

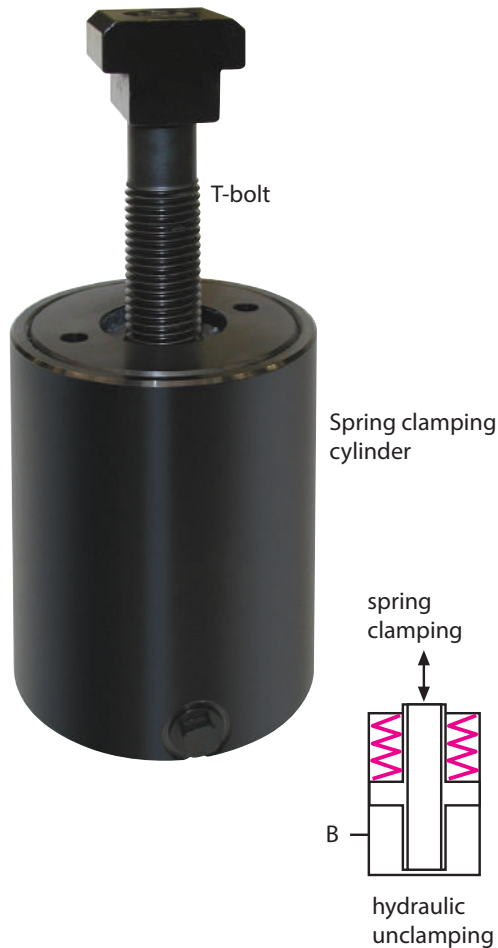
Hollow piston cylinder, single-acting

• spring clamping • hydraulic unclamping



ROEMHELD

HILMA ■ STARK



Applications:

- un-pressurized long-term clamping of dies or fixtures on press beds and rams
- when the space available is limited

Function:

Manual positioning of the cylinder on the die clamping edge.

Unclamping is carried out by applying hydraulic pressure to the piston, clamping takes place by spring power.

By means of the T-bolt the die is clamped against the clamping surface of the press ram or bed.

Special features:

- ◇ hydraulic supply is only required for unclamping, i.e. for a short time
- ◇ ideal power transmission
- ◇ convenient and compact design with gripping surface
- ◇ no colliding edges, smooth die positioning
- ◇ suitable for retrofit
- ◇ easy fastening

For suitable power units
please refer to product group 7

For accessories
please refer to product group 11

Recommended accessory:
Angular rotary coupling
part no. HCR-9208-043



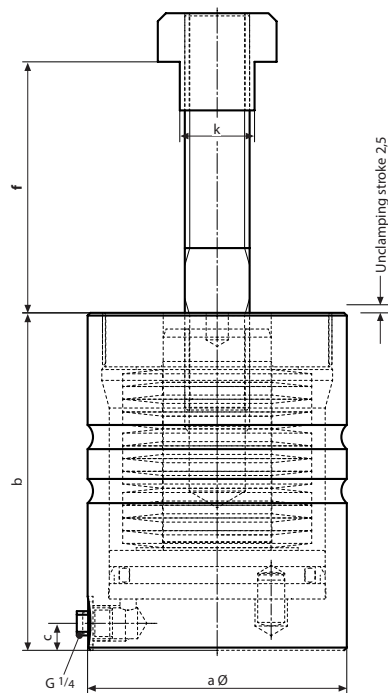
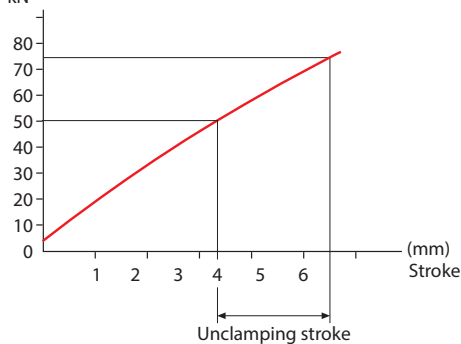
Hollow piston cylinder, single-acting

• spring clamping • hydraulic unclamping

Spring clamping cylinder, complete with adjusted and pinned T-bolt, Dimension 'f' to be quoted in the order

For T-slot (mm)	22	28
Clamping force (kN)	50	50
Unclamping pressure (bar)	175	175
Unclamping stroke (mm)	2,5	2,5
Oil consumption/1 mm of stroke (cm ³)	5	5
a (mm)	96	96
b (mm)	125	125
c (mm)	10	10
k (mm)	22	28
Weight (kg)	6,8	7,0
Part no.	HCR-8.1403.2200	HCR-8.1403.2800

Clamping force
kN

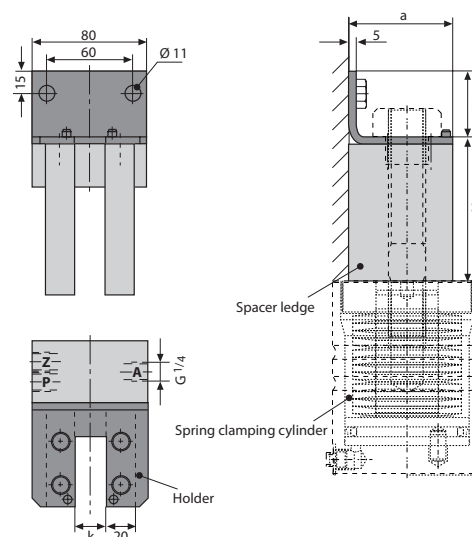


Dimension 'f' =
die clamping edge
+ web height + unclamping stroke

Parking station during die change

Holder with spacer ledges fastened (without a connector block) Part no.	HCR-8.2753.2230	HCR-8.2753.2830
Width of T-slot k (mm)	22	28
a (mm)	72	85
Separate holder Part no.	HCR-2753-220	HCR-2753-280

Special versions are available on request



Distance 'x':
x = dimension 'f' - 4 mm
(to be quoted in the order)

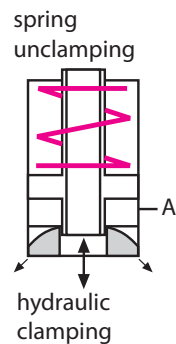
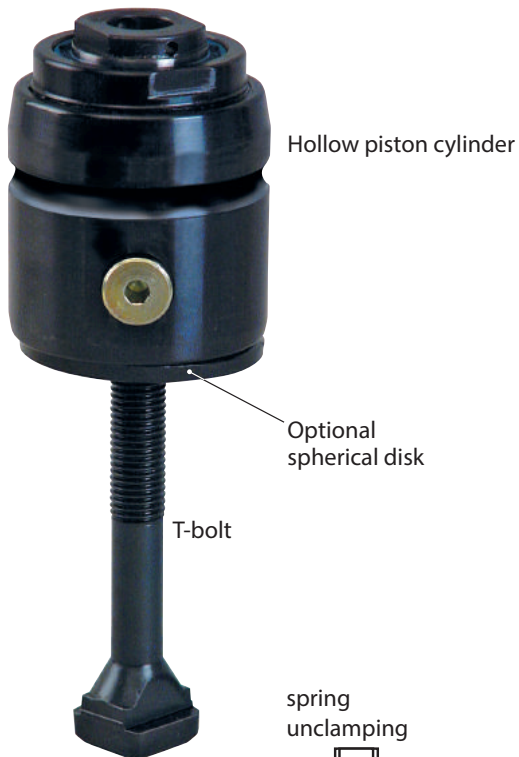
Hollow piston clamp, single acting

• hydraulic clamping • spring unclamping



ROEMHELD

HILMA ■ STARK



Applications:

- on press beds and rams
- on machines and equipment for clamping and locking
- when the available space is limited
- when temperatures may reach 120° C (248°F)

Function:

The sliding clamp is manually placed on the clamping edge of the die. The die is clamped by applying hydraulic pressure to the piston and mechanically unclamped by spring return.

The T-bolt clamps the die on the clamping surface of the press ram or bed.

Special features:

- ◇ optional spherical disk for optimum adaptation to the clamping surface
- ◇ T-bolt, pinned to maintain clamping dimension
- ◇ convenient and compact design with gripping surface
- ◇ clamping force of between 60 and 104 kN
- ◇ large clamping stroke
- ◇ no colliding edges, smooth die positioning
- ◇ suitable for retrofit
- ◇ hardened and ground piston
- ◇ easy fastening
- ◇ fully utilizable stroke

For power units
please refer to product group 7



Hollow piston cylinders
fastened to the
press ram



Hollow piston clamp, single acting

• for ANSI T-slot • without spherical washer

Hollow piston cylinder complete with T-bolt , adjusted and pinned

Dimension 'f' to be quoted in the order

for T-slot (in)	11/16	13/16	1-1/16	1-5/16
Clamping force at 5,800 psi (lbf)	13,500	13,500	23,400	23,400
Spring return force min. (lbf)	72	72	128	128
Piston-Ø d (in)	2.126	2.126	2.755	2.755
Stroke (in)	0.472	0.472	0.472	0.472
Total oil consumption (in³)	1.1	1.1	1.9	1.9
a (in)	2.834	2.834	3.543	3.543
b (in)	3.641	3.641	4.094	4.094
c (in)	1.102	1.102	0.944	0.944
g (in)	5/8-11	3/4-10	1-8	1-1/4 - 7
k (in)	11/16	13/16	1-1/16	1-5/16
Weight (lbm)	5.3	5.6	9.7	11
Part no.	HCR-2134-611	HCR-2134-613	HCR-2135-617	HCR-2135-621

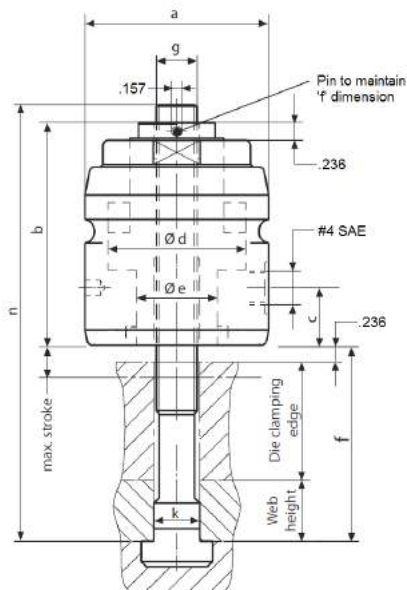
36,000 lbf clamping force at 5,800 psi upon request

Example of ordering: HCR-2135-617-1234

Hollow piston cylinder
Clamping force: 23,400 lbf

T-slot
1-1/16

Functional dimension
'f' = 1.234 inch



Hollow piston cylinder without a T-bolt

Part no.	HCR-2134-213	HCR-2134-313	HCR-2135-213	HCR-2135-313
Weight (lbm)	4.6	4.5	7.8	7.3

T-bolt, detached

for T-slot (in)	11/16	13/16	1-1/16	1-5/16
Length n (in)	7	7	8	8
Strength	grade 8	grade 8	grade 8	grade 8
Weight (lbm)	0.7	1.1	2.1	3.7
Part no.	HCR-HM-TB062-0700	HCR-HM-TB075-0700	HCR-HM-TB100-0800	HCR-HM-TB125-0800

If hollow piston cylinder and T-bolt are supplied separately, adjust them to suit dimension 'f' and secure them.

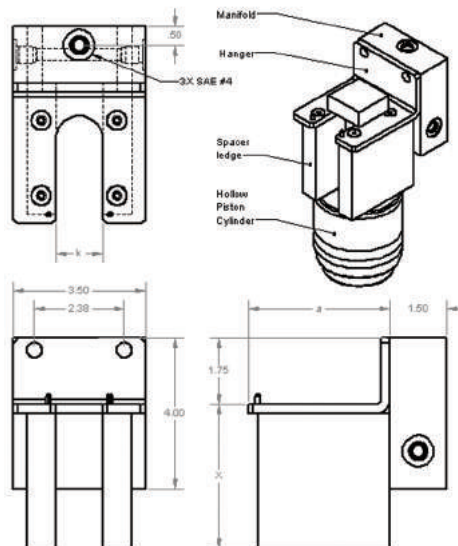
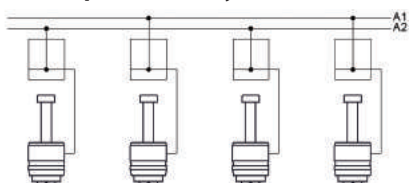
Dimension 'f' =
die clamping edge
+ web height + ½ stroke

Clamp holders and hangers for clamps not in use

① Complete holder (holder, spacer ledge and manifold block) Part no.	Available on request	HCR-2753-705-XXXX	HCR-2753-775-XXXX	Available on request
① Holder with spacer ledges fastened (without a manifold block) Part no.	Available on request	HCR-2753-700-XXXX	HCR-2753-770-XXXX	Available on request
③ Hanger (without spacer ledge, with manifold block) Part no.	Available on request	HCR-2753-275	HCR-2753-285	Available on request
① Hanger for hollow piston cylinder	2134	2134	2135	2135
Width of T-slot k (in)	11/16	13/16	1-1/16	1-5/16
a (in)	3.75	3.75	3.75	3.75
Part no.	Available on request	HCR-2753-270	HCR-2753-280	Available on request

Special versions are available on request.

Application with manifold blocks for dual parallel safety circuit



Distance 'x':
x = dimension 'f' - ½ stroke
(to be quoted in the order)

Hollow piston clamp, single acting

- for ANSI T-slot • with spherical washer



ROEMHELD
HILMA ■ STARK

Hollow piston cylinder complete with T-bolt , adjusted and pinned

Dimension 'f' to be quoted in the order

for T-slot (in)	11/16	13/16	1-1/16	1-5/16
Clamping force at 5,800 psi (lbf)	13,500	13,500	23,400	23,400
Spring return force min. (lbf)	72	72	128	128
Piston-Ø d (in)	2.126	2.126	2.755	2.755
Stroke (in)	0.472	0.472	0.472	0.472
Total oil consumption (in³)	1.1	1.1	1.9	1.9
a (in)	2.834	2.834	3.543	3.543
b (in)	3.661	3.661	4.133	4.133
c (in)	1.102	1.102	0.944	0.944
g (in)	5/8-11	3/4-10	1-8	1-1/4 - 7
k (in)	11/16	13/16	1-1/16	1-5/16
m (in)	2.677	2.677	3.071	3.071
Weight (lbm)	5.3	5.6	9.7	11
Part no.	HCR-2134-711	HCR-2134-713	HCR-2135-717	HCR-2135-721

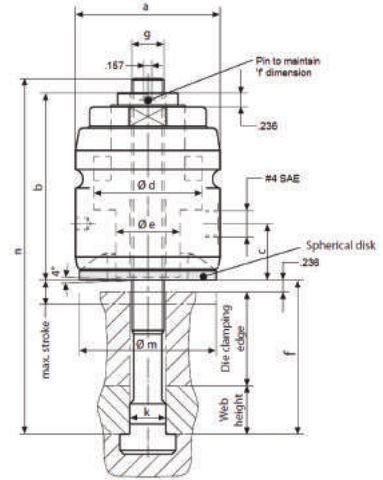
36,000 lbf clamping force at 5,800 psi upon request

Example of ordering: HCR-2135-717-1234

Hollow piston cylinder
Clamping force: 23,400 lbf

T-slot
1-1/16

Functional dimension
'f' = 1.234 inch



Hollow piston cylinder without a T-bolt

Part no.	HCR-2134-210	HCR-2134-310	HCR-2135-210	HCR-2135-310
Weight (lbm)	4.6	4.5	7.8	7.3

T-bolt, detached

for T-slot (in)	11/16	13/16	1-1/16	1-5/16
Length n (in)	7	7	8	8
Strength	grade 8	grade 8	grade 8	grade 8
Weight (lbm)	0.7	1.1	2.1	3.7
Part no.	HCR-HM-TB062-0700	HCR-HM-TB075-0700	HCR-HM-TB100-0800	HCR-HM-TB125-0800

If hollow piston cylinder and T-bolt are supplied separately, adjust them to suit dimension 'f' and secure them.

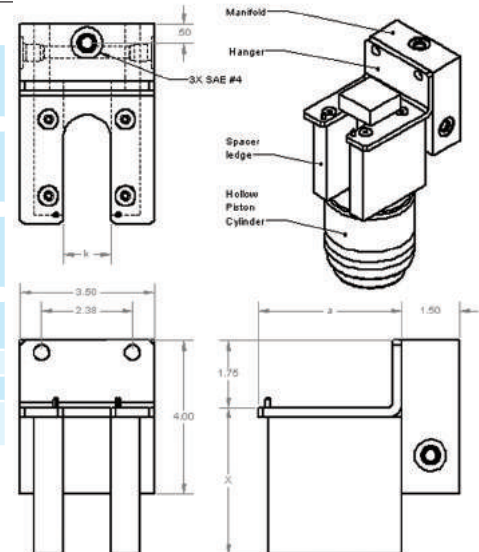
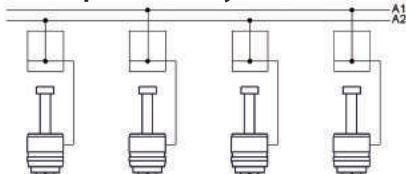
Dimension 'f' =
die clamping edge
+ web height + ½ stroke

Clamp holders and hangars for clamps not in use

① Complete holder (holder, spacer ledge and manifold block) Part no.	Available on request	HCR-2753-705-XXXX	HCR-2753-775-XXXX	Available on request
① Holder with spacer ledges fastened (without a manifold block) Part no.	Available on request	HCR-2753-700-XXXX	HCR-2753-770-XXXX	Available on request
③ Hangar (without spacer ledge, with manifold block) Part no.	Available on request	HCR-2753-275	HCR-2753-285	Available on request
① Hangar for hollow piston cylinder	2134	2134	2135	2135
Width of T-slot k (in)	11/16	13/16	1-1/16	1-5/16
a (in)	3.75	3.75	3.75	3.75
Part no.	Available on request	HCR-2753-270	HCR-2753-280	Available on request

Special versions are available on request.

Application with manifold blocks for dual parallel safety circuit



Distance 'x':
x = dimension 'f' - ½ stroke
(to be quoted in the order)



Hollow piston clamp, single acting

• for metric T-slot • without spherical washer

Hollow piston cylinder complete with T-bolt , adjusted and pinned

Dimension 'f' to be quoted in the order

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 consumption (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
k (mm)	18	22	28	36
Weight (kg)	2.49	2.74	4.85	5.38
Part no.	HCR-8.2134.1832	HCR-8.2134.2232	HCR-8.2135.2832	HCR-8.2135.3632

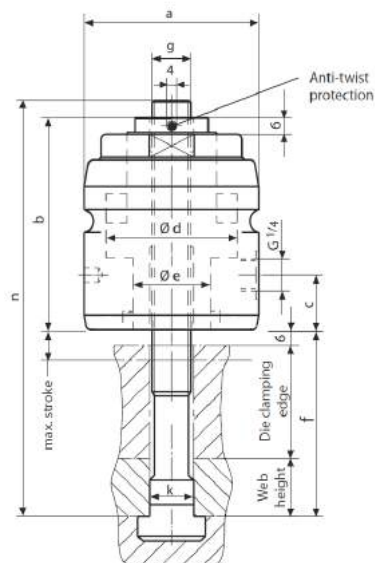
kN lbf clamping force at 400 bar upon request

Example of ordering: HCR-8.2134.1832.F110

Hollow piston cylinder
Clamping force: 60kN

T-slot
18mm

Functional dimension
'f' = 110 mm



Hollow piston cylinder without a T-bolt

Part no.	HCR-8.2134.0132	HCR-8.2134.1132	HCR-8.2135.0132	HCR-8.2135.1132
Weight (kg)	2.2	2.16	3.75	3.58

T-bolt, detached

for T-slot (mm)	18	22	28	36
Length n (mm)	160	200	250	250
Strength	8.8	8.8	8.8	8.8
Weight (kg)	0.29	0.58	1.1	1.8
Part no.	HCR-5700-022	HCR-5700-023	HCR-5700-024	HCR-5700-048

If hollow piston cylinder and T-bolt are supplied separately, adjust them to suit dimension 'f' and secure them.

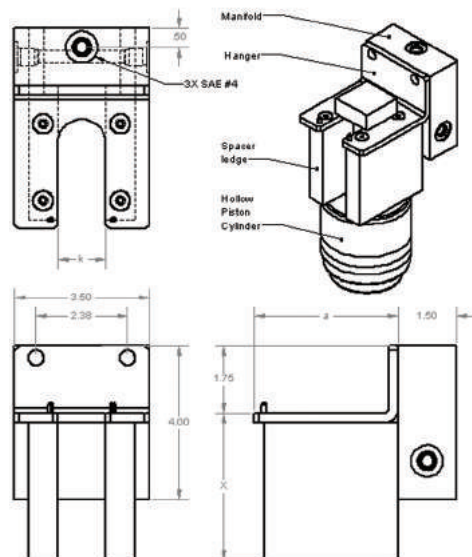
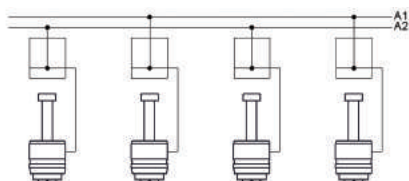
Dimension 'f' =
die clamping edge
+ web height + ½ stroke

Clamp holders and hangers for clamps not in use

① Complete holder (holder, spacer ledge and manifold block) Part no.	HCR-2753-755-XXXX	HCR-2753-765-XXXX	HCR-2753-775-XXXX	HCR-2753-795-XXXX
① Holder with spacer ledges fastened (without a manifold block) Part no.	HCR-8.2753.1830.XXXX	HCR-8.2753.2230.XXXX	HCR-2753-770-XXXX	HCR-8.2753.3630.XXXX
③ Hanger (without spacer ledge, with manifold block) Part no.	HCR-2753-255	HCR-2753-265	HCR-2753-285	HCR-2753-295
① Hanger for hollow piston cylinder	2134	2134	2135	2135
Width of T-slot k (mm)	18	22	28	36
a (mm)	72	72	95	90
Part no.	HCR-2753-180	HCR-2753-220	HCR-2753-280	HCR-2753-360

Special versions are available on request.

Application with manifold blocks for dual parallel safety circuit



Distance 'x':
x = dimension 'f' - ½ stroke
(to be quoted in the order)

Hollow piston clamp, single acting

• for metric T-slot • with spherical washer



ROEMHELD

HILMA ■ STARK

Hollow piston cylinder complete with T-bolt , adjusted and pinned

Dimension 'f' to be quoted in the order

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 consumption (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.	HCR-8.2134.1802	HCR-8.2134.2202	HCR-8.2135.2802	HCR-8.2135.3602

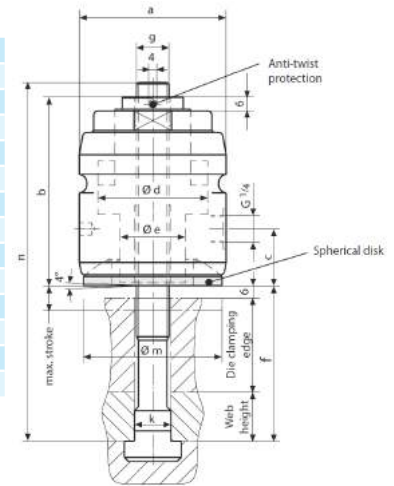
160 kN clamping force at 400 bar upon request

Example of ordering: HCR-8.2134.1802.F110

Hollow piston cylinder
Clamping force: 60kN

T-slot
18mm

Functional dimension
'f' = 110 mm



Hollow piston cylinder without a T-bolt

Part no.	HCR-8.2134.0102	HCR-8.2134.1102	HCR-8.2135.0102	HCR-8.2135.1102
Weight (kg)	2.1	2.09	3.67	3.49

T-bolt, detached

for T-slot (mm)	18	22	28	36
Length n (mm)	160	200	250	250
Strength	8.8	8.8	8.8	8.8
Weight (kg)	0.29	0.58	1.1	1.8
Part no.	HCR-5700-022	HCR-5700-023	HCR-5700-024	HCR-5700-048

If hollow piston cylinder and T-bolt are supplied separately, adjust them to suit dimension 'f' and secure them.

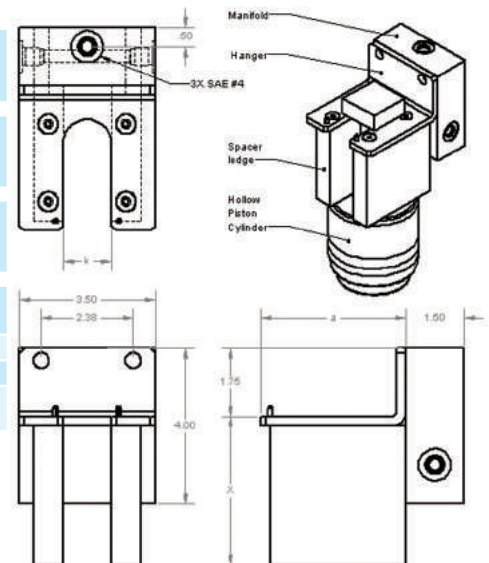
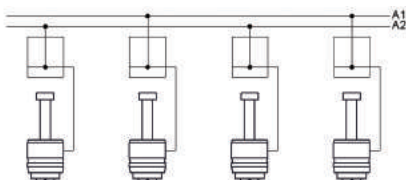
Dimension 'f' =
die clamping edge
+ web height + ½ stroke

Clamp holders and hangers for clamps not in use

① Complete holder (holder, spacer ledge and manifold block) Part no.	HCR-2753-755-XXXX	HCR-2753-765-XXXX	HCR-2753-775-XXXX	HCR-2753-795-XXXX
① Holder with spacer ledges fastened (without a manifold block) Part no.	HCR-8.2753.1830.XXXX	HCR-8.2753.2230.XXXX	HCR-2753-770-XXXX	HCR-8.2753.3630.XXXX
③ Hanger (without spacer ledge, with manifold block) Part no.	HCR-2753-255	HCR-2753-265	HCR-2753-285	HCR-2753-295
① Hanger for hollow piston cylinder	2134	2134	2135	2135
Width of T-slot k (mm)	18	22	28	36
a (mm)	72	72	95	90
Part no.	HCR-2753-180	HCR-2753-220	HCR-2753-280	HCR-2753-360

Special versions are available on request.

Application with manifold blocks for dual parallel safety circuit

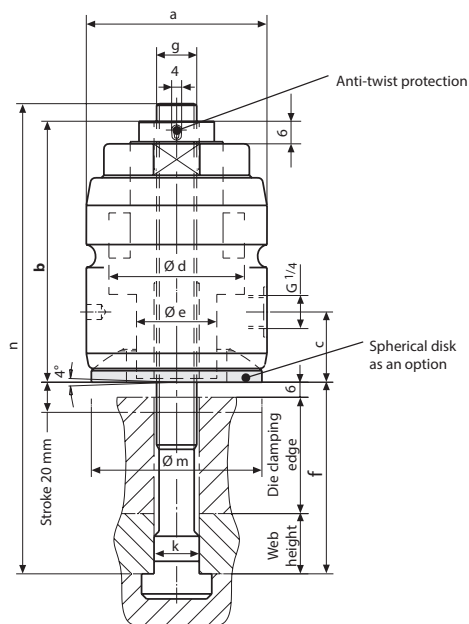


Distance 'x':
x = dimension 'f' - ½ stroke
(to be quoted in the order)



Hollow piston clamp, single acting

• special versions



Version 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 in catalog sheet 3.2130. Due to the increased total stroke, dimension 'b' is greater than indicated in catalog sheet 3.2130.

Total stroke 20 mm:

Dimension 'b' with a clamping force of 60 kN: 120 mm

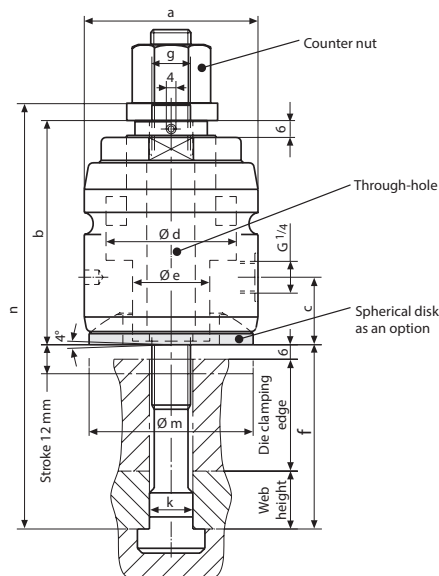
Dimension 'b' with a clamping force of 104 kN: 132 mm

Version with variable clamping dimension

Freely adjustable and flexible adaptation to suit varying heights of clamping edges by rapid and easy adjustment of the tie rod using a counter nut. The tie rod is inserted through the hollow piston cylinder and adjusted to the correct dimension by means of the counter nut.

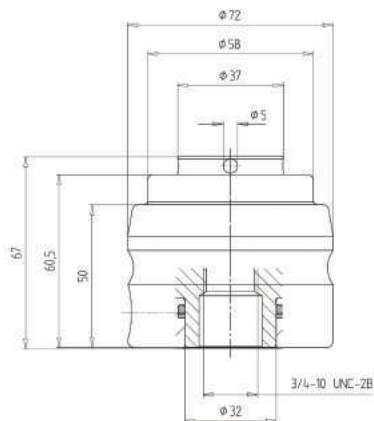
In this version, the cylinder has a through-hole instead of a thread.

Technical design, clamping forces and dimensions are shown on catalog sheet 3.2130 for the standard design.



Version with compact size

Compact 2134 hollow piston clamp for use in small spaces. Reduced total height, reduced stroke and without spherical washer to make the clamp as small as possible. Available with metric thread up to M20 and inch thread up to 3/4 inch.



Safety information

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