

The right handling system in just 20 minutes

The Handling Guide Online is revolutionising engineering for ready-to-install solutions

As of immediately, technicians and engineers arrive at the right ready-to-install handling system at a record-breaking tempo in the areas of project engineering and planning. They can now order new system solutions intelligently and intuitively via the new Festo Handling Guide Online – without any interruptions in the value chain because the new configuration and ordering platform is integrated into the online product catalogue from Festo.

Manufacturers of complex highly automated assembly lines – such as those used in Festo's Scharnhausen Technology Plant to assemble VUVG valves – are particularly pleased that the new software tool enables them to drastically reduce their time to market. These assembly lines incorporate up to 20 handling gantries. The costs of engineering carried out with traditional methods used to be relatively high, but this has now been revolutionised by Festo's Handling Guide Online.

Arrive at the right, standard handling system including CAD model with just a few clicks in only 20 minutes – that's what the Festo Handling Guide Online can do for you. The individual steps including RFQ, layout, quotation and CAD design, for which 10 to 15 days were required in the past, have been shortened to a revolutionary 20 minutes by the Handling Guide Online.

Shorter time to market

The Handling Guide Online opens up entirely new horizons with standardised handling systems: Its revolutionising assembly and delivery times with reductions from nearly two months to just a few weeks. New standard products are also shortening parameterisation and commissioning time. Machine and equipment manufacturers are thus able to reduce time-to-market by the revolutionary amount of roughly 70% with regard to integrated handling systems.

Thanks to the brand new engineering tool, design engineers gain time and space for creativity in planning and project engineering processes for their companies' core areas of technological expertise. Sifting through catalogues, tedious supplier RFQs, ordering individual components and complex individual constructions for handling tasks are thus a thing of the past forever.

Intuitive software

A large portion of the engineering costs are eliminated and detailed product knowledge is unnecessary. Intuitive software with structured data querying ensures reliable selection of the

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right components from the modular handling system. Direct querying of net prices provides for planning security.

Three steps to the right handling system

Just three steps are enough to arrive at a fully configured handling system. During the first step, the engineer selects the desired type of handling system and enters the application data to the Handling Guide Online. The tool calculates appropriate handling systems, including price.

During the second step, the planner selects the most suitable handling system from these suggestions. The data sheet and the correctly configured CAD model are immediately made available for download in all common data formats for direct integration into the customer's own design engineering system. During the third step, the engineer configures the selected system with additional options in accordance with his own requirements.

The selected handling system is then transferred to the shopping cart. The shopping cart function will be enabled as of the second quarter of 2015. A final click transmits the order to Festo. Handling experts from Festo deliver a ready-to-install system including user documentation in accordance with the EC Machinery Directive directly to the machine or system with extremely short lead-time.

Individually developed

In addition to flexible standard products, Festo also develops handling systems based entirely on individual, industry-specific requirements, for example with freely definable axis geometries for shorter cycle times or for integration into machines with minimal space requirements – including perfectly matched individual solutions for gripping, rotary motion and vacuum, as well as image processing with intelligent compact cameras for quality inspection and conveyor belt monitoring.

Because if the handling systems suggested by the Handling Guide Online should fail to meet the specified requirements despite the great variety of options, the design engineer can simply forward the entered application data to the handling experts from Festo with a single click in order to obtain an individualised quotation.

Matching control packages

Individually adaptable control packages link the handling system to the customer's master controls for the overall system. The control package CMCA is available in particular for highly dynamic handling systems. This standardised, decentralised control package is integrated into the control cabinet or onto the mounting plate. It ensures extremely easy commissioning and reliability.

Commissioning service

Process costs are reduced by our commissioning service, which is provided by trained experts. And system productivity is increased at the same time. The service includes inspection of wiring, connections, travel path and energy chains, configuration and parameterisation of the axes, optimisation of the control parameters and homing, operation of the axes in the test mode, data backup and documentation. The workload of the users is reduced as a result, and they have more time and elbowroom for other tasks involving their company's core business activities.

Assembly lines in the Technology Plant Scharnhausen

In the assembly lines there are up to eight production cells spread one after the other over 30 metres; this is where the motion sequences for assembling the individual valves are controlled and executed. This includes spray greasing the housings, pressing in the cartridges and fitting the seals, as well as ensuring the respective process monitoring procedures. The specialists for automation created the cells both in the hardware and the software with a modular design and networked them with each other.

The individual processes are autonomously set up, whilst the cells' interfaces are standardised. It is possible to convert, replace or extend the cells without a great deal of effort. A time slot no longer has to be planned even for retooling, as the system retools itself within the cycle time. The consistent standardisation process means that even assembly cells or modules made by other manufacturers can be integrated as required.

Correct greasing

To grease the pistons, the Festo experts use a clever method in the automated assembly process: special grease is finely atomised by a heatable spraying system and applied safely and accurately using spray nozzles. The process data for this production step is constantly monitored. In service life tests, the solenoid valves thus perform five times better than before. For testing the valves after the last production step, an innovative test system has been developed, by which it has been possible to reduce the time required for this to just a few seconds.

Everything can be tracked

Right from the planning stage, the experts ensured a high energy-efficiency level on the assembly lines. The energy consumption can now be individually determined for each unit today. Possible leaks are automatically detected, whilst pressure and flow rate are continually monitored. Locally employed valve terminals reduce the consumption of compressed air on the machines considerably.

Thanks to cameras and laser sensors, each separate assembly step is inspected without delay. Barcodes and RFID chips (radio frequency identification) are used across the entire production process and beyond, from the supplier to the customer, to record batch data, process parameters and all test results. Unfavourable trends in production can thus be identified early

on, and waste or reworks avoided.

Persfoto's



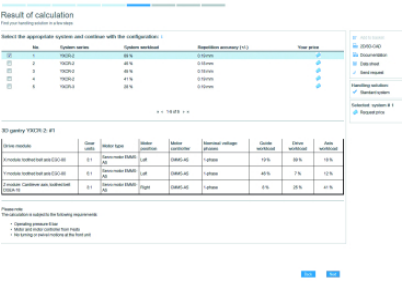
Technology plant VUVG assembly line 2

A compact valve every 12 seconds: automated assembly plants with fast retooling times ensure high output volumes for the automation products of the Festo core product range.



Handling Guide Online Screen 1 EN

Handling Guide Online from Festo: allows design and project engineers to configure and order new system solutions intelligently and intuitively – in just 20 minutes.



Handling Guide Online Screen 2 EN

Structured data querying and planning security: a large portion of the engineering costs are eliminated and detailed product knowledge is unnecessary.



Handling Guide Online Screen 3 EN

Selected handling system in the Handling Guide Online: the data sheet and the correctly configured CAD model are immediately made available for download in all common data formats.



Handling

With the Handling Guide Online, machine and equipment manufacturers are able to reduce time-to-market by the revolutionary amount of roughly 70% with regard to integrated handling systems.



Technology Plant VUVG assembly line control system

Festo products produce Festo products: on the left of the picture is a handling gantry, which could have been configured considerably faster using the Handling Guide Online.