



adaptive

[illegible]



**Sliding clamp, mechanical
with integral high-pressure spindle**

6.2210



**Clamping block, mechanical
with integral high-pressure spindle**

6.2212



**High-pressure spindle, mechanical
with integral wedge system**

6.2270



**Clamping nut, mechanical
with integral planetary gear**

6.2275

Sliding clamp, mechanical with integral high-pressure spindle



HILMA



Applications:

- ▶ for clamping and locking dies on press beds and rams
- ▶ on beds of machine tools
- ▶ when the available space is limited

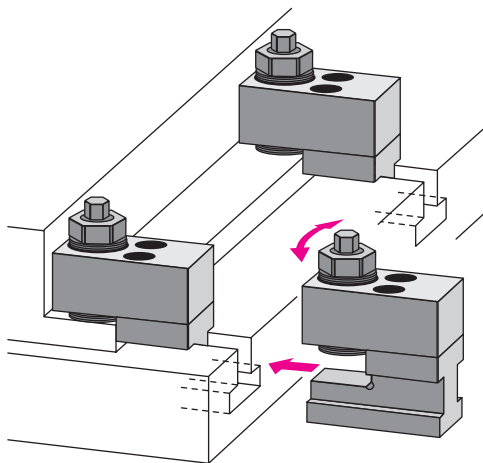
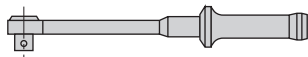
Function:

The sliding clamp is manually placed in the T-slot and screwed against the die clamping edge. Once the high-pressure spindle has been adjusted to suit the height of the clamping edge, the clamping force is built up by turning the hexagon nut (SW 1) in a clockwise direction. The clamping force achieved depends on the tightening torque selected with the torque wrench

Special features:

- ▶ Suitable for retrofit
- ▶ Compact design and easy handling
- ▶ Clamping force of between 40 and 80 kN
- ▶ High clamping force with low torque
- ▶ Compensates for large clamping edge tolerances
- ▶ No colliding edges, smooth die positioning
- ▶ No need for die standardisation (width and depth)
- ▶ Self-locking by patented wedge system

Accessory
Torque wrench 20 - 100 Nm
Part no. 9.3792.6610



Note:

Before applying the tightening torque, the high-pressure spindle must be screwed against the clamping edge so that there is no play. If the parts are not rigid, tighten the high-pressure spindle using the hexagon nut (SW 2) until there is no play.



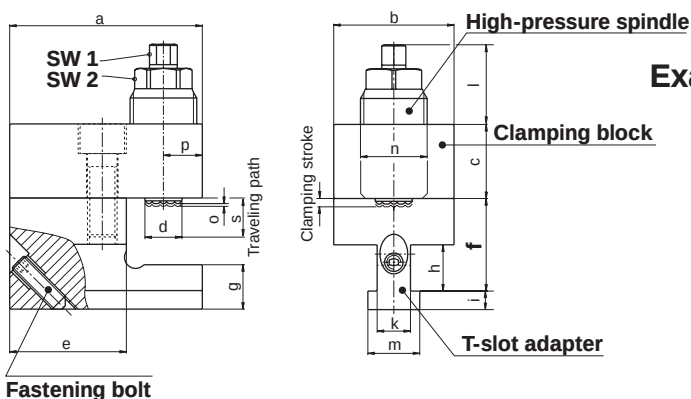
Mechanical sliding clamps fastened to a machine bed.



HILMA



Sliding clamp, mechanical with integral high-pressure spindle



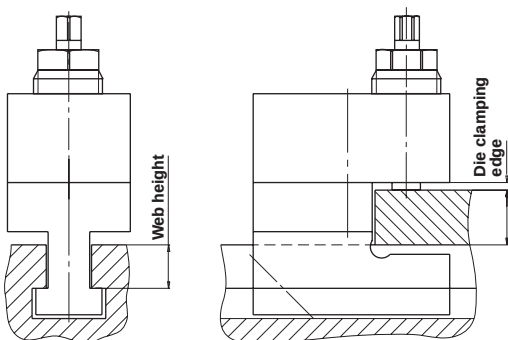
Example of ordering: **2212.185/ 80**

Sliding clamp,
mechanical
T-slot: 18 mm
Clamping force: 40 kN

Functional
dimension
'f' = 80 (in mm)
to be quoted
in the order

Part no.	T-slot DIN 650 (mm)	Clamp- ing force (kN)	Clamp- ing stroke (mm)	Max. tightening torque (Nm)	Dimensions in mm													Max. travelling path			Weight (kg)
					a	b	c	d	e	g	h	i	k	l	m	n	p	s	SW1	SW2	
2212-185	18	40	1,5	45	104	65	40	19	63	24	25	10	18	50	28	M 36 x 3	21	30	13	30	3,7
2212-225	22	40	1,5	45	104	65	40	19	63	32	30	14	22	50	35	M 36 x 3	21	30	13	30	4,0
2213-285	28	80	2,2	90	116	80	50	28	63	42	37	18	28	60	44	M 48 x 3	27	35	17	41	6,5

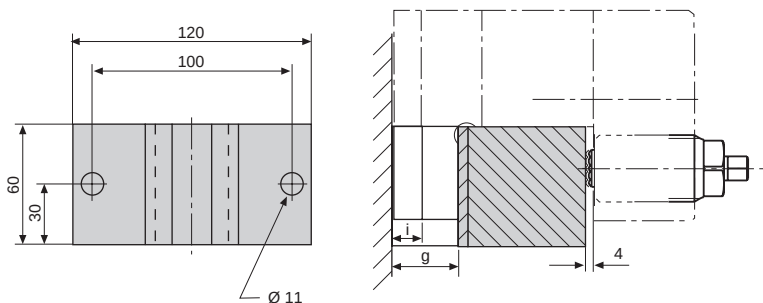
Special versions are available on request.



Functional dimension 'f':

die clamping edge
+ web height of T-slot
+ 4 mm
= dimension 'f'

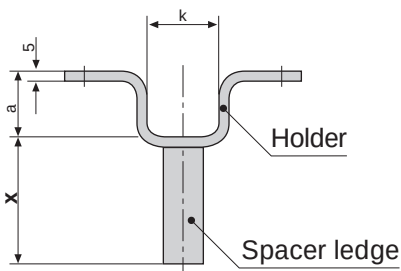
Parking station accommodates the clamping element during die change



Distance 'x':

$$x = f + i - g - 4 \text{ mm}$$

Dimension **x** to be quoted in the order



T-slot to DIN 650 (mm)	Parking station, with holder and spacer ledge Part no.	Holder Part no.	Spacer ledge Part no.	a mm	k mm	i mm	g mm
18	8.2754.1850	2754-180	2754-500	25	30	10	24
22	8.2754.2250	2754-220	2754-500	33	37	14	32
28	8.2754.2850	2754-280	2754-500	43	46	18	42

6.2210

03/2006

Hilma-Römheld GmbH

Schützenstraße 74 · D-57271 Hilchenbach

Phone +49 (0) 2733 / 281-0 · Fax +49 (0) 2733 / 281-113 · www.hilma.de

Subject to technical modification

Clamping block, mechanical with integral high-pressure spindle



HILMA



Applications:

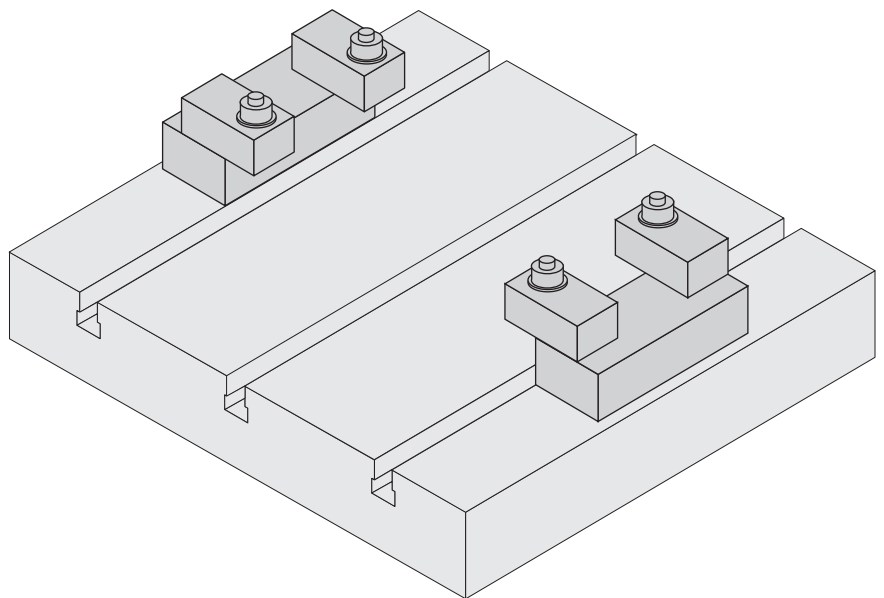
- ▶ for clamping and locking dies on press beds and rams
- ▶ on beds of machine tools
- ▶ when the available space is limited

Function:

The high-pressure spindle is manually screwed against the die clamping edge. The clamping force is built up by turning the hexagon nut (SW 1) in a clockwise direction using a torque wrench. The clamping force achieved depends on the tightening torque selected with the torque wrench.

Special features:

- ▶ Suitable for retrofit
- ▶ Compact design
- ▶ Clamping force of between 40 and 80 kN
- ▶ High clamping force with low torque
- ▶ Compensates for large clamping edge tolerances
- ▶ Self-locking by patented wedge system
- ▶ Individually usable



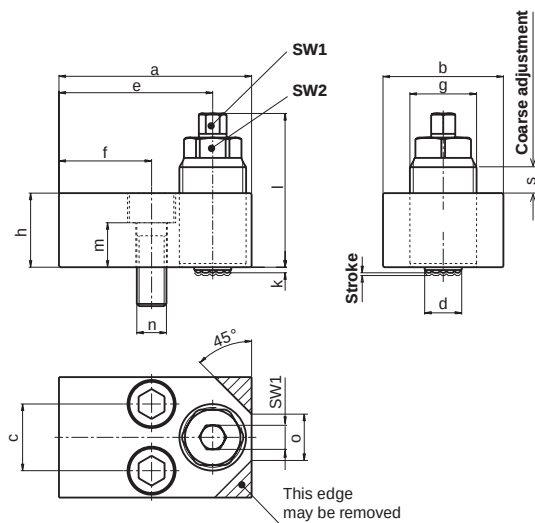
Clamping block with high-pressure spindle,
mounted on spacer ledges



HILMA



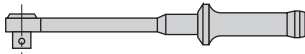
Clamping block, mechanical with integral high-pressure spindle



Part no.	Clamp- ing force (kN)	Clamp- ing stroke (mm)	Max. tightening torque (Nm)	Dimensions in mm														Max. travelling path		SW1	SW2	Weight (kg)
				a	b	c	d	e	f	g		h	k	l	m	n	o	s				
2212-111	40	1,5	45	104	65	36	19	83	50	M 36 x 3		40	3	91	24	M 16	24	30	13	30	2,3	
2213-111	80	2,2	90	126	80	43	28	99	57	M 48 x 3		50	3	111	29	M 20	30	35	17	41	4,0	

Accessory:

Torque wrench 20 - 100 Nm
Part no. 9.3792.6610



Note:

Before applying the tightening torque, the high-pressure spindle must be screwed against the clamping edge so that there is no play. If the parts are not rigid, tighten the high-pressure spindle using the hexagon nut (SW 2) until there is no play.



Original size
Section of high-pressure spindle

Applications:

- ▶ in ledges and blocks
- ▶ for workpiece and die clamping and locking
- ▶ when the available space is limited
- ▶ in presses, punching machines and machine tools

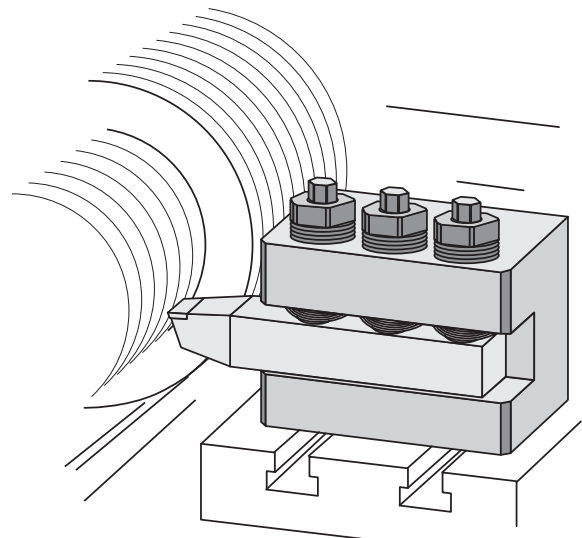
Function:

Following manual positioning of the high-pressure spindle against the clamping edge, the wedge system is brought into action by turning the hexagon nut (SW1), and the clamping force is transmitted axially to the clamping point. The required clamping force is achieved by selecting the appropriate torque on the torque wrench (see force - torque diagram). For unclamping, proceed in the reverse order.

Special features:

- ▶ Suitable for retrofit
- ▶ Compact design allows for multiple clamping
- ▶ Clamping force of between 40 and 120 kN
- ▶ High clamping force with low torque
- ▶ Self-locking by patented wedge system
- ▶ Individually usable

Example of application



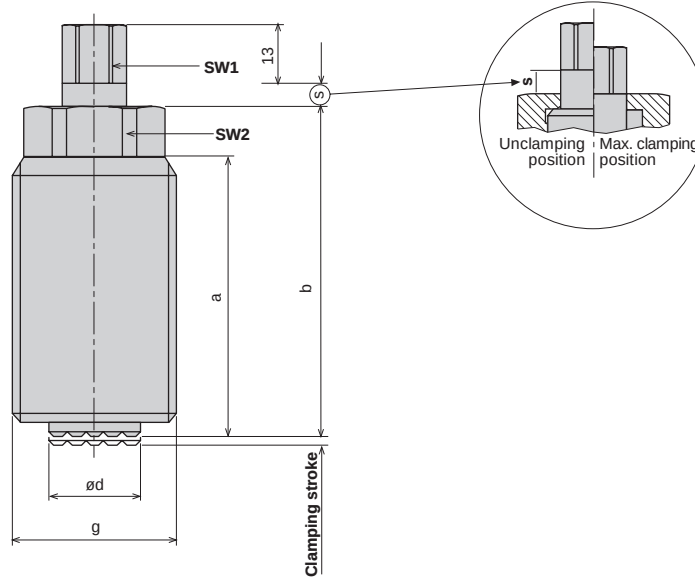


HILMA



High-pressure spindle, mechanical with integral wedge system

Max. clamping position (s)



Part no.	Clamping force (kN)	Clamping stroke (mm)	Max. tightening torque (Nm)	Static load max. (kN)	Dimensions in mm				Monitoring of clamping stroke		SW1	SW2	Weight (kg)
					a	b	Ød	g	s				
2272-210	40	1,5	45	80	62	73	19	M 36 x 3	5		13	30	0,5
2273-210	80	2,2	90	160	75	90	28	M 48 x 3	7,5		17	41	2,0
2274-210	120	2,5	140	240	90	110	39	M 64 x 4	8,5		19	55	2,5

Other sizes and threads (e.g. inch) are available on request.

Accessories:

Torque wrench 20 - 100 Nm

Part no. 9.3792.6610

Torque wrench 40 - 200 Nm

Part no. 9.3792.6620

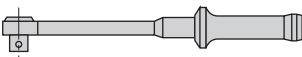
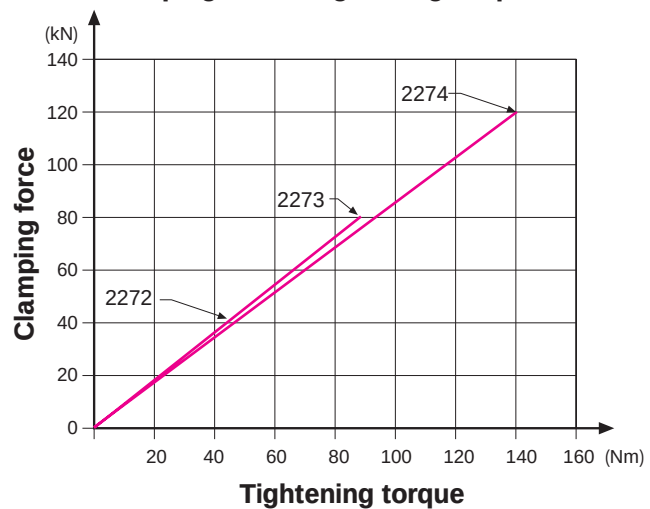


Diagram:

Clamping force - tightening torque



Note:

Before applying the tightening torque, the high-pressure spindle must be screwed against the clamping edge so that there is no play. If the parts are not rigid, tighten the high-pressure spindle using the hexagon nut (SW 2) until there is no play.

High-pressure spindles are permanently lubricated and are maintenance-free under normal conditions of use.

6.2270

03/2006

Hilma-Römheld GmbH

Schützenstraße 74 · D-57271 Hilchenbach

Phone +49 (0) 2733 / 281-0 · Fax +49 (0) 2733 / 281-113 · www.hilma.de

Subject to technical modification

Clamping nut, mechanical with integral planetary gear



HILMA



Clamping nut

T-slot adapter



Planetary gear
inside the clamping nut
for clamping force multiplication

Applications:

- ▶ for clamping and locking dies on press beds and rams
- ▶ on beds of machine tools
- ▶ when the available space is limited

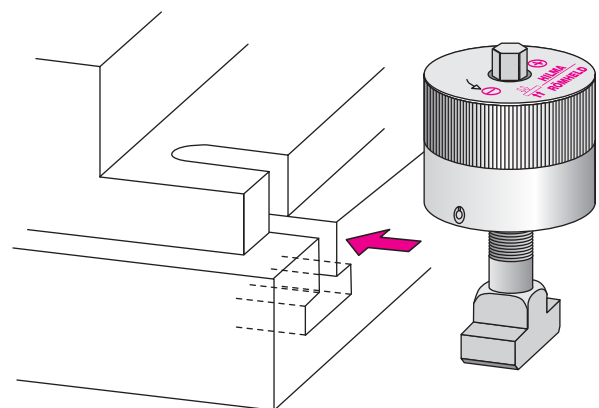
Function:

Following manual positioning of the clamping nut against the clamping edge, the integral planetary gear is brought into action by turning the hexagon nut. As a result of the gear transmission, the tightening torque is multiplied. In order to reliably ensure the required clamping force, we recommend that a torque wrench is used.

Special features:

- ▶ Suitable for retrofit
- ▶ Compact design allows for multiple clamping
- ▶ Intensification of clamping force possible in case of multiple clamping
- ▶ High clamping force with low torque
- ▶ Compensates for large clamping edge tolerances
- ▶ Easy manual clamping and unclamping

Example of application





HILMA



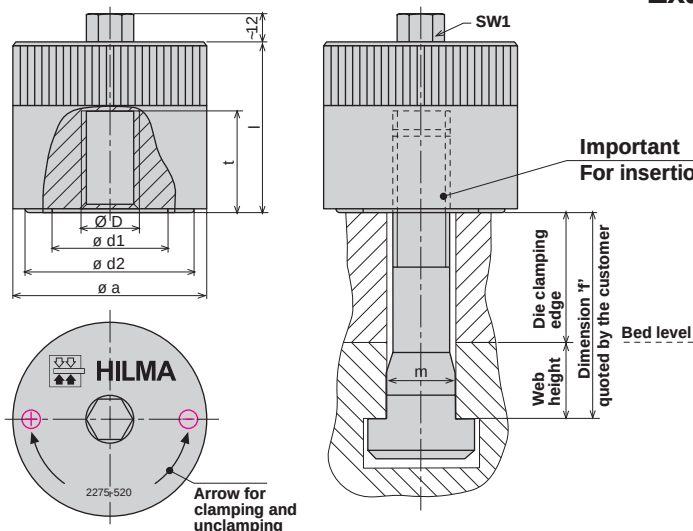
Clamping nut, mechanical with integral planetary gear

Example of ordering: **2275-820/ 80**

Clamping nut, mechanical
T-slot: 22 mm
Clamping force: 50 kN

Functional dimension 'f' = 80 (mm) to be quoted in the order

Important
For insertion depth, see table



Functional dimension 'f':

die clamping edge
+ web height of T-slot
+ 4 mm
= dimension 'f'

Clamping nut with T-slot adapter

Part no.	T-slot DIN 650	Clamping force (kN)	Tightening torque (Nm)	D	a	d1	d2	l	t	SW1	Insertion depth min.	max.	Weight ca. (kg)
2275-816	18	60	25	M16	62	32	60	50	24	13	16	24	2,0
2275-820	22	60	30	M20	62	32	60	50	24	13	16	24	2,1
2276-824	28	100	45	M24	73	42	71	70	35	15	25	35	3,2
2277-830	36	150	70	M30	83	52	81	75	40	17	30	40	5,5
2277-836	42	150	75	M36	83	52	81	75	40	17	30	40	6,5
2278-836	42	200	120	M36	120	82	118	80	45	17	35	45	6,5

Clamping nut (separately supplied)

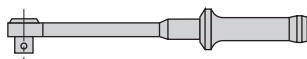
Part no.		Clamping force (kN)	Tightening torque (Nm)	D	a	d1	d2	l	t	SW1	Insertion depth min.	max.	Weight ca. (kg)
2275-716		60	25	M16	62	32	60	50	24	13	16	24	0,9
2275-720		60	30	M20	62	32	60	50	24	13	16	24	0,85
2276-724		100	45	M24	73	42	71	70	35	15	25	35	1,7
2277-730		150	70	M30	83	52	81	75	40	17	30	40	2,2
2277-736		150	75	M36	83	52	81	75	40	17	30	40	2,1
2278-736		200	120	M36	120	82	118	80	45	17	35	45	4,6

Other sizes and threads (e.g. inch) are available on request.

Accessories:

Torque wrench 20 - 100 Nm

Part no. 9.3792.6610



Torque wrench 40 - 200 Nm

Part no. 9.3792.6620

6.2275

03/2006

Hilma-Römheld GmbH

Schützenstraße 74 · D-57271 Hilchenbach

Phone +49 (0) 2733 / 281-0 · Fax +49 (0) 2733 / 281-113 · www.hilma.de

Subject to technical modification