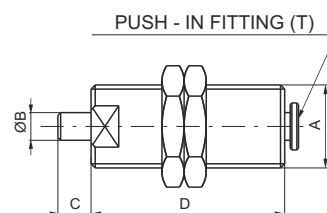


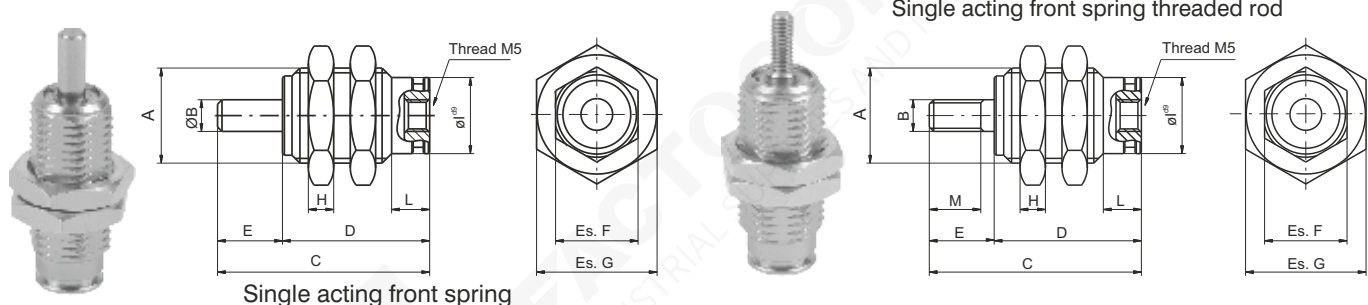
Threaded body, round execution

Ordering code	Bore	Stroke	A	B	C	D	T
1213.6.5	6	5	M10x1	3	5	30,5	4/2
1213.6.10	6	10	M10x1	3	5	35,5	4/2
1213.6.20	6	20	M10x1	3	5	49,5	4/2
1213.8.5	8	5	M12x1	3	6	28	4/2
1213.10.3	10	3	M15x1,5	5	1	44	4/2
1213.10.5	10	5	M15x1,5	5	5	40	4/2
1213.10.10	10	10	M15x1,5	5	12	44	4/2



Threaded body, hexagonal execution

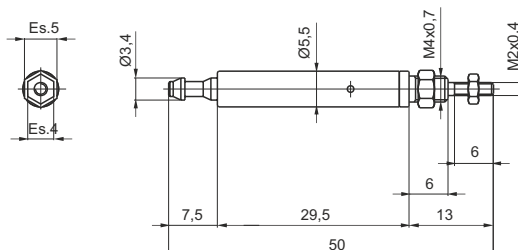
Ordering code	Description
1213.Ø.stroke.C	Single acting front spring
1213.Ø.stroke.CF	Single acting front spring threaded body



Ø Cil.	Stroke	A	ØB	B	C	D	E	Es. F	Es. G	H	ØI	L	M
6	5	M10x1	Ø3	M3x0.5	27,5	18,5	9	9	12	3	Ø8,5	6	7
6	10	M10x1	Ø3	M3x0.5	34,5	25,5	9	9	12	3	Ø8,5	6	7
6	15	M10x1	Ø3	M3x0.5	41,5	32,5	9	9	12	3	Ø8,5	6	7
10	5	M15x1.5	Ø5	M4x0.7	32,5	20,5	12	13	19	4	Ø12	6	10
10	10	M15x1.5	Ø5	M4x0.7	39	27	12	13	19	4	Ø12	6	10
10	15	M15x1.5	Ø5	M4x0.7	46	34	12	13	19	4	Ø12	6	10
16	5	M22x1.5	Ø6	M5x0.8	37,5	23,5	14	20	27	5	Ø19	7	12
16	10	M22x1.5	Ø6	M5x0.8	43,5	29,5	14	20	27	5	Ø19	7	12
16	15	M22x1.5	Ø6	M5x0.8	50	36	14	20	27	5	Ø19	7	12

Front fixing microcylinders

Ordering code
1273.4.10



Construction characteristics

End covers	hard anodised aluminium
Barrel	stainless steel AISI 304
Piston rod	stainless steel
Piston	brass (ø8-10-12) aluminium (ø16-20-25)
Seals	Standard: NBR Oil resistant rubber, PUR Piston rod seals (HNBR or FPM seals available upon request)
Mounting	steel painted in cataphoresis
Forks	zinc plated steel
Single-acting springs	C98 zinc plated steel for springs
Cushioning length	$\varnothing \quad \frac{16}{15} - \frac{20}{18} - \frac{25}{18} - \frac{32}{18}$ mm

Technical characteristics

Fluid	filtered air and preferably lubricated
Maximum working 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

ø 8 and ø 10

15 - 25 - 50 - 75 - 80 - 100 mm

ø 12 and ø 16

15 - 25 - 50 - 75 - 80 - 100 - 150 - 160 - 200 - 250 - 300 mm

ø 20 and ø 25

15 - 25 - 50 - 75 - 80 - 100 - 150 - 160 - 200 - 250 - 300 - 320 - 350 - 400 mm

ø 32

15 - 25 - 50 - 75 - 80 - 100 - 150 - 160 - 200 - 250 - 300 - 320 - 350 - 400 - 450 - 500 mm

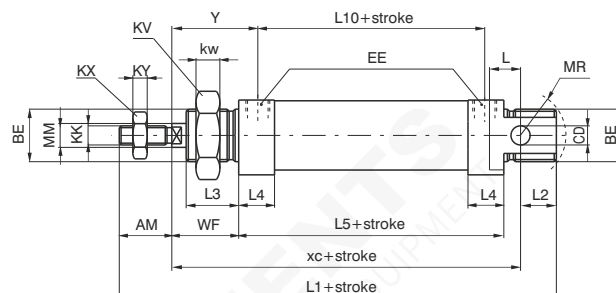
Minimum and maximum springs load

Bore	Ø8	Ø10	Ø12	Ø16	Ø20	Ø25	Ø32
Min. load(N)	2.2	2.2	4	7.5	11	16.5	23
Max. load(N)	4.2	4.2	8.7	21	22	30.7	52.5

Basic version

Ordering code	Description
1280.Ø.stroke	Basic version
1291.Ø.stroke	Basic version front spring (max stroke 50 mm)
1292.Ø.stroke	Basic version rear spring from Ø16 (max stroke 50 mm)
12- -Ø.stroke.A	Adjustable cushioning (from Ø16)
12- -Ø.stroke.M	Magnetic piston
12- -Ø.stroke.A.M	Cushioning with magnetic piston (from Ø16)
12- -Ø.stroke. . . .T	HNBR seals version
12- -Ø.stroke. . . .V	FPM seals version

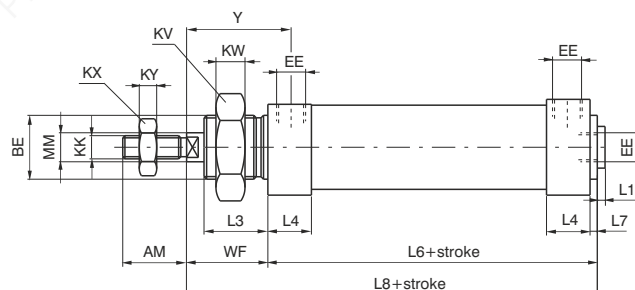
Standard version, fully compliant with ISO standards. Can use all available mountings. For single acting type, the maximum stroke is 50 mm., after which overall dimensions increase in length to an extent not proportional to the stroke (and in any case not longer than stroke 100).



Without rear eye version

Ordering code	Description
1281.Ø.stroke	Without rear eye
1293.Ø.stroke	Without rear eye front spring (max stroke 50 mm)
1294.Ø.stroke	Without rear eye rear spring from Ø16 (max stroke 50 mm)
12- -Ø.stroke.A	Adjustable cushioning (from Ø16)
12- -Ø.stroke.M	Magnetic piston
12- -Ø.stroke.A.M	Cushioning with magnetic piston (from Ø16)
12- -Ø.stroke. . . .T	HNBR seals version
12- -Ø.stroke. . . .V	FPM seals version

Version derived from standard version 1260 and not included in ISO standard. Not having a rear eye it is shorter. Rear inlet connection is at 90 like the front one, in line and plugged. The considerations made for the basic type 1280 apply for all single-acting types.



Push/Pull rod version

Ordering code	Description
1282.Ø.stroke	Push/pull rod version
1282.Ø.stroke.M	Magnetic piston
1282.Ø.stroke.A	Adjustable cushioning (from Ø16)
1282.Ø.stroke.A.M	Cushioning with magnetic piston (from Ø16)
1282.Ø.stroke. . . .T	HNBR seals version
1282.Ø.stroke. . . .V	FPM seals version

This version having rods coming out from both end plates with overall dimensions, except for the rod, equal to 1280 version. This version is not suitable for Ø8 and Ø10 due to difficulty in anchoring the pistons to rods.

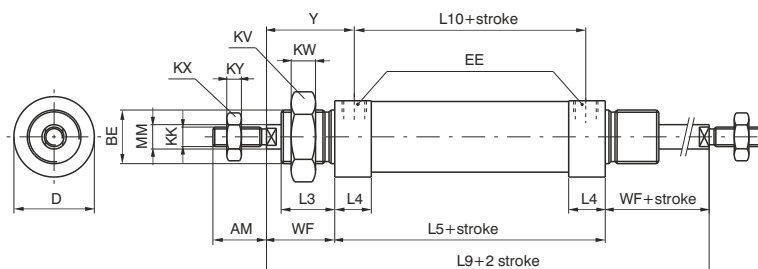


Table of dimensions

		Bore						
		8	10	12	16	20	25	32
AM (-0,2)		12	12	16	16	20	22	20
BE		M12X1,25	M12X1,25	M16X1,5	M16X1,5	M22X1,5	M22X1,5	M30X1,5
CD (H9)		4	4	6	6	8	8	12
D (h11)		16	16	20	21	27	30	38
EE		M5	M5	M5	M5	G1/8"	G1/8"	G1/8"
EW (d13)		8	8	12	12	16	16	26
KK (6g)		M4X0,7	M4X0,7	M6X1	M6X1	M8X1,25	M10X1,25	M10X1,25
KV		17	17	22	22	30	30	42
KW		5,5	5,5	6	6	7	7	8
KX		7	7	10	10	13	17	17
KY		3	3	4	4	5	6	6
L		6	6	9	9	12	13	13
L1 (±1)	★	86	86	105	111	130	141	139
L2		10	10	14	13	15	15	14
L3		12	12	17	17	18	22	22
L4		9	9	9	11	15,5	15	14,5
L5 (±1)	★	46	46	50	56	68	69	69
L6	★	48	48	52	58	70,5	71,5	71,5
L7		2	2	2	2	2,5	2,5	2,5
L8	★	64	64	74	80	94,5	99,5	99,5
L9 (±1,2)	★	78	78	94	100	116	125	125
L10 (±1)	★	37	37	41	45	52,5	53	54,5
L11		1,5	1,5	1,5	1,5	2	2	2
MM (f7)		4	4	6	6	8	10	12
MR		12	12	16	16	18	19	22
WF (±1,2)		16	16	22	22	24	28	28
XC (±1)	★	64	64	75	82	95	104	105
Y (±1,2)		20,5	20,5	26,5	27,5	32	36	35
Stroke tolerance: until stroke 100 +1,5 mm, beyond +2 mm								
Weight	stroke 0	30	35	65	80	160	200	310
gr.	every 10mm	2	2,5	4	5	7,5	11,5	18
Variations of the versions: without rear eye version								
Weight	stroke 0	25	30	60	75	150	185	290
gr.	every 10mm	2	2,5	4	5	7,5	11,5	18
Push/pull rod version								
Weight	stroke 0	35	40	75	95	200	250	370
gr.	every 10mm	2,5	3	6	7	10,5	15,5	24

Dimensions marked with * do not increase proportionally to stroke for rear spring version (over 25 mm stroke).

Construction characteristics

End covers	stainless steel AISI 316
Barrel	stainless steel AISI 304
Piston rod	stainless steel
Piston	aluminium
Piston seals	Standard: NBR Oil resistant rubber, PUR Piston rod seals (FPM seals available upon request)
Mounting	stainless steel AISI 304
Forks	stainless steel AISI 304

Technical characteristics

Fluid	filtered air and preferably lubricated
Maximum working 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 - +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

Ø 16

15 - 25 - 50 - 75 - 80 - 100 - 150 - 160 - 200 - 250 - 300 mm

Ø 20 and Ø 25

15 - 25 - 50 - 75 - 80 - 100 - 150 - 160 - 200 - 250 - 300 - 320 - 350 - 400 mm

Ø 32

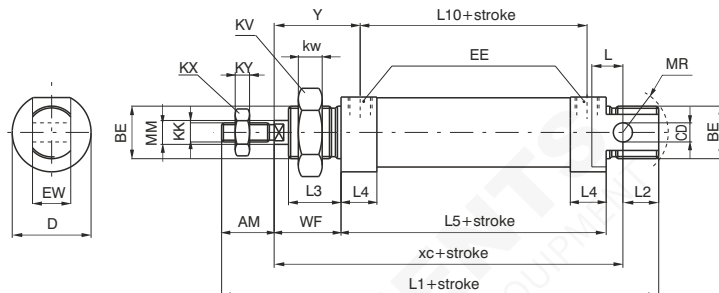
15 - 25 - 50 - 75 - 80 - 100 - 150 - 160 - 200 - 250 - 300 - 320 - 350 - 400 - 450 - 500 mm

Basic version

Ordering code	Description
1280.Ø.stroke.X	Inox non-magnetic version, NBR seals
1280.Ø.stroke.XV	Inox non-magnetic, FPM seals
1280.Ø.stroke.AX	Inox non-magnetic version with cushions*, NBR seals
1280.Ø.stroke.AXV	Inox non-magnetic version with cushions*, FPM seals
1280.Ø.stroke.MX	Inox magnetic version, NBR seals
1280.Ø.stroke.MXV	Inox magnetic version, FPM seals
1280.Ø.stroke.AMX	Inox magnetic version with cushions*, NBR seals
1280.Ø.stroke.AMXV	Inox magnetic version with cushions*, FPM seals

* no adjustable cushioning

Standard version, fully complying with ISO standards.



Push/pull rod version

Ordering code	Description
1282.Ø.stroke.X	Inox non-magnetic version, NBR seals
1282.Ø.stroke.XV	Inox non-magnetic, FPM seals
1282.Ø.stroke.AX	Inox non-magnetic version with cushions*, NBR seals
1282.Ø.stroke.AXV	Inox non-magnetic version with cushions*, FPM seals
1282.Ø.stroke.MX	Inox magnetic version, NBR seals
1282.Ø.stroke.MXV	Inox magnetic version, FPM seals
1282.Ø.stroke.AMX	Inox magnetic version with cushions*, NBR seals
1282.Ø.stroke.AMXV	Inox magnetic version with cushions*, FPM seals

* no adjustable cushioning

This version having rods coming out from both end plates, with overall dimensions, except for the rod, equal to 1280 version.

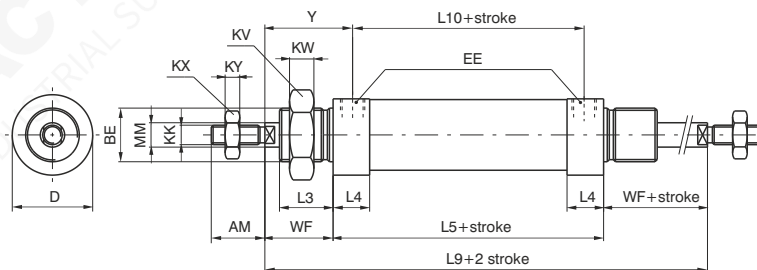


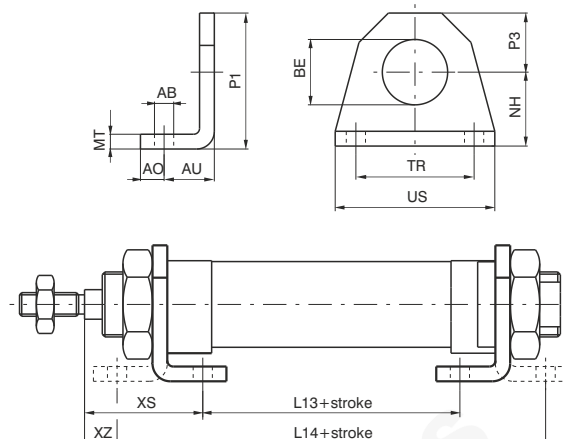
Table of dimensions

Bore	AM	BE	CD	D	EE	EW	KK	KV	KW	KX	KY	L	L1	L2	L3	L4	L5	L9	L10	MM	MR	WF	XC	Y
16	16	M16X1,5	6	21	M5	12	M6X1	22	6	10	4	9	111	13	17	10,5	56	100	45	6	16	22	82	27,5
20	20	M22X1,5	8	27	G1/8"	16	M8X1,25	30	7	13	5	12	130	15	18	10,5	68	116	52,5	8	18	24	95	32
25	22	M22X1,5	8	30	G1/8"	16	M10X1,25	30	7	17	6	13	140	15	22	15,5	68	125	52,5	10	18	28	104	36
32	20	M30X1,5	12	38	G1/8"	26	M10X1,25	42	8	17	6	13	139	14	22	14,5	69	125	54,5	12	22	28	105	35

Bore	Standard weight (gr.)		Weight push-pull version (gr)	
	Stroke 0	every 10 mm	Stroke 0	every 10 mm
16	145	5	180	7
20	280	8	330	11
25	370	12	440	16
32	580	18	660	24

Foot

Ordering code

1200.0.01
(1 piece)


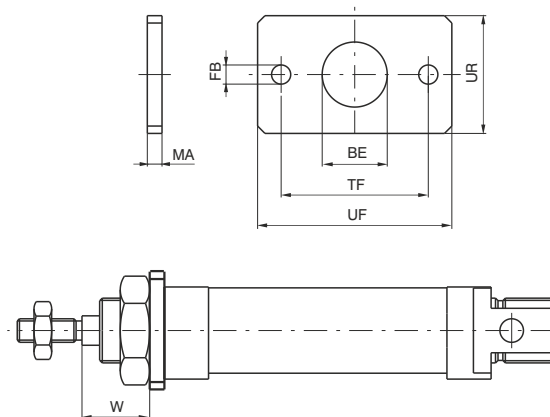
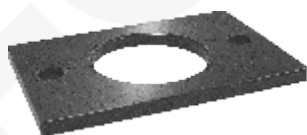
Used to mount the cylinder on the mounting plane with the rod parallel to said plane. Use one for short strokes and two for long strokes. It is made of stamped steel, made corrosion resistant by cataphoresis treatment. Attached to the end plates by means of nuts (or lock nuts) 05.

Attention: the dimensions of microcylinders with threaded end covers (★) increase of 10 mm. for microcylinders equipped with magnetic piston and spring return, and of 9 mm. for microcylinders with 10 mm. BORE magnetic piston.

Bore	8	10	12	16	20	25	32	40	50
AB (H13)	4,5	4,5	5,5	5,5	6,5	6,5	6,5	8,5	8,5
AO	5	5	6	6	8	8	8	10	10
AU	11	11	14	14	17	17	17	20	20
BE	12	12	16	16	22	22	30	40	40
L13 (±1) ★	30	30	30	36	44	45	45	49	52
L14 (±1) ★	68	68	78	84	102	103	103	119	122
MT	3	3	4	4	5	5	5	5	5
NH (±0,3)	16	16	20	20	25	25	28	40	40
P1	26	26	33	33	45	45	50	70	70
P3	10	10	13	13	20	20	22	30	30
TR (JS14)	25	25	32	32	40	40	52	70	70
US	35	35	42	42	54	54	66	90	90
XS (±1,4)	24	24	32	32	36	40	40	50	50
XZ (±1,4)	5	5	8	8	7	11	11	15	15
Weight gr.	22	22	45	45	90	90	110	210	210

Flange

Ordering code

1200.0.02
(1 piece)


Used to mount the microcylinder at a right angle to the mounting plane. Attached to the front (or rear) endcap by a nut (or lock nut) 05. Made of extruded steel, made corrosion resistant by cataphoresis.

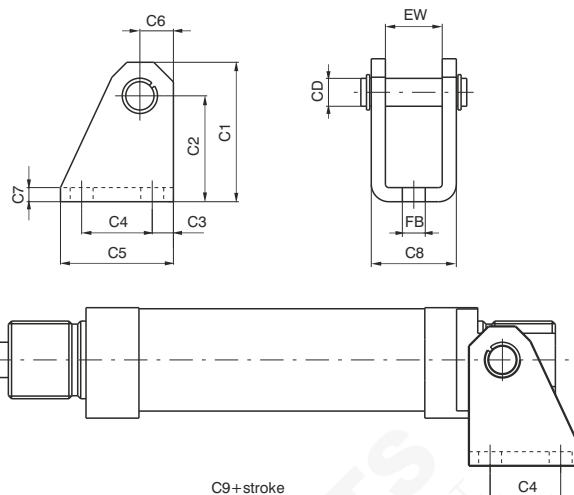
Bore	8	10	12	16	20	25	32	40	50
BE	12	12	16	16	22	22	30	40	40
FB (H13)	4,5	4,5	5,5	5,5	6,5	6,5	6,5	8,5	8,5
UF	40	40	53	53	66	66	68	90	90
UR	25	25	30	30	40	40	50	60	60
MA	3	3	4	4	5	5	5	5	5
TF (JS14)	30	30	40	40	50	50	52	70	70
W (±1,4)	13	13	18	18	19	23	23	30	30
Weight gr.	20	20	40	40	85	85	100	150	150



Rear eye

Ordering code

1200.0.03
(1 piece)



Use with the rear end cover to mount the cylinder either parallel or at a right-angle to the mounting plane. This allows the cylinder to oscillate and self-align with the linked element to the rod. This is necessary when the rod may be subject to lateral during travel.

Attention: the dimensions of microcylinders with threaded end covers (*) increase by 10mm for equipped with magnetic piston and spring return, and by 9mm for microcylinders with 10mm BORE magnetic piston.

Bore	8	10	12	16	20	25	32	40	50
CD	4	4	6	6	8	8	12	14	14
C1	28,5	28,5	33,5	33,5	39,5	39,5	44,5	53,5	53,5
C2 (±0,3)	24	24	27	27	30	30	33	40	40
C3	3,5	3,5	5	5	6	6	7	10	10
C4	12,5	12,5	15	15	20	20	24	28	28
C5	20	20	25	25	32	32	38	45	45
C6	4,5	4,5	6,5	6,5	9,5	9,5	11,5	13,5	13,5
C7	2,5	2,5	3	3	4	4	4	4	4
C8	13	13	18	18	24	24	34	38	38
C9 (±0,4) *	63	63	73,5	80,5	91,5	100,5	100,5	119,5	122,5
EW	8,1	8,1	12,1	12,1	16,1	16,1	26,1	30,1	30,1
FB (H13)	4,5	4,5	5,5	5,5	6,5	6,5	6,5	8,5	8,5
Weight gr.	20	20	35	35	75	75	135	180	180

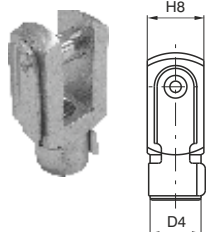
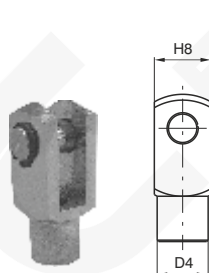
Cylinder rod forks / Nut or lock nut for the endcaps

Ordering code

1200.0.04 *
(with pin)

1200.0.04/1
(with clips)

*Available from bore Ø12

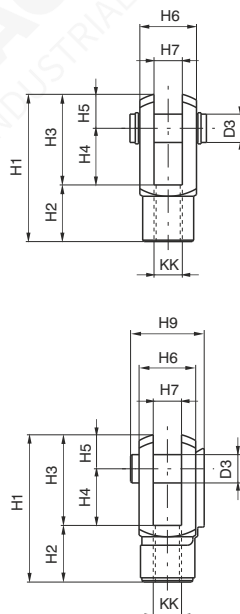


Forks:

Similar to hinge 03, mounted on the rod thread, assures a regular operation even in the presence of significant forces to the linked element. Made of zinc plated steel.

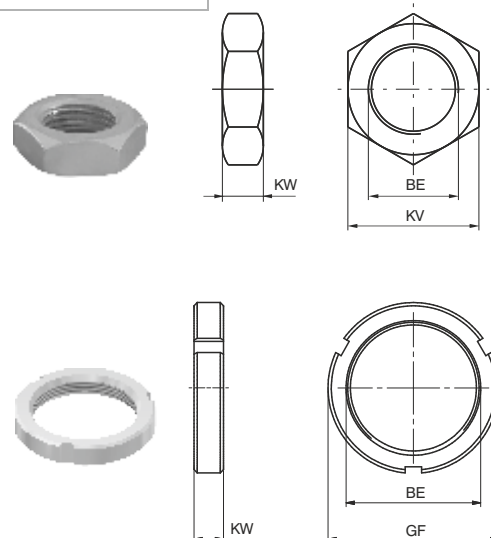
Nut:

Used to fasten flanges or feet to the endcaps of the microcylinder. The nuts are mounted on BOREs that go from 8 to 25, the lock nuts on 32, 40 and 50. Both are supplied (one piece) with the microcylinders.



Ordering code

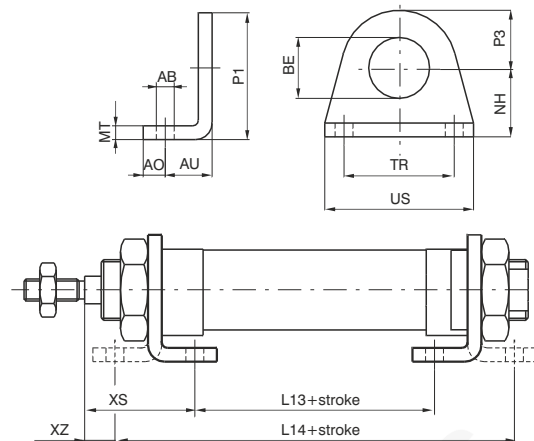
1200.0.05



Bore	D3	D4	H1	H2	H3	H4	H5	H6	H7 (B12)	H8	H9	KK	BE	KV	GF	KW	Forks weight gr.	Nut weight gr.
8	4	8	21	8	13	8	5	8	4	10	11	M4x0,7	M12x1,25	17	-	5,5	12	7
10	4	8	21	8	13	8	5	8	4	10	11	M4x0,7	M12x1,25	17	-	5,5	12	7
12	6	10	31	12	19	12	7	12	6	12	18	M6x1	M16x1,5	22	-	6	20	16
16	6	10	31	12	19	12	7	12	6	12	18	M6x1	M16x1,5	22	-	6	20	16
20	8	14	42	16	26	16	10	16	8	16	23	M8x1,25	M22x1,5	30	-	7	45	25
25	10	18	52	20	32	20	12	20	10	20	27	M10x1,25	M22x1,5	30	-	7	90	25
32	10	18	52	20	32	20	12	20	10	20	27	M10x1,25	M30x1,5	-	42	8	90	42
40	12	20	62	24	38	24	14	24	12	24	32	M12x1,75	M40x1,5	-	52	9	145	60
50	12	20	62	24	38	24	14	24	12	24	32	M12x1,75	M40x1,5	-	52	9	145	60

Foot

Ordering code

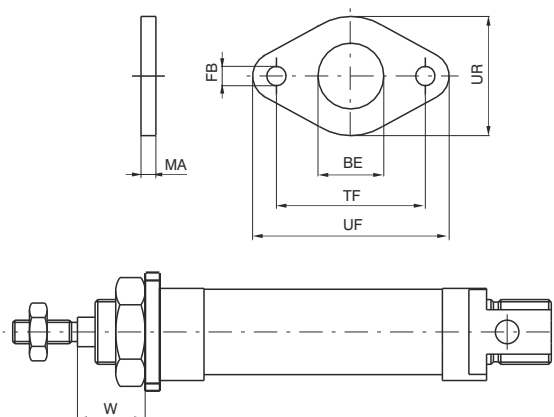
1200.Ø.01X
(1 piece)


Used to mount the cylinder on the mounting plane with the rod parallel to said plane. Use one for short strokes and two for long strokes. It is made stamped stainless steel AISI 304. Attached to the end plates by means of nuts (or lock nuts) 05X.

Bore	16	20	25	32
AB (H13)	5,5	6,5	6,5	6,5
AO	6	8	8	8
AU	14	17	17	17
BE	16	22	22	30
L13 (±1)	36	44	44	45
L14 (±1)	84	102	102	103
MT	4	5	5	5
NH (±0,3)	20	25	25	28
P1	33	45	45	50
P3	13	20	20	22
TR (Js14)	32	40	40	52
US	42	54	54	66
XS (±1,4)	32	36	40	40
XZ (±1,4)	8	7	11	11
Weight gr.	45	90	90	110

Flange

Ordering code

1200.Ø.02X


Use to mount the microcylinder at a right angle to the mounting plane. Attached to the front (or rear) endcap by a nut (or lock nut) 05X. Made of stainless steel AISI 304.

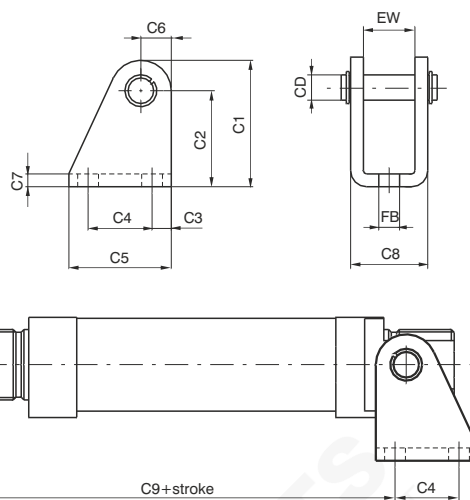
Bore	16	20	25	32
BE	16	22	22	30
FB (H13)	5,5	6,5	6,5	6,5
UF	53	66	66	68
UR	30	40	40	50
MA	4	5	5	5
TF (JS14)	40	50	50	52
W (±1,4)	18	19	23	23
Weight gr.	40	85	85	100



Rear eye

Ordering code

1200.Ø.03X
(1 piece)



Used to mount by using the rear end cover to mount either parallel or at a right angle to the mounting plane. Allows the cylinder to oscillate and self-align with the linked element to the rod. Necessary to use when the rod may be subject to lateral forces during travel. Made of stamped stainless steel AISI 304.

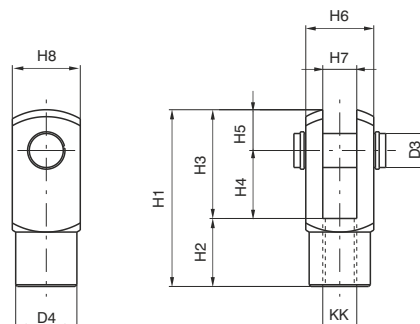
Bore	16	20	25	32
CD	6	8	8	12
C1	33,5	39,5	39,5	44,5
C2 (±0,3)	27	30	30	33
C3	5	6	6	7
C4	15	20	20	24
C5	25	32	32	38
C6	6,5	9,5	9,5	11,5
C7	3	4	4	4
C8	18	24	24	34
C9 (±0,4)	80,5	91,5	100,5	100,5
EW	12,1	16,1	16,1	26,1
FB (H13)	5,5	6,5	6,5	6,5
Weight gr.	35	75	75	135

Cylinder rod fork / Nut or lock nut for the endcaps

Ordering code

1200.Ø.04X
(with pin)

1200.Ø.05X
(1 piece)

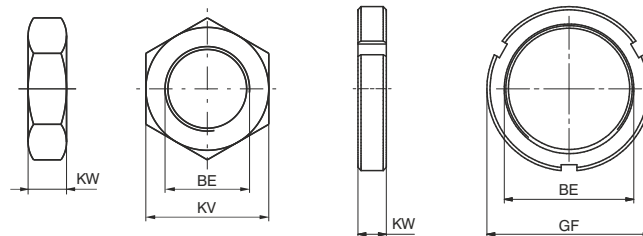


Fork:

Similar to hinge 03X, mounted on the rod thread, assures a regular operation even in the presence of significant forces to the linked element. Made of stainless steel AISI 304.

Nut:

Used to fasten flanges or feet to the endcaps of the microcylinder. The nuts are mounted on BORES that go from 16 to 25, the lock nuts on 32. Both are supplied (one piece) with the microcylinders.



Bore	Weight gr. forks	Weight gr. nut	D3	D4	H1	H2	H3	H4	H5	H6	H7 (B12)	H8	KK	BE	KV	GF	KW
16	20	16	6	10	31	12	19	12	7	12	6	12	M6X1	M16X1.5	22	-	6
20	45	25	8	14	42	16	26	16	10	16	8	16	M8X1.25	M22X1.5	30	-	7
25	90	25	10	18	52	20	32	20	12	20	10	20	M10X1.25	M22X1.5	30	-	7
32	90	42	10	18	52	20	32	20	12	20	10	20	M10X1.25	M30X1.5	-	42	8

Construction characteristics

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

Technical characteristics

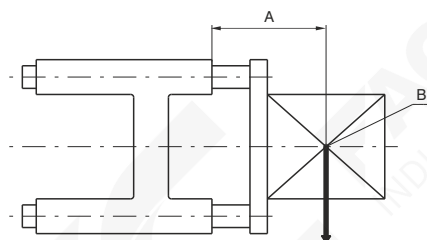
Max. suggested strokes for 1200 series:

Diameter	20	25
Stroke mm	200	250

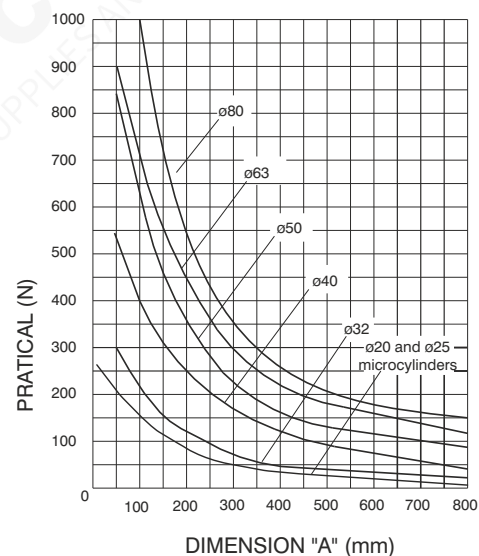
Max. suggested strokes for 1320 series:

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

Loading diagram based on dimension "A"



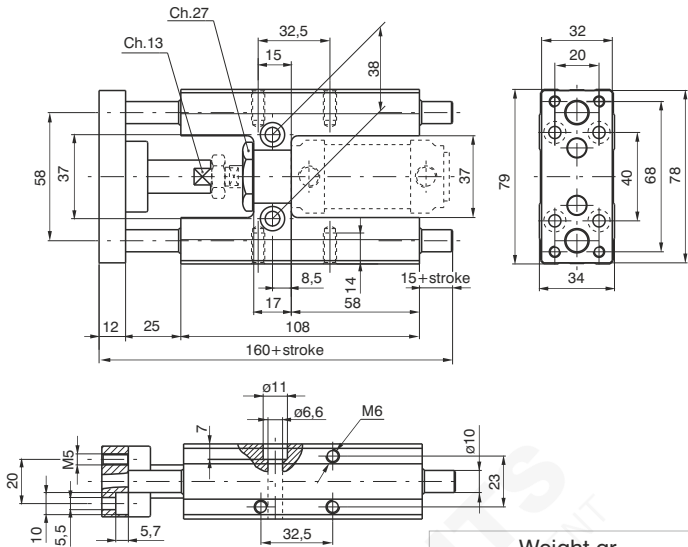
A = Protusion
B = Load centre of gravity



Use and maintenance

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

Dimensions for microcylinders ISO 6432



Ordering code
1260.Ø.stroke.GLB (Microcylinders ISO 6432 must be ordered separately)

Weight gr.	
stroke 100	every 50 mm
970	60

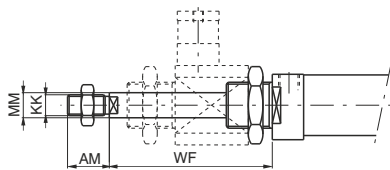
Standard strokes
Ø 20 100 - 150 - 200 mm
Ø 25 100 - 150 - 200 - 250 mm

Sensors and sensor clamps: Use standard sensors and clamps.

Overall dimensions and technical information are provided solely for informative purposes and may be modified without notice.

Microcylinders for piston rod lock

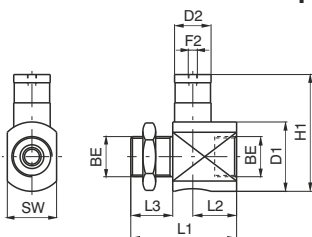
Threaded end covers version



Ordering code

12_ _Ø.stroke.B

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

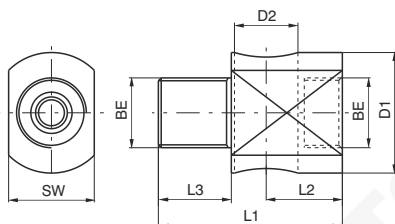
Piston rod lock complete

Do not use as safety device

Ordering code

1260.Ø.51BS

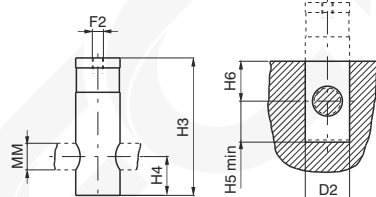
Ø	12	16	20	25	32
Weight gr.	82	82	140	140	188

Piston rod lock bracket

Ordering code

1260.Ø.51S

Ø	12	16	20	25	32
Weight gr.	60	60	85	85	133

Piston rod lock and housing

Do not use as safety device

Ordering code

1260.Ø.51B (Ø12-Ø25)**1320.32.51B (Ø32)**

Ø	12	16	20	25	32
Weight gr.	22	22	55	55	55

Table of dimensions (series 1200)

Bore	AM	BE	D1	D2	F2	H1	H3	H4	H5	H6	KK	L1	L2	L3	MM	SW	WF
12	16	M16x1.5	20	16	M5	35	35	10	11	10	M6x1	42	21	12	6	20	55
16	16	M16x1.5	20	16	M5	35	35	10	11	10	M6x1	42	21	12	6	20	55
20	20	M22x1.5	38	20	M5	64	62	17.5	19	18	M8x1.25	58	24	23	8	27	73
25	22	M22x1.5	38	20	M5	64	62	17.5	19	18	M10x1.25	58	24	23	10	27	77
32	20	M30x1.5	39.5	20	M5	64	62	17.5	18.5	18	M10x1.25	60	26	22	12	35	76.5

Sensor clamps for microcylinders with threaded end covers and Technopolymer

Sensor clamps for microcylinders with rolled end covers "MIR" and "MIR-INOX"

Sensor clamps - codes 1500._, RS._, HS._	Sensor clamps - codes 1580._, MRS._, MHS._
Ordering code	Ordering code
1280.Ø.F - cylinders MIR 1280.Ø.FX - cylinders MIR-INOX	1280.Ø.FS - cylinders MIR 1280.Ø.FSX - cylinders MIR-INOX

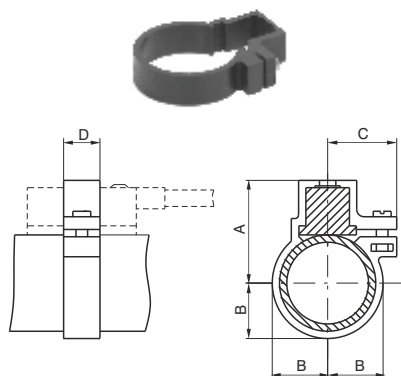


Table of dimensions

Bore	Ø16	Ø20	Ø25	Ø32
A	24	25,5	28,5	31,8
B	10,5	12,5	15,5	18,8
C	16,5	17,5	19	20
D	10	10	10	10
Weight (gr)	3	5	7	10

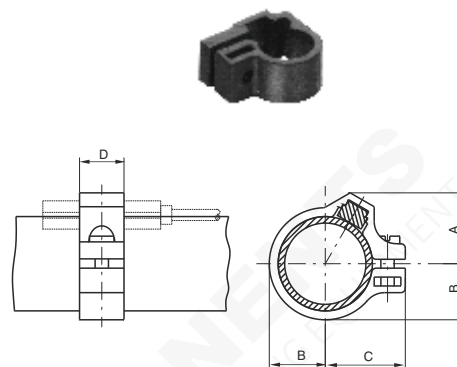


Table of dimensions

Bore	Ø8	Ø10	Ø12	Ø16	Ø20	Ø25	Ø32
A	11	12	13	14,5	16	17,5	19,5
B	6,5	7,5	8,5	10,5	12,5	15,3	18,8
C	12,5	13,5	15	16	18	20,5	24
D	10	10	10	10	10	10	10
Weight (gr)	2	2	2	3	5	7	10

Sensor for microcylinders

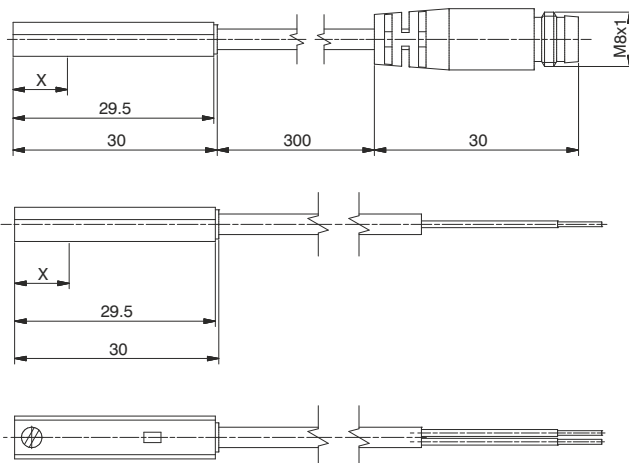
For technical characteristics and ordering codes see Chapter 6 (magnetic sensors)

Sensor with 2.5 m. cable

Weight gr. 27

Sensor with cable and M8 connector

Weight gr. 15



X= point of commutation

Sensor ordering codes

Ampulla Reed sensors, with led, Universal, N.O. (Normally open)

X=point of commutation

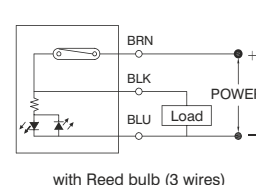
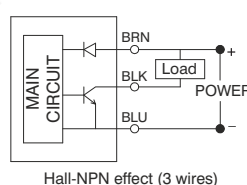
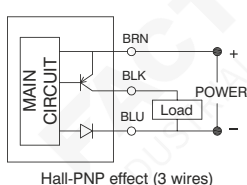
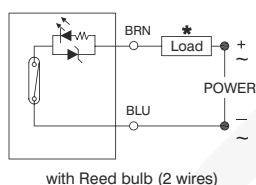
1580.U	(2 wires) cable 2.5 mt.	15 mm
MRS.U	(2 wires) cable 300 mm, M8 connector (use MC1 or MC2 connectors)	15 mm
1580.UAP	PNP (3 wires) cable 2.5 mt.	15 mm
MRS.UAP	PNP (3 wires) cable 300 mm, M8 connector (use MCH1 or MCH2 connectors)	15 mm

Hall effect sensors, with led, DC, N.O. (Normally open)

X=point of commutation

1580.HAP	PNP (3 wires) cable 2.5 mt.	8 mm
1580.HAN	NPN (3 wires) cable 2.5 mt.	8 mm
MHS.P	PNP (3 wires) cable 300 mm, M8 connector (use MCH1 or MCH2 connectors)	8 mm

Diagrams and connections



* The load (LOAD) can be connected either to negative or positive pole

Technical characteristics	1580.U	MRS.U	1580.UAP	MRS.UAP	1580.HAP	1580.HAN	MHS.P
Type of contact	N.O.						
Output type			PNP			NPN	PNP
Maximum current	100mA						
Maximum permanent power	14 VA - 10 W		4 VA - 3 W		3 W		
Voltage range	5 - 230V DC/AC	5 - 30V DC/AC	10 - 30 V DC/AC		10 - 30 V DC		
Working temperature	-10°C - +70°C						
Maximum voltage drop	3.5 V		0V **		2 V		
Cable section (mm²)	2 x 0.14 Ø3.3mm PUR	2 x 0.14 Ø3.3mm PUR	3 x 0.14 Ø3.3 mm PUR		3 x 0.14 Ø3.3 mm PUR		
Degree of protection	IP 67						

** Even if one sensor generates a voltage drop very close to 0 Volts, we suggest to connect no more than 30 sensors in series.

Cable ordering code

Connection 2 wires

Connector



Sensor



1 Brown (+)
4 Blue (-)
3 Not use

Connection 3 wires

Connector



Sensor



1 Brown (+)
4 Black (signal)
3 Blue (-)

- MC1** cable 2 wires l=2.5m with M8 connector
MC2 cable 2 wires l=5m with M8 connector
MC3 cable 2 wires l=10m with M8 connector

- MCH1** cable 3 wires l=2.5m with M8 connector
MCH2 cable 3 wires l=5m with M8 connector
MCH3 cable 3 wires l=10m with M8 connector