

# Wedge Swing Clamp

for clamping tools on presses, self-locking  
with position monitoring



## Application

This clamp has been specially developed for use on large presses. The clamp's generous stroke, self-locking wedge and electronic position monitoring provide safe and effective clamping.

## Description

To clamp, after the slide is lowered to meet the die, the tie rod of the wedge swing clamp pivots in 15° and pulls up. The clamping stroke accommodates for a generous variation in the die's clamp height and because of the clamp's self-locking wedge, unintentional unclamping of the die is prevented, even if there is a loss of pressure.

The swing movement of the tie rod is controlled by sequence valves and monitored with proximity switches.

To unclamp, close the die completely, select unclamp, the tie rod extends down releasing the die and pivots away 15°. After lifting the slide the die can be removed from the press.

## Advantages

- self-locking wedge clamp
- wide tool clamp height tolerance
- suitable for new or retrofit

## Additional information

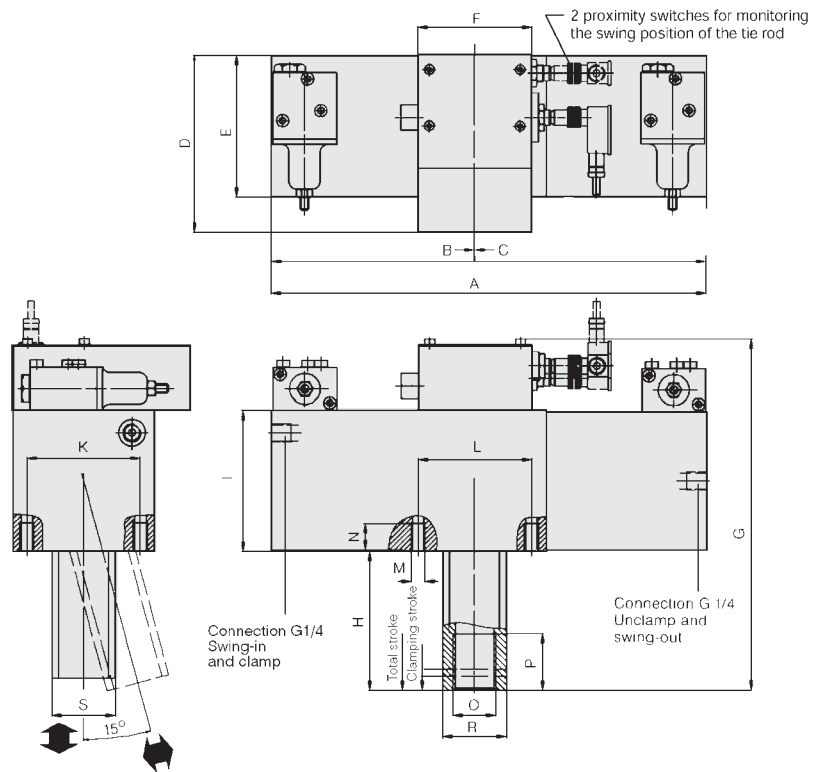
- t-bolts must be ordered separately per customer requirements
- supplied with two proximity switches with cables

## Important notes

Operating conditions, tolerances, and other data, see sheet page B-3.

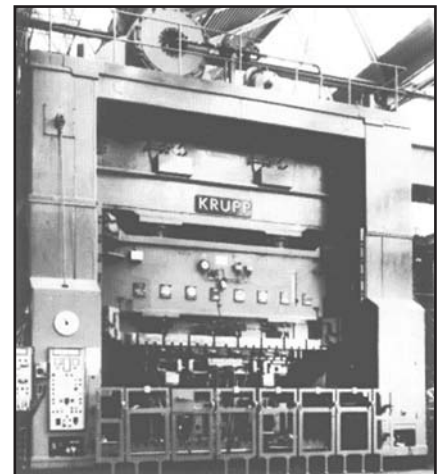
## Power units

For the design of power unit and control, please consult us.



Max. clamping force at	(lbs)	11,250	22,500
Total stroke	(in)	.315	.394
Usable clamping stroke	(in)	.295	.374
<b>Perm volume flow</b>	(in <sup>3</sup> /min)	19	19
Min. operating pressure	psi	2,175	2,175
Max. operating pressure	psi	3,480	4,060
Oil required			
Clamping	(in <sup>3</sup> )	4.88	6.161
Unclamping	(in <sup>3</sup> )	5.032	9.272
A	(in)	10.00	12.09
B	(in)	4.72	5.65
C	(in)	5.276	6.437
D	(in)	4.744	4.921
E	(in)	3.15	3.937
F	(in)	2.756	3.15
G	(in)	7.323	9.783
H	(in)	2.48	3.878
I	(in)	3.15	3.937
K	(in)	2.362	3.15
L	(in)	2.362	3.15
M	(mm)	M10	M10
N	(in)	.591	.787
O	(mm)	M20	M30
P	(in)	1.102	1.772
R	(in)	1.417	1.772
S	(in)	1.575	1.772
<b>Part no.</b>		<b>HCR-4607-000</b>	<b>HCR-4607-001</b>

## Example for application



Wedge swing clamps used for clamping tools on a power press.

The 8 wedge swing clamps are electronically monitored.

Other sizes and special designs upon request.  
HCR-4607-002 (45,000 lbs.) contact  
Carr Lane Roemheld.

### Position monitoring

The wedge swing clamp is supplied with proximity switches for monitoring the clamping and unclamping position. The switch for the clamping position only reacts if the tie rod is in a vertical position and within the clamping range. If the clamping element performs the full clamping stroke, the proximity switch is released, and the signal disappears. The proximity switches are installed on the side of the swivel cylinder (see drawing). In case of part no. HCR-4607-000, the proximity switches are installed on the front side of the housing.

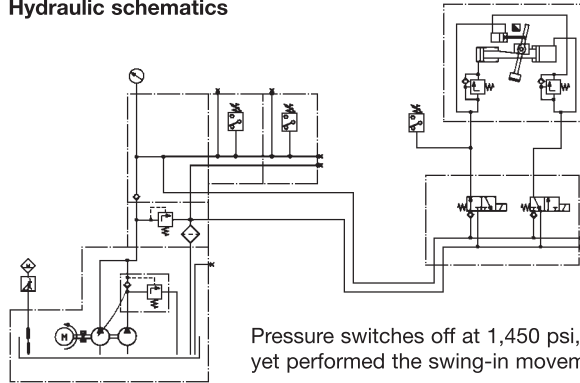
### Control port for tie rod operation

As an option, the wedge swing clamp is available with an additional line for separate control of the swing-in movement of the swing cylinder.

In this case, the integrated sequence valve (see drawing, left side) is replaced by an oil port. Thus, each element is connected by means of three lines. Combined with a suitable control, this system enables clamping only after all tie rods of the clamping elements have performed the swing-in movement.

If 4 or more clamping elements are used, two clamping circuits can be arranged diagonally as an additional safety.

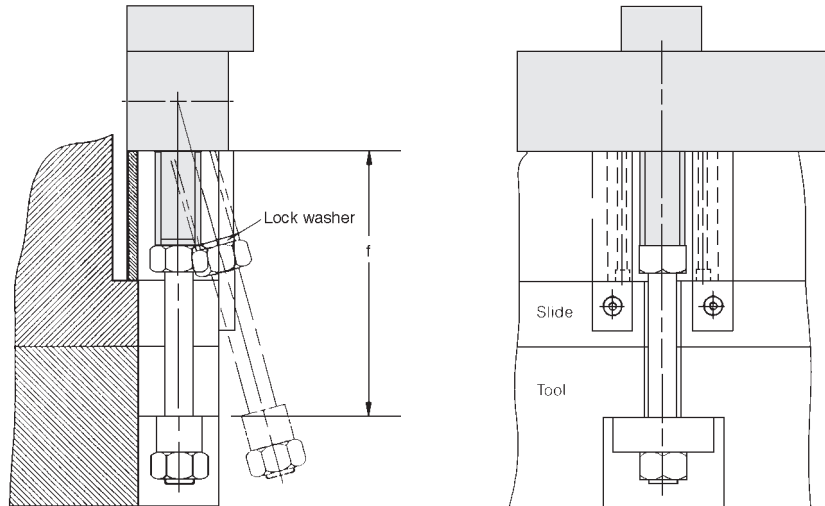
### Hydraulic schematics



Pressure switches off at 1,450 psi, if the tie rod has not yet performed the swing-in movement.

### Retrofitting

Retrofitting to an existing bolt pattern or a specific application can be achieved with a custom machined adapter block.



### T-Bolt

To ensure the T-bolt is secure, it is provided with a lock nut and a tabbed lock washer. The T-bolt is assembled to the "f" dimension specified by the customer.

Part no. HCR-7.4607.XXXX

