Series Steel line - AISI 316

The 1393-1394 stainless steel ISO 15552 cylinders series are designed for corrosion resistance application such as marine, pharmaceutical and food ambiences.
The pre lubrication grease used is NSF H1 certified for food application.
Specific care has been taken during the design stages and the result is a clean profile cylinder easy to clean and free from possible residue build-up areas.
All parts in contact with the external environment are in Stainless steel 316L and the seals are available in two different compounds for different temperature applications:
PUR -30°C ... +80°C FPM -5°C ... +150°C.
The range starts from 32 bore up to 100 bore , round barrel and tie rods design. Double acting version standard or with through rod, magnetic or not magnetic piston available.
The piston is aluminium and the sensor bracket, when required is in stainless steel 316.
The cylinder can be fixed via the threaded holes in the tie rod nuts or with the wide range of stainless steel accessories.

Construction characteristics

Piston rod bushings	Stainless steel AISI 316 with P.T.F.E. coat
Barrel	Stainless steel AISI 316
Lubricating grease	NSF-H1 certified grease for incidental contact with food
Seals	PUR or FPM on request
Half-pistons	Aluminium
Piston rod	Stainless steel AISI 316
End caps	Stainless steel AISI 316
Cushion screws	Stainless steel AISI 316

Operational characteristics

Fluid	filtered and preferably lubricated air or not (if lubricated the lubrication must be continuous)
Pressure	10 bar
Working temperature	-30° C ... +80°C with PUR seals -5° C ... +150°C with FPM seals and non magnetic piston -5° C ... +80°C with FPM seals and magnetic piston

Cushioning lengths

Bore	Ø	32	40	50	63	80	100
Cushioning lenght	mm	20	20	22	22	32	32

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.

Standard strokes (for all diameters)

from 0 to 150, every 25 mm
from 150 to 500, every 50 mm
from 500 to 1000, every 100 mm
On request are available strokes up to: 2800 mm

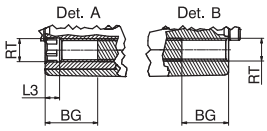
Stroke tolerance (ISO 15552)

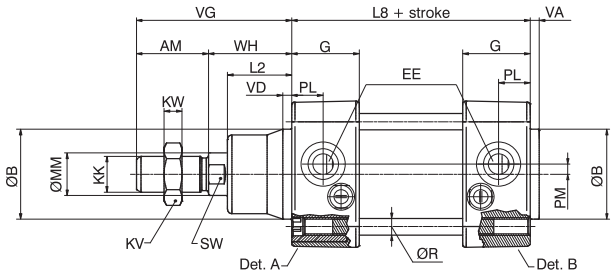
Bore	Stroke	Tolerance
32-40-50	up to 500 mm	+2 0
	over 500 up to 1000	+3,2 0
63-80-100	up to 500 mm	+2,5 0
	over 500 up to 1000	+4 0

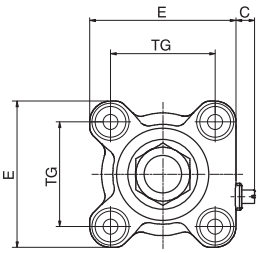
Basic version "01"

Coding: 13Ⓥ.Ø.stroke.01Ⓖ

Ⓥ	VERSION
	93 = Magnetic
	94 = Non magnetic
Ø	BORE
	32 = Ø32
	40 = Ø40
	50 = Ø50
	63 = Ø63
	80 = Ø80
	100 = Ø100
Ⓖ	SEALS
	= PUR
	V = FPM







Through rod cylinder version "02"

Coding: 13Ⓥ.Ø.stroke.02Ⓖ

Ⓥ	VERSION
	93 = Magnetic
	94 = Non magnetic
Ø	BORE
	32 = Ø32
	40 = Ø40
	50 = Ø50
	63 = Ø63
	80 = Ø80
	100 = Ø100
Ⓖ	SEALS
	= PUR
	V = FPM

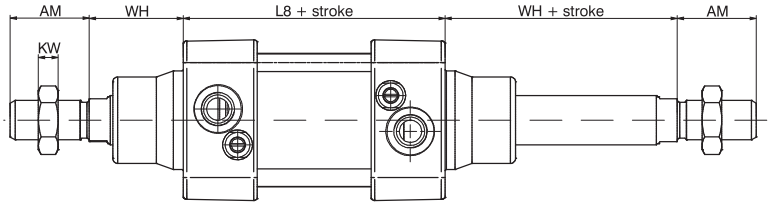


Table of dimensions

Bore		32	40	50	63	80	100
AM		22	24	32	32	40	40
ØB (d 11)		30	35	40	45	45	55
BG min.		16	16	16	16	18	17
C min.		4	4	4	4	3,5	3,5
C max.		7.5	7,5	8,5	8,5	9	9
E		47	52	65	76	95	113
EE		G1/8"	G1/4"	G1/4"	G3/8"	G3/8"	G1/2"
G		29	31	30	34	36	40,5
KK		M10X1,25	M12X1,25	M16X1,5	M16X1,5	M20x1,5	M20X1,5
KV		17	19	24	24	30	30
KW		16	7	8	8	9	9
L2		20	22	28,5	29	35	36
L3		4,5	4,5	5	5	6	6
L8		94	105	106	121	128	138
ØMM		12	16	20	20	25	25
PL		13	14	14	16	16	18
PM		3	3,5	4,5	7	8	8
ØR		Ø5,2	Ø5,2	Ø7,1	Ø7,1	Ø8,9	Ø8,9
RT		M6	M6	M8	M8	M10	M10
SW		10	13	17	17	22	22
TG		32,5	38	46,5	56,5	72	89
VA		4	4	4	4	4	4
VD		4	4	4	4	4	4
VG		48	54	69	69	86	91
WH		26	30	37	37	46	51
Weight g	Stroke 0	1000	1430	2150	3000	4400	6400
	every 10 mm	35	45	63	80	120	135