Steel Projects PLM 1.19.x

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Introduction

Steel Projects is recognized as one of the world's leading software development companies for the steel fabrication industry.

Our market leading Windows based modular PLM software has provided tremendous time and cost savings to fabricators for many years.

Steel Projects provides structural steel fabricators an integrated and modular software solution. Its modules automate and secure the link between the drawing office and the workshop.

A Microsoft Windows environment ensures a user-friendly interface and allows for quick and efficient implementation.

The real-time information feedback provided can be used to create reports on the efficiency of individual machines or the overall workshop. This data is invaluable to be able to manage revisions, time scheduling, stock control, purchasing, nesting, cost analysis and to be able to capitalize on CNC machinery.

Technical Support

Our expertise and experience allow us to provide solutions tailored to your needs, and to assist you in efficiently using your software.

Steel Projects SMART Program (Software Maintenance, Assistance and Remote Training Program): \checkmark Technical assistance and support \checkmark Software upgrades and improvements \checkmark Remote training sessions

When you invest in our software, you are investing in years of experience, code writing, research and development. You are investing in the product as it exists today.

However, our product is never 'finished': We are always developing new features, enhancing the user experience, and researching new technology. To keep up with this continuous improvement, we offer you our SMART program.

Features

Technical Assistance & Support: Unlimited telephone and email support

- Coverage for up to 18 hours' of every working day
- Both phone and email support is distributed across our global software experts
- All support calls generate a ticket that is tracked to completion
- Includes Remote Access Support which allows our technicians to remotely access your desktop and provide technical assistance

Software Upgrades and Improvements

- New version releases and upgrades²
- Fixes and improvements to existing features

Remote Training Sessions

Quick fix online training sessions as available



SMART program, an addition to our existing Steel Projects PLM packages







PRODUCT AREA/MODULE	Parts Manager	Project Manager	Production Manager
PROJECT PLANNING & PREPARATION			
Integrated Drawing Package - create, edit parts	S	S	S
Assembly Management		S	S
2D/3D visualization	S	S	S
Revision Management		S	S
Import CAD	0	0	0
Import BIM	0	0	0
MATERIAL PLANNING			
Manual/Basic Linear Nesting	S	S	S
Automatic Profile Nesting	0	0	0
Fully Integrated Plate Nesting	0	0	0
PRODUCTION PLANNING			
Production Manager Viewer			0
Part Checking and Validation		S	S
Workflow Management			S
Workstation Management			S
Fabrication Job Creation	S	S	S
Production Analysis		S	S
Automatic and/or Manual Production Feedback			S
Production Forecasting			S
MIS & ERP Interface		0	0
Stock and Purchasing Interface	0	0	0
4D link with BIM/3D Models			0
CNC AUTOMATION			
Automatic Post Processing	0	0	0
Automatic Handling/Routing			0
Export CAM data	S	S	S
Export DSTV, DXF	0	0	0
TRANSPORTATION MANAGEMENT			
Shipping		0	0

Our SMART Program helps ensure you are using our solutions to the maximum of their - and your - capabilities :

S=Standard; O=Optional

Steel-Projects

About Steel Projects

Steel Projects specializes in developing solutions that enable steel fabricators to:

- · Plan and schedule fabrication before it begins
- · Get reliable, accurate and up to date information from the detailing office
- Create an integrated shop linking material handling, equipment and workstations
- · Manage change seamlessly
- · Adjust production on the fly to maximize equipment utilization or avoid bottlenecks
- · Easily track and record progress and share it as needed with clients

Enjoy the peace of mind that comes with knowing your shop is maximizing use of its resources and operating as efficiently as it can be; with improved material flow and increased man-hour efficiencies.

Steel Projects has been at the forefront of steel fabrication software for over 20 years and our solutions are used in more than 90 countries.



Our mission is to manage, automate and optimize the work-flow from the CAD model through production and to site erection.



Steel Projects solutions consists of easy to uses modules that control all the aspects of Production life-cycle management (PLM).

With our strategy "Intelligent Fabrication" combining both machines and software we work side by side with FICEP all around the world.

We also work with many other machine manufacturers upon request, ensuring that everyone can receive the best in steel fabrication software.

Our innovative software solutions allow for increased production by managing projects, optimizing processes, tracking stock, and with real time production feedback.



Installation

Steel Projects PLM uses Microsoft SQL Server Enterprise 2017 and it is required it to be installed on a company server (if used in a multi client installation) or local machine (if it is to be installed on just one pc)

Once the database is installed and configured correctly, Steel Projects PLM can then be installed as an application, and connected to the database with an automatic connection wizard.

The program requires a shared BASE folder on the server to run.

Installation Prerequisites

Before installing Steel Projects PLM please take into account these prerequisites :

- <u>Client Requirements</u>
- <u>Server Requirements</u>

Client Requirements

Operating System

- Workstations :

Windows Vista SP2, Windows 7 SP1, Windows 8/8.1, Windows 10 : 32 or 64 bits

If you have an older machine and the prerequisites are not met, you will receive a message alert. Please download and install the relevant patches from the following links:

- Microsoft .NET Framework 4.6
- : <u>https://www.microsoft.com/fr-fr/download/details.aspx?id=53344</u>
- Microsoft Windows Installer 4.5
- : <u>http://www.microsoft.com/en-us/download/details.aspx?id=8483</u>
- Microsoft Power Shell 1.0 : <u>https://www.microsoft.com/fr-fr/download/details.aspx?id=23200</u>

The minimum version of operating system supported is Windows Vista SP2. This constraint is related to the use of Microsoft. NET Framework 4.6 Full profile.

Facilities and manual settings

- The operating system and service pack.
- Microsoft. NET Framework 4.6 Full profile.

The installer performs a check of these two prerequisites, it will refuse to continue if they are not checked.

Facilities supported

Re distributable package **SAP Crystal Reports** (version 32 bits, including 64-bit systems)

ATTENTION: to aid the installer, the Crystal Report re distributable is not "embedded" in setup.exe.

Setup supports the installation provided that the file "CRRuntime_32bit_13_0.msi" is in the same folder. In the case of new installation, the two files must be present in case of updating only setup.exe is required.

Sentinel Driver dongle (optional installation to be carried out if the station uses an individual key and not a network key)

Programs and DLL Steel-PLM Projects Shortcuts in the menu "Programs". Steel-shortcut on the desktop PLM Projects (optional).

In addition, the installer offers to launch the setup wizard before leaving.

Settings supported

The Installer creates the necessary registry keys if they exist.

The setup wizard guides the user to:

- The choice of a base of a database. The latter must exist since installing a client.
- The verification of accessibility of a WinSTEEL base directory set in the chosen base.

If the execution of the configuration wizard will to the end, the connection parameters to the database are recorded in the registry.

Server Requirements

Operating System

- Server : Windows Server 2016

- Database : SQL Server 2017 Enterprise

SQL Server 2017 Enterprise can be used under the following limitations :

- Incompatible with production manager module and the real time production feedback.

- Database size is limited.
- Incompatible with document management (ECM).

1. General Considerations

It is quite possible to install the database on a dedicated machine that will never be used as a client. Prerequisites described below will apply. If the machine is used as a client, the prerequisites are cumulative.

2. Operating System

The minimum version of operating system supported is Windows Vista SP2. This constraint is related to SQL Server 2017 Enterprise.

3. Facilities and manual settings

The operating system and latest service pack.

In addition, the following items are needed to install MS SQL must be installed manually (allow several reboots) :

- Microsoft. NET Framework 4.6
- Microsoft Installer 4.5
- PowerShell 1.0

Reminder: If the machine is designed to perform the PLM must be installed in addition to. NET Framework 4.6 Full profile.

Finally, you must install and configure Microsoft SQL Server 2017 Enterprise. <u>(see chapter Installation / SQL Server)</u>

4. Facilities supported

If Microsoft. NET Framework 4.0 Full profile is installed on the machine, the installer PLM supports copies in a subdirectory (Program File \ SteelProjects \ base \) the application of a backup file for install an empty database (manually or using the configuration wizard).

5. Settings supported

The setup wizard will restore an empty database on the machine that hosts the database.

For this to be possible, it must meet the following conditions:

- Have a MS SQL base folder on the machine:
- Services must be started (especially SQL Server Browser must be started for the local database is detected by the setup wizard)
- The user must exist with the sysdba password agreed.
- Installing PLM on the machine and request the initiation of the configuration wizard.

• To restore an empty database from the configuration wizard, choose as database server on the local machine. In the combo box for selecting the database, select "Create new database ..." and follow the instructions.

NB: It is impossible to overwrite an existing database with the wizard. If the user selects the name of an existing database, the program will refuse to move.

Deploying Steel Projects PLM over the Cloud using Microsoft RDS (Remote Desktop Services)

Overview

Steel Projects PLM has been designed to be able to be deployed and administered over the cloud using Microsoft Remote Desktop Services (RDS)—formerly known as Terminal Services—and an RD Session Host server.

This makes it possible to install and manage the application in one location but be controlled by end users in another location, either inside a corporate network or by users at remote locations.

Applications that run on the RD Session Host server are called RDS RemoteApp applications.

From the end-user perspective, PLM looks and feels as though it is running on the local system.

The user's keystrokes and mouse movements are sent to the server.

Images are sent back to the user's system.

All that is required is an internet connection.

Even thin client pc's or netbooks or ipads (with additional third party applications) can run the application.

Remote Desktop Services can be used to enable end users to run PLM on a remote server from their desktop computer.

The server hosting the application is called a Remote Desktop Session Host (RD Session Host) server.

When you deploy PLM with this method, you can do the following:

- Deploy and manage the application on one RDS servers instead of multiple client computers
- Provide the application to end users whom you cannot easily support because they're in another office—or another country.
- Reduce the impact of client hardware failures by keeping all applications on a central server. If a client's computer dies, plug in a new one, and they're back to work
- Avoid mis-configured computers.
- Use computers in environments that are not compatible with desktop computers.
- Simplify help-desk, training and remote support.

If any of these tasks are important to you, then you should seriously consider deploying PLM using Remote Desktop Services with a Session Host server.

IT Requirements

Windows Server 2016 Windows SQL 2017 Enterprise RDS Licence (Microsoft CAL) for each active user

Deploying RDS RemoteApp

RemoteApp programs are applications that are running on the RD Session Host server but appear to the end user to be running on their desktop.

This is often easier for an end user to understand.

They don't have to manage multiple desktops but instead can simply launch another application from their main desktop.

Windows Server 2016 introduced RemoteApp programs.

It does take a little bit of configuration to support RemoteApp programs but once you've configured all the pieces, users can access RemoteApp applications using the following methods:

- Through a **web browser**: If RD Web Access is configured, users can access the web page and click a link to launch the application.
- Using a Remote Desktop Protocol (.rdp) file: Users can simply double-click a properly configured .rdp file to launch the RemoteApp application.
- Through the Start menu or a program icon: RemoteApp applications can be installed using traditional Windows Installer (.msi) packages (also called Microsoft Installer packages). Once installed, users can launch the applications just as any other installed application.

The RDS Network Model

Thin-client networking or server-based computing refers to any computing environment in which most application processing takes place on a server enabled for multiuser access, instead of a client.

What makes thin-client networking and computing "thin" is neither the size of the operating system nor the complexity of the apps run on the client, but how processing is distributed.

In a thin-client network, most if not all processing takes place on the server.

Instructions for creating video output travel from server to client, mouse clicks and keystrokes pass from the client to the server, and all video output is rendered on the client.

A thin-client networking session has three parts:

- The RDS server, running a multiuser operating system
- The display protocol, which is a data link layer protocol that creates a virtual channel
- between server and client through which user input and graphical output can flow
- The client, which can be running any kind of operating system that supports the
- terminal client



Figure 1 - PLM Over RDS

The RDS Server

Remote Desktop Services is one of the optional components you can choose to install on Windows Server 2008 R2.

If you've added the Remote Desktop Services role, RDS begins listening at TCP port 3389 for incoming client connection requests as soon as the server boots up and loads the core operating system.

Adding Remote Desktop Services

You can add the Remote Desktop Services role to any Windows Server 2016 server using Server Manager. Server Manager includes wizards that allow you to add many roles.

When adding the RDS role, you'll be prompted to answer some questions. Some of the topics related to an RD Session Host server installation include the following:

- Additional role services
- Network Level Authentication
- Licensing mode
- Local Remote Desktop Users group membership
- Adding applications

Required Role Services

Remote Desktop Services is a server role and includes several role services. All of the services aren't required for every installation.

You'll need to evaluate what you're trying to accomplish to determine which services to add.

Remote Desktop Session Host The RD Session Host service enables the server to host Windows-based programs or a full Windows desktop. This is a required service for the role.

Remote Desktop Virtualization Host The RD Virtualization Host service is integrated with Hyper-V to allow users to connect to a virtual machine on a server hosting Hyper-V. It can be configured so that users will connect to their own unique virtual machine and allow users to run multiple operating systems simultaneously. This service requires the Hyper-V role service and is needed if you are using the Hyper-V role service.

Remote Desktop Licensing The RD Licensing service manages the client access licenses (RDS CALs) that are needed to connect to an RD Session Host server. It's possible to run Remote Desktop Services without licenses for a limited grace period of 120 days. This allows you to deploy, configure, and test the server. After this period you will need an RDP CAL for each PLM user.

Desktop Connection Broker The RD Connection Broker service is used for session load balancing and session reconnection in an RD Session Host server farm. It's also required to support RDS RemoteApp applications that allow users to launch applications on the RD

Session Host server via Internet Explorer. If you are using multiple RD Session Host servers, the RD Connection Broker can redirect connections to the servers that are the least busy, which provides load balancing. Additionally, if a user is disconnected, the RD Connection Broker will ensure they are reconnected to the same server where their session is active

Remote Desktop Gateway The RD Gateway service is used to allow users to connect to RD Session Host servers and remote desktops over the Internet. This service requires additional role services including the Web Server (IIS), Network Policy and Access Services, RPC over HTTP Proxy, and the Remote Server Administration Tools.

Remote Desktop Web Access The RD Web Access service allows users to access RemoteApp and Remote Desktop Connection through a web browser. If the clients are running Windows 7, they can access these through the Start menu on their system. This service requires additional supporting role services including Web Server (IIS) and Remote Server Administration Tools.

Network Level Authentication

Network Level Authentication (NLA) can be used in Remote Desktop sessions to provide better security.

When adding the Remote Desktop Services role, you need to specify whether NLA is required. Your decision is based on the clients the RD Session Host server will support.

NLA ensures that the authentication is completed before a full Remote Desktop connection is established.

Without NLA, there is a small window of opportunity for a malicious user or malicious software to attack, even if authentication is unsuccessful.

NLA is available by default in Windows Vista. It relies on the Credential Security Service Provider (CredSSP).

If all the clients are running Windows Vista, then you should require Network Level Authentication on the RD Session Host server.

If your clients are older than Windows XP SP3, they cannot use NLA, and NLA should not be required. The older clients will not be able to connect using NLA.

Licensing Mode

You'll be prompted to select the licensing mode when you add the Remote Desktop Services role.

The licensing mode specifies what type of Remote Desktop Services Client Access Licenses (RDS CALs) you'll use. You have three choices:

Configure Later You can postpone your decision and simply select Configure Later. You'll have a grace period of 120 days to configure licensing and select a licensing mode. It's common to choose this option early in the deployment cycle and then configure the RDS CALs once you've worked out the kinks in your RD environment.

Per Device A per-device CAL is issued to a client computer or device. If the licensing mode is set to Per Device and a licensing server has been configured, the licensing server will issue the device a temporary license the first time the device connects. The second time the device connects, the licensing server will attempt to issue it a permanent license. The licensing server will enforce per-device CALs. In other words, if a per-device CAL doesn't exist for the device and an RDS CAL isn't available to be issued, the connection will be blocked. You should use per-device CALs if multiple users will use the same device to connect to an RD Session Host server.

Per User A per-user CAL allows a user to connect to an RD Session Host server from any number of devices. Interestingly, the license server doesn't track the per-user CALs. This can make things both easier and more difficult. It's easier to manage on a day-to-day basis because the RD Session host server won't stop users from connecting. However, administrators still have a responsibility to ensure that appropriate CALs have been purchased, which does take some extra administration.

It is possible to configure the maximum connections supported by the server to coincide with the number of purchased CALs.

This is done on the Network Adapter page of the RDP-Tcp Properties in the Remote Desktop Session Hosts Configuration console.

This isn't exact since users can legitimately connect to more than one session at a time unless you've limited users to only a single connection at a time.

You should use a per-user CAL if users will connect to an RD Session Host server from multiple devices.

A Remote Desktop Services Licensing server needs to be configured to install, issue, and track RDS CALs.

Clients won't be able to connect to the RD Session Host server if RDS CALs haven't been purchased and added to the licensing server before the grace period.

Remote Desktop Users Group

Users need to be members of the **local** Remote Desktop Users group in order to connect to the RS Session Host server. You can add them when you add the role or add them later.

The Administrators group is added to the Remote Desktop Users group by default.

Two Remote Desktop Users groups exist: one in the domain and a local group on the RD Session Host server. You need to add users and groups into the local group to grant access for them to connect.

Adding the Remote Desktop Services Role

You can use the following steps to install Remote Desktop Services. A word of warning, though: you really need to install this on a computer that isn't a domain controller.

In our example environment, were using one server as a DC (named BF1) and another server as the RDS server (named BF2) in a domain named bigfirm.com.

If you try install RDS on a DC, you'll receive a couple of warnings and later realize some things just cant work.

For example, you'll need to manipulate local groups, but local groups don't exist on a DC.

1. Log onto a member server.

2. If Server Manager doesn't launch automatically, launch it by selecting Start > Administrative

Tools > Server Manager.

- 3. In Server Manager, select Roles, and click the Add Roles link.
- 4. If the Before You Begin page appears, review the information, and click Next.
- 5. Select the Remote Desktop Services role. Your display will look similar to Figure 2. Click Next.

Add Roles Wizard		X
Select Server Ro	les	
Before You Begin Server Roles Remote Desktop Services Role Services Confirmation Progress Results	Select one or more roles to install on this server. Roles: Active Directory Opmain Services Active Directory Idention Services Active Directory Rights Management Services Application Server OHCP Server Fax Services Priving Mocument Services Web Server (113) Windows Deployment Services Windows Server Update Services More about server roles	> Install Cancel Install Cancel Install Services, provides technologies that enable users to access the full Windows destrop orgams that are installed on an RD Session Host server or to access the full Windows destrop. With Remote Destrop Services, users can access an RD Session Host server or virtual machine from within your corporate network or from the Internet.

Figure 2 - Adding the Remote Desktop Services role

6. Review the information on the Introduction to Remote Desktop Services page, and click Next.

7. On the Select Role Services page, select the check boxes for Remote Desktop Session Host, Remote Desktop Licensing, Remote Desktop Connection Broker, and Remote Desktop Web Access. When you select the check box for Remote Desktop Web Access, a dialog box will appear similar to Figure 3. Click the Add Required Role Services button, and click Next.

Add Roles Wizard		
Select Role Ser	vices	
Before You Begin Server Roles Remote Desktop Services Role Services Application Compatibility Authentication Method Licensing Mode User Groups Client Experience RD Licensing Configuration Confirmation Add Roles Wizar	Select the role services to install for Remote Deskto Role services: Remote Desktop Session Host Remote Desktop Virtualization Host Remote Desktop Licensing Remote Desktop Connection Broker Remote Desktop Gateway Remote Desktop Web Access	Description: <u>Remote Desktop Web Access (RD</u> <u>Web Access</u> , formerly TS Web Access, enables users to access RemoteApp and Desktop Connection through the Start menu on a computer that is running Windows 7 or through a Web browser. RemoteApp and Desktop Connection provides a customized view of RemoteApp programs and virtual desktops to users.
Progress Results Add	role services and features required f ess?	for Remote Desktop Web
You c	annot install Remote Desktop Web Access unless the req	uired role services and features are also
Role	ervices:	Description:
	/eb/Server (IIS) 12 Web/Server 13 Management Tools 24 Role Administration Tools 25 Role Administration Tools	Web Server (IIS) provides a reliable, manageable, and scalable Web application infrastructure.
		Add Required Role Services Cancel
(j) Why are the	ese role services and features required?	

Figure 3 - Adding required role services

8. Review the information on the Applications for Compatibility page. Click Next.

9. Review the information on the Authentication Method page, and select Require Network Level Authentication if your clients are running at least Windows Vista or Windows XP SP3 with the registry modification to enable CredSSP. Select Do Not Require Network Level Authentication if the clients are older. Click Next.

10. On the Specify Licensing Mode page, select Configure Later, and click Next.

11. The User Groups page will appear and includes the Administrators group. You can add users or groups using this page, and they will automatically be added to the local Remote Desktop Users group. Click Next.

12. The Configure Client Experience page will appear, as shown in Figure 4. If clients are running Windows 7, you can use this page to enable additional functionality that mimics Windows 7. Select the check boxes for each to install the Desktop Experience feature on the server. It can be disabled later if desired. Click Next.

Add Roles Wizard		×
Configure Client	Experience	
Before You Begin Server Roles Remote Desktop Services Role Services Anglication Compatibility	You can configure the RD Session Host server so that users connecting to a remote desktop session can use functionality similar to that provided by Windows 7.	
Authentication Method Licensing Mode User Groups	Select the functionality that you want to provide. Additional functionality can be configured by using the Remote Desktop Session Host Configuration tool. (i) Selecting audio and video playback or desktop composition will install the <u>Desktop Experience</u>	
Client Experience RD Licensing Configuration Web Server (IIS)	☐ <u>feature</u> on the RD Session Host server. ✓ Audio and video playback	
Role Services Confirmation	Audio recording redirection Desktop composition (provides the user interface elements of Windows Aero)	
Progress Results	If a selection is dimmed, a Group Policy setting is currently being applied to the computer that prevents that functionality from being configured. For more information, see Group Policy Settings and Configuring the Client Experience.	
	More about configuring the client experience	

Figure 4 - Configuring the client experience

13. Review the information on the RD Licensing Configuration page. Leave the check box deselected so that discovery scope is not configured for the license server. Click Next.

14. The Web Server (IIS) installation will begin. As a reminder, this is required to support Remote Desktop Web Access. Review the information on the Web Server (IIS) page, and click Next.

15. The Role Services page will show with the required role services already selected. Review the selected services, and click Next. Review the information on the Confirmation page. A warning stating you may need to reinstall existing applications is normal. It's just reiterating that applications installed before Remote Desktop Services is installed may not work in multiuser mode unless they are reinstalled. Click Install.

17. The installation will take several minutes to complete. When it completes, the Installation page will appear indicating a restart is pending. Click Close. When prompted to restart the server, click Yes. The installation will continue during the restart process. This may take several minutes to complete

18. After the system reboots, log on using the same account, and the configuration wizard will resume. When the installation completes, review the information in the Installation Results page, and click Close.

It's normal to get informational messages related to the Remote Desktop Services Server License server since it has not been configured yet. Additionally, you'll see a warning indicating that RD Web Access requires additional configuration

Adding Applications

Although many applications will work automatically in multiuser mode (such as Paint, Calculator, and Notepad), other applications need to be installed. Previous versions of Remote Desktop Services (called Terminal Services) required extra steps to install the applications, but the process is much simpler with RDS. After the role has been added, you can install any application using an .msi (Windows Installer) file or via the Control Panel's Add Remove Programs Wizard. If the application will install via one of these methods, that's all that's necessary. However, if you have a legacy application that won't install via one of these methods, you'll need to use the Change User command. The three-step process is as follows:

1. Execute the Change User /install command from the command prompt. This puts the RDS server into installation mode.

2. Install the application.

3. Execute the Change User /execute command from the command prompt. This returns the RDS server to the normal mode of operation.

Adding an RDS RemoteApp Application

Remote Desktop RemoteApp applications are a neat feature with RDS. Once added and configured, they will run in their own window on the end user's computer. Instead of a user launching a full desktop of another operating system, the RemoteApp application appears just like another application.

Another neat feature is that you can restrict access to the RemoteApp programs by identifying which users and groups can access the program. By default, all authenticated domain users will have access.

The following steps are needed to get RemoteApp applications to work

1. Add an RDS RemoteApp program to the RDS server.

2. Add the RDS server to the TS Web Access Computers group.

3. Configure your RD Session Host server to serve RD RemoteApp applications.

4. Identify your RDS server as an RD RemoteApp source. You'll then be able to launch RD Remote Applications using Internet Explorer from any system in your network.

Adding PLM as a RemoteApp

Use the following steps to add PLM to the RemoteApp program list:

1. Launch the RemoteApp Manager by selecting Start > Administrative Tools > Remote Desktop Services > RemoteApp Manager.

2. The Actions pane on the right includes a link to Add RemoteApp Programs. Click this link.

3. Review the information on the Welcome page, and click Next.

4. The RemoteApp Wizard displays a list of programs that are currently installed on the server and can be added to the RemoteApp Programs list. Select the check box for PLM and any other programs you may want to add. You can also click Browse, and browse to other executable programs on your system that don't show in this list.

5. Click Properties. Select the User Assignment tab. Your display will look similar to Figure 5. Notice you can restrict access to programs to specific users and groups here

Domoto Ann Winned	📱 RemoteApp Properties 🔗 🕺
RemoteApp Wizard Choose programs to add to the RemoteApp Programs list Select the programs that you want to add to the RemoteApp Pr can also configure individual RemoteApp properties, such as th Name	Properties User Assignment You can specify which domain users and domain groups, the RD Session Host server must be joined to an Active Directory domain. To run the RemoteApp program, a user must be a member of the Remote
♥ Paint ● Remote Desktop Connection ● Remote Desktop Licensing Manager ● Resource Monitor ■ Security Configuration Wizard ♥ ♥ sinping Tool ● ♥ sound Recorder ● ♥ Storage Explorer ● ♥ Storage Explorer	Desktop Users group on the RD Session Host server. Select which users and groups will be able to see the icon for this RemoteApp program: All authenticated domain users Specified domain users and domain groups Domain user and domain group names:
System Configuration System Information Windows Media Player Windows Media Player Windows Memory Diagnostic Select All Select None Properties	
< Back	Add Remove

Figure 5 - Adding programs to the RemoteApp Programs list

6. Click OK to dismiss the RemoteApp properties sheet. Click Next on the program selection list page.

7. Review your choices on the Review Settings page, and click Finish.

Adding an RDS Server to the TS Web Access Computers Group

These next steps will add your RDS server to the TS Web Access Computers group:

- 1. Launch Server Manager by selecting Start > Administrative Tools > Server Manager.
- 2. Browse to the Configuration\Local Users and Groups\Groups node.
- 3. Double-click the TS Web Access Computers group, and click Add.
- 4. In the Active Directory search page, click Object Types.
- 5. Select the check box next to Computers to include computers in the search. Click OK.
- 6. Type in the name of the computer hosting RDS, and click OK.

Configuring the RDS Server to serve RD RemoteApp Applications

With the RDS server added to the TS Web Access Computers group, you can now configure the RD Session Host server to serve the RD RemoteApp applications via a web browser.

1. Launch the Remote Desktop Web Access Configuration console by selecting Start > Administrative Tools > Remote Desktop Services > Remote Desktop Web Access Configuration. This will launch Internet Explorer with the address of the RD web server.

2. Unless you've added a certificate from a trusted authority, you will receive an error indicating there is a problem with the website's security certificate. This is normal. The certificate is self-signed, which is good enough for a test environment, but you'll want to install a certificate from a trusted certificate authority for a production server. Click "Continue to this website (not recommended)."

3. After a moment, the Remote Desktop Services Default Connection page will appear. Enter the domain and username for an administrator account and the associated password. Your display will look similar to Figure 6. Click the Sign In button.

C RD Web Access - Windows Internet Explorer	_ [] ×
🚱 🕘 🗢 😰 https://locahost.RDWeb/Pages/en-US/login.aspx?ReturnUrl=< 💌 😵 Certificate Error 🛛 🖭 🔄 🔀 🔎 Bing	- ٩
🙀 Favorites 🛛 🖧 🙋 Suggested Sites 🕶 🙋 Web Slice Gallery 🔸	
RD Web Access	Page • Safety • Tools • 🔞 •
	🐁 RD Web Access 📥
Remote Desktop Services Default Connection	
	Help
Domain/user name: bigfim/\administrator Password:	
Security (<u>show explanation</u>) G This is a public or shared computer C This is a private computer	-
Sign in	

Figure 6 - Remote Desktop Services Default Connection page

4. If you followed the steps in this chapter to install RDS, you included the Remote Desktop Connection Broker as one of the role services installed on the server. This will be the source for your RemoteApp programs. Select An RD Connection Broker Server, as shown in Figure 7. Click OK.

(C) 🗢 😰 https://localbox	t/RDWeb/Pages/en-LIS/config.aspy	ificate Error	
avorites	el Ster • @ Web Size Gallery •		
D Web Access		A • N · ■ #	• Page • Safety • Tools • (
			RD Web Acces
Remote RemoteApp and	Desktop Services Default C	onnection	
RemoteApp Program	Remote Desktop Configuration		Help Sign out
Salast the second to use	C As PD Connection Brokes conver		
Select the source to use:	C An RD Connection Broker server © One or more RemoteApp sources		
Select the source to use: Source name:	C An RD Connection Broker server C One or more RemoteApp sources	X	
Select the source to use: Source name:	C An RD Connection Broker server C One or more RemoteApp sources Iocalhost Enter the NetBIOS name or fully qualified domain nar server farm as the RemoteApp source, specify the DN separate each name with a semicolon.	The formation of the formation of the formation of the formation of the form. If you are specifying multiples of the formation of the formatio	using an RD Session Host le RemoteApp sources,
Select the source to use: Source name:	C An RD Connection Broker server O ne or more RemoteApp sources Iocalhost Enter the NeBIOS name or fully qualified domain nar server farm as the RemoteApp source, specify the DN separate each name with a semicolon.	The (FQDN) of the RemoteApp source. If you are Specifying multip	using an RD Session Host le RemoteApp sources, OK Cancel

Figure 7 - Configuring RD Connection Broker server as the source

5. At this point, Remote Desktop Web Access is configured, and the Enterprise Remote Access web page will appear with the RemoteApp Programs selected. However, the list is empty. Even though you added several RemoteApp programs previously, none of them appears because the server hasn't been identified as a RemoteApp source. It's time to do that now.

Adding an RDS Server as a RemoteApp Source

You'll now add your RDS server as a RemoteApp source:

1. Launch the Remote Desktop Connection Manager by selecting Start > Administrative Tools > Remote Desktop Services > Remote Desktop Connection Manager.

2. Select RemoteApp Sources in the navigation tree pane on the left, and then click Add RemoteApp Source in the Actions pane on the right.

3. Enter the name of the server where you've installed RDS

4. Your server will appear as one of the RemoteApp sources. Close the Remote Desktop Connection Manager.

Launching a RemoteApp from Internet Explorer

Launch a RemoteApp from Internet Explorer with the following steps. You can do this from

your RDS server, or if desired, you can do it from another computer in your network.

1. Launch Internet Explorer.

2. Enter the following URL into the address bar: https://localhost/rdweb.

If you're accessing this from a remote host, enter the name of the server in place of localhost. For example, our server name is BF2, so we would enter it as https://bf2/rdweb.

3. Since the server is using a self-signed certificate, you'll see an error. Click the Continue to This Website (Not Recommended) link.

4. If prompted by the Internet Explorer Enhanced Security Configuration, click Add to indicate you trust this website. Click Add again, and click Close.

5. The RemoteApp and Desktop Connection page will appear.

6. Enter a username in the format of domain\user name and a password for an account that

is in the local Remote Desktop Users group of the RDS server. We've created an account named Sally in the Bigfirm.com domain, so we have entered it as bigfirm\Sally

Notice that you can also select whether you're accessing the RemoteApps from a public or private computer. The private setting allows a longer period of activity before logging you off. It's strongly recommended that users close the session as soon as they are finished to flush any remnant data from the session.

7. Enter the user's password, and click Sign In.

8. The RemoteApp programs that have been published to the server are listed

9. Click the PLM application. A warning will appear providing a warning to the user that the RemoteApp program is starting. Click Connect.

10. Enter the credentials of the same account you used to access the website, and click OK. After a moment, the credentials will be validated, and the program will start.

11. Leave the program open, and click another RemoteApp program on the web page.

You'll receive the warning again, but after you click Connect, this program will launch without requiring you to enter credentials again.

12. Return to the Internet Explorer web page showing the Enterprise Remote Access menu. Click Remote Desktop.

13. On the Remote Desktop page, click Options.

14. Enter the name of the RD Session Host server in the Connect To box, and click Connect.

15. A warning will appear as it did before. Review the information, and click Connect.

16. After a moment you will be connected to a full desktop session running on the server.

17. Log off the RemoteApp desktop session, and close all the RemoteApp applications.

Creating .rdp Files for RemoteApp Programs

You can use a Remote Desktop Protocol (.rdp) file to allow users to easily connect to an RD RemoteApp application. You can create the .rdp file with these steps:

1. Launch the RemoteApp Manager by selecting Start > Administrative Tools > Remote

Desktop Services > RemoteApp Manager.

At the bottom of the RemoteApp Manager, you should see one or more RemoteApp programs. You will also see a warning icon in the Digital Signature Settings area. It indicates a digital certificate has not been configured.

2. Click Change next to Digital Signature Settings to add a digital certificate. Select the

"Sign with a digital certificate" check box, and click the Change button. Adding the certificate will allow you to sign .rdp files, which provides clients an added layer of security.

3. Click OK to confirm the certificate. Click OK to close the RemoteApp Deployment Settings

property page. You'll see that the warning icon on the Digital Signature Settings page will disappear.

4. Locate the PLM program in the RemoteApp Program list. Right-click it, and select Create .rdp File.

5. Review the information on the Welcome page, and click Next.

6. The Specify Package Settings page will appear, as shown in Figure 25.17. You can change any of these settings, but the defaults will work for most deployments. Click Next.

7. Click Finish on the Review Settings page.

8. Windows Explorer will open in the C:\Program Files\Packaged Programs folder. It will include the rdp file. This file can be copied to other computers or shared. Once it is available to other computers in the network, it can simply be double-clicked to start the application.

9. Copy the rdp file to another computer in your network.

10. Double-click the .rdp file on the other computer. Even though the .rdp file is signed with a certificate from the RD Session Host server, the server's certificate isn't in the trusted root authority store, so you will receive an error similar to Figure 8.

🖫 Remo	oteApp	×			
The publisher of this RemoteApp program cannot be identified. Do you want to connect to run the program anyway?					
This RemoteApp program could harm your local or remote computer. Do not connect to run this program unless you know where this program came from or have used it before.					
	Publisher:	Unknown publisher			
<u> </u>	Type:	RemoteApp program			
	Path:	mspaint			
	Name:	Paint			
	Remote computer:	BF2.bigfirm.com			
Don't ask me again for connections to this computer					
Allow the remote computer to access the following resources on my computer:					
	Drives	✓ Ports			
Clipboard		Other supported PnP devices			
	Printers	Graphics acceleration			
Changes to these options apply to this connection only.					
Deta	ails	Connect Cancel			

Figure 8 - Unknown Remote-App publisher warning

If you click the Details page, you can view additional options showing what local resources

will be available to the RemoteApp program. Click Connect.

11. Enter the credentials of an account that is in the local Remote Desktop Users group on the RDS server, and click OK. After a moment, the credentials will be verified, the connection will be established, and the program will launch and appear on your desktop.

At this point, you've seen how to launch a RemoteApp application using WebAccess and using an .rdp file. Once the program is launched, there isn't any difference in how it works between the two methods.

Creating Windows Installer Packages for RemoteApp Programs

Another way you can deploy RemoteApp applications is by creating a Windows Installer (.msi) file and deploying the application using the .msi file.

The big benefit of using Windows Installer files is that they can easily be deployed using

Group Policy. Once the installer file has been created, you can create GPOs to assign or publish them to users and computers in your domain.

Applications installed with the Windows Installer files can be available via the Start menu and via icons placed on the desktop, depending on what you choose.

SQL Server 2017 Enterprise

Installation

SQL Enterprise versions must be bought from your Microsoft vendor.

Once all the requirements are met then run the installer. You will see this screen :



First, launch the "System Configuration Checker" to prevent a successful SQL Server installation.

🃸 SQL Server 2017 Setup	_		×
Global Rules			
Setup Global Rules identify pro corrected before Setup can con	blems that might occur when you install SQL Server Setup support files. Failures must be		
Global Rules	Operation completed. Passed: 9. Failed 0. Warning 0. Skipped 0. Show details >> View detailed report	Re-r	un
	ОК	Cancel	

Then, click on the button "OK".

Select New installation or add features to an existing installation.

髋 SQL Server Installation Center		- 🗆 ×
Planning Installation	ŧ	New SQL Server stand-alone installation or add features to an existing installation Launch a wizard to install SQL Server 2017 in a non-clustered environment or to add features to an existing SQL Server 2017 instance.
Maintenance		Install SQL Server Reporting Servicer
Tools	==	Launch a download nage that provides a link to install SQL Server Reporting Services
Resources		An internet connection is required to install SSRS.
Advanced		Install SQL Server Management Tools
Options	<i>X</i> 4	Launch a download page that provides a link to install SQL Server Management Studio, SQL Server command-line utilities (SQLCMD and BCP), SQL Server PowerShell provider, SQL Server Profiler and Database Tuning Advisor. An internet connection is required to install these tools.
	K	Install SQL Server Data Tools Launch a download page that provides a link to install SQL Server Data Tools (SSDT). SSDT provides Visual Studio integration including project system support for Azure SQL Database, the SQL Server Database Engine, Reporting Services, Analysis Services and Integration Services. An internet connection is required to install SSDT.
	F	New SQL Server failover cluster installation Launch a wizard to install a single-node SQL Server 2017 failover cluster.
	¥N	Add node to a SQL Server failover cluster Launch a wizard to add a node to an existing SQL Server 2017 failover cluster.
		Upgrade from a previous version of SQL Server Launch a wizard to upgrade a previous version of SQL Server to SQL Server 2017.
Microsoft SQL Server 2017	ŧ	New Machine Learning Server (Standalone) installation Launch a wizard to install Machine Learning Server (Standalone) on a Windows machine. This is typically used by data scientists as a standalone analysis server or as a

If you already have installed instances, then select "new installation or add shared features".

🃸 SQL Server 2017 Setup	- 0	×
License Terms To install SQL Server 2017, you	u must accept the Microsoft Software License Terms.	
Product Key License Terms Global Rules Microsoft Update Product Updates Install Setup Files Install Rules Feature Selection Feature Rules Feature Configuration Rules Ready to Install Installation Progress Complete	 MICROSOFT SOFTWARE LICENSE TERMS MICROSOFT SQL SERVER 2017 ENTERPRISE These license terms are an agreement between Microsoft Corporation (or based on whyou live, one of its affiliates) and you. Please read them. They apply to the software na above, which includes the media on which you received it, if any. The terms also apply any Microsoft updates, updates, Internet-based services, and Internet-based services, and 	here med to Print
	< Back Next > Ca	ncel

Check $\ensuremath{^{'}\!I}$ accept the license terms", then Next .

🃸 SQL Server 2017 Setup		_		×
Microsoft Update				
Use Microsoft Update to check	for important updates			
Product Key License Terms Global Rules Microsoft Update Product Updates Install Setup Files Install Rules Feature Selection Feature Rules Feature Configuration Rules Ready to Install Installation Progress Complete	 Microsoft Update offers security and other important updates for Windows and oth software, including SQL Server 2017. Updates are delivered using Automatic Update the Microsoft Update website. ☑ Use Microsoft Update to check for updates (recommended) <u>Microsoft Update FAQ</u> <u>Microsoft Update Privacy Statement</u> 	er Micr	rosoft ou can vi	sit
	< Back Next >		Cancel	

Check "Use Microsoft Update to check for updates", then click on the button "Next".

髋 SQL Server 2017 Setup			_		×	
Install Rules						
Setup rules identify potential pr can continue.	oblems that might occur while running Setup. Failures must be correc	ted before Setup				
Product Key	Operation completed. Passed: 3. Failed 0. Warning 1. Skipped 0.					
License Terms						
Global Kules Microsoft Update	Hide details <<			Re-	run	
Product Updates	View detailed report					
Install Setup Files						
Install Rules	Rule	Status			_	
Feature Selection	Fusion Active Template Library (ATL)	Passed	ed			
Feature Rules	Image: Consistency validation for SQL Server registry keys Passed Image: Computer domain controller Passed					
Feature Configuration Rules						
Ready to Install	🔥 Windows Firewall	Warning				
Installation Progress						
Complete						
	< Back	Next >		Cance	I	
Then click Next.

髋 SQL Server 2017 Setup			- 0	×
Feature Selection Select the Enterprise features to	install.			
Product Key License Terms Global Rules	 Looking for Reporting Servio Features: 	ces? <u>Download it fro</u>	om the web Feature description:	
Microsoft Update Product Updates Install Setup Files Install Rules Feature Selection Feature Rules Instance Configuration Server Configuration Database Engine Configuration Feature Configuration Rules Product Install	Global Rules Features: Microsoft Update Instance Features Product Updates Instance Features Install Setup Files SQL Server Replication Install Rules Machine Learning Ser Feature Selection R Feature Rules Full-Text and Semant Instance Configuration Data Quality Services Server Configuration Analysis Services Database Engine Configuration Charact Features		The configuration and operation of each instance feature of a SQL Server instance is Prerequisites for selected features: Already installed: Windows PowerShell 3.0 or higher Microsoft .NET Framework 4.6 Disk Space Requirements Drive C: 1001 MB required, 11301 MB available	
Ready to Install Installation Progress Complete	Select All Unselect All	C:\Program Files\M	icrosoft SOL Server]
Complete	Shared feature directory: Shared feature directory (x86):	C:\Program Files\M C:\Program Files (x8	icrosoft SQL Server\	
			< Back Next > Cancel	

Check "Database Engine Services" then, click on the button "Next".

髕 SQL Server 2017 Setup					_		×
Instance Configuration Specify the name and instance	ID for the instance of SC	QL Server. Instance ID b	pecomes part of the i	nstallation path.			
Product Key License Terms Global Rules	 Default instance Named instance: 	SPPLM					
Microsoft Update Product Updates Install Setup Files	Instance ID:						
Install Rules Feature Selection Feature Rules	SQL Server directory: Installed instances:	C:\Program Files\Mice	rosoft SQL Server\MS	SQL14.			
Server Configuration	Instance Name	Instance ID	Features	Edition	Ver	sion	
Database Engine Configuration	SP_SQLEXP2016	MSSQL13.SP_SQLE	SQLEngine	Express	13.0	.1601.5	
Feature Configuration Rules	<shared compone<="" td=""><td></td><td>SSMS, Adv_SSMS</td><td></td><td>13.0</td><td>.15600.2</td><td></td></shared>		SSMS, Adv_SSMS		13.0	.15600.2	
Ready to Install Installation Progress Complete							
			< B	ack Next >		Cancel	

On the configuration of the instance, choose instance name and call it SPPLM.

Then click Next.

髋 SQL Server 2017 Setup				_		\times
Server Configuration Specify the service accounts an	d collation configuration.					
Product Key License Terms Global Rules Microsoft Update Product Updates Install Setup Files Install Rules Feature Selection Feature Rules Instance Configuration Server Configuration Database Engine Configuration Feature Configuration Rules Ready to Install Installation Progress Complete	Service Accounts Collation Microsoft recommends that you Service SQL Server Agent SQL Server Database Engine SQL Server Browser Grant Perform Volume Mainte This privilege enables instant to to information disclosure by a <u>Click here for details</u>	use a separate account for each Account Name NT Service\SQLAgent\$S NT Service\MSSQL\$S \v NT AUTHORITY\LOCAL enance Task privilege to SQL Serv file initialization by avoiding zero llowing deleted content to be acc	SQL Server servi	ce. Startup Manual Automa gine Service Jes. This may	Type ttic ttic	 ✓ ✓ ✓ ✓
		< Back	c Next	>	Cance	el

Activate automatic SQL Server Browser service if it is **multi-station** configuration.

Then, select the "Collation" tab.		
Customize the SQL Server 2017 Databa	se Engine Collation	
Select the collation you would like to	use:	
Windows collation designator and	l sort order	
Collation designator:	Latin1_General	\sim
Binary	Binary-code point	
Case-sensitive	Kana-sensitive	
Accent-sensitive	☐ Width-sensitive	
Supplementary characters	Variation selector-sensitive	
O SQL collation, used for backward	s compatibility	
SQL_1xCompat_CP850_CI_A8		^
SQL_AltDiction_CP850_CI_AS		
SQL_AltDiction_CP850_CS_AS SQL_AltDiction_Pref_CP850_CI_AS		~
Collation description:		
Latin1-General, case-insensitive, acc Order 49 on Code Page 850 for non-	ent-sensitive, kanatype-insensitive, width-insensitive for Unicode Data, SQL Server Sort Unicode Data	
	OK Canc	el

Select the Collation designator "Latin1_General" then, click on the button "OK".

髋 SQL Server 2017 Setup		_		×
Server Configuration Specify the service accounts an	d collation configuration.			
Product Key License Terms Global Rules Microsoft Update Product Updates Install Setup Files Install Rules Feature Selection Feature Rules Instance Configuration Server Configuration Database Engine Configuration Feature Configuration Rules Ready to Install Installation Progress Complete	Service Accounts Collation Database Engine:] a	istomize.	
	< Back Next >		Cancel	

Click on the button "Next".

🃸 SQL Server 2017 Setup				_		×
Database Engine Config	guration					
Specify Database Engine auther	tication security mode,	administrators, data director	ries and TempDB settings.			
Product Key License Terms Global Rules Microsoft Update Product Updates Install Setup Files Install Rules Feature Selection Feature Rules Instance Configuration Server Configuration Database Engine Configuration Feature Configuration Rules Ready to Install Installation Progress Complete	Server Configuration Specify the authent Authentication Mod Windows authen Mixed Mode (SQ Specify the password Enter password: Confirm password: Specify SQL Server a STEEL-PROJECTSON	Data Directories TempDB tication mode and administrated administration and administration and administration and administrators L Server authentication and administrators administrators administrators administrators Add Remove	FILESTREAM ators for the Database Eng Windows authentication) administrator (sa) accoun	t. SQL Server adr have unrestrict to the Databas	ninistrato ted acces: e Engine.	rs 5
			< Back	Next >	Cance	I .:

Select **Mixed Mode** authentication mode.

Specify the password for the SQL Server account: SpVienne38

It is mandatory to have a user be the SQL administrator.

Click on the "Data Directories" tab.

髋 SQL Server 2017 Setup			_		×
Database Engine Confid	guration				
Specify Database Engine author	tication security mode administr	ators data directories and TempDB settings			
specify batabase Engine auther	recation security mode, administr	ators, data directories and rempos settings.			
Product Key	Server Configuration Data Di	ectories TempDB FILESTREAM			
License Terms					
Global Rules	Data root directory:	C:\Program Files\Microsoft SQL Server\			
Microsoft Update	System database directory:	C:\Program Files\Microsoft SQL			
Product Updates		Server\MSSQL14.SPPLM\MSSQL\Data			
Install Setup Files	User database directory:	C:\Program Files\Microsoft SQL Server\MSSQL14.5		SQL .	
Install Rules					
Feature Selection	User database log directory:	C:\Program Files\Microsoft SQL Server\MSSQL14.	SPPLM/MS	SQL .	
Feature Rules	Backup directory:	C:\Program Files\Microsoft SQL Server\MSSQL14.3		SQL .	
Instance Configuration					
Server Configuration					
Database Engine Configuration					
Feature Configuration Rules					
Ready to Install					
Installation Progress					
Complete					
		< Back Nex	t >	Cance	el

In this screen, the user can choose the expected drive for the data base.

Click on the button "Next".

髋 SQL Server 2017 Setup	- 🗆 X
Ready to Install Verify the SQL Server 2017 feat	ures to be installed.
Product Key License Terms Global Rules Microsoft Update Product Updates Install Setup Files Install Rules Feature Selection Feature Rules Instance Configuration Server Configuration Database Engine Configuration Feature Configuration Rules Ready to Install Installation Progress Complete	Ready to install SQL Server 2017: Summary
	< Back Install Cancel

Click on the button "Install".

Press Next,

Press Next again to accept error reporting.

it will complete the installation and if all goes well, you get a success screen. If there are any problems then it will warn you what they are.

It is not necessary to reboot the server to use SQL Server 2017.

Once the application is installed, it is important that you must carry out the following to ensure SP PLM can work

Configuration for Client Access

Windows Firewall Setup

Configuration for Client Access

SQL Server needs to be configured to enable clients to access data.

From the Start menu, launch Configuration Tools / SQL Server Configuration Manager.

Go to SQL Server Network Configuration, Protocols for SPPLM.

Sql Server Configuration Manager Fichier Action Affichage ?			
Gestionnaire de configuration SQL Server (Local) Services SQL Server Configuration réseau SQL Server (32 bits) Configuration de SQL Native Client 11.0 (32 bits) Configuration du réseau SQL Server Protocoles pour SQL2016 Protocoles pour SQL2017 Configuration de SQL Native Client 11.0	Nom du protocole "\$" Mémoire partagée "\$" Canaux nommés "\$" TCP/IP	État Activé Désactivé Activé	

Enable TCP / IP via right click on the line.

B Général		
Active	Oui	
Connexion persistance	0.4	

Then for TCP / IP, right click Properties.

Steel Projects PLM 1.19.x

	Deat TCD		
	Port ICP	2	^
P	Ports ice dynamiques	0	
۲	Actif	Out	
	Activé	Nen	
	Adresse IP	=1	
	Port TCP		
	Ports TCP dynamiques	0	
Ξ	IP4		
	Actif	Oui	
	Activé	Non	
	Adresse IP	127.0.0.1	
	Port TCP		
	Ports TCP dynamiques	0	
Ξ	IPAII		
	Port TCP	1433	
	Ports TCP dynamiques		
Po Vi dy	orts TCP dynamiques de, si les ports dynamique mamiques, définissez cett	s ne sont pas activés. Pour utilis e valeur sur 0.	er les ports

On all classes of IP address, put 1433 on TCP Port property and clear the TCP Dynamic Ports property.

Then click OK.

Go to SERVICES choose the SQL Server Service and restart via a right-click the SQL Server service.

🚘 Sql Server C	onfiguration Manager		D X
Fichier Action Affichage ?			
Sestionnaire de configuration SQL Server (Local)	Nom SQL Server Browser	État En cours d'exécution	Mode de dér Automatique
Configuration réseau SQL Server 2005 (32 bits) Configuration de SQL Native Client 11.0 (32 bits) Configuration du réseau SQL Server Protocoles pour SERVEUR Configuration de SQL Native Client 11.0	Agent SQL Server (SERVE)	Démarrer D Arrêter Suspendre Reprendre Redémarrer	Automatique Autre (Déma
Redémarrer (arrêter nuis démarrer) le service sélectionné	< m	Propriétés	>
reserver of the second of the second second		Alde	

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Windows Firewall Setup

You must open the ports for the Firewall Microsoft if it is enabled.

For Windows 7:

Go to Control Panel, System and Security, Windows Firewall. Select Advanced Settings, Inbound Rules. Then create a new rule.



Select PORT.

Prev Inbound Rule Wizard		×					
Protocol and Ports	Protocol and Ports						
Specify the protocols and ports to which this rule applies.							
Steps:							
Rule Type	Does this rule apply to TCP or UDF	Does this rule apply to TCP or UDP?					
Protocol and Ports	TCP						
Action	O UDP						
Profile							
 Name 	Does this rule apply to all local port	s or specific local ports?					
	All local ports						
	Specific local ports:	1433					
		Example: 80, 443, 5000-5010					
	Learn more about protocol and por	<u>ts</u>					
		< Back Next > Cancel					

Select TCP, and at position 1433 Specific local ports. Press Next.

Prev Inbound Rule Wizard	President Statements and an an an an	x
Action		
Specify the action to be taken who	en a connection matches the conditions specified in the rule.	
Steps:		
Rule Type	What action should be taken when a connection matches the specified conditions?	
Protocol and Ports	Allow the connection	
 Action 	This includes connections that are protected with IPsec as well as those are not.	
Profile	Allow the connection if it is secure	
• Name	Inis includes only connections that have been authenticated by using IPsec. Connections will be secured using the settings in IPsec properties and rules in the Connection Security Rule node. Customize O Block the connection Learn more about actions < Back Next >	

Select "Allow the connection" and press Next.

Profile Specify the profiles for which this rule applies. Stone:	
Specify the profiles for which this rule applies.	
Store:	
Jiqo.	
Rule Type When does this rule apply?	
Protocol and Ports	
Action Domain	
Profile Applies when a computer is connected to its corporate domain.	
Name Private	
Applies when a computer is connected to a private network location.	
Public	
Applies when a computer is connected to a public network location.	
Leam more about profiles	
< Back Next > Cancel	

If you only want to be sure to allow connections from inside the domain only, select domain only. For connections from outside the domain, allow all.

Press Next.

	New Inbound Rule Wizard				x
N	lame				
S	pecify the name and description	of this rule.			
s	teps:				
	Rule Type				
	Protocol and Ports				
l•	Action				
•	Profile		Name:		
٠	Name		SQL SERVER		
			Description (optional):		
			< Back Hinist	1 Cance	ei 🖉

Give the SQL Server name to the rule, and to Finish.

Create a new rule UDP rule in the same way.

Prev Inbound Rule Wizard	-		3
Protocol and Ports Specify the protocols and ports to	which this rule applies.		
Steps:			
Rule Type	Does this rule apply to TCP or UDP	?	
Protocol and Ports	⊚ тср		
 Action 	ODP		
Profile			
 Name 	Does this rule apply to all local ports	or specific local ports?	
	All local ports		
	Specific local ports:	1434	
	Leam more about protocol and port	S S S S S S S S S S S S S S S S S S S	

This time select UDP to 1434 in specific local ports. As the name of the rule set SQL Server Browser.

Restore a Database in SQL Server

It is possible to import a database from another instance of MS SQL 2012.

Launch SQL Server Management Studio and connect to the server database. On database, right click Restore Database.

Microsoft SQL S	Server Management Studio	
File Edit Viev	v Debug Tools Window	Community
🗄 👥 New Query	🗅 🕒 📂 🖬 🗇 🌉 💂	
Object Explorer		→ ╄ ×
Connect 🕶 📑 📑	🕴 = 🝸 🛃 🍒	
ASPENCE	PLM (SQL Server 10.50.1617 - ASI ses	PENCE\Andre
± 🗀	New Database	
	Attach	
🕀 📄 Sec	Restore Database	
🕀 🧰 Ser	Restore Files and Filegroups	
⊕ □ Rep ⊕ □ Ma	Start PowerShell	
	Reports	•
	Refresh	

Choose the name "STEEL" for the restored Database.

Specify the source location as "From device" and press the "..." button to browse for the file.

间 Restore Database - STEEL	
Select a page	Script 👻 🎼 Help
	Destination for restore
	Select or type the name of a new or existing database for your restore operation.
	To database: STEEL -
	To a point in time: Most recent possible
	Source for restore
	Specify the source and location of backup sets to restore.
	From database:
	From device:
	Select the backup sets to restore:
	Restore Name Component Type Server Database Position First LSN Last LS
Connection	
Server: ASPENCE\PLM	
Connection: ASPENCE\AndrewS	
View connection properties	
Progress	
Ready	4
	OK Cancel

间 Restore Database - STEEL			23
Select a page Provide the select a page of the sele	Script 🔻 📑 Help		
Options	Destination for restore		
	Select or type the name of a new or existing database for your restore operation.		
Specify	Backup	ባ	-
Specify t	ne backup media and its location for your restore operation.		
Backup r	nedia: File		
C:\Progr	am Files\Microsoft SQL Server\MSSQL10_50.PLM\MSSQL\Backup\S Add		_
	Remove	-	
	Contents		
		st LSN	Last LS
Connection			
Server: ASPENCE\PLM	4		
Connection: ASPENCE\Andrev			
] · <u>View connec</u>	OK Cancel Help		

Then Press ADD and press for the backup .BAK file.

🧻 Restore Database - STEEL								• X
Select a page	Script 🔻 📑 Help							
	Destination for restore							
	Select or t	Select or type the name of a new or existing database for your restore operation.						
	To databa	se:		ST	EEL			-
	To a point	in time:		Mo	st recent possible			
	Source for res	tore —						
	Specify the	e source	and location of l	backup	sets to restore.			
	From data	atabase:						-
	From details	evice:		C:\	Program Files\Micro:	soft SQL Sen	ver\MSSQL	.10_5
	Select the	backup :	sets to restore:		1			
	Restore	Name	Component Database	Type Full	Server ASPENCE\PLM	Database PLM	Position 1	First LSN 22100000
Connection								
Server: ASPENCE\PLM								
Connection: ASPENCE\AndrewS								
View connection properties								
Progress								
Ready	•							•
						ОК		Cancel

Tick the option to restore, then Press OK.

A message tells you when the restoration is done.

Once restored, on the database list, Right click on the database and select Properties.

On the Options page, verify that the recovery mode is Full.

Select a page General	Script 🔻 🛐 Help				
Files	Collation:	French	_CI_AS		
Change Tracking	Recovery model:	Full	Full		
Permissions Extended Properties	Compatibility level: SQL Server 2008 (100)				
	Other options:				
	₽ ↓ □				
	Automatic			A	
	Auto Close		False		
	Auto Create Statistics		True		
	Auto Shrink	False			
	Auto Update Statistics		True		

SP PLM Installation & Setup

When SQL Server has been installed we can proceed to install Steel projects PLM.

The program must first be installed on the same computer that you installed SQL Server. The database can be created automatically and any other settings can be set.

Initial Setup on Server

If any other client computers require access, these can then easily be configured to connect to the main database.

Client Setup

Installing Steel Projects PLM

SP PLM needs to be installed first on the same computer that MS SQL Server 2017 is installed. This user needs to have administrative rights.

Run the setup.exe file on the Steel Projects PLM installation media.

🔹 Setup - Steel-Projects PLM — 🗌	×
License Agreement Please read the following important information before continuing.	
Please read the following License Agreement. You must accept the terms of this agreement before continuing with the installation.	
END-USER SOFTWARE LICENSE AGREEMENT	^
FOR STEEL PROJECTS SOFTWARE	
IMPORTANT: The STEEL PROJECTS software product in which this agreement is embedded, identified above with online, electronic or printed documentation ("Software") is protected by copyright laws and international copyright treaties, as well as other intellectual property	*
 I accept the agreement 	
○ I do not accept the agreement	
Next > C	Cancel

Setup - Steel-Projects PLM	_		×
Steel-Projects Installation prerequisits check			1
DK: Computer running Windows 10 or Windows Server 2016 OK: Microsoft .NET Framework v4.6 : Installed OK: Microsoft PowerShell v1 installed OK: Microsoft Installer 5.0.17134.1			
< Back Next	t >	Can	ncel

Press next and then select where you want to install the program to.

Setup - Steel-Projects PLM	_		×
Select Destination Location			
Where should Steel-Projects PLM be installed?			
Setup will install Steel-Projects PLM into the following folder.			
To continue, click Next. If you would like to select a different folder, d	lick Bro	owse.	
C:\Program Files (x86)\SteelProjects	Br	owse	
At least 415,3 MB of free disk space is required.			
< Back Next	>	Can	icel

The software will ask you which components you would like to install :

- Standard installation
- Shipping Mobile installation

Setup - Steel-Projects PLM	_		Х
Select Components Which components should be installed?			1
Select the components you want to install; clear the components yo install. Click Next when you are ready to continue.	u do no	t want to	
Standard installation		~	
Standard installation			
Shipping Mobile installation			
< Back Nex	t >	Can	cel

Select Standard installation then, click on the button "Next".

Setup - Steel-Projects PLM	_		×
Select Start Menu Folder Where should Setup place the program's shortcuts?			1
Setup will create the program's shortcuts in the following S	tart Mer	nu folder.	
To continue, dick Next. If you would like to select a different folder,	click Bro	owse.	
SteelProjects	В	rowse	
< Back Nex	t >	Can	icel

Choose Start Menu shortcut name and whether to create a desktop shortcut by pressing Next again.

Setup - Steel-Projects PLM	_		×
Select Start Menu Folder Where should Setup place the program's shortcuts?			1
Setup will create the program's shortcuts in the following St	art Me	nu <mark>fo</mark> lder.	
To continue, click Next. If you would like to select a different folder,	click Br	owse.	
SteelProjects	E	Browse	
< Back Nex	t >	Car	ncel

Select the file extensions association and if a shortcut will be created on the PC desktop. Then, click on the button "Next".

Setup - Steel-Projects PLM —		×
Select Additional Tasks Which additional tasks should be performed?		
Select the additional tasks you would like Setup to perform while installing Steel-Projects PLM, then click Next.		
Additional shortcuts:	^	
Create desktop shortcut		
File extensions association		
✓ CAM (*.cam)		
CAM3D (*.cam3D)		
✓ *FNC (*.fnc)		
STEP (*.stp / *.step)		
DSTV (*.cnc / *.cnp / *.nc / *.nc1 / *.nc2)	~	
< Back Next >	Cance	

Il ask you to review the installation. Press INSTALL to finish.

Setup - Steel-Projects PLM		_		\times
Ready to Install Setup is now ready to begin installing Steel-Project	ts PLM on your com	puter.		1
Click Install to continue with the installation, or clic change any settings.	k Back if you want	to reviev	v or	
Destination location: C: \Program Files (x86) \SteelProjects			^	
Setup type: Standard installation				
Selected components: Core files				
Start Menu folder: SteelProjects				
Additional tasks: <			> *	
<	Back Insta	all	Cano	el

Once the installation is complete, it will automatically run the Setup Assist to connect to the database.

If this is the first time the installation has been run, you need to Create the SPPLM Database

If this has already been done and this is an installation on a client PC, you need to connect to the database

Creating The Database

If this is the first time you have installed the software and it is on the same computer that you installed MS SQL Server 2017, you need to create the database.

Once the installation of SP PLM is complete, it will automatically run the Setup Assist to do this automatically.

If you need to cancel installation or it does not automatically run you can open the *Sp.Setup.Assist.exe* file from the following location :

32 Bit machine: C:\Program Files\SteelProjects 64 Bit Machine: C:\Program Files (x86)\SteelProjects

Steel-Projects PLM configuration wizard	×
3	
Welcome to Steel-Projects	
configuration wizard.	
This wizard will guide you through the minimum set of steps needed to run Steel-Projects PLM	
Click Next to continue	
Next > Cancel	

When the welcome screen appears, press Next.

Steel-Pro	ects PLM configuration wizard		×
1	Validating registry entries		
	The informations needed to c database are shown below. P edit if needed. Server [\Instance] name Database name	onnect to the lease check and	
	Click Next to continue	New database Restore Database from Zip Search	
		Next > Cancel	

Next to Database Name, select New Database, and press Next.

Steel-Pro	jects PLM configuration wizard		×
3	Login SQL Server		
	 Default 		
	Custom		
	Login		
	Password	۲	
		< Back Next > Cance	ł

Enter the expected credential to login to SQL Server then, click on the button "Next".

Steel-Pro	ects PLM configuration wizard	×
1	New empty database	
	Choose a name for the new empty database that will be created on this computer	
	SPPLM2019	
	Click Next to continue < Back	Next > Cancel

Create the name of the Database. It can be the same as the instance name or something different. Write SPPLM and press Next.

Steel-Pro	jects PLM configuration wizard	×
1	New empty database	
	Creation done !	
	Click Next to continue	
	Ne	xt >

The database will then be created, and you will get a message saying that the final configuration will be performed when the application is opened.

Steel-Pro	jects PLM configuration wizard	×
3	Validating registry entries	
	The informations needed to connect to the database are shown below. Please check and edit if needed. Server [\Instance] name Database name SPPLM2019	
	Click Next to continue Next > Canc	cel

Click on the button "Next".

Steel-Projects PLM configuration wizard			
3	Login SQL Server		
	ODefault		
	 Custom 		
	Login	sysdba	
	Password	••••••	
		< Back Next > Ca	ncel

Click on the button "Next".

Steel-Projects PLM configuration wizard			
1	Base folde	r	
		Base folder is not set yet because the selected database is empty. Running Steel- Projects PLM for the first time will take care of further configurations.	
		Click Finish to exit.	cel

Open the software either from the start menu or desktop short cut. You will be asked to set parameters.

			- 🗆	×
Configuration				
Main Language	English -			
Company	STEEL PROJECT			
User	A USER			
DataBase path	\\PLMSERVER\PLM			
	< Previous	lext >	Abo	rt

Main language: Set the main language of SPPLM.

Company: Create a company name

User: Create the Master User in the database. This user has administrator rights.

Old Database Path: Shared directory will be positioned where the common data (reports, files etc)

If the software is to be used in a multi-client environment, it is important that this path must be accessible by ALL computers needing access to SP PLM.

The best way to do this is to create a Share on the server, with full read write modify sharing rights for all users who need access. Right click on the folder and go to SHARING to set this.

Once the share is created, copy the shared path and use this as the Old database Path

The Create button is available only if the data is set.

Press Create and the user and company will be created, and shared files put in the database path. The application will then open.

For any further installations of the software on additional client computers, you do not need to do this, but instead should <u>Connect to the database</u> instead

Connecting to The Database

When installing the software on additional computers, you do not need to create a database again, you just need to connect to the one you have already created.

Install the software like normal and then once installer has completed, the Setup Assist will open automatically.

If you need to cancel installation or it does not automatically run you can open the *Sp.Setup.Assist.exe* file from the following location :

32 Bit machine: C:\Program Files\SteelProjects 64 Bit Machine: C:\Program Files (x86)\SteelProjects



When the welcome screen appears, press Next.n the dropdown menu for server, you will see the SQL database instance name if it has been installed correctly.

Select this option and press Next.

Steel-Projects PLM configuration wizard		
3	Validating registry entries	
	The informations needed to connect to the database are shown below. Please check and edit if needed. Server [\Instance] name Database name SPPLM2019	
	Click Next to continue	
	Next > Cance	ł

In the dropdown option for Database Name, select the name of the database you have already created and Press Next.

The software will then connect to the database and only require local user settings to be configured.

General tools & Navigation

Icons and Software Short-cuts

You will find these items in various windows of the program :


Grid tools bar

For all grids in SPPLM you can open the tools bar :

Cont	ract 16025			Project 160	25PL			Drawing				Assembly	Mark
	Project 🔍	Description	Object	Manager	Customer	Typology	Final Date of the Project	Theoretical weight	Maximum length	Priority	Comment 1	Comment 2	Comment 3
	16025	OLVAC							10000.00	99			
•	16025PL	PLIAGE							100.00	99			
	16025TPS	TEMPS							1000.00	99			
					ract 16025			Proj	ect 16025PL				Drawing
				+ =	- Project		P 🖡 🕯	Case sensitive	💇 - 🛃 -	🔽 Alphanu	umeric		
					Project	0	Description Ob	ject Manage	er Custon	ner Typ	pology Final Da	te of the Project 1	heoretical weight

Ribbon Menu

The ribbon menu is always available in the top left hand corner of the screen



From here you can do the following

Language - Change the default language. Translations are set from the translation tool-bar



Remote Support - To allow a Steel Projects Support Engineer to connect remotely to your pc you need to give ID and password.



	<u> </u>						S	teel Projects CAD	Viewer
Steel-Pro	ojects F	ile							
CAM	CAM3D Open	FNC	% DSTV	STEP Open	Autocad	Close General	Update Utilities	Options Configuration	
Compone	ent								
				Profile	e				
Info									
Property	r		Value						

CAD Viewer - Short-cut to launch the CAD Viewer tool

Send to Steel Projects - Short-cut to send an email to Steel Projects Support

User Manuals - Access to the manuals

About - System information

1 About	×
Composant Parts of this software	
Composant Parts of this software \$p.Plm 1.19.0.12229 \$p.ActionScript 1.19.0.10245 \$p.Alma.Almacam 1.00.0 \$p.Alma.Base 1.19.0.961 \$p.Alma.V35 1.19.0.961 \$p.Alma.V36 1.19.0.961 \$p.Alma.V37 1.19.0.961 \$p.Alma.V38 1.19.0.961 \$p.Alma.V39 1.19.0.961 \$p.Alma.V39 1.19.0.961 \$p.Alma.V39 1.00.061 \$p.Alma.V39 1.00.061 \$p.Alma.V39 1.00.061 \$p.AlmaCam.Loader 1.00.06 \$p.AlmaCam.Wrapper 1.00.0 \$p.AlmaCam.Wrapper.Drafter 1.00.0 \$p.Autocad 1.19.0.10245 \$p.Cam 1.19.0.10245 \$p.Cam. 1.19.0.10245 \$p.Cam. 1.200 \$p.Cloud.Client 1.21.200	~
Sp.Cloud.CommonSigned	

End user license agreement - Open the agreement license

6 D			P	
	End	user	license	agreement

END-USER SOFTWARE LICENSE AGREEMENT FOR STEEL PROJECTS SOFTWARE

 \mathbf{A}

Print (

Close

IMPORTANT:

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Prevent production data transmission

🖮 Smart Program			?	×
	STEEL PROJECTS FR	ANCE		
	Current program version	1 19 0		
	Maximum licensed version Expiration date	1.99.99 27/02/2019		
SMART				
			<u>ر</u>	Close

Smart Program - Displays data about version, license and expiration date

Folder - Give you the main folders information.

Folder	?	\times
Installation	C:\Program Files (x86)\SteelProjects \Sp.Plm	
Base	\`\SuperMacro\base\	
Parameter	C:\Users .STEEL-PROJECTS0\AppData\Roaming\SteelProjects	
Backup	\' \Backup\	
	<u>ٺ</u>	Close

Quick Access Tool-bar

The quick access tool-bar is located at the top of the screen

3 🗯	÷						
Steel-Proje	Custor	Customize Quick Access Toolbar					
	Cu	Customize Quick Access Toolbar					
ک	Mir	Minimize the Ribbon					
Import •	Project manager	Contract	Project	Fabrication Job	Section Nesting		

By customizing it, you can add various tool-bar icons to it for quick access by selecting them from the left menu, sending them to right and pressing confirm

Customize Quick Access Toolbar	×
Configuration Ists Ists Report management Configuration Configuration Local settings Company Users Group Users Users Users Users manager	uterity
	🗸 Ok 🔀 Abort

Components

Folder Selection:

Folder Selection by using the listing

C:\Users\test\Documents\Test\

Directory		
Filter		Sélectionner un dossier
» 🔞 💩 🥂		← → ✓ ↑ → Ce PC → Data (D:) → Steel_Project →
Name \$\$1208.CAM \$\$1_0001.CAM \$\$593.CAM 15090-22_1208.CAM 15115-15_593.CAM	Creation Date 18/04/2018 17:50: 23/01/2019 16:58: 18/04/2018 17:50: 25/06/2018 13:10: 25/06/2018 13:10:	Organiser Nouveau dossier Vidéos Vidéos Mom Vidéos Data (D:) SRECYCLE.BII ApowersoftRi Backup Base_PLM Base_PLM BaseFolders BASEPLM Faadhack Ma
Delete Imported Files		Install Mob

Selection bar:

Select all the item

🔌 🖉 🖉 🎽		-	
lave	Creation Date	Modification Date	Size
\$\$1208.CAM	18/04/2018 17:50:02	18/04/2018 17:50:02	4,13 Ko
\$\$1_0001.CAM	23/01/2019 16:58:17	23/01/2019 16:58:17	15,2 Ko
\$\$593.CAM	18/04/2018 17:50:02	18/04/2018 17:50:02	5,39 Ko
15090-22_1208.CAM	25/06/2018 13:10:53	25/06/2018 13:10:53	4,45 Ko
15115-15_593.CAM	25/06/2018 13:10:53	25/06/2018 13:10:53	3,37 Ko

Unselect all the item

≫ <mark>⊗</mark> , @ C						
Name 2	Creation Date	Modification Date	Size			
\$\$1208.CAM	18/04/2018 17:50:02	18/04/2018 17:50:02	4,13 Ko			
🛑 \$\$1_0001.CAM	23/01/2019 16:58:17	23/01/2019 16:58:17	15,2 Ko			
🛑 \$\$593.CAM	18/04/2018 17:50:02	18/04/2018 17:50:02	5,39 Ko			
15090-22_1208.CAM	25/06/2018 13:10:53	25/06/2018 13:10:53	4,45 Ko			
15115-15_593.CAM	25/06/2018 13:10:53	25/06/2018 13:10:53	3,37 Ko			

Invert the selection

≫ 🕺 🌺 C			
Name	Creation Date	Modification Date	Size
\$\$1208.CAM	18/04/2018 17:50:02	18/04/2018 17:50:02	4,13 Ko
\$\$1_0001.CAM	23/01/2019 16:58:17	23/01/2019 16:58:17	15,2 Ko
\$\$593.CAM	18/04/2018 17:50:02	18/04/2018 17:50:02	5,39 Ko
15090-22_1208.CAM	25/06/2018 13:10:53	25/06/2018 13:10:53	4,45 Ko
15115-15_593.CAM	25/06/2018 13:10:53	25/06/2018 13:10:53	3,37 Ko

Refresh the selection of all the item

🦻 🖉 🦉 🏹			
Name 😽	Creation Date	Modification Date	Size
\$\$1208.CAM	18/04/2018 17:50:02	18/04/2018 17:50:02	4,13 Ko
\$\$1_0001.CAM	23/01/2019 16:58:17	23/01/2019 16:58:17	15,2 Ko
\$\$593.CAM	18/04/2018 17:50:02	18/04/2018 17:50:02	5,39 Ko
15090-22_1208.CAM	25/06/2018 13:10:53	25/06/2018 13:10:53	4,45 Ko
15115-15_593.CAM	25/06/2018 13:10:53	25/06/2018 13:10:53	3,37 Ko

Grid Control:

Create a n	Create a new item.								
★₩ -	Compo	onent		🔎 🤞	👕 🗌 Case sensitive	2X - JA	Alphanu	imeric	
45		Component 🔍		Quantity	Profile	Length		Width	
•	خ 😓	PL1	i 🖉 🛷	1	TOLE1	50.00		100.00)
Component	: 16025 / 160	25PL / 1000 / PL1 /							×
Rew Save X Abort Delete Print Wext Input Out								?	
Projec	ct 16025PL		0	Component					

A new screen is displayed to add a new item.

Delete an item.		
New Save Abort	Delete Print Next Inpu	ıt 😃 Quit
Contract 16025	Project 1	6025PL
🕂 🏭 — Component	🔎 🧍 👕 Case sensitive	🛃 👻 🖌 Alphanumeric
Component 🔍	Quantity Profile	Length Width

The selected line in the grid is disappeared. The buttons "Save" and "Abort" are enabled.

Create	a new item	by using the Edi	t Gri	d.				
+ 👪	Compo	onent			ρ 🦊	👕 🗌 Case sensitive	e 🚺 👻 🗸 Alpha	anumeric
	5	Component 🔍			Quantity	Profile	Length	Width
•	1	PL1	ø	۲	1	TOLE1	50.00	100.00
+								
-								

A new line in the grid is added.

Research Grid Control:

Enter the characters in the field then click on the button "Search" or press the Enter key. Use the character "?" for an advanced search.

Contra	ct 16022		P	roject 16022				
🕂 🏢 🗕 Assembly Mark ?L?			🔎 🤞 肯 🗌 Cas	🔎 🌲 👕 Case sensitive 108 elements 🛛 🛐 👻 🖬 Alphanumeric				
	Quantity	Assembly Took	Description	Delivery Date	Treatment	Material Grade		
	1	T4	AUXENT					
	1	Т3	AUVENT					
	1	L66	LISSE					
	1	L63	LISSE					
	1	L64	LISSE					
	1	L65	LISSE					
	1	L54	LISSE					
	2	CH17	CHEVETRE					

Contrac	ct 1602	22		<u></u> Рі	roject 16022		
+ 📰 — Assembly Mark ?L?			🔎 🔩 🔲 Case sensitive 108 elements 🛛 🗹 🗸 Alphanumeric				
		Quantity	Assembly Mark	Descripton	Delivery Date	Treatment	Material Grade
		1	T4	AUVENT			
		1	Т3	AUVENT			
		1	L66	LISSE			
		1	L63	LISSE			
•		1	L64	LISSE			
		1	L65	LISSE			
	-	1	L54	LISSE			
		2	CH17	CHEVETRE			

Navigate to the Next or Previous.

User search can be in case sensitive.

Contrac	t 16022		Project 16022					
+ 📰 — Assembly Mark 🕅			🔎 💺 👔 🔀 case sensitive 0 elements 🛛 🛨 🔽 Alphanumeric					
	Quantity	Assembly Mark	Description	Delivery Date	Treatment	Material Grade		
	1	T4	and the second s					
	1	Т3						
	1	L66						
	1	L63						
•	1	L64						
	1	L65						
	1	L54						
	2	CH17						

Click on the button "Export" to export grid data in CSV or Excel file.

	Contrac	t CAM3E	0_1		Projec	Project CAM3D				
🕂 🏢 🛑 Assembly Mark				🔎 🧍 👕 🖸 Case se	nsitive 🔣 👫	🝷 🔽 Alphanum	eric			
	4		Assembly Mark	Quantity	Description	Delivery Date	Treatment	Material Grade		
•	1		PROFILES	1	Profils bruts					
	2	0	HOLES	1	Perçages					
	2	0	CHAMFERS	1	Chanfreins					
	<i>i</i>	0	SCRIBING	1	Scribing					
	<i>i</i>	0	CONTOURS	1	Contours					
	1	0	MARKING	1	Marquage					
	<i>i</i>	0	BREAKS	1						
	1	0	PLIAGES	1						

Onon o										
Co	ntract	1602	22		Pi 🎬 Pi	Project 16022				
+ III - Assembly Mark ?!?			🔎 🤞 👔 🗆 Cas	e sensitive 108 ele	ments 🛃 👻 🗸	Alphanumeric				
			Quantity	Assembly Mark	Description	Delivery Date	Treatment	Material Grade		
			1	Τ4	AUVENT					
			1	ТЗ	AUVENT					
			1	L66	LISSE					
			1	L63	LISSE					
•			1	L64	LISSE					
			1	L65	LISSE					
			1	L54	LISSE					
			2	CH17	CHEVETRE					

Click on the button "elements" to select all the search result

Filter:

Cor	itract 16022		1	Project 16022			Drawing	I	0.
+ 🏽 •	 Assembly Mari 	k ?!?	🔎 🕹 👔 🗆 Ca	se sensitive 108 el	lements 🛐	Alphanumeric			
	Quanti	ty Assembly Mark	Description	Delivery Date	Treatm	Assembly Mark	- Ascending	- 🖌 Alphanumeric	
	1	T4	AUVENT		-	Assembly Mark			07/03/
	1	Т3	AUVENT			Jantity			07/03/2
	1	L66	LISSE		1	Description			07/03/2
	1	L63	LISSE			Delivery Date			07/03/2
F.	1	164	LISSE			Ireatment Material Create			07/03/3
<u>i</u>	1	165	LISSE			Final Painting			07/03/
	1	154	LICCE			Comment 1			07/02/
		0.04				Comment 2			07/03/
	2	CHI/	CHEVETRE			Comment 3			07/03/.
	1	CH19	CHEVETRE	1		Last Revision Update			07/03/3
	1	CH18	CHEVETRE			Weight			07/03/3
	4	N14	RENFORT			Surface			07/03/2
	4	N15	RENFORT			Drilling			07/03/3
	1	T12	AUVENT			Marking			07/03/3
	2	N16	RENFORT			Cutting			07/03/2
	- 1	T13	AUVENT			Scribings			07/03/3
	1	T2				Bendings			07/03/
		12	AUVENT			Chamfers			07/03/1
	1	11	AUVENT			Creation Date			07/03/3
	1	P6	AMEPRS			Modification Date			07/03/3
	2	D14	LINCOLD						07/02/

Select the expected column to filter then, click on the button "Sort"

Contrac	t 16022			Project 16022			Draw	ving 1
+ 🏽 🗕	Assembly Mark ?!?) 🔎 🦊 🛊 🗔 G	ase sensitive 108 e	lements 🛃 🝷	Alphanumeric		
	Assembly Mark	Quantity	Description	Delivery Date	Treatment	Material Grade	Final Painting	Comment 1
1	L57	2 3	LISSE					
	L2	2	MONTANT					
Ø	L39	2	LISSE					
	L58	2	LISSE					
	L13	2	LISSE					
Ø	E3	2	GOUSSET					
	L19	2	LISSE					
	B2	3	BUTON					
	B15	3	BUTON					
	T14	3	AMEPRS					
	CH14	3	CHEVETRE					
	B1	3	BUTON					
Ø	AT5	3	ATTACHE					
Ø	N11	3	PANNE					
	CH15	3	CHEVETRE					
1	L33	4	LISSE					
1	L36	4	LISSE					
	T6	4	AMEPRS					

Advanced Search:

Treatment

+ 🔍

To create a new item, enter its name in the field then click on the button "+" or press [CTRL+INS]

Treatment	TREAT001	
Painting		- v

🞡 Treatment	t
New	Save X Abort Delete Print H Next Input U Qui
Treatr	nent TREAT001
General 1	Fooling
Trea	tment TREAT001
Des	cription

3 ways to display the item listing :

- Click on the button "Search"
- Press [F3] When the cursor is inside the text-box
- You can also Double click the mouse

Treatment	PEINTURE	+
Painting		+
O - · ·		

V Treatment			
Treatment		Create	
ID 🔺	Treatment		
1	GALVA		
2	PEINTURE		
3	BRUT		
5	GALVA+PEINTURE		
6	RAL 7042		
7	RAL 9010		
8	GALVA LAQUE 7015		
9	RAL 7040		

Next value:

	<u></u>
Click on the button "Next	value" to update the current value to the next.
8 Component : 16022 /	16022 / 1 / T13 /
New Save	Abort Delete Print
Project 16022	Co
Component	400
Quantity	1 🔹
Profile	TC70*3 🕂 🔍
Unit	Metric (mm) OImperial
Length	430.17 mm
Width	0.00 mm
Group	TUBES R/C <
	45

The next value is updated. The buttons "Save", "Abort" and "Delete" are enabled.

	😂 Component : 16022 / 16022 / 1 / T13 /		
New Save	Abort Delete Print		
Project 1602	2		
Component	400		
Quantity	1 👤		
Profile	TC70*3		
Unit	Metric (mm) OImperial		
Length	430.17 mm		
Width	0.00 mm		
Group	X-DIVERS		



Country Addresses

Exact Profile / Profiles

Material gra

Toolings

From this menu you can set up most of the Data for your company

Standard Customer

Folding

Material Grade

Material Material Treatments Painting Profiles Grade type



Profile Groups Workstations

Producti

From this menu you can view or set-up your specific Material Grades. Some standard grades are created automatically or you can modify these as you wish.

To add a new material grade to the database, type the name into the search box and then press NEW or [Ctrl+N].



You can then add a description and density (the standard density of steel is 7.85) and then either press "SAVE" to save and close or "NEXT INPUT" to add another Material Grade.

Material Grade	A26
Material Grade	<u>A30</u>
Description	
Density	7.85
Material type	+ ⊂
Short code	

Steel Projects PLM 1.19.x

You can define a material type. This will help you to define and material code link.

Material Grade	A36					
Description						
Density	7.85	O Material bu		_		~
Material type	<u>+</u> Q					^
Short code		Material type		Create		
		ID	 Material type 			
		1	ACIER			
		46	ALU			
		130	BOIS			
		All Visible			Ok 🔀	Abort

Depending of the Project manager option, you will be able to define Equivalence between Material grades.

Gener	al	
I − P	Project manager	
	Default treatment	
	Default material grade	
	Default painting	
►	Status Management	
	Job management	
	Product Management	
⊳	Sub assembly management	1
	Drawing quantity	
	Revision Management	✓
	Material Grade Upgrade	
_	Enabled by default	
₽	Profiles Upgrade	
	Project customer management	
⊳	Part checking	
	Warning if part is in drawing in production	
	Priority mode	Drawing -
	Sites and departments management	
	Workstation multi export	1
Þ	EN 1090 standard management	



You can define Material Code for each Material Grade or according the Material type you define.



To view the list of material grades, either press [F3] or double click in the search box.

🔍 Material G	rade	-		×
Material Grade				
ID	 Material Grade 			
1	S235JR			
4	S275JR			
5	S235JRG2			
7	S355JR			
12	S355J0			
14	A60			
15	E36-2			
16	E24-2			
17	STEEL_UNDEFINED			
18	EPDM			
19	S355JO			
20	S235JO			_
21	S275IO			
All Visible			k 🗙	Abo

Then double click on any of the grades to modify its name, description, or density, or delete it from the database.

New Save	Abort Delete Print How Next Input U Quit
Material Grade S275JR	
General Equivalence Ma	aterial code
Material Grade	S275JR
Description	EN10025/93
Density	7.85
Material type	
Short code	

A material Grade can be replaced by another one. Select the Material Grade to replace then, click on the button "Replace".

Replace	
New Save	Abort Delete Print H Next Input U Quit
Material Grade S275JR	
General Equivalence Mat	erial code
Description	EN10025/93
Density	7.85
Material type	🕂 🔍
Short code	

A Material Grade Selection screen is displayed. Select the expected one then click on the button "Ok".

Material Type



From this menu you can view or setup a specific Material Type.

Used only for Plate Nesting Module, this parameter will regroup a list of material grade to link with a specificity material code.

To add a new material type to the database, type the name into the search box and then press NEW or [Ctrl+N].



You can then add a description.

New Vave	Abort Delete	Print Hext	Input 😃 Quit
Material type MATER	IAL TYPE 1	Q	
General Material code			
[
Material type	MATERIAL TYPE 1		
Description			

You can then affect a Material Code for this Material type.

General Material code		
Material code		
ALU		
BOIS		
STEEL		
	2	
-		

Treatments



From this menu you can view or setup your different types of treatment. Treatments are extra processing that is not done on a CNC machine, for example Shot blasting or Galvanising. By using the treatments function in PLM you can create specific lists or custom workflows for automatic handling machines.

To add a new treatment to the database, type the name into the search box and then press NEW or [Ctrl+N].



You can then add a description and then either press [SAVE] to save and close or [NEXT INPUT] to add another Treatment.

Tooling - To associate the treatment with a tooling, you must do this here. This is required when you have an CNC machine that can do the treatment automatically, for example an automatic Shot blast line.

For more information on tooling see here

New Save X Abort Delete Print Wext Input U Qui	t
Treatment GALV	
General Tooling	
Tooling	
GALVA+PEINTURE Drag and Drop GALVA	
PEINTURE	

To view the list of treatments, either press [F3] or double click in the search box. By default this list is blank.

🔍 Treatment		-		×
Treatment				
ID 🔺	Treatment			
1	GALVA			
2	PEINTURE			
3	BRUT			
5	GALVA+PEINTURE			
6	RAL 7042			
7	RAL 9010			
8	GALVA LAQUE 7015			
9	RAL 7040			
10	RAL 5015			
11	RAL7040			
12	RAL 5012			
13	RAL 7035			
14	ANTERQUILLE			-
All Visible			k 🗙	Abort

Double Click on a tooling to view it and add a description if required.

A treatment can be replaced by another one. Select the Treatment to replace then, click on the button "Replace".

S Replace	
New Save Abort Delete Print Hext Input	t
Treatment RAL 7042	
General Tooling	
Treatment RAL 7042 Description	
Parts	
Master	
Other	
O Finished Pieces	
Finished Pieces or master	

A treatment Selection screen is displayed. Select the expected one then click on the button "Ok".

Painting



From this menu you can view or setup your different types of painting. This can be used to for reporting, automatic paint requirements calculation, or for custom workflows for different painted or none painted items.

You can also set up different rules more single flange unpainted bars.

To add a new type of Painting to the database, type the name into the search box and then press NEW or [Ctrl+N].



General - Specify the default thickness of this type of painting

Painting	GREY			0	2	
General Optim	ize Cutting					
Painting		GREY				
Thickness		0.00	mm			

Optimize Cutting - If you produce bars that are one flange unpainted, you can control this here by turning off the part rotations the section nesting module will use to optimize the nesting.

This allows for the top flange of the part always being at the same place in the bar for all nested parts with this painting type

General	Optimize	Cutting
Unitary	/ bundle	1
		Symmetry
	X	✓ X Symmetry
	Y	✓ Y Symmetry
	ΧŶ	✓ XY Symmetry

To view the list of treatments, either press F3 or double click in the search box. By default this list is blank.

🔍 Painting		-		×
Final Painting				
ID 🔺	Final Painting			
45	MIRROIR			
51	PEINT			
All Visible		🛹 c	k 🗙	Abort

Double Click on a painting type to view it and modify details if required.

Profiles



This menu opens up the Profile Manager. By default a full list of standard profiles are included in the database. Profiles are automatically added to the database when importing them from certain CAM files.

View Profiles

To view the list of profile, either press [F3] or double click in the search box.

A new window will open up. You can type in this box to filter the results.

🔍 Profile					_		×
Profile							
ID	Category	Profile	Description	Creation Date	Modification Date		
1	А	C10X15.3		16/12/2015 13:45	16/12/2015 13:45		
3	A	C10X25		16/12/2015 13:45	16/12/2015 13:45		
4	A	C10X30		16/12/2015 13:45	16/12/2015 13:45		
5	A	C12X20.7		16/12/2015 13:45	16/12/2015 13:45		
6	A	C12X25		16/12/2015 13:45	16/12/2015 13:45		
7	A	C12X30		16/12/2015 13:45	16/12/2015 13:45		
8	A	C15X33.9		16/12/2015 13:45	16/12/2015 13:45		
9	A	C15X40		16/12/2015 13:45	16/12/2015 13:45		
10	A	C15X50		16/12/2015 13:45	16/12/2015 13:45		
11	A	C3X4.1		16/12/2015 13:45	16/12/2015 13:45		
12	A	C3X5		16/12/2015 13:45	16/12/2015 13:45		
13	A	C3X6		16/12/2015 13:45	16/12/2015 13:45		
14	A	C4X5.4		16/12/2015 13:45	16/12/2015 13:45		-
					🗸 o	k 🗙	Abort

New Save Abort Delete Print How Next Input UB254*102*25						
Profile Description	UB254*102*25	Metric (mm) Maximum Scrap	Imperial			
H 257.200 B 101.900 C 4 6.000 E 8.400 R 7.600	H1		Ex 0.000 Ey			
Weight 25.1 Surface 0.89 Section 3203	5 Kg/ml 70 m²/ml .90 mm²		(ML Ç M ² \ UN r			

Double click on a profile to see its details. In here you can manually modify any of the dimensions if required.

Adding New Profiles

If you need to manually draw a part with a bespoke profile size, you need to first add it into the Profile Manager.

To manually add a new profile to the database, type the name into the search box and then press NEW or [Ctrl+N].



Then choose the type of profile by clicking on the corresponding icon, and add the profile measurements.

The weight, surface area and section are automatically calculated.

Profile		L600*50*5	Metric (mm)	mperial
Descript	ion		Maximum Scrap 0.00	mm
H 0.00	0	H1		Ex 0.000
0.00	0	B1	BE	Ey 0.000
:		C1	. ≜`	Tr 0.000
0.00	0	A1	Fr Fr	Tr1
0.00	0	E1		Prc 0.000
0.00	0	R1 0.000	<u>Ey</u> , , , Tr,	Prc1
		R2	<mark>, </mark>	
Veight	0.00	Kg/ml		1L
Surface	0.0000	m²/ml		1 ²
Section	0.00	mm²	C ΙΙ • Ն ω 、 ι	JN

When you are finished, press [SAVE] to save and close or [NEXT INPUT] to save and add another Profile.

Creating a Generic profile

It's possible to create a parametrized profile. This is used when you don't want to create all dimensions of a profile.

In the profile name field, type the prefix of the profile, plus a "?".

New 🗸	Save Abort Delete	Print Print Quit
Profile	SHS?	

This question mark means some parameters are expected.

When you press [Enter], in the next screen, you will have to enter the parameters in their sequence.

Replace				
New Save Profile SHS?	Abort D	elete	Quit	
General Profile Description	SHS?	Metric (mm) Maximum Scrap	Imperial	m
H 1.000 B 2.000 C A 3.000 E R 4.000	H1 B1 C1 A1 E1 R1 R2		E) Ey Ti Ti Pi Pi	x
Weight -0.24 Surface -0.000 Section -30.88	Kg/ml 9 m²/ml mm²		(ML CM ² CM ² UN	

When you will use this profile, you will have to input as follow :

SHS100*3

The first parameter after the profile name, 100, will be assigned to the height and the width of the square profile.

The second, 3, will be the thickness.

Folding Parameters



Steel Projects PLM includes a part unfolding tool. To use it, the folding parameters must have been set-up.

The goal is to define a ratio, r, for each folding case.

This ratio, in green here, is the position of the neutral fiber, as shown below : (0.5 is in the exact middle of the thickness, 1 is on the inside and 0 is on the outside)



Let's analyse this example :

- 🖌	Category	Prefix	Material Grade	Fold type	Minimum angle	Maximum angle	Min Thickness	Max Thickness	Ratio
	L			~	-180.00	180.00			0.50
	L		S235JR	~	-180.00	-90.00			0.30
	L		S235JR	~	-90.00	-90.00			0.33
	L		S235JR	~	-90.00	180.00			0.35

The folded angle profiles have a 0.5 ratio.

A folded angle, with a S235JR material grade have a ratio of

0.30 for a bending angle -180° <> -90°

0.33 for a -90° angle

0.35 for a bending angle $-90^{\circ} < > 180^{\circ}$

In our example, the first line is not mandatory.

By default, the ratio, if not defined in this grid, is equal to 0.5

Standard Flats



Standard Flats are parts that PLM can use section nesting for, in order to go through a linear machine such as a saw drill or angle line for example.

You can use this screen to set the standard flat sizes.

Any part with a size not in this list, or of a none standard shape, will be imported as a gusset\plate in order to be sent for plate nesting.

0.00	-	Thickness						
		5.00	30.00	40.00	50.00	60.00	70.00	80.00
	▶ 40.00	\bigcirc	\bigcirc	\bullet	\bigcirc	\bigcirc	\bigcirc	\bigcirc
	50.00	\bigcirc	lacksquare	\bigcirc		\bigcirc	\bigcirc	\bigcirc
	60.00	\bigcirc	\bigcirc	\bigcirc	\bigcirc		\bigcirc	\bigcirc
Width	70.00	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	lacksquare	\bigcirc
	80.00	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	lacksquare
	120.00	\bigcirc						

To add a new size not already in the list, type the size in the box and press the right to add it

as a possible thickness, and the bottom 🛨 to add it as a width.

Then if you double click it the intersection point on the grid, it will make this option black and therefore recognized as a standard flat.

To multi select or deselect a row or column, choose the circles you want with the mouse while holding the

[Shift] or [Ctrl] key, and use



To totally delete a certain thickness or width from the list, press on the line and then press

Customer



You can use this menu to add details of your customers in order to automate reports, and view attached documents from the document manager.

To add a new customer to the database, type the name into the search box and then press [NEW]or [Ctrl+N].

New 🗸	Save Abort	Delete Print Next Input UQuit	
Customer	ACUSTOMER		

General - Add descriptions for the customer including their VAT codes and comments. This information can be associated with the customer and shown on reports

Attached Documents - Shows all documents that have been attached using the DOCUMENT MANAGER

Address - Add Address's associated with this customer.

To add a new address press New address and enter the details below.							
Customer ACUSTOMER	<u>_</u>						
General Attached documents Addresses	Contacts						
1	Label Description	1 Main Factory					
	Address 1 Address 2 City	1 Steel St Forgeland ST33I01	eMail Telephone N° Fax	steel@projects.com			
	Zip Code Country						

Add an extra address by repeating the same steps.

To add a new contact press						
Customer ACUSTOMER						
General Attached documents Addresses	Contacts					
🐣 M. STEEL	General Information					
	Title Mr Name STEEL First Name					
Once completed press	to save and exit or vext input to add a new customer.					

Country



If you operate in multiple countries you can list them here to be available in drop down menus throughout the program.

To add a new country to the database, type the name into the search box and then press [NEW] or [Ctrl+N].



Adresses



This menu allows the user to manage addresses which would be used in projects and carriages.

	4 🕈 🗕			
SP VIENNE				
	Label	SP VIENNE		
	Description			
]
	Address 1	rue des frères Lumière	eMail	steel@projects.com
	Address 2		Telephone N°	
	City	VIENNE	Fax	
	State / Region		Contact	
	Zip Code		Туре	Customer 🕞 💦
	Country	FRANCE		
Exact Profile \ Material Grade



It is possible to associate none standard profiles or material grades with standard ones you have set up in your database. With this option they are automatically changed to be to profile or material grade you have set up.

To use this option you first need to activate the option in the <u>CONFIGURATION</u> menu .

The associations are created when parts are imported using an option at that stage. With the configuration option ticked when you try import a part with a profile or grade that is not in your database, the exact profile window will open.

🔮 E	kact Treatment			\times
+	-	🔎 🤞	👔 🗌 Case	e sensitive $\frac{1}{2}$
	Treatment	ID		
•	•			
	SHOTBLAST			
				0.0
			🥖 Ok	Abort

If you press the profile will be added to the database. If you double click in the ID box, it will open up a new window for you to find a profile to associate this one with.

You can type in the profile box to filter the results.

This menu allows you to view and delete all of the associations that have been made.

Click on the relevant tab to view the list.

To delete an association, click on it in the list and press

New Save	Abort Delete Print Mext Input	Quit
Material Grade Profile Treatm	lent	
-		
Material Grade	Exact Material Grade	Creation Date
S275JR		
S275JR	S235JR 1	09/03/2016 16:57:56
S275JR	S275JR 1	09/03/2016 16:57:56

Products



This option is only visible if you activate the product management option.

Gene	ral	
4	Project manager	
	Default treatment	
	Default material grade	
	Default painting	
⊳	Status Management	
	Job management	
	Product Management	
⊳	Sub assembly management	
	Drawing quantity	
	Revision Management	I I I I I I I I I I I I I I I I I I I
⊳	Material Grade Upgrade	\checkmark
⊳	Profiles Upgrade	
	Project customer management	
⊳	Part checking	
	Warning if part is in drawing in production	
	Priority mode	Drawing -
	Sites and departments management	
	Workstation multi export	V
⊳	EN 1090 standard management	

Activating this option will give you an extra option to manage products like bolts, washers, nuts, etc.

Produit							—	
Material Grade				Specification	2			
Treatment					3			
Painting					4		Т	oply Filter
Proc	duct code		P 🕹 🕯 🗆	Case sensitive	🚼 👻 🖌 Alphanume	eric		
Product code	Product name	Spec. 1	Spec. 2	Spec. 3	Spec. 4	Spec. 5	Family	Pr
	Troduct Hallie	opec. 1	0000.2	0,000.0	0000.4	6000.0	, churky	

Profiles equality



Profile in metric can be equal to a profile in imperial.

For this, you must configure this equality in this menu.

To add a new profile equality, type the name into the search box and then press [NEW] or [Ctrl+N].



Material grade equality



Material grade can be equal to another material grade.

For this, you must configure this equality in this menu.

To add a new material grade equality, type the name into the search box or press on the [F3] key and then press [NEW] or [Ctrl+N].

	New Save X Abort Delete Print H Next Input U Quit										
	Material Grade 🔍	Identical material grade									
•	S355J0	S355									
+											

Toolings



From this menu you can create all the toolings you can complete in your factory. This includes machine specific tooling such as drilling, cutting, coping etc and also none machined processes such as assembly, welding and delivery.

Toolings are associated with parts when they have been drawn or imported in the project manager. If a part has holes in it for example, it would have the drilling tooling associated to it.

When you set your workstations up, you state what toolings can be performed there. The system will then know that this part needs to be sent to a workstation that can do this tooling.

All of the standard toolings are already set up, but you can add extra ones if you require to have an advanced production routing, or achieve production piece monitoring from none CNC workstations.

🔍 Too	oling	
Tooling		
ID		Tooling
1		COUPE
2		PERÇAGE
3		GRUGEAGE
4		MARQUAGE
5		PLIAGE
6		CHANFREIN
7		CONTOUR
8		CINTRAGE
9		SCRIBING
10		FRAISAGE
11		OBLONG
12		COUPE AILE
13		GALVA

To view the list of toolings, either press [F3] or double click in the search box.

To add a new tooling to the database type the name into the search box and then press [NEW] or [Ctrl+N].



If a standard tooling exists that has not already been used then you can make this association from this screen. If it is a manual tooling, you must choose "Not Any".

New Save	Abort Delete Print Herring Message U Quit
Tooling MANUAL OP	
Tooling MANU/ Description Short code MAO	
Not any	Marking
Cutting First Cut	Bending
O Drilling	O Chamfer O Outline
⊂ Coping	O Binding
O Assembly Sub assembly	○ Milling
⊖ Treatment ⊖ Welding	 Painting Shipping Transformation

Standard Toolings



You can use this menu to apply rules to automatically assign certain toolings to parts. This is required for advanced machine routing and not required for standard usage.

To add a new standard tooling press the + button on the toolbar or right click and press [New].

From this window you can then choose a profile group and choose the tooling to be added to the either all the parts, the finished assembly, or the master part.

Cenated Process Group Tooling Parts Quantity Description	
Created Process Group Tooling Parts Quantity Description Group Save Abort Delete Print Next Input Out Group Image: Created Process SHOTBLASTING Image: Created Process SHOTBLASTING Image: Created Process Other Quantity Image: Created Process SHOTBLASTING Image: Created Process Other Description Image: Created Process SHOTBLASTING Image: Created Process Other	×

Group - Use this list to create a process only for one profile group (If empty the process will be created for all groups)

Tooling - Use this list to create a process only to replace an existent one

Create Process - This parameter defines the tooling process to create

Quantity of tooling process - This parameter defines the quantity

- Description Optional description
- **Parts** Define the part's type affected by the tooling creation.

Profile Groups



Custom profile groups are used to group similar parts together for specific production workflow routing or to help you for a selection.

For example, you may want parts with a certain tooling, or a different size or profile, to go through your factory in a different route than other parts with different characteristics.

The complexity of your profile groups will depend on the number of workstations you have in your factory and the complexity of your workflow.

The name of your groups can be a certain section, or any other name that means something to the way you work

To add a new profile group, type the name into the search box and then press [NEW] or [Ctrl+N].

	Group A	NGLES		0		
eral						
New 🗸	Save 🗙 Ab	ort Delei	te 📄 Print 🖊	Next Input	Quit	
Group	ANGLES					
			,			
General Tooling	g Detail Part					
Group	ANG	LES				
Group Description	ANG	LES				
Group Description	ANG	LES				
Group Description	ANG	LES	Maxi Nb of D	Diameters	Maxi 1	Nb if Gauge Lines
Group Description	ANG Criteria Minimum	LES Maximum	Maxi Nb of E	Diameters	Maxi I	Vb if Gauge Lines On axis
Group Description	Criteria Minimum 0.00	Maximum 0.00	Maxi Nb of D Web	Diameters	Maxi 1 Web	NbifGauge Lines On axis
Group Description Length Width	Criteria Minimum 0.00 0.00	Maximum 0.00 0.00	Maxi Nb of D Web Top Flange	Diameters	Maxi I Web Top Flange	VbifGauge Lines On axis
Group Description Length Width Weight	Criteria Minimum 0.00 0.00 0.00	Maximum 0.00 0.00 0.00	Maxi Nb of D Web Top Flange Bottom Flange	Diameters	Maxi 1 Web Top Flange Bottom Flange	Nb if Gauge Lines On axis
Group Description Length Width Weight Angle	Criteria Minimum 0.00 0.00 0.00 0.00	Maximum 0.00 0.00 0.00 0.00	Maxi Nb of D Web Top Flange Bottom Flange Back Web	Diameters	Maxi I Web Top Flange Bottom Flange Back Web	Nb if Gauge Lines On axis 0 ÷ 0 ÷ 0 ÷
Group Description Length Width Weight Angle Diameter	Ang Criteria Minimum 0.00 0.00 0.00 0.00 0.00	Maximum 0.00 0.00 0.00 0.00 0.00	Maxi Nb of D Web Top Flange Bottom Flange Back Web	Diameters	Maxi Maxi Maxi Maxi Maxi Maxi Maxi Maxi	Vb if Gauge Lines On axis 0 ÷ 0 ÷ 0 ÷ 0 ÷

Description, Maxi Nb of Diameters, Maxi Nb of Gauge Lines - Specify criteria parts need to adhere to in order to be selected for this group. If left at 0.00 these are not used as criteria.

Tooling



Specify toolings that are either Needed or Forbidden. Click on one of the toolings in the list on the left and



to add it to the correct window.

If the part is Needed, then a part must have this tooling associated with it in order to be assigned this group. If a tooling is forbidden, a part with this tooling can not be assigned in this group. Toolings that are not put in one of these options are not used as a criteria for the profile group.

Detail

Nev	V 🗸 Save	Abort	Delete	Print 🔶	Next Input	U Quit				
	Group ANGLES		0							
Genera	al Tooling Detail F	Part								
		+ 😻 🗕		[Mini	imum			Maxir	num (
	Category	Prefix	Web	Flange	E_Web	E_Flange	Web	Flange	E_Web	E_Flange

Specify the profiles or profile ranges to be included in this Profile Group

+ Add a new profile or profile range to the list

Add all profiles to the group

Delete a line from the list

Double Click in the Category window and choose the required profile from the drop down list :



To create a detail profile group range, you can add more specific information.

Prefix - Specify a profile name prefix. For example, UC or UB if you want to have separate groups for these two types of Profile

Min \ Max Web Min \ Max Flange Min \ Max E_Web (thickness) Min \ Max E_Flange (Thickness)

Part

New Save X Abor	rt 📃 Delete 🤤 Print 🖊 Next Input 🕑 Quit	
Group ANGLES		
General Tooling Detail Part		
General Tooling Detail Part	🔎 💺 👕 Case sensitive 🛛 🛃 👻 🖌 Alphanumeric	
General Tooling Detail Part	🔎 🧍 👕 Case sensitive 🛛 🛨 🗸 💌 Alphanumeric	
General Tooling Detail Part	🔎 💺 👕 Case sensitive 🛛 🔁 🕶 🖌 Alphanumeric	

Specify the Prefix to this Profile Group.



+ Add a new prefix

🔡 Edit the Prefix

Delete the selected Prefix

Click on the button "Save" to save the Profile Group or Next Input to save and create another group.

If you create a list of groups that have overlapping profiles, i.e, part can be attributed to more than one profile group, then it is assigned to the one which is first alphabetically.

Use

If you change or add a profile group you can regenerate and affect the proper group to your parts with this tool :

5	1		Ð		P	8	2	C		Ĩ			ĉ	K					
Selection	Trees	Preview	Import +	Draw	Сору	Select	Template project	Refresh	Priorities edition	Nesting Quantity	Additional Informations	Profile Groups	Weight/Surface	Search			ter		

You evaluate the profile group in the part list :

Rew 🖌 Save 🗶 Abort 🛄 Delete 🚔 Print 🛹 Next Input 😃 Quit																	
Contract	16022					1	Project 10	5022				<u></u>	Drawing 1			Assem	bly Mark T13
+=-	Componen	t			P 🕴 🕯	Ci	ase sensitive	ZA -	🖌 Alphanu	imeric							
		Component 🔍			Quantity		Profile	L	.ength	Width		Material Grade	Final Painting	Treatment	Group	Description	Product Name
F		400	- Çê	۲	1		TC70*3	4	30.17			S235JR		PEINTURE	TUBES R/C <	CONSOLE	
		406	ø	2	4		L60*6	6	0.00			S235JR		PEINTURE	L 40*4 -150*18<	EQUERRE	
		480		۲	4		TOLE6	8	0.00	200.00)	S235JR		PEINTURE	TOLES - 10 MM	PLATINE	
		263	Q:	2	4		TOLE6	1	54.85	72.00		S235JR		PEINTURE	TOLES - 10 MM	TOLE	

Workstations



You use this menu to set-up and configure your factories machines \ workstations.

To view the list of workstation, either press [F3] or double click in the search box

To add a new workstation to the database, type the name into the search box and then press [NEW] or [Ctrl+N].



The configuration of the machine is dependent on the type specifics of the model.

General Tooling Parameters Cut parameters Hole parameters Export Profile Alarms and messages Unloading Zone

Configure the machine with the following tabs:

GENERAL - General setup of the machine

TOOLING - Set what toolings can be performed on the machine

PARAMETERS - Set tooling specific options

CUT PARAMETERS - For Coping Machines. Set the cutting tools the machine has

HOLE PARAMETERS - For Drilling machines. Set the drilling tools the machine has

EXPORT - Set extra CNC export options for the machine

PROFILE - Set profile specific nesting parameters

ALARMS AND MESSAGES - Set feedback messages to the workstation

General Options

General Tooling Paramet	ters Hole parameters Export Alarms and messages
Name Description	ROBOT
Туре	Manual Sub-Contractor
Machine NC Type	(Unspecified)
IP Address	
Shop Drawing	
Feedback type	
Export	🕂 🔍
Output	
Alias	
End Cut Length	
Bundle	

Name - The name of the workstation

Description - Add a description of the station if required

Type - Choose the type of the workstation. Some of the later options are dependent on the type chosen. For example, if you choose saw, then the cutting option will be made available to you.

Туре	Manual 👻		
	Manual		
Machine	Plate		
NO.7	Shear		
NC Type	Saw		
ID A LL	Drill		
IP Address	Robot - coping		
	Notch		
Shop Drawing	Shot blasting		
Feedback type	Robot - welding		
r coubdok type	Exit point		
Export	Convoying Node	0	
CAPOIL	Robot - Plate		

Shop drawing - Automatically print out part drawings for parts when sent to this machine

Feedback Type - For Piece tracking / monitoring. Only activate if you want to use this workstation with feedback, double click and choose the type from the list. See <u>Feedback Type</u> <u>Export</u>

Export - Choose the pre setup export to use to send files to this workstation. See Project Manager - Export

Tooling

	ers Cut parameters Hole para	meters Export Pr	ofile Alarms and messages Unio	bading Zone
Tooling			Workstation tooling	Fee
GRUGEAGE	GALVA+PEINTURE		COUPE	
PLIAGE	SOUDURE		PERÇAGE	
CHANFREIN	ARMEMENT PRS		MARQUAGE	
CONTOUR	ASSEMBLAGE		SCRIBING	
CINTRAGE	GRENAILLAGE		COUPE AILE	
FRAISAGE	PRÉ ASSEMBLAGE		COUPE_AME	
OBLONG	POST ASSEMBLAGE		SORTIE	
GALVA	EXPÉDITION		UNLOAD	
GALVA	EXPEDITION PRS		UNLOAD	
. 2				

Select the toolings that can be performed at this workstation. To select them, click on the list on the left side and press the arrow to move to the right See $\underline{\text{Toolings}}$

Parameters

Parameters - Nesting

General Tooling Parameters Cut parameters Hole par	ameters Export Profile Alarms and messages Unloading Zone
 Nesting 	
First Cut	30.00 mm
End Bar Scrap	30.00 mm
Saw/Disk Thickness	0.00 mm
Distance Cuts Not //	0.00 mm
Add saw/disk thickness if first cut	
Remnant	Pincher scrap 🔹
Packing cut	
X Symmetry	4
Y Symmetry	4
XY Symmetry	4
Optimise flange cut	4
Sawing macro	Not managed 🔹
Unitary quantity	4
Split T	Not managed -
Nesting Haunch	
Maximum length	16000.00 mm
Maximum length Exit	12000.00 mm
Small Part Position	Pincher side 🔹
Distance macro milling	0.00 mm
Milling macros checking	Disabled
Coping checking	
Flange cut for angles	
Macro Position	Not any
U management	Flange down 💌
General	
D Tooling	
Performance indicator	
> Feedback	

These options are used by the SECTION NESTING module for linear CUTTING or COPING machines.

First Cut - Area cut at the front of the bar for a trim cut

End Bar Scrap - Area kept free at the end of a bar for the pincher area

Saw Thickness - Thickness left between parts to take into consideration the material lost with the cut

Distance Cut Not // The distance kept between cuts with different angles. Cuts with the same angle will always be cut common cut

Remnant - Leave the remnant at front or back of the bar

Packing cut - Configure the packing cut parameters

Width Of Packet - For pack nesting

Height of packet - for pack nesting

X, Y, XY Symmetry - Allow part rotations by section nester for optimization

Optimize Flange Cut - If selected, PLM will nest parts with flange bevels together. If not, flange cuts will be sent as straight cuts

Unitary Quantity - Instead of having identical bars with multiple quantities, bars will always be unique

Sawing macro - Configure the sawing macro parameters

Maximum length - The length of the machine in-feed which affects the maximum bar size

Small Part Position - Set if you want small parts to be nested with priority at the start or end of the bar

Parameters - General

General						
Input Bench						
▶ Exit Bench						
Capacity (%) 100.00						
Bar loading time	30.00 s					
Part unloading time	30.00 s					
Workstation move speed	30000.00 mm/min					
Mitrol workstation parameters						
Tooling						
Performance indicator						
🕖 Feedback						

These settings affect the time calculation by the $\ensuremath{\mathsf{PRODUCTION}}$ MANAGER module.

Parameters - Tooling

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All of these options are machine specific and dependent on the Tooling the machine can do.

Maxi Nb of Gauge Lines - Set the max number of gauge lines the machine can do in any one bar each side

Maxi Nb of Diameters - Set the max number hole diameters the machine can do in any one bar each side

Maxi number of components per bar - Select if you want to minimize the number of components in any bar

Verify cut angle min / max - Set the minimum and maximum angle the machine can cut to. Anything outside of this range will be sent as square cut.

4	Verify cut angle min/max	1
	Cut Angle min	-60.00 🚖
	Cut Angle max	60.00 🜲

Scribing - Set the scribing options if this machine is capable of it. The settings affect the time estimation by the Production Manager module

Scribing	1	
Scribing back web		
Scribing speed Web and Flanges	2500.00	mm/min
Scribing speed Back Web	1500.00	mm/min
Probing time per Scribing block	3.00	s

Marking - Set the type and speeds of part marking operations

4	Marking	J.				
	Marking back web					
	Default marking type	Punching -				
	Punching : Probing time per marking	6.00	s			
	Punching : Marking time per letter	2.00	s			
	Scribing : Probing time per marking	6.00	s			
	Scribing : Marking time per letter	5.70	s			
	Plasma : Probing time per marking	6.00	s			
	Plasma : Marking time per letter	5.70	s			

Drilling - Set the type of drilling performed by the machine, number of heads and speeds and loading times to be used by the Production Manager module

Drilling	1			
Speed	70.00	mm/min		
Normal holes	Punching	-		
Punching min. diameter	0.00 mm			
Punching max. diameter	30.00 mm			
Punching max. thickness	25.00	mm		
Minimum Diameter for Flame Cutting	40.00	mm		
Probing time	10.00	s		
Drilling constraint	Not any	-		
Drilling type	1 Fixed Head D	rill 👻		
Tool loading time	5.00	s		
Slot	Drilling both ends			

Cutting - Set the default cutting speed of the machine

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Parameters - Bundle

Use these settings when you have an automatic shot blast machine and need to create bundles of bars to send through at the same time.

General Tooling Parameters Export		
⊿ Bundle		
Width	1000.00	mm
Mini Length	2500.00]mm
Minimum distance	50.00]mm
Gap height	5.00]mm
Gap Length	1500.00]mm
Treatment Management		
Painting Distinct		
Storage Distinction	\checkmark	

Width - Width of the rollers. The software calculates the amount of bars it can bundle together using this setting and also half of the height of the profile

Mini Length - The minimum length of a bar, normally the size of the gap between the rollers

Minimum distance - the min distance between bars

Gap height, Length - the height and length of the gap

Treatment Management - Bars with different treatments are bundled separately

Painting Distinction - Bars with different Painting are bundled separately

Storage Distinction - Bars with different storage areas are bundled separately

Cut Parameters

This tab is available only for Coping machines.

Using this tab you can set in the software the cutting tools that are available on this machine. This is used by the PART CHECKING function and also for detailed time calculation by the Production Manager module. These tables can be imported automatically from FICEP machines or added manually for none FICEP machines.

Genera	al Tooling Par	ameters	Cut parameters	Hole parameters	Export Deliv	verable dimensions St	tandards G	ap Alarms a	nd messages Unl	oading Zone
+ 🔛	🕂 🔛 — 🖉 🕹 🛊 🗋 Case sensitive 🛛 🕅 👻 🗸 🗸 🗸 🗹 Alphanumeric									
	Туре	M	aterial Grade	Mir	n Thickness	Max Thickness	Kerf	Speed	Prime duration	Plasma current intensity
•	Oxycutting	\sim		8.00	0 mm	15.00 mm	1.95 mm	600.00 mm	20	
*		\sim								

For automatic import of these settings see here: <u>Automatic Import From Ficep Machine</u>

To add a tool manually, open the top menu by pressing on the hidden box at the top, then press										
	Туре	Material Grade	Min Thickness	Max Thickness	Kerf	Speed	Prime duration	Plasma current intensity)	
•	Oxycutting ~		8.00 mm	15.00 mm	1.95 mm	600.00 mm	20			
	~									

Make the selection of the type of tool from the dropdown (oxy\plasma) and then fill the rest of the details by typing in the corresponding boxes.

To delete a tool, click on it and then press 🧮

Hole Parameters

This tab is available only for Drilling machines.

Using this tab you can set in the software the drilling tools that are available on this machine. This is used by the PART CHECKING function and also for detailed time calculation by the Production Manager module. These tables can be imported automatically from FICEP machines or added manually for none FICEP machines

Genera	General Tooling Parameters Cut parameters Hole parameters Export Deliverable dimensions Standards Gap Alarms and messages Unloading Zone												
+ 🏼	-			🔎 🤞 🕯	Case sensitive	👫 👻 🗸 Alpł	nanumeric						
		Туре		Material Grade	Tool code	Min. diameter	Max. diameter	Diameter	Drill type	Min Thickness	Max Thickness		
•	0	Countersink	\sim		35	14.00 mm	14.00 mm	14.00 mm					
		Drilling	\sim		33	14.00 mm	14.00 mm	14.00 mm					
		Drilling	\sim		33	16.00 mm	16.00 mm	16.00 mm					
		Drilling	\sim		33	18.00 mm	18.00 mm	18.00 mm					
		Drilling	\sim		33	20.00 mm	20.00 mm	20.00 mm					
		Drilling	\sim		33	22.00 mm	22.00 mm	22.00 mm					
		Drilling	\sim		33	24.00 mm	24.00 mm	24.00 mm					
		Drilling	\sim		33	26.00 mm	26.00 mm	26.00 mm					
		Drilling	\sim		33	28.00 mm	28.00 mm	28.00 mm					
		Milling	\sim		2	10.00 mm	10.00 mm	10.00 mm					
		Milling	\sim		3	20.00 mm	20.00 mm	20.00 mm					
		Punching	\sim		57	14.00 mm	14.00 mm	14.00 mm			14.00 mm		
		Punching	\sim		57	16.00 mm	16.00 mm	16.00 mm			16.00 mm		
		Punching	~		57	18.00 mm	18.00 mm	18.00 mm			18.00 mm		

For automatic import of these settings see here: Automatic Import From Ficep Machine

To add a tool manually, open the top menu by pressing on the hidden box at the top, then press

General Tooling Parameters Cut parameters Hole parameters Expe	export Deliverable dimensions Standards Gap Alarms and messages Unloading	Zon
--	---	-----

[_				
	Туре			Material Grade	Tool code	Min. diameter	Max. diameter	Diameter	Drill type	Min Th	ickness	Max Thickness
•		Countersink	\sim		35	14.00 mm	14.00 mm	14.00 mm				
		Drilling	\sim		33	14.00 mm	14.00 mm	14.00 mm				
		Drilling	\sim		33	16.00 mm	16.00 mm	16.00 mm				
		Drilling	\sim		33	18.00 mm	18.00 mm	18.00 mm				

Make the selection of the type of tool from the dropdown and then fill the rest of the details by typing in the corresponding boxes.

To delete a tool, click on it and then press

Automatic Import From FICEP Machine

The tool tables can be exported from a FICEP machine as a FNC file. This can then be imported into PLM for these tables to be added automatically

To create the file on the FICEP machine: In MINOSSE go to PROGRAMMING - ARCHIEVE - EXPORT

Choose the Table list and add all of the table lists into the ITEMS TO EXPORT window

Choose an output path and press OK to create the file

Then in SP PLM, in the Cut Parameters option, press the button import parameters and browse to the file to import the settings automatically



Export

It is possible to set up extra export interfaces for this machine as well as the default export. This is useful if you would like to automatically send backup files to a separate location, or if you want to export to multiple identical machines and let the capacity be decided at a shop floor level

To set the extra export, double click in the Export window and select one of the already defined exports.

General Tooling F	arameters Cut paran	neters Hole parameters Export	Deliverable dimensions
+ 🏭 —		🔎 💺 👕 🗆 Case sensitive	🛃 👻 🗹 Alphanun
Export	Directory		
K126L	\\	M-I:	
(Fer	~		
	Link		
	ID 🔺	Link	
	1	TIPOB254	
	2	MAP	
	3	HANDLING	
	5	1203DD	
	12	1201FRC	
	23	ARCHIVE	
	24	DSTV	
	25	DXF/DWG	
	26	EXPORT LAQUE	
	226	CAM	

Profile

It is possible to set up different ranges of nesting parameters the section nesting module will use for different profiles this machine. This is made so you can be more specific than just having one set for all your different profiles.

Ge	ieneral Tooling Parameters Cut parameters Hole parameters Export Profile Alarms and messages Unloading Zone															
		Minimum					Maximum									
		Category	Prefix	Web	Flange	E_Web	E_Flange	Web	Flange	E_Web	E_Flange	First Cut	End Bar Scrap	Saw/Disk	Distance Cuts Not	Remnant
	Þ											50.00		2.50	50.00	Leading edge scrap
		I		271.00								100.00	50.00	2.50	50.00	Pincher scrap
		C		271.00								100.00	50.00	2.50	50.00	Pincher scrap
		С		271.00								100.00	50.00	2.50	50.00	Pincher scrap

To add a new range, press the + button and select the type of profile from the drop down. Then set the specific nesting parameters for that profile. These options are used instead of the <u>default nesting parameters</u> for any profile in this list

Alarms and messages

It is possible to link feedback logs to workstation.

In the "Alarms and messages" tab, the user can manage this link.

General Toolin	g Paramete	rs Cut para	meters	Hole parameters	Export	Profile	Alarms and messages	Unloading Zone
$+ \blacksquare - \square$			\mathcal{P}	👃 👔 🗌 Case	sensitive	A Z	🔹 🔽 Alphanumeric	
	Туре	Number	Desc	cription				

Comparison

Tools

This menu is available only for the workstation having the type "Plate".

Resource Editor	Comparison	Import parameters	Alarms and messages	DDDMachineNC snaps. update
Nev	🔏 тоо	ls		Delete
Work	Tec	hnological para	ameters	<u></u>

When the user selects the menu "Comparison/Tools", a new screen displays the difference of the tools data between the software SP.PLM and the current version of Actcut.

🏫 Tools									— [⊐ ×
New Save	Abort	Dele	te Print	Next Input	Messag	e 🕛 Quit				?
		~								
te te te	🕇 🚺	S								
expand conapse billeren	ice Add op	date								
		Steel Project	cts PLM					Actcut 3.9		
	Diameter	Tool code	Drill type	Properties	Width		Diameter	Tool code Drill type	Properties	Wid 📥
E- W TIPOB254						E- W TIPOB254				
🖨 🔀 Countersink						🗗 🔀 Countersink				
🖻 📈	14.00	35				😐 📈	14.00	35		
🖨 🔀 Drilling						🖨 🔀 Drilling				
⊕ - <u>×</u>	5.00	33				😐 📉	5.00	33		
🖽 📉	6.00	31				🖽 · 🏹	6.00	31		
⊕ - X	7.00	31				⊕ - %	7.00	31		
🖽 - ズ	8.00	31				😐 📈	8.00	31		
⊕ -%	9.00	31				🖶 🏹	9.00	31		
⊡ - %	10.00	31				😐 🏹	10.00	31		
<u></u> ⊕-%	11.00	31				⊕ -%	11.00	31		
<u>⊕</u> -%	12.00	31				🖽 · ズ	12.00	31		
⊕ -%	13.00	31				🖶 🏹	13.00	31		
<u>⊕</u> - <u>%</u>	14.00	33				🖶 📈	14.00	33		
<u></u> ⊕- <u>%</u>	16.00	33				<u></u> ⊕- <u>×</u>	16.00	33		
<u>⊡-</u> 💢	18.00	33				<u>⊡</u> - 💢	18.00	33		
<u>⊕</u> - <u>×</u>	20.00	33				<u> </u>	20.00	33		
<u>⊡</u> - <u>×</u>	22.00	33					22.00	33		
<u>x</u>	24.00	33				<u>⊕</u> — 🔀	24.00	33		
<u>_</u> <u>X</u>	26.00	33				i i i i i i i i i i i i i i i i i i i	26.00	33		
<u>_</u> . <u>×</u>	28.00	33				<u>_</u> _ <u>X</u>	28.00	33		
- X	29.00	33					29.00	33		
L I II	30.00	33				L I II	30.00	33		
	32.00	33				i i i i i i i i i i i i i i i i i i i	32.00	33		
<u>₹</u>	35.00	33				L 🖬 🚀	35.00	33		
L III III III III III III III III III I	38.00	33				L I II	38.00	33		
L III III III III III III III III III I	40.00	33				│ ↓ ₩ 🕺	40.00	33		
Et: S Million	10.00	~				Et: 🐼 Million	10.00			
	10.00	2					10.00	2		
L L L	20.00	3				L L L 💭	20.00	3		
Et: Runching	20.00	Š				Et: Runching	20.00	Ĭ		
•					P'					F

To update the application SP.PLM, click on the button "Update" then save the modifications.

Expand Collapse Difference Add Update											
		Steel Project	ts PLM		Actcut 3.9						
	Diameter	Tool code	Drill type	Properties	Width		Diameter	Tool code	Drill type	Properties	Width
E-W TIPOB254						⊡ W TIPOB254					
Ġ 📉					250	Ē. 🔀	250.00	53			250

Technological parameters

 Resource
 Comparison
 Import
 Alarms and parameters
 DDDMachineNC snaps. update

 Import
 Tools
 Pelete
 Print

 Work
 Technological parameters
 Import
 Import

This menu is available only for the workstation having the type "Plate".

When the user selects the menu "Comparison/Technological parameters", a new screen displays the difference of the technological data between the software SP.PLM and the current version of Actcut.

💏 Technological par	ameters											- 0	×
New Si	ave Ab	oort De	elete	Print N	ext Input	Messa	ge 😃 Quit						?
Te Te	ъ +	C											
Expand Collapse Diff	ference Add	Update							_				
		Steel Pro	jects PLM						Acto	out 3.9			
	Thickness Part Gap Left Gap Right Gap Top Gap Botton Thickness Part Gap Left Gap Right Gap Right Gap											Top Gap	Botton
E- W TIPOB254							E- W TIPOB25	4					
🖨 🔜 STEEL							🗄 🔜 STEE	L					
D 😥	4.00	15.00	15.00	15.00	15.00	15.00	🖶 🔂	4.00	15.00	15.00	15.00	15.00	15.00
₽	5.00	15.00	15.00	15.00	15.00	15.00	₽ <u>8</u>	5.00	15.00	15.00	15.00	15.00	15.00
E 🖄	5.70	15.00	15.00	15.00	15.00	15.00	₽ <u>\$</u>	5.70	15.00	15.00	15.00	15.00	15.00
	6.00	15.00	15.00	15.00	15.00	15.00	<u></u>	6.00	15.00	15.00	15.00	15.00	15.00
	7.00	15.00	15.00	15.00	15.00	15.00		7.00	15.00	15.00	15.00	15.00	15.00
L	10.00	15.00	15.00	15.00	15.00	15.00	±	10.00	15.00	15.00	15.00	15.00	15.00
	12.00	15.00	15.00	15.00	15.00	15.00	царана При 420	12.00	15.00	15.00	15.00	15.00	15.00
L <u> </u>	12.70	15.00	15.00	15.00	15.00	15.00	L	12.70	15.00	15.00	15.00	15.00	15.00
⊡ <u>-</u>	15.00	20.00	20.00	20.00	20.00	20.00	🕁 🙀	15.00	20.00	20.00	20.00	20.00	20.00
⊕- 🚘	20.00	20.00	20.00	20.00	20.00	20.00	⊡ - <u>5</u>	20.00	20.00	20.00	20.00	20.00	20.00
🖽 - 🚘	25.00	25.00	20.00	20.00	20.00	20.00	🖶 - 🚘	25.00	25.00	20.00	20.00	20.00	20.00
🖶 🛱	30.00	30.00	30.00	30.00	30.00	30.00	ф. 🚘	30.00	30.00	30.00	30.00	30.00	30.00
😐 - 🚘	35.00	30.00	30.00	30.00	30.00	30.00	🖻 🗠 🔛	35.00	30.00	30.00	30.00	30.00	30.00
<u></u> <u> </u>	40.00	30.00	30.00	30.00	30.00	30.00	🖶 💆	40.00	30.00	30.00	30.00	30.00	30.00
± <u>≋</u>	45.00	30.00	30.00	30.00	30.00	30.00	Ē. <u>₩</u>	45.00	30.00	30.00	30.00	30.00	30.00
₽ ≤	50.00	30.00	30.00	30.00	30.00	30.00	₽ <u>\$</u>	50.00	30.00	30.00	30.00	30.00	30.00
L 1 1	50.80	30.00	30.00	30.00	30.00	30.00	± ≊	50.80	30.00	30.00	30.00	30.00	30.00
₩ <u>₩</u>	55.00	30.00	30.00	30.00	30.00	30.00	± ≝	55.00	30.00	30.00	30.00	30.00	30.00
±+•• <u>1887</u> ,	60.00	30.00	30.00	30.00	30.00	30.00	<u>ل</u>	60.00	30.00	30.00	30.00	30.00	30.00
•						►	•						►

To update the application SP.PLM, click on the button "Update" then save the modifications.

Expand Collapse Difference Add Update													
	Actcut 3.9												
	Thickness	Part Gap	Left Gap	Right Gap	Top Gap	Botton		Thickness	Part Gap	Left Gap	Right Gap	Top Gap	Botton
	4.00 5.00	15.00 15.00	15.00 15.00	15.00 15.00	15.00 15.00	15.00 15.00		4.00 5.00	15.00 15.00	15.00 15.00	15.00 15.00	15.00 15.00	15.00 15.00

Production Workflow



Once you have set up all of your machines, toolings and profile groups, you can use this screen to set-up your company's workflow.

The aim is to define the routing workflow all of your different profile groups can take through your workstations in all of your sites and departments.

The screen provides an easy to use drag and drop interface and uses standard process management rules.

The complexity of your workflow depends on the number of workstations and profile groups you have set up.



If you have a complicated workflow with multiple factories or departments, please SEE HERE

The basic function of this feature is that you have a quick access menu to the machines etc that you have already set up on the left hand side, and the white window to the right is where you can create your production workflow diagram.

At any stage you can add new workstations, toolings or profile groups by clicking on the corresponding list

on the left menu, and pressing the 🕂 📩 button. This gives a short cut the separate option screens

The first thing to do is to create a start point. Do this by first clicking on the Workstations list on the left hand side, and then dragging the icon into the white space.

Toolbox	
+ -	
Workstations	
First Point	
ASSEMBLAGE	
B3	
B 4	
CONTRÔLE DÉBIT	
CONTRÔLE SOUD	
DIVERS MANUEL	
DSTV	
DXF/DWG	•

You can then drag your workstations into the white space and place them in a logical order that represents the physical top down layout of your factory.

Then you can create a connection to the first point to each work station by first clicking the central point of the start point, and then one of the corner boxes in the workstation.



Continue to add your workstations and make connections until you have created your production workflow.



The next step is to create the specific workflow paths for your different profile groups.

Click on the profile groups list on the left menu and click on the group you want to set a path for.



Then, starting from the first point, you need to click on each connection arrow for all the workstations



associated with this workflow path, and press "Add to Connection" connection

This will put a number next to the connection, representing the priority of the path.



If multiple paths are possible, do the same for all connections and it will show a number representing the priority of the path. When there is more than one path available the parts can have multiple workstations opportunities.

You need to add to each of the connections from the start point to the last workstation in your workflow.



Do this for all of your different profile groups. Each group should have its own specific connection path.

Sites and Departments Management

If you have a more complex workflow including multiple sites and or departments, you can use the option for site and department management.

It basically adds some extra hierarchical layers of workflow to group together workstations instead of having large complicated single diagram flows.

The first thing is to activate the option in the Configurations - Company Options - Project Manager screen. With this option enabled, you get the more advanced options in the <u>Production Workflow</u> screen.

Gene	ral	STEEL	Search									
4 F	Project manager											
	Defa	Default treatment								0		
	Default material grade									0		
	Defa	Default painting								0		
arphi	Status Management			1								
	Job management											
	Prod	luct Manag	gement									
\triangleright	Sub	assembly	manageme	nt								
	Draw	ving quant	ity									
	Revision Management											
\triangleright	Mate	Material Grade Upgrade										
arphi	Profi	Profiles Upgrade										
	Proje	ect custom	ner manage	ment								
\triangleright	Part	checking				1						
	Warr	ning if part	is in drawir	ng in production								
	Prior	rity mode				Not any		-				
	Sites	and depa	rtments ma	nagement								
	Work	kstation m	ulti export			1						
⊳	EN 1	090 stand	ard manage	ement								
This will then activate two extra options in the sidebar menu in the Production Workflow screen.

Toolbox	Р
+ -	
Site	
First Point	
Department	

To add a new site or department, click on 🕇

When you have added all your sites, you will see that you have extra tabs at the top of the white space.

At the top level, you need to set the potential flow between your sites. Do this by using the same drag and drop method as before.



You then need to set the workflows for inside each of your sites. Do this by clicking on the tab on the top of the whitespace, and set the workflow of your workstations inside that site.



You can do the same for your departments if you want to group these together.

You then need to set the Profile Groups Connections as before, for all of the connections at each level, including site, department, and workstation flows.



Steel Projects PLM 1.19.x



Connection

In the "Production workflow" screen, the user can configure a link by using a double-click on this one.



A "Connection" screen is displayed.

The user can assign a name for this link, a description and its type (Manual, Automatic and Handling).

🚾 Connection		— 🗆	×
New Save Save	Abort Delete Print H Next Input Ressage	Quit	8
Start workstation FIRST POINT	End workstation SHOTBLASTING	Q	
General Name Description Type	Link 1 Needed Link Start - Shootblasting Image: Comparison of the start of th		

When the connection is mandatory, the link in the "Production workflow" is displayed in bold.



Excel Formula



, the "Edit formula" screen is displayed.

It is composed by 3 tabs : Result, Var and Calc

F	Form	ula					-	- 🗆	×	<
RES	SUL!A2	- foð 🚽 =	VAR!B3							
		A	В	С	D	E	F	G	н	
	1									
۰.	2	0								
	3									
	4									_
	5									_
	6									_
	7									_
	8									_
	9									_
	10									_
	11									_
	12									_
	13									-
4										
Re	Result Var Calc									
	🗸 Ok 🔀 Abort									

The screen works as an Excel document. The user can enter text, formulas.

F=	Form	nula iantite - <i>f</i> ee 🗸				_		×
		A	В	С	D	E	F	-
	1	1, 0						
	2		Piece				Profil	
۰.	3	Piece_Quantite				Profil		
	4	Piece_Poids				Profil_H		
	5	Piece_Surface				Profil_B		
	6	Piece_Longueur				Profil_C		
	7	Piece_Largeur				Profil_A		
	8	Piece_Quantite_Usinage				Profil_E		
	9	Piece_Quantite_Usinage1				Profil_R		
	10	Piece_Quantite_Usinage2				Profil_H1		
	11	Piece_Quantite_Usinage3				Profil_B1		
	12	Piece_Quantite_Usinage4				Profil_C1		
	13	Piece_Groupe				Profil_A1		-
•								
Re	sult V	/ar Calc						4 Þ
	Ok 🎽 Abort							

Formula Selection

When the user clicks on the button



, the "Formula Selection" screen is displayed.

In the tab "Template", the user can create a new Formula sheet by selecting the empty line. Then, click on the button "Ok".



When a formula sheet exists, the user can select this one in the tab "Connection".

Ferm Form	ula	?	×
Template	Connection		
> SHOT	BLASTING		
		\checkmark	
	V Ok	\sim	Abort

In this case, the expected formula sheet is displayed.

Configuration

When the software is completed the first thing you should do is to set the Global and Company configuration.

See help for Global Configuration

Then on each individual client computer you will need to set the local user settings.

See help for Local Settings



You can access numerous menus for configuring SP PLM from the configuration menu.

Click on an item to display the related chapter.

Shop Drawing



The shop drawing configuration is used to set up the format for the component shop drawings

Options

The shop drawing options allow the user to set-up the necessary formats, representation and parameters for the dimensioning text and lines, and the printers to be used.

Options					
Option Format Representation Comment Symbols					
Holes Dimensioning AXE X AXE Y O Not any O Not any O Absolute O Absolute	Outline Dimensioning AXE X O Not any	AXE Y Not any Absolute Relative			
Axis Direction Increasing Decreasing Decreasing	Reduction of Pieces	Both Recall Line Not any Line Arrow			
Scale And Precision Use Scaling Dimensionin 0	Presentation Sides to Draw Worked All	Draw Marking Scribing			
Gusset 1/1 Angles 2 Gusset 1/1 Image: Constraint of the second se	Dimensioning ✓ Angles Bending ● Default ○ Open ○ Close ✓ Scribing	3D Keep parts name Reference Point			
Quantity O Sum by Contract	tail by Mark	Sort			
		Ok Abort			

Field	Designation	
	Selection of the	e type of dimensions for holes in the horizontal axis (X axis) and gauges
	Not Any	No Dimensioning
Holes	Absolute	Absolute dimension according to the reference point of the concerned
Dimensioning	side	
	Relative	The dimension of drilling is given in the relation to the previous one.
	The dimension	of the first hole is relative to the reference point of the piece side
	Both	Absolute and Relative dimensions
	This option allo	ws to move the X axis zero point
	Increasing	The zero point will be on the left
X Direction		The positive direction will go from left to right
	Decreasing	The zero point will be on the right
		The positive direction will go from right to left
	This option allo	ws to place the slot holes relatively to the length
Slots	Center	The length will be calculated between the centers of the two half-circles
	Extremity circles	The length will be calculated between the extremities of the two half-

Outline Dimensioning	Not AnyNo DimensioningAbsoluteAbsolute dimension according to the reference point of the concerned side.RelativeThe dimension of drilling is given in the relation to the previous one. Thedimension of the first corner is relative to the reference point of the piece side.BothAbsolute and Relative options
Reduction of Pieces	This option allows omitting some unnecessary zones to make the graphic view clearer.NoNo cut will be authorized.YesSelected cuts will be carried out.
Line Thickness	Parameter which defines the line thickness.

	Use scaling Authorization to extend the piece in the X axis direction to avoid	
	character superimposition.	
	No In case of difference, outline lines will be continuous.	
Scale and	Yes In case of difference, outline lines will be interrupted.	
Precision	Decimal Dimensions The dimension will be represented with the number of the	
	chosen decimals.	
	Decimal Angles The angles will be represented with the number of the chosen	
	decimals.	
Drocontation	Worked Only the worked sides will be edited.	
Presentation	All All sides of the piece will be printed.	
	Selection of the type of dimensioning line	
Recall	None No type of dimensioning line	
Line	Line A 45 degrees dash as an end of the dimension	
	Arrow A 30 degrees arrow as an end of the dimension line.	
Angle This option allows the activation or deactivation of angle dimensioning.		
Dimensioning		

Format

The following screen gives the possibility to assemble all available prototypes for shop drawings. Each one will be assigned to a printer and its characteristics, a format of paper, an orientation, etc.

Options Option Format Represent	ation Comment Symbols	>
Preview	O Print O Save	
Prototype A4H A4V Page Setting	Format Profiles Gussets Printer 297 x 210 1 1 210 x 297 1 1 0 x 0 0 0	
Filter Profiles Gussets	PAGINATION Width Height X Step 2 Y Step 4	
*	Top 0 Bottom 0 Left 0 Right 0 Direction Increasing Decreasing	
Mod	lify Printer New Add	
	Ok	Abort

Format	Dimensions of Paper
Profiles	Authorization to print log profiles (Beams, Angles, etc.)
Gussets	Authorization to print profiles and gussets.
	Possibility to print with 1 scale and page setting.
Printer	Name of the printer configured in the system under Windows 95 or Windows NT or later.
Preview	Allows to view the shop drawing on the screen before printing
Prototype	Name of file which contains information of drawing sheet. This file is in the format DWG
	or DXF.

The Printer button accesses the configured printer in the system and allows modification of the characteristics, as on Fig 4-12 following:

Options	×
Option Format Representation Comment Symbols	
Preview O Print Save	
Prototype Format Profiles Gussets Printer	
A Impression ×	
Pe Imprimante Nom : \\SERV-SP-FILES\KONICA_C258_CLR V Propriétés	
Statut : Prêt Type : KONICA MINOLTA C368SeriesPCL Emplacement : 1er ETAGE Commentaire : KONICA_C258_CLR	
Zone d'impression Copies Image: Sélection Nombre de copies : 1 + Image: Description Image: Description de copies : 1 +	
OK Annuler	
Modify Printer New Add	
Ok	Abort

Representation

Selecting the type of representation for each profile.

Options										×
Option	Format	Representation	Comment	Symbols						
			Europ	oean/Ame	ican					
	A. UPI	N		•	0	4	~			
	T. UA	P		\odot	0	4	~			
	C. IPE	HE A/B/M		\odot	0	1	~			
	B. IPN	l		\odot	0	1	\sim			
	D. Ang	gles		0	\odot	4	~			
	V. Prof	files Z		\odot	0	1	~			
	G. Rou	und Tubes		\odot	0	2	~			
	U. T R	ound Comers		\odot	0	1	~			
	Z. T R	ectangular Comen	s	\odot	0	1	\sim			
	Y. Plat	es		\odot	0	4	\sim			
	I. Ome	ga		\odot	0	1	\sim			
	L. Ang	les		0	\odot	4	\sim			
	M. Pro	files C		\odot	0	4	\sim			
	N. Pro	files U		\odot	0	4	\sim			
	O. Pro	files Z		\odot	0	1	\sim			
	Welde	d Beams		\odot	0	1	\sim			
	H. Cof	fered Beams		\odot	0	1	\sim			
	E. Rec	tangular Tubes		\odot	0	4	\sim			
	F. Rou	ind Tubes		\odot	0	2	~			
	R. Gu	ssets		\odot	0	4	\sim			
	1. Bulb	Flats		\odot	0	4	~			
									Ok	Abort

Field	Designation
European	Top flange of the profiles drawn below the web
American	Top flange of the profiles drawn above the web
Origin	The reference origin of the piece which can be chosen on the table given in index

Comment

This section allows the user to personalize the shop drawing by inserting some comments.

Code	Description	Width	^
COM_NAM	Contract	15	
COM_DES	Description	31	
COM_OBJ	Object	31	
COM_CLI	Customer	31	
COM_CRE	Creation Date	10	
COM_FIN	Final date	10	
COM_TRT	Treatment	31	
COM_MAT	Grade	31	
COM_PNT	Painting	31	
COM_TIM	Creation Time	10	
COM_PDS	Weight	10	
COM_PRX	Price	10	~
Gusset 1/1	le Block	*	

Lists



The program comes with a set of inbuilt reports but it is possible to add new ones or update existing ones using the Report Manager

To add a new report, type the name into the search box and then press [NEW] or [Ctrl+N].

Reports	BAR NESTING		Module Secti	on Nesting	•	
Supersedes			Category			
Comment						
File				Usual paran	neters for this module	
Filters	Table	Colonne		Table		Colonne
	*			NEST	ING N	IES_ID
			Expo	ort		
				Rename		
Directory						

Reports - The name of the report

Supersedes - if it is to replace an existing report, specify it here

Module - the module name the report is to show in. Choose from the dropdown list

Category & Comment - Manual text box for you to make notes in

File - choose the file name of the new report. By default, all new reports are to go in the folder base\rpt_cust

Filter - You need to specify a filter for the report. A different filter will be shown on the right side depending on the module it is to be shown in.

The standard process is to select this and press 🔚 to add it in as the standard filter for this report

it is possible to set up different filters depending on the report. your support engineer will advise if this is the case.

Reports Management



This screen is composed by 2 grid data.

The first one displays all the standard reports, the custom reports and all the files ".rpt". The second one displays all the user groups that are associated with the selected report.

	Reports	Comment	Module	Category	Is custom	File	Existing file	Existing record	Is used	Is replaced
۶.	-		Analysis	Analysis	0	Alames.rpt	0	-	-	
			Analysis	Production	0	Analyse Production Machine - Res	0	0	-	
			Analysis	Production	0	Analyse Production Machine.rpt	0		0	
		No. I Concession of State	Analysis	Production	0	Bilan Production Affaire.rpt	0		-	
			Shipping	Shipping	0	Bordereau.rpt	0		-	
	-		(Unspecified)	Utilitaire	0	chutes.rpt	0		•	
		the last	(Unspecified)	Utilitaire	0	Code barre.rpt	0	9	-	
			Packing List	Packing List	0	Packing List Barcode.rpt	0	-	-	
			(Unspecified)	Utilitaire	0	employe.rpt	0	-	0	
		Table 10 million	Production manager	Fabrication Job	0	Mise en Fab Entites QR code.rpt	0		•	
			Production manager	Fabrication Job	0	Mise en Fab Entites QR code - W	0	9	-	
		State Inc.	Production manager	Fabrication Job	0	Etiquette - Assemblage.rpt	0		-	
			Production manager	Fabrication Job	0	Etiquette QR code.rpt	0		-	
		Name of Concession,		Fabrication Job	0	Etiquette QR Code - Assemblage.rpt	0		-	
			Production manager	Fabrication Job	0	Etiquette.rpt	0	9	-	
	tana .	Table and	Production manager	Fabrication Job	0	Feuille_route.rpt	0		-	
			Project manager	Parts	0	Liste des articles.rpt	0	-	-	
		the local data in the second second	Project manager	Parts	0	Liste Piece.rpt	0	9	-	
			Project manager	Parts	0	Liste Piece 3D.rpt	0	9	-	
	the second s	the second se	Project manager	Parts	0	Liste Piece par profil.rpt	0		-	
	the subscription of the	the fact full strengt	Project manager	Parts	0	Liste Piece Profil Usinages.rpt	0		-	
		the first times	Project manager	Parts	0	Liste Piece Usinages.rpt	0		•	
		the local division of	(Unspecified)	Profiles	0	Liste Profil.rpt	0	9	-	
			(Unspecified)	Utilitaire	0	Machines.rpt	0	-	-	
	rear frances for the	The same of the same	Section Nesting	Bars	0	Bar Nesting - Code barre.rpt	0	0	0	
	Construction of the local	Name and Address of the Owner, or other	Section Nesting	Bars	0	Bar Nesting - Code barre - 3D.rpt	0	-	•	
	and the second sec	Restaurant Concession of Street, Stree	Production manager	Fabrication Job	0	Mise en fabrication.rpt	0	-	0	

Configuration



From this menu you can set the main shared program configuration of Steel Projects PLM.

New Save X Abort Delete Print Wext Input U Quit
General STEEL Search
General General
Standard Flats
Project manager
Draw
Macros
D Import
Metric Import
Imperial Import
Reports
Export Contemport
Nesting
Products
Feedback
Supervisor

The configuration is split into two main sections:

General Configuration

Company Specific Configuration

General Configuration

General:

General Search	
General	
Contract management	V
Main Language	French 💌
DataBase path	
Exact Weight for Gussets	
Surface	Painted -
Unit	Metric
Default unit	
Precision	Not any
Backup Directory	
Document management	✓
SubBar Project Name	@_[]_@?PLM@_[
Use a specific domain controller	
Standard Flats	
Project manager	
Draw	
Macros	
D Import	
Metric Import	
Imperial Import	
Reports	
Export	
Nesting	
Products	
Feedback	
Supervisor	

Contracts - Activate the Contract Hierarchy in the Project Manager. The default structure is to have a 4 tier hierarchy - Project - Drawing (Load \ Phase) - Assembly - Component. Activating this option gives you 5 tiers - Contract - Project - Drawing - Assembly - Component. This is useful if you work with multi project contracts

Database path - The path to the main shared Data folder. This needs to be accessible with the actual path to all clients. If it is on a shared server it is recommended to create a folder share, and use the share path instead of the local path

Exact Weights for Gussets - Use the actual weight for plates (material left after tooling), or the theoretical weight of the total area needed before tooling.

Surface - Calculate the actual painted area or the real surface area

Unit - Metric or Imperial units

Precision - Used for imperial weight rounding calculation

Backup Directory - The folder the system will use to create backups. it is recommended this is on a different server to the database. If it is on a shared server it is recommended to create a folder share, and use the share path instead of the local path

Document Management - Activate the Document Manager

Standard Flats:

General Search	
General	
Standard Flats	
Rectangular Shape	4
MaximumSize	
Any Rotation	\checkmark
Tolerance	0.10 mm
Width	Minimum
Total	
Project manager	
Draw	
Macros	
> Import	
Metric Import	
> Imperial Import	
Reports	
Export	
Nesting	
Products	
Feedback	
Supervisor	

Extra options the system uses for Standard flats. For further options see here

Rectangular Shape - The fitting needs to be a rectangle to be recognized as a flat.

Any Width - Parts of any width, not just standard widths are recognized as flats.

Any Rotation - Allow the program to rotate parts to fit your standard flat sizes if possible

Tolerance - Set a tolerance for the software to round up or down the width to a standard flat size

Maximum NOTCH angle - If you have a machine that can cut notches out of flat bar, set the maximum angle it can cut here

Project Manager:

General . Search							
General	General						
Standard Flats							
Project manager							
Auto next tab							
Clear selection on action	4						
Job	Assembly Mark 🔹						
Automatic Master Part	Name 🔹						
Check automatic master part							
Manual Group							
Tooling filter							
Print before Shop drawing							
Draw							
Macros							
> Import							
Metric Import							
Imperial Import							
Reports							
Export Export							
Nesting							
Products							
Feedback							
Supervisor							

Configuration for the Project Manager Module

Auto Next Tab - When you create a Project, it will automatically tab to the next level of the hierarchy.

Clear Selection on Action - When you press action, if you have any parts selected they will be cleared

Job - Decide if the drawing, assembly or component should be used for jobs

Automatic Master Part - Set how the software should calculate what the master part of an assembly is.

Check automatic master part - With this activated, a check box will open for you to validate the master part in an assembly.

Manual Group - Manually determine what profile group parts are allocated to

Tooling Filter - Activate the option to be able to filter by tooling

Draw:

General	Search		
General			
Standard Flats			
Project manager			
Draw			
Back Web			
Gauge Line		1.50 🌲	
Edge Gap		1.00	mm
Default markir	ng height	15.00	mm
Macros			
Import			
Metric Import			
Imperial Import			
Reports			
Export			
Nesting			
Products			
> Feedback			
Supervisor			

Macros FENICE - Automatically recognize Stand FICEP macro codes on part import. Required if you have a coping robot

G1F33 - Activate the G1F33 macro recognition

G1F33

I U



Coping on initial sideMAC:ESTI33Coping on final sideMAC:ESTF33Coping axis:B / XCoping:Oxycutting / PlasmaAUTO_DSTV:No

Leadcut - Lead cuts are used for internal cuts where there is no standard macro available. Use this option to convert these cuts to scribing lines or cuts

Coping - Set the coping drawing option and its radius

Back web- Activate the back web in the drawing module. Useful to be able to see back web scribing

Gauge line - Set the gauge line distance for the drawing module

Import:

Genera	STEEL	Search					
🕨 Ger	eral						
Star	Standard Flats						
> Pro	ect manager						
) Dra	N						
) Max	ros						
4 Imp	ort						
E	xact Materia	l Grade					
E	xact Profile						
E	kact Treatme	ent					
E	Exact Painting						
s	Standard flats prefix PLAT?						
s	Square tubes prefix						
n	ctangular tu	bes prefix					
F	ound tubes p	orefix					
0	ellular beam	s prefix					
D Met	ric Import						
D Imp	erial Import						
D Rep	orts						
) Exp	ort						
Nes	ting						
> Pro	lucts						
> Fee	dback						
Sup	ervisor						

Exact Material Grade, Profile, Treatment, Painting: Normally, when you import parts from CAM files that have new profiles or material grades, the software will automatically add these to the relevant databases. With this option switched on, when you import parts that are not in your database, an extra option will ask you if you want to add it, or associate it with an existing grader or profile

Profile Prefixes - You can specify prefixes so the parts are renamed to standardized profile names. With this switched off, then profile name in the CAM file is used.

Company Configuration

Project Manager:

Ger	hera	al Search	
4	Ρ	roject manager	
		Default treatment	
		Default material grade	
		Default painting	
	Þ	Status Management	
		Job management	
		Product Management	
	Þ	Sub assembly management	
		Drawing quantity	
		Revision Management	
	Þ	Material Grade Upgrade	
	Þ	Profiles Upgrade	
		Project customer management	
	Þ	Part checking	
		Warning if part is in drawing in production	
		Priority mode	Not any
		Sites and departments management	V
		Workstation multi export	
	Þ	EN 1090 standard management	
		Create a default drawing and assembly	
		Welding management	
		Delete projects before date	
- Þ	F	abrication Job	
×.	S	ection Nesting	
P.	G	ieneral	
P	P	late Nesting	
P	P	roduction Progress	
P	S	hipping	
	3	D Geometry	
	0	AD Analysis	

Default Treatment - Specify a treatment to assign to all parts as a default. Double Click in the box to search and select

Material Grade By Default - Specify a material grade to assign to all parts as a default. Double Click in the box to search and select

Default Painting - Specify a painting to assign to all parts as a default. Double Click in the box to search and select

Status Management - Activate the Status management. option This lets you manually assign the current status of a project

1 4 Status Management To Produce Default drawing status Creation Job management Evaluation Aborted Product Management Purchase Sub assembly management To Produce Production Drawing quantity Finished Archive Revision Management

Jobs Management - Activate the option for the Phase Builder

Product Management - Activate Product Management

Sub Assembly Management - Activating the Sub Assembly option gives you the ability to break down beams into corresponding web and flanges plates. You can set the default weld thickness in the sub menu

1	Sub assembly management	1	
	Remove flange thickness	1	
	Drilling after assembly	1	
	Weld thickness	0.00	mm
	Cut to Length	1	

Drawing Quantity - By default, there can only be single quantity drawings. This is because for structural buildings, each drawing (load) is unique. However, if you are using the program for other sectors you may want to allow drawings to be multiple quantities. A multiple quantity drawing, will have all of the sub assemblies quantities multiplied by this number.

External GUID Management - GUIDs are used to identify assemblies and parts uniquely by assigning a hexadecimal characters consist of eight (0x00000001). This is for advanced BIM integration

Revision Management - Activate the option for Revision Management

Material & Profile Upgrade - Changes to the material or profile grades names are changed for all parts with those grades \ profiles

Part Checking - Activate Part Checking

Warning if drawing is in production - If you try and modify a part that has already been sent to production you will receive a warning

Sites and Departments Management - Activate this option for advanced options workflow configuration for large or multiple factories. See <u>Sites and Departments Management</u>

Workstations multi export - Allows the option for exporting to more than one workstation at a time. See <u>Workstation Export</u>

Fabrication Job:

Project manager	
Fabrication Job	
Name prefix	SELECT
Export through project manager	\checkmark
Report for shop drawing	
Grouping master parts and finished pieces	Drawing and Assembly -
Phase grouping master parts and finished pieces	Phase and Job 🔹
Grouping other parts	Drawing and Assembly -
Phase grouping other parts	Phase and Job 🔹
Nesting by profil group	
Default priority	99 🜩
Drawing Reservation	
Update nesting status by drawing status	
Fabrication Job removing - Update workstation	
Delete Job before date	11 - X
Fabrication Job checking Mode	Check sent Fabrication Job 🔹
Tooling checking	
Section Nesting	
General	
Plate Nesting	
Production Progress	
Shipping	
3D Geometry	
CAD Analysis	
Scheduling	

Report For Shop Drawing - Choose the report to use for your shop drawings

Grouping of parts - Determine the deciding factors in the grouping of parts in fabrication jobs

Cutting Sheet - The cutting sheet needs to be a unique number. It starts at 1 and increases by 1 every time you do a nesting. If you ever want to skip to a later cutting sheet number you can change the next sheet number here

Nesting by profile group - Parts with different profile groups can not be nested together

Default Priority - All part are given a default nesting priority of this setting. The higher the priority, the more it is prioritized.

Revision Management - Activate revision management for fabrication jobs

Update nesting status by drawing status - With this option and project manager status management activated, you can set to override the nesting status with the manually assigned status.

MEF checking mode - Decide if you should check all MEF or sent MEF

Toolings Checking - Do a <u>part check</u> at the Send to Production stage to be sure the machines have the correct tools set up in their tool tables to do the allocated parts

Section Nesting:

Project manager	
Fabrication Job	
Section Nesting	
Material Distinction	\checkmark
Treatment Distinction	
Grouping Treatment	
Treatment before cutting	
Grouping Painting	
Maximum Scrap	Length
Min. Remnant Allowed	0.00 mm
Stock Bundles Management	
Tolerance	0.00 mm
Catalog part	All bars 🔹
General	
Plate Nesting	
Production Progress	
Shipping	
3D Geometry	
CAD Analysis	
Scheduling	

Material Distinction - With this activated, no parts with different material grades will be nested together Treatment Distinction - With this activated, no parts with different treatments will be nested together Grouping Treatment, Grouping Painting - Group together bars with the same treatment and or painting

General:

General	
Workstation tooling for profile group	
Page Code	Default -
Default code page	√

Set the maximum scrap value by either length or percentage

Workstation tooling for profile group - Activate Workstation tooling for profile groups

Plate Nesting:

Plate Nesting			
Material Distinction	1		
Delete offcuts	1		
Default tolerance	0.10	mm	
Default material code			
Tolerance for thicknesses of profiles	0.01	mm	

Material Distinction - With this activated, no parts with different material grades will be nested together Treatment Distinction - With this activated, no parts with different treatments will be nested together Grouping Treatment, Grouping Painting - Group together bars with the same treatment and or painting

Production Progress:

Production Progress		
Input individual production time	1	
Input tracking ID	Enabled	•
Show next/previous workstation	1	
Activate delay warning	J	
Stopwatch	1	

Input individual production time - Allow the option to manually override the production time

Input casting numbers - Set whether you need to add a casting number before updating the production progress

Stopwatch - With this activated, the module Stopwatch is enabled in the Workshop Assistant application

3D Geometry :

3D Geometry	
Assembly 3D Management	

Assembly 3D management - Activating this option allows you to view the 3d assembly drawing for projects that have been imported with the Tekla XML interface.

Local Settings



These local settings are independent for each workstation the software is installed on.

GLOBAL OPTIONS:

Global options	Graphic options		
Log			
▶ Write in LO)G file	\checkmark	
Proxy server			
Use auther	ntication		
- Tekla Structu	res		
Use Tekla I	link		
Project mana	ger		
▷ Use 3D Robot			
General			
Search eng	gine	Google -	
Update che	ecking	Monthly	
Disable the	webservices checking		
Display inc	hes only		
CONFIRM	ER AVANT SORTIE		
Alma			
Actcutvers	ion	Automatic version 🔹	

Log - Update a log file in the PLM base folder. Used by Steel projects to understand technical problems. Set to off unless required as it will generate a large file

Proxy Server - If your company network uses a proxy server for internet access you need to activate this option to be able to update over the internet and use the customer FTP utility. Activate if needed and specify a username and password with access to use HTTP and FTP

TEKLA Structures - SP PLM has added integration with TEKLA Structures with this option activated. Both applications need to be installed on the same computer.

General - Specify your preferred search engine for internet queries

GRAPHIC OPTIONS:

Global options	Graphic options			
d General				
Show menu	i i i i i i i i i i i i i i i i i i i	1		
Show tabs		1		
2D graphic	style	DotNetBar style		•
3D graphic	style	DotNetBar style		•
Screenshot	view	3D		•
Advanced r	node	1		
Activation				
Activate 3D	engine	1		
Activate 3D	display	1		
Activate 2D	display	1		
Performances				
Use hardwa	are acceleration	1		
Force		4		
Antialiasing	I			
Tolerance		0.50 mm		
Views				
Activate mu	lti-views			
View types				v
View 1		3D		v
View 2		3D		•
View 3		3D		•
View 4		3D		v

 $\mathsf{GENERAL}$ - Activate the 3D preview on this computer and set the options for the display window in the Project Manager



3D OPTIONS - Set various window display options for the 3D preview

3D MODELLING OPTIONS - Set various part display options for the 3D preview

Company



Specify your company details in order for them to be used in reports

		i		981 AC
Company	-		Logo	
Description				
Code Company				
Code Register Company				
Code Register Company				

If the management of the EN1090 norm is activated for the company (see <u>here</u>), you can fill in the related information in the CE Marking tab

eral Address Material Grade Upgrade Profiles Upgrade CE marking	
Identification number of the notified orga	
Application date of CE marking	
Certificate of compliance number	
ATE number	

User Groups



SP PLM has a full User Group management allowing you to control which users can have access to certain program functionality.

Different users can have their own logins and given certain rights to software menus and reports.

The default user group created is *administrator*. Users belonging to this group have access to all of the software. The default user is always in the administrator group.

You only need to add more user groups if you want to restrict access to any user.

To add a new user group, type the name into the search box and then press [NEW] or [Ctrl+N].

GENERAL

Type the name of your Profile Group.

General	Rights Lists Das	hboard
Use	ers Group	TECHNICAL
Star	rtup module	Unspecified 🗸

RIGHTS

Use this list to select the parts of SP PLM you would like users of this Profile Group to have access to.

Select the menus from the left list, and press 📂 to add it to the list on the right.

Then you need to allow the right for creation, modification and deletion with the box further to the right.

You can multi select from either list :



LISTS

Control which reports users in this group can have access to.

Select the allowed lists on the left menu and press 📂 to allow access.

eral Rights Lists D	ashboard			
Report	Supersedes	^	Report	Supersedes
			Analyse	
LISTE EMPLOYES			Alarmes	
Synthèse			Remontée d'Informati	ons
Barres				
Mise en barre Code Ba	arre		MISE EN BARRES	
Mise en barre Code Ba	arre 3D		STOCK BARRES	
Nesting			TEMPS AFFAIRE	
Stock				
Synthèse mise en barr	re			
Colisage				
Colisage				
Expedition				
Bordereau				
Nomenclature d'expéd	lition			
Synthèse expédition				
Mise en Fabrication				
Entite QR Code				
Entite QR Code WA		\checkmark		
<		>		

Allow access to Production Feedback Dashboards.

Select the allowed dashboards on the left menu and press 🔶 to allow access

General Rights Lists Dashboard

If you use the <u>Sites and Departments Management</u> option you can allow access to your different sites from this menu. To allow access to a site press it to add it to the list on the right.



Users



SP PLM has a full User Group management allowing you to control which users can have access to certain program functionality.

Different users can have their own logins and given certain rights to software menus and reports.

From this list, you can create and control the users, user names, and passwords, and assign them into a relevant <u>User Group</u>

When you log into the program, each user will need to specify his login and password to access the program :

ᡖ Identification	×
Э 🚣 国	
Login	
Save Configuration	
Reset	V Ok 🗡 Abort

Use the "save configuration" option to remember the login information and not have to refill it every time.

To add a user to the database, type a user name into the search box and then press [NEW] or [Ctrl+N].

GENERAL

Specify a password, and the first and last name of the user.

Login	TMERLIN	✓ Active user
Password		Multi Company
Name	MERLIN	
First Name		
Startup module	Unspecified	-

if the user is not active, unselect "active user" this is useful if you don't want to delete the user fully but would like to stop access using that account.

If you have a multi company database and the user can have access to multiple companies, select this option. In most cases this is not needed.

USER GROUP

Users Group	+		
			/ ADMINISTRATEUR
		-	

Specify the user group that the user belongs to, by selecting it from the list of the left side and pressing to add it to the right. The user will have all the rights and restrictions of this group.

Users Manager



This functionality in SP PLM allows to manage the application users in the users groups.

It is possible to remove or add application users to any users groups.

User	DAP nport	Abort Delete	Print HI Next Input U Quit
	Expand E Collapse	Name	First Name
	L ADMINISTRATI	EUR	
	R		

When a user click on the button ^{import}, a new screen is displayed. He can import users from an Active Directory.

LDAP

🔜 Import LDAP	>	<
Select Active Director	Y	
steel-projects.fr		
User		
Current user		
User		
Display password		
	< Previous Next > Abort	
🔜 Import LDAP	>	<
Selectusers	Existing contact	
♦ Ø Ø C		
Login Name	First Name Description	
adminazure Adminis	adm_sqi	
Administrateur	Compte d'utilisateur d'adm xefi	
e agrolleau Grolleau Grolleau	u Alexandre	
bamboo Bamboo bmann Mann	o Bun	
ebenarbia Ben arb	pia Chaouki	
CTI-Dackup backup	appassure >	
	< Previous Import > Abort	
Messaging system configuration



This menu allows to configure the SP.PLM messaging.

The fist tab is to define messaging type and the parameters.

Shop Drawing	Lists	Report management	Configuration	Local settings	Company	Users Group	Users	Users manager	Messaging system configuration
Ref. Ne	ew 🖣	Save Save	Abort	Delete	Print	Next Ir	nput C	Mes	sage 🕛 Quit
Message	s type:	Messaging group	s Predefined i	messages					
+ 🏼 -	-		P 4	🖡 📋 Case :	sensitive	2×	• J	Alphanun	neric
		Description	Colour	Duration	n (s)				
<u>۲</u>	8	ERREUR	Default	0		Ģ)		
4	Þ 😲	AVERTISSEMENT	Orange	5	[Ģ)]	
6	0	INFORMATION	Default	3		Ģ)]	

For each line, he can edit many parameters :

- Description : Text to display
- Duration : Displaying duration in seconds
- Priority : Set the priority
- Type : Type of message Error, Warning or Information
- Colour : Set the colour message

A preview button is available to display the expected message.

ages types		— 🗆
New Si	ave 🗙 Abort 🔲 Delete 📄 Print 🔶 Next Input 😃 Qu	uit
Description	ERREUR	Preview
Duration	0 s	
Priority	High priority 🔹	
Туре	Error	
Colour	Default 👻	

The second tab allows the user to manage messaging groups. He can define a name then add users, employees and machines to this group.

New Save XA	bort Delete Print Her Next Input Ressage UQuit
Messages types Messaging groups	Predefined messages
User	+ -
SP SP	E- TIPOB254
	SP SP
GROISARD	
	BERENGER
Le	
TTLE2	GUIBERT
•	BAERT
	TIPOB254

The third tab allows the user to define predefined messages. He can define a name then select messaging group, the message type and the text to display.

Predefined messages	_	×
New Vave Xabort Delete Print Vext Input UQuit		•
Name		
TIPOB254 Message Maintenance		
Messaging groups Description		
b		
The machine should be in maintenance		^
User		
Employees		
Workstations		~

Utilities



Project Restore



Restore a previously backup PLM Project or WinSteel Contract.

Press the browse button to search for the contract zip file. Select the file and press OK to import it into the program. It will go through the import routine and if there is no problem it will be available in the Project list.







Backup one PLM or Multiple PLM Projects, to zip files. These can then be <u>restored</u> back into program at a later point if required.

Project Backup		_		×
Directory				
Filter				
≫ ⊗ @ C				
Project	Customer			^
16025				
16022				
🛑 15260A				
15260				
9 15264				
9 15135				
16028				
15209				
16032				
15264A				
= 15264B				
152040				\checkmark
		-	ok 🖌	AH
				•

Press the Browse button to set the folder that you would like to back the projects up to. We recommend this is a folder away from the main server.

Your full Project list will be shown below. For all of the Projects you want to backup, click on the red circle next to the name to turn to green. Or you can multi select the Projects while holding Ctrl, and use the selection icon \Im above.

To select all the Projects press the $\overset{@}{@}$ icon.

When you have made your selection, press OK to start the backup process.

Once finished, you will have a number of zip folders in the selected directory.

Backup



Backup the full SP PLM database and base folder.

The program will try and create the backup to the destination folder you have set up in your <u>general</u> <u>configuration options</u>

💾 Backup		?	×
Backup Directory			
\Backup\			
Backup file name			
Backup_20190315-1.19.0.61.zip			
✓ FTP			
✓ Plate Nesting			~
	🗸 Ok	×	Abort

If you uncheck the Plat Nesting option, the plate nesting related elements (files in the MET folder) won't be included in the backup. Thus reducing quite a lot the size of the backup file.

To make the backup, simply press OK to start the process.

It is important to note that the destination folder needs to be accessible by the client and also the server. It is recommended to use a folder share with the correct user permissions

Lists



Some reports are available to run from the Utilities menu.

The default reports lists the profiles you have in your profile database, but you can also load extra reports in using the <u>report manager</u>

To preview the report double click on a report name and it will show on the right side :





To filter the information shown on the report, press $\stackrel{\text{tr}}{=}$ and set the required filters by project, profile, or date for example :

👎 Filter		-		×
Criteria	Value			
□ Contract □ Project □ Project □ Prosenbly Mark □ Profile Groups □ Profiles □ Profiles				
	Reset	🚔 Арр	ly 🔀	Abort

To print the report to either a printer, excel file or pdf, click on the red circle next to the report name to turn it green. This will activate the corresponding options on the top toolbar.

Edition			
Name	Language		
Utilitaire			
Employés	English		
Code Barre	English		
Opérations	English		
Machines	English		
Chutes	English		
	English		
Profils			
🛑 Recherche pièce par profil	English		
Liste des profils	English		

Translator



SP PLM contains a comprehensive translation tool, which can be used to modify the menu, icon, option names, and wording as required.

To set or check the default language, click the top ribbon toolbar menu and look at the language option :



In the translation menu, the translation the software uses corresponds the selected language.

rt Not												
translated												
New Save	Abort	Delete	Print Next In	put 🕛 Quit								
Key 🔍	French	English	English_US	Italian	German	Spanish	Portuguese	Russian	Simplified Chinese	Polish	Korean	Turkish
•	-	-	-	•	-	-	-	•	-	-	-	-
%	%	%	%	%	%	%	2,	%	%	%	%	%
% ACHEVE	% Achevé	% Cleared	% Cleared	% Terminato	% Abgeschlossen	% Acabado	% Acabado	% Завершено	% 已清除	% Wyczyszczone	% Cleared	% Temizlendi
% EFFECTUE	% Effectué	% Operated	% Operated	% Eseguito	% Ausgeführt	% Realizado	% Efetuado	% Выполнено	%已操作	% Obsługiwane	% Operated	% İşlendi
% POIDS	% Poids	% Weight	% Weight	% Peso	% Gewicht	% Peso	% Peso	% Bec	%重量	% Waga	% Weight	% Ağırlık
% TPS	% Tps	% Time	% Time	% Tempo	% Zeit	% Tiempo	% Tempo	% Время	%时间	% Czas	% Time	% Zaman
%D PIECE(S)	%d Pièce(s)	%d Piece(s)	%d Piece(s)	%d Pezzo(i)	%d Stück(e)	%d Pieza(s)	%d peça(s)	% Деталь(и)	%d 件数(s)	%d Część (i)	%d Piece(s)	%d Parça(lar)
(AUTRES)	(Autres)	(Others)	(Others)	Altri/e	weiteres	(Otros)	(Outras)	(Другие)	(其它)	(Inne)	(Others)	(diğerleri)
(DE)INSTALLER	(Des)Installer	(Un)Install	(Un)Install	(Dis)installare	deinstallieren	desinstalación	(DE)INSTALLER	(DE)INSTALLER	(DE)安装	(DE)INSTALLER	(DE)INSTALLER	Yüklen(me)miş
(INDEFINI)	(Indéfini)	(Unspecified)	(Unspecified)	(non definito)	unbestimmt	(INDEFINIDO)	(INDEFINIDO)	(Неопределенн	(未指定)	(Niewyspecyfiko	(Unspecified)	(Belirlenmemiş)
(KG)	(kg)	(kg)	(kg)	(kg)	(kg)	(kg)	(kg)	(кг)	(公斤)	(kg)	(kg)	(kg)
(KG/M²)	(kg/m²)	(kg/m²)	(kg/m²)	(kg/m²)	(kg/m²)	(kg/m²)	(kg/m²)	(KF/M²)	(公斤/平方米)	(kg/m²)	(kg/m²)	(kg/m²)
(KG/ML)	(kg/ml)	(kg/ml)	(kg/ml)	(kg/ml)	(kg/ml)	(kg/ml)	(kg/ml)	(кг/мл)	(公斤/耄升)	(kg/ml)	(kg/ml)	(kg/ml)
(M)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(14)	(米)	(m)	(m)	(m)
(M ²)	(m²)	(m²)	(m²)	(m²)	(m²)	(m²)	(m²)	(M²)	(平方米)	(m²)	(m?)	(m²)
(M ² /M ²)	(m²/m²)	(m²/m²)	(m²/m²)	(m²/m²)	(m²/m²)	(m²/m²)	(m²/m²)	(M ² /M ²)	(平方米/平方米)	(m²/m²)	(m²/m²)	(m²/m²)
(M²/ML)	(m²/ml)	(m²/ml)	(m²/ml)	(m²/ml)	(m²/ml)	(m²/ml)	(m²/ml)	(м²/мл)	(平方米/耄升)	(m²/ml)	(m²/ml)	(m²/ml)
(MM?)	(mm²)	(mm²)	(mm ⁻)	(mm ⁻)	(mm²)	(mm²)	(mm²)	(MM)	(平方鼋米)	(mm²)	(mm²)	(mm²)
(SC)	(SC)	(SC)	(SC)	(SC)	(SC)	(SC)	(SC)	(SC)	(SC)	(SC)	(SC)	(SC)
(SL)	(SL)	(SL)	(SL)	(SL)	(SL)	(SL)	(SL)	(SL)	(SL)	(SL)	(SL)	(SL)
(SP)	(SP)	(SP)	(SP)	(SP)	(SP)	(SP)	(SP)	(SP)	(SP)	(SP)	(SP)	(SP)
(SRS)	(SRS)	(SRS)	(SRS)	(SRS)	(SRS)	(SRS)	(SRS	(SRS)	(SRS)	(SRS)	(SRS)	(SRS)
(VIDE)	(Vide)	(Empty)	(Empty)	(Vuoto)	(LEER)	(Vacio)	(Vasio)	(Пустой)	(空)	(Pustv)	(비어 있음)	(Bos)

Click on the heading of the current language to organize the list alphabetically.

To view the hidden toolbar, press

To set the search to use that column, right click on the heading name. you will see that column now has a magnifying glass next to it.

+ 🏽 🗕	Key	<i>~</i>) 👃 👔 🗌 Case s	ensitive	 Alphanumeric 	
	Key 🔍	French	English	English_US	Italian	Geman
•						
	-	-	-	-	-	-
	%	%	%	%	%	%
	% ACHEVE	% Achevé	% Cleared	% Cleared	% Terminato	% Abgeschlossen
	% EFFECTUE	% Effectué	% Operated	% Operated	% Eseguito	% Ausgeführt
	% POIDS	% Poids	% Weight	% Weight	% Peso	% Gewicht
	% TPS	% Tps	% Time	% Time	% Tempo	% Zeit
	%D PIECE(S)	%d Pièce(s)	%d Piece(s)	%d Piece(s)	%d Pezzo(i)	%d Stück(e)
	(AUTRES)	(Autres)	(Others)	(Others)	Altri/e	weiteres
	(DE)INSTALLER	(Des)Installer	(Un)Install	(Un)Install	(Dis)installare	deinstallieren

Type in the search bar the word or phrase you want to change the translation for.

Press Enter or the search icon to scroll through the possible lines. All possibilities are highlighted in yellow.

+ 🌐	-	Key drawing	Ģ	🔎 💺 👕 Case sensitive 1 elements 🛛 🔁 🔻 🗹 Alphanumeric					
		Key 🔍	French	English	English_US	Italian	German		
		DRAFTER INTR	Drafter non trouvé	Drafter not found	Drafter not found	Drafter non trova	Drafter nicht gefu		
		DRAWING	Dessin	Drawing	Phase	Disegno	Zeichnung		
		DRAWING IS D	Plan en cours de	Drawing is being	Phase is being d	Disegno in corso	Bauphase wurde		
		DRIVER	Driver	Driver	Driver	Driver	Treiber		
		DROIT	Droit	Right	Right	Destro	Rechts		

To modify the word, press the icon to edit the grid. Then this allows you to change the word and then save to commit the change.

New Save Abort Delete Print Hard Next Input										
🕂 🔛 — Key drawing \wp 💺 👔 🗌 Case sensitive 1 elements 🛐 🔹 🗹 Alphanumeric										
	Key 🔍	French	English	English_US	Italian	German				
	DRAFTER INTR	Drafter non trouvé	Drafter not found	Drafter not found	Drafter non trova	Drafter nicht gefu				
	DRAWING	Dessin	Drawing	Phase	Disegno	Zeichnung				
	DRAWING IS D	Plan en cours de	Drawing is being	Phase is being d	Disegno in corso	Bauphase wurde				
	DRIVER	Driver	Driver	Driver	Driver	Treiber				
	DROIT	Droit	Right	Right	Destro	Rechts				

The translation in the software will now reflect your changes instead of the default.

Update



SP PLM can be automatically updated so long as you have a warranty period or active maintenance contract.

The database will first need to be updated and then once this is done the client programs will automatically recognize they need to be updated on program opening.

There are three possible options for updating the database

In Base Folder: If you have already downloaded the file from SP servers and not applied it yet, choose this option. There needs to be a valid folder and update.exe file in the base\update\ folder

On Steel Projects Servers - This method of update will attempt to connect to the SP servers to download the latest version over the internet.



If an update is available it will tell you the version that is available and allow you to download. Once the file is downloaded, it will ask you if you want to apply the update now and automatically update the database.

On This Computer: If you are provided with a copy of the update on a disc, you can use this option to browse to the update.exe file

If you have a valid maintenance contract but the option to download the latest version is not available, please contact SP Support and you will be provided with a valid support file.

Customer FTP

Then press 📂 to upload.



The customer FTP is a useful tool for you to be able to upload or download files to or from your private folder on the Steel Projects FTP server.

the left window allows you to browse to a folder on your computer and view the files. the window on the right shows the files in your FTP folder.

To upload a file to the FTP folder, browse to the correct location and click on the red circle to turn it to green.

FTP client							— (
Local directory			FTP	Custo	mer zone on Steel-Proje	cts FTP server		
Isers\ttle.STEEL-PROJECTS0\Downloads\ 🔣 Customer STEEL PROJECTS FRANCE			FRANCE FTP					
× 🕺 🖉 🧲					≫ 🕺 ở C 🗕			
ame	Creation Date	Modification Date	Size	^	Name	Creation Date	Modification Date	Size
SP PLM Test.zip	26/07/2017 15:37:03	26/07/2017 15:37:04	109 K		Backup_20190312-1.1	12/03/2019 15:40:00	12/03/2019 15:40:00	22,8 M
SP-Week2018-Planning	17/09/2018 09:43:42	17/09/2018 09:43:43	37,2 K					
Sp.Plm.en.chm-revHEAD	07/02/2019 15:15:35	06/11/2018 17:40:43	32,4 N					
sp.PLM_1.12.1_New_feat	03/07/2018 10:20:36	19/07/2018 16:52:07	14,0 K					
Sp.Setup.Plm.1.19.0.12.exe	11/01/2019 10:54:36	11/01/2019 09:23:49	133 M	- h	5			
Sp.Setup.Plm.1.19.0.17.exe	16/01/2019 16:49:31	16/01/2019 08:11:10	132					
Sp.Setup.Plm.1.19.0.19.exe	17/01/2019 15:49:44	17/01/2019 09:06:34	.33 M					
Sp.Setup.Plm.1.19.0.20.exe	22/01/2019 08:50:33	18/01/2019 08:09	133 M					
Sp.Setup.Plm.1.19.0.25.exe	23/01/2019 09:24:32	22/01/2019 17 .0:17	133 M					
Sp.Setup.Plm.1.19.0.26.exe	24/01/2019 09:23:37	24/01/20 09:02:54	133 M					
Sp.Setup.Plm.1.19.0.29.exe	30/01/2019 08:45:57	30/01, 2019 08:32:43	133 M					
Sp.Setup.Plm.1.19.0.33.exe	31/01/2019 15:30:07	2/01/2019 11:46:25	133 M					
Sp.Setup.Plm.1.19.0.35.exe	01/02/2019 10:11:12	01/02/2019 09:41:29	133 M					
Sp.Setup.Plm.1.19.0.38.exe	05/02/2019 15:53:24	05/02/2019 12:07:44	133 M					
Sp.Setup.Plm.1.19.0.48.exe	27/02/2019 11:27:31	27/02/2019 09:24:45	135 M	_				
Sp.Setup.Plm.1.19.0.51.exe	01/03/2019 09:09:23	28/02/2019 09:42:41	135 M					
Sp.Setup.Plm.1.19.0.56.exe	07/03/2019 13:59:25	06/03/2019 09:00:44	136 M					
Sp.Setup.Plm.1.19.0.61.exe	14/03/2019 09:22:41	11/03/2019 16:14:17	136 M					
Sp.Setup.Plm.Test.exe	24/07/2018 15:59:55	06/03/2019 09:00:44	136 M					
Sp.Setup.Tekla.3.47.0.91	27/09/2018 14:05:55	27/09/2018 14:06:15	23,8 N					
Sp.Setup.Tekla.exe	24/09/2018 17:59:47	27/08/2018 10:54:40	23,8 N	¥				
			>		<			

To download an available file, select a folder on your pc to download it to, press the circle on the right to

change it to green and press

Lock



The lock screen shows a list of locked database files.



When a user clicks on the button Clean up, all the grey points are taken in account then will be removed.

New Save	Abort Delete	Print 🛹 Next Input 🖰 Quit			
Use	er / Computer	License locks	Entity locks		
User	Session	Module	Entity	Count	
	Console@PC-TTLE				
<	>				
C Refresh	Clean up				

Database Administration



Tools for database administration and maintenance.

Information

Reports Express Version SQL Server 2016 Server PC-TTLE\SP_SQLEXP2016 Database	Express ion SQL Server 2016 rer PC-TTLE\SP_SQLEXP2016 base base Size 4159.75 MB 42% Free_Disk_Space Data C:\ 3590.00 Mb 13919 Mb Log C:\ 570.00 Mb	Inform	nation	Administra	tion						
Version SQL Server 2016 Server PC-TTLE\SP_SQLEXP2016 Database Database Size 4159.75 MB 42% Free_Disk_Space Data C:\ 3590.00 Mb 13919 Mb	ion SQL Server 2016 PC-TTLE\SP_SQLEXP2016 ibase ibase Size 4159.75 MB 42% Type Drive Size Free_Disk_Space Data C:\ 3590.00 Mb 13919 Mb Log C:\ 570.00 Mb 13919 Mb	Report	ts		Express						
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Log C:\ 570.00 Mb 13919 Mb				Log		C:\	!	570.00 Mb		13919 Mb	
		ataba	ase Sta	tistics not u	up to date 6	89 Day(s)					
Database Statistics not up to date 689 Day(s)	base Statistics not up to date 689 Day(s)	Size o	f tempo	rary table !	58720 KB						

The main information, such as version, size of database are displayed here.

Administration

Maintenance	Module
Update indexes	Update used modules
Delete terreserve telete	△ 4D exports
Delete temporary table	4D Export
	Applications and modules
Shrink database	Any nesting feature
	Mobile Shipping management
Shrink log file	Plate Nesting
	Production Feedback
T 1.2	Production Manager
Iranslation	Project Manager
	Section Nesting
File stream	Shipping management
	BIM files import
	TEKLA Import
FileStream Option enabled	CAD files import
	DSTV Import
Activate	4 Fabrication2ways
	Vernet Interface

Maintenance

If the maintenance plan service is stopped, it can't perform all the necessary operation to avoid the database size to blow up.

In this case, you can manually update the indexes, delete the temporary tables and shrink the databases and log file to save disk space.

This operation has to be done preferably by a Steel Project expert.

The "Translation" button allows to launch the application update translation.

Filestream

This must always be activated. If not, click on "activate".

Module

After an update of the license file, an addition of new modules, it's mandatory to press "Update Used Modules".

Services Management



General

Set-up of the services (parameters, recurrence, etc.) This has to be done by a Steel Projects Expert.

Local

Management of the services installed on the server.

 Δ Each service, if needed, must be installed only once, preferably on the server Δ

C				Local service appli	cations managemen	t			
		~	Name		Installation			Sta	rtup
	in None	IP Address	Port number	(Un)Install	Statup mode	Log	Running		
			Sp.Refresh3D		-1	Install]		OFF
	9	0	Sp.Feedback		8001	Uninstall	Manual		OFF
	-		Sp.BackgroundTasks		-1	Install]		OFF
	-		Sp.MaintenancePlan		-1	Install			OFF
	-	0	Sp.Rest.FeedbackMobile		8001	Uninstall	Manual		OFF
	9		Sp.InterfaceService		-1	Install			OFF
L	L	Ļ							
1	2	3	4	5	6	7	8	9	10

- 1 Activity indicator. Visible if a management operation is in progress.
- 2 Specifies whether the executable service file is present on disk.
- 3 Indicates whether the service is registered in Windows, and if the latter can run it.
- 4 Name of the executable file
- 5 When there are more than one network card interface on the server, indicate the IP address used. Must be set-up before installing the service
- 6 Defines the port used by the service. Must be set-up before installation.
- If -1, the port 8001 will be used
- 7 Install / Uninstall
- If the service is in use, it can't be uninstalled.
- 8 Once the service installed, defines the startup mode.
- 9 For an installed service, not started, allows to activate a log file to trace the execution.
- 10 If the service is installed, allow to start or stop it.

Messaging

In this tab, the user can manage the messaging tool. First, he should launch the installer by clicking on the button "Install". The component RabbitMQ will be installed.

Setup - RabbitMQ - Steel-Projects PLM	_		×
Install			
Downloading]	
Downloading package Setup Using FTP Impossible to download with FTP and extract files. Erreur système. Using HTTP			
		Cance	3

Then, the user could activate the option.



A restart of SP.PLM software is required.

	Status	
🔵 Name	PC-TTLE	
Server	RabbitMQ	
Version	3.7.13	
Status	Ok	
Users	Ok	

Source Data Import



This functionality allows the user to create and configure many type of import.

Feedback data				
New VSav	e Abort Delete Print	Next Input		
Link CAN	13D			
Name	CAM3D			
Туре	Source Data Cam3D (1.19.0.4677)	- Options		
Directory	D:\Steel_Project\Interface 3D\CAM\			
		S Options		? ×
		Profile	Add	•
		Material Grade	Comparison	•
		Folding parameters	Comparison	•
			~	Dk 🗙 Abort

In the Data tab, the user can use the import.



							×
Directory	201004	15					
D:\Steel_Project\Interfa	ace 3D/CA	VI V					
Filter							
≫ ⊗ @ C							
Name	Cr	eation Date	Modification Date	Size			
TeklaBaseDataExc	oort.c 31	/10/2018 09:14:56	31/10/2018 09:14:56	43.0 Ko			
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				<u> </u>		-	
				🚽 Ok	Abort	- -	Optio
							opus
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Comparison							~
		[[
🆺 New 🗹 Save	🔀 Abort	Delete	Print Next Input	Ouit			
		Delete		Quit			
				Cedite			G
C C				Ceunt			G
• C d Update				Grunt			C
- C d Update				U Guit			
- C d Update Ste	el Projects F	PLM		Impo	rt		G
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Steel Projects PLM 1.19.x

Import (100%)

ſ

Backup (100%)	
File : D:\Steel_Project\Interface 3D\CAM\TeklaBaseDataExport.cam3d Profiles Added : 2154	^
Material Grade Added : 186 Modified : 14 Folding parameters	
	~
	🔷 🧹 Ok 🚽 Lo





This functionality allows the user to analyze and fix the data integrity in the software.

Check		
Assembly		
Item/Quantity		
No Master Part		
Welds		
Feedback		
Bars		
Parts		
Plate		
Material Grade		
Density		
Optimize Cutting		
Parts		
Sub Bar		
Parts		
Graphics data		
Item/Quantity		
Profile	1	
Weight/Surface		
Plate Nesting		
Automatic multiplicity		
Chamfer basic preparation files		
☐ Files		
Menu Bar		
Scraps		
Technologies		
Profiles		
Dimensions		
T Nesting		
Weight/Surface		
		🔍 Analyze

For example, check the box "Technologies" then click on the button



A fix report is displayed. Click on the button

```
100 %
```







Documentations



This menu allows users to read the previous SP.PLM Release Note.



Project Manager - Modules



The main module to manage your projects

The project manager module in SPPLM is the "heart of our PLM solution". Its main use is to manage your Projects, <u>import CAD files</u> from other packages, <u>manually draw or edit parts</u>, assign grades, tooling, treatments, profile groups and other database information. It is also used to make selections of components to send to production and other advanced tools.



Layout

The main window is divided into 6 areas :



Here you can have 2D or 3D preview for component (Assembly if TEKLA import with WinSCRIBE option)



Project Manager Navigation

The Project Manager is laid out with the standard tool-bars at the top, and then a hierarchical layout of your Projects, drawings (Phases\Loads), Assemblies and Components. The default view shows a list of all of your Projects (if you have any otherwise the screen is blank)

The hierarchical filters are shown in Blue next to the tab name

To view all the Components in a Project, click on the relevant Project from the Project tab, ant then click on the Component tab

As you can see in this example, we have selected the Project number BAT01 and are viewing the components inside this Project

New Save X Abort	Delete Print H	ut 😃 Quit			
Contract 16025	Project 16025	Drawing	Assembly Mark	Component	

To view only the components inside a drawing or assembly, select the Project and then the required part of the contract from those tabs. in this example I have selected to view the parts in Assembly Mark

	ontrac	t 16025			6	Project 16	025			Han Dray	wing 2		Assembly	Mark P1		Component 1	1	
🕂 🏢 🗕 Component			🔎 🧍 👔 🗌 Case sensitive 🛛 🛐 👻 🖌 Alphanumeri				ric											
	1		Component 🔍			Quantity		Profile	1	Length	Width	Material Grade	Final Painting	Treatment	Group	Description	Product Name	Comment
•			11	<i>.</i>	#	1		TOLE15	2	260.00	250.00	S235JR		RAL 7040	TOLES - 25 MM	POTEAU		
			69	ø	۲	1		TOLE10	2	267.74	135.00	S235JR		RAL 7040	TOLES - 10 MM	ATTACHE		
			67	<i></i>	۲	2		TOLE10	2	246.60	64.20	S235JR		RAL 7040	TOLES - 10 MM	PLAT		
			18	<i>i</i>	۲	2		TOLE8	1	150.00	69.00	S235JR		RAL 7040	TOLES - 10 MM	TRAVERSE		
		۵	P1	1	۲	1		IPE270	4	1891.96		S275JR		RAL 7040	V - IPE	POTEAU		

Project Manager Tool-Bar



Selection



Open the Selection Window

You can then drag items into the Window to process for section nesting, creating a fabrication job, view drawings or create reports. The selection Window opens automatically if you drag an item anywhere on the screen.



The trees window shows the hierarchical structure in a tree menu. You can navigate around your Projects and make selections from this window instead of the main window

Preview



Open the Preview Window

If you have a valid Component or Assembly selected, you will see a view of the part in 2D or 3D. To activate 3D view you need to have it enabled in your <u>Local Settings</u>. You can also change the way the item is displayed with these options

You can change the 2D display options in the <u>Shop Drawings</u> configuration



Import



Import data into your Project Manager by pressing the arrow to view your configured Imports

Draw



Open the <u>Drawing Module</u> to add or modify tooling details of your components such as drilling, cutting and marking



Copy a project, Drawing, Assembly or Component into another place in the Project Manager. If the item you copy has lower hierarchy items, these will also be copied.

For example, if you copy a Project, all of the sub drawings, Assemblies and Components will be copied. if you Copy a Component, then that will be the only item copied.

Select the desired item in the main window and either press the Copy button, or right click -Copy, or press the keyboard shortcut [Ctrl+C]

this will open the Copy options. the node shows the item that is to be copied, the destination shows where it is to be copied to.

🎢 Сору		×
	Node	
Project	16025	
Drawing	2	Q
Assembly Mark	P1	
Component	18	
	Destination	
Project	16022	<u></u>
Drawing	12	
Assembly Mark	L100	
Component	18	
Quantity	2 🜲	
]
	~	🖊 Copy 🔀 Abort
🥙 Сору		×
	Node	
Contract	16025	
Project	16025PL	
	Destination	
Contract	15260	
Project	16025PZ	
Parameters	•	🗸 Copy 🔀 Abo

You can modify the destination selections to rename them by typing or double click in the windows to choose existing locations. press OK and the items will be copied

Open <u>Copy Function</u> to have more information.



You can use the Select icon to multi select items and open and send them to the selection window.





You can assign any of your Projects as templates. When you do this, the items inside them can be copied over to other projects quickly. For more information <u>Template Project</u>

Refresh Refresh

Refresh the screen

Priorities edition



This option allows to display the priority of each projects/drawing.

🂰 Pr	iorities edition						?	×
-	-	🔎 🕹 🕯 🗆	Case sensitive	🖌 🖌 Alphanumeric				Ċ
	Contract	Project	Drawing	Customer	Final Date of the Project	Priority		
•	16189	0	1			99		
	00	00	00			99		
	00	00	105			99		
	00 TEST	00 TEST	12			99		
	00	00-16125	01			99		
	007	007	01			99		
	007	007	02			99		
	00	00A	1			99		
	00	00B	01			99		
	00	00C	01			99		
	00	00D	00D			99		
	00	00TG	TG			99		
	00	00TL	1			99		
	00	00TPS	TPS			99		
	007	01	01			99		
	00	1203DD	1			99		
	14033	14033PL	1000			99		
	14033	14033TPS	TPS			99		
	14041	14041PL	1000			99		-
						🗸 Ok	X	Abort

Nesting Quantity



When this icon has been selected, it activates an extra column in the main components window so you can visualise in the Project manager the parts and quantities that have already been nested in the <u>Section</u> <u>Nesting Module</u>

🕄 🗰	\$										Tools	Steel	Projects PLM - P	roject manager
Steel-Proje	cts Project	Data	Project Manager data	Nesting data	Fabrication Jol	odata Feedback dat	a Shipping data	Scheduling data	Configuration	Utilities Proje	ct manager			
Selection	Phase Tre	Preview	Import Draw	Copy Select	Template Refresh	Priorities edition	Additional Informations	ofile Weight/Surface	Search		Filter			
Nev	v 🖌 Sav	e 🗙 A	bort Delete	Print	Next Input	Quit								
Contr	act 16117			Project	6117		Drawing	в		Assembly	Mark CH7		Compon	ent 512
+ 🎟 –	Compone	nt		🔎 🤞 🛊 🔲 G	ase sensitive	🔹 🗹 Alphanumeric								
4		Componen	t 🔍 🛛 Q	uantity	Nesting Q dity	Profile	Length	Width	Material Grade	Final Painting	Treatment	Group	Description	Product Name
F		512	🧀 🛷 2		12/12	TOLE6	75.00	40.00	S235JR		RAL 9010	TOLES - 10 MM	ATTACHE	
	1	CH7	i 🖉 🎯 🖉		6/6	UPF-150*50*3	2086.00		S235JR		RAL 9010	UPN/AF 80-300 <	CHEVETRE	

Additional Informations



When the user activates this menu, additional columns are displayed in the data grid :

- Weight
- Surface
- Drilling (in quantity)
- Marking (in quantity)
- Cutting (in quantity)
- Coping (in quantity)
- Scribings (in quantity)
- Bendings (in quantity)
- Chamfers (in quantity)

New Save Abort Delete Print Next Input Out Contract 16117 Project 16117 Project 16117 Component 512 + III - Component P & IIII Case sensitive IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	Selection Phase Trees Preview	nport Draw Copy Select Template Refres	sh Priorities Quantity	Profile Weight/Surface Search	• • • • • • • • • • • • • • • • • • •	ilter							
■ Contract 16117 ■ Project 16117 ■ Component 512 + Ⅲ - Component > + ▮ □ Case sensitive X + ☑ Alphanumeric	New Save Abort	Rev V Save X Abort Delete Print H Next Input											
+ III - Component P + 1 Case sensitive II - 2 Alphanumeric	Contract 16117	Project 16117	Dr	awing 8	Assembly Mark	CH7	Component 512						
	+ III — Component 🖉 🔎 ♣ 🛊 🗆 Case sensitive 🛛 🛪 💌 (Alphanumeric												
Component 🔍 Quantity Comment 4 Weight Surface Drilling Marking 🛆 Cutting Scribings Bendings Coping Chamfers Creation Date	Component Component	·····											
512 2 0.14 Kg 0.01 m ² 1 0 0 0 0 0 0 05/07/2016 164	Component Component	Quantity Commen	nt 4 Weight Sur	rface Drilling M	larking 🛆 Cutting	Scribings Bendings	Coping Chamfers	Creation Date					
🛃 🙀 CH7 🕼 😤 1 12.05 Kg 1.03 m² 0 1 1 8 0 0 0 0.05/07/2016 164	Component Compon	Quantity Commen	tt.4 Weight Su 0.14 Kg 0.01	rface Drilling M 1 m² 1 0	larking 🛆 Cutting 0	Scribings Bendings 0 0	Coping Chamfers 0 0	Creation Date 05/07/2016 16:4.					

These information are computed for each tab : Contract, Project, Drawing, Assembly and Component

Profile Groups



This button is activated and displayed when, at least, one profile group is modified. The user can click on this button to update the profile groups.

Weight/Surface



You can recalculate weight and surface values if profile or material grade parameters as changed.

Search



Search for an Assembly or Component using the search tool. You need to type the name in the left or right window press enter to search. All the results that match up will be shown in the window. Double click on one of the entries and it will take you to that item in the Project Manager

You can search Macro with the second tab window.

You can search Profile with the third tab window.

ic s	earch							_		×
Gene	aral Macro Profi	ile								
	Assembly	Mark			Or	Component	512			
+8	-		🔎 🤞 🕯 🗆 G	ase sensitive 🔽 Alpł	nanumeric					Ċ
	Contract	Project	Drawing	Assembly Mark	Component	Phase	Job			
•	15119	15119	31	P5016	5126					
	15119	15119	31	P5016	5127					
	15119	15119	31	P5017	5126					
	15119	15119	31	P5017	5127					
	15119	15119	31	P5029	5128					
	15119	15119	31	P5029	5129					
	15119	15119	31	P5030	5128					
	15119	15119	31	P5030	5129					
	15119	15119A	28	P5013	5122					-
									C	Close

Top Tool-bar

Þ

In order to see this tool bar you must either press the bar to expand, or press [Ctrl+B]

Steel-Projects Proje	ct Data Project Mar	nager data Nesting data F	abrication Job c	lata Fee	edback data S	Shipping data	Scheduling data	Config	uration	Utilities Pr	oject manager	
	E 🛛 🔊	🥩 🖆 💕 🧏	P C			6) Č	K				
Selection Phase T	rees Preview Import	Draw Copy Select Temp proj	ect	edition	Resting Addit Quantity Inform	ations Group	le Weight/Surface os	Search			Filter	
New VS	Save Abort	Delete Print	Next Input	Quit								
Contract 16117	7	Project 16117	,		Click Here	Drawing 8				Assemb	ly Mark CH7	
	Component 🔍	Quantity	Final Painting	Treatm	ment 🔓 Gro	oup	Description	Product	Name	Comment 1	Comment 2	Comment 3
•	CH7	2 🛷 2 2 🖑 1		RAL 9	010 TO 010 UP	N/AF 80-300 <	CHEVETRE					
+ 🏼 -	Component				Q 👃		Case sensit	tive	A Z Z A	- J/	Alphanume	eric
+ Create	a new hiera	archy dependin	a on w	hich t	tab vou	are in	- Proiect	. Dra	wina	- Asse	mblv -	
Component	:		9 011 11		us ,eu			, 2.4	g	,		
Delete	the current	selection										
HH		072				<u>А</u> г						
-	Component	t 971	_		2	•						
		Component 🔍			Quantity							
		975	i 🖉	1 党	1							
		957	1	۲ 🗶	3							
		970		ء	1							

Search the current tab. Change the search column by right clicking on the column header and replace any characters by [?]. In this case the goal is to search all part starting by 97.

i 🥩 🎉

🍰 🖑 1

1191

P28

Project



The Project Toolbar gives access to all the main Steel-Projects PLM modules:

Import - Import CAD/ CAM files in a variety of formats

<u>Contract</u> - Edit an existing Contract.

Project - Edit an existing Project.

Fabrication Job - Edit and resend jobs \ nestings to production

Section Nesting - Nest your Linear products into commercial sizes or user defined bars

Plate Nesting - Nest your flat product into plates

Shipping - Control your shipping and create delivery notes

Production Manager - Production work flow management, time estimation and real time feedback

<u>Analysis</u> - Analyse your Production Feedback information with a variety of reports and widgets

<u>Control</u> - The main module to control your Production Feedback information

Provisional scheduling - Control the production feedback and the consolidation status

Production scheduling - Control the production feedback and the consolidation status

Supervisor - Check the lay-out in the real time

Import



The Import CAD files entry point

Import parts from a variety of third party software using the imports you have set-up in your Project Manager Import options.

this can be done from the main screen of PLM, or from inside the project Manager.

Press the drop down arrow under the import tab, and will show the available imports. Click on the required one to open a new import window.

The window will show all of the files in the default import folder which are available.

Import Te	kla (1, 50, 7, 72)		- 0	×						
Directory D:\STEEL_PROJECT\INTERFACE 3D\TEKLA*.XML ~										
Available		0	Selected	3						
File		C >>>	File 17-193_Phase 1.xml 17-193_Prescellement.xml ttle_ComponentCatalogUIModelSettings	C 2 S.xml 2						
<		>	<	>						
	Ok	Abort	Optic	ons						
Steel Projects PLM 1.19.x

Import [D314]				_	
Directory					
D:\Steel_Project\Interface	e 3D\DSTV\BOCAD\DSTV\				•
ilter					
8 🐼 🖉 🧭					
Name	Creation Date	Modification Date	Size		^
z3000p1001.nc	25/09/2017 15:49:11	11/10/2017 16:02:20	1,46 Ko		
a 2000-1002 ma	25/09/2017 15:49:11	23/08/2017 14:13:07	1,50 Ko		
23000p1002.nc					
z3000p1002.nc	25/09/2017 15:49:11	23/08/2017 14:13:07	1,50 Ko		
z3000p1002.nc z3000p1003.nc z3000p1004.nc	25/09/2017 15:49:11 25/09/2017 15:49:11	23/08/2017 14:13:07 23/08/2017 14:13:07	1,50 Ko 462 octet(

You can press on



to view and change the import options from this screen

Parts selected or with green circles will be imported into the system when you press OK. Available or red ones will be ignored

Double click, or select or multiple select parts that you don't want to import and press 🧟 to unselect them

Press start.

when you have the required parts to imported selected green, and the import process will



If the Drawings Dispatching option is selected you can change Contract Name, Projects Name or Drawing Name.

To continue select [OK].

The program will refresh the 3D information and you should press [OK] to continue.

😼 Import	\times
Finished (100%)	
Modified : 0 Ignored : 0 Processing Job Added : 0 Modified : 0 Ignored : 0 Processing JobDet Added : 0 Modified : 0 Ignored : 0	^
*** Refresh 3D *** Total part count : 43 Processed part count : 43 *** Finished ***	~
\checkmark	Ok 🥌 Log

To finish the import Windows will confirm the project(s) imported.

Unit selection

For the plate component, the application allows to prefix a Gusset name according to the unit (Metric or Imperial).

The user must define the name in the general configuration.

New Save Abort Delete	Print Next Input	Crossage 😃 Quit
General		
General		
Standard Flats		
Project manager		
> Draw		
Macros		
> Import		
Metric Import		
Gusset Prefix	TOLE?	
Imperial Import		
Gusset Prefix	PLATE?	
> Reports		
> Export		
> Nesting		
Products		
Feedback		
> Supervisor		

Steel Projects PLM 1.19.x

During an import loading, a selection screen allows the user to select the expected unit.

崎 P	rofile						?	×
Origin	Metric Imperial							
	Origin	Thickness	Metric	Imperial	Unit			
•	TOLE6	6.00	TOLE6	PLATE.236	Metric	\sim		
						🗸 Ok	×	Abort

Contract



In Part Manager, it is not possible to add a new and modify an existing contract.

View an existing Contract

Double click in the Contract box to open up a list of your existing contract.

Choose the required one from the list, or type in the new window to filter the selection then Press [Ok]

Import T	ct Fabrication Se Job Ne	ction Plate sting Nesting	Shipping	Production manager	III Analysis	Control	Provisional scheduling	Production scheduling	Supervisor
New Save A	port Delete	Print	Next	Input	Quit				
Contract		Q							
	Contract						_		×
	ID 🖌	Contract							
	21	16025							
	24	16022							
	26	15260							
	20	15125							
	31	16028							
	33	15209							
	34	16032							
	35	15221							
	36	15196							
	37	16039							
	45	15261							
	46	15270							Ŧ
	All Visible						 	0k 🔀 /	Abort

You can consult the details of the contract.

	Contract 15209		
6	eneral Information		
			Comment
	Contract	15209	
	Description	100.000	
	Customer	₩	
	Theoretical weight	0.0000 Kg	
	Calculated theoretical weight	0.0000 Kg	

Project



Create or edit a Project

The project tab allows you to view and create new projects and view or modify your existing projects options, without needing to go into the Project Manager module

Type the name of the new project you want to create, and press [NEW] or [TAB]



Confirm with [Yes]

3	:	×
	Do you want to create	
	Yes No	

You can then add the required project options the instructions for this are the same as in the Project Manager

roject	NEW	Contract	
)escription		Phase	V
lanager		Material Grade Upgrade	le 🗌
)bject		Profiles Upgrade	V
inal Date of the Pro	oj / /	 Project customer 	
lustomer	+	Туре	Default
ypology	+ (Origin	Manual project
itatus	Purchase	Priority	99 🚖
beeretical weight	0.0000 Ka	Execution class	EXC2

To add further details to the Project you need to do this in the Project Manager module

View Or Modify Existing Project

Double click in the Project box to open up a list of your existing projects.

Choose the required one from the list, or type in the new window to filter the selection. Press [OK]



You can then modify and save any of the details, or click on the Summary tab to see a summary of the project without needing to go into the Project Manager module

0	General Default values	Information Status Summary Assembli	estoolings Partstoolings Addresse	s Attached documents Contacts
			Π	
	Project	16025	Contract	16025 🕂 🔍
	Description	OLVAC	Phase	
	Manager		Material Grade Upgrade	
	Object		Profiles Upgrade	
	Final Date of the Proj	- 11 -	Project customer	16-025
	Customer	∔ ⊆	Туре	Default 🔹
	Typology	+ Q	Origin	Tekla Structures
	Status	To Produce -	Priority	99 🔶
	Theoretical weight	0.0000 Kg	Execution class	EXC2
	Calculated theoretica	al weight 0.0000 Kg	Account manager	

You can access the options, view and edit parameters and data of Projects, Drawings, Assemblies and Components by double clicking on them in the main lists.

Project Options

General:

View and change the general project information.

Project - The project name

Description - Description of the project

Manager - Manual field to specify the project manager

Object - Extra description field

Final Date of the Project - Press the drop down option to choose a final delivery date from the calendar

Customer - Double click to bring up your customer list

Typology - Allows you to choose a project typology

Template Project - Set this contract as a template (see above)

Origin - States if the project was created by importing files or manually by a user

New Save Abort Delete Print	Next Input 😃 Quit		
Project 15260			
eneral Default values Information Status Summary Assemblies	stoolings Partstoolings Address	es Attached documents Contacts	
Project 15260	Contract	15260 + 🔍	
Description	Phase		
Manager	Material Grade Upgrade		
Object	Profiles Upgrade		
Final Date of the Proj / /	Project customer	15260	
Customer 🕂	Туре	Default -	
Typology 🕂	Origin	Imported project	
Status To Produce 💌	Priority	99 🜩	
Theoretical weight 0.0000 Kg	Execution class	EXC2	
	• •		

Default Value:

Allows you to specify default values for parts in this project that are added manually

Project: 15260 /)
New 🗸 Save	🗙 Abort 🔲 Delete 📄 Print 🖊 Next Input 😃 Quit		
Project 15260			
eneral Default values	Information Status Summary Assemblies toolings Parts toolings Addresses Attached documents Contacts		
Material Grade	E36-2 + 		
Treatment	RAL7040		
Painting	PEINT		
Unit	Metric (mm)		

Information:

Shows information on the creation and modification information, weights, and number of assemblies and components

roject : CONT_STEEL	_001_1 /								
New Save	Abort Delete	Print	Next I	nput 😯	Nessage 😃 Quit				
Project AFF_S	TEEL_001	0							
ieneral Default values	Information Summary Ass	emblies toolings	Parts tooling	s Addresses ,	Attached documents Cont	acts Provisional	scheduling		
	Comment]			Weight	1155.80	Ka		
					Average part weight	35.02	Ka		
					Surface	31.47	m²		
					Weight coef for galva		1.0000 🜲		
					Packaging max weight	0.00	Kg		
Created on	14/05/2018 15:31:27		Ву	SP_ADMIN					
Modified on	14/05/2018 15:31:27		Ву	SP_ADMIN					
	Quantity Num	ber of definition							
Component	33 13								
Assembly Mark	4 4								

Status:

Shows a summary of the project status.

	ATALOGI	JE_TEST /				— 🗆
New	Sav	e 🗙 Abort [Delete 📄 Print 🔶	🛋 Next Input 🕛 Quit		
Proj	ect CAT	ALOGUE_AFF	<u></u>			
			_			
ieneral De	efault valu	es Information Status	s Summary Assemblies too	lings Parts toolings Addresses Atta	ached documents Contacts	
+ =			🔎 👃 👔 🗌 Case sen	isitive 🔀 👻 🖌 Alphanumeric	Ċ	
	Version	Status	Date	User		
•	0	Purchase	02/02/2018 17:36:4	46 TTLE2		

Summary:

Shows a summary of the project by profile and category. Click on the tab on the left to switch between profiles and lengths

i Proj	ect : CATALOGUE_TEST /					_		×
	lew Save Ab	ort Delete	Print H	Next Input 🔱 Quit				?
	Project CATALOGUE_AF	F [2					
Gen	eral Default values Informatio	on Status Summary As	semblies toolings	Parts toolings Addresses	s Attached documents Con	tacts		
3		Length	Quantity	Weight	Quantity			
	Total by profile category	1000.00		E4 11 K-				
E E		0.00 mm	1	30.00 Ka		Profile categories (Quantity)		
g#	Total by profile	0.00 mm	1	50.00 Ng			B	
	I IPN300	1000.00 mm	1	54.11 Kg			X	
	UN TOLEGS 4000 312	0.00 mm	1	30.00 Kg				
					4	50.00%		
					Þ			
						50.00%		
						50.00%		

Assemblies and Parts Toolings:

A summary of the total amount of toolings in the project

New Sa Project 16	ave A	bort	De	elete	Print 🔲 Next Input 💾 Quit		
Project 16		DUIL					0
Project 16							U
	5202PL						
eneral Default va	alues Informat	ion Status	s Sur	mmary	y Assemblies toolings Parts toolings Addresses Attached documents Contacts		
			0	6 1	Case sensitive 🛃 👻 🖌 Alphanumeric		Ċ
Tooling	Quantity	1 2	3 4	4			
roject : 16202 /							×
roject : 16202 /				-1-1-			×
roject: 16202 / , New Sa	ave XA	bort	De	elete	Print Vext Input Ouit	_	×
roject : 16202 / , New Sa Project 16	ave A	bort	De	elete	Print Vext Input Ouit		> •
roject : 16202 / , New Sa Project 16	ave A	bort	De	elete	Print Vext Input Ouit		>
roject : 16202 / , New Sa Project 16 eneral Default va	ave AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	bort to Status	De s Sur	elete	Print Mext Input Cuit		>
roject : 16202 / New Sa Project 16 eneral Default va Toolina	ave A S202PL alues Informat	bort	De s Sur 2 3	elete mmar,	Print Mext Input Ouit Quit S Y Assemblies toolings Parts toolings Addresses Attached documents Contacts Distribution		> •
roject : 16202 / , New Sa Project 16 eneral Default va Tooling CONTOUR	ave A 5202PL alues Informat Quantity 8000	bort ion Status	De s Sur 2 3 0 0	elete	y Assemblies toolings Parts toolings Addresses Attached documents Contacts		>
roject : 16202 / , New Sa Project 16 eneral Default va Tooling CONTOUR EXPÉDITION	ave A 5202PL alues Informat Quantity 8000 1000	bort ion Status	De s Sur 2 3 0 0 0 0	elete 4 0 0	Print Image: Addresses Attached documents Contacts Distribution		>
roject : 16202 / New Sz Project 16 eneral Default va Tooling CONTOUR EXPÉDITION PLI FACONNE	ave A 5202PL alues Informat Quantity 8000 1000 1000	bort ion Status 1 000 0 0 0 0 0	De s Sur 2 3 0 0 0 0 0 0 0 0	elete 4 0 0 0	Print Mext Input Ouit Quit Addresses Attached documents Contacts Distribution		>
roject : 16202 / New Sz Project 16 eneral Default va Tooling CONTOUR EXPÉDITION PLI FACONNE PLIAGE	ave A 5202PL alues Informat Quantity 8000 1000 1000 1000	bort ion Status 1 1 1000 0 0 0 0 0 0 0 0 0 0 0 0	De s Sur 2 3 0 0 0 0 0 0 0 0 0 0	elete 4 0 0 0 0 0	Print Image: Print Print Print Image: Print Image: Print Image: Prin		>
roject : 16202 / New Sz Project 16 eneral Default va Tooling CONTOUR EXPÉDITION PLI FACONNE PLIAGE SORTIE	ave A 5202PL alues Informat Quantity 8000 1000 1000 1000 1000	bort ion Status 1 000 0 0 0	De s Sur 2 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	elete 4 0 0 0 0 0 0 0	Print Image: Print Print Print Image: Print Image: Print Image: Prin		>
roject : 16202 / New Sz Project 16 eneral Default va Tooling CONTOUR EXPÉDITION PLI FACONNE PLIAGE SORTIE UNI QAD	ave A 5202PL alues Informat Quantity 8000 1000 1000 1000 1000 1000	bort ion Status 1 000 0 0 0	De s Sur 2 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	elete	Print Image: Print Print Image: Print Image: Print Image: Print Imag		

Addresses

A list of addresses you can define for your project

🥌 Project : 16202 /				— 🗆	×
New Vave Abort	Delete	Print Hext Input Ouit			?
Project 16202PL	Q.,				
General Default values Information Status	s Summary Asse	mblies toolings Parts toolings Addresses Attach	ned documents Contacts		
SP VIENNE					
	Label Description	SP VIENNE			
	Address 1	RUE DES FRERES LUMIERE	eMail		
	Address 2 City	VIENNE	Fax		
	State / Region		Contact		
	Zip Code	38200			
	Country				
-					

Attached Documents:

Use the **Document Manager** to attach documents to the project

🕋 Project: 16202 /	×
Rew Vave Xabort Delete Print + Next Input UQuit	?
Project 16202PL	
General Default values Information Status Summary Assemblies toolings Parts toolings Addresses Attached documents Contacts	
[r0] SMART Program Brochure SMART Program Brochure EN 18,3 Ko	«
21/02/2019 08:55:38	
	2
	peration
	ð

Contacts: A list of contacts you can define for your project

🕌 Project : 16202 /		_	×
New Vave Abort	Delete Print Hext Input UQuit		0
Project 16202PL			
General Default values Information Statu	s Summary Assemblies toolings Parts toolings Addresses Attached documents Contacts		
II M. STEPHANE	General Information		
	Title Mr Name STEPHANE First Name		
~			

Part Options

Change the part name, quantity, profile etc from the double click list. The screen also shows a summary of the part creation and modification information, weight and surface area.

Component : 1620	02 / 16202PL / / /						
New Sa	ve Abort Delete	🛛 Print 🖊 Hext Input	Quit				(
Project 16	202PL	Component PL1		Q			
Component	PL1	Information	Toolings Preview Subassem	bly Profile Drill	ing Attached doc	uments	_
Quantity	1000 🚖			Comment			
Profile	TOLE1	+ 🤇					
Unit	Metric (mm) OImperia	1					
Length	50.00 mm						
Width	100.00 mm						
Group	TOLES - 0 A 4MM	Created on	02/03/2017 17:03:10	By			
		Modified or	02/03/2017 17:03:10	By			
Description		▼ Weight	0.0395 Kg	Surface	0.0103	m ²	
Article Code						1	
	C005.1D		Node		Perime	eter	
Material Grade	5230JR	Project	16201PI Versio	n Ex	ternal 300.00	mm	
l reatment					000.00		
Painting		Part Part	PL1	Int	ernal 0.00	mm	

Toolings:

Project 16	202PL	Co	omponent PL1					Q			
Component	PL1		Information Tooling	s Preview	Sub a:	sen	ıbly	Prof	file Drilling Attached documents		
Quantity	1000 🛬		Tooling	Quantity	1	2	3	4	Description	Not machine	
			PLIAGE	1	0	0	0	0			
Profile	TOLE1		CONTOUR	8	1	0	0	0			
Jnit	Metric (mm)	mperial	EXPÉDITION	1	0	0	0	0			
Length	50.00 mm		SORTIE	1	0	0	0	0			
∿idth	100.00 mm		UNLOAD	1	0	0	0	0	Forcer K126L pour déchargement		
Group	TOLES - 0 A 4MM	Q 🖊	PLI FACONNE	1	0	0	0	0			
Description		-									
Article Code											
Material Grade	S235JR	+ 🔍									
Freatment		+									
Detectors		_									

Lists the number of different toolings in the part

Preview:

Shows a preview of the part. Double click on the preview to open the part in the Drawing Module

Component : 1620	02 / 16202PL / / /					×
New Sa	we Abort De	lete Print 🖊	Next Input			6
Project 16	202PL	Co	mponent PL1	9		
Component	PI 1		Information Toolings Preview	v Sub assembly Profile Drilli	ing Attached documents	
Quantity	1000			÷	-0	
Profile	TOLE1	+ 🔍				
Unit	 Metric (mm) 	Imperial				
Length	50.00 mm					
Width	100.00 mm					
Group	TOLES - 0 A 4MM	➡ 🔎			-50	
Description		•		90°	-50	
Article Code						
Material Grade	S235JR	+ 🔍				
Treatment		+ 🔍				
Painting		+ 🔍			-100	
Execution class	EXC2			Ó	50	

Sub assembly :

If the component is define by Sub assemblies (Break down part) you can see the composition.

New Sa	ve Abort Delete	Print 🔶	Next Input	U Quit					?)
Project 16	094	Co	mponent T2			0				
Component	12		Information	n Toolings P	review Sub asse	mbly Profile	Drilling Attached	d documents		
Quantity	1				Component		Quantity	Profile	l	
			۱.		T2_2	ø	1	TOLE9.5	6	
Profile	HEA180			0	T2_1	<i>i</i>	1	TOLE9.5	6	
Jnit	Metric (mm)	mperial		0	T2_0	<i>i</i>	1	TOLE6	6	
ength	6504.77 mm									
Vidth	0.00 mm									
Group	ANGLES	(
Description	TRAVERSE	-								
Article Code										
Material Grade	S275JR									
reatment										
Painting										
	EVC2									

Profile:

Shows the type of profile that the part is

Component : 1609	94 / 16094 / 2 / T2 /	_		×
New Sa	ve Abort Delete Print 🔶	Next Input 😃 Quit	?	
Project 16	094 C	omponent T2		
Component	1	Information Toolings Preview Sub assembly Profile Drilling Attached documents		
Profile Unit	HEA180 Metric (mm) Imperial	$ \begin{array}{c} F = 171.00 \\ F = 180.00 \\ A = 6.00 \\ F = 9.50 \\ R = 15.00 \\ F x = 0.00 \\ T r = 0.00 \\ \end{array} $		
Length Width Group	6504.77 mm 0.00 mm ANGLES			
Description Article Code	TRAVERSE	Ex		
Material Grade Treatment	S275JR	<u> , </u>		
Painting	Even			
Execution class	EAC2			

Drilling:

Allows you to change the critical reference point for all the parts in a certain face.

Component : 1609	4 / 16094 / 2 / T2 /			×
New Sav	ve Abort Delete Print	Hext Input 😃 Quit	2	
Project 160	094	Component T2		
Component	T2	Information Toolings Preview Sub assembly Profile Drilling Attached documents		-
Quantity	1	Web		
Profile Unit	HEA180	O Top OCentre Line OBottom		
Length	6504.77 mm	Top Flange		
Width Group	0.00 mm ANGLES	OTop OCentre Line OBottom		
Description	TRAVERSE	Bottom Flange		
Article Code		O Top Centre Line OBottom		
Material Grade	S275JR	Back Web		
Treatment Painting		O Top O Centre Line O Bottom		
Execution class	EXC2			

Attached Documents:

Attach documents to a part using the Document Manager

Component : 1609	4 / 16094 / 2 / T2 /							>
🖡 New 🗸 Sar	ve 🗙 Abort 📃 Delete	Print 🖊	Next Input					(
Project 160	094	Co	mponent T2_2		<u>,</u>			
Component Quantity Profile Unit Length Width Group	T2_2 1 € TOLE9.5 @ Metric (mm) 6456.74 mm 180.00 mm X - AUTRES TOLE Retter Record	Imperial	Information Toolings Preview Preview Preview Prevision 0 Revision 0 Introduction.docx 1,36 Mo 13/09/2018 09:50:47	rofile Drilling Document Name Introductio Delete Revision 0	Attached documents Operations on e New from file File Introduction .docx	Renar	>> 10 ne pc.	
Description Article Code	Bottom Flange	•			1,36 Mo 13/09/2018 09:50:47			
Material Grade Treatment Painting	S275JR	+ Q + Q + Q		Author 19/03/	Preview Load /2019 10:32:01 19/03/2	Delet	2	
Execution class	EXC2							

Right Click Menu

Further options can be found from the right click menu by right clicking on specific Projects, Drawings, Assemblies and components

+	New	Ins
	Edit Grid	Ctrl+Ins
-	Delete	Del
	Toolbars	Ctrl+B
¢	Edit	Enter
۲	Add product	Ctrl+Maj+P
P	Сору	Ctrl+C
۲	Master Part	Ctrl+M
P	Cut to Length	Ctrl+K
E	Rename for ass	embly
	Draw	•
\geq	Tools	•
	Distribution	•



Create a new Project, Drawing, Assembly or Component. See creating a manual project



Allows you to make changes to the information on the screen you are in by modifying the grid instead of going into the individual EDIT OPTIONS - INFORMATION window. This option can also be selected from the hidden toolbar

- Delete Del

Delete the current selection

Toolbars Ctrl+B

View or hide the hidden toolbar

🄄 Edit Enter

open the EDIT OPTIONS - INFORMATION for the selection. If you have multiple selections then you can edit all of them at the same time. for example, if you wanted to change the material grade of a full assembly at the same time, select all of the parts in the assembly with Shift & left click, then right click - edit

	Draw	Ŷ	Drafter	Ctrl+D
\geq	Tools +		3D dimens	ioning
	Distribution +		Refresh 3D	
			Delete cac	he

🥩 Drafter 🛛 Ctrl+D

Open the Drawing Module to modify the drawing of the part you have selected

3D dimensioning

Open the 3D dimensioning Module



Refresh 3D

Refresh the 3D view of the parts

Delete cache

Fix the issues in the drawing module

Ctrl+C

🐔 Сору

Copy the Project or Part



Define the master part of the assembly. This is usually the main beam of an assembly and the other parts are associated part. This is automatically defined on creation or import but this function allows you to manually define it.

🖆 Cut to Length Ctrl+K

Rename a part in an assembly.

This sets the selected part or parts as cut to length, so they will not be nested into bars in the section nesting module, and when they are sent to the machine they will include no cut information. This is useful of you have the correct sizes bars and would like to just send them to machines for extra tooling such as drilling



Break down

Break down : Convert beam to flats.



😵 Fix part

<u>Check the selected parts</u> for feasibility on your machines or force part(s) as valid one(s).

🚻 Manufacturing process	?	×	
Tooling	Value		
Marking	Unspecified		
	✓ ∘	k 🔀	Abort

Allows you to specify the tool used to mark the part if there is a choice of more than one tool on the machine it is sent to.

- 🚻 Adding auto mark
- 🚻 Delete auto mark

Allows you to determine in the software if the part of group of parts is to be marked on the machine. This function requires you to activate the associated option on the WinCN or DSTV export options for it to work.

	Drilling			-	×
÷	🔛 — 🛛 🔎 🤞 👔 🗌 Case sensitiv	ive	👔 🔹 Alphanumeric		Ċ
	Drilling		Substituted drilling		
۲	Normal, Diameter: 14.0 mm				

Drilling will substitute a diameter or change the type or drill the propriety for parts selection.

Drilling	- 🗆 X
+ 🔛 — 🛛 🔎 🦊 🛊 🗌 Case sensitive	ŽX ▼ JAlphanumeric
Drilling	Substituted drilling
Normal, Diameter: 14.0 mm	X -
	Type Normal Parameters Diameter HD Alpha 0.0 ° Beta 0.0 °
	Delete Ok

You need to double click in the line to open the property box.

Convert to standard Flats 💦 🖬 Convert to plate

Convert parts that have been defined as flat to plates, or plates to flats. this is a manual override of the <u>Standard Flats</u> settings and allows you to change if the part is to be done on a linear or plate machine

Distribution	•	Drawing	Assembly Mark	Quantity = 4	
		2	T2	2	-
		2	T1	2	-

This lets you see the distribution of a part in a project, and also lets you see if the part is nested in a particular nest. if it is you can click on it and it will take you into the nesting number.

Create Revision

Manually create a <u>revision number</u> for the Project.

Konvert toolings to scribing			?	×
Toolings	Parameters			
✓ Web cut	Cut Angle min	0.00	•	
Flange cut	Cut Angle min	0.00	•	
Leadcut				
Bending				
Chamfer				
		√ 0	k 🔀	Abort

Allows you to Convert toolings to scribing Convert toolings to scribing

Manage the revisions and compare

The Revision management tool can be used to keep track of different revisions .

Any changes to the facts of the Project, drawing, assemblies, component and sub-assemblies are stored in the system

Enable revision management:

The Revision management parameter needs to be activated in the Company Configuration.

General	
Project manager	
Default treatment	
Default material grade	
Default painting	
Status Management	
Job management	
Product Management	
Sub assembly management	
Drawing quantity	
Revision Management	
Material Grade Upgrade	
Profiles Upgrade	
Project customer management	
Part checking	
Warning if part is in drawing in production	
Priority mode	Project 🔹
Sites and departments management	
Workstation multi export	
EN 1090 standard management	
Create a default drawing and assembly	
Welding management	
Delete projects before date	

Create a Revision

There are two ways to create a revision:

- Through the Project Manager.
- Through an import.

Create Revision In the Project Manager

It is possible to create a revision on an individual Project . Right click on the Project in question and select Create a revision in the right click context menu.

T C											
It.	а	revision	IC	noccible	а	create	а	new	revision	window	onenc
τι	u	10131011	13	possible,	u	cicate	u	IIC W	1013011	window	opens.

Contra	ct 17051					Proj	ect 17051	PL	
+ = -	Project		🔎 🍦	1	Cas	e sensitive	27 -	🕺 👻 🗸 Alphar	numeric
	Project	Q	Description		Objec	t M	anager	Customer	Typology
•	17051PL		PLIAGE						
	17051TPS		TEMPS		+	New	Ins		
						Edit Grid	Ctrl+Ins		
					-	Delete	Del		
						Toolbars	Ctrl+B		
					٩	Edit	Enter		
					P	Сору	Ctrl+C		
						Create Rev	ision		
						Status		•	
						Draw		•	
					\geq	Tools		•	

Version		×
New Vare	🕻 Abort 📃 Delete 💭 Print 🛹 Next Input 🕑 Quit	3
Project 17051PL	Version 1	<u>_</u>
Revision Date	18/03/2019 👻	
Description	New Révision	

A revision is then created. All changes to the details of the Project will now be performed on the current revision.

Create Revision From an Import

When parts are imported any differences between the new version and the current version are compared The import will ask you if wants to modify the data by making a revision or not.

If yes you need to fill the check-box and [OK]



Project Review, Drawing, Assembly, Component

Revi	sions	of F	Project	S										
+ 🖩 🗕	Project		P 🕴 🕯	Case sensi	tive 🛃	👫 👻 🖌 Alpha	numeric							
	Project	0	Description	Object	Typology	Maximum length	Priority	Project customer	Creation Date	Modification Date	Nb Revision	Last Revision Update	Status	Execution class
•	15090			SERRURE		3238.56	99	15-090	11/05/2016 08:54	19/10/2017 16:08:09	256	1	Purchase	EXC2
	15090PL		PLIAGE			100.00	99		12/07/2016 14:03	12/07/2016 14:03:17	0	0	To Produce	EXC2
	15090TPS					1000.00	99	16086TPS	18/07/2016 14:43	18/07/2016 14:43:26	0	0	To Produce	EXC2

On this screen, two concepts relate to revisions.

Revision No. column indicates the current revision of this case. In the example above, the selected case is currently under revision 1.

Last revision column indicates the last revision that changed the database of the Project

Revisions of Drawings

Con	tract 15090				Project	15090		Assembly I	Mark				
+ 🖩 -	 Drawing 		6	🔾 🦊 👔 🗌 Case	sensitive	Alphanumeric							
	Drawing	0	Description	Delivery Date	Drawer	Treatment	Material Grade	Creation Date	Modification Date	Status	Execution class	Last Revision Update	
•	22		SERRURERIE					11/05/2016 08:5	05/09/2018 23:3	Production	EXC2	1	

On this screen, the column last revision indicates which revision data on this drawing are active.

Revisions of assemblies

Modification of an assembly may involve two actions:

Changing the amount of an assembly in a project, addition of an assembly to a project

The modification of data assembly as such (description, master part)

On this screen, the last revision column indicates which revision assembly is active.

Contract 15090		Project 15	5090	Dra	wing 22		Assembly Mari	k GC26	Comp	onent
🕂 🎆 🗕 Assembly	/ Mark	<i>P</i>	🕴 👕 🗆 Case se	nsitive 👫 🕶 🗸	Alphanumeric					
	Assembly Mark	Quantity	Description	Delivery Date	Treatment	Material Grade	Creation Date	Modification Date	Execution class	Last Revision Update
	GC21	1	-GARDE-C				11/05/2016 08:5	05/02/2019 15:4	EXC2	255
	GC23	1	-GARDE-C				11/05/2016 08:5	11/05/2016 08:5	EXC2	0
	GC27	1	-GARDE-C				11/05/2016 08:5	11/05/2016 08:5	EXC2	0
Þ	GC26	1	-GARDE-C				11/05/2016 08:5	11/05/2016 08:5	EXC2	0
	GC22	1	-GARDE-C				11/05/2016 08:5	11/05/2016 08:5	EXC2	0
	GC16	1	-GARDE-C				11/05/2016 08:5	11/05/2016 08:5	EXC2	0
	GC24	2	-GARDE-C				11/05/2016 08:5	11/05/2016 08:5	EXC2	0

Revisions of Components

Modification of a part can be of 4 types:

- Changing the quantity of the part in an assembly, the addition of a component to an assembly
- Modification of part data (grade, profile, length, width)
- Changing the machining of the component
- The composition of the pre-assembly part.

Contrac	t 15090		Pr	oject 15090		Drawing	22	Asse	embly Mark GC26		🗊Component 🤇	GC26	۹ ۵
+ 🏼 –	Component] 🔎 🦊 🛊 [Case sensitive	🔹 🔽 Alphanun	neric						Ċ
		Component 🔍		Quantity	Profile	Length	Width	Material Grade	Treatment	Group	Description	Last Revision Update	Weight
		1208	i 🕼	2	TOLE6	80.00	80.00	S235JR	-GALVA	TOLES - 10 MM	-GARDE-C	3	0.24 Kg
		1214	i 🖉	1	TOLE6	80.00	80.00	\$235JR	-GALVA	TOLES - 10 MM	-GARDE-C	0	0.24 Kg
		1236	i 🕼 🐲	1	ROND10	140.45		S235JR	GALVA	RONDS	rond	0	0.09 Kg
		1239	i 🕼 🐲	1	D16	203.54		S235JR	GALVA	RONDS	rond	0	0.32 Kg
		1240	i 🖉	1	D16	201.35		S235JR	GALVA	RONDS	rond	0	0.32 Kg

Display Of Revision History

View Project Revisions

It is possible to compare the different revisions of a Project from the Project Options Information Screen (Double click the Project from the main Projects list)

On Projects that have been revised, the there is a tab called "revision" which sows all the revision history

roject :	15090 /				— 🗆
New	Save	Abort Abort	Delete	Next Input Uuit	
F	Project 1509	0			
ieneral	Default value	es Information Status	Summary Assemblies tooling	s Parts toolings Version Addresses Attached documents Contacts	
	Number	Version Date			
•	1	19/10/2017 16:08:09	Description		
	2	19/10/2017 16:12:22			
	3	19/10/2017 16:21:40			
	4	19/10/2017 16:43:17			
	5	19/10/2017 16:59:14			
	6	19/10/2017 17:29:50			
	7	19/10/2017 17:32:33			
	8	19/10/2017 17:38:51			
	9	19/10/2017 17:42:16			
	10	19/10/2017 17:44:45			
	11	19/10/2017 17:46:18			
	10	20/10/2017 09:15:38			-

This tab shows the dates of any revisions, as well as the description that has been entered.

It also allows you to compare two revisions by right-clicking on the line that you want to compare.

Then simply choose how you want to review the comparison.

roject: 15090 /			
New Sav	e 🗙 Abort 🛄	Delete 📰 Print 🖊 Next Input 😃 Quit	
Project 150	90		
eneral Default valu	es Information Status	Summary Assemblies toolings Parts toolings Version Addresses Attached documents Contacts	
+ = _		🔎 💺 👕 Case sensitive 🛛 🛐 👻 🖌 Iphanumeric	Ċ
Number	Version Date	Description	
▶ 1	19/10/2017 16:08:09		
2	19/10/2017 16:12:22	Compare with Version 0	
3	19/10/2017 16:21:40		
4	19/10/2017 16:43:17		
5	19/10/2017 16:59:14		
6	19/10/2017 17:29:50		
7	19/10/2017 17:32:33		
8	19/10/2017 17:38:51		
9	19/10/2017 17:42:16		
10	19/10/2017 17:44:45		
	19/10/2017 17:46:18		
11			

The comparison review screen appears:

Project : 15090							Х
New Save X	Abort	Delete	Print	Next Input			?
E E E							
Versi	on 1			Versi	on 0		
	Quantity	Profile	Lengt		Quantity	Profile	Le 📥
□ · □ · · □ · · □ · · □ · ·	1 1 1 2 1			□ 15090 □ 22 □ 22 □ CC16 □ CC2 □	1 1 1 2 1		

The colors used on the nodes:

- Green color: the element was added compared to the initial revision (in the example above PART4 not exist in the assembly revision 0).
- The color orange: the data has been changed between the two revisions (in the above example PART1 saw its length increased from 1500 to 1600 between revision 0 and revision 2)
- The color red: data no longer exists (eg, a piece has been removed from Revision 0 and Revision 1).
- Yellow: the data concerned has not been changed, but one of its nodes has been attached (in the example above ASSEMBLY has not been changed, but the elements of its composition so).
- No color : any changes to the element and its descendants.
- The window buttons:

Comparison of Components:

Navigate in the Tree hierarchy to the part you are looking for and it will view the part in both revisions of the project

View Component Revisions

It is also possible to view the history of changes to a particular component.

In the component Options screen, a component which had had revisions have a VERSION tab for viewing the design of different versions of the piece.

😮 Component : 1509	00 / 15090 / / /						_		×
New Sa	ve Abort	Delete Print 싁	Next Input	U Quit					?
Project 15	090	Cor	mponent 22_	1208					
Component	22_1208		Information	n Toolings	Preview Sub a	assembly Profile Drilling Version Attack	hed docun	nents	
Quantity	2			-		🔎 🗼 👔 🗌 Case sensitive	2		
Profile	TOLE6	+ 🔍	Start	End	Modificatio	Modification Date			
Unit	Metric (mm)	OImperial	254	254	TECNO-M	05/09/2018 11:11:48			
Length	80.00 mm		255	255	CAM	05/02/2019 15:45:26			
Width	80.00 mm		256		CAM	19/03/2019 09:02:01			
Group	TOLES - 10 MM	🛶 💫							
Description Article Code	-GARDE-C	•			-+	-15 -16 -27 -39 -40 -47			
Material Grade	S235JR	+ 🔍			1	65 -59 -56 -76			
Painting			01	4.0	0	17 21 4053 80			
Execution class	EXC2								
L									

The left grid shows the range of validity of the component (in the example above the component was amended in Revision 1 and Revision 2).

As in the comparison sheet revision, it is possible to display the version with a double click on the preview picture.

Check if your parts can be produced

SPPLM has the ability to check the feasibility of the parts in the Project Manager in order to assess if the parts can be done on your machines

Configuration

To use this option you first need to activate it in the <u>Company Configuration</u> - Project Manager tab

Genera	l la	
-4 Pr	roject manager	
	Default treatment	
	Default material grade	
	Default painting	
►	Status Management	4
	Job management	4
	Product Management	4
⊳	Sub assembly management	✓
	Drawing quantity	
	Revision Management	✓
⊳	Material Grade Upgrade	✓
⊳	Profiles Upgrade	4
	Project customer management	
▶	Part checking	
_	Warning if part is in drawing in production	
	Priority mode	Project 🔹
	Sites and departments management	4
	Workstation multi export	✓
⊳	EN 1090 standard management	4
	Create a default drawing and assembly	
	Welding management	
	Delete projects before date	// ×

From this menu you can activate the different types of checks the software will perform :

- **Export Unchecked Part** If this option is not switched on, parts can not be exported if they have not been checked, or if they have failed the check. With it on, it is just used as a visual indicator.
- Edge Gap Max distance a hole will be to the edge of a part that you will get a drilling error
- Hole Gap Max distance to another hole. Anything less than this you will get a drilling error
- Bending checking -
- Leadcut checking If there are any leadcuts (unrecognized coping macros) in the part you will get a warning
- Hole Checking- Warning if there are holes outside the part or too close to an edge or other hole

- Scribing Checking Warning if there is any bad scribing lines on the part
- Marking Checking Warning if there is a mark off the part or too close to an edge
- **Tooling checking** The check looks at the tool tables you have set up for your available machines, and warns you if there is a tooling that you do not have a tool set up for
- **Coping Checking** Works in conjunction with Ficep cope checking software and gives you a warning if there are any coping macros that can not be done on your machine In order to use this option you need to copy the folder d:\Minosse from the machine itself to a local \ accessible network location. You then need to set this path here
- EN1090 cheking -

Functionality

With this option enabled you will notice a shield icon next to all of your Projects, drawings, assemblies and components. If you put the mouse over the icon it tells you the state of the checking

Con	ntract 15	5260		Project	15260A		Prawing			Assembly Ma	ark	Com	ponent
+ 🖩 •	– Proj	ect		🔎 🤞 🕯	Case sensitive	💇 - 🕅	🔹 🗹 Alphanum	eric					
		Project	0	Description	Object	Typology	Maximum length	Priority	Project customer	Creation Date	Modification Date	Nb Revision	Last Revision Update
۱.		15260A					14020.02	99	15260	18/02/2016 15:15	10/03/2016 10:23:17	0	0
	0	15260					12564.10	99	15260	18/02/2016 16:31	18/02/2016 16:32:56	0	0
	0	15260B					14212.27	99	15260	10/03/2016 10:21	10/03/2016 10:24:07	0	0
	0	15260C					6020.00	99	15260	18/04/2016 15:38	18/04/2016 15:39:01	0	0
	0	15260D					6702.10	99	15260	17/06/2016 10:19	17/06/2016 10:20:27	0	0
	0	15260E					6136.81	99	15260	20/06/2016 10:14	20/06/2016 10:14:10	0	0
	0	15260PL					100.00	99	15255PL	12/07/2016 15:37	12/07/2016 15:37:38	0	0
		15260TPS					1000.00	99	15255TPS	18/07/2016 17:12	18/07/2016 17:12:04	0	0

The default status for all items is Not CHecked.

You can check parts from a Project to a Component level by selecting items (using Ctrl or Shift to multi select) and going to the Right Click Menu. In there is an option for Tools - Check Part



Once the parts have been checked the shield icon will change to either Valid vor Not Valid epending on whether the part can be done on your machines

Contr	act 15	260		Project	15260TPS		Drawing			Assembly Ma	ark	Com	ponent
+ 🖩 –	Proje	ct		🔎 🕹 肯 [Case sensitive	2× 2X	🔹 🗹 Alphanum	eric					
		Project	О,	Description	Object	Typology	Maximum length	Priority	Project customer	Creation Date	Modification Date	Nb Revision	Last Revision Update
	0	15260A					14020.02	99	15260	18/02/2016 15:15	10/03/2016 10:23:17	0	0
	0	15260					12564.10	99	15260	18/02/2016 16:31	18/02/2016 16:32:56	0	0
	0	15260B					14212.27	99	15260	10/03/2016 10:21	10/03/2016 10:24:07	0	0
	0	15260C					6020.00	99	15260	18/04/2016 15:38	18/04/2016 15:39:01	0	0
	0	15260D					6702.10	99	15260	17/06/2016 10:19	17/06/2016 10:20:27	0	0
	0	15260E					6136.81	99	15260	20/06/2016 10:14	20/06/2016 10:14:10	0	0
	0	15260PL					100.00	99	15255PL	12/07/2016 15:37	12/07/2016 15:37:38	0	0

To check what the problem is with the un-valid parts, double click on the component to go into its Options page and press the ERROR tab

Component : 1526	60 / 15260A / 1 / B10	/				
New Sa	ve Abort	Delete Print	Next Input	it		2
Project 15	260A	Co	mponent 213			
Company	212		Information Tooling	s Preview Sub assembly Profile Drilling Error	Attached documents	
Component	213		Error	Validation		
Quantity	2 🖨		😵 Drilling	Validate error		
Profile	TOLE6	+ 🔍	😵 Tools	Validate error		
Unit	Metric (mm)	OImperial				
Length	170.00 mm					
Width	80.00 mm					
Group	TOLES - 10 MM	➡				
Description		T				
Article Code						
Material Grade	S235JR	+ 🔍		v v		
Treatment	RAL 5015	+ 🔍				
Painting						
Execution class	EXC2					

The errors will be shown in the list. If you click on the error in the list you can see the error details.

If you have checked the part and the issue is not a problem, press "Validate Error" on this screen. The part will then be recorded as \checkmark "Validated by the User"

Component : 1526	i0 / 15260A / 1 / B10 /					\times
New Sav	ve Abort Delete	Print 🖊	lext Input 🔱 Quit			?
Project 152	260A	Comp	ponent 213			
Component	212		Information Toolings Prev	view Subassembly Profile Drilling Error Attache	d documents	
Component	213		Error	Validation		
Quantity	2 🜲		🦋 Drilling	Validated on 19/03/2019 10:02:10 By TTLE2		
Profile	TOLE6	+ 🔍	🤸 Tools	Validated on 19/03/2019 10:02:10 By TTLE2		
Unit	Metric (mm)	mperial				
Length	170.00 mm					
Width	80.00 mm					
Group	TOLES - 10 MM	➡				
Description		•				
Article Code						
Material Grade	S235JR	+ 🔍		v v		
Treatment	RAL 5015	+Q				
Painting		+Q				

Steel Projects PLM 1.19.x

It is also possible to validate parts with errors from the right click tools menu

Contra	act 15260				Projec	:t 15	260A	
+ 🏽 –	Component			🔎 🦊 🕯	Case sensit	ive	🛃 👻 Alphanumeric	
		Component 🔍		Quantity	Pro	ofile	Length	Width
•	8	213		New	Ins	56	170.00	80.00
_	🗸 🌖	B10		Edit Grid	Ctrl+Ins	*3	4505.90	
		-		Delete	Del			
				Toolbars	Ctrl+B			
		6	Þ	Edit	Enter			
		0	3	Add product	Ctrl+Maj+P			
		ů.	8	Сору	Ctrl+C			
			2	Master Part	Ctrl+M			
		1		Cut to Length	Ctrl+K			
		4	I.	Draw	mbiy	-		
			\ ,#	Draw		5	Convert to standard Elate	
			^	Distribution		0	Convert to standard riats	rl+X
		L	_	Distribution		Ø	Validate parts	
						8	Fix part	_
						814	Manufacturing process	
						814	Delete auto mark	
							Drilling	
							Convert toolings to scribin	ng

Drawing

This screen displays the summary of the selected drawing.

It is composed by existing tabs from Project view.

The general tab describes the drawing parameters.

Warawing: 15141 / 15141A /			\times
New Save Abort Delete Print	- Next Input Ouit		?
Project 15141A	Drawing 16		
General Default values Information Status Summary Assemblies tool	ings Parts toolings Attached documents		
Drawing 16 Description	Divers Priority 99 Execution class EXC2		

Assembly Mark

This screen displays the summary of the selected assembly.

It is composed by existing tabs from Project view.

The general tab describes the assembly parameters.

Assembly Mark : 15141 /	/ 15141A / /	_	×
New Save	Abort Delete Print H Next Input U Quit		?
Project 15141A	Assembly Mark G21		
General Default values I	sformation Summary Assemblics toolings Date toolings Attached documents		
General Delauit values in	normation. Summary Assemblies toolings, Parts toolings, Attached documents		
Assembly Mark	G21		
Description	PLATINE		
Quantity	1 🚔		
Delivery Date	<i>11</i> •		
Execution class	EXC2		
Finished Pieces			
	Comment		
	Continuous		

Component

This screen displays the summary of the selected component.

😮 Component : 1514	1 / 15141A / 16 / G21 /		
New Sa	ve Abort Delete Print +	Axt Input Ouit	2
Project 15	141A C	omponent 1194	
Component Quantity	<mark>1194</mark>	Information Toolings Preview Sub assembly Profile Drilling Attached documents Comment	
Profile Unit Length Width Group Description Article Code	TOLE6 Metric (mm) Imperial 240.00 mm 147.00 mm TOLES - 10 MM	Created on 13/09/2016 09:42:24 By TEKLA Modified on 13/09/2016 09:44:37 By POILVERT Weight 1.5064 Kg Surface 0.0679 m²	
Material Grade Treatment Painting Execution class	\$235JR ••••• GALVA •••• EXC2 •	Node Perimeter Project Version Part Internal 0.00 mm	
The parameters Profile, Unit, Length, Width and Material Grade are mandatory.

In the "Toolings" tab, a list of the tooling required for this component is displayed.

Component : 1514	11 / 15141A / 16 / G21 /										>
New Sa	ve Abort De	ete 📄 Print 🖊	Next Input	t							•
Project 15	141A	Co	omponent 1194					Q			
Component	1194		Information Tooling	s Preview S	iub as	sem	ıbly	Prof	ile Drilling Attached documents	i	-
Quantity	1 🚔		Tooling	Quantity	1	2	3	4	Description	Not mach	in
			PERÇAGE	2	0	0	0	0			
Profile	TOLE6	+ 🔍	MARQUAGE	1	4	0	0	0			
Unit	Metric (mm)	Imperial	CONTOUR	9	1	0	0	0			
Length	240.00 mm		ASSEMBLAGE	1	0	0	0	0			
Width	147.00 mm		SORTIE	1	0	0	0	0			
Group	TOLES - 10 MM		UNLOAD	1	0	0	0	0	Forcer K126L pour déchargement	t 🗆	
Description	TOLE	•									
Article Code											
Material Grade	S235JR	+ 🔍									
Treatment	GALVA	+ 🔍									
Painting		+ 🔍									
Execution class	EXC2	Q									

The "Preview" screen displays the component in the 2D preview.

Component: 1514	41 / 15141A / 16 / G21 /				— 🗆	
New Sa	we Abort Delete	Print 🖊	Next Input			
Project 15	141A	Cor	mponent 1194	<u>_</u>		
Component	1194		Information Toolings Preview	v Sub assembly Profile Drilli	ng Attached documents	
Quantity	1 🛓					
Profile	TOLE6	+ 🔍			-0	
Unit	Metric (mm)	perial		/		
Length	240.00 mm				<u> </u>	
Width	147.00 mm					
Group	TOLES - 10 MM	➡		1191	-70	
Description	TOLE	•		1194	<u> </u>	
Article Code						
Material Grade	S235JR	+ 🔍				
Treatment	GALVA	+ 🔍			-147	
Painting		+	Ó	100	215 240	
Execution class	EXC2	Q	0 14 0			

The "Sub assembly" tab displays the component parameters if it is existed.

The "Profile" tab displays the profile drawing. It is the same drawing from the <u>Profiles</u> screen.

Component : 1514	11 / 15141A / 16 / G21 /		— 🗆	×
New Sa	ve Abort Delete	nt Hext Input Ouit		?
Project 15	141A	Component 1194		
Component	1194	Information Toolings Preview Sub assembly Profile Drilling Attached docum	ents	-
Quantity	1 🔹	A = 6.00		
Profile	TOLE6 🕂			
Unit	Metric (mm) Imperial			
Length	240.00 mm			
Width	147.00 mm			
Group	TOLES - 10 MM			
Description	TOLE			
Article Code				
Material Grade	S235JR 🔶			
Treatment	GALVA 🔶			
Painting	+			
Execution class	EXC2			

The "Drilling" tab displays the drilling parameters. It is not working for plate profiles.

Component : 1614	0 / 16140A / 35 / TC33 /					_	Х
New Sav	ve 🗙 Abort 🛄 Delete	Print Heat Input	U Quit				?
Project 161	140A	Component 304		<u>_</u>			
Component	304	Information	Toolings Preview	w Sub assembly Prof	file Drilling Attached	documents	
Quantity	1 🛓			Web			
Profile	PLAT40*6	<u>+</u> ⊆	ОТор	O Centre Line	OBottom		
Unit Length	Metric (mm) Imperia			Top Flange			
Width	0.00 mm	•	ОТор	O Centre Line	OBottom		
Deseriation	CADRE			Bottom Flange			
Article Code	CADAL		ОТор	O Centre Line	OBottom		
Material Grade	S235JR	+		Back Web			
Treatment Painting	BRUN ROUGE		ОТор	O Centre Line	OBottom		
Execution class	EXC2						

Documents could be attached in the "Attached documents" tab. Please see the <u>Document Manager</u> form.

It is possible to edit many components by selecting these one in the grid then click on the button "Enter". A new screen is displayed. The user can edit data for all the selected components :

- Description
- Treatment
- Painting
- Group
- Comments
- Tooling

😮 Component : TES	T_CUT_WS_1 / TEST_0	CUT_WS / 01 / 01 /				— [- X
New 🗸 Sa	ave X Abort	Delete	nt Next Inp	ut Messag	e 😃 Quit		?
General Tooling	Drilling						
Description	Test description						
Profile Material Grade Treatment Painting Group	PEINTURE			Con	Inment		
Component	Profile	Material Grade	Final Painting	Treatment	Group	Descri	ption
▶ P7	IPN220	S355		PEINTURE	PROFIL_MON_P	Test o	lescriptio
P6	IPN220	S355		PEINTURE	PROFIL_NON_P	Test o	lescriptio
P5	IPE200	S275	-	PEINTURE	IPE 80-300	Test o	lescriptio
P4	IPN300	S355		PEINTURE	PROFIL_NON_P	Test o	lescriptio
4							

Template Project



Define Project as Template and use it to create a new one

You can assign any of your Projects as templates.

When you do this, the items inside them can be copied over to other projects quickly.

To assign a Project as a template, double click on it in the Project list to bring up the option page, and select the type "Standard".

New Save	Abort Delete Print	Next Input 🕐 Quit		
Project AFF_ST	rD_01			
	14 × 01 0 4 15			
meral Default values	Information Status Summary Assemblie:	s toolings Parts toolings Profiles (Jpgrade Addresses Attached documents Conta	cts
Project	AFF_STD_01	Contract	AFF_STD 🕂 🔍	
Description		Phase	\checkmark	
Manager		Material Grade Upgrade		
Object		Profiles Upgrade	\checkmark	
Final Date of the Proj.	. 11 .	Project customer		
Customer	+ 🔍	Туре	Standard -	
Typology	🕂 🔍	Origin	Manual project	
Status	Purchase 🔹	Priority	99 🚖	
Theoretical weight	0.0000 Kg	Execution class	EXC2	
Colorian data and	weight 0.0000 Kg	Account manager		

In the list the Project will now have a briefcase icon next to it to show it is a template.

New	Save Save	Abort	Delete	Print	Next Input	U Quit		
Contra	ct AFF_STD				Project AFF_	STD_01		
+ 🖩 –	Project		P 🍕	👔 🗌 Case se	ensitive 🛛 💇 🕞	👫 👻 🗸 Alphanu	umeric	
	Project	0	Description	Object	Manager	Customer	Typology	Final Date of the
•	<pre>6// AFF_STD_01</pre>							

Then to copy the items in a template project to another project, simply press the icon in the tool-bar, double click in the Project window and select the Project you want to copy to from the list

Project as prefix		
New Save Abort	Delete Print Heat Input	U Quit
Project 16028		
	Description	Mama
	Description	Name

Fabrication Job



Open the Fabrication Job list

The Fabrication Job screen shows a list of all the jobs \ nestings you have already created and allows you to view, edit and resend them to production.

You can create a fabrication job by selecting parts and sending them to the <u>selection window</u> in either the Project Manager or production manager modules

A fabrication job is described as / group of parts consisting of the same or multiple projects which you want to nest and send to production at the same time.

The functionality of the screen if different depending on whether you have the Production Management Module or not. If you have this module you can also monitor the production status of your jobs and manage the factory workflow.

Fabrication Job Screen With No Production Management - Backup and manage your section nestings

Fabrication Job Screen With Production Management - <u>Send to production</u>, workflow management, tooling time calculation, piece time feedback

Fabrication Job Navigation

The Fabrication Job screen is viewed in a tabbed format, with the default view showing a list of your current jobs.

You can select a specific job and tab into the components window to show a list of the components in the job, and the optimize cutting window which shows the details of your nesting results

Fabrication Job

The fabrication job tab lists all of the jobs you have already created and shows details of them.

The optimize cutting bar lets you visualize the amount of parts in the job that have already been nested. red - unnested, orange - pending, green nested.

Production bar indicates the parts production status. see production manager

If any parts are in a section nesting then the number\s are indicated in the cutting sheet column :

Stee	l-Projec	ts Proj														ilities	Fabricat	ion Job					
Re	fresh	E Pr	eview Section Nesting	Plate Nes	ting Check	Send to production	riorities Time Calo	ulation) 👶 🚺 F	Filter					Status				sev Import	Export	Action	Stock	Refresh Stock
	New		Save X	Abort	Delete	Print	Next Input	U Quit															
6	Fabrica	ation Job	16025 OLVA	C 01			C₀	mposition							20pt	imize Cu	utting						
÷	-	Fabrica	tion Job			🔎 🕹 🕯 🗆	Case sensitive	💇 🔹 👯	• 🖃 Alphar	numeric													
	4		Fabrication Job	s 🔍	Optimize Cutt	ing Product	tion Statu:	3	Project		(Cutting Shee	et	Customer		Descript	tion	Time		Cor	mment 1	(Comment 2
۰.		8	16025 OLVAC	01			Finishe	ed .	16025		9	, 10, 1467						24:50					
		10	16020 BAILLY	CHALLA			Finishe	d	16022		1	5		BAILLY QU	AIRE	PRECSE	ELLEME	06:21					
	<u>_</u>	16	15260 BAILLY	QUERE			Finishe	d	15260		2	3		BAILLY QU	AIRE	Pièce 12	203 DD	07:40					
		10	15260 BAILLY	QUERE			Finishe	d	15260A		2	4		BAILLY QU	AIRE	Pièce 12	203 DD	13:10					
		10	15273 SICADI	MA 02			Finishe	d			2	7				SICADI	MA Atelier	04:40					
		10	PRESCELLEM	NET FO			Finishe	d	15135, 16028		2	9		GOINARD		PRESCE	ELLEME	11:37					
		10	15264 ABCM 0	1			Finishe	d	15264		3	0		ABCM		ABCM C	HARPE	. 19:52					
		10	15264 ABCM 0	2			Finishe	d	15264		3	1		ABCM		ABCM C	HARPE	85:46					
		10	15209 DIFAGR	1 01			Finishe	ed	15209		3	2, 33		S.C.I. IBUK	A	DIFAGR	II Trappe	04:17					
		10	16032 HOTEL	D' ELBE			Finishe	ed be	16032		3	4, 35				HOTEL	D' ELBE.	. 07:17					
		10	15264 ABCM 0	3			Finishe	ed .	15264A		3	6, 37		ABCM		ABCM d	hemin de	16:23					

Composition

If you click on a particular fabrication job, then on the composition tab, it lists all of the parts that are part of that job. The optimize cutting and production tabs are also active in this tab and show the details of the individual parts

Steel-Proj	ects										tion Utilities	Fabrication Job				
C Refresh	Tree	Preview	Section Pl Nesting	late Nesting	Check Send to production	Priorities Time Calco	ulation	Filter		8 🖗	Status	limp	rt Export Action	Stock Refresh Stock	Save Restore	
Ne Ne	ew	Save	Abo	ort De	elete	Next Input	U Quit									
🔓 Fabr	ication	Job 1602	25 OLVAC 0)1			Composition	16025/2/ P5/	.//P5			👔 👔 ptimize	Cutting			
+ = -	- Co	mponent			P 🖡 🕯 🛛	Case sensitive 🛛 불	🔹 🕺 🔹 🗸 Alpha	numeric								
		Project	Dr	rawing	Assembly Mark	Component 🔍	Phase	Profile	Material Grade	Job	Width	Group	Quantity	Length	Optimize Cutting	Production
E.		16025	2		P5	P5		PE270	S275JR			V - IPE	1	4891.96		
		16025	2		P3	P3		PE270	S275JR			V - IPE	1	4891.96		
		16025	2		P1	P1		PE270	S275JR			V - IPE	1	4891.96		
		16025	2		T1	AILET1		TOLE10	S275JR		140.00	X - AUTRES TOLE	: 1	5697.41		
		16025	2		T1	AILET2		TOLE10	S275JR		140.00	X - AUTRES TOL	1	5697.41		
		16025	2		T2	AILET2		TOLE10	S275JR		140.00	X - AUTRES TOLE	: 1	5697.41		
		16025	2		P4	P4		PE270	S275JR			V - IPE	1	4891.96		
		16025	2		T3	AILET2		TOLE10	S275JR		140.00	X - AUTRES TOL	1	5697.41		
		16025	2		T5	AILET2		TOLE10	S275JR		140.00	X - AUTRES TOL	1	5697.41		
		16025	2		P2	P2		PE270	S275JR			V - IPE	1	4891.96		
		16025	2		T5	AILET5		TOLE10	S275JR		140.00	X - AUTRES TOLE	1	5697.41		

Optimize Cutting

The optimize cutting tab shows a summary of all of the section nests that are part of this job. Any parts that have not be nested are listed as "not processed"

New Save	Abort Delete	Print Next Input	Message 🕐 Quit					
Fabrication Job		Compo	sition		3	Optimize Cuttin	q	٩
E E 🖉								
xpand Collapse To Produce	•							
umber	Machine	Profile	Material Grade	Length	Width	Quantity	Produced Quantity	
🖃 🏪 Plate Nesting								
E- 🌇 Cutting Sheet 29					To Produce	5	5	
E Plate 1	TIPOB254	TOLE8	\$235JB	3000.00	1500.00	1	1	
Project	Component	Drawing	Assembly Mark	Length	Width	Quantity		
		11	PB5	Longar		2		
16028	PR1	1	PR1	410.00	270.00	2		
16028	PR2	1	PR2	170.00	270.00	6		
15135	PR2	11	PR2	300.00	270.00	2		
16028	PR3	1	PR3	410.00	270.00	4		
15135	PR3	11	PR3	370.00	550.00	1		
15135	PR4	11	PR4	240.00	420.00	6		
16028	PR4	1	PR4	270.00	270.00	4		
16028	PR5	1	PR5	190.00	270.00	6		
16028	PR6	1	PR6	240.00	270.00	4		
15135	PR6	11	PR6	300.00	270.00	1		
15135	PR7	11	PR7	360.00	270.00	4		
🕀 🞼 Plate 2	TIPOB254	TOLE8	S235JR	3000.00	1500.00	1	1	
🕀 航 Plate 3	TIPOB254	TOLE10	S235JR	3000.00	1500.00	1	1	
🛱 🐘 Plate 4	TIPOB254	TOLE20	S235JR	3000.00	1500.00	1	1	
EL Dib Dista 6	TIPOB254	TOLE12	\$235.IB	3000.00	1500.00	1	1	

Fabrication Job Tool-bars





Refresh the screen



Tree Activate the tree menu window



When on the Composition tab you can see a preview of the components



Section Nesting

Creates a new section nesting for all of the unnested linear parts in the selected fabrication job



Plate Nesting

Creates a new plate nesting for all of the unnested flat parts in the selected fabrication job



If there has been a change to any of the parts in the fabrication job, pressing this will let the system check for potential issues with the routing.



Displays the list of priorities which has been modified



Produce, Production, Finished, Aborted



Create a fabrication job selection using a configured import

Stock

Add a column to the Job grid in order to see the Stock status.

Steel-Proje	ects Pro	oject Data	Project Manager	r data Nes	sting data Fabri	cation Job data	Feedback data	Shipping data Schedul	ng data Configuration	Utilities Fabricati	ion Job			
C Refresh	Tree F	Preview Section Nesting	Plate Nesting	Check Ser produ	d to priorities T	(L) ime Calculation	0	Filter	🔰 🎉 🎉 🗱 Status	()		xport Action Sto	ck Refresh Stock	Save Restore
Real Net		Save A	bort De	lete	Print Next	Input 😃 Q	uit							6
🔒 Fabri	cation Jol	15135 FORD	01			Compo	sition			Sptimize Cuttin	ng			4
+ = -	- Fabric	ation Job		ρ,	🖡 📄 Case ser	isitive 🛛 🛃 👻	👫 👻 🖌 Alpha	anumeric						
		Fabrication Job	🔍 Optim	nize Cutting	Stock	Production	Status	Project	Cutting Sheet	Customer	Description	Time	Comment 1	Comment
<u>í</u>	1	16025 (Finished	160.00	9, 10, 1467			24:50		
6	6	16020					Finished	16022	15			06:21		
<u>í</u>	6	15260					ninished	15260	23			07:40		
<u>í</u>	6	15260					Finished	15260A	24			13:10		
É	1	15273					Finished		27			04:40		
<u>í</u>		PRESC					Finished	15135, 16028	29			11:37		
	1 6	15264					Finished	15264	30			19:52		
	1 6	15264		_			Finished	15264	31			85:46		
		15209		_			Finished	15209	32, 33			04:17		
	1 6	16032	-				Finished	16032	34, 35			07:17		
	I (G)	15264					Finished	15264A	36, 37			16:23		
		15264					Finished	152648	39,40			03:05		
	1 (G) 	15264	_				Finished	152640	41, 42			03:38		
		15221					Pinished	10221	30	_		00:43		
-	- 0 <u>-</u>	15135					Finished	15135A	43	_		62:24		
4	- 49 - 62	15196					Finished	15196 15196A	40 59			06-02		
-	*	16039	-	_			Finished	16039	45, 50			07:55		
-	*	15135		_			Finished	151358	62			26:17		
	*	15135					Finished	151358	63 64			14:42		
	8	MANU					Finished		65			00:31		
-	8	16022		_			Finished	16022	67			101:26		
6	8	16022					Finished	16022	68, 69			44:11		
6	18	15261 (Finished	15261	70			07:20		
6	8	15209					Finished	15209A	71, 72			07:56		
6	10	15209					Finished	15209B	73, 74			06:01		
6	16	15209					Finished	15209C	75, 76			08:24		
í.	16	15209					Finished	15209D	95			06:46		
6	6	15270					Finished	15270	77			01:18		
6	1	SCI GF		_			Finished	15226	78, 79			03:42		
<u>í</u>	1	16016					Finished		83			20:24		



Stock Refresh the stock status in the data grid



Perform a backup of the selected Fabrication Job. The user select the save folder and the file name.

😽 Fabrication Backup	?	\times
Backup Directory		
C:\temp\		
Backup file name		
16025 OLVAC 01_201909051728-1.19.1.21.zip		
	•	•
	k 🔪	Abort



Restore a backup of a Fabrication Job



Generate name and weight for projects without Fabrication Job



Fabrication Job Edit Options

If you double click on a fabrication job in the main list it opens up the edit options screen.

General

Change the name of the job, or add a description or comment.

🕈 Fabrication Job		—		×
New Save	Abort Delete 🚔 Print 🖊 Next Input 😃 Quit		8	•
Fabrication Job 16025	OLVAC 01			
General Information	Composition Summary Status			
		amont		
Name	16025 OLVAC 01	iment		
Description				
Priority	99 🚖			
Status	Finished			

Information

Shows information on the time and user who created and last modified the job.

New Save Abort Print Print Next Input Composition Summary Status Component 250 Number of definition 168 Optimize Cutting 168 Delete Number of definition 168 Delete Veight 3357.96 Kg Surface 122.73 m2	t Cuit Cuit
Fabrication Job 16025 OLVAC 01 General Information Component 250 Number of definition 168 Optimize Cutting 168 Surface 122.73	Weight 3357.96 Kg Surface 122.73 m²
General Information Composition Summary Status Component 250 Weight 3357.96 Kg Number of definition 168 Surface 122.73 m² Optimize Cutting 168 Description Description Description	Weight 3357.96 Kg Surface 122.73 m²
Component 250 Number of definition 168 Optimize Cutting 168	Weight 3357.96 Kg Surface 122.73 m²
Number of definition 168 Optimize Cutting 168	Surface 122.73 m ²
Optimize Cutting 168	
Created on 15/02/2016 15:52:55 By	
Modified on 08/02/2017 17:49:07 By	

Composition

Shows a list of the components that make up the fabrication job.

Fabric	ation Job							
L Nev	w Save	Abort	Delete Print	Hext Input	U Quit			2
Fabrica	ation Job 16025 OL	VAC 01	0					
Genera	al Information Co	mposition Summary	Status					
- 88	-		👃 👕 🗌 Case sens	sitive 🔀 🕶 🗸	Alphanumeric			Ċ
	Project	Drawing	Assembly Mark	Component	Phase	Profile	Job	Grou
•	16025	2	P2	67		TOLE10		TOLE
	16025	2	Q1	66		TOLE10		TOLE
	16025	2	P1	11		TOLE15		TOLE
	16025	2	P2	11		TOLE15		TOLE
	16025	2	P4	11		TOLE15		TOLE
	16025	2	P5	11		TOLE15		TOLE
	16025	2	P3	11		TOLE15		TOLE
	16025	2	P6	11		TOLE15		TOLE
	16025	2	Т6	41		TOLE12		TOLE
	16025	2	T6	42		TOLE12		TOLE
	16025	2	T5	41		TOLE12		TOLE

Summary

Shows a list of all the workstations that make up the fabrication job.

Fabrication Job						— D ×
New Save Ab	ort De		Print H	Next Input	5	Quit 🕄 🧃
Fabrication Job 16025 OLVAC 01		0				
General Information Composition	Summary St	atus				
Vorkstation	Quantity	%	Weight	%		Quantity -
TIPOB254 TIPOB254 K126L K126L MAP K120 120	211 33 33 0 0 0 0 36 250 64 64 64 2	84.40 % 13.20 % 13.20 % 0.00 % 0.00 % 0.00 % 14.40 % 100.00 % 25.60 % 0.80 % 0.00 %	2861.79 Kg 2024.71 Kg 2024.71 Kg 0.00 Kg 0.00 Kg 0.00 Kg 2238.85 Kg 3357.96 Kg 2272.41 Kg 16.68 Kg 0.00 Kg	85.22 % 60.30 % 60.30 % 0.00 % 0.00 % 0.00 % 66.67 % 100.00 % 67.67 % 0.50 % 0.00 %	¢ 	Quantity 300 250 211 200 150 100 33 33 36 64 64 64 64 50 33 33 36 64 64 64 64 50 2 4 2 4 2 4 2 4 2 4 2 4 2 5 6 11 0 0 0 0 0 0 0 0 0 0 0 0 0

Status

Shows the status traceability of the fabrication job.

New Save Abort Delete Print Hext Input Out	
eneral Information Composition Summary Status eneral Information Composition Summary Status tatus Date User tished 08/02/2017 17:49:07	2
eneral Information Composition Summary Status Case sensitive X * " tatus Date User ished 08/02/2017 17:49:07	
Image: Case sensitive Case sensitive	
Itatus Date User hished 08/02/2017 17:49:07	
nished 08/02/2017 17:49:07	

It is also possible to add extra components from your existing projects to the fabrication job from this screen.

To do this, press the 💼 icon. This opens a window to select a Project name. Either type the name in the window or double click to bring up a list.

This shows a list of all the available components. to add one, select it in the list and press [+]:



Fabrication Job Right Click Menu

+	New	Ins
	Edit Grid	Ctrl+Ins
-	Delete	Del
	Toolbars	Ctrl+B
Ø	Send to product	ion
5	Export	
۵	Action	
0	Check part	
8	Check	
×	Delete not expor	ted parts
	Status	+

- New Add extra components
- Edit Insert data directly in the grid
- Delete Delete the fabrication job and all the information inside it
- Toolbars Show \ hide the hidden toolbar
- Send to Production If you have the production manager, use this option to progress to the <u>Send to</u> <u>Production</u> screen
- Export Export a document according the parameters in the Fabrication Job Data
- Action Run expected exports and Shop Drawings print
- Check part run the Part Checking option on the parts
- Check Update the selected Fabrication Job
- Delete not exported parts Delete all the components which are not present in a bar/plate
- Status Change the status of the selected Fabrication Job
- Unlock Unlock Fabrication Job which is locked

Priorities

In the Fabrication Job screen, a menu "Priorities" allows the user to check the "Fabrication job" which the priority has changed.

Refresh Tree Previe	w Section Plate Nesting Check Send to Production	iorities Time Calculation	Filter	E E E E E E Satus	Import Export Action St	Refresh Stock	Save Restore
🃸 Prioriti	es					?	×
+ = -		📃 🔎 🦊 🕯 [Case sensitive	Alphanumeric			Ċ
	Fabrication Job	Optimize Cutting	Description	Fabrication Job priority	New priority		
🕨 👸	17049 ABCM			99	60		
6	17051 OSM			99	75		
6	17066 LA FOURNEE D			99	90		
					- 🗸 c)k	Abort

If the user clicks on the button "Ok", the new priorities are applied for each "Fabrication Job".

Export



This menu allows perform a workstations export from a Fabrication Job.

These exports should be configured in the workstation data.

🖅 Export				—		\times
Machines						
	🗞 🔕 🖉					
Section Nesting 1362	Machine 1203DD ASSEMBLAGE EXPÉDITION K126L SNG SOUDURE	Export TECNO-METAL CAM HANDLING	Director	y		
		~	/ Ok	Abort	202	Options

Restore

In the Fabrication screen, the user can restore a backup by using the menu "Restore".



A new screen is displayed. The user can select the backup file to restore.

😽 Fabrication Restore		?	\times
Backup file name			
C:\temp\SpInfo.zip			
	🗸 Ok	X	Abort

Click on the button "Ok", the fabrication job is restored.

Creating Manual Projects

You can import your contract but also create from zero with all subdivisions.

As well as being able to import projects from third party CAD\CAM systems, you can create projects manually using the project manager, add the required project hierarchy, and add component and component drawings

Creating A Project

From the Projects list in the project manager, press new + New on the top tool bar or right click menu,

💼 on the hidden tool bar, or press INS short cut on the keyboard

Enter the name of the new project in the window and press New

Contract 17051			Project 17051	PL			Drawing
+ 🔲 🗕 Project	P 🖡	👕 🗌 Case sens	sitive 💇 🔹	🕺 👻 🖌 Alphanu	imeric		
Project C	Description	Object	Manager	Customer	Typology	Final Date of the Pr	oject Theoretical weigh
► 1705.11	뗼 Project : 17051	/					
	New 🗸	Save Abo	ort Delete	Print 4	Next Input	U Quit	
	Project	MANUAL_PRJ					

You can then add all of the project parameter and set all of the required parameters in the Project Options window.

New Vave	Abort Delete	Next Input U Quit				
Project MANUA	L_PRJ					
eneral Default values	Information Status Summary Assemblies	toolings Parts toolings Profiles (Upgrade Addresses Attach	ed documents Contacts		
Project	MANULAL DD I		17051			
Project		Contract	17051			
Description		Phase	1			
Manager		Material Grade Upgrade				
Object		Profiles Upgrade	4			
Final Date of the Proj	· / /	Project customer				
Customer	∔ Q	Туре	Default	•		
Typology	+ 🔍	Origin	Manual project			
Status	Purchase 🔹	Priority	99 🌩			
	0.0000 Kg	Execution class	EXC2			
Theoretical weight						

Press OK to save and you will then have a new project in the project list.

If you have the <u>configuration option</u> setting for Auto next tab set, you will automatically go into the Project - Drawing screen. If not, then click on the Project in the list and press the Drawing tab

Ger	neral	
Þ	General	
Þ	Standard Flats	
4	Project manager	
	Auto next tab	
	Clear selection on action	
	Job	Component 🔹
	Automatic Master Part	Name
	Check automatic master part	
	Manual Group	
	Tooling filter	
	Print before Shop drawing	
Þ	Draw	
Þ.	Macros	
Þ	Import	
Þ.	Metric Import	
Þ.	Imperial Import	
Þ.,	Reports	
Þ.	Export	
Þ.	Nesting	
Þ.	Products	
Þ.	Feedback	
Þ.	Supervisor	

Creating Drawings

Every Project must have at least 1 Drawing. you can use Drawings to act as Phases or Loads, in order to split your project up into sub-sections.

To create a drawing press new + New on the top tool bar or right click menu, + on the hidden tool bar, or press INS short cut on the keyboard

You can then give the drawing a name and change the drawing options.

For a single level project just call the drawing 1 and then press next input

Creating Assembly Marks

Every Project must have at least 1 Assembly. You can use Assemblies Marks to group together components that make up a single fabricated piece

To create a drawing press new ⁺ ^{New} on the top tool bar or right click menu, ⁺ on the hidden tool bar, or press INS short cut on the keyboard

You can then give the Assembly a name and change the Assembly options, including the quantity. if you change the quantity the total number of components in the project will be multiplied by assembly quantity

For a single level project just call the drawing 1 and then press next input

Creating Components

Project 17051PL

You can then use the same method to add components to the relevant drawings and assemblies

Ensure that you have a Drawing and Assembly selected and that the selections are stated in blue text next to the relevant tabs (NOTE to reset a tab filter, right click on the tab)

Assembly Marl PL1

Component

To create a component press new 🕇 New	on the top tool bar or right click menu, 💼 on the hidden tool
bar, or press INS short cut on the keyboard	

Type the name of the component and press new

Drawing 1000

😰 Component: 17051 / 17051PL / 1000 / PL1 /								
New Save Abort Delete	Print Vext Input UQuit							
Project 17051PL	Component NEWPART	0						

Add the relevant details in the component options menu

Component: 170	51 / 17051PL / 1000 / PL1 /		— 🗆	×
New Vsa	we Abort Delete	Print 🖊 Next Input 😃 Quit		?
Project 17	051PL	Component NEWPART		
Component	NEWPART	Information Toolings Preview Sub assembly Profile Drilling Attached documer	nts	
Quantity	1	Comment		
Profile	C15X40			
Unit	Metric (mm)			
Length	5000.00 mm			
Width	0.00 mm			
Group	ANGLES	Created on 01/01/0001 00:00:00 By		
		Modified on 01/01/0001 00:00:00 By		
Description		 Weight 294.3000 Kg Surface 5.4290 m² 		
Article Code				
Material Grade	S235JR	Node		
Treatment		Project Version		
Painting		Part Description		

It is critical that you add at a minimum the following details -

• **Profile** - type the profile name or double click in the window to open up the profile list. Enter the name and the available options are shown

😮 Component : 1705	i1 / 17051PL / 1000 / I	PL1 /						1 ×				
📑 New 🗸 Sar	ve 🗙 Abort	Delete 📄 Print 🖊	Next Input	U Quit				8				
Project 170	051PL	Co	mponent NE	WPART		Q.						
Component	NEWDADT		Informatio	m Toolings F	Preview Sub assembly	Profile Drilling Attach	ed documents					
Component	NEWFART		_	Q Profile		-				_		×
Quantity	1 ≑											
Profile	C15V40			Profile			Create					
Linit	CT3X40			ID	Category	Profile		Description	Creation Date	Modification Date		
L	Connectic (mm)			1	A	C10X15.3			16/12/2015 13:45	16/12/2015 13:45		
Length	5000.00 mm			3	A	C10×25			16/12/2015 13:45	16/12/2015 13:45		
Width	0.00 mm			4	A	C10×30			16/12/2015 13:45	16/12/2015 13:45		
Group	ANGLES	<u> </u>	Created	5	A	C12X20.7			16/12/2015 13:45	16/12/2015 13:45		
			Modified	6	A	C12X25			16/12/2015 13:45	16/12/2015 13:45		
Description		•	Weight	7	A	C12X30			16/12/2015 13:45	16/12/2015 13:45		
Article Code				8	A	C15X33.9			16/12/2015 13:45	16/12/2015 13:45		
				9	A	C15X40			16/12/2015 13:45	16/12/2015 13:45		
Material Grade	S235JR	+ 🔍		10	A	C15×50			16/12/2015 13:45	16/12/2015 13:45		
Treatment		+ 🔍	Projec	11	A	C3X4.1			16/12/2015 13:45	16/12/2015 13:45		
Painting		🕂 🔍	Part	12	A	C3X5			16/12/2015 13:45	16/12/2015 13:45		
				13	A	C3X6			16/12/2015 13:45	16/12/2015 13:45		
Execution class		<u></u>		14	A	C4X5.4			16/12/2015 13:45	16/12/2015 13:45		~
										🗸 o 🗸	k 🗙	Abort

- Length Add a length of the part in mm
- Width (Only for plate PLT profiles) Add a width of the part in mm
- Material grade Double click in the window to show a list of your available material grades

All of the other options are optional, and some are filled in automatically when you have set these fields.

In order to add tooling to the part, you need to use the Drawing Module

Document Manager

Add documents directly attached on contract, drawing , assembly and parts

The document management in SPPLM gives you the ability to attach one or more electronic documents to your Projects, drawings, assemblies, components and customers

Attached documents are stored on the server database.

Steel-Projects PLM functionality applies a version to these documents and can preserve a history of changes.

Parameters

You need to enabling the document management in the general configuration settings

In the tab-Steel Projects PLM, select the tab "Settings" icon and then "Configuration". Check the box to enable document management in the general settings section.

General	
General	
Contract management	✓
Main Language	French
DataBase path	\\pc-ttle\SuperMacro\base\
Exact Weight for Gussets	
Surface	Painted -
Unit	Metric
Default unit	
Precision	Not any
Backup Directory	\\pc-ttle\Backup\
Document management	
SubBar Project Name	@_[]_@?PLM@_[
Use a specific domain controller	

Functionality

Once the document management enabled, an additional tab appears in the relevant options page.

🦀 Project: 17051 /	-	
👍 New 🗸 Save 🗙 Abort 🛄 Delete 🥽 Print 🕂 Next Input 😃 Quit		2
Project 17051PL		
General Default values Information Status Summary Assemblies toolings Parts toolings Addresses Attached docu	ments Contacts	
⊿ Jira_045 (7)	Operations	*
Revision 0	Document	
Jira_045.pptx	Name	8
545 NO	Introduction	Rename
16/01/2018 11:47:40	Delete New from file	New Dee
Introduction (8)	Delete New from file	New Doc.
Revision 0	Revision 0	
Introduction.docx	File	New Rev.
1,00110		
13/09/2018 09:50:47	Introduction.docx	
	1,36 Mo	
	13/09/2018 09:50:47	
	Author	
	Preview - Load	Delete
	18/03/2019 17:49:23 18/03/2019	9 17:49:23
	L	

Default view

This view displays only the attached documents and their revisions:

🥌 Project: 17051 / —	×
Rew Vave Xabort Delete Print Hard Next Input Out	?
Project 17051PL	
General Default values Information Status Summary Assemblies toolings Parts toolings Addresses Attached documents Contacts	
[r0] Jira_045 [r0] Introduction Jira_045 pptx Introduction.docx 349 Ko 1.36 Mo	*
16/01/2018 11:47:40 13/09/2018 09:50:47	
	suo
	Operati

The information is displayed :



[review] Document Name (identical to the file name here)

File name for the revision of the document

The file size on the disk (same units and rounded to Windows)

Author of file revision

Date and time of file modification.

No change is possible in this view. Double-clicking the icon launches the preview using the default Windows program (which means that if there is no program associated with the file type, Windows will ask which application to use).

The transition to full is done by clicking on the vertical bar "Operations" on the right

Expanded View

To open the expanded menu press the expansion arrow on the right side

Once in full view, you can perform various operations on the documents and revisions.

The icon representing the document comes from the operating system when loading the file. It can be generic (as above) or represent a preview if it exists and is supported by Windows.



Management rules

- You can always create a new document.
- You can always rename a document.
- You can not delete a document if it does not exist in revision 0.
- The same file can be associated with several documents / revision.
- Creating a new revision, it duplicates the previous revision is locked.
- You can not change the current revision of a document.
- You can not delete the last revision of a document
- The author is optional
- Revision dates (creation and modification) and the modification date of file can not be edited manually

Document Management

	Operations	*
Document		
Name		7
Jira_045		Rename
Delete	New from file	New Doc.

New Doc

Create a document. May enter a document name and click "Nv.doc. ". If no name has been entered, the document created without a name. It may be renamed later.

New from file

Click "Nv. from ... ". Dialogue open file appears. You can select multiple files. Many documents as selected file will be created. The name of each new document without the corresponding file extension.

Rename

Select any revision of the document in the list on the left. Enter a new name. Click "Rename". All revisions are known, the files are not affected.

Delete

Select document revision 0 to remove (delete prohibited if more than one revision). Click on "Remove".

Revision Management

Revision 0	·]							
	File		New Rev.					
	Jira_045.pptx							
P	349 Ko							
	16/01/2018 11:47:4	40						
Author								
	Preview -	Load	Delete					
18/03	/2019 17:49:01	18/03/2019 17:49:01						

New Rev

Select any revision of a document. Click "New. Rev.". The latest revision of the document is duplicated and locked.

File

File information and author assignment.

Load

Update an existent revision of a document. Click on "Load". A file selection dialog appears. Select the file. The size of extracted automatically. Modification date of the revision is updated.

Preview

Viewing a file

Rename

Select any revision of the document in the list on the left. Enter a new name. Click "Rename". All revisions are known, the

Delete

Select the latest revision of a document (only the latter can be deleted). Click on "Delete"

Shop Drawings

Print and configure shop drawing

You can print out shop drawings for your components using the parameters you have set up in the <u>shop</u> <u>drawing configurations</u>

Single Shop Drawing

To view or print out a single shop drawing, open the part in the <u>Drawing module</u> with [Draw], then select the Drafter menu. Or press [Ctrl+D] or double click in the draw 2d or 3D preview.

+ 🏼 –	Component			🔎 🦊 🕯 🗆	Case sensitive	👫 🔹 Alphanumeric								
		Component 🔍		Quantity	Profile	Length	Width		Material Grad	le Treatment		Group		Description
•	🦁 📀	A1	4	🛷 1	L70*50*6	6 140.00		Ŧ	New	Ins		L 40*4 ·	150*18<	ATTACHE
									Edit Grid	Ctrl+Ins				
								-	Delete	Del				
									Toolbars	Ctrl+B				
								٢	Edit	Enter				
								-	Add product	Ctrl+Maj+P				
								(P	Сору	Ctrl+C				
								۲	Master Part	Ctrl+M				
								P	Cut to Length	Ctrl+K				
								Ē	Rename for asse	embly				
									Draw	•	Ç,	Drafter	Ctrl+D	
								Σ	Tools	•		3D dimen	sioning	
									Distribution	•		Refresh 31	D	
											_	Delete cao	:he	

Press the 🚨 button in the toolbar, press Ctrl+P or go to the menu file - preview

E 16094 \ 7										
File Edit Vie	w Draw To	ooling								
📔 🖬 🖪 🖉] ∽ ~ °	@, @, ⊕, @	ର୍ର୍ଷ୍ ଏ	😂 WEB		~ [CD]	×			
📘 😓 🖊 🗖 🗌	$\odot \odot \odot$	0 66	a a. 🗡 🧟	$ \cap \cap \cap$	ſ <i> /</i>	″ ┺ %	🌒 🖪 =";	′ ≁	🗋 🖾 🗄	× 🥵
∲ ∂ 1 2	3 4 🗮	비 🗄 꾬	1 C 🕄 🕄	🗘 🕉 🚱						
🤇 # 🗞 🤇) 🖆 🖺 /	A ノッロ	🔳 🔳 🖽	9 🕫 🛍 🛛		•				

This will open the shop drawing preview window.

press Print $\stackrel{\textcircled{\mbox{-}}}{=}$ to send it to the configured printer

■ 16094 \ 7	
File Edit View Draw Tooling	
🍺 🖥 🖪 🧲 🕋 🔍 🔍 🕀 🏵 🔍 🔍 🔍 🔍	WEB 🗸 🖾 🔀
 ≥ / □ 0 0 0 0 <i>C C C K</i> ¥ <i>A</i> C	ГССГ // // 💵 👗 🔦 🗅 🗂 / -/ 🛇 🖸 🖓 🖏 🏅
�⊕ 1 2 3 4 ☵ 🖽 🎛 ☵ 🕅 🎇 🗈 🖆 🖨	 У Бо
🦕 🗞 🔿 🖆 🖺 A ノ ଅ 🖿 🖿 🗃 🗣	

Multiple Drawings

To view or print multiple component drawings at the same time, drag the required parts into the <u>selection</u> <u>window</u>

													(
- 🐳 - I	Project	Job	Drawing	Assembly Mark	Quantity	Component	Profile	Quantity	Length	Width	Treatment	Material Grade	Final Painting	V 📷
	16094		2	T2	1	37	TOLE6	2	216.97	202.67		S235JR		
1 🐨 🗌	16094		2	T2	1	26	TOLE6	1	217.69	126.11		S235JR		
_	16094		2	T2	1	24	PLAT184.81*6	1	374.06			S235JR		
	16094		2	T2	1	T2	HEA180	1	6504.77			S275JR		
	Parts		Messages										Þ	

0

Set any required filters if you want to filter the selection down

Ensure the shop drawings icon is ticked \checkmark and then press Action

This will open all the selected parts in the drawing preview window



Print All to print all the documents in one go, print will print the current view.

Preview 2/4							
File	View Parts						
	Save	Ctrl+S					
	Save all						
	Prototype						
	Print	Ctrl+P					
	Print all						
	Options	Ctrk+0					

Print Reports

Print parts, assemblies list

You can print out reports for your components and all items from your projects.

Multiple selection

To view or print multiple component drawings at the same time, drag the required parts into the <u>selection</u> <u>window</u>

Project	Job	Drawing	Assembly Mark	Quantity	Component	Profile	Quantity	Length	Width	Treatment	Material Grade	Final Painting
16094		2	T2	1	36	TOLE6	1	348.49	188.25		S235JR	
16094		2	T2	1	37	TOLE6	2	216.97	202.67		S235JR	
16094		2	T2	1	26	TOLE6	1	217.69	126.11		S235JR	
16094		2	T2	1	24	PLAT184.81*6	1	374.06			S235JR	
16094		2	T2	1	T2	HEA180	1	6504.77			S275JR	
												1

Set any required filters if you want to filter the selection down.

Ensure the shop drawings icon is ticked \checkmark and then press Action



This will open report module.

Phase/Job

The Job management is activated from the society configuration.

Ger	ner	al								
4	Project manager									
		Default treatment								
		Default material grade								
		Default painting								
	₽,	Status Management								
		Job management								
		Product Management								
	Þ	Sub assembly management	1							
		Drawing quantity								
		Revision Management	✓							
	Þ	Material Grade Upgrade	✓							
	Þ	Profiles Upgrade								
		Project customer management	4							
	Þ	Part checking	4							
		Warning if part is in drawing in production								
		Priority mode	Drawing							
		Sites and departments management								
		Workstation multi export	✓							
	Þ	EN 1090 standard management	4							
		Create a default drawing and assembly								
		Welding management	4							
		Delete projects before date	// * X							
Þ	F	abrication Job								
Þ.	S	Section Nesting								
P.	0	General								
P.	P	Plate Nesting								
	P	Production Progress								
2	S	Shipping								
	3	D Geometry								
	0	AD Analysis								

When this option is checked, the menu "Phase" is displayed in the Project Manager screen.


Selection	on Ph	sy nase	Trees	Preview	Impor	t D	Draw	Сору
	New	\checkmark	Save	Ab	ort		Delete	
Contra	Contract Phase							
+ 🖩	-	Project					ρ	🕹 🕯 (
			Projec	t 🔍		Desc	cription	ı
•			16025			OLV/	AC	
			16025	PL		PLIA	GE	
			16025TPS			TEM	PS	
)	16025BIS			OLV	AC	
) 💋	AFF_S	TD_16025				

The module "Phase" is composed by the tabs Contract, Project, Phase, Job and Composition.

New Save	Abort Delete	rint Next Input Sector	sage 😃 Quit	
Contract Phase				
Contract 16078	Project 16078	Phase FDV0120	bb LNC5601	Composition 1/T3 : T3

Phase

From a project, the user can create a Phase.

He must enter a phase name and can add a description.

🐼 Phase: 16078 / 16078 /			×
New Save Abort Delete Print Hext Input Ressage	U Quit		?
Project 16078 Phase FDV0120		0]
General Information Phase FDV0120 Description			

Job

From a phase, the user can create a Job.

In this screen, he must define a Job Name then a Delivery Date.

A comment is not mandatory.

🐯 Job: 16078 / 16078	/ FDV0120 /		_		×
New Save	Abort Delete	Print Hext Input Message	Quit		?
Project 16078	3	Job LNC5601		Q	
General Information Job Description Delivery Date	Composition LNC5601 04/09/2019	Comment			

Composition

From a job, the user can create a Composition.

In this screen, he must create a link between the Composition and the Component. So it is mandatory to select the expected Drawing, the Assembly Mark and the Component.

He can select the Component Quantity for this Composition. A comment is not mandatory.

🐷 Composition : 16078	/ 16078 / FDV0120 / LNC56	01 /		_	×
New Save	Abort Delete	Prin	t Next Input Message	U Quit	?
Drawing	1	0	Comment		
Assembly Mark	Т3	0			
Component	Т3	Q			
Quantity	1 🚔 Maxim	um			

Project Manager Data



The Project Manager Data menu is an advanced configuration tab concerned with the import and export of data into and from the Project Manager and other advanced option.

Import



If you want to import data from any other software, you must first configure your imports here. This includes imports from other CAD\CAM software, excel spreadsheets and Steel Projects CAM files.

It is important to note the imports, with the exception of the SP CAM import, require the purchase of a site import license being available.

You can control a lot of the information that is imported with each type through the configuration options. You can have multiple imports of the same type with different configurations, for example, DSTV files.

To add a new import, type the name into the search box and then press [Ctrl+N] or click on the button "New".



Type: You need to choose a type of import from the type drop-down list. The type of file can represent either the file extension or program the files were created in for program specific import types.

DSTV IMPORT

DXF \ DWG IMPORT

TEKLA XML IMPORT

Directory: Specify the default directory where the program will look to import the files from. If you use sub directories then choose the top level.

Important You must specify the file extension after the directory path in order filter for only the correct files. As DSTV files have an extension .nc, type *.nc* at the end of the path. For DXF files it would be *.dxf. for XML files *.xml*

Гуре	DSTV File (1.19.1.5002)	- Options	3	
Directory	S:*.XSR			
		Parameters		
Automatic		Compare	Project	-
🗸 Assign Analyti	cal Group			
✓ Drawings Disp	patching			
		D: 1	0.00	

- ASSIGN ANALYTICAL GROUP Automatically puts parts into relevant profile group on import
- DRAWINGS DESPATCHING Gives you the option to change the Project or Drawing name when importing the parts

🔊 D)rawings Dispatchin	g			×
	Project	Drawing	Contract	Project	Drawing
•	17-193	1	17-193_1	17-193	1
	17-193	100	17-193_1	17-193	100
			· 🛎 🔏	×	Ok 📈 Abort

To change the project or drawing name, type the change in the bottom box and press the corresponding box next to it to change the relevant information.

If you have the configuration option "customer project" activated, you will still be able to see the original project name

If there are multiple different Projects or drawings then you can multi-select them and change them all in one go.

- DRILLING CHECKING Set a distance and SP PLM will flag up a warning if there are any holes too close to an edge
- COMPARE With the compare function selected, you can check if the parts you are importing already exist in the database, and if so, what the differences are with the existing parts

Comparison				_		×
Es Es Es 🕂 Expand Collapse Difference Ad	• — C d Delete Update					
Ste	eel Projects PLM		Import			
	Quantity		Quantity			
E→ 17-193 AT1 E→ AT1 AT1 E→ AT1 E→ AT1 AT1 E→ AT1 AT1 E→ AT1 AT1 AT1 AT1 AT1 AT1 AT1 AT1	2 1 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1	□ 17-193 □ ▲ T1 □ ▲ AT1 □ ⓐ G13 □ ⓐ G13 □ ⓐ B1 □ ⓑ 1001 □ 월 1001 □ ⓐ 1003 □ ⓑ 166 □ ⓑ 167 ⓐ 5 □ □ ■ 100 □ ■ 9	2 1 1 1 1 2 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1			
				V or	• 🗙	Abort

If the parts are different then it will show the difference in red highlight. If the change is in the profile, width, length or grade you can see it in the list, or you can see the previous and new previews in the windows below.

Please <u>See here</u> for instructions on how to use the imports.

DXF \ DWG Import

Automatic procedure

Each file describes one piece of steel construction (beam, angle, channel, plate ...) each side should be defined in one different layer (i.e. layer WEB, TOP, BOTTOM, and BACK).

Each layer contains the complete definition of the side: outlines, holes, inlines ... All the sides should be aligned in X direction and drawn horizontally.

To pass the information of the pieces, an AUTOCAD bloc should be inserted. This bloc has the following attributes:

Attribute	Description		
COM_NAM	Contract name		
DWG_NAM	Drawing name		
ASS_NAM	Assembly name or mark		
PCE_NAM	Position		
PCE_PRF	Profile		
PCE_QTY	Quantity		
PCE_LEN	Length		
PCE_WDH	Width		
PCE_THK	Thickness for plates		
PCE_MAT	Material		
PCE_TRT	Treatment		
PCE_DES	Description		
PCE_CMT1	Remark		
PCE_ECH	Scale factor (i.e. for $1/20$ scale = 20,		
	for 2 :1 scale = 0.5)		
PCE_UNI	Unit (0: Millimeter / 1: Inch)		

HEAD block

If this bloc is not defined in the drawing, the information will be asked when the file is imported.

Defining block with AUTOCAD

- Start a new drawing
- Command DDATTDEF : define all attributes you need
- Save this drawing as name HEAD.DWG

Inserting block in the drawing

- Command INSERT
- Enter HEAD=HEAD.DWG (<bloc name>=<file definition>)
- Fill the attributes in when asked

To get a dialog box for the attributes use command ATTDIA and enter 1

Modifying attributes

- Command DDATTE
- Select the bloc you want to edit

Configuration

Options

Import Parameters	1		×
Options Head Blo	ck Drilling M	lanual	
Option Scale(1 / x) Precision (mm) Ellipse 0.0 Maximum Drillin	5 g Diameter	0.5 SPLINE 1 40	
Gusset Prefix	eneration	TOLE	
Outline Web Top Flange Bottom Flange Back Web	WEB TOP BOTTOM BACK	Marking	Scribing
Bending Cutting		Bending Cutting	
			Ok Abort

- Scale (1/x)
- Precision
- Ellipse

•

- Maximum Drilling Diameter
- Gusset Prefix
- Outline Regeneration
 - Layer
- : Scale of the AutoCAD Drawing.
- : Precision of the line on the Drawing.
- : Precision of the ellipse on the Drawing.
 - : After this Diameters the drill is defined by InLine contour
- : The name of the Plate Profile defined in Data Base
- : Regeneration of the Outline after Import
- : Correspondence of Layer in Drawing / Flange of Profile

Head Block

Import P	arameters				\times	
Options	Head Block	Drilling Man	ual			
Autor Prei SU	Automatic HEAD Informations Only the First Time Prefix SUFFIX Reset					
	k Block Text	HEAD	_			
	Excel	Option		Default		
Co	entract	Option	COM_NAM	Default /	^	
Co Dra	excel entract awing	Option	COM_NAM DWG_NAM	Default	^	
Co Dra Ma	excel antract awing ark	Option	COM_NAM DWG_NAM ASS_NAM	, Default	^	
Co Dra Ma Pa	excel antract awing ark rt	Option	COM_NAM DWG_NAM ASS_NAM PCE_NAM	Default	^	
Co Dra Ma Pa Pro	excel awing ark rt ofile	Uption	COM_NAM DWG_NAM ASS_NAM PCE_NAM PCE_PRF	Default	~	
Co Dra Ma Pa Pro Qu	excel antract awing ark rt ofile Jantity	Uption	COM_NAM DWG_NAM ASS_NAM PCE_NAM PCE_PRF PCE_QTY	Default	*	
Co Dra Pa Pro Qu Lei	excel antract awing ark rt ofile uantity ngth	Uption	COM_NAM DWG_NAM ASS_NAM PCE_NAM PCE_PRF PCE_QTY PCE_LEN	Default	*	

- Head Information .
- : Not Used

Prefix •

: Not Used : Not Used

Suffix • Block •

- : The Name of HEAD Bloc on AutoCAD File
- Thickness, Grade ... •
- : The Name of information in HEAD Block.

Note**:

By default, the correspondence for drawing Unit is PCE_UNI. If you use PCE_UNIT on your drawing Head Block (Old DXF Import) you can change this parameter or change your HEAD Block on your Draw.

Drilling

If you prefer you can use Block definition instead of drawing Circle in Scale on you Drawing. It can be useful also for Pop Marking definition.

To do that:

- Create a symbol and name this symbol by Block Name (For Example create a crew for Pop marking and name this Draw POP)
- Insert this Bloc (POP) where do you want on your Profile Drawing.
- Modify Drilling Option (Bloc = POP, Diameter = 0)

lm	port Parameters			×			
0	Options Head Block Drilling Manual						
	Block		Diameter	Attributes			
	POP	0		▼			
				-			

You can also define the tool in DXF instead of using Drilling or punching machine definition. To do that:

• In the Drilling Window input the tooling correspondence (You can change the colors if you want, each color is a number (1 to 6))

Colour	Attributes		Ignored
1	Drilling	•	
2	Punching	•	
3	Tapping	•	
4	Countersink	•	
		•	

At DXF file creation:

• Change the tool color to your circle hole definition.



- Yellow circle = PUNCH
- \circ Red circle = DRILL
- \circ Green circle = TAPPING (Diameter = Hole diameter + Tapping)
- \circ Blue circle = COUNTERSINK (Create Drilled or punched hole and the countersink diameter as the same center definition)

Manual

Import Parameters			×
Options Head Block	Drilling Manual		
Options Selection Automatic Proc Automatic Unse ZOOM TOTAL MODEL SPACE	ess Hect	Unit Millimetre Inch	
OverWrite All D	ata		
🗌 Log	C:\DXF.LOG		
11.11			

Selection

Zoom all

Log

٠

٠

- Automatic Process
- Automatic Unselect
- : Color of the selected lines
- : Automatically begin to analyze the drawing
- : Automatically unselect the lines after analyze
- : Automatically Zoom the entire Drawing
- :
 - : Create a file with all import information

Import

Head Bloc check

If this bloc is not defined in the drawing, the empty or wrong information will be asked when the file is imported the following window appear :

Detailing Data		×
Project	7477	~
Drawing	701-03A-PY1	~
Assembly Mark	B1046	~
Component	DXFPAR0100	~
Quantity	1	
Profile	L127X127X7.9	\sim
Length		
Width		
Material Grade		\sim
Treatment		\sim
Description		\sim
Comment		\sim
Comment		\sim
Comment		\sim
Purchase		\sim
Scale	1	
Unit	● Millimetre ○ Inch	
Ok	Abort Profiles]

If you press OK all information is checked and the cursor will show which parameter is wrong, if any.

If the cursor is highlighted in Profile parameter that means the Profile doesn't exist in Database.

You can access directly in Profile Database to modify or create a new Profile.

Layers check

If the Layers are not created or created with a wrong name the following window appear :

		×
Layer		
Web	0	\sim
Top Flange	0	\sim
Bottom Flange		\sim
Back Web		\sim
Ok	Abort	

This window show you with parameters are found. If the parameter (Web / Top Flange ...) is empty that mean the software can't find any correspondence from Layer found and Layer in your drawing. You can select the name of the correct Layer in the list.

The list of Layer's is all the layers found in the drawing.

Be careful, if you change the layer correspondence, It will be changed in the Import configuration and your modification is active for the other drawings.

You can select empty line if you don't want to import this layer

Dimension check

If the dimensions doesn't correspond with the Profiles or the software have found no contour on the layers, the following window appear :

DXFPAR0100.DXF			
L127X127X7.9		Width	(Millimetre)
Side	Outline	Draw	Profile
Web			
Top Flange	ОК	16.31	127.00
Bottom Flange			
Πk		Abort	1 1
- OK	l l	HEOR .	

Color meaning:

- Red Nothing found for this side
- Yellow Closed contour found but the width of the side is different than the expected one Draw Width = Dimension in the Draw
- Profile Width = Dimension expected (On the Profile Data Base)
- Green Closed contour found matching the width of the side.

Manual procedure

By selecting the file and clicking 'Manual', you enter in the drawing with the following menu :

Directory	D:\STEEL_PF ed Files	ROJECTVINTE	RFACE 3	3D\DXF*.DXF	∼ Bro	iwse
Available		(0)		Selected		(2
File	Date	Time		File	Date	Time
				DXFPAR0100.dxf	23/08/2017	14:1:
			>>	DXFPAR0101.dxf	23/08/2017	14:1:
				DXFPAR0102.dxf	23/08/2017	14:1:
				DXFPAR0103.dxf	23/08/2017	14:1:
				DXFPAR0104.dxf	23/08/2017	14:1:
			11	DXFPAR0105.dxf	23/08/2017	14:1:
			~~~	DXFPAR0106.dxf	23/08/2017	14:1:
				DXFPAR0107.dxf	23/08/2017	14:1:
<		>		<	7100/00/7	>
		Abort	1	Manual	Option	s

#### **Detailing Piece**

H

When you choose the selection mode you have to enter the information of the piece and the profile.

If the piece is drawn with one different layer by side with all information inside each layer (outlines, in lines, holes ...), you can select the complete piece with all different side at the same time and then click 'Analyze'.

If the layers are not well defined, select one side at a time and click on the corresponding button. The whole selection will refer to the specified side without regarding the layers.

Color meaning on the button: (the scale and the profile is very important

- red Nothing found for this side
- yellow Closed contour found but the width of the side is different than the expected one
- green Closed contour found matching the width of the side.

#### Selection/Unselection

After selecting the mode you can choose the entities in 3 ways:

- Double clicking on the entity will only select/unselect this entity.
- Defining a window from left to right will select/unselect all the entities that are completely inside this window.
- Defining a window from right to left will select/unselect all the entities inside and also crossing the window.

When you are in deselecting mode, clicking again the button will unselect all the entities.

#### **Preview**

This will show you the shop drawing of the current piece.

#### Validation

When the piece is detailed, click OK to confirm. Then you can begin another piece.

When you quit the drawing, you will see on the files list a hand at the left of all detailed files.

Clicking OK will only import in WinSTEEL the pieces of the corresponding files.

#### Options

In the options, you can specify the layer linked for each side (if you want to work in this way).

You can also give the name of the blocks that you want to be recognized as holes and for these blocks you give the corresponding diameter (i.e. block M12 is diameter 14) or -1 if the scale of the block is equal to the diameter.

## Tekla XML Import

## Installation

To use this macro, it first needs to be installed inside the TEKLA environment.

A file "Sp.Setup.Tekla.exe" is available to download from <u>https://warehouse.tekla.com/#/catalog/details/u5bc2c6a4-c283-4ef4-b6a4-5aee5d07ac6d</u>

Li	angue de l'assistant d'install	ation X	
	Veuillez sélectionner l par l'assistant d'instal	a langue qui sera utilisée lation :	
	English	~	
		OK Annuler	
Setup - Steel-Pro	ojects TEKLA		
License Agreen Please read the	<b>1ent</b> e following important informatio	on before continuing.	1
Please read the agreement bef	e following License Agreement. ore continuing with the installa	You must accept the terms o tion.	f this
	END-USER SOFTWARE LIC	ENSE AGREEMENT	^
	FOR STEEL PROJECT	S SOFTWARE	
IMPORTANT The STEEL F embedded,	: PROJECTS software produ identified above with	ct in which this agreer online, electronic or	nent is printed
documentati	ion ("Software") is prot	ected by copyright law	vs and
internationa	l copyright treaties, as we	ell as other intellectual p	roperty v
<ul> <li>I accept the</li> </ul>	e agreement		
O I do not acc	:ept the agreement		
		Next >	Cancel

Setup - Steel-Projects TEKLA		_		×
Select Destination Location Where should Steel-Projects TEKLA be insta	alled?			
Setup will install Steel-Projects TEP	SLA into the following fold	er.		
To continue, click Next. If you would like to	select a different folder,	click Brows	se.	
C:\Program Files (x86)\SteelProjects		Brov	vse	
At least 1,5 MB of free disk space is require	d.			
	< Back Nex	t > 💦	Cancel	
Setup - Steel-Projects TEKLA		—		×
Setup - Steel-Projects TEKLA Select Components Which components should be installed?		_		×
Setup - Steel-Projects TEKLA Select Components Which components should be installed? Select the components you want to install; install. Click Next when you are ready to component to use an additional to the component to use an additional to use an additional to use a select to use the text of the component to use a select to use the text of tex	dear the components you ntinue.	u do not w	ant to	×
Setup - Steel-Projects TEKLA Select Components Which components should be installed? Select the components you want to install; install. Click Next when you are ready to constant of the stallation Standard installation	dear the components you ntinue.	u do not w	ant to	×
<ul> <li>Setup - Steel-Projects TEKLA</li> <li>Select Components Which components should be installed?</li> <li>Select the components you want to install; install. Click Next when you are ready to constall Standard installation</li> <li>Core files</li> </ul>	dear the components you ntinue.	u do not w	ant to	×
<ul> <li>Setup - Steel-Projects TEKLA</li> <li>Select Components Which components should be installed?</li> <li>Select the components you want to install; install. Click Next when you are ready to constant of the second standard installation</li> <li>Core files</li> </ul>	dear the components you ntinue.	u do not w	ant to	×
<ul> <li>Setup - Steel-Projects TEKLA</li> <li>Select Components Which components should be installed?</li> <li>Select the components you want to install; install. Click Next when you are ready to constant of the second standard installation</li> <li>Core files</li> </ul>	dear the components you ntinue.	u do not w	ant to	×
Setup - Steel-Projects TEKLA Select Components Which components should be installed? Select the components you want to install; install. Click Next when you are ready to co Standard installation Core files	dear the components you ntinue.	u do not w	ant to	×
Setup - Steel-Projects TEKLA Select Components Which components should be installed? Select the components you want to install; install. Click Next when you are ready to co Standard installation Core files	dear the components you ntinue.	u do not w	ant to	×
<ul> <li>Setup - Steel-Projects TEKLA</li> <li>Select Components Which components should be installed?</li> <li>Select the components you want to install; install. Click Next when you are ready to constant of the select installation</li> <li>Core files</li> <li>Current selection requires at least 62,0 MB</li> </ul>	dear the components you ntinue.	u do not w	ant to	×

Setup - Steel-Projects TEKLA – X
Select Start Menu Folder Where should Setup place the program's shortcuts?
Setup will create the program's shortcuts in the following Start Menu folder.
SteelProjects Browse Browse
< Back Next >> Cancel
Setup - Steel-Projects TEKLA – X
Select Additional Tasks Which additional tasks should be performed?
Select the additional tasks you would like Setup to perform while installing Steel-Projects TEKLA, then dick Next.
Additional shortcuts:
< Back Next > Cancel

Ready to Install         Setup is now ready to begin installing Steel-Projects TEKLA on your computer.         Click Install to continue with the installation, or click Back if you want to review or change any settings.         Destination location:         C: Program Files (x86) \SteelProjects         Setup type:         Standard installation         Selected components:         Core files         Start Menu folder:         SteelProjects         Additional tasks:	Ready to Install Setup is now ready to begin installing Steel-Projects TEKLA on your computer.  Click Install to continue with the installation, or click Back if you want to review or change any settings.  Destination location: C:\Program Files (x86)\SteelProjects Setup type: Standard installation Selected components: Core files Start Menu folder: SteelProjects Additional tasks: Cancel  Files (x80)\SteelProjects\Sp.Tekla.Macro.Setup.ee  wres environments have been correctly updated ! wironments. et ed - Press ENTER	Ready to Install         Setup is now ready to begin installing Steel-Projects TEKLA on your computer.         Click Install to continue with the installation, or click Back if you want to review or change any settings.         Destination location: C:\Program Files (x86)\SteelProjects         Setup type: Standard installation         Selected components: Core files         Start Menu folder: SteelProjects         Additional tasks:             deditional tasks:             cancel             rese environments have been correctly updated !         updated :         vironments.         sted - Press ENTER	Ready to Install         Setup is now ready to begin installing Steel-Projects TEKLA on your computer.         Click Install to continue with the installation, or click Back if you want to review or change any settings.         Destination location:         C:\Program Files (x86)\SteelProjects         Setup type:         Standard installation         Selected components:         Core files         Start Menu folder:         SteelProjects         Additional tasks:               Cancel	Ready to Install         Setup is now ready to begin installing Steel-Projects TEKLA on your computer.         Click Install to continue with the installation, or click Back if you want to review or change any settings.         Destination location:         C:\Program Files (x86)\SteelProjects         Setup type:         Standard installation         Selected components:         Core files         Start Menu folder:         SteelProjects         Additional tasks:               (200)SteelProject/Sp.Tekla/Sp.Tekla.Macro.Setup.exe         ures environments         tree environments         tree         /press ENTER	Ready to Install Setup is now ready to begin installing Steel-Projects TEKLA on your computer. Click Install to continue with the installation, or click Back if you want to review or change any settings. Destination location: C:\Program Files (x86)\SteelProjects Setup type: Standard installation Selected components: Core files Start Menu folder: SteelProjects Additional tasks: 	Ready to Install Setup is now ready to begin installing Steel-Projects TEKLA on your computer.  Click Install to continue with the installation, or click Back if you want to review or change any settings.  Destination location: C: \Program Files (x86)\SteelProjects Setup type: Standard installation Selected components: Core files Start Menu folder: SteelProjects Additional tasks: Cancel  Res (400)SteelProjects\Sp.Tekla\Sp.TeklaMero.Stup.ex  Cancel  res environments have been correctly updated ! updated : ironments.  ted - Press ENTER			_		^
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eted - Press Enter							iiles(x86)\SteelProjects\Sp.Tekla\Sp.Tekla.Macro.Setup.exe ures environments have been correctly upd updated : vironments	< Back Insta		Cance	4

The automatic installation will copy the file Steel-Projects_XMLexport on the macros folder of TEKLA.

The Scribing interface will then appear, if it does not or an error message appears then please check previous steps then contact either TEKLA, or Steel Projects support.

S	cribing – 🗆 🗾
Chier Aide Options	
Langues 🕨 pdèle	
Licence on Quitter	
<ul> <li>Scribing des pièces secondaires</li> </ul>	Steel Projects
Démarrer	

The two radio buttons ("With full model" and "With the selection") allow the user to generate scribing either for the full model or for specific elements selected directly in the model.

To create scribing for all parts activate the tick box "Scribing secondary parts"; if scribing is required for the main part only do not select this option.

## **TEKLA Options**

#### **Parameters**

Options	_ 🗆 🗙
Paramètres Import profils   Filtres   Attributs utilisateurs	
Chemin du fichier XML C:\TeklaStructuresModels\Ste	elProjectsBuild Parcourir
Paramètres	Gestion des plans
Précision globale (mm) 4	Phases
Distance maximale entre 2 pièces (mm) 3	C Colisage
Detrompeur (mm) 2	Options scribing
Angle des boulons max (°) 1	Activer le scribing 🔽
	Pas de contrôle des soudures 🔽
Options générales	Options PLM
Importer les matériaux inconnus de Tekla 🔽	Export PLM 🔽
Importer les boulons	Importer GUID 🔽
Double détrompeurs	Importer les soudures
Description du fichier	Assemblages 3D 🔽
Ok Annuler	

- XML File Path: Path where the exported files for scribing are created. By default they are created in the following folder: C:\TeklaStructuresModels\
- Global Precision (mm): precision for test for comparison regarding a drawing
- Minimal Distance Between 2 parts (mm) : precision for test for comparison of parts
- Import materials not known by TEKLA : import even if profile do not exist in TEKLA
- Import Bolt: Import of bolt in XML file
- Import all parts identifiers: import identifiers for every parts
- No welding check: the macro will generate scribing data even if two parts are not welded together if this option is checked. This option is useful if parts have been added with the option "Add to assembly"
- Import Welds: the macro will generate scribing data even if two parts are not welded together if this option is checked. This option is useful if parts have been added with the option "Add to assembly"
- Drawing (Phases/Lots): import by phases or by lots

# **Profile import**

Э		Options	_ 🗆 ×
Paramètres Import profils Fi	tres Attributs utilisateurs		
	•	₹	
	V	i 0	
Ok Annu	ler		

Importation only of parts whom profile are ticked.

## Filter

Э	Options -	□ ×
Paramètres   Import profils Filtres Attributs utilisateurs		
Les pièces supérieures (mm):	0	
Filtre sur le nom des pièces :		
Description différent de :		
Ok Annuler		

- Only part with length taller than (mm): import only parts with a length bigger than the value
- Filters on parts name: do not import only parts with name beginning by the entered value
- Description different of: do not import part with a description beginning by the entered value

3	Options	- 🗆 ×
Paramètres   Import profils   Filtres	Attributs utilisateurs	
Commentaire 1		
Community 2		
Commentaire 2		
Commentaire 3		
Ok Annuler		

Select the Start button and the scribing process will start to run.



An XML file will then be created by the Scribing macro; this file can then be imported into SP PLM for processing.

The next steps explain how to open this file into the Steel Projects Software.

For any models created in earlier versions of TEKLA Structures it is possible to open the Model in TeklaStructures V15.0 process and then exit the model without saving.

If it is important that the model remains in the previous version then it is suggested that the file is opened in TEKLA Structures V15.0 Viewer mode.

Then it will not be possible to save the model by error into V15 format.

Another option is to make a copy of the model and process the copy version; this will protect the original from any accidental saves.

# In Steel-Projects PLM

# Import Use

Import Te	kla (1, 50, 7, 72)				_		$\times$
Directory	D:\STEEL_P	ROJECTVINTE	RFACE	3D\TEKLA*.XML	~ [	Browse	9
Available		0		Selected			3
File		C	>>	File 17-193_Phase 1.xm 17-193_Prescelleme ttle_ComponentCata	l :nt.xml ilogUIMod	lelSettings	C 2 .xml 2
<		>		<			>
	Ok	Abort	]			Optio	ns

## **Import Setup**

Name	TEKLA	
Туре	Import Tekla (1, 50, 7, 72)	
Directory	D:\Steel_Project\Interface 3D\Tekla*.XML	

Enter the setup as indicated above. Use the Browse button to locate the designated folder.

Remember to add *.xml at the end of the path.

Then press on the options button and move to the next section.

Select "Options" tab on the above screen

Import Pa	arameters				×
Options Option Cutt	Scribing ns	Position	Category	Option	
Mini Max	mum Diam bolt angle	eter for Fla (°)	me Cutting	40	
Gusse Squai Recta Roun	ets re Tubes Ingular Tub d Tubes	[ ] [		Millimetre     Inch     Gussets     Unpolygonize     FABTRO	
				Ok Abort	

Parameter	Values
Outline regeneration	If a coping robot is connected to the system, then this has to be checked.
Cutting Tolerance (MM)	
For Round	Rounds up the cut to the nearest integer value
Minimum Diameter for Flame Cutting	Any diameter greater than this value will be transformed to an inline
Max bolt angle	
Gussets	Default prefix for plates. (usually PL or PLT)
Square Tubes	Default prefix for SHS. (usually SHS)
Rectangular Tubes	Default prefix for RHS. (usually RHS)
Round Tubes	Default prefix for CHS. (usually CHS)
Fabtrol	Thick to import an XML file from Fabtrol

Import P	arameters						×
Options	Scribing	Position	Category	Option			
Marki	ng		Positi	oning m	ark —		
	Not any		F	ositionin	ig mark	Not any	
	O Right					Missing to	ol
	◯Left					O Special	
	O Both		Rotat	tion			
	Default	$\sim$		Scribing	g Ba	ack Web	
Copin	g						
	•		Radiu	s (	)		
	0	5	0	Ę	F		
	0		0	Ę	₅		
					Ok	د A	bort

Parameter	Values			
Marking	Scribe the component's name aside the scribing			
	Not any : No			
	Right : Scribes on the right of the scribing			
	Left: Scribes on the left of the scribing			
Position mark	Adds scribing to make sure there is only one orientation for a part			
Rotation / scribing back web	Do a X symmetry in case there are more scribing on back web than on web fir the I beam.			
	Do not activate this option for customer using "erection mark".			
Out				
Coping	No modification or Transformation in this macro			
Radius	Diameter for hole			



Parameter	Values
All	Scribe all faces in full
Profile	Select profile and then select faces to be scribed for that profile :
	🗵 : scribes all the line
	• : scribes the line from each corner, on a distance
	"Length"
	<ul> <li>: doesn't scribe the selected side</li> </ul>
Special	For Wards (Kingspan) purlin cleat, will draw a line on flange of
	the rafter representing the front face of the cleat equal to the
	dimension inserted – use hole centers to enable shop location
Length	Length equals the actual length of the line that will be scribed if
	the "web" is selected - in the cut down version of the scribing

Steel Projects PLM 1.19.x

Import Paramete	ers	×
Options Scribing	g Position Category Option	_
Prefix	Category	
IPN	B I	
INP	B <u>−</u> I	
PRS	P <u> </u>	
UPN		
UNP	Α – Γ	
	Ok Abort	
Import Paramete	ers	×
Options Scribing	g Position Category Option	
T Transform	T C. IPE HE A/B/M	

Import Par	ameters						Х
Options \$	Scribing	Position	Category	Option			
T Trar Macro	nsform	T B	C. IPE HE	A/B/M	0		
Millir Split	ng Welded	Beams to Pre	Flats H fix	0	Back	Web	
Gros	ss length						
					Ok	Abort	

Parameter	Values
Transform	Tick to transform a T in IPE; If a profile with same dimensions (web and flanges thickness and flanges width) is found, the name of profile before transformation is written in field comment 1. If quantity $>2$ and height of T is twice inferior to height of new profile, quantity is divided by 2.
Macro	Input the value of the macro
Chamfer	To import chamfer created in TEKLA
Milling	To recognize pocketing plates (only for GEMINI machines)
Split welded beams to flat	To split welded beams to flat beams

## DSTV Import

DSTV is a world defined format for the steel construction.

So many different software are able to export using this format, which have an .NC extension file.

You can find here below a real example:

5T ** F6 387 1 F67 F67	57.nc1 7/BBS		FORMATIC	DN • IMPORT-EXAI	MPLES > DSTV >	• 387-BBS			
PFC U	2-180*75*20 3835.00 180.00 75.00 10.50 6.00 12.00 20.300 0.640	Organiser Sent Aris Sent Empl Mart Téléc Sent Bibliot	accurents récents hargements su nèques	<ul> <li>Partager ave</li> <li>Nom</li> <li>assar</li> <li>F66.ng</li> <li>F67.ncl</li> <li>F68.ncl</li> <li>F80.ncl</li> </ul>	ly_part_list.xsr	Nouveau dos	Modifié le 08/01/2004 12:14 08/01/2004 12:15 08/01/2004 12:15 08/01/2004 12:15 08/01/2004 12:15	Type Fichier XSR Fichier NC1 Fichier NC1 Fichier NC1 Fichier NC1	
AK V	0.000 0.000 45.000 45.000 3835.00 3835.00 0.000	0.00 0.00 180.00 180.00	0.00 0.00 0.00 0.00	0.00 45.00 0.00 45.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00		ш
AK O	0.00 0.000 75.00 3760.00 3835.00 0.00	0.00 75.00 75.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00		
u EN ∢	0.000 3835.00 3760.00 75.00 0.00	0.00 0.00 75.00 75.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00		

This type of files can be opened with the notepad windows tool and it is possible to find project name, part name, etc... as well as the part definition on their data.

Steel-Projects PLM is importing this type of files in order to integrate the customer's structural projects on its interface which is specially designed for project and production management.

## Configuring import files *.NC

To configure your import it is necessary to access SP.PLM's Project Manager Data, then import and then type the name:



After this step you will be on the import configuration screen as following, you need to fill the next: <u>Name:</u> you can choose the name you want

#### Type: DTSV files

Feedback data	
New Save	Abort Delete Print H Next Input U Quit
Link DSTV	
Name	DSTV
Туре	Import DSTV Files (2, 50, 7, 150)
Directory	D:\Steel_Project\Interface 3D\DSTV\CN*.XSR
	Parameters
Automatic	
Assign Analytical Group	
Drawings Dispatching	
Drilling checking	Distance 0.00 mm
✓ Compare	

Directory: the path we you can files your *.NC projects + *.NC* extension

To configure options and parameters you need Steel-Projects technician.

## Configuring assembly list *.XSR

The assembly list can has many different extension types as it is a simple text document.

One of the most popular is the .XSR extension, it is generated by TEKLA software and some different default possibilities are included by default on the software.

The SP.PLM need is to have the necessary information to make a correct distribution of the project and follow designers divisions.

Here following an example of assembly list:



The assembly-list.XSR and the parts.NCshould be on the same folder in order to permit SP.PLM to find the files it found on the assembly list.

SP.PLM will find Project name, drawing name (phase is usually used as), assembly and part name.

When read the information, SP.PLM will find the correct file .NC, compare Project and part name so if it is correct the part will be imported.

If the file .NC is not found we get an error, if the file information doesn't feet we also get an error.

This will be explained after on "Main issues", click on it to access.

The way to configure the import on SP.PLM is equal as *.NC files, difference that we look for and *.XSR file so we may change the extension as following:

Name DSTV Type Import DSTV Files (2, 50, 7, 150)  Options Directory D:\Steel_Project\Interface 3D\DSTV\Ct*XSR Parameters	Options Report Drilling Category Option Coping Type Not any Name XSTEEL
Automatic  Assign Analytical Group  Drawings Dispatching  Drilling checking  Distance 0.00  Compare	Phase Phase Contract for Pieces Reference NOMENCLATURE SEULE NOMENCLATURE SEULE Head Block Project Project Drawing Project Assembly Mark

When name, type and directory completed (with *.XSR extension) you should click on the options button and select one of the default report names (XSTEEL for example) and accept.

Then save you changes and quit back to the main menu.

This doesn't means that you are ready to import assembly list as you also need the Steel-projects technician to configure well the assembly list reading options.

As *.NC files, you also need a Steel-Projects technician to configure Options and Parameters before starting to well-using the import.
#### **Import DSTV into SP.PLM:**

### Part files (*.NC)

Some steps are necessary to import files into SP.PLM:

- Go to the main menu and select "Project Manager" (you can also use the import icon if you don't want to enter Project Manager).
- Select the import you want to use.
- When selected, look for the path where are your files by clicking the "browse" button.

Import DS	TV Files (2, 50, 7, 150)			-		×
Directory	D:\STEEL_PROJEC	TNINTERFACE	3D\DSTV\CN*.XSR	~	Browse	•
Available		(0)	Selected			(1)
File		>>	File liste_assemblages_\	WINSTEEL	. avec P⊦	IASE.:
<		>	<			>
[	Ok	Abort		Options		

The import window is common for all our import.

All the items (found items) will be on the right side. If you don't want to import them, put on the left side.

If you just want to import some, leave them on the right side and move the other to the left.

Items can be moved by double clicking them or by selecting them and move with the central arrows.

- Once the correct items on the right side, press Ok to import them.
- After this, just validate the new windows and you can access your project.

ស Import	×
Fir	nished (100%)
Modified : 0 Ignored : 0 Processing Job Added : 0 Modified : 0 Ignored : 0 Processing JobDet Added : 0 Modified : 0 Ignored : 0	
*** Refresh 3D *** Total part count : 7 Processed part count : 7	
rinisned	~

## Assembly list (*.XSR)

As below, when using assembly list import you will find a few differences on the process:

- Go to the main menu and select "Project manager" (you can also use the import icon if you don't want to enter Project Manager).
- Select the import you want to use.
- When selected, look for the path where are your files by clicking the "browse" button.
- Once the correct items on the right side, press ok to import them (import only 1 assembly list)
- Check your project on the "project validation window" that appears
- After this, just validate the new windows and you can access your project.

Steel-Proj	jects	Project	Data	Pro	ject Manager	data l	Nesting da	ta Fabrication Jo	bdata Fee	dback data	Shippin
	ę	3			1	B		<b>%</b>		Ø	
Import	Proje	ct Con	tract f	Project	Fabrication	Section	Plate	Shipping Produc	tion Analysis	Control	Provisional
-	manag	lm 🕄	iport D	STV File	es (2, 50, 7, 15	0)			- 0	ı ×	chequing
		Dire	ctory	D:	STEEL_PRO	JECTVINT	ERFACE 3	BDVXSRV*.XSR	✓ B	rowse	
			Delete I	mported	Files						
		Availa	ble			()	))	Selected		(4)	
		File			Date	Time		File	Date	Time	
								assembly-part-list.xs	14/06/2018	13:41:03	
							>>	material-list.xsr	12/06/2018	15:38:26	
								material-listA.xsr material-list-BHS xsr	07/06/2018	14:59:51	
								indicinal not in rothor	0110012010	10.00.00	
						,		×			
				Oł	<		Abort		Options		

eport Control				
Name	Quantity	Description		Profile
	2	1 454190	440	
KU62B	2	THEATOU	440	
KU63B	3			
🧳 KU68	16			
🚀 KU74	4			
<				

After this step, the new project validation window will appear:

This is the assembly list. In blue color all the correct information (it means that SP.PLM found the *.NC file and it feets) In red color all the information that doesn't feet. NC file should be missing or information between NC file and assembly list doesn't fit.

#### **DSTV Import Options**

Import Para	meters	;							×
Options Re	eport	Drilling	Category	Optio	n	Copir	ng		
Options - Dele Dele De Outi Verif Cutting	ete Pop ete Mari fault ine Reg fy Oper Tolerar	Marking king generatio ations fo nce (MM	a on r Tubes ))	ST	ATI Web		Haun Backu Angle For R	ch up s ound	•
Cutting Prefix Gussets Square T Rectangu Round T	Tolerar Tubes ular Tul ubes	nce (MM			Flan	ge Millir Inch HOF Scril	0 metre RAIRE bing bing	AILE SUP KO Bocad	ER
					C	0	k	Abo	ort

Delete Pop Marking - Delete all pop marks / pointing from the file if it is not required

Delete Marking - Delete all marking from the file if you want the position to be controlled by PLM  $\$  WinCN, or specify the default tool for imported marking

Outline Regeneration - This needs to be switched on for SP PLM to convert the outline to coping macros

Verify Operations For Tubes - Turn this on for RDHS and SHS profiles to be rotated for best rotation for machining

JARRETT -

Backup -

Angles - Rotates angle profiles so that the bevel is in the web and not the leg

Cutting Tolerance - Round up web or flange cuts by an angle or distance

Prefix - Rename profile names into a standard format instead of using the names in the DSTV file

#### Report

Import a report as well as the DSTV files to import full assembly information.

Import Pa	arameter	s				×
Options	Report	Drilling	Category	Option	Coping	
Type N N XS1	lot any lame FEEL		~	Bolts	<ul> <li>Norma</li> <li>Speci</li> <li>Screw</li> </ul>	al al v
		Pha	se			
	ontract fo	r Pieces ATURE	Reference SEULE		Separation	
Head	Block —			Fo	mat	
Projec	ct		1 🛓		] Drawing as Pref	fix
Drawi	ing		2		ASSEMBLAGE	EN PRE
Asser	nbly Mark		3 💂		Separation	-
Comp	onent		4 💌		Quantity	
				[	Ok	Abort

Head Block - Set the head block to import the correct information from the files

Its main use is to set a different import for Strucad and TEKLA import.

Strucad uses a none standard head block structure, so you need to change this in the import for the information to be imported correctly

TEKLA Structures 1,2,3,4 Strucad 1,4,3,2

Drawing \ Assembly As Prefix - rename the component names with a prefix of either the Project Drawing or Assembly, depending on your naming conventions.

## Drilling

Imp	port P	aramete	ers					×
Ор	otions	Report	Drilling	Category	Option	Coping		
	-Copin Mini	ng imum Dia	meter for	Flame Cuttir	ng	0		
		Slot			$\checkmark$	Macros FE	NICE	
		Generate	Pop Mark	king		LEAD/CU	т	
	٦	уре	Diame	ter T	ype •	Diameter	V0	
			-					
[	<							>
					[	Ok	Ab	ort

Minimum Diameter for flame cutting - Any hole greater than this setting will be converted to be a flame cut instead of a drill.

Slot - When this is not ticked, slots are imported as a tooling. With it ticked, they are imported as an outline  $\$  flame cut

Macros FENICE - Imports coping macros

Lead Cut - Imports and shows none standard coping as blue lines

## Category

Ir	mport P	aramete	rs					×
	Options	Report	Drilling	Category	Option	Coping		
	P	refix	Catego	ory				Ľ.
	IPN		В	<u>-</u> I				
	INP		В	JI				
	PRS		Р	JI				
	UPN		А	- C				
	UNP		А	- C				
				•				
					Г	Ok	Abort	
					L	UK	ADOIL	

# Option

Import Parameters	×
Options Report Drilling Category C	Option Coping
Round Tubes	Options Split Welded Beams to H 0 Prefix
T Transform T C. IPE HE A/ Macro B 0 C 0	/B/M
Options  Profile Special  Drawing Error  Section Nesting Import Sheet Import Bar N°	Comment           1         PCE_DES           2         PCE_CMT1           3         PCE_TRT           4
	Ok Abort

## AUTOCAD Import

For AUTOCAD Import, the user should enter the Project Manager data then define the expected preview.

1 🖉 📄 🚈	roject Manager data Mesting da	ita Fabrication Job data F	eedback data Shi	pping data	Scheduling of	data Confi	guration
	A 🕰 🕺	H. 😁 🕍					
Project Contract Project	t Enhvirontion Constant Plate	Chine Dealting Deaduating		Ma Devisional	Production		
manager	Job Nesting Nesting	List manager	n Analysis Control	scheduling	scheduling	Supervisor	
TEKLA		1			I		
DSTV							
DSTV BOCAD							
DSTV BOCAD E2C							
STRUCAD							
NC							
DXF							
AUTOCAD							
						_	$\sim$
mport [AUTOCAD]							$\sim$
Directory							
D:\Steel_Project\Campagne	e de Test\CAD\						-
Filter							
≫ 🙆 @ C							
≫ 😣 🙋 🧲 Name	Creation Date	Modification Date	Size				
Image: Weight of the second secon	Creation Date 12/07/2019 15:30:04	Modification Date 12/07/2019 15:30:05	Size 108 Ko				
Image: Weight of the second	Creation Date 12/07/2019 15:30:04 12/07/2019 15:30:09	Modification Date 12/07/2019 15:30:05 12/07/2019 15:30:09	Size 108 Ko 119 Ko				
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Image: Weight of the second	Creation Date 12/07/2019 15:30:04 12/07/2019 15:30:09	Modification Date 12/07/2019 15:30:05 12/07/2019 15:30:09	Size 108 Ko 119 Ko				
Image: Second system	Creation Date 12/07/2019 15:30:04 12/07/2019 15:30:09	Modification Date 12/07/2019 15:30:05 12/07/2019 15:30:09	Size 108 Ko 119 Ko				
Image: Weight of the system     Image: Weight of the system       Image: Weight of the system     Image: Weight of the system       Image: Weight of the system     Image: Weight of the system       Image: Weight of the system     Image: Weight of the system       Image: Weight of the system     Image: Weight of the system       Image: Weight of the system     Image: Weight of the system       Image: Weight of the system     Image: Weight of the system       Image: Weight of the system     Image: Weight of the system       Image: Weight of the system     Image: Weight of the system       Image: Weight of the system     Image: Weight of the system       Image: Weight of the system     Image: Weight of the system       Image: Weight of the system     Image: Weight of the system       Image: Weight of the system     Image: Weight of the system       Image: Weight of the system     Image: Weight of the system       Image: Weight of the system     Image: Weight of the system       Image: Weight of the system     Image: Weight of the system       Image: Weight of the system     Image: Weight of the system       Image: Weight of the system     Image: Weight of the system       Image: Weight of the system     Image: Weight of the system       Image: Weight of the system     Image: Weight of the system       Image: Weight of the system     Image: Weight of the system	Creation Date 12/07/2019 15:30:04 12/07/2019 15:30:09	Modification Date 12/07/2019 15:30:05 12/07/2019 15:30:09	Size 108 Ko 119 Ko				
Image: Symplectic symplecti symplecte symplectic symplectic symplectic symplectic symplectic	Creation Date 12/07/2019 15:30:04 12/07/2019 15:30:09	Modification Date 12/07/2019 15:30:05 12/07/2019 15:30:09	Size 108 Ko 119 Ko				
Image: Name       Image: Output of the second	Creation Date 12/07/2019 15:30:04 12/07/2019 15:30:09	Modification Date 12/07/2019 15:30:05 12/07/2019 15:30:09	Size 108 Ko 119 Ko				



3 AutoCAD Import		- 0	×
Tools			
Image: Selection on an analysis       Image: Selection on nalysis       Image: Selection on analysis			
Files [#] 2D preview 3D preview	Layers		4
	Name 0 B-DIM DEFPOINTS B-WEB DEBOTTOM m-TCP 4 Blocks Name HEAD Dimension - 120 Dimension - 127 Dimension - 127 Dimension - 127 Dimension - 164 C-Utime B-Cutine B-Leadcut	Colour	
The Expand The Collapse 🛉 Filter • + -			
Report   Web View			
Contrat TT120	Property		
Affaire IA121  200 100 R 3555 R 200 200 200	- Toporty		· ·
Plan PLI2U3  Top View			
Repere Principal ASSUI			
Profil IPN280			
Nuance S235JR + 🔍			
Traitement			
Finition + C			
		🗸 Ok 🔰	Abort

Click on the button "Ok" to validate this import.

#### Export



You can set up exports for all of your CNC machines from this screen. You need to have a separate export for each machine.

To add a new export, type the name into the search box (usually the name of the machine) and then press [Ctrl+N] or click on the button "NEW".

New Sa	re 🔀 Abort 📃 Delete 📄 Print 싁 Next Input 😃 Quit
Link CA	M
Name	CAM
Туре	CAM File (1.19.0.4677)

Then add the type of export and the directory you want to export the files to.

The type of export depends on the machine you are sending to.

If you are exporting to a machine with a WinCN post processor installed on it, then you want to choose CAM files.

This will send a Steel Projects CAM file to the machine to be imported into this software.

For none WinCN machines you would normally choose either DSTV or DXF\DWG (Site licenses required) depending on the import choices and post processing capabilities on the machine

## Type of export

- CAM Export
- File Created Choose the options for the name of the CAM file generated by SP.PLM
- Drawing as Prefix Prefix the drawing name before the file name

Options	?	$\times$
File created		
One File per each Selection		
One user file		
One File per Contract		
One file per Cutting sheet		
One File per Drawing		
Drawing as Prefix Enabled Separa	ation	
🗸 (	ok 🔀	Abort

## Typology



It is possible to create different types of projects and assign them a different typology.

To add a new typology to the database, type the name into the search box and then press [Ctrl+N] or click on the button "NEW"  $\,$ .



You can give the typology a description and then set controls on whether it is allowed to have drilling or punching for this type of building.

New Vare	🕻 Abort 📃 Delete 📄 Print 🖊 Next Input 😃 Quit
Typology BUILDING	
General	
Typology	BUILDING
Description	
Allow drilling	$\checkmark$
Allow punching	

## **Profile / Material Grade**



This option allows you to restrict certain material grades for particular profile. The default is for all grades to be available, you only need to change this setting if there are profiles you want to specify the allowed grades.

New Save Abort	Delete Print Next Inp	Quit	8
Profiles	Available material grades	Allowed material grades	
BOUDIN            C10X15.3         C10X25           C10X30         C12X20.7           C12X20.7         C12X20.7           C12X20.7         C12X20.7           C12X20.7         C12X20.7           C15X50         C260/200           C3X4.1         C3X5           C3X6         C4X5.4           C4X5.4         C4X5.4	10.9 4.6 6.8 8.8 AGLO_CREUX AGGLO_CREUX AGGLO_SEMI_PLEIN AISI304 AISI316 ALIMIAO ALUMINIUM ANGELIQUE BETON BETON_CELLULAIRE BETON_Existant DITUME		
C4X/25 C5X6.7 C5X9 C6X10.5 C6X13 C6X8.2 C7X12.25 C7X14.75	BTUME BOIS_Existant C12/15 C16/20 C18 - BMASSIF C20/25 C22 - BMASSIF C24 - RMASSIF <		

To set a material grade restriction for a profile, click on the grade on the list on the left side.

Then click on the allowed material grades on the second list, and press to add them to the right side window.

This will mean this profile will only have the option to be one of the listed grades.

rofiles		Available material grades		Allowed material grades	
BOUDIN	^	10.9	~	AGGLO_CREUX	
C10X15.3		4.6		C16/20	
C10X25		6.8			
C10X30		8.8			
C12X20.7		A60			
C12X25		ACIER_Existant			
C12X30		AGGLO_SEMI_PLEIN			
2140-1.5		AISI304			
:15X33.9		AISI316			
:15X40		ALIMIAO			
15X50		ALUMINIUM			
260/200		ANGELIQUE			
:3X4.1		BETON			
:3X5		BETON_CELLULAIRE			
:3X6		BETON_Existant	4		
4X5.4		BITUME			
4X7.25		BOIS_Existant			
5X6.7		C12/15			
:5X9		C18 - BMASSIF			
6X10.5		C20/25			
6X13		C22 - BMASSIF			
C6X8.2		C24 - BMASSIF			
7X12.25		C25/30			
°7X14 75	~	C27 - RMASSIE	~		

#### **Execution Classes**



In order to activate the execution classes management, you first have to go to the configuration menu of the company and enable the following option :

General		
Project manager		
Default treatment		
Default material grade		<u></u>
Default painting		$\bigcirc$
Status Management	1	
Job management	1	
Product Management	1	
Sub assembly management	1	
Drawing quantity		
Revision Management	1	
Material Grade Upgrade	1	
Profiles Upgrade	1	
Project customer management	4	
Part checking	1	
Warning if part is in drawing in production		
Priority mode	Project -	
Sites and departments management	1	
Workstation multi export	1	
<ul> <li>EN 1090 standard management</li> </ul>	✓	
Default execution class	EXC2	$\bigcirc$
Create a default drawing and assembly		
Welding management		
Delete projects before date	11	- X

You can define the default execution class to be applied for each new contract. Here, we select EXC2.

When you go into the Execution Classes menu, the list of all 4 classes is displayed.

New Save X Abort Delete Print Wext In	put 😃 Quit
Name	
Name	Туре
EXC1	EXC1
EXC2	EXC2
EXC3	EXC3
EXC4	EXC4

This list is not modifiable. It corresponds to the EN1090 norm.

However, you can rename the classes.

#### **Auto Mark**



When set-up, this feature allows you to add a specific marking to a group of parts.

		Manut	facturing process		
Unspecified	ODisc	Scribing	CLeadcut	◯ Inkjet	
			Text		
eparation	_	Free text		Multilin	e
Composition					
Value			Current Va	alue Size	4
Project Drawing Assembly Mar Material short Project descri Drawing desc Part descriptio	k code ption ription n		Comp	onent 0	•
{Component}			Method		
Edge Gap	0.50 Plate	mm		Haunch	
Position			Position	■□□ - Side Flange	•

It's possible to manage the automatic for all the parts, without any distinction, or set-up a different marking pattern and process for each type of part (Master, Finished, Other).

Do so, you have to activate the "Part Type Configuration" check box :

	Manu	facturing process	4	5
Unspecified     Disc	Scribing		jet	
		Text		
Separation _	Free text		Multiline	
Composition				
Value		Current Value	Size	4
Project Drawing Assembly Mark Material short code Project description Drawing description Part description		Component	0	+
Preview				
{Component}		Method		
Edge Gap 0.50 m Plate	Im		Haunch	
			nungo	

The manufacturing process is made to force a marking process, if the machine is able to do it.

Masters Finished Pieces Other				✓ Part	type configuration
	Manuf	acturing process			
O Unspecified	Scribing	CLeadcut	◯ Inkjet		
		Text			
Separation _	Free text	•		Multiline	
Composition					
Value		Current Va	lue	Size	<b></b>
Part description		Free te	ext	0	+
Comment 2		Assen	bly Mark	0	
Comment 3					
Source project					
Source part					
Preview					
*_{Assembly Mark}					
		Method			
Edge Gap 0.50	mm				
Plate			Haunch	ı	
Position		Position	■□□ - Sid	le Flange	•

The content of the marking is set up as follows	The	content	of the	marking	is	set-up	as	follows
-------------------------------------------------	-----	---------	--------	---------	----	--------	----	---------

			Man	ufacturing process			
Unspec	fied	Disc	Scribing	CLeadcut	◯ Inkjet		
				Text			
Separation	_		Free text	CE145		Multiline	
Compositio	ı						
Value				Current	/alue	Size	
Drawin	,			Proj	ect	0	•
Project	l short code description			Free	text	15	
Drawin	description			Asse	embly Mark	15	
Part de	scription						
Comme	nti nt2		-				
Preview {Projec	₿_CE145_{A	ssembly Mark}					
				Method			
Edge Gap		0.50 mm	ı				
		Plate			Haunch		
						-	

Select an item among the available ones on the left hand side section, and move it to the right hand side.

You can change the order of each selected item by selecting it and using the and  $\bigtriangledown$  buttons.

If you insert the "Free text" item, it will be replaced in the marking pattern by the text you enter in the free text field.

#### Milling



This menu allows to check the milling macros.

The data grid displays all the data in the file "MILL.INI".

The first 2 columns "Existing file" and "Existing record" display if the expected macros are present in the file "MILL.INI" and/or in the database.

If the values "Tools", "Diameter" and "Code" are missing, the default values from company options are displayed in the data grid.

These one are displayed in italic format in the data grid.

New S	New Save X Abort Delete Print Wext Input								
Existing file	Existing record	Profile	Macro	Tools1	Diameter1	Code1	▼ Tools2		
<b></b>	<b></b>	D	SCAF01	62	20				
<b></b>	<b></b>	Q	INTBA02	62	20				
<b></b>	<b></b>	Q	INTBA01	62	20				
<b></b>	<b></b>	Q	INTAA03	62	20				
<b></b>		Q	INTAA02	62	20				
<b></b>		Q	INTAA01	62	20				
-	-	Q	ESTI40	62	20				
<b></b>	-	Q	ESTF40	62	20				
-	-	L	SBAI06	62	20				
-	-	L	SBAF06	62	20				

A button "Import" is available.

The user can import 3 packs of configuration :

- Liberty Vanguard
- Endeavour Base
- Endeavour Advanced



Each pack of configuration initializes the database and overwrites the existing data.

#### Macros



This menu is available when :

- The configuration General > Macros > FICEP Macros is checked
- The configuration General > Macros > FICEP Macros > Coping Robot > Ceptrol and/or Oxycutting and/or Plasma and/or Milling are checked

General	General				
General					
Standard Flats					
Project manager					
Draw					
Macros					
<ul> <li>FICEP Macros</li> </ul>	1				
Coping Robot	1				
Ceptrol					
Oxycutting	1				
Plasma	1				
Milling	1				
⊿ Notch					
Angles					
Flats					

This functionality allows the user to check the relationship between Macros and the Profile according the technologies Oxycutting, Plasma and Milling.

The data grid displays the data from the files ROBOT.INI and MILL.INI

It allows the user to know if the technologies are enabled or not for the macros.

	New V Save Abort Delete Print Wext Input U Quit													
	+ 🔛 — 🖉 🦆 Case sensitive 🛛 👻 🗸 Alphanumeric													
	Existing file	Existing record	Profile	Macro 🛆	Oxycutting	Enabled	Default	Plasma	Enabled	Default	Milling	Enabled	Default	Common cut
•	<b></b>	-	1	ESTF01	0		$\checkmark$	0	$\checkmark$		0			
	<b></b>	9	U	ESTF01	0			0			0			
	<b></b>	0	L	ESTF01	0		$\checkmark$	0			0			
	•	-	U	ESTF02	0		$\checkmark$	0			0			
	<b></b>	0	1	ESTF02	0	$\checkmark$	$\checkmark$	0	$\checkmark$		0			
	<b></b>	9	Q	ESTF08	0			0	$\checkmark$		0			
	<b></b>	0	R	ESTF08	9			0	$\checkmark$		0			
	<b></b>	0	L	ESTF08	0		$\checkmark$	0			0			
	•	9	U	ESTF08	0	$\checkmark$	$\checkmark$	0			0			
		0	1	ESTF08	0		$\checkmark$	0	$\checkmark$		0			
	<b></b>	9	R	ESTF09	0			0	$\checkmark$		0			
	<b></b>	0	1	ESTF09	0		$\checkmark$	0	$\checkmark$		0			
	•	0	L	ESTF09	0	$\checkmark$	$\checkmark$	0	$\checkmark$		0			
		0	U	ESTF09	0	$\checkmark$	$\checkmark$	0	$\checkmark$		0			
	<b></b>	9	Q	ESTF09	0	$\checkmark$	$\checkmark$	0			0			
	<b></b>	9	1	ESTF11	0			0	$\checkmark$		0			
			D	ESTF11			$\checkmark$		$\checkmark$		0			

In the data grid, the white field can be edited.

The user can cancel the modifications by clicking on the button

The data grid will be initialized and will be refreshed.

To apply the modifications, the user should click on the button

The selection buttons per line are available when the user clicks on the button "Edit Grid"



The modifications are applied on the selection of line.



: Allow all technologies only if it is applicable



: Forbidden all technologies



: Allow the technology Oxycutting only if it is applicable



: Allow the technology Plasma only if it is applicable



: Allow the technology Milling only if it is applicable







## Welding symbols



This menu displays the default values used in the Project Manager screens.

	Parameters
Representation mode	ANSI/AWS 2.4
Details	Default 🗨
Position	Priority to secondaries -
Edge Gap	1.00 mm
Maximum distance	100.00 mm
Precision	1.50 mm
Text	
Width	10 mm
Height	10 mm

- Representation mode : Allows to select a standard for the Welding symbols
- Details : The user can select a level detail for the symbol
- Position : He can select the priority to compute the position (to secondaries, to master part or to only master part
- Edge Gap : Maximum distance from the edge of each face where scribing is proscribed. This option avoids having scribing at a certain distance from the edge
- Maximum distance : Maximum search distance where the weld symbol should be positioned from the point of application of the weld
- Precision : Parameter used to compute the welding symbol position
- Text : Text size in the welding symbol

#### Scribing



This menu is composed by 2 tabs : Options and Profiles It displays the scribing configuration.

#### **Options**

	Parameters
<ul> <li>Scribing secondary parts</li> </ul>	
Max distance between 2 parts	2.00 mm
Edge Gap	1.00 mm
Flange gap	15.00 mm
Parts on web	Default 👻

- Scribing secondary parts : When this box is checked, the scribing is applied also to the secondary parts
- No welding check : When this box is checked, the welding will not take in account
- Max distance between 2 parts : Maximum distance maximum between 2 different parts
- Edge Gap : Set a distance from the edge
- Flange gap : Set a distance from the flange
- Parts on web : Configure the parts on web in the Top or Bottom Flange

	Marking
Add marking	
Position	
	Automatic 🗨
Maximum distance	100.00 mm
✓ Orient marking	

- Add marking : When this box is checked, the text marking indicates the name of the other parts to be positioned at the assembly scribing
- Position : Defines the marking position around the scribing on the face
   Automatic : The algorithm itself determines the position of the text around the scribing
   Both side : The algorithm will position 2 text markings on both sides of the assembly scribing
   Four sides : The algorithm will add 4 text markings
- Maximum distance : Sets the maximum distance between the scribing line and the text mark to be added

• Orient marking : When this box is checked, text marking will be parallel or perpendicular to the scribing lines

	Positioning mark	
Add positioning marks		
Length	10.00 mm	

- Add positioning marks : When this box is checked, the scribing generation is taken in account the positioning marks
- Length : Enabled when the previous box is checked. Set the length of the positioning marks

## **Profiles**

Category						
I C L D I						
Length 10.00	mm					
Quick configuration						
Full	Apply					
Partial						
O Not any	Apply on all					

The goal of this functionality is to configure for each profile the segments to be scribed or ignored.

The user should select a category of profile then select the length of a scribed segment.



When a user clicks on a segment, he can select a state of this one :

- Full : The segment is full scribed
- Partial : The segment is composed by 1, 2 or 3 segments. Each segment has the "length" value. No scribing is performed if "length" is equal to 0
- Not any : No segment is scribed

When the segment state is partial, the user can select the position of new segments : Beginning, Centre line and End

This part allows the user to perform the configuration quickly.

When the user click on the button	Apply	, the selection is on the displaying profile.
When the user click on the button	Apply on all	, the selection is on all the profile.

## Leadcuts



This menu allows the configuration of the leadcuts parameters.

	Parameters
Technology	Automatic -
✓ Leadcut checking	
✓ Group	
L	
	Optimisation
Configuration	Manual
Priority	Web before flanges -
Web	
Outline	
Orientation	Path -
Compensation	Left
Path	Towards the edges -
Inline	
Compensation	Left
Flange	
Outline	
Orientation	Path -
Compensation	Left
Path	From bottom to top
Inline	
Compensation	Left

The user can select many technologies : Automatic, Plasma, Oxycutting :

- If the value is "Automatic", the production defines the technology according to the machine
- When the option "Leadcut checking" is checked, SP.PLM defines the drawing to separate leadcuts. The leadcuts impossible to perform have the status "Not any tooling"
- If the option "Group" is checked, the software generates groups of leadcuts to optimize the treatment.

Optimization options are Not any, Manual and Automatic.

The priority defines the execution order for the cutting.

For the Web and the Flange, the user can configure the outlines and the inlines to define the orientation, compensation and the path.

#### **Employees**



If you use the Production Feedback Module, you can use this option to set up your employees and link them to their SP PLM user name.

To add an employee to the database, type their user ID into the search box and then press NEW or [Ctrl+N].

#### General

Fill in the employees details including start date and end dates if necessary.

Double click in the user field to associate this employee with a user.

General Information Company Workstation						
ID ID Number	00052 52					
Name	CAVILLON	Functions				
First Name	1000	Account manager				
Date in	20/06/2016 🔹	Sales representative				
Date out	11					
User	Q					
Supervisor						
Telephone N°						

## Information

Comments can be entered in this tab.

General Informatio	Company Workstation						
Created on	01/07/2016 10:43:41	By					
Modified on	01/07/2016 10:44:16	Ву					
Comment							

#### Company

For Multi company databases, select the company this employee is associated with by selecting it from the

list of the left side and pressing 📕 to add it to the right

Gener	ral Information	Company	Workstation			
Co	ompany				Employee's company	
				4		

#### Workstation

You can assign an employee to each machine he's working on.

In this case, in the production feedback module, only these machines will be displayed when this employee will log on.



## **Employee Management**



This is an overview of all the employees and workstations for each company.

When wis selected, it displays the list of the employees assigned by workstation.

Employee	Ф	New Save	Abort Delete	Print Next Input	U Quit			8					
🌆 00002		The Service of the College											
🌆 00003		LE Expand LE Conapse	ID Number	Mana	Circl Name	Talashasa MP	Dista						
🌆 00004			ID Number	Name	First Name	Telephone N	right						
🌆 00005													
🌆 00006		EF La TIPOB254											
🌆 00007		- 5 00010	10				Feedback, Operations						
🌆 00008		- 🍋 00015	15				Feedback, Operations						
🌆 00009		- 🌢 🗐 00017	17				Feedback, Operations						
🌆 00010		- 🖉 00030	30				Feedback, Operations						
<b>&amp;=</b> 00011	-	- 🚛 00042	42				Feedback, Operations						
Workstation	<b></b>	🛱 🏝 K126L											
Workstation		- 5 00010	10				Feedback, Operations						
₽		- 🌆 00013	13				Feedback, Operations						
		- 🌆 00015	15				Feedback, Operations						
1203DD		- 🌆 00017	17				Feedback, Operations						
to ASSEMBLAGE		- 🖉 00040	40				Feedback, Operations						
👌 B3		- <b>M</b> 00049	49				Feedback, Operations						
👌 B4		🛱 📅 1203DD											
👌 CONTRÔLE DÉBIT		- <b>6</b> 00010	10				Feedback, Operations						
👌 CONTRÔLE SOUD		- 5 00013	13				Feedback, Operations						
🏣 COUPE-GOUSSET		- 🚛 00015	15				Feedback, Operations						
TOTERS MANUEL		- 5 00017	17				Feedback, Operations						
🔁 DSTV		- 5 00040	40				Feedback Operations						
DXF/DWG	•	00049	49				Feedback, Operations	-					

If

is selected, the list of the workstations assigned by employee is displayed.

Employee	Ф	New Save	Abort Delete	Print Next Input	U Quit			2
🌆 00002		The Expand The Collapse						
🌆 00003		ID	ID Number	Name	First Name	Telephone N°	Rights	
🌆 00004				Hume	Thornamo		rugno	
🌆 00005			02					
🌆 00006		±+ ≥≡ 00003	03					
🍋 00007		EF- ₩= 00004	04					
🌆 00008		· ⊡-· 🍋 00005	05					
🌆 00009		⊞- &= 00006	06					
🌆 00010		⊞- ▲≣ 00007	07					
<b>&amp;</b> = 00011	-	E 00008	08					
Workstation	4	E- M= 00009	09					
		⊞ ▲== 00010	10					
			11					
1201FRC		⊞- ▲= 00012	12					
1203DD		⊞- ▲= 00013	13					
ASSEMBLAGE		⊞- ▲= 00014	14					
		⊞- 🌆 00015	15					
👌 B4		<b>M</b> 00016	16					
👌 CONTRÔLE DÉBIT		⊞- ▲= 00017	17					
····· 💽 CONTRÔLE SOUD		Am 00018	18					
🌆 COUPE-GOUSSET			19					
to DIVERS MANUEL			20					
🛅 DSTV		⊡- 🌆 00021	21					
DXF/DWG	T	⊞- 🌆 00022	22					•
## Welder Management



You can manage here the welding qualifications

To add a new qualification and assign it to an employee, select him on le left panel and right click, new on the right one.

In the new window, insert the test number and press NEW



# Approval

In the Approval form, the general tab contains the main information about the approval test itself

New 🖌 Save 💙	Abort Delete Print	Next Input	Quit		
Employee 00002	9	Test N°	AIG-5684-Y	<u></u>	
	Deservels				
eneral mornation rest i	nellewals	Norm			
		Nom			
Test N°	MIG-5684-Y	Reference			
Procedure specification					
Norm				1	K -
	F	arameters			
	Test details		Ran	ge of approval	
Process		<b>X</b> -		1	× -
Plate or tube		× -		1	<b>K</b>   -
Joint type		<b>X</b> -		1	K -
Material group		<b>X</b> -		1	K -
Type of filler material		× -		1	<b>K</b> -
Shielding gas		× -		1	K -
Auxiliaries					
Test piece thickness	0.00	mm	0.00	mm	I
Deposited thickness	0.00	mm	0.00	mm	I.
Pipe outside diameter	0.00	mm	0.00	mm	I.
					_

The fields like this one	allow a multiple selection, except for
Shielding gas, Plate or Tube, and Joint Type.	

# Hold [Ctrl] while selecting the items

			Norm			
Test N°	MIG-5684-Y		Reference			
Procedure specification						
Norm						× -
			Parameters			
		Test details			Range of approval	
Process			ć	× -		× -
Plate or tube					ծ ⊗	0
Joint type				111	(MMAW/SMAW)	
Material group			_	114	(Flux cored wire without gas)	
and group				121	SAW	
Type of filler material				122	(SAW+strip)	
Shielding gae				123	(SAW+multiple wire)	
oniciding guo				124	(SAW+metal powder)	
Auxiliaries				125	(SAW+flux cored wire)	
Testeland	0.00			131	(MIG)	
l est pièce thickness	0.00		¶	135	(MAG)	
Deposited thickness	0.00		m	136	(FCAW)	
				138	(MAG with metal cored wire electrode)	
Pipe outside diameter	0.00		m		Ok Ab	ort
Welding position						

The test tab gives additional information about how the approval test has been done (name of the inspector, Address of the inspection center, ...)

New       Save       Abort       Delete       Print       Hext Input       Out         Employee       00002       Test N ¹ MG-5684-Y       Image: Comparison of the second	Approval					—		2
Employee 00002     General Information     Test Renewals     Inspector     MR INSPECTOR     Address     RUE DES FRÈRES LUMIÈRES 38200 VIENNE FRANCE     Case sensitive     Test type     Done     Ignored     Visual inspection     Religoraphy     Test type     Done     Ignored     Visual inspection     Radiography     Test ure     Bending test   Notch tensile test     Macroscopic inspection     Ultrasound     Test und	New	Save Save	Abort Delete	Print 🖊	Next Input			(
General Information Test Renewals	Emplo	oyee 00002		С, т	est N° MIG-5684-Y	0		
Inspector MR INSPECTOR Address RUE DES FRÈRES LUMIÈRES 38200 VIENNE FRANCE  Test type  Test type  Test type Done Ignored Visual inspection Radiography Texture Bending test Be	General Ir	nformation Test Re	enewals					
Inspector MR INSPECTOR Address RUE DES FRÈRES LUMIÈRES 38200 VIENNE FRANCE				Informatio	n			
Address RUE DES FRÈRES LUMIÈRES 38200 VIENNE FRANCE	Inspecto	or	MR INSPECTOR					
Test type     Test type     Done     Ignored     Visual inspection     Radiography     Texture     Bending test   Notch tensile test   Macroscopic inspection   Ultrasound	Address	s	RUE DES FRÈRES LUI	MIÈRES 38200 VIENN	E FRANCE		Q	
Image: Sector of the sector of th				Test typ	a			
Image: Construction   Image: Construction   Radiography   Texture   Bending test   Notch tensile test   Macroscopic inspection   Ultrasound	[							
Test type       Done       Ignored         Visual inspection       Ignored         Radiography       Ignored         Texture       Ignored         Bending test       Ignored         Notch tensile test       Ignored         Macroscopic inspection       Ignored         Ultrasound       Ignored	+ #	-	🔎 🤞	👕 🗌 Case sensitive	• -			
Visual inspection       Image: Constraint of the constraint of		Test type	Done	Ignored				
Radiography   Texture   Bending test   Notch tensile test   Macroscopic inspection   Ultrasound	•	Visual inspection						
Texture		Radiography						
Bending test		Texture						
Notch tensile test		Bending test						
Macroscopic inspection     Image: Comparison       Ultrasound     Image: Comparison		Notch tensile test						
Ultrasound 📃		Macroscopic inspec	tion					
		Ultrasound			T			

The renewals tab contains the list of the dates the certificate has been renewed and its validity date. In the name field is the name of the inspector who renewed it.

An employee who has qualifications for welding appears with this icon



# Tools

# **Manufacturing process**



This menu is available in the tabs Project, Drawing, Assembly Mark and Component.

The user allows to select the tooling for the Marking, the Chamfer (internal and external) and the Macro.

Manufacturing process	;	?	×
Tooling	Value		
Marking	Unspecified		
Macro Default Unspecified Oxycutting			•
	V Ok	X	Abort

For the Marking, the value can be : Unspecified, Disc, Scribing and Leadcut For the Chamfer and the Macro, the value can be : Unspecified, Oxycutting, Plasma and Milling

When the user clicks on the button "Ok", the new values are took in account.

#### **Adding auto mark**



This menu is available in the tabs Project, Drawing, Assembly Mark and Component.

The user allows to configure the mark in the component.

He has to select the :

- Manufacturing process
- Text in the component
- Position of the text
- Edge Gap distance

					Par	rt type configu
						t type comige
		Manuf	acturing process			
<ul> <li>Unspecified</li> </ul>	ODisc	Scribing	CLeadcut	◯ Inkjet		
			Text			
Separation	_	Free text			Multiline	
Composition						
Value			Current V	alue	Size	4
Project Drawing Assembly M Material sho Project desc Drawing des Part descript	ark rt code ription cription ion		Com	ponent	0	•
{Component	9					
			Method			
Edge Gap		nn	Position	Haunch	h Hange	T
					. /	~

When the user clicks on the button "Ok", the mark is took in account.



# Drilling



This menu is available in the tabs Project, Drawing, Assembly Mark and Component.

When a drilling is applied in a component, the user allows to substitute this one by another type.

Image: Case sensitive       Image: Case sensi	Prilling	- 🗆 X
Drilling       Substituted drilling         Image: Normal, Diameter: 14.0 mm       Image: Type         Image: Normal, Diameter: 100.0 mm       Type         Image: Normal, Diameter: 100.0 mm       Image: Normal Diameter: 100.0 mm         Image: Normal, Diameter: 100.0 mm       Type         Image: Normal, Diameter: 100.0 mm       Image: Normal Diameter: 100.0 mm         Image: Normal, Diameter: 100.0 mm       Type         Image: Normal, Diameter: 100.0 mm       Image: Normal Diameter: 100.0 mm         Image: Normal, Diameter: 100.0 mm       Image: Normal Diameter: 100.0 mm         Image: Normal, Diameter: 100.0 mm       Image: Normal Diameter: 100.0 mm         Image: Normal, Diameter: 100.0 mm       Image: Normal Diameter: 100.0 mm         Image: Normal, Diameter: 100.0 mm       Image: Normal Diameter: 100.0 mm         Image: Normal, Diameter: 100.0 mm       Image: Normal Diameter: 100.0 mm         Image: Normal, Diameter: 100.0 mm       Image: Normal Diameter: 100.0 mm         Image: Normal, Diameter: 100.0 mm       Image: Normal Diameter: 100.0 mm         Image: Normal, Diameter: 100.0 mm       Image: Normal Diameter: 100.0 mm         Image: Normal, Diameter: 100.0 mm       Image: Normal Diameter: 100.0 mm         Image: Normal, Diameter: 100.0 mm       Image: Normal Diameter: 100.0 mm         Image: Normal, Dimage: Normal Diameter: 100.0 mm       Image:	+ 🔛 — 🛛 🔎 🦊 🛊 🗌 Case sensitive 🚺 👻 🗸 Alpha	numeric 😃
▶ Nomal, Diameter: 14.0 mm       Type         ▶ Nomal, Diameter: 100.0 mm       Type         ■ Normal       Drilling         Punching       Rectangle         Slot       Tapping         Countersink       Milling         Deburring       Pecial         Inline       Scribing         Notch       Deletion	Drilling	Substituted drilling
Wormal, Diameter: 100.0 mm       Type         Normal       Drilling         Drilling       Punching         Rectangle       Stot         Stot       Tapping         Countersink       Milling         Deburring       Pecial         Inline       Scribing         Notch       Deletion         Delete       Ok	Normal, Diameter: 14.0 mm	X -
Normal         Drilling         Punching         Rectangle         Slot         Tapping         Countersink         Milling         Deburring         Pointing         Special         Inline         Scribing         Notch         Delete         Ok	Normal, Diameter: 100.0 mm	Туре
		Normal Drilling Punching Rectangle Slot Tapping Countersink Milling Deburring Pointing Special Inline Scribing Notch Deletion

No Drilling	X
+ 🔛 — 🛛 🔎 🦆 🕆 🖸 Case sensitive 🛛 🕅 🗸 🗸 Alphar	umeric 😃
Drilling	Substituted drilling
Normal, Diameter: 14.0 mm	× -
Normal, Diameter: 100.0 mm	Туре
	Milling -
	Parameters
	Diameter 30.0 mm
	Depth 10.0 mm
	Delete Ok
	Ok 🗡 Abort
A Drilling	- C ×
Image: Second secon	- C ×
Image: Case sensitive     Image: Case sensitive       Image: Drilling	Unmeric Construction of the second se
Image: Case sensitive       Image: Case sensi	Ok Abort     Ok Abort     Ok     Ok     Substituted drilling Milling, Diameter: 30.0 mm, Depth: 10.0 mm
Image: Case sensitive       Image: Case sensi	Ok Abort — □ × substituted drilling Milling, Diameter: 30.0 mm, Depth: 10.0 mm
Image: Case sensitive       Image: Case sensi	Ok     Abort       -     -       Substituted drilling       Milling, Diameter: 30.0 mm, Depth: 10.0 mm
Image: Second	v Ok → Abort − □ × sumeric ⁽¹⁾ Substituted dnlling Milling, Diameter: 30.0 mm, Depth: 10.0 mm
Image: Second	Ok     Abort       -     -       sumeric     •       Substituted drilling     •       Milling, Diameter: 30.0 mm, Depth: 10.0 mm
Image: Drilling   Image: Drilling   Image: Drilling   Image: Normal, Diameter: 14.0 mm   Image: Normal, Diameter: 100.0 mm	Ok     Abort       —     —       ×     ************************************
Image: Drilling   Image: Drilling   Image: Drilling   Image: Diameter: 14.0 mm   Image: Diameter: 14.0 mm	Ok     Abort       —     —       Numeric     Image: Comparison of the second secon
Image: Case sensitive   Image: Case sensiti	Ok     Abort       -     -       sumeric     Image: Comparison of the second secon
Image: Case sensitive   Image: Case sensiti	Ok     Abort       -     -       sumeric     Image: Comparison of the second secon
Image: Case sensitive       Image: Case sensitive         Image: Drilling       Image: Case sensitive         Image: Normal, Diameter:       14.0 mm         Image: Normal, Diameter:       100.0 mm	Ok     Abort       -     -       sumeric     ************************************
Image: Case sensitive       Image: Case sensi	Ok     Abort       -     -       sumeric     Image: Comparison of the second secon
Image: Second	Ok     Abort       -     -       xumeric     Image: Comparison of the second secon
Image: Case sensitive   Image: Case sensiti	Ok     Abort       -     -       sumeric     Image: Comparison of the second secon
Image: Second secon	Ok       Abort         -       -         sumeric       Image: Comparison of the second s

When the user clicks on the button "Ok", the drilling update is took in account.



# **Convert toolings to scribing**



This menu is available in the tabs Project, Drawing, Assembly Mark and Component.

👫 Convert toolings to scribing			?	×
Toolings	Parameters	;		_
☐ Web cut	Cut Angle min	0.00	•	
Flange cut	Cut Angle min	0.00		
Double cuts				
Chamfer				
		- 🗸 oi		Abort

The user has to select the Toolings type he wants to convert.

When he clicks on the button "Ok", the preview screens are updated.



# **Adding scribing**



This menu is available in the tabs Project, Drawing and Assembly Mark.

🔛 Scribing computation	? ×
Options Profiles	Ψ
Par	ameters
Scribing secondary parts	
Max distance between 2 parts	2.00
Max distance between 2 parts	2.00 mm
Edge Gap	1.00 mm
Flange gap	15.00 mm
Parts on web	Default -
M	arking
Add marking	
Position	
	Automatic 👻
Maximum distance	100.00 mm
✓ Orient marking	
(	ning mark
Posta	oning mark
Add positioning marks	
Length	10.00 mm

The user can configure the scribing parameters : Scribing configuration

## **Adding Welding symbols**



This menu is available in the tabs Project, Drawing and Assembly Mark.

🛹 Welding symbols computation			?	×
(	Parameters			
Representation mode	ANSI/AWS 2.4	-		
Details	Default	-		
Position	Priority to secondar	ies 👻		
Edge Gap	1.00	mm		
Maximum distance	100.00	mm		
Precision	1.50	mm		
Text				
Width	10	mm		
Height	10	mm		
				Abor
			A	Aboi

The user can configure the welding symbols parameters : <u>Welding symbols configuration</u>

#### Cut



This menu is not available for the plate profiles.

😵 Cut				? ×
0.00	1/4	105.00 mm	3/4	140.00
				🗸 Ok 🔀 Abort

The user can manually scroll or enter the distance to cut.

It is possible to click on the buttons to generate automatically the expected ratio.

When the user click on the button "Ok", the ratio is applied.

# In the data grid, the component is composed by 2 components.

Contra	ct 16094				Project 16094	Ļ	
+ 🏽 🗕	Component			P 🖡 🕯 🗆	Case sensitive	🝷 🔽 Alphanumer	ic
		Component 🔍		Quantity	Profile	Length	Width
•	0 🕹	A1	<i>i</i>	🛷 1	L70*50*6	140.00	
Contra	-+ 16094				Project 16094		
- = -	Component				Care repritive	• 🗸 Alabaaumeri	ie .
	component	-				Aphandmen	
		Component 🔍		Quantity	Profile	Length	Width
•	- 😲 🍫 📮	A1	<i>i</i>	💰 1 🔽	🗐 🕼 L70*50*6	140.00	
		A1_0	<i>i</i>	1	L70*50*6	105.00	
	😲 L	A1_1	<i>i</i>	1	L70*50*6	35.00	

The preview screens are refreshed.



## Stretch



This menu is available for the components having a profile type I, L, N or M.



The user can manually enter the distance to stretch.

Steel Projects PLM 1.19.x

When the user click on the button Ok, the stretching is applied.



#### **Break Down**



First, the user should activate a parameter in the general configuration screen :

Ge	neral		
- Þ	General		
- Þ	Standard Flats		
Þ	Project manager		
Þ	Draw		
Þ	Macros		
	Import		
4	Metric Import		
	Gusset Prefix	TOLE?	
Þ	Gusset Prefix Imperial Import	TOLE?	
Þ	Gusset Prefix Imperial Import Reports	TOLE?	
) ) )	Gusset Prefix Imperial Import Reports Export	TOLE?	
) ) )	Gusset Prefix Imperial Import Reports Export Nesting	TOLE?	
Þ Þ Þ	Gusset Prefix Imperial Import Reports Export Nesting Products	TOLE?	
) ) ) )	Gusset Prefix Imperial Import Reports Export Nesting Products Feedback	TOLE?	

This menu is available for the components having a profile type C, P or Z.

3 Break down beam	? ×
Drilling after assembly	1
Remove flange thickness	1
Weld thickness	100 mm
Cut to Length	<b>v</b>
	V Ok 🔀 Abort

When the user selects this one, the component is broken down into 3 plates : the web, top flange and bottom flange

+ 🏼 –	Component			🔎 🦊 🛊 🗆 G	ase se	ensitive 👫 -	🚼 👻 Alphanumeric			
		Component 🔍		Quantity		Profile	Length	Width		
	0	36	i 🎉 🗧	🛫 1		TOLE6	348.49	188.25		
	0	37	i 🎉 🗧	🋫 2		TOLE6	216.97	202.67		
	0	26	i 🖗	🛫 1		TOLE6	217.69	126.11		
	0	24	i 🖗	🛫 1		PLAT184.81*6	374.06			
•	0 📀	📮 Т2	🤹 (	🗩 1	\$	HEA180	6504.77			
	0	··· T2_2		1		TOLE9.5	6456.74	180.00		
	0	··· T2_1		1		TOLE9.5	6456.77	180.00		
	0	т2_0	<i>i</i>	1		TOLE6	6487.50	48.00		

# **Unfold part**

1	New	Ins	-		TOLES - TO MM
	Edit Grid	Ctrl+Ins			TOLES - 10 MM
_	Delete	Del			UPAF150 - AME
	Delete	Der	-		L 40*4 - 150*18
	Toolbars	Ctrl+B		Unfold part	
٩	Edit	Enter	E	Cut	
	Add product	Ctrl+Maj+P	ø	Stretch	
£.	Сору	Ctrl+C	0	Check part	Ctrl+X
٢	Master Part	Ctrl+M	814	Manufacturin	g process
P	Cut to Length	Ctrl+K	814	Delete auto m	ark
	Draw	•	814	Drilling	
$\succeq$	Tools	•	814	Convert toolin	gs to scribing
	Distribution	•			

This menu is available for the components having a profile type L, N or M.

When the user selects this one, the component is transformed into a plate.



#### **Adding erection marks**

This option is available from an assembly.

The aim of this mark is to indicate the direction of assembly by creating a scribing.



The user has to indicate then validate parameters to create the scribing.

Erection marks	×
	Parameters
North location	90.00 °
Mark location	North or East
Maximum distance	100.00 mm
Maximum angle for column	10.00 °
۱	)
	V Ok 📈 Abort

Steel Projects PLM 1.19.x

After validating, the erection mark is displayed in the component.



This scribing can be removed by using the option "Delete erection mark".



#### **Convert to standard flat**

This menu is available in the tabs Component only on plate. This functionality allows the user to convert the plate type by standard flat.



A new screen is displayed, the user can configure many parameters :

Convert to standard Flats		?	$\times$
Rectangular Shape			
MaximumSize			
Max Width	500.00 mm		
Max Thickness	40.00 mm		
Any Rotation	1		
Tolerance	0.10 mm		
Width	Minimum 🗨		
Total			
Table			
		Ok 🔀	Abort

# Draw

## Leadcuts



This menu is available in the "Component" tab.

The user can consult the properties of leadcuts.





He can consult the 3D preview with the following option : ^{3D preview}



# Dimensioning



This menu is available in the "Component" tab.



The aim of this functionality is to measure distances, angles of the component.

#### The user can use many options for these dimensioning.



# **Contours Analysis**

This menu is available in the project management in the tabs Project, drawing, assembly and component. It allows to launch 3 actions :

E	Rename for assembly			-
	Draw	۶ 🧯	🌡 Drafter Ctrl+D	
$\geq$	Tools	•	Leadcuts	
	Distribution	•	Dimensioning	
_			Contours Analysis 🔸	Run analysis
			Refresh 3D	Convert macros to leadcuts
			Delete cache	Convert leadcuts to macros

## **Run analysis**

This option allows to run manually the contours analysis.

The parameter "Contours Analysis" should be checked in the CAD analysis configuration.

#### **Convert macros to leadcuts**

This option allows to run manually the analysis by deactivating the macros to be recognized as leadcut.

#### **Convert leadcuts to macros**

This option allows to run manually the analysis by deactivating the leadcut check to be recognized as macos.

# **Production Manager- Modules**



#### The main module to manage your production

Production Manager allows to send pieces to workstations and to follow the production work-flow. You have the same possibility defined in <u>Module - Project Manager</u> with additional functionality to manage and follow the production.

With this module 4 possibilities will be activated.

- Send to Production
- Production Manager
- Fabrication Job
- Supervisor

The main difference with the project manager is that the production status displayed for each element (Project/Drawing/Assembly/Component).

When you move the mouse over the production's progress bar, a grid with detailed information appears.

When an element has a feedback level completed, the colour of the progress bar changes according to what has been set-up in the <u>feedback parameters</u>.

New	$\checkmark$	Save		K	Abort Dele	ete	9	Print	Next	Input	Quit									
Contrac	t 1609	94						6	Project	16094					Drawing					d
+ 🖩 🗕	Compo	nent				8	)	👔 🗌 Case :	sensitiv	ve Žž -	Alphanume	ric								
					Component 🔍			Quantity		Production	Profile		Lengt	h	Width	Material Grad	le Treatm	ent	Group	
	0				41	ø	2	8			TOLE6		140.0	0 !	90.00	S235JR			TOLES	- 10 MM
	0				34		2	2			TOLE6		332.7	6	172.16	S235JR			TOLES	- 10 MM
	0				35		2	2			TOLE6		192.1	8	167.12	S235JR			TOLES	- 10 MM
	0	۲		٠	R1	ø	2	1	\$		UPF-150*	70*5	6501.	99		S235JR			ANGLE	S
	0	۲	8		C10	1	2	1			1.1011		0000			000510			1 1011	150*18
	0	1	8		C9		2	1			R1	ENVOY	E	DÉBIT	PERCAGE	POINTAGE	SOUDURE	EXPEDI	TION	50*18
	0	۲	ø		A3	ø	2	6			Quantity (1)	100.00 %	ញ	100.00 % (1)	0.00 % (0)	0.00 % (0)	0.00 % (0)	0.00 % (0)		50*18<
	0				23	Ç,	Ċ	1												10 MM

# **Production Manager**



# **Selection Window & Select function**



# Select part to send to production or Print list

The selection window in the Project manager is the tool to progress selections to the next stages of the software - export them to production, and generate shop drawings and reports.

You can open the selection window using the top icon, or if you make a selection of parts and drag them with the mouse the window automatically opens.

You can also make a multi-selection in the grid and press the Select button to "move" the selected items in the Selection section.

₩	Project	Job	Drawing	Assembly Mark	Quantity	Component	Profile	Quantity	Length	Width	Treatment	Material Grade	Final Painting	Group	Desc	
	16094		2	G1	1	729	TOLE6	1	300.00	100.00		S235JR		TOLES - 10 MM		
1	16094		2	G1	1	G1	TOLE6	1	373.46	322.80		S235JR		TOLES - 10 MM	GOU	
×																
															Þ	
	Parts		Messages													- 9

The aim of the tool is to drag the projects or components that you want to process together into the window, use the filters on the left side to filter out any unwanted parts, choose what you want to do with the selection on the right side, and then press the Action Button to process.

# *

Button to set the filter criteria



: Button to apply or remove the filter



: Button to reset the selection. All of the selected parts are removed from the grid.







: Button to prepare shop drawings of the parts



: Open the <u>Reports Window</u>



Action Button - press this to apply the actions you have selected

#### **The Selection Filter**

Once parts are selected, it is possible to filter to refine a selection. The exact options in the filter are determined by your profile group and tooling set-up.

You can create specific filters for your selection by phase, assembly or component (By name, profile, material, treatment or thickness).

You can also filter by specific profile groups or toolings using the windows. To set these filters click on the traffic light button to the left to turn them green.

With this set only parts belonging to the green profile groups or toolings will be visible in the selection window.

💎 Filtre		— D	$\times$
Name			
Project Drawing Assembly Mark Component			
Component	Finished Pieces	Unit Thickness	
Profile	Master Part		
Material Grade	Sub assembly		
Treatment	Not in MEF		
	Ø ∛ Ø	<b>8</b>	🐼 🎸
Profile Groups	▲ Tooling		^
🔵 0 COUPE AILE	ARMEMENT PRS		
0 GRUGEAGES	SSEMBLAGE		
HEA/B 100-180			
HEAVE 100-180 <			
HEA/B 181-1000<	COUPE		
e IPE 301-600	COUPE AILE		
IPE 301-600 <	COUPE_AME		
ipf 80-300	Y 🖨 EXPÉDITION		×
Inversion	Save 🗙 Abort 📃 Delete	Reset 🚰 Apply	Uuit 🕑

🚏 Filtre						_		]	$\times$
Name SAVE	ED-FILTER	0							
<u> </u>									
Project Drawing Assemb	bly Mark Component Informatio	n							
Component		Finished Pie	ces		Unit	Thickness			1
Profile		Master Part				×			
Material Grade		Sub assembl	У						
Treatment									
									1
		🔕 🦻 🧟					8	3	2
Profile Groups		^	Tooling						^
0 COUPE AILE				IENT PRS					
HEA/B 100-180				AGE					
🝎 HEA/B 100-180 <			ONTC	DUR					
e HEA/B 181-1000			COUPE						
HEA/B 181-1000<				AILE					
IPE 301-600 <		~		:_AME ITION					~
			_					-	
	~	🖊 sa👯 🗙	Abort	Delete	R R	eset 🛛 🛃 Ap	ply	C	Quit

You can save specific filters by typing the name in the top window, and then press [Save].

The saved filters will be available from a drop down list under the filter icon in the selection window.


#### **Phases & Phase Builder**



#### As an option you can organize your contract by phase of production

The phase builder allows you to organize your projects into phases and loads.

To use this facility you first need to activate "jobs management" in the company configuration settings

To make a Project a phased project, open the project options and choose the selection as below after that you will see this symbol behind the project line

oject: 15115 /				- 0	×
New Save	Abort Delete Print	Next Input			6
Project 15115					
eneral Default values Ir	nformation Status Summary Assemblies to	olings Parts toolings Version	Addresses Attached documents Contacts		
Project	15115	Contract	15115		
Description		Phase			
Manager		Material Grade Upgrade			
Object		Profiles Upgrade			
Final Date of the Proj	11	Project customer	15-115		
Customer	<b>₽</b>	Туре	Default		
Typology		Origin	Tekla Structures		
Status	Purchase 🔹	Priority	99 🗢		
Theoretical weight	0.0000 Kg	Execution class	EXC2		
·····		Account manager			

Pressing the phase button will activate an extra top level tab called phase

Contract Phase												
Contract 17060												
+ 🖩	🗕 Projec	t		🔎 🦊 🛊 🗆 a	ase sensitive	🚰 - 🛃 -	Alphanumeric					
		Project	О, г	Description	Object	Typology	Maximum length	Priority				
•	0	17060PL		PLIAGE			100.00	99				
		17060TPS		TEMPS			1000.00	99				

When you click the phase builder button a new window will open. This will allow you to build your phases by drawing, assembly or component.

Steel-	Projects Proje	ect Data Projec	t Manager data	Nesting data Fa	abrication Job data	Feedback data	Shipping data	Scheduling data	Configuration	Utilities	Project manager	Phase builder
OD As OC	rawing Ph ssemblyMark _{Jo} omponent	lase	+ ( + (	C C Refresh	1gr Auto eight							
	Rew Very Save X Abort Delete Print + Next Input											
	Project 1	5115		<u>_</u>								
	Drawing	Assembly Mark	Component	Profile	Quantity	Phase	Job	Quantity Job	Weight	D	escription	
•	15	GC8	15_593	TOLE8	4			0	1.64			
	15	GC8	594	TRO60.3*2.9	7			0	20.90			
	15	GC8	595	TRO60.3*2.9	1			0	18.67			
	15	GC8	601	TOLE3	2			0	6.69			
	15	GC8	GC8	TRO60.3*2.9	1			0	18.67			
	9	GC19	413	TOLE8	2			0	5.31			
	9	GC19	414	TOLE6	8			0	1.72			
	9	GC19	422	TOLE6	4			0	1.85			
	9	GC19	425	IPE120	4			0	38.29			
	9	GC19	445	TOLE8	2			0	5.31			
	9	GC19	598	TRO88.9*5	2			0	24.89			
	9	GC19	GC19	TRO88.9*5	2			0	27.07			
	9	Т9	Т9	TOLE2	2			0	5.91			

If you press the auto weight button you can get the system to create your phases automatically to the assigned weight. This is useful for creating loads by trailer weights etc.

📓 Auto weight		? ×
Name	Prefix	Start increment
Name	JOB	
Jobs weight	500 Kg	
	Description	
		🗸 Ok 🔀 Abort

## Drawing Module



### Open the drawing module to modify or create a part

The drawing module in Steel Project PLM Project Manager allows the user to create and/or edit the parts that are required to be processed in the workshop.

Select a part in the Component tab then click on the "Draw" button or double-click on the Preview screen.





For more information : Drawing module

## **Part Preview Window**



#### You can have 2D or 3D preview

The part preview window lets you view the current selected part in a 2D and or 3D view.

To activate the 3D view you need to first activate it in the local settings

The way the parts are represented can be set in the Shop Drawing - Representation option, and the local settings - 3D settings.



Press the Preview button to activate the preview window. This will default to open at the bottom of the screen, you can drag and drop the window onto other areas of the screen if you prefer it to be there.

The default view shows the current selection in either 2D or 3D.

If you want to show both views in the same window you can drag the top of the view ribbon tab



icon appears, and then drag it to the left or the right to activate both displays.



The 2D view shows a graphic of the part with the tooling, dimensions, coping macros all shown.

If you double click in the window, it opens the part up in the Drawing Module

The view of the 3D view can be set to show exactly what you want by changing the View and Modelling options.

The angle of the view can be changed by using the box icon. Simply click and rotate the box to change the view of the part.



The other options for changing the default view of the 3D display can be accessed from the icon menu at the top of the window.



You can open the full screen view of the part by pressing [Shift+F].

## **Copy Function**



#### Copy a Project, Drawing, Assembly or Part

It is possible to copy projects, or parts of a project, to another one inside the Project Manager. If you do this it will copy all of parts and the lower hierarchical levels, including all of the component tooling and outlines. To copy a project simply select the project from the main list and either press [Ctrl + C], choose "Copy" from

the right click menu, or press the Copy icon on the tool bar.

This opens the copy window. Choose the name of the new project in the destination window, press on the button "OK" and then, you will have a second identical project in the project list.

🎢 Сору		×
	Node	
Contract	17060	0
Project	17060PL	Q
	Destination	
Contract	17060	0
Project	17060PL	
Parameters	🗸 Сору	Abort

You can also copy Drawings and Assemblies in a similar way.

To copy individual components, also use the same method as above but the copy window gives you the extra options to be able to copy it to specific levels of a project.

This can be the same one you are in now or a different one. Double click in the window to see a list of all the available options.

🧨 Сору	×							
	Node							
Project	17060PL							
Drawing	1000							
Assembly Mark	PL1							
Component	PL1							
Destination								
Project	17060PL							
Drawing	1000							
Assembly Mark	PL1							
Component	PL1							
Quantity	1 束							
	Copy 🔀 Abort							

## **Template Project**



Click on the menu "Template project".

Select a project then, assign to this one to a template project.

Click on the button "Save" to validate.

Projectas prefix			
New Save Abort	Delete Print Hext Inpu	t 😃 Quit	
Project 15260			
	Description	Name	Quantity
3			
🖨 🗹 📁 AFF_STD_01 🛛 🗸			
🖻 🗹 👺 DRW_STD		DRW_STD	
🖻 🕢 🧼 ASS_STD (1)		ASS_STD	1
🗹 😰 IPE_STD (1)		IPE_STD	1
		TOLE_STD	1

## Refresh



Click on the button "Refresh".

The information in the data grid are reloaded then displays the refreshing data.

## **Properties edition**



The menu displays the list of contract.

For each contract, the user can set its priority level.

🂰 Pri	iorities edition						?	×
- 8	-	🔎 🗍 🕯 🗆	Case sensitive	✓ Alphanumeric				Ċ
	Contract	Project	Customer	Final Date of the Project	Priority			
•	16189	0			99			
	00	00			99			
	00 TEST	00 TEST			99			
	00	00-16125			99			
	007	007			99			
	00	00A			99			
	00	00B			99			
	00	00C			99			
	00	00D			99			
	00	00TG			99			
	00	00TL			99			
	00	00TPS			99			
	007	01			99			
	00	1203DD			99			
	14033	14033PL			99			
	14033	14033TPS			99			
	14041	14041PL			99			
	14257	14257			99			
	14257	14257PL			99			-
						🗸 Ok	X	Abort

## **Nesting Quantity**

When the user actives this menu, a column "Nesting Quantity" is added in the data grid.

For each component in the data grid, the Nesting Quantity is displayed.

Selection	Phase	Trees	Preview	Import T	Draw	Сору	Select	Template project	C Refresh	Priorities edition	Nesting Quantity	Additional Informations	CE Weight/Surface	Search				Filter
Nev	v   🗸	Save	Ab	ort	Delete		Print	Next	Input	Quit								
Contr	act INF	_SUPP_	CONTRAT				1	Project	AFFAI	RE-1				Prawi	ing PLA	N-01		
+ 🏽 –	Comp	onent				ا 🍦 🔍	👔 🗌 Ca	ise sensitiv	ve 27	🔹 🗹 Alp	hanumeric							
			Compo	nent 🔍		Quant	tity	Nest	ting lan	tity	Profile	Lengt	n Wi	dth	Mat	terial Grad	le T	reatment
	8		PERC_	01	<i>i</i>	15				1	PE300	500.00			S23	5JR		
•	V		PLI_01		- 🧀 👌	ž 10		10/	10	1	PLAT300*10	100.00	)		S23	5JR		

## **Additional Information**



When the user activates this menu, additional columns are displayed in the data grid :

- Weight
- Surface
- Drilling (in quantity)
- Marking (in quantity)
- Cutting (in quantity)
- Coping (in quantity)
- Scribings (in quantity)
- Bendings (in quantity)
- Chamfers (in quantity)

Selection	Phase Trees	Preview	Draw	Copy Select	Template Refresh P	riorities edition	Additional Informations	ht/Surface		Filter							
el Ne	w Save	X Abort	Delete	Print	Next Input	Quit											
Cont	ract INF_SUPP_	CONTRAT			Project AFFAIRE	-01		Drawi	ng PLAN			Assemb	y Mark ASS_01			Component	PLI_01
+ 🏭 -	- Component		5	Ə 🤞 🛊 🗆 🕻	ase sensitive 🚺 🔹	Alphanumeric											
		Component 🔍		Quantity	Profile	Length	Material Grade	Group	Weight	Surface	Driling	Marking	△ Cutting	Scribings	Bendings	Coping	Chamfers
	8	PERC_01	1	15	IPE300	500.00	S235JR	IPE 301-600 <	21.25 Kg	0.58 m ²	1	1	1	5	0	6	0
<b>F</b>		PLI_01	i 🍻 🛷	10	PLAT300*10	100.00	S235JR	V - PLATS <	2.37 Kg	0.07 m ²	1	1	1	5	1	1	0

These information are computed for each tab : Contract, Project, Drawing, Assembly and Component

### Search



When the user click on this menu, the "Search" screen is displayed.

3 tabs are available : General, Macro and Profile

The user can perform his research by the name of :

- Assembly
- Component
- Macro
- Profile

Assembly	Mark PL1			Or	Component			
- ==		🔎 🦊 🛊 🗆 a	ase sensitive 🛛 🖌 Alph	anumeric				(
Contract	Project	Drawing	Assembly Mark	Phase	Job			
14033	14033PL	1000	PL1					
14041	14041PL	1000	PL1					
14257	14257PL	1000	PL1					
15090	15090PL	1000	PL1					
15115	15115PL	1000	PL1					
15119	15119D	29	PL1					
15119	15119D	29	PL10					
15119	15119PL	1000	PL1					
15128	15128AA	175	PI 12					
							- C	Clo

Gener	ral Macro Profile							
	Assembly Ma	ırk			Or	Component K1		
+	—	\$	🔾 🤞 👔 🗌 Case s	sensitive 🔽 Alpha	anumeric			ථ
	Contract	Project	Drawing	Assembly Mark	Component	Phase	Job	<b>A</b>
•	15128	15128	13	K13	K13			
	15128	15128Y	10	K16	K16			
	15128	15128Y	10	K17	K17			
	15128	15128Y	10	K19	K19			
	15135	15135	11	K1	K1			
	15185	15185C	3	K1	K1			
	15185	15185C	3	K18	K18			
	15185	15185C	3	К19	K19			
	15185	15185J	24	K14	К14			<b>•</b>
								() Close

s s	earch							_		×
Gener	ral Macro Prof	file								
	F	Profile IPE300								
+	-		🔎 🤞 🛊 🗆 Ca	ase sensitive 🛛 🖌 Alpł	nanumeric					Ċ
	Contract	Project	Drawing	Assembly Mark	Component	Profile	Phase	Job		<b></b>
•	15119	15119	31	B5000	B5000	IPE300				
	15119	15119	31	B5001	B5001	IPE300				
	15119	15119	31	P5000	P5000	IPE300				
	15119	15119	31	P5001	P5001	IPE300				
	15119	15119	31	P5002	P5002	IPE300				
	15135	15135A	10	P1	P1	IPE300				
	15135	15135A	10	P2	P2	IPE300				
	15135	15135A	10	P28	P28	IPE300				
	15135	15135A	10	T1	T1	IPE300				-
									C	Close

#### **Status Filter**



A filter menu is available only in the project tab.

The user can select only one status in the filter. The data grid displays only the project having its status.

He can select the following status :

- Not any
- Creation
- Evaluation
- Purchase
- To produce
- Production
- Finished
- Aborted



## **Fabrication Job Builder**



This menu allows the user to configure the weight of a "Fabrication Job".

The user can enter the "Fabrication Job name" in the expected field then click on the button Ok to select the expected "Fabrication Job".

Steel-Projects	Project	Data Pro	ject Manager data	Nesting data	Fabrication Job data	Feedback data	Shipping data	Scheduling data	Configuration	Utilities	Production manager	Fabrication Job Builder
Project Drawing	All		<ul> <li>✓ Profile</li> <li>✓ Material G</li> </ul>	All irade All		<ul> <li>Project</li> <li>Drawing</li> </ul>	Assembly Part	Mark Name			Ok C 🛅	
					L						Refresh Auto weight	
New 0	Save	Abort	Delete	Print	Next Input	F	iltres			1	Fabrication Job name	
Project	Q	Quantity	Weight	Priority	Fabrication Job	Description	Final Date of	the Project				
▶ 15260A		11	7112.50	99								

## Auto Weight



In the data grid, the user can select a Fabrication Job then click on the button Auto Weight

This function allows to create Fabrication Jobs by weight criteria. The weight is the maximum value allowed.

📓 Auto weight			$\times$
	Prefix		Start increment
Name	SELECT		1 💂
Weight	1000.00	Kg	
			]
			]
			🗸 Ok 🗡 Abort

In the "Auto Weight" pop-up, enter the expected value then click on the button "Ok" to update the Fabrication Job.

## Synchronize



This functionality allows to synchronize geometric data in a project from a template project or not.

In the "Synchronize" screen, select the expected project. Then, select the source project.

The grid displays all the components of the project.

When a component equals to a source component (same name, profile, material grade, length and width), it is automatically detected and updated.

If the name is different, the user can select the target name.

🐁 Synchroniser							_		×
Project						Source project			
16025		Q			<b>\$</b>	16025BIS			Q
		Compone	ent						
Project	Name	Profile	Material Grade	Length	Width		Node		
16025	67	TOLE10	S235JR	246.60	64.20	16025BIS / 67			
16025	18	TOLE8	S235JR	150.00	69.00	16025BIS / 18		6	)
16025	P1	IPE270	S275JR	4891.96	0.00			- 0	)
16025	AILET1	TOLE10	S275JR	5697.41	140.00	Project	Component		)
16025	AILET2	TOLE10	S275JR	5697.41	140.00				)
16025	41	TOLE12	S235JR	401.62	140.00	16025BIS	P2		)
16025	42	TOLE12	S235JR	431.62	140.00	16025BIS	PQ21		)
16025	60	TOLE6	S235JR	70.00	70.00	×			-
							<u> </u>		Abort

# Analysis



## The main module to analyze the production feedback and the machine status



# **Projects**



# Feedback data are displayed by Contract or Project

3  #	<b>i</b> . =									Ste	eel Proj	ects PLM	- Proj	ects							-	□ ×
Steel-Pr	ojects	Project	Data	Projec	t Mana	iger da	Nesti	ng dat	Fabri	ication	Job dat	Feedba	ack dat	Shipp	ing dat	Sch	eduling da	Con	figuratio	Utilities	Analysis	Projects
F	ilter					Fil	ter					Pendin	ng Not	t exporte	Refree	sh						
	New	Sav	e 🔪	Abor	t	De	lete	P	int		Next Inp	out 😃	Quit									8
	ontract	00										🎆Info	ormati	on								4 Þ
+ =	— 0	Contract					ρ 🌡	1	Cas	e sensi	itive	AZ ZA -	🗸 Alpł	hanumer	ic							Ċ
•	Contrac 00 00 TES	ct 🔍 T	)																			
	007																					
	14033																					
	14041																					
	14257																					
	15001																					
	15090																					
	15115																					
	15119																					
	15128																					
	15129																					
	15135																					
	15141																					
	15166																					
	15185																					
	15186																					
	15196																					
	15209																					
	15215																					•

#### Steel Projects PLM 1.19.x

When the feedback data is displaying by project, the project status filter is activated.

1	. <del>.</del>								Steel Proje	ects PLM -	Projects	;					-	<b>—</b> ×
Steel-Pro	ojects Pro		Data Pi	roject Mana	ager da	Nesting	g dat	Fabricati	on Job dat	Feedbac	k dat S	Shipping dat	Schedul	ling dat	Configuratio	Utilities	Analysis	Projects
Fi	lter				Fil	ter	¢,			Pending	Not exp	ported Refre	sh					
	lew 🗸	Save	X	Abort	De	lete	, Pri	int 🔶	Next Inp	out Ů	Quit							2
Pro	oject 0									infor	mation							4 Þ
	Project 0	9	Product	tion														<b>A</b>
	00				3													
	00 TEST																	
	00-16125																	
	007																	
	00A																	
	00B																	
	00C				3													
	00D																	
	00TG																	
	00TL																	
	00TPS				-													
	01																	
	1203DD																	
	14033PL																	
	14033TPS				-													
	14041PL																	
	14257																	
	14257PL																	
	14257TPS				7													
	15001				]													-

As in the production manager module, you can see two progress bars for each project : the top one represents the quantity and the bottom one, the weight.

Once a contract / project is selected, one can click on the second tab, Information, do display more detailed information :

## **Nestings Detailed Feedback Information**

Filter		Filter			Pending Not exported	C Refresh					
New Sav	re X A	Abort Delete	Print	Next Inpu	t 😃 Quit						
Project 007						Information					
Sesting List		Fabrication Job		Cutting She	et Bar N°	Production	Workstation	Profile	Length	Width	Quantity
8 Parts	۱ 🔒	and the second s	8 8	571	1		K126L	IPE220	15100.00		1
X Operations	<u>_</u>	1000 01 00000 - 41 1	1 1 2	3 580	1		TIPOB254	TOLE6	3000.00	1500.00	1
MAR 14/	<u>_</u>		1 🔛 🖌	\$ 580	2		TIPOB254	TOLE6	1380.00	898.00	1
Workstations			1 2	3 580	3		TIPOB254	TOLE20	3000.00	1500.00	1
	<u>_</u>		1 2	\$ 580	4		TIPOB254	TOLE20	1966.00	1500.00	1
	<u>_</u>		1	3 580	5		TIPOB254	TOLE10	3000.00	1500.00	1
	6		1 5	3 580	6		TIPOB254	TOLE10	1500.00	680.00	1
	<u>_</u>		1 🔛 😂	\$ 580	7		TIPOB254	TOLE10	1340.00	820.00	1
	6		1 1 2	3 580	8		TIPOB254	TOLE10	1500.00	1268.00	1

## **Workstations Detailed Feedback Information**

Parts sent to the machines but not fabricated yet:

Filter	Filter		Pending N	lot exported Refresh
Filter	ing Not exported Refresh			
New Sav	ve Abort Delete Print He Nex	t Input 😃 Quit		
Nesting List	Workstation	Quantity	Weight	Time
	- 🗗 🏠 STEEL			
V Operations	<u>)</u> saw	15 (71.43 %)	1398.00 Kg (38.60 %)	01:03 (90.00 %)
W Workstations		2 (9.52 %)	76.00 Kg (2.10 %)	00:02 (3.96 %)
	🚺 GEMINI	1 (4.76 %)	79.00 Kg (2.18 %)	00:01 (1.47 %)
	SHOTBLASTING	2 (9.52 %)	2040.00 Kg (56.32 %)	00:02 (3.13 %)
	ASSEMBLY	1 (4.76 %)	29.00 Kg (0.80 %)	00:01 (1.44 %)

Parts assigned to a machine but not exported yet:

Filter	Pending Not exported Refresh	t Input Quit		
Project AFF_STEE	L_001			
Sesting List	Workstation	Quantity	Weight	Time
Parts		24 (48.98 %)	867.18 Kg (50.14 %)	01:15 (69.72 %)
W Workstations	ROBOT	0 (0.00 %)	0.00 Kg (0.00 %)	< 1mn (0.00 %)
	GEMINI	1 (2.04 %)	50.56 Kg (2.92 %)	00:08 (7.45 %)
		23 (46.94 %)	782.17 Kg (45.22 %)	00:23 (21.88 %)
	ASSEMBLY	1 (2.04 %)	29.76 Kg (1.72 %)	00:01 (0.95 %)

#### Combination of both above-mentioned information :

Filter		Filter	Pendir	ng Not exported Refresh
New Sav	e Abort Delete Print	Next Input	Weight	Time
Vesting List Parts Operations	SAW			
W Workstations	GEMINI			
	ASSEMBLY			

#### **Alarms & Messages**



## Information

Displays the list of the alarms and messages gathered from the FICEP machines.

Alarm	Messages Gra	aphics Ref	fresh					
	New Save		bort Dele		Print Ne	ext Inp	ut 😃 Quit	
	Starting Date 2	0/01/2015	14:52:55	-	Final D	ate	20/12/2015 14:52	:55 🔹
W	Vorkstation TIPOI	8254						🏹 Alarms and messages
	Workstation 🔍	Distribution	n Descrip	tion	Site	D	epartment	
•	TIPOB254							
	K126L		Scie Fic	ер				
	1203DD		Endeav	our				
	MAP		Manad			7		
	SNG		1203DD	Alarms	Messages			
	CONTRÔLE DÉ		Quantitu (19)	91 11 %	5.56.%			
	CONTRÔLE SO		quantity (10)	34.44 %	3.30 %			

Alarms are shown in red, warnings in yellow.

When a machine is selected, the detail of each message is displayed in the second tab :

New V Save X Abort Delete Print Vext Input U Quit										
	Star	ting Date	20/01/	/2015 14:52:55	•	Final Date	20/12/2015 14:52:55	•		
W	/orkst	ation 12	03DD					🍳 Alarms and messa		
+ 8	-	Туре			🔎 🧍 👔 🗌 Case	sensitive 🛛 💇	🝷 🚺 🝷 🖉 Alphanun	neric		
		Туре	0	Number	Description	Operator	Starting Date	Final Date		
•	i	1		0	Machine START		10/12/2015 10:16:36	10/12/2015 10:16:36		
	0	2		0	Machine STOP		10/12/2015 10:26:40	10/12/2015 10:26:40		
	0	1		0	Machine START		10/12/2015 11:06:53	10/12/2015 11:06:53		
	8	77		7	PLC SIGNALDes		10/12/2015 11:08:51	10/12/2015 11:08:51		
	0	4		0	CANBUS LINE R		10/12/2015 11:10:37	10/12/2015 11:10:37		
	0	2		0	Machine STOP		10/12/2015 12:05:50	10/12/2015 12:05:50		
	0	1		0	Machine START		10/12/2015 12:05:55	10/12/2015 12:05:55		
	0	1		0	Machine START		10/12/2015 13:12:51	10/12/2015 13:12:51		
	Ø	77		7	PLC SIGNALDes		10/12/2015 13:15:13	10/12/2015 13:15:13		

## Double clicking on a message will open a window with the full details

ጳ Alarm		×
New	Delete Previous Next 🔱 Close	
General		
Туре		
Number	7 Operator	•
Starting Date	10/12/2015 11:08:51 Final Date 10/12/2015 11:08:51	
Description	PLC SIGNAL Description: Mushroom of emergency pressed. Cause: NO CNC FAULT. Suggestion: Reset mushroom and reset machine, switch on auxiliaries.	< >

The message displayed is exactly the same as the one appearing on the machine.

## Graphics

When the graphics button is activated, you can choose between three graphical view of the data :

## Alarms or messages, sorted by machine





## Total of alarms and messages per day, by machine



#### Number of occurrences of each message and alarm, by machine



Sraphic 🔟 Bar chart 🔟 Bar chart

## Workload



The goal of this screen is to display the workload in progress and not exported of each workstation.

To display the workload in progress, select the Pending filter.

	Charts	Pending Not exported	C Refresh	
New	Save Abort Delete	Print Next Inpu	ıt 😃 Quit	
Workstation		Quantity	Weight	Time
🖻 🕂 🏠 📃				
	TIPOB254	569 (0.02 %)	6149.00 Kg (0.25 %)	43:46 (0.10 %)
10	K126L	1212 (0.05 %)	42730.00 Kg (1.75 %)	30:35 (0.07 %)
- 1	1203DD	578 (0.02 %)	110757.00 Kg (4.53 %)	93:22 (0.22 %)
	МАР	186 (0.01 %)	15745.00 Kg (0.64 %)	31:20 (0.07 %)
	SNG	320 (0.01 %)	13461.00 Kg (0.55 %)	05:46 (0.01 %)
	CONTRÔLE DÉBIT			
	CONTRÔLE SOUD			
	SOUDURE	2126 (0.09 %)	117488.00 Kg (4.81 %)	39:25 (0.09 %)
	ASSEMBLAGE	7841 (0.33 %)	225923.00 Kg (9.25 %)	137:26 (0.32 %)
	GRENAILLEUSE	0 (0.00 %)	0.00 Kg (0.00 %)	< 1mn (0.00 %)
	PEINTURE	85 (0.00 %)	14693.00 Kg (0.60 %)	01:44 (0.00 %)
10	FMB	8 (0.00 %)	240.00 Kg (0.01 %)	00:28 (0.00 %)
- 10	MONGIN	14 (0.00 %)	530.00 Kg (0.02 %)	01:03 (0.00 %)
-	GUILLOTINE	48 (0.00 %)	234.00 Kg (0.01 %)	02:10 (0.01 %)

To display the workload not exported, select the Not exported filter.



New Save Abort Delete	Print Vext Inpu	ut 😃 Quit	
Workstation	Quantity	Weight	Time
🖃 🏡			
<b>TIPOB25</b> 4			
🎦 K126L			
1203DD			
MAP			
🎦 SNG			
CONTRÔLE DÉBIT			
CONTRÔLE SOUD			
to SOUDURE			
ASSEMBLAGE			
GRENAILLEUSE			
PEINTURE			
🍋 ғмв			
MONGIN			

The user can select the Charts button to check the workload distribution by the criteria Quantity, Weight or Time.





TIPOB254					
🖃 🏄 Optimize Cutting	9				
Job Number	Number	Cutting Sheet	Profile	Mate	rial Grade
	1	1363	TOLE6	S235	JR
	8	13/0	TOLE15	5355	JR
	9	13/0	TOLE20	5300	UR III
	2	1400	TOLEIZ	5230	
	2	1400	TOLES	5230	
	3	1400	TOLE15	5255	
	1	1401	TOLEG	S235	UR
	2	1401	TOLE8	S235	UR
	1	1403	TOLE6	S235	JR
	10	1409	TOLE10	S355	JR
	12	1409	TOLE12	S235	JR
	1	1428	TOLE6	S235	JR
	4	1428	TOLE8	S235	JR
	13	1428	TOLE6	S235	JR
🖃 泼 Component					
Job Number	Project	Component	Drawing	Assembly	M Profile
	17071	216	4	R1	TOLE6
	17071	A4	4	A4	TOLE6
	17071	246	4	L2	TOLE6
	17071	A14	4	A14	TOLE6
	17071	A11	4	A11	TOLE6
	17071	A8	4	A8	TOLE6
	17071	236	4	Q1	TOLE8
	17071	238	4	E6	TOLE8
	1/0/1	3/9	4	L12	TOLE6
	17071	215	4	KI 412	TOLES
	17071	217	4	A12 06	TOLES
	17071	230	4	40 A20	TOLES
	17071	216	4	A20 P2	TOLES
	17071	210	4	Δ13	TOLES
	17071	Δ5	4	45	TOLEG
	17071	A9	4	A9	TOLE6
	17071	215	4	R2	TOLEG
	17071	379	4	L8	TOLE6
	17071	229	4	Q10	TOLE6
	17071	254	4	Q7	TOLE6
	17071	155	5	M2	TOLE6
	17071	A15	4	A15	TOLE6
	17071	208	4	Q7	TOLE6
	17071	214	4	R5	TOLE6
	17071	A3	4	A3	TOLE6
	17071	215	4	R5	TOLE6
	17071	237	4	Q1	TOLE8
	17071	E6	4	E6	TOLE6
	17071	210	4	L4	TOLE6

#### Workstations



The goal of this screen is to display the information of each workstation. It is composed of 5 tabs : Workstation, Information, Bars, Parts and Operations

By default, the list of workstations is displayed.

	Starting Date 2	0/03/2019 0	0:00:00	-	Final Dat	e	e 20/03/2019 15:10:17	e 20/03/2019 15:10:17 •	e 20/03/2019 15:10:17    Search
W	Workstation <b>TIPOI</b>	B254	OInformation	I	Bars			(DParts	<b>D</b> Parts
	Workstation 🔍	Description	Site		Department				
•	TIPOB254								
	K126L	Scie Ficep							
	1203DD	Endeavour							
	MAP	Vernet							
	SNG	Galva							
	CONTRÔLE DÉ	Contrôle dél	bit						
	CONTRÔLE SO	Contrôle sou	udure						
	SOUDURE	Soudure							
	ASSEMBLAGE	Pointage							
	GRENAILLEUSE	GIETART							
	PEINTURE	Peinture							

At first, the user should define a Starting Date and a Final Date. Then, click on the button Search.

Starting Date 20/03/2019 00:00:00    Final Date 20/03/2019 15:10:17   Searce	Starting Date	20/03/2019 00:00:00	-	Final Date	20/03/2019 15:10:17	-	🔎 <u>Search</u>
------------------------------------------------------------------------------	---------------	---------------------	---	------------	---------------------	---	-----------------

For each workstation, the Bars and Parts nesting details are displayed in the tabs Bars and Parts.

Work	station TIPOB254	OInforma	tion	Bars MT	DEF0001	Parts		XOperations	
	Optimize Cutting	Description	Profile	Material Grade	Length	Width	Remnant (mm)	Tracking ID	Supplier
•	MTDEF0001		plate15	STEEL	2000.00	1500.00			
	MTDEF0001		plate15	STEEL	2000.00	1500.00			
	MTDEF0001		plate15	STEEL	2000.00	1500.00			
	MTDEF0001		plate15	STEEL	2000.00	1500.00			
	MTDEF0001		plate 15	STEEL	2000.00	1500.00			
	MTDEF0001		plate 15	STEEL	2000.00	1500.00			
	MTDEF0001		plate15	STEEL	2000.00	1500.00			
	MTDEF0001		plate15	STEEL	2000.00	1500.00			
	MTDEF0001		plate15	STEEL	2000.00	1500.00			

Workstation TIPOB254 Onformation			tion	Bars MT	DEF0001	DParts 160	28/1/PR5/	XOperations		
+ 🖩 — Component			🔎 🤞 🕯 [	Case sensitive	🚰 - 🔀 - 🗸	Alphanumeric				
		Optimize Cutting	Project	Drawing	Assembly Mark	Component 🔍	Profile	Material Grade	Length	Width
•	Û	29_2_1	16028	1	PR5	PR5	TOLE8	S235JR	190.00	270.00
	$\mathfrak{E}$	29_2_1	16028	1	PR5	PR5	TOLE8	S235JR	190.00	270.00
	$\mathfrak{E}$	29_2_1	16028	1	PR5	PR5	TOLE8	S235JR	190.00	270.00
	$\boldsymbol{\mathfrak{U}}$	29_2_1	16028	1	PR5	PR5	TOLE8	S235JR	190.00	270.00

If operations are linked to the workstation, they would display in the tab Operations.

The button Waiting time is available only on the tabs Bars and Parts.

It is used to display or not waiting times for bars and / or parts.



The button Graphics is used to show or hide the graphs for each workstation.



The graph is displayed by Weight, Total duration, Durations and Production.
# Weight(TIPOB254)



# Total duration (TIPOB254)



#### Durations (TIPOB254)



#### Production (TIPOB254)



This button is used to display the comparison of planned and actual times per week, for the machine selected in the tab Workstation.







24/07/2019 - TIPOB254

#### **Gantt for Workstations**



In the tool bar, the user can select the display period by day, week, month or year.



The user can configure the expected starting date.

Date	01/03/2017	-	4 🔶	Period	10 🚔 🗌 All Visible
------	------------	---	-----	--------	--------------------

Then, the user can select the number of periods to display in the calendar.

Date	01/03/2017 🔹			-	• •	Period			10 🌩	All V	isible		
			04:00	08:00	12:00	16:00	20:00		04:00	08:00	12:00	16:00	
				17025TPS	TEMPS					17025TPS	STEMPS		
												17002TPS	БТЕМІ
												17002TP	БТЕМ
				15185TPS T	EMPS					15185TPS T	EMPS		
				151851P51	EMPS					1518511511	EMPS		
				17000700	TEMPE					17000TDC T	CMDC		
				17008TPS	TEMPS					17008TPS T	EMPS		
				17008TPS 1	TEMPS					17008TPS T	EMPS		
				17008TPS1	remps					17008TPS T	EMPS		

The filter is used to display or not the Waiting times on the planning.



The filter is used to display or not the Operations in the workstation.



	04:00						04:00		12:00		
		17025TPS	TEMPS					17025TPS	STEMPS		
		17025TPS	TEMPS					17025TP	STEMPS		
 _											
										17002TP	STEMI
										17002TP	STEM
		15185TPS T	EMPS					15185TPS T	emps		
		15185TPS T	EMPS					15185TPS T	emps		
 _											
 _		17008TPS	TEMPS					17008TPS T	EMPS		
		17008TPS	TEMPS					17008TPS T	EMPS		
 		17008TPS T	EMPS					17008TPS T	EMPS		
		17008TPS T	EMPS					17008TPS T	EMPS		
		17008TPS T	EMPS					17008TPS T	EMPS		

This button is used to refresh the data in the current tab.



## Stock Traceability



When pushed down, the component displays all the Tracking ID.

	New Save	Abort	Delete	Print	Next Inp	it 😃 Quit	
<b>A</b> T	racking ID 1						Composit
	Tracking ID 🔍	Supplier					
•	1						
	11051						
	AA						
	К						
	КК						
	ККК						

The list can be filtered by No filter, by project or by contract. The user can refresh the data by using the button [Refresh].



If the user selects the filter "Project", the project status filter will be activated. The data grid displays the project according to its status.

Filter		Filter
New Save	Abort Abort	Delete Print Print Next Input U Quit
Project 0		Katha and the second se
Project		🔎 🕹 👕 🗋 Case sensitive 🛛 🛐 🔻 🗹 Alphanumeric
🖌 Project 🔍	Count	
• 0	0	
00	0	
00 TEST	0	
00-16125	0	
007	0	
00A	0	
00B	0	
00C	0	
00D	0	

The detail of the composition of each Tracking ID is available in the composition tab.

Rew V Save X Abort Delete Print Wext Input								
Tracking ID (Unspecified)				Compositio	n 16025 OLVAC	01/00009_012_0	1/9	
+ 🗐 — Optimize Cutting	P 🖡 1	Case sensitive	🗄 Expand   🗄	Collapse 🛃 🗸	Alphanumeric			
Optimize Cutting 🔍	Fabrication Job	Cutting Sheet	Workstation	Profile	Length	Width	Count	
🥪 📮 00009_001_01	16025 OLVAC 01	9	K126L	IPE270	15121.34			
··· 16025 / 2 / P3 / P3							1	
··· 16025 / 2 / P5 / P5							1	
16025 / 2 / P6 / P6							1	
🥪 📮 00009_001_01	16025 OLVAC 01	9	K126L	IPE270	15121.63			
··· 16025 / 2 / P3 / P3							1	
··· 16025 / 2 / P5 / P5							1	
16025 / 2 / P6 / P6							1	
	16025 OLVAC 01	9	K126L	IPE270	15121.22			
···· 16025 / 2 / P1 / P1							1	
···· 16025 / 2 / P2 / P2							1	
16025 / 2 / P4 / P4							1	
🥪 😑 00009_010_01	16025 OLVAC 01	9	K126L	TC100*3	10018.06			
i 16025 / 2 / N4 / N4							1	

# **Stock Control**



This functionality is available only if a Stock Import is configured. This one should be configured in the menu "Nesting data".

#### **Bundle**



The menu is composed by a tool bar and 2 main tabs.

The tool bar has a filter on the tooling, not any, project and contract. Another filter on the status of the project and a button "Refresh" to update the information in the data grid.

<u>X</u> 🔴 🕋 🖿		C
Filter	Filter	Refresh

The bundle tab displays all the traceability number according to the filter.

The second tab displays the composition of the selected bundle.

# **Employees**



This menu is composed by 2 tabs : Employee and Calendar

The first one displays in the data grid the list of all the employees.

Ne Ne	ew 🗸	Save X A	bort	Delete	Print H	xt Input	U Quit
5 Emp	loyee Name			0	👕 🗌 Case sensitive	1	👬 🔻 🖌 Alphanum
		ID Number	Name	0	First Name		
۱.		02			1000		
		03	- Bernett				
		04					
		05			The second se		
		06					
		07			1000		

For each employee, the user can use the functionalities "Clock in" and "Clock out" to save the employees' presence.

	Rew Save X Abort Delete Print Wext Input U Quit									
8 En	nploy	ee								
-	—	Name			P 🖡	1	Case sensitiv	e 💇 🔹	ŽŽ -	Alphanum
			ID Number	Name	0	First	Name			
•			02				New	Ins		
			03				Edit Grid	Ctrl+Ins		
			04				Delete	Del		
			05				Toolbars	Ctrl+B		
			06			N.	Clock in			
			07				Clock out			

Clock in : enter the start date for the selected employee



Clock out : enter the end date for the selected employee

3	×
Please enter the end date of the employe William	ee's presence
20/03/2019 15:54:1	8 🔻
	🗸 Ok 🔀 Abort

The second one displays the calendar.

When this tab is selected, the Period filter is displayed : Day, Week, Month and Year



The user can select the period displaying in the calendar.



When the button ^{Operations} is selected, the calendar displays all the employees' operations in the calendar period.



When the user clicks on the button Refresh, the data on the Employee data grid and the calendar are reloaded and are refreshed.

## **Gantt for Employee**



In the tool bar, the user can select the display period by day, week, month or year.



The user can configure the expected starting date.

Date	01/03/2017	- 📅 (	+ +	Period	10 🌲 🗌 All Visible

Then, the user can select the number of periods to display in the calendar.

Date	01/03/2017	,	-	🔶 🔶 Period	I 10 🔹 🗌 All Visible
	00:00 04:00	27/02/2017 08:00 12:00 16:0 17025TPS TEMPS 17025TPS TEMPS		28022017 04:00 08:00 12:00 17025TPS TEMPS 17025TPS TEMPS	01032017 16:00 20:00 00:00 04:00 08:00 12:00 16:00 17000TFS TEMPS 17000TFS TEMPS
					1702TPS TEM 17025TPS TEMPS 17027PS TEMPS
		15185TPS TEMPS 15185TPS TEMPS		15185TPS TEMPS 15185TPS TEMPS	1002173 LEW 1002173 LEWS 15185175 TEMPS 15185175 TEMPS
		17008TPS TEMPS 17008TPS TEMPS 17008TPS TEMPS 17008TPS TEMPS 17008TPS TEMPS		17008TPS TEMPS 17008TPS TEMPS 17008TPS TEMPS 17008TPS TEMPS 17008TPS TEMPS	17000TPS TEMPS 17000TPS TEMPS 17000TPS TEMPS 17000TPS TEMPS 17000TPS TEMPS
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The filter is used to display or not the Operations in the workstation.



This button is used to refresh the data in the current tab.



# Shipping



This menu is composed by 2 tabs : Carriage and Shipment

#### Carriage

The first one displays all the carriages between 2 dates.



The user can select the 2 dates then click on the button Refresh.

The data grid is updated.

<b>Er</b> Carri	age Transp	ort-7							nt					
+ == -	Carriage	name		P 🖡 🕯 🗆	Case sensitive	🐓 • 👯 • 🗸 A	Iphanumeric							
	Carria	ge name	Description	Driver	Vehicle	Vehicle class	Maximum load	Truck N°	Forecast depart	Real departure	Real return date	Travelled distance	Net weight	Gross weight
۱.	🎯 Transp	port-7		JEAN	8341 XE 85	SEMI-REMORQUE	25000.00 Kg		01/06/2016 14:4	01/06/2016 14:4	01/06/2016 14:5	0.00 km	18.81 Kg	18.81 Kg

# Shipment

The second one displays all the shipments between 2 dates.



<b>S</b> rc	arriage <b>Tra</b>	ansport	-7					KShipm	ient 4	
	Shipping	0.	Project	Net weight	Gross weight	Drawing delivery date	Assembly delivery date	Comment 1	Comment 2	Comment 3
_	Shipping	- 0	Troject	Not Weight	Groad Weight	brawing derivery date	reaction of the second se	Comment 1	Commone 2	Comment o
•	4		16068A_EXPEDI	18.81 Kg	18.81 Kg					

#### Reports



This menu allows user to print a selection of reports.

The list of report is displayed in the "Edition" part.

When the user select a report, this one displays in the preview screen.

ion		× Remontée d'Info	mations									
′ 😕 🍳		👻 🛃 🚘	🛓 IA 🔺	1≑ ►	ы 😋							
ame	Language	Main Report										
nalyse												
Remontée d'Informations	English											
Alarmes	English			Inforn	nation Fe	ed E	Back					
roduction	5 . F. I			20/03	2010							1201FRC
Production semaine	English			20/00/	2013							
Suivi Mef Affaire	English	Dat	Time	Project	Part	Qt.	Profile	Duration	Drilling	Actual production	Ready to start	Stop for alarm
Suivi Mef Machine	English	19/03/	015 03:04:15	TEST	LAZER-MMHE	1	497.5X201	00:02:18		00:02:18		· · · · · ·
Suivi Affaires	English	19/03/	015 03:18:35	TEST	LAZER MMHE	1	497 5X201	00:02:21		00:02:21		
Productivite Operateur	English	19/03/	015 03:36:03	TEST	LAZER MMHE	1	497 58201	00-01-52		00:01:52		
Résumé Analyse Production Machin	ne English	10/02/	015 05-28-22	TECT	LAZER MACHE	1	407 58201	00.05.20		00.03.44	00.01.46	
Bilan Production Affaire	English	19/03/	013 05.28.33	TLOT	LAZER-MMHE		497.57.201	00.05.30		00.03.44	00.01.40	00.01.05
Analyse Production Machine	English	19/03/	015 05:35:29	TEST	LAZER-MMHE	1	497.5X201	00:06:49		00:04:05	00:01:40	00:01:06
Traçabilité du stock	English	19/03/	015 07:29:19	TEST	LAZER-MMHE	1	497.5X201	00:02:01		00:02:01		
Resume de la production stock	English	19/03/	015 07:36:37	TEST	LAZER-MMHE	1	497.5X201	00:07:07		00:03:59	00:00:19	00:02:42
r resume de la produción macrime	Englion	19/03/	015 08:15:00	TEST	LAZER-MMHE	1	497.5X201	00:12:23		00:10:09	00:02:11	00:00:03
TEMPS AFEAIRE	English	20/03/	015 04:06:35	TEST	mmhe	1	497.5X201	00:08:00		00:04:58	00:02:05	00:00:48
		20/03/	015 04:11:02	TEST	mmhe	1	497.5X201	00:04:24		00:02:58	00:01:22	00:00:04
		20/03/	015 09:31:28	TEST	LAZER-MMHE	1	497.5X201T	00:20:48		00:15:50	00:04:53	00:00:05
		25/03/	015 12:42:47	max	2	1	IP240	00:10:56		00:07:07	00:03:46	00:00:03
		25/03/	015 16:56:07	max	2	1	IP240	00:10:22		00:08:16	00:02:00	00:00:06
		02/04/	015 12:09:48	max	3	1	IPE330	00:03:28		00:02:18	00:01:10	
		03/04/	015 16:59:29	test1	azti	1	IPE330	00:03:21		00:02:15	00:01:06	
		03/04/	015 17:16:30	test1	ramzaln	1	TPE330	00:16:59		00:02:53	00:05:45	00:08:20
		04/04/	015 10:16:07	test1	ami	1	TRE220	00:10:02		00:07:24	00:02:27	00:00:01
		04/04/	10:16:07	test1	azn	1	II 2330	00.10.02		00.07:34	00.02.27	00.00:01

The user can export the report in many format : PDF, Excel, Word





He can print the report by clicking on the button Print

#### Filter



A filter option is available by clicking on the button

The filter screen is displayed.

The user can filter by many criteria.



Click on the button



to confirm the criteria selection.



In this case, the button "Filter" is displayed as "applied"

son	Language English English English English English English	♥     × Remontée       ♥     ♥       Main Report	e d'Information	ns  4   ◀	1 🔹 🕨	мС							
	Language English English English English English English	Main Report	🖴   🛅   I		1►	M C							
ane Inalyse Pernortike d'Informations Alarmes roduction Tronage quotidien par mois Productors semaine Savi: Mel Machine Savi: Affare Savi: Affare Productivis Opfrateur Savi: Affare machine Résumé Analyse Production Machine Tracabilité du stock Praduction Machine Tracabilité du stock	Language English English English English English English	Main Report	rt										
hallyse Ferronizide d'informations Alarmes roduction semaine Suivi Mel Affaire Suivi Mel Affaire Suivi Mel Affaire Suivi Affaires Suivi Affaires Productivio Opérateur Suivi Affaires Productivio Opérateur Suivi Affaire machine Productivio Opérateur Suivi Affaire machine Production Affaire Analyse Production Machine Traspabilité du suck Résund é la production suck Pésunde é la production suck	English English English English English English	- Main Report	nt										
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Alarmes roduction Tronage quobilien par mois Production Savix Mer Machine Savix Mer Machine Savix Affare machine Productivito Opérateur Savix Affare machine Résumé Analyse Production Machine Jinanghort Affare Analyse Production Machine Traspabilité du stock Résumé de la production stock Résumé de la production stock	English English English English English	-											
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Tomage quotidien par mois Production semaine Savin Mel Affaire Savin Affaires Productivil Opérateur Savin Affaires Productivils Opérateur Savin Affaire machine Trésund Analyse Production Machine Bilan Production Affaire Analyse Production Machine Trasbillité du stock Résund de la production stock Pésund de la production stock	English English English English							aon					1201FRC
Production semaine Savin Mel Affaire Savin Mel Machine Savin Affaires Productive Defrateur Savin Affaire machine Résumé Analyse Production Machine Billa Production Affaire Analyse Production Machine Trasplaitié du stock Résumé de la production machine	English English English				20/03/	2019							12011110
Sourin Mer Aualle Sourin Mar Machine Sourin Affaires Productivite Opérateur Sourin Affaire machine Résumé Analyse Production Machine Traqabilité du stock Résumé de la production stock Résumé de la production stock	English			<b>T</b> 1			0	D (1)					
Suivi Affaires Productivite Opérateur Suivi Affaire machine Résumé Analyse Production Machine Bilan Froduction Affaire Analyse Production Machine Traçabilité du stock Résumé de la production stock Résumé de la production machine			Date	Time	Project	Part	Qr.	Profile	Duration	Drilling	Actual production	Ready to start	Stop for alarm
Productivite Opérateur Suivi Affaire machine Résumé Analyse Production Machine Bilan Production Affaire Analyse Production Machine Trapabilité du stock Résumé de la production stock Résumé de la production machine	English	1	19/03/2015	03:04:15	TEST	LAZER-MMHE	1	497.5X201	00:02:18		00:02:18		
I Suivi Affaire machine I Résumé Analyse Production Machine Bilan Production Affaire Analyse Production Machine Traçabilité du stock I Résumé de la production stock Résumé de la production machine	English	1	19/03/2015	03:18:35	TEST	LAZER-MMHE	1	497.5X201	00:02:21		00:02:21		
Résumé Analyse Production Machine Bilan Production Affaire Analyse Production Machine Traçabilité du stock Résumé de la production stock Résumé de la production machine	English	1	19/03/2015	03:36:03	TEST	LAZER-MMHE	1	497.5X201	00:01:52		00:01:52		
Bilan Production Affaire Analyse Production Machine Traçabilité du stock Résumé de la production stock Résumé de la production machine	ne English	1	19/03/2015	05:28:33	TEST	LAZER-MMHE	1	497.5X201	00:05:30		00:03:44	00:01:46	
Analyse Production Machine Traçabilité du stock Résumé de la production stock Résumé de la production machine	English	1	19/03/2015	05:35:29	TEST	LAZER-MMHE	1	497.5X201	00:06:49		00:04:03	00:01:40	00:01:06
Résumé de la production stock Résumé de la production machine	English	1	19/03/2015	07:29:19	TEST	LAZER-MMHE	1	497.5X201	00:02:01		00:02:01		
Résumé de la production machine	English	1	19/03/2015	07:36:37	TEST	LAZER-MMHE	1	497 58 201	00:07:07		00:03:59	00:00:19	00-02-42
	English		19/03/2015	08:15:00	TEST	LAZER-MMHE	1	497.5X201	00:12:23		00:10:09	00:02:11	00:00:03
		-	19/03/2015	04-06-25	TEST	LAZER-WINTE	1	497.58201	00.02.00		00:04:58	00:02:05	00.00.48
TEMPS AFFAIRE	English	2	20/03/2015	04.00:33	TEST	manne	1	497.5X201	00.08:00		00.04:38	00.02.03	00.00:48
		2	20/03/2015	04:11:02	TEST	mmhe	1	497.5X201	00:04:24		00:02:58	00:01:22	00:00:04
		2	20/03/2015	09:31:28	TEST	LAZER-MMHE	1	497.5X201T	00:20:48		00:15:50	00:04:53	00:00:05
		2	25/03/2015	12:42:47	max	2	1	IP240	00:10:56		00:07:07	00:03:46	00:00:03
		2	25/03/2015	16:56:07	max	2	1	IP240	00:10:22		00:08:16	00:02:00	00:00:06
		0	02/04/2015	12:09:48	max	3	1	IPE330	00:03:28		00:02:18	00:01:10	
		0	03/04/2015	16:59:29	test1	azri	1	IPE330	00:03:21		00:02:15	00:01:06	
		0	03/04/2015	17:16:30	test1	ramzaln	1	IPE330	00:16:59		00:02:53	00:05:45	00:08:20
		0	04/04/2015	10:16:07	test1	azri	1	TPE330	00:10:02		00:07:34	00:02:27	00:00:01
			04/04/2015	10:28:28	test1	ramzaln	1	IPE330	00-12-21		00:08:09	00:04:12	
			01.01.2013	10.20.20	ceeci	Tunzami		12000	00.12.21		00.00.09	00.04.12	

#### Comments

When a user clicks on the button "Comments", a field displays below this one.

He can enter free comments.

This one is recorded in the document property.



### Refresh



Refreshes the displayed data.

 ${}^{\wedge}$  This action doesn't force a feedback data gathering

# Control



# Feedback gathering



Forces the feedback service to collect the data from the machines and to consolidate it, if possible.

#### Not consolidated



Displays the list of the not consolidated data.

When, in the main window of the software, the following message is displayed, you have to check the consolidation manually.



In the details of the message, the project name concerned by the consolidation failure is displayed.



In the Not Consolidated window,

# Connections



After a manual consolidation, the links between the feedback and the existing data are stored here.

New Save Abort	Delete Print Next Inpu	t 😃 Quit
Workstation Project Drawing Assembly Mar	k Component Profile Material Grade Trea	atment Employee Fabrication Job
Origin	Bound	Expiry

## Raw data



#### Here, you can find all the feedback data, in their original format.

	New	Save	Abort	Delete	Print 4	Next Inpu	Quit									
Not con	nsolidated	Consolidated	]													
	Cycle	GUID	FFR_DAT	FFR_TIM	FFR_TYP	FFR_CNC	FFR_COM	FFR_DWG	FFR_RP	FFR_RS	FFR_PRF	FFR_MAT	FFR_TRT	FFR_OPE	FFR_MEF	FFR_NE:
<u>۲</u>	NPc		20170426	104552	P	1203DD	17039A	3		H16	UPN180	S275JR				01416_08
	NPc		20170426	104629	N	1203DD					UPN180	S275JR				01416_08
	NPc		20170426	104850	Р	1203DD	17039A	3		A22	UPN140	S275JR				01416_08
	NPc		20170426	104923	Р	1203DD	17039A	3		1199	UPN140	S275JR				01416_08
	NPc		20170426	105022	Ρ	1203DD	17039A	3		PA35	UPN140	S275JR				01416_08
	NPc		20170426	105107	P	1203DD	17039A	3		PA36	UPN140	S275JR				01416_08
	NPc		20170426	105153	P	1203DD	17039A	3		PA34	UPN140	S275JR				01416_08
	NPc		20170426	105239	P	1203DD	17039A	3		PA33	UPN140	S275JR				01416_08
	NPc		20170426	105302	N	1203DD					UPN140	S275JR				01416_08
	NPc		20170426	104100	P	1203DD	17039A	3		H19	UPN180	S275JR				01416_08
	NPc		20170426	104242	P	1203DD	17039A	3		H18	UPN180	S275JR				01416_08
	NPc		20170426	92721	P	1203DD	17039A	3		SO32	UPN180	S275JR				01416_08
	NPc		20170426	92924	P	1203DD	17039A	3		H9	UPN180	S275JR				01416_08
	NPc		20170426	93030	P	1203DD	17039A	3		H3	UPN180	S275JR				01416_08
	NPc		20170426	93045	N	1203DD					UPN180	S275JR				01416_08
	NPc		20170426	91804	Р	1203DD	17039A	3		H1	UPN240	S275JR				01416_08
	NPc		20170426	91827	N	1203DD					UPN240	S275JR				01416_08
	NPc		20170426	225431	Р	K126L	17039A	3		LA2	TR80*140*3	S235JR				01415_05
	NPc		20170426	75548	P	1203DD	17039A	3		L38	TR80*140*3	S235JR				01415_06
	NPc		20170426	75607	N	1203DD					TR80*140*3	S235JR				01415_06
	NPc		20170426	75918	P	1203DD	17039A	3		L126	TR80*140*3	S235JR				01415_06
	NPc		20170426	75931	N	1203DD					TR80*140*3	\$235JR				01415_06
	NPc		20170426	80150	Р	1203DD	17039A	4		SX1	TC100*3	S235JR				01415_03
	NPc		20170426	80159	Р	1203DD	17039A	4		SX1	TC100*3	\$235JR				01415_03
	NPc		20170426	80213	Р	1203DD	17039A	4		SX1	TC100*3	S235JR				01415 03

# New Save Abort Delete Print Wext Input Out

4	FFC_DAT_DEB	FFC_DAT_FIN	FFC_DURATION	FFC_DAT	FFC_TIM	FFC_OPE	FFC_TYP	FFC_RMT1	FFC_RMT2	FFC_RMT3	FFC_RMT4	FFC_RMT5	FFC_
	26/04/2017 10:40:00	26/04/2017 10:46:30	390	20170426	104630		W	390	0	5	35	1	0
	26/04/2017 10:46:37	26/04/2017 10:47:42	66	20170426	104742		W	66	0	0	0	0	0
	26/04/2017 10:39:37	26/04/2017 10:39:56	20	20170426	103956		W	20	0	0	0	0	0
	26/04/2017 06:59:43	26/04/2017 09:59:43	10800	20170426	95943		P	10800					
	26/04/2017 07:11:06	26/04/2017 09:41:06	9000	20170426	94106		P	9000					
	26/04/2017 09:23:15	26/04/2017 09:30:46	451	20170426	93046		W	451	0	0	0	0	0
	26/04/2017 09:30:53	26/04/2017 09:31:41	49	20170426	93141		W	49	0	0	0	0	0
	26/04/2017 09:18:31	26/04/2017 09:21:41	191	20170426	92141		W	191	0	0	0	0	0
	26/04/2017 09:21:47	26/04/2017 09:23:12	86	20170426	92312		W	86	0	0	0	0	0
	26/04/2017 09:20:50	26/04/2017 09:21:50	60	20170426	92150		Ν	60					
	26/04/2017 09:20:50	26/04/2017 09:21:50	60	20170426	92150		N	60					
	26/04/2017 09:20:50	26/04/2017 09:21:50	60	20170426	92150		N	60					
	26/04/2017 09:20:50	26/04/2017 09:21:50	60	20170426	92150		N	60					
	26/04/2017 09:20:50	26/04/2017 09:21:50	60	20170426	92150		N	60					
	26/04/2017 09:20:50	26/04/2017 09:21:50	60	20170426	92150		P	60					
	26/04/2017 09:20:50	26/04/2017 09:21:50	60	20170426	92150		Ρ	60					
	26/04/2017 09:20:50	26/04/2017 09:21:50	60	20170426	92150		Ρ	60					
	26/04/2017 09:20:50	26/04/2017 09:21:50	60	20170426	92150		Ρ	60					
	26/04/2017 09:20:50	26/04/2017 09:21:50	60	20170426	92150		P	60					
	26/04/2017 08:04:27	26/04/2017 09:06:45	3737	20170426	90645		W	3737	0	0	0	0	0
	26/04/2017 09:06:52	26/04/2017 09:08:25	94	20170426	90825		W	94	0	1	0	2	14
	26/04/2017 07:07:33	26/04/2017 09:07:33	7200	20170426	90733		Р	7200					
	26/04/2017 07:06:23	26/04/2017 09:06:23	7200	20170426	90623		Р	7200					
	26/04/2017 05:35:23	26/04/2017 09:05:23	12600	20170426	90523		Р	12600					
	26/04/2017 08:04:23	26/04/2017 09:04:23	3600	20170426	90423		P	3600					

?



A button Employee is available. When a user clicks on this button, the Employee to consolidate screen is displayed. He can assign the employee feedback to a Plm.

💵 Er	mployee			?	х
	Feedback	Plm			
•	-				
					_
	Contract of Contra				•
			V Ok	×	Abort

To select the PIm to assign, double-click on the PIm. The employee ID screen is displayed.

0		-		×
ID				
ID 🔺	ID			
3	00002			
4	00003			
5	00004			
6	00005			
7	00006			
8	00007			
9	00008			
10	00009			
11	00010			
12	00011			
13	00012			
14	00013			
L15	00014			<b>T</b>
All Visible			0k 🔀	Abort

Select the expected ID then, click on the button "Ok".

<b>8</b> -	Employee		?	×	
	Feedback	Plm			<b>A</b>
•		00003			
	-				-
			🗸 🗸	)k 🔀	Abort

Click on the button "Ok" to validate the employee consolidation.

# **Fabrication manual input**



This screen is composed by 3 tabs : Parts, Nestings and Bundle The user can select the input type.

<b>3</b>   #	÷			Steel Project	ts PLM - Manual j	production feedba	ack			– 🗆 ×
Steel-Project	ts Project Data	Project Manager dat	Nesting data	Fabrication Job dat	Feedback data	Shipping data	Scheduling dat	Configuration	Utilities Control	Manual production feedbac
C Refresh										
New	Save	Abort Dele	ete Pr	int Next Inpu	it 😃 Quit					Filter
Parts Ne	sting List Bundle									
Machine			Job Numb	er		Reject			Q	*
	Workstation	Actual f Job Numbe	er Proje	ect Drawi	ing Ass	embly P.	art	Profile	Material Grad	
_	ASSEMBLAGE	15264 ABC	M 04 \rm 0 1526	4B 12	P9	46	50	TOLE15	S235JR	
	ASSEMBLAGE	15264 ABC	M 04 \rm 0 1526	4B 12	P10	45	57	TOLE10	S235JR	
	ASSEMBLAGE	15264 ABC	M 04 \rm 0 1526	4B 12	P10	P1	10	IPE200	S275JR	
	SOUDURE	15264 ABC	M 04 \rm 0 1526	4B 12	P10	P1	10	IPE200	S275JR	Data Grid
	ASSEMBLAGE	15264 ABC	M 04 \rm 0 1526	4B 12	P9	45	57	TOLE10	\$235JR	
	ASSEMBLAGE	15264 ABC	M 04 \rm 0 1526	4B 12	P11	46	51	TOLE15	\$235JR	
	ASSEMBLAGE	15264 ABC	M 04 \rm 0 1526	4B 12	P11	P1	11	IPE200	S275JR	
	ASSEMBLAGE	15264 ABC	M 04 \rm 0 1526	4B 12	P9	58	3	TOLE8	\$235JR	
۱.	ASSEMBLAGE	15264 ABC	M 04 🕕 1526	4B 12	P10	45	56	TOLE10	S235JR	
	ASSEMBLAGE	15264 ABC	M 04 \rm 0 1526	4B 12	P9	45	56	TOLE10	S235JR	
	ASSEMBLAGE	15264 ABC	M 04 \rm 0 1526	4B 12	P10	58	3	TOLE8	S235JR	
	ASSEMBLAGE	15264 ABC	M 04 \rm 0 1526	4B 12	P9	42	28	TOLE6	S235JR	
	ASSEMBLAGE	15264 ABC	M 04 🕕 1526	4B 12	P10	66	55	TOLE15	S235JR	
	ASSEMBLAGE	15264 ABC	M 04 \rm 0 1526	4B 12	P11	58	3	TOLE8	S235JR	
	SOUDURE	15264 ABC	M 04 🕕 1526	4B 12	P11	P1	11	IPE200	S275JR	
	DIVERS MANUEL	15264 ABC	M 04 \rm 0 1526	4B 12	P11	14	40	HEA100	S275JR	
	ASSEMBLAGE	15264 ABC	M 04 🕕 1526	4B 12	P11	14	40	HEA100	S275JR	
	ASSEMBLAGE	15264 ABC	M 04 \rm 0 1526	4B 12	P9	PS	9	IPE200	S275JR	
	SOUDURE	15264 ABC	M 04 🕕 1526	4B 12	P9	PS	9	IPE200	S275JR	
	ASSEMBLAGE	15264 ABC	M 04 \rm 0 1526	4B 12	P10	42	28	TOLE6	S235JR	
	PERÇAGE MAN	15226 SCI	GRA. 9 1522	6E 8	T44	AI	LET31	PLAT200*15	\$355JR	
	DIVERS MANUEL	15226 SCI	GRA. 9 1522	6E 8	T44	AI	LET31	PLAT200*15	S355JR	
	DIVERS MANUEL	15226 SCI	GRA. 0 1522	6E 8	T19	9 AI	LET148	PLAT300*30	\$355JR	
										Þ
Machine		9		Quantity						
Fabrication.	11 :	Ŧ	]	Duration :		M	lanual Inp	ut		
Employee		<u>_</u>	]		Dispatch	duration				

The Filter allows select the lines to display in data grid.

The data grid displays the list of the expected items according to the filter. The Manual Input zone allows the user to enter data in the selected line.

In the data grid, only white field can be edited.

# Attendance



The stopwatch option should be checked in the configuration screen.

	New Save Abort Delete	Print Vext Input 😃 Quit
Gen	eral	
Þ	Project manager	
- Þ	Fabrication Job	
Þ	Section Nesting	
Þ	General	
Þ	Plate Nesting	
4	Production Progress	
	Input individual production time	$\checkmark$
	Input tracking ID	Disabled 🔹
	Show next/previous workstation	
	Activate delay warning	V
	Stopwatch	
Þ	Shipping	
Þ	3D Geometry	
Þ	CAD Analysis	
Þ	Scheduling	

Attendance is a functionality for the user to fix clock error for a workstation or an employee (the process is the same).

<b>Vorkstations</b> Machi	Employees				
Mach					
	ine CONTROLE S	OUD	Q	Show 🖌	
+ 🖩 — 🗌		P 🖡 🕯	Case sensitive	💱 👻 🛃 👻 Alphanur	meric
Workst	ation	Clock in		Clock out	
CONTR	ÔLE SOUD	₽	<b>.</b>	25/03/2019 17:45:51	

# An error pictogram is displayed in the selection part.

		Selection	
Machine	CONTRÔLE SOUD	]	
Description	Contrôle soudure	]	
Clock in	//::-	]0	
Clock out	25/03/2019 17:45:51	]	
Attendance e	rror for this workstation: CONTRÔLE SOUD		
To fix this error <b>click</b> o	n the button on the right.		~

The user has to fill out the missing clock in or clock out.

	Selection	
Machine	CONTRÔLE SOUD	
Description	Contrôle soudure	
Clock in	22/03/2019 07:00:00	
Clock out	25/03/2019 17:45:51	
No attendance error fo	for this workstation: CONTRÔLE SOUD	

Click on the button to fix this error.

Click on the button "Save" to validate.

# Export



Exports the feedback data to a custom ERP software.

#### The exports are configured in the menu **Feedback data > Export**

New Vav	e 🗙 Abort 📃 Delete 📄 Print 🛁 Next Input 😃 Quit
Link CST	OCK
Name Type	CSTOCK FabSuite - Plugin - 4D (1.19.0.4677)
Directory	FABSUITE Feedback Export (1.19.0.4677) FABTROL Feedback Export (1.19.0.4677) PSR Feedback File (1.19.0.4677) Feedback Standard interface (1.19.0.4677) TEKLA 4D Feedback Export (1.19.0.4677) Interface Stock PLM (1.19.0.4677)

Many export types are available.

# Reports



Prints a selection of reports.

S 🗰 🔻													Тс	ools
Steel-Projects	Project	Data	Project I	Manager data	Nesting data	Fabrication J	ob data	Feedback data	Shipping data	Scheduling data	Configuration	Utilities	Control	Reports
PDF Exc Export Expo	Word Word Export	Print	Filter	Comments										
New	Save		Abort	Delete	Print	Next Input	U Quit	t						
Edition					<b>4</b>									
🗞 😣 🌾														
Name			Lan	guage										

# Refresh



Refreshes the displayed data.

# **Feedback Data**



The Feedback Data menu is an advanced configuration tab concerned with the Production Manager module.

PLM can be used as a Production monitoring tool with automatic time feedback from CNC machines, and semi automatic feedback from manual workstations.

Click on an item to display the related chapter.

#### Import



From here you can setup specific imports for production feedback data from none FICEP machines.

You do not need to set this up for FICEP machines, as they are set up a different way.

#### Export



From here you can set up interface specific exports to send the results of your feedback to third party software.

#### **Production Import**



There are no imports available for this menu yet

# Dashboard



You can create a dashboard layouts of custom graphics representing the information from your Production Feedback.

Before create dashboards, you need to have created some Widgets

To add a new Dashboard, type the name into the search box and then press NEW or Ctrl+N

#### General

Name the dashboard and give it a description

Dashboard TIME	E_CNC	<u>_</u>
General Widest		
Name	TIME_CNC	
Comment		

#### Widget

Specify the different Widgets you would like to show in this dashboard view.



You can add the same widget multiple times which is useful to show the same widget multiple times but with different filters settings

Dashboard TIME_CNC	0	
General Widget		
Widget		Current widget
LIL TIME		<b>Ш</b> ТІМЕ

In the menu "Analysis", the dashboard is updated.



#### Widgets



You can create custom views of your Production Feedback Data using Widgets. You create the different graphical types and filters here, and then use your <u>Dashboard</u> to view them

To add a new Widget, type the name into the search box and then press [NEW] or [Ctrl+N].

#### General

Give your Widget a name, and choose the type of graph that will be used to represent the information.

Widget TIME		<u>_</u>	
General Value Filter	s Grouping		
Name	TIME		
Туре	Bar chart	•	
Category			_

#### Value

Set what information will be shown in the graph.

General Value Filters Grouping

Select the required field in the list on the left, and press read to add it to the selected list on the right side.



Value	^	Current Value	
Actual production		Product weight	
Blade life			
Auxiliaries not connected			
Unloading Time			
Drilling time			
Scribing time			
Milling time			
Rmt 14			
Rmt 15			
Rmt 16			
Cutting time			
Waiting time			
Marking time			
Rmt 20			
Alarms and messages	_		
Alarms count			
Message count			
## **Filters**

_

Enable different filters to only show the information for particular machines, projects, types or date ranges.

General Value Filters Grouping		
Filter Starting Date Final Date Project Drawing	Current filt Machine Type Period	ter
Operator Profile Groups		

## Grouping

Set different groups of filters.

Widge	TIME	0	
General Valu	e Filters Grouping		
Grouping			Current grouping
Machine Drawing day Week Months Year			Project

#### Feedback Type



SP PLM uses different Feedback Types to represent different stages of the production process, from being sent to Production through to Shipping.

You will see these colors in the piece feedback status in the Production Management module and also Fabrication Job list.

You can assign different feedback types.

Each stage of production can be given a name and a color in order for you to customize it according to your process.

A default list is used with standard colors :



To change a type name - Click on the line and then modify the name above, and save

To Change a type color - Click on the line, and press the color drop down menu, select the desired color and save

New		Save Abort Delete	Print   Hext Input   U Quit	
	Name	EXPEDITION	Colour	+ - + +
Order		Name	Theme colour	Туре
1		ENVOYE		SEND
1000		DÉBIT		Tooling
	1001	PLIAGE	Standard Colour	
	1002	PERCAGE		
	1003	GRUGEAGE	Others colours	
2000		ASSEMBLAGE		Assembly
	2001	POINTAGE		
3000		SOUDURE		Welding
4000		TRAITEMENT		Treatment
	4001	GALVA		
	4002	PEINTURE		
5000		EXPEDITION		Shipping
	5001	TEMPS		

To add a sub level production type, type the name you want, choose a color from the drop down, and press

+

You can then use the arrow keys to move the new type to the correct level.

This adds an extra level in your production process if you require it. One reason would be to have multiple levels of fabrication, such as assembly and welding.

New	<b>V</b> 9	Save X Abort Delete	📑 Print 🖊 Mext Input 🖉 Qui	it
	Name		Colour	+ - + +
Order		Name		Туре
1		ENVOYE		SEND
1000		DÉBIT		Tooling
	1001	PLIAGE		
	1002	PERCAGE		
	1003	GRUGEAGE		
2000		ASSEMBLAGE		Assembly
	2001	POINTAGE		
3000		SOUDURE		Welding
4000		TRAITEMENT		Treatment
	4001	GALVA		
	4002	PEINTURE		
5000		EXPEDITION		Shipping
	5001	TEMPS		
	5002	WELDING		

## Operation



This functionality allows the users to create operation type which will be used in Workshop Assistant.

Operation MAIN1	
General	
Operation	MAINTENANCE
Description	
Duration	00:20:00
Enabled	I.

The box "Enabled" should be checked to be take in account in Workshop Assistant.

#### **Break**



This functionality allows the users to create break type which will be used in Workshop Assistant.



The box "Enabled" should be checked to be take in account in Workshop Assistant.

## Supervisor



In this menu, the workload is displayed by default.



For each workstation, the menu is :



Edit : The user can consult the workstation properties

Expand / Collapse the toolings list.

If the user selects the menu "Add", the workstation is added to a bookmark tab.

New Save X Abort Delete Print Wext Input						
			Bookmark			
	1203DD	1201FRC	COUPE-GOUSSET	TIPOB254	PERÇAGE MANUEL	
Status						
Alam						
Program						
Bar length						
Feedback						
Lock						
Checking production						
Employee						
ltem						
•	Delete	Delete	Delete	Delete	Delete	

To consult the data in real time of the workstation, it must be configured in the workstation properties screen. The machine must be a FICEP type.

The IP address must be filled out.



When these parameters are entered, click on the button Refresh to refresh the connection. When the connection displays OK, the communication is done.

General Tooling Para	meters Cut parameters Hole parameters Profile Alarms and messa	ges Unloading Zone	
Name	SAW	Connection	ОК
Description		Туре	ENDEAVOUR
Туре	Saw Sub-Contractor	Гіро	RIGHT
Machine	FICEP		
NC Type	(Unspecified)	C	
IP Address	192.168.2.251		
Shop Drawing			
Feedback type	USINAGE		
Export	CAM		
Output			

#### Steel Projects PLM 1.19.x

In the bookmark tab of the supervisor screen, data are displayed.

			Bookmark	
	SAW	ROBOT	GEMINI	SHOTBLASTING
▶ Status	<	✓	✓	
Alarm	09:020	09:020	09:020	
Program	PE100 510	PE100 510	PE100 510	
Bar length	2790 mm	2790 mm	2790 mm	
Feedback			15/05/2018 10:16:59	
Lock				
Checking production				
Employee			EMPL03	
Item			5-1	
	Delete	Delete	Delete	Delete

In the workload screen, data of the selected workstation are displayed.

General	
Workstation	GEMINI
Status	<ul> <li>✓</li> </ul>
Alarm	09:020
Program	
Capacity (%)	40%
Project	
Drawing	
Assembly	
Part	
Bundle	
Profile	PE100
Material Grade	510
Bar length	2790 mm
Feedback	15/05/2018 10:16:59
Lock	

## **Send To Production**



In the "Fabrication Job" screen, the user can send to production the selected "Fabrication Job".

In the "Send to Production" screen, the company layout is displayed.



Also, the fabrication job data part is composed by 3 tabs : Entity, Processing and Workstation

Bar Component								
Te Te								
Expand Collapse								
Number	Profile	Material Grade	Length	Width	Quantity	Pro	duced Quantity	
🖃 爹 Section Nesting								
🗄 😥 Cutting Sheet 39					To Produce			
🕀 🥪 Bar 1	L40*4	S235JR	12100.00		1	0		
🕀 🥪 Bar 2	L40*4	S235JR	12100.00		1	0		
🕀 🥪 Bar 3	IPE200	S275JR	15100.00		1	1		
🕀 🥪 Bar 4	IPE200	S275JR	15100.00		1	1		
🕀 🥪 Bar 5	IPE200	S275JR	15100.00		1	1		
🖻 🥪 Bar 6	HEA100	S275JR	12100.00		1	0		
Project		Component		Drawing			Assembly Mark	Quantity
· 15264B		140		12			P11	6
🖃 🔛 Plate Nesting								
🖻 👑 Cutting Sheet 40					To Produce			
🕀 🗽 Plate 2	TOLE8	S235JR	2501.00	1500.00	1	1		
🕀 🕕 🙀 Plate 3	TOLE10	S235JR	1626.00	1500.00	1	1		
🕂 航 Plate 4	TOLE15	S235JR	1655.00	1500.00	1	1		
🖻 航 Plate 5	TOLE6	S235JR	1640.00	1500.00	1	1		
Project		Component		Drawing			Assembly Mark	Quantity
···· 15264B		428		12			P10	1
15264B		428		12			P9	1
····· 15264B		G33		12			G33	1

Bar	3ar Component						
	1	Project	Drawing	Assembly Mark	Component 🔍	Profile	Phase
•		15264B	12	P11	461	TOLE15	
		15264B	12	P11	140	HEA100	
		15264B	12	P11	58	TOLE8	
		15264B	12	P11	P11	IPE200	
		15264B	12	P10	58	TOLE8	
		15264B	12	P10	665	TOLE15	
		15264B	12	P10	428	TOLE6	
		15264B	12	P10	456	TOLE10	
	<ul> <li>Image: A second s</li></ul>	15264B	12	P10	457	TOLE10	
		15264B	12	P10	P10	IPE200	
		15264B	12	P9	58	TOLE8	
		15264B	12	P9	428	TOLE6	
	<ul> <li>Image: A second s</li></ul>	15264B	12	P9	456	TOLE10	
		15264B	12	P9	457	TOLE10	
		15264B	12	P9	460	TOLE15	
		15264B	12	P9	P9	IPE200	
		15264B	12	G33	G33	TOLE6	
		15264B	12	S49	S49	L40*4	
		15264B	12	S48	S48	L40*4	
		15264B	12	S51	S51	L40*4	

Name	Quantity	Quantity	Weight	Time	Time	Shop Drawing
🗗 🌪						
···· 🍱 TIPOB254	25	59.52 %	835.24	00:28	15.83 %	
🔄 K126L	8	19.05 %	1012.91	00:19	11.00 %	
🔽 1203DD	8	19.05 %	1012.91	00:29	16.37 %	
🔄 MAP	3	7.14 %	58.56	00:06	3.46 %	
👌 SNG	12	28.57 %	892.12	00:13	7.75 %	
	0	0.00 %	0.00	< 1mn	0.00 %	
👌 CONTRÔLE SOUD	0	0.00 %	0.00	< 1mn	0.00 %	
💽 SOUDURE	8	19.05 %	854.31	00:09	5.22 %	
👌 ASSEMBLAGE	42	100.00 %	988.89	00:43	24.74 %	
···· 👌 GRENAILLEUSE	0	0.00 %	0.00	< 1mn	0.00 %	
···· 揯 PEINTURE	0	0.00 %	0.00	< 1mn	0.00 %	
🔄 FMB	6	14.29 %	201.71	00:06	3.63 %	
🔄 MONGIN	0	0.00 %	0.00	< 1mn	0.00 %	
틝 GUILLOTINE	0	0.00 %	0.00	< 1mn	0.00 %	
- 📐 EXPÉDITION	12	28.57 %	892.12	00:13	7.75 %	
👆 PLIAGE	0	0.00 %	0.00	< 1mn	0.00 %	1
🍱 1201FRC	0	0.00 %	0.00	< 1mn	0.00 %	
归 COUPE-GOUSSET	0	0.00 %	0.00	< 1mn	0.00 %	

#### The "Send to Production" menu :





Workload option which displays data the Fabrication Job and the company

Þ		SAW	<b>—</b>	
	То	SAW	Workload	
	CO PE	Fabrication Job	100.00 %	
	MA	Company	89.98 %	





Tools menu



Job

Fabrication Job menu



Simulation menu

Export

Launch an export by selecting the expected nesting and workstation



Launch the export with the nesting and the workstations

## Scheduling



This menu allows the user to manage the production scheduling.

Steel-Projects Project Dat	a Project Managerd Nes	ting dat Fabrication	Job d Feedback da	t Shipping dat	Scheduling da Configuratio	Utilities Fabrication Jo	Send to production [ 15264 ABC	Production scheduling [ 15264 AB	3C
		ف 🕹	🤹 🖱	1 and the second					
Period	Workload Planning	Check Analysis	Reports Calendar	Fabrication Job					
New Save	Abort Delete	Print (	Next Input	Quit				(?	
Project 15264 ABCM	04		Task			Gantt		4 0	Þ
+- + +									
A Name	Description	Type Al	owed resources	Effort	Predecesso	r	Early start	Late start	
Port									<u>н</u>
i eit									
Oh	\ /	Oh							
Start	/	End							
Un		Un							
Early start Duration Early	finish								
Late start Tolerance Late	finish								

#### Tools



This menu allows the user to see the list of workstations required for the Fabrication Job.



The user knows if the tools are available in each workstation.

## Simulation

A TTS simulation link should be configured : Dispatch to simulation

The Interface simulation TTS screen is displayed.

🗱 Interface s	imulation TTS						?	×
-								
Workstation	Simulation model							
Sir	mulation data export							
	Simulation							
_								
Simu	lation results import					 		]
				S	tart	Abort		
¥ Details								

Click on the button Start to launch the "Simulation data export".

## **Nesting - Modules**

## **Module - Section Nesting**



#### The main module to optimize your bar nesting

The section nesting module allows you to nest your components into linear bars for streamlined purchasing and production process

The module uses the parameters set in the <u>Nesting Data</u> options

To create a new section nesting you would not normally do it by first accessing this menu. New nests are normally created either in the <u>Project Manager</u>, by dragging the required parts into the <u>selection window</u> and activating the section nesting option and pressing action, or from the <u>Production Manager</u> in the <u>Send</u> <u>To Production</u> screen

Use can use this menu to view and modify existing section nests. To do this either type the nesting sheet number, or double click in the window and choose the nest from the window and press OK.

3  🗰 🛛	÷			_					_	_			_		_	_	_	_	Tools
Steel-Project	ts Project	Data	Project M	anager dat	a Ne	sting data	Fab	rication Job	data	Feedback	data S	hipping da	ata Sc	heduling	data C	Configur	ation	Utilities	Section Nesting
	W		<u>e</u>		Ð	$\overline{\mathbb{A}}$		E.	747		***		STR.	2					
Preview \	Workstations	Reports	Automatic	Import	Export	Production T Input	Time	Remaining Parts	Catalog part	Priorities edition	Configure Filter	Apply Filter	Edit	Bar's Order					
New	Save		Abort	Delete		Print	Nex	tt Input	Quit										
Section I	Nesting				0,														
					•	2									_		×		
					Ci	utting Sheet													
						ID		Cutting She	et			Creation	Date	Modific	cation Date				
					2	4		9				15/02/2	016 16:29	07/03/	2016 10:03	3			
					5	2		23				18/02/2	016 17:31	23/02/	2016 17:25	5			
					5	4		24				18/02/2	016 17:41	04/03/	2016 10:21				
					5	9		27				19/02/2	016 07:54	23/02/	2016 09:36	5			
					6	6		30				19/02/2	016 12:19	09/03/	2016 17:43	3			
					7	1		33				23/02/2	016 09:52	23/02/	2016 10:25	5			
					7.	3		34				23/02/2	016 14:10	26/02/	2016 07:52	2			
					7	8		36				23/02/2	016 15:43	07/03/	2016 16:10	)			
					8	1		38				23/02/2	016 17:53	26/02/	2016 07:54	1		-	
															<b>~</b>	Dk 🔰	Ab	ort	

This will open up the section nesting module. Alternatively, this module will open automatically if you process with the Project Manager or Send to Production screens

#### **Section Nesting Layout**

The module uses a similar multi window, tabbed format layout to the Projects Manager.



#### **Main Window**

Preview	Workstations	Reports Automa	atic Import Produc	tion Time Remain put Part	ing Catalog Prio	ities Configure Ap ion Filter Fi	ply Edit nesting Orde							
Nev	// 🗸 Sav	/e XAbort	Delete	Print 🖊 N	ext Input	Message 😃 Qui	it 2							9
Fabric	ation Job SEI	LECT8096												
8 Comp	onent 🕼 Sta	🖈 🛞 Optimize C	utting								4 ₽	Optimize Cutting		7
T= #												General		
+ 🏽 -	-		🔎 🤞 🛊 🗌 Case	e sensitive 🛛 🍵	💱 👻 🗸 Alph	anumeric					Ċ	Quantity	1 📥	
		Profile	Material Grade	Treatment	Project	Length	Quantity	Used quantity	Storage location	Warehouse	Tra	Comment		
		HEA180	S275JR			9000.00	10	0				Workstation	MAP	
	<u> </u>	L40*4	S275JR			9000.00	10	0				Ecrosottime		
	<u> </u>	HEA180	S275JR			9000.00	10	0				Torecastume		
		L80'60'7	5230JR			9000.00	10	0				Profile	UPF-150*70*5	
F .		UPF-150*70*5	S235JR			9000.00	10	1			_	Material Grade	\$235JB	
						3						Treatment		
												riedunent	0000.00	
												Length	5000.00 mm	
												Warehouse		
												Storage location		
												Tracking ID		
4											Þ			
Preview											4			
Menu V	/iewports Or	ptions Command	is Help											
3D previe	 													
loo biolio														
				G		$\downarrow \leftrightarrow $ $\bigcirc$ $[$	× 🔰 🖌							
										the soll				
						-						Composition		
										10 4 0	0	Nesting parameters		
												General		
у 👗	×											Tools		
	N												•	
												6	_ 7	
												General Optimize Cutting	Progress	

The main window consists of three tabs.

#### Component

This lists all of the components that have been included in the section nesting. You can see all the details brought from the Project Manager, including the project, workstation, and quantity details.

- 111 [		🔎 🦊 🛊 🛛	Case sensitive	🛐 👻 🖌 Alphanur	neric							
	Project	Component	Drawing	Assembly Mark	Phase	Workstation	Profile	Material Grade	Job	Treatment	Quantity	Length
	15260	799	2	R2		MAP	UPN160	S275JR		RAL 5015	1	12429.11
	15260	L15	2	L15		K126L	TC100*3	\$235JR		RAL 5015	1	7588.69
	15260	EX1	2	EX1		MONGIN	UPF-200*80*4	\$235JR		RAL 5015	4	301.21
	15260	L17	2	L17		K126L	TR150*100*3	\$235JR		RAL 5015	1	5070.00
	15260	LA37	2	LA37		K126L	TR100*150*3	\$235JR		RAL 5015	1	9977.00
	15260	798	2	R5		MONGIN	UPN160	S275JR		RAL 5015	1	182.99
	15260	L11	2	L11		K126L	TC100*3	\$235JR		RAL 5015	1	5070.00
	15260	L2	2	L2		K126L	TC100*3	\$235JR		RAL 5015	4	1125.00
	15260	L22	2	L22		K126L	TC100*3	\$235JR		RAL 5015	1	11349.64
	15260	L54	2	L54		K126L	TC100*3	\$235JR		RAL 5015	1	4715.00
	15260	LA39	2	LA39		K126L	TR100*150*3	\$235JR		RAL 5015	1	4820.00
	15260	17	2	R5		MONGIN	UPF-200*80*4	S235JR		RAL 5015	1	189.99
	15260	797	2	R5		K126L	UPN160	S275JR		RAL 5015	1	12497.65
	15260	R5	2	R5		K126L	UPF-200*80*4	\$235JR		RAL 5015	1	12504.65
	15260	L10	2	L10		K126L	TC100*3	\$235JR		RAL 5015	1	4941.50
	15260	L12	2	L12		K126L	TC100*3	S235JR		RAL 5015	2	4725.00
	15260	L13	2	L13		K126L	TC100*3	S235JR		RAL 5015	1	4988.00
	15260	L16	2	L16		K126L	TC100*3	\$235JR		RAL 5015	1	7588.69
	15260	L44	2	L44		K126L	TC100*3	\$235JR		RAL 5015	22	4774.99
	15260	L46	2	L46		K126L	TC100*3	S235JR		RAL 5015	1	4725.00

If you double click on one of the components it opens up the component options and you CANNOT make modifications here but having to go back to the Project Manager.

定 Component		_		×
New Sa	ve XAbort Delete Print +	Next Input 😃 Quit	8	
Project 15	260 🔍 C	iomponent L15		
Component Quantity	L15	Information Toolings Preview Sub assembly Profile Drilling Attached documents		
Profile Unit Length Width	TC100°3 Metric (mm) Imperial 7588.69 mm 0.00 mm			
Group Description Article Code	TUBES R/C	Created on         18/02/2016 16:31:42         By         DSTV           Modified on         04/08/2016 10:33:29         By         SP_ADMIN           Weight         67.4668         Kg         Surface         2.9573         m²		
Material Grade Treatment Painting	S235JR RAL 5015	Project Version Part		
Execution class	EXC2			

#### Stock

The stock list will be blank to start with. You can add your stock to the list to use this in the nesting, or if you leave this blank the nester will only use purchased lengths using the best possible <u>deliverable lengths</u>

🕃 Componer	nt 😂 Ste	🖈 🖇 Optimize Cu	tting						
۱									
$+ \blacksquare - [$			🔍 🤞 👔 🗌 Case s	sensitive 🔽 Alpha	anumeric				
		Profile	Material Grade	Treatment	Project	Length	Quantity	Used quantity	Warehouse
•	1	UPN160	S275JR			12100.00	1	0	
	6	TC100*3	S235JR			12000.00	2	2	
	1	TR100*150*3	S235JR			12000.00	5	3	
	1	UPN160	S275JR			13100.00	2	2	
	8	UPF-200*80*4	S235JR			15000.00	1	1	
	1	TC100*3	S235JR			10000.00	20	17	
	8	TR100*150*3	S235JR			6000.00	2	2	
	8	TR150*100*3	S235JR			6000.00	2	2	
	8	TR100*150*3	S235JR			10570.00	1	1	

#### Butt Welded Beams

# Pressing the build butt Welding option in the stock right click menu allows you to use the currently selected bar as bar of a larger butt welded bar.

🕄 Compo	nent 🕼 Sto	ck 够 Optim	ize Cutting								
۵											
+ 🏼 —			🔎 🤞 👔 🗌 Case	sensitive 🗹 A	Iphanumeric						
		Profile	Material Grade	Treatment	Project	Length	Qua	ntity		Used quantity	Wa
•	1	IPN500	S355JO			5000.00	9			1	
	1	IPN500	S355JO			2000.00	10	1	New	Ir	ns
	🥩 E	IPN500	S355JO			5000.00	1		Edit Grid	Ctrl+Ir	ns
								1-	Delete	D	)el
								۲	Toolbars	Ctrl+	-B
									Edit		
									Build but	tt welding	
									Duplicat	e Ctrl+Maj+	D
									Lock	Ctrl+	+L
									Unlock	Ctrl+	·U

In the Stock list select stock bars and right-click to open the menu.

You will have this window to define the way to weld both bars.

🧼 Stock							?	$\times$
+ New	Delete 🗧	Previous	Next	Close				
General Detail	Butt welding elements							
Profile	IPN500	🔍 💰 Туре	e	Purchase	Metric (	mm) OImperial		
Material Grade	S355JO	🔍 🧼 🛛 Proje	ect		ς L	200.00 mm		
Treatment		C. Leng	gth	4900.00 mm	Ī			
Quantity	1					←L→		
Order								
Supplier								

Detail give you the possibility to add extra informations.

🧼 Stock		?	$\times$
+ New	Delete Previous Next 🕑 Close		
General Detail Butt v	velding elements		
Warehouse			
Storage location			
Tracking ID			
Certificate	External reference		
Country	External length 0.00 mm		
Comment	Reception date / / v		
	Next Rolling Date / / -		
	Future Rolling Date         / / /		

From this list you can nominate the stock bars you will use to create the butt welded beam. the list on the left shows the available bars. Drag and drop the required bars to the right side window to make up the element.

Image: New matrix     Delete     Previous     Next     Close       General Detail     Butt welding elements       Profile     Material Grade     Treatment     Length       IPN500     \$3355JO     \$5000.00     6       IPN500     \$3355JO     \$2000.00     10       IPN500     \$3355JO     \$000.00     6       IPN500     \$3355JO     \$000.00     10	🧼 Stock										?	$\times$
General Detail       Butt welding elements         Profile       Material Grade       Treatment       Length       Quantity       Profile       Material Grade       Treatment       Length         IPN500       S355JO       S355JO       5000.00       6       IPN500       S355JO       5000.00       10       IPN500       S355JO       5000.00       10       1         IPN500       S355JO       IPN500       IPN500       S355JO       IPN500       S355JO       IPN500       S355JO       IPN500       S355JO       IPN500       S355JO       IPN500       IPN500       S355JO       IPN500       IPN500 </td <td>Hew New</td> <td>Delete</td> <td>e 📮</td> <td>Previous</td> <td></td> <td>lext</td> <td>• <b>ل</b></td> <td>lose</td> <td></td> <td></td> <td></td> <td></td>	Hew New	Delete	e 📮	Previous		lext	• <b>ل</b>	lose				
ProfileMaterial GradeTreatmentLengthQuantityProfileMaterial GradeTreatmentLengthIPN500S355JOS355JO500.00610101010500.00500.00IPN500S355JOLongthLongthIPN500S355JO500.00500.00	General Detail	Butt welding el	ements									
IPN500         \$355JO         \$000.00         6         IPN500         \$355JO         \$000.00           IPN500         \$355JO         2000.00         10         IPN500         \$355JO         \$000.00	Profile	Material Grade	Treatment	Length	Quantity		Profile	Material Grade	Treatment	Length		
	IPN500 IPN500	S355JO S355JO		5000.00 2000.00	6 10	4 4	IPN500	S355JO		5000.00		

When you save the bar you will see that the bar icon and total length has changed and you can see a sub list of the bars that make up the butt welded bar

Compone	Component Stock Optimize Cutting									
+ -	+ III Case sensitive ✓ Alphanumeric									
			Profile	Material Grade	Treatment	Project	Length	Quantity		
	Ø		IPN500	S355JO			5000.00	7		
	8		IPN500	S355JO			2000.00	10		
	88	+	IPN500	S355JO			5000.00	1		
	88	+	IPN500	S355JO			5000.00	1		
► I	Ø	e	IPN500	S355JO			4900.00	1		
	Ø	l	IPN500	S355JO			5000.00	1		

When you do an automatic nest the total length will be used as a standard available bar, but you can keep the full traceability of the different elements to it in the system.

## Optimize Cutting

## This tab shows the results of the nesting.

				🔎 🦊 👔 🗌 Case sensitive	🚼 Expand 🛛 🚼 Collapse	e 👫 👻 🖌 Alpha	numeric			
				Bar N°	Workstation	Profile	Material Grade	Treatment	Quantity	Length
•	<i>6</i>	5	Ŧ	2	K126L	TC100*3	S235JR		1	12000.00
	6	8	÷	3	K126L	TC100*3	S235JR		1	12000.00
	6	8	÷	23	K126L	TR100*150*3	S235JR		1	12000.00
	6	8	Ŧ	24	K126L	TR100*150*3	S235JR		1	12000.00
	6	8	÷	25	K126L	TR100*150*3	S235JR		1	12000.00
	8		÷	28	K126L	UPN160	S275JR		1	13100.00
	8		Ŧ	29	MAP	UPN160	S275JR		1	13100.00
	8		٠	30	K126L	UPF-200*80*4	S235JR		1	15000.00
	8	8	÷	31	K126L	TC100*3	S235JR		1	10000.00
	8	8	٠	32	K126L	TC100*3	S235JR		1	10000.00
	8	8	÷	33	K126L	TC100*3	S235JR		1	10000.00
	8	8	÷	34	K126L	TC100*3	S235JR		1	10000.00
	Ø	83	+	35	K126L	TC100*3	S235JR		1	10000.00

## General Information

This tab shows a general summary of the section nesting results.

Status	To Produce			
	Quantity	Length	Remnant length	Scrap length
Total	30	305770.00	26940.95 mm (8.8	0.00 mm (0.00%
I Total by profile cat	egory			
	27	264570.00	24642.19 mm (9.3	0.00 mm (0.00%
Ľ	2	26200.00 mm	1268.24 mm (4.84	0.00 mm (0.00%
С	1	15000.00 mm	1030.52 mm (6.87	0.00 mm (0.00%
⁴ Total by profile				
TC100*3	19	194000.00	14106.20 mm (7.2	0.00 mm (0.00%
TR100*150*3	6	58570.00 mm	8685.99 mm (14.8	0.00 mm (0.00%
<b>UPN160</b>	2	26200.00 mm	1268.24 mm (4.84	0.00 mm (0.00%
C UPF-200*80*4	1	15000.00 mm	1030.52 mm (6.87	0.00 mm (0.00%
TR150*100*3	2	12000.00 mm	1850.00 mm (15.4	0.00 mm (0.00%
4 Total by bar type				
🥪 Purchase	5	60000.00 mm	7482.16 mm (12.4	0.00 mm (0.00%
Stock	25	245770.00	19458.79 mm (7.9	0.00 mm (0.00%

#### Optimize Cutting Information

The optimize cutting window shows specific information for each nested bar

**General** - The general tab shows you general information on the nested bar that you have selected. The forecast time is only shown if you have the Production Manager module activated

The remnant identity is generated automatically by SPPLM, this can be used to mark you remnant to keep traceability.

This button 📤 allows to update the value to the maximum quantity.

Quantity 1   Comment   Workstation   MAP   Forecast time   :   Profile   L40*4   Image: the second secon	General	
Comment   Workstation   MAP   Forecast time   :   Profile   L40°4   Material Grade   S235JR   Treatment   Length   10000.00   mm   Warehouse   Storage location	Quantity	1
Workstation MAP   Forecast time :     Profile L40°4   Material Grade \$235JR   Treatment	Comment	
Forecast time   Profile   L40*4   Material Grade   S235JR   Treatment   Length   10000.00   mm	Workstation	MAP
Profile L40°4   Material Grade S235JR   Treatment	Forecast time	:
Material Grade S235JR Treatment Length 10000.00 mm Warehouse Storage location	Profile	L40*4
Treatment Length 10000.00 mm Warehouse Storage location	Material Grade	S235JR
Length 10000.00 mm Warehouse Storage location	Treatment	
Warehouse Storage location	Length	10000.00 mm
Warehouse Storage location		
Storage location	Warehouse	
T	Storage location	
I racking ID	Tracking ID	

**Composition** - This tab shows you the parts that are nested in the currently selected bar.

You can change the order in the bar by manually dragging the parts order. And you can view and change

part rotation by using the 🔍 🍝 🍁 🤍 functions

This button 📤 allows to grow a component quantity to its maximum value.

Offcuts value is displayed.

Composition								
0	F 🕪 🄇	•	-			 ∓		
Length	Quantity	Tr 🔺	Maximum	è	Profile	Component		
		_	-					
2003.60	1					V1		
2963.18	1					C12		
4423.47	1					C11		
2928.32	1					C10		
4392.03	1					C9		

**Nesting Parameters** - This tab shows the parameters that have been assigned t the bar. They come from the <u>workstation configuration</u>, but can be manually overridden in the bar by changing them here.

#### Nesting parameters

First Cut	50.00 mm
Saw/Disk Thickness	2.50 mm
Distance Cuts Not //	50.00 mm
End Bar Scrap	50.00 mm
Add saw/disk thickness if first cut	<u>√</u>
Remnant	Pincher scrap 💌
Optimise flange cut	
Maximum Scrap	0.00 mm C
Parameters forced	

## Progress Information

Progress		1
	Nesting Quantity	Produced Quantity
Interpretation of the second secon		
Тс	0 (0.00 %)	0 (0.00 %)
L D	0 (0.00 %)	0 (0.00 %)
C N	1 (50. <mark>00 %)</mark>	0 (0.00 %)
Interpretation of the second secon		
<b>HEA180</b>	0 (0.00 %)	0 (0.00 %)
L40*4	0 (0.00 %)	0 (0.00 %)
L80*60*7	0 (0.00 %)	0 (0.00 %)
UPF-120*50*3	0 (0.00 %)	0 (0.00 %)
UPF-150*70*5	1 (100.00 %)	0 (0.00 %)

This tab displays the state of progress for each profile category.

General Optimize Cutting Progress

#### **Right Click Menu**

There are some extra options for the main window tabs accessible from the right mouse click menu

Con	nponent	
+	New	Ins
	Edit Grid	Ctrl+Ins
-	Delete	Del
۲	Toolbars	Ctrl+B
	Property	Ctrl+P
	Build cut to	o length
	Quantity	
Pa	rt grouping	
		Ψ.
Ph	ase groupin	9
		<b>*</b>
W	orkstations	
	K126L	Ŧ
	Lock	
	Unlock	

- New Add a new default part with no tooling
- Edit Grid Modify the components options in the grid instead of in their individual options pages
- **Delete** Delete the current selection from this section nesting sheet
- Toolbars view \ hide the hidden toolbar

• **Property** - Open up an additional properties page which allows you to set individual options for each component. You can override the available symmetries and rotations, and give the part a priority. The automatic nester will put parts with a higher priority (with 1 being the highest) earlier in the nesting results

Parts Properties					?	×
Priority 99 🖨						
Symmetry / Rotation Material G	irade					
X Symmetry		90°	Rotation 90	6		
Y Symmetry						
XY Symmetry						
Project	Component		Workstation	Length		
20170810_14H13_AFFAIRE	20170810_14H57_RS	1	K126L	2'6''		
				V Ok	X	Abort

• **Build Cut to Length** - When this option is selected, the component will not be nested into a separate stock bar, but sent cut to length. If you add a stock bar into the stock list with same length, this will be used. if not, you will get a list of cut to length bars in your purchasing list. Cut to length parts are sent to the machine with no cutting tooling or front or end bar scrap.

• **Quantity** - Displays the quantity computed of the Optimize Cutting

Quantity	?	×
Project manager		
Assembly 1		
Part 3		
Optimize Cutting		4
	k 🔪	Abort

• Lock \ Unlock - Temporarily Lock parts so they are not available to the automatic section nesting. this is useful if you want to nest some components earlier in the order, or separate to some other components in the same sheet.

#### Stock

+	New	Ins				
	Edit Grid	Ctrl+Ins				
-	Delete	Del				
	Toolbars	Ctrl+B				
	Edit					
	Build butt welding					
	Duplicate	Ctrl+Maj+D				
	Lock	Ctrl+L				
<b>n</b>	Unlock	Ctrl+U				

• **New** - Add some stock bars into your stock list to be available for the nester to use. Select the required details by either typing in the windows, or double clicking will show a list of available ones.

The critical parameters that are needed as a minimum are the profile, material grade and length

the default type of bar are stock bars, but you can give it a different type such as a remnant or purchased bar. These types are used by the automatic nester to use different priorities

🧼 Stock					?	$\times$
Hew New	Delete	Previous	Next			
General Detail						
Profile	IPN500	<u>s</u>	Туре	Purchase   Metric (mm)	rial	
Material Grade	S355JO	<u></u>	Project			
Treatment			Length	1000.00 mm		
Quantity	1 🚖					
Order						
Supplier						

On the detail page you can also add extra information for use for traceability and advanced nesting by loading bay or storage location.

🕼 Stock					?	$\times$
+ New	Delete	Previous	Next Close			
General Detail						
Warehouse						
Storage location						
Tracking ID						
Certificate			External reference			
Country		Q	External length	0.00 mm		
Comment			Reception date	11		
			Next Rolling Date	11 -		
			Future Rolling Date	11 -		

- Edit Grid Add more bars or modify the existing ones by using the grid format instead of individual options pages
- **Delete** Delete the current selection
- Toolbars View or hide the hidden toolbar
- Edit Modify the bar in the options window
- Build Butt Welding Join two or more bars together to form a connected bar. See <u>Butt Welded</u>
   <u>Beams</u>
- Duplicate Add an identical bar to the current selection the list
- Lock \ Unlock Temporarily Lock bars so they are not available to the automatic section nesting. this is useful if you want to nest some components earlier in the order, or separate to some other components in the same sheet.
#### Bar

+	New	Ins
11 11 11 11	Edit Grid	Ctrl+Ins
-	Delete	Del
۲	Toolbars	Ctrl+B
	Optimise	
$\odot$	Production 1	ïme Input
	Show stock i	tem

- **Delete** Delete the current selection
- Toolbars View or hide the hidden toolbar
- **Optimise** Optimise the current bar
- Show stock item Display for the current bar in the tab "Stock"

#### **Manual Section Nesting**

#### It is possible to create manual nests instead of using the automatic nesting.

This is useful if you need to cut specific components in a specific order out of specific bars

To begin, add some stock bars in the Stock tab of the main window

Drag and drop one of the bars from this list to the optimize cutting window. You will see that the icon changes to show that the bar is now in the window



New	🗸 Sav	re 🗙 Abort	Delete	Print H	ext Input	Quit					
Section 1	Vesting 147	9									
8 Compor	nent 😂 Sto	ck 够 Optimize	Cutting					4 Þ	Optimize Cutting		
Та 🎟								_	General		
+ = -			🔄 🔎 🦊 👔 🗌 Case	sensitive 🗹 A	phanumeric			Ċ	Quantity	1 🜩	
		Profile	Material Grade	Treatment	Project	Length	Quantity	_	Comment		
•	P	HEM340	52/5			1200.00	2		Workstation		
									Forecast time	:	
										UEM240	
									Profile	HEM340	
									Material Grade	52/5	
									Ireatment	1000.00	
									Length	1200.00 mm	
									Warehouse		
									Storage location		
									Tracking ID		
									Composition		
									Nesting parameters		
									General		
									Taala		
									10015		
4									General Optimize Cutti	ng	

Then switch to the main window component tab. only the components with the same profile as the bar you just selected will be available

To add one or more of the components into the bar, drag and drop them from the main window to the optimize cutting window

New	Save X Abor	t Delete	Print 🔶	📕 Next Input	Quit			?
Section N	Nesting 1479		O,					
Compo	nent 🕼 Stock 🚿 Optimiz	e Cutting				4 Þ	Optimize Cutting	4
+ 🏽 –		P 🕹 🕯 🛛	Case sensitive	🛐 👻 🖌 Alphanun	neric	ڻ	General	
	Project	Component	Drawing	Assembly Mark	Phase	Workstation P	Pn Quantity 1	
•	4228_PROTO_C	1001	PE22	01	-	K126L H	HE Comment	
						Drag and Drop	op Workstation	
							Forecast time :	
						YE		
						- A		
							Materia rade 32/3	
							leasth 1200.00	
							Lengin	
							Warehouse	
							Storage location	
							Tracking ID	
							Composition	
							Nesting parameters	
							General	
							Tools	
•						Þ	General Optimize Cutting	

New	Save X Abo	rt 📃 Delete	Print	Next Input	Quit							2
Section N	lesting 1479		0									
Compon	ent 🕼 Stock 够 Optimiz	e Cutting					۹ ۵	Optimize	Cutting			4
+ 🏼 —		🔎 🤞 🕯 🗆	Case sensitive	🛐 👻 🗹 Alphanum	ieric		Ċ	Com	position			
	Project	Component	Drawing	Assembly Mark	Phase	Workstation	Pn		5 🌵 🕲			
									Project	Drawing	Assembly Mark	Component
									4228_PROTO_CHAMBORD	PE22	01	1001
								4 Compos Nesting Genera Tools	ition parameters			Þ
4							Þ	General	Optimize Cutting			

You will see the graphic and options of the bar change to match the manual modifications

Change the order of the parts in the bar by dragging and dropping them in the list in the optimize cutting window.

	Comp	ositio	n			
	<b>)</b>		2			
		Project	Drawing	Assembly Mark	Component	Profile
	0	15264B	12	S51	S51	
	9	15264B	12	548 15264B 12 S51	s ⁵⁴⁸ GAL	VA 1 73
	,					
				<b>N A A</b>		
You can add rotations to	o the part	ts by usi	ng the 📘		buttons	

When you have built your bar, press the save button and then move to the Stock tab, and drag another bar into the Optimize cutting window and repeat the same process

## **Section Nesting ToolBar**





Preview Opens bar / Part , 2D /3D Preview



Workstations Opens a short-cut to the Workstation configuration



Reports Create bar lists and nesting reports with the Reports Window



Automatic Automatically nests the components into Stock, remnants and purchased bars using Automatic Section Nesting



Import Stock bars using a configured Stock Import



Production Time

Input Allows to input the actual production time spent to produce each bar (Available with the Production Manager module).



Parts

Activates a filter to display only the parts to be nested



part

Add a catalog part to the selected workstation



Assign a project priority to the component



Configure Apply Filter Filter Configure a display filter and the second button is to apply this one



nesting Edit the nesting using the Manual Nesting



Order Change the bar order and create bundles for automatic handling systems



Export the bars to production ( Only for part & project manager)

#### Preview



This window shows a preview of the part or bar, depending on your selection in the main window.

The user can show/hide the preview screen by clicking on the button F9.

To show a 3D view you need to have the option activated in your local configuration settings.

The functionality of the window is the same as the project manager part preview window



#### Report



# Pressing the Reports option will open the reports module.

	bort Delete Prin	t Next Input	Quit						8
Edition	<del>4</del>	× Synthèse mise en bar	re						4 Þ ×
× 8 8		👻 🐿 🖨 🛅	4   4	1 📩 🕨	ы 😋				
Name	Language	Main Report	Lunn						
Barres									
Synthèse mise en barre	English								
Stock	English								
Nesting	English				- ··				
Mise en barre Code Barre 3D Mise en barre Code Barre	English English				Summary Linea	ir Nesting	15264	4 ABCM 04	39
			Quantity	Length	Remnant length	Scrap length	Weight	Rennant weight	Scrap weight
		Total			(2.5.5.1)				
		Tabl bu as 21 - 1	6	81,600 mm	28,188 mm (34.54%)	210 mm (0.26%)	1,273 kg	5/2 kg (29.21%)	3 kg (0.27%)
		T I otal by profile cat	egory 4	57.400 mm	18 512 mm (32 25%)	150 mm (0.26%)	1.215 kg	349 kg (78 69%)	3 kg (0.28%)
		ll t	2	24,200 mm	9,676 mm (39.98%)	60 mm (0.25%)	59 kg	23 kg (39.98%)	0 kg (0.25%)
		Total by profile					-		
		I HEA100	1	12,100 mm	11,495 mm (95.00%)	0 mm (0.00%)	202 kg	192 kg (95.00%)	0 kg (0.00%)
		I IPE200	3	45,300 mm	7,017 mm (15.49%)	150 mm (0.33%)	1,013 kg	157 kg (15.49%)	3 kg (0.33%) 0 kg (0.35%)
		Total by bar broa	2	24,200 mm	9,676 mm (39,96%)	60 mm (0.25%)	59 Kg	23 kg (39.96%)	0 kg (0.25%)
		Purchase	6	81,600 mm	28,188 mm (34.54%)	210 mm (0.26%)	1,273 kg	372 kg (29.21%)	3 kg (0.27%)
		Steel Projeste						Sun	imary Linear Nesting 21/02/2019 Page 1 of 1
		<							>
		1/1						75% -	+

### Automatic Section Nesting





Pressing the Automatic icon will open the automatic nesting options screen. This tool will nest your components into your available stock \ purchasable lengths, with powerful algorithms prioritizing either minimizing scrap, remnants, or number of bars.

and it will use the options you have set up to nest the

To use the automatic nester, simply press **Ok** parts to the available bars.

At the end you will found the created bars in the bar list.

Componer	nt 🕼 Stock 💕 🛛	ptimiz	e Cutting								
+ = - [			🔎 💺 👕 🗌 Case sensitive 🛛 🎦 Expa	nd 🐮 Collapse	👫 👻 🖌 Alphanu	umeric					
			Bar N°	Workstation	Profile	Material Grade	Treatment	Quantity	Length	Remnant (mm)	Remnant (%)
	ø		1	K126L	IPN500	S355JO		1	5000.00	4233.000	84.66
		L	20170810_14H13_AFFAIRE/20147081				GALVA+PEINTU	1	2'6"		
•	1	e,	2	K126L	IPN500	S355JO		1	2000.00	468.500	23.43
		L	20170810 14H13 AFFAIRE/20147081				GALVA+PEINTU	2	2'6"		

## **Section Nesting Options**

### General

Section Nesting Parameters	—		×
General       Profile       Purchase         Priority 1 <ul> <li>Project Order</li> <li>Project booked stock</li> <li>Project remnants stock</li> <li>Priority 2</li> <li>Order</li> <li>Stock</li> <li>Order</li> <li>Stock</li> <li>Priority 3</li> <li>Purchase</li> <li>Not managed</li> </ul> <ul> <li>Image: Stock</li> <li>Purchase</li> <li>Not managed</li> <li>Show several solutions</li> </ul> <ul> <li>Options</li> <li>Options</li> <li>Options</li> <li>Options</li> <li>Options</li> <li>Maximize Pack Number</li> <li>Show several solutions</li> </ul>			
Limit remnant         Limit number of bars         Limit scrap		<b>↑</b>	
~	Ok	×	Abort

#### Stock

Different priorities can be set for different types of stock bar.

If remnant stock is set at a higher priority than Stock, offcuts will always be nested before stock bars, if they are available. If Stock is above purchasing, all of the added stock bars will be maximized before bars are suggested for purchasing

To change the priority, simply click on the type of bar and use the up and down arrows to move to a different priority

#### Result

This option will allow you to change the preference of the nesting algorithm.

If limit remnant is selected first, then the nester will try and limit the total amount of remaining material left in a bar.

Limit number of bars will try and limit the number of bars used in a trade off for scrap for less material handling.

Limit scrap will take into consideration the set maximum scrap and trade off waste for recoverable stock

#### Options

Time - Select a time (min of 1 minute) for the nester to calculate more permutations for a better nest

Bar with same priority – Force the nester to only nest parts with the same priority together. If the option is not checked, the lowest priority will initially be nested, but the bars can be supplemented with higher-priority items.

Show several Solutions. This option only works if a time has been set. At the end of the nesting process it will display on the screen three options with different results of scrap, remnant and number of bars

### Profile

This tab shows you the profiles you have in your selection and allows you to enable or not the nesting for each ones.

If the profile is represented with a black circle then it is available. if you double click the circle t changes to a white circle, and is then unselected.



#### **Purchase**

This tab shows you the <u>Purchase</u> you have set up, and allows you to enable \ restrict their availability for the automatic nesting.

If the length is represented with a black circle then it is available. if you double click the circle t changes to a white circle, and is then unavailable



# **Production Time Input**



When you click on the Production time input button, you can type the actual production time for each bar

A The fabrication job of the nesting must not be "unchecked with a roceed.

🕙 Prode	uction Follow Up										- 0	×
+ 🔛 –	-		🔎 🤞 🛊 🗌 Cas	se sensitive	🕶 🖃 Alphanumeri	ic						Ċ
	Workstation	Actual f	Bar	Program	Length	Remnant	Profile	Material Grade	Treatment	Outstanding qua	Quantity produced	Estimated
•	MAP		1		12100.00 mm	1169.42 mm	L40*4	S235JR		1	0	000:03:16
												_
<b> </b> ▲												
											🗸 Ok 🔰	Abort

## **Configure Filter**



1

Quit

# Click on the button "Configure Filter". The Filter screen is displayed. 👾 Filter 🤡 🤡 😣 🤡 8 Workstation Profile FMB HEA100 K126L IPE200 L40*4 😣 🤡 🧟 😣 🤡 🤕 Treatment Material Grade 🔵 S235JR 🔵 GALVA 🛑 S275JR Reset Apply

The user can configure a filter with the parameters Workstation, Profile, Material Grade and Treatment.

Click on the button :

"Reset" to initialize the filter. All the parameters are deactivated •



- "Apply" to perform the filter. The button Filter is activated
- "Quit" to close the filter screen. The filter is not applied



Click on the button Filter . The configured filter is applied. The data grid is updated.

$[ \mathcal{Q} ]$	W			t)	Ð	÷.	<b>7</b>		*	*		2	
Preview	Workstations	Reports	Automatic	Import •	Production Time Input	Remaining Parts	Catalog part	Priorities edition	Configure Filter	Apply Filter	Edit nesting	Bar's Order	
Ne Ne	w Save		Abort	Delete	e Print	Hext	Input (	Quit					
Sectio	n Nesting 39				Q								
8 Com	ponent 🕼 Sto	ck 够 Op	timize Cuttin	g									4 Þ
+ 🏽 -	-		$\sim$	ŧ ŧ	Case sensitive	ŽŽ -	🗸 Alpha	numeric					Ċ
	Pr	oject	Comp	onent	Drawing	As	sembly Ma	rk Ph	ase	Wo	rkstation	Pro	file
•	15	264B	S49		12	S49	)			MAR	2	L40	*4
	15	264B	S51		12	S51	I			MAR	2	L40	*4
	15	264B	140		12	P11	I			FME	3	HEA	A100
	15	264B	P11		12	P11	I			K12	6L	IPE	200
	15	264B	P10		12	P10	)			K12	6L	IPE	200
	15	264B	S48		12	S48	3			MA	2	L40	*4
	15	264B	P9		12	P9				K12	6L	IPE	200

## Bar Order Change



# When you have finished either a manual or an automatic nest, you can change the order of the bars.

(achina	Priority	Order	Profile	Material Grade	Trootmont	Oupetity	Longth	Pomport	Pundle \t/idth
	FIONY	Order	FIGHE	Material Grade	Treatment	Quantity	Length	Remnant	Bundle Width
MAP 15264B/12/S51/ 15264B/12/S48/	99	1	L40*4	S235JR		1 1 1	12100.00	1199.42	
MAP 15264B/12/S49/	99	2	L40*4	S235JR		1 1	12100.00	8536.47	
K126L 15264B/12/P9/P9 15264B/12/P10/ 15264B/12/P11/	99	3	IPE200	S275JR		1 1 1	15100.00	796.24	
K126L 15264B/12/P11/ 15264B/12/P11/ 15264B/12/P11/ 15264B/12/P11/	99	4	IPE200	S275JR		1 1 1 1	15100.00	796.24	
K126L 15264B/12/P11/ 15264B/12/P11/	99	5	IPE200	S275JR		1 1 1	15100.00	5574.67	
FMB 15264B/12/P11/	99	6	HEA100	S275JR		1 6	12100.00	11494.60	

To change the order, either drag and drop the bars in the list to the required order, or click on particular

bars and use the arrow icons on the right of the window

If you have an automatic system that has the ability to work with bundles of bars, press the icon and the system will automatically bundle together bars with similar profiles, treatments, painting etc, using the rules you have set up in your work-flow.

# **Module - Plate Nesting**



#### The main module to optimize your plate nesting

The plate nesting module allows you to nest your components into plates for streamlined purchasing and production process

The module uses the parameters set in the Nesting Data options

To create a new plate nesting you would not normally do it by first accessing this menu. New nests are normally created either in the <u>Project Manager</u>, by dragging the required parts into the <u>selection window</u> and activating the plate nesting option and pressing action, or from the <u>Production Manager</u> in the <u>Send To</u> <u>Production</u> screen

Use can use this menu to view and modify existing plate nests. To do this either type the nesting sheet number, or double click in the window and choose the nest from the window and press OK.

🕄   🗰 🗢						Tools
Steel-Projects Project Data Project Manager data N	lesting data Fabricati	on Job data 🛛 Feedback da	ata Shipping data Sche	duling data Configur	ation Utilities	Plate Nesting
Preview Workstations Nester PathFinder DocViewer Offi	Offcuts oort manager	Reports Automatic In	mport Export Production Tin Input	ne Remaining Catalog Parts part	Priorities Configur edition Filter	e Apply Filter
New V Save Abort Delete	Print Next Inp	ut U Quit				1
Plate Nesting						
	0			-		]
	Cutting Sheet					
	ID 🔺	Cutting Sheet	Creation Date	Modification Date	<b></b>	
	25	10	15/02/2016 17	:13 16/02/2016 10:07		
	36	15	17/02/2016 10	:02 17/02/2016 10:22		
	63	29	19/02/2016 10	:51 19/02/2016 11:40		
	68	31	19/02/2016 12	:42 25/02/2016 17:31		
	70	32	23/02/2016 09	:52 23/02/2016 10:25		
	74	35	23/02/2016 14	:18 26/02/2016 07:52		
	79	37	23/02/2016 15	:56 23/02/2016 16:12		
	83	40	29/02/2016 10	:08 01/03/2016 07:42		
	85	42	29/02/2016 13	:36 01/03/2016 07:50		
	93	45	29/02/2016 18	:07 03/03/2016 08:24		
	104	49	01/03/2016 17	:45 03/03/2016 08:29		
	100	E0.	02/02/2010 00	E1 02/02/2010 00.42	<b>v</b>	
					Ok 🗙 Abort	

This will open up the plate nesting module. Alternatively, this module will open automatically if you process with the Project Manager or Send to Production screens

#### **Main Window**

0-210

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26.0

-270

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The module uses a similar multi window, tabbed format layout to the Projects Manager.



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General Optimize Cutting Part tools

#### **1 - Main Window**

The main window consists of three tabs.

This lists all of the components that have been included in the plate nesting. You can see all the details brought from the Project Manager, including the project, workstation, and quantity details.

Compone Compone	ent 🕼 Stock 🛞 Op	timize Cutting						
	Project	Component	Drawing	Assembly Mark	Phase	Workstation	Profile	Material Grade
	16022	15	6	PR4		TIPOB254	TOLE15	S235JR
	16022	12	6	PR4		TIPOB254	TOLE12	S235JR
	16022	13	6	PR4		TIPOB254	TOLE12	S235JR
	16022	PR4	6	PR4		TIPOB254	TOLE8	S235JR
	16022	PR3	6	PR3		TIPOB254	TOLE8	S235JR
	16022	15	6	PR3		TIPOB254	TOLE15	S235JR
	16022	10	6	PR2		TIPOB254	TOLE12	S235JR
•	16022	PR2	6	PR2		TIPOB254	TOLE8	S235JR
	16022	16	6	PR1		TIPOB254	TOLE10	S235JR
	16022	17	6	PR1		TIPOB254	TOLE10	S235JR
	16022	PR1	6	PR1		TIPOB254	TOLE8	S235JR
	16022	10	6	PR1		TIPOB254	TOLE12	S235JR

If you double click on one of the components it opens up the component options and you can make modifications here instead of having to go back to the Project Manager.

Component					$\times$
New Sa	ve Abort Delete	Print 🖊	Next Input 😃 Quit	8	
Project 16	022	Com	nponent PR2		
Component	PR2		Information Toolings Preview Sub assembly Profile Drilling Attached documents		
Quantity	21		Comment		
Profile	TOLE8				
Unit	Metric (mm)	al			
Length	200.00 mm			11	
Width	270.00 mm				
Group	TOLES - 10 MM		Created on 17/02/2016 09:48:21 By TEKLA		
Description	PRESCELLEMENT		Modified on         04/08/2016 10:31:13         By         SP_ADMIN           Weight         3.4128         Kg         Surface         0.1155         m²		
Anticle Code	000510		Node		
Material Grade	5235JR		Project Version External 940.00 mm		
Ireatment	BRUI				
Painting			Part Internal 0.00 mm		

If you need to add more components, right click in an empty area and select new. Then, add the parts from this screen.

The parts must have been previously added in the fabrication job, as seen <u>here</u>.

The stock list will be blank to start with. You can add your stock to the list to use this in the nesting, or if you leave this blank the nester will only use purchased lengths using the best possible commercial dimension.

Componer	nt 😂 Sto	ĸ 🖇 Optimize	Cutting							
E 🖩										
+ # -			🔎 🦊 🛊 🗌 Case	sensitive 🔽 Al	phanumeric					
		Profile	Material Grade	Treatment	Project	Length	Width	Quantity	Used quantity	Weight
•	1	TOLE8	S235JR			3000.00	1500.00	4	1	282.60 Kg
	1	TOLE10	S235JR			3000.00	1500.00	4	1	353.25 Kg
	1	TOLE12	S235JR			3000.00	1500.00	4	1	423.90 Kg
	8	TOLE15	S235JR			1520.00	1070.00	1	1	191.51 Kg

#### This tab shows the results of the nesting

8 Cor	mponent 🕼	Stock 🔗 O	ptimiz	e Cu	tting							
					Workstation	Bar N°	Profile	Material Grade	Treatment	Quantity	Length	Width
•		🥩 lh	6		TIPOB254	1	TOLE8	S235JR		1	3000.00	1500.00
		🥩 🐘 👘	8	٠	TIPOB254	2	TOLE10	S235JR		1	3000.00	1500.00
		🥩 🐘 👘	8	٠	TIPOB254	3	TOLE12	S235JR		1	3000.00	1500.00
		🥩 🕼 👘	8	٠	TIPOB254	4	TOLE15	S235JR		1	1520.00	1070.00

#### 2 - Preview

This window shows a preview of the part or plate, depending on your selection in the main window.

To show a 3D view you need to have the option activated in your local configuration settings

The functionality of the window is the same as the project manager part preview window

Preview		
2D preview	3D preview	Image
, , -60 , 5135		O PR2
○-210 0 100 200 ◊ 26.0		0

## **3 - General Information**

This tab shows a general summary of the section nesting results

Status	To Produce			
	Quantity	Length	Remnant length	Scrap length
Total	4	10520.00 mm	0.00 mm (0.00%)	0.00 mm (0.00%
Total by profile	category			
<b></b>	4	10520.00 mm	0.00 mm (0.00%)	0.00 mm (0.00%
Total by profile				
TOLE8	1	3000.00 mm	0.00 mm (0.00%)	0.00 mm (0.00%
TOLE10	1	3000.00 mm	0.00 mm (0.00%)	0.00 mm (0.00%
TOLE12	1	3000.00 mm	0.00 mm (0.00%)	0.00 mm (0.00%
TOLE15	1	1520.00 mm	0.00 mm (0.00%)	0.00 mm (0.00%
Total by bar typ	e			
Stock	4	10520.00 mm	0.00 mm (0.00%)	0.00 mm (0.00%

### 4 - Optimize Cutting

The optimize cutting window shows specific information for each nested bar

**General** - The general tab shows you general information on the nested plate that you have selected. The forecast time is only shown if you have the Production Manager module activated

The remnant identity is generated automatically by SPPLM, this can be used to mark you remnant to keep traceability

jeneral		
Quantity	1	
Comment		
Workstation	TIPOB254	
Forecasttime	:	
D-Cl-		
Profile	TOLES	
Material Grade	S235JR	
Treatment		
Length	3000.00 mm	
Width	1500.00 mm	
Warehouse		
Storage location		
Tracking ID		

**Composition** - This tab shows you the parts that are nested in the currently selected plate.

Comp	ositio	n			
	Project	Drawing	Assembly Mark	Component	Profile
<b>-</b>	16022	6	PR4	PR4	
<b>-</b>	16022	6	PR3	PR3	
<b>-</b>	16022	6	PR2	PR2	
<b>-</b>	16022	6	PR1	PR1	

**Tools -** This tab list the tools that are going to be used by the machine once the nesting has been generated. Tools used will vary depending on how the workstation has been configured.

Tools	Tools									
		Quantity	Name							
Punching Punching	Circle Diameter=26.00mm Circle Diameter=32.00mm	1 1	PUNCH26 PUNCH32							

#### 5 - Part tools

The Part tools window shows the tools list from PathFinder

Part tools	무
Name	
CUT MARK PUNCH26	

## **Plate Nesting Toolbar**





Opens the Part preview window



Opens a short-cut to the Workstation configuration



Opens Nester module to manually define the plate nesting.



Opens Pathfinder module to define cutting sequences, create bridges between parts, generate CNC program, etc...





Opens DocViewer module to generate and print the plate nesting report



import

Import Offcuts with same thickness and material type from previous nesting



manager

Offcuts manager menu



Standards Gap menu



Create piece lists and nesting reports with the Reports Window



Automatically nest the components into Stock, remnants and purchased plates using Automatic Plate Nesting



Import Stock plates using a configured Stock Import



Export the plates to production. Can be done from Plate nesting or from Send To Production depending on options



Production Time Input menu



Activates a filter to display only the parts to be nested



Catalog part menu



Configure a display filter with the Configure Filter and the second button is to apply this

one

#### Preview

This window shows a preview of the part or plate, depending on your selection in the main window.

To show a 3D view you need to have the option activated in your local configuration settings.

The functionality of the window is the same as the project manager part preview window.



#### Workstations



# In order to modify some machine parameters before nesting, it is also possible to access the resource editor from the plate module.



Pressing the Workstations icon will open the workstations menu where we can find the machine parameters:



On the machine parameters window, it is possible to access Resource Editor and comparison in order to modify and update many nesting parameters:

W Workstation	S							- 0	×
New New	Save	Abort Delete	Print	Next Input	Quit 🔀	Tools 🕶			?
Workstation	TIPOB254		2			Import parameters			
General Too	oling Paramete	rs Cut parameters Hole param	ieters Expo	rt Deliverable dimensio	ons Sta 🔊	Alarms and messages	g Zone		
		TIDODDEA			2×	Resource Editor			
Descripti	on	TIFUB234		. Maria	<b>(3)</b>	Comparison )	X	Tools	4
Туре		Plate	-	Sub-Contractor	Ti 📄	DDDMachineNC snaps. update	100	Technological parameters	5
Machine		FICEP	•						
NC Type		(Unspecified)	-		C				
IP Addres	35	192.168.2.200							
Shop Dra	wing								
Feedback	k type	DÉBIT		9					
Export		TECNO-METAL	+	Q					
Output									

**Import parameters** - Import machine parameters file

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Resource Editor - Access de machine and nesting parameters manager

**Comparison** - Access a updater menu in order to compare or import or update the resource editor data into SP.PLM

**Tools** - Access the updater menu which compares the available tools in Resource Editor and SP.PLM

**Technological parameters** - Access the updater menu which compares the available thickness and gaps in Resource Editor and SP.PLM

#### **Resource Editor Window**



Click Resource Editor to access more information

## **Tools window**

When accessing the tools window it is possible to compare to tools on SP.PLM and Resource Editor.

Tools				_							
New 🗸 Save	Abort	Delet	te Print	Next Input	Quit						
Te Te	+ (	2									
id Collapse Differen	ice Add Up	date					_				
		Steel Projec	ts PLM				2	Actcut	3.8		
	Diameter	Tool code	Drill type	Properties	Width		Diam	eter Tool code	Drill type	Properties	V
W TIPOB254							254				
Countersink						E S Cou	untersink				
⊡-×	14.00	35				⊡-×	14.00	35			
Drilling						🕀 🔀 Dril	ling				
P 📉	5.00	33				P 🕺	5.00	33			
<b>₽</b> * <b>X</b>	6.00	31				. ₽ <b>X</b>	6.00	31			
中 📉	7.00	31				- P 🗡	7.00	31			
Þ 💢	8.00	31				<b> </b>	8.00	31			
ф- <b>X</b>	9.00	31				<b>X</b>	9.00	31			
ė- 💢	10.00	31				ė 🕺	10.00	31			
ф- <u>Ж</u>	11.00	31				ф- <b>X</b>	11.00	31			
Þ 🕺	12.00	31				<b> </b>	12.00	31			
⊨-X	13.00	31					13.00	31			
	14.00	33					14.00	33			
<b>⊨</b> <u>×</u>	16.00	33					16.00	33			
	18.00	33				×	18.00	33			
l d⊢ 💢	20.00	33				<del> </del>   <del> </del>   <del> </del>	20.00	33			
	22.00	33				<u> </u> <u> </u> <u>,</u>	22.00	33			
L-X	24.00	33				<u>⊢</u> , <u>,</u>	24.00	33			
	26.00	33				L 🕹 🛣	26.00	33			
L 🗛 🚀	28.00	33				古家	28.00	33			
L .	29.00	22				II.	29.00	33			
L 🖓	30.00	33				古家	30.00	33			
L 🗸 💭	32.00	33				∐ 🖓	32.00	33			
品	35.00	22				∐. 🖓	35.00	33			
工 🖓	38.00	22				¦¦?	38.00	33			
I II. 🖓	40.00	22				L 🏠	/0.00	33			
	40.00	33					40.00	33			
	10.00	2					10.00	2			
1 1 2	20.00	2					20.00	2			
	20.00	3					20.00	3			
IT M Punching						🖃 🖂 Pur	noning				

The tools that software has found on Resource Editor and are not present into SP.PLM are represented with green color.



#### Technological parameters window

Save         Abor         Detecte         Print         Next Imple Distribution           Collapse Difference         Add Update         Seel Projects PLM         2         Actor 3.8           TPOB254         Seel Projects PLM         2         Actor 3.8           TPOB254         Diameter         Tool code         Drill type         Properties         Width           Partice         6.00         31         5         5         6         31           PAC         7.00         31         5         6         31         6         10.00         31           PAC         10.00         31         8         10.00         31         8         10.00         31           PAC         10.00         31         8         10.00         31         8         10.00         31           PAC         10.00         31         8         10.00         31         8         10.00         31           PAC         10.00         33         8         10.00         33         8         10.00         33           PAC         20.00         33         8         10.00         33         8         10.00         33           PAC </th <th></th>												
Bit Projects PLM         Contensite         Diameter         Tool code         Drill type         Properties         Width         Diameter         Tool code         Drill type         Properties           Countersink         14.00         35         500         33         14.00         35         14.00         35         14.00         35         14.00         31         14.00         31         14.00         31         14.00         31         14.00         31         14.00         31         14.00         31         14.00         31         14.00         31         14.00         31         14.00         31         14.00         31         14.00         31         14.00         31         14.00         31         14.00         33         14.00         33         14.00         33         14.00         33         14.00         33         14.00         33         14.00         33         14.00         33         14.00         13.00         33         14.00 <th>w Save</th> <th>Abort</th> <th>Dele</th> <th>te Print</th> <th>Next Input</th> <th>Quit</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	w Save	Abort	Dele	te Print	Next Input	Quit						
Colleges Difference         Add Update         Steel Projects PLM         2         Actual 3.           IPDE234         Tool code         Drill type         Properties         Vidth         B         Nimmeter         Tool code         Drill type         Properties         Vidth         B         Nimmeter         Tool code         Drill type         Properties           Countersink         14.00         35         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S         S	E E	+ 0				<b>~</b>						
Steel Projects PLM         Actout 3 / Actout 4 / Actout 4 / Actour	Collapse Differe	ence Add Upo	date					•				
Diameter         Tool code         Drill type         Properties           TPO2264 Countersink         -         -         -         Tool code         Drill type         Properties           Countersink         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         - <t< th=""><th></th><th></th><th>Steel Project</th><th>cts PLM</th><th></th><th></th><th></th><th>2</th><th>Actcut</th><th>3.8</th><th></th><th></th></t<>			Steel Project	cts PLM				2	Actcut	3.8		
TPO254       Import PRO254       Import PRO254       Import PRO254         Import PRO254       Import PRO254       Import PRO254       Import PRO254         <		Diameter	Tool code	Drill type	Properties	Width		Diameter	Tool code	Drill type	Properties	
Countersink	TIPOB254						E- W TIPOB254					
A14.0035A5.0033A6.0031A7.0031A7.0031A8.0031A9.0031A9.0031A1.0031A1.0031A1.0031A1.0031A1.0031A1.0031A1.0031A1.0031A1.0031A3.0031A3.0031A3.0031A3.0033A3.0033A3.0033A3.0033A3.00A3.00A3.00A3.00A3.00A3.00A3.00A3.00A3.00A3.00A3.00A3.00A3.00A3.00A3.00A3.00A3.00A3.00A3.00A3.00A3.00A3.00A3.00A3.00A3.00A3.00A3.00A3.00A3.00A3.00A3.00A <td>Countersink</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>🛱 🔀 Countersink</td> <td></td> <td></td> <td></td> <td></td> <td></td>	Countersink						🛱 🔀 Countersink					
Should and and and and and and and and and an	÷- <u>×</u>	14.00	35				±-××	14.00	35			
5.00       33       6.00       33         6.00       31       6.00       31         6.00       31       6.00       31         6.00       31       6.00       31         6.00       31       6.00       31         6.00       31       6.00       31         6.00       31       6.00       31         6.00       31       6.00       31         6.00       31       6.00       31         6.00       31       6.00       31         6.00       31       6.00       31         6.00       31       6.00       31         6.00       31       6.00       31         6.00       31       6.00       31         6.00       31       6.00       31         6.00       31       6.00       31         6.00       33       6.00       31         6.00       33       6.00       33         6.00       33       6.00       33         6.00       33       6.00       33         6.00       33       6.00       33         6.00	< Drilling						🗗 🔀 Drilling					
	- <u>X</u>	5.00	33				⊕ <u>×</u>	5.00	33			
	• <u>X</u>	6.00	31				E	6.00	31			
A-A       8.00       31       B-A       8.00       31         A-A       9.00       31       B-A       9.00       31         A-A       10.00       31       B-A       10.00       31         B-A       11.00       31       B-A       11.00       31         B-A       12.00       31       B-A       12.00       31         B-A       13.00       31       B-A       13.00       31         B-A       16.00       33       B-A       14.00       33         B-A       18.00       33       B-A       18.00       33         B-A       18.00       33       B-A       18.00       33         B-A       18.00       33       B-A       18.00       33         B-A       20.00       33       B-A       20.00       33	Ð- 📉	7.00	31				. ⊕. <u>×</u>	7.00	31			
9.00       31       9.00       31         9.4       10.00       31       10.00       31         9.4       10.00       31       10.00       31         9.4       12.00       31       9.4       10.00       31         9.4       12.00       31       9.4       12.00       31         9.4       12.00       31       9.4       12.00       31         9.4       13.00       31       9.4       13.00       31         9.4       14.00       33       9.4       16.00       33         9.4       18.00       33       9.4       18.00       33         9.4       20.00       33       9.4       18.00       33         9.4       20.00       33       9.4       9.4       20.00       33         9.4       20.00       33       9.4       9.4       20.00       33         9.4       20.00       33       9.4       9.4       20.00       33         9.4       20.00       33       9.4       9.4       30.00       33         9.4       20.00       33       9.4       9.4       30.00       33	₽• <u>X</u>	8.00	31				E. X	8.00	31			
10.00       31       10.00       31         11.00       31       11.00       31         12.00       31       11.00       31         12.00       31       11.00       31         12.00       31       12.00       31         12.00       31       12.00       31         12.00       31       12.00       31         12.01       33       14.00       33         12.02       33       14.00       33         12.03       33       14.00       33         12.04       33       14.00       33         12.05       33       14.00       33         12.06       33       14.00       33         12.07       33       14.00       33         12.08       33       14.00       33         12.09       33       14.00       33         12.00       33       14.00       33         12.01       33       14.00       33         12.02       33       14.00       33         12.03       33       14.00       33         12.04       33       14.00       33 <td>Ð- 📉</td> <td>9.00</td> <td>31</td> <td></td> <td></td> <td></td> <td>🖽 🏧 🏹</td> <td>9.00</td> <td>31</td> <td></td> <td></td> <td></td>	Ð- 📉	9.00	31				🖽 🏧 🏹	9.00	31			
11.00       31       11.00       31         12.00       31       12.00       31         13.00       31       12.00       31         14.00       33       13.00       31         14.00       33       13.00       31         14.00       33       13.00       33         14.00       33       14.00       33         14.00       33       14.00       33         14.00       33       14.00       33         14.00       33       14.00       33         14.00       33       14.00       33         14.00       33       14.00       33         14.00       33       14.00       33         14.00       33       14.00       33         14.00       33       14.00       33         14.00       33       14.00       33         14.00       33       14.00       33         14.00       33       14.00       33         14.00       33       14.00       33         14.00       33       14.00       33         14.00       33       14.00       33 <td>Ð-: 🏋</td> <td>10.00</td> <td>31</td> <td></td> <td></td> <td></td> <td>🕀 📈</td> <td>10.00</td> <td>31</td> <td></td> <td></td> <td></td>	Ð-: 🏋	10.00	31				🕀 📈	10.00	31			
12.00       31       12.00       31         13.00       31       13.00       31         14.00       33       14.00       33         16.00       33       14.00       33         17.00       31       14.00       33         18.00       33       14.00       33         18.00       33       14.00       33         18.00       33       14.00       33         18.00       33       14.00       33         18.00       33       14.00       33         18.00       33       14.00       33         18.00       33       14.00       33         18.00       33       14.00       33         18.00       33       14.00       33         18.00       33       14.00       33         18.00       33       14.00       33         18.00       33       14.00       33         18.00       33       14.00       33         18.00       33       14.00       33         18.00       33       14.00       33         18.00       33       14.00       33 <td>Ð 📉</td> <td>11.00</td> <td>31</td> <td></td> <td></td> <td></td> <td><b>⊡</b> ~ 💢</td> <td>11.00</td> <td>31</td> <td></td> <td></td> <td></td>	Ð 📉	11.00	31				<b>⊡</b> ~ 💢	11.00	31			
13.00       31       13.00       31         14.00       33       14.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       32.00	9 🏹	12.00	31				🖽 – 🏹	12.00	31			
14.00       33       14.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       33       16.00       33         16.00       30.00       33       16.00       33         16.00       33.00       33       16.00       32.00         16.00       33.00 <td>Ð- 🏹 —</td> <td>13.00</td> <td>31</td> <td></td> <td></td> <td></td> <td>😐 🏹</td> <td>13.00</td> <td>31</td> <td></td> <td></td> <td></td>	Ð- 🏹 —	13.00	31				😐 🏹	13.00	31			
16.00       33       16.00       33         18.00       33       16.00       33         20.00       33       18.00       33         20.00       33       19.7       20.00       33         20.00       33       19.7       20.00       33         20.00       33       19.7       20.00       33         20.00       33       19.7       20.00       33         20.00       33       19.7       20.00       33         20.00       33       19.7       20.00       33         20.00       33       19.7       20.00       33         20.00       33       19.7       20.00       33         20.00       33       19.7       20.00       33         20.00       33       19.7       20.00       33         20.00       33       19.7       20.00       33         20.00       33       19.7       20.00       33         20.00       33       19.7       20.00       33         20.00       33       19.7       20.00       33         20.00       33       19.7       30.00       33 <td>B- 🂢</td> <td>14.00</td> <td>33</td> <td></td> <td></td> <td></td> <td>😐 📈</td> <td>14.00</td> <td>33</td> <td></td> <td></td> <td></td>	B- 🂢	14.00	33				😐 📈	14.00	33			
18.00       33       18.00       33         20.00       33       18.00       33         20.00       33       18.00       33         20.00       33       19.7       20.00       33         20.00       33       19.7       20.00       33         20.00       33       19.7       20.00       33         20.00       33       19.7       20.00       33         20.00       33       19.7       20.00       33         20.00       33       19.7       20.00       33         20.00       33       19.7       20.00       33         20.00       33       19.7       20.00       33         20.00       33       19.7       20.00       33         20.00       33       19.7       20.00       33         20.00       33       19.7       20.00       33         20.00       33       19.7       30.00       33         20.00       33       19.7       30.00       33         20.00       33       19.7       30.00       33         20.00       33       19.7       30.00       33 <td>Ð- 📈</td> <td>16.00</td> <td>33</td> <td></td> <td></td> <td></td> <td><b>⊕</b> %</td> <td>16.00</td> <td>33</td> <td></td> <td></td> <td></td>	Ð- 📈	16.00	33				<b>⊕</b> %	16.00	33			
20.00       33       33       9-%       20.00       33         20.00       33       9-%       22.00       33         20.00       33       9-%       22.00       33         20.00       33       9-%       24.00       33         20.00       33       9-%       26.00       33         20.00       33       9-%       28.00       33         20.00       33       9-%       28.00       33         20.00       33       9-%       28.00       33         20.00       33       9-%       28.00       33         20.00       33       9-%       28.00       33         20.00       33       9-%       28.00       33         20.00       33       9-%       30.00       33         20.00       33       9-%       30.00       33         20.01       33       9-%       32.00       33         20.02       33       9-%       32.00       33         20.02       33       9-%       38.00       33         20.03       33       9-%       38.00       33         20.03       33 </td <td>÷- 💢</td> <td>18.00</td> <td>33</td> <td></td> <td></td> <td></td> <td>😐 🏹</td> <td>18.00</td> <td>33</td> <td></td> <td></td> <td></td>	÷- 💢	18.00	33				😐 🏹	18.00	33			
22.00       33       33       1       1       22.00       33         24.00       33       1       1       24.00       33         24.00       33       1       1       24.00       33         24.00       33       1       1       24.00       33         24.00       33       1       1       24.00       33         24.00       33       1       1       24.00       33         24.00       33       1       1       24.00       33         24.00       33       1       1       24.00       33         24.00       33       1       1       24.00       33         24.00       33       1       1       24.00       33         24.00       33       1       1       24.00       33         25.00       33       1       1       29.00       33         26.00       33       1       1       30.00       33         27.00       33       1       1       1       1         28.00       33       1       1       1       1         29.00       33       1 </td <td>⊪ 💢</td> <td>20.00</td> <td>33</td> <td></td> <td></td> <td></td> <td>±-%</td> <td>20.00</td> <td>33</td> <td></td> <td></td> <td></td>	⊪ 💢	20.00	33				±-%	20.00	33			
24.00       33       1       1       1       24.00       33         26.00       33       1       1       26.00       33         26.00       33       1       1       26.00       33         27.00       33       1       1       28.00       33         27.00       33       1       1       28.00       33         27.00       33       1       1       29.00       33         27.00       33       1       1       1       1         27.00       33       1       1       1       1       1         27.00       33       1       1       1       1       1       1         27.00       33       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1	3- X	22.00	33				± 🔨	22.00	33			
P       26.00       33         P       28.00       33         P       29.00       33         P       30.00       33         P       30.00       33         P       30.00       33         P       20.00       33         P       30.00       33      <	- X	24.00	33				<b>⊕</b> 💢	24.00	33			
28.00       33         29.00       33         29.00       33         30.00       33         20.00       33         20.00       33         20.00       33         20.00       33         20.01       33         20.02       33         20.03       34         20.04       32.00         30.05       33         20.05       33         20.06       33         20.07       33         20.08       33         20.09       33         20.00       33         20.01       33         20.02       33         20.03       33         20.04       33         20.05       33         20.06       33         20.07       33         20.08       33         20.09       33         20.09       33         20.09       33         20.09       33         20.09       33         20.09       33	- 📈	26.00	33				_ <u>⊕ X</u>	26.00	33			
P       29.00       33         P       30.00       33         P       32.00       33         P       35.00       33         P       35.00       33         P       38.00       33         P       38.00       33         P       38.00       33	- X	28.00	33				±- 🕺	28.00	33			
P     30.00     33       P     32.00     33       P     35.00     33       P     35.00     33       P     38.00     33       P     38.00     33	- 2	29.00	33					29.00	33			
P     32.00     33       P     35.00     33       P     38.00     33	- <u>2</u>	30.00	33				I I I I I I I I I I I I I I I I I I I	30.00	33			
P 2     25:00     33       P 2     38:00     33       P 2     38:00     33	2	32.00	22				T. 🖓	32.00	33			
P − − − − − − − − − − − − − − − − − − −		35.00	22				L 2	35.00	22			
		28.00	22					20.00	22			
h 40.00 22		30.00	22				1.2	40.00	22			
	1927	40.00	50			_		40.00	33			

The thickness which values are different are represented in red color.

C

By clicking the Update icon you can automatically update this values into SP.PLM. Then you have to press Save to validate before closing the window.

The thickness that software has found on Resource Editor and are not present into SP.PLM are represented with green color.



#### Nester



#### Nester: the 1st step for manual plate nesting



Pressing the Nester icon will automatically open the Nester module.

It is possible to send many different parts to the Plate Nesting module, different thickness and different material degree parts will be managed by separate as well as it is not possible to manage the whole parts into one plate.

In this case, the software will offer us many different nesting possibilities and we may choose the one we want to nest.

The whole process may be completed for the different nesting by separate.

	₹								Te	ools
Steel-Projec	c <b>ts</b> Project Data	Project Manager data	Nesting data	Fabrication Job data	Feedback data	Shipping data	Scheduling data	a Configuration	Utilities Plate	Nesting
Preview	Workstations Nester	PathFinder DocViewer	Offcuts Offcuts import manage	s Standards Gap	ts Automatic Impo	ort Production Tin Input	Remaining Ca Parts p	talog Priorities Config art edition Filt	gure Apply er Filter	
Nev	Save TIP	OB254 - 6.00 - STEEL OB254 - 10.00 - STEEL	- S235JR S355JR	Next Input	Quit					
Plate	Nesting 1389									
2 Comp	onent Stock 🕺 Opti	imize Cutting								
		-				144 I	5.4			
-	Project	Component	Drawing	Assement Mark	Phase	Workstation	Profile	Material Grade	Job	Material code
	170678	1606	53	5X19		TIPOB254	TOLES	SZ35JR		STEEL
	170678	1605	53	5X22		TIPOB254	TOLES	5235JR		STEEL
	170678	1605	53	5721		TIPOB254	TOLES	5235JR		STEEL
	17067B	2059	53	N308		TIPOB254	TOLES	SZ35JR		STEEL
	170678	/54	53	5X20		TIPOB254	TOLES	5235JR		STEEL
	170678	2057	53	5X20		TIPOB254	TOLES	5235JR		STEEL
	170678	2065	53	5721		TIPOB204	TOLETO	S300JR C00EUD		STEEL
	170678	2058	53	5721		TIPOB254	TOLES	5235JR		STEEL
	170078	2007	50	5×15		TIPOB254	TOLES	5235JR		STEEL
	170678	2003	52	SX19		TIPOP254	TOLES	\$33530H		STEEL
	170678	1607	53	SX19		TIPOR254	TOLES	\$235 IP		STEEL
	17067B	1606	53	5222		TIPOR254	TOLES	\$235 IR		STEEL
	17067B	1605	53	SX20		TIPOB254	TOLEG	\$235JB		STEEL
	170678	2056	53	855		TIPOB254	TOLES	\$235 IR		STEEL
	170678	754	53	SX21		TIPOB254	TOLES	\$235JB		STEEL
	17067B	1606	53	SX21		TIPOB254	TOLES	\$235JB		STEEL
	17067B	1607	53	SX21		TIPOB254	TOLES	\$235 IR		STEEL
	17067B	1607	53	SX21		TIPOB254	TOLE6	S235JR		STEEL

Check component and stock before starting

If there are various thickness's and/or grades, select a nesting to start Nester

Selecting a nesting will open the Nester module.

# **Nester: description**

🔹 Nester - [1467_2.r01]	– 🗆 X
Fichier Edition Affichage Placement Technologie Zones Macros Fenêtre ?	_ & ×
	↑ Coordonnées ₽×
	X (mm) 0.00
	Y (mm) 0.00
	dX (mm) 0.00
	dY (mm) 0.00
	distance (mm) 0.00
	angle (°) 0.00
	Appliquer
	Paramètres 7 ×
	Placement ^
	Nom 1467_2.r01
	Multiplicité 1
	Longueur uti 5712.41
	Chute au froi 23.45
	Chute totale 26.89
	Nombre de p 11
	Sauver Restaurer
	¥
<	>
Pièce	<b>#</b> ×
Drawing Assembly Part Material Grade Description Treatment Painting Commer	nt 1 Comment 2 Comment 3
	>
Pièce   Format   Module   Placement   6	
Quantité placée • 11 / 11 Format (6000 v 2000)• 1 / 20	0048 Surface utilisée : 11 STEEL - 10.00 mm





By clicking the icons it is possible to position parts automatically into 1 plate, automatically into all the necessary plates and automatic positioning with a limit of time for calculation.



By using these icons it is possible to select to part we want, to move, to copy, delete one part, delete all (in one plate) or positioning with precision.

1° rotation	1 (Pave num.)
5° rotation	5 (Pave num.)
30° rotation	Т
45° rotation	Q
90° rotation	9 (Pave num.)
Reverse rotation	- (Pave num.)

These are the short cuts to rotate parts when selected.

Double torch mode or common cut mode icons, they may be selected before positioning parts (automatic or manual)

:	ivesting								÷ .	^
1	Name	Multiplicity	Length (mm)	Width (mm)	Remnant to N	Total remnant	Parts quantity	Format		*
	-1	1	5,990.00	1,490.00	25.98	26.01	330	-1		E
a	<b>m</b> 2	1	0.00	0.00	100.00	100.00	0	-1		
a	<b>m</b> 3	1	0.00	0.00	100.00	100.00	0	-1		*
T	Part Format M	Iodule Nesting								

By clicking on the tabs it is possible to see the available options

- Part: we see remaining parts to nest
- Format: we can take a new format by double clicking on the "" icon
- Nesting: we see the different plates already nested (also by double clicking on them)



H

Remnant (cutting line) is automatically added if possible, it can be removed, modified or reset by using the "Technology" options

Save icon, when Nester completed, click save and close or close de window and save

#### Steel Projects PLM 1.19.x

# After closing the Nester module the result is available in optimize cutting tab as following:

8 Cor	E Component Stock Optimize Cutting														
			Workstation	Bar N°	Profile	Material Grade	Treatment	Quantity	Length	V					
	🥪 🌜	+	TIPOB254	1	TOLE4	S275JR		1	6000.00	20					
•	🥩 🐇	Ð	TIPOB254	2	TOLE10	S275JR		1	6000.00	20					

# Pathfinder



# Pathfinder: the 2nd step for manual plate nesting



Selecting an optimization cutting and pressing the PathFinder icon will automatically open the Nester module.

🕄   🗰 🗉	⇒																Tools	
Steel-Project	s Project	Data	Project N	lanager data		ng data		Job data	Feedback	: data	Shipping data	Scheduling	data	Configurati		ties P	late Nesting	
Preview \	Workstations	Nester	PathFinder	DocViewer	Offcuts import	Offcuts manager	Standards Gap	Reports	Automatic	Import •	Production Time Input	Remaining Parts	Catalog part	Priorities edition	Configure Filter	Apply Filter		
New New	Save		Nbort	Delete	<b>S</b> Pri	int 🖊	Next Input	(U) Qu	iit									
Plate I	Nesting 1467																	
E Component 🖗 Stock 🐼 Optimize Cu ing														4 ⊳				
				Wo station	Ba	r N°	Profile		Material	Grade	Treatment	Quantit	у	Length		Width	I	Used length
	6	*	÷	TIPOB. 4	1		TOLE	ŧ.	S275JR			1		6000.00	)	2000.00	5	804.60
•	ø	sk.	±.	TIPOB254	2		TOLE	0	S275JR			1		6000.00		2000.00	5	712.41
					2													


# Check component and stock before starting

If many possibilities, select a nesting to start Nester

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E Fichier	Edition	Affich	age	Démarrage	Zon	e O	ptimisati	on	Opérat	tion	Séquenc	e S	quelette	e Pos	st-proce	esseur	Macr	ros ?	?											
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Selecting a nesting will open the Nester module.

Save icon, when Pathfinder completed, click save

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	OK	

This window will appear. Select your cutting mode and

select next plate to complete pathfinder, or close

# **Turret: description**





Menu for managing cutting lines

# **Pathfinder: description**





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# **Duplication parameters**

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Remnant (cutting line) is automatically added if possible, it can be removed, modified or reset by using the "Technology" options

### DocViewer



#### DocViewer: the 3th step for manual plate nesting

B

After complete Nester and Pathfinder, by pressing the DocViewer icon you will access to the DocViewer module. The icon is only available when Nester and pathfinder completed

(Optimize cutting tab must be also selected)

Preview	Workstations	Nester	VathFinder	DocViewer	Offcuts import	Offcuts manager	Standards Gap	eports	Automatic	Import T	Production Time Input	Remaining Parts	Catalog part	Priorities edition	Configure Filter	Apply Filter
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When DocViewer module window appears, you should select one of the next options to view or print one or more reports (for one or more plates).

Depending the selected option, the process may be repeat after selecting a different plate on the left bottom window.



The machine report may be accessible (after around 30s) on the pdf viewer, check your windows bar where you can find it.

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# **Report description**

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No. Name	Qty Reference	RTS LIST Dimensions	Surface	102_01.dpr 6	No. Name	Qty Reference	PARTS LIST Dimensions	Surface	Weight	
No. Name 1 99/42259- 1 09/42259-	Qty Reference 3 BAT2 PL2	RTS LIST Dimensions 170 X 200 mm	Surface 0.034 m ²	102_01.dpr 6 Weight 2.7 kg	No. Name 27. er95161b-0566-4b4d 28. 600746015-6327-460-4	Qty Reference 1 BAT2 PL32 2 BAT2 PL25	PARTS LIST Dimensions 1131 X 57 mm 188 X 188 mm	Surface 0.003 m ² 0.029 m ²	Weight 0.3 kg 2.3 kg	
No. Name 1 9004-4222-boli federoidea0 2 bio-2443220	Qty         Reference         PA           3         BAT2 PL2         BAT2 PL2           4	RTS LIST Dimensions 170 X 200 mm 209 X 80 mm	Surface 0.034 m ²	102_01.dpr 6 Weight 2.7 kg	No. Name 27	Qty         Reference           1         BAT2 PL32           2         BAT2 PL25           4         BAT2 V1	PARTS LIST Dimensions 113 X 57 mm 188 X 188 mm 346 X 311 mm	Surface 0.003 m ² 0.029 m ² 0.077 m ²	Weight 0.3 kg 2.3 kg 6.0 kg	
No. Name 1. 9x42255-54 1. 9x42255-54 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	Oty         Reference         PA           4         8         BAT2 PL2         4/1           4/1         8         BAT2 V3         4/2	RTS LIST Dimensions 170 X 200 mm 209 X 80 mm 346 X 310 mm	Surface 0.034 m ² 0.017 m ²	Weight 2.7 kg 1.3 kg 6.0 kg	No. Name 27 er95151b-0556-4040 1900/1905-5421-460- 1909/140-756-0064 1909/440-756	Qty         Reference           1         BAT2 PL32           2         BAT2 PL25           4         BAT2 V1           4         BAT2 V8	PARIS LIST Dimensions 113 x 57 mm 188 X 188 mm 346 X 311 mm 202 X 50 mm	Surface 0.003 m ² 0.029 m ² 0.077 m ² 0.010 m ²	Weight 0.3 kg 2.3 kg 6.0 kg 0.8 kg	
No. Name 1. 9442259- 1. 9444259- 1. 9442259- 1. 9442259- 1. 9442259- 1. 9442259- 1. 9442259- 1. 944259- 1. 94425- 1. 9445- 1. 9445	Qty         Reference         PA           4         3         BAT2 PL2           4/755-1         BAT2 PL2           4/755-1         BAT2 V5	RTS LIST Dimensions 170 x 200 mm 209 x 80 mm 346 x 310 mm 299 x 80 mm	Surface 0.034 m ² 0.017 m ² 0.076 m ²	102_01.4pr 6	No. Name 27. e955151-0556-40-4 28. 6007actb-4516-450-4 5059-4608-8064-70- 9. 5007-4608-8064-70- 9. 6007-4608-8064-70- 3. 6077-4504-9666-70- 3. 6077-4504-9666-70- 3. 6077-4504-96-62-80-	Qty         Reference           1         BAT2 PL32           2         BAT2 PL32           4         BAT2 V1           4         BAT2 V8           4         BAT2 P1	PARIS LIST Dimensions 113 X 57 mm 185 X 181 mm 346 X 531 mm 202 X 50 mm 98 X 92 mm	Surface 0.003 m ² 0.029 m ² 0.077 m ¹ 0.010 m ² 0.009 m ²	Weight 0.3 kg 2.3 kg 6.0 kg 0.8 kg 0.7 kg	
No. Name 1. 946/2590- cef4422-960- 1. 946/2590- 1. 946/202-3100 1. 966/202-3100 1. 966/202-300 1.	Oty         Reference         PA           3         BAT2 PL2         4-           4-         3         BAT2 PL2           4-         SA         BAT2 V5           4-         BAT2 V5         4-           4-         SA         BAT2 V5           4-         BAT2 V5         4-           4-         BAT2 V5         3-            BAT2 V5         3-	RTS LIST Dimensions 170 X 200 mm 209 X 80 mm 346 X 310 mm 334 X 102 mm 186 X 105 mm	Surface 0.034 m ² 0.017 m ² 0.017 m ² 0.017 m ² 0.017 m ² 0.017 m ²	102_01.dpr 6	No. Name 22 - 601 Auto 2014 - 604 23 - 601 Auto 2014 - 604 24 - 601 Auto 2014 - 604 25 - 604 - 604 - 804 - 604 - 604 - 804 - 604 - 604 - 604 -	Qty         Reference           1         BAT2 PL32           2         BAT2 PL32           4         BAT2 V1           1         BAT2 PL44	PARTS LIST Dimensions 1187 × 12 mm 188 × 189 mm 346 × 311 mm 202 × 314 mm 98 × 92 mm 219 × 100 mm	Surface 0.003 m ² 0.029 m ² 0.077 m ² 0.010 m ² 0.009 m ² 0.022 m ²	Weight 0.3 kg 2.3 kg 6.0 kg 0.8 kg 0.7 kg 1.7 kg	
No.         Name           19         906/3259- ceff-4322-b61- ceff-4322-b61- teff-4322-b61- teff-4323-b61- scele-scele-scele- ceff-b62-b62- scele-scele-scele- teff-b62-b62- scele-scele-scele- teff-b62-s	Qty         Reference         PA           3         BA12 PL2         A           4-3         BA12 PL2         A           4-3756-1         BA12 PL2         A           4-3756-1         BA12 PL2         A           4-3756-1         BA12 PL2         A           4-3756-1         BA12 PL2         A           4-4572-1         BA12 PL2         A           4405-1         BA12 PL2         A           14         BA12 PL3         A           4405-2         BA12 PL3         A	RTS LIST Dimensions 170 x 200 mm 209 x 80 mm 346 x 310 mm 354 x 102 mm 150 x 150 mm	Surface 0.034 m ² 0.017 m ²	Weight 2.7 kg 1.3 kg 6.0 kg 2.4 kg 2.4 kg 2.4 kg 1.8 kg	No.         Name           22         -0000 Mills 1000 for data of the formation of the form	Qty         Reference           1         BAT2 PL32           2         BAT2 PL32           4         BAT2 V1           4         BAT2 V1           4         BAT2 V1           4         BAT2 PL3           5         BAT2 PL4           5         BAT2 V1	PARTS LIST Dimensions 113 A 5 mm 138 A 160 mm 348 X 311 mm 202 X 50 mm 203 K 92 mm 219 X 100 mm 333 K 81 mm 333 K 81 mm	Surface 0.003 m ² 0.029 m ² 0.077 m ² 0.010 m ² 0.022 m ² 0.027 m ² 0.027 m ²	Weight 0.3 kg 2.3 kg 6.0 kg 0.8 kg 0.7 kg 1.7 kg 2.1 kg 2.1 kg	
No.         Name           1         cel42259-1           cel74422-b01         cel74422-b01           1         cel74422-b01           2         basic 2d03200-           3         basic 2d03200-           2         basic 2d03200-           3         basic 2d03200-           4         colocit 40-6807           5         scolocit 40-6807           6         r/2014000-           7         stocolocit 40-6807           6         r/2014000-           7         stocolocit 40-6807           6         r/2014000-           7         stocolocit 40-6807           8         r/2014000-           7         stocolocit 40-6807           6         r/2014000-           7         stocolocit 40-6807           8         r/2014000-           8         r/2014000-           8         r/201400-           9         stocolocit 40-6807           8         r/201400-           9         stocolocit 40-6807           9         stocolocit 40-6807           9         stocolocit 40-6807           9         stocolocit 40-6807	Qty         Reference         PA           3         BA12 PL2         3           4-3         BA12 PL2         3           4-3075-1         BA12 PL2         3           4-3075-1         BA12 PL2         3           4-436-4         BA12 V5         4           4-3072-1         BA12 PL3         5           4-465-1         BA12 PL3         4           4-465-1         BA12 PL3         4           4-465-1         BA12 PL3         4           4-465-1         BA12 PL3         4	RTS LIST Dimensions 170 X 200 mm 209 X 80 mm 209 X 80 mm 209 X 80 mm 134 X 102 mm 166 X 160 mm 160 X 150 mm 160 X 150 mm 190 X 111 mm	Surface 0.034 m ² 0.017 m ² 0.017 m ² 0.017 m ² 0.017 m ² 0.011 m ² 0.021 m ²	Weight 2.7 kg 1.3 kg 6.0 kg 1.3 kg 2.4 kg 2.4 kg 1.8 kg 1.8 kg 1.5 kg	No.         Name           22.         -editis (std) - 0566-4564           23.         -editis (std) - 0566-4564           24.         -editis (std) - 0564-4567           25.         -0504-4562-4564           26.         -0504-4562-4564           27.         -0504-4564-4564-786           28.         -0504-4564-4564-786           29.         -0504-4564-4564-786           20.         -0504-4564-656-786           20.         -0504-4564-656-786           20.         -0504-566-786           20.         -0504-566-786           20.         -0504-566-786           20.         -0504-566-786           20.         -0504-566-786           20.         -0504-566-786           20.         -0504-566-786           20.         -0504-566-786           20.         -0504-566-786           20.         -0504-566-786           20.         -0504-566-786           20.         -0504-566-786           20.         -0504-566-786           20.         -0504-566-786           20.         -0504-566-786           20.         -0504-566-786           20.         -0504-566-786 <td>Qty         Reference           1         MA72 PL32           2         MA72 PL32           4         BA72 V1           4         BA72 V1           4         BA72 V1           4         BA72 V1           1         BA72 P1           1         BA72 P1           1         BA72 P1           1         BA72 P1           5         BA72 V9           0         BA72 P15</td> <td>PARTS LIST Dimensions 1112 A 52 mm 108 X 108 mm 202 X 50 mm 201 X 502 mm 219 X 100 mm 235 X 81 mm 200 X 100 mm</td> <td>Surface 0.003 m² 0.029 m² 0.077 m² 0.010 m² 0.022 m² 0.022 m² 0.020 m²</td> <td>Weight 0.3 kg 2.3 kg 0.8 kg 0.7 kg 1.7 kg 2.1 kg 1.6 kg</td> <td></td>	Qty         Reference           1         MA72 PL32           2         MA72 PL32           4         BA72 V1           4         BA72 V1           4         BA72 V1           4         BA72 V1           1         BA72 P1           1         BA72 P1           1         BA72 P1           1         BA72 P1           5         BA72 V9           0         BA72 P15	PARTS LIST Dimensions 1112 A 52 mm 108 X 108 mm 202 X 50 mm 201 X 502 mm 219 X 100 mm 235 X 81 mm 200 X 100 mm	Surface 0.003 m ² 0.029 m ² 0.077 m ² 0.010 m ² 0.022 m ² 0.022 m ² 0.020 m ²	Weight 0.3 kg 2.3 kg 0.8 kg 0.7 kg 1.7 kg 2.1 kg 1.6 kg	
No.         Name           1         964/225-b61- (646703205-b61- (646703205-b61- (646703205-b61- 25-b660305-b61- (64690205- 25-b660305-b61- (11-646-960- 5-c61-46-649)           2         5-b66030- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-646-960- (11-	Oty         Reference         PA           3         BAT2 PL2         2765         3           27053         BAT2 PL2         2765         3           27054         BAT2 PL2         2765         3           27055         BAT2 PL2         2767         3           27054         BAT2 PL2         3         3           20051         BAT2 PL2         3         3           20052         BAT2 PL2         3         4           20054         BAT2 PL2         3         4	RTS LIST Dimensions 170 X 200 mm 209 X 80 mm 346 X 310 mm 354 X 102 mm 150 X 160 mm 150 X 150 mm 150 X 100 mm 150 X 100 mm	Surface 0.034 m ² 0.017 m ² 0.007 m ² 0.001 m ² 0.001 m ² 0.002 m ² 0.002 m ² 0.002 m ² 0.002 m ²	<b>Weight</b> 2.7 kg 1.3 kg 6.0 kg 2.4 kg 2.4 kg 2.4 kg 1.5 kg 1.5 kg 1.5 kg 1.5 kg	No.         Name           27.         eds051511-0566-4bid           28.         60214661-8621-4626- 5659-4650-4664- 5659-4650-4664- 300         b0204667362           29.         25627-4620- 6027-4620-4604-40890- 301         b0204667362           29.         46204667362         b020-460- 301           29.         46204667362         b020-460- 301           29.         46204627362         b020-400- 301           20.         46204627362         b020-400- 302           20.         46204627362         b020-400- 302           20.         5020-5020         b020-5020           20.         5020-5020         b020-5020           20.         5020-5020         b020-5020           20.         5020-5020         5020-5020	Oty         Reference           1         BA72         P132           2         BA72         P132           4         BA72         V1           4         BA72         V1           4         BA72         V1           5         BA72         V1           6         BA72         V1           6         BA72         V1           6         BA72         V1           7         BA72         V1	PARTS LIST Dimensions 1112 X 57 mm 108 X 108 mm 346 X 311 mm 2022 X 50 mm 2018 X 502 mm 213 X 100 mm 335 X 83 mm 2005 X 100 mm	Surface 0.003 m ² 0.027 m ² 0.010 m ² 0.027 m ² 0.022 m ² 0.020 m ² 0.020 m ²	Weight 0.3 kg 0.8 kg 0.7 kg 0.7 kg 1.7 kg 1.6 kg 0.4 kg 0.4 kg	
No.         Name           1         9-64/2 259-54           2         5-66/2 529-54           2         5-66/2 529-54           3         2-63/2 529-54           3         2-63/2 529-54           3         2-63/2 529-54           3         2-63/2 529-54           3         2-63/2 529-54           4         5-62/2 529-54           5         5-62/2 529-54           7         5-62/2 529-54           7         5-62/2 529-54           7         5-62/2 529-54           7         5-62/2 529-54           9         133/2 57-54           9         133/2 57-54           9         133/2 57-54           9         133/2 57-54           11         9-50/2 529-54           11         9-50/2 529-54           11         9-50/2 529-54           11         9-50/2 529-54           11         9-50/2 529-54           12         9-50/2 529-54           13         9-50/2 529-54           14         9-50/2 529-54           15         9-50/2 529-54           16         50/2 529-54           17         9-50/2 52	Qty         Reference           4         3         BAT2 PL2           4758-1         BAT2 PL2           4305-4         BAT2 PL2           14         BAT2 PL2           1305         BAT2 PL2           14305-4         BAT2 PL3           4455-2         BAT2 PL3           4455-3         BAT2 PL3           1435-4         BAT2 PL3           1435-5         BAT2 PL3           1435-6         BAT2 PL3           1435-7         BAT2 PL3           1435-8         BAT2 PL3	RTS LIST Dimensions 1707 X200 mm 209 X 80 mm 346 X 310 mm 346 X 102 mm 186 X 166 mm 190 X 100 mm 190 X 111 mm 189 X 160 mm 189 X 166 mm	Surface 0.034 m ² 0.017 m ³ 0.076 m ³ 0.037 m ³ 0.037 m ³ 0.037 m ³ 0.037 m ³ 0.037 m ³ 0.037 m ³	N2_01.4pt B Weight 2.7 kg 1.3 kg 2.4 kg 2.4 kg 1.5 kg 1.5 kg 1.5 kg 2.4 kg	No.         Name           27         #9551516-0556-40-64           28         600714625-4516-450-6           29         500714625-4516-450-6           20         500714625-4516-450-6           20         50071-650-650-6           20         50071-650-650-7           20         50071-650-650-7           20         50071-650-7           20         50071-650-7           20         50071-650-7           20         50071-650-7           20         50071-650-7           20         50071-650-7           20         50071-650-7           20         50071-650-7           20         50071-650-7           20         50071-650-7           20         50071-650-7           20         50071-650-7           20         50071-650-7           20         50071-650-7           20         50071-650-7           20         50071-7007-7	Oty         Reference           BAT2 P132         BAT2 P132           2         BAT2 P134           4         BAT2 V1           4         BAT2 P134           4         BAT2 P144           5         BAT2 P144           6         BAT2 P144           6         BAT2 P144           7         BAT2 P145           1         BAT2 P145           1         BAT2 P135           1         BAT2 P135	PARIS LIST Dimensions 185 X 188 mm 346 X 311 mm 202 X 50 mm 219 X 100 mm 238 X 92 mm 249 X 100 mm 200 X 100 mm 200 X 100 mm 300 X 100 mm	Surface 0.003 m ² 0.027 m ² 0.010 m ² 0.010 m ² 0.022 m ² 0.022 m ² 0.020 m ² 0.020 m ² 0.020 m ²	Weight 0.3 kg 5.3 kg 6.3 kg 0.8 kg 1.7 kg 1.6 kg 0.7 kg 0.7 kg 1.6 kg 0.7 kg 1.4 kg	
No.         Name           1         9-642259- 5647035000           2         Seeder 2000           3         535-6400, 2000           3         535-6400, 2000           3         535-6400, 2000           3         535-6400, 2000           3         535-6400, 2000           4         536-600, 2000           5         77-610, 2000           3         535-6400, 2000           3         535-6400, 2000           3         535-6400, 2000           4         5400, 2000           3         535-6400, 2000           3         535-6400, 2000           3         535-6400, 2000           3         535-6400, 2000           3         535-6400, 2000           3         535-6400, 2000           3         535-6400, 2000           3         535-6400, 2000           3         535-6400, 2000           3         535-6400, 2000           3         535-6400, 2000           3         535-6400, 2000           3         535-6400, 2000           3         535-6400, 2000           3         535-6400, 2000           3 <td>Qty         Reference           4         3         BAT2 PL2           4         3         BAT2 PL2           4         6         BAT2 PL3           6         BAT2 PL3         BAT2 PL3           6         BAT2 PL3         BAT2 PL3           6         2         BAT2 PL3           6         2         BAT2 PL3           6         2         BAT2 PL3           6         3         BAT2 PL3           6         2         BAT2 PL3           6         2         BAT2 PL3           6         3         BAT2 PL3</td> <td>RTS LIST Drensions 170 × 200 mm 299 × 80 mm 346 × 310 mm 189 × 106 mm 159 × 150 mm 159 × 150 mm 159 × 111 mm 159 × 111 mm 159 × 166 mm 750 × 600 mm</td> <td>Surface 0.034 m³ 0.017 m³ 0.017 m³ 0.017 m³ 0.011 m³ 0.012 m³ 0.012 m³ 0.012 m³ 0.011 m³</td> <td>N2,01.44 () Weight 2.7 kg 1.3 kg 2.4 kg 2.4 kg 1.5 kg 2.4 kg 1.5 kg 2.4 kg 1.5 kg 1</td> <td>No.         Name           202         Notifies        </td> <td>Oty         Reference           1         BAT2 P132           2         BAT2 P132           2         BAT2 P132           4         BAT2 V1           4         BAT2 V1           4         BAT2 P132           1         BAT2 P14           5         BAT2 P13           1         BAT2 P131           1         BAT2 P131           1         BAT2 P133           1         BAT2 P133</td> <td>PARIS LIST Dimensions 188 x 188 mm 346 x 311 mm 202 x 50 mm 38 x 92 mm 219 x 100 mm 205 x 100 mm 205 x 100 mm 395 x 55 mm 395 x 55 mm 395 x 55 mm</td> <td>Surface 0.003 m² 0.025 m² 0.007 m² 0.009 m² 0.020 m² 0.020 m² 0.020 m² 0.020 m² 0.020 m² 0.020 m² 0.020 m²</td> <td>Weight 2.3 kg 5.7 kg 0.8 kg 0.7 kg 1.7 kg 1.6 kg 0.4 kg 0.4 kg 0.4 kg 0.4 kg 0.4 kg 0.4 kg 0.7 kg 0.4 kg 0.7 kg</td> <td></td>	Qty         Reference           4         3         BAT2 PL2           4         3         BAT2 PL2           4         6         BAT2 PL3           6         BAT2 PL3         BAT2 PL3           6         BAT2 PL3         BAT2 PL3           6         2         BAT2 PL3           6         2         BAT2 PL3           6         2         BAT2 PL3           6         3         BAT2 PL3           6         2         BAT2 PL3           6         2         BAT2 PL3           6         3         BAT2 PL3	RTS LIST Drensions 170 × 200 mm 299 × 80 mm 346 × 310 mm 189 × 106 mm 159 × 150 mm 159 × 150 mm 159 × 111 mm 159 × 111 mm 159 × 166 mm 750 × 600 mm	Surface 0.034 m ³ 0.017 m ³ 0.017 m ³ 0.017 m ³ 0.011 m ³ 0.012 m ³ 0.012 m ³ 0.012 m ³ 0.011 m ³	N2,01.44 () Weight 2.7 kg 1.3 kg 2.4 kg 2.4 kg 1.5 kg 2.4 kg 1.5 kg 2.4 kg 1.5 kg 1	No.         Name           202         Notifies	Oty         Reference           1         BAT2 P132           2         BAT2 P132           2         BAT2 P132           4         BAT2 V1           4         BAT2 V1           4         BAT2 P132           1         BAT2 P14           5         BAT2 P13           1         BAT2 P131           1         BAT2 P131           1         BAT2 P133           1         BAT2 P133	PARIS LIST Dimensions 188 x 188 mm 346 x 311 mm 202 x 50 mm 38 x 92 mm 219 x 100 mm 205 x 100 mm 205 x 100 mm 395 x 55 mm 395 x 55 mm 395 x 55 mm	Surface 0.003 m ² 0.025 m ² 0.007 m ² 0.009 m ² 0.020 m ²	Weight 2.3 kg 5.7 kg 0.8 kg 0.7 kg 1.7 kg 1.6 kg 0.4 kg 0.4 kg 0.4 kg 0.4 kg 0.4 kg 0.4 kg 0.7 kg 0.4 kg 0.7 kg	
No.         Name           1         9-642239- c64444230- c64444230- c64444230- 3         5-6642300- c6444230- c642402- 3           2         5-6642300- c642643- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c742640- c7440- c742640- c742640- c7440- c7440- c7440- c7440- c7440- c7440- c7440	Qty         Reference         PA           3         BAT2 PL2         A           4         BAT2 PL2         B           4055         BAT2 PL3         B           4056         BAT2 PL3         B           4057         BAT2 PL3         B           4058         BAT2 PL3         B           4051         BAT2 PL3         B           4052         BAT2 PL3         B           4054         BAT2 PL3         B           4054         BAT2 PL3         B           6050         BAT2 PL3         B	RTS LIST Dimensions 170 × 200 mm 209 × 80 mm 344 × 310 mm 185 × 106 mm 150 × 150 mm 150 × 150 mm 190 × 111 mm 190 × 110 mm 193 × 106 mm 193 × 106 mm 156 × 117 mm	Surface 0.031 / H ² 0.031 / H ² 0.032 / H ² 0.032 / H ² 0.031 / H ² 0.032 / H ² 0.032 / H ² 0.032 / H ² 0.032 / H ²	N2.01.44 () Weight 2.7 kg 1.3 kg 2.4 kg 2.4 kg 1.3 kg 2.4 kg 1.3 kg 1.3 kg 1.4 kg 1	No.         Name           22         4001 August 2015 4 4044           23         4001 August 2015 7 4000 7           24         501 August 2015 7           25         509 4 400 a gold           26         500 4 400 a gold           27         509 4 400 a gold           28         509 4 400 a gold           29         509 4 400 a gold           20         600 7 400 a gold           21         610 4 500 a gold           23         400 4 400 a gold           24         500 5 700 a gold           25         500 4 400 a gold           26         500 4 400 a gold           27         500 4 400 a gold           28         500 4 400 a gold           29         500 5 700 a gold           29         700 500 a gold	Oty         Reference           BAT2 P122         BAT2 P122           BAT2 P124         BAT2 V1           4         BAT2 V1           4         BAT2 V1           1         BAT2 P124           5         BAT2 P14           6         BAT2 P14           1         BAT2 P14           1         BAT2 P14           1         BAT2 P15           1         BAT2 P13           1         BAT2 P133           1         BAT2 P133           1         BAT2 P133           2         BAT2 P132           3         BAT2 P124           3         BAT2 P124           3         BAT2 P124	PARTS LIST Dimensions 188 × 189 mm 188 × 189 mm 346 × 311 mm 202 × 321 mm 347 × 100 mm 335 × 81 mm 200 × 100 mm 357 × 100 mm	Surface 0.001 m ² 0.029 m ² 0.007 m ² 0.007 m ² 0.027 m ² 0.022 m ² 0.022 m ² 0.020 m ² 0.020 m ² 0.020 m ² 0.020 m ²	Weight 2.3 kg 2.3 kg 0.8 kg 0.7 kg 1.7 kg 1.5 kg 0.4 kg 0.4 kg 0.4 kg 0.4 kg 0.2 kg 0.5 kg 0.5 kg	
No.         Name           1         5463250- c64442250- c64442250- c64442250- 10         56622300- c646023030- 10           2         566202300- 10         10           3         5620640- 10         10           6         766205130- 10         10           6         76620514- 10         10           7         10000777200- 10         10           8         7007637-5801- 10         10           9         1027-10         10           10         50206777200- 10         10           11         2620677320- 10         10           12         7842-607-3322         13           13         767365-8627- 303         13           14         262067-3202         13           15         762067-3202         13           16         762067-3202         13           17         762067-3202         13           12         7842-607-3322         13           13         767365-862/10         14           14         767400-70         14           15         76740-70         14           14         76740-70         14           15         76740-70	Qty         Reference         PA           3         BAT2 PL2         4           4-         BAT2 PL3         4           4-         BAT2 PL3         4           4-         BAT2 PL3         4           4-         BAT2 PL3         4           4- <td>RTS LIST Dimensions 170 x 200 mm 209 X 80 mm 346 X 310 mm 156 X 102 mm 150 X 150 mm 150 X 150 mm 150 X 150 mm 150 X 100 mm 156 X 100 mm 156 X 100 mm 156 X 100 mm</td> <td>Surface 0.034 m² 0.076 m² 0.097 m² 0.097 m² 0.001 m² 0.001 m² 0.001 m² 0.001 m² 0.001 m²</td> <td>N2.01.497 B Weight 2.7 kg 6.0 kg <u>1.3 kg</u> <u>1.3 kg</u></td> <td>No.         Name           22         e0014381-0206-0464           23         e0014381-0206-0464           24         e0014-7054-0206-0464           25         e004-7054-0206-0           26         e004-7054-0206-0           27         e004-400-006-0           28         e004-7054-0           29         e004-400-006-0           20         e004-400-0           20         e004-200-0           20         e004-200-0           20         e004-200-0           20         e004-200-0</td> <td>Oty         Reference           1         MATZ PL32           BATZ PL32         BATZ PL3           4         BATZ VI           4         BATZ VI           4         BATZ PL3           1         BATZ PL4           8         BATZ PL3           1         BATZ PL3           3         BATZ PL3           3         BATZ PL3</td> <td>PARTS LIST Dimensions 1132 X 120 mm 346 X 311 mm 200 X 321 mm 387 X 92 mm 219 X 100 mm 200 X 100 mm 200 X 100 mm 395 X 551 mm 100 X 155 mm 100 X 155 mm 100 X 155 mm</td> <td>Surface 0.003 m² 0.029 m² 0.077 m² 0.009 m² 0.022 m² 0.022 m² 0.027 m² 0.027 m² 0.025 m³ 0.027 m²</td> <td>Weight 2.3 kg 2.3 kg 6.0 kg 0.7 kg 1.7 kg 2.1 kg 0.7 kg</td> <td></td>	RTS LIST Dimensions 170 x 200 mm 209 X 80 mm 346 X 310 mm 156 X 102 mm 150 X 150 mm 150 X 150 mm 150 X 150 mm 150 X 100 mm 156 X 100 mm 156 X 100 mm 156 X 100 mm	Surface 0.034 m ² 0.076 m ² 0.097 m ² 0.097 m ² 0.001 m ² 0.001 m ² 0.001 m ² 0.001 m ² 0.001 m ²	N2.01.497 B Weight 2.7 kg 6.0 kg <u>1.3 kg</u> <u>1.3 kg</u>	No.         Name           22         e0014381-0206-0464           23         e0014381-0206-0464           24         e0014-7054-0206-0464           25         e004-7054-0206-0           26         e004-7054-0206-0           27         e004-400-006-0           28         e004-7054-0           29         e004-400-006-0           20         e004-400-0           20         e004-200-0           20         e004-200-0           20         e004-200-0           20         e004-200-0	Oty         Reference           1         MATZ PL32           BATZ PL32         BATZ PL3           4         BATZ VI           4         BATZ VI           4         BATZ PL3           1         BATZ PL4           8         BATZ PL3           1         BATZ PL3           3         BATZ PL3           3         BATZ PL3	PARTS LIST Dimensions 1132 X 120 mm 346 X 311 mm 200 X 321 mm 387 X 92 mm 219 X 100 mm 200 X 100 mm 200 X 100 mm 395 X 551 mm 100 X 155 mm 100 X 155 mm 100 X 155 mm	Surface 0.003 m ² 0.029 m ² 0.077 m ² 0.009 m ² 0.022 m ² 0.022 m ² 0.027 m ² 0.027 m ² 0.025 m ³ 0.027 m ²	Weight 2.3 kg 2.3 kg 6.0 kg 0.7 kg 1.7 kg 2.1 kg 0.7 kg	
No.         Name           1         9664/222-bit           1         9664/222-bit           2         862-242-bit           1         9664/222-bit           2         862-242-bit           3         5-501/24-bit           2         862-242-bit           3         5-501/24-bit           1         5-501/24-bit           1         7005/24-bit           1         7005/24-bit           1         7005/24-bit           1         602-1020-bit           1	Oty         Reference         PA           3         BAT2 PL2         A           4         3         BAT2 PL2           40551         BAT2 PL2         B           44         B         BAT2 PL2           44         B         BAT2 PL2           1         BAT2 PL2         BAT2 PL2           14         BAT2 PL3         BAT2 PL3           44054         BAT2 PL3         BAT2 PL3           14         BAT2 PL3         BAT2 PL3           44054         BAT2 PL3         BAT2 PL3	RTS LIST Dimensions 170 × 200 mm 209 × 80 mm 346 × 310 mm 354 × 102 mm 150 × 100 mm 150 × 100 mm 150 × 100 mm 150 × 100 mm 155 × 106 mm 156 × 110 mm	Surface 0.034 m ² 0.017 m ² 0.0067 m ² 0.0027 m ² 0.0027 m ² 0.0021 m ² 0.0031 m ² 0.0031 m ² 0.0031 m ² 0.0031 m ²	N2.01.497 B Weight 2.7 kg 1.3 kg 2.4 kg 2.4 kg 1.3 kg 1	No.         Name           22.         -0001410-0001-0001           23.         -0001410-0001-0001           24.         -0001400-0001           25.         -0001-0001           26.         -0001-0001           27.         -0001400-0001           28.         -0001-0001           29.         -0001-0001           20.         -0001-0001           20.         -0001-0001           20.         -0001-0001           20.         -0001-0001           20.         -0001-0001           20.         -0001-0001           20.         -0001-0001           20.         -0001-0001           20.         -0001-0001           20.         -0001-0001           20.         -0001-0001           20.         -0001-0001           20.         -0001-0001           20.         -0001-0001           20.         -0001-0001           20.         -0001-0001           20.         -0001-0001           20.         -0001-0001           20.         -0001-0001           20.         -0001-0001           20.         -0001-0001 <td>Oty         Reference           1         MAT2 PL22           EAAT2 PL23         EAAT2 VI           4         BAT2 VI           4         BAT2 VI           4         BAT2 VI           4         BAT2 VI           6         BAT2 VI           1         BAT2 PLI           0         BAT2 PLI           2         BAT2 PLIS           1         BAT2 PLIS           1         BAT2 PLIS           3         BAT2 PLIS           2         BAT2 PLIS</td> <td>PARTS LIST Dimensions 113 A 52 mm 188 A 186 mm 388 X 311 mm 202 X 50 mm 219 X 100 mm 219 X 100 mm 200 X 100 mm 305 X 83 mm 100 X 150 mm 100 X 150 mm 100 X 150 mm 110 X 80 mm</td> <td>Surface 0.023 m² 0.027 m² 0.077 m² 0.009 m² 0.022 m² 0.022 m² 0.027 m² 0.020 m² 0.020 m² 0.020 m²</td> <td>Weight 2.3 Kg 2.3 Kg 0.8 Kg 0.7 Kg 1.7 Kg 2.1 Kg 0.4 Kg 0.4 Kg 0.4 Kg 0.4 Kg 0.5 Kg 0.5 Kg</td> <td></td>	Oty         Reference           1         MAT2 PL22           EAAT2 PL23         EAAT2 VI           4         BAT2 VI           4         BAT2 VI           4         BAT2 VI           4         BAT2 VI           6         BAT2 VI           1         BAT2 PLI           0         BAT2 PLI           2         BAT2 PLIS           1         BAT2 PLIS           1         BAT2 PLIS           3         BAT2 PLIS           2         BAT2 PLIS	PARTS LIST Dimensions 113 A 52 mm 188 A 186 mm 388 X 311 mm 202 X 50 mm 219 X 100 mm 219 X 100 mm 200 X 100 mm 305 X 83 mm 100 X 150 mm 100 X 150 mm 100 X 150 mm 110 X 80 mm	Surface 0.023 m ² 0.027 m ² 0.077 m ² 0.009 m ² 0.022 m ² 0.022 m ² 0.027 m ² 0.020 m ² 0.020 m ² 0.020 m ²	Weight 2.3 Kg 2.3 Kg 0.8 Kg 0.7 Kg 1.7 Kg 2.1 Kg 0.4 Kg 0.4 Kg 0.4 Kg 0.4 Kg 0.5 Kg 0.5 Kg	
No.         Name           1         9641259- 1000000000000000000000000000000000000	Oty         Reference           4         3         BAT2 PL2           4785-1         BAT2 PL2           4305-4         BAT2 PL3           4305-4         BAT2 PL3           4452-2         BAT2 PL3           4452-2         BAT2 PL3           4452-2         BAT2 PL3           4452-1         BAT2 PL3           4451-2         BAT2 PL3           4451-1         BAT2 PL3           4451-2         BAT2 PL3           650         BAT2 PL3	KTS LIST Dimensions 170 × 200 mm 209 X 80 mm 346 X 310 mm 134 X 102 mm 150 X 150 mm 150 X 150 mm 150 X 150 mm 190 X 111 mm 190 X 110 mm 196 X 166 mm 750 X 600 mm 186 X 117 mm	Surface 0.034 m ² 0.096 m ² 0.097 m ² 0.097 m ² 0.097 m ² 0.097 m ² 0.097 m ² 0.091 m ²	No. 201 AP	No.         Name           22.         #9551511-0566-4564           23.         #9551511-0566-4564           24.         #951511-0566-4564           25.         #951-656-1567           25.         #951-656-1567           25.         #951-656-1567           25.         #951-656-1567           26.         #951-656-1567           27.         #951-956-1567           28.         #951-956-1567           29.         #951-956-1567           29.         #951-956-1567           29.         #951-956-1677           29.         #951-956-174-1568           29.         #951-956-1677           29.         #952-956-174-156           29.         #952-956-174-156           29.         #952-956-174-156           29.         #952-956-174-156           29.         #952-956-174-156           29.         #952-956-174-156           20.         #952-9576-174-156           20.         #952-9576-1745           20.         #952-9576-1745	Oty         Reference           BAT2 PL32         BAT2 PL32           2         BAT2 PL34           H         BAT2 V1           4         BAT2 V1           4         BAT2 PL34           5         BAT2 PL44           6         BAT2 PL34           6         BAT2 PL34           7         BAT2 PL35           1         BAT2 PL35	PARIS LIST         Dimensions           185 X 158 mm         185 X 158 mm           386 X 531 imn         386 X 531 imn           202 X 50 mm         202 X 50 mm           219 X 100 mm         335 X 81 imn           395 X 81 imn         205 X 100 mm           395 X 51 imn         205 X 100 mm           395 X 51 imn         205 X 100 mm           395 X 55 imn         205 X 100 imm           395 X 55 imn         205 X 100 imm           395 X 55 imn         205 X 100 imm           100 X 180 imm         180 imm           1105 X 80 imm         1105 X 80 imm	Surface 0.003 m ² 0.027 m ² 0.010 m ² 0.009 m ² 0.020 m ²	Weight 2.3 %2 5.3 %2 6.3 %2 0.8 %2 0.7 %2 1.7 %2 1.7 %2 1.6 %2 0.8 %2	
No.         Name           1         9-642/259- 1-644/259- 1-644/259- 1-644/259- 2-856/0-3300           2         8-66/0-257           2         8-66/0-257           3         60/0-257           4         60/0-257           4         60/0-257           7         8-66/0-257           7         8-66/0-257           8         70/0-75           8         70/0-75           9         1332-77           10         8-65/0-75           11         8-20/0-75           12         3-26/0-75           13         8-20/0-75           14         9           10         8-65/0-75           12         3-62/0-250           12         3-62/0-250           12         3-20/0-20           13         2-60/0-250           14         9           14         14/0-200           12         3-20/0-200           13         2-60/0-200           14         3-60/0-200           15         3-60/0-200           14         3-60/0-200           15         3-60/0-200           16         3-60	Oty         Reference           4         3         BAT2 PL2           4-778-1         BAT2 PL2         BAT2 PL3           4-778-1         BAT2 PL3         BAT2 PL3           -14356-4         BAT2 PL3	KTS LIST Dimensions 1707 X200 mm 209 X 80 mm 346 X 310 mm 186 X 180 mm 190 X 100 mm 188 X 186 mm 790 X 600 mm 186 X 117 mm	Surface 0.034 m ² 0.037 m ³ 0.076 m ² 0.037 m ² 0.031 m ² 0.031 m ² 0.031 m ² 0.031 m ² 0.031 m ²	No. 201 AP	No.         Name           21         e69515161-0566-40-64           28         600714625-4514-450-7           29         500714625-4514-450-7           20         500714625-4514-450-7           20         500714625-4514-450-7           20         50071-450-7           20         50071-450-7           21         61051462-450-7           22         74071492-7           23         74071492-7           24         74071492-7           25         74071492-7           25         74071492-7           25         74071492-7           25         74071492-7           25         74071492-7           26         7407-492-7           27         74071492-7           28         74071492-7           29         56514-650-7           29         56514-650-7           29         76071491-7           29         76071491-7           29         76071491-7	Qty         Reference           BAT2 P132         BAT2 P132           BAT2 P134         BAT2 V1           4         BAT2 V1           6         BAT2 V1           6         BAT2 V1           9         BAT2 P14           9         BAT2 P131           9         BAT2 P132           9         BAT2 P132	PARIS LIST         Dimensions           185 X 187 mm         185 X 188 mm           386 X 931 mm         202 X 50 mm           202 X 50 mm         98 X 92 mm           219 X 100 mm         203 X 83 mm           200 X 100 mm         200 X 100 mm           390 X 155 mm         200 X 100 mm           300 X 100 mm         100 X 100 mm           301 X 100 mm         100 X 100 mm	Surface 0.03 m ² 0.027 m ² 0.077 m ² 0.027 m ² 0.022 m ² 0.027 m ² 0.027 m ² 0.027 m ² 0.027 m ² 0.027 m ²	Weight 2.3 kg 5.3 kg 6.3 kg 0.7 kg 1.7 kg 1.4 kg 0.4 kg 0.2 kg 0.5 kg	
No.         Name           1         9-62-205-1           2         8-66-205-1           3         636-405-2           3         636-405-2           4         6-62-2           4         6-62-2           5         6-62-2           6         6-62-2           7         8-62-2           8         6-20-2           9         8-62-2           10         6-20-2           11         8-62-2           12         7-62-2           13         6-20-2           14         7-62-2           15         6-20-2           16         6-2           17         8-62-2           18         8-2           19         19-2           10         6-20-2           11         8-62-2           12         7-8-2           14         7-8-2           15         7-9           16         7-1           17         8-2           18         8-2           19         19-2           10         10-2           10         10-2	Qty         Reference           4         3         BAT2 PL2           4755-1         BAT2 PL2           4765-1         BAT2 PL2           4775-1         BAT2 PL2           4785-1         BAT2 PL2           4305-4         BAT2 PL3           44355-2         BAT2 PL3           4435-2         BAT2 PL3           4435-2         BAT2 PL3           4435-3         BAT2 PL3           4435-4         BAT2 PL3           4435-5         BAT2 PL3           4435-6         BAT2 PL3           4435-7         BAT2 PL3           4435-7         BAT2 PL3           4435-7         BAT2 PL3           450         BAT2 PL3	KTS LIST Dimensions 170 × 200 mm 209 × 80 mm 346 × 310 mm 158 × 160 mm 159 × 100 mm	Surface 0.034 m ² 0.074 m ² 0.075 m ² 0.075 m ² 0.031 m ² 0.032 m ² 0.032 m ² 0.032 m ² 0.032 m ² 0.032 m ²	N22,01.447 (B)	No.         Name           22         a695-161-0566-4644           23         6057-862-4614           24         6057-862-4614           25         529-460-8044           26         529-460-8044           26         529-460-8044           26         529-460-8044           26         529-460-8044           27         529-460-8044           28         606-764           29         529-460-8044           29         529-460-8044           20         607-462-8045           20         529-460-8044           20         529-460-8045           21         4414-629-4045           22         529-524-5245           23         6450-625-5245           23         6450-625-5245           24         52554-647-6245           25         55554-647-6245           26         55554-647-6245           27         55554-647-647-647-647-647-647-647-647-647-64	Qty         Reference           1         BAT2 P132           2         BAT2 P132           2         BAT2 P132           4         BAT2 V1           4         BAT2 V1           4         BAT2 V1           4         BAT2 V1           5         BAT2 P114           5         BAT2 P131           5         BAT2 P131           5         BAT2 P132	PARIS LIST         Dimensions           188 X 180 mm         188 X 180 mm           346 X 311 mm         346 X 311 mm           202 X 50 mm         98 X 92 mm           319 X 100 mm         303 X 81 mm           200 X 100 mm         305 X 100 mm           300 X 100 mm         90 X 55 mm           302 X 152 mm         80 X 80 mm           100 X 100 mm         100 X 100 mm	Surface 0.03 m ² 0.027 m ² 0.077 m ² 0.007 m ² 0.022 m ² 0.022 m ² 0.022 m ² 0.022 m ² 0.027 m ² 0.027 m ² 0.005 m ² 0.003 m ²	Weight 2.3 Kg 6.3 Kg 0.8 Kg 0.7 Kg 1.7 Kg 1.6 Kg 0.4 Kg 0.7 Kg 0.7 Kg 0.7 Kg 0.7 Kg	
No.         Name           1	Oty         Reference           4         3         BAT2 PL2           4         6         BAT2 PL2           4         7         BAT2 PL2           4         6         BAT2 PL3           4         6         BAT2 PL3           4         7         BAT2 PL3           4         7         BAT2 PL3           4         7         BAT2 PL3           4         8         BAT2 PL3           4         8         BAT2 PL3           4         4         BAT2 PL3           4         4         ATAT PL3           4         4         ATAT PL3           4         5         2           6         7         ATAT PL3           6         5         2           6         5         2           6         5         2           6         5         2           6         5         2           6	KTS LLST Dimensions 170 × 200 mm 209 × 80 mm 346 × 310 mm 186 × 110 mm 150 × 150 mm 150 × 150 mm 150 × 150 mm 150 × 111 mm 156 × 117 mm	Surface 0.034 m ² 0.017 m ² 0.007 m ² 0.001 m ² 0.002 m ² 0.001 m ² 0.001 m ² 0.001 m ² 0.001 m ² 0.001 m ²	N2.01.44 () Weight 2.7 kg 1.3 kg 2.4 kg 2.4 kg 1.5 kg 1.5 kg 1.5 kg 1.5 kg 1.5 kg 1.5 kg 1.7 kg 1.5 kg 1.7 kg 1.5 kg 1.7 kg 1.5 kg 1.5 kg 1.7 kg 1.5 kg 1	No.         Name           201         000174620         20114000           201         000174620         2011400078           201         000174620         2011400078           201         000174620         2011400078           201         000174620         200147620           201         000174620         200147620           201         000174620         200147620           201         000174620         200147620           201         000174620         201047620           201         000174620         201047620           201         000174620         201047620           201         000174620         201047620           201         000174620         201047620           201         000174620         201047620           201         000174600         201047620           201         0001746000         201047620           201         000177620         201047620           201         000177620         201047620           201         0001762000000000000000000000000000000000	Oty         Reference           1         BAT2 P122           2         BAT2 P125           4         BAT2 V1           4         BAT2 V1           4         BAT2 V1           1         BAT2 P12           1         BAT2 P14           5         BAT2 V5           4         BAT2 P14           1         BAT2 P15           1         BAT2 P13           1         BAT2 P13           1         BAT2 P13           3         BAT2 P13           3         BAT2 P12           3         BAT2 P12           3         BAT2 P12           3         BAT2 P12	PARTS LIST Dimensions 188 × 188 mm 346 × 31 mm 202 × 32 mm 358 × 92 mm 219 × 100 mm 205 × 100 mm 305 × 100 mm 305 × 100 mm 305 × 100 mm 100 × 100 mm 100 × 100 mm	Surface 0.003 m 0.025 m ² 0.007 m ² 0.010 m ² 0.022 m ² 0.022 m ² 0.022 m ² 0.020 m ² 0.020 m ² 0.020 m ² 0.005 m ²	Weight 2.3 kg 3.8 kg 6.7 kg 0.8 kg 0.7 kg 1.7 kg 1.6 kg 0.4 kg 0.4 kg 0.2 kg 0.2 kg 0.2 kg 0.5 kg	
No.         Name           1         Sectors           2         Sectors           2         Sectors           3         b34-colors           3         b34-colors           3         b34-colors           3         b34-colors           4         Sectors           5         colors           6         colors           7         social colors           8         colors           9         social colors           10         social colors           11         social colors           12         social colors           13         social colors           14         social colors           15         social colors           16	Qty         Reference           3         BAT2 PL2           4         3           4         8           4         8           4         8           4         8           4         8           4         8           4         8           4         8           4         8           4         8           4         8           4         8           4         8           4         8           4         8           4         8           4         8           4         8           4         8           4         8           4         8           4         8           4         8           4         8           4         8           4         8           4         8           4         8           4         8           4         8           4         8           4         8           4	Statistic         Statistic           209 X 80 mm         209 X 80 mm           344 X 310 mm         209 X 80 mm           344 X 102 mm         106 X 100 mm           150 X 150 mm         150 X 150 mm           150 X 150 mm         150 X 150 mm           150 X 150 mm         150 X 150 mm           150 X 150 mm         150 X 100 mm           150 X 100 mm         156 X 117 mm           156 X 117 mm         156 X 117 mm	Surface 0.031 /H ² 0.031 /H ² 0.032 /H ² 0.032 /H ² 0.032 /H ² 0.032 /H ² 0.032 /H ²	N2.01.447 B Weight 2.7 kg 1.3 kg 2.4 kg 2.4 kg 1.3 kg 2.4 kg 1.3 kg 1	No.         Name           22         -0014 mill:         -0216 - 4044           23         -0014 mill:         -0216 - 4014           24         -0014 mill:         -0216 - 4014           25         -0014 - 4014         -0014 - 4014           26         -0014 - 4014         -0014 - 4014           21         -0114 - 4014         -0014 - 4014           23         -0124 - 4014         -0144 - 4014           24         -0124 - 4014         -0144 - 4014           25         -0124 - 4014         -0144 - 4014           24         -0124 - 4014         -0144 - 4014           25         -0124 - 4014         -0144 - 4014           26         -0124 - 4014         -0144 - 4014           26         -0124 - 4014         -0144 - 4014           27         -0124 - 4014         -0144 - 4014           28         -01014 - 4014         -0144 - 4014           29         -01014 - 4014 - 4014 - 4014         -0144 - 4014 - 4014           29         -01014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 - 4014 -	Qty         Reference           BAT2 P122         BAT2 P122           EAT2 P124         BAT2 V1           4         BAT2 V1           4         BAT2 V1           1         BAT2 P124           5         BAT2 P14           6         BAT2 P14           1         BAT2 P14           2         BAT2 P14           3         BAT2 P128           2         BAT2 P128	PARTS LIST Dimensions 188 × 189 mm 188 × 189 mm 346 × 311 mm 202 × 50 mm 397 × 100 mm 205 × 100 mm 305 × 100 mm 305 × 100 mm 505 × 150 mm 60 × 60 mm 1105 × 60 mm	Surface 0.003 m ² 0.029 m ² 0.007 m ² 0.007 m ² 0.022 m ³ 0.022 m ³ 0.027 m ² 0.020 m ² 0.020 m ² 0.031 m ² 0.031 m ²	Weight 2.3 kg 2.3 kg 0.8 kg 0.7 kg 1.7 kg 1.4 kg 0.4 kg 0.4 kg 0.4 kg 0.5 kg 0.5 kg	

Nesting name, file name and machine name

Stock data

3

4

6

7

Estimated time

Necessary tools the operator needs to prepare before executing the nesting on the machine

Name of the created offcut (if created)

Part list and description

A second page will be also generated on the same report to offer parts preview for the operators help:



### Generating manually the offcut

Important:

- If the cutting line (Nester) has been generated, software will automatically generate the offcut (and automatic name it)
- If the cutting line (Nester) hasn't been generated, software will NOT generate an offcut. In some cases, it is possible to generate it manually and this is done on DocViewer module by following the next steps:



In this case the offcut name won't appear on the report, you should write it by yourself.

# Offcuts import



# Offcuts are automatically saved and managed into SP.PLM. After generated, it is possible to load them and nest parts on.



Pressing the **import** icon will automatic load the saved offcuts into the stock tab, they will be ready to nest.

😭 🗰 👳									Taala
									10015
Steel-Projects Project	Data	Project Manager data	Nesting data	Fabrication Job da	ta Feedback data	Shipping data	Scheduling data	Configuration Uti	lities Plate Nesting
	eriter Nester	PathEinder DocViewe	Offcuts Offc	uts Standards Rep	arts Automatic Imp		Remaining Catalo	a Priorities Configure	
	•		import mana	ger Gap	- -	Input	Parts part	edition Filter	Filter
New V Save	X	Abort Delete	Print	🛋 Next Input 😃	Quit				
Plate Nesting 1462			9						
S Component Stoc	* 2 OI	otimize Cutting							
ت 🖿									
+ 🎟 -			Case sensitive	✓ Alphanumeric					
	Profile	Material G	de Treatme	nt Project	Length	Width	Quantity	Used quantity	Weight
<u>۲</u>	TOLE6	S235JR			15000.00	10000.00	10	0	7065.00 Kg
ø	TOLE6	S235JR			3000.00	1500.00	1	1	211.95 Kg

### **Offcuts Manager**

	W	-		B	9	Æ	<b>*</b>		5	Ð	Ð	Ş		6	*	*
Preview	Workstations	Nester •	PathFinder	DocViewer •	Offcuts import	Offcuts manager	Standards Gap	Reports	Automatic	Import •	Production Time Input	Remaining Parts	Catalog part	Priorities edition	Configure Filter	Apply Filter

### **Overview of existing offcuts**

Same as <u>here</u>, but without the possibility of adding manually a new offcut.

S   #												
Steel-Project	s Project [	Data Project Mana	iger data Nesting	data Fabrication	Job data Feedback d	ata Shipping data	Scheduling data	Configuration	Utilities	Plate Nesting	Offcuts manager [ 14	52]
Preview F	C Scrap	Inventory Refresh Stock										
New	Save Save	Abort Abort	Delete	Next Input	U Quit							
	File Name 🔍	GUID	Length	Width	Thickness Mat	terial Grade Weig	ght Cutting	g Sheet Bar I	N°	Tracking ID	Material code	Quantity
۶ 🖌	1462_101_01.dp	1462_101_01	2868.00 mm	1500.00 mm	6.00 mm S23	35JR 202.6	S2 Kg				STEEL	1

### Standard Gaps



### Temporary modification of gap between all parts of a nesting

In the workstation's parameters, we imported from the resource editor the values of the gaps between the parts.

So, for each thickness / material code, the parts have a constant gap between them when being nested on a plate.

In our example, we defined a 20 mm gap between parts of 15mm STEEL :

Genera	al Tooling Paramet	ters Cut parame	ters Hole para	imeters Expor	t Deliverable di	mensions Sta	ndards Gap Alar	ms and messages	Unloading Zone
+ 🎟	<ul> <li>Material cod</li> </ul>	le		P 🖡 🕯	Case sensitiv	/e ŽŽ -	Alphanumeric		
- 4	Material code	Thickness	Part Gap	Left Gap	Right Gap	Top Gap	Bottom Gap	Common cut	Skeleton
•	ALU	4.00 mm							
	ALU	5.00 mm							
	ALU	5.70 mm							
	ALU	6.00 mm							
	ALU	7.00 mm							
	ALU	8.00 mm							
	ALU	10.00 mm							

If we want to change this value for the current nesting only, once pressed the Standard Gaps button, one can edit the following grid :

4	Workstation 🔍	Thickness	Material code	Part Gap	Common cut
	TIPOB254	6.00 mm	STEEL	15.00 mm	4.00 mm
	Workstation 9	Thickness	Material code	Part Gap	Common cut

▲ Note that this change will affect all the parts (STEEL / 15mm) of the nesting, and has to be done **before** nesting the parts on a plate

# Reports



# Pressing the Reports option will open the reports module.

S   🗰 🗢	Steel Projects PLM - Reports Tools	- 🗆 ×		
Steel-Projects Project Data Project Manager data Nesting d	ata Fabrication Job data Feedback data Shipping data Scheduling data Configuration Utilities Plate Nesting Reports			
PDF Excel Vord Print Filter Comments				
Rew Save Abort Delete Print	Hext Input 😃 Quit	?		
Edition 7	× Nesting tôle	4 Þ ×		
	₩ \$ <b>1 1 1 1 1 1 1 1 1 1</b>			
Mise en Tôles	Main Report			
Nesting tôle English	Machine TIPOB254     Fabrication Job 16208       Plate Nesting     1,000       Storage     Warehouse Tracking ID       Consent 1     Conment 2       Gussets     1,500 mm       2,453 mm     1,500 mm       2,453 mm     1,500 mm       1,000 mm     2235.R     1       1     1     ARNA	Â		
	######         1,500 mm         952 mm         1         1           Parts List           Project         Drawing         Assembly MaComponent         Thickness         Width         Weight         Surface         Quantity           E208         PR3         600 mm         S235/R         200 mm         20 mm <th 2"2"2"2"2"2"2"2"2"2"2"2"2"2"2"2"2"2<="" colspan="2" th=""><th>, v</th></th>	<th>, v</th>		, v

#### Automatic Plate Nesting



#### Automatic plate nesting: let the software work in automatic mode



Pressing the Automatic icon will open the automatic nesting options screen. This tool will nest your components into your available stock \ purchasable lengths, with powerful algorithms prioritizing either minimizing scrap, remnants, or number of plates.

and it will use the options you have set up to nest the

To use the automatic nester, simply press parts to the available plates.

You will see this window during the software time calculation:



After this process, we should tell to the software the cutting mode (plasma or oxy)

ppcBasic	23
CUTTING 1 Oxycutting 2 Plasma ?	
ОК	

This information needs to be enter for each plate the software is creating.

At the end you will found the created plates in the plate list. Still needed to validate the result and use Docviewer to print manually the nester report for the operator.

🕄   🗰 🤝 Steel Projects PLM - Plate Nesting												Tools					
Steel-Projec	ts Project	Data	Project M	anager data	Nestin	g data	Fabrication	Job data	Feedback	: data	Shipping data	Scheduling	data	Configurat	ion Utili	ties Pl	ate Nesting
	W	-	Ł		9	æ	<b>*</b>		<b>P</b>	Ð	A	Ŷ	5		۲	<b>*</b>	
Preview	Workstations	Nester	PathFinder	PecViewer	Offcuts import	Offcuts manager	Standards Gap	Reports	Automatic	Import •	Production Time Input	Remaining Parts	Catalog part	Priorities edition	Configure Filter	Apply Filter	
New	Save	X	Abort	Delete	Prir	nt 🖊	Next Input	(C) Qi	uit								
Plate	Nesting 1462				0												
Compo	onent 😂 Stoc	< 🚳 Op	otimize Cutti	ng													4 Þ
			١	Workstation	Bar	N°	Profile		Material	Grade	Treatment	Quantit	y	Length	ı.	Width	U
•	Ø	* /		IPOB254	1		TOLE	5	S235JR			1		3000.0	0	1500.00	11

# **Automatic plate Nesting Options**

# General

🐯 Plate Nesting Parameters		?	×
General Deliverable dimensions Pro	file		
	Options		
Time 30	Second		
PathFinder 🗸			
	🧹 o	· 🗙	Abort

On the general tab is possible to parameter maximum time spend by step (Nester and Pathfinder).

# **Deliverable lengths**

<b>1</b>	Plate I	Nesting Param	neters					?	×
G	Genera	al Deliverable	dimensions Profile						
							8	8	<b>@</b>
				Le	ngth / Width				
			3000.00 / 1500.00	3000.00 / 2000.00	3000.00 / 2500.00	6000.00 / 1500.00	6000.00 / 2000.00	60	)00.00
	•	6.00					$\bullet$		
							1		
	ness								
Ē									
		(							
		· ·							
							🗸 Ok	X	Abort
n tł	ne de	eliverable	dimensions tab w	e may select or	deselect the co	mmercial length	s we want to u	use f	or th

particular nesting by double clicking on the black icon

If we manually already added some stock or offcuts this will be used in priority.

# Profile

8	Plate	Nesting Para	ameters								?	×	
	Gener	ral Deliverab	le dimensio	ns Profile									
										8	8	2	
		Profile											
	•	TOLE6											
									$\checkmark$	Ok	X	Ab	ort

In case of multi-thickness nesting, we may choose the thickness(es) we want the software to nest.

.

Thickness can be selected or deselected by double clicking on the black icon

### Import



# Import: use it for update PLM stock using your own stock lists



Pressing the icon will open the stock import menu. This tool allows to import stock lists in excel or other formats.

If different imports are configured, we may click the arrow and select the import you want to use:

<b>3</b>   #	÷						Steel Pr	ojects PLI	M - Plate Ne	esting							Tools
Steel-Projec	ts Project	Data	Project Ma	anager data	Nesting	g data	Fabrication .	lob data	Feedback	: data	Shipping data	Scheduling	data	Configurati	ion Utiliti	ies Pl	ate Nesting
	W	-	4		9	æ	<b>+</b>		<b>B</b>	Ð	A	Ŷ	<b>7</b>	6	۲	<b>*</b>	
Preview	Workstations	Nester •	PathFinder	DocViewer •	Offcuts import	Offcuts manager	Standards Gap	Reports	Automatic	Import	Production Time Input	Remaining Parts	Catalog part	Priorities edition	Configure Filter	Apply Filter	
Neu			Abort	Delete			Next Input		.i+	IN	IPORT_STOCK						
	Jave			- Delete			Mext input	<b>U</b>	an.	E	XCEL STOCK						
Plate	Nesting 1462				0												
8 Compo	onent 🕼 Stoc	k 💕 Op	otimize Cuttir	ng													4
			١	Vorkstation	Bar	۳N°	Profile		Material	Grade	Treatment	Quantit	у	Length		Width	ι
•	ø	J.	B T	IPOB254	1		TOLE	;	S235JR			1		3000.00	D	1500.00	1

After this process, we should see the available items on the default configured path. If any change, it is possible to select other paths in order to find the file we need.

Import [EXCEL STOCK]	]					×
Directory						
D:\Steel_Project\						
Filter						
≫ ⊗ & C						
Name	Creation Date	Modification Date	Size			
Performance.xlsx	19/07/2017 14:52:11	19/07/2017 10:51:05	21,1 Ko			
SP-Week2017-Pla	18/09/2017 10:16:30	18/09/2017 10:16:30	26,0 Ko			
Suivi d'activite_TT	05/07/2017 08:44:20	06/07/2017 11:53:59	29,6 Ko			
			🧹 🗸 o	ik 📈 Aba	ort 🐳	Optio

Once the files found, select the files you want to import by double clicking on in by using the next bar

Ok

menu を 🙆 🙋 🧲 and press 🔽

Found stock will be automatically add to the stock nesting tab:

😰 Component 🕼 Stock 🚳 Optimize Cutting													
te 🎟													
+ 🏶 -	•		🔎 🧍 👕 Case	sensitive 🕑 Alpha	anumeric								
		Profile	Material Grade	Treatment	Project	Length	Width						
•	6	TOLE6	S235JR			15000.00	10000.00						
	6	TOLE6	S235JR			3000.00	1500.00						

# **Production Time Input**



When you click on the Production time input button, you can type the actual production time for each plate.

### **Remaining Parts**



When pushed down, the component list only displays the parts to be nested, not the ones already in plates.

# **Nesting Data**



The Nesting Data menu contains all the settings related to both section and plate nesting.

Click on a button to go to the related chapter.

# **Deliverable Lengths**



These are the stock lengths that are allowed for purchased stock (when not importing your own stock bars, useful for estimation purposes)

You are required to set some lengths up in order to use the Section nesting module

New Save X Abort Delete Print Wext Input													
Catego	ory / prefi	x	•		+	-	¢	Length	0.00	) mm 🕂 –			-
	-	Category	Prefix	6000	9500	10000	10500	11000	12000	12100	15100	16100	
	•	Ľ		$\bigcirc$	$\bigcirc$		$\bigcirc$		$\bigcirc$				
		C		$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$				
		I		$\bigcirc$		${ \bullet }$	${ \bullet }$	${ \bullet }$	$\bigcirc$				
		I		$\bigcirc$	$\bigcirc$	lacksquare	$\bigcirc$	lacksquare	$\bigcirc$				
		L			$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		$\bigcirc$	$\bigcirc$	

Add Profiles - Add the required profiles you will need to nest from the drop down menu and press the left

🛨 for each

Add Lengths - Add all of the possible lengths by typing in the size and pressing the right



Assignment - Once you have all your profiles and possible lengths set up, double click on the white circles to turn them black, to indicate that you can purchase that length for that profile

Ranges - if you can only purchase certain ranges of profiles for a particular length, use can use the range option

Steel Projects PLM 1.19.x

To start with, click on one of the black circles you would like to assign a range to

New Vare Abort Delete Print Vext Input U Quit													
Catego	ory / prefi	x	•		+	-	¢	Length	1524	0.00	mm 🕂 🗕		
	-	Category	Prefix	6000	9500	10000	10500	11000	12000	12100	15100	15240	16100
	•	C		$\bigcirc$	$\bigcirc$		$\bigcirc$		$\bigcirc$				
		C		$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$				
		Ι		$\bigcirc$		${}^{\bullet}$		${ \bullet }$	$\bigcirc$				
		I		$\bigcirc$	$\bigcirc$		$\bigcirc$	lacksquare	$\bigcirc$				
		L			$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		$\bigcirc$		$\bigcirc$

Then on the range window on the right, fill in the parameters of the profile that the part must be within to go into to that range. For example here I have set that the maximum web size is 100mm and thickness 20. Anything outside of these parameters will not be nested into.

× Ranges 1	+			
	Min		Max	
Web	0.00	mm	0.00	mm
Flange	0.00	mm	0.00	mm
Web th.	0.00	mm	0.00	mm
Flange th.	0.00	mm	0.00	mm

Once you have set these, click on the black circle and you will see it changes from a fully black to a partial black circle, indicating there is a range.

To set up a number of different ranges within the same profile\length,press When you have set up multiple ranges the circle will show like this

### Scrap



Here you can set up the maximum scrap sizes for all types or ranges of profiles.

Any offcuts of less than this value will be identified by the system as scrap (and spray painted \ unloaded this way if you have an automatic system). Anything above this will be seen as a recoverable remnant.

	+ 🕸 🗕		[ Mini	imum			Maxi	mum [		
Category	Prefix	Web	Flange	E_Web	E_Flange	Web	Flange	E_Web	E_Flange	Maximum Scrap
C										2500.00
С										2500.00
I										2500.00
I										2500.00

Press 🛨 to add a new profile to the list, or press 👐 to add all profiles

If you want the same scrap value for all sizes of a profile, you don't need to set any minimum or maximum profile size values. Just set a value for the maximum scrap as above

To set different ranges of the same profile, add the profile in a number of times with septate profile sizes.

Web - Web size

Flange - Flange size

E_Web - Web Thickness

E_Flange - Flange thickness

For example the following settings would set two ranges for beams. Any beam with a web size of below 100, will have a maximum scrap value of 2500. Any size above will be 2000

	+ 🕸 🗕		[ Mini	imum			Maxi	mum (		
Category	Prefix	Web	Flange	E_Web	E_Flange	Web	Flange	E_Web	E_Flange	Maximum Scrap
Ľ										2500.00
С										2500.00
I						100.00				2500.00
I		100.00								2000.00

# Typology



It is possible to create different nestings and assign them a different typology.

To add a new typology to the database, type the name into the search box and then press [Ctrl+N] or click on the button "NEW".

You can give the typology a description.

Typology	BUILDING
General	
Typology Description	BUILDING

# **Deliverable Dimensions**



Deliverable dimensions are the dimensions of the plates which can be used in the plate nesting module without having to input them for each nesting.

Type the Widths and Lengths in the corresponding fields and press 💼 to add them in the table.



Once all the dimensions have been entered, you have to double click on the pairs [Length;Width] you wallow for using :



You can define a range of availability depending on the thickness of the plate.

Click once on a black point, 6000x1500 for instance, and on the right hand side, unselect the "All" box.

	Thic	kness	
Thickness	0.00 mm	+ -	

It turns the thickness field available.

		Thick	ness	
Thickness	0.00	mm	+ -	

Enter all the thickness allowed for these dimensions.

	Thickness				
A	11				
Thick	ness	8.00	mm	+ -	
	_				
	Thick	ness			
	3.00				
	5.00				
	6.00				
•	8.00				

You can now see in the grid the symbol saying there are ranges defined for these dimensions.



# **Material Code**



The technological parameters of a nesting depend on the material grade.

In most of the cases, these technological parameters are the same for all the grades.

Thus, the material code allows grouping material grades together.

One material grade can be linked to one or more material codes.

Most of the time, this code will be STEEL.

General Material type Material Grade

However, for some particular machines, this code can be different in order to provide information about the amperage, for example.

One or more <u>material types</u> can be selected, my moving them from the left hand side panel to the right hand side one.

Material type		
ALU		ACIER
BOIS	•	
	4	

### Same for the Material Grades :



If a material grade is not assigned to any material code, you will get an error message in the nesting module and you won't be able to nest the parts without material code.

4	Project	Component	Drawing	Assembly Mark	Material Grade	Material code
•	16121A	V3	1	T1	S235JR	
9	16121A	330	1	L23	S235JR	
9	16121A	A18	1	A18	S235JR	
Material	code not defined	327	1	LT13	S235JR	
Ð	16121A	183	1	P11	S235JR	
Ð	16121A	183	1	P13	S235JR	
Ð	16121A	533	1	C4	S235JR	
9	16121A	316	1	M4	S235JR	
9	16121A	175	1	L6	S235JR	
0	16121A	23	1	P12	S235JR	

# **Material Code / Thickness**



Each Material Code has to be linked to one or several thickness.

The list of thickness is imported from the ones attached to the plate nesting machines.



By default, all the thickness are added in the Thickness / Material Code grid.

### **Plate Scrap**



Define here the minimum dimensions for the offcuts to be considered as reusable. Note that the thickness is not mandatory.

	New Sav	e Abort	Delete	Print Next Inpu	ıt 😃 Quit
+	🏭 🗕 🛛 Mini Lengt	h	🔎 🦊	👕 🗌 Case sensitive	🛃 🝷 🖉 Alphanumeric
	Min Thickness	Mini Length 🔍	Mini Width		
•	25.00 mm	1500.00 mm	1600.00 mm		

### **Offcuts Manager**



The offcuts manager keeps track of all the plate nesting's offcuts.

If the scrap button is activated, the offcuts which are not big enough to be considered as reusable are also shown. These dimensions are set up in the <u>Plate Scrap</u> window.

In the main screen, you have an overview of all the offcuts. These offcuts are generated automatically when the workshop document is printed in the nesting module.

Note the casting number of the mother plate has followed the offcuts.





In this example, the offcuts has been generated by the following nesting :

The offcuts is generated only once the workshop document has been created.

# **Editing an offcut**

If you right click on a line, you can have access to the drafter in order to edit the offcut. In our example, it's useful to rotate the plate, so the bottom left corner is at the (0,0) point.

+	New	Ins
	Edit Grid	Ctrl+Ins
-	Delete	Del
۲	Toolbars	Ctrl+B
	Drafter	

We need to rotate the offcut so the top right corner (green point) is moved to the origin of the draft :


Select the Accurate Nesting tool  $\stackrel{[]}{ imes}$ , click on the entity, then on the top right corner. Now the plate is attached to the tool, you can rotate and flip it until having the result you want :



# Save and close Now, in the offcut manager, you can see the modified figure :

New	Save	Abort	Delete	Next Input	U Quit		
+ 🏼 –	File Name		P 🕹 🕯 🗆	Case sensitive	🔀 👻 🗸 Alphanu	meric	
	File Name 🔍	GUID	Width	Thickness	Material Grade	Length	Weight
-9	1000_101_01.dpr	1000_101_01	1500.00 mm	6.00 mm	S235JR	291.00 mm	20.56 Kg
S	1000_202_01.dpr	1000_202_01	1500.00 mm	10.00 mm	S235JR	1891.00 mm	222.67 Kg
E C	1000_302_01.dpr	1000_302_01	952.00 mm	15.00 mm	S235JR	411.00 mm	46.07 Kg
E	1004_105_01.dpr	1004_105_01	53.00 mm	6.00 mm	S235JR	1500.00 mm	3.74 Kg

### **Stock Import**



From here you can set-up imports for importing stock bars into the section nesting module from third party software.

These imports are available in the section nesting module using the following icon.

🕄   🗰 🗢 👘										Tools
Steel-Projects Pr	oject Data	Project Manager data	Nesting data	Fabrication Job data	Feedback dat	a Shipping data	Scheduling data	Configuration	Utilities	Section Nesting
Preview Workstz	tions Reports	Automatic Import P	roduction Time R Input	emaining Catalog Price Parts part ed	orities Configure Filter	Apply Edit Filter nesting (	Bar's Drder			
New 🗸	Save X	Abort EXC	RT_STOCK	Next Input	Quit					
Section Nesting	9		9							
🕃 Component 🕼	🕫 Stock 够 Opti	imize Cutting								
+ # -		P 🕹 🕯 🗆	Case sensitive	🛃 🔹 🗸 Alphanum	eric					
	Project	Component	Drawing	Assembly Mark	Phase	Workstation	Profile	Material Grade	Job	Treatment
►	16025	P1	2	P1		K126L	IPE270	S275JR		RAL 7040
	16025	92	2	L1		K126L	TC70*3	S275JR		RAL 7040
	16025	102	2	L1		K126L	TR50*30*3	S275JR		RAL 7040

To add a new material grade to the database, type the name into the search box and then press [NEW] or [CTRL+N]

Choose the name of the import, type, and default directory

The two main types are excel, and SP Stock

## **Import Excel Stock**

This import is to import available stock from either an xls or csv Excel file. You can create a file with different rows for the bars you have, and different columns with a variety of different information.

lame	EXCEL STOCK	
уре	Excel Stock Import (1.19.0.4677)	
)irectory		

LINE - Specify the line of the file the information starts on. If you have a single heading line, then you would put line 1 in here (the import ignores line 0)

FORMAT - Choose between CSV or XLS formats

GENERAL - Specify the columns of the file and where the information should be imported into.

The number represents the alpha numerical position - A=0, B=2, C=3 etc

Some of the columns are required to be able to create the part - Profile, Length, Quantity, Material Grade.

#### If a column is set to -1 it is ignored.

Options			?
Line Format	0 - CSV -	Metric (mm) Imperial Separation Log	
General Bar Back	kup		
Profile	0 🔶 Tracking ID	-1 -1 Project	-1
Material Grade	1 🖨 Comment 1	-1 🔹 Order	-1
Treatment	2 Comment 2	-1 -1 Supplier	-1
Length	4 Comment 3	-1 Certificate	-1 🌩
Width	5 🗢 Fabrication Job	-1 📥 External reference	-1
Storage location	-1 🖨 Delivery Date	-1	
Warehouse	-1 🖨 Future Rolling Date	-1	
Quantity	3 🌩		
OTonne	-1 📥		
	Filte	r	
Project	Storage location	Contract	
Storage location	1		

BAR - Set up a column to import the *type* of bar. Different types of bar can be given different nesting priorities, for example remnants can be given a higher priority than stock bars

9 Options			?	×
Line Format	0 - CSV -	<ul> <li>Metric (mm)</li> <li>Imperial</li> <li>Separation</li> <li>Log</li> </ul>		
General Bar Back	kup			7
Profile	0 ≑ Tracking ID	-1 -1 -1 Project	-1 🜩	
Material Grade	1 🜩 Comment 1	-1 -1 Order	-1 🚔	
Treatment	2 Comment 2	-1 Supplier	-1 韋	
Length	4 Comment 3	-1 Certificate	-1 🌻	
Width	5 🔹 Fabrication Job	-1 -1 External reference	-1=	
Storage location	-1 -1 Delivery Date	-1 🜩		
Warehouse	-1 🜩 Future Rolling Date	-1		
Quantity	3 ਦ			
Tonne	-1			
	Filter	]		
Project	Storage location	Contract		
Storage location				
		🗸 🗸	Dk 🔀 A	48

BACKUP - Set a directory for the file to be backup up to after importing

## **Export Stock**



Export Your nesting results to third party software

Please contact SteelProjects support to proceed.

#### Warehouse



#### Definition of the warehouses and storage locations in each one.

New Save	Abort Delete Print Hand Next Input
Warehouse VIENNE	
Warehouse Maximum length	VIENNE 100000.00 mm
	Storage location
SOUTH VIENNE	
NORTH VIENNE	Storage location NORTH VIENNE
~	

## **Fabrication Job Data**



The Fabrication Job Data menu is an advanced configuration tab concerned with the Production Manager module.

Click on an item to display the related chapter.

#### **Import Fabrication Job**



From here you can set-up imports for importing fabrication job selections into the fabrication job screen from third party software.

#### **Export Fabrication Job**



From here you can set-up exports for exporting fabrication jobs to third party software.

#### **Dispatch To Simulation**



It is possible for bars to be sent to Production Simulation software for optimal routing to be planned

The first step is to configure a simulation link with the type TTS simulation.

Link SIN	ULATE	
Name	SIMULATE	
Туре	TTS simulation tool connector (1.19.0.467 - Options	
Directory		

Then select the expected parameters in the "Options" button.

😴 Options				?	×
Simulation program path	····	Has preview Optimisation Buildin length check	<ul> <li>Delete files</li> <li>Take into account the</li> <li>Protection key served</li> </ul>	e existin #r	g
Workstation	Simulation model path				
Proot-     IIPOB254     K126L     I203DD     MAP     SNG     CONTRÔLE DÉBIT     SOUDURE     SOUDURE     SOUDURE     SOUDURE     GRENAILLEUSE     GRENAILLE					
			🗸 Ok	×4	Abort

#### Please contact us for more information



# **Shipping - Modules**

# **Shipping Data**



Set the options for the Shipping Module.

Click on an item to display the related chapter.

**Package Types** 



Here are described the package types used for shipping.

			Characte	eristics			Compatible modes
Maximu	ım load		0.00		Kg		All
Tare we	eight		0.00		Kg		Road
							Railway
	Length		Width		Height		River
Gross	0.00	mm	0.00	mm	0.00	mm	
lat	0.00	mm	0.00	mm	0.00	mm	

Name is the name of the package type. Pallet, for instance.

The gross dimensions are the outside maximum dimensions.

The net dimensions are the inner maximum dimensions, the actual capacity of the package type.

In compatible modes, you must tell which transport modes can be used for this type of package. This is used to allow or not a certain type on a <u>class of vehicle</u>.

### Here are some examples :

			Character	istics			Compatible modes
Maxim	um load		500.00		Κα		All
Tare we	eight		15.00		Kg		✓ Road
							Railway
	Length		Width		Height		River
Gross	12200.00	mm	800.00	mm	1200.00	mm	Segway
Net	12300.00	mm	800.00	mm	1200	mm	Jeaway

#### **Vehicle Classes**



The classes of vehicles are defined here.

The mode is to be selected in the drop down menu. This mode is the same as the one defined in the <u>package</u> <u>types</u>.

A certain package type can be used on a vehicle only if both modes are identical.

Here is an example :

Nume.		1			
Mode	Road		•		
	Load				
Length	13700.00	mm			
Volume	94.00	m ³			
Weight	2700.00	Kg			

## Vehicles



Here are listed all the vehicles used for shipping :

	Characteristics
Vehicle class	
Truck N°	
Second registration	
Туре	Tractor

8341

Each vehicle must have a class assigned to.

Here is an example :

	Characteristics
ehicle class	SEMI-REMORQUE
ruck N°	
econd registration	
уре	Tractor

# **Module - Shipping**



## The main module to manage the shipping of your production



#### 3 views are available:

Carriage Shipment Composition

## Carriage

<b>S</b> rc:	arriage <b>1</b> 2	221			- WShipment				Composition			
		Carriage name	Description	Driver	Gross weight	Vehicle	Vehicle class	Truck N°	Forecast depart	Net weight	Maximum load	Real departure
•		1221			0.00 Kg	DF - 241 - TN	CAMION		08/08/2017 13:3	0.00 Kg	12000.00 Kg	
	ا 🧐	🥰 Transport-7		JEAN	18.81 Kg	8341 XE 85	SEMI-REMORQUE		01/06/2016 14:4	18.81 Kg	25000.00 Kg	01/06/2016 14:

The data grid displays all the carriages data. The carriages displayed in the data grid can be filtered by its status.





#### • New : Create a new Carriage

New Save					
Carriage TRANSPOR	T-10	<u></u>			
General Information Com	ments Status Attached	d documents			
Carriage name	TRANSPORT-10		Vehicle	DF-241-TN	+ 🔍
Description			Vehicle class		+
Driver			Truck N°		
Forecast departure date	11 ::	•	Second registration		
Forecast duration	0 🌩 Day(s)	:			
		Ch	ecked		
Employee					
Check date	11 ::				
			Sent		
Employee		Q			
Real departure date	e // ::	-	Real weight	0.00 Kg	
		De	livered		
Employee		<u></u>	<b>- - - - - - - - - -</b>	0	
Popl roturn data		· · · · · · · · · · · · · · · · · · ·	Travelled distance	0 km	TTT

The user can add a new carriage. This one is added in the data grid.

• Edit Grid : Edit Carriage parameter in the grid data Only white field can be modified

Sec.	arriage	T	rans	sport-7		i i i	- Shipment						
	Carriage name Description				Description	Driver	Gross weight	Vehicle	Vehicle class	Truck N°			
				1221			0.00 Kg	DF - 241 - TN	CAMION				
•		6		Transport-7		JEAN	18.81 Kg	8341 XE 85	SEMI-REMORQUE				

- Delete : Delete the selected carriage
- Toolbars : Active/Deactivate Toolbars

|--|

• Status : The user can assign a status to the selected carriage 3 status are available Checked, Sent and Delivered



- Create Fabrication Job : A Fabrication Job is created for the selected carriage
- Associate to Fabrication Job : Associate the selected carriage to an existing Fabrication Job

• Show direction : Display the route in the Maps application



#### Associate to Fabrication Job

In the tab "Carriage", the user can use the menu "Associate to Fabrication Job".

New		1	Save Abort		D	elete	Print		Vext In	put 😳	Message 🔱 Qu	it
<b>E</b> Carriac	ge 1	221										Shipment
+ 🏽 –	Ca	rriag	e name				o 🕴 🕯 🗆	Case	sensi	tive 🍵	🚰 👻 Alphanu	imeric
			Carriage name	Des	cription	n	Driver		Vehic	le	Vehicle class	Maximum load
	۲	K	Transport-7				JEAN		8341	XE 85	SEMI-REMORQUE	25000.00 Kg
•			1221			N			DC 0	11 - TN	CAMION	12000.00 Kg
	12144						New Calif	Ctrl+Inc	ins	26 - XM	SEMI-REMORQUE	25000.00 Kg
						Delete	0	Del Ctrl+B				
					۲	Toolbar	s					
						Status			•	_		
						Create F	abrication Jo	b				
					Associate to Fabrication Job							
						Show d	irection					

The carriage should have a shipment. This one should have a composition of components.

	New Save	Abort	Delete	Print 4	Next Input	Me:	ssage 😃	Quit					8
<b>S</b> rc.	arriage 1221			25 Ship	ment 2				<b>M</b> Com	position 14257 /	12 / A45		۹ ۵
+ 🖩	- Name		🔎 🤞	👔 🗌 Case sen	sitive 👏 🕴	X - J	Alphanumeri	c					Ċ
	Pro	ject	C	Drawing	Assembly Mark	Name	, 🔍	Quantity	Profile	Weight		Length	Width
•	142 🍉	57	1:	2	A45			2	TOLE8	1.63 Kg		150.00 mm	100.00 mm
	ا 🛞 142	57	13	2	A44			3	TC50*3	3.61 Kg		136.00 mm	0.00 mm
	ا 🛞 142	57	13	2	A43			2	TC50*3	2.65 Kg		136.00 mm	0.00 mm
4													Þ
Assemb	lies												<del>4</del>
	Drawing	Assembly Mark	Quantity	Profile	Weig	nt	Length	v	Vidth	Description	Comment	Surface	<b></b>
•	12	A46	2	TOLE8	1.63 H	g	150.00 mn	n 1(	00.00 mm	ATTACHE		0.07 m ²	
	12	A47	5	TOLE8	2.09 H	ģ	150.00 mn	15	50.00 mm	ATTACHE		0.08 m ²	
	12	A48	3	TOLE8	3.24 k	ig i	220.00 mn	n 15	50.00 mm	ATTACHE		0.15 m ²	
	12	GC1	1	PLAT60*1	0 39.02	Kg	1077.60 m	m 0.	00 mm	GARDE CORPS		1.68 m ²	
	12	GC10	1	PLAT60*1	0 25.32	Kg	939.66 mn	<b>0</b> .	00 mm	GARDE CORPS		1.05 m ²	
	12	GC11	1	PLAT60*1	0 25.31	Kg	939.66 mn	<b>0</b> .	00 mm	GARDE CORPS		1.05 m ²	
	12	GC12	1	PLAT60*1	0 27.11	Kg	1179.43 m	m 0.	00 mm	GARDE CORPS		1.11 m ²	
	12	GC13	1	PLAT60*1	60.94	Kg	1100.16 m	m 0.	00 mm	GARDE CORPS		2.75 m ²	
	12	GC14	1	PLAT60*1	45.54	Kg	1100.16 m	m 0.	00 mm	GARDE CORPS		2.06 m ²	
4													•

🔋 Packages 膨 Assemblies

🐲 Associate to Fabricatio	n Job			_		$\times$
Drawing	Assembly	Part	Fabrication Job			
🖃 💼 Project : 14257						
- 定 12	A43	A43	🐲 SELECT4281		•	
- 定 12	A44	A44	SELECT4281		•	
12	A45	A45	SELECT4281		•	
				•		
				V Ok	· X	Abort

The project of the shipment must have Fabrication Jobs. In this case, the menu "Associate to Fabrication Job" is displayed.

For each component, the user can select a Fabrication Job. Then, click on the button "Ok" to apply the modification.

## Shipment

<b>F</b> Carriag	e CAR	RIAGE-001-	213		Shipment SHIP912201					position
$+ \blacksquare -$	Shippi	ng		, P	🦊 👕 🗌 Case sen	sitive 👫 👻 🗸	Alphanumeric			
		Shipping	0	Project	Net weight	Gross weight	Drawing delivery date	Assembly delivery date	Comment 1	Comment 2
•	V SHIP912201 AFF_STEEL_001 13000.00 Kg					13000.00 Kg	F02 : 124-521 : I			
4										
Shipping										
		Shipping	0	Address 1	Address 2	City	Zin Code	State / Region C	ountry	Project
• •	34	FF			7 42 600 E	LA COTE SAINT AN	1	olale / logion	A	FF_STEEL_001

This data grid displays the shipment details of the selected carriage.

The shipping part displays the list of shipping.

The user can add an existing shipping to the expected shipment by using a drag and drop.

률 Carriag	e CA	RRIAGE-001-010			Shipment SHIP	co 🏐	Composition		
+ 🏼 –	Shipp	ing	P (	🕨 👕 🗌 Case sens	sitive 🚺 🕶 🗸	Alphanumeric			
	Shipping 🔍 Project N				Gross weight	Drawing delivery date	Assembly delivery date	Comment 1	Comment 2
•	SHIP101-512 AFF_STEEL_001 240000.				240000.00 Kg				
	0	SHIP101-513	AFF_STEEL_001	150000.00 Kg	150000.00 Kg				
4			1	1	1	1	1		
Shipping									
	Shipping Shipping Address 1 Address 2					Zip Code	State / Region C	ountry	Project
•	3	▶ FF			LA COTE SAINT AN		AFF_STEEL_001		



#### • New : Create a new shipping

Shipping						
New S	ave Abort Delete	Print Hext Input	Quit			
Project A	FF_STEEL_001	Shipment SHIP101-51	2	2		
General Informati	on Comments Status Attached d	ocuments				
			Status			_
Shipment Gross weight	SHIP101-512 240000.00 Kg	Status	Pending		•	
Net weight	240000.00 Kg	Employee				
Shipping address	STEEL LYON					
Address 1		eMail				
Address 2		Telephone N°				
City	LYON	Fax				
State / Region		Contact				
Zip Code						
Country	FRANCE			R		
					-	

The user can add a new shipment. This one is added in the data grid.

• Edit Grid : Edit shipping parameter in the grid data Only white field can be modified.

률 Carria	ge (	CARF	RIAGE-001-010		Shipment SHIP101-512							
🕂 🔛 — Shipping 🖉 🧍 1					👔 🗌 Case sens	itive 🕺 🕶 🗸	Alphanumeric					
			Shipping 🔍	Project	Net weight	Gross weight	Drawing delivery date	Assembly delivery date	Comment 1	Comment 2	Comment 3	
۱.			SHIP101-512	AFF_STEEL_001	240000.00 Kg	240000.00 Kg						
		*	SHIP101-513	AFF_STEEL_001	150000.00 Kg	150000.00 Kg						

- Delete : Delete the selected shipping
- Toolbars : Active/Deactivate Toolbars

+		Shipping		$\mathcal{O}$	÷	👕 🗌 Case sensitive	A Z Z A	<ul> <li>Alphanumeric</li> </ul>
---	--	----------	--	---------------	---	--------------------	------------	----------------------------------

• Status : The user can assign a status to the selected shipping 2 status are available Prepared and Checked.



## Composition

<b>F</b> Car	rriage CARRIAGE-001-010	Kenter Shipment SH	IIP101-512	tomposit	ion	
	Project Drawin	g Assembly Mark Name 🔍	Quantity Profile	Weight Length	Width	Description Comment
•			16	15000.00 Kg 12000.00 mr	n 2200.00 mm	PROD101-12-532
	V 🧊 AFF_STEEL_001	PACK002	1	782.17 Kg		
	AFF_STEEL_001	PACK003	1	293.31 Kg		

This data grid displays the composition details of the selected shipping.

+	New	Ins
	Edit Grid	Ctrl+Ins
-	Delete	Del
۲	Toolbars	Ctrl+B
	Quantity	Ctrl+Maj+Q

- Delete : Delete the selected composition
- Toolbars : Active/Deactivate Toolbars

🕂 🛗 🛑 Name	ρ 🐇	👕 🗌 Case sensitive	A Z Z A	+ 🔽 Alphanumeric
------------	-----	--------------------	------------	------------------

• Quantity : The user can define the quantity for the selected composition

Unknown	/ / /
Quantity	16 🌲 / 16
	🗸 0k 🔀 Annuler

## Scheduling



This functionality allows the users to see carriage scheduling in the data grid according the period.



The user can select the period to watch the data grid by day, week, month or year.



The second part of the screen displays the list of all the carriage.



The list displaying can be configured by using the filter : Not any, pending, check, sent and delivered

Cumugo	unda.											
🕂 🏢 — Carriage name 🛛 👂 🧍 🕯 👔 🗆 Case sensitive 🛛 🕅 🗸 👻 🖓 Alphanumeric												
		Carriage name	Description	Driver	Vehicle	Vehicle class	Maximum load	Truck N°	Forecast depart	Real departure	Real return date	Travelled distance
•	8	CARRIAGE-001-			BM-101-XC-210	1	10000.00 Kg	6301	14/02/2019 13:5			0 km
	V	CARRIAGE-001-			BM-101-DF-216	3	1300.00 Kg	12401	14/02/2019 14:0			0 km
		CARRIAGE-001-			BM-103-ER-601	2	2000.00 Kg	63209	14/02/2019 14:0	14/02/2019 15:4		0 km
		CARRIAGE-001-		ROBERTO	BM-101-DF-216	3	1300.00 Kg	12401	25/03/2019 15:3			0 km

#### Search

The menu "Search" allows to find an assembly, a package or a shipment by enter its name.

In the grid, the user can consult the details screen by using a double-click on the item or by using a rightclick option "Select".

🔎 Se	arch									-		Х
● A ○ P ○ S	ssembly ackage hipment		Search AT									
+ 🏼	<ul> <li>Shipping</li> </ul>		🔎 🦊 🛊 🗆 (	Case sensi	tive ಶ	A Z A	🖌 🔽 Alphanumeri	c				Ċ
	Project	Drawing	Assembly Mark		Shipping	0	Net weight	Gross weight	Drawing delivery date	Assembly	delivery date	Con
	16068A_EXPEDI	16	AT1		4							
•	16068A_EXPEDI	16	ATO .		4							
	16068A_EXPEDI	16 💆	Select		4							
	16068A_EXPEDI	16	AT7		4							
	16068A_EXPEDI	16	AT8		4							
	16068A_EXPEDI	16	AT9		4							
											Ö	Close

# **Packing List**



This menu allows the user to add packages in an existing project.

First, he should select the expected project then click on the tab "Package".



In the tab "Package", the user can add/delete existing packages and/or create new packages. He can configure many parameters of the package.

Package					—		
New Si	ave Abort	Delete Print	Next Input	💬 Message 🄇	Quit		(
Project 1	7050A	<u>_</u>	Package COL	IS-00103		0	
Concel Informati	on Commonte Statu	Attached documents					
General mornau	on Comments Status	Attached documents		Status			
Number	COLIS-00103		Status	Pending		-	
Description			Employee			0	
Group			Date	11 ::		-	
Туре	PALETTE	<b>+Q</b>					_
Gross weight	2.29 Kg	Maximum load	500.00 Kg				
Net weight	2.29 Kg	Tare weight	0.00 Kg	Real weight	0.00	Kg	
	Length	Width	Height				
Gross	12200.00 mm	800.00 mm	1200.00 mm				
Net	12300.00 mm	80.00 mm	1200.00 mm				
							_

In the tab "Composition", he could add components from the project to the package by using a drag and drop.

	New Save	Abort	Delete	Print Nex	t Input Messa	age 🕛 Quit							?
Pr	oject 17050A				Package COLIS-0	00103			Composition	17050A / 2 / A3			4 Þ
+ =	- Component	t	ا چ	👔 🗌 Case sensit	tive 🚼 🛃 🛨	Alphanumer	ic						Ċ
	Drawing	Assembly Mark	Component	Quantity	Profile	Weight	Length	Width	Description	Comment	Surface	Fabrication Job	D
•	2	A3		1	UPF-120*50*3	0.87 Kg	76.07 mm	0.00 mm	ATTACHE		0.06 m ²		
	2	A7		2	TOLE6	0.71 Kg	250.00 mm	60.00 mm	PLAT_PLIE		0.03 m ²		
Ana ambi													
	<ul> <li>Assembly N</li> </ul>	lark		🖡 👕 Case se	nsitive ಶ 🛐	• Alphanur	meric						Ċ
	Drawing	Assembly Mark	Quantity	Profile	Weight	Length	Width	Description	Comment	Surface	Drawing delivery date	Assembly deliver	/ da ^
+	2	A4	1	UPF-120*50*3	0.86 Kg	73.51 mm	0.00 mm	ATTACHE		0.05 m ²			
	2	A5	2	TOLE6	0.68 Kg	143.00 mm	100.00 mm	PLAT_PLIE		0.03 m ²			
	2	AG	2	TOLE6	0.84 Kg	297.00 mm	60.00 mm	PLAT_PLIE		0.04 m ²			
	2	A8	14	TOLE6	1.05 Kg	247.00 mm	90.00 mm	ATTACHE		0.05 m ²			
	2	A9	2	TOLE6	1.07 Kg	225.15 mm	100.00 mm	PLAT_PLIE		0.05 m ²			-
4													Þ.

# **Tips & Tricks**

# Drafter

Project	Co Right Cli	ick	awing	Assembly	y Mark Workstation		
AFF_STEEL_001	77	Ŧ	New	Ins		GEMINI	
	6		Edit Grid	Ctrl+Ins			
		-	Delete	Del			
		۲	Toolbars	Ctrl+B			
			Property	Ctrl+P			
			Quantity				
			Drafter				
			Regeneratio	on			

## Advanced manual modification of a part

When doing a right-click on a component, select Drafter in the contextual menu. It opens the component in the drafter module.

## **Drawing module**



# Open the drawing module to modify or create a part ( Click the icon , double click in the drawing preview, Ctrl+D)

The drawing module in Steel Project PLM Project Manager allows the user to create and/or edit the parts that are required to be processed in the workshop.

#### **Drawing layout**

The main window is divided into 6 areas.

These windows can be arranged as the user desires. This is done by dragging and dropping the box to the preferred location.

In order to zoom in and out, just use the mouse wheel. Press and hold the mouse wheel to move the part that is selected.





## Toolbars

For each function, it is shown if it can be used either for profiles plates or .

#### File



Icon	Profiles	Plate s	Description
<b>2</b>	<b>v</b>	<b>v</b>	Open a part from the part list
	1	<b>V</b>	Save the current part
<u>a</u>	1	<b>v</b>	Print preview
<b>a</b>	1	1	Print the workshop document
10 CH	<ul> <li>Image: A set of the /li></ul>	<ul> <li>Image: A set of the /li></ul>	Undo / Redo You can undo / redo as many times as you want
Q	<b>v</b>	<b>v</b>	Zoom all Best zoom to display the entire part
Q	<b>v</b>	<b>v</b>	Zoom Window
<b>⊕</b>	<b>v</b>	<b>v</b>	Move You can also move the part by clicking the mouse wheel.
<b>Q Q</b>	<b>v</b>	<b>v</b>	Zoom In / Out Can be done with the mouse wheel.
9	<b>v</b>	<b>V</b> -	Display / Hide layers box
WEB 💌	<b>v</b>	<b>v</b>	Select active layer

## **Toolings**

[전 # � O 같 A J | || ■ ■ 🖩 ↔ 🕸

Icon	Prf.	PI.	Description
Ĺ	<b>V</b>		Mitre cut
#	1	<b>V</b>	Drilling input
۰	1	<b>v</b>	Inclined drilling input
0	1	1	Circular drilling input
5	1		Coping input
뽭	1		Steel Projects Macros
А	1	<b>v</b>	Stamping/Marking input
$\mathcal{L}$		1	Bending lines input
Q.	1	<b>V</b>	Lead-Cut direction changing
₿ļ.	1	<b>V</b>	Lead-Cut sequence changing

# Сору

# 🕪 1 2 3 4 📇 🗓 🖺 😤 📆 🖺 🗖 🗖

Icon	Prf	PI.	Description
<b>⊕</b> ₽	1	1	Switching from American to European view
1 2 3 4	1		Select the sides affected by a symmetry
₩ [] 🕄	1	1	Copy holes using a symmetry
※ 部 殿	1	1	Move holes using a symmetry
n 🕜 🖌			Converts a beam/column with a mitre cut in the flanges into a RHS profile.

# Drawing

▶ / □   0 0 0 0   C C C K   Y &   C C	ГСГ  // // 💵   👗 🔍 🗅 🕂 🕂 🛇 🖸 🖓 😴
---------------------------------------	----------------------------------

Icon	Prf	PI.	Description						
	1	1	Selection						
1		V	Line						
		V	Rectangle						
$\Theta$		1	Circle with 2 points						
$\bigcirc$		V	Circle with 3 points						
$\odot$		1	Circle with center and radius						
$\odot$		V	Circle with center and pre-defined diameter						
5		1	Arc 3 points						
<i>C</i> .		V	Arc center and 2 points						
5		1	Arc with 2 points (begin, end) and radius						
í.		V	Arc with center, start and radius						
$\mathbf{Y}$	1	1	Measure						
.s.	1	V	Erase						
$\left( \right)$		V	Straight notch						
		V	Round notch (Convex)						
$\left  \right $		1	Round notch (Concave)						
٢		1	Edge						
	1	1	Offset (draw a line to a pre-defined distance)						
1k -	1	1	Parallel (draw a parallel line to the selected line)						
<u> </u>	V	1	Perpendicular						
X	_	4	Cut (a segment)						
0		<b>V</b>	Closes the non closed contours						
	<b>/</b>	<b>V</b>	Move						
		۷,							
7	_	<u>×</u>	Trim lines						
$\circ$	V	V	Polygonize circles						
		<b>V</b>	Resize a contour						
		V	Homothetic						
iii e		<b>V</b>	Translation						
Ç		1	Rotation						

### Legend box

		81
×	O 14.0	
	O 18.0	
	○ 22.0	
Ш		

Indicates the legend for the holes (diameter and properties). The colours are not fixed by diameter from a part to another. The smaller diameter is red, then yellow, and so on.

#### Layers



It is possible display or hide any layer by checking the corresponding checkbox.
# Information

	X
Х	1700.50
Y	550.47
Delta X	319.64
Delta Y	10.45
Angle	1.87
Distance	319.81
	Applu
	- AA-

This box shows the various data such as coordinates, distance, etc.

# **Parameters**

	>
Parameters	Value
Project	00
Component	TEST ROBOT
Profile	IPE180
Length	3000.00
Lower level	0.00
Distance	3000.00
DX1	0.00
DX2	0.00
A	pply

Displays the options needed for some tools

# **Getting started with the drawing module**

# **General use**

Except in some cases as shown below, when a tool is selected all the parameters that require an input will appear in the *Properties* window. Then, in order to confirm the input, press the *Enter Key* twice or click on the *Apply* button.

# Drilling

By selecting the drilling tool # (or pressing [F6]), this window will appear:



In SPPLM , the perforations are inserted as a matrix of holes: a complete pattern of holes can be inserted at once.

In the first area (Side), select the side that requires holes to be drilled (if the profile is a plate, the side is automatically set as *Web*). Then, in the second area (Reference), select the desired reference for the drilling matrix. The reference is the vertical reference (Y axis) of the origin in the drilling matrix. If *Top* is selected, then the origin is placed at the top and the Y coordinates of the holes will be placed in a downward direction. If *Centre Line* is selected, holes can be placed above or below the origin. Finally if *Bottom* is selected, Y coordinates of the holes will be placed above the origin.

After selecting the Y reference, the hole parameters and placing the origin of the matrix is now defined. In the *Type* list, the type of hole to be created is specified here (drill, punch, slot, countersink, etc.). If *Normal* selected, WinCN / WinNEST will select the appropriate way to make the hole, regarding their parameters. If *Drill* is selected, WinCN / WinNEST will automatically drill the hole even if this hole should have been punched (ex. TIPOB).

When creating drilled or tapped holes it is possible to input a depth to create blind holes. The legend will display them as filled circles.

In the X and Y fields, the coordinates of the origin is inputted here. This is represented by the black point in the area above (4).

Now the coordinates of the holes are placed in the fields C, D, E and F; C and D represent the X axis and E and F stand for the Y axis.

In this example, here is the resulting hole;



The red line indicates the horizontal axis of the origin.

If the reference is changed to *Top* and the parameters are as below, the same result is obtained.



When absolute mode is selected, all coordinates are in reference to the origin. If relative mode is selected, coordinates are from the last inputted coordinate. This allows the user to input a series of holes at once.



In this case, the resulting 10 holes will look like this;



After creating a hole, the properties can be changed by right clicking on it and selecting properties, or by double clicking on it.

While editing the matrix for the holes, it is possible to select certain holes in the matrix to be removed. This is done by clicking on the *Detail* button. The following is an example.

Fill the Drill parameters as shown

Drilling Input		X
Side C Web Top Flange Bottom Flange Back Web Beference Top Center Line Bottom	<u>C</u> <u>D</u> <u>Mode</u> <u>Absolute</u>	Gap 80 E 40 E 40 E 40 Nov5*50 © Relative
Mode Absol Ivpe Normal Diameter 18.00	ute C Relative	C <u>u</u> rrent Axis Value 0.00
<u>×</u> 0 <u>Y</u> 0.00	Abort	3128.04

By clicking OK, the following pattern is obtained:



Double click on a hole to edit the properties of the group. Then click on the *Detail* button and uncheck the boxes representing the holes to be deleted.

After clicking OK, the following figure is the result;



Remark: Note that the pattern can be modified as many times as desired simply by opening the *Drilling Group Detail* window and changing the pattern.

# **Cutting - Profiles**

Making a cut in SPPLM is very easy: select the cutting tool (or press [F5]). Then, in the *parameters box*, fill the fields as required:

	×	
Parameters	Value	
Web		
Beginning	30.00	
End	0	
Flange		
Beginning	0.00	
End	0.00	

In this case, there will be a cut in the Web, on the left hand side (*beginning*), with the angle of 30°. It is possible do the same on the flanges.

To remove a cut in a profile, simply enter the value 0 in the corresponding field.

#### **Cutting - Plates**

Cutting a plate is slightly different compared to a bar profile. The contours of the plates are modified instead of adding a cut/mitre. The tools required to do this are in the drawing toolbar.

# **Notches**

After having selected a notch tool, fill the parameters in the parameter area (cut length, radius, etc.) and approach the mouse pointer to the angle to be modified. In the case of straight notches, the value *Cut1* corresponds to the closest line to the pointer.

Parameters	Value
Cut 1	100.00
Cut 2	200.00
A	,pply





Round and tangent notch tools work like the straight notch tool. The parameter to put is not a distance but a radius.

# **Construction lines**

Construction lines are useful when figures are needed to be drawn in a plate. They allow for reference points to aid when drawing lines, circles, rectangles, etc.

Select the *parallel tool*, check the *construction* box and click on the line to have a parallel line drawn. Then click to place the insertion point. This tool is useful if the user requires draw lines going through the middle or ends of existing lines.

To draw a construction line with an offset value from a reference line, select the *offset* tool, *main* insert the offset value and click on the reference line;

	×
Parameters	Value
Distance	200
Construction	
,	
1	Apply



Note that construction lines will not appear on the workshop document. However it is possible to hide them either by deleting them or by inactivating the construction layer.

# **Modifying the contour**

After having drawn some construction lines, the shape of the plate can be modified using one of the drawing tools (line, rectangle, etc.).

For this example, the line tool will be used.

Select the first intersection (note that the pointer locks automatically on intersections)

Click and select the second point you want the line to go through :



# Steel Projects PLM 1.19.x

Click on the second point.



Do the same for the last point. When the last point is clicked, right click to finish.



To cut the segment between the first and the last point of the polyline, select the scissor tool  $\overset{\scriptstyle \ensuremath{\mathcal{K}}}{\ensuremath{\mathcal{K}}}$  and click on the segment to delete it. When the pointer approaches the line, the segment will be highlighted to indicate which part of the line that will be removed:



# **FICEP Macros**

In order to program FICEP coping machines, SPPLM has a *macro* library. These macros can be used only for profiles (beams, channels, flats, etc.).

To add a coping to a profile, select the *macro tool* (or press [F8]). In the following window, select the macro that is desired.



When a macro is selected, the following window appears. The data must be entered to represent the correct cope. Each dimension on the figure is represented by a letter and each letter is reported in fields on the right hand side. If a field is left blank, it is considered to equal 0.

Macros FENICE	$\mathbf{X}$			
	ESTI09 (G1F04)			
	▲     100     H     □     □       B     80     i     P     □       C     50     J     □     □       D     K     R     20       E     L     S       E     M     A       G     N     B			
Position Beginning  End Abort				

#### Steel Projects PLM 1.19.x

In this example, the cope is added on the left hand side of the beam (beginning).



In order to modify the macros settings or delete it, select the macro tool to find the macro used and click on modify or delete.

It is possible to have the macros used most frequently separated in a user-defined library. This will make it easier to find the same macro in the future. To do so, select the "Macro User" item in the "File" menu.

Then, double click on the macro to be added in the user-defined library and click on OK when done.

Then when the macro tool is selected, there will be a group *User* that will display only the most frequently used macros as defined by the user.



# Stamping

The mark number (or any text as desired) can be manually placed on a part. Simply select the stamp tool

# (or press [F7]).

In the parameters box, the part name is automatically set by default. This can be changed or left as required.

Then, click on the location on the part where the stamp should be placed.

# **Bending lines**

SPPLM allows the user to draw bending lines on the plates. They will appear on the workshop document. Bending lines are inserted as regular lines plus the value of the bending angle that is entered in the properties box.

# **Scribing lines**

SPPLM also allows the user to draw lines to be scribed on plates or profiles using bending lines. The difference is that the angle parameter must be set to 0.

# **Drawing options**

Menu File / Options

Drawing Options			X
Draw Gauge Line			1
Uption Pointing precision rectangle Marking Text	10		
🗖 Back Web	,		
Coping	Leadcut C Not any C Leadcut C Scribing		
Layer	Name	Color	
Web	AME	3	
Top Flange	AILE SUPÉRIEURE	3	=
Bottom Flange	AILE INFÉRIEURE	3	
Back Web	BACK WEB	3	
Text	TEXTE	7	~
Ok Abort			

Item	Description
Pointing precision rectangle	This value allows defining the size of the selection rectangle during the selection of drawing elements. Default Value = $5$ .
Marking Text	Font size for stamping
Macros FENICE	Must be checked if using a FICEP Robot If the coping machine is a Ceptrol machine, uncheck this box.
Oxycutting / Plasma	Both Oxycutting and Plasma are checked by default. If the Robot doesn't have Plasma, uncheck the plasma checkbox. If it doesn't have an Oxycutting torch, uncheck the Oxycutting checkbox.
Lead Cut	If a macro is not recognized, SPPLM can generate Lead Cut commands, scribing lines. If <i>Not Any</i> is checked, nothing is done.

Remark: With a FICEP Coping Machine (Robot), it is possible to copy the file *minosse.ini* / *arianna.ini* (in D:\Minosse or D:\Arianna on the machine) into the *BASE* folder of SPPLM in order to set up the macros filter automatically.

Drawin	ng Options			
Draw	Gauge Line			
	<u>D</u> efault Coefficien	t	1.5	
	Diameter	Distance	Coefficient	
22	2		1.1	
20	)	5		
			Ok A	bort

This data is used for the generation of shape outlines according to the size of each drilling axis. SPPLM proposes either a fixed distance relative to the size selected, or a coefficient to apply to the relevant size. Otherwise, the default coefficient will be applied.