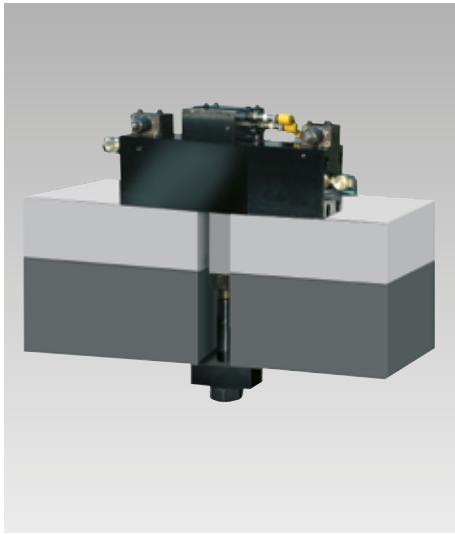




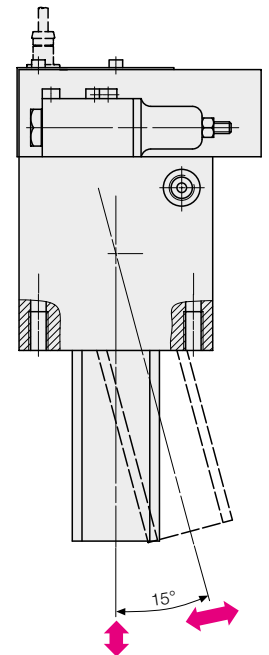
Wedge Swing Clamps with Mechanical Lock

double acting, max. clamping forces 100 kN, clamping stroke up to 9.5 mm



Advantages

- Clamping stroke 9.5 mm, which means high adaptability to varying heights of clamping edges
- High operational safety by
 - mechanical lock
 - position monitoring
 - automatic motion sequence
- Only 2 hydraulic connections
- Very suitable for retrofit



Description

A wedge converts the stroke of the double-acting piston into a stroke of the tie rod. In order to release the die, the tie rod pivots by a maximum of 15°. The swing movement of the tie rod is performed by a separate swing cylinder which is operated by sequence valves. The clamping force is transmitted to the clamping point in the axial direction of the tie rod. The clamping and unclamping positions are monitored by inductive proximity switches. The mechanically-locked wedge prevents unintentional unclamping of the die even if there is a loss of pressure.

The tie rod must be ordered separately.

Temperature range up to max. 70 °C

Application

Double-acting wedge swing clamps are used on press beds and rams. They are especially suitable where space is limited.

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. 4607-000, the proximity switches are installed on the front side of the housing.

Proximity switches

PNP switch

Voltage range 12 – 24 V DC

Nominal operating distance 2 mm

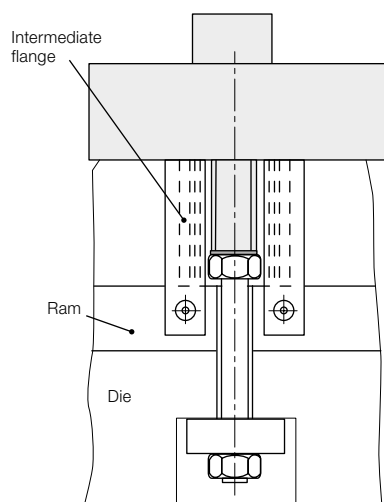
Load: 200 mA

Proximity switch and LED display

Plug with 5 m connecting cable 3 x 0.34

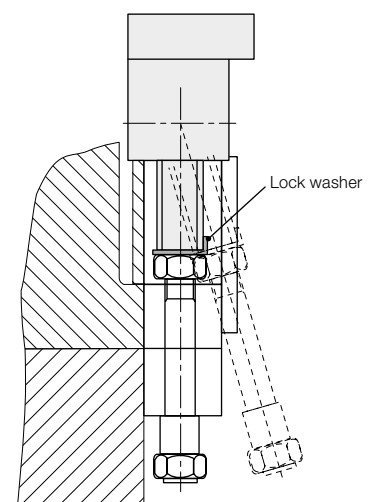
Retrofitting

The subsequent installation is possible by using an intermediate flange.

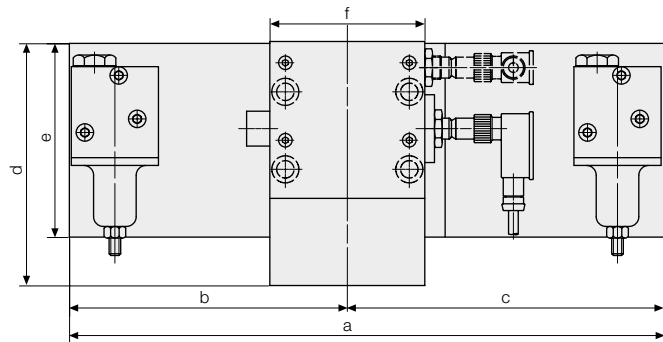
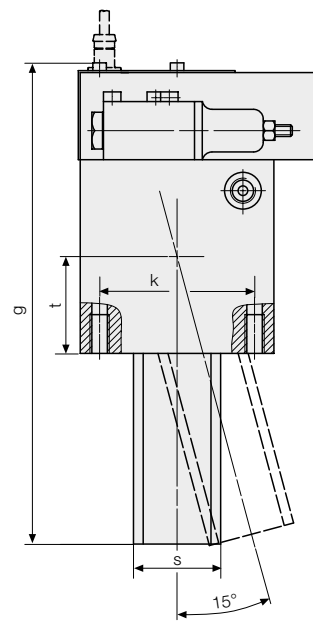
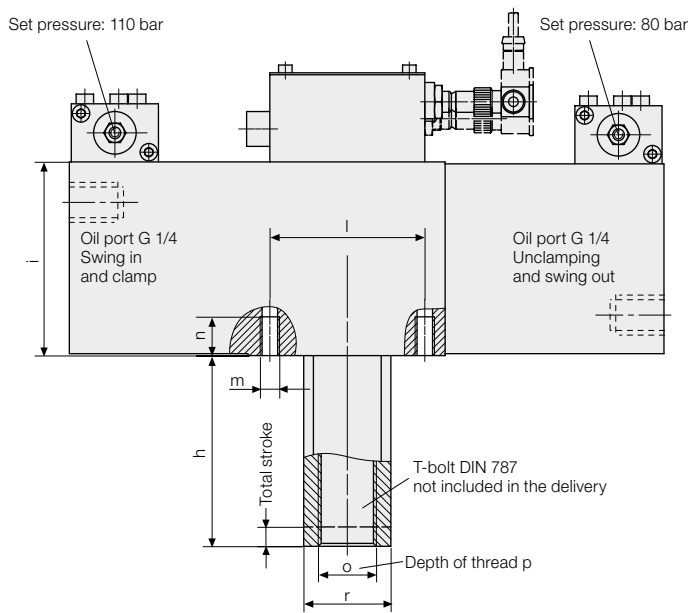


Safety measures

The tie rod is secured with a lock nut. In order to prevent it from loosening, a lock washer should be added.



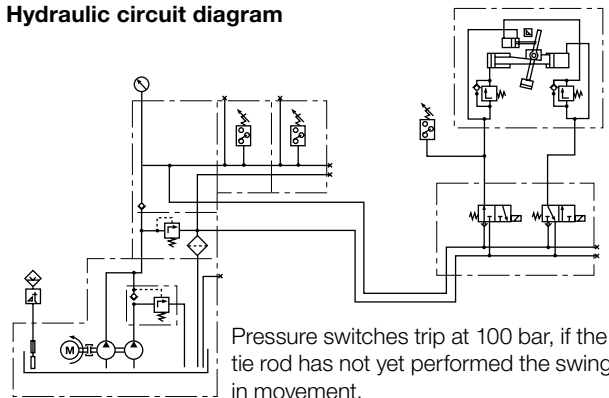
Technical data Dimensions



Dimensions

Max. Clamping force	[kN]	50	100
Total stroke	[mm]	8	10
Usable clamping stroke	[mm]	7,5	9,5
Max. oil flow rate	[cm³/s]	70	70
Min. operating pressure	[bar]	150	150
Max. operating pressure	[bar]	240	280
Oil volume clamping	[cm³]	80	101
Oil volume unclamping	[cm³]	82,5	152
a	[mm]	254	307
b	[mm]	120	143,5
c	[mm]	134	163,5
d	[mm]	120,5	125
e	[mm]	80	100
f	[mm]	70	80
g	[mm]	186	248,5
h	[mm]	63	98,5
i	[mm]	80	100
k	[mm]	60	80
l	[mm]	60	80
m	[mm]	M 10	M 10
n	[mm]	15	20
o	[mm]	M 20	M 30
p	[mm]	28	45
r	[mm]	36	45
s	[mm]	40	45
t	[mm]	40	50
Part no.		4607-000	4607-001

Hydraulic circuit diagram



Control port for tie rod operation

As an option, the wedge swing clamp is available with an additional pipe connection for separate control of the swing-in movement of the swivel cylinder. In this case, the integral sequence valve (see drawing, left side) is replaced by a hydraulic oil port. Thus, each element must be connected by three pipes. 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 measure.