

Area of application

The hydraulic automatic clamp cylinder type HSZ is designed for machines exerting a force of up to about 700 tons. It is particularly suitable for bottom die clamping (with and without clamping edge). The dies to be clamped must have T-slots.

The clamp cylinder is fitted in recesses in the press bed (or ram).

The clamp cylinder places little demands on the periphery of the machine. Its control can easily be combined in the existing machine control system.

Mode of operation

A double-acting hydraulic cylinder, hydraulically controlled, transmits the necessary clamping force to the die.

Release is effected by reversing the hydraulic valve and driving out the tie rod.

The clamping force is applied by:

- The clamping stroke of the tie rod

Distinguishing features

The hydraulically operated clamp cylinder directly produces the necessary clamping force. In so doing, the hydraulic pressure must be maintained throughout the clamping process (optional equipment with releasing non-return valves and pressure switches recommended).

Due to the installation of the cylinder in recesses provided for it in the press bed, the surface of the clamp cylinder ends just below the bed surface; only the tie rod projects from the surface.

Electrical control of the following functions (switches):

- Tie rod in the clamping area (nominal clamping length $\pm 3\text{mm}$) (S1)
- Pressure control by means of pressure switches in the hydraulic unit is advisable

Technical data

Switch:	an inductive proximity switch; p-n-p normally open contact
Supply voltage:	10-30 V DC
Cable length:	ca. 3 m

Advantages

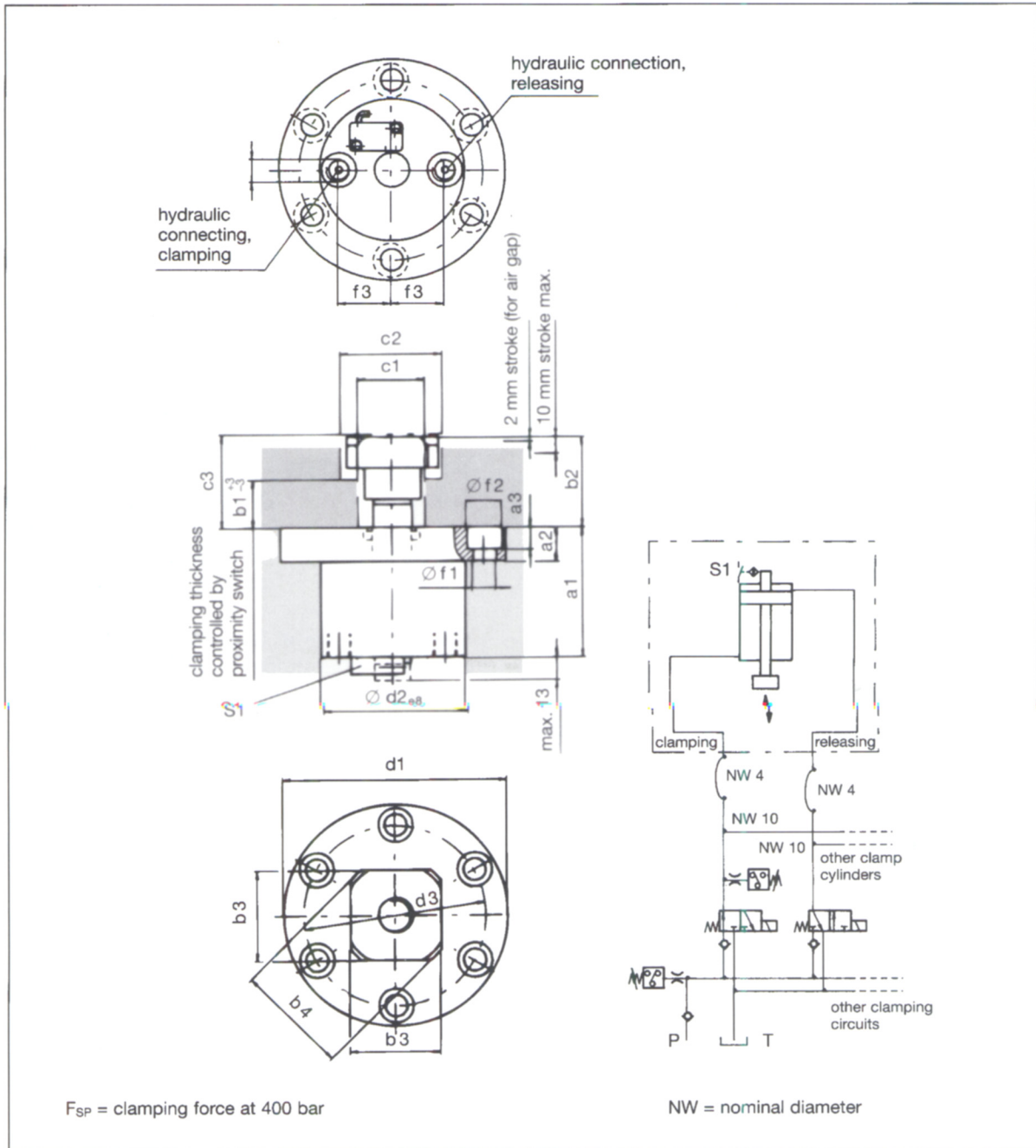
- Completely automatic and also purely hydraulic operation
- Large clamping thickness tolerance
- Central control
- Highest standard of safety due to electrical control
- Low installation cost
- Low maintenance cost
- Highest clamping force, despite compact dimensions of the clamp cylinders

Construction

The clamp cylinder had a gunmetal-finish housing and a gunmetal-finish tie rod.

It is secured by four bolts, of strength class 10.9 according to DIN 912 (not included). The thread dimension depends on the type (see technical drawing).

3.400



The company reserves the right to make technical changes.

Type	F_{SP} [kN]	Oil requirement, clamping/release [cm ³]	a1	a2	a3	b1	b2	b3	b4	c1	c2	c3	d1	d2	d3	f1	f2	f3	f4	Weight [kg]
HSZ 63	63	16	75	20	13	28	51	52	65	38	58	54	128	82	104	13	20	30	G1/4	4,3
HSZ 100	100	25	90	28	17	37	68	-	74	48	82	71	160	104	130	18	26	38	G3/8	9
HSZ 160	160	40	105	35	21	48	85	84	95	58	92	88	192	126	156	22	33	45	G3/8	15