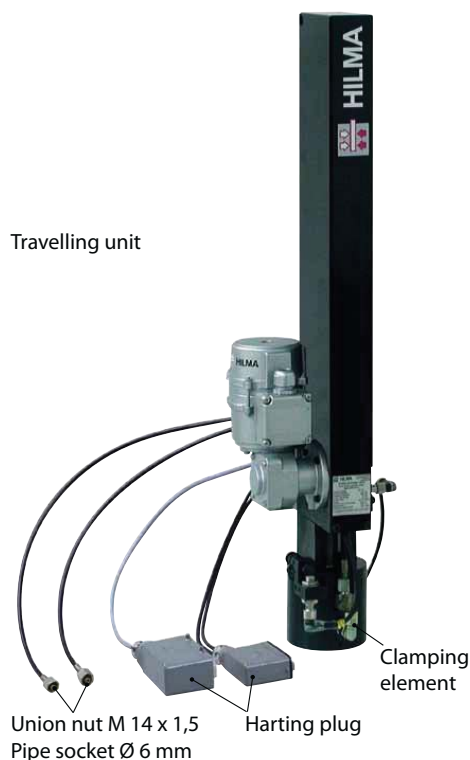


Rapid clamping system with pusher chain



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.



Subject to technical modification

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Technical drawing of a vertical shaft assembly. The drawing shows a shaft with a central section of length 120 mm, a top section of length 84.5 mm, and a bottom section of length 123.5 mm. The shaft has a diameter of $\phi 13.5$ mm in the central section and $\phi 8$ mm in the bottom section. The shaft is supported by a bearing assembly at the bottom, which includes a bearing housing with a diameter of $\phi 100$ mm and a bearing with a diameter of $\phi 70$ mm. The bearing housing has a height of 100 mm and a width of 48 mm. The bearing has a width of 25 mm and a height of 16 mm. The shaft has a total height of 100 mm. The drawing also shows a cross-section of the shaft at the top, with a diameter of $\phi 13.5$ mm and a height of 25 mm. The shaft is shown in a vertical orientation, with the top of the shaft at the top of the drawing and the bottom of the shaft at the bottom of the drawing.

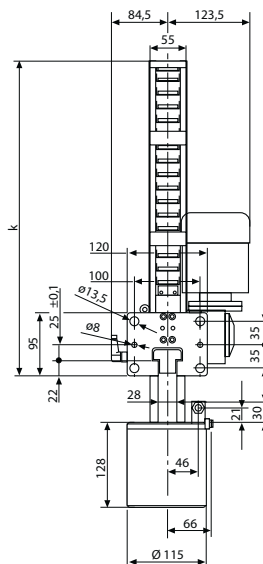
Hyquip Limited New Brunswick Street Horwich Bolton Lancashire BL6 7JB UK
Company Registered in England No: 4167649 VAT Registration No: 732 5692 25 BS EN ISO 9001:2008 No: LRQ 0964389

Clamping cylinder with mechanical lock, double-acting

Technical drawing showing the dimensions and components of the clamping cylinder assembly.

Dimensions:

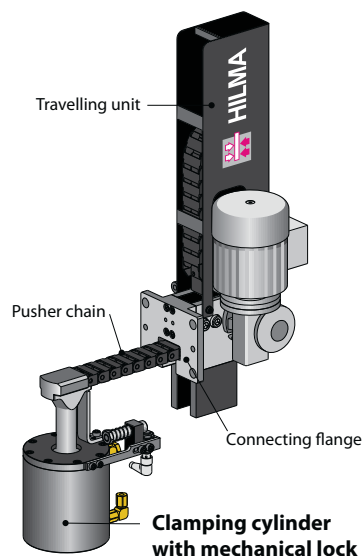
- Die clamping edge: f_{max}
- Web height
- Clamping edge tolerance: 4 mm
- Unclamping stroke: 3 mm
- T-Slot
- Travelling path V: min. 20, max. 57,5, 67,5
- Clamping position
- Parking position
- Overall width: 150,2
- Overall height: 14
- Distance between clamping and parking positions: 179,5
- Distance from clamping edge to T-slot: 35,5
- Distance from T-slot to parking position: 10



Part no.	8.2292.1xxx	8.2292.2xxx
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Rapid clamping system with clamping cylinder with mechanical lock as clamping element	Functional dimension 'f' (mm)
T-slot: 28 mm	to be quoted
Travelling path: 500 mm	in the order

Travelling path 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	24 (10-30) V DC *)
1. Parking position	
2. Die position	
3. A further proximity switch for "End of chain"	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!

05/2011



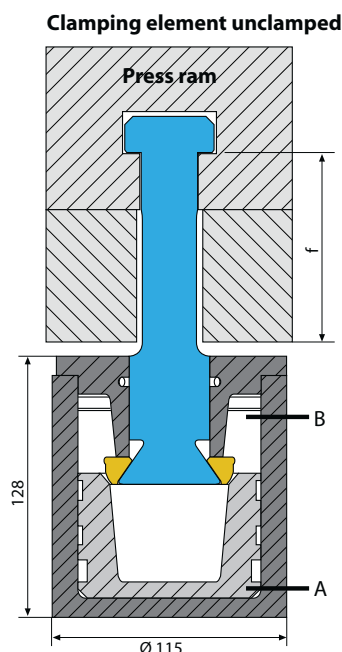
ROEMHELD
HILMA ■ STARK



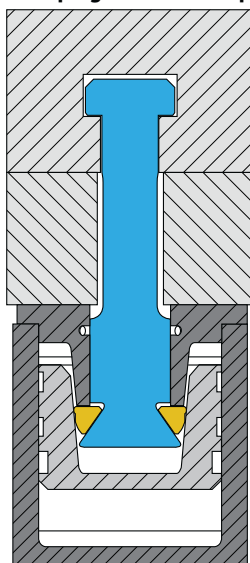
Rapid clamping system with pusher chain

Other details:

Pull-type clamping element with mechanical lock



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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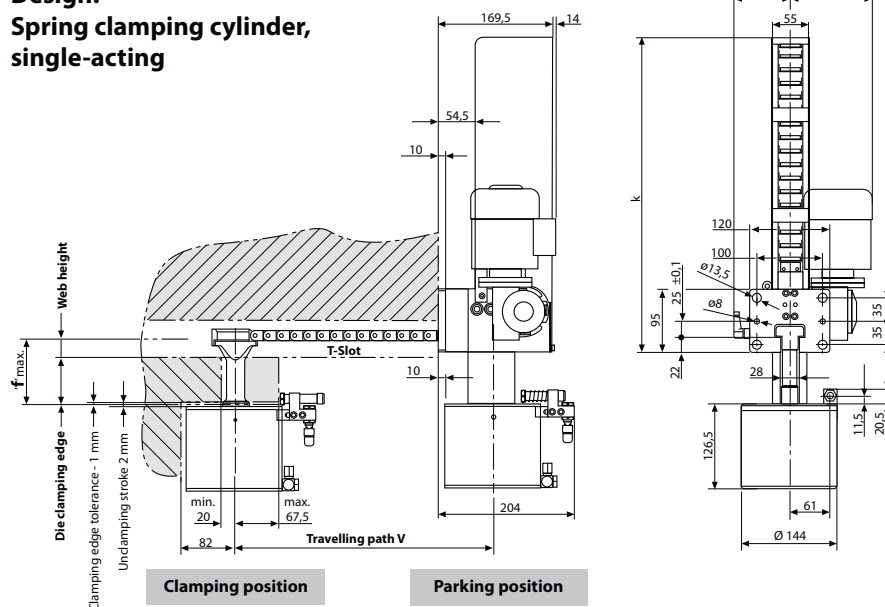
Subject to technical modification

Rapid clamping system with pusher chain



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
Travelling path 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

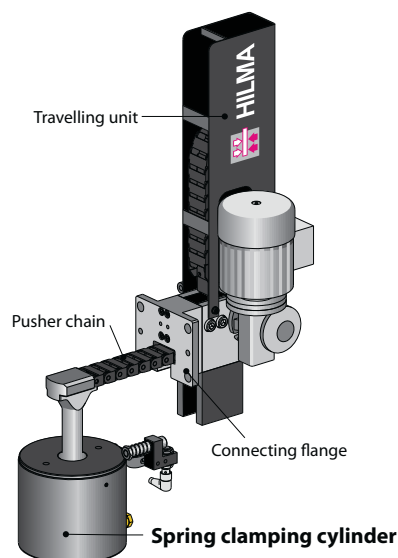
Functional dimension
'f' (mm)
to be quoted
in the order

Technical data:

Travelling path 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	24 (10-30) V DC *)
1. Parking position	
2. Die position	
3. A further proximity switch for "End of chain"	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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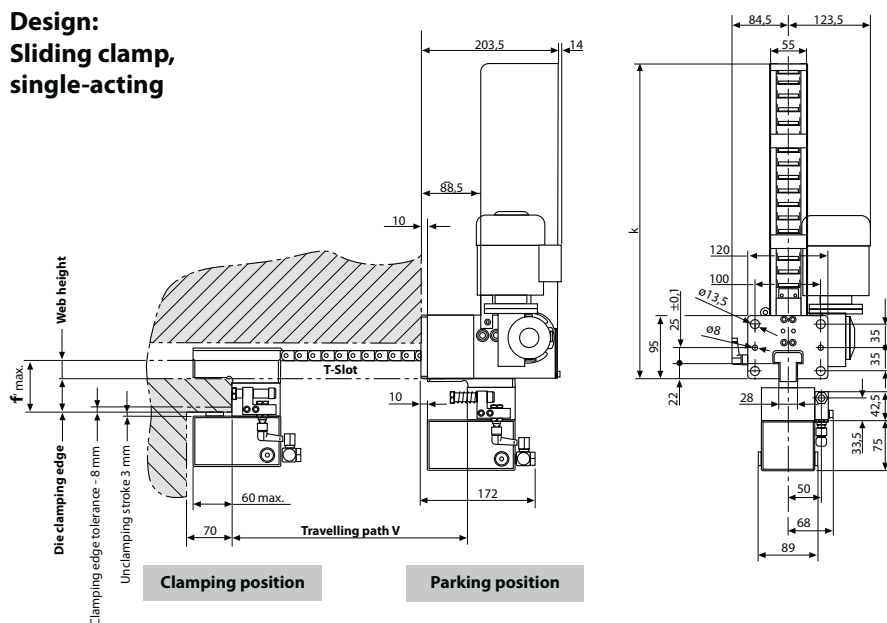


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Rapid clamping system with pusher chain

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
Travelling path 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**

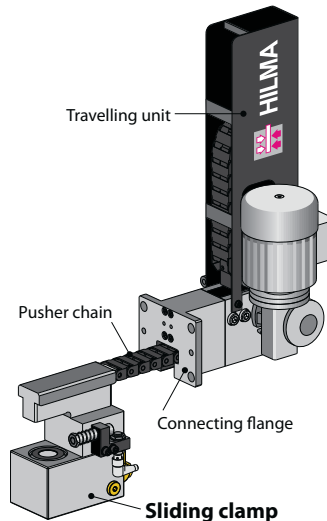
Rapid clamping system with
sliding clamp as clamping element
T-slot: 28 mm
Travelling path: 500 mm

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

Technical data:

Travelling path 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	24 (10-30) V DC *)
1. Parking position	
2. Die position	
3. A further proximity switch for "End of chain"	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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Subject to technical modification