



SIEMENS

Siemens PLM Software

Line Designer

Providing a complete production layout solution for manufacturing engineers

Benefits

- Quickly design and visualize production lines in NX
- Perform accurate impact analysis and drive efficient change management
- Use a single system for product, tool and production system design
- Access a fully classified equipment library that can be managed with Teamcenter

Summary

Line Designer is an advanced application to design and visualize layouts of production lines in NX™ software. The integrated Siemens PLM Software platform enables you to easily associate the designed layout to manufacturing planning.

This close integration with planning and equipment design allows you to efficiently manage the entire manufacturing process. You can easily optimize the process by specifying each production step down to

managing a single manufacturing resource, such as a robot or a fixture.

You can perform accurate impact analysis and drive efficient change management by using the parametric resources that are associated with the manufacturing plan.

Having a complete solution for line-level design that is integrated with manufacturing planning is essential to define optimized production processes.

Line Designer

Benefits *continued*

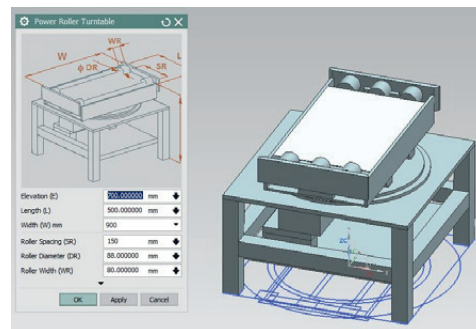
- Design, validate, and commission manufacturing lines on a single PLM platform

Features

- Parametric capabilities to create manufacturing layouts
- Flexible digital representation of manufacturing equipment so you can easily switch between multiple 2D and 3D representations, all in the same system
- Advanced technology, such as 4GD and JT, to efficiently handle a large amount of complex data
- Direct access to component properties using NX Visual Reporting
- Validation of designed layouts with Tecnomatix Process Simulate and Plant Simulation
- Support for multi-CAD




Layout the production concept in NX

The parametric engine in NX enables you to efficiently work with manufacturing components and to easily accommodate any changes. When adjusting the size of individual components or modifying the layout, the dependent components automatically update.

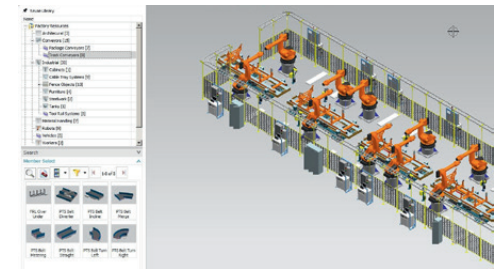


Define smart components with NX parametric modeling.

For each phase of the layout design, you can use the right digital representation of the manufacturing components:

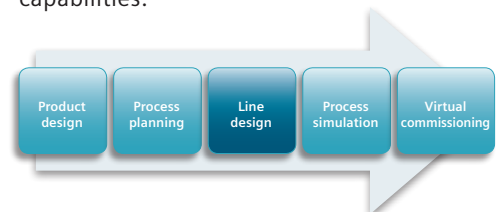
	<p>2D representation: quickly position the components and generate drawings.</p>
	<p>Simplified representation: design the 3D layout with a minimum number of components.</p>
	<p>Detailed representation: simulate and detect interferences by using all of the equipment's details.</p>

The fully classified equipment library is managed using Teamcenter® software, a complete system for data and process management. By connecting to the Teamcenter library environment, you can utilize the powerful search, view and retrieval capabilities across a fully classified library directly from the NX Re-use Library.



Share the same library equipment with the Siemens PLM Software suite of applications.

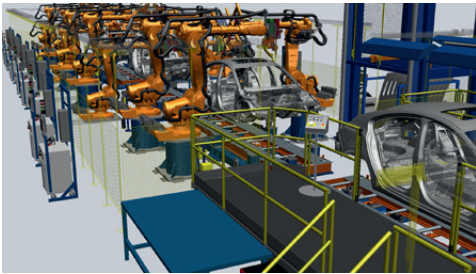
To efficiently handle a large amount of complex data, NX provides advanced technology such as fourth-generation design (4GD) and the JT™ data format. The component-based 4GD approach enables concurrent design in multiple configurations, and is scalable to layouts with a large number of components. JT is a lightweight data technology that provides high-performance visualization and collaboration capabilities.



Pictured is the factory layout design and manufacturing planning workflow.

The layout designed with Line Designer can be used to validate the manufacturing process using Tecnomatix® software for digital manufacturing. Using the Process Simulate application, you can validate a wide range of robotic applications, allowing you to simulate complete production systems, including cell validation and robot placement optimization. By simulating production processes, you can define the optimum manufacturing process.

With Tecnomatix virtual commissioning solutions, you can correct your programmable logic controller (PLC) codes in a virtual environment before using them on real equipment. By simulating and validating your automation equipment virtually, you can ensure proper operation and significantly reduce system startup time. Using



Validate the designed production lines with Process Simulate.

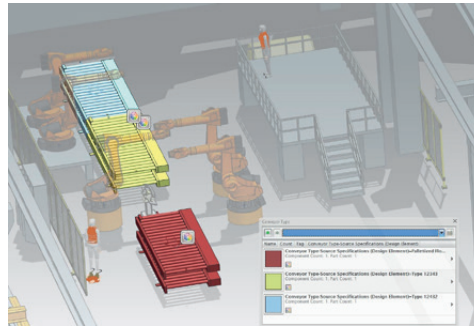
the Siemens PLM Software unified platform provides efficient change management and direct access to a shared library of manufacturing assets. Re-usable best practices can be synchronized across the solution. You can further expand the solution to efficiently work with suppliers and system integrators.

Visual reporting and documentation

You can use Line Designer to directly access a layout's product lifecycle management (PLM) information in Teamcenter. Line Designer can display relevant information about each component, including type, design changes, suppliers, investment cost and build dates.

With high-definition 3D (HD3D) NX Visual Reporting, you can browse PLM data and view details in an interactive navigator. Visual reports can be configured to display color-coded information on manufacturing equipment models based on values and properties so you can quickly and intuitively visualize components in make-or-buy categories, identify long-lead items or all suppliers for a full line of equipment.

Visual reports can be managed and distributed to benefit the entire enterprise.



Directly access and display the component properties using NX Visual Reporting.

Contact

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