



## Series 1200, Threaded end caps

### Construction characteristics

End caps	hard anodised aluminum
Barrel	anodised aluminium (brass for Ø8 and Ø10)
Piston rod	non magnetic piston : Ø8 - Ø10: stainless steel / Ø12 - Ø50: C43 chromed magnetic piston: Ø10 - 20: stainless steel / Ø25 - 50: C43 chromed
Piston	aluminium
Seals	Standard: NBR Oil resistant rubber, PUR Piston rod seals (HNBR or FPM seals available upon request)
Mounting	steel painted in cataphoresis
Forks	cadmium plated steel
Single-acting springs	steel for springs and stainless steel
Cushioning length	∅ 16 - 20 - 25 - 32 - 40 - 50 mm 15 - 18 - 18 - 18 - 22 - 22

### Technical characteristics

Fluid	Filtered air. No lubrication needed, if applied it shall be continuous.
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

#### Double acting version

Ø8 - Ø10 : 15 - 25 - 50 - 75 - 80 - 100 mm

Ø12 - Ø16 : 15 - 25 - 50 - 75 - 80 - 100 - 150 - 160 - 200 - 250 - 300 mm

Ø20 - Ø25 : 15 - 25 - 50 - 75 - 80 - 100 - 150 - 160 - 200 - 250 - 300 - 320 - 350 - 400 mm

Ø32 - Ø50 : 15 - 25 - 50 - 75 - 80 - 100 - 150 - 160 - 200 - 250 - 300 - 320 - 350 - 400 - 450 - 500 mm

On request are available strokes up to:

Ø8 - Ø10 : 250 mm

Ø12 - Ø16 : 700 mm

Ø20 - Ø50 : 1000 mm

#### Single acting version

Ø12 - Ø50 : up to stroke 40 mm

On request are available strokes up to 200 mm

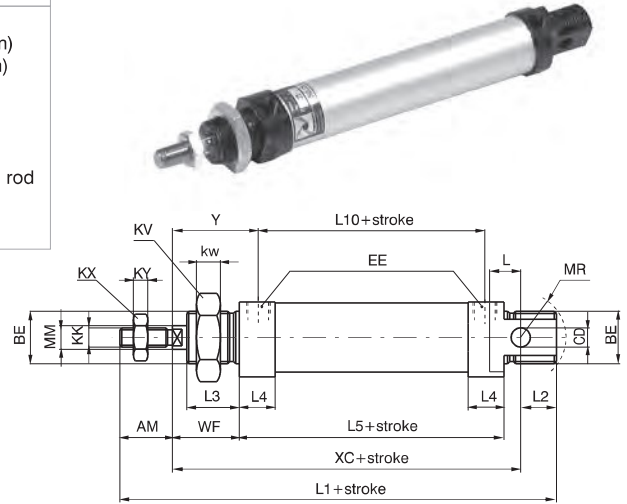
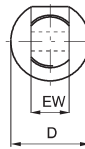
### Minimum and maximum springs load for single acting version

Bore	Ø12 - Ø20	Ø25	Ø32	Ø40 - Ø50
Min. load (N)	10	10	20	40
Max. load (N)	25	50	55	110

**Basic version**

Ordering code	Description
1260.Ø.stroke	Basic version
1271.Ø.stroke	Basic version front spring from Ø12 (max stroke 40 mm)
1272.Ø.stroke	Basic version rear spring from Ø12 (max stroke 40 mm)
12--Ø.stroke.A	Adjustable cushioning (from Ø16)
12--Ø.stroke.M	Magnetic piston (from Ø10)
12--Ø.stroke.X	Stainless steel rod
12--Ø.stroke.M.A	Cushioning with magnetic piston
12--Ø.stroke.M.A.X	Cushioning, magnetic piston and stainless steel piston rod
12--Ø.stroke...T	HNBR seals version
12--Ø.stroke...V	FPM seals version

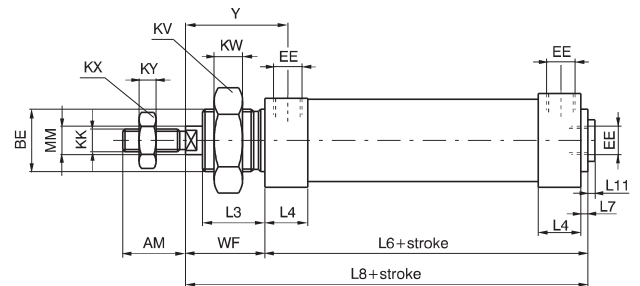
Standard execution, fully complying with ISO standards from ø 8 to ø 25. BORES 32, 40 and 50 not included in the standard, comply with our own specifications. Can use all available mountings. For single acting type, the maximum stroke is 40 mm., after which overall dimensions increase in length to an extent not proportional to the stroke (and in any case not longer than stroke 100).



**Without rear eye version**

Ordering code	Description
1261.Ø.stroke	Without rear eye
1273.Ø.stroke	Without rear eye front spring from Ø12 (max stroke 40 mm)
1274.Ø.stroke	Without rear eye rear spring from Ø12 (max stroke 40 mm)
12--Ø.stroke.A	Adjustable cushioning (from Ø16)
12--Ø.stroke.M	Magnetic piston (from Ø10)
12--Ø.stroke.X	Stainless steel rod
12--Ø.stroke.M.A	Cushioning with magnetic piston
12--Ø.stroke.M.A.X	Cushioning, magnetic piston and stainless steel piston rod
12--Ø.stroke...T	HNBR seals version
12--Ø.stroke...V	FPM seals version
12--Ø.stroke...L	Air inlet at 90° version

Version derived from standard execution 1260 and not included in ISO standard. Not having a rear eye it is shorter and the air inlet is from the rear or at 90° like it is on the front. The considerations made for the basic type 1260 apply for all single-acting types.

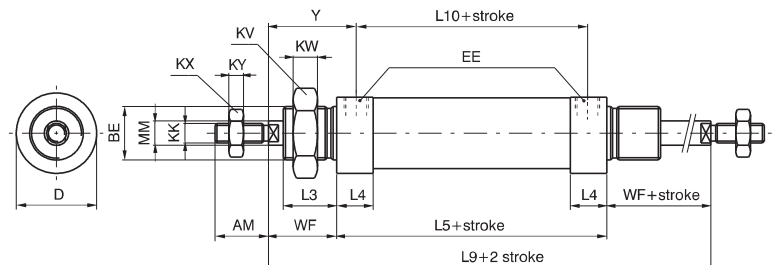


**Through rod cylinder version**

Ordering code	Description
1262.Ø.stroke	Through rod cylinder rod
1262.Ø.stroke.A	Adjustable cushioning (from Ø16)
1262.Ø.stroke.M	Magnetic piston (from Ø10)
1262.Ø.stroke.X	Stainless steel rod
1262.Ø.stroke.E	Hexagonal piston rod (from Ø12)
1262.Ø.stroke.M.A	Cushioning with magnetic piston
1262.Ø.stroke.M.A.X	Cushioning, magnetic piston and stainless steel piston rod
1262.Ø.stroke...T	HNBR* seals version
1262.Ø.stroke...V	FPM* seals version

\* Excludes hexagonal rod version

Execution by rod coming out from both end caps, with overall dimensions, except for the rod, equal to 1260 version. Not available with Ø8 and 10.



► Non rotating piston rod version

Ordering code	Description
1260.Ø.stroke.E	Hexagonal piston rod (from Ø12)
1271.Ø.stroke.E	Hexagonal piston rod with front spring from Ø12 (max stroke 40 mm.)
1272.Ø.stroke.E	Hexagonal piston rod with rear spring from Ø12 (max stroke 40 mm.)
12--.Ø.stroke.M.E	Hexagonal piston rod with magnetic piston (from Ø12)



Similar overall dimensions as 1260 basic type, it differs because of the hexagonal rod (instead of circular) to avoid the rotation. It is particularly suitable when it is used as a guide and support to the linked element. Not for use with high frequencies and long strokes. For which, whenever possible use front spring.

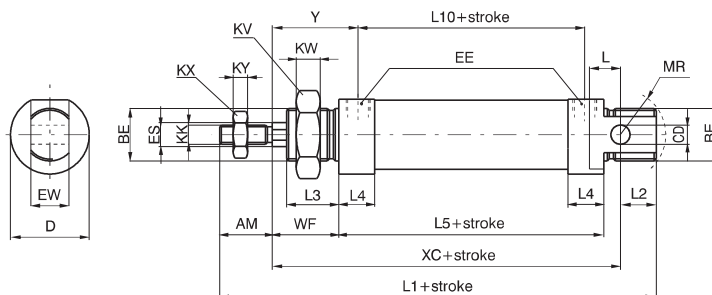


Table of dimensions

Bore		8	10	12	16	20	25	32	40	50
AM (-0,2)		12	12	16	16	20	22	20	25	25
BE		M12x1,25	M12x1,25	M16x1,5	M16x1,5	M22x1,5	M22x1,5	M30x1,5	M40x1,5	M40x1,5
CD (H9)		4	4	6	6	8	8	12	14	14
D (-0,3)		16	17	19	24	28	33	40	48	58
EE		M5	M5	M5	M5	G1/8"	G1/8"	G1/8"	G1/4"	G1/4"
ES		-	-	6	6	8	10	12	12	12
EW (d13)		8	8	12	12	16	16	26	30	30
KK (6g)		M4x0,7	M4x0,7	M6x1	M6x1	M8x1,25	M10x1,25	M10x1,25	M12x1,75	M12x1,75
KV		17	17	22	22	30	30	42	52	52
KW		5,5	5,5	6	6	7	7	8	9	9
KX		7	7	10	10	13	17	17	19	19
KY		3	3	4	4	5	6	6	7	7
L		6	6	9	9	12	13	13	16	16
L1(±1)	*	85	85	105	111	130	141	139	164	167
L2		9	9	14	13	15	15	14	16	16
L3		11	11	17	17	18	22	22	25	25
L4		10	10	9,5	10,5	15	15	15	18	18
L5(±1)	*	46	46	50	56	68	69	69	79	82
L6(±1)	*	48	48	52	58	70,5	71,5	71,5	82	85
L7		2	2	2	2	2,5	2,5	2,5	3	3
L8(±1)	*	64	64	74	80	94,5	99,5	99,5	117	120
L9(±1,2)	*	78	78	94	100	116	125	125	149	152
L10(±1)	*	35	35	40	45	52	53	53	60	63
L11		-	-	-	1,5	2	2	2	2	2
MM (f7)		4	4	6	6	8	10	12	14	14
MR (min.)		12	12	16	16	18	19	22	28	28
WF (±1,2)		16	16	22	22	24	28	28	35	35
XC(±1)	*	64	64	75	82	95	104	105	123	126
Y(±1,2)		21,5	21,5	27	27,5	32	36	36	44,5	44,5
STROKE TOLERANCE: until stroke 100 mm - 1,5, beyond + 2 mm.										
Weight	stroke 0	55	60	80	100	175	240	365	610	790
g	every 10mm	6	7	5	5	8	11	15	19	21

Without rear eye version

Weight	stroke 0	50	55	75	95	170	230	345	570	750
g	every 10mm	6	7	5	5	8	11	15	19	21

Through rod cylinder version

Weight	stroke 0	55	60	95	120	220	310	450	760	950
g	every 10mm	7	8	7	7	12	17	24	31	33

Hexagonal rod version

Weight	stroke 0	-	-	85	105	180	250	370	590	760
g	every 10mm	-	-	5	6	8	12	16	17	19

(\*) These dimensions increase of 10 mm for microbore cylinders equipped with magnetic piston and spring return, and of 9 mm for microbore cylinders with 10 mm BORE magnetic piston



## Series 1200, Rolled end covers "MIR"

### Construction characteristics

End caps	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	ø 16 - 20 - 25 - 32 mm 15 - 18 - 18 - 18

### Operational characteristics

Fluid	Filtered air. No lubrication needed, if applied it shall be continuous.
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

#### Double acting version

Ø8 - Ø10 : 15 - 25 - 50 - 75 - 80 - 100 mm

Ø12 - Ø16 : 15 - 25 - 50 - 75 - 80 - 100 - 150 - 160 - 200 - 250 - 300 mm

Ø20 - Ø25 : 15 - 25 - 50 - 75 - 80 - 100 - 150 - 160 - 200 - 250 - 300 - 320 - 350 - 400 mm

Ø32 : 15 - 25 - 50 - 75 - 80 - 100 - 150 - 160 - 200 - 250 - 300 - 320 - 350 - 400 - 450 - 500 mm

On request are available strokes up to:

Ø8 - Ø10 : 250 mm

Ø12 - Ø16 : 700 mm

Ø20 - Ø32 : 1000 mm

#### Single acting version

Front spring Ø8 - Ø32 : up to stroke 50 mm

Rear spring Ø16 - Ø32 : up to stroke 50 mm

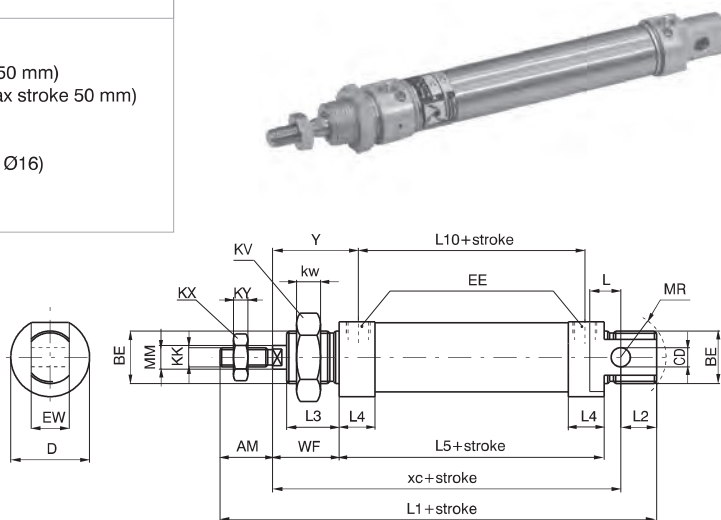
### Minimum and maximum springs load for single acting version

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

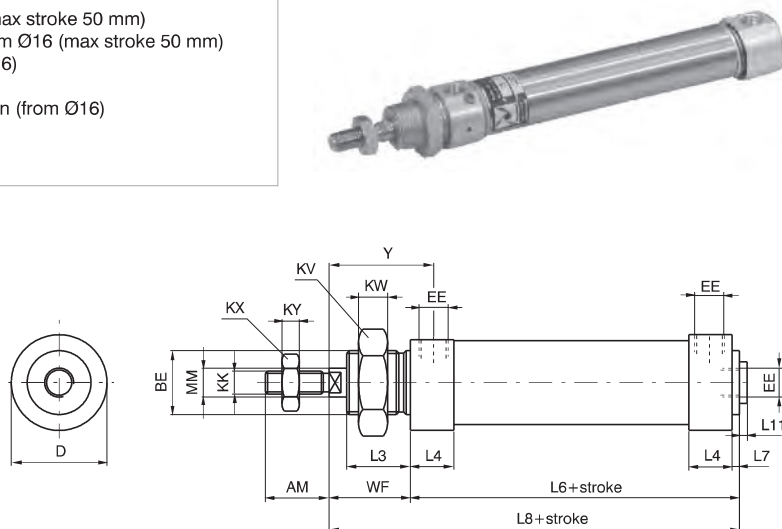
Standard version, fully compliant with ISO standards. Can use all available mountings. For single acting type, the maximum stroke is 50 mm., after which overall dimensions increase in length to an extent not proportional to the stroke (and in any case not longer than stroke 100).



### Without rear eye version

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



### Through rod cylinder version

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

This version having rods coming out from both end caps 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.

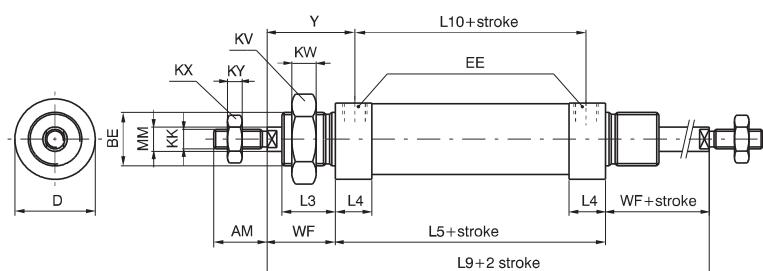




Table of dimensions

		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
g	every 10mm	2	2,5	4	5	7,5	11,5	18
<b>Variations of the versions:</b>								
<i>without rear eye version</i>								
Weight	stroke 0	25	30	60	75	150	185	290
g	every 10mm	2	2,5	4	5	7,5	11,5	18
<i>Through rod cylinder version</i>								
Weight	stroke 0	35	40	75	95	200	250	370
g	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).

PNEUMATIC ACTUATION 3