

General

They conform to CNOMO standards, fully complying with CETOP and ISO standards, with mounted fixing devices 32 to 100.

Construction characteristic

End plates	solid aluminium bar up to Ø100, alloy aluminium from Ø125 to Ø200
Rod	C43 chromed steel, by thickness or stainless steel
Barrel	oxidised aluminium
Tie rods	steel with rolled threads
Cushion bearings	aluminium
Rod-guide bushing	brass (Ø32, 40, 50) in aluminium with self-lubricating bearings in sinterized bronze for the remaining diameters
Piston	aluminium lathed from bar
Seals	Standard: NBR Oil resistant rubber, PUR Piston rod seals (FPM seals available upon request)

Technical characteristic

Fluid	filtered and lubricated air - hydraulic oil (with special bushing)
Pressure	max. 12 bar (air) - 20 bar (oil)
Operating temperature	-5 °C ÷ +70 °C with 1303-1308 standard seals -5 °C ÷ +80 °C with FPM seals for 1306-1308 series (magnetic piston) -5 °C ÷ +150 °C with FPM seals for 1303-1305 series (non magnetic piston)
Cushioning length	Ø 32 - 40 - 50 - 63 - 80 - 100 - 125 - 160 - 200 mm 20 - 20 - 22 - 24 - 24 - 25 - 27 - 35 - 35

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

From 0 to 150 every 25 mm; from 150 to 500 every 50 mm; from 500 to 1000 every 100 mm. (for all diameters)

Basic version

Ordering code

Non magnetic piston

1303.Ø.stroke.01A (CNOMO)

1304.Ø.stroke.01A (CETOP)

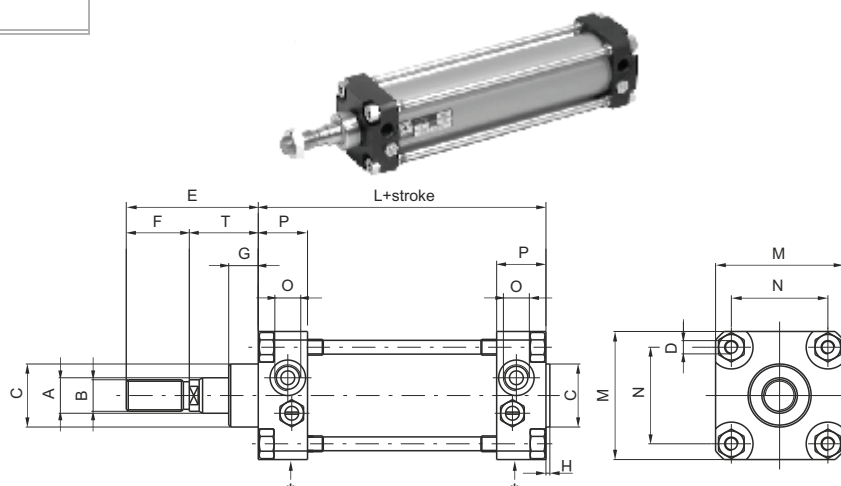
1305.Ø.stroke.01A (ISO)

Magnetic piston

1306.Ø.stroke.01A (CNOMO)

1307.Ø.stroke.01A (CETOP)

1308.Ø.stroke.01A (ISO)

**Push/Pull version**

Ordering code

Non magnetic piston

1303.Ø.stroke.02A (CNOMO)

1304.Ø.stroke.02A (CETOP)

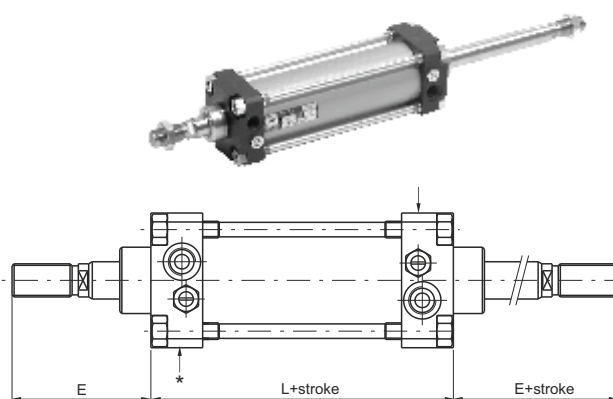
1305.Ø.stroke.02A (ISO)

Magnetic piston

1306.Ø.stroke.02A (CNOMO)

1307.Ø.stroke.02A (CETOP)

1308.Ø.stroke.02A (ISO)

**Tandem push with a common rod**

Ordering code

Non magnetic piston

1303.Ø.stroke.H (CNOMO)

1304.Ø.stroke.H (CETOP)

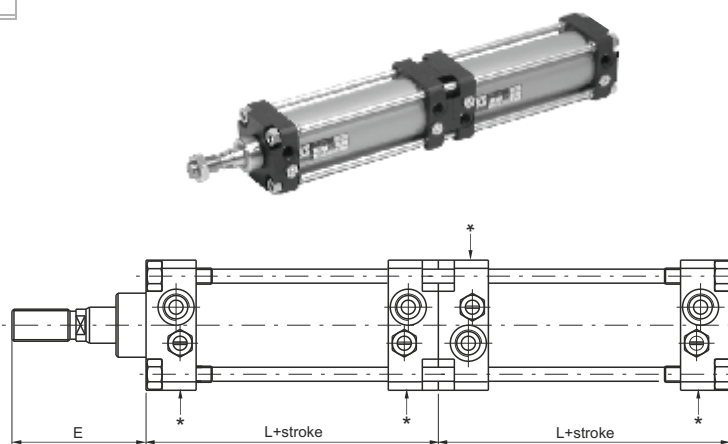
1305.Ø.stroke.H (ISO)

Magnetic piston

1306.Ø.stroke.H (CNOMO)

1307.Ø.stroke.H (CETOP)

1308.Ø.stroke.H (ISO)

**Tandem push with independent rods**

Ordering code

Non magnetic piston

1303.Ø.stroke.stroke1.N (CNOMO)

1304.Ø.stroke.stroke1.N (CETOP)

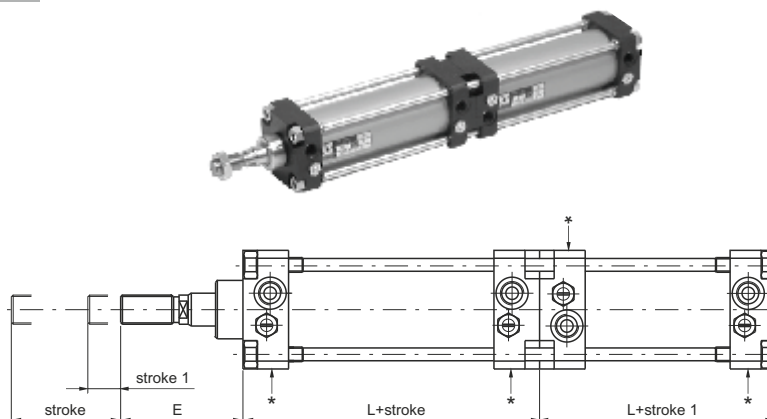
1305.Ø.stroke.stroke1.N (ISO)

Magnetic piston

1306.Ø.stroke.stroke1.N (CNOMO)

1307.Ø.stroke.stroke1.N (CETOP)

1308.Ø.stroke.stroke1.N (ISO)



Opposed tandem with common rods

Ordering code

Non magnetic piston

1303.Ø.stroke.stroke1.R (CNOMO)

1304.Ø.stroke.stroke1.R (CETOP)

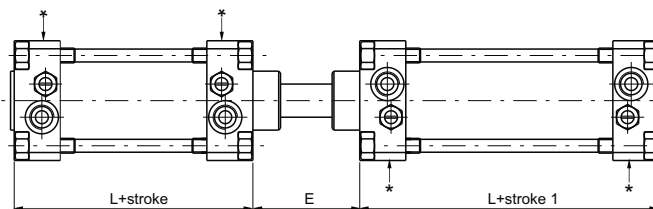
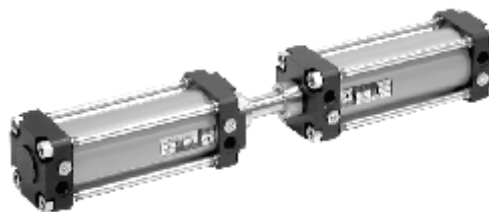
1305.Ø.stroke.stroke1.R (ISO)

Magnetic piston

1306.Ø.stroke.stroke1.R (CNOMO)

1307.Ø.stroke.stroke1.R (CETOP)

1308.Ø.stroke.stroke1.R (ISO)



Tandem with opposed rods

Ordering code

Non magnetic piston

1303.Ø.stroke.stroke1.U (CNOMO)

1304.Ø.stroke.stroke1.U (CETOP)

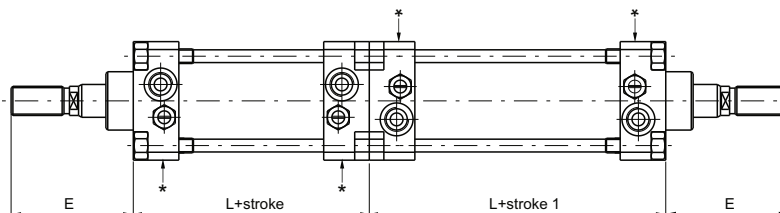
1305.Ø.stroke.stroke1.U (ISO)

Magnetic piston

1306.Ø.stroke.stroke1.U (CNOMO)

1307.Ø.stroke.stroke1.U (CETOP)

1308.Ø.stroke.stroke1.U (ISO)



Variants

Add "X" to the cylinder code to order cylinders with STAINLESS STEEL rods. Example: **1303.32.250.01AX**.

Add "V" to the cylinder code to order cylinders with FPM seals. Example: **1303.32.250.01AV**.

Add "MA" to the cylinder code to order cylinders single acting front spring, with strokes not superior to 50. Example: **1303.32.50.01AMA**.

Add "MP" to the cylinder code to order cylinders single acting rear spring, with strokes not superior to 50. Example: **1303.50.25.01AMP**.

Note: Cushion adjustment (for Ø 32, Ø 40, Ø 125, Ø 160 and Ø 200) is on the side indicated by ★ (see drawings).

Table of dimensions

Bore	32	40	50	63	80	100	125	160	200
A (f7)	12	18	18	22	22	30	30	40	40
B - CNOMO (6g)	M10x1,5	M16x1,5	M16x1,5	M20x1,5	M20x1,5	M27x2	M27x2	M36x2	M36x2
B - CETOP (6g)	M10x1,25	M12x1,25	M16x1,5	M16x1,5	M20x1,5	M20x1,5	M24x2	M36x2	M36x2
B - ISO (6g)	M10x1,25	M12x1,25	M16x1,5	M16x1,5	M20x1,5	M20x1,5	M27x2	M36x2	M36x2
C (d11)	25	32	32	45	45	55	55	65	65
H	2,5	2	2	2	2	2	3	3	3
D	M6	M6	M8	M8	M10	M10	M12	M16	M16
E - CNOMO	45	70	70	85	85	110	110	135	135
E - CETOP	44	52	67	67	82	87	109	152	162
E - ISO	46	52	67	67	82	87	115	152	162
F - CNOMO	20	36	36	46	46	63	63	85	85
F - CETOP	20	24	32	32	40	40	48	72	72
F - ISO	22	24	32	32	40	40	54	72	72
G	15	15	15	20	20	20	20	25	25
M	45	52	65	75	95	115	140	180	220
N	33	40	49	59	75	90	110	140	175
O	G 1/8"	G 1/4"	G 1/4"	G 3/8"	G 3/8"	G 1/2"	G 1/2"	G 3/4"	G 3/4"
P	16	23	25	31	31	35	36	45	45
T - CNOMO	25	34	34	39	39	47	47	50	50
T - CETOP-ISO	24	28	35	35	42	47	61	80	90
L - CNOMO (±1)	80	110	110	125	125	145	145	180	180
L - CETOP-ISO (±1)	98	110	110	125	136	145	168	180	190

STROKE TOLERANCE: + 2 mm.

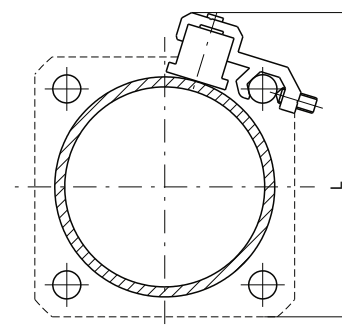
WEIGHT IN gr. OF THE CYLINDERS WITH VARIOUS BARRELS (BASIC VERSION)

Bore		32	40	50	63	80	100	125	160	200
Aluminium	stroke 0	580	1010	1350	2110	3350	5400	7450	13300	18300
	every 10 mm	24	38	47	63	75	117	130	235	250

FOR CYLINDERS IN TANDEM THE WEIGHT IS APPROXIMATELY DOUBLE

Sensor brackets codes - 1500._, RS._, HS._

Ordering code	1306.A				1306.B			1306.C	
Bore	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100	Ø125	Ø160	Ø200
L	59	65	76	87	103	121	144	179	215

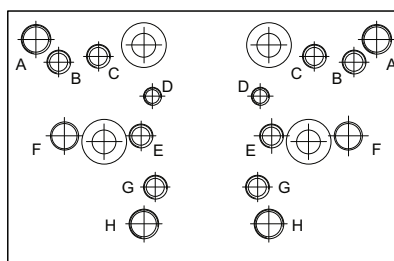


Sensor for microcylinders

For technical characteristics and ordering codes see Chapter 6 (magnetic sensors)

Distributor supports

This accessory allows valves or solenoid valves to mount on the side of the cylinder. Support should be anchored to the tie rods and on it either a threaded distributor can be mounted or a base upon which an ISO distributor can be mounted. Once installed the connections must be done with fittings and pipes. All of the threaded holes on the support plate are dedicated to different valves series as per attached drawing.

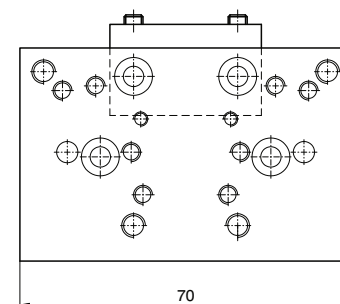


Fixing holes for valves series:

- A = 414/2
- B = 824
- C = 828, T488, 488, 484
- D = 2400
- E = 2600
- F = Bases for ISO distributors
- G = 858/2
- H = T424

Support

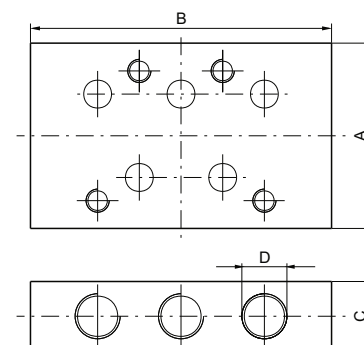
Ordering code
1306.15 (Ø32 - Ø100)



Bases for ISO distributors

Ordering code

1320.21	bases for ISO 1 electro distributor
1320.22	bases for ISO 2 electro distributor



Dimensions

	A	B	C	D
bases for ISO 1 electro distributor	40	75	15	G 1/8"
bases for ISO 2 electro distributor	50	95	20	G 1/4"

Front and rear flanges

Ordering code

1303.Ø.03F
(CNOMO)
1304.Ø.03F
(CETOP - ISO)

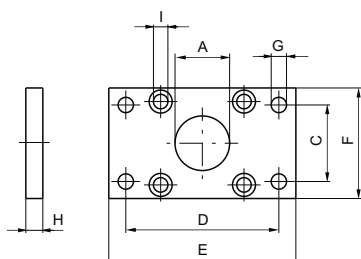
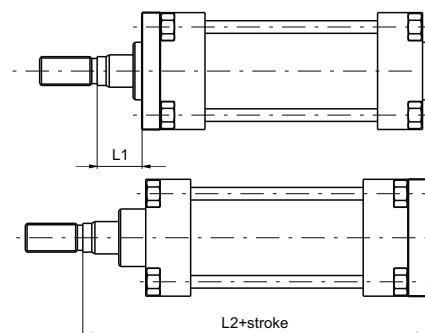


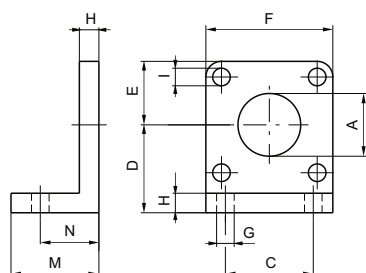
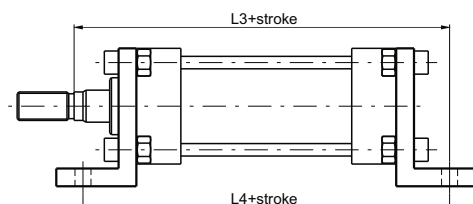
Plate which allows anchorage of the cylinder at a right angle to the plane. It is made of zinc-plated extruded steel.

Bore	32	40	50	63	80	100	125	160	200
A (H11)	25	32	32	45	45	55	55	65	65
C - CNOMO (JS 14)	33	40	49	59	75	90	110	140	175
C - CETOP ISO (JS 14)	32	36	45	50	63	75	90	115	135
D - CNOMO (JS 14)	68	78	94	104	130	150	180	228	268
D - CETOP - ISO (JS 14)	64	72	90	100	126	150	180	230	270
E	80	90	110	120	150	170	205	260	300
F	45	52	65	75	95	115	140	180	220
G - CNOMO (H13)	9	9	11	11	14	14	18	22	22
G - CETOP - ISO (H13)	7	9	9	9	12	14	16	18	22
H (JS 14)	8	8	10	10	12	12	16	20	20
I	6,5	6,5	9	9	10,5	10,5	13,5	16,5	16,5
L1 - CNOMO	17	26	24	29	27	35	31	30	30
L1 - CETOP - ISO	16	20	25	25	30	35	45	60	70
L2 - CNOMO	113	152	154	174	176	204	208	250	250
L2 - CETOP - ISO	130	145	155	170	190	205	245	280	300
Weight gr.	165	200	540	1060	1460	1510	3100	6400	9500

Standard feet

Ordering code

1303.Ø.05F
(CNOMO)
(1 piece)
1304.Ø.05F
(CETOP - ISO)
(1 piece)

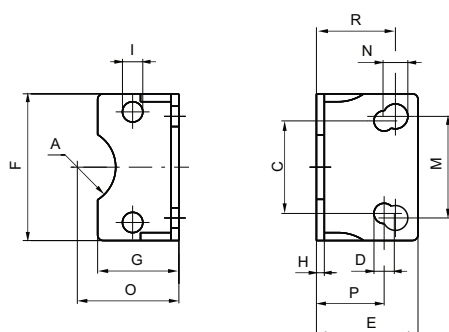


Elements used to anchor the cylinder parallel to the mounting plane. They are made of cast aluminium, painted black.

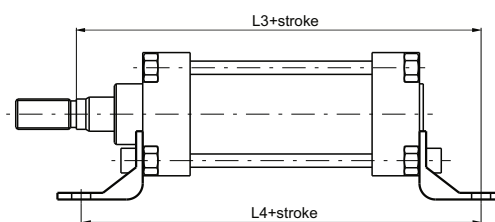
Bore	32	40	50	63	80	100	125	160	200
A (H11)	25	32	32	45	45	55	55	65	65
C - CNOMO (JS 14)	28	36	45	55	70	90	100	130	170
C - CETOP ISO (JS 14)	32	36	45	50	63	75	90	115	135
D - CNOMO (JS 15)	32	36	45	50	63	73	91	115	135
D - CETOP - ISO (JS 15)	32	36	45	50	63	71	90	115	135
E	22	26	32	37	47	57	70	90	110
F	45	52	65	75	95	115	140	180	220
G - CNOMO (H14)	9	9	11	11	14	14	18	22	22
G - CETOP (H14)	7	9	9	9	12	14	16	18	22
G - ISO (H14)	7	9	9	9	12	14	16	18	22
H	8	8	10	10	12	12	16	20	20
I	7	7	9	9	11	11	13	17	17
M	35	35	45	45	55	55	68	82	91
N - CNOMO (±0,2)	27	27	35	35	43	43	52	62	62
N - CETOP - ISO (±0,2)	22	25,5	30	30	37	37,5	41	60	65
L3 - CNOMO	132	171	179	199	207	235	244	292	292
L3 - CETOP - ISO	144	163	175	190	215	230	270	320	345
L4 - CNOMO	134	164	180	195	211	231	249	304	304
L4 - CETOP - ISO	142	161	170	185	210	220	250	300	320
Weight gr.	55	70	150	175	260	550	920	2200	3200

Short sheet metal feet

Ordering code

1303.0.05/1F
(CNOMO - CETOP - ISO)
(1 piece)

Elements used to anchor the cylinder parallel to the mounting plane. They are made of stamped and pierced sheet metal and painted in black. The mounting holes allow use with CNOMO, CETOP and ISO. Available up to 100 mm. diameter.



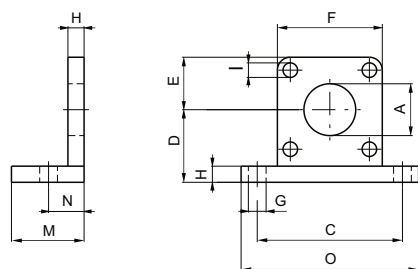
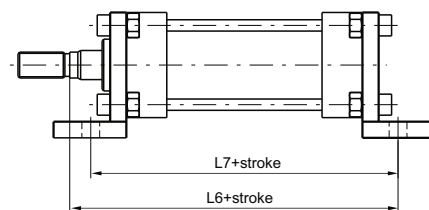
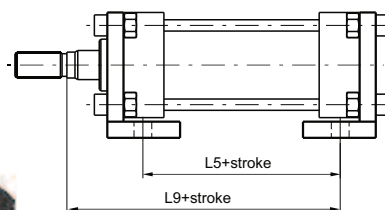
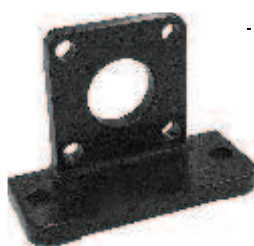
Bore	32	40	50	63	80	100
A	13	17	17	23,5	23,5	-
C - CETOP - ISO (JS 14)	32	36	45	50	63	75
D - CETOP - ISO (JS 15)	7	9	9	9	12	14
E	35	36	45	45	55	56
F	45	52	65	75	95	115
G	30	30	36	35	45	44
H	3,5	3,5	3,5	4,5	5	5
I	7	7	9	9	11	11
M - CNOMO (JS 14)	28	36	45	55	70	90
N - CNOMO (JS 15)	9	9	11	11	13	13
O - CNOMO (JS 15)	32	36	45	50	63	73
O - CETOP - ISO (JS 15)	32	36	45	50	63	71
P - CETOP - ISO ($\pm 0,2$)	22	25,5	30	30	37	37,5
R - CNOMO ($\pm 0,2$)	27	27	35	35	43	43
L3 - CNOMO	132	171	179	199	207	235
L3 - CETOP - ISO	144	163	175	190	215	230
L4 - CNOMO	134	164	180	195	211	231
L4 - CETOP - ISO	142	161	170	185	210	220
Weight gr.	58	70	118	184	305	385

Large internal and external feet

Ordering code

Internal
1303.0.06F
(CNOMO) (1 piece)
(May be used with
CETOP-ISO cylinders
but are not specified
in the standards)

External
1303.0.07F
(CNOMO) (1 piece)



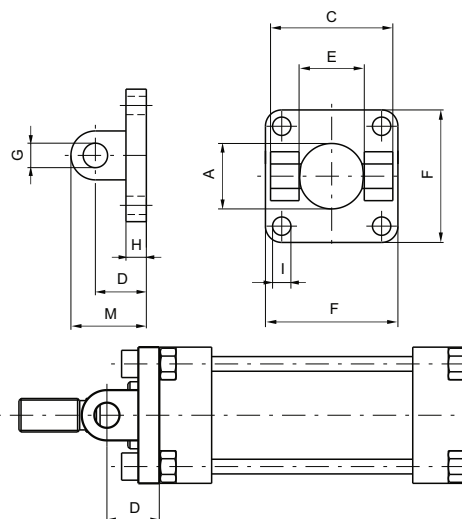
Elements used to anchor the cylinder parallel to the mounting plane. They are made of aluminium alloy and painted black.

Bore	32	40	50	63	80	100	125	160	200
A (H11)	25	32	32	45	45	55	55	65	65
C (JS 14)	65	72	90	100	126	148	180	230	270
D (JS 15)	32	36	45	50	63	73	91	115	135
E	22	26	32	37	47	57	70	90	110
F	45	52	65	75	95	115	140	180	220
G (H14)	9	9	11	11	14	14	18	22	22
H	8	8	10	10	12	12	16	20	20
I	7	7	9	9	11	11	13	17	17
M	35	35	45	45	55	55	67	80	80
N ($\pm 0,2$)	18	18	22	22	28	28	32	40	40
O	82	90	110	120	155	180	215	275	315
L5 - CNOMO	60	90	86	101	93	113	113	140	140
L5 - CETOP - ISO	78	90	86	101	104	113	136	140	150
L6 - CNOMO	123	162	166	186	192	220	224	270	270
L6 - CETOP - ISO	141	162	166	186	203	220	247	270	280
L7 - CNOMO	116	146	154	169	181	201	209	260	260
L7 - CETOP - ISO	134	146	154	169	192	201	232	260	270
L9 - CNOMO	95	134	132	152	148	176	176	210	210
L9 - CETOP - ISO	112	128	133	148	162	176	213	240	250
Weight gr.	80	90	190	210	460	600	1080	2400	3100

Front clevis

Ordering code

Front
1303.Ø.08F
(CNOMO)

1304.Ø.08F
(CETOP - ISO)


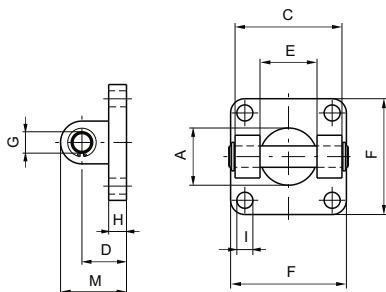
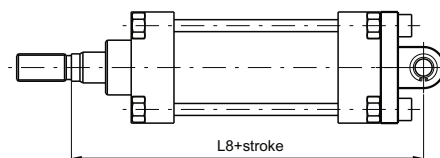
This type of mounting allows anchorage of the cylinder both parallel and at a right angle to the plane; the cylinder rod can oscillate and self-align as necessary. It is made of aluminium alloy and painted black.

Bore	32	40	50	63	80	100	125	160	200
A	25	32	32	45	45	55	55	65	65
C - CNOMO (H1)	45	52	65	75	95	115	140	180	220
C - CETOP - ISO (H14)	45	52	60	70	90	110	130	170	170
D - CNOMO (±0,2)	18	24	26	30	32	37	41	55	55
D - CETOP (±0,2)	20	22	25	30	32	37	46	55	55
E - CNOMO (H14)	26	33	33	47	47	57	57	72	72
E - CETOP (H14)	26	28	32	40	50	60	70	90	90
F	45	52	65	75	95	115	140	180	220
G - CNOMO (H9)	8	12	12	16	16	20	20	25	25
G - CETOP - ISO (H9)	10	12	12	16	16	20	25	30	30
H	8	8	10	10	12	12	16	19	19
I	7	7	9	9	11	11	13	17	17
M - CNOMO	26	36	38	46	48	57	61	80	80
M - CETOP - ISO	30	35	37	46	48	57	71	85	85
Weight gr.	55	60	120	145	325	510	900	2080	3100

Rear clevis complete with pin

Ordering code

Front
1303.Ø.09F
(CNOMO)

1304.Ø.09F
(CETOP - ISO)


This type of mounting 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.

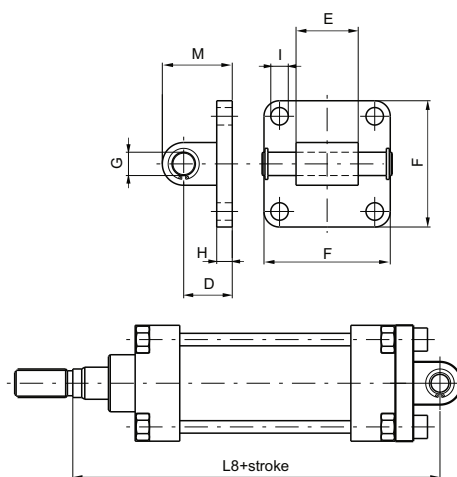
Bore	32	40	50	63	80	100	125	160	200
A	25	32	32	45	45	55	55	65	65
C - CNOMO (H1)	45	52	65	75	95	115	140	180	220
C - CETOP - ISO (H14)	45	52	60	70	90	110	130	170	170
D - CNOMO (±0,2)	18	24	26	30	32	37	41	55	55
D - CETOP - ISO (±0,2)	20	22	25	30	32	37	46	55	55
E - CNOMO (H14)	26	33	33	47	47	57	57	72	72
E - CETOP (H14)	26	28	32	40	50	60	70	90	90
F	45	52	65	75	95	115	140	180	220
G - CNOMO (H9)	8	12	12	16	16	20	20	25	25
G - CETOP - ISO (H9)	10	12	12	16	16	20	25	30	30
H	8	8	10	10	12	12	16	19	19
I	7	7	9	9	11	11	13	17	17
M - CNOMO	26	36	38	46	48	57	61	80	80
M - CETOP - ISO	30	35	37	46	48	57	71	85	85
L8 - CNOMO	123	168	170	194	196	229	233	285	285
L8 - CETOP - ISO	142	160	170	190	210	230	275	315	335
Weight gr.	75	110	190	280	490	820	1270	2800	3900

Rear male clevis

Ordering code

1304.Ø.09/1F

(For CETOP-ISO cylinders
May be used with CNOMO
cylinders but is not specified
in the standards)



Similar to 09 clevis except for the connection, which is male rather than female. It can also be used as a counter clevis for type 10 (only CETOP - ISO). Allows mounting of cylinder at right angle to the plane of the cylinder rod.

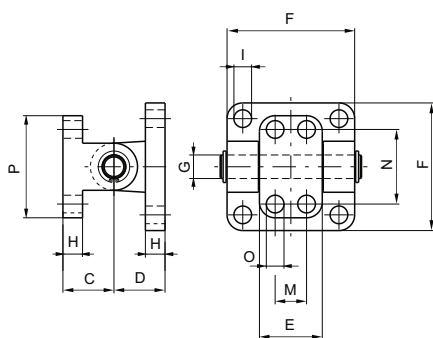
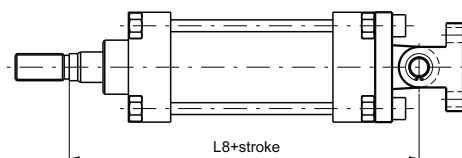
Bore	32	40	50	63	80	100	125	160	200
D ($\pm 0,2$)	20	22	25	30	32	37	46	55	55
E ($^{+0,2}_{-0,6}$)	26	28	32	40	50	60	70	90	90
F	45	52	65	75	95	115	140	180	220
G (H 9)	10	12	12	16	16	20	25	30	30
H	8	8	8	10	12	12	16	20	20
I	7	7	9	9	11	11	14	18	18
M	30	35	36	45	47	57	71	80	80
L8 - CNOMO	125	166	169	194	196	229	233	285	285
L8 - CETOP - ISO	142	160	170	190	210	230	275	315	335
Weight gr.	50	80	110	185	325	460	1300	2850	3980

Rear clevis bracket

Ordering code

1303.Ø.10F (CNOMO)

(May be used with
CETOP - ISO
cylinders but is not
specified in the standard)



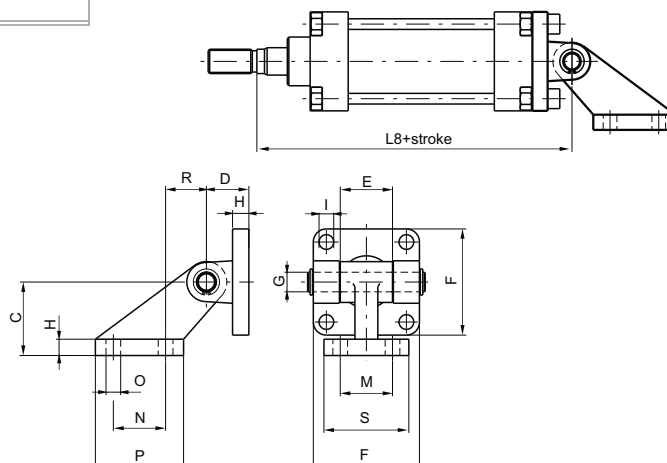
Mounting consists of clevis 09 and counter clevis. Used to mount cylinders at a right angle to the plane to which the counter clevis is attached. Allows self-alignment of the cylinder rod under load with an oscillation of ± 60 degrees.

Bore	32	40	50	63	80	100	125	160	200
C ($\pm 0,2$)	18	26	26	34	34	41	41	55	55
D ($\pm 0,2$)	18	24	26	30	32	37	41	55	55
E	25	32	32	46	46	56	56	71	71
F	45	52	65	75	95	115	140	180	220
G (H 9)	8	12	12	16	16	20	20	25	25
H	8	10	10	12	12	16	16	20	20
I	7	7	9	9	11	11	13	17	17
M (JS 14)	-	16	16	25	25	32	32	43	43
N (JS 14)	28	38	38	54	54	90	90	150	150
O (H 13)	7	9	9	11	11	14	14	18	18
P	40	52	52	75	75	115	115	180	180
L8 - CNOMO	123	168	170	194	196	229	233	285	285
L8 - CETOP - ISO	140	162	171	190	210	229	270	315	335
Weight gr.	90	165	240	470	665	1190	1660	3700	4700

Trunnion with support bracket

Ordering code

1303.Ø.11F
(CNOMO)
(May be used with
CETOP - ISO
cylinders but
is not specified
in the standards)



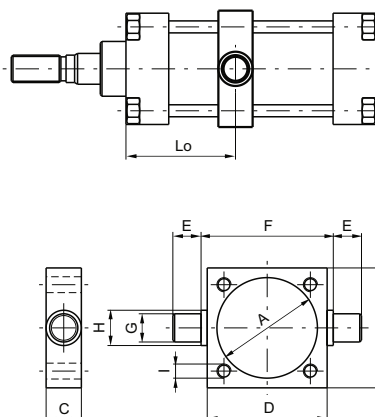
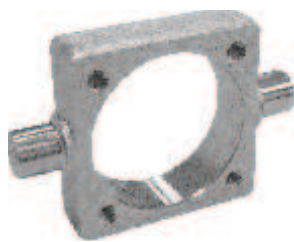
Mounting consists of clevis 09 and right angle counter clevis. Used to mount cylinders parallel to the plane to which the counter clevis is attached. Allows self-alignment of the cylinder rod under load with an oscillation up to 90 degrees from the mounting plane.

Bore	32	40	50	63	80	100	125	160	200
C (JS 15)	32	45	45	63	63	90	90	140	140
D (±0,2)	18	24	26	30	32	37	41	55	55
E	25	32	32	46	46	56	56	71	71
F	45	52	65	75	95	115	140	180	220
G (H9)	8	12	12	16	16	20	20	25	25
H	8	10	10	12	12	16	16	20	20
I	7	7	9	9	11	11	13	17	17
M (JS14)	25	32	32	40	40	50	50	63	63
N (Js14)	20	32	32	50	50	70	70	110	110
O (JS 13)	7	9	9	11	11	14	14	18	18
P	37	54	54	75	75	102	102	154	154
R	18	25	25	32	32	40	40	50	50
S	41	51	51	62	62	80	80	110	110
L8 - CNOMO	123	168	170	194	196	229	233	285	285
L8 - CETOP - ISO	140	162	171	190	210	229	270	315	335
Weight gr.	125	250	325	600	800	1570	2100	4600	5700

Intermediate trunnion

Ordering code

1300.Ø.12F



Clevis to be mounted between the endcaps of the cylinder allowing rotation at any point along the barrel. One piece construction from zinc-plated stamped steel. Can be mounted in fixed position or attached to adjustable tie rods.

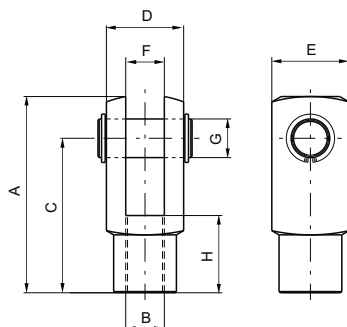
NOTE: L0 max means at stroke 0.

Bore	32	40	50	63	80	100	125	160	200
A	37	46	56	69	87	107	133	170	211
C	15	20	20	25	25	30	32	40	40
D	46	59	69	84	102	125	155	190	240
E (h 14)	12	16	16	20	20	25	25	32	32
F (h 14)	50	63	73	90	108	131	160	200	250
G (e 9)	12	16	16	20	20	25	25	32	32
H	15	20	20	25	25	30	30	40	40
I	M6	M6	M8	M8	M10	M10	M12	M16	M16
L0 min.	32	35	40	47	53	55	61	78	79
L0 max. +stroke - CNOMO	48	75	70	80	72	90	84	103	102
L0 max. + stroke - CETOP - ISO	67	75	70	80	84	90	107	103	112
Weight gr.	130	310	370	700	900	1590	2600	4300	7500

Fork with pin

Ordering code

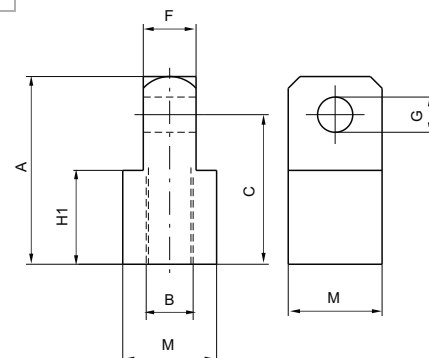
1300.Ø.13F (CNOMO)
1301.Ø.13F (CETOP)
1302.Ø.13F (ISO)



Male fork

Ordering code

1300.Ø.14F
(only for CNOMO cylinders)

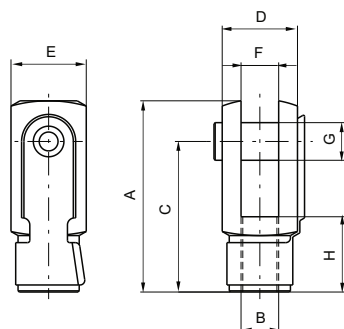


Fork with clips

Ordering code

1300.Ø.13/1F (CNOMO)
1301.Ø.13/1F (CETOP)
1302.Ø.13/1F (ISO)

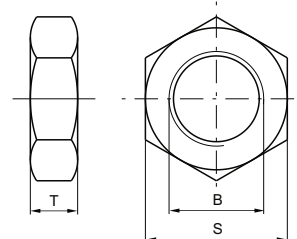
from Ø32 to Ø100



Rod lock nut

Ordering code

1300.Ø.18F (CNOMO)
1301.Ø.18F (CETOP)
1302.Ø.18F (ISO)



Bore	32	40	50	63	80	100	125	160	200
A - CNOMO	45	64	64	80	80	105	105	140	140
A - CETOP - ISO	51	62	82	82	105	105	132/148	188	188
B - CNOMO (6H)	M10x1,5	M16x1,5	M16x1,5	M20x1,5	M20x1,5	M27x2	M27x2	M36x2	M36x2
B - CETOP (6H)	M10x1,25	M12x1,25	M16x1,5	M16x1,5	M20x1,5	M20x1,5	M24x2	M36x2	M36x2
B - ISO (6 H)	M10x1,25	M12x1,25	M16x1,5	M16x1,5	M20x1,5	M20x1,5	M27x2	M36x2	M36x2
C - CNOMO	36	51	51	63	63	85	85	115	115
C - CETOP - ISO	40	48	64	65	80	80	100/100	144	144
D - CNOMO	22	36	36	45	45	63	63	80	80
D - CETOP - ISO	20	24	32	32	40	40	50/55	70	70
E - CNOMO	22	26	26	34	34	42	42	50	50
E - CETOP - ISO	20	24	32	32	40	40	50/55	70	70
F - CNOMO (H 14)	11	18	18	22	22	30	30	40	40
F - CETOP - ISO (B 12)	10	12	16	16	20	20	25/30	35	35
G - CNOMO (H 9)	8	12	12	16	16	20	20	25	25
G - CETOP - ISO (H 9)	10	12	16	16	20	20	25/30	35	35
H - CNOMO	20	26	26	30	30	45	45	75	75
H - CETOP - ISO	20	24	32	32	40	40	50/56	72	72
H1 - CNOMO	20	32	32	40	40	55	55	75	75
M	22	32	32	36	36	45	45	70	70
S - CNOMO	17	24	24	30	30	41	41	55	55
S - CETOP	17	19	24	24	30	30	36	55	55
S - ISO	17	19	24	24	30	30	41	55	55
T - CNOMO	6	8	8	9	9	12	12	18	18
T - CETOP	6	7	8	8	9	9	10	18	18
T - ISO	6	7	8	8	9	9	12	18	18
Weight gr.									
Fork	90	150	350	350	680	680	2500	4000	4000
Rod lock nut	10	20	20	35	35	80	80	210	210
Male fork	110	30	330	500	500	1300	1300	3500	3500

Construction characteristics

Front cover	anodised aluminium
Rear cover	UNI 5079 aluminium alloy casting
Rod	C43 chromed steel stainless steel
Barrel	RA=0.3-0.5 anodised aluminium
Cushion bushings	hard aluminium
Piston	vulcanized rubber block on steel core with incorporated permanent magnet, or without magnet for non magnetic version (plus spacer).
Flange	zinc plated steel
Rod seal	PUR
Other seals	NBR 80 shore rubber
Cushioning adjustment screw	nickel-plated steel

Technical characteristics

Fluid	filtered and lubricated air
Max. pressure	10 bar
Working temperature	-5°C - +70°C

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.

Cushioning lengths

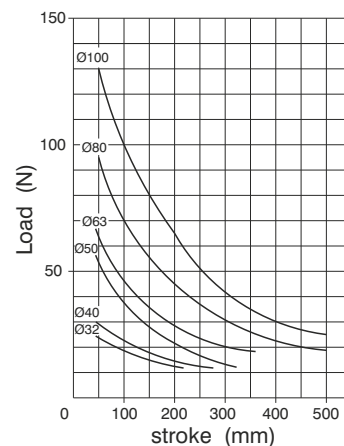
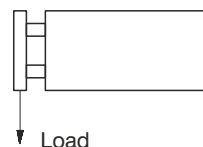
Bore	Ø	32	40	50	63	80	100
Front length	mm	22	22	24	32	32	32
Rear length	mm	28	32	32	40	44	50

Standard strokes

Ø32	25 - 50 - 75 - 100 - 150 - 200 mm
Ø40	25 - 50 - 75 - 100 - 150 - 200 - 250 mm
Ø50	25 - 50 - 75 - 100 - 150 - 200 - 250 - 300 mm
Ø63	25 - 50 - 75 - 100 - 150 - 200 - 250 - 300 - 350 mm
Ø80	25 - 50 - 75 - 100 - 150 - 200 - 250 - 300 - 350 - 400 - 500 mm
Ø100	25 - 50 - 75 - 100 - 150 - 200 - 250 - 300 - 350 - 400 - 500 mm

Stroke tolerance (ISO 15552)

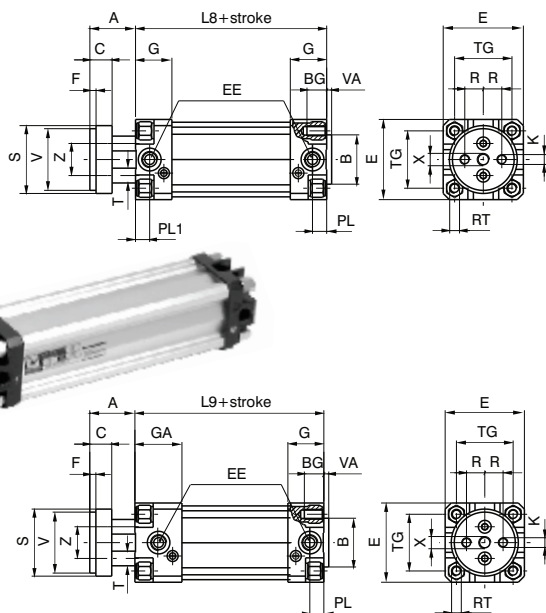
Bore	Stroke	Tolerance
32 - 40 - 50	up to 500 mm	+2
63 - 80 - 100		0



Basic version

Ordering code

1325.Ø.stroke.01 magnetic
1326.Ø.stroke.01 non magnetic
1325.Ø.stroke.01X magnetic stainless steel rod
1326.Ø.stroke.01X non magnetic stainless steel rod



Alesaggio	32	40	50	63	80	100
A	26	30	37	37	46	51
AM	22	24	32	32	40	40
B	30	35	40	45	45	55
BG	12	12	16	16	20	20
C	15	15	18	22	22	22
E	46	52	65	75	95	115
EE	G 1/8"	G 1/4"	G 1/4"	G 3/8"	G 3/8"	G 1/2"
F	4	4	5	5	5	5
G	25	29	29,5	36	36	40
GA	50	54	54,5	61	61	65
K	M6	M8	M8	M10	M12	M12
L8	94	105	106	121	128	138
L9	119	130	131	146	153	163
PL	9	11,5	13	14	16	18
PL1	9,5	11	10,5	14	13	15
R	9,5	11,25	15	19	25	35
RT	M6	M6	M8	M8	M10	M10
S	35	45	55	70	85	105
T	8	10	12	16	20	20
TG	32,5	38	46,5	56,5	72	89
V	32	40	50	63	80	100
VA	4	4	4	4	4	4
Z	18	22	26	35	40	50
WH	26	30	37	37	46	51
X	M8	M10	M10	M12	M14	M14
Weight	Stroke	Basic version	560	810	1380	2300
gr.	0	Extended ver.	650	950	1500	2500
	every 10 mm		20	26	30	40
					80	90

Extended front cover

1345.Ø.stroke.01 magnetic
1347.Ø.stroke.01 non magnetic
1345.Ø.stroke.01X magnetic stainless steel rod
1347.Ø.stroke.01X non magnetic stainless steel rod

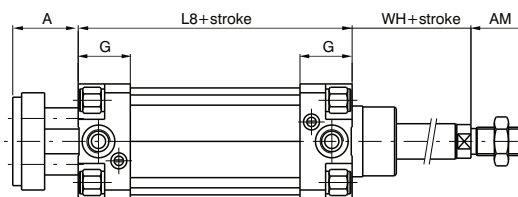
Push-pull rod version with ISO standard

Ordering code

1325.Ø.stroke.02 magnetic
1326.Ø.stroke.02 non magnetic

Ordering code

1325.Ø.stroke.02X magnetic stainless steel rod
1326.Ø.stroke.02X non magnetic stainless steel rod



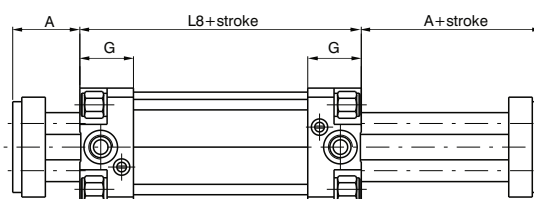
Twin rods push-pull version

Ordering code

1325.Ø.stroke.06 magnetic
1326.Ø.stroke.06 non magnetic

Ordering code

1325.Ø.stroke.06X magnetic stainless steel rod
1326.Ø.stroke.06X non magnetic stainless steel rod



Magnetic sensors

For sensor and sensor support bracket please refer to the 1319 and 1320 series.

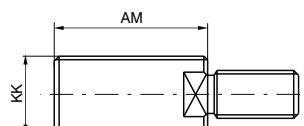
Accessories

All of the attachments of the ISO 15552 can be mounted, with the exclusion of the front flange and the foot mounting bracket that, although they are part of the same series, need a small adjustment in the exit zone of the rods. For these there is a different code and the dimensions are indicated below.

Threaded Nipple

Ordering code

1325.Ø.17F

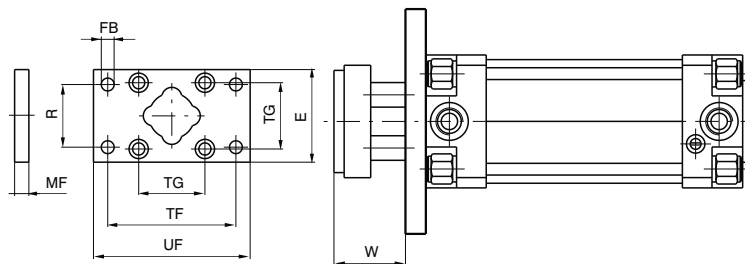


Bore	32	40	50	63	80	100
AM	22	24	32	35	40	40
KK	M10x1,25	M12x1,25	M16x1,5	M16x1,5	M20x1,5	M20x1,5
Weight gr.	17	27	63	65	110	110

Front flange

Ordering code

1325.Ø.03F

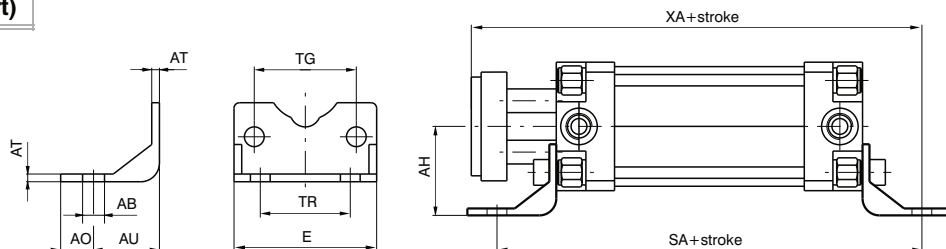


Bore	32	40	50	63	80	100
E	45	52	65	75	95	115
FB (H13)	7	9	9	9	12	14
MF (JS 14)	10	10	12	12	16	16
R (JS 14)	32	36	45	50	63	75
TF (JS 14)	64	72	90	100	126	150
TG	32,5	38	46,5	56,5	72	89
UF	80	90	110	120	150	170
W	16	20	25	25	30	35
Weight gr.	160	250	480	620	1430	3500

Front foot mounting bracket (short)

Ordering code

1325.Ø.05/1F
(1 piece)



Bore	32	40	50	63	80	100
AB (H14)	7	9	9	9	12	14
AH (JS 15)	32	36	45	50	63	71
AO (± 0,2)	11	8	13	13	14	15
AT	3,5	3,5	3,5	4,5	5	5
AU	24	28	32	32	41	41
E	45	52	65	75	95	115
SA	142	161	170	185	210	220
TG	32,5	38	46,5	56,5	72	89
TR (JS 14)	32	36	45	50	63	75
XA	144	163	175	190	215	230
Weight gr.	50	70	120	180	320	400

General

The SKIP and STOP valves are pneumatically actuated 2 ways poppet valves. The SKIP valve (accelerating device) is normally open and is equipped with a supplementary regulator for maximum speed control. It must be activated to obtain speed regulation.
The STOP valve can be normally closed or normally open.

Construction characteristics

Covers	black anodised aluminium
Barrels	bright painted drawn steel
Rod	C43 chromed steel
Tie rods	plated zinc steel
Piston	aluminium
Waterproof seals	NBR rubber
Piston seal	FPM
Rod seal	PUR
Regulators group	brass
Skip and stop valves	black anodised aluminium
Circuit oil	hydraulic with viscosity 2.9° E at 50°C (viscosity index minimum 118)
Bore	40 mm and 63 mm diameter

Technical characteristics

Max connecting load	600 kg (Ø40) -1200 Kg (Ø63)
Min. and max. speed	60 - 10000 mm/min.
Working temperature	-5°C - +70°C
Minimum pressure for the actuation of skip and stop valves	4 bar

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

Standard strokes

50 - 100 - 150 - 200 - 250 - 300 - 350 - 400 - 450 - 500 mm
minimum stroke for type 1400.stroke.03.05 and 1400.stroke.03.06, 150 mm.

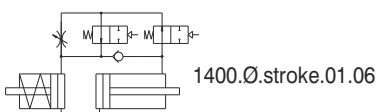
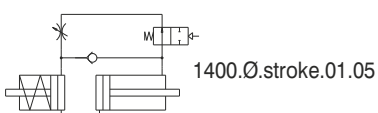
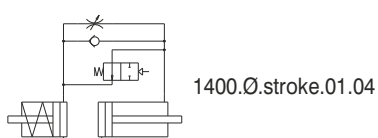
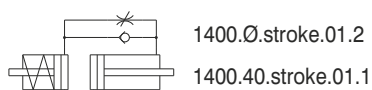
Important: For heavier load we have available the hydraulic speed control check cylinders of 63 mm diameter suitable to withstand loads up to 1200 kg. For more information please contact our technical department.

Maintenance

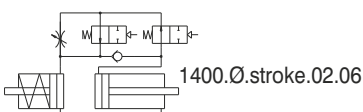
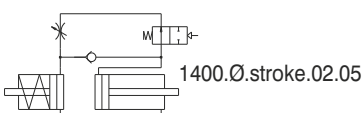
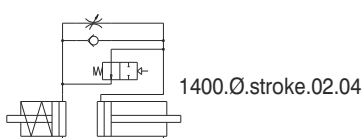
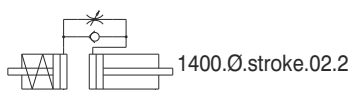
The speed control check is a closed system and there are no external factors that can adversely affect its function. Care however, has to be exercised not to allow the hydraulic fluid level to drop below the minimum indicated on the auxiliary tank. Should this occur, cavitation, or worse, an air pocket would result causing erratic control. Additional fluid should be put in exclusively through a unidirectional valve by means of an appropriate syringe (such as our code number 1400.99.01). Excess fluid will be expelled through a vent into an appropriate container. It is necessary to completely disassemble the regulator and be sure to bleed the system to eliminate air pockets. We suggest that you create a vacuum before beginning to refill. This can be done with a small unidirectional valve turned up and repeatedly loaded with a syringe. The rod must be manually actuated successively releasing air through the valve using a small and pointed instrument.

Functional schematics

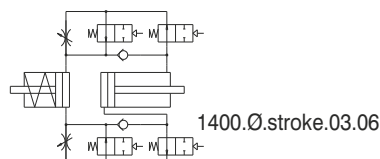
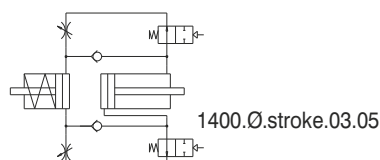
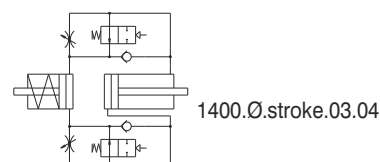
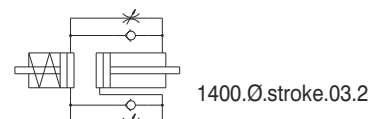
Outward Stroke Control



Inward Stroke Control



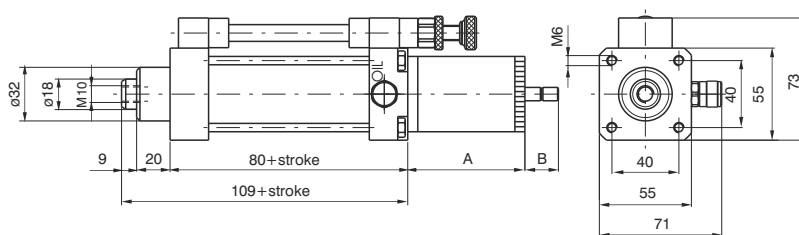
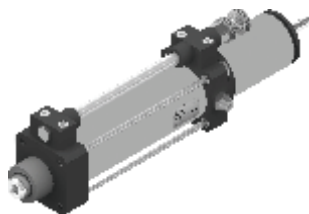
Inward & Outward Stroke Control



Regulation on the outward stroke - Tank in line

Ordering code

1400.40.stroke.01.1



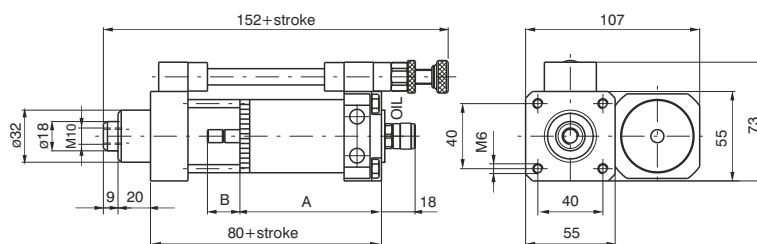
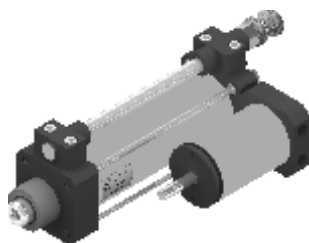
Strokes	A	B max.
< 75	78	30
75 - <150	102	45
150 - <250	127	60
250 - <350	187	90
350 - <500	202	120

Weight gr.1450 + gr. 300 every 50 mm. stroke

Regulation on the outward stroke – Lateral tank

Ordering code

1400.40.stroke.01.2



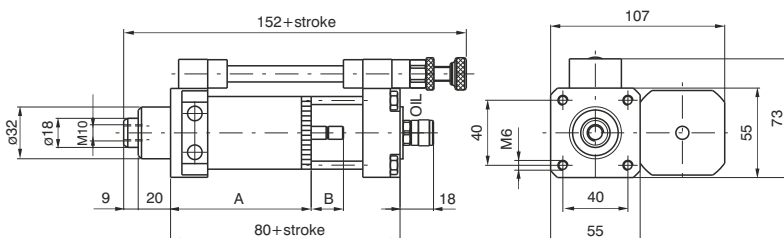
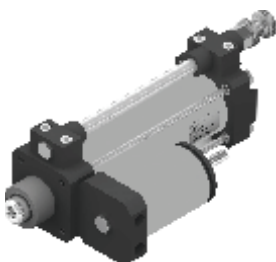
Strokes	A	B max.
< 75	93	30
75 - <150	118	45
150 - <250	143	60
250 - <350	183	90
350 - <500	218	120

Weight gr. 1530 + gr. 300 every 50 mm. stroke

Regulation on the inward stroke

Ordering code

1400.40.stroke.02.2



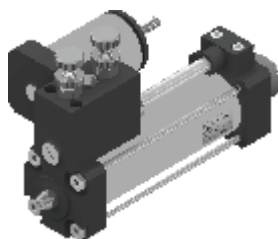
Strokes	A	B max.
< 75	93	30
75 - <150	118	45
150 - <250	143	60
250 - <350	183	90
350 - <500	218	120

Weight gr. 1530 + gr. 300 every 50 mm. stroke

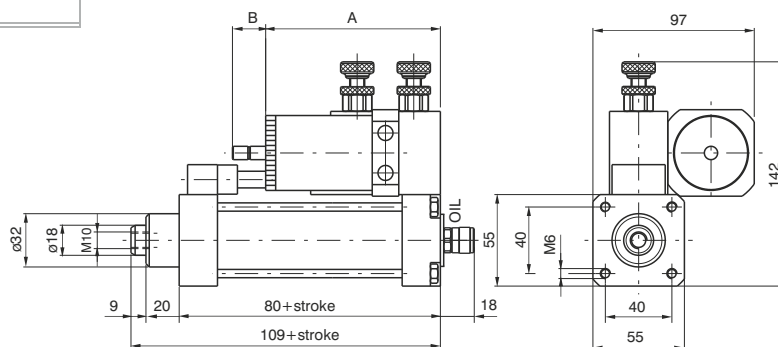
Regulation in both directions

Ordering code

1400.40.stroke.03.2



Weight gr. 1870 + gr. 300 every 50 mm. stroke



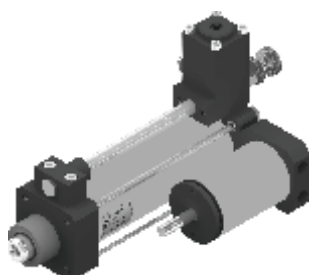
Attention: Minimum stroke=150mm when fitted in tandem (parallel or in-line) with 1319-1320-1321 cylinders series Ø80mm or Ø100mm.

Strokes	A	B max.
< 75	110	30
75 - <150	135	45
150 - <250	160	60
250 - <350	200	90
350 - <500	235	120

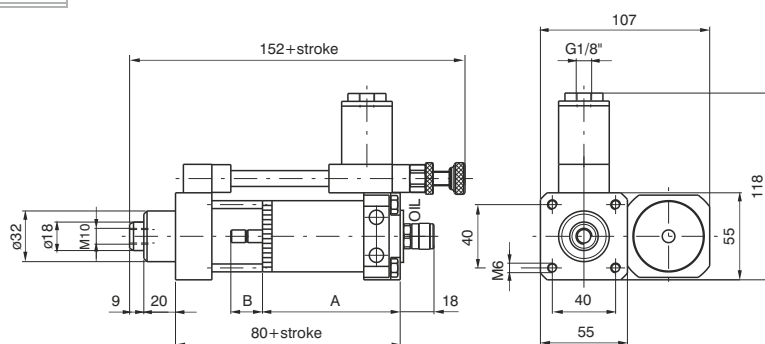
Regulation on the outward stroke with skip (Acceleration valve)

Ordering code

1400.40.stroke.01.04



Weight gr. 1670 + gr. 300 every 50 mm. stroke

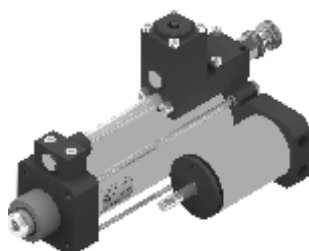


Strokes	A	B max.
< 75	93	30
75 - <150	118	45
150 - <250	143	60
250 - <350	183	90
350 - <500	218	120

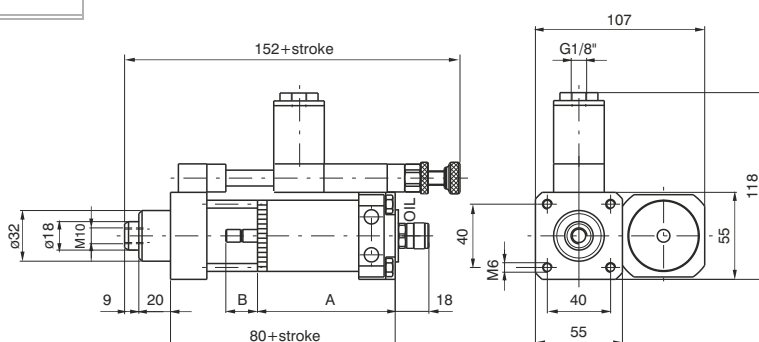
Regulation on the outward stroke with stop (Stop valve)

Ordering code

1400.40.stroke.01.05



Weight gr. 1710 + gr. 300 every 50 mm. stroke

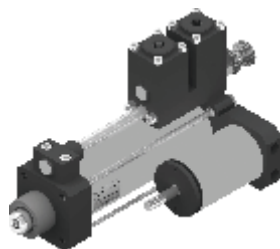


Strokes	A	B max.
< 75	93	30
75 - <150	118	45
150 - <250	143	60
250 - <350	183	90
350 - <500	218	120

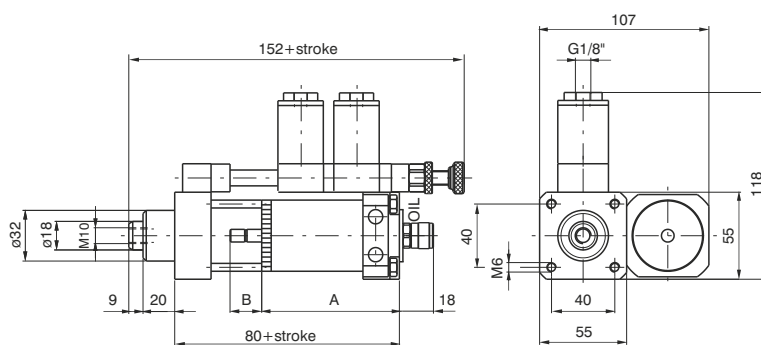
Regulation on the outward stroke with skip and stop (Acceleration and stop valves)

Ordering code

1400.40.stroke.01.06



Weight gr. 1830 + gr. 300 every 50 mm. stroke

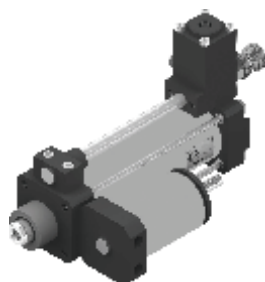


Strokes	A	B max.
< 75	93	30
75 - <150	118	45
150 - <250	143	60
250 - <350	183	90
350 - <500	218	120

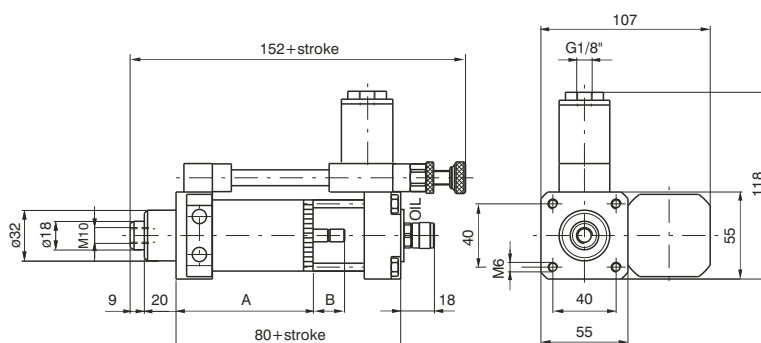
Regulation on the inward stroke with skip (Acceleration valve)

Ordering code

1400.40.stroke.02.04



Weight gr.1670 + gr. 300 every 50 mm. stroke

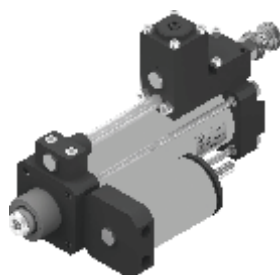


Strokes	A	B max.
< 75	93	30
75 - <150	118	45
150 - <250	143	60
250 - <350	183	90
350 - <500	218	120

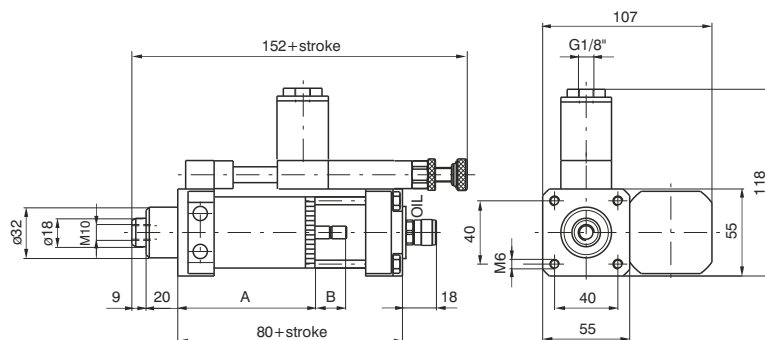
Regulation on the inward stroke with stop (Stop valve)

Ordering code

1400.40.stroke.02.05



Weight gr. 1710 + gr. 300 every 50 mm. stroke

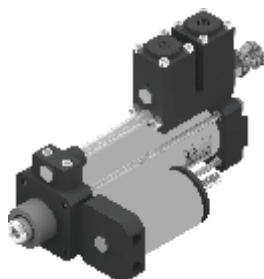


Strokes	A	B max.
< 75	93	30
75 - <150	118	45
150 - <250	143	60
250 - <350	183	90
350 - <500	218	120

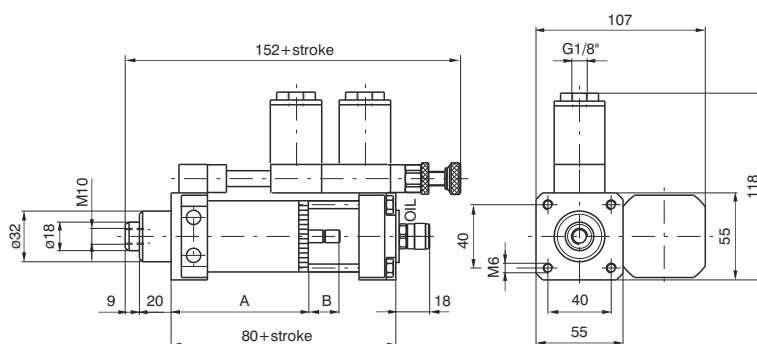
Regulation on the inward stroke with skip and stop
(Acceleration and stop valves)

Ordering code

1400.40.stroke.02.06



Weight gr. 1830 + gr. 300 every 50 mm. stroke

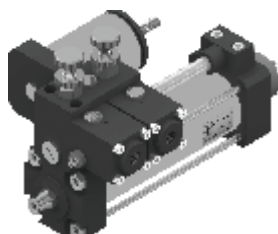


Strokes	A	B max.
< 75	93	30
75 - <150	118	45
150 - <250	143	60
250 - <350	183	90
350 - <500	218	120

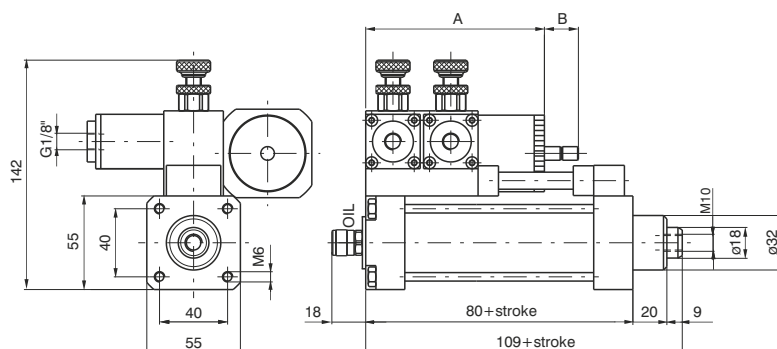
Regulation in both directions with skip
(Acceleration valves in both directions)

Ordering code

1400.40.stroke.03.04



Weight gr. 2110 + gr. 300 every 50 mm. stroke



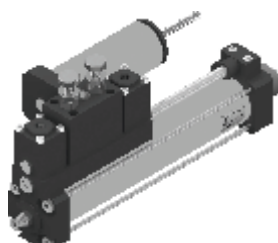
Attention: Minimum stroke=150mm
when fitted in tandem (parallel or in-line)
with 1319-1320-1321 cylinders series
Ø80mm or Ø100mm.

Strokes	A	B max.
< 75	110	30
75 - <150	135	45
150 - <250	160	60
250 - <350	200	90
350 - <500	235	120

Regulation in both directions with stop
(Stop valves in both directions)

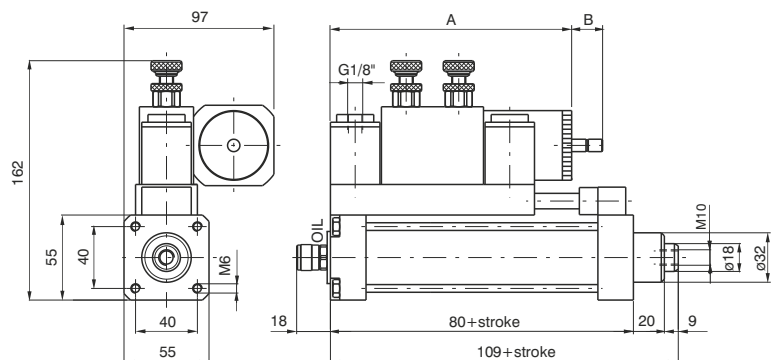
Ordering code

1400.40.stroke.03.05



Min. stroke 150 mm

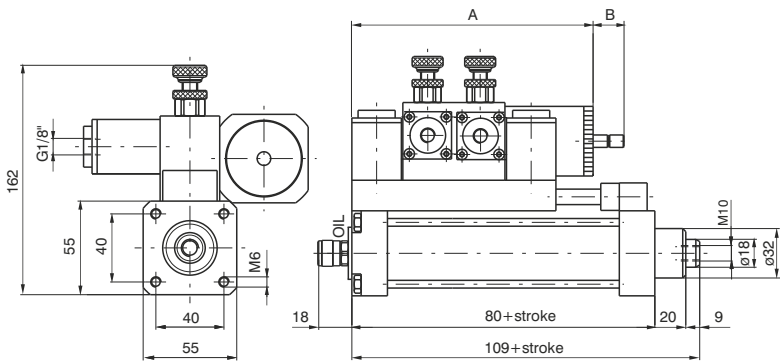
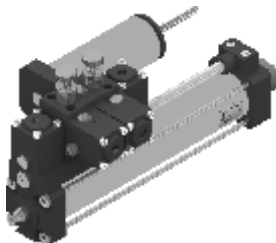
Weight gr. 2390 + gr. 300 every 50 mm. stroke



Strokes	A	B max.
150 - <250	197	60
250 - <350	237	90
350 - <500	272	120

Regulation in both directions with skip and stop
(Acceleration and stop valves in both directions)

Ordering code
1400.40.stroke.03.06



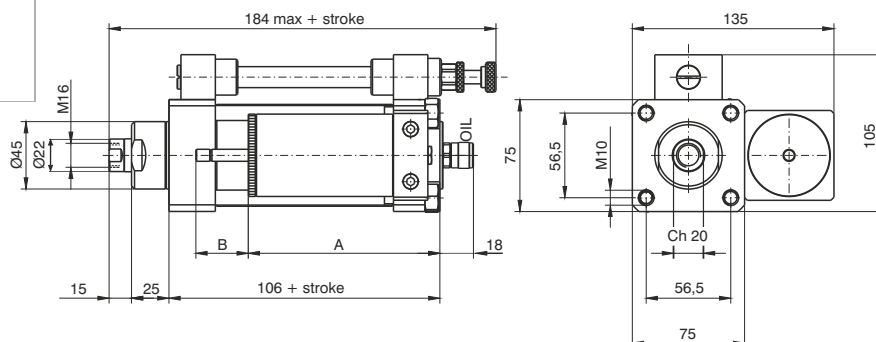
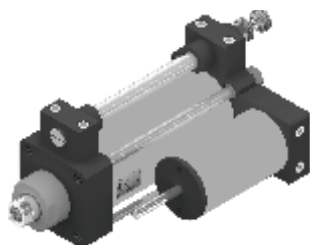
Min. stroke 150 mm
Weight gr. 2630 + gr. 300 every 50 mm. stroke

Strokes	A	B max.
150 - < 250	197	60
250 - < 350	237	90
350 - < 500	272	120

Regulation on the outward stroke – Lateral tank

Ordering code

1400.63.stroke.01.2



Min. stroke 75 mm

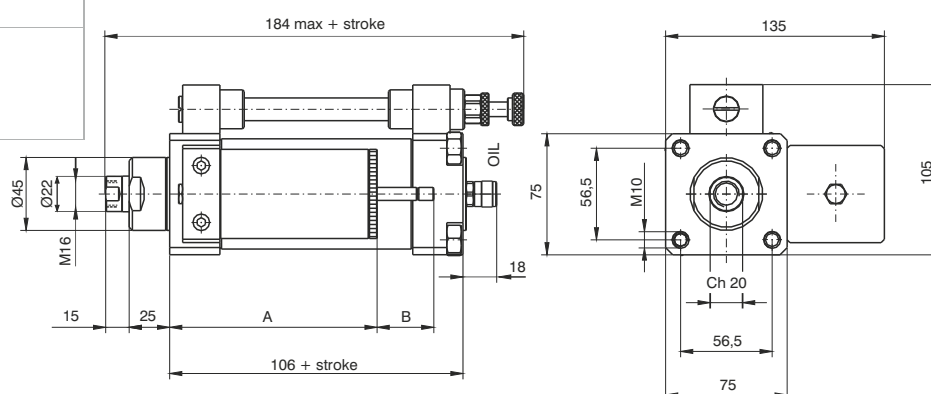
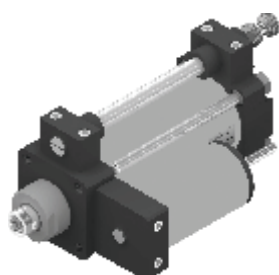
Weight gr. 2950 + gr. 850 every 50 mm. stroke

Strokes	A	B max
≥75 - <150	128	50
≥150 - <250	188	80
≥250 - <350	238	100
≥350 - <450	298	130
≥450 - ≤600	358	160

Regulation on the inward stroke

Ordering code

1400.63.stroke.02.2



Min. stroke 75 mm

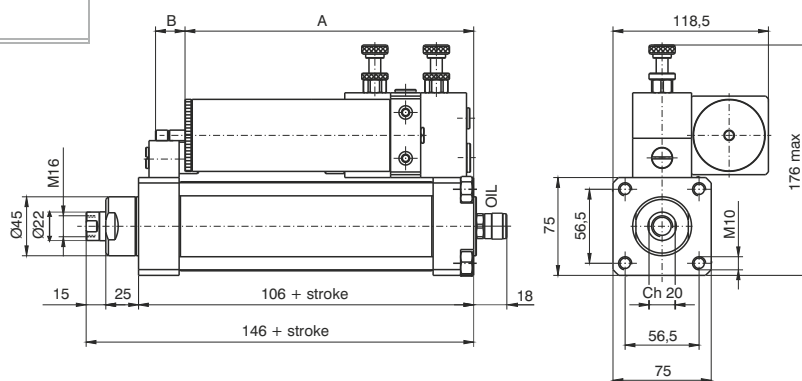
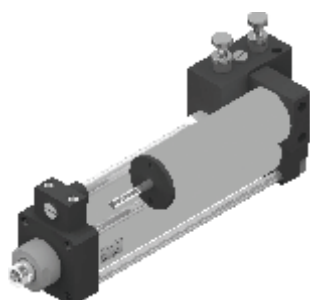
Weight gr. 2950 + gr. 850 every 50 mm. stroke

Strokes	A	B max
≥75 - <150	128	50
≥150 - <250	188	80
≥250 - <350	238	100
≥350 - <450	298	130
≥450 - ≤600	358	160

Regulation in both directions

Ordering code

1400.63.stroke.03.2



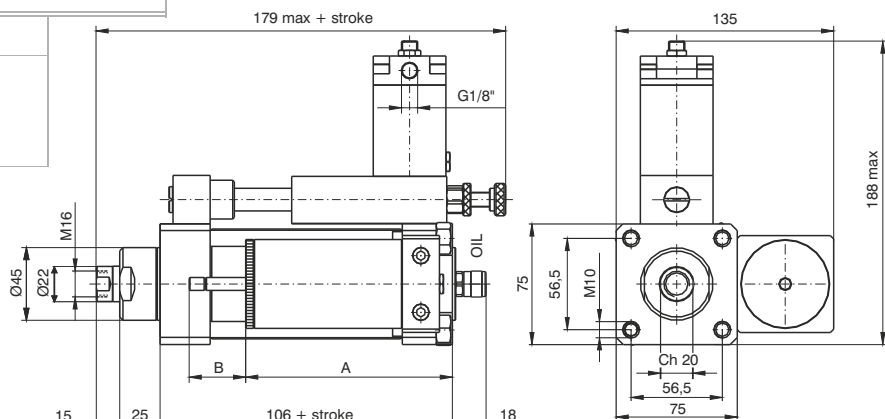
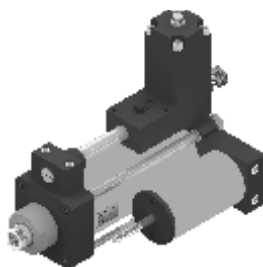
Min. stroke 100 mm

Weight gr. 3600 + gr. 850 every 50 mm. stroke

Strokes	A	B max
≥100 - <150	160	50
≥150 - <250	220	80
≥250 - <350	270	100
≥350 - <450	330	130
≥450 - ≤600	390	160

Regulation on the outward stroke with skip (Acceleration valve)

Ordering code

1400.63.stroke.01.04


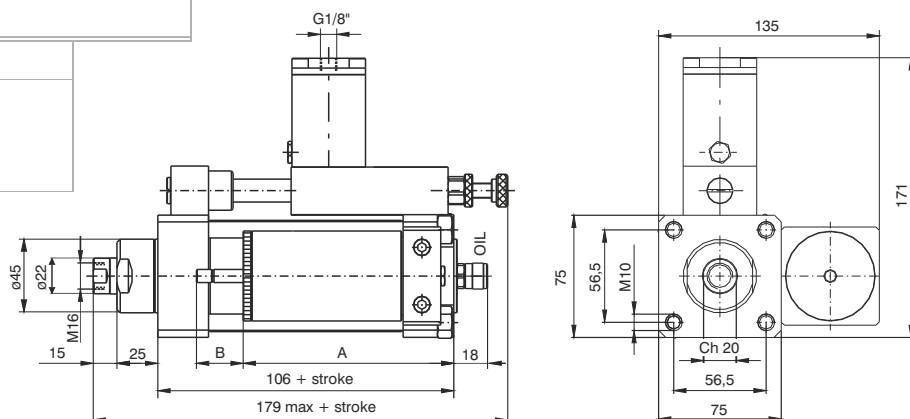
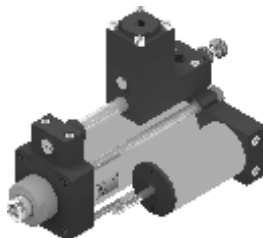
Min. stroke 75 mm

Weight gr. 3450 + gr. 850 every 50 mm. stroke

Strokes	A	B max
≥75 - <150	128	50
≥150 - <250	188	80
≥250 - <350	238	100
≥350 - <450	298	130
≥450 - ≤600	358	160

Regulation on the outward stroke with stop (Stop valve)

Ordering code

1400.63.stroke.01.05


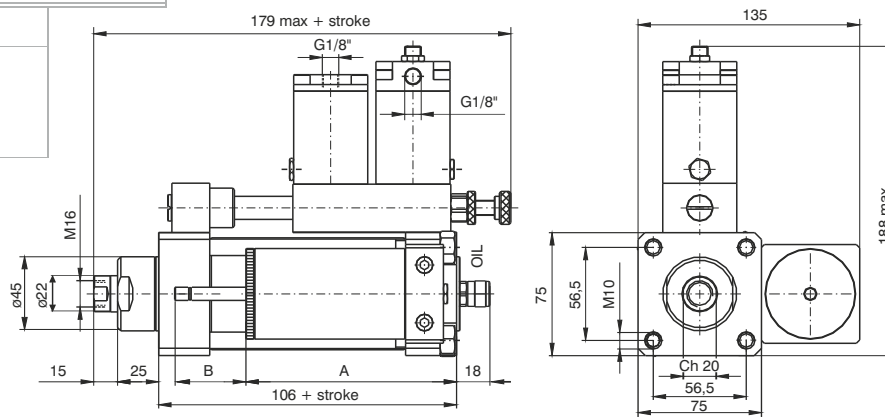
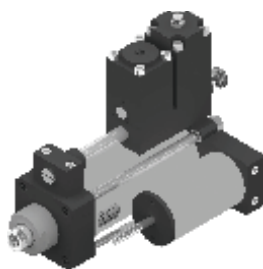
Min. stroke 75 mm

Weight gr. 3450 + gr. 850 every 50 mm. stroke

Strokes	A	B max
≥75 - <150	128	50
≥150 - <250	188	80
≥250 - <350	238	100
≥350 - <450	298	130
≥450 - ≤600	358	160

Regulation on the outward stroke with skip and stop (Acceleration and stop valves)

Ordering code

1400.63.stroke.01.06


Min. stroke 75 mm

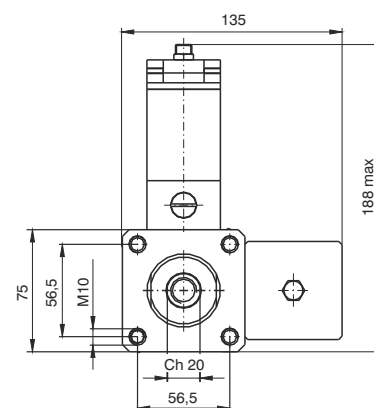
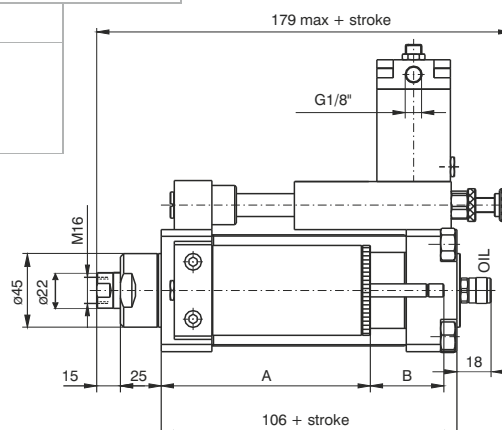
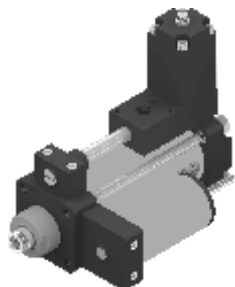
Weight gr. 3700 + gr. 850 every 50 mm. stroke

Strokes	A	B max
≥75 - <150	128	50
≥150 - <250	188	80
≥250 - <350	238	100
≥350 - <450	298	130
≥450 - ≤600	358	160

Regulation on the inward stroke with skip
(Acceleration valve)

Ordering code

1400.63.stroke.02.04



Strokes	A	B max
≥75 - <150	128	50
≥150 - <250	188	80
≥250 - <350	238	100
≥350 - <450	298	130
≥450 - ≤600	358	160

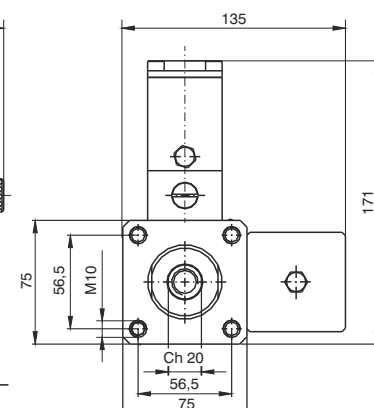
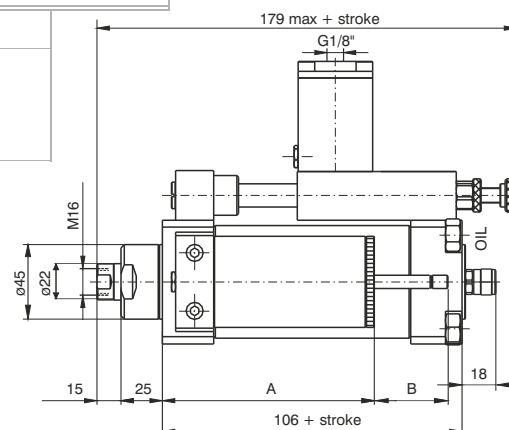
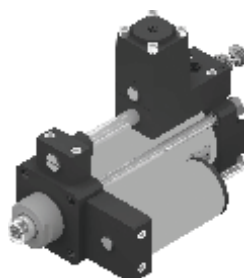
Min. stroke 75 mm

Weight gr. 3450 + gr. 850 every 50 mm. stroke

Regulation on the inward stroke with stop
(Stop valves)

Ordering code

1400.63.stroke.02.05



Strokes	A	B max
≥75 - <150	128	50
≥150 - <250	188	80
≥250 - <350	238	100
≥350 - <450	298	130
≥450 - ≤600	358	160

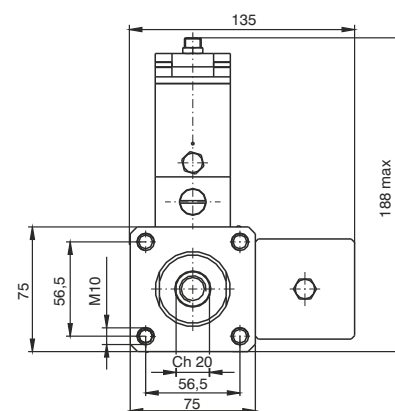
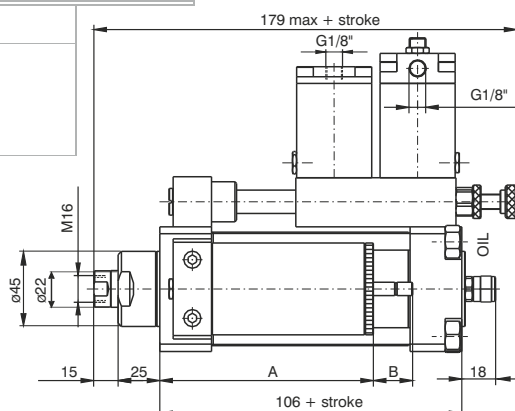
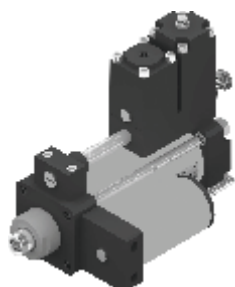
Min. stroke 75 mm

Weight gr. 3450 + gr. 850 every 50 mm. stroke

Regulation on the inward stroke with skip and stop
(Acceleration and stop valve)

Ordering code

1400.63.stroke.02.06



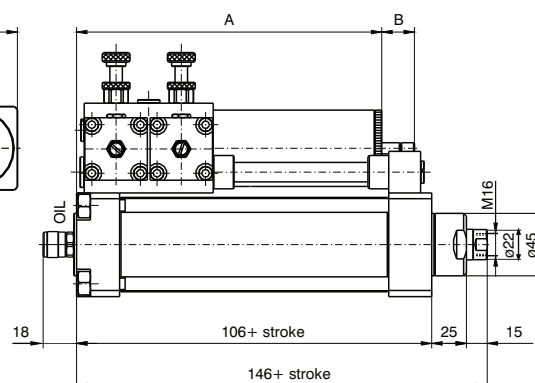
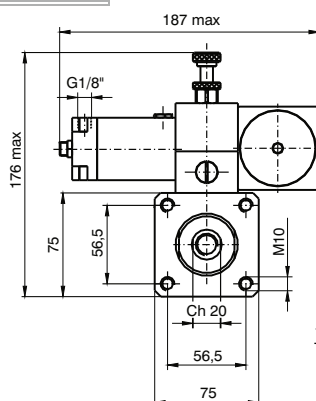
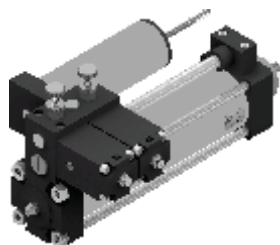
Strokes	A	B max
≥75 - <150	128	50
≥150 - <250	188	80
≥250 - <350	238	100
≥350 - <450	298	130
≥450 - ≤600	358	160

Min. stroke 75 mm

Weight gr. 3700 + gr. 850 every 50 mm. stroke

Regulation in both direction with skip
 (Accelerations valve in two directions)

Ordering code

1400.63.stroke.03.04


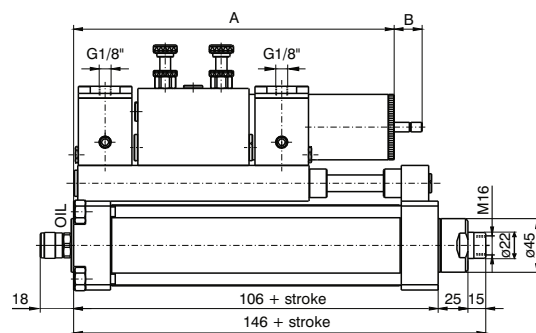
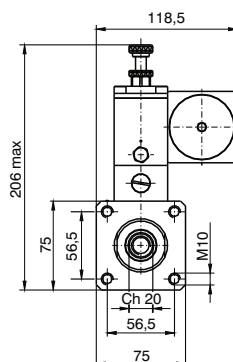
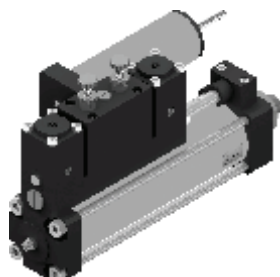
Strokes	A	B max
≥100 - <150	160	50
≥150 - <250	220	80
≥250 - <350	270	100
≥350 - <450	330	130
≥450 - ≤600	390	160

Min. stroke 100 mm

Weight gr. 4100 + gr. 850 every 50 mm. stroke

Regulation in both direction with stop
 (Stop valves in two directions)

Ordering code

1400.63.stroke.03.05


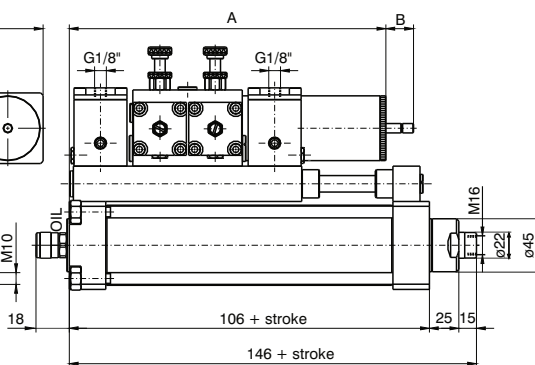
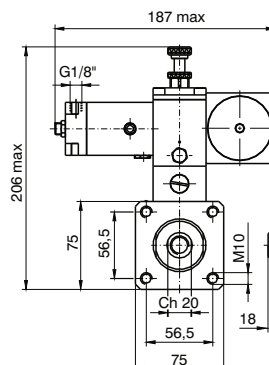
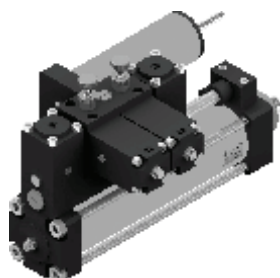
Strokes	A	B max
≥200 - <250	269	80
≥250 - <350	319	100
≥350 - <450	379	130
≥450 - ≤600	439	160

Min. stroke 200 mm

Weight gr. 4850 + gr. 850 every 50 mm. stroke

Regulation in both direction with skip and stop
 (Acceleration and stop valves in two directions)

Ordering code

1400.63.stroke.03.06


Strokes	A	B max
≥200 - <250	269	80
≥250 - <350	319	100
≥350 - <450	379	130
≥450 - ≤600	439	160

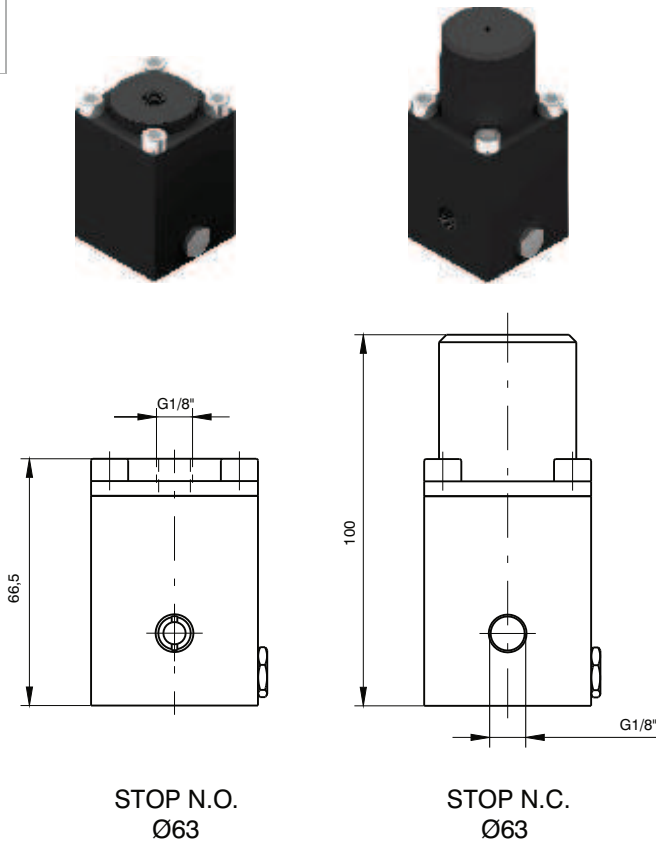
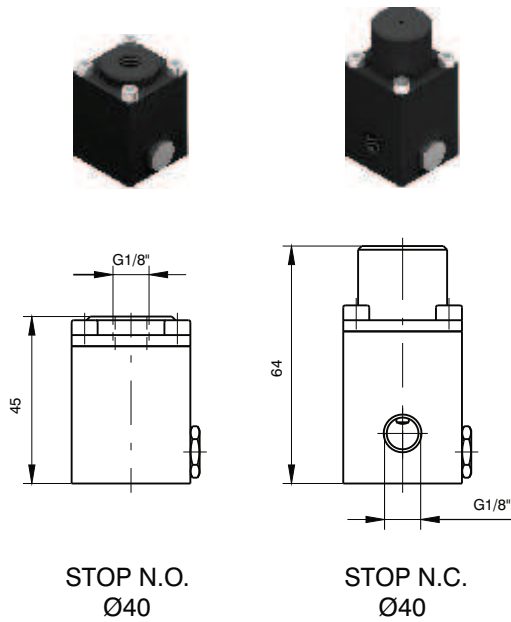
Min. stroke 200 mm

Weight gr. 5400 + gr. 850 every 50 mm. stroke

Dimensional releases and power supply positions with N.C. stop valves

Ordering code

- 1400.Ø.stroke.01.07 regulation on the outward stroke + stop N.C.
- 1400.Ø.stroke.01.08 regulation on the outward stroke + skip + stop N.C.
- 1400.Ø.stroke.02.07 regulation on the inward stroke + stop N.C.
- 1400.Ø.stroke.02.08 regulation on the inward stroke + skip and stop N.C.
- 1400.Ø.stroke.03.07 regulation in both directions + stop N.C.
- 1400.Ø.stroke.03.08 regulation in both directions + skip + stop N.C.



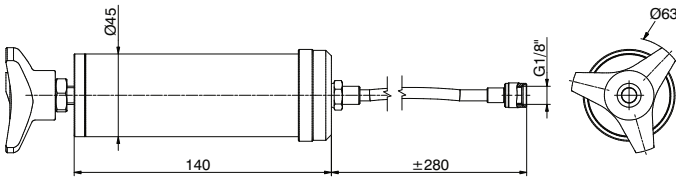
Hydraulic fluid refill syringe

Ordering code

1400.99.02



Weight gr. 420



Oil for hydraulic and pneumatic circuits

Ordering code

PNEUMOIL 01
(1 litre bottles)



This oil is suitable to lubricate pneumatic circuits and also to refill hydraulic speed control tanks. It is completely compatible with our seals.

General

Pneumatic cylinder ISO 15552 handling and controlling movement by means of internal hydraulic circuit.

All ISO fixing devices can be used except for:

- Cylinder Ø50 intermediate trunnion code 1463.50.12F
- Cylinder Ø63 intermediate trunnion code 1463.63.12F
- Cylinder Ø63 front clevis code 1463.63.08F
- Cylinder Ø63 front flange code 1463.63.03F
- Cylinder Ø63 foot code 1463.63.05/1F

Ordering key

14 .stroke. . . .

Ø50
Ø63

Regulation

- A = Regulation on extraction
- B = Regulation on compression
- D = Double regulation

STOP function

- 0 = None
- A = Stop N.C. extraction
- B = Stop N.C. compression
- C = Double Stop N.C.
- D = Stop N.O. extraction
- E = Stop N.O. compression
- F = Double Stop N.O.

SKIP function

- 0 = None
- A = Skip N.C. extraction
- B = Skip N.C. compression
- C = Double Skip N.C.
- D = Skip N.O. extraction
- E = Skip N.O. compression
- F = Double Skip N.O.

Construction characteristics

End cap	aluminium black anodised
Piston Rod	steel tube externally chrome plated
Barrel	aluminium alloy anodised
Magnetic piston	aluminium
Cushion screw	nickel plated steel
Oil tank	aluminium
Pneumatic piston seal (pneumatic side)	oil resitant NBR rubber
Rod and cushion seal	PUR
Hydraulic piston seal (hydraulic side)	PUR

Technical characteristics

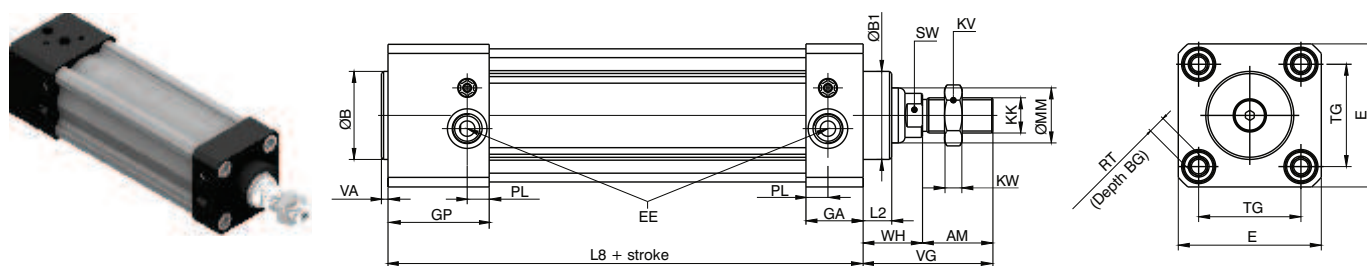
Pneumatic media	filtered and lubricated air
Hydraulic media	filtered 1µ hydraulic oil
Maximum pressure	8 bar
Skip & Stop valve minimum operating pressure	3 bar
Environment temperature	-5°C +70°C
Minimum regulated speed	40 mm/min.
Maximum regulated speed	6000 mm/min. *
Speed with SKIP	150 mm/sec. *
Free speed (without regulation)	300 mm/sec. *
Cushion speed	20 mm *
Standard stroke	from 50 to 450 steps 50 mm
Possibility of rear regulation (on request)	

* **Attention:** speed recorded with cylinder on horizontal position fed at 8 bar without load on piston rod.

Force (N)

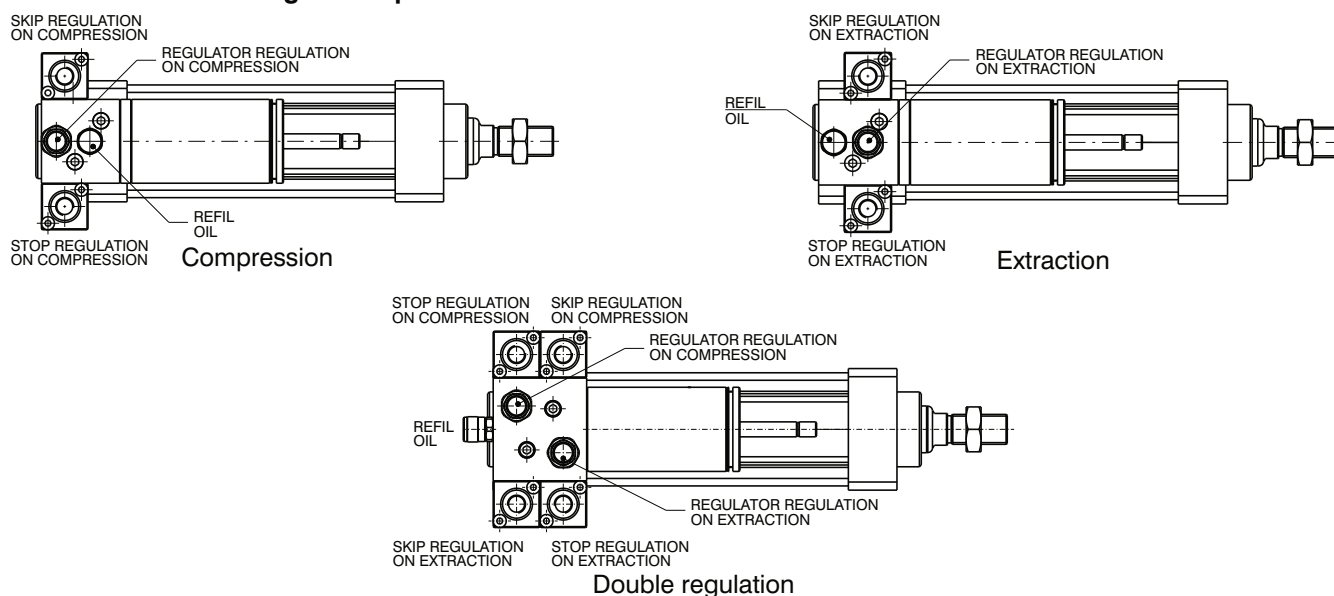
BORE	FORCE	PRESSURE (bar)									
		1	2	3	4	5	6	7	8	9	10
50	Extraction	181.4	362.9	544.3	725.7	907.2	1088.6	1270	1451.5	1632.9	1814.3
	Compression	144.4	288.8	433.2	577.6	722	866.3	1010.7	1155.1	1299.5	1443.9
63	Extraction	294.6	589.1	883.7	1178.2	1472.8	1767.3	2061.9	2356.5	2651	2945.6
	Compression	211.3	422.6	633.9	845.2	1056.6	1267.9	1479.2	1690.5	1901.8	2113.1

Base cylinder dimensions

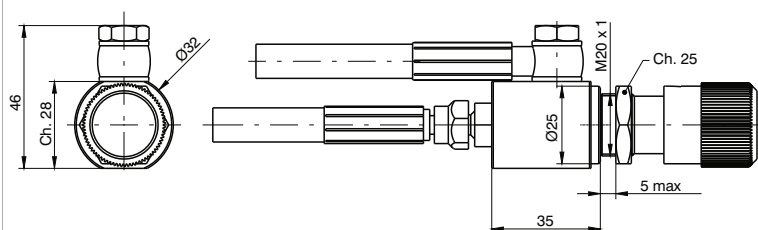


Bore	AM	B (d11)	B1 (d11)	BG	E	EE	GA	GP	KK	KV	KW	L2	L8	MM	PL	RT	SW	TG	VA	VG	WH
50	32	40	40	16	65	G1/4"	26	46	M16x1.5	24	8	13	116	25	10	M8	17	46.5	3	59	27
63		45	50		75	G3/8"			M16x1.5			20	121	35	12			56.5	4	69	37

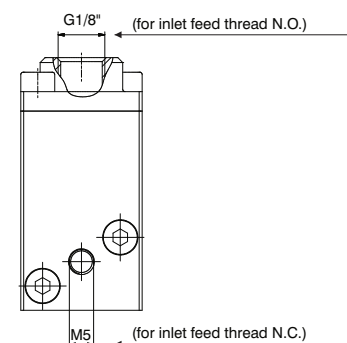
Function valves and regulators position for the different versions



Rear regulator dimensions

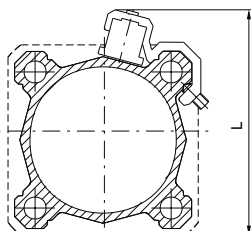


SKIP and STOP valves inlet feed position



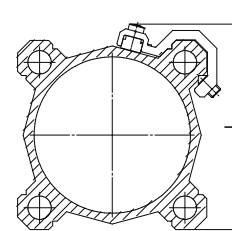
Sensor brackets codes 1500._, RS._, HS._

Dimensions	
Bore	L
Ø50	77
Ø63	87



Sensor brackets codes 1580._, MRS._, MHS._

Dimensions	
Bore	L
Ø50	66
Ø63	76



Ordering code

1320.B

Brackets for cylinder sensors Ø50 - Ø63

Ordering code

1320.BS

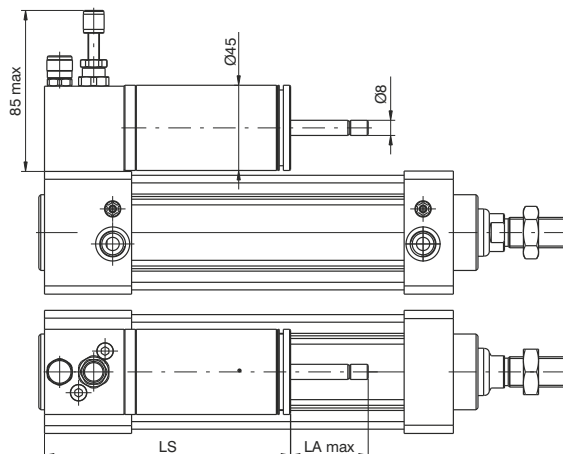
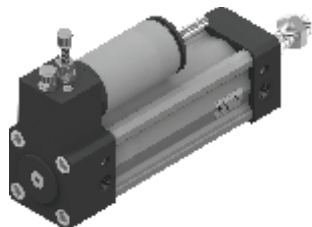
Brackets for cylinder sensors Ø50 - Ø63

Sensor for cylinder

For technical characteristics and code see Chapter 6 "Magnetic sensor"

Regulation on the outward stroke

Ordering code

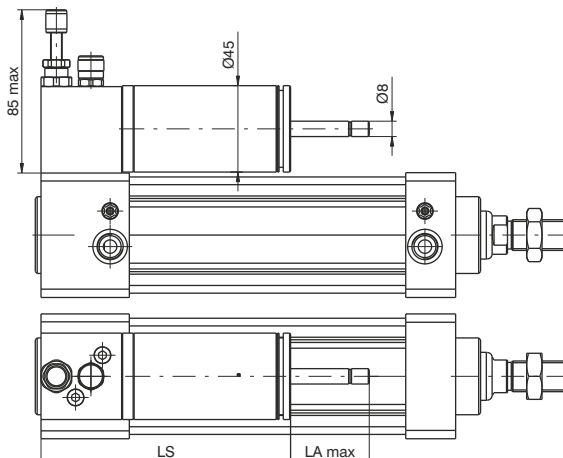
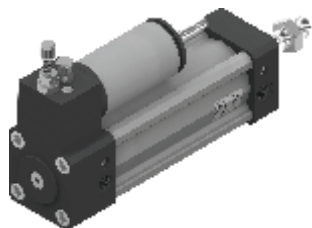
14Ø.stroke.A.0.0


Ø50 Weight gr. 1970 + gr. 200 every 50 mm. stroke
 Ø63 Weight gr. 2591 + gr. 280 every 50 mm. stroke

Strokes	LS	LA max
0 - 150	130	41
151 - 350	185	66
351 - 450	255	106

Regulation on the inward stroke

Ordering code

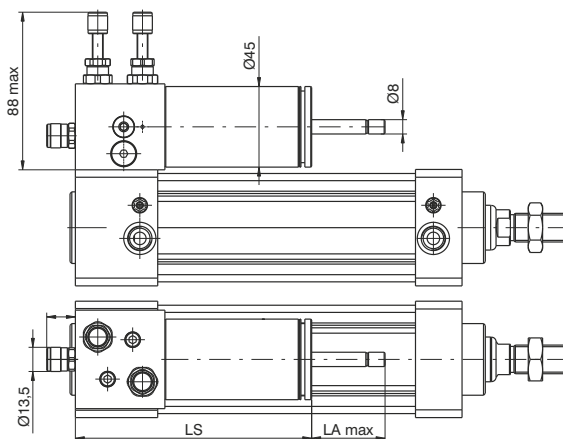
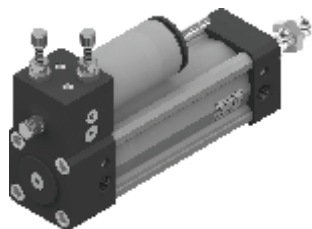
14Ø.stroke.B.0.0


Ø50 Weight gr. 1970 + gr. 200 every 50 mm. stroke
 Ø63 Weight gr. 2591 + gr. 280 every 50 mm. stroke

Strokes	LS	LA max
0 - 150	130	41
151 - 350	185	66
351 - 450	255	106

Regulation in both directions

Ordering code

14Ø.stroke.D.0.0


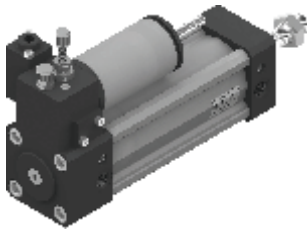
Ø50 Weight gr. 2128 + gr. 200 every 50 mm. stroke
 Ø63 Weight gr. 2749 + gr. 280 every 50 mm. stroke

Strokes	LS	LA max
0 - 150	132	41
151 - 350	187	66
351 - 450	257	106

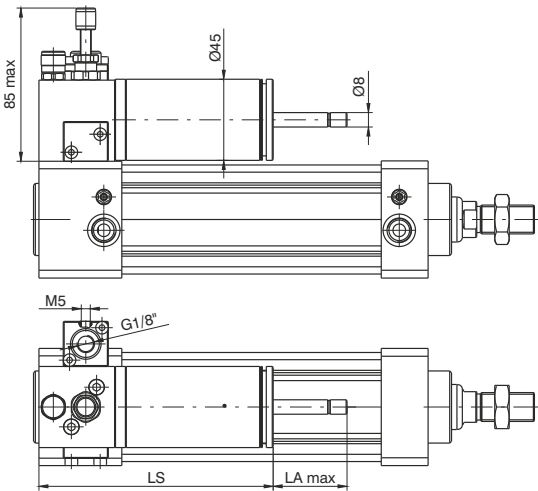
Regulation on the outward stroke with Skip N.O.

Ordering code

14Ø.stroke.A.0.D



Ø50 Weight gr. 2059 + gr. 200 every 50 mm. stroke
Ø63 Weight gr. 2928 + gr. 280 every 50 mm. stroke

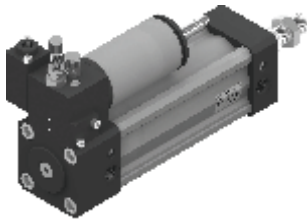


Strokes	LS	LA max
0 - 150	130	41
151 - 350	185	66
351 - 450	255	106

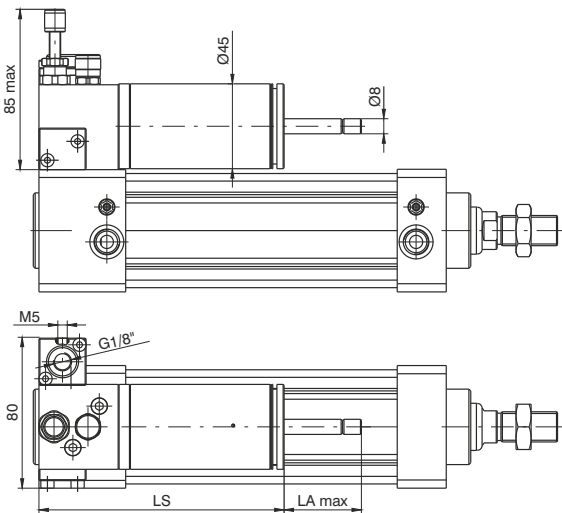
Regulation on the inward stroke with Skip N.O.

Ordering code

14Ø.stroke.B.0.E



Ø50 Weight gr. 2059 + gr. 200 every 50 mm. stroke
Ø63 Weight gr. 2928 + gr. 280 every 50 mm. stroke

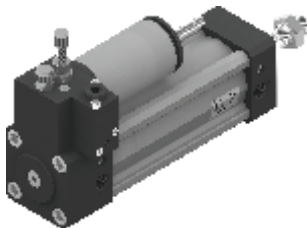


Strokes	LS	LA max
0 - 150	130	41
151 - 350	185	66
351 - 450	255	106

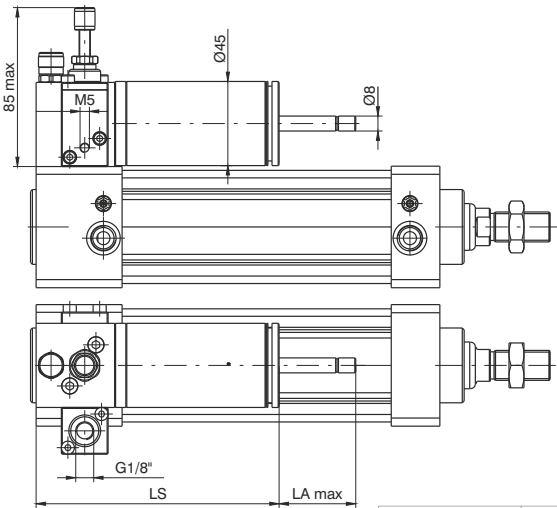
Regulation on the outward stroke with Stop N.O.

Ordering code

14Ø.stroke.A.D.0



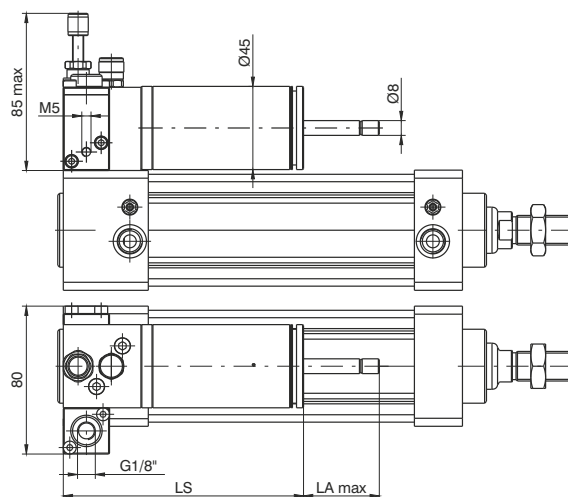
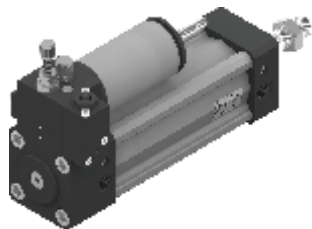
Ø50 Weight gr. 2059 + gr. 200 every 50 mm. stroke
Ø63 Weight gr. 2928 + gr. 280 every 50 mm. stroke



Strokes	LS	LA max
0 - 150	130	41
151 - 350	185	66
351 - 450	255	106

Regulation on the inward stroke with Stop N.O.

Ordering code

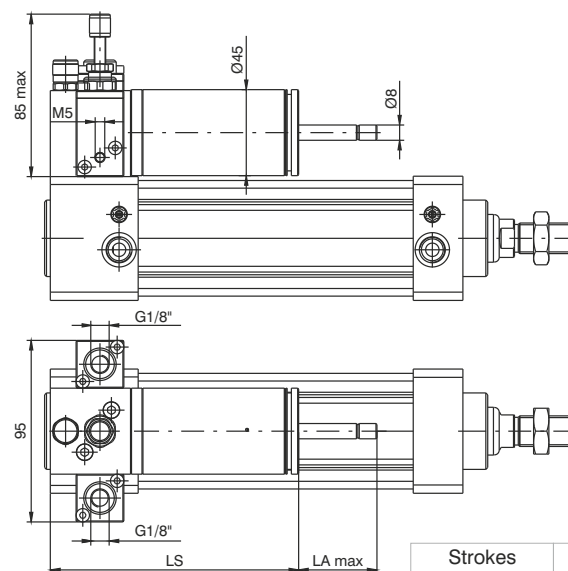
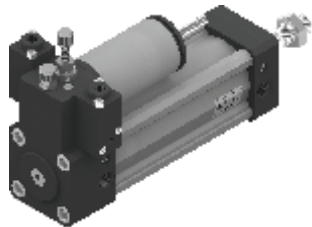
14Ø.stroke.B.E.0


Ø50 Weight gr. 2059 + gr. 200 every 50 mm. stroke
 Ø63 Weight gr. 2928 + gr. 280 every 50 mm. stroke

Strokes	LS	LA max
0 - 150	130	41
151 - 350	185	66
351 - 450	255	106

Regulation on the outward stroke with Skip N.O. - Stop N.O.

Ordering code

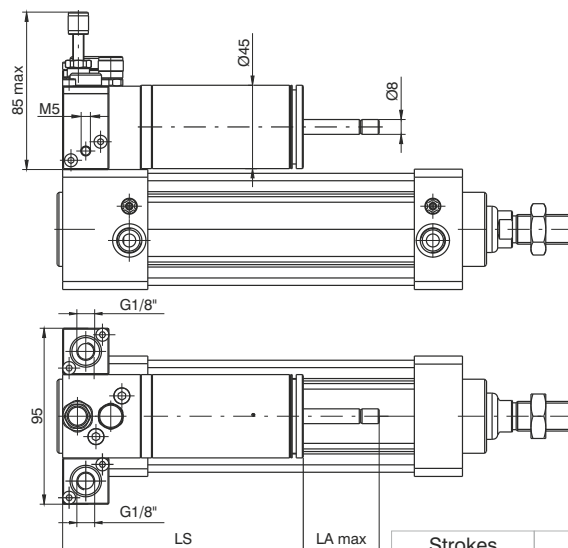
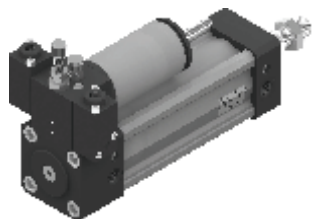
14Ø.stroke.A.D.D


Ø50 Weight gr. 2140 + gr. 200 every 50 mm. stroke
 Ø63 Weight gr. 2761 + gr. 280 every 50 mm. stroke

Strokes	LS	LA max
0 - 150	130	41
151 - 350	185	66
351 - 450	255	106

Regulation on the inward stroke with Skip N.O. - Stop N.O.

Ordering code

14Ø.stroke.B.E.E


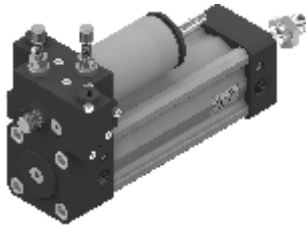
Ø50 Weight gr. 2140 + gr. 200 every 50 mm. stroke
 Ø63 Weight gr. 2761 + gr. 280 every 50 mm. stroke

Strokes	LS	LA max
0 - 150	130	41
151 - 350	185	66
351 - 450	255	106

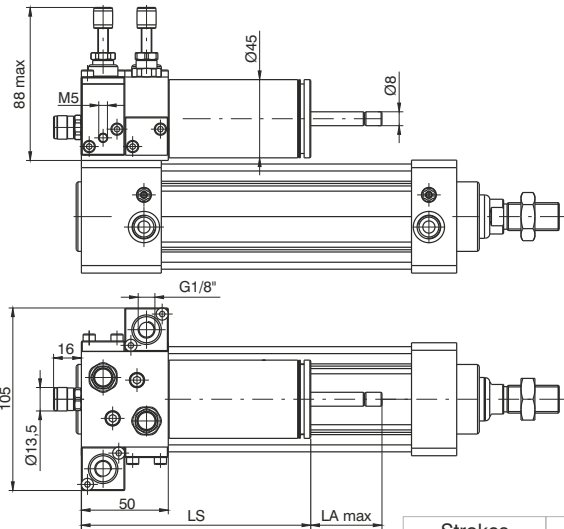
Regulation and Skip in both directions
(N.O. Skip valves in both directions)

Ordering code

14Ø.stroke.D.0.F



Ø50 Weight gr. 2311 + gr. 200 every 50 mm. stroke
Ø63 Weight gr. 2932 + gr. 280 every 50 mm. stroke

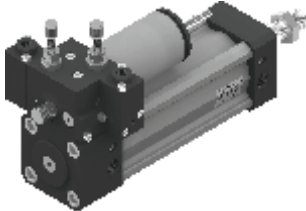


Strokes	LS	LA max
0 - 150	132	41
151 - 350	187	66
351 - 450	257	106

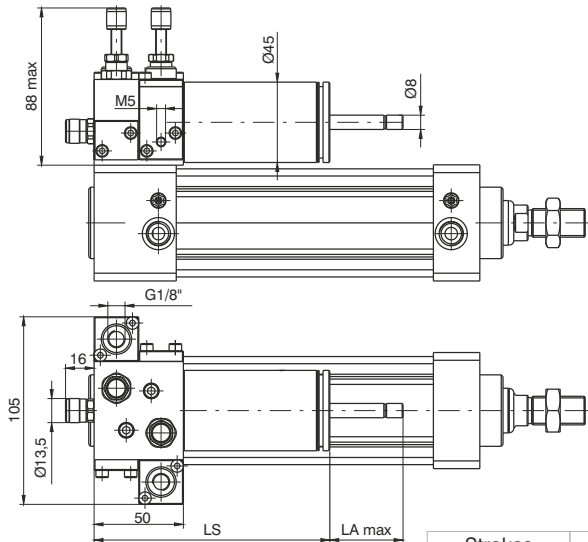
Regulation and Stop in both directions
(N.O. Stop valves in both directions)

Ordering code

14Ø.stroke.D.F.0



Ø50 Weight gr. 2311 + gr. 200 every 50 mm. stroke
Ø63 Weight gr. 2932 + gr. 280 every 50 mm. stroke

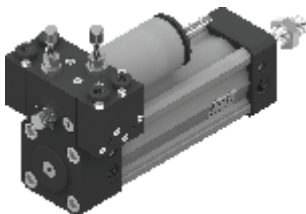


Strokes	LS	LA max
0 - 150	132	41
151 - 350	187	66
351 - 450	257	106

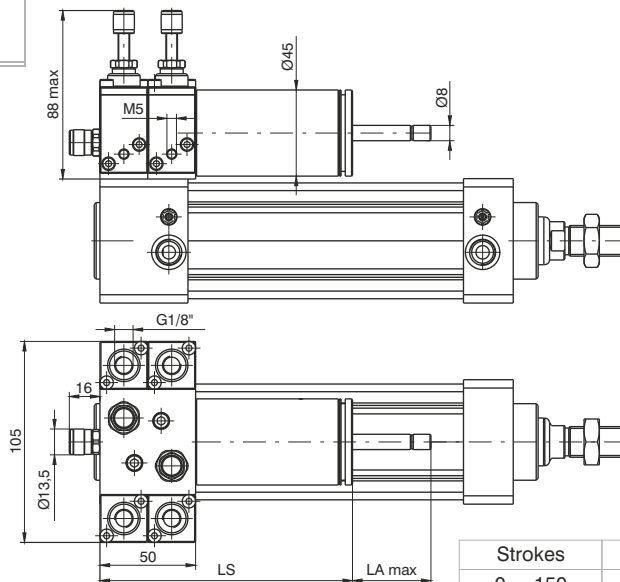
Regulation with Skip and Stop in both directions
(N.O. Skip and Stop valves in both directions)

Ordering code

14Ø.stroke.D.F.F



Ø50 Weight gr. 2473 + gr. 200 every 50 mm. stroke
Ø63 Weight gr. 3094 + gr. 280 every 50 mm. stroke



Strokes	LS	LA max
0 - 150	132	41
151 - 350	187	66
351 - 450	257	106

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.

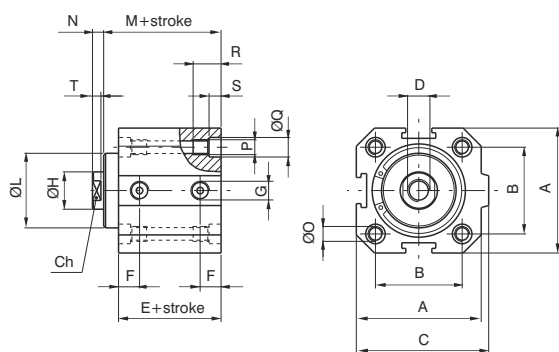
Type with non-rotating device:

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

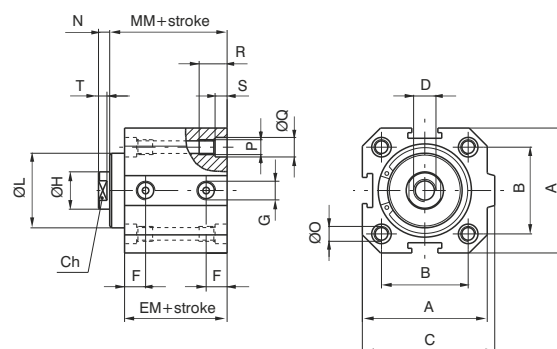
Ordering code

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 $\pm 0,05$ $\left(\begin{smallmatrix} 0 \\ -0,1 \end{smallmatrix} \right.$ 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

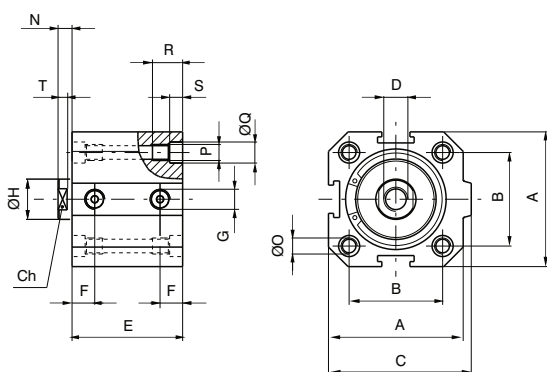
Magnetic

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

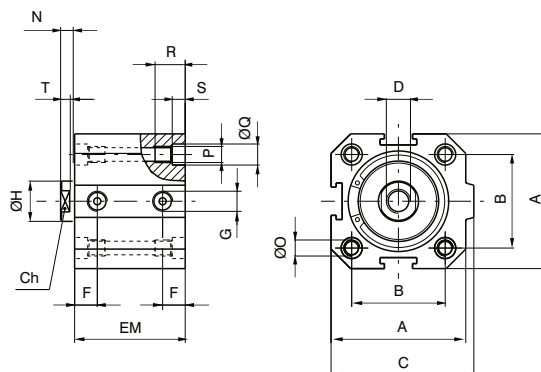
1502.Ø.stroke standard seals
1502.Ø.stroke.V FPM seals
1502.Ø.stroke.T HNBR seals



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

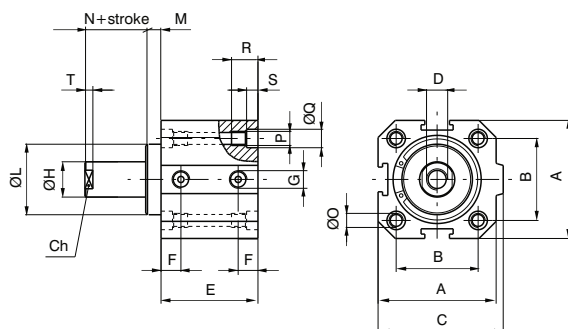
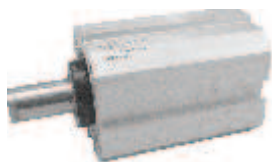
Magnetic

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

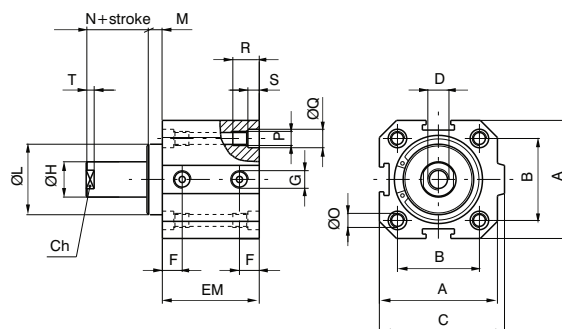
1503.Ø.stroke standard seals
1503.Ø.stroke.V FPM seals
1503.Ø.stroke.T HNBR seals



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 -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

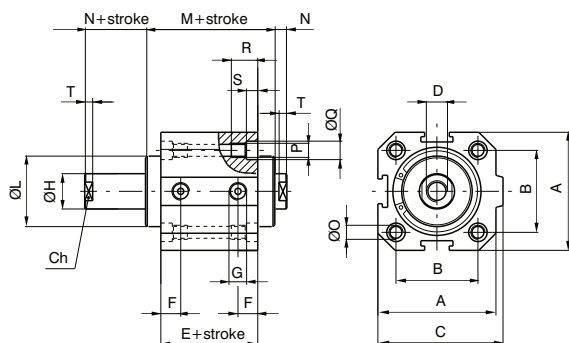
Magnetic

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

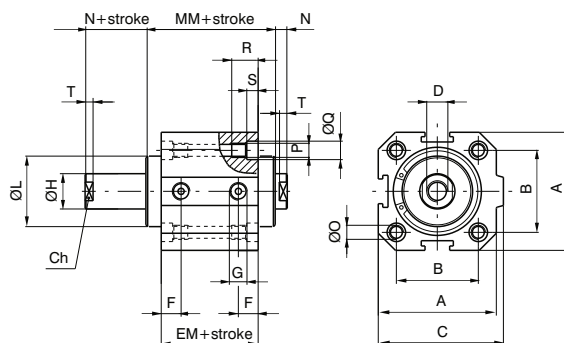
1504.Ø.stroke standard seals
1504.Ø.stroke.V FPM seals
1504.Ø.stroke.T HNBR seals



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 (0,1 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

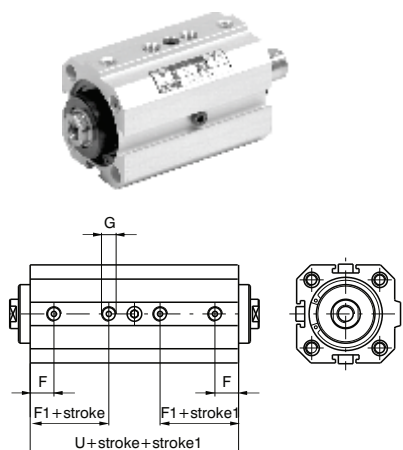
Magnetic

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

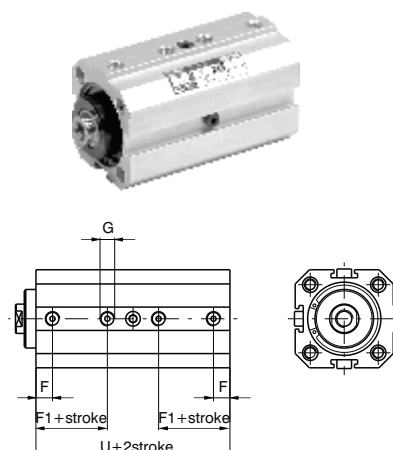
Ordering code

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**

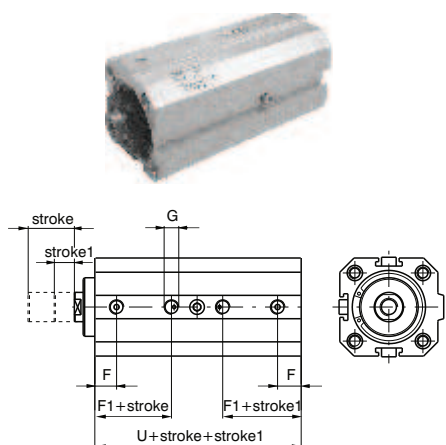
Ordering code

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**

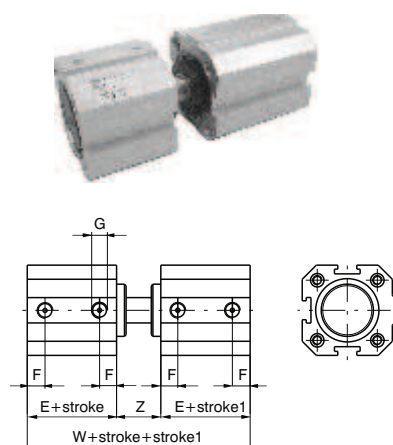
Ordering code

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

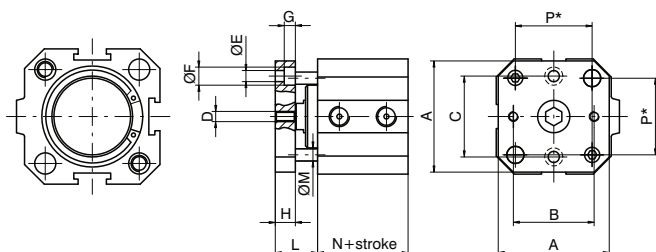
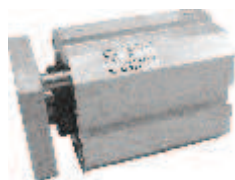
1501.Ø.stroke.AR standard seals
1501.Ø.stroke.AR.V FPM seals
1501.Ø.stroke.AR.T HNBR seals

Double version with magnetic piston

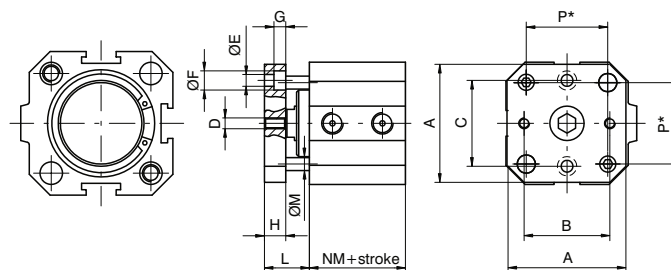
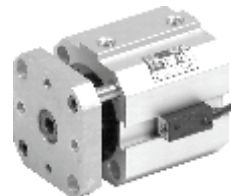
Ordering code

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.

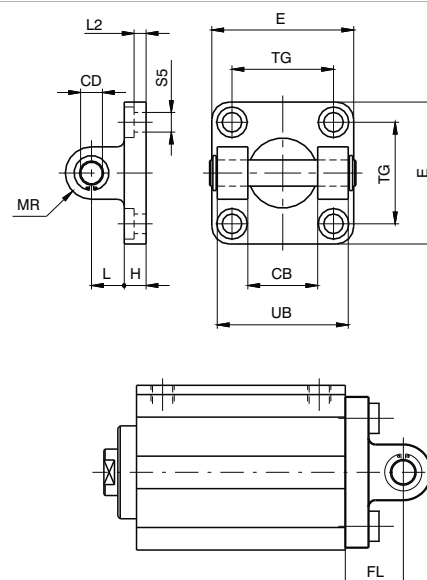
Bore	20	25	32	40	50	63	80	100
A	35	40	45	55	65	80	100	120
B	22	26	32	40	50	62	82	103
C	22	28	34	40	50	62	82	103
D	M4	M5	M5	M5	M6	M6	M8	M8
Ø E	4,5	5,5	5,5	5,5	6,5	8,5	8,5	8,5
Ø F	7,5	9	9	9	10,5	13,5	13,5	13,5
G	4,5	5,5	5,5	5,5	6,5	8,5	8,5	8,5
H	8	8	10	10	12	12	15	15
L	15	14,5	17,5	21	26	26	30,5	30,5
Ø 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	40	50	70	90	200	250	490
gr.	every 10 mm	5	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.



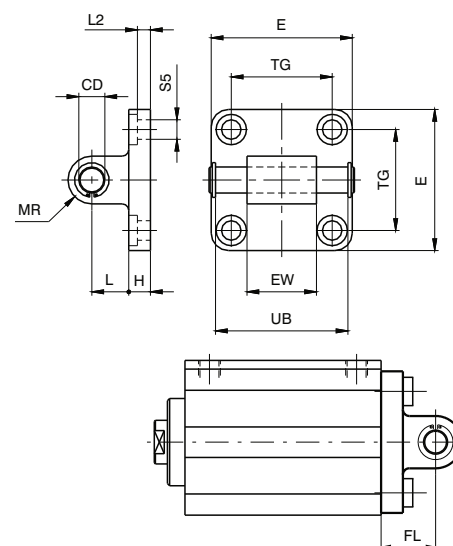
Bore	20	25	32	40	50	63	80	100
CB (h 9)	16	20	26	28	32	40	50	60
CD (H 9)	8	10	10	12	12	16	16	20
E	35	40	45	52	65	75	95	115
H	6	8	9	9	11	11	14	14
L	12	12	13	16	16	21	22	27
MR	8	9	10	12	12	16	16	20
TG	26	28	32,5	38	46,5	56,5	72	89
UB	35	40	45	52	60	70	90	110
FL	18	20	22	25	27	32	36	41
L2	/	/	5,5	5,5	6,5	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.

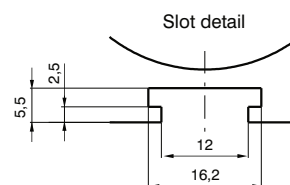
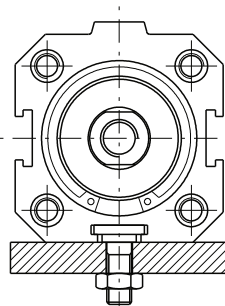
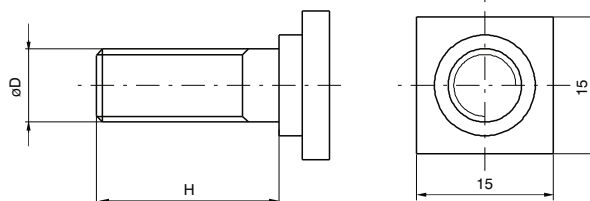


Bore	20	25	32	40	50	63	80	100
CD (h 9)	8	10	10	12	12	16	16	20
E	35	40	45	52	65	75	95	115
EW	16	20	26	28	32	40	50	60
H	6	8	9	9	11	11	14	14
L	12	12	13	16	16	21	22	27
MR	8	9	10	12	12	16	16	20
TG	26	28	32,5	38	46,5	56,5	72	89
UB	35	40	46	53	61	71	91	111
FL	18	20	22	25	27	32	36	41
L2	/	/	5,5	5,5	6,5	6,5	10	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)



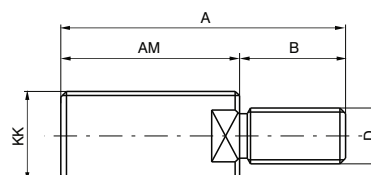
Example mounted with square headed screws on the plane.

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 Ø 20 and Ø 25; ISO 6431 for cylinders from Ø 32 to Ø 100).

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

General

The cable cylinders work in a linear translation systems, they are very compact and can be used where a normal cylinder with a rigid rod is too cumbersome. The main characteristic of the cable cylinders is the absence of the rod which, in coming out of the end plate at the end of the stroke, doubles the total overall dimension of the cylinder. In the case of the cable cylinder, the rod is replaced by a metal rilsan-coated cable. It is connected to the piston and coming at the maximum point of stroke never exceeds the overall dimensions of the cylinder.

The cable is connected to the bracket with clamps which serve also to regulate the tension. Because of the construction characteristics of this type of cylinder it must be used with much care. The cable is capable of supporting large stress due to heavy load and high speed. Unfortunately, we cannot give definitive limits of use if not in presence of masses of a few kilograms to be translated (7 - 10 for 16 and 20 - 25 for Ø 25) with speed inversely proportional to the entity of the same load (max 0,5 m/sec). This is done in a way that the load always has a mechanical stop at the end of the stroke. The magnetic piston version lengthens the overall dimensions by 50 mm; the 1200 series microcylinder sensors are used along with the clips of that series.

Construction characteristics

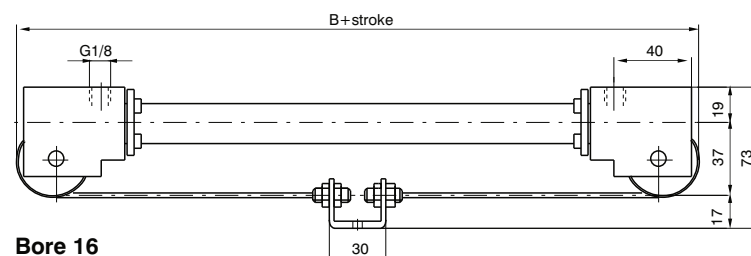
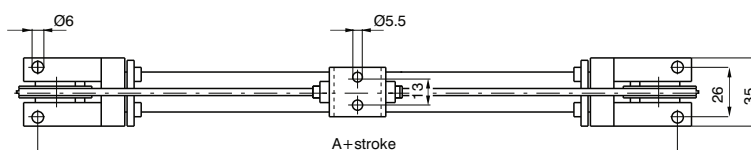
End plates	anodised black aluminium	Piston seals	NBR 80 Shore (at lip)
Barrel	anodised aluminium	Cable seal	PUR
Piston	aluminium	Bracket	steel
Cable	steel	Cable clamps	brass
Cable covering	Rilsan	Pulleys	aluminium with ball bearing

Technical characteristics

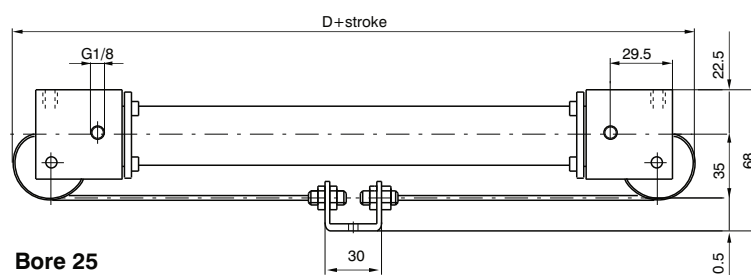
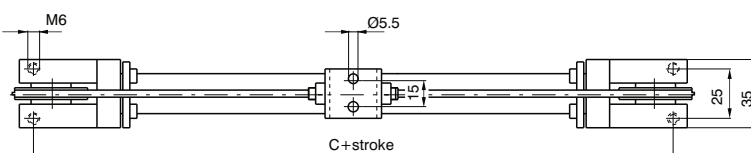
Fluid: filtered and lubricating air Max. pressure: 6 bar Min. and max. temperature: -5°C - +70°C Max speed: 0.5 m/sec.

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

	A	B	C	D
Standard	111	132	86	124
Magnetic	161	182	136	174



Bore 16



Bore 25

Ordering code

1601.Ø.stroke
1601.Ø.stroke.M
 Version with magnetic piston

Maintenance

The cable is obviously the part most subject to breakage. The cylinder can be disassembled for replacement of the cable which is supplied already complete with threaded bushings to be screwed on to the piston. Once the wear of the barrel and seals has been checked, the cylinders can be reassembled by screwing on the end plates. Next, the ends of the cable are attached to the bracket by way of clamps and the tension regulated. The tension is correct when the cable is not cambered.