

Area of application

The swing-clamp unit of the type ESS is designed for mechanical and hydraulic presses exerting a force of ca. 500 tonnes or more. It is basically only suitable for top die clamping.

Rigidly installed on the press ram bracket, it requires dies that have clamping edges with U-recesses.

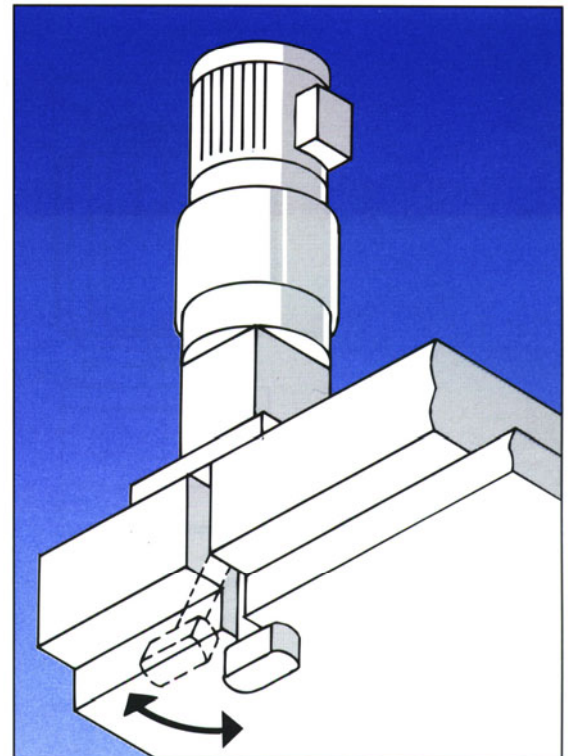
Mode of operation

By means of an electric motor, a spindle is rotated by way of a gear box. Because of this rotation, the associated nut moves and thus moves the tie rod connected to it up and down. The swing movement is effected mechanically.

The mechanical self-locking of the clamp unit protects the clamped die from unintentional release. Power is required only during the clamping and release processes.

Movement sequence for applying the clamping force:

- Swing the tie rod into position
- Clamping stroke of the tie rod
(release the clamp unit in reverse order)



Distinguishing features

The released tie rod swings completely out of the die area, and thus considerably simplifies access to the work area.

Electrical control of the following functions (switch):

- Tie rod swung in (S4)
- Tie rod swung out (S5)
- Continuous monitoring of clamping force (S6)
- Maximum upper position of tie rod (S7)
(clamped without die)

Advantages

- Large clamping thickness tolerance
- Compact dimensions
- Mechanical self-locking
- Electrical control of all important functions
- Central control
- Continuous monitoring of clamping force

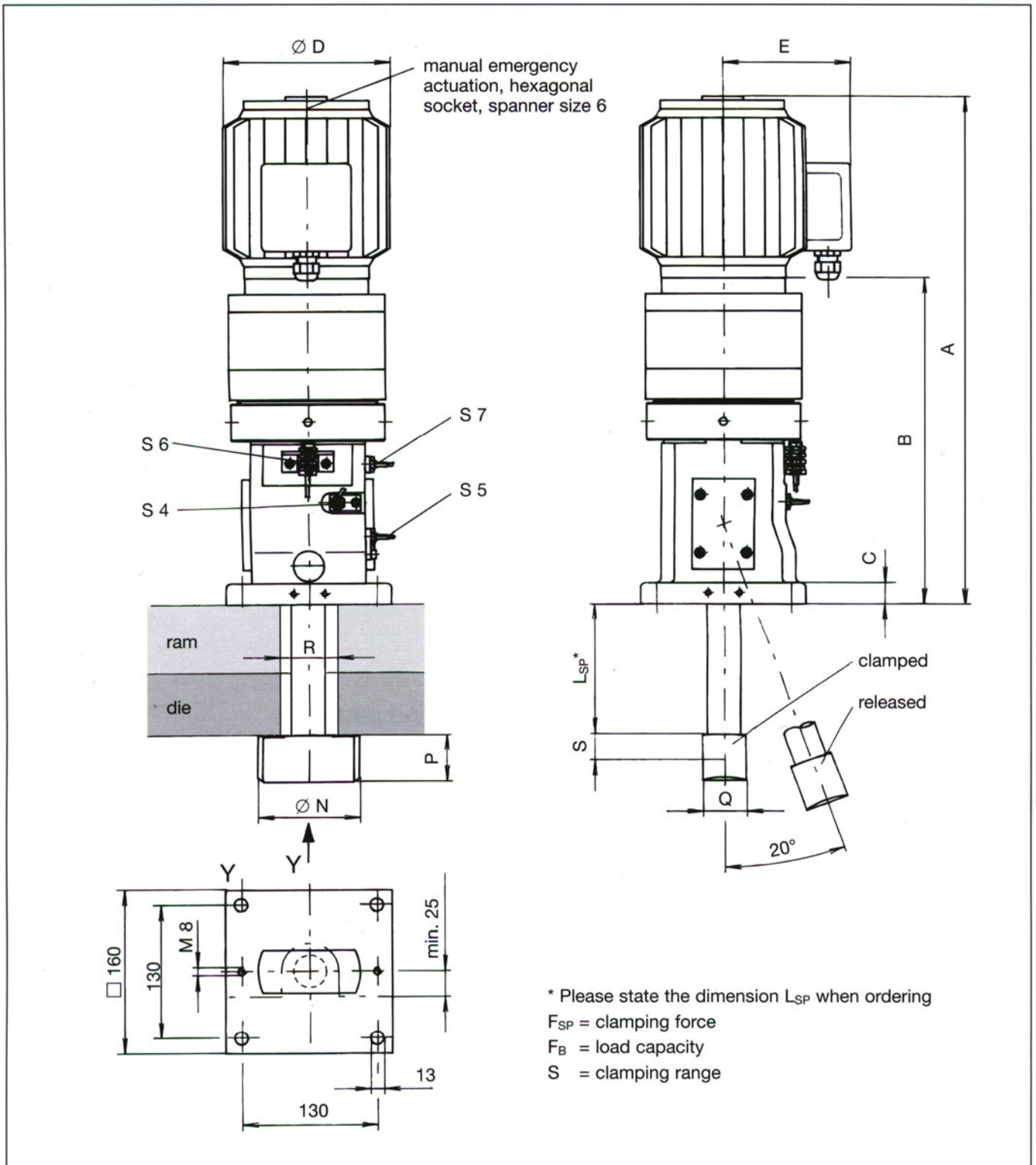
Technical data

Motor:	DC motor
Supply voltage:	400 V, 50 Hz; n = 3000 rpm; S3-duty factor 15%
Switches:	4 inductive proximity switches p-n-p normally open contact
Supply voltage:	10-30 V DC
Cable length:	ca. 3 m
Clamping rate:	ca. 2.2 mm/sec.
Clamping time:	ca. 9-15 sec.
Max. operating temp:	70° C

Construction

The clamp unit has a nickel-plated swing housing and a forged and gunmetal-finish tie rod. A high-ratio epi-cyclic gear box provides the necessary driving force.

To secure the clamp unit to the machine, please use four M12 bolts, strength class 8.8 according to DIN 912 (not included in the supply).



The company reserves the right to make technical changes.

Type	F _{SP} [kN]	F _B [kN]	S	Motor power [kW]	A	B	C	D	E	N	P	Q	R		Weight [kg]
													min.	max.	
ESS 60	60	100	15	0,55	473	308	20	150	102	80	30	36	45	50	40
ESS 120	120	200	15	0,75	505	318	20	160	123	98	45	42	50	60	43
ESS 240	240	400	15	1,50	558	371	30	160	123	120	60	62	65	70	48