

General

Profiled tube has three "T" slots on the three sides hosting sensors 1500._, RS._, HS._ without adaptors and with adaptor code 1380.01F codes 1580._, MRS._, MHS._.

A complete range of clamps makes them easy to install under any conditions.

It is interesting to note that as these cylinders (from Ø 32 to Ø 100) have anchoring holes with the same lead and thread as those of series 1320 ISO 6431, they accept all mountings except for the intermediate trunnion.

Construction characteristics

Body	anodised aluminium
Rod	C43 chromed steel (stainless steel for magnetic cylinder Ø20 and Ø25)
Piston	aluminium
Rod bushing	anodised aluminium
End plate	anodised aluminium
Seals	Standard: NBR Oil resistant rubber, PUR Piston rod seals (HNBR or FPM seals available upon request)

Technical characteristics

Fluid	filtered and preferably lubricated air
Max. pressure	10 bar
Working temperature	-5°C - +70°C with standard seals magnetic or non magnetic piston -5°C - +80°C with FPM seals magnetic piston -5°C - +80°C with HNBR seals magnetic piston -5°C - +120°C with HNBR seals non magnetic piston -5°C - +150°C with FPM seals non magnetic piston

Please follow the suggestions below to ensure a long life for these cylinders:

- use clean and lubricated air
- correct alignment during assembly with regard to the applied load so as to avoid radial components or bending the rod.
- avoid high speeds together with long strokes and heavy loads: this would produce kinetic energy which the cylinder cannot absorb, especially if used as a limit stop (in this case use mechanical stop device)
- evaluate the environmental characteristics of cylinder used (high temperature, hard atmosphere, dust, humidity etc.)

Please note: air must be dried for applications with lower temperature.

Use hydraulic oils H class (ISO VG32) for correct continued lubrication.

Our Technical Department will be glad to help.

Standard strokes

Type 1501, 1504, 1511, 1514, 1515, 1516, 1517 and 1518:
for all bores from 5 to 50 mm every 5 mm.

Type 1502, 1503, 1512 and 1513:
for all bores from 5 to 10 mm.

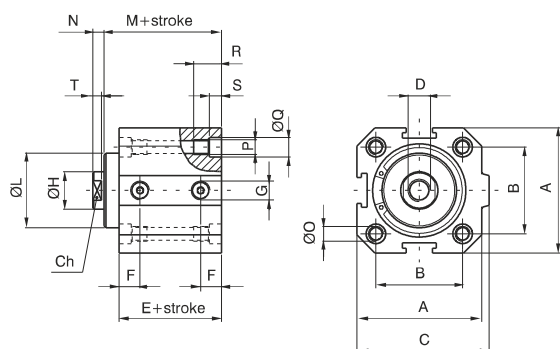
Type with non-rotating device:

Ø 20 and Ø 25	from 5 to 40 mm every 5 mm.
Ø 32 and Ø 40	from 5 to 50 mm every 5 mm.
Ø 50 and Ø 63	from 5 to 60 mm every 5 mm.
Ø 80 and Ø 100	from 5 to 80 mm every 5 mm.

Double acting version

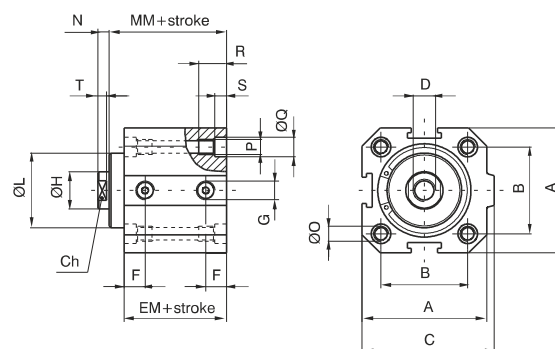
Ordering code

1501.Ø.stroke standard seals
1501.Ø.stroke.V FPM seals
1501.Ø.stroke.T HNBR seals

**Double acting version with magnetic piston**

Ordering code

1511.Ø.stroke standard seals
1511.Ø.stroke.V FPM seals
1511.Ø.stroke.T HNBR seals



Bore	20	25	32	40	50	63	80	100
A	35	41	48	57	67	80	100	120
B	26	28	32,5	38	46,5	56,5	72	89
C	39,5	44,5	52	61	71	84	106	126
D	M4x8	M5x10	M6x12	M10x15	M12x18	M12x18	M16x20	M16x20
E	29	30,5	32	33,5	35	38	44	47
EM	34	35,5	37	38,5	40	43	49	52
F	9	9,15	9,75	10,5	11	11,25	13,75	15,25
G	G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 3/8"	G 3/8"
Ø H	8	10	12	16	20	20	25	25
Ø L $\pm 0,05$ ($\begin{smallmatrix} 0 \\ -0,1 \end{smallmatrix}$ for Ø80 and Ø 100)	17	20,5	26	31	39	40	55	55
M	32	33	35,5	39,5	43	46	51,5	54,5
MM	37	38	40,5	44,5	48	51	56,5	59,5
N	4	4	4	5	6	6	8	8
Ø O	4,3	5,3	5,3	5,3	7	7	9	9
P	M5	M6	M6	M6	M8	M8	M10	M10
Ø Q	7,5	8,5	8,5	8,5	10,5	10,5	13,5	13,5
R	15	18	18	18	22	22	30	30
S	4,5	5,5	5,5	5,5	6,5	6,5	8,5	8,5
T	3	3	3	4	4,5	4,5	5,5	5,5
Ch	6	8	10	13	17	17	22	22

Non magnetic

Weight	stroke 0	75	110	170	260	400	600	800	1500
gr.	every 10 mm	20	30	40	60	80	100	120	145

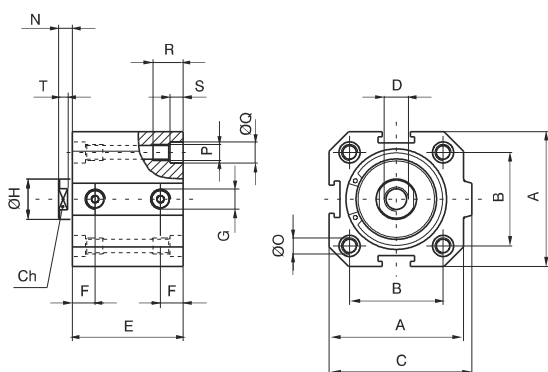
Magnetic

Weight	stroke 0	90	130	200	310	460	700	910	1620
gr.	every 10 mm	20	30	40	60	80	100	120	145

Single acting version with front spring

Ordering code

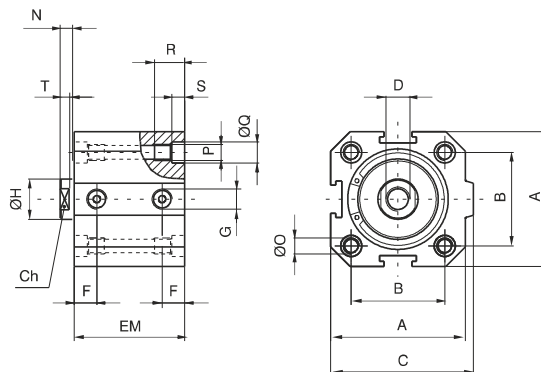
1502.Ø.stroke standard seals
1502.Ø.stroke.V FPM seals
1502.Ø.stroke.T HNBR seals



Single acting version front spring with magnetic piston

Ordering code

1512.Ø.stroke standard seals
1512.Ø.stroke.V FPM seals
1512.Ø.stroke.T HNBR seals



Bore		20	25	32	40	50	63	80	100
A		35	41	48	57	67	80	100	120
B		26	28	32,5	38	46,5	56,5	72	89
C		39,5	44,5	52	61	71	84	106	126
D		M4X8	M5X10	M6X12	M10X15	M12X18	M12X18	M16X20	M16X20
E	stroke 5	29	30,5	32	33,5	35	38	44	47
	stroke 10	34	35,5	37	38,5	40	43	49	52
EM	stroke 5	34	35,5	37	38,5	40	43	49	52
	stroke 10	39	40,5	42	43,5	45	48	54	57
F		9	9,15	9,75	10,5	11	11,25	13,75	15,25
G		G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 3/8"	G 3/8"
Ø H		8	10	12	16	20	20	25	25
N		4	4	4	5	6	6	8	8
Ø O		4,3	5,3	5,3	5,3	7	7	9	9
P		M5	M6	M6	M6	M8	M8	M10	M10
Ø Q		7,5	8,5	8,5	8,5	10,5	10,5	13,5	13,5
R		15	18	18	18	22	22	30	30
S		4,5	5,5	5,5	5,5	6,5	6,5	8,5	8,5
T		3	3	3	4	4,5	4,5	5,5	5,5
Ch		6	8	10	13	17	17	22	22

Non magnetic

Weight gr.	stroke 5	70	105	160	250	370	550	750	1440
	stroke 10	80	120	180	280	410	600	810	1500

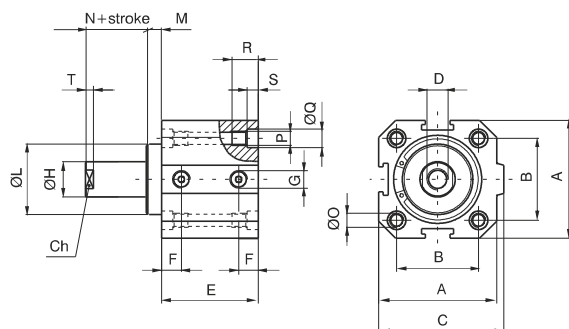
Magnetic

Weight gr.	stroke 5	85	125	190	300	430	650	860	1560
	stroke 10	95	140	210	330	470	700	920	1620

Single acting version with rear spring

Ordering code

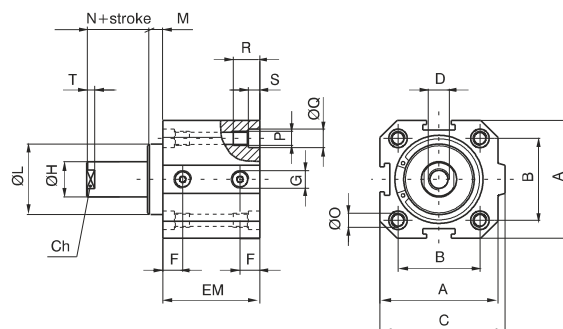
1503.Ø.stroke standard seals
 1503.Ø.stroke.V FPM seals
 1503.Ø.stroke.T HNBR seals



Single acting version rear spring with magnetic piston

Ordering code

1513.Ø.stroke standard seals
 1513.Ø.stroke.V FPM seals
 1513.Ø.stroke.T HNBR seals



Bore		20	25	32	40	50	63	80	100
A		35	41	48	57	67	80	100	120
B		26	28	32,5	38	46,5	56,5	72	89
C		39,5	44,5	52	61	71	84	106	126
D		M4X8	M5X10	M6X12	M10X15	M12X18	M12X18	M16X20	M16X20
E	stroke 5	29	30,5	32	33,5	35	38	44	47
	stroke 10	34	35,5	37	38,5	40	43	49	52
EM	stroke 5	34	35,5	37	38,5	40	43	49	52
	stroke 10	39	40,5	42	43,5	45	48	54	57
F		9	9,15	9,75	10,5	11	11,25	13,75	15,25
G		G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 3/8"	G 3/8"
Ø H		8	10	12	16	20	20	25	25
Ø L ±0,05 (0,1 for Ø80 and Ø100)		17	20,5	26	31	39	40	55	55
M		3	2,5	3,5	6	8	8	7,5	7,5
N		4	4	4	5	6	6	8	8
Ø O		4,3	5,3	5,3	5,3	7	7	9	9
P		M5	M6	M6	M6	M8	M8	M10	M10
Ø Q		7,5	8,5	8,5	8,5	10,5	10,5	13,5	13,5
R		15	18	18	18	22	22	30	30
S		4,5	5,5	5,5	5,5	6,5	6,5	8,5	8,5
T		3	3	3	4	4,5	4,5	5,5	5,5
Ch		6	8	10	13	17	17	22	22

Non magnetic

Weight gr.	stroke 5	70	105	160	250	370	550	750	1440
	stroke 10	80	120	180	280	410	600	810	1500

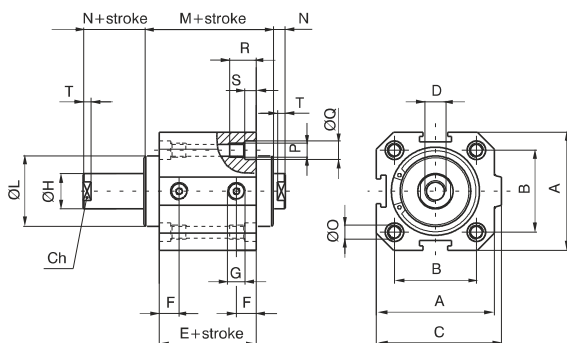
Magnetic

Weight gr.	stroke 5	85	125	190	300	430	650	860	1560
	stroke 10	95	140	210	330	470	700	920	1620

Double acting push-pull rod version

Ordering code

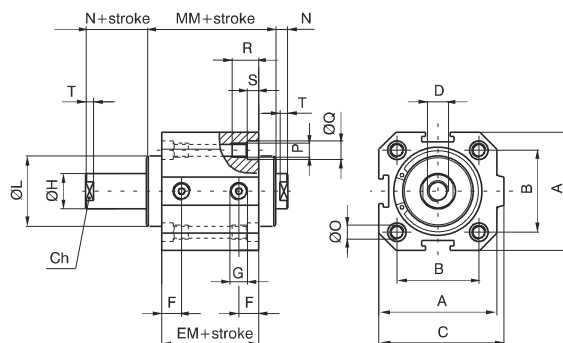
1504.Ø.stroke standard seals
1504.Ø.stroke.V FPM seals
1504.Ø.stroke.T HNBR seals



Double acting push-pull rod version with magnetic piston

Ordering code

1514.Ø.stroke standard seals
1514.Ø.stroke.V FPM seals
1514.Ø.stroke.T HNBR seals



Bore	20	25	32	40	50	63	80	100
A	35	41	48	57	67	80	100	120
B	26	28	32,5	38	46,5	56,5	72	89
C	39,5	44,5	52	61	71	84	106	126
D	M4X8	M5X10	M6X12	M10X15	M12X18	M12X18	M16X20	M16X20
E	29	30,5	32	33,5	35	38	44	47
EM	34	35,5	37	38,5	40	43	49	52
F	9	9,15	9,75	10,5	11	11,25	13,75	15,25
G	G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 3/8"	G 3/8"
Ø H	8	10	12	16	20	20	25	25
Ø L ±0,05 (0 -0,1 for Ø80 and Ø 100)	17	20,5	26	31	39	40	55	55
M	35	35,5	39	45,5	51	54	59	62
MM	40	40,5	44	50,5	56	59	64	67
N	4	4	4	5	6	6	8	8
Ø O	4,3	5,3	5,3	5,3	7	7	9	9
P	M5	M6	M6	M6	M8	M8	M10	M10
Ø Q	7,5	8,5	8,5	8,5	10,5	10,5	13,5	13,5
R	15	18	18	18	22	22	30	30
S	4,5	5,5	5,5	5,5	6,5	6,5	8,5	8,5
T	3	3	3	4	4,5	4,5	5,5	5,5
Ch	6	8	10	13	17	17	22	22

Non magnetic

Weight	stroke 0	90	130	200	320	460	670	1100	1680
gr.	every 10 mm	20	35	50	70	90	110	155	185

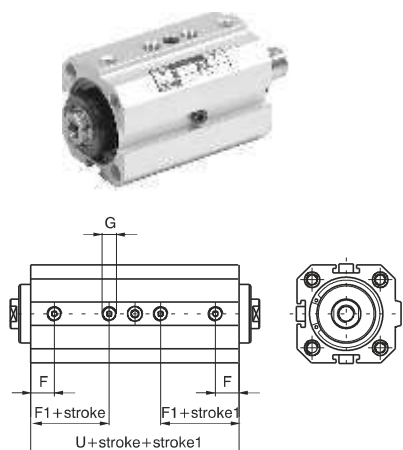
Magnetic

Weight	stroke 0	105	160	240	380	530	740	1210	1820
gr.	every 10 mm	20	35	50	70	90	110	155	185

Tandem with opposed rods

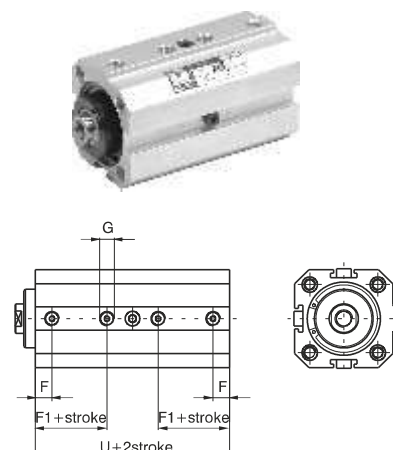
Ordering code

1515.Ø.stroke.stroke 1 standard seals
1515.Ø.stroke.stroke 1.V FPM seals
1515.Ø.stroke.stroke 1.T HNBR seals
1515.Ø.stroke.stroke 1.M standard seals, magnetic piston
1515.Ø.stroke.stroke 1.MV FPM seals, magnetic piston
1515.Ø.stroke.stroke 1.MT HNBR seals, magnetic piston

**Tandem push with common rods**

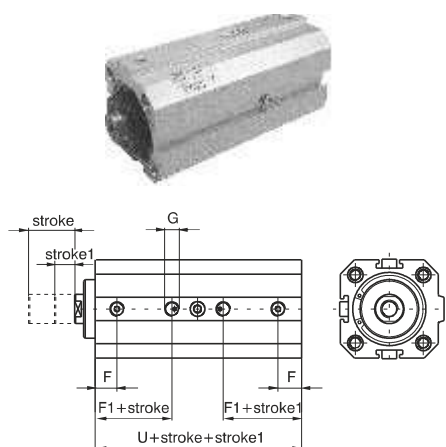
Ordering code

1516.Ø.stroke standard seals
1516.Ø.stroke.V FPM seals
1516.Ø.stroke.T HNBR seals
1516.Ø.stroke.M standard seals, magnetic piston
1516.Ø.stroke.MV FPM seals, magnetic piston
1516.Ø.stroke.MT HNBR seals, magnetic piston

**Tandem push with independent rods**

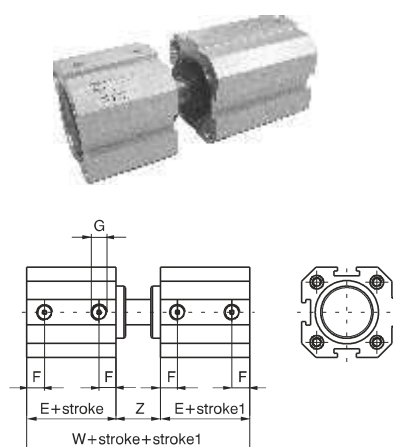
Ordering code

1517.Ø.stroke.stroke 1 standard seals
1517.Ø.stroke.stroke 1.V FPM seals
1517.Ø.stroke.stroke 1.T HNBR seals
1517.Ø.stroke.stroke 1.M standard seals, magnetic piston
1517.Ø.stroke.stroke 1.MV FPM seals, magnetic piston
1517.Ø.stroke.stroke 1.MT HNBR seals, magnetic piston

**Opposed tandem with common rods**

Ordering code

1518.Ø.stroke.stroke 1 standard seals
1518.Ø.stroke.stroke 1.V FPM seals
1518.Ø.stroke.stroke 1.T HNBR seals
1518.Ø.stroke.stroke 1.M standard seals, magnetic piston
1518.Ø.stroke.stroke 1.MV FPM seals, magnetic piston
1518.Ø.stroke.stroke 1.MT HNBR seals, magnetic piston



Bore	20	25	32	40	50	63	80	100
E	29	30,5	32	33,5	35	38	44	47
F	9	9,15	9,75	10,5	11	11,25	13,75	15,25
F1	17,5	18,35	19,75	20,5	21,5	24,25	24,75	26,25
G	G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 3/8"	G 3/8"
U	59	60,5	67	68,5	70	78	89	97
W	72	74	79	89	98	104	119	125
Z	14	13	15	22	28	28	31	31

Variations with magnetic piston

E	34	35,5	37	38,5	40	43	49	52
F1	22,5	23,35	24,75	25,5	26,5	29,25	29,75	31,25
U	69	70,5	77	78,5	80	88	99	107
W	82	84	89	99	108	114	129	135

Double acting version

Ordering code

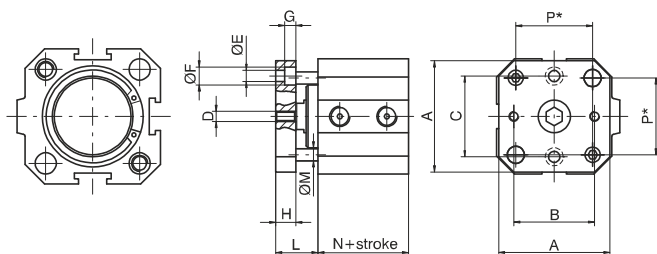
1501.Ø.stroke.AR standard seals
1501.Ø.stroke.AR.V FPM seals
1501.Ø.stroke.AR.T HNBR seals

Double version with magnetic piston

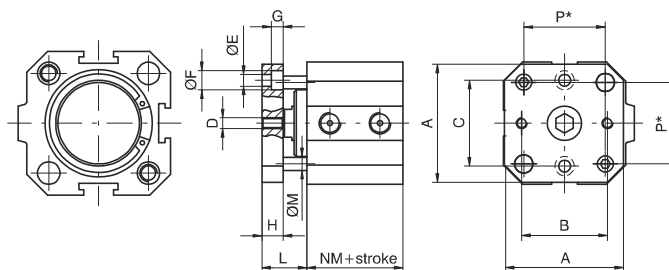
Ordering code

1511.Ø.stroke.AR standard seals
1511.Ø.stroke.AR.V FPM seals
1511.Ø.stroke.AR.T HNBR seals

Cylinders with non-rotating device



* = Distance between rods centres



* = Distance between rods centres

It is possible, upon request to have four holes threaded and with counter bores in order to rear mount the cylinder as if it was standard.

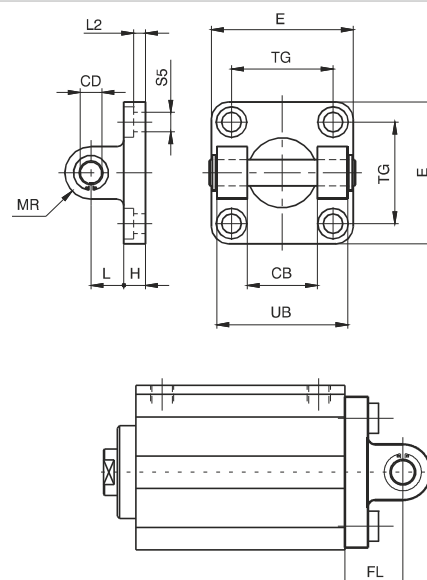
Bore	20	25	32	40	50	63	80	100
A	35	40	45	55	65	80	100	120
B	22	26	32	40	50	62	82	103
C	22	28	34	40	50	62	82	103
D	M 4	M 5	M 5	M 5	M 6	M 6	M 6	M 8
Ø E	4,5	5,5	5,5	5,5	6,5	8,5	8,5	8,5
Ø F	7,5	9	9	9	10,5	13,5	13,5	13,5
G	4,5	5,5	5,5	5,5	6,5	8,5	8,5	8,5
H	8	8	10	10	12	12	15	15
L	15	14,5	17,5	21	26	26	30,5	30,5
Ø M	6	6	6	6	8	8	10	10
N	29	30,5	32	33,5	35	38	44	47
NM	34	35,5	37	38,5	40	43	49	52
P	26	28	32,5	38	46,5	56,5	72	89
Max. suggestion stroke	40	40	50	50	60	60	80	80
Weight	stroke 0 gr.	40	50	70	90	200	250	490
gr.		every 10 mm	5	5	5	10	10	20

Rear clevis

Ordering code

1500.Ø.09F

This allows anchorage of the cylinder both parallel and at a right angle to the plane; the cylinder rod can oscillate and self-align as necessary. It is made of aluminium alloy and painted black.



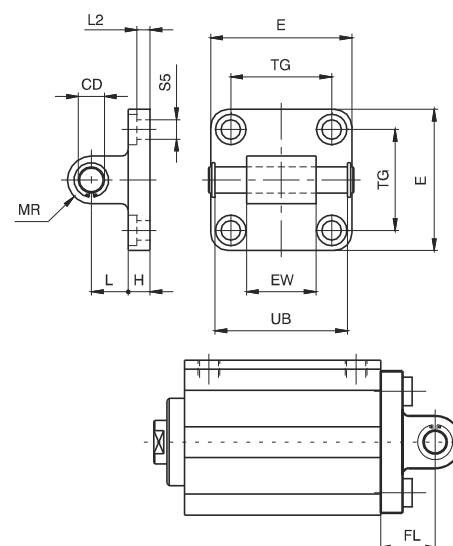
Bore	20	25	32	40	50	63	80	100
CB (h 9)	16	20	26	28	32	40	50	60
CD (H 9)	8	10	10	12	12	16	16	20
E	35	40	45	52	65	75	95	115
H	6	8	9	9	11	11	14	14
L	12	12	13	16	16	21	22	27
MR	8	9	10	12	12	16	16	20
TG	26	28	32.5	38	46.5	56.5	72	89
UB	35	40	45	52	60	70	90	110
FL	18	20	22	25	27	32	36	41
L2	/	/	5.5	5.5	6.5	6.5	10	10
S5 (H13)	5.5	6.6	6.6	6.6	9	9	11	11
Weight gr.	45	75	80	130	185	310	530	910

Rear clevis male

Ordering code

1500.Ø.09/1F

This allows anchorage of the cylinder both parallel and at a right angle to the plane; the cylinder rod can oscillate and self-align as necessary. It is made of aluminium alloy and painted black.



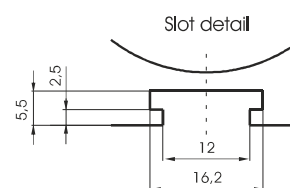
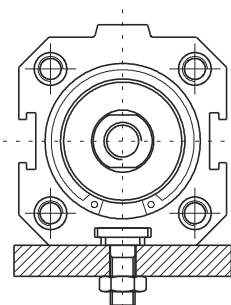
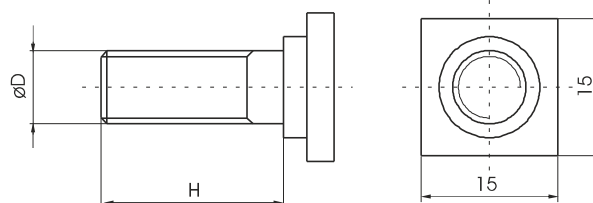
Bore	20	25	32	40	50	63	80	100
CD (h 9)	8	10	10	12	12	16	16	20
E	35	40	45	52	65	75	95	115
EW	16	20	26	28	32	40	50	60
H	6	8	9	9	11	11	14	14
L	12	12	13	16	16	21	22	27
MR	8	9	10	12	12	16	16	20
TG	26	28	32.5	38	46.5	56.5	72	89
UB	35	40	46	53	61	71	91	111
FL	18	20	22	25	27	32	36	41
L2	/	/	5.5	5.5	6.5	6.5	10	10
S5 (H 13)	5.5	6.6	6.6	6.6	9	9	11	11
Weight gr.	53	85	90	130	190	340	580	960

Slot fixing screws

Ordering code

1500.15F (from Ø20 to Ø32)

1500.16F (from Ø40 to Ø63)

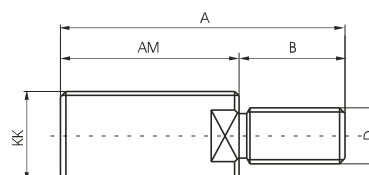
1500.18F (Ø80 and Ø100)


Example mounted with square headed screws on the plane.

Bore	20	25	32	40	50	63	80	100
ØD	M6	M6	M6	M8	M8	M8	M10	M10
H	15	15	15	20	20	20	25	25
Weight gr.	10			18			25	

Nipple with ISO standard thread

Ordering code

1500.Ø.17F


Fitted on the female thread of the compact cylinders, restore the ISO configurations rod (ISO 6432 for cylinders Ø20 and Ø25; ISO 6431 for cylinders from Ø32 to Ø100).

Bore	20	25	32	40	50	63	80	100
KK	M8x1,25	M10x1,25	M10x1,25	M12x1,25	M16x1,5	M16x1,5	M20x1,5	M20x1,5
AM	20	22	22	24	32	32	40	40
A	26	30	32	36	47	47	58	58
B	6	8	10	12	15	15	18	18
D	M4	M5	M6	M10	M12	M12	M16	M16
Weight gr.	8	15	16	27	65	65	110	110