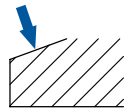
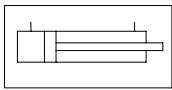


# Hydraulic Wedge Clamp Unit HKS

## Application area

- For small, medium and large presses
- For clamping moving bolsters as well as upper and lower dies
- For dies with 20° bevelled clamping edges
- Fixed installation to the sides of the press columns, on the press bed or slide

## Mode of operation



- A double-acting hydraulic cylinder pushes a wedge onto the clamping edge of the die.
- The clamping force is generated by the angle of the wedge.
- The clamp unit is unclamped by reversing this sequence.

## Description

The hydraulically driven wedge clamp unit generates the required clamping force by means of the wedge mechanism. In order to secure the clamping force, hydraulic pressure must be maintained (e.g. with pilot-controlled check valves). Pressure sensing by the pressure switch on the hydraulic power pack is required.

In its park position, the clamping wedge is fully retracted into the housing and therefore protected against damage. To ensure that the clamping wedge remains in the park position during die change, the operating pressure must be maintained or a pilot-controlled check valve must be integrated into the unclamping line.

Park and clamping positions can be monitored by limit switches (optional).



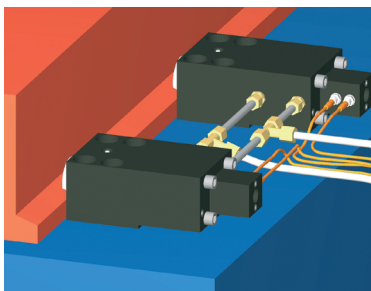
## Advantages

- Low space requirements due to compact dimensions
- Large clamping dimension tolerance
- Minimal installation investment
- Central operation
- Continuous clamping force monitoring possible (pressure sensing)
- Monitoring of clamping and unclamping positions possible (optional)
- High mechanical load capacity

## Accessories

- Pilot-controlled check valves
- Fittings
- Flow-control valves
- Hydraulic hoses / Hydraulic accessories
- Hydraulic power packs

## Technical data



Type	HKS 25	HKS 50	HKS 100	HKS 160	HKS 250
Clamping force [kN]	25	50	100	160	250
Max. loading force [kN] <sup>1)</sup>	35	65	130	210	320
Max. operating pressure [bar]	350	275	300	350	350
Clamping dimension tolerance [mm]	+/- 1				
Stroke [mm]	14-19	16-22	16-22	17-23	22-29
Oil volume: Clamp / unclamp [cm <sup>3</sup> ]	10 / 6	33 / 23	49 / 34	94 / 63	162 / 110
Max. oil volume flow [l/min] <sup>2)</sup>	0,5 - 0,7	1,5 - 2	2,5 - 3	5 - 6	9 - 10
Limit switch: Number / type (optional)	• two inductive proximity switches				
Supply voltage	• 10-30 V DC				
Connection type	• Plug-in type (M8 x 1)				
Designation	• Clamping wedge in park position				S1
	• Clamping wedge in clamping position				S2
Max. operating temperature [°C]	70				
Weight [kg]	2,7	5,7	11,6	21,9	43,3

1) Mechanical damage may occur at higher loads.

2) If a pump with a greater output is used, the oil flow must be reduced by means of flow control valves or one-way restrictors.

Fixing is achieved with four screws, DIN EN ISO 4762, strength class 10.9 (not supplied).

# Hydraulic Wedge Clamp Unit

HKS

Electrical monitoring (optional)

Hydraulic connection G1/4 "CLAMP"

Hydraulic connection G1/4 "UNCLAMP"

stroke

20° ±0.2°

S2 S1

E X<sub>L</sub> X<sub>S</sub> D C

max. 3

L<sub>SP</sub> ±1

For drill jig as per DIN 179

Connection fitted on the right hand side (R)

Connection fitted on the left hand side (L) (optional)

Lubrication nipple DIN 71412

Q<sub>±0,02</sub>

Additional clamp units

Additional clamping circuits

**Example order**

HKS 100 - R - E

Type \_\_\_\_\_

Position of connections \_\_\_\_\_

with Electrical Monitoring (optional) \_\_\_\_\_

L<sub>SP</sub> = Nominal clamping dimension [mm]  
(Custom designs available on request)

Type	stroke	A	B	C	D	E	F	H	Ø J	Ø K	Ø M	Ø N	O	P	Q	R	X <sub>L</sub>	X <sub>S</sub>	L <sub>SP</sub>
HKS 25	20	48	70	177	122	58	70	45	20	13	18/7	30	14	24	48	13	70	110,5	15
HKS 50	25	65	95	215	160	80	90	60	26	17	26/9	40	16	30	65	18	97	143	18
HKS 100	25	80	120	240	200	100	120	75	32	21	30/11	55	20	38	85	20	112,5	172,5	25
HKS 160	30	105	150	277	238	125	125	100	40	26	35/11	70	25	50	106	26	143,5	202,5	30
HKS 250	32	125	200	320	285	150	200	120	48	33	48/13	80	26	52	140	32	161,5	253,5	30