Series 1200, Rolled end covers MIR

Construction characteristics

Barrel	stainless steel AISI 304
Fixing devices	steel painted in cataphoresis
Forks	zinc plated steel
Seals	standard: NBR Oil resistant rubber, PUR Piston rod seals (HNBR or FPM seals available upon request)
Single-acting springs	C98 zinc plated steel for springs
Pistons	brass (Ø8-10-12) aluminium (Ø16-20-25-32)
Piston rod	stainless steel
End caps	anodized aluminium

Cushioning lenght	Ø	16	20	25	32
	mm	15	18	18	18

Operational characteristics

Fluid	filtered air, preferably lubricated
Max. 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.

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

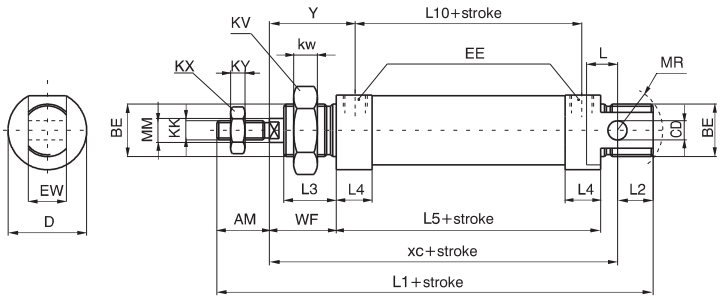
Bore	Ø8	Ø10	Ø12	Ø16	Ø20	Ø25	Ø32
Min. load (N)	2.2	2.2	4	7.5	11	16.5	23
Max. load (N)	4.2	4.2	8.7	21	22	30.7	52.5

Basic version

Coding: 12Ⓣ.Ø.stroke.ⓋⒼ

Ⓣ	TYPE
	80 = Double acting version
	91 = front spring (max stroke 50 mm)
	92 = rear spring from Ø16 (max stroke 50 mm)
Ø	BORE
	8 = Ø8
	10 = Ø10
	...
	32 = Ø32
Ⓥ	VERSION
	A = Adjustable cushioning (from Ø16)
	M = Magnetic piston
	AM = Cushioning with magnetic piston (from Ø16)
Ⓖ	SEALS
	= NBR
	T = HNBR
	V = FPM

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).

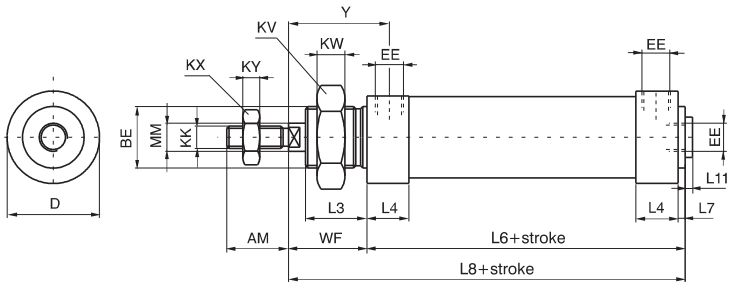


Without rear eye version

Coding: 12Ⓣ.Ø.stroke.ⓋⒼ

Ⓣ	TYPE
	81 = Double acting version
	93 = front spring (max stroke 50 mm)
	94 = rear spring from Ø16 (max stroke 50 mm)
Ø	BORE
	8 = Ø8
	10 = Ø10
	...
	32 = Ø32
Ⓥ	VERSION
	A = Adjustable cushioning (from Ø16)
	M = Magnetic piston
	AM = Cushioning with magnetic piston (from Ø16)
Ⓖ	SEALS
	= NBR
	T = HNBR
	V = FPM

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

Coding: 1282.Ø.stroke.ⓋⒼ

Ø	BORE
	8 = Ø8
	10 = Ø10
	...
	32 = Ø32
Ⓥ	VERSION
	= Double acting version
	A = Adjustable cushioning (from Ø16)
	M = Magnetic piston
	AM = Cushioning with magnetic piston (from Ø16)
Ⓖ	SEALS
	= NBR
	T = HNBR
	V = FPM

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.

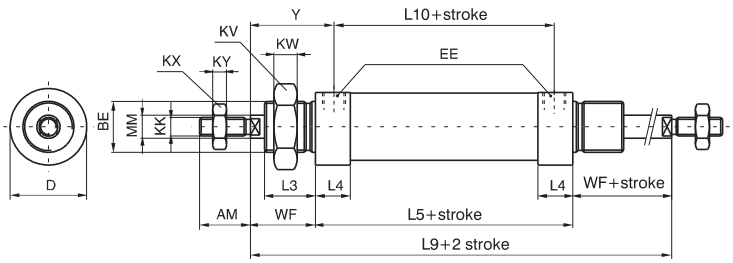


Table of dimensions

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

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

STROKE TOLERANCE: until stroke 100 mm - 1,5, 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

Without rear eye version

Weight	Stroke 0	25	35	60	75	150	185	290
g	every 10mm	2	2,5	4	5	7,5	11,5	18

Through rod cylinder version

Weight	Stroke 0	35	40	75	95	200	250	370
g	every 10mm	2,5	3	6	7	10,5	15,5	24