

COMPONENTS FOR PNEUMATIC AUTOMATION



COMPACT CYLINDERS
ISO 21287
ECOMPACT



General

The new **ECOMPACT** range of cylinders, manufactured to ISO 21287, represent the latest generation of Pneumax compact cylinders and are based upon the experience gained with the 1500 and Europe series cylinders. The ECOCOMPACT series is completely new and every component has been designed specifically for this range. The design is "clean", with aluminium end caps that perfectly match the anodized aluminium barrel profile and all edges are carefully rounded.

The end caps are mounted to the barrel using self tapping zinc plated screws (two for each end cap) which also carry the thread used to mount the cylinder accessories (the other two threads are formed in the end cap itself).

On the 80 and 100 bore cylinder the end caps are fixed with four screws and the mounting threads are all formed in the end cap. The new barrel design includes two slots (one slot on the 20 and 25mm bore) on three sides which are suitable for the slim series magnetic sensor (square profile type "B" slot – 1580) which can be directly mounted without the need for adaptors.

The piston comprises two half pistons made from acetylic resin (aluminium on the 80 and 100mm bore) with integrated cushioning bushes and a guide ring that ensures excellent guidance for the rod. Several configurations are available: Non-cushioned or cushioned (from 25mm bore), magnetic or non-magnetic piston, double or single acting (front or rear spring), male or female piston rod threads, chromed steel or 420-A stainless piston rods, through rod, non-rotating rod and various tandem configurations. Furthermore, a choice of seal materials is available (see technical specifications below).

All versions and sizes are fitted with a noise reducing bumper ring.

The bore sizes available are as specified by the ISO 21287 standard: Ø20, Ø25, Ø32, Ø40, Ø50, Ø63, Ø80, Ø100.

These cylinder may be mounted using the threads on the end caps, via the through holes in the body, or using UNITOP RU-P/6-P/7 (20 & 25mm bore) and ISO 15552 (32 to 100mm bore) mounting accessories.

Construction characteristics

Body	25 micron anodized aluminium alloy
End plates	UNI 5076 aluminium alloy casting painted
Rod-guide bushing	sintered bronze
Piston rod	from Ø20 to Ø25 stainless steel AISI 303 chromed from Ø32 to Ø100 C43 chromed (on request stainless steel AISI 420 A)
Half piston	from Ø20 to Ø63 acetal resin ,Ø80 an Ø100 aluminium (with FPM seals aluminium piston on all diameter)
Piston seals	oil resistant nitrile rubber (NBR) Polyurethane (PUR), fluoropolymer rubber (FPM)
Piston rod seals	Polyurethane (PUR), fluoropolymer rubber (FPM)
Spring	stainless steel AISI 302
Fixing screw	plated zinc steel

Technical characteristics

Fluid	Filtered and preferably lubricated air, or non-lubricated (if air is lubricated, the lubrication must be constant).		
Max. pressure	10 bar		
Operating temperature	oil resistant nitrile rubber (NBR):	-5° C ÷ +70°C	
	Polyurethane (PUR):	-30° C ÷ +80°C	
	Viton® (FPM):	-5° C ÷ +150°C	

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

Stroke tolerance, minimum and maximum spring loads and cushioning length

Bore (mm)	Stroke tolerance (mm)	Minimum and maximum springs load (N)		Cushioning length (mm)
		min.	max.	
Ø20	+1,5 / 0 mm	10,8	19,6	/
Ø25		16,7	22,6	5
Ø32	+2 / 0 mm	19,6	25,5	6,5
Ø40		25,5	42,2	8
Ø50		44,1	96,3	7,5
Ø63	+2,5 / 0mm	44,1	96,3	7,5
Ø80		63,8	100,1	8
Ø100		107,9	193,3	12

STANDARD STROKE

**DOUBLE ACTING
BASIC VERSION
& PUSH/PULL ROD**

Bore	Stroke																												
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	100	125	125	160	200	250	300	320	350	400	450	500	
	WITHOUT CUSHIONING DEVICE																												
Ø20	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Ø25	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Ø32	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Ø40	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Ø50	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Ø63	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Ø80	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Ø100	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	WITH CUSHIONING DEVICE																												
Ø20					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Ø25					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Ø32					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Ø40					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Ø50					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Ø63					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Ø80					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Ø100					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

**DOUBLE ACTING
BASIC VERSION
PUSH/PULL ROD**

Bore	STROKE																											
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80												
	WITHOUT CUSHIONING DEVICE								WITH CUSHIONING DEVICE																			
Ø20	●	●	●	●	●	●	●	●									●	●	●	●	●	●	●	●	●	●	●	
Ø25	●	●	●	●	●	●	●	●	●								●	●	●	●	●	●	●	●	●	●	●	●
Ø32	●	●	●	●	●	●	●	●	●	●							●	●	●	●	●	●	●	●	●	●	●	●
Ø40	●	●	●	●	●	●	●	●	●	●	●						●	●	●	●	●	●	●	●	●	●	●	●
Ø50	●	●	●	●	●	●	●	●	●	●	●	●					●	●	●	●	●	●	●	●	●	●	●	●
Ø63	●	●	●	●	●	●	●	●	●	●	●	●	●				●	●	●	●	●	●	●	●	●	●	●	●
Ø80	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●	●	●	●	●	●	●	●	●	●	●	●
Ø100	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●

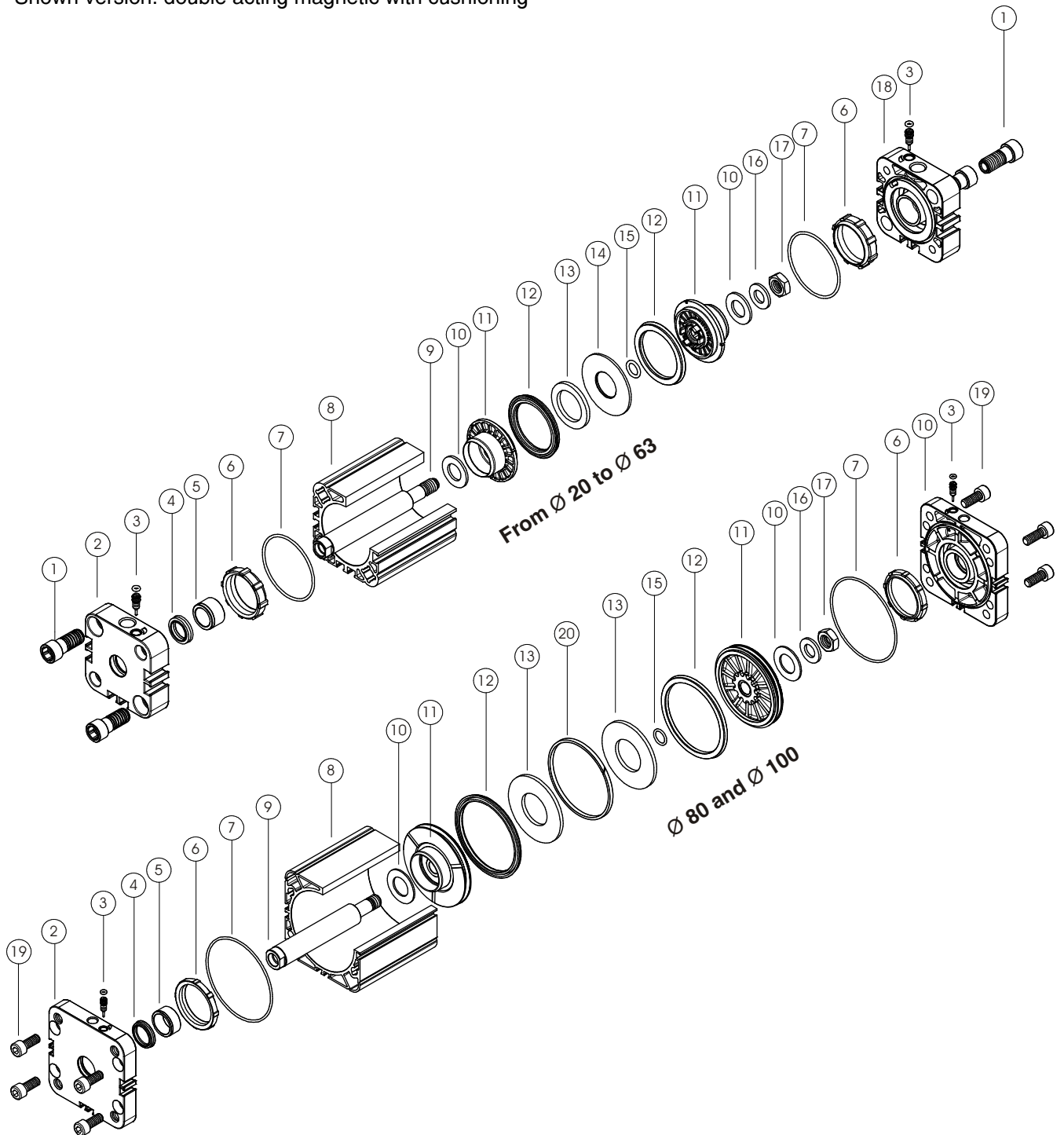
**DOUBLE ACTING VERSION
WITH NON-ROTATING DEVICE**

Bore	Stroke																											
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80												
	WITHOUT CUSHIONING DEVICE								WITH CUSHIONING DEVICE																			
Ø20	●	●	●	●	●	●	●	●									●	●	●	●	●	●	●	●	●	●	●	
Ø25	●	●	●	●	●	●	●	●	●								●	●	●	●	●	●	●	●	●	●	●	●
Ø32	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Ø40	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Ø50	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Ø63	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Ø80	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Ø100	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

SINGLE ACTING VERSION

Bore	Stroke				
	5	10	15	20	25
Ø20	●	●	●	●	●
Ø25	●	●	●	●	●
Ø32	●	●	●	●	●
Ø40	●	●	●	●	●
Ø50	●	●	●	●	●
Ø63	●	●	●	●	●
Ø80	●	●	●	●	●
Ø100	●	●	●	●	●

Shown version: double acting magnetic with cushioning



Pos.	Description	N.pieces		Pos.	Description	N.pieces	
		Non-cushioned version	Cushioning version			Not cushioning version	Cushioning version
1	Tie nut (Ø20 ÷ Ø63)	4		11	Half piston	2	2
2	Front cover	1	1	12	Piston seal	2	2
3	Cushion adjustment screw	/	2	13	Magnet	*	
4	Piston rod seal	1	1	14	Piston washer	1	1
5	Bronze bush	1	1	15	Half piston seal	**	
6	Cushion seal	/	2	16	Washer	1	1
7	Cover seal	2	2	17	Nut	1	1
8	Barrel	1	1	18	Rear cover	1	1
9	Piston rod	1	1	19	Screw, end cover (Ø80 ÷ Ø100)	8	
10	Cushion washer	2	2	20	Sliding shoes guide	1	1

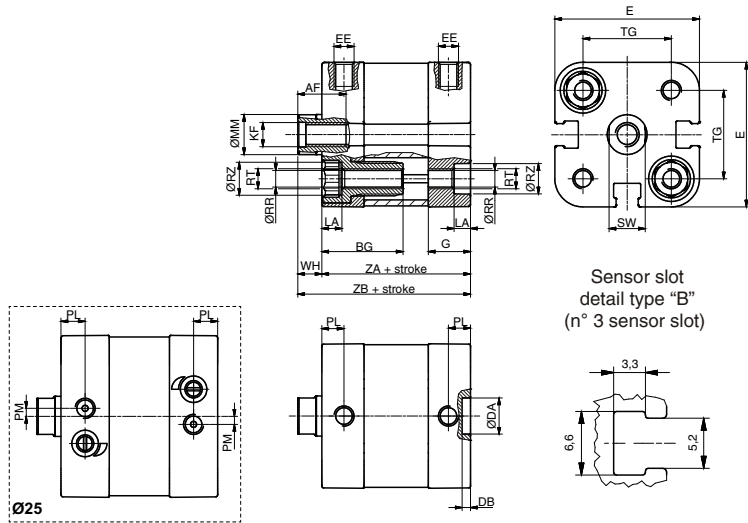
*Ø40 ÷ Ø63 n°1, other bores n°2

**Ø20 n°2, other bores n°1

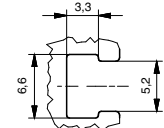
BASIC version
double and single acting



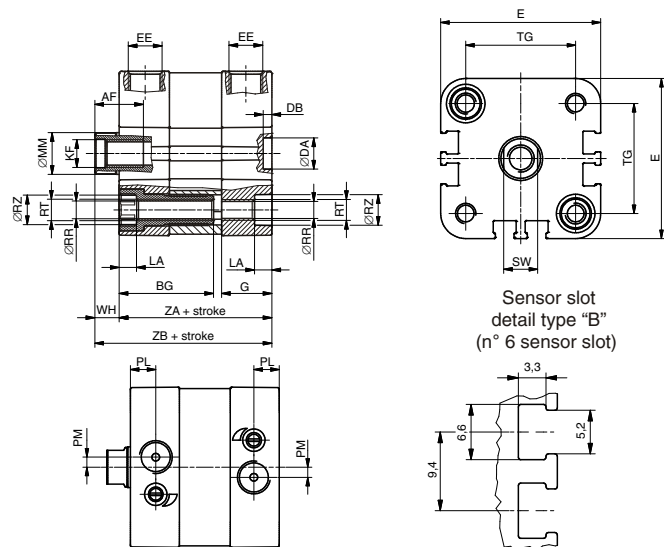
Ø20 and Ø25



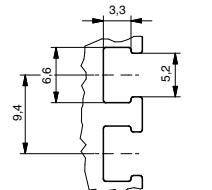
Sensor slot detail type "B" (n° 3 sensor slot)



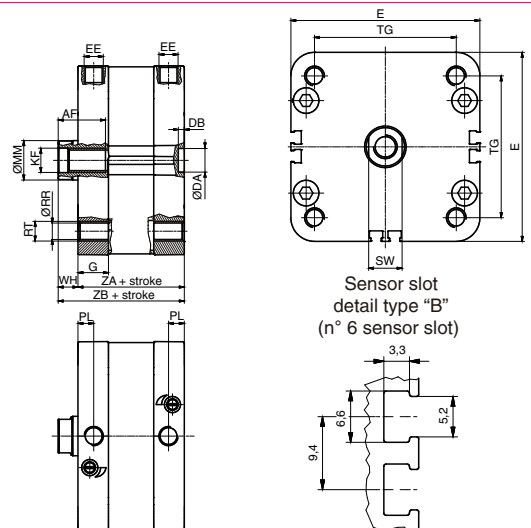
from Ø32 to Ø63



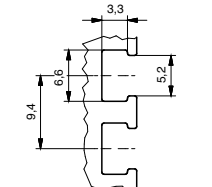
Sensor slot detail type "B" (n° 6 sensor slot)



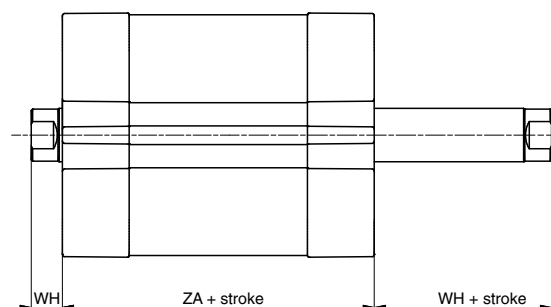
Ø80 and Ø100



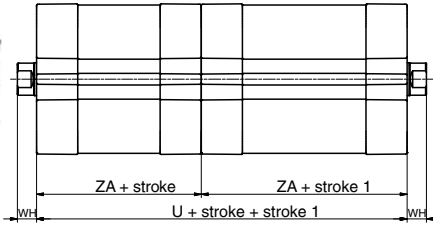
Sensor slot detail type "B" (n° 6 sensor slot)



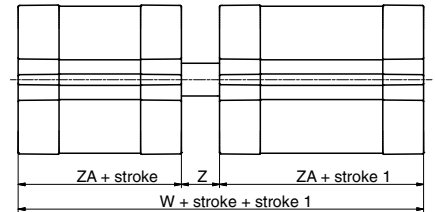
PUSH/PULL rod version
double and single acting



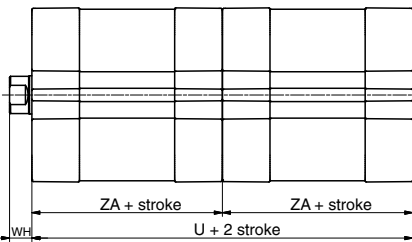
TANDEM version



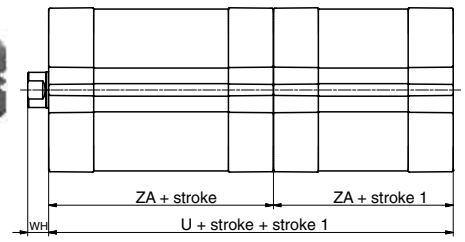
Tandem with opposed rods



Opposed tandem with common rods



Tandem push with common rod



Tandem push with independent rod

Ordering code

Basic and push/pull version

15 . Ø . stroke .

- 1= magnetic piston, Double acting
 - 2= magnetic piston, Single acting with front spring
 - 3= magnetic piston, Single acting with rear spring
 - 4= non magnetic piston, Double acting
 - 5= non magnetic piston, Single acting with front spring
 - 6= non magnetic piston, Single acting with rear spring
 - 01= Base, female threaded rod
 - 02= Base, male threaded rod
 - 03= through rod, female threaded rod
 - 04= through rod, male threaded rod
 - 05= through rod, bored female threaded rod
 - 06= through rod, bored male threaded rod
 - 07= With non-rotating device
 - 08= through rod, female threaded rod, with non-rotating device on one side
 - 09= through rod, male threaded rod, with non-rotating device on one side
 - 0= NBR seals and C43 chromed plated rod *
 - 1= NBR seals and AISI 420-A plated rod (starting from bore Ø32)
 - 4= PUR seals and C43 chromed plated rod *
 - 5= PUR seals and AISI 420-A plated rod (starting from bore Ø32)
 - 6= FPM seals and C43 chromed plated rod *
 - 7= FPM seals and AISI 420-A plated rod
- * (Ø20 and Ø25 AISI 303 stainless steel chromed)
- 4= Non-cushioned version (mechanical cushioning only)
 - 5= Versions with adjustable end of stroke cushioning system (from Ø25)

TANDEM version

15 . Ø . stroke . (stroke 1) .

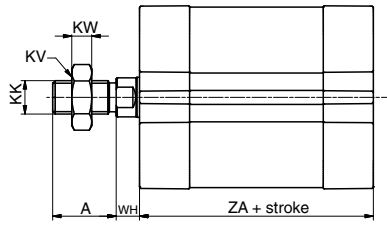
- C= female threaded rod
 - G= male threaded rod
 - H= with through rod and female threaded rod
 - N= with non-rotating device
 - B= female threaded rod
 - F= male threaded rod
 - M= with non-rotating device
 - P= with through rod and female threaded rod
 - Q= with through rod and male threaded rod
 - D= **Opposed tandem with common rod**
 - A= female threaded rod
 - E= male threaded rod
 - L= with non-rotating device on both ends
- 0= NBR seals and C43 chromed plated rod *
 - 1= NBR seals and AISI 420-A plated rod (starting from bore Ø32)
 - 4= PUR seals and C43 chromed plated rod *
 - 5= PUR seals and AISI 420-A plated rod (starting from bore Ø32)
 - 6= FPM seals and C43 chromed plated rod *
 - 7= FPM seals and AISI 420-A plated rod
- * (Ø20 and Ø25 AISI 303 stainless steel chromed)
- 4= Non-cushioned version (mechanical cushioning only)
 - 5= Versions with adjustable end of stroke cushioning system (from Ø25)

Seal compounds scheme: **NBR** oil resistant nitrilic rubber
PUR: polyurethane seals **FPM**: fluoropolymer rubber seals

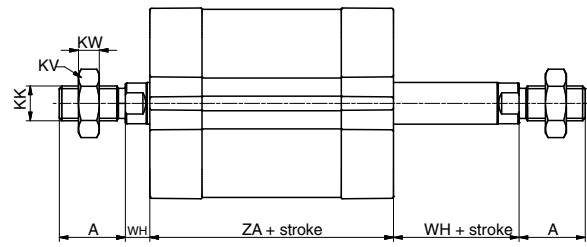
Table of dimensions

	Ø20	Ø25	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100	
AF (min)	12	12	14	14	18	18	24	24	
BG	20	20	27	27	29	29	/	/	
DA (H9)	Ø 9	9	9	9	12	12	12	12	
DB (+0,1/0)	2,1	2,1	2,5	2,5	2,6	2,6	3	3	
E (max)	36	40,5	47,5	55	66	78	96	116	
EE	M5	M5	G1/8	G1/8	G1/8	G1/8	G1/8	G1/8	
G	10,5	12	14,5	15	15	15	15,5	18,5	
KF	M6	M6	M8	M8	M10	M10	M12	M12	
LA (0/-0,1)	4,1	4,1	5	5	5	5	/	/	
MM (f7)	Ø 10	10	12	12	16	16	20	25	
PL (+0,1/0)	5,5	6	7,5	8	8	8	8	8	
PM	/	2	3	/	/	/	/	/	
RR (min)	Ø 4,1	4,1	5,1	5,1	6,6	6,6	8,4	8,4	
RT	M5	M5	M6	M6	M8	M8	M10	M10	
RZ (min)	Ø 7,5	7,5	8,5	8,5	10,5	10,5	/	/	
SW (0/-0,1)	9	9	10	10	13	13	17	22	
TG (±0,2)	22	26	32,5	38	46,5	56,5	72	89	
U	74	78	88	90	90	98	108	134	
W	83	89	100	103	105	113	124	154	
WH (±1)	6	6	7	7	8	8	10	10	
Z	9	11	12	13	15	15	16	20	
ZA (±0,5)	37	39	44	45	45	49	54	67	
ZB (+1/0)	43	45	51	52	53	57	64	77	
Weight									
gr.	Stroke every 5mm	105	110	200	270	420	550	760	1400
		10	10,5	13	17	23,5	27	37	51

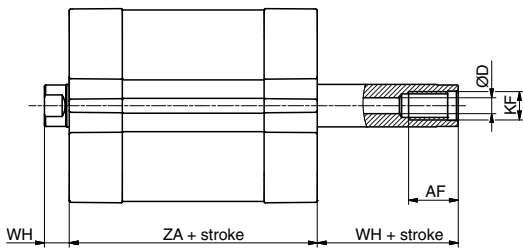
Basic version male piston rod



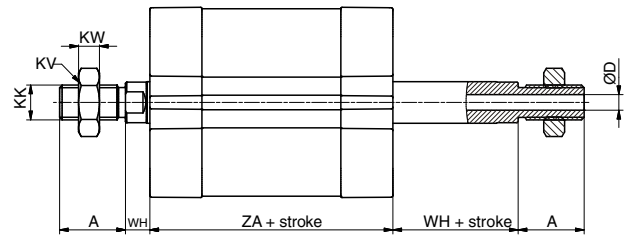
Push/pull version male rod



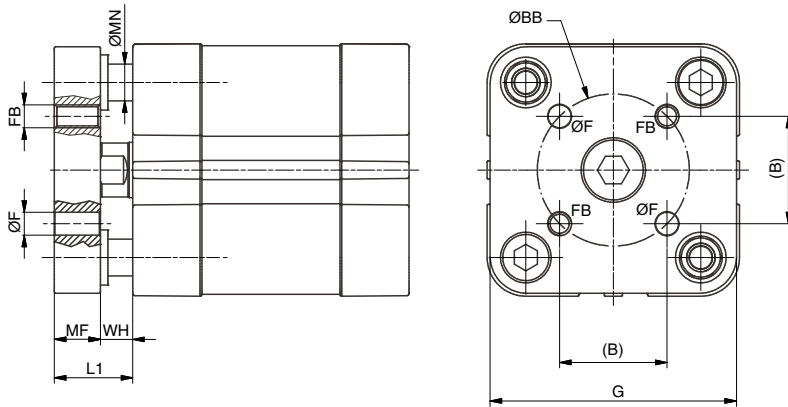
Push - pull version bored female piston rod



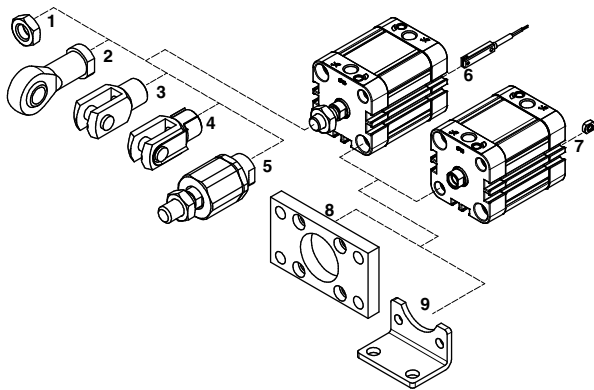
Push - pull version bored male piston rod



Non-rotating version

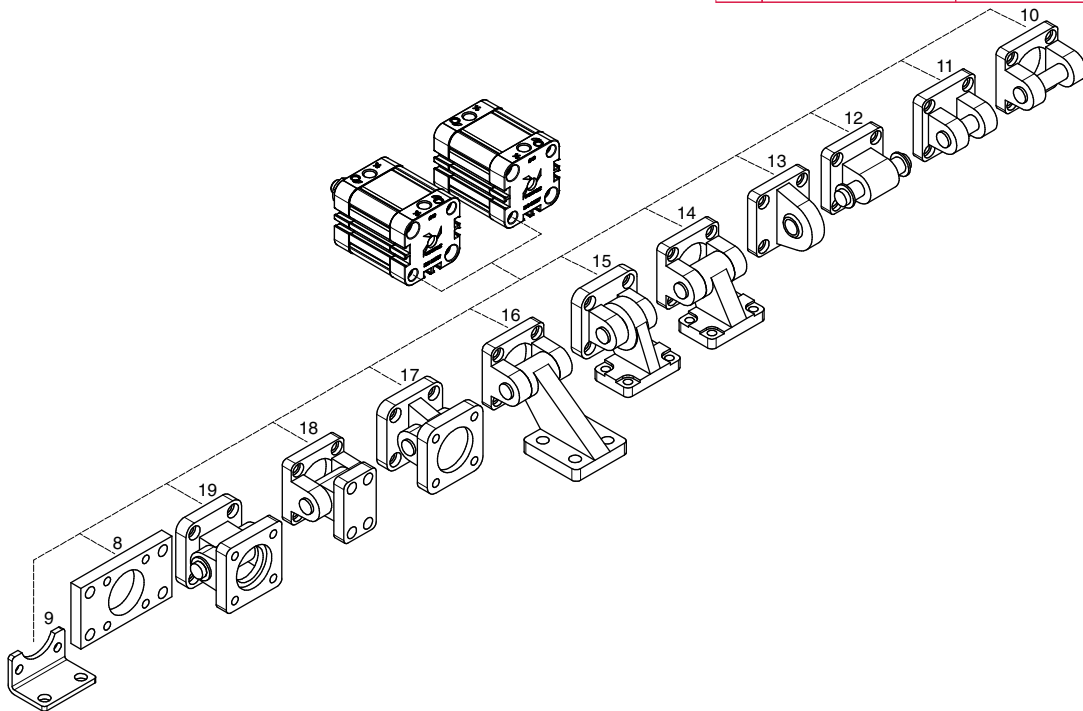


Bore	Ø20	Ø25	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100
A (0/-0,5)	16	16	19	19	22	22	28	28
AF (min)	12	12	14	14	18	18	24	24
B	12	15,6	19,8	23,3	29,7	35,4	46	56,6
BB (±0,1)	Ø 17	22	28	33	42	50	65	80
D	Ø 3,8	3,8	4,5	4,5	6	6	8	10
F (+0,1/0)	Ø 4	5	5	5	6	6	8	10
FB	M4	M5	M5	M5	M6	M6	M8	M10
G	35	39,5	45	52	65	75	95	115
KF	M6	M6	M8	M8	M10	M10	M12	M12
KK	M8x1,25	M8x1,25	M10x1,25	M10x1,25	M12x1,25	M12x1,25	M16x1,5	M16x1,5
KV	13	13	17	17	19	19	24	24
KW	5	5	6	6	7	7	8	8
L1	14	14	17	17	20	20	24	24
MF (+0,1/0)	8	8	10	10	12	12	14	14
MN (f 7)	Ø 6	6	8	8	10	10	12	12
WH (±1)	6	6	7	7	8	8	10	10
ZA (±0,5)	37	39	44	45	45	49	54	67



Sensor and piston rod accessories

Pos.	Description	Ordering code	
		Aluminium	Steel
1	Rod lock nut	1200.20.06	(Ø20-Ø25)
		1320.32.18F	(Ø32-Ø40)
		1320.40.18F	(Ø50-Ø63)
		1320.50.18F	(Ø80-Ø100)
2	Ball joint	1200.20.32	(Ø20-Ø25)
		1320.32.32F	(Ø32-Ø40)
		1320.40.32F	(Ø50-Ø63)
		1320.50.32F	(Ø80-Ø100)
3	Fork	1200.20.04	(Ø20-Ø25)
		1320.32.13F	(Ø32-Ø40)
		1320.40.13F	(Ø50-Ø63)
		1320.50.13F	(Ø80-Ø100)
4	Fork with clips	1200.20.04/1	(Ø20-Ø25)
		1320.32.13/1F	(Ø32-Ø40)
		1320.40.13/1F	(Ø50-Ø63)
		1320.50.13/1F	(Ø80-Ø100)
5	Self-aligning joint	1200.20.33F	(Ø20-Ø25)
		1320.32.33F	(Ø32-Ø40)
		1320.40.33F	(Ø50-Ø63)
		1320.50.33F	(Ø80-Ø100)
6	Sensor	(See pag. 18)	
7	Valves direct mounting bolt	1500.20F	(Ø20 ÷ Ø100)



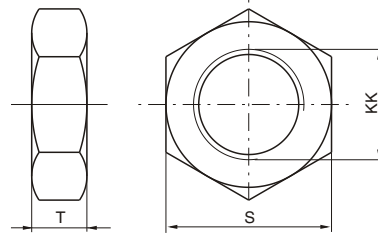
Fixing

Pos.	Description	Ordering code	
		Aluminium	Steel
8	Flange (Mp2)	/	1540.Ø.03F (Ø20 ÷ Ø25) 1380.Ø.03F (Ø32 ÷ Ø100)
9	Foot (MS1)	/	1540.Ø.05/1F (Ø20 ÷ Ø100)
10	Rear female clevis (MP2)	1380.Ø.09F (Ø32 ÷ Ø100)	1320.Ø.20F (Ø32 ÷ Ø100)
11	Narrow rear female trunnion (AB6)	1380.Ø.30F (Ø32 ÷ Ø100)	1320.Ø.29F (Ø32 ÷ Ø100)
12	Rear male clevis (MP4)	1580.Ø.09/1F (Ø20 ÷ Ø25)	1580.Ø.09/2F (Ø20 ÷ Ø100)
		1380.Ø.09/1F (Ø32 ÷ Ø100)	1320.Ø.21F (Ø32 ÷ Ø100)
13	Rear male clevis (with jointed head - MP6)	1380.Ø.15F (Ø32 ÷ Ø100)	1320.Ø.25F (Ø32 ÷ Ø100)
14	Square angle trunnion (Ab7)	1380.Ø.35F (Ø32 ÷ Ø100)	1320.Ø.23F (Ø32 ÷ Ø100)
15	Square angle trunnion (with jointed head)		1320.Ø.27F (Ø32 ÷ Ø100)
16	Square angle trunnion (not specified by ISO 15552)	1380.Ø.11F (Ø32 ÷ Ø100)	/
17	Standard trunnion (with jointed head)	1380.Ø.36F (Ø32 ÷ Ø100)	1320.Ø.26F (Ø32 ÷ Ø100)
18	Standard trunnion (not specified by ISO 15552)	1380.Ø.10F (Ø32 ÷ Ø100)	/
19	Complete standard trunnion	/	1320.Ø.22F (Ø32 ÷ Ø100)

Rod lock nut

Ordering code

Ø20-Ø25: **1200.20.06**
 Ø32-Ø40: **1320.32.18F**
 Ø50-Ø63: **1320.40.18F**
 Ø80-Ø100: **1320.50.18F**

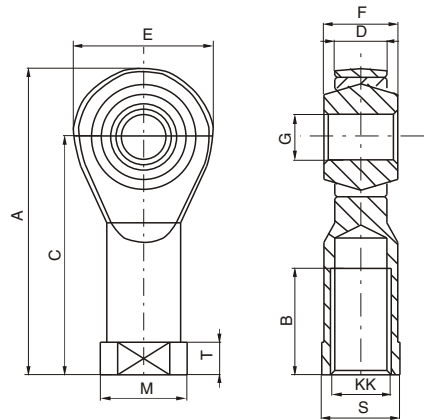


Bore	Ø20	Ø25	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100
S	13	13	17	17	19	19	24	24
T	5	5	6	6	7	7	8	8
KK	M8x1,25	M8x1,25	M10x1,25	M10x1,25	M12x1,25	M12x1,25	M16x1,5	M16x1,5
Weight gr.	12	12	15	15	20	20	20	20

Ball joint

Ordering code

Ø20-Ø25: **1200.20.32F**
 Ø32-Ø40: **1320.32.32F**
 Ø50-Ø63: **1320.40.32F**
 Ø80-Ø100: **1320.50.32F**

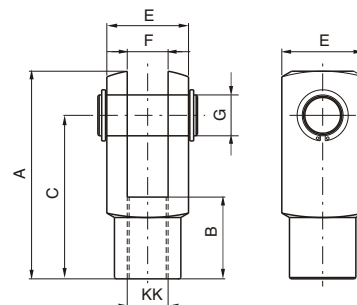


Bore	Ø20	Ø25	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100
A	48	48	57	57	66	66	85	85
B	16	16	20	20	22	22	28	28
C	36	36	43	43	50	50	64	64
D (-0,1)	9	9	10,5	10,5	12	12	15	15
E	24	24	28	28	32	32	42	42
F	12	12	14	14	16	16	21	21
G (H7)	8	8	10	10	12	12	16	16
KK	M8x1,25	M8x1,25	M10x1,25	M10x1,25	M12x1,25	M12x1,25	M16x1,5	M16x1,5
M	16	16	19	19	22	22	27	27
S	14	14	17	17	19	19	22	22
T	5	5	6,5	6,5	6,5	6,5	8	8
Weight gr.	46	46	76	76	110	110	220	220

Fork

Ordering code

Ø20-Ø25: **1200.20.04**
 Ø32-Ø40: **1320.32.13F**
 Ø50-Ø63: **1320.40.13F**
 Ø80-Ø100: **1320.50.13F**

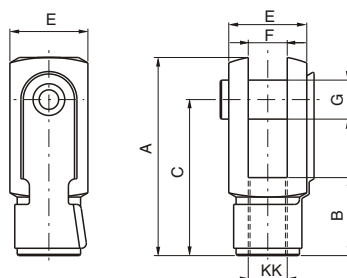


Bore	Ø20	Ø25	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100
A	42	42	52	52	62	62	83	83
B	16	16	20	20	24	24	32	32
C	32	32	40	40	48	48	64	64
E	16	16	20	20	24	24	32	32
F (B12)	8	8	10	10	12	12	16	16
G	8	8	10	10	12	12	16	16
KK	M8x1,25	M8x1,25	M10x1,25	M10x1,25	M12x1,25	M12x1,25	M16x1,5	M16x1,5
Weight gr.	45	45	100	100	140	140	340	340

Fork with clips

Ordering code

Ø20-Ø25: **1200.20.04/1**
 Ø32-Ø40: **1320.32.13/1F**
 Ø50-Ø63: **1320.40.13/1F**
 Ø80-Ø100: **1320.50.13/1F**

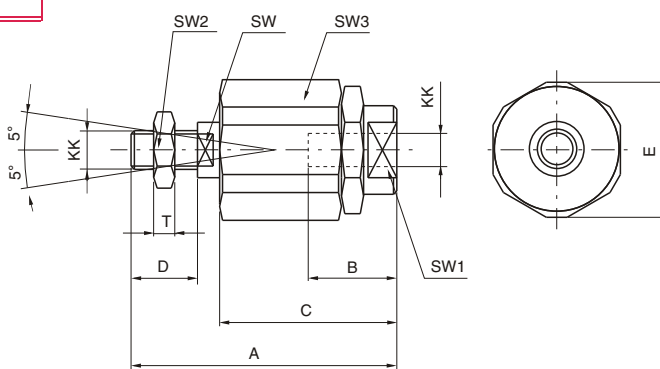


Bore	Ø20	Ø25	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100
A	42	42	52	52	62	62	83	83
B	16	16	20	20	24	24	32	32
C	32	32	40	40	48	48	64	64
E	16	16	20	20	24	24	32	32
F (B12)	8	8	10	10	12	12	16	16
G	8	8	10	10	12	12	16	16
KK	M8x1,25	M8x1,25	M10x1,25	M10x1,25	M12x1,25	M12x1,25	M16x1,5	M16x1,5
Weight gr.	45	45	100	100	140	140	340	340

Self-aligning joint

Ordering code

Ø20-Ø25: **1200.20.33F**
 Ø32-Ø40: **1320.32.33F**
 Ø50-Ø63: **1320.40.33F**
 Ø80-Ø100: **1320.50.33F**

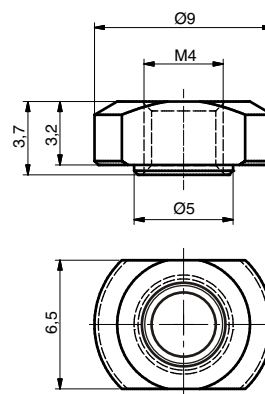


Bore	Ø20	Ø25	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100
A	57	57	71	71	75	75	103	103
B	20	20	20	20	20	20	32	32
C	33	33	46	46	46	46	63	63
D	20	20	20	20	24	24	32	32
E	19	19	32	32	32	32	45	45
KK	M8x1,25	M8x1,25	M10x1,25	M10x1,25	M12x1,25	M12x1,25	M16x1,5	M16x1,5
SW	7	7	12	12	12	12	20	20
SW1	11	11	19	19	19	19	27	27
SW2	13	13	17	17	19	19	24	24
SW3	17	17	30	30	30	30	41	41
T	5	5	6	6	7	7	8	8
Weight gr.	60	60	220	220	230	230	660	660

Valves direct mounting nut

Ordering code

1500.20.F

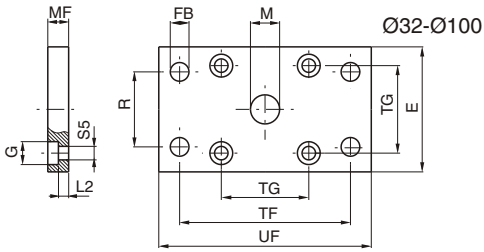
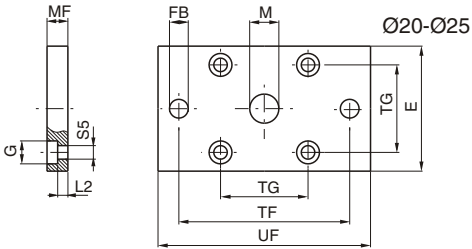
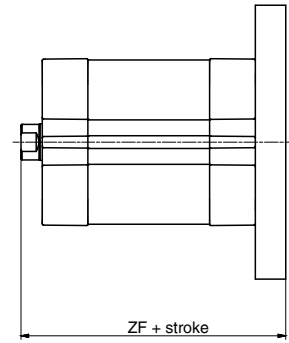
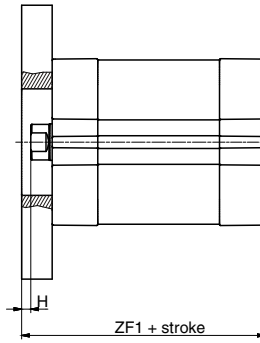


Flange (MF2)

Ordering code

Ø20-Ø25: **1540.Ø.03F**
Ø32-Ø100: **1380.Ø.03F**

The kit comprises:
n°1 flange (plated zinc steel)
n°4 screws (plated zinc steel)



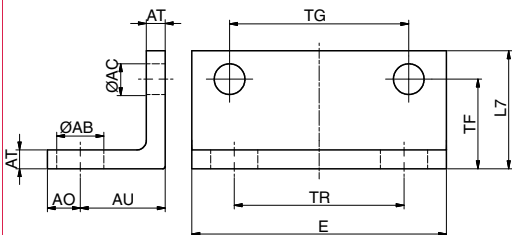
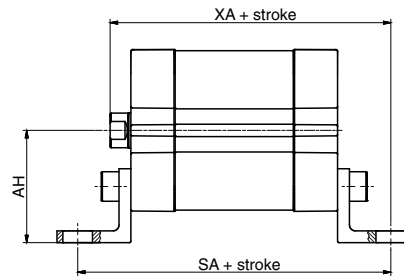
Bore	Ø20	Ø25	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100
E	35	40	45	52	65	75	95	115
FB (H 13)	6,6	6,6	7	9	9	9	12	14
G	9,5	9,5	10,5	10,5	15	15	18	18
M (H 11)	16	16	30	35	40	45	45	55
MF (JS 14)	8	8	10	10	12	12	16	16
R (JS 14)	/	/	32	36	45	50	63	75
TF (JS 14)	55	60	64	72	90	100	126	150
TG	22	26	32,5	38	46,5	56,5	72	89
UF	70	75	80	90	110	120	150	170
ZF	51	53	130	145	155	170	190	205
ZF1	45	47	54	55	57	61	70	83
W	2	2	3	3	4	4	6	6
L2	3	3	5	5	6,5	6,5	8	8
S5 (H 13)	5,5	5,5	6,6	6,6	9	9	11	11
Weight gr.	125	160	190	250	480	620	1430	1990

Foot (MS1)

Ordering code

1540.Ø.05/1F

The kit comprises:
n°1 foot (plated zinc steel)
n°2 screws (plated zinc steel)



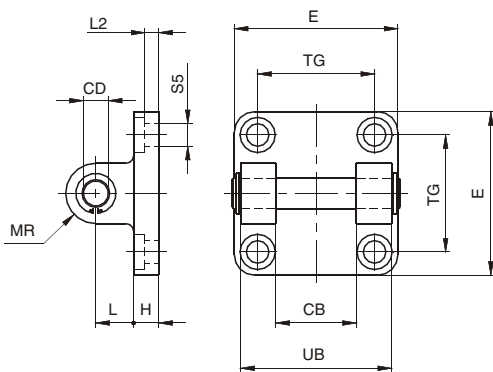
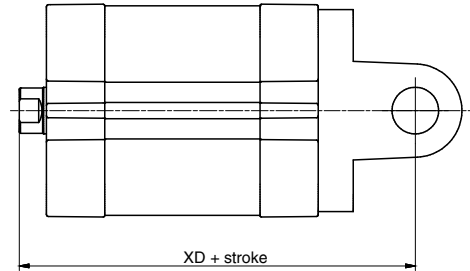
Bore	Ø20	Ø25	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100
AB (H 14)	7	7	7	10	10	10	12	14,5
AC	5,5	5,5	6,5	6,5	8,5	8,5	10,5	10,5
AH	27	29	33,5	38	45	50	63	74
AO (max)	7	7	7	7	9	9	11	13
AT (±0,5)	4	4	4	4	5	5	6	6
AU (±0,2)	16	16	16	18	21	21	26	27
E (max)	35,5	39,5	46,5	54	65	77	95	115
L7	20	20	25	25	30	30	40	45
TF (±0,1)	16	16	17,25	19	21,75	21,75	27	29,5
TG (±0,2)	22	26	32,5	38	46,5	56,5	72	89
TR (JS 14)	22	26	32	36	45	50	63	75
SA	69	71	76	81	87	91	106	121
XA	59	61	67	70	74	78	90	104
Weight gr.	40	45	60	70	130	160	300	405

Rear female clevis (MP2)

Ordering code

The kit comprises:
n°1 clevis (steel or painted aluminium)
n°4 screws (plated zinc steel)
n°1 pin (plated zinc steel)
n°2 circlips (steel)

Aluminium: **1380.Ø.09F**
Steel: **1320.Ø.20F**



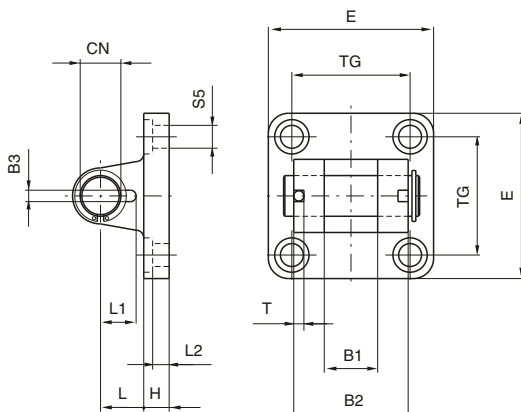
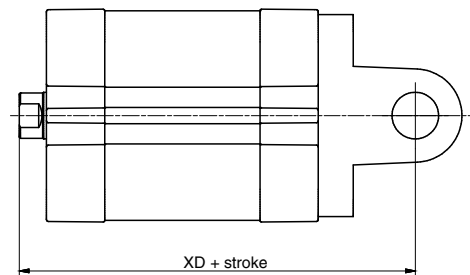
Bore	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100
CB (H 9)	26	28	32	40	50	60
CD (f 7)	10	12	12	16	16	20
E	45	52	65	75	95	115
H	Aluminium	9	9	11	11	14
	Steel	10	10	10	12	14
L	Aluminium	13	16	16	21	22
	Steel	12	15	17	20	22
MR	10	12	12	16	16	20
TG	32,5	38	46,5	56,5	72	89
UB	45	52	60	70	90	110
XD	142	160	170	190	210	230
L2	5,5	5,5	6,5	6,5	10	10
S5 (H 13)	6,6	6,6	9	9	11	11
Weight gr.	Aluminium	80	130	185	310	530
	Steel	180	290	400	670	1160

Narrow rear female trunnion (AB6)

Ordering code

The kit comprises:
n°1 clevis (plated zinc steel or painted)
n°4 screws (plated zinc steel)
n°1 pin (plated zinc steel)
n°2 circlip (steel)

Aluminium: **1380.Ø.30F**
Steel: **1320.Ø.29F**



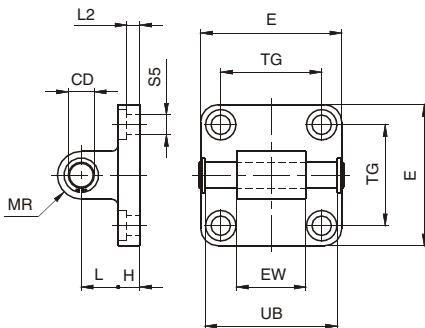
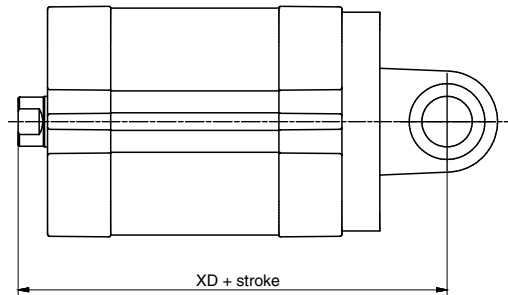
Bore	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100
B1 (H14)	14	16	21	21	25	25
B2 (D 12)	34	40	45	51	65	75
B3 (±0,2)	3,3	4,3	4,3	4,3	4,3	6,3
CN (f 7)	10	12	16	16	20	20
E	45	52	65	75	95	115
H	Aluminium	9	9	11	11	14
	Steel	10	10	10	12	14
L	Aluminium	13	16	16	21	22
	Steel	12	15	17	20	22
L1 (±0,3)	11,5	12	14	14	16	16
L2 (±0,5)	5,5	5,5	6,5	6,5	10	10
S5 (H13)	6,6	6,6	9	9	11	11
T (±0,2)	3	4	4	4	4	4
TG	32,5	38	46,5	56,5	72	89
XD	142	160	170	190	210	230
Weight gr.	Aluminium	70	115	200	290	570
	Steel	160	270	370	670	1110

Rear male clevis (MP4)

Ordering code

Aluminium: Ø20-Ø25: **1580.Ø.09/1F**
 Ø32-Ø100: **1380.Ø.09/1F**
 Steel: Ø20-Ø25: **1580.Ø.09/2F**
 Ø32-Ø100: **1320.Ø.21F**

The kit comprises:
 n°1 clevis (steel or painted aluminium)
 n°4 screws (plated zinc steel)
 n°1 pin (plated zinc steel) *
 n°2 circlips (steel)
 *(from Ø32)



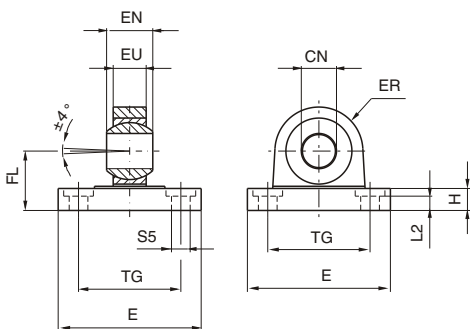
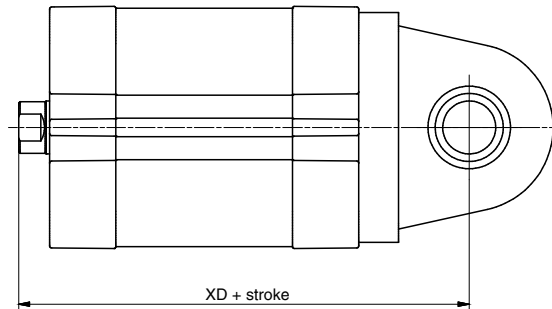
Bore	Ø20	Ø25	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100
CD(f 7)	8(H9)	8(H9)	10	12	12	16	16	20
E	34	38	45	52	65	75	95	115
EW ^(Ø21-Ø5)	16(h14)	16(h14)	26	28	32	40	50	60
H	Aluminium	6	6	9	9	11	14	14
	Steel	/	/	10	10	10	12	14
L	Aluminium	14	14	13	16	16	21	27
	Steel	/	/	12	15	17	20	25
MR	8	8	10	12	12	16	16	20
TG	22	26	32,5	38	46,5	56,5	72	89
UB	/	/	46	53	61	71	91	111
XD	62,5	65	142	160	170	190	210	230
L2	2,6	2,6	5,5	5,5	6,5	6,5	10	10
S5(H13)	5,5	5,5	6,6	6,6	9	9	11	11
Weight gr.	Aluminium	25	28	90	130	190	340	580
	Steel	70	80	210	330	430	810	1350

Rear male clevis (with jointed head MP6)

Ordering code

Aluminium: **1380.Ø.15F**
 Steel: **1320.Ø.25F**

The kit comprises:
 n°1 clevis (steel or painted aluminium)
 n°4 screws (plated zinc steel)



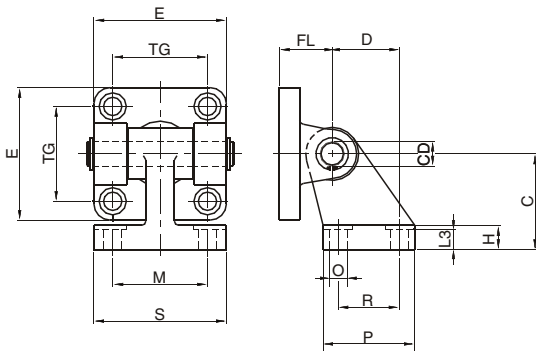
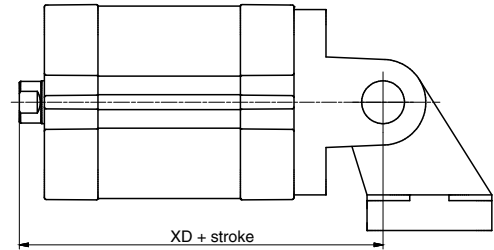
Bore	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100
CN (H7)	10	12	16	16	20	20
E	45	52	65	75	95	115
EN (-0,1)	14	16	21	21	25	25
ER	Aluminium	16	19	21	24	28,5
	Steel	15	18	20	23	27
EU	10,5	12	15	15	18	18
FL (JS 15)	22	25	27	32	36	41
H	Aluminium	9	9	11	11	14
	Steel	10	10	10	12	14
L2 (±0,5)	5,5	5,5	6,5	6,5	10	10
S5 (H 13)	6,6	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.	Aluminium	60	100	180	245	480
	Steel	210	310	400	710	1350

Square angle trunnion (AB7)

Ordering code

The kit comprises:
n°1 clevis (steel or painted aluminium)
n°1 counter clevis, square
(steel or painted aluminium)
n°4 screws (plated zinc steel)
n°1 pin (plated zinc steel)
n°2 circlips (steel)

Aluminium: **1380.Ø.35F**
Steel: **1320.Ø.23F**



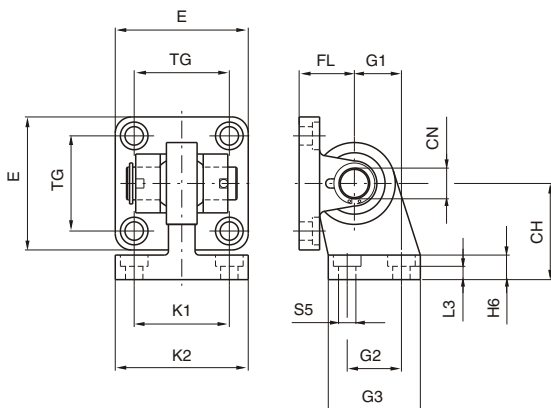
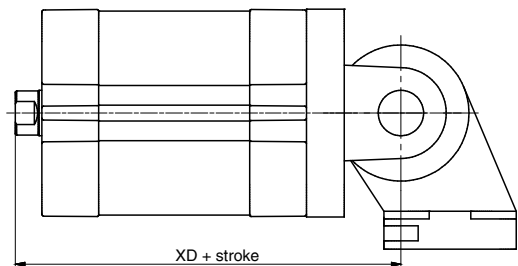
Bore	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100
E	45	52	65	75	95	115
TG	32,5	38	46,5	56,5	72	89
FL	22	25	27	32	36	41
D (JS14)	21	24	33	37	47	55
CD (H9)	10	12	12	16	16	20
C (JS15)	32	36	45	50	63	71
H	Aluminium	8	10	12	14	17
	Steel	/	/	/	12	15
L3	Aluminium	6,4	8,4	10,4	12,4	14,5
	Steel	7,5	8	10	10	11
R (JS14)	18	22	30	35	40	50
P	31	35	45	50	60	70
O (H13)	6,6	6,6	9	9	11	11
S	51	54	65	67	86	96
M (JS14)	38	41	50	52	66	76
XD	142	160	170	190	210	230
Weight gr.	Aluminium	120	180	225	435	730
	Steel	340	500	640	1250	2100

Square angle trunnion (with joined head)

Ordering code

The kit comprises:
n°1 clevis (painted steel)
n°1 counter clevis square
with joined head (painted steel)
n°4 screws (plated zinc steel)
n°1 pin (plated zinc steel)
n°2 circlips (steel)

Steel: **1320.Ø.27F**

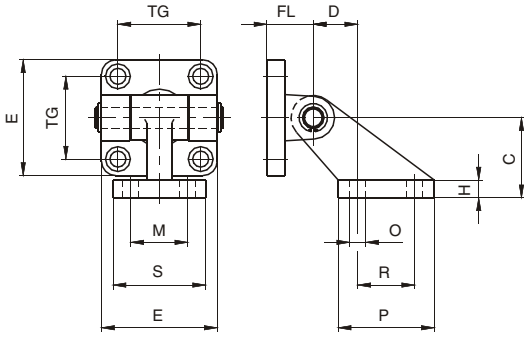
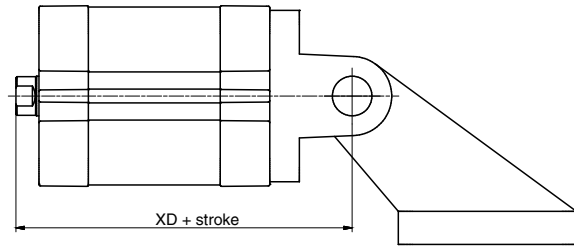


Bore	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100
CH (JS15)	32	36	45	50	63	71
CN	10	12	16	16	20	20
E	45	55	65	75	95	115
FL (JS 15)	22	25	27	32	36	41
G1 (JS 14)	21	24	33	37	47	55
G2 (JS 14)	18	22	30	35	40	50
G3 (JS 14)	31	35	45	50	60	70
H6	10	10	12	12	14	15
K1 (JS 14)	38	41	50	52	66	76
K2	51	54	65	67	86	96
L3 (± 0,5)	7,5	8	10	10	11	12
S5 (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.	330	480	830	1220	2100	3580

Square angle trunnion (not specified by ISO-VDMA standard)

Ordering code
Aluminium: **1380.Ø.11F**

The kit comprises:
n°1 clevis (painted aluminium)
n°1 counter clevis square (painted aluminium)
n°4 screws (plated zinc steel)
n°1 pin (plated zinc steel)
n°2 circlips (steel)

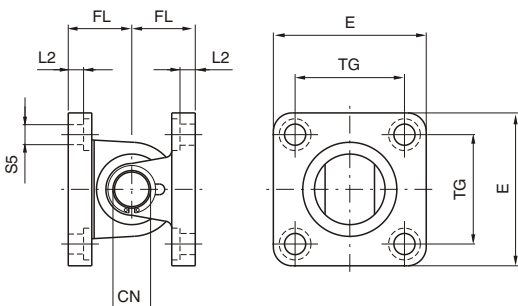
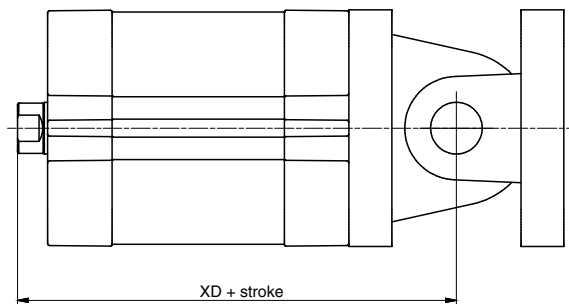


Bore	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100
C (JS15)	32	45	45	63	63	90
D	18	25	25	32	32	40
E	45	52	65	75	95	115
H	8	10	10	12	12	17
FL	22	25	27	32	36	41
M (JS 14)	25	32	32	40	40	50
TG	32,5	38	46,5	56,5	72	89
O (H 13)	7	9	9	11	11	14
P (JS 14)	37	54	54	75	75	103
R	20	32	32	50	50	70
S	41	52	52	63	63	80
XD	142	160	170	190	210	230
Weight gr.	130	260	330	600	820	1560

Square angle trunnion (with joined head)

Ordering code
Aluminium: **1380.Ø.36F**
Steel: **1320.Ø.26F**

The kit comprises :
n°1 clevis (steel or painted aluminium)
n°1 counter clevis with joined head (steel or painted aluminium)
n°4 screws (plated zinc steel)
n°1 pin (plated zinc steel)
n°2 circlips (steel)



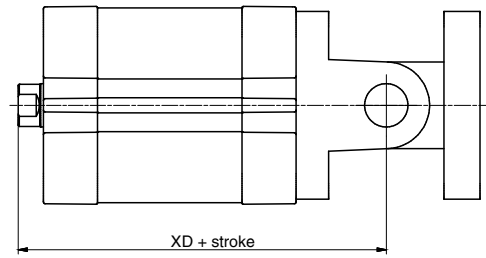
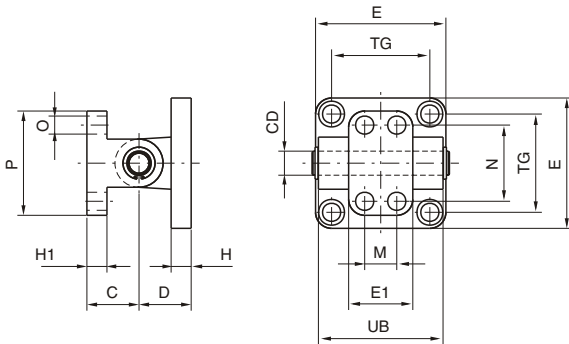
Bore	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100
CN	10	12	16	16	20	20
E	45	55	65	75	95	115
FL (± 0,2)	22	25	27	32	36	41
L2 (± 0,5)	5,5	5,5	6,5	6,5	10	10
S5 (H 13)	6,5	6,5	8,5	8,5	10,5	10,5
TG	32,5	38	46,5	56,5	72	89
XD	142	160	170	190	210	230
Weight gr.	Aluminium	130	215	380	535	1050
	Steel	380	580	770	1380	2460

Standard trunnion (not specified by ISO-VDMA standard)

Ordering code

Aluminium: **1380.Ø.10F**

The kit comprises:
 n°1 clevis (painted aluminium)
 n°1 counter clevis (painted aluminium)
 n°4 screws (plated zinc steel)
 n°1 pin (plated zinc steel)
 n°2 circlips (steel)



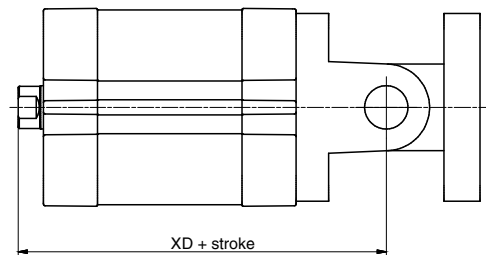
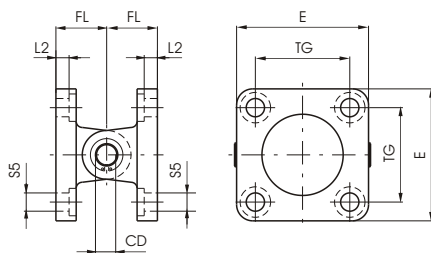
Bore	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100
C	18	26	26	34	34	41
CD	10	12	12	16	16	20
D	22	25	27	32	36	41
E1	45	52	65	75	95	115
E	25	32	32	46	46	56
H	10	10	12	12	16	16
H1	8	10	10	12	12	16
M	/	16	16	25	25	32
N	28	38	38	54	54	90
O	7	9	9	11	11	14
P	40	52	52	75	75	115
TG	32,5	38	46,5	56,5	72	89
UB	45	52	60	70	90	110
XD	142	160	170	190	210	230
Weight gr.	110	190	240	490	710	1290

Complete standard trunnion

Ordering code

Steel: **1320.Ø.22F**

The kit comprises:
 n°1 clevis (painted steel)
 n°1 counter clevis (painted steel)
 n°4 screws (plated zinc steel)
 n°1 pin (plated zinc steel)
 n°2 circlips (steel)

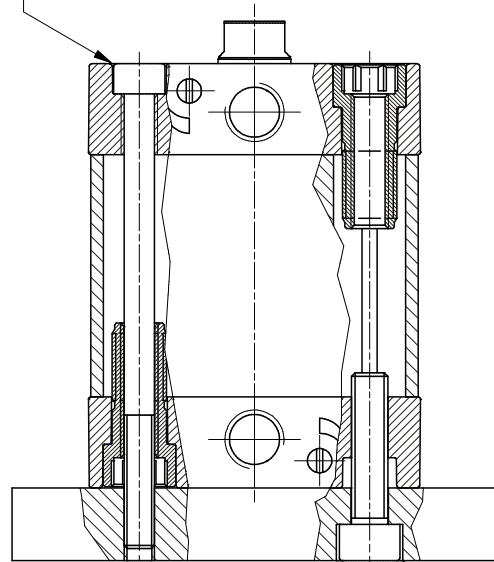


Bore	32	40	50	63	80	100
CD	10	12	12	16	16	20
E	45	55	65	75	95	115
FL	22	25	27	32	36	41
L 2 (±0.5)	5,5	5,5	6,5	6,5	10	10
S 5	6,6	6,6	9	9	11	11
TG	32,5	38	46,5	56,5	72	89
XD	142	160	170	190	210	230
Weight gr.	360	580	780	1370	2370	4110

Alternative fixing options

Frontal mounting:

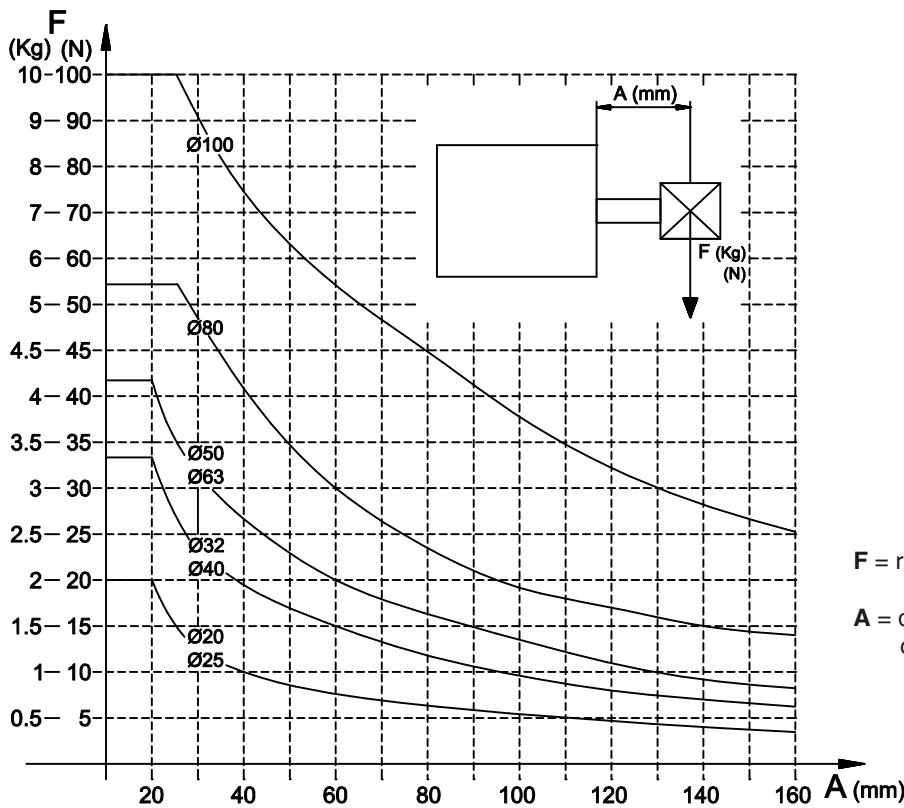
- from $\text{Ø}20$ to $\text{Ø}40$ bolt head
- the use of non-magnetic screws is recommended



Rear mounting



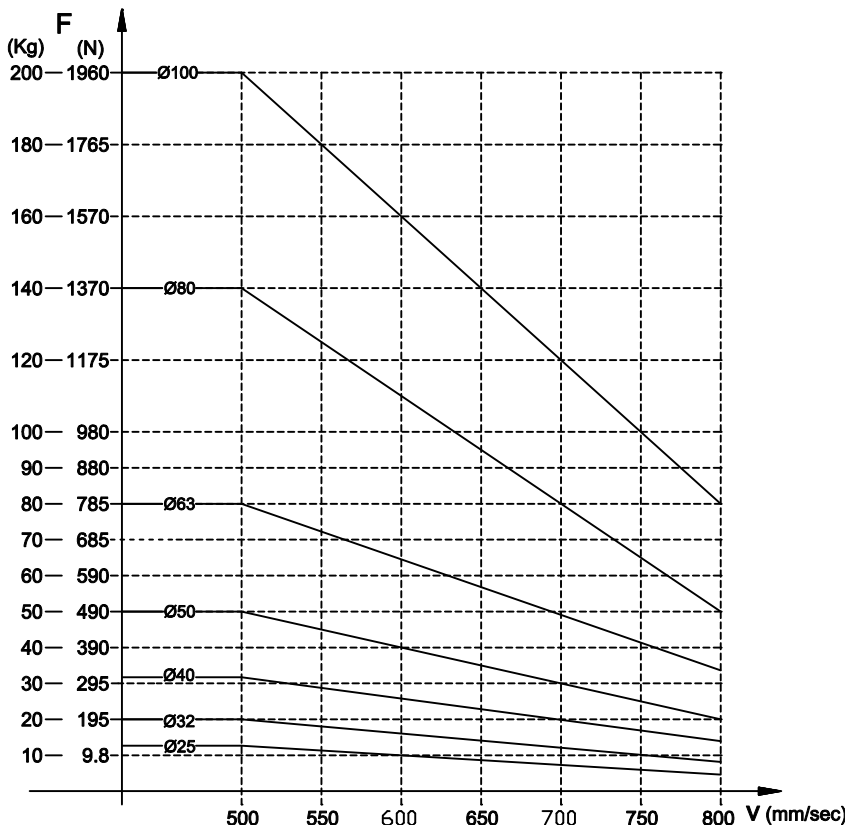
Admissible maximum radial load diagram



F = radial load (Kg and N)
 A = distance between the load (F) centre of gravity and the cylinder front end cap

The diagram shows the maximum Radial load F (in Newtons) that can be applied to the cylinder piston rod as a function of the distance A (in mm); based upon the standard version cylinder under static conditions

End of stroke cushioning capacity diagram



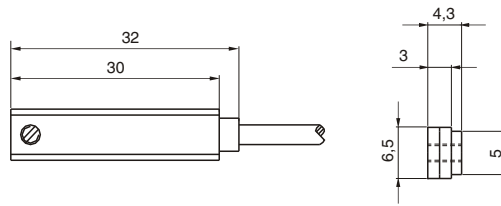
F = moved cylinder load (Kg e N)
 V = load speed

The diagram shows, for each diameter, the safety curves relative to the maximum loads which can be moved by the cylinder in function of its speed V . The data has been calculated under the following test conditions: Cylinder mounted vertically with the rod pointing down, air pressure at 5 bar and with a guided load. Important: Do not exceed the recommended values in the table as reduced life or damage to the cylinder may result.

Sensor c/w 2,5 m. cable



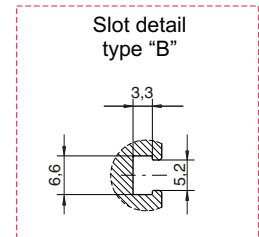
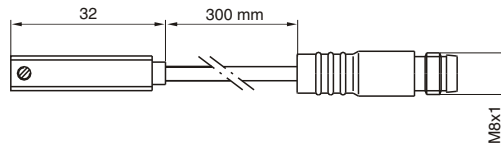
Weight gr. 27



Sensor c/w M8 connector



Weight gr. 15



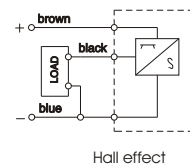
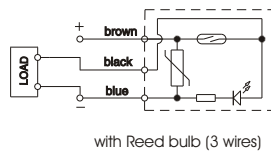
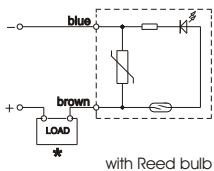
Ordering code

- 1580.U** Reed bulb sensor with led and cable 2 wires l=2,5mt.
- 1580.UAP** PNP sensor, REED type with led and 3wire cable L=2.5MT
- 1580.HAP** PNP sensor Hall effect with led and cable 3 wires l=2,5mt.

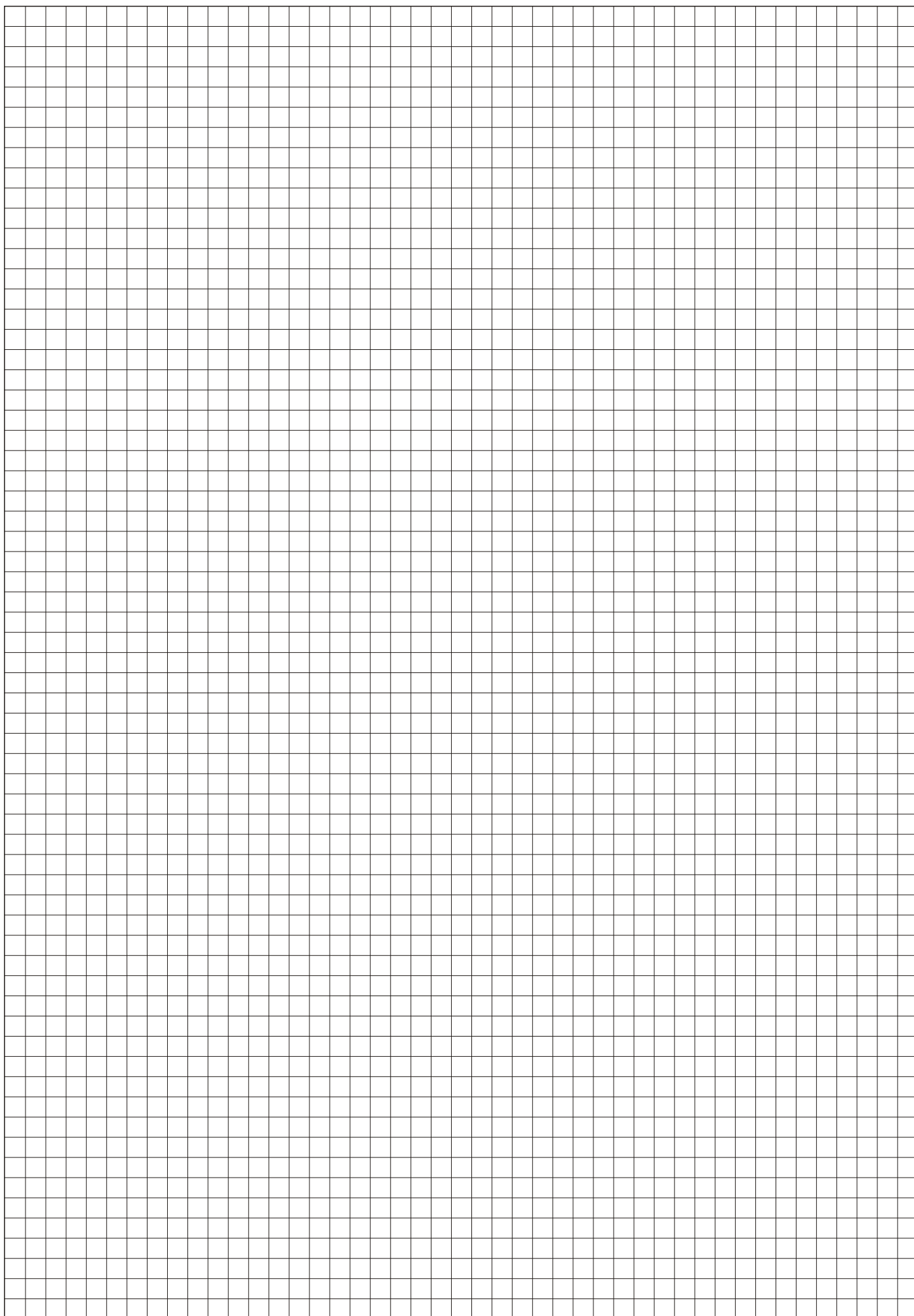
- MRS.U** Reed bulb sensor with led and cable 2 wires l=300mm and connector M8
- MRS.UAP** PNP sensor, REED type with led and 3wire cable with M8 connector, cable L=300mm
- MHS.P** PNP sensor Hall effect with led cable 3 wires l=300mm and connector M8

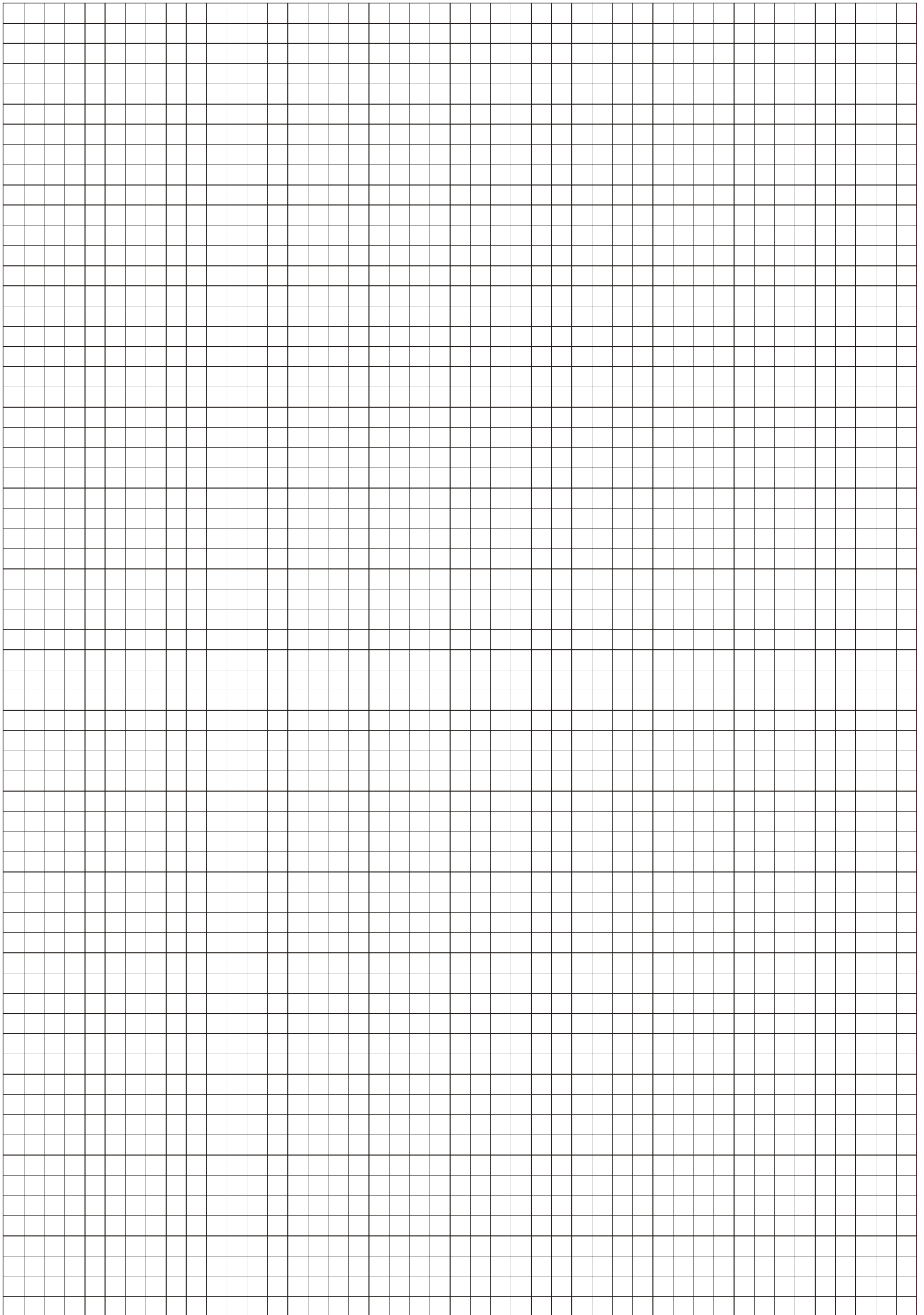
- MC1** Cable 2 wires l=2,5m with connector M8
- MC2** Cable 2 wires l=5m with connector M8
- MCH1** Cable 3 wires l=2,5m with connector M8
- MCH2** Cable 3 wires l=5m with connector M8

Diagrams and connections



* Connection can be done either to negative or positive pole.







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PNEUMAX S.p.A.
24050 LURANO (BG) - Italy
Via Cascina Barbellina, 10
Tel. 035/4192777
Fax 035/4192740
035/4192741
<http://www.pneumaxspa.com>
pneumax@pneumaxspa.com

