



Series 1500 - Short stroke cylinders

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 Ø32 to Ø100) 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	oxidised aluminium
Piston rod bushing	oxidised aluminium
Bottom plates	oxidised aluminium
Seals	standard: NBR Oil resistant rubber, PUR Piston rod seals (HNBR or FPM seals available upon request)
Pistons	aluminium
Piston rod	C43 chromed steel (stainless steel for magnetic cylinder Ø20 and Ø25)

Operational characteristics

Fluid	filtered air, preferably lubricated
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.

Standard strokes

Double acting version

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

Maximum suggested strokes:

Ø20-Ø25: up to stroke 250 mm

Ø32-Ø40: up to stroke 300 mm

Ø50-Ø63: up to stroke 350 mm

Ø80-Ø100: up to stroke 400 mm

for strokes longer than 50 mm, please get in touch with our area sales rep.

Series with non-rotating device:

Ø20-Ø25: from 5 to 40 mm every 5 mm

Ø32-Ø40: from 5 to 50 mm every 5 mm

Ø50-Ø63: from 5 to 60 mm every 5 mm

Ø80-Ø100: from 5 to 80 mm every 5 mm

For longer strokes, please get in touch with the area sales rep.

Single acting version

Serie 1502, 1503, 1512 and 1513:

for all bores from 5 to 10 mm.

for strokes longer than 10 mm, please get in touch with our area sales rep.

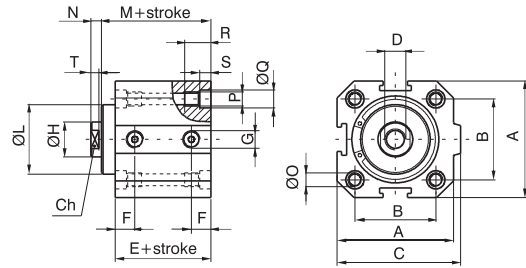
Minimum and maximum springs load for single acting version

Bore	20	25	32	40	50	63	80-100
Min. load (N)	8.5	9.5	34	34	49	54	110
Max. load (N)	14.5	26	59.5	63.5	79	85	137

Double acting version

Coding: 15P.Ø.stroke.G

P	PISTON
	01 = Non magnetic 11 = Magnetic
Ø	BORE
	20 = Ø20
	25 = Ø25
	... 100 = Ø100
G	SEALS
	= Standard seals
	V = FPM seals
	T = HNBR seals



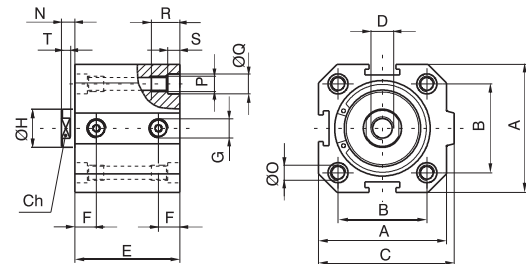
Bore		20	25	32	40	50	63	80	100
A		35	41	48	57	67	80	100	120
B		26	28	32,5	38	46,5	56,5	72	89
C		39,5	44,5	52	61	71	84	106	126
D		M4x8	M5x10	M6x12	M10x15	M12x18	M12x18	M16x20	M16x20
E	Non magnetic	29	30,5	32	33,5	35	38	44	47
	Magnetic	34	35,5	37	38,5	40	43	49	52
F		9	9,15	9,75	10,5	11	11,25	13,75	15,25
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 Ø100)		17	20,5	26	31	39	40	55	55
M	Non magnetic	32	33	35,5	39,5	43	46	51,5	54,5
	Magnetic	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

Weight (g)		20	25	32	40	50	63	80	100
Non magnetic	Stroke 0	75	110	170	260	400	600	800	1500
	every 10 mm	20	30	40	60	80	100	120	145
Magnetic	Stroke 0	90	130	200	310	460	700	910	1620
	every 10 mm	20	30	40	60	80	100	120	145

Single acting version with front spring

Coding: 15P.Ø.stroke.G

P	PISTON
	02 = Non magnetic 12 = Magnetic
Ø	BORE
	20 = Ø20
	25 = Ø25
	... 100 = Ø100
G	SEALS
	= Standard seals
	V = FPM seals
	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	Non magnetic	stroke 5	29	30,5	32	33,5	35	38	44
		stroke 10	34	35,5	37	38,5	40	43	49
	Magnetic	stroke 5	34	35,5	37	38,5	40	43	49
		stroke 10	39	40,5	42	43,5	45	48	54
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

Weight (g)		20	25	32	40	50	63	80	100
Non magnetic	stroke 5	70	105	160	250	370	550	750	1440
	stroke 10	80	120	180	280	410	600	810	1500
Magnetic	stroke 5	85	125	190	300	430	650	860	1560
	stroke 10	95	140	210	330	470	700	920	1620



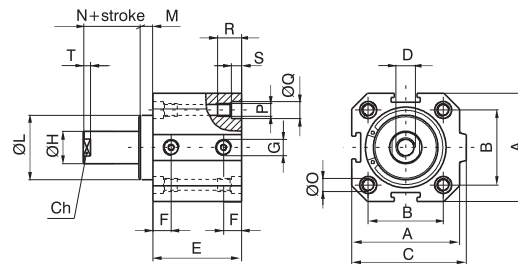
Compact cylinders

Series 1500 - Short stroke cylinders

Single acting version with rear spring

Coding: 15P.Ø.stroke.ⓐ

P	PISTON	
	03 = Non magnetic	
	13 = Magnetic	
Ø	BORE	
	20 = Ø20	
	25 = Ø25	
	... 100 = Ø100	
ⓐ	SEALS	
	= Standard seals	
	V = FPM seals	
	T = HNBR seals	



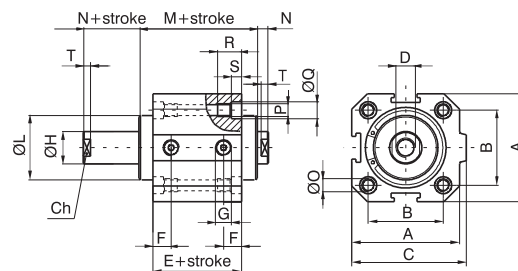
Bore			20	25	32	40	50	63	80	100
A			35	41	48	57	67	80	100	120
B			26	28	32,5	38	46,5	56,5	72	89
C			39,5	44,5	52	61	71	84	106	126
D			M4X8	M5X10	M6X12	M10X15	M12X18	M12X18	M16X20	M16X20
E	Non magnetic	stroke 5	29	30,5	32	33,5	35	38	44	47
		stroke 10	34	35,5	37	38,5	40	43	49	52
	Magnetic	stroke 5	34	35,5	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

Weight (g)			20	25	32	40	50	63	80	100
Non magnetic	stroke 5		70	105	160	250	370	550	750	1440
	stroke 10		80	120	180	280	410	600	810	1500
Magnetic	stroke 5		85	125	190	300	430	650	86	1560
	stroke 10		95	40	210	330	470	700	920	1620

Double acting push-pull rod version

Coding: 15P.Ø.stroke.ⓐ

P	PISTON	
	04 = Non magnetic	
	14 = Magnetic	
Ø	BORE	
	20 = Ø20	
	25 = Ø25	
	... 100 = Ø100	
ⓐ	SEALS	
	= Standard seals	
	V = FPM seals	
	T = HNBR seals	



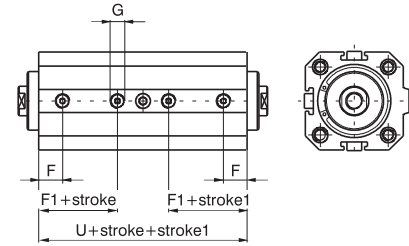
Bore			20	25	32	40	50	63	80	100
A			35	41	48	57	67	80	100	120
B			26	28	32,5	38	46,5	56,5	72	89
C			39,5	44,5	52	61	71	84	106	126
D			M4X8	M5X10	M6X12	M10X15	M12X18	M12X18	M16X20	M16X20
E	Non magnetic		29	30,5	32	33,5	35	38	44	47
	Magnetic		34	35,5	37	38,5	40	43	49	52
F			9	9,15	9,75	10,5	11	11,25	13,75	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"
ØH			8	10	12	16	20	20	25	25
ØL ±0,05 (0/-0,1 for Ø80 and Ø100)			17	20,5	26	31	39	40	55	55
M	Non magnetic		35	35,5	39	45,5	51	54	59	62
	Magnetic		40	40,5	44	50,5	56	59	64	67
N			4	4	4	5	6	6	8	8
ØO			4,3	5,3	5,3	5,3	7	7	9	9
P			M5	M6	M6	M6	M8	M8	M10	M10
ØQ			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

Weight (g)			20	25	32	40	50	63	80	100
Non magnetic	Stroke 0		90	130	200	320	460	670	1100	1680
	every 10 mm		20	35	50	70	90	110	155	185
Magnetic	Stroke 0		105	160	240	380	530	740	1210	1820
	every 10 mm		20	35	50	70	90	110	155	185

Tandem with opposed rods

Coding: 1515.Ø.stroke.stroke1.Ⓟⓖ

Ø	BORE
	20 = Ø20
	25 = Ø25
	100 = Ø100
Ⓟ	PISTON
	= Non magnetic
	M = Magnetic
ⓖ	SEALS
	= Standard seals
	V = FPM seals
	T = HNBR seals

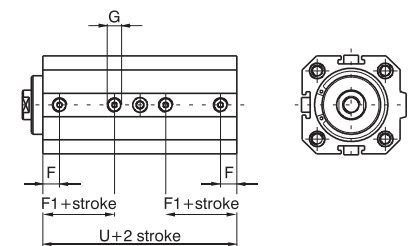


Bore	20	25	32	40	50	63	80	100
F	9	9,15	9,75	10,5	11	11,25	13,75	15,25
F1	Non magnetic	17,5	18,35	19,75	20,5	21,5	24,25	26,25
	Magnetic	22,5	23,35	24,75	25,5	26,5	29,25	31,25
G	G 1/8"						G 3/8"	
U	Non magnetic	59	60,5	67	68,5	70	78	89
	Magnetic	69	70,5	77	78,5	80	88	99

Tandem push with common rods

Coding: 1516.Ø.stroke.Ⓟⓖ

Ø	BORE
	20 = Ø20
	25 = Ø25
	100 = Ø100
Ⓟ	PISTON
	= Non magnetic
	M = Magnetic
ⓖ	SEALS
	= Standard seals
	V = FPM seals
	T = HNBR seals

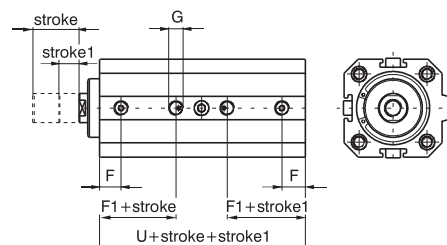


Bore	20	25	32	40	50	63	80	100
F	9	9,15	9,75	10,5	11	11,25	13,75	15,25
F1	Non magnetic	17,5	18,35	19,75	20,5	21,5	24,25	26,25
	Magnetic	22,5	23,35	24,75	25,5	26,5	29,25	31,25
G	G 1/8"						G 3/8"	
U	Non magnetic	59	60,5	67	68,5	70	78	89
	Magnetic	69	70,5	77	78,5	80	88	99

Tandem push with independent rods

Coding: 1517.Ø.stroke.stroke1.Ⓟⓖ

Ø	BORE
	20 = Ø20
	25 = Ø25
	100 = Ø100
Ⓟ	PISTON
	= Non magnetic
	M = Magnetic
ⓖ	SEALS
	= Standard seals
	V = FPM seals
	T = HNBR seals

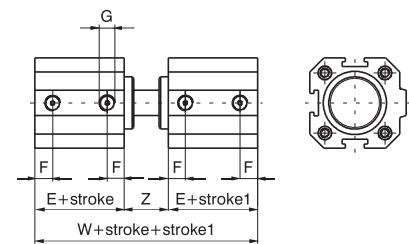


Bore	20	25	32	40	50	63	80	100
F	9	9,15	9,75	10,5	11	11,25	13,75	15,25
F1	Non magnetic	17,5	18,35	19,75	20,5	21,5	24,25	26,25
	Magnetic	22,5	23,35	24,75	25,5	26,5	29,25	31,25
G	G 1/8"						G 3/8"	
U	Non magnetic	59	60,5	67	68,5	70	78	89
	Magnetic	69	70,5	77	78,5	80	88	99

Opposed tandem with common rods

Coding: 1518.Ø.stroke.stroke1.Ⓟⓖ

Ø	BORE
	20 = Ø20
	25 = Ø25
	100 = Ø100
Ⓟ	PISTON
	= Non magnetic
	M = Magnetic
ⓖ	SEALS
	= Standard seals
	V = FPM seals
	T = HNBR seals



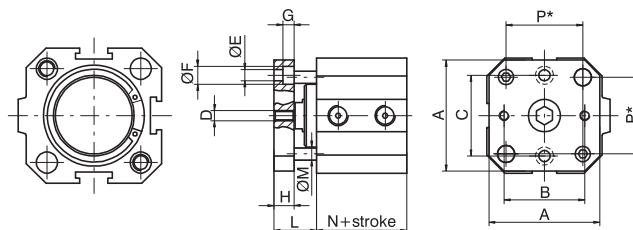
Bore	20	25	32	40	50	63	80	100
E	Non magnetic	29	30,5	32	33,5	35	38	44
	Magnetic	34	35,5	37	38,5	40	43	49
F	9	9,15	9,75	10,5	11	11,25	13,75	15,25
G	G 1/8"						G 3/8"	
W	Non magnetic	72	74	79	89	98	104	119
	Magnetic	82	84	89	99	108	114	129



► Double acting version with non-rotating device

Coding: 15□.Ø.stroke.AR□

P	PISTON
	01 = Non magnetic 11 = Magnetic
Ø	BORE
	20 = Ø20
	25 = Ø25
	...
	100 = Ø100
G	SEALS
	= Standard seals
	V = FPM seals
	T = HNBR seals



* = distance between rods centres

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	Non magnetic	29	30,5	32	33,5	35	38	44	47
	Magnetic	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 (g)							
Non magnetic	Stroke 0	115	160	240	350	600	850	1290	2150
	every 10 mm	25	35	45	65	90	110	140	165
Magnetic	Stroke 0	130	180	270	400	660	950	1400	2270
	every 10 mm	25	35	45	65	90	110	140	165