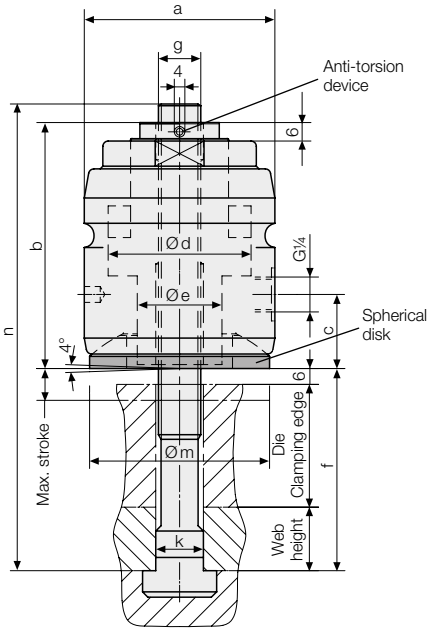
WZ 3.2130

Hollow Piston Cylinders

single acting, hydraulic clamping and spring unclamping
max. clamping force of 60 up to 104 kN, max. operating pressure 400 bar

Advantages

- Optimum adaptation to the clamping surface by spherical disk
- T-bolt, secured against loosening
- Ideal force transmission
- Convenient and compact design with gripping surface
- Large clamping stroke
- No interfering edges when inserting the dies
- Easy to retrofit
- Piston hardened and ground
- Easy installation
- Fully resilient stroke limitation



dimension "f" = die clamping edge + web height + ½ stroke

Application

These hollow-piston cylinders are used for clamping and locking on machines and plants, on press bed and ram.
Due to the manageable and compact design, hollow-piston cylinders are especially suitable where space is limited.
The use is possible at ambient temperatures up to a maximum of 120°C.

Description

The element is manually placed on the clamping edge of the die.
Clamping by the application of hydraulic pressure to the piston and unclamping by spring force. By means of the T-bolt the die is clamped against the clamping surface of the press ram or bed.

Hollow piston cylinder with T-bolt

adjusted and secured (please specify dimension "f" when ordering)

For T-slot	[mm]	18	22	28	36
Clamping force at 400 bar	**[kN]**	**60**	**60**	**104***	**104***
Spring return force, min.	[N]	320	320	570	570
Piston Ø d	[mm]	54	54	70	70
Stroke	[mm]	12	12	12	12
Total oil volume	[cm³]	18	18	32	32
a	[mm]	72	72	90	90
b	[mm]	93	93	105	105
c	[mm]	28	28	24	24
g	[mm]	M 16	M 20	M 24	M 30
k	[mm]	18	22	28	36
m	[mm]	68	68	78	78
Weight	[kg]	2.39	2.67	4.77	5.29
Part no.		**8 2134 1802**	**8 2134 2202**	**8 2135 2802**	**8 2135 3602**

max. operating pressure 400 bar, *160 kN on request

Example of ordering

8 2134 1802 / F110

Hollow piston cylinder
Clamping force: 60 kN

T-slot
18 mm

Functional dimension "f" [mm]
please specify when ordering

Hollow piston cylinder without T-bolt

Weight	[kg]	2.1	2.09	3.67	3.49
Part no.		**8 2134 0102**	**8 2134 1102**	**8 2135 0102**	**8 2135 1102**

Important note!

If hollow piston cylinder and T-bolt are supplied separately, adjust them to suit dimension "f" and secure them.

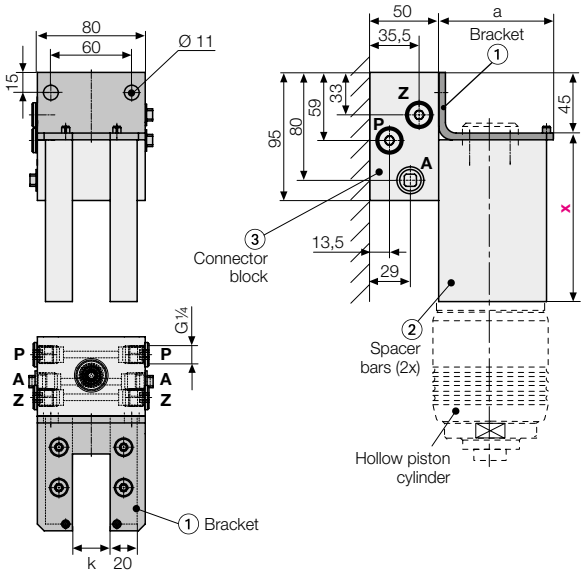
T-bolt, separate

For T-slot	[mm]	18	22	28	36
Lengths	[mm]	160	200	250	250
Property class		12.9	8.8	8.8	8.8
Weight	[kg]	0.29	0.58	1.10	1.8
Part no.		**5700 022**	**5700 023**	**5700 024**	**5700 048**

Accessories

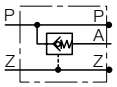
Parking station without position monitoring

accommodates the hollow piston cylinder during die change.

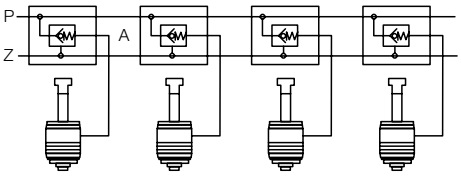


Distance dimension "x"
= dimension "f" – ½ stroke
please specify when ordering

Hydraulic circuit diagram



Application
with integral check valve



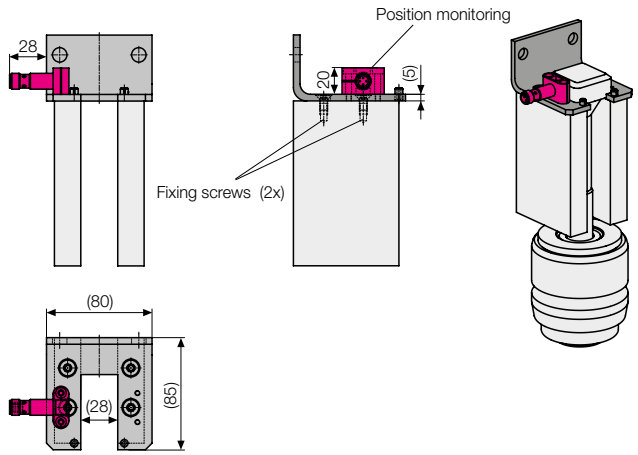
Part numbers

for hollow piston cylinder type		2134	2134	2135	2135
T-slot width [mm]		18	22	28	36
Bracket ①	**Part no.**	**2753-180**	**2753-220**	**2753-280**	**2753-360**
Bracket ① with mounted spacer bars ②	**Part no.**	**8 27531830**	**8 27532230**	**8 27532830**	**8 27533630**
Bracket ① with spacer bars ② and connector block ③	**Part no.**	**8 27531850**	**8 27532250**	**8 27532850**	**8 27533650**
Connector block ③ with integral check valve, separate	**Part no.**	**8 27534002**	**8 27534002**	**8 27534002**	**8 27534002**

Special designs on request

Parking station with position monitoring

An inductive proximity switch indicates when a hollow piston cylinder is mounted to the parking station.



Position monitoring

Control options

- The correct number of clamping cylinders and thus sufficient clamping force is available
- Operator protection: no clamping cylinder will be forgotten
- Control of a selective choice per die size is possible

Please contact us!

Other accessories

- **Hydraulic power units**
  see product group 7
- **Hydraulic accessories**
  see product group 11
- **Angular rotary coupling**
  Part no. 9208-176

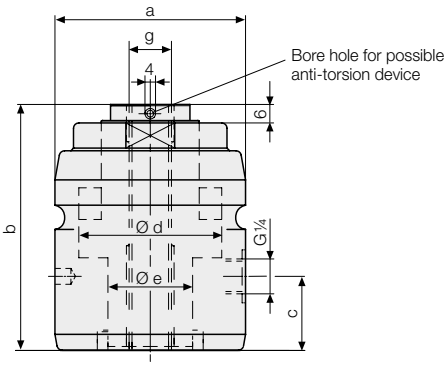
Hollow piston cylinder “L” design, without spherical disk

- without spherical disk for an adaptation to the clamping surface
- T-bolt, detached, dimension “f” not adjusted

Hollow piston cylinder “L” design , without T-bolt

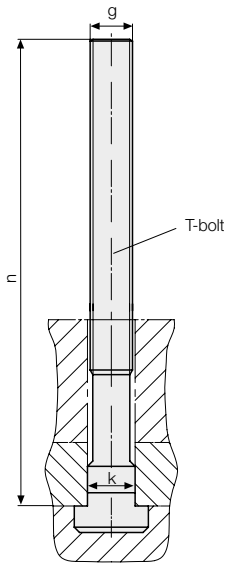
Clamping force at 400 bar	**[kN]**	**60**	**60**	**104**	**104**
Spring return force, min.	[N]	320	320	570	570
Piston Ø d	[mm]	54	54	70	70
Stroke	[mm]	12	12	12	12
Total oil volume	[cm³]	18	18	32	32
a	[mm]	72	72	90	90
b	[mm]	92.5	92.5	104	104
c	[mm]	28	28	24	24
g	[mm]	M 16	M 20	M 24	M 30
Weight	[kg]	2.2	2.16	3.75	3.58
Part no.		**821340132**	**821341132**	**821350132**	**821351132**

Max. operating pressure 400 bar



T-bolt, separate

For T-slot	**[mm]**	**18**	**22**	**28**	**36**
g	[mm]	M 16	M 20	M 24	M 30
k	[mm]	18	22	28	36
Length n	[mm]	160	200	250	250
Property class		12.9	8.8	8.8	8.8
Weight	[kg]	0.29	0.58	1.10	1.8
Part no.		**5700022**	**5700023**	**5700024**	**5700048**



Important note!

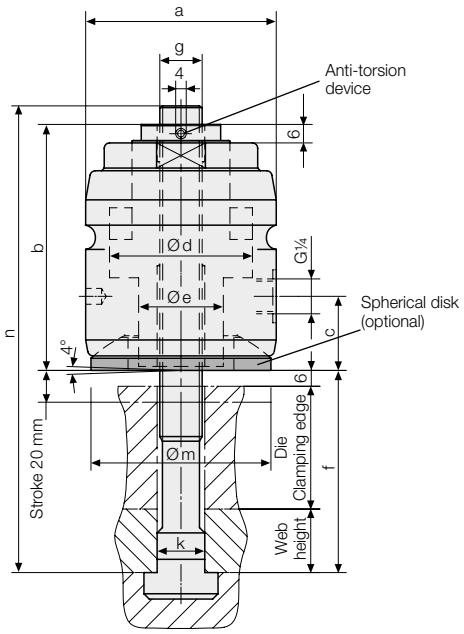
If hollow piston cylinder and T-bolt are supplied separately, adjust them to suit dimension “f” and secure them.

Hollow piston cylinder “L” design , with T-bolt

- with adjusted and secured T-bolt (specify dimension “f” when ordering)
- without spherical disk

For T-slot	**[mm]**	**18**	**22**	**28**	**36**
g	[mm]	M 16	M 20	M 24	M 30
Weight	[kg]	2.49	2.74	4.85	5.38
Part no.		**821341832**	**821342232**	**821352832**	**821353632**

Variant with a total stroke of 20 mm

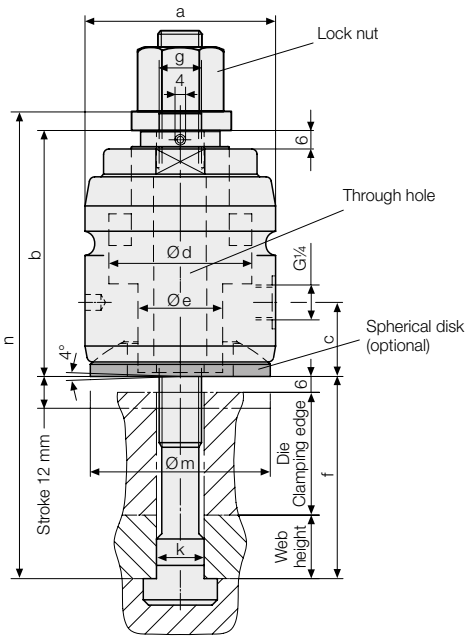


Optimum adaptation to varying heights of the clamping edges of dies by an increased total stroke of 20 mm (higher total stroke on request).

Technical design, clamping forces and dimensions correspond to the standard design. Due to the increased total stroke, dimension “b” is greater than indicated on page 1.

Total stroke 20 mm:
Dimension “b” with a clamping force of 60 kN: 120 mm
Dimension “b” with a clamping force of 104 kN: 132 mm

Variant with variable clamping dimension



Freely adjustable and flexible adaptation to suit varying heights of clamping edges of the dies by quick and easy adjustment of the tie rod by means of a lock nut.
The tie rod is inserted through the hollow piston cylinder and adjusted to the correct dimension by means of the lock nut.
In this design, the cylinder has a through hole instead of a thread.

Technical design, clamping forces and dimensions correspond to the standard design.

Important notes
Increased risk of injury in the case of an incorrect adjustment of the variants with higher total stroke or variable clamping dimension.
The clamping stroke must be less than 6 mm.