

HYFORE

— WORKHOLDING —

It's gripping stuff...

HALTER
AUTOMATION



HALTER

Hyfore is the UK distributor for Halter CNC Automation, the Netherlands based supplier of machine tool robotic loading and unloading systems. Sitting alongside Hyfore's workholding products, Halter offers a further dimension to its turnkey, FMS and machine automation capabilities which are increasingly an integral part of customer specifications.

Best known for its 'Load Assistant' which uses a Fanuc robot arm with the Halter smart control and smart loading system, Halter CNC Automation has over 25 years' experience in supplying robotic solutions to increase the productivity of machining centres.

A feature of Halter automation systems is the simplicity of smart control programming system which does not require previous robotic experience. It is a universal system for both CNC lathes and CNC machining centres.

IMMEDIATELY INCREASE PROFITS WITH THE RIGHT AUTOMATION!

The market for you, as a business in the metalworking industry, has changed significantly in recent years. Your customers have become more demanding than ever before. They expect you to supply at competitive prices, but they also demand smaller batch sizes and shorter delivery times. At the same time you have to deal with rising labor costs and a lack of CNC operators. You need these operators for skilled labor, not simple repetitive jobs. The only way to resolve these challenges is to choose the right automation. For small to large batch sizes this should be an automation system that is fast to set up and easy to integrate into existing processes.

EASY LOADING SYSTEM WITH SHORT SET-UP TIMES

The HALTER LoadAssistant has been developed based on HALTER CNC Automation's many years of experience in the metalworking industry and in production automation. It is a smart and sophisticated system and it does exactly what it is designed to do: load your CNC machine with small and medium batches. The system is very fast to set up and you don't need any knowledge about robots to operate it. Would you like to immediately increase your profits like many other companies have already done? Do you want to invest in a system that provides years of trouble-free loading of your CNC machines, even with smaller batch sizes? Then choose the HALTER LoadAssistant and get in touch with us today!



YOUR KEY BENEFITS

HALTER LoadAssistant increases your production output, machine efficiency and profits:

- + The additional machining hours at a lower cost immediately result in higher production output and higher profitability.
- + One operator can operate more than one machine at the same time, improving the utilization rate of your machine shop.
- + Automation lowers labor costs, as the average labor costs are 5 to 8 times higher than the average depreciation cost per hour of the robot.

The easy way to automate your CNC machine with HALTER SmartControl

- + No robotics experience required
- + Set-up ready in 12 steps
- + Very flexible: add additional cycles yourself
- + Change-over takes less than 5 minutes

Rotating loading system

- + Universal, pre-programmed grid plates
- + For lathes and/or milling machines up to 230 mm
- + Grid-plates are adjustable in height for workpieces up to 250 mm
- + New batches can be set up while the robot arm is working
- + Stacking stations for milling workpieces up to 180 mm
- + High capacity on a small surface area (for shorter workpieces)
- + Workpiece turn-around station for two-sided machining
- + Stacking stations for turning workpieces up to 230 mm
- + High capacity with a small surface area (for shorter workpieces)
- + Workpiece turn-around station for two-sided machining

Your qualified operators are better utilised

Operators are qualified to set up and program CNC machines. Most of the time, however, they are engaged in tedious and repetitive work. The HALTER LoadAssistant takes over this work, allowing your qualified operators to focus on work preparation, testing, configuring other machines, and creating CNC programs. The content of their job therefore becomes more appealing and the operators become more efficient.

You do not need robot specialists

The HALTER LoadAssistant can easily be set up and operated by any employee. No robotics training is required thanks to the HALTER SmartControl combined with the well-thought-out loading solution.

It increases flexibility as it can be used with several of your CNC machines

The HALTER LoadAssistant can easily be moved with a pallet truck and connected to other CNC machine in your shop. By investing in one loading robot you can automate several machines, allowing you to respond to the demand of your customers in a more flexible way. You can use the HALTER Universal with a lathe as well as with a milling machine.

Fanuc 6-axis robot arm

- + Maximum load capacity of robot arm: 10 kg, 20 kg or 35 kg
- + Suitable for industrial environments
- + Stable, accurate and sustainable

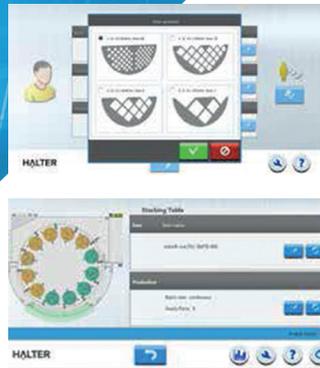
Optimal gripper system

- + Universal 2- or 3-finger grippers
- + Quickly adjustable grippers
- + Built-in safety sensors for open/close control
- + Airblow system that cleans off the vice or chuck

Setting up a new batch while the robot continues to operate

- + Thanks to the rotating loading system, a new batch can be filled from the backside while the production process is running.
- + Rigid construction
- + Only A-class industrial components
- + Standard and complete plug-and-play system





This means that the operator only needs to enter the workpiece data (e.g., the diameter and height) and the robotic arm will know, based on this data, the exact position of the workpiece. The data of the CNC machine (such as the vice or chuck) are set so that the HALTER LoadAssistant can immediately start the automatic loading of the machine. Thanks to the HALTER SmartControl, the changeover times are minimized and the HALTER LoadAssistant can even be used for smaller batches.

HALTER SMARTCONTROL

- + Intuitive and graphical programming in 12 steps
- + Rotating panel with 15" touch screen
- + Choice between inside and outside gripping
- + Gripping with or without pressure star
- + Possibility to work with spindle orientation
- + Eccentric loading and unloading
- + Adding of free programmable cycles
- + Standard cycles can be extended with extra functionalities Adjustable distance of the airflow system
- + Software analysis for machine utilization
- + Automatic program storage
- + Input can be entered in inches or mm
- + Automatic back-up of robot programs or manual back up to USB Robot arm can be parked with the Park Position button
- + Free choice of pre-installed language
- + Can be connected to up to 4 machines

Intuitive, graphics-based programming in 12 steps

The HALTER SmartControl features intuitive software, so the operator does not need any knowledge of robot programming. All positions and all possible variables have been pre-programmed into the HALTER LoadAssistant by means of a grid plate (for the Universal) or a stacking system (for the S-180 and S-230).

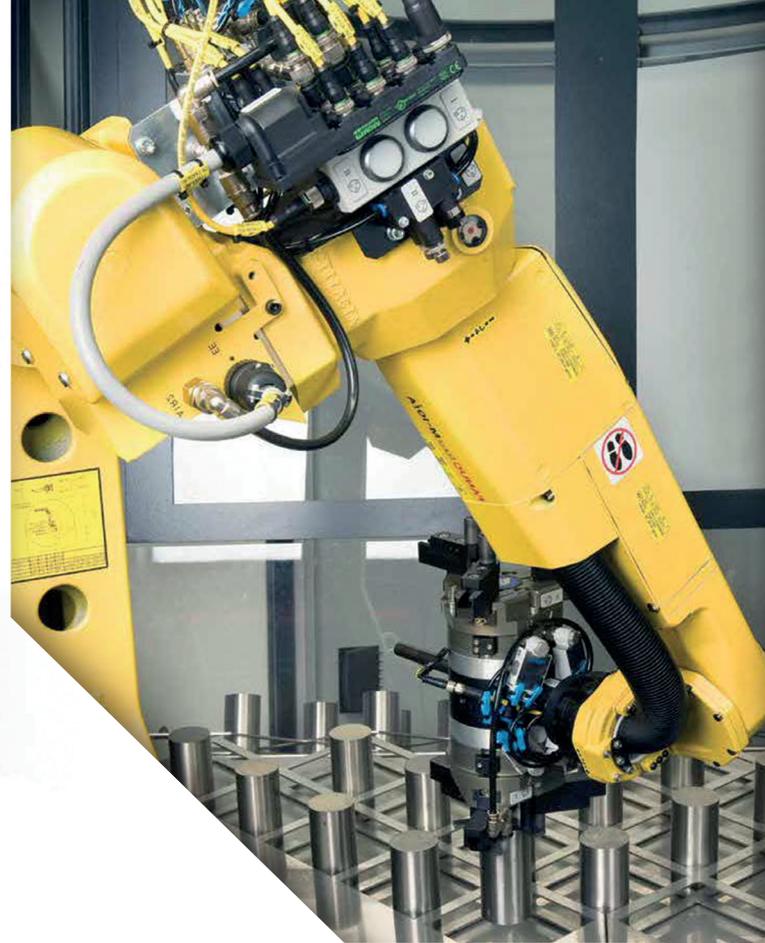
Standard loading cycles that can be flexibly extended with additional functions

The HALTER LoadAssistant works with multiple standard loading cycles, which can be selected with one click. Thus you do not need to program anything because the robot arm upon installation is taught exactly where the vice or chuck is. For example, there are standard cycles for the loading and unloading of CNC machines with one spindle, two spindles, a multitasking lathe center or for the unloading of a sub-spindle in combination with a bar feeder. In addition, you also have the option to extend any standard cycle with additional functionalities. For example, the workpieces can be placed on a measuring station, engraving machine, production line or pallet. Therefore you retain the advantage of short changeover times through the use of standard cycles, but you also have optimal flexibility when it comes to adding extra features.

Installation and instruction

The HALTER LoadAssistant is delivered turnkey. It is important to know that your CNC machine does not necessarily need to be equipped with a so-called 'robot interface' from your machine supplier. Our certified technicians make the connection between your CNC machine and the HALTER LoadAssistant through a PLC. Thanks to the standardized HALTER interface protocol, our installation can result in significant cost savings for you.

Your CNC machine needs to be equipped with an automatic door opener to be able to work with the HALTER LoadAssistant. In case your CNC machine doesn't have a door opener, we can build it in for you. The operator training session takes place immediately after the installation. Our technicians ensure that after the training, your operator is able to work independently with the HALTER LoadAssistant.



Halter LoadAssistant Universal 10 / 20 / 35	Capacity
Workpiece diameter (min-max)	10 mm - 230 mm
Minimum workpiece (L x W)	10 mm x 10 mm
Maximum workpiece (L x W)	230 mm x 230 mm
Maximum height of workpiece	250 mm
Maximum load capacity robot arm	10 kg / 20 kg / 35 kg
Maximum total weight on rotating table	250 kg / 750 kg / 750 kg
Max. number of workpieces for grid plate 10-35 mm	176
Max. number of workpieces for grid plate 23-55 mm	136
Max. number of workpieces for grid plate 23-85 mm	68
Max. number of workpieces for grid plate 23-115 mm	40
Max. number of workpieces for grid plate 23-135 mm	24
Max. number of workpieces for grid plate 23-155 mm	18
Max. number of workpieces for grid plate 23-230 mm	6

Halter LoadAssistant S-180 20 / 35	Capacity
Minimum workpiece (L x W)	40 mm x 40 mm
Maximum workpiece (L x W)	180 mm x 180 mm
Maximum height of workpiece	175 mm
Maximum load capacity robot arm	20 kg / 35 kg
Maximum total weight on rotating table	1250 kg
Maximum stacking height	350 mm
Number of stacking stations (1 empty)	12
Maximum weight per station	115 kg
Max. number of workpieces at workpiece height of 10 mm	385
Max. number of workpieces at workpiece height of 20 mm	154
Max. number of workpieces at workpiece height of 50 mm	77
Max. number of workpieces at workpiece height of 80 mm	44
Max. number of workpieces at workpiece height of 115 mm	33

Halter LoadAssistant S-23 0 20 / 35	Capacity
Workpiece diameter (min-max)	43 mm – 230 mm
Maximum height of workpiece	175 mm
Maximum load capacity robot arm	20 kg / 35 kg
Maximum total weight on rotating table	1250 kg
Maximum stacking height	350 mm
Number of stacking stations (1 empty)	12
Maximum weight per station	115 kg
Max. number of workpieces at workpiece height of 10 mm	385
Max. number of workpieces at workpiece height of 20 mm	154
Max. number of workpieces at workpiece height of 50 mm	77
Max. number of workpieces at workpiece height of 80 mm	44
Max. number of workpieces at workpiece height of 115 mm	33
Max. number of workpieces at workpiece height of 175 mm	22

Halter LoadAssistant S-23 0 20 / 35	UNIVERSAL 10 / 20 / 35	S-180 20 / 35	S-230 20 / 35
Rigid industrial construction	✓	✓	✓
Rotating loading table	✓	✓	✓
Full enclosure and protection	✓	✓	✓
Simple to move with pallet truck	✓	✓	✓
Can be placed on 3-point self-centering anchors	✓	✓	✓
Fanuc 6-axis robot arm	10 / 20 / 35 kg	20 / 35 kg	20 / 35 kg
Drip tray for leaking coolant	✓	✓	✓
Workpiece turn-around station for two-sided machining	✓	✓	✓
Standard robot-machine interface for every CNC machine	✓	✓	✓
Intuitive and graphical programming in 12 steps	✓	✓	✓
Rotating panel with 15" touch screen	✓	✓	✓
Choice between inside and outside gripping	✓	✓	✓
Gripping with or without pressure star	✓	✓	✓
Possibility to work with spindle orientation	✓	✓	✓
Eccentric loading and unloading	✓	✓	✓
Adding of free programmable cycles	✓	✓	✓
Standard cycles can be extended with extra functionalities	✓	✓	✓
Adjustable distance of the airblow system	✓	✓	✓
Software analysis for machine utilization	✓	✓	✓
Automatic program storage	✓	✓	✓
Input can be entered in inches or mm	✓	✓	✓
Robot arm can be parked with the Park Position button	✓	✓	✓
Free choice of pre-installed language	✓	✓	✓
Max. number of CNC machines to connect with	4	4	4
2-finger gripper for rectangular workpieces	Optional	✓	-
3-finger gripper for round workpieces	Optional	-	✓
Separate grippers for raw and machined workpieces	✓	✓	✓
Standard airblow system on all grippers	✓	✓	✓
Workpiece detection system by open/close message	✓	✓	✓
Quick change system for exchanging grippers	✓	✓	✓
Quickly adjustable gripper fingers	✓	✓	✓
Pressure sensor on the robot arm monitors air pressure	✓	✓	✓





Safety	UNIVERSAL 10 / 20 / 35	S-180 20 / 35	S-230 20 / 35
In-machine-space function	✓	✓	✓
Fanuc DCS area in combination with the Sick floor scanner	✓	✓	✓
Sliding door provided with safety sensors	✓	✓	✓
Standard safety fence between CNC machine and the Halter	✓	✓	✓
Closed safety circuit	✓	✓	✓
Automatic servo-driven door opener with integrated safety	✓	✓	✓

Safety	UNIVERSAL 10 / 20 / 35	S-180 20 / 35	S-230 20 / 35
Length x Width	1750 x 1434 mm	1750 x 1434 mm	1750 x 1434 mm
Height	2220 mm	2220 mm	2220 mm
Total weight	990 / 1110 / 1120 kg	1210 / 1220 kg	1210 / 1220 kg
Voltage	400 V	400 V	400 V
Peak consumption	16 A	16 A	16 A
Compressed air pressure 6 bar 6 bar 6 bar	6 bar	6 bar	6 bar



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