Roller and ball bars
for easy and safe die change

ROEMHELD
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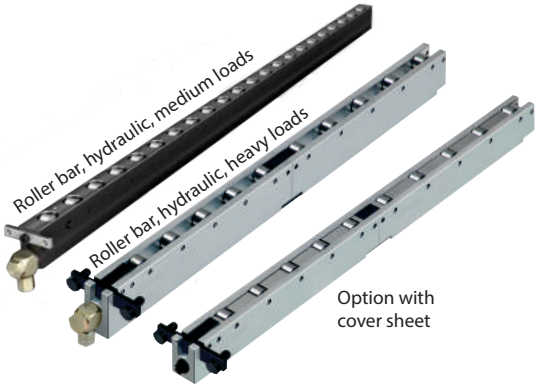

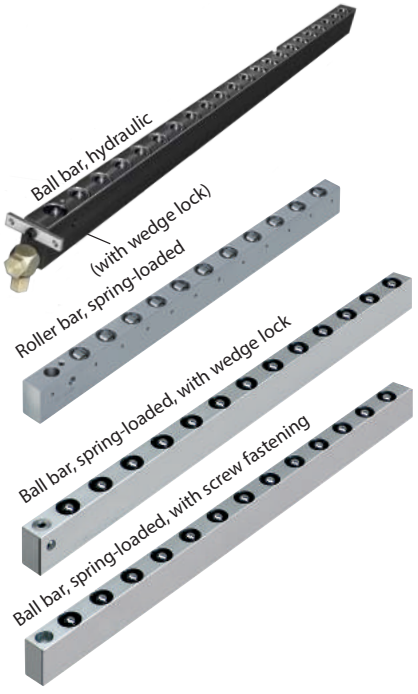

Load: 20 - 100 kg
Hole: 20 - 40 mm

Load: 40 - 220 kg
Hole: 20 - 40 mm

Applications:

- Fits in T-slots and rectangular slots of press beds for easy die change
- die change streamlining

Roller bar, hydraulically lifted
for heavy loads, for linear movement of dies:
On the underside of the roller bar lifting pistons are provided. Pressure is applied to these pistons using hydraulic pressure generators, which lift then the complete roller bar. The die positioned on the roller bars is not in contact with the table top and can be easily moved and positioned. The basic bodies are made from a high-strength and robust aluminium alloy.
Max. operating pressure: 400 bar
Load-bearing capacity: up to 160 kN/m, roller spacing 50 mm.
Any length up to 2500 mm is possible using modular segments.
Fastening of the roller bar using a fastening plate.

Roller bar, hydraulically lifted
for medium loads, for linear movement of dies:
The lifting pistons are provided below each roller allowing rollers to be lifted individually. The basic bodies are made from a high-strength aluminium alloy.
Lifting pistons are provided below each roller allowing each roller to be lifted individually.
Max. operating pressure: 120 bar.
Max. load-bearing capacity: 99 kN/m, flexible roller spacing and orientation.
Any variable length in a single piece design up to 2900 mm.
Fastening of the roller bar using a fastening plate or a wedge lock.

Ball bar, hydraulically lifted for medium loads ,
for flexible horizontal movement of dies:
Oil pressure is applied using a hydraulic pressure generator to lift each ball bar individually. The die positioned on the ball bars is not in contact with the table top and can be easily moved.
Max. operating pressure: 100 bar
Max. load-bearing capacity: 55 kN/m, flexible ball spacing.
Any length in a single piece design up to 2900 mm.
Fastening of the ball bar using a fastening plate or a wedge lock.

Ball bar with spring pack for lightweight loads
for flexible horizontal movement of dies:
When preloaded, the balls project over the table level by up to 2 mm.
When the die is clamped, the balls are pressed into the bar body against the spring force until they are flush with the table level.
Max. load-bearing capacity: 27 kN/m, flexible ball spacing.
Any variable length in one-piece design up to 2900 mm.
Fastening of the ball bar using a fastening crossbar or a wedge lock.

Roller bar with spring pack
for medium loads, for linear movement of dies:
Function and design of the roller bar similar to spring-loaded ball bars.
Load-bearing capacity slightly increased thanks to the use of rollers.
Max. load-bearing capacity: 66 kN/m, flexible roller spacing and orientation.
Any variable length in one-piece design up to 2900 mm.
Fastening of the roller bar using a fastening crossbar or a wedge lock.

Ball and roller inserts with spring pack
For installation in tables without T-slots:
The spring-loaded ball and roller inserts are individually inserted into drilled holes. The function is similar to that of ball or roller bars with a spring pack.
Max. load-bearing capacity: 2200 N, stroke up to 3 mm.

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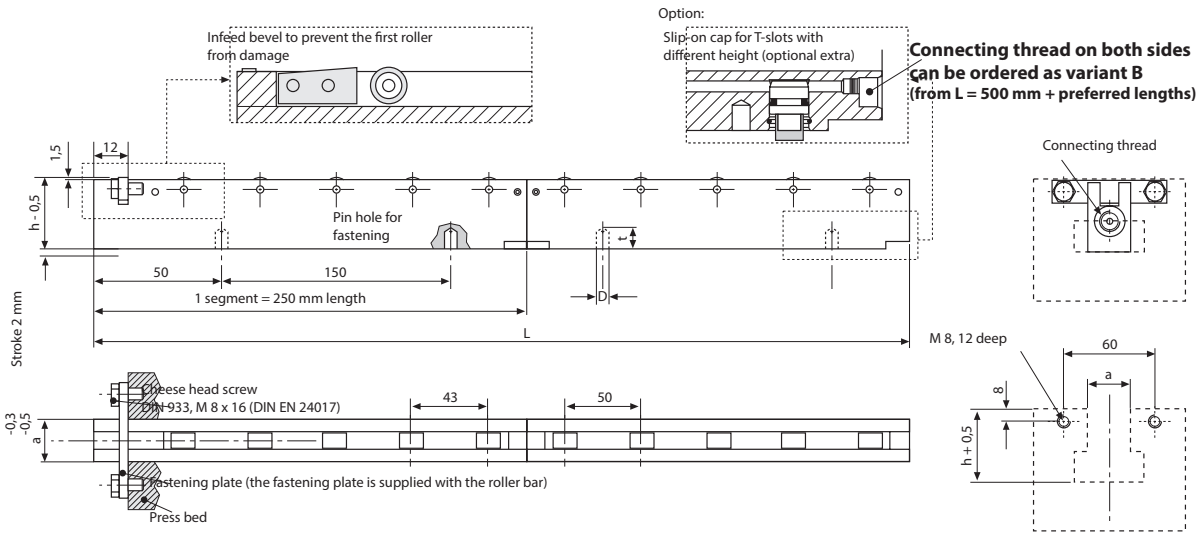
Roller bar for heavy loads, hydraulic lifting of the complete bar (max. 400 bar)



Slot (a) (mm)	22	28	36
Height (h) (mm)	38	48	61
Slot height max. (h) (mm)	45	59	72
Max. load/ roller (in kN)	6,0	6,4	8,0
Number of rollers per segment = 250 mm	5	5	5
Connecting thread	G ⅛	G ⅛	G ¼
Max. operating pressure (bar)	400	400	400
Roller Ø (mm)	16 x 12	16 x 12	19 x 12
Stroke (mm)	2	2	2
Oil requirement / segment (cm³)	1,54	1,60	2,00
D (mm)	6,5	8,5	8,5
t (mm)	9	12	12

Other heights and lengths are available on request.
Max. temperature 100°C. Inch dimensions on request

Connecting thread on both ends can be ordered as variant B (from L = 500 mm + Preferred lengths)

Part no.	Slot (a) (mm)	Length (L) (mm)	Max. load (kN) at 400 bar
HCR-8.1834.5100L250	22	250	30
HCR-8.1834.5110L300	22	300	36
HCR-8.1834.5110L350	22	350	42
HCR-8.1834.5110L400	22	400	48
HCR-8.1834.5110L450	22	450	54
HCR-8.1834.5110L500	22	500	60
HCR-8.1834.5115L550	22	550	66
HCR-8.1834.5115L600	22	600	72
HCR-8.1834.5115L650	22	650	78
HCR-8.1834.5115L700	22	700	84
HCR-8.1834.5115L750	22	750	90
HCR-8.1834.5120L800	22	800	96
HCR-8.1834.5120L850	22	850	102
HCR-8.1834.5120L900	22	900	108
HCR-8.1834.5120L1000	22	1000	120
HCR-8.1834.5130L1100	22	1100	132
HCR-8.1834.5130L1250	22	1250	150
HCR-8.1834.5140L1350	22	1350	162
HCR-8.1834.5140L1500	22	1500	180
HCR-8.1834.5150L1750	22	1750	210
HCR-8.1834.5180L2500	22	2500*	300

* two-piece design
Dimensions printed in bold are the preferred lengths.
On request these are available with a steel sheet cover.

Part no.	Slot (a) (mm)	Length (L) (mm)	Max. load (kN) at 400 bar
HCR-8.1834.6100L250	28	250	32
HCR-8.1834.6110L300	28	300	40
HCR-8.1834.6110L350	28	350	48
HCR-8.1834.6110L400	28	400	48
HCR-8.1834.6110L450	28	450	56
HCR-8.1834.6110L500	28	500	64
HCR-8.1834.6115L550	28	550	72
HCR-8.1834.6115L600	28	600	80
HCR-8.1834.6115L650	28	650	80
HCR-8.1834.6115L700	28	700	88
HCR-8.1834.6115L750	28	750	96
HCR-8.1834.6120L800	28	800	104
HCR-8.1834.6120L850	28	850	112
HCR-8.1834.6120L900	28	900	112
HCR-8.1834.6120L1000	28	1000	128
HCR-8.1834.6130L1100	28	1100	144
HCR-8.1834.6130L1250	28	1250	160
HCR-8.1834.6140L1350	28	1350	176
HCR-8.1834.6140L1500	28	1500	192
HCR-8.1834.6150L1750	28	1750	220
HCR-8.1834.6160L2000	28	2000	250
HCR-8.1834.6180L2500	28	2500*	320

Part no.	Slot (a) (mm)	Length (L) (mm)	Max. load (kN) at 400 bar
HCR-8.1834.7110L500	36	500	80
HCR-8.1834.7115L600	36	600	96
HCR-8.1834.7115L750	36	750	120
HCR-8.1834.7120L850	36	850	136
HCR-8.1834.7120L900	36	900	144
HCR-8.1834.7120L1000	36	1000	160
HCR-8.1834.7130L1100	36	1100	176
HCR-8.1834.7130L1250	36	1250	200
HCR-8.1834.7140L1350	36	1350	216
HCR-8.1834.7140L1500	36	1500	240
HCR-8.1834.7150L1750	36	1750	280
HCR-8.1834.7160L2000	36	2000	320
HCR-8.1834.7180L2500	36	2500*	400

Fastening plate, short hose and 90° swivel banjo coupling are supplied with the bar.

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RH-rollblocks, rectangular style for ASA T-slots (3,000 psi)

Application:

- exact height adjustment by precision lowering of the lifting column These rollblocks are used in pairs or sets to lift the die and provide a roller surface to easily roll the die in and out during the die change process. For use in ASA B5.1-1949 T-slots specifications or rectangular slots, see chart below for dimensions. Deeper T-slots can be shimmed to suit

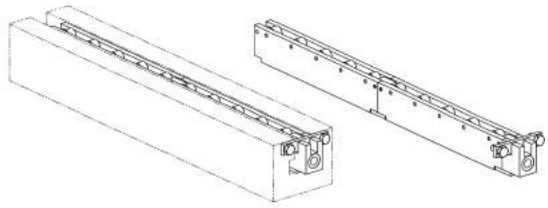
Description:

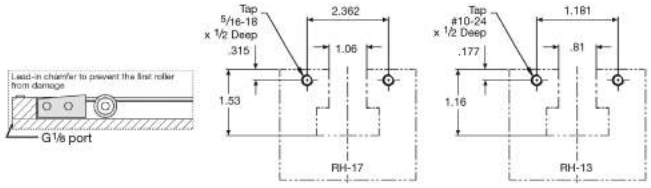
The RH rollblock consists of a bar with rollers, mounted in the upper channel. When pressurized the internal pistons push down against the bottom of the T-slot, lifting the roller assembly and die. Recommended operating pressure is 3,000 psi. Pressure range is 1,000 to 5,800 psi maximum. A safety circuit relief set for 10% over the operating pressure, must be included to prevent pressure intensification caused by rollblock overload. See Section 7 of this catalog for pumps or valve packages.

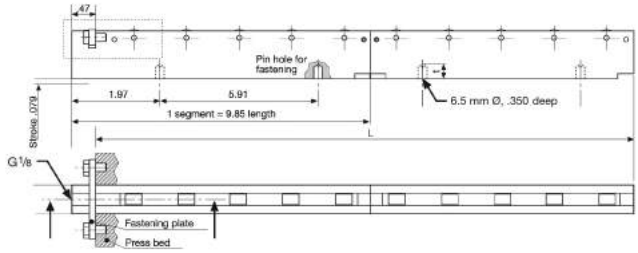
Rollblocks for 22, 28, and 36mm Metric T-slots sizes also available.

Advantages:

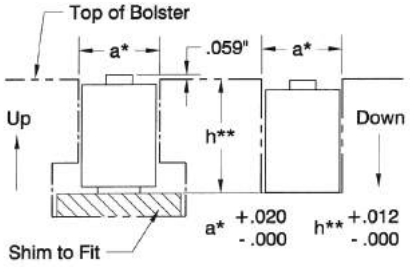
- modular design provides quick delivery
- each roller provides linear movement
- rolling resistance is 1-3% of the die weight
- each roller is a prelubricated cam roller bearing mounted in a common block
- rollblock can be secured with the included plate retainer or with pins mounted in the base of the T-slot







Slot size	13/16"	1-1/16"
a	.81	1.06
h	1.16	1.53



Part No.	T-slot size	L (in)*	Max. load per roller at 3,000 psi	# of Rollers	Max. lift capacity at 3,000 psi
HCR-RH-13-5	13/16"	9.38	220	8	1,760
HCR-RH-13-10	13/16"	19.23	220	16	3,520
HCR-RH-13-15	13/16"	29.08	220	24	5,280
HCR-RH-13-20	13/16"	38.93	220	32	7,040
HCR-RH-13-25	13/16"	48.78	220	40	8,800
HCR-RH-17-5	1-1/16"	9.38	700	5	3,500
HCR-RH-17-10	1-1/16"	19.23	700	10	7,000
HCR-RH-17-15	1-1/16"	29.08	700	15	10,500
HCR-RH-17-20	1-1/16"	38.93	700	20	14,000
HCR-RH-17-25	1-1/16"	48.78	700	25	17,500
HCR-RH-17-30	1-1/16"	58.63	700	30	21,000
HCR-RH-17-35	1-1/16"	68.48	700	35	24,500
HCR-RH-17-40	1-1/16"	78.33	700	40	28,000

Stock Items
***Intermediate, Metric, and Longer Lengths Available**

Based on these parameters, we will devise the ball bar for your specific application. Please contact us, we will be pleased to offer you advice!

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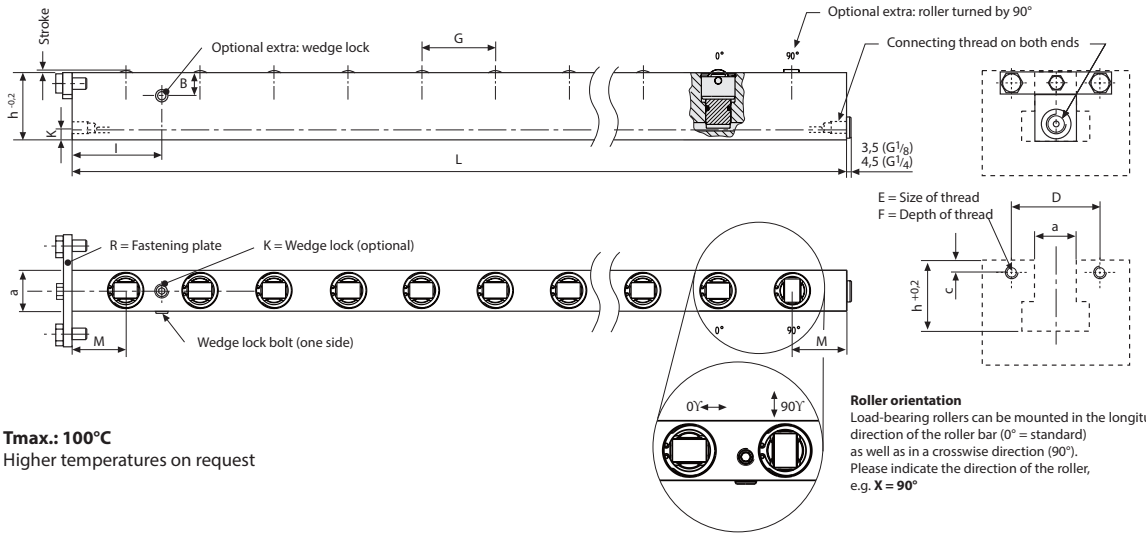
Roller bar for medium loads, steel housing, hydraulic lifting of individual rollers (max. 120 bar)



Tmax.: 100°C
Higher temperatures on request

Roller orientation
Load-bearing rollers can be mounted in the longitudinal direction of the roller bar (0° = standard) as well as in a crosswise direction (90°). Please indicate the direction of the roller, e.g. **X = 90°**

Slot width (a) (mm)	**18**	**22**	**28**	**36**	**13/16“**	**1-1/16“**
Min. slot height (h) (mm)	29,5	37,5	43	54,5	29,4	38
Standard slot height (h) (mm)	3o	38	48	61	29,4	38,9
Roller Spacing G min. (mm)	26	32	37	43	26	32
Roller spacing G standard (mm)	**30**	**40**	**45**	**50**	**30**	**40**
Roller spacing G max (mm)	60	80	90	100	60	80
L min.	*)	*)	*)	*)	*)	*)
L max.	2900	2900	2900	2900	2900	2900
Stroke (mm)	1	2	2	2	1	2
Load-bearing capacity/roller (kN)	1,14	1,85	3,0	4,5	1,14	1,85
Connecting thread	G1/8	G1/8	G1/4	G1/4	G1/8	G1/4
Oil requirement/l roller insert (cm^3)	0,10	0,31	0,51	0,76	0,10	0,31
B (mm)	12	16	16	16	12	16
C (mm)	5	7	9	10	5	7
D (mm)	36	40	50	55	36	40
E (mm)	M5	M5	M6	M6	M5	M5
F (mm)	15	15	20	20	15	15
I (mm)	35	46	51	56,5	35	46
K (mm)	8	8,5	11	11	8	11
M (mm)	22,5	30	32,5	35	22,5	30

*) L min. depends on the roller spacing G between at least 3 rollers.
Loadbearing capacity indicated per roller bar.
K=Wedge lock
R=Fastening plate
Fastening plate, short hose (250 mm long) and 90° elbow coupling are supplied with the bar.

Example of ordering:

HCR-8.9215. 6028 L1415 K **without suffix**

Rollar bar hydraulic	Slot width 28 mm	Length 1415 mm	Fastening: wedge lock	Standard slot height	Standard roller orientation (0°)

Example of ordering:

HCR-8.9215. 6028 L1445 R G60 H43 X

Roller bar hydraulic	Slot width 28 mm	Length 1445 mm	Fastening: fastening plate	Roller spacing 60 mm	Slot height 43 mm	Roller orientation (90°)

Roller bar variations, hydraulically lifted

(max. 120 bar)

If the appropriate roller bar for your specific application is not included in the tables of standard bars, our range of variations offers a solution. Fewer rollers also means that the roller bar will be offered at a lower price. Select slot height, the ball spacing and the bar length to create a variation for your application.

e.g. **a=28 mm**
e.g. **fastening plate=R**

Within the limits indicated in the table of dimensions the following parameters can be freely selected:

Slot height (h)

The sliding clamp contains a high-pressure spindle which is manually screwed against the tool or the workpiece. The clamping force is built up by turning the hexagon sw1 with a torque wrench and by positioning the wedge system.

e.g. **h=43 mm**

Spacing of rollers (G) and load-bearing capacity of the roller bar

By changing the spacing of the rollers the load-bearing capacity is indicated for the full length of the roller bar. Therefore, both the load-bearing capacity and the roller spacing must be selected to suit the die weight and the die supporting length. Please indicatee the desired roller spacing or load-bearing capacity of the roller bar, or the maximum die weight and the die dimensions.

e.g. **G=60mm**
or **load-bearing capacity per roller bar=72 kN**
or **number of rollers=24**
or **die weight and outside dimensions**

Length of the roller bar (L)

The possible length of the bar is obtained from the roller spacing (G) and the parameter (M). Just indicate the theoretical length (e.g. the length of the table) for your roller bar.
Please note that a roller bar must be equipped with at least 3 rollers.

e.g. **L=1445mm**

Roller orientation

Load-bearing rollers can be orientation in the longitidinal direction of the roller bar (0° = standard) or in a crosswise direction (90°). Please indicate the orientation of the rollwers required.

e.g. **X=90°**

Based on these parameters, we will devise the ball bar for your specific application.
Please contact us, we will be pleased to offer you advice!

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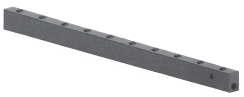
Hydraulic roller bar, steel housing standard 1-1/16 inch sizes in stock



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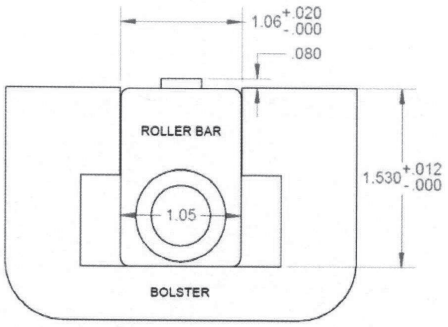
Application:

These roller bars are used in pairs or sets to lift the die and provide a roller surface to easily roll the die in and out during the die change process. For use in ASA 861-1949 T-slots specifications or rectangular slots 1-$^{1}/_{16}$ inch wide. Deeper T-slots can be shimmed to suit.



Description:

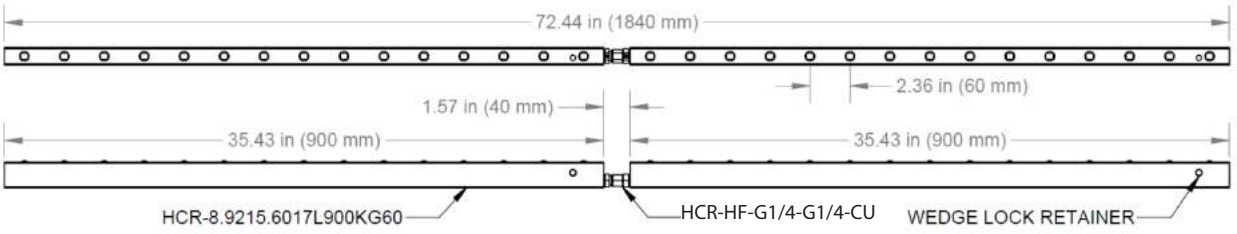
The roller bar consists of a bar that is equipped by hydraulically operated supporting rollers for movement in line with the bar. Rollers can be positioned for front to back or left to right movement. Maximum operating pressure is 1,740 psi (120 bar). A circuit relief valve must be provided to prevent pressure intensification caused by overloading the rollers.

Advantages:

- each roller provides linear movement
- roller bar includes wedge lock retainer
- other sizes available upon request
- steel housing

Important notes:

G 1/4 ports on both ends to couple the roller bars together to suit special lengths. See catalog page 8.1834B for additional data, sizes and roller bar.



Part No.	Length inch (mm)	Max. load per roller lbs (kN)	Max. lift capacity lbs (kN)	# of Rollers	Slot (inch)	Weight
HCR-8.9215.6017L600KG60	23.62 (600)	415 (1.85)	4,158 (18.50)	10	1-$^{1}/_{16}$"	4.7 kg
HCR-8.9215.6017L900KG60	35.43 (900)	415 (1.85)	6,236 (27.75)	15	1-$^{1}/_{16}$"	7.0 kg
HCR-8.9215.6017L1200KG60	47.24 (1200)	415 (1.85)	8,315 (37.00)	20	1-$^{1}/_{16}$"	9.3 kg
HCR.8.9215.6017L1500KG60	59.06 (1500)	415 (1.85)	10,394 (46.25)	25	1-$^{1}/_{16}$"	11.6 kg
Accessories						
HCR-HF-G1/4-G1/4-CU	Coupling Union, G$^{1}/_{4}$					

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DIE LIFTER APPLICATION DATA SHEET

Contact Name:_____ Company Address:

Company Name:_____ _____

Phone Number:_____ _____

E-Mail Address:_____ _____

Press Bed Information:

Bolster Dimensions L-R:_____ F-B:_____

Number of T-Slots L-R:_____ F-B:_____ Other:_____

Dimensions of T-Slot a:_____ b:_____ f:_____ h:_____

Temperature at press bed:_____ ☐F ☐C

Does the press bed have an opening? ☐No ☐Yes; if yes, please provide a drawing.

Die Information:

Maximum Weight:_____ lbs, Minimum Weight:_____ lbs

Dimensions: Maximum L-R:_____ F-B:_____

Minimum L-R:_____ F-B:_____

Dies Loaded From:_____ Dies Unloaded From:_____

Die Lifters (Rollblocks):

☐ Spring Loaded ☐ Ball (for movement in all directions)

☐ Hydraulic ☐ Roller (movement in one direction)

Die Lifter Pump:

☐ Manual Toggle ☐ Solenoid Valve 120 VAC

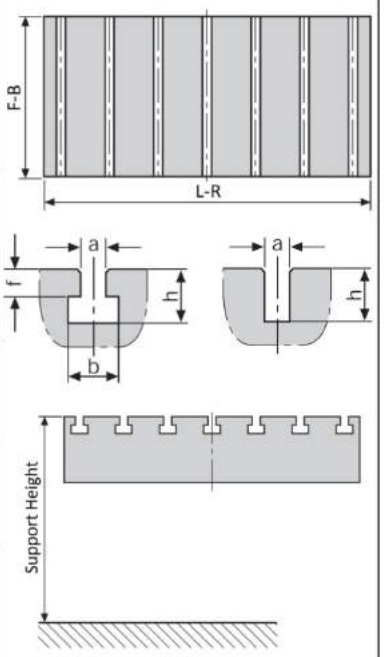
☐ Pressure Switch ☐ Solenoid Valve 24 VDC

Carrying Consoles:

☐ Hanging ☐ Supported ☐ Swiveling

Support Height*:_____

*needed for supported and swiveling consoles



Notes:_____

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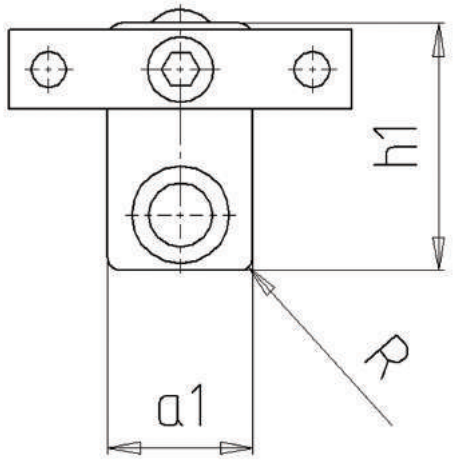
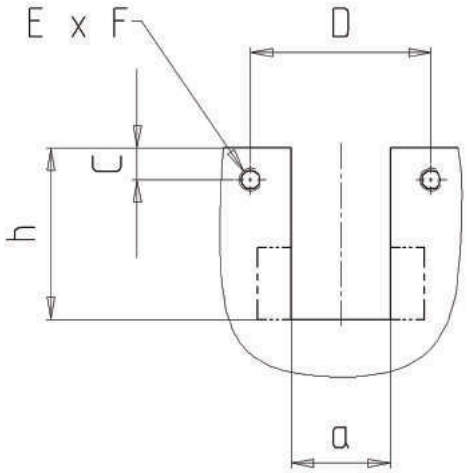


Die Lifter



Rectangular Slot

ANSI Standard Slots
ANSI/ASME B5.1M-1985 (R2009)

Slot dim.	$^{13}/_{16}$	1 $^{1}/_{16}$
a (in)	.811 (+.010/-.016)	1.063 (+.010/-.016)
h* (in)	1.157 (+.008/-0)	1.531 (+.008/-0)
C (in)	0.197	0.276
D (in)	1.417	1.575
E	M5	M5
F (in)	0.315	0.315

Die lifter dim.	$^{13}/_{16}$	1 $^{1}/_{16}$
a1 (in)	0.803 (-.024/-.031)	1.063 (-.024/-.031)
h1* (in)	1.157 (-.008/-.016)	1.531 (-.008/-.016)
R (in)	0.039 x 45°	0.039 x 45°

Metric Standard Slot
DIN 650

Slot dim.	18mm	22mm	28mm	36mm
a (mm)	18 (+.20/-0)	22 (+.25/-0)	28 (+.25/-0)	36 (+.30/-0)
h* (mm)	30 (+.20/-0)	38 (+.20/-0)	48 (+.20/-0)	61 (+.20/-0)
C (mm)	5	7	9	10
D (mm)	36	40	50	55
E	M5	M5	M6	M6
F (mm)	8	8	12	12

Die lifter dim.	18mm	22mm	28mm	36mm
a1 (mm)	18 (-.2/-.5)	22 (-.2/-.5)	28 (-.2/-.5)	36 (-.2/-.5)
h1* (mm)	30 (-.2/-.4)	38 (-.2/-.4))	48 (-.2/-.4)	61 (-.2/-.4)
R (mm)	1 x 45°	1 x 45°	1 x 45°	2 x 45°

* special die lifter heights available upon request

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