



**ROEMHELD**  
HILMA ■ STARK

Issue 1-17 E

## WZ 2.2450

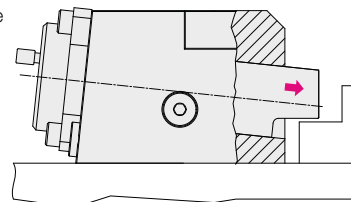
### Wedge Clamps for Dies with Straight Clamping Edge

clamping with spring force and hydraulic unclamping, single acting, operating force 25 up to 120 kN with and without position monitoring



#### Advantages

- Safe clamping of dies with straight clamping edge
- High operating safety due to clamping with spring force as well as inductive and visual position monitoring
- Position monitoring on the left or right side
- Clamping element with self-locking
- Dimensions in accordance with Euromap guidelines
- No clamping edge bevels are required
- Variable clamping edge heights (spacer plates)
- Tolerance of clamping edge height  $\pm 0.5$  mm
- The pressure of the machine hydraulics of 160 bar is sufficient for unclamping
- Very sturdy and compact design
- Housing with stainless coating
- Flexible connecting possibilities by 4 hydraulic connections



#### Application

The single-acting wedge clamps are suitable for safe clamping of moulds and dies with straight clamping edge in injection moulding machines, punches and presses.

#### Description

The wedge clamps consist of a guide housing with one-piece clamping bolt.

Clamping cycle: the clamping bolt which is inclined by  $6^\circ$  performs an idle stroke and simultaneously a clamping stroke. The clamping bolt is lowered axially onto the clamping edge. The  $6^\circ$  angle, the spring force in the clamping bolt and the frictional engagement at the clamping point create a self-locking connection. The wedge clamp should preferably be used with position monitoring.

#### Technical data

Max. operating force	[kN]	25 – 120
Clamping force	[kN]	2,4 – 11
Unclamping pressure	[bar]	160
Max. operating pressure	[bar]	200

#### Maximum operating force

This is the force that can be absorbed by the clamping element and the fastener (screws).

#### Clamping force

This is the force the clamping element applies to the workpiece. The die or the tool is clamped on the fixture plate by means of this force.

#### Important notes!

Please observe: in case of incorrect operation of the wedge clamps, the clamping bolt may fully retract into the guide housing and thus cause a die half falling off.

When using wedge clamps on the press ram or a vertical press, it is recommended that multiple-circuit hydraulic supply of the clamping elements and pilot-controlled check valves are used for securing hydraulic clamping.

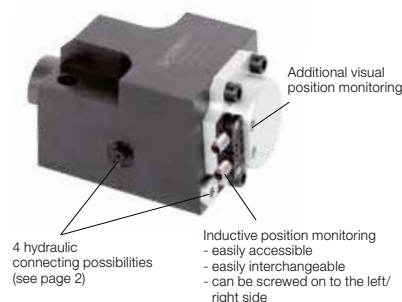
#### Versions

- with position monitoring  
max. temperature:  $80^\circ\text{C}$
- without position monitoring  
max. temperature:  $160^\circ\text{C}$   
( $250^\circ\text{C}$  on request)

#### Position monitoring

The integrated position monitoring is coupled to the clamping bolt in a space-saving way and signals:

- Clamping bolt in unclamping position
- Clamping bolt in clamping position
- Error message when overrunning the clamping position

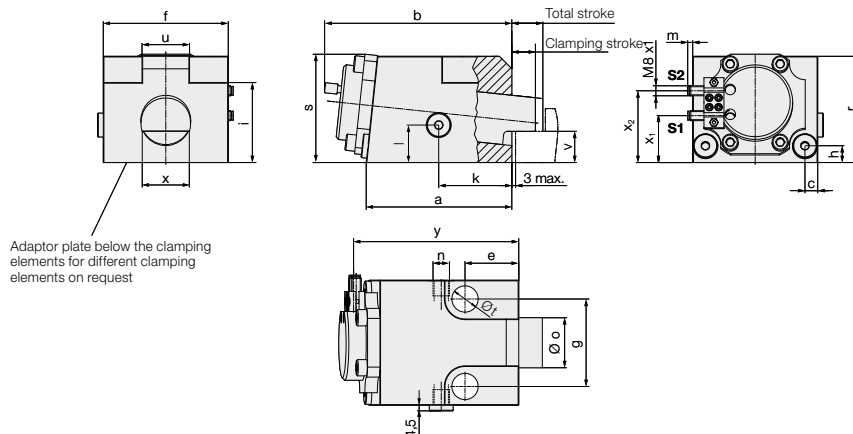


## Dimensions Technical data

### Wedge clamps

with position monitoring

Clamping bolt with a 6° bevel



Max. admissible operating force	[kN]	25	50	80	120	120
Clamping force by spring	[kN]	2,4	5	5	11	11
Unclamping pressure	[bar]	160	160	160	160	160
Max. operating pressure	[bar]	200	200	200	200	200
Cylinder Ø	[mm]	35	60	60	85	85
Max. oil volume	[cm³]	14	39	39	90	90
Total stroke	[mm]	20	25	25	40	40
Clamping stroke	[mm]	14	19	19	15	15
a	[mm]	100	120	120	200	200
b	[mm]	131	153	153	245	245
c	[mm]	9	10	10	30	30
e min. / e max.	[mm]	10/37	12/45	15/43	15/77	18/74
f	[mm]	88	100	100	180	180
g (± 0.2 mm)	[mm]	35/M12/12.9	70/M16/12.9	70/M20/12.9	140/M20/12.9	140/M24/8.8
mounting grid as per Euromap	[mm]					
Tightening torque	[Nm]	85	220	300	470	550
h	[mm]	13	13,5	13,5	30	30
i	[mm]	–	64	64	94	94
k	[mm]	55	62	62	115	115
l	[mm]	14	30	30	23	23
m	[mm]	–	4	4	–	–
n	[mm]	G 1/8	G 1/4	G 1/4	G 1/4	G 1/4
Ø o	[mm]	18	40	40	65	65
r	[mm]	60	85	85	120	120
s	[mm]	62	87	87	120	120
Ø t	[mm]	13	17	21	21	26
u	[mm]	–	38	38	90	90
v (± 0.15)	[mm]	20	25	25	40	40
x <sub>1</sub> /x <sub>2</sub>	[mm]	25/47	38/58	38/58	58/84	58/84
y	[mm]	114	132	132	212	212
Weight	[kg]	2,5	6,5	6,5	29	29

### Part no.

with position monitoring up to 80 °C

8.2403.5510

8.2404.5510

8.2404.5520

8.2405.5510

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without position monitoring up to 160 °C\*

on request

\* Higher temperatures up to 250 °C on request

Different operating forces, clamping edge heights, mounting grids or dimensions of the housing on request

### Technical data

#### for inductive proximity switches

Operating voltage	10 ... 30 V DC
Ripple	max. 15 %
Switching function	interlock
Output	PNP
Housing material	steel, corrosion resistant
Code class (DIN 40050)	IP 67

Part no. 6.3829.0980

#### Connecting cable with plug

Environmental temperature TA	[°C]	-25 ... +80
Min. distance of the switching positions	[mm]	8
Type of connection		Plug
LED function display		in the plug
Constant current max.	[mA]	200
Rated operating distance	[mm]	1.5
protected against short circuits		yes
Connecting cable with plug, 5 m	<b>Part no.</b>	<b>3829-099</b>
Connecting cable with plug, 10 m	<b>Part no.</b>	<b>3829-139</b>

#### Electric circuit diagram

