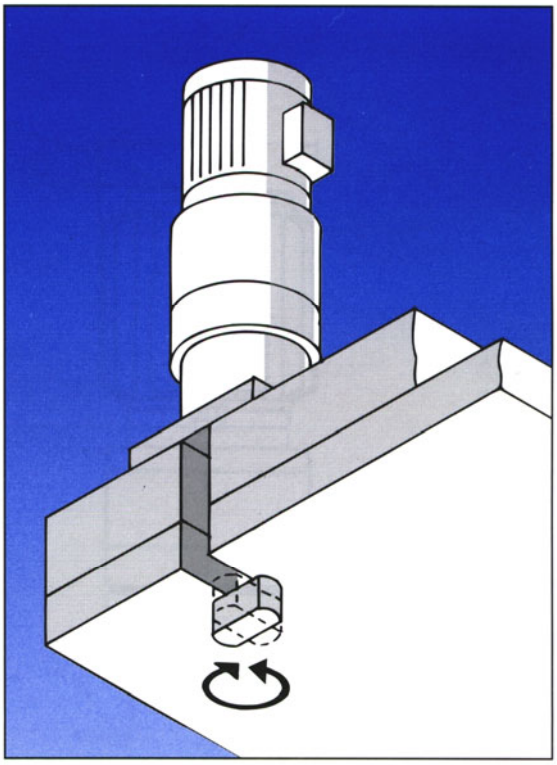
Optima Spanntechnik

Electro-Mechanical Turn-Clamp Unit Type ED

Area of application

The turn-clamp unit of the type ED is designed for mechanical and hydraulic presses exerting a force of ca. 500 tonnes or more. It is suitable both for top die clamping and for internal die clamping, with multiple acting presses.

It can be installed rigidly either on the press ram bracket or in recesses in the ram surface. The dies used should have a lock plate or a clamping edge with a U-recess.



Mode of operation

By means of an electric motor and a gear system, a threaded nut is set in rotation. The nut, in cooperation with the associated spindle, initiates the rotary movement by means of friction. After the clamping process is started, the tie rod of the clamp unit is brought to the clamping position by means of a 90° rotation, and the die is finally clamped in the required position.

The mechanical self-locking of the clamp unit prevents accidental release of the clamped die. Energy is only required during the clamping and release processes.

Movement sequence for applying the clamping force:
- 90° rotation of the tie rod
- Clamping stroke of the tie rod

(release the clamp unit in reverse order)

Distinguishing features

Due to the fact that the clamping process takes place in the smallest space, the clamp unit may also be used with multiple acting presses. In the released position the tie rod head projects from the surface of the ram. As a result, this clamp unit has usually to be used on the ram.

Electrical control of the following functions (switches):
- Tie rod in clamping position (S5)
- Continuous monitoring of clamping force (S6)
- Tie rod in release position (S7)

Advantages

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

Technical data

Motor:	DC motor
Supply voltage:	400 V, 50 Hz; n = 3000 rpm; S3- duty factor 15%
Switches:	3 inductive proximity switches p-n-p normally open contact
Supply voltage:	10 - 30 V DC
Cable length:	ca. 3 m
Clamping rate:	ca. 3 mm/sec.
Clamping time:	ca. 1-6 sec.
Max. operating temp.:	70° C

Construction

The clamp unit has a forged and gunmetal-finish tie rod. A high-ratio epicyclic gear box provides the necessary driving power.

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).

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Turn-Clamp Unit
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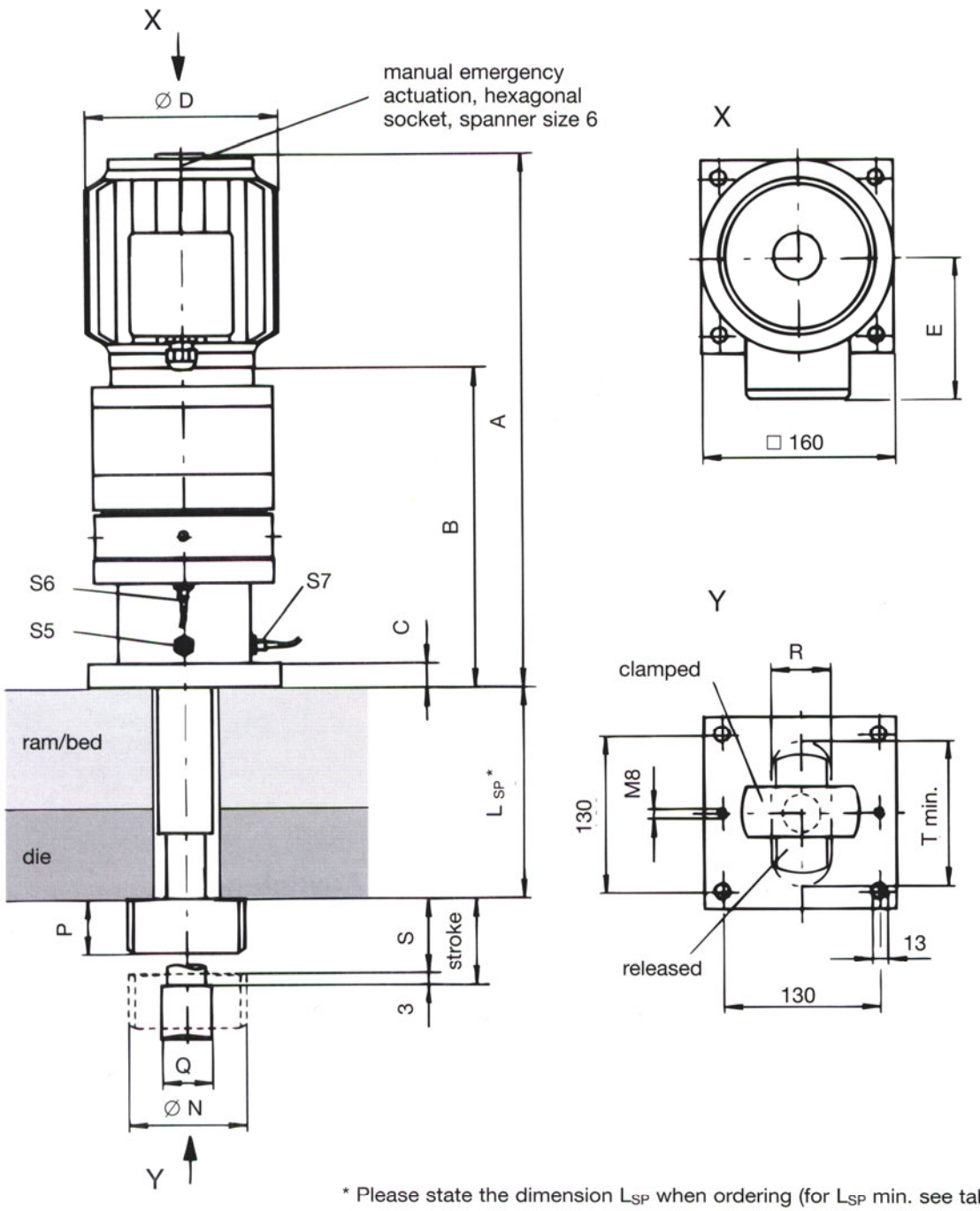

* Please state the dimension L_{SP} when ordering (for L_{SP} min. see table)

F_{SP} = clamping force
F_B = load capacity
S = clamping range

Type	F_{SP} [kN]	F_B [kN]	S	Stroke	L_{SP} min.	Motor power [kW]	A	B	C	D	E	N	P	Q	R min.	R max.	T min.	Weight [kg]
ED 60	60	100	15	18	105	0,55	418	253	20	150	102	80	30	36	45	50	90	33
ED 120	120	200	15	18	105	0,75	440	253	20	160	123	98	45	42	50	60	120	36
ED 240	240	400	15	18	130	1,50	484	297	20	160	123	120	60	62	65	70	160	45