



Series 1303-1308

They conform to CNOMO standards, fully complying with CETOP and ISO standards, with mounted fixing devices 32 to 100.

Construction characteristics

Cushion bushings	aluminium
Piston rod bushings	brass (Ø32, Ø40, Ø50) in aluminium with self-lubricating bearings in sinterized bronze for the remaining bores
Barrel	oxidised aluminium
Seals	standard: NBR Oil resistant rubber, PUR Piston rod seals (FPM seals available upon request)
Pistons	aluminium lathed from bar
Piston rod	C43 chromed steel, by thickness or stainless steel
End caps	solid aluminium bar up to Ø100, alloy aluminium from Ø125 to Ø200
Tie rods	steel with rolled threads

Operational characteristics

Fluid	filtered and lubricated air - hydraulic oil (with special bushing)
Pressure	max. 12 bar (air) - 20 bar (oil)
Working temperature	-5 °C ... +70 °C with 1303 ... 1308 standard seals -5 °C ... +80 °C with FPM seals for 1306 ... 1308 Series (magnetic piston) -5 °C ... +150 °C with FPM seals for 1303 ... 1305 Series (non magnetic piston)

Cushioning lenght	Ø	32	40	50	63	80	100	125	160	200
	mm	20	20	22	24	24	25	27	35	35

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

From 0 to 150 every 25 mm; from 150 to 500 every 50 mm; from 500 to 1000 every 100 mm. (for all diameters).
On request are available strokes up to: 2800 mm

Single acting version

up to stroke 50 mm.

Minimum and maximum springs load for single acting version

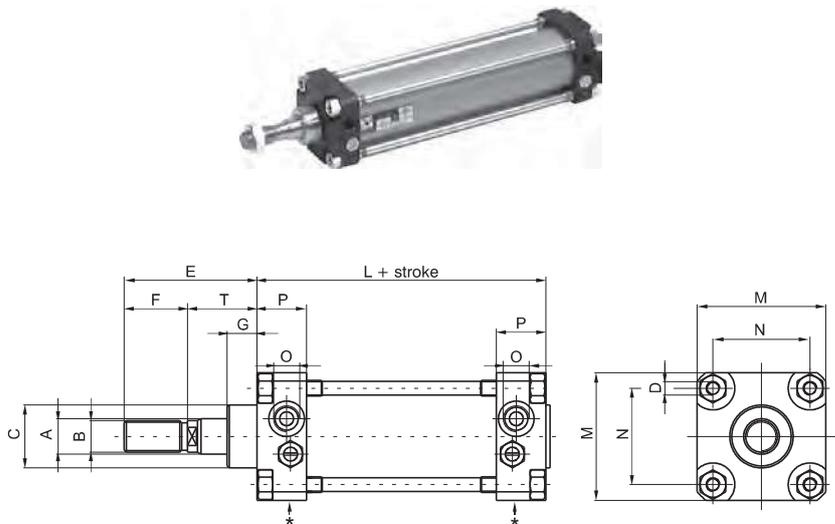
Bore	Ø32	Ø40-50	Ø63	Ø80 - Ø100
Min. load (N)	17	25	50	100
Max. load (N)	50	80	115	200

Basic version

Coding: 13N.Ø.stroke.01AEMS

N	STANDARDS
	03 = CNOMO (Non magnetic rod)
	04 = CETOP (Non magnetic piston)
	05 = ISO (Non magnetic piston)
	06 = CNOMO (Magnetic piston)
	07 = CETOP (Magnetic piston)
	08 = ISO (Magnetic piston)
	BORE
Ø	32 = Ø32
	40 = Ø40
	...
	200 = Ø200
G	SEALS
	V = FPM seals
M	SPRING
	MA = Front springs (Ø32 ... Ø125)*
	MP = Rear springs (Ø32 ... Ø125)*
S	PISTON ROD
	= C43 chromed steel piston rod
	X = Stainless steel piston rod

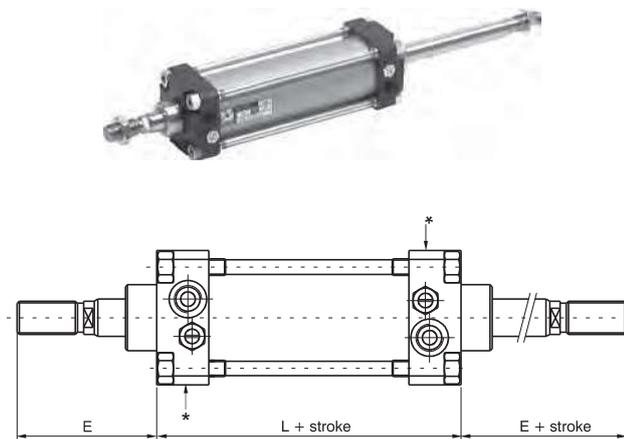
* max. stroke 50



Through rod cylinder version

Coding: 13N.Ø.stroke.02AES

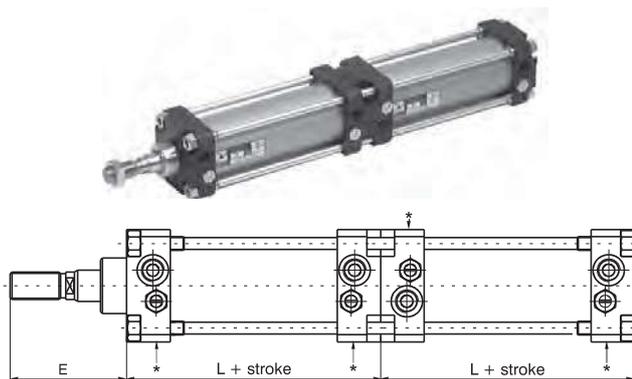
N	STANDARDS
	03 = CNOMO (Non magnetic rod)
	04 = CETOP (Non magnetic piston)
	05 = ISO (Non magnetic piston)
	06 = CNOMO (Magnetic piston)
	07 = CETOP (Magnetic piston)
	08 = ISO (Magnetic piston)
	BORE
Ø	32 = Ø32
	40 = Ø40
	...
	200 = Ø200
G	SEALS
	V = FPM seals
S	PISTON ROD
	= C43 chromed steel piston rod
	X = Stainless steel piston rod



Tandem push with a common rod

Coding: 13N.Ø.stroke.H

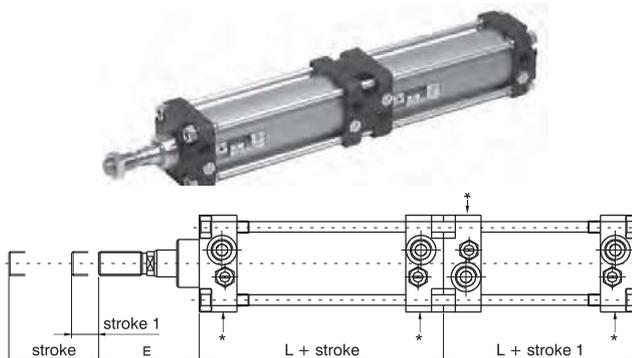
N	STANDARDS
	03 = CNOMO (Non magnetic rod)
	04 = CETOP (Non magnetic piston)
	05 = ISO (Non magnetic piston)
	06 = CNOMO (Magnetic piston)
	07 = CETOP (Magnetic piston)
	08 = ISO (Magnetic piston)
	BORE
Ø	32 = Ø32
	40 = Ø40
	...
	200 = Ø200



Tandem push with independent rods

Coding: 13N.Ø.stroke.stroke1.N

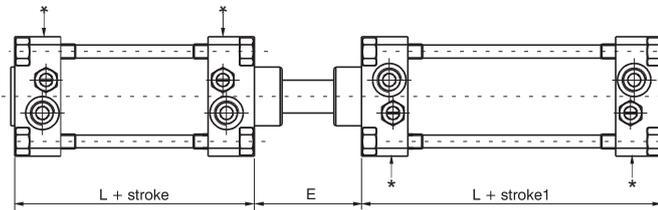
N	STANDARDS
	03 = CNOMO (Non magnetic rod)
	04 = CETOP (Non magnetic piston)
	05 = ISO (Non magnetic piston)
	06 = CNOMO (Magnetic piston)
	07 = CETOP (Magnetic piston)
	08 = ISO (Magnetic piston)
	BORE
Ø	32 = Ø32
	40 = Ø40
	...
	200 = Ø200



Opposed tandem with common rods

Coding: 13N.Ø.stroke.stroke1.R

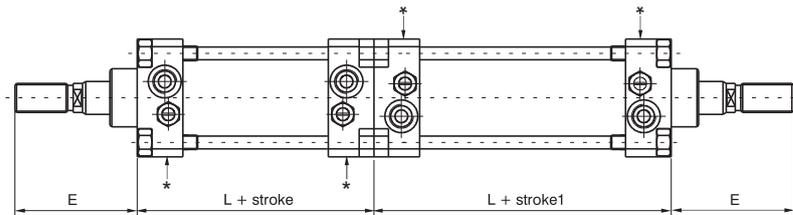
N	STANDARDS
	03 = CNOMO (Non magnetic rod)
	04 = CETOP (Non magnetic piston)
	05 = ISO (Non magnetic piston)
	06 = CNOMO (Magnetic piston)
	07 = CETOP (Magnetic piston)
	08 = ISO (Magnetic piston)
	BORE
32 = Ø32	
40 = Ø40	
...	
200 = Ø200	



Tandem with opposed rods

Coding: 13N.Ø.stroke.stroke1.U

N	STANDARDS
	03 = CNOMO (Non magnetic rod)
	04 = CETOP (Non magnetic piston)
	05 = ISO (Non magnetic piston)
	06 = CNOMO (Magnetic piston)
	07 = CETOP (Magnetic piston)
	08 = ISO (Magnetic piston)
	BORE
32 = Ø32	
40 = Ø40	
...	
200 = Ø200	



Note: Cushion adjustment (for Ø32, Ø40, Ø125, Ø160 and Ø200) is on the side indicated by * (see drawings).

Table of dimensions

Bore	32	40	50	63	80	100	125	160	200
A (f7)	12	18	18	22	22	30	30	40	40
B - CNOMO (6g)	M10x1,5	M16x1,5	M16x1,5	M20x1,5	M20x1,5	M27x2	M27x2	M36x2	M36x2
B - CETOP (6g)	M10x1,25	M12x1,25	M16x1,5	M16x1,5	M20x1,5	M20x1,5	M24x2	M36x2	M36x2
B - ISO (6g)	M10x1,25	M12x1,25	M16x1,5	M16x1,5	M20x1,5	M20x1,5	M27x2	M36x2	M36x2
C (d11)	25	32	32	45	45	55	55	65	65
H	2,5	2	2	2	2	2	3	3	3
D	M6	M6	M8	M8	M10	M10	M12	M16	M16
E - CNOMO	45	70	70	85	85	110	110	135	135
E - CETOP	44	52	67	67	82	87	109	152	162
E - ISO	46	52	67	67	82	87	115	152	162
F - CNOMO	20	36	36	46	46	63	63	85	85
F - CETOP	20	24	32	32	40	40	48	72	72
F - ISO	22	24	32	32	40	40	54	72	72
G	15	15	15	20	20	20	20	25	25
M	45	52	65	75	95	115	140	180	220
N	33	40	49	59	75	90	110	140	175
O	G1/8"	G1/4"	G1/4"	G3/8"	G3/8"	G1/2"	G1/2"	G3/4"	G3/4"
P	16	23	25	31	31	35	36	45	45
T - CNOMO	25	34	34	39	39	47	47	50	50
T - CETOP-ISO	24	28	35	35	42	47	61	80	90
L - CNOMO (±1)	80	110	110	125	125	145	145	180	180
L - CETOP-ISO (±1)	98	110	110	125	136	145	168	180	190

STROKE TOLERANCE: + 2 mm.

WEIGHT IN (g) OF THE CYLINDERS WITH VARIOUS BARRELS (BASIC VERSION)

Bore	32	40	50	63	80	100	125	160	200	
Aluminium	Stroke 0	580	1010	1350	2110	3350	5400	7450	13300	18300
	every 10 mm.	24	38	47	63	75	117	130	235	250

FOR CYLINDERS IN TANDEM THE WEIGHT IS APPROXIMATELY DOUBLE

PNEUMATIC ACTUATION