



# Digital Twin Software

for layout planning, visualization  
and animation



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**Rockwell  
Automation**

## Layout planning, animation and presentation of production and logistics systems

**Demo3D** enables system concepts to be modeled in 3D within a very short time and presented with all material flows and movements. This supports both planning and sales processes, with the aim of working efficiently and creating understanding, transparency and trust. **Demo3D** provides all the necessary functions, including physics-based simulation, based on state-of-the-art software technology.

### Areas of application

Visualization and animation for sales support: During the sales phase of production and logistics systems, it is important to communicate possible solutions to the customer quickly and impressively. With the help of **Demo3D**, systems can be constructed and animated from module boxes within a short space of time. The system can be viewed from any angle and walked through virtually. The customer can thus understand a solution developed for him as quickly as possible. This creates the basis for a common understanding, on the basis of which even non-technicians can make decisions.



**Photo:** Visualization of warehouse planning including building, narrow-aisle warehouse, etc..

### 3D layout planning and project

**planning:** The use of CAD in layout planning is state of the art. However, the effort involved in creating CAD drawings is still not insignificant and slows down planning speed and creativity in the early planning phases. The use of **Demo3D** can help here and leads to a more efficient planning process while at the same time increasing planning quality. True-to-life 3D models and animation of the system designs immediately create a high level of system understanding and alternatives can be modeled and evaluated interactively.



**Photo:** Animation of an automated logistics system

## Grundlegende Eigenschaften

**Model structure:** Models are built using predefined modules from standard or customer-specific catalogs. The catalog principle generally ensures a high degree of reusability. The modules can be adapted to individual requirements using a variety of parameters. This applies to both the appearance and the function.

In principle, the simulation of material flows is based on physical Properties such as gravity, friction and impacts are taken into account, making them appear deceptively real. If required, however, the physics can also be deactivated, resulting in a "normal" material flow.

**Presentation:** The animation quality of **Demo3D** is very good thanks to the use of the latest graphics technology. With the help of imported 3D CAD data, the realism can be significantly improved. The systems shown can be walked or flown through as desired. Particularly suitable for this is the use of 3D mice and X-Box game controllers.

With the help of VR glasses, such as the HTC Vive, it is also possible to immerse yourself in 3D worlds. For presentations, videos can be created with any desired camera movements,



**Snap function:** The snap function during model creation automatically produces executable models, which can then be further detailed in a second stage with regard to material flow control if required.

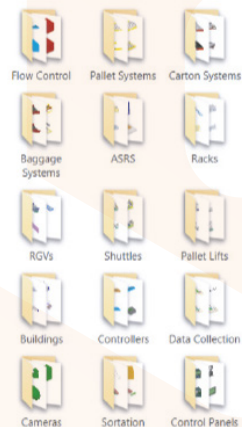


which can then be played with standard viewers. However, the animation models can also be saved in viewer format or as a 3D PDF.

No software installation is required to view models using the **Demo3D Viewer**. For trade fairs etc., images or videos can also be created using the freeware tool

Povray rendering. The image quality is even higher due to reflections etc. and any resolution can be generated, e.g. for printing posters.

**Catalogs:** **Demo3D** is delivered with numerous standard catalogs, currently these are



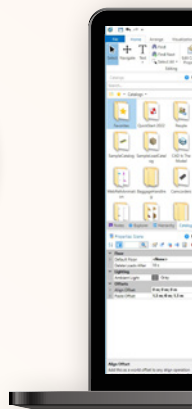
### ③ QuickStart for modeling :

- |                             |                                 |
|-----------------------------|---------------------------------|
| ➤ Conveyor technology       | ➤ Transverse displacement       |
| ➤ overhead conveyors        | weighing                        |
| ➤ Storage technology        | ➤ Building parts, interior      |
| ➤ Sorters                   | fittings                        |
| ➤ Industrial trucks         | ➤ Camera paths                  |
| ➤ Automated guided vehicles | ➤ Conveyed goods                |
|                             | ➤ Logical modules (controllers) |

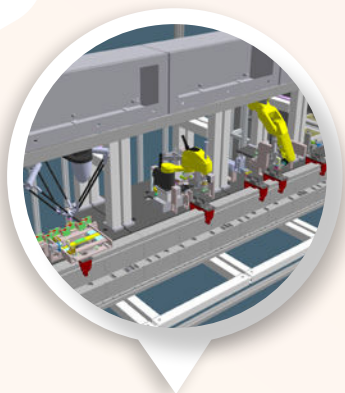
- ③ People catalog for mapping workers (transport, order picking, palletizing)
- ③ Robot catalog (articulated axis robots, gantry robots, flexpicker)
- ③ Various catalogs for static elements (building parts, interior fittings)
- ③ Sample catalog with basic elements as a basis for creating customer-specific modules

**Photo:** Integration of 3D CAD data for a high level of detail.

**CAD connection:** Various native interfaces are available for the integration of CAD data, e.g. for AutoCAD, Creo Parametric, Inventor, Onshape, Sketchup, SolidWorks, Solid Edge etc.. Other formats can be imported via STEP. Following After the import, the data can be easily kinematized using the "CAD Is The Model" module.



The axes of movement are applied directly to the components using prefabricated function blocks, allowing even complex kinematics to be animated. The kinematization of data using the "CAD Is The Model" module can also be carried out directly in the design programs within **Demo3D**, for which specific add-ins are available.



**Photos:** Model based on the manufacturer-specific library for "Independent Cart Technology (ICT)"

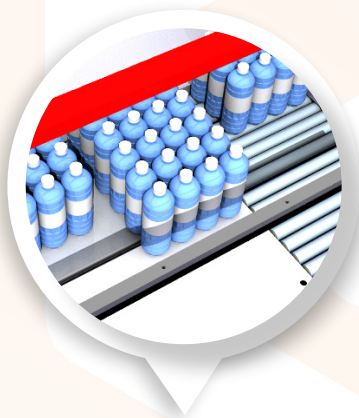
## Advanced functions

In addition to the use of standard elements, **Demo3D** also offers the option of developing your own modules. As a rule, these are also designed to be parameterizable and stored in new catalogs.



There are virtually no limits in terms of appearance and function. As a development platform, **Demo3D** can also be used for a wide variety of individual developments. These include, for example.:

- ③ Export of parts lists for price calculation
- ③ Automatic model generation based on CSV, XML files



## Demo3D Editions

In order to meet the requirements of the different application areas and user groups, there are two editions of **Demo3D** that build on each other. These are:

### Demo3D Professional

The **Demo3D** Professional license allows the use of all available standard catalogs. In addition, you can create your own catalogs and import and export a variety of 3D CAD formats. The visual sequence description logic "QuickLogic" is available for the development of special functions.

### Demo3D Enterprise

**Demo3D Enterprise** is based on the Professional license and also allows scripts to be written on the basis of JScript and C#. This supports, for example, the development of new modules with specific functions, the customization of the **Demo3D** GUI, the integration of dialogs and DLLs, or the implementation of automatic model generation.

## Extract from the current references

- ③ Accenture
- ③ Bühler AG
- ③ Continental Reifen Deutschland GmbH
- ③ Dachser Group SE & Co. KG
- ③ DHL Sorting Center GmbH
- ③ Dematic GmbH
- ③ Ehrhardt + Partner GmbH & Co. KG
- ③ Fortna
- ③ G. Siempelkamp GmbH & Co. KG
- ③ GEBHARDT Fördertechnik GmbH
- ③ Interroll Group
- ③ IWL AG
- ③ Jungheinrich AG
- ③ KHS GmbH
- ③ KNAPP AG
- ③ Körber AG
- ③ Lidl Stiftung & Co. KG
- ③ Miebach Consulting GmbH
- ③ REWE Markt GmbH
- ③ Schenker Deutschland AG
- ③ SEW-EURODRIVE GmbH & Co. KG
- ③ SWAN GmbH
- ③ Swisslog GmbH
- ③ TGW LOGISTICS GROUP GmbH
- ③ Vanderlande Industries GmbH
- ③ viastore SYSTEMS GmbH

## Our Locations







**DEMO3D**



**Do you have any questions about the  
Demo3D Softwar?**

**Please feel free to contact us:**  
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[www.demo3d.de](http://www.demo3d.de)



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