



ROEMHELD
HILMA ■ STARK

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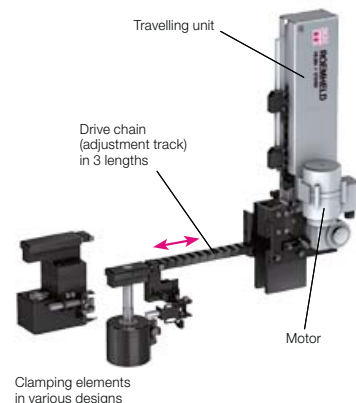
Flexline rapid clamping systems with drive chain

Flexible selection of clamping element, T-slot and adjustment track



Advantages

- 8 different clamping elements
- 4 different T-slots
- 3 different adjustment tracks
- Drive motor and "die position" monitor attachable on left or right
- Easy to service, easily exchangeable modular assemblies ensure high availability of parts
- Technical arrangement and finished drawing in just a few minutes
- Highly flexible, low-maintenance hydraulic lines with high burst pressure



Application

Rapid clamping systems are used for the automatic clamping of dies of varying sizes on the press ram.

Description

The electro-mechanical drive chain moves the clamping element attached to the rapid clamping system automatically from the parking position to the clamping position at the clamping edge and then back to the parking position. The T-slot of the machine serves as the guide for the drive chain and clamping element. The drive chain also serves as the energy chain for accommodating the hydraulic and electric lines of the clamping element.

Versions

Flexline rapid clamping systems can be supplied in the following variants:

- **Clamping elements**
Hollow piston cylinders, clamping cylinders with locking mechanism, spring clamping cylinders or sliding clamps
- **T-slots** 28, 32 or 36 mm or 1 1/16"
- **Adjustment tracks** (tracks of the clamping element) 660, 820 or 1100 mm
- **Drive motor** attached on left or right
- **Optional position monitoring** (configurable)
micro switch for "end position" and "intermediate position"
- **"Die position"** monitoring attached on left or right
- **Chain case** in galvanised design or painted individually at customer's request
- **Option: Arrangement with UL-compliant parts**
- **Various Harting connectors** to choose from for motor current and monitoring signals
- **Option: Socket housing** for assembly to machine

Technical data

T-slot	28 mm and 36 mm (DIN 650) / 32 mm (similar to DIN 650) and 1 1/16"
Adjustment speed	150 mm/s
Multi-frequency motor	400 V 50 Hz and 480 V 60 Hz / 3~ AC
Motor current	0,18 A
Motor power	45 W
Motor connection	Harting connector with 500 mm cable length
Monitoring connection	Harting connector with 500 mm cable length
Monitoring:	
1. Parking position	inductive sensor 24 (10–30) V DC
2. Die position	inductive sensor 24 (10–30) V DC
Option:	
3. "End position" (end of chain)	micro switch
4. "Intermediate position"	micro switch
Hydraulic connection	8 mm pipe nozzle with M 16 x 1.5 union nut (500 mm pipe length)
Operating temperature	max. 70 °C
Part-No.	8228 (standard version)

Application example



Dimensions



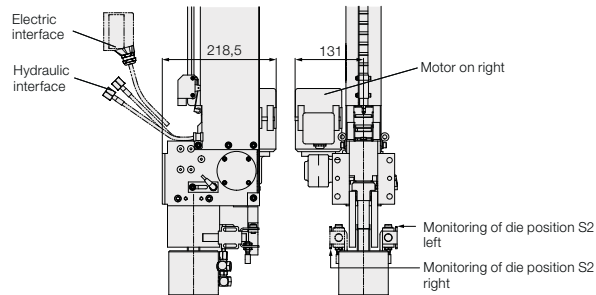
Interfaces

Electric interfaces

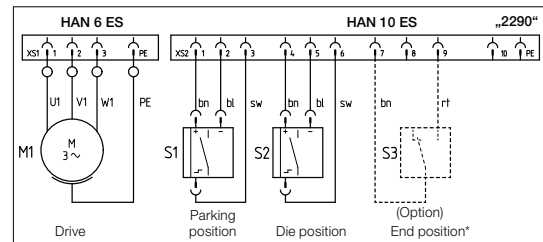
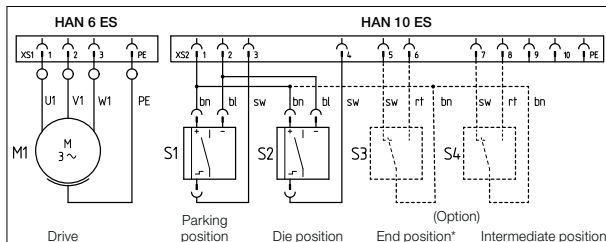
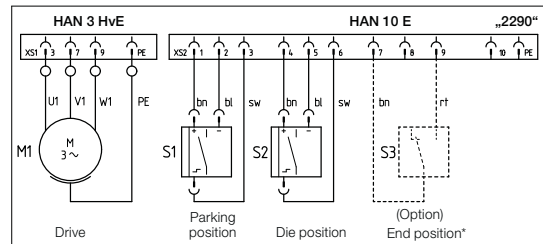
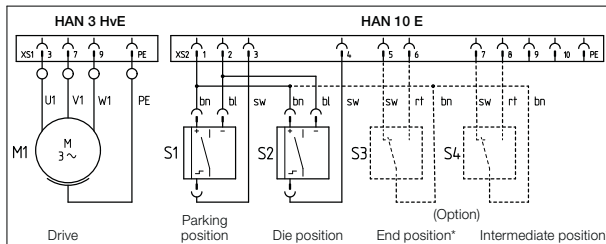
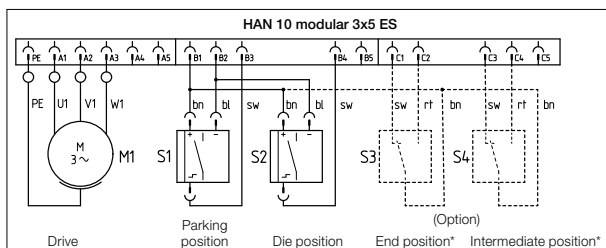
Harting connector for motor + position monitoring. See circuit diagram for pin assignment and connector design. (available as special variant or without connector on request)

Hydraulic interface

Connection A for clamping
Connection B for releasing
Standard: M16 x 1.5 union nut,
pipe connection 8 diam.



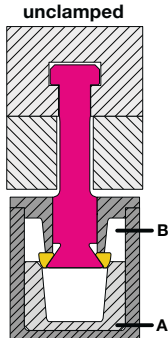
Pin assignment of Harting connectors



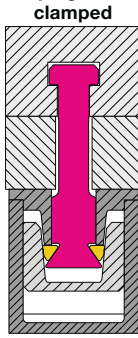
^{*)} unactuated in *-position!

Clamping cylinder double-acting with mechanical lock

Clamping element unclamped



Clamping element clamped



Mode of operation

To clamp, apply pressure to connection A. The clamping element is moved by means of the integrated wedge mechanics to the edge of the die in a rapid adjustment stroke. After generating clamping force of 100 kN with only 100 bar operating pressure, the clamping position is then mechanically secured in a self-locking manner, so that the clamping force is retained completely, even in the event of pressure loss. For safety reasons it is recommended to maintain the hydraulic pressure. To release, depressurize connection A and apply pressure to connection B.

The mechanical lock is released and the clamping element moves to the release position.

Special versions

Special versions

Please contact us if your individual clamping task is not covered by the options available with "Flexline". In many cases, we will be able to fulfill your requirements with a customised special version which deviates only slightly from the standard design.

Possible special versions:

- Clamping solutions for tight spaces
- Special mounting hole pattern
- Different T-slot dimension (e.g. T-slot 22)
- Modified adjustment track V (e.g. > 1100 mm)
- Clamping elements with, for example
 - special clamping force
 - specific operating pressure
 - modified clamping stroke St
 - modified clamping dimension F
 - modified shape
 - different mode of operation
- different motor voltage (e.g. 24 V DC) or different drive principle (e.g. pneumatic)
- special options for electric or hydraulic connections
- Parts of certain manufacturers or specifications
- Additional requests and customer-specific requirements ...

Examples of special versions

Special sliding clamping element with two clamping pistons

- Short track



Adapter plate with special mounting hole pattern

- special electric connection and hydraulic connection



Long track with special low profile chain case

- additional position monitoring



Specific flange plate with special mounting hole pattern



Additional extension bracket with new parking position to overcome major obstruction on the press

