

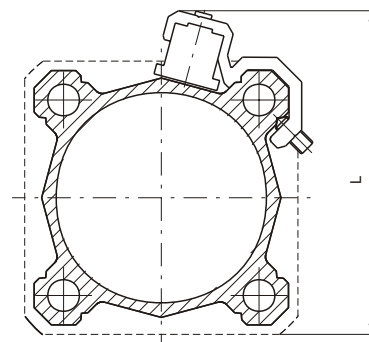
Sensor brackets

for series:

- 1319-1320-1321
- 1325-1326
- 1330-1331-1332-1333
- 1345-1347

Dimensions

Bore	L
Ø 32	60
Ø 40	65
Ø 50	77
Ø 63	87
Ø 80	105
Ø 100	125
Ø 125	145
Ø 160	184
Ø 200	222

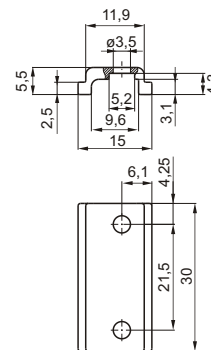


Ordering code	1320.A	Bracket for cylinder sensors Ø 32 ÷ 40
	1320.B	Bracket for cylinder sensors Ø 50 ÷ 63
	1320.C	Bracket for cylinder sensors Ø 80 ÷ 100
	1320.D	Bracket for cylinder sensors Ø 125
	1320.E	Bracket for cylinder sensors Ø 160
	1320.F	Bracket for cylinder sensors Ø 200

Sensor adapter



Weight gr. 4



This nylon adapter allows the miniature sensor assembly on large slot.

Ordering code
1380.01F

Linear control units

General

The linear control units are used as non-rotating device with \varnothing 32, 40, 50 and 63 cylinders bore. The high precision makes it ideal in application for assembly, packaging machines, automatic handling machine tools and so on. The combination of different linear control unit makes them particularly suitable for the robotic manipulation. The cylinders with magnetic piston and sensor give the facility to monitor the position on the unit giving an electrical signal to the control system. The units are equipped with threaded mounting holes, located on the body and front plate for fixing to the machine and the load to be moved.

Construction characteristics

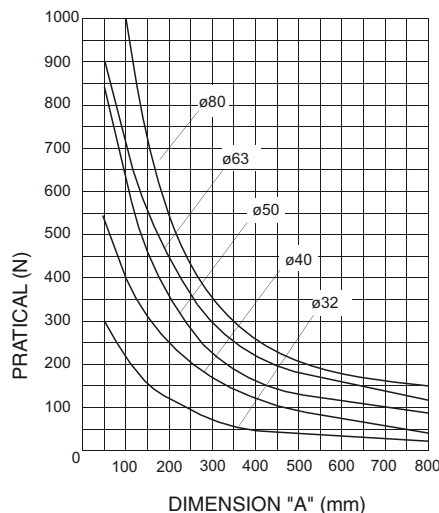
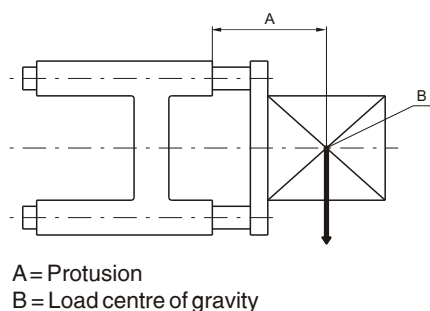
Body	extruded shape anodized aluminium alloy 6060
Bushings	sintered bronze
Wiper	oil resistant NBR rubber
Rods	chromed C43 steel
Plate	plated zinc steel
Mounting block	plated zinc steel

Technical characteristics

Max. suggested stroke:

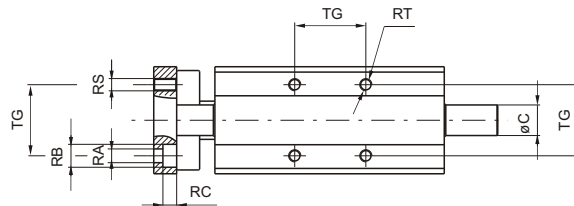
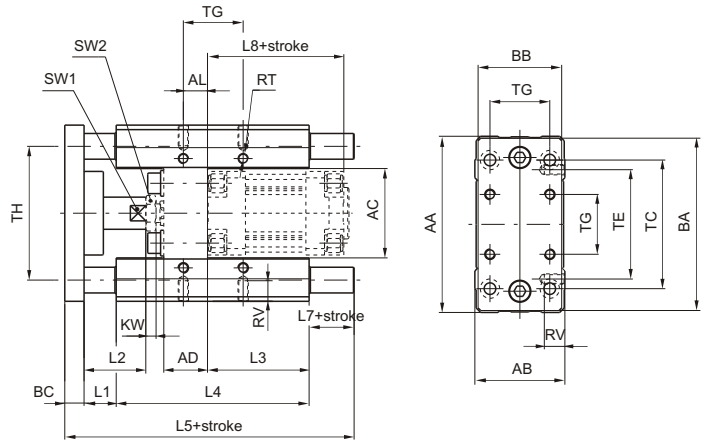
Diameter	32	40	50	63	80
Stroke mm.	300	350	450	500	550

Loading diagram based on dimension "A"



Use and maintenance

Follow the indication of the above diagram as far as loads are concerned. A large quantity of grease is placed between the two wipers during assembly, therefore the linear control units should not require special maintenance.



Ordering code
1320.Ø.stroke.GLB
(Cylinders ISO 6431 - VDMA must be ordered separately)

Bore	Weight gr.	
	stroke 100	every 50 mm
32	1720	91
40	2900	159
50	4700	159
63	6000	250
80	11300	380

Bore	AA	AB	AC	AD	AL	BA	BB	BC	C	KW	L1	L2	L3	L4	L5
32	97	49	50	24	4,3	93	45	12	12	6	25	39	76	125	187
40	115	58	57,5	28	11	112	55	12	16	7	25	44	81	140	207
50	137	70	69,5	34	18,8	134	65	15	20	8	25	48	79	150	225
63	152	85	84,5	34	15,3	149	80	15	20	8	25	48	111	182	242
80	189	105	106	34	21	180	100	20	25	9	25	53	128	215	302

Bore	L7	L8	RA	RB	RC	RS	RT	RV	SW1	SW2	TC	TE	TG	TH
32	25	94	6,6	11	6,5	M6	M6	12	15	17	78	61	32,5	74
40	30	105	6,6	11	6,5	M6	M6	14	15	19	84	69	38	87
50	35	106	9	15	9	M8	M8	16	22	24	100	85	46,5	104
63	20	121	9	15	9	M8	M8	16	22	24	105	100	56,5	119
80	42	128	11	18	11	M10	M10	20	27	24	130	130	72	148

Standard strokes

- Ø 32 100 - 150 - 200 - 250 - 300 mm
- Ø 40 100 - 150 - 200 - 250 - 300 - 350 mm
- Ø 50 100 - 150 - 200 - 250 - 300 - 350 - 400 - 450 mm
- Ø 63 100 - 150 - 200 - 250 - 300 - 350 - 400 - 450 - 500 mm
- Ø 80 100 - 150 - 200 - 250 - 300 - 350 - 400 - 450 - 500 - 550 mm

Sensor clamps and brackets

Use standard sensor and bracket on the rear and following special brackets on front of cylinders:

- 1320.AGL** sensor bracket for cylinders Ø 32 and 40
- 1320.BGL** sensor bracket for cylinders Ø 50 and 63
- 1320.CGL** sensor bracket for cylinders Ø 80

General

The piston rod lock devices are clamping units mounted on cylinders front head. They allow to lock the piston rod in any position.

Piston rod clamping is mechanically obtained by springs actuated purpose-made jaws. This method allows to lock the cylinder in the desired position, should the air pressure drop.

The piston rod lock device is not a safety device.

The clamping force is higher than the one developed by the microcylinder operating at 6 bar (maximum suggested pressure), however, it is suggestible to slow down the cylinder speed in order to decrease the kinetic energy before actuating the piston rod lock. It is advisable to balance the pressure in the cylinders chambers with pressurized centre distributors once locked.

The piston rod lock device cannot be used with stainless steel cylinder piston rod.

This piston rod lock do not prevent the piston rod rotation as it works axially.

Construction characteristics

Mounting bracket	anodized aluminium
Body	anodized aluminium
Clamping jaws	hardened alloy copper
Piston	acetal resin
Seal	NBR oil-resitant rubber
Springs	springs steel

Technical characteristics

Fluid	clean air						
Working pressure	3 ÷ 6 bar						
Working temperature	-5°C ÷ +70°C						
Functioning	mechanical-double jaws						
Locking	axial, two-directions (normally locked)						
Unlocking	pneumatic						
Clamping force with static load for different bores	<u>Ø 32</u> 600N	<u>Ø 40</u> 1000N	<u>Ø 50</u> 1400N	<u>Ø 63</u> 2000N	<u>Ø 80</u> 5000N	<u>Ø 100</u> 5000N	<u>Ø 125</u> 7000N

"Attention: Dry air must be used for application below 0°C"

Use and maintenance

Do not exceed the above technical data.

The piston rod lock does not require maintenance if properly utilized. However, it can be disassembled if needed.

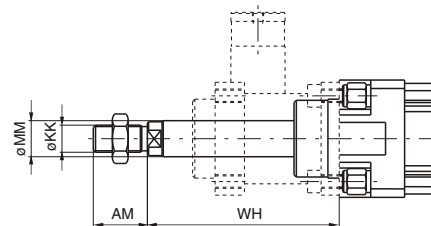
The working inlet port has to be pressurized for assembling the piston rod lock device on cylinder. Alternatively adjust the jaws with screw located on connection.

Spare parts are not available.

Cylinders for piston rod lock

Ordering code

13 -- ϕ .stroke.-- B



- Order piston rod lock separately. Do not use with stainless steel or hexagonal piston rod

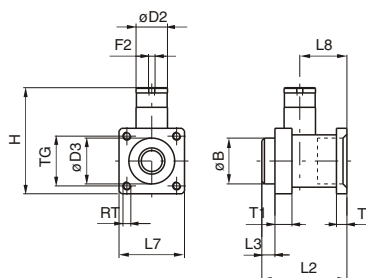
Piston rod lock complete



Ordering code

1320. ϕ .51BS

- Do not use as safety device



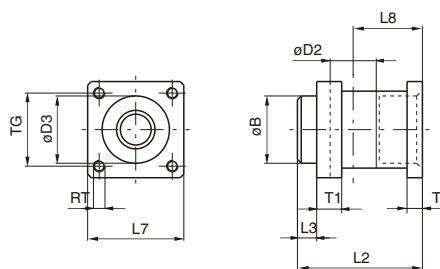
Bore	Weight gr.
32	194
40	271
50	530
63	858
80	1722
100	2360
125	5100

Piston rod lock bracket



Ordering code

1320. ϕ .51S



Bore	Weight gr.
32	142
40	171
50	360
63	486
80	1060
100	1700
125	3500

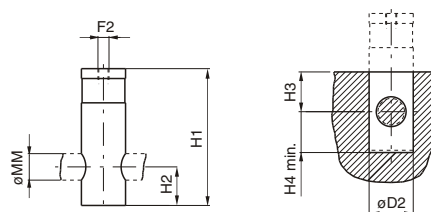
Piston rod lock and housing



Ordering code

1320. ϕ .51B

- Do not use as safety device



Bore	Weight gr.
32	142
40	171
50	360
63	486
80	1060
100	1700
125	3500

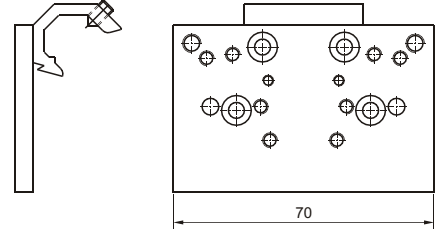
Table of dimensions

Bore	AM	B	D2	D3	F2	H	H1	H2	H3	H4	KK	L2	L3	L7	L8	MM	RT	T1	T2	TG	WH
32	22	30	20	30,5	M5	67	62	17,5	18	18,5	M10x1,25	58	10	45	31,5	12	M6	13	8	32,5	74
40	24	35	24	35	G 1/8"	86	83	22	22	23	M12x1,25	65	10	50	36	16	M6	13	8	38	85
50	32	40	30	40	G 1/8"	105	100	25	25	26	M16x1,5	82	12	60	45,5	20	M8	16	15	46,5	107
63	32	45	38	45	G 1/8"	121	116	30	30	31	M16x1,5	82	12	70	49,5	20	M8	16	15	56,5	107
80	40	45	48	45	G 1/8"	164	155	36	36	37	M20x1,5	110	20	90	61	25	M10	20	18	72	126
100	40	55	48	55	G 1/8"	172	155	36	36	37	M20x1,5	115	23	105	65	25	M10	20	18	89	143
125	54	60	65	60	G 1/8"	210	195	56	55	56	M27x2	167	45	140	86,5	32	M12	30	22	110	187

Distributor supports

This accessory permits to mount a valve or an electrovalve on a side of the cylinder. The support is connected to the threaded cylinder tie or false tie and, on it, can be mounted either a threaded distributor or a base on which can be mounted an ISO distributor. The connections are made by means of joints and pipes. All of the threaded holes on the support plane serve as receivers for 828-858/2-414/2-824 valve series and as the base for size 1 and 2 ISO distributors.

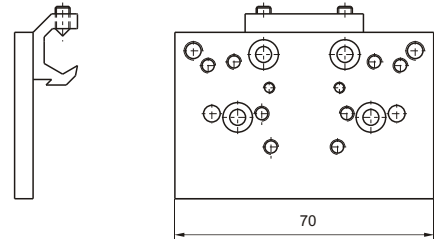
ties cylinder



Ordering code

1306.15 (Ø 32+Ø100)

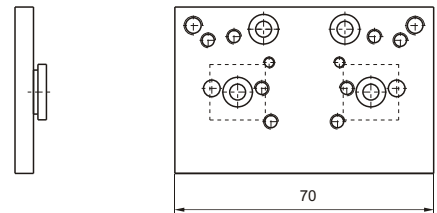
shaped pipe series 1319



Ordering code

- 1320.15** (Ø 32+Ø40)
- 1320.16** (Ø 50+Ø63)
- 1320.17** (Ø 80+Ø100)
- 1320.18** (Ø 125)
- 1320.19** (Ø 160)
- 1320.20** (Ø 200)

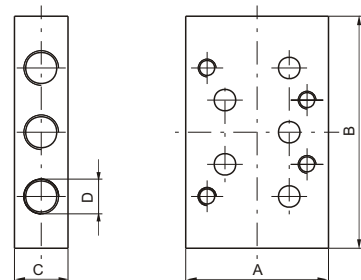
Clean profile cylinder series 1380



Ordering code

1380.15

Bases for ISO distributors



Ordering code	Dimensions			
	A	B	C	D
1320.21 base for ISO 1 electro distributor	40	75	15	G 1/8"
1320.22 base for ISO 2 electro distributor	50	95	20	G 1/4"

Front and rear flanges (MF1 - MF2)

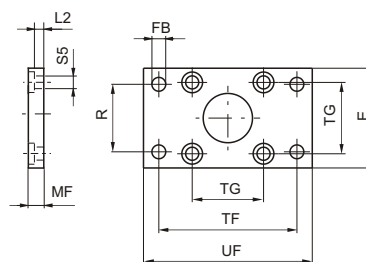
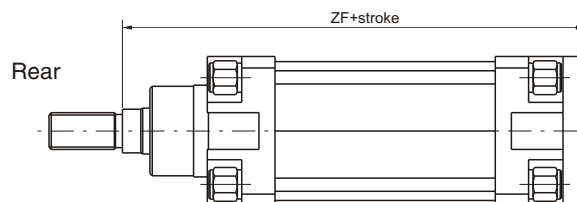
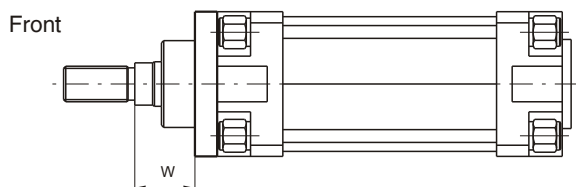


Plate which allows anchorage of the cylinder at a right angle to the plane. It is made of zinc-plated extruded steel.



Bore	32	40	50	63	80	100	125	160	200
E	45	52	65	75	95	115	140	180	220
FB (H 13)	7	9	9	9	12	14	16	18	22
MF (JS 14)	10	10	12	12	16	16	20	20	25
R (JS 14)	32	36	45	50	63	75	90	115	135
TF (JS 14)	64	72	90	100	126	150	180	230	270
TG	32,5	38	46,5	56,5	72	89	110	140	175
UF	80	90	110	120	150	170	205	260	300
ZF	130	145	155	170	190	205	245	280	300
W	16	20	25	25	30	35	45	60	70
L2	5	5	6,5	6,5	8	8	10,5	9,5	12,5
S5 (H13)	6,6	6,6	9	9	11	11	13,5	18	18
Weight gr.	190	250	480	620	1430	1990	3750	6350	11350

Ordering code

Front
1380.Ø.03F
Rear
1380.Ø.04F

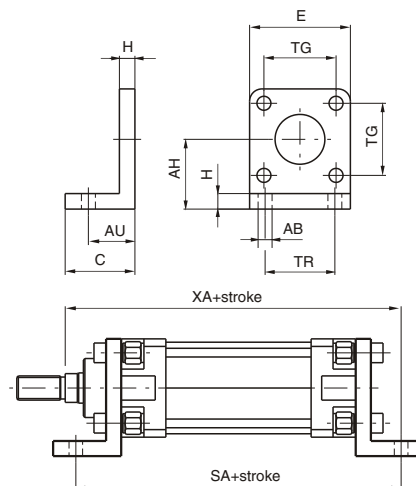
Standard mounting foot brackets

Ordering code

1320.Ø.05F (1 piece)



Elements used to anchor the cylinder parallel to the mounting plane. They are made of cast aluminium, painted black.



Bore	32	40	50	63	80	100	125	160	200
AB (H 14)	7	9	9	9	12	14	16	18	22
AH (JS 15)	32	36	45	50	63	71	91	115	135
AU (±0,2)	24	28	32	32	41	41	45	60	70
C	35	35	45	45	55	56	68	82	90
E	45	52	65	75	95	115	140	180	220
H	8	8	10	10	12	12	16	20	20
SA	142	161	170	185	210	220	250	300	320
TG	32,5	38	46,5	56,5	72	89	110	140	175
TR (JS 14)	32	36	45	50	63	75	90	115	135
XA	144	163	175	190	215	230	270	320	345
Weight gr.	45	65	140	175	360	470	920	2300	3200

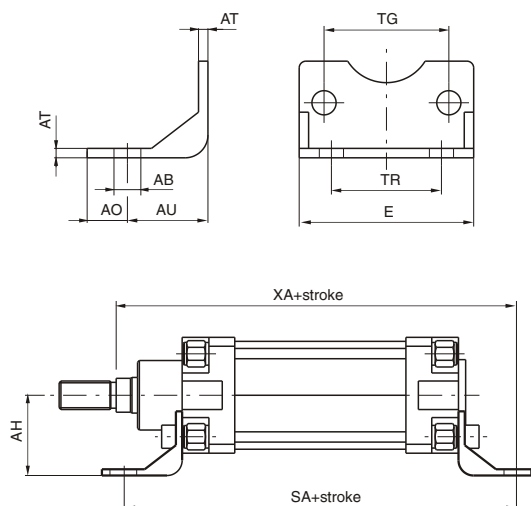
Short mounting foot brackets (in sheet metal MS1)

Ordering code

1320.Ø.05/1F (1 piece)



Elements used to anchor the cylinder parallel to the mounting plane. They are made of cast aluminium, painted black.

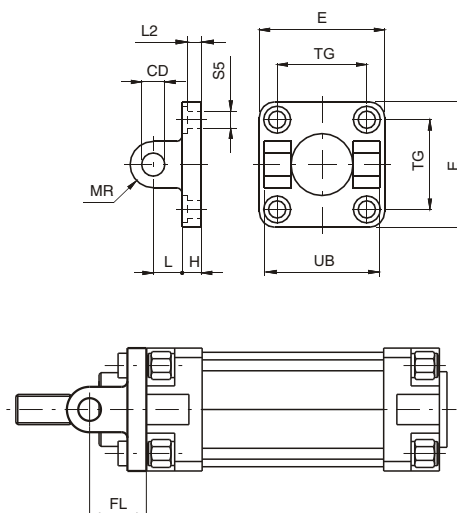


Bore	32	40	50	63	80	100	125	160	200
AB (H 14)	7	9	9	9	12	14	16	18	22
AH (JS 15)	32	36	45	50	63	71	90	115	135
AU (± 0.2)	24	28	32	32	41	41	45	60	70
AO (± 0.2)	11	8	15	13	14	16	25	15	30
E	45	52	65	75	95	115	140	180	220
AT	4	4	5	5	6	6	8	9	12
SA	142	161	170	185	210	220	250	300	320
TG	32,5	38	46,5	56,5	72	89	110	140	175
TR (JS 14)	32	36	45	50	63	75	90	115	135
XA	144	163	175	190	215	230	270	320	345
Weight gr.	65	80	170	190	380	452	1090	1190	3450

Front clevis (not specified by ISO-VDMA standards)

Ordering code

1380.Ø.08F



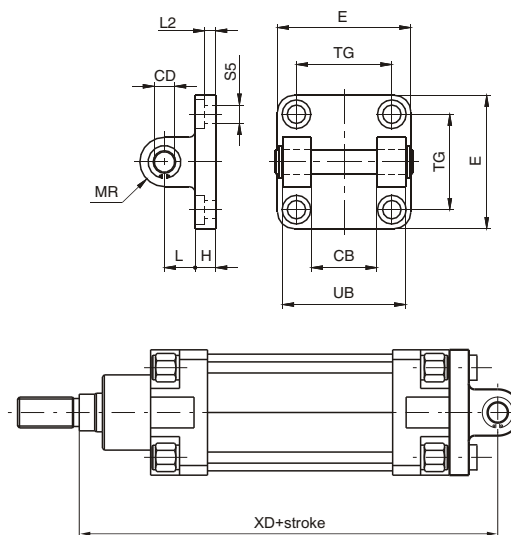
Bore	32	40	50	63	80	100	125	160	200
CD (H9)	10	12	12	16	16	20	25	30	30
E	45	52	65	75	95	115	140	180	220
FL (±0,2)	22	25	27	32	36	41	50	55	60
H	9	9	11	11	14	14	20	20	25
L	13	16	16	21	22	27	30	35	35
MR	10	12	12	16	16	20	25	25	25
TG	32,5	38	46,5	56,5	72	89	110	140	175
UB (h14)	45	52	60	70	90	110	130	170	170
L2	5,5	5,5	6,5	6,5	10	10	10	10	11
S5 (H13)	6,6	6,6	9	9	11	11	14	18	18
Weight gr.	50	75	125	190	380	620	1180	1780	2900

Used to mount the cylinder either parallel or at a right angle to the mounting plane; allows the cylinder to self-align under load. Made of aluminium alloy, painted black.

Rear clevis (MP2)

Ordering code

1380.Ø.09F



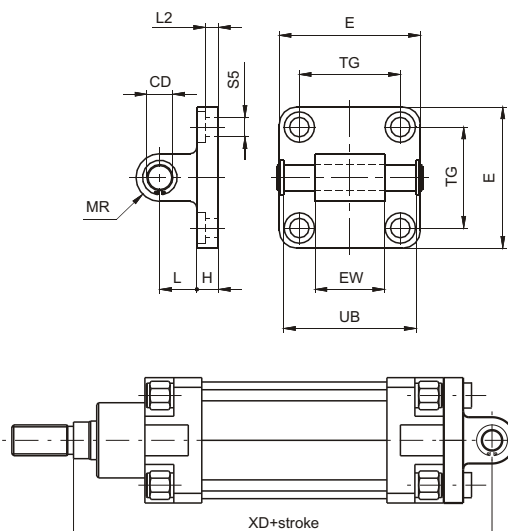
Bore	32	40	50	63	80	100	125	160	200
CB (H 9)	26	28	32	40	50	60	70	90	90
CD (f 7)	10	12	12	16	16	20	25	30	30
E	45	52	65	75	95	115	140	180	220
H	9	9	11	11	14	14	20	20	25
L	13	16	16	21	22	27	30	35	35
MR	10	12	12	16	16	20	25	25	25
TG	32,5	38	46,5	56,5	72	89	110	140	175
UB	45	52	60	70	90	110	130	170	170
XD	142	160	170	190	210	230	275	315	335
L2	5,5	5,5	6,5	6,5	10	10	10	10	11
S5 (H13)	6,6	6,6	9	9	11	11	14	18	18
Weight gr.	80	130	185	310	530	910	1710	2760	3820

Similar to type 08 but includes a hinge pin. This type of mounting allows anchorage of the cylinder either parallel or right angle to plane; the cylinder rod can oscillate and self-align as necessary when under load. It is made of aluminium alloy and painted black.

Rear male clevis (MP4)

Ordering code

1380.Ø.09/1F



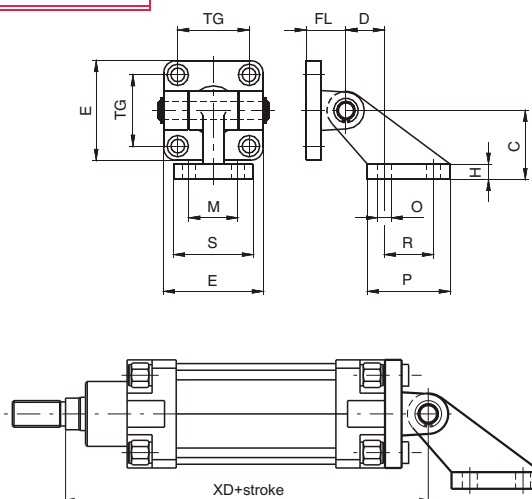
Similar to 09 clevis except for the connection, which is male rather than female. Used to mount the cylinder either parallel or at a right angle to the plane; the cylinder rod can oscillate and self-align as necessary when under load. It is made of cast aluminium and painted black.

Bore	32	40	50	63	80	100	125	160	200
CD (f 7)	10	12	12	16	16	20	25	30	30
E	45	52	65	75	95	115	140	180	220
EW ($^{+0,2}_{-0,6}$)	26	28	32	40	50	60	70	90	90
H	9	9	11	11	14	14	20	20	25
L	13	16	16	21	22	27	30	35	35
MR	10	12	12	16	16	20	25	25	25
TG	32,5	38	46,5	56,5	72	89	110	140	175
UB	46	53	61	71	91	111	132	171,5	171,5
XD	142	160	170	190	210	230	275	315	335
L2	5,5	5,5	6,5	6,5	10	10	10	10	11
S5 (H13)	6,6	6,6	9	9	11	11	14	18	18
Weight gr.	90	130	190	340	580	960	1890	2830	3940

Rear trunnion with support bracket (not specified by ISO-VDMA standards)

Ordering code

1380.Ø.11F



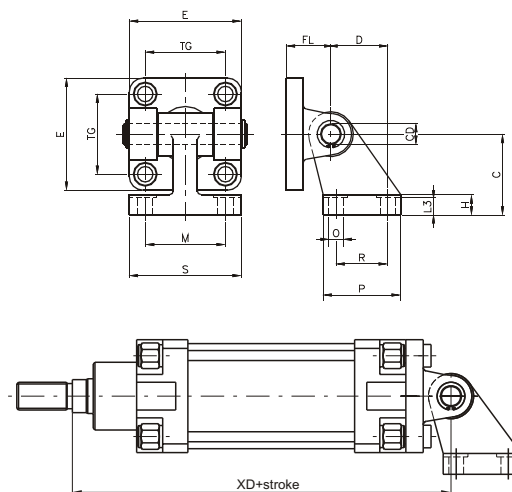
Mounting consists of clevis 09 and right angle counter clevis. Used to mount cylinders parallel to the plane to which the counter clevis is attached. Allows self-alignment of the cylinder rod under load with an oscillation up to 90 degrees from the mounting plane.

Bore	32	40	50	63	80	100	125	160	200
C (JS 15)	32	45	45	63	63	90	90	140	140
D	18	25	25	32	32	40	40	50	50
E	45	52	65	75	95	115	140	180	220
H	8	10	10	12	12	17	17	20	20
FL	22	25	27	32	36	41	50	55	60
M (JS 14)	25	32	32	40	40	50	50	63	63
TG	32,5	38	46,5	56,5	72	89	110	140	175
O (H 13)	7	9	9	11	11	14	14	18	18
P (JS 14)	37	54	54	75	75	103	103	154	154
R	20	32	32	50	50	70	70	110	110
S	41	52	52	63	63	80	80	110	110
XD	142	160	170	190	210	230	275	315	335
Weight gr.	130	260	330	600	820	1560	2530	4735	5795

Square angle trunnion

Ordering code

1380.Ø.35F

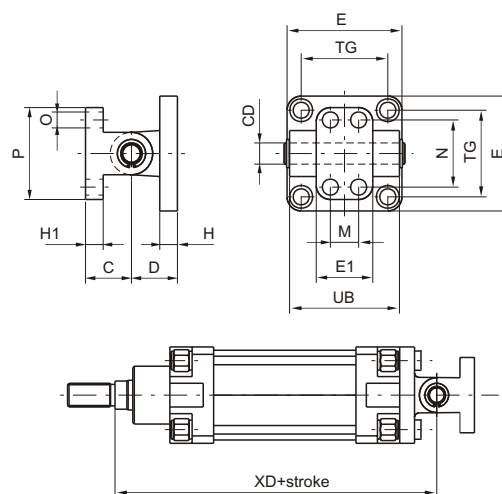


Bore	32	40	50	63	80	100	125	160	200
E	45	52	65	75	95	115	140	180	220
TG	32,5	38	46,5	56,5	72	89	110	140	175
FL	22	25	27	32	36	41	50	55	60
D (Js14)	21	24	33	37	47	55	70	97	105
CD (H9)	10	12	12	16	16	20	25	30	30
C (JS15)	32	36	45	50	63	71	90	115	135
H	8	10	12	14	14	17	20	25	30
L3	6,4	8,4	10,4	12,4	11,5	14,5	16,8	21	26
R (JS14)	18	22	30	35	40	50	60	88	90
P	31	35	45	50	60	70	90	126	130
O (H13)	6,6	6,6	9	9	11	11	14	14	18
S	51	54	65	67	86	96	124	156	162
M (JS14)	38	41	50	52	66	76	94	118	122
XD	142	160	170	190	210	230	275	315	335
Weight gr.	120	180	225	435	730	1220	2325	3780	4950

Standard trunnion (not specified by ISO-VDMA standards)

Ordering code

1380.Ø.10F



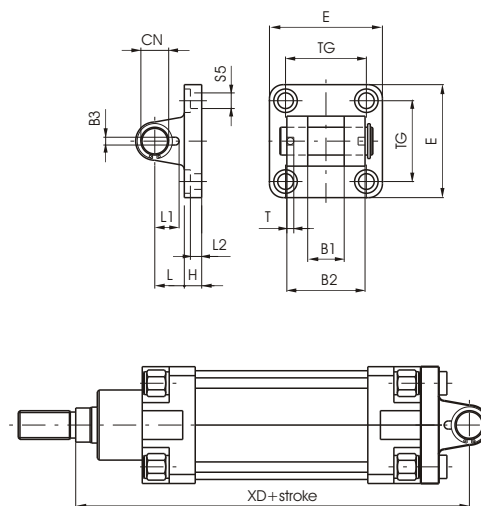
Bore	32	40	50	63	80	100	125	160	200
C	18	26	26	34	34	41	41	55	55
CD	10	12	12	16	16	20	25	30	30
D	22	25	27	32	36	41	50	55	60
E	45	52	65	75	95	115	140	180	220
E1	25	32	32	46	46	56	56	71	71
H	10	10	12	12	16	16	20	20	25
H1	8	10	10	12	12	16	16	20	20
M	-	16	16	25	25	32	32	43	43
N	28	38	38	54	54	90	90	150	150
O	7	9	9	11	11	14	14	18	18
P	40	52	52	75	75	115	115	180	180
TG	32,5	38	46,5	56,5	72	89	110	140	175
UB	45	52	60	70	90	110	130	170	170
XD	142	160	170	190	210	230	275	315	335
Weight gr.	110	190	240	490	710	1290	2090	3690	4810

Mounting consists of clevis 09 and counter clevis. Used to mount cylinders at a right angle to the plane to which the counter clevis is attached. Allows self-alignment of the cylinder rod under load with an oscillation of ± 60 degrees.

Rear narrow clevis

Ordering code

1380.Ø.30F



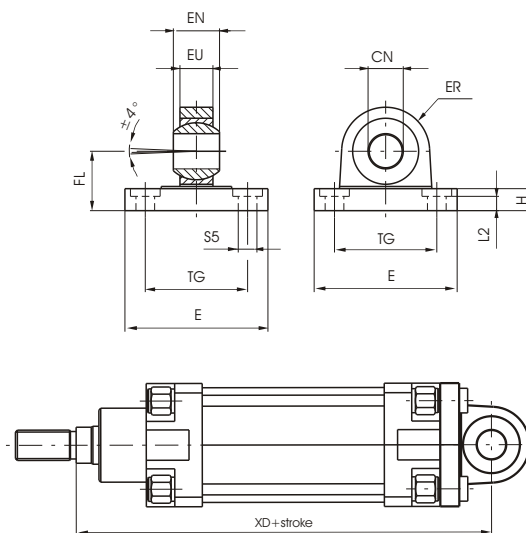
Utilized with clevis 15F allows the cylinder to oscillate in all directions. Made of aluminium alloy, painted black.

Bore	32	40	50	63	80	100	125	160	200
B1 (H 14)	14	16	21	21	25	25	37	43	43
B2 (d 12)	34	40	45	51	65	75	97	122	122
B3 (±0,2)	3,3	4,3	4,3	4,3	4,3	6,3	6,3	6,3	6,3
CN (f 7)	10	12	16	16	20	20	30	35	35
E	45	52	65	75	95	115	140	180	220
H	9	9	11	11	14	14	20	20	25
L	13	16	16	21	22	27	30	35	35
L1 (±0,3)	11,5	12	14	14	16	16	24	26,5	26,5
L2 (±0,5)	5,5	5,5	6,5	6,5	10	10	10	10	11
S5 (H13)	6,6	6,6	9	9	11	11	14	18	18
T (±0,2)	3	4	4	4	4	4	6	6	6
TG	32,5	38	46,5	56,5	72	89	110	140	175
XD	142	160	170	190	210	230	275	315	335
Weight gr.	70	115	200	290	570	820	1710	3010	4380

Rear male clevis (with jointed head according to DIN 648K standard)

Ordering code

1380.Ø.15F



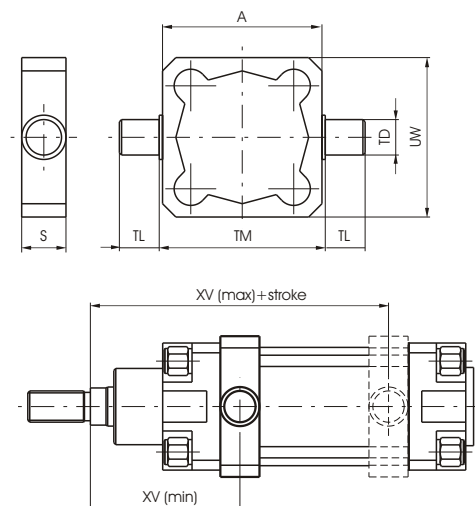
Utilized with clevis 30F allows the cylinder to oscillate in all directions. Made of aluminium alloy, painted black.

Bore	32	40	50	63	80	100	125	160	200
CN (H 7)	10	12	16	16	20	20	30	35	35
E	45	52	65	75	95	115	140	180	220
EN (-0.1)	14	16	21	21	25	25	37	43	43
ER	16	19	21	24	28,5	30	40	45	48
EU	10,5	12	15	15	18	18	25	28	28
FL (JS 15)	22	25	27	32	36	41	50	55	60
H	9	9	11	11	14	14	20	20	25
L 2 (±0.5)	5,5	5,5	6,5	6,5	10	10	10	10	11
S 5 (H 13)	6,6	6,6	9	9	11	11	13,5	18	18
TG	32,5	38	46,5	56,5	72	89	110	140	175
XD	142	160	170	190	210	230	275	315	335
Weight gr.	60	100	180	245	480	650	1410	2420	3840

Intermediate trunnion Series 1319 ÷ 1321

Ordering code

1320.Ø.12F



Clevis to be mounted on the barrel to have the center of rotation of the hinge pin at a point between the end plates of the cylinder. It is attached to the barrel by means of 8 pointed grains that block in the "V" groove of the four protruding shapes. In the case of anchorage subject to heavy use, it is recommended to connect the clevis once the right position has been found.

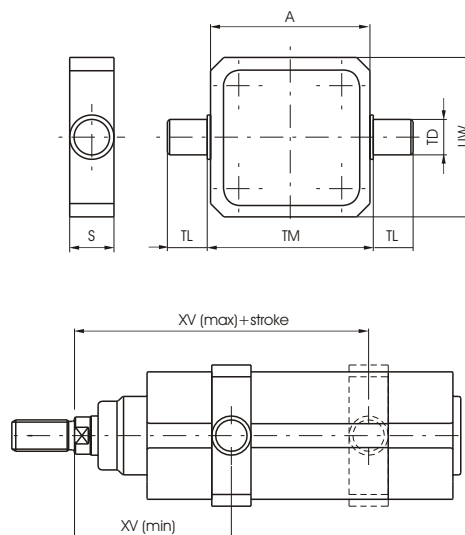
ATTENTION: mounting of the clevis with contact to the end plates does not allow the use of the magnetic sensors as the switch limits.

Bore	32	40	50	63	80	100	125	160	200
A	49	62	73	87	109	130	155	190	240
S	18	21	21	27	27	32	32	40	40
TD (e9)	12	16	16	20	20	25	25	32	32
TL (h14)	12	16	16	20	20	25	25	32	32
TM (h14)	50	63	75	90	110	132	160	200	250
UW	59	62	73	87	109	130	155	190	240
XV (max.)	85	96	102	109	123,5	131,5	162	193	204
XV (min.)	61	69	78	86	96,5	108,5	128	150	168
Weight gr.	180	270	330	650	890	1550	1950	3580	5850

Intermediate trunnion Series 1380 ÷ 1382

Ordering code

1380.Ø.12F



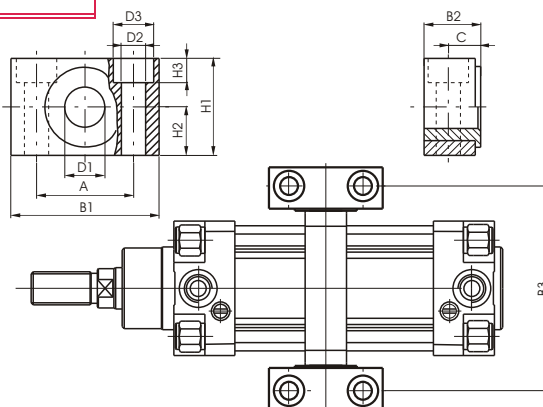
Clevis to be mounted on the barrel to have the center of rotation of the hinge pin at a point between the end plates of the cylinder. It is attached to the barrel by means of 8 pointed grains. In the case of anchorage subject to heavy use, it is recommended to connect the clevis once the right position has been found. ATTENTION: mounting of the clevis with contact to the end plates does not allow the use of the magnetic sensors as the switch limits.

Bore	32	40	50	63	80	100
A	49,8	62,6	74,1	89,1	109,1	130,1
S	18	21	21	27	27	30
TD (e 9)	12	16	16	20	20	25
TL (h 14)	12	16	16	20	20	25
TM (h 14)	50	63	75	90	110	132
UW	70	78	91	94	130	145
XV (max.)	80	91,5	97,5	106,5	118,5	127
XV (min.)	66	73,5	82,5	88,5	101,5	113
Weight gr.	195	350	430	565	1035	1450

Support for intermediate trunnion

Ordering code

1320.Ø.12/1F
(1 piece)



Combining two supports to the intermediate trunnion it is possible to fix the cylinder on plane surface.

Bore	32	40	50	63	80	100	125	160	200
A (±0,2)	32	36	36	42	42	50	50	60	60
B1	46	55	55	65	65	75	75	92	92
B2	18	21	21	23	23	28,5	28,5	40	40
B3	71	87	99	116	136	164	192	245	295
C	10,5	12	12	13	13	16	16	22,5	22,5
D1 (F7)	12	16	16	20	20	25	25	32	32
D2	6,6	9	9	11	11	14	14	18	18
D3	11	15	15	18	18	20	20	26	26
H1	30	36	36	40	40	50	50	60	60
H2 (±0,1)	15	18	18	20	20	25	25	30	30
H3	7	9	9	11	11	13	13	17	17
Weight gr. (1 piece)	100	150	150	235	235	435	435	850	850

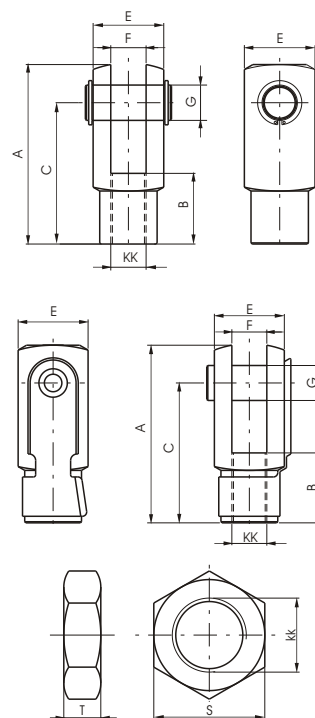
Rod forks and nuts

Ordering code

1320.Ø.13F

1320.Ø.13/1F

1320.Ø.18F



Fork:
Element that when screwed to the rod consents a regular functioning even when there are significant lateral forces as the connection point. Made of zinc-plated steel.

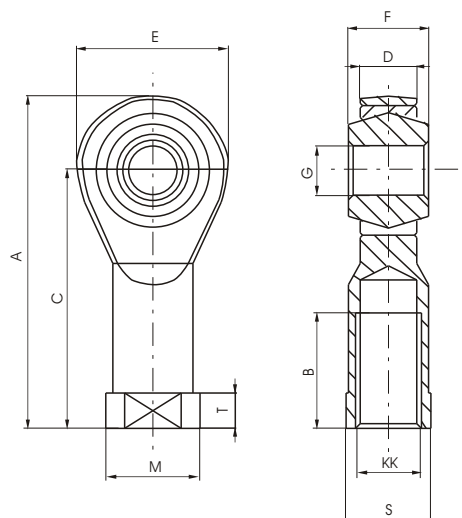
Nut:
Used to block the position of the fork.

Bore	32	40	50	63	80	100	125	160	200
A	52	62	83	83	105	105	148	188	188
B	20	24	32	32	40	40	56	72	72
C	40	48	64	64	80	80	110	144	144
E	20	24	32	32	40	40	55	70	70
F (B 12)	10	12	16	16	20	20	30	35	35
G	10	12	16	16	20	20	30	35	35
S	17	19	24	24	30	30	41	55	55
T	6	7	8	8	9	9	12	18	18
KK	M10x1,25	M12x1,25	M16x1,5	M16x1,5	M20x1,5	M20x1,5	M27x2	M36x2	M36x2
Weight fork	100	140	340	340	680	680	2500	4000	4000
gr. nut	15	20	20	20	40	40	100	210	210

Ball joint

Ordering code

1320.Ø.32F

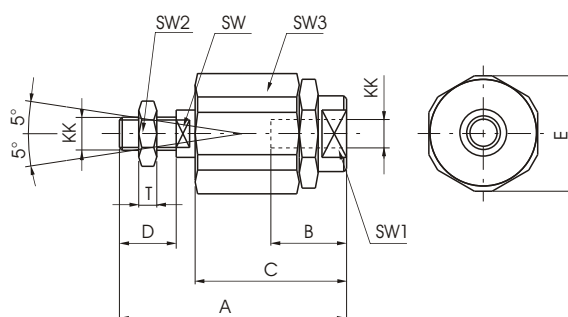


Bore	32	40	50	63	80	100	125	160	200
A	57	66	85	85	102	102	145	165	165
B	20	22	28	28	33	33	51	56	56
C	43	50	64	64	77	77	110	125	125
D (-0,1)	10,5	12	15	15	18	18	25	28	28
E	28	32	42	42	50	50	70	80	80
F	14	16	21	21	25	25	37	43	43
G (H 7)	10	12	16	16	20	20	30	35	35
KK	M10x1,25	M12x1,25	M16x1,5	M16x1,5	M20x1,5	M20x1,5	M27x2	M36x2	M36x2
M	19	22	27	27	34	34	50	58	58
S	17	19	22	22	30	30	41	50	50
T	6,5	6,5	8	8	10	10	15	17	17
Weight gr.	76	110	220	220	410	410	1200	1600	1600

Self-aligning joint

Ordering code

1320.Ø.33F

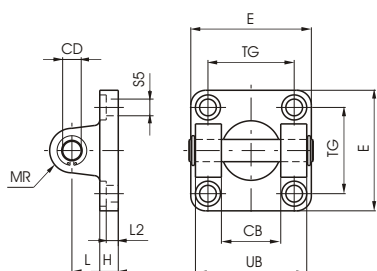
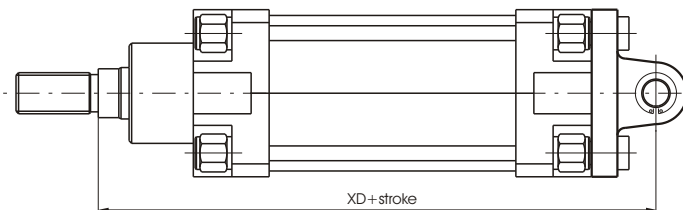


Bore	32	40	50	63	80	100
A	71	75	103	103	119	119
B	20	20	32	32	40	40
C	46	46	63	63	71	71
D	20	24	32	32	40	40
E	32	32	45	45	45	45
KK	M10x1,25	M12x1,25	M16x1,5	M16x1,5	M20x1,5	M20x1,5
SW	12	12	20	20	20	20
SW1	19	19	27	27	27	27
SW2	17	19	24	24	30	30
SW3	30	30	41	41	41	41
T	6	7	8	8	9	9
Weight gr.	220	230	660	660	700	700

Rear clevis (MP2)

Ordering code

1320.Ø.20F

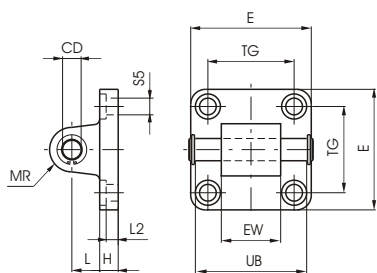
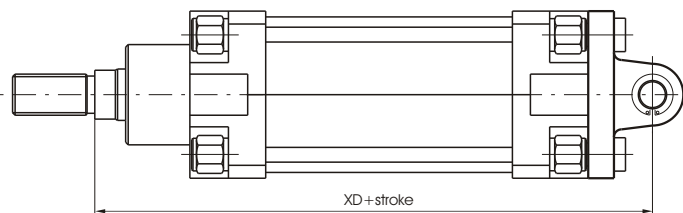


Bore	32	40	50	63	80	100	125	160	200
CB (H 14)	26	28	32	40	50	60	70	90	90
CD (f 7)	10	12	12	16	16	20	25	30	30
E	45	55	65	75	95	115	140	180	220
H	10	10	10	12	14	16	20	20	20
L	12	15	17	20	22	25	30	35	40
L 2 (±0.5)	5,5	5,5	6,5	6,5	10	10	10	10	11
MR	10	12	12	16	16	20	25	25	25
S 5	6,5	6,5	9	9	11	11	13,5	18	18
TG	32,5	38	46,5	56,5	72	89	110	140	175
UB (h 14)	45	52	60	70	90	110	130	170	170
XD	142	160	170	190	210	230	275	315	335
Weight gr.	180	290	400	670	1160	2000	3890	6730	9880

Rear male clevis (MP4)

Ordering code

1320.Ø.21F

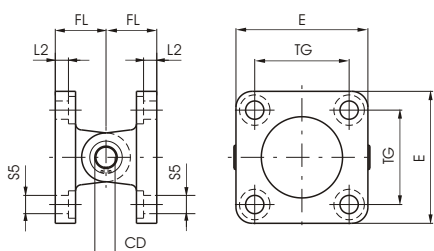
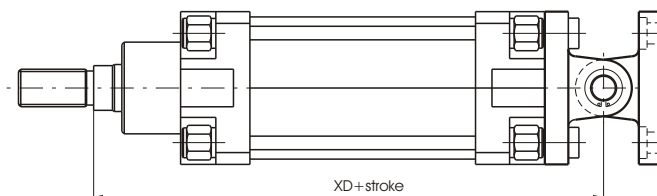


Bore	32	40	50	63	80	100	125	160	200
CD (f 7)	10	12	12	16	16	20	25	30	30
E	45	55	65	75	95	115	140	180	220
EW ^(±0,2) _(±0,6)	26	28	32	40	50	60	70	90	92
H	10	10	10	12	14	16	20	20	20
L	12	15	17	20	22	25	30	35	40
L 2 (±0.5)	5,5	5,5	6,5	6,5	10	10	10	10	11
MR	10	12	12	16	16	20	25	25	25
S 5	6,6	6,6	9	9	11	11	13,5	18	18
TG	32,5	38	46,5	56,5	72	89	110	140	175
UB (h 14)	46	53	61	71	91	111	132	171,5	171,5
XD	142	160	170	190	210	230	275	315	335
Weight gr.	210	330	430	810	1350	2400	4300	6880	8560

Standard complete trunnion

Ordering code

1320.Ø.22F

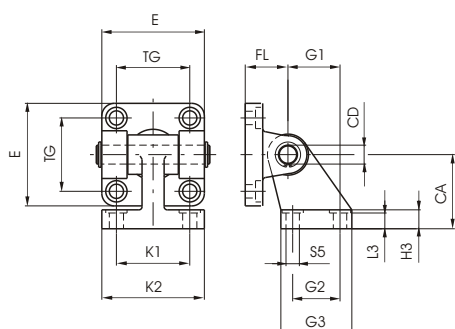
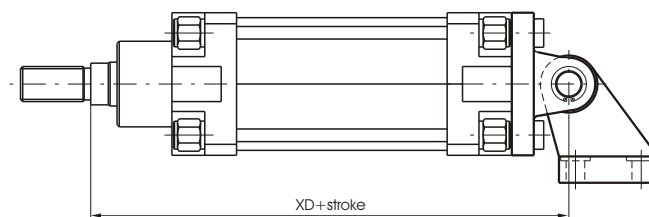


Bore	32	40	50	63	80	100	125	160	200
CD	10	12	12	16	16	20	25	30	30
E	45	55	65	75	95	115	140	180	220
FL	22	25	27	32	36	41	50	55	60
L 2 (±0.5)	5,5	5,5	6,5	6,5	10	10	10	10	11
S 5	6,6	6,6	9	9	11	11	13,5	18	18
TG	32,5	38	46,5	56,5	72	89	110	140	175
XD	142	160	170	190	210	230	275	315	335
Weight gr.	360	580	780	1370	2370	4110	7670	12650	17480

Square angle complete trunnion

Ordering code

1320.Ø.23F

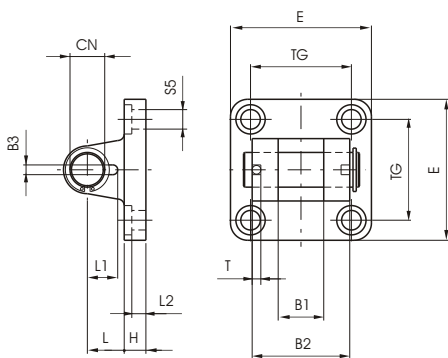
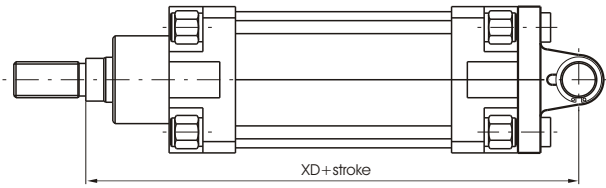


Bore	32	40	50	63	80	100
CA (JS 15)	32	36	45	50	63	71
CD	10	12	12	16	16	20
E	45	55	65	75	95	115
FL	22	25	27	32	36	41
G 1 (JS 14)	21	24	33	37	47	55
G 2 (JS 14)	18	22	30	35	40	50
G 3	31	35	45	50	60	70
H 3	8	10	12	12	14	15
K 1 (JS 14)	38	41	50	52	66	76
K 2	51	54	65	67	86	96
L 3 (±0.5)	7,5	8	10	10	11	12
S 5 (H 13)	6,6	6,6	9	9	11	11
TG	32,5	38	46,5	56,5	72	89
XD	142	160	170	190	210	230
Weight gr.	340	500	640	1250	2100	3500

Rear leavis - narrow

Ordering code

1320.Ø.29F

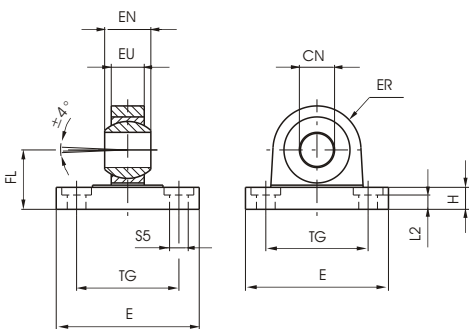
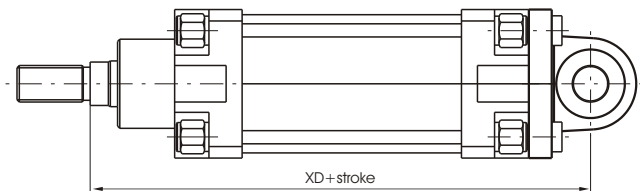


Bore	32	40	50	63	80	100	125
B 1 (H 14)	14	16	21	21	25	25	37
B 2 (d 12)	34	40	45	51	65	75	97
B 3 (±0.2)	3,3	4,3	4,3	4,3	4,3	6,3	6,3
CN (f 7)	10	12	16	16	20	20	30
E	45	55	65	75	95	115	140
H	10	10	10	12	14	16	20
L	12	15	17	20	22	25	30
L 1 (±0.3)	11,5	12	14	14	16	16	24
L 2 (±0.5)	5,5	5,5	6,5	6,5	10	10	10
S 5 (H 13)	6,5	6,5	8,5	8,5	10,5	10,5	13
T (±0.2)	3	4	4	4	4	4	6
TG	32,5	38	46,5	56,5	72	89	110
XD	142	160	170	190	210	230	275
Weight gr.	160	270	370	670	1110	2100	4150

Rear male cleavis (with joined head according to DIN 648K standards)

Ordering code

1320.Ø.25F



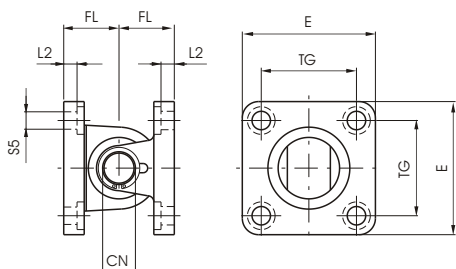
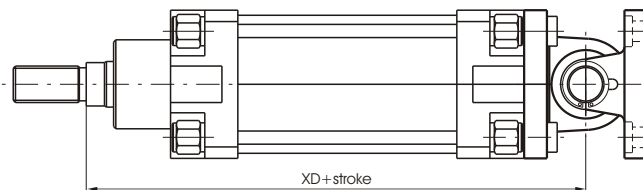
Bore	32	40	50	63	80	100	125
CN (H 7)	10	12	16	16	20	20	30
E	45	55	65	75	95	115	140
EN (-0.1)	14	16	21	21	25	25	37
ER	15	18	20	23	27	30	40
EU	10,5	12	15	15	18	18	25
FL (JS 15)	22	25	27	32	36	41	50
H	10	10	10	12	14	16	20
L 2 (±0.5)	5,5	5,5	6,5	6,5	10	10	10
S 5 (H 13)	6,5	6,5	8,5	8,5	10,5	10,5	13
TG	32,5	38	46,5	56,5	72	89	110
XD	142	160	170	190	210	230	275
Weight gr.	210	310	400	710	1350	2400	4000

4

Complete standard trunnion (with joined head according to DIN 648K standards)

Ordering code

1320.Ø.26F

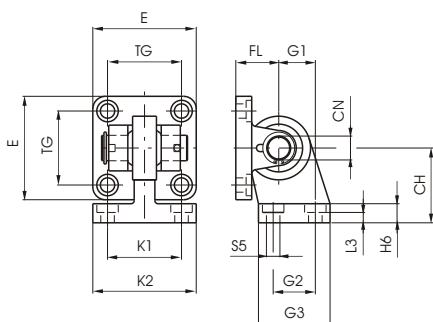
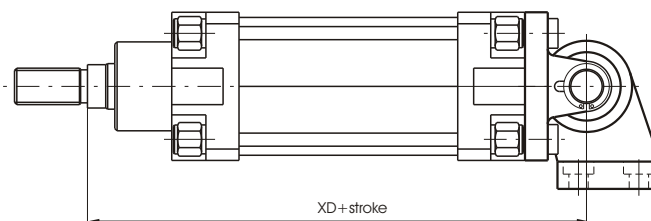


Bore	32	40	50	63	80	100	125
CN	10	12	16	16	20	20	30
E	45	55	65	75	95	115	140
FL (±0.2)	22	25	27	32	36	41	50
L 2 (±0.5)	5,5	5,5	6,5	6,5	10	10	10
S 5 (H 13)	6,5	6,5	8,5	8,5	10,5	10,5	13
TG	32,5	38	46,5	56,5	72	89	110
XD	142	160	170	190	210	230	275
Weight gr.	380	580	770	1380	2460	4500	7700

Complete square angle trunnion (with joined head according to DIN 648K standards)

Ordering code

1320.Ø.27F



Bore	32	40	50	63	80	100	125
CH (JS 15)	32	36	45	50	63	71	90
CN	10	12	16	16	20	20	30
E	45	55	65	75	95	115	140
FL (JS 15)	22	25	27	32	36	41	50
G 1 (JS 14)	21	24	33	37	47	55	70
G 2 (JS 14)	18	22	30	35	40	50	60
G 3	31	35	45	50	60	70	90
H 6	10	10	12	12	14	15	20
K 1 (JS 14)	38	41	50	52	66	76	94
K 2	51	54	65	67	86	96	124
L 3 (±0.5)	7,5	8	10	10	11	12	17
S 5 (H 13)	6,6	6,6	9	9	11	11	13
TG	32,5	38	46,5	56,5	72	89	110
XD	142	160	170	190	210	230	275
Weight gr.	330	480	830	1220	2100	3580	7000