Rapid clamping system with pusher chain

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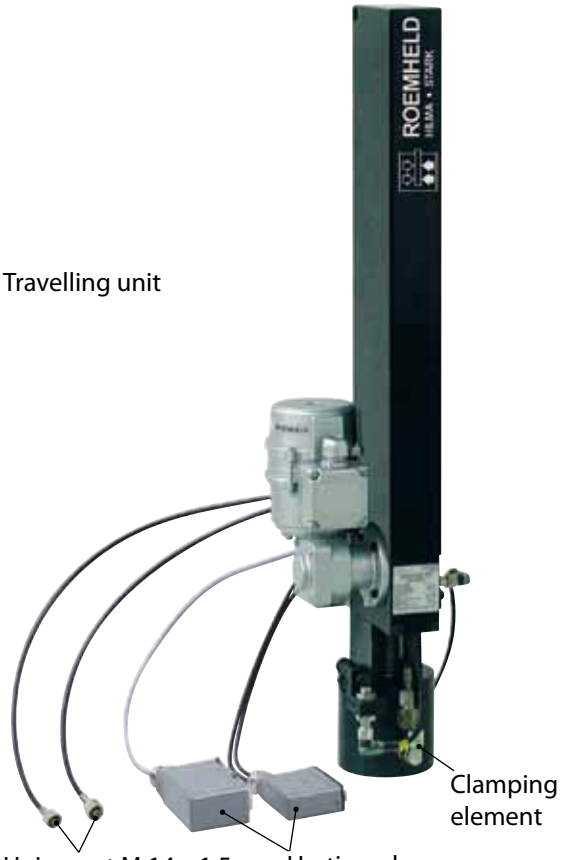

Applications:

- automatic clamping of dies on press rams
- for dies varying in width

Function:

A pusher chain driven with an electric motor moves the rapid clamping system with its attached clamping cylinder automatically to the clamping edge. The T-slot in the machine provides guidance for the chain and the clamping element. Clamping and unclamping of the cylinder is carried out by applying pressure to the cylinder, depending on the design. Following unclamping, the clamping element moves automatically from the clamping position into the parking position.

Special features:

- high functional safety by position monitoring and automatic travelling sequence
- suitable for retrofit and installation in original equipment
- tie rod made from high-strength forge steel
- no need for die standardisation (width and depth)
- optimum utilisation of the ram area
- clamping force of between 78 and 115 kN (other clamping forces on request)
- central operation of all clamping elements
- additional safety by mechanical self-locking available on request

For power units
please see product group 7

For accessories
please see product group 11

Rapid clamping system with pusher chain fastened to the press ram of a double column press. A hollow piston cylinder serves as clamping element.

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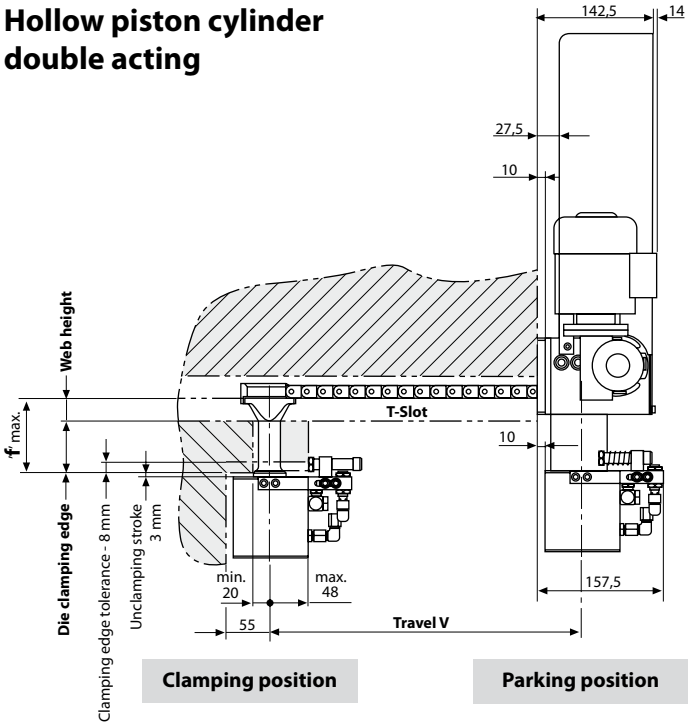
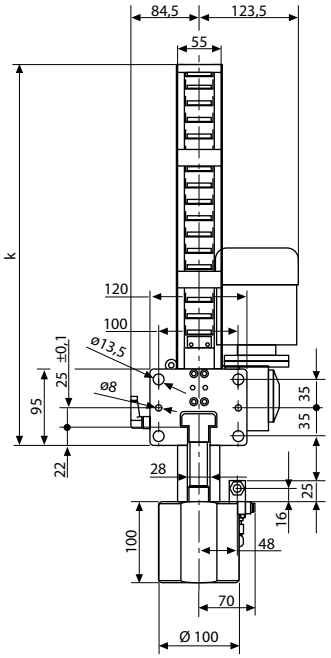
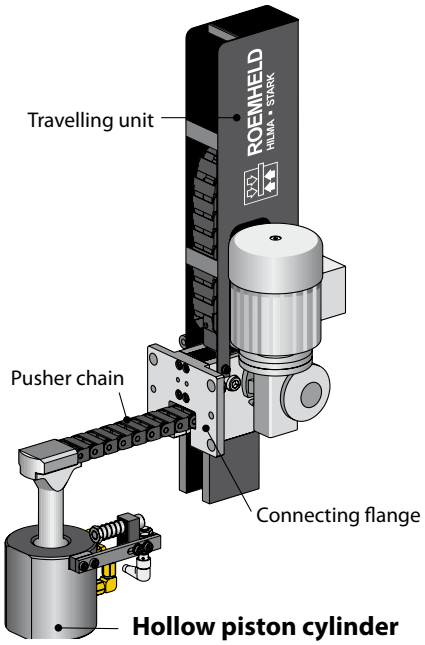
Rapid clamping system with pusher chain

Design:
Hollow piston cylinder double acting





T-slot as per DIN 650 [mm]	**28**	**28**
Clamping force at 400 bar [kN]	**115**	**115**
Operating pressure [bar]	400	400
Oil cons. clamping [cm³ mm/stroke]	2,9	2,9
Oil cons. unclamping [cm³ mm/stroke]	3,85	3,85
Travel V	500	1000
Dimension k [mm]	490	730
Clamping dimension '**f**' tolerance [mm]	–8	–8
Part no.	**8.2291.1xxx**	**8.2291.2xxx**



Example of ordering: 8.2291.1 F110

Rapid clamping system
with **hollow piston cylinder**
as clamping element
T-slot: 28 mm
Travelling path: 500 mm

Functional dimension
'**f**' (mm)
to be quoted
in the order

Technical data:

Travel V	see table *)
Travelling speed	150 mm/s
Width of T-slot	see table DIN 650 *)
Motor voltage	400 V / 50 Hz / 3~ *)
Rated motor current	0,18 A
Motor output	45 W
Two proximity switches 1. Parking position 2. Die position 3. A further proximity switch for 'End of chain'	24 (10-30) V DC *) is available on request
Motor connection	Harting HAN3HvE *) (plug with 500 mm cable length)
Connections for proximity switches	Harting HAN10E *) (plug with 500 mm cable length)
Hydraulic connection	Union nut M 14 x 1,5 *) (free hose length 500 mm)

***) Other versions as well as a spindle drive are available on request.**

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Rapid clamping system with pusher chain

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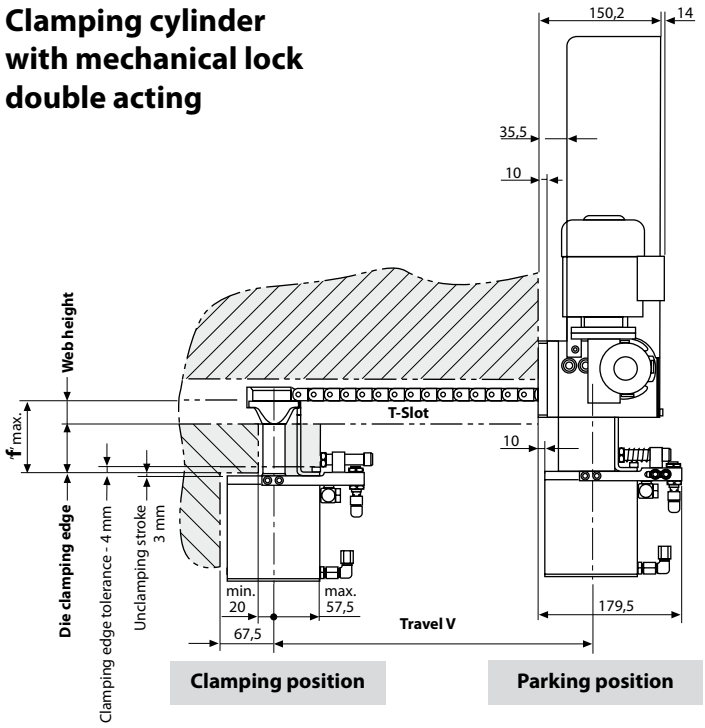
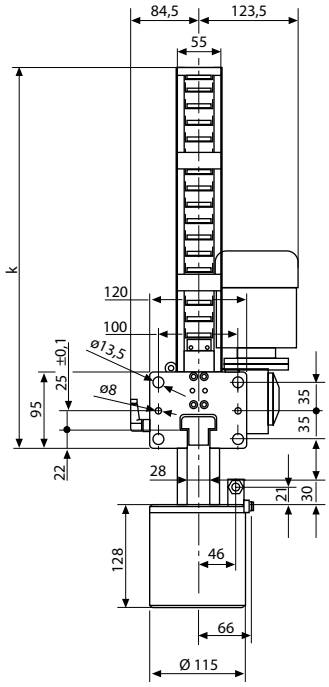
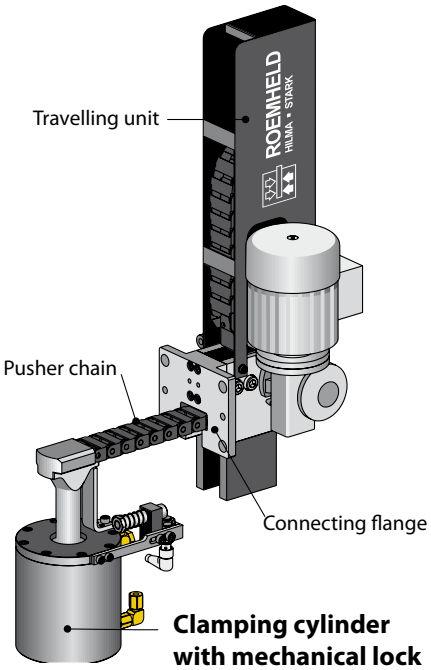
Design:
Clamping cylinder with mechanical lock double acting





T-slot as per DIN 650 [mm]	**28**	**28**
Clamping force at 80 bar [kN]	**100**	**100**
Operating pressure [bar]	80	80
Oil cons. clamping [cm³ mm/stroke]	31	31
Oil cons. unclamping [cm³ mm/stroke]	31	31
Travel V	500	1000
Dimension k [mm]	490	730
Clamping dimension '**f**' tolerance [mm]	– 4	– 4
Part no.	**8.2292.1xxx**	**8.2292.2xxx**

For details concerning clamping cylinders with mechanical lock, please see next page



Clamping cylinder with mechanical lock

Example of ordering: 8.2292.1 F110

Rapid clamping system with **clamping cylinder with mechanical lock** as clamping element
T-slot: 28 mm
Travelling path: 500 mm

Functional dimension '**f**' (mm) to be quoted in the order

Technical data:

Travel V	see table *)
Travelling speed	150 mm/s
Width of T-slot	see table DIN 650 *)
Motor voltage	400 V / 50 Hz / 3~ *)
Rated motor current	0,18 A
Motor output	45 W
Two proximity switches 1. Parking position 2. Die position 3. A further proximity switch for 'End of chain'	24 (10-30) V DC *) is available on request
Motor connection	Harting HAN3HvE *) (plug with 500 mm cable length)
Connections for proximity switches	Harting HAN10E *) (plug with 500 mm cable length)
Hydraulic connection	Union nut M 14 x 1,5 *) (free hose length 500 mm)

Mechanical self-locking provides a high degree of safety in the event of pressure drop!

***) Other versions as well as a spindle drive are available on request.**

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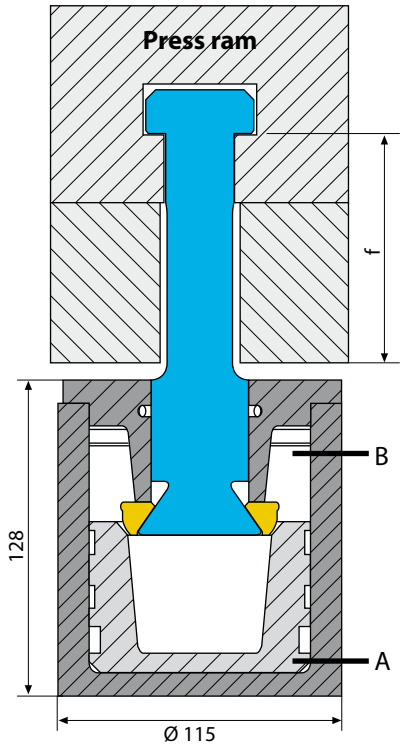
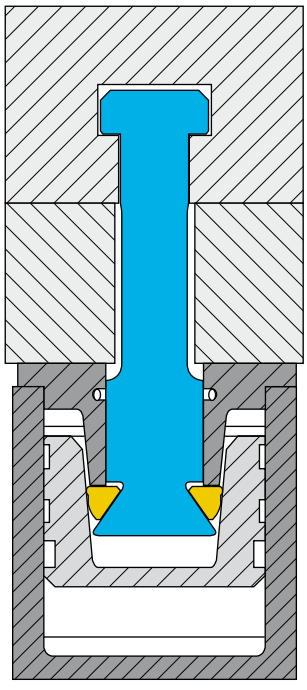
Rapid clamping system with pusher chain

Other details:
Pull-type clamping element with mechanical lock

Clamping element unclamped



Clamping element clamped



Application:

- For clamping dies on the ram if the clamping force must be maintained by self-locking in the event of a hydraulic pressure drop.

Function:

The rapid clamping system moves the clamping element automatically into its clamping position. Pressure is applied to port A, the pull-type clamping element moves towards the clamping edge.

Once the clamping element has come in contact with the die clamping surface, the maximum clamping power is applied, and the clamping element locks mechanically.

Mechanical self-locking ensures that the full clamping power will be maintained in the event of pressure drop.

For safety reasons, it is recommended that the hydraulic pressure is maintained.

For unclamping, relieve pressure at port A and apply pressure to port B. Following unclamping, the clamping element returns automatically into the parking position.

Technical data:

Clamping force	100 kN
Max. operating pressure	80 bar
Max. stroke	8 mm
Positioning stroke	3 mm
Max. clamping stroke	4 mm

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Rapid clamping system with pusher chain

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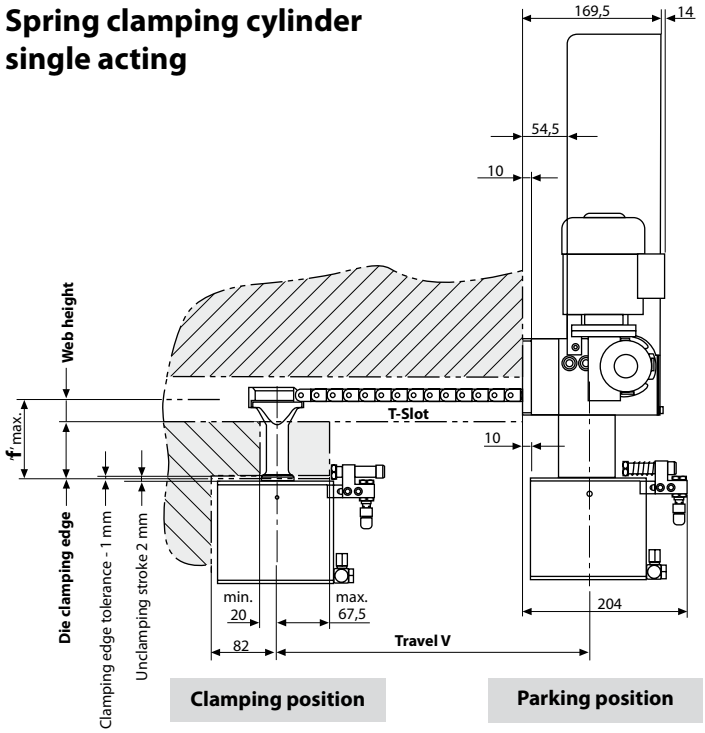
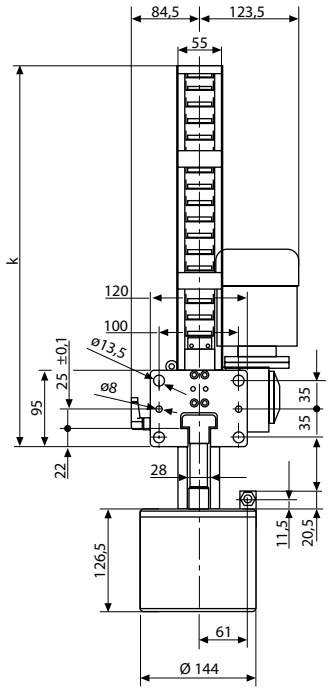
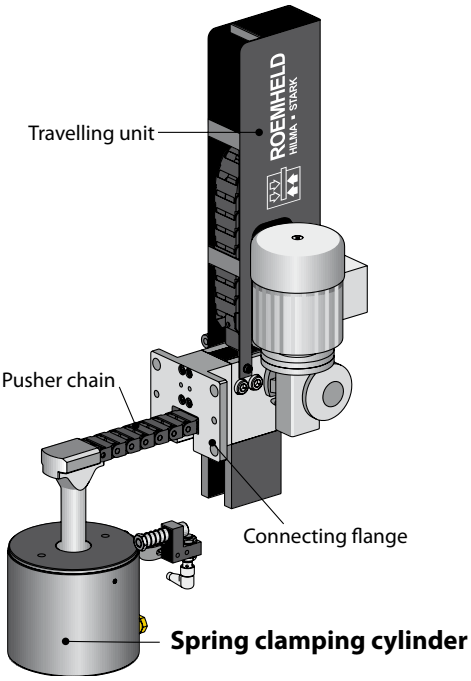
Design:
Spring clamping cylinder single acting





T-slot as per DIN 650 [mm]	**28**	**28**
Clamping force [kN]	**100**	**100**
Operating pressure unclamping [bar]	120	120
Oil cons. unclamping [cm³ mm/stroke]	12,3	12,3
Travel V	500	1000
Dimension k [mm]	490	730
Clamping dimension '**f**' tolerance [mm]	-1	-1
Part no.	**8.2293.1xxx**	**8.2293.2xxx**



Example of ordering: 8.2293.1 F110

Rapid clamping system
with **spring clamping cylinder**
as clamping element
T-slot: 28 mm
Travelling path: 500 mm

Functional dimension
'**f**' (mm)
to be quoted
in the order

Technical data:

Travel V	see table *)
Travelling speed	150 mm/s
Width of T-slot	see table DIN 650 *)
Motor voltage	400 V / 50 Hz / 3~ *)
Rated motor current	0,18 A
Motor output	45 W
Two proximity switches 1. Parking position 2. Die position 3. A further proximity switch for 'End of chain'	24 (10-30) V DC *) is available on request
Motor connection	Harting HAN3HvE *) (plug with 500 mm cable length)
Connections for proximity switches	Harting HAN10E *) (plug with 500 mm cable length)
Hydraulic connection	Union nut M 14 x 1,5 *) (free hose length 500 mm)

***) Other versions as well as a spindle drive are available on request.**

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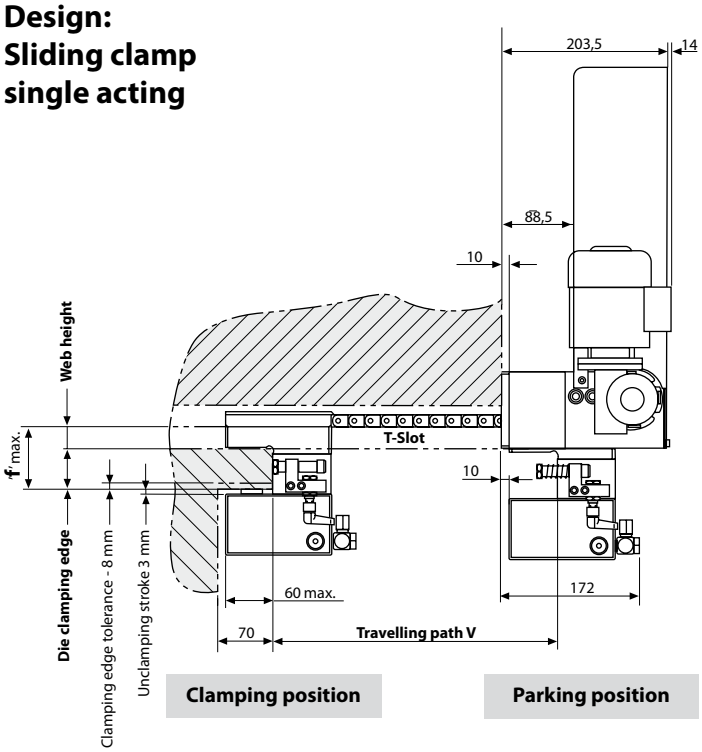
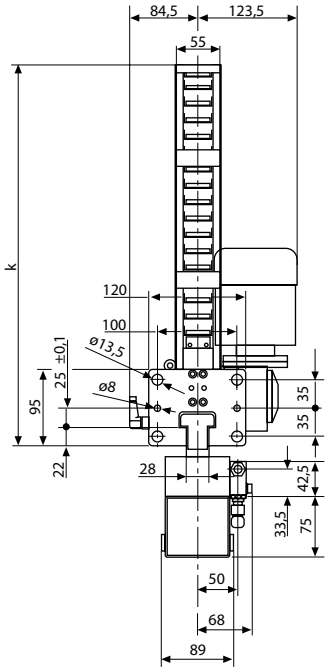
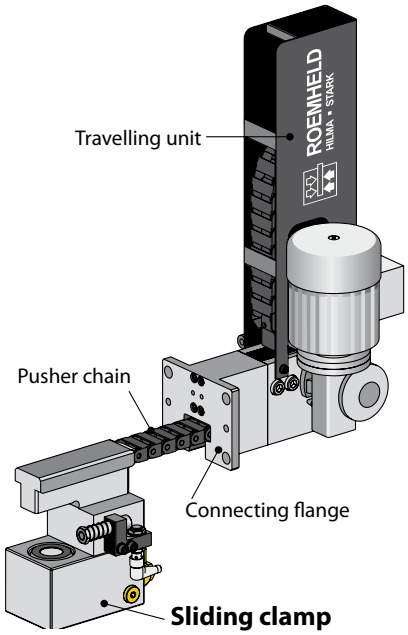
Rapid clamping system with pusher chain

Design: Sliding clamp single acting





T-slot as per DIN 650 [mm]	**28**	**28**
Clamping force at 400 bar [kN]	**78**	**78**
Operating pressure [bar]	400	400
Oil consump. clamping [cm³ mm/stroke]	1,5	1,5
Travel V	500	1000
Dimension k [mm]	490	730
Clamping dimension '**f**' tolerance [mm]	– 8	– 8
Part no.	**8.2294.1xxx**	**8.2294.2xxx**



Example of ordering: 8.2294.1 F110

Rapid clamping system with **sliding clamp** as clamping element
T-slot: 28 mm
Travelling path: 500 mm

Functional dimension '**f**' (mm) to be quoted in the order

Technical data:

Travel V	see table *)
Travelling speed	150 mm/s
Width of T-slot	see table DIN 650 *)
Motor voltage	400 V / 50 Hz / 3~ *)
Rated motor current	0,18 A
Motor output	45 W
Two proximity switches 1. Parking position 2. Die position 3. A further proximity switch for 'End of chain'	24 (10-30) V DC *) is available on request
Motor connection	Harting HAN3HvE *) (plug with 500 mm cable length)
Connections for proximity switches	Harting HAN10E *) (plug with 500 mm cable length)
Hydraulic connection	Union nut M 14 x 1,5 *) (free hose length 500 mm)

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