

PLATO Process-Flow designs process flows. The logical sequence of production, inspection, and assembly steps and all other movements of a product (transport, storage, etc.) are analyzed and documented. The representation of the entire flow, including concurrent processes and their interactions, helps to detect the possible causes of a fault.

Manufacturing process blade STD										
Process step	No.	Process Type	Preceding Steps	Subsequent Steps	Machine/Device	No.	Product Characteristics	Process Characteristics	Class	Specifications/Tolerances
Clamp raw material in steel saw	10			[ 20 ] Cut raw material to length	Steel saw	1001		Clamping angle	SC	= 90 ° (+0.2/-0.2)
					Steel saw	1002		Clamping force	CC	= 90 N (+2/-2)
Cut raw material to length	20	●	[ 10 ] Clamp raw material in steel saw	[ 30 ] Insert blank in CNC-milling machine	Steel saw	1003		Length setting	SC	= 250 mm (+1/-1)
					Steel saw	1004		Feed rate	CC	= 60 mm/s (+2/-2)
					Steel saw		Legth			250 mm (+0.5/-0.5)
Insert blank in CNC-milling machine	30	●	[ 20 ] Cut raw material to length	[ 40 ] mill blade profile	CNC machine					
mill blade profile	40	●	[ 30 ] Insert blank in CNC-milling machine	[ 50 ] Mill cross head	CNC machine	1105		Control program "Blade profile 8"		= 0124/KK Program
Mill cross head	50	●	[ 40 ] mill blade profile	[ 60 ] Mill slotted head	CNC machine	1110		Control program cros head M6 - M8		= 0124/KK Program
Mill slotted head	60	●	[ 50 ] Mill cross head	[ 70 ] Manually deburr blade	CNC machine			Control program "Slotted Head M6 - M8"		= 0124/KK Program
Manually deburr blade	70	●	[ 60 ] Mill slotted head	[ 80 ] Place blade in polishing machine	CNC machine					

Fig.: The process flow is displayed in a table.

## Applications and Use

- The process flow chart is needed early in the design phase of a new product. Process and product assumptions are documented.
- Forms the basis for the identification and analysis of fault parameters on machines and materials and when there are problems with the methods.
- Serves as preparation for an FMEA or for planning a new project or a new process.
- Supplies data for control plans.

## PLATO e1ns Database

The process flow chart supplies data for FMEAs, system analyses, and production control plans through the central PLATO e1ns database. This integration ensures effective and efficient teamwork throughout all departments – revisions and the need to maintain more than one database are eliminated.

## Primary Focus and Functions

### Faster configuration using the Process Configurator

Data from a variety of sources is needed in the process flow chart. The Process Configurator provides a clear, cross-structural overview of the complex relationships between the process and product structure, machines, and characteristics.

The matrix graphic is easy to understand and allows users to proceed very quickly and systematically.

Once the process is configured, the process flow chart form is already filled in with the essential data. You only need to add the process step numbers and process types.

### Consistent, up-to-date, and easily available data

Changes and updates to process data are automatically propagated to all other forms affected (FMEA, process flow chart, etc.). The data in e1ns.flow is also synchronized when processes are created and modeled visually.

Critical process and product characteristics are consistently indicated and updated.

PLATO Process-Flow is a web application, which means no local installation is necessary. Employees from all corporate divisions have easy access – from anywhere in the world.

### Individual requirements are taken into account

PLATO Process-Flow benefits from the PLATO toolbox concept.

Additional columns or data are added to the standard process flow chart form if necessary – depending on the internal requirements of the company.

The data output can also be configured individually depending on which documents are needed for projects, customers, or archiving purposes.

## Branches and Standards

PLATO Process-Flow is used for production processes in industry, assembly processes, quality management processes, services, etc.

IATF 16949 and AIAG require process flow charts to be created. They are required documents for the Production Part Approval Process (PPAP).

The FAO/WHO HACCP standard (ALINORM 97/13A, Annex II) requires the creation of process flow charts. PLATO Process-Flow represents flow charts according to DIN 10503, "Food hygiene".