

Status: 01/2022



Products need labeling
Print and apply systems



HERMES Q

Made in Germany



Data security in label printing

Modern manufacture sees marking systems work autonomous, interact among each other, with host computers or a plant control unit. Data security is a key issue. The integration of components, their administration and authentication are sensitive tasks demanded from the corporate IT. cab systems developed for printing and applying labels¹ provide proper features by default, fairly protecting your data in a network.



Permissions can be assigned to users and restricted by passwords.



Firmware updates are verified for integrity before installation.



Access to network services (HTTP, FTP, VNC, OPC UA etc.) is possible only for users with authorization. Network services can be switched on or off.



Network protocols can be encrypted using TLS/SSL. To connect securely in a network, a certificate as required is installed in the device ex factory.



Wireless interfaces (WLAN, Bluetooth) can be switched on or off. WPA2 and WPA2 Enterprise levels of security are supported.



Printers in a network can be authorized securely. IEEE 802.1X network standard is supported.



USB slots can be locked and access to external storage media be denied.

All the current cab printing systems are based on the same electronics and firmware. The printer language is the same, so are interfaces and memory. Any further developed operating system or driver is available immediately on every device. Resets to default settings are PIN-protected.

¹ models SQUIX, MACH 4S, EOS 2/5, AXON 1/2, HERMES Q, PX Q, IXOR



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HERMES Q

Printing labels and applying them automatically in production lines

1.1



The slim one

to print small labels

Label printer		HERMES Q2	
Printable resolution	dpi	300	600
Print speed	up to mm/s	300	150
Print width	up to mm	56.9	54.1
Label roll outside diameters	mm	205 / 305	
Label width	up to mm	58	

1.2



The universal one

An industrial bestseller, providing a wide range of accessories

Label printer		HERMES Q4.3		HERMES Q4	
Printable resolution	dpi	200	300	300	600
Print speed	up to mm/s	300	300	300	150
Print width	up to mm	104	108.4	105.7	105.7
Label roll outside diameters	mm	205 / 305			
Label width	up to mm	114			

1.3



The wide one

to print Odette, UCC and GS1 labels in logistics applications

Label printer		HERMES Q6.3	
Printable resolution	dpi	200	300
Print speed	up to mm/s	250	250
Print width	up to mm	168	162.6
Label roll outside diameters	mm	205 / 305	
Label width	up to mm	174	

Sample applications



Label rolls

All units can provide an unwinder for picking up rolls with maximum diameter either 205 mm or 305 mm.



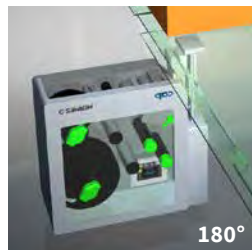
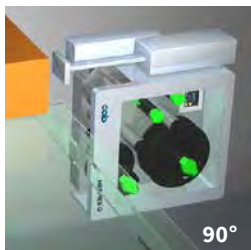
Directions to which dispense labels

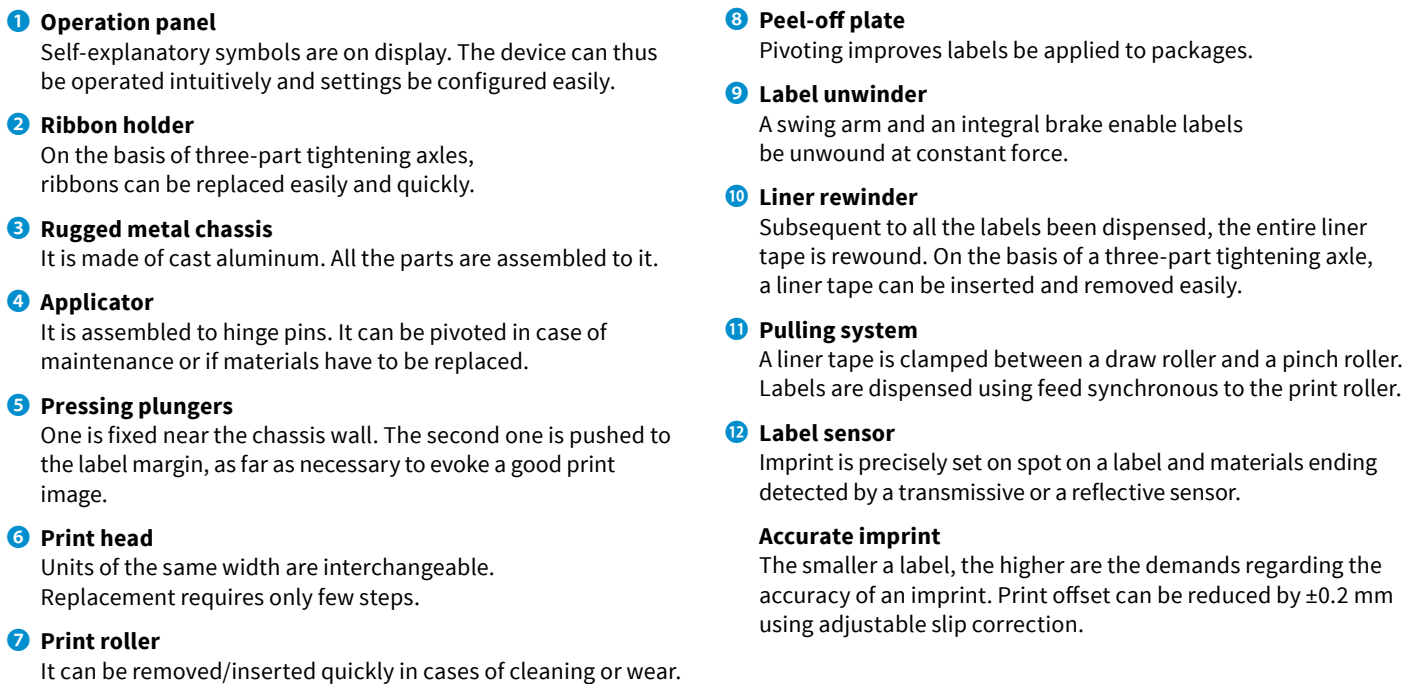
All units can be designed for providing labels either to the left or to the right.



Orientations of assembly

All the units can be rotated vertically by at most 360° or assembled in horizontal orientation.





Self-explanatory symbols are on display. The device can thus be operated intuitively and settings be configured easily.

On the basis of three-part tightening axles, ribbons can be replaced easily and quickly.

It is made of cast aluminum. All the parts are assembled to it.

It is assembled to hinge pins. It can be pivoted in case of maintenance or if materials have to be replaced.

One is fixed near the chassis wall. The second one is pushed to the label margin, as far as necessary to evoke a good print image.

Units of the same width are interchangeable.
Replacement requires only few steps.

It can be removed/inserted quickly in cases of cleaning or wear.

Pivoting improves labels be applied to packages.

A swing arm and an integral brake enable labels be unwound at constant force.

Subsequent to all the labels been dispensed, the entire liner tape is rewound. On the basis of a three-part tightening axle, a liner tape can be inserted and removed easily.

A liner tape is clamped between a draw roller and a pinch roller. Labels are dispensed using feed synchronous to the print roller.

Imprint is precisely set on spot on a label and materials ending detected by a transmissive or a reflective sensor.

The smaller a label, the higher are the demands regarding the accuracy of an imprint. Print offset can be reduced by ± 0.2 mm using adjustable slip correction.

Print heads



Units of the same width are interchangeable.
They are detected by the CPU automatically and calibrated.
The print distance to the locating edge can be adjusted.

Major data such as the operational performance, maximum operating temperature and heat energy are recorded on the print head. Data can be read at the factory.

Print heads provided for HERMES Q2, HERMES Q4 - 300, 600 dpi

- sharp-edge print images
- e.g. when printing small fonts and graphics on typeplates
- e.g. when printing on materials requires high energy needs

Print heads provided for HERMES Q4.3, HERMES Q6.3 - 200, 300 dpi
 persistent; when labeling in rough settings and thermal direct method

Print rollers



Two types of materials:

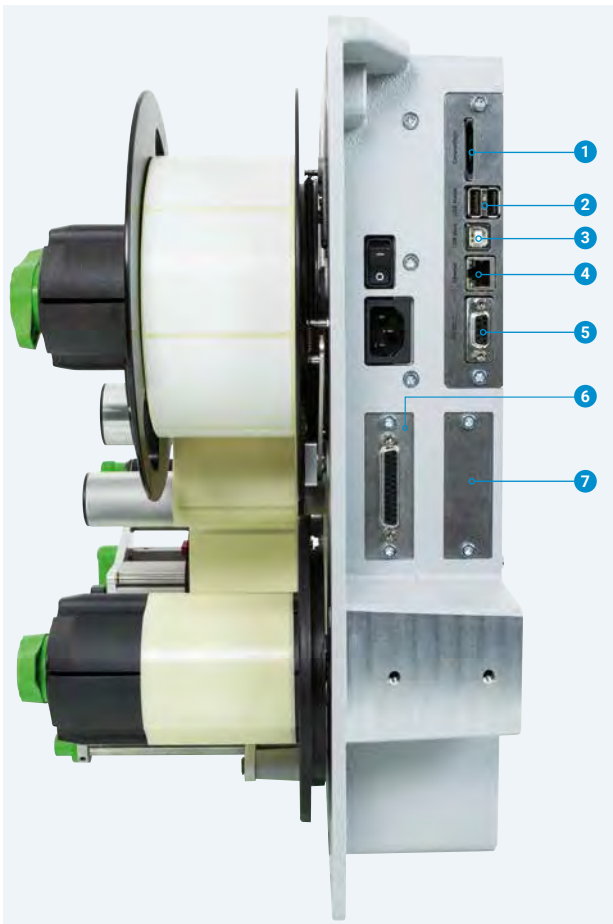
Print rollers DR

providing a synthetic rubber coating
 They enable highly accurate imprint and are provided by default.

Print rollers DRS

providing a silicone coating
 Product life is extra long, taken a higher print offset into account.

Interfaces



- 1 Slot to insert a **SD memory card**
- 2 **2 USB hosts** to connect a service key, USB memory stick, keyboard, barcode scanner, USB Bluetooth adapter, USB WLAN stick, warning light, an external operation panel
- 3 **USB 2.0 Hi-Speed** to connect a PC
- 4 **Ethernet 10/100 Mbit/s**
- 5 **RS232C** 1,200 to 230,400 baud /8 bits
- 6 **Digital I/O interface;** socket connector SUB-D, 25 pins compliant with IEC/EN 61131-2, types 1+3;
 All the inputs and outputs are isolated galvanically and protect from reverse polarity. In addition, outputs are short-circuit proof

PNP inputs

Start printing or labeling
 Print first label
 Reprint
 Delete print job
 Label removed
 Stop printing or labeling
 Label feed
 Label rotated by 90°
 (to be applied by applicator 4214)
 Pause
 Reset

PNP, NPN outputs

Device ready
 Print data available
 Initial / upper end position
 Paper feed ON
 Label in transfer position
 Label application / lower end position
 Pre-warning to a ribbon ending
 Pre-warning to a label web ending
 End of a ribbon and/or a label web
 Collective error

Option:

- 7 **2 port Ethernet switch 10/100 Mbit/s**



Operation panel

Self-explanatory symbols are on display. The device can thus be operated intuitively and settings be configured easily.

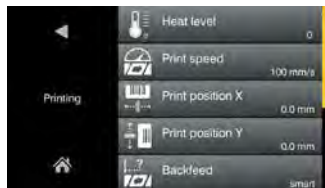
- 1 **LED:** Power ON
- 2 **Status bar:** data reception, record data stream, pre-warning to a ribbon ending, SD memory card / USB memory stick plugged in, Bluetooth, WLAN, Ethernet, USB slave, time
- 3 **Printer status:** ready, pause, number of labels printed in a print job, label in transfer position, awaiting external start signal
- 4 **USB slot** to connect a service key or a memory stick, to transfer data to the IFFS memory

5 Operation

- Printing and applying labels in individual steps
- Jump to menu
- Reprint the latest label
- Interrupt and continue a print job
- Stop and delete all print jobs
- Label feed



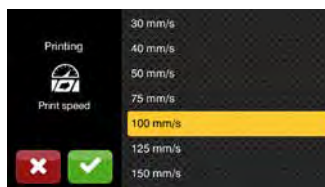
Setup options



Print parameters



Print offset Y



Print speeds

Landscape or portrait display, depending from the orientation of assembly



Printer rotated by 90°



Video tutorials

External operation panel

If the operation panel of a printer cannot be accessed, an additional external one can be plugged.

Same functionality as on the printer

Landscape or portrait mode

Operability as desired on the external operation panel or on the printer

Printer connectivity: USB 2.0 Hi-Speed device

- 1 **LED:** Power ON
- 2 **USB port** to plug a service key or a memory stick, to transfer data to the IFFS memory
- 3 **Connecting USB cable** for power supply
cab provides specified cables. Lengths are 1.8 m to 16 m.



Accessories

Accessorial products are plugged or screwed to a printer by the customer.

Pos.	Designation	roll Ø	205	305	1.1	1.2		1.3
					HERMES Q2	HERMES Q4.3	HERMES Q4	HERMES Q6.3
2.1	SD memory card		●	●	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.2	USB memory stick		●	●	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.3	USB WLAN stick		●	●	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.4	USB WLAN stick including a rod antenna		●	●	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.5	USB Bluetooth adapter		●	●	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.6	Product sensor, 3 pins		●	●	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.7	Product sensor, 25 pins		●	●	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.8	I/O interface connector SUB-D, 25 pins		●	●	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.9	Warning light		●	●	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.10	External operation panel		●	●	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Connecting USB cable		●	●	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.11	Label selection - I/O box		●	●	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.12	Hand switch TR2		●	●	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.13	Foot switch		●	●	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.14	Connecting RS232 C cable		●	●	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.15	Scanner CC200		●	●	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2.1		SD memory card						
2.2		USB memory stick						
2.3		USB WLAN stick 2.4 GHz 802.11b/g/n hotspot or infrastructure mode						
2.4		USB WLAN stick including a rod antenna to extend the range of operation 2.4 GHz 802.11b/g/n + 5 GHz 802.11a/n/ac hotspot or infrastructure mode						
2.5		USB Bluetooth adapter						
2.6		Product sensor, 3 pins to be attached to a front side applicator, a vacuum belt applicator or an air jet box. Labels are triggered to be applied as soon as a product has been detached, e.g. on a conveyor belt.						
2.7		Product sensor, 25 pins Labels are triggered to be applied as soon as a product has been detached, e.g. on a conveyor belt.						
2.8		I/O interface connector SUB-D, 25 pins All control signals can be attached to the I/O interface using clamping screws.						
2.9		Warning light In addition to the information indicated on the display of a printer, states are signalled. Red Collective error Yellow Pre-warning to a label web or a ribbon ending Green Device ready USB cable (1 m) to connect to HERMES Q Assembly materials are provided for vertical printer installation only. 1 Chassis assembly 2 Bracket assembly						
2.10		External operation panel If the operation panel of a printer cannot be accessed, an additional external one can be plugged. Same functionality as on the printer Landscape or portrait mode Operability as desired on the external operation panel or on the printer						
		Printer connectivity: USB 2.0 Hi-Speed device cab provides specified connecting USB cables for power supply. Lengths are 1.8 m to 16 m.						
2.11		Label selection - I/O box A maximum of 16 different labels can be selected from a memory card by a master control unit, e.g. PLC.						
2.12		Hand switch TR2 to be attached to the I/O interface						
2.13		Foot switch to be attached to the I/O interface						
2.14		Connecting RS232 C cable 9/9 pins, 3 m						
2.15		Scanner CC200 provided on request						

Options are parts or units to perform special functions. They are assembled to a printer in addition to or instead of standards.

If order implies options be assembled ex factory, the part numbers of such printers and options are added by .250. Options delivered separately are added by .001.

Pos.	Designation	roll Ø	205	305	HERMES Q2	HERMES Q4.3	HERMES Q4	HERMES Q6.3	.250	.001
3.1	Automatic ribbon saving		●	●	-	□	□	□	●	-
3.2	Label unwinder K40		●	●	□	□	□	□	●	●
3.3/3.4	Adapters 40/50 and 76/100		●	●	□	□	□	□	●	●
3.5	Spacers		●	-	□	□	□	-	●	●
3.6	Margin stop 10		●	-	□	□	□	□	●	●
3.7	Cover		●	-	□	□	□	□	●	●
3.8	Print head pressure system, reduced force		●	●	□	□	-	□	●	●
3.9	Extended peel-off plate (+10 mm)		●	●	□	□	□	□	●	●
3.10	Print roller DRS		●	●	□	□	□	□	●	●
3.11	Antistatic brush		●	●	□	□	□	-	●	●
3.12	Draw roller ZS		●	●	□	□	□	□	●	●
3.13	2 port Ethernet switch 10/100 Mbit/s		●	●	□	□	□	□	●	●
3.14	Label sensor, modified		●	●	□	-	-	-	●	●



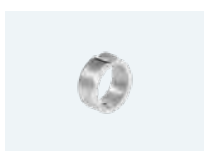
Automatic ribbon saving

Use is recommended in cases of at least 60 mm unprinted area on a label. While labels are fed, the print head is lifted and the ribbon stopped, resulting in less material consumption.



Label unwinder K40

to process label rolls having a core diameter of 40 mm



Adapter 40/50

to pick up label rolls having a core diameter of 50 mm and minimum widths of 20 mm. One adapter is sufficient if material width does not exceed 50 mm.

Operate only with a label unwinder K40.



Adapter 76/100

to pick up label rolls having a core diameter of 100 mm and minimum widths of 20 mm. One adapter is sufficient if material width does not exceed 50 mm.



Spacers

to process narrow labels provided on liners ≤ 20 mm wide, wound on a roll or a reel.

Ribbon protruding on both sides prevents from wrinkling. The label guidance is therefore offset by 7 mm from the middle wall with spacers. A modified label sensor is included on delivery.

Reel plate wall thickness 1 - 2 mm



Margin stop 10

to guide narrow labels provided on a liner 10 - 24 mm wide, wound on a roll (no reels) having a core diameter of 76 mm.

Operate only with a spacer

Package marking

Air jet box 6114

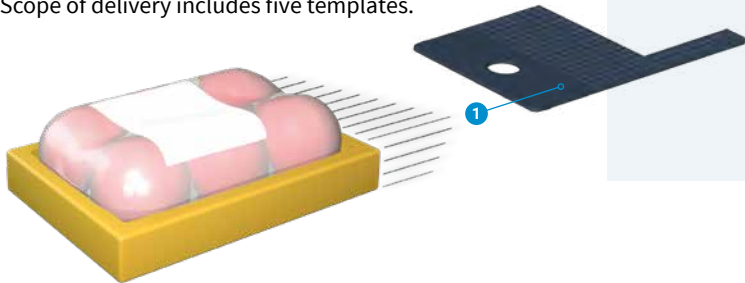
Labels can be applied to packages in motion or at rest. Each label is sucked by a fan and blown off by a powerful blast of air coming through aligned nozzles. Depending from the size of a label, a maximum distance of 200 mm can be bridged between a package and the peel-off plate.

Accessories

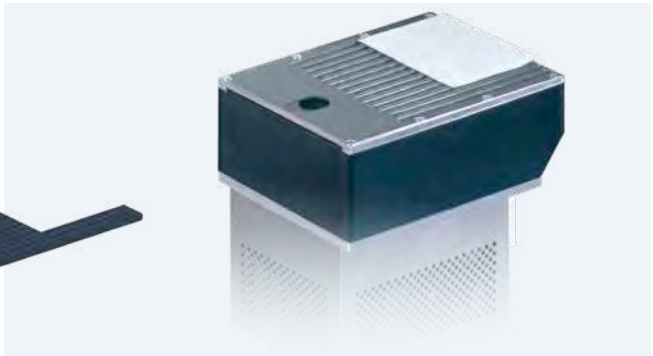
- 5.13 **Blow tube**
- 5.16 **Unit to regulate compressed air, providing a shut-off valve** to vent a hose line subsequent to the unit; provided in a left-hand or right-hand design



- 1 **Templatee**
to cover all the holes sucking or blowing off air outside a label
- By holes pre-scored on an 8 x 8 mm pattern, a template can be adapted easily to the size of a label. By sliding in a template between the suction block and rails, the surface outside a label is covered. Scope of delivery includes five templates.



4.13



Air jet box		6114 L/R
Label widths operating a HERMES Q4/Q4.3	mm	50 -114 smaller sizes can be provided on request
Label heights	mm	50 -125 smaller sizes can be provided on request
State of a package	at rest	■
at the moment a label is applied	in motion	■
Label application	from the top	■
	from below	■
	from the side	■
Package heights	variable	■
Distance of a package to the peel-off plate up to	mm	200
Compressed air	bar	4.5 - 6
Cycle rate ¹⁾	labels/min up to	100

¹⁾ calculated using labels 50 mm high, a print speed of 250 mm/s, a blast of air lasting 100 ms, with packages located 100 mm to the peel-off plate.

Accessories and options provided for applicators

		■ standard □ option									
Pos.	Designation	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	4.13
		3214	4114/16	4214	4414	4514	4712	3014/16	4014/16	4614	6114
5.13	Blow tube	■	■	■	■	■	■	■	■	■	■
5.14	Unit to regulate compressed air	□	□	□	□	□	□	□	□	□	□
5.16	Unit to regulate compressed air, providing a shut-off valve	-	-	-	-	-	-	-	-	-	□
5.17	Pressure-reducing valve	-	□	□	□	-	-	-	□	-	-

5.13



Blow tube

to provide support air. To assist label transfer, the label is blown from below to the pad.

Provided for 2", 4" or 6" label applications

5.14



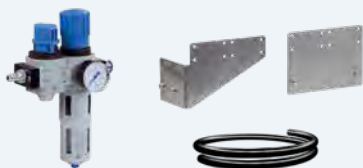
Unit to regulate compressed air

4.5 bar default setting

Provided in a left-hand or right-hand design

Delivery includes a fine filter, a pressure control valve with a display, a hose to connect to an applicator's compressed air input and material to assemble the unit to a chassis or a bracket.

5.16



Unit to regulate compressed air, providing a shut-off valve

to vent a hose line subsequent to the unit

Provided in a left-hand or right-hand design

5.17

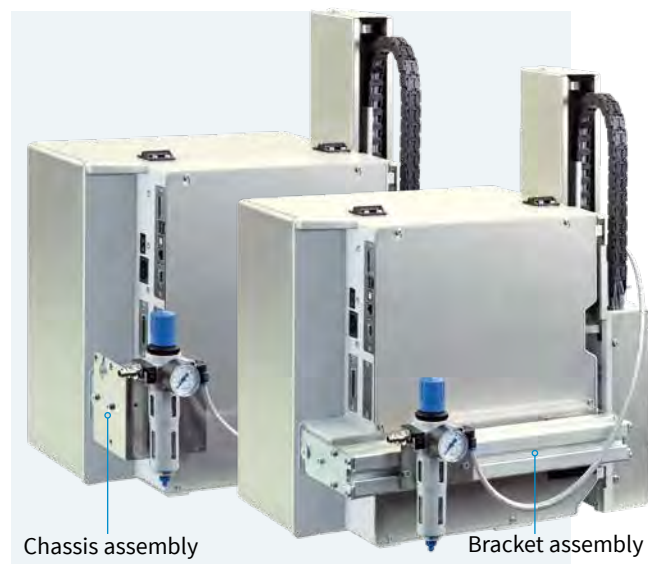


Pressure-reducing valve





It reduces the pressure exerted by the stroke cylinder to a product.

Designed for applicators 4014/16, 4114/16, 4214, 4414








Examples how to assemble a unit to regulate compressed air



Accessories and options provided for applicators

Pos.		Part no.	Designation
5.13		5964277.001 5964095.001 5964614.001	Blow tube 2" Blow tube 4" Blow tube 6"
5.14		6010880 6010881	Unit L to regulate compressed air Unit R to regulate compressed air
5.16		5984805 5984795	Unit L to regulate compressed air, providing a shut-off valve Unit R to regulate compressed air, providing a shut-off valve
5.17		596xxxx.212	Pressure-reducing valve
		xxxx - applicator part no.	

Tools to assemble

Pos.		Part no.	Designation
6.1		5965940	Adapter plate
6.2		on request	Profile (customer-specific lengths)
6.3		5961203	Base plate 500 x 255 mm
6.4		5958400	Mounting plate
6.5		5955685	Bracket
6.6		8914443	Clamped joint designed for a 50 x 50 mm profile
6.7		8914444	Flanged joint designed for a 50 x 50 mm profile

Floor stands

Pos.		Part no.	Designation
6.8		5970113	Floor stand 1601
6.9		5970112	Floor stand 1602
6.10		5972515	Floor stand 1201