



ROEMHELD
HILMA ■ STARK

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WZ 2.2460

Wedge Clamps for Straight Clamping Edge

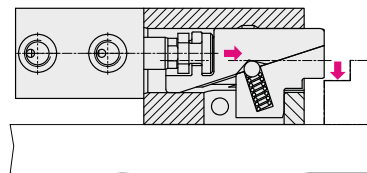
double acting, clamping force 25 up to 100 kN,

hydraulic clamping and unclamping, without and with position monitoring at the side



Advantages

- Safe clamping of dies with straight clamping edge
- The clamping piston does not retract in the case of pressure drop
- Uniform clamping and unclamping pressure
- High operational safety by position monitoring and automatic motion sequence
- Very sturdy and compact design
- Well-proven clamping element with high degree of safety and long service life
- Retracting clamping bolt ensures unimpeded mould and die change
- Special versions on request
- Minimum space requirement due to position monitoring without lateral overhang



Application

Double-acting wedge clamps are particularly suitable for safe clamping of dies with straight clamping edge on a press bed or ram or for clamping dies in injection moulding machines.

Description

The double acting wedge clamps consist of a hydraulic block cylinder connected with a two-piece mechanical clamping bolt in a floating manner.

Clamping cycle: the clamping bolt with thrust pad first performs an idle stroke. When the inner stop is reached, the clamping bolt is vertically lowered onto the clamping edge.

The 5° angle of the thrust pad has been determined so as to ensure that despite self-locking the hydraulic pressure required for clamping is not higher than the required pressure for unclamping.

Since the clamping force is vertically transmitted to the clamping point, no side loads occur. The wedge clamp is available with or without position monitoring.

Application example



Technical data

Max. clamping force	[kN]	25 – 100
Max. operating force	[kN]	45 – 145
Max. clamping pressure	[bar]	250
Max. unclamping pressure	[bar]	250

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.

Maximum operating force

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

Important notes!

In case of incorrect operation of the wedge clamps, the clamping bolt may fully retract into the guide housing and thus cause the upper die falling off the ram.

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

The greasing intervals (high-temperature grease) should be scheduled in accordance with the operating conditions (at least once a week). Please note that greasing of the wedge bolts should only be made with the elements being retracted.

Clamping elements with a wedge clamping bolt must be protected against dirt, scale, swarf, coolant, etc. by means of a suitable covering. If penetration of such foreign matters cannot be prevented, this type of element should not be used.

Versions

- without position monitoring
max. temperature: 160 °C
(300 °C on request)
- with position monitoring at the side
max. temperature: 100 °C

Position monitoring

The integrated position monitoring is coupled to the clamping bolt and the contact bolt and signals:

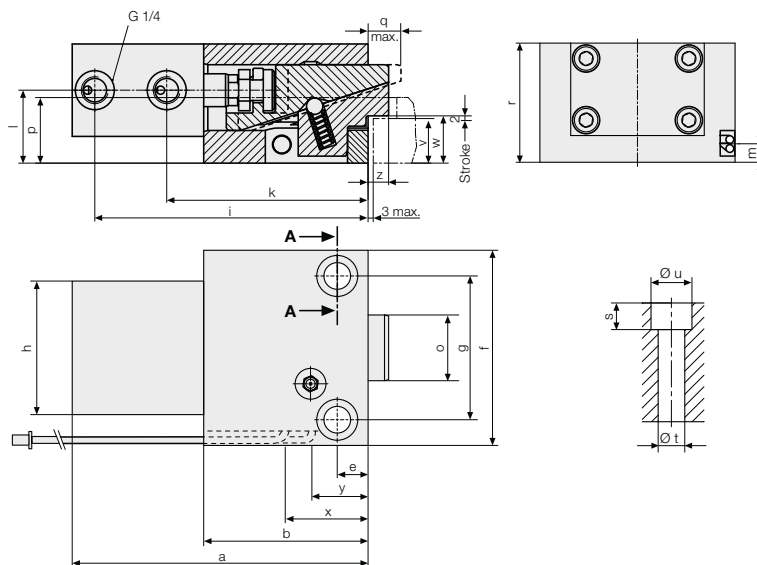
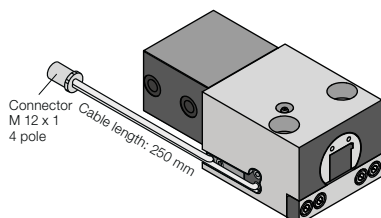
1. Clamping bolt in unclamping position
2. Clamping bolt in clamping position
3. Error message when overrunning the clamping position

Dimensions Technical data

Wedge clamps

with position monitoring (at the side)

Clamping bolt for vertical clamping



Clamping force max.	[kN]	25	50	100
Max. admissible operating force				
Screw DIN 912 8.8	[kN]	35	65	130
Screw DIN 912 12.9	[kN]	45	75	145
Screw DIN 912 (2 off)	M 12	M 16	M 20	
Max. operating pressure	[bar]	250	250	250
Cylinder Ø	[mm]	25	40	50
Max. stroke	[mm]	2	2	2
Max. oil consumption	[mm]	10	31	49
Clamping stroke	[mm]	1	1	1
a	[mm]	144	196	240
b	[mm]	80	117	150
e	[mm]	15	33	32
f	[mm]	95	100	140
g (± 0,2)	[mm]	70	70	105
h	[mm]	65	85	100
i	[mm]	133	185	227
k	[mm]	98	141	177
l	[mm]	35.5	48.5	62.5
m	[mm]	9	9	17
Ø o	[mm]	32	50	60
p	[mm]	32	43	56
q max.	[mm]	17	24	24
r	[mm]	58	80	100
s	[mm]	13	16	22
Ø t	[mm]	13	17	21
Ø u	[mm]	20	26	32
v** (± 0.3)	[mm]	22	25	35
w	[mm]	23	26	36
x	[mm]	39	65	85
y	[mm]	26	47	50
z	[mm]	10	17	17
Weight	[kg]	4.28	9.55	15.20

Part no.

without position monitoring up to 160 °C*	824036800	824046810	824056820
with position monitoring up to 100 °C	824036601	824046611	824056621

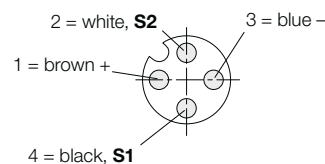
* Higher temperatures up to 300 °C on request

** clamping edge height as per Euromap Standard on request, tolerance ± 0.3 mm

Position monitoring

Switching function	interlock
Output	PNP
Rated operating distance S _n	1 mm
Ambient temperature T _A	-25 °C... + 100 °C*
Operating voltage U _B	10 ... 30 V DC
Residual ripple/supply frequency	≤ 15 % (SS)
Constant current max.	100 mA
Unit power consumption	≤ 10 mW
Voltage drop U _D at I max.	≤ 1.5 V
Output resistance R _A	4.7 k
Housing material	steel, corrosion resistant
Type of connection *2	Plug on the right side
Code class as per DIN 40050	IP 67
Length of cable	250 mm

Pin assignment



Accessories

Connecting cable with screw coupling	
Cable length 5 m	Part no. 5700013
Cable length 10 m	Part no. 5700014

Proximity switch (spare part)	
Twin-Set	Part no. 250120073