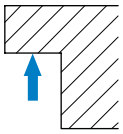
Mechanical Clamping Nut
MKA

Application area

- For all types of presses
- For various die sizes and clamping dimensions
- For clamping upper and lower dies
- For dies with U-recess
- For applications in the construction of jigs and fixtures

Mode of operation



- The clamping nut is pushed manually into the U-recess of the die and the T-slot on the machine.
- The clamping nut is then adjusted manually to the required clamping dimension.
- The required clamping force is created by turning the operating hexagon clockwise with a wrench. A planetary gear provides a multiple torque increase.
- Unclamping occurs by turning the operating hexagon counter-clockwise.

Description

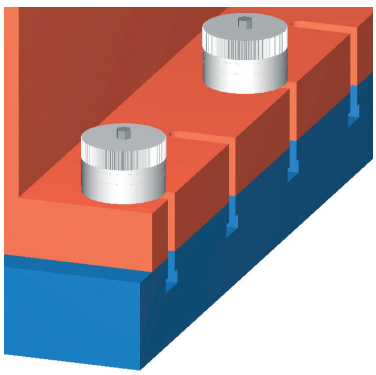
The transmission ratio provides multiple torque amplification which is then transmitted to the nut via the planetary wheels. The rotation of the nut causes the clamping stroke for the screwed-in T-bolt. The clamping force is safely applied, depending on the operating torque and the spring stiffness of the entire system. The clamping and operating forces are supported by an axial bearing and a pressure plate directly to the machine bed or slide or the fixture. This clamping mechanism guarantees self-locking in all clamping positions.

Advantages

- Infinitely variable adaptation to various die sizes
- Large clamping dimension tolerance
- Corrosion protected
- Highest level of clamping force with manual operation
- Mechanically self-locking
- Suitable for retrofitting
- Maintenance free
- Easy installation
- Versatile
- Max. operating temperature 200°C

Accessories

- T-bolts



Note

We recommend the use of a torque wrench in order to reliably guarantee the required clamping force and to protect the clamping mechanism from damage by excessively high torque. Under certain conditions, the use of a standard socket wrench, ring spanner or racketing end wrench may be acceptable for clamping.

The required stroke is to be considered when adjusting the actual thread reach for the T-bolts, e.g. the max. given thread reach "T_{max}" must be reduced at least by the amount of the stroke. The clamping nuts are provided with min/max markings on the housing in order to aid visual inspection of the thread position. It must be ensured that the screwed-in T-bolts are tight, i.e. cannot turn with the clamp unit.

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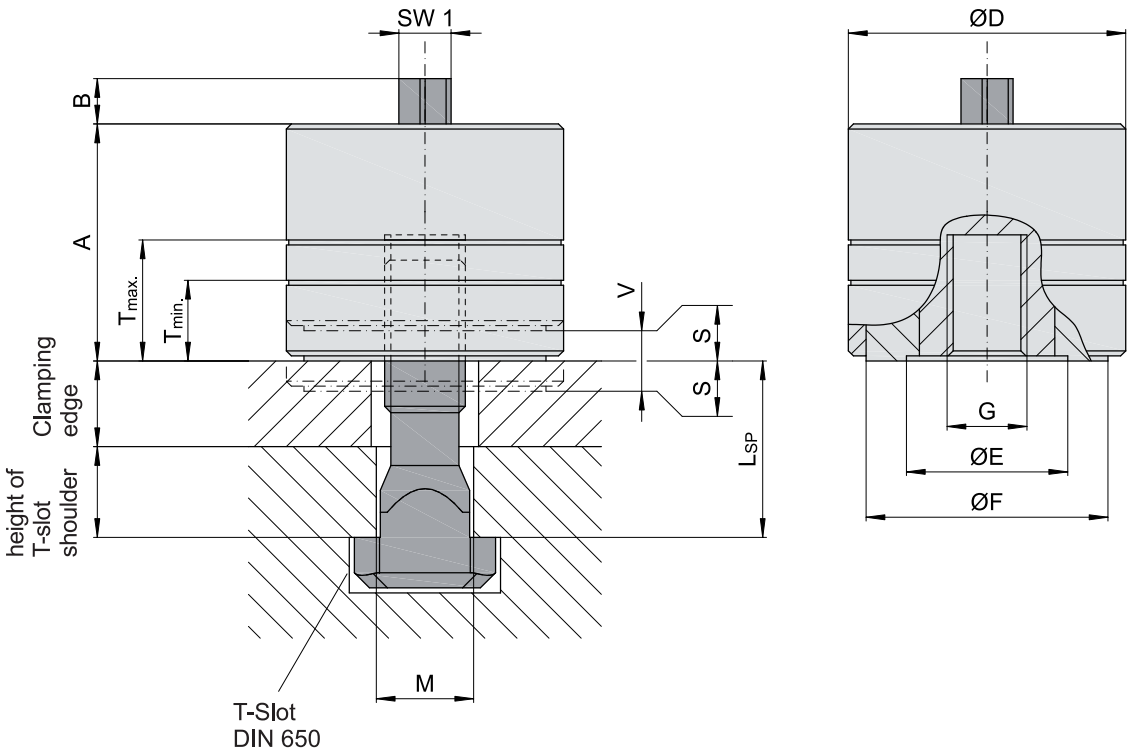

Example order

without T-bolt	**MKA 100 - M 24**
incl. T-bolt	**MKA 100 - 28 - 82**
Type	
T-slot size according to DIN 650	
L_{SP}	

L_{SP} = Nominal clamping dimension [mm]
(Custom designs available on request)

Type	Clamping force (kN)	Max. torque (Nm)	Max. loading force [1] (kN)	Weight approx. (kg)	M T-slot DIN 650	V	S	A	B	Ø D	Ø E	Ø F	G * Thread	T Thread reach min.	T Thread reach max.	SW_1
MKA 60	60	25 30	120 120	0,9	18 22	8	4	50	10	62	32	60	M16 M20	16	24	13
MKA 100	100	45 50	200 200	1,8	28 36	10	5	70	10	73	42	71	M24 M30	25	35	15
MKA 150	150	70 75 80	300	2,4 2,3 2,2	36 42 48	10	5	75	12	83	52	81	M30 M36 M42	30	40	17
MKA 200	200	90 95 100 105 115	400 450 450 500 500	4,9 4,8 4,7 4,5 4,3	42 48 54 - -	10	5	80	12	120	82	118	M36 M42 M48 M56 M64	35	45	19

* T-bolt strength classes up to M24 minimum Q 10.9, from M30 Q 8.8

1) Mechanical damage may occur at higher loads.