Product information
HILMA "Force Control"

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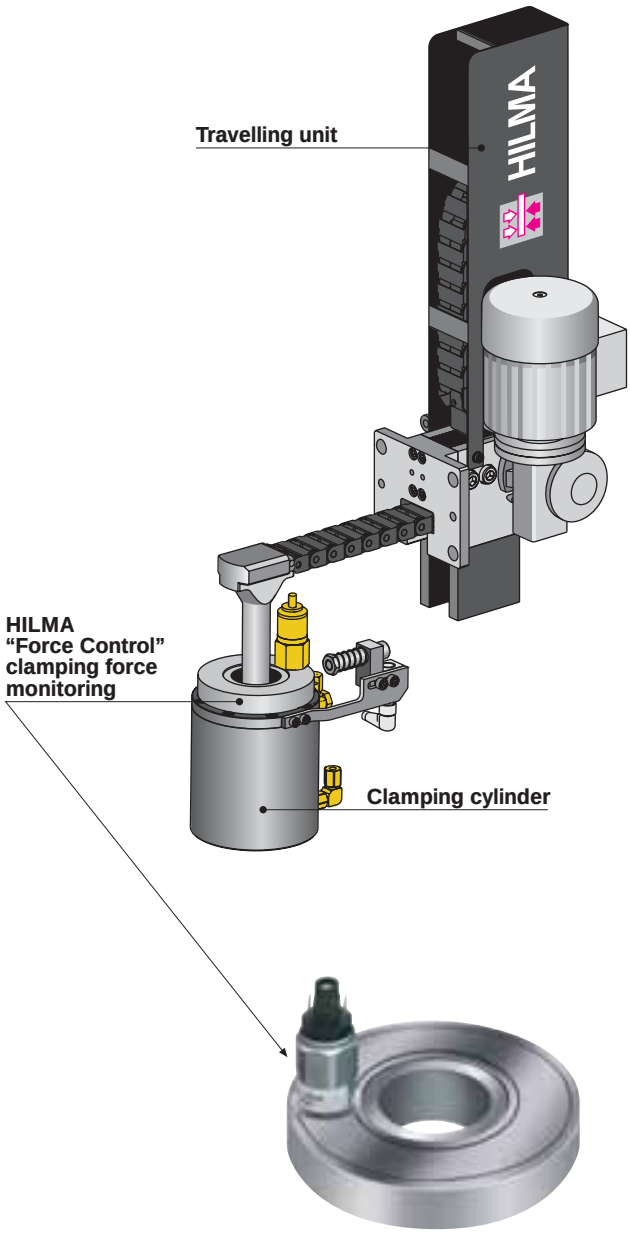
In automated die clamping systems, monitoring of the clamping position and of the clamping force is a central safety feature.

In addition to the well-known methods, i.e. monitoring of the clamping position by proximity switches and monitoring of the clamping force by pressure switches in the clamping circuit, Hilma-Römheld offers with immediate effect a new system for clamping force monitoring. The Hilma "Force Control" is designed as a loop and is installed between the clamping element and the clamping edge. "Force Control" is a closed system comprising a hydraulic piston and cylinder. The internal pressure increases and decreases in proportion to the clamping force.

By means of a pressure switch, the internal pressure is constantly monitored, and consequently the clamping force is monitored directly at the clamping point. The pressure switch trips when the pressure has dropped to 80% of the nominal clamping force. The signal must be evaluated by the machine control system. As a result, the power unit operates again for a short time, or the operation of the machine is interrupted.



Benefits to you:

- Real and permanent monitoring of the clamping force directly at the clamping point at an affordable price.
- Enhanced functional reliability is achieved by constant monitoring of the clamping force.
- In the case of mechanically locked clamping elements, a decrease of the clamping force is clearly visible by settlement. In the clamped condition, the pressure need not be maintained.
- Especially suitable for automated rapid clamping systems.

Use of rapid clamping systems with pusher chain on the press ram of a double-sided press

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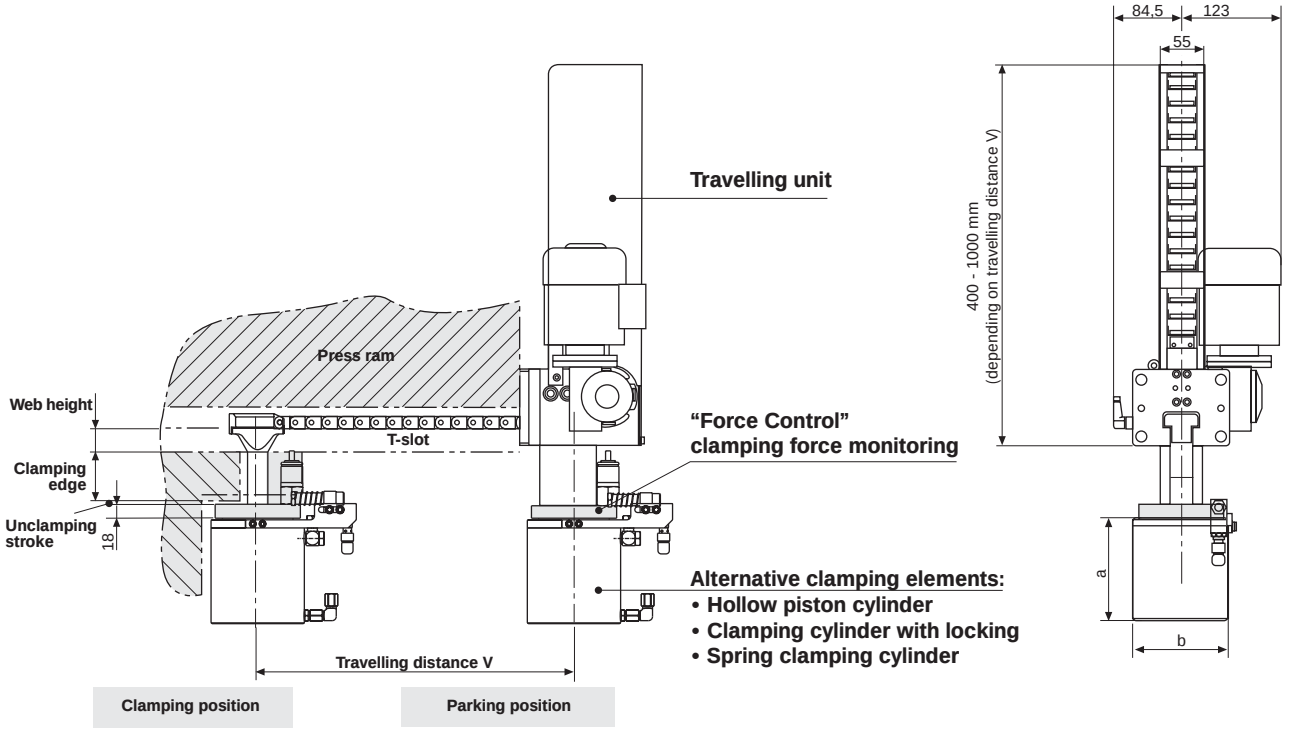


Technical data clamping element

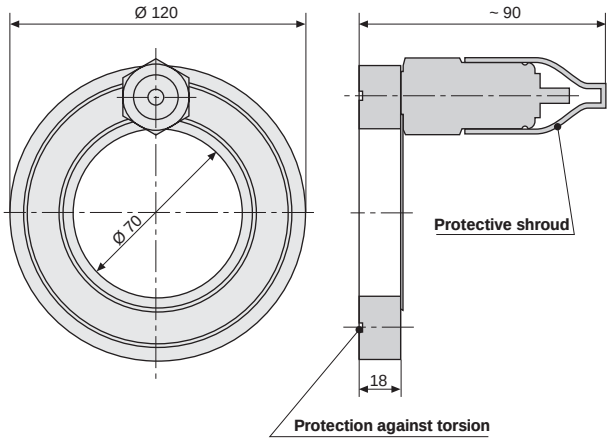
Clamping element	Clamping force	Travelling distance	a	b
Hollow piston cylinder, double acting	115 kN at 400 bar		100	Ø 100
Clamping cylinder with locking, double acting	100 kN at 80 bar	as	128	Ø 115
Spring clamping cylinder, single acting	100 kN spring clamping force	requested	127	Ø 144

Technical data travelling unit

Travelling speed	150 mm/s
Motor voltage	400 V / 50 Hz / 3~
Nominal motor current	0,39 A
Motor output	60 W
Proximity switch	24 V DC (parking and clamping position)

Technical data “Force Control”

Installation position	any
Ambient temperature	between -25ºC and 85ºC
Switching element	microswitch contacts silver-coated
Voltage	24 V DC
Switching capacity	5 A inductive load
Max. switching frequency	100/min.
Electrical connection	flat-cable plug 2 x 6,3 x 0,8
Type of protection	IP 65, with protective shroud
Wiring schematics	 normally open contact (NO)
Part no.	**8.1111.0501**



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