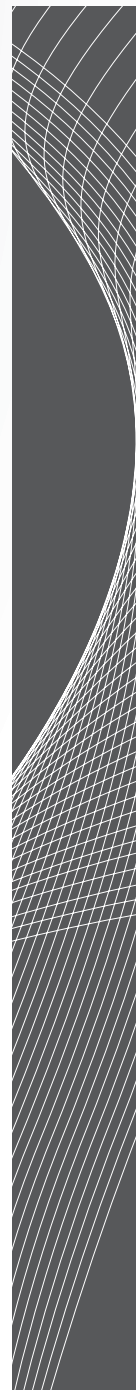
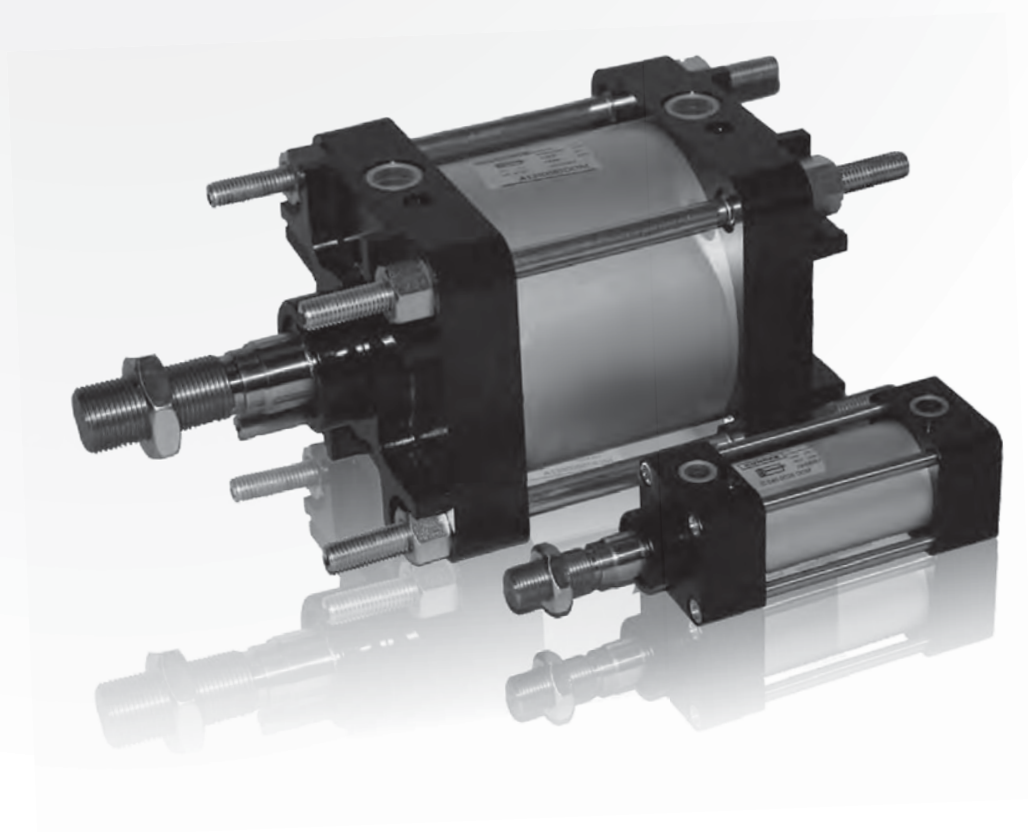
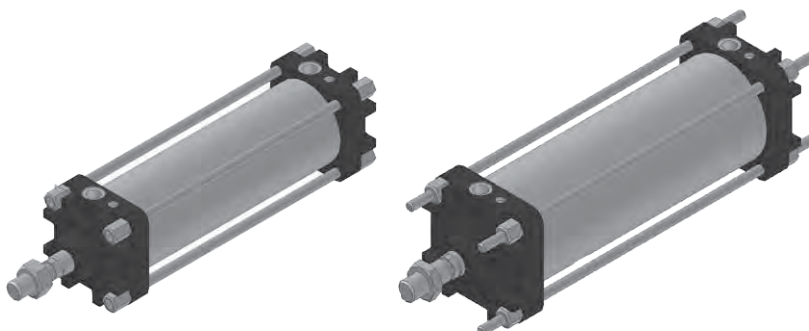


# A/C SERIES CYLINDERS CNOMO



# CYLINDERS CNOMO

## General Information



Series A/C cylinders are manufactured according to the Cnomo standard. The cylinder tubes have a round profile and visible tie-rods. This product has been designed to have extraordinary

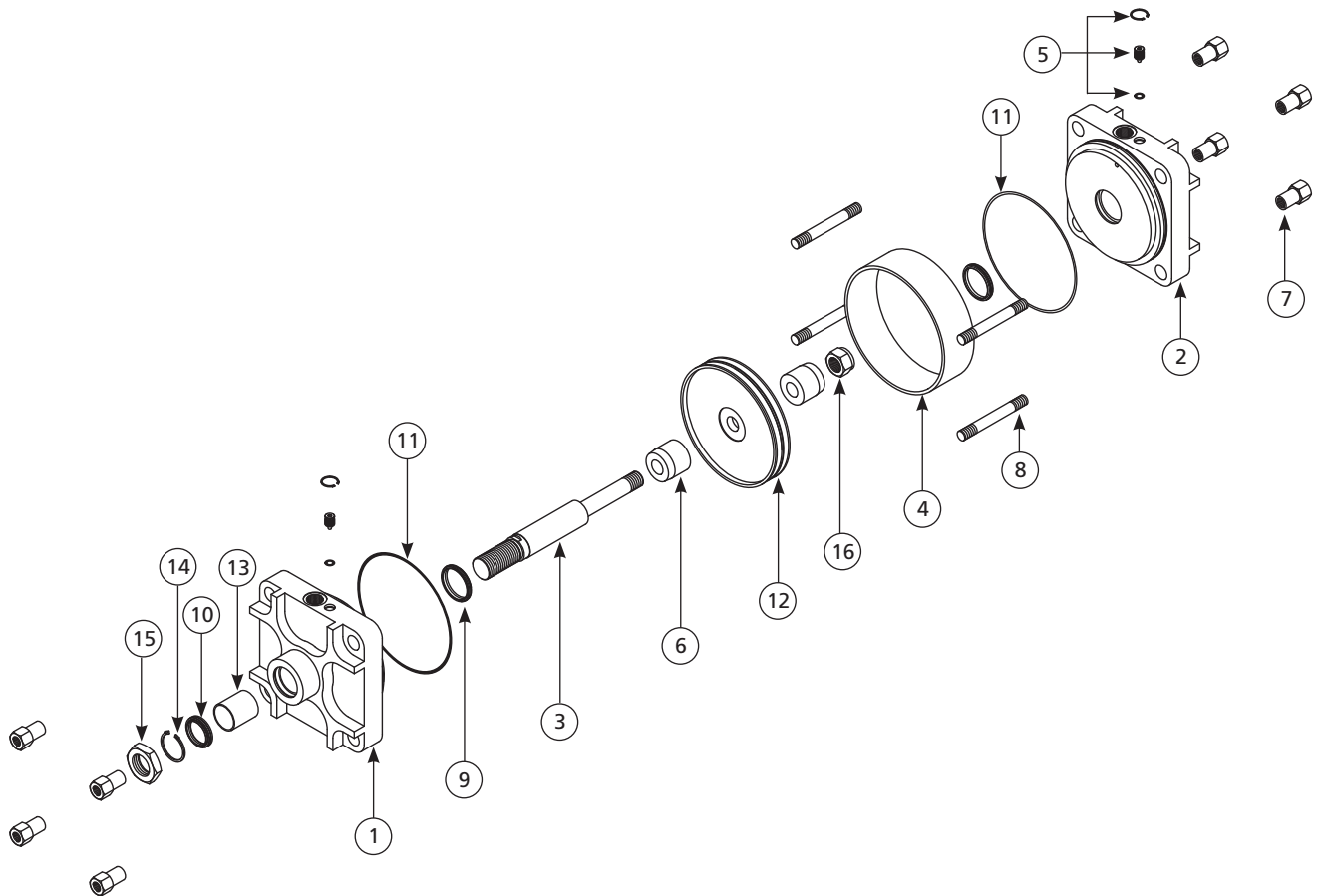
strength. This simple design facilitates special high and low temperature versions, by means of minor component changes. All double acting with through rod and tandem options.

## Technical Data

Piston diameters:	Ø 32, 40, 50, 63, 80, 100, 125, 160, 200, 250, 320 (mm)											
Ports:	Ø 32 = G1/8; Ø 40, Ø 50 = G1/4; Ø 63, Ø 80 = G3/8; Ø 100, Ø 125 = G1/2; Ø 160, Ø 200, Ø 250 = G3/4; Ø 320 = G1											
Covers:	Aluminium die-cast (painted)											
Piston rod:	C45 chromium plated steel (upon request stainless steel)											
Tube:	Round anodised aluminium											
Tie-rods:	Galvanised steel											
Piston seal:	NBR (Viton® on request)											
Other seals:	NBR (Viton® seals on request)											
Operating medium:	5 µm filtered air, lubricated or not (dry air must be used for application below 0 °C)											
Max pressure:	10 bar											
Operating temperature:	NBR seals: -10 °C to +80 °C						Viton® seals: -10 °C to +150 °C					
Cushioning length:	Ø 32 mm 28	40 28	50 32	63 32	80 40	100 40	125 35	160 45	200 45	250 50	320 -	
Stroke tolerance:	Ø 32 - 50		< 500 mm: + 2.0 mm				Ø 125 - 200				< 500 mm: + 4.0 mm	
			> 500 mm: + 3.2 mm								> 500 mm: + 5.0 mm	
	Ø 63 - 100		< 500 mm: + 2.5 mm				Ø 250 - 320				< 500 mm: + 5.0 mm	
			> 500 mm: + 4.0 mm								> 500 mm: + 7.0 mm	
Force at 6 bar:	Ø	32	40	50	63	80	100	125	160	200	250	320
	N [push]	470	730	1.150	1.830	2.990	4.600	7.200	11.760	18.440	28.840	47.260
	N [pull]	400	590	1.000	1.590	2.720	4.190	6.790	11.050	17.700	27.690	40.620
Max strokes:	3000 mm											

Please note that when using Viton seals with magnetic pistons, the temperature limit is determined by the magnetic ring. In this case the upper limit is 100°C. Accessories for cylinder diameters 250 & 320mm are only available by special order. Contact our sales office.

## Exploded View



- |                                |                             |
|--------------------------------|-----------------------------|
| 1. Front cover                 | 9. End piston rod seal ring |
| 2. Rear cover                  | 10. Piston rod nut          |
| 3. Tie-rod nut                 | 11. O-ring                  |
| 4. Cushioning adjustment screw | 12. Piston                  |
| 5. Piston rod seal             | 13. Piston rod              |
| 6. O-ring                      | 14. Spinner                 |
| 7. Piston fixing nut           | 15. Cylinder body           |
| 8. Piston rod guide bushing    | 16. Tie-rod                 |

## Order Code

Order specifications		A.	125.	0200.	DOM
Series number and version					
Piston diameter	with magnetic piston	C			
	without magnetic piston	A			
Stroke	Ø 32 (standard without protruding tie-rods)		032		
	Ø 40 (standard without protruding tie-rods)		040		
	Ø 50 (standard without protruding tie-rods)		050		
	Ø 63 (standard without protruding tie-rods)		063		
	Ø 80 (standard without protruding tie-rods)		080		
	Ø 100 (standard without protruding tie-rods)		100		
	Ø 125 (with protruding tie-rods only)		125		
	Ø 160 (with protruding tie-rods only)		160		
	Ø 200 (with protruding tie-rods only)		200		
	Ø 250 (with protruding tie-rods only)		250		
	Ø 320 (with protruding tie-rods only)		320		
Design	mm			XXXX	
	double acting				DOM
	through rod				DOM.1
	stainless steel piston rod				DOM.4
	Viton® seals				DOM.8
	tandem				DOM.2

Note: Viton seals are not available for Ø 250 and Ø 320 cylinders

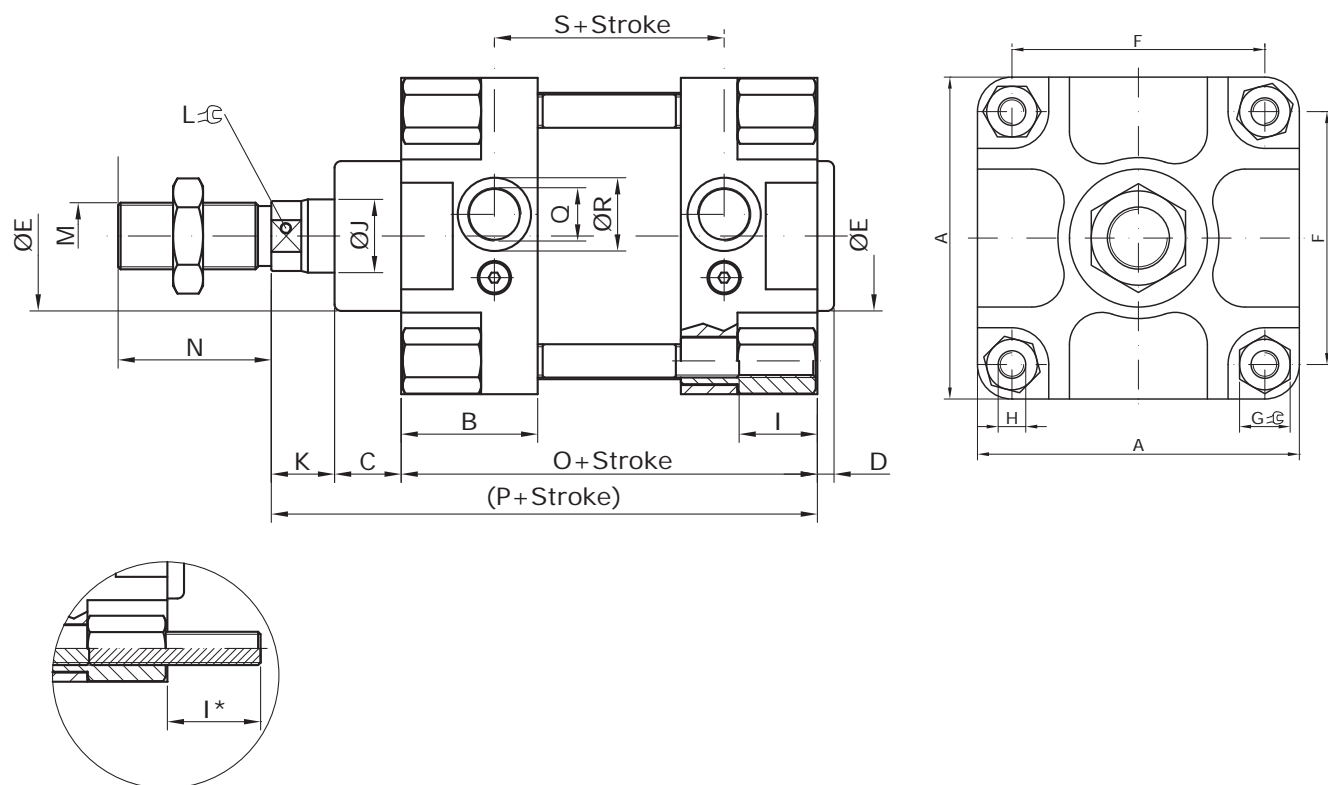
Special versions	A.	125.	0300.	zzzz*
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\*zzzz = project number (assigned by factory)

## Dimensional Drawing

32-100 MM DIAMETER

**Piston diameters:** from Ø32 up to Ø100 mm



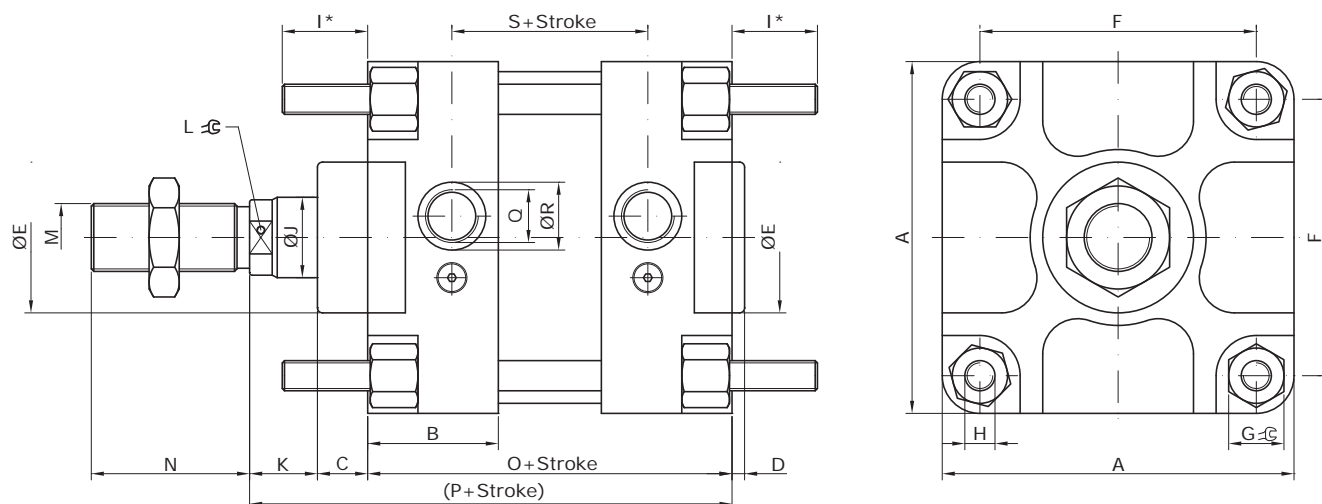
Ø	A	B	C	D	ØE	F	G	H	I	ØJ	K	L	M	N	O	P	Q	ØR	S	I*
32	46	25	15	5	25	33	6	M6	15.5	12	10	10	M10x1.5	20	80	105	G1/8	13	59	17
40	52	29	15	5	32	40	6	M6	15.5	18	19	15	M16x1.5	36	110	144	G1/4	18	80	17
50	66	29	15	5	32	49	14	M8	20.5	18	19	15	M16x1.5	36	110	144	G1/4	18	75	23
63	75	34	20	5	45	59	14	M8	20.5	22	19	19	M20x1.5	46	125	164	G3/8	22	80	23
80	95	41	20	5	45	75	17	M10	23.5	22	19	19	M20x1.5	46	125	164	G3/8	22	68	28
100	115	44	20	5	55	90	17	M10	23.5	30	27	27	M27x2	63	145	192	G1/2	27	88	28

Note: Cnomo cylinders Ø32 to Ø100 with protruding tie-rods only upon request.

## Dimensional Drawing

125-320 MM DIAMETER

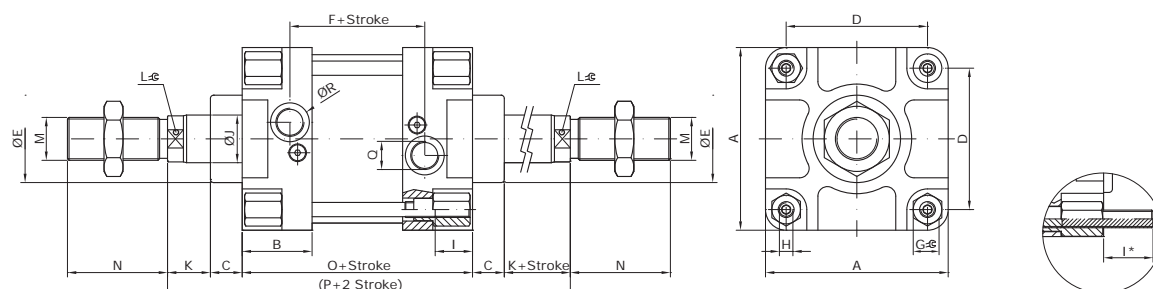
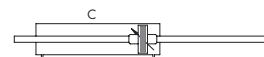
**Piston diameters:** from Ø125 up to Ø320 mm



Ø	A	B	C	D	ØE	F	G	H	ØJ	K	L	M	N	O	P	Q	ØR	S	I*
125	140	48.5	20	5	55	110	22	M12	30	27	27	M27x2	63	145	192	G1/2	27	85	34
160	180	60	35	5	65	140	27	M16	40	15	36	M36x2	85	180	230	G3/4	35	102	42
200	220	59	35	5	65	175	27	M16	40	15	36	M36x2	85	180	230	G3/4	35	104	42
250	280	60	50	5	90	220	38	M20	50	30	41	M36x2	85	230	310	G3/4	35	149	50
320	340	60	82	5	110	270	46	M24	63	23	55	M36x2	90	230	335	G1	50	170	60

## Through piston rod

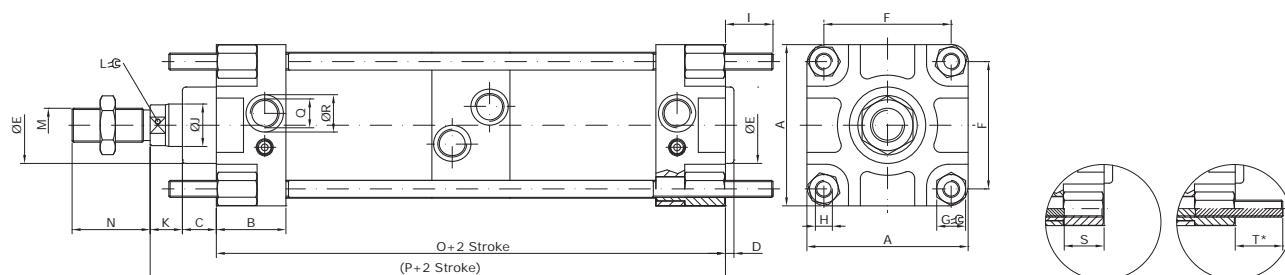
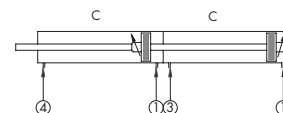
This is a double acting cylinder with piston rod coming out from both end covers.  
Piston rod extends away from pressurised port.



Ø	A	B	C	D	ØE	F	G	H	I	ØJ	K	L	M	N	O	P	Q	ØR	I*
32	46	25	15	33	25	59	6	M6	15.5	12	10	10	M10	20	80	130	G 1/8	15	17
40	52	29	15	40	32	80	6	M6	15.5	18	19	15	M16x1.5	36	110	178	G1/4	20	17
50	66	29	15	49	32	74	14	M8	20.5	18	19	15	M16x1.5	36	110	178	G1/4	20	23
63	75	34	20	59	45	81	14	M8	20.5	22	19	19	M20x1.5	46	125	203	G3/8	23	23
80	95	41	20	75	45	68	17	M10	23.5	22	19	19	M20x1.5	46	125	203	G3/8	23	28
100	115	44	20	90	55	88	17	M10	23.5	30	27	27	M27x2	63	145	239	G1/2	27.5	28
125	140	48.5	20	110	55	86	22	M12	-	30	27	27	M27x2	63	145	239	G1/2	27.5	34
160	180	60	35	140	65	102	27	M16	-	40	15	36	M36x2	85	180	280	G3/4	35	42
200	220	59	35	175	65	104	27	M16	-	40	15	36	M36x2	85	180	280	G3/4	35	42
250	280	60	50	220	90	149	38	M20	-	50	30	41	M36x2	85	230	390	G3/4	35	50
320	340	60	82	270	110	170	46	M24	-	63	23	55	M36x2	90	230	440	G1	50	60

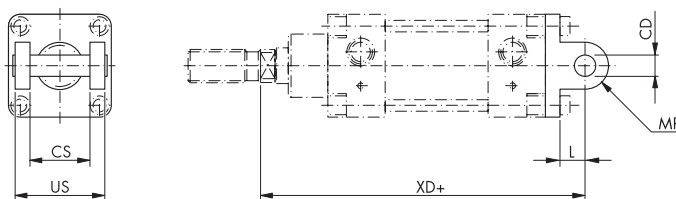
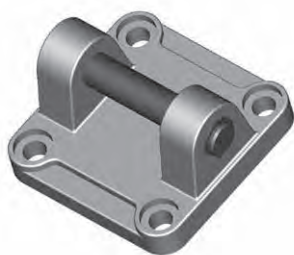
## Tandem

This cylinder is used to double the force. Piston rod is one single piece passing through both cylinders (for this reason the strokes of the cylinders have to be exactly the same). Pressure in 1: pressurising both cylinders from the rear covers (port 1), piston rod moves out. Piston rod return: to have the rod retract, it is necessary to feed both cylinders (ports 3 and 4) or, if there is no load on rod return (load is applied only on the forward stroke), the rod can be returned by applying pressure only on one cylinder (3 or, in preference, 4).



Ø	A	B	C	D	ØE	F	G	H	I	ØJ	K	L	M	N	O	P	Q	ØR	S	T
32	46	25	15	5	25	33	6	M6	-	12	10	10	M10x1.5	20	138	163	G 1/8	13	15.5	17
40	52	29	15	5	32	40	6	M6	-	18	19	15	M16x1.5	36	200	234	G1/4	18	15.5	17
50	66	29	15	5	32	49	14	M8	-	18	19	15	M16x1.5	36	200	234	G1/4	18	20.5	23
63	75	34	20	5	45	59	14	M8	-	22	19	19	M20x1.5	46	228	267	G3/8	22	20.5	23
80	95	41	20	5	45	75	17	M10	-	22	19	19	M20x1.5	46	214	253	G3/8	22	23.5	28
100	115	44	20	5	55	90	17	M10	-	30	27	27	M27x2	63	258	305	G1/2	27	23.5	28
125	140	48.5	20	5	55	110	22	M12	34	30	27	27	M27x2	63	230	277	G1/2	27	-	-
160	180	60	35	5	65	140	27	M16	42	40	15	36	M36x2	85	282	332	G3/4	35	-	-
200	220	59	35	5	65	175	27	M16	42	40	15	36	M36x2	85	284	334	G3/4	35	-	-
250	280	60	50	5	90	220	38	M20	50	50	30	41	M36x2	85	382	462	G3/4	35	-	-

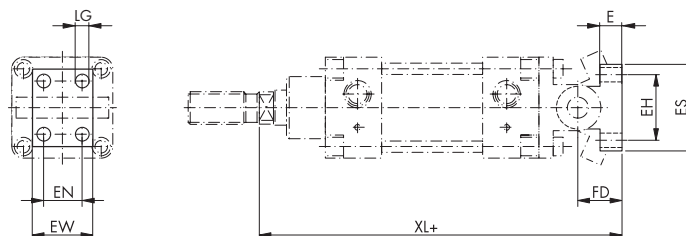
## Female Trunnion



Code	Ø	CS	US	L	XD	CD	MR
16.001.01	32	26	45	10	123	8	9
16.001.02	40	33	52	16	168	12	12
16.001.03	50	33	65	16	170	12	12
16.001.04	63	47	75	20	194	16	17
16.001.05	80	47	95	20	196	16	17
16.001.06	100	57	115	25	229	20	21
16.001.07	125	57	140	30	233	20	24
16.001.08	160	72	180	35	285	25	30
16.001.09	200	72	220	35	285	25	30

Note: Bolt and fixing screws included.

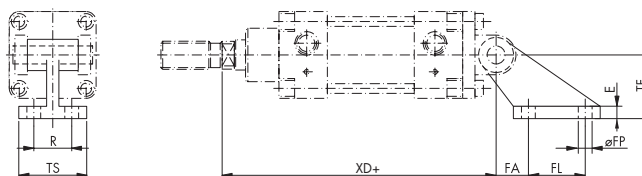
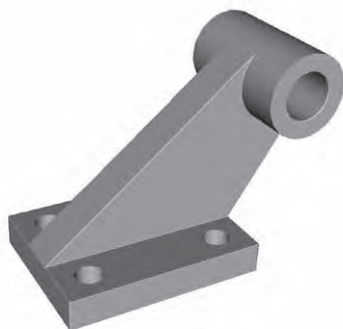
## Trunnion Mounting Bracket



Code	Ø	EW	EN	LG	XL	FD	E	EH	ES
16.003.01	32	25	-	7	141	18	8	28	40
16.003.02	40	32	16	9	194	26	10	38	52
16.003.02	50	32	16	9	196	26	10	38	52
16.003.04	63	46	25	11	228	34	12	54	75
16.003.04	80	46	25	11	230	34	12	54	75
16.003.06	100	56	32	14	270	41	16	90	115
16.003.06	125	56	32	14	274	41	16	90	115
16.003.08	160	71	43	18	340	55	20	150	180
16.003.08	200	71	43	18	340	55	20	150	180

Note: Cetop standard, for use with female trunnion.

## Square Angle Trunnion Mounting Bracket

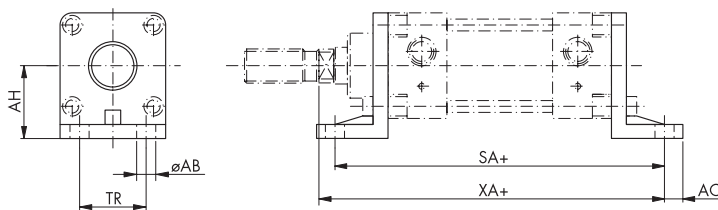


Code	Ø	TS	R	FP	XD	FA	FL	E	TF
16.004.01	32	41	25	7	123	18	20	8	32
16.004.02	40	52	32	9	168	25	32	10	45
16.004.02	50	52	32	9	170	25	32	10	45
16.004.04	63	63	40	11	194	32	50	12	63
16.004.04	80	63	40	11	196	32	50	12	63
16.004.06	100	80	50	14	229	40	70	16	90
16.004.06	125	80	50	14	233	40	70	16	90
16.004.08	160	110	63	18	285	50	110	20	140
16.004.08	200	110	63	18	285	50	110	20	140

Note: Cetop standard, for use with female trunnion.



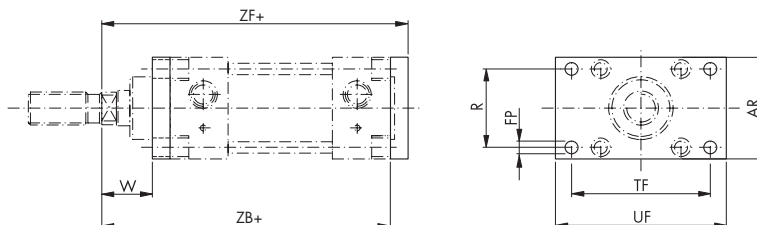
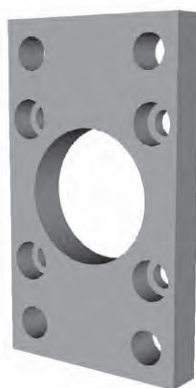
## Mounting Bracket



Code	Ø	AH	TR	AB	AO	SA	XA
16.005.01	32	32	28	9	8	134	132
16.005.02	40	36	36	9	8	164	171
16.005.03	50	45	45	11	8	180	179
16.005.04	63	50	55	11	10	195	199
16.005.05	80	63	70	14	12	211	207
16.005.06	100	73	90	14	12	231	235
16.005.07	125	90	100	18	16	249	244
16.005.08	160	115	130	22	18	304	292
16.005.09	200	135	170	22	28	304	292

Note: Kit includes only one bracket and fixing screws.

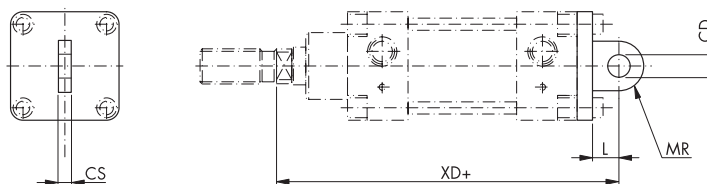
## Mounting Plate



Code	Ø	W	R	FP	TF	UF	AR	ZF	ZB
16.006.01	32	17	33	9	68	80	45	113	105
16.006.02	40	26	40	9	78	90	52	152	144
16.006.03	50	24	49	1	94	110	65	154	144
16.006.04	63	29	59	1	104	120	75	174	164
16.006.05	80	27	75	14	130	150	95	176	164
16.006.06	100	39	90	14	150	170	115	204	192
16.006.07	125	31	110	18	180	205	140	208	192
16.006.08	160	30	140	22	228	260	180	250	230
16.006.09	200	30	175	22	228	300	220	250	230

Note: Fixing screws included.

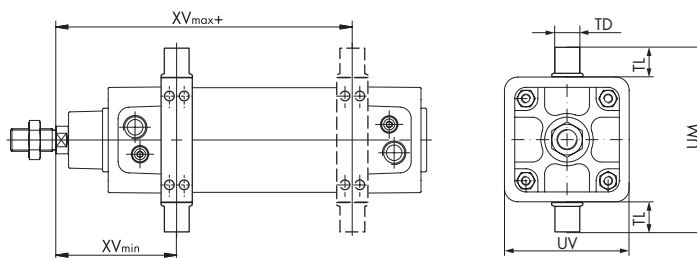
## Male Trunnion



Code	Ø	CS	CD	L	MR	XD
16.002.01	32	26	10	12	10	125
16.002.02	40	28	12	15	12	167
16.002.03	50	32	12	17	12	171
16.002.04	63	40	16	20	16	194
16.002.05	80	50	16	20	16	196
16.002.06	100	60	20	25	20	229
16.002.07	125	70	25	30	25	238
16.002.08	160	90	30	35	30	285
16.002.09	200	90	30	35	30	285

Note: Fixing screws included, this product is covered by Cetop std.

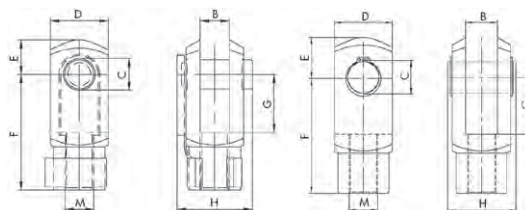
## Swivel Bearing



Note: These swivels could be mounted only disassembling the cylinder. For this reason we suggest to order the swivel directly assembled on the cylinder. Please contact our sales department for support.

Code	Ø	TD	UL	UM	UV	XV <sub>min</sub>	XV <sub>max</sub> +
16.017.01	32	12	12	74	45	57.5	72.5
16.017.02	40	16	16	95	55	73	105
16.017.03	50	16	16	105	65	73	105
16.017.04	63	20	20	130	80	85.5	117.5
16.017.05	80	20	20	148	100	92.5	110.5
16.017.06	100	25	25	181	124	106	133
16.017.07	125	25	25	209	152	111.5	127.5
16.007.08	160	32	32	262	190	130	150
16.007.09	200	32	32	312	240	129	151

## Clevis



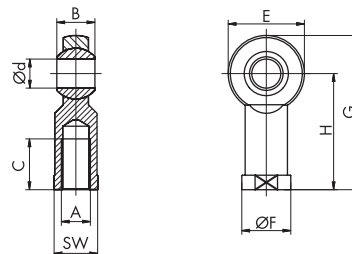
Ø 32 - 125

Ø 160 - 200

Code	Ø	M	B	C	D	E	F	G	H
16.008.01	32	M10x1.5	11	8	22	9	36	16	28
16.008.02	40	M16x1.5	18	12	26	13	51	25	44
	50								
16.008.03	63	M20x1.5	22	16	34	17	63	33	53
	80								
16.008.04	100	M27x2	30	20	42	20	85	40	73
	125								
16.008.05	160	M36x2	40	25	50	25	115	40	95
	200								

Note: Clips (Ø 32-125) and pins (Ø 160-200) are included.

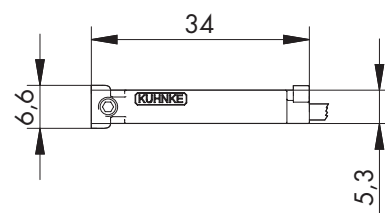
## Rod End - Spherical Bearing



Code	Ø	A	d	B	E	F	H	G	C	SW
16.009.01	32	M10x1.5	10	14	28	19	43	57	20	17
18.009.03	40	M16x1.5	16	21	42	27	64	85	28	22
	50									
18.009.04	63	M20x1.5	20	25	50	34	77	102	33	30
	80									
18.009.05	100	M27x2	30	37	70	50	110	145	51	41
	125									
18.009.06	160	M36x2	35	43	80	58	125	165	56	50
	200									

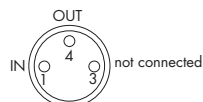
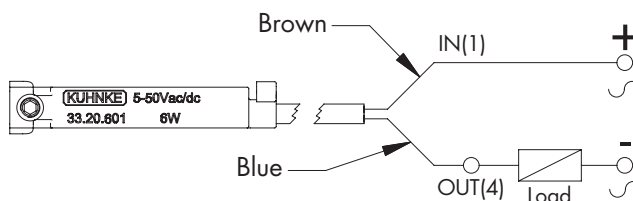
Note: Fixing screws included.

## Position Transmitter



### Position Transmitter REED (2 pole)

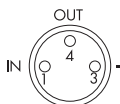
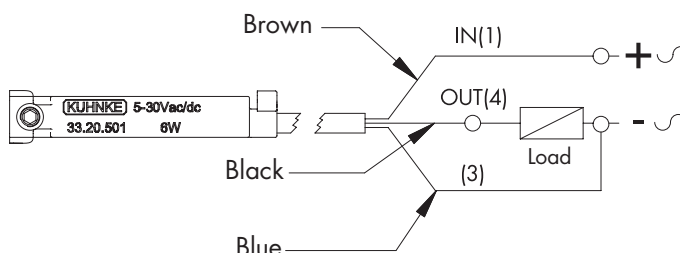
Contact type: N.O.  
 Cable: 2 x 0.14 mm<sup>2</sup>  
 Switching capacity: max 6 W  
 Switching voltage: 5-50 V AC/DC  
 Switching current: max 200 mA  
 Voltage drop: 3 V  
 Switching time: 0.6 ms  
 Switching rate: max 400 Hz  
 Service life: 10<sup>7</sup> operations, depending on the load  
 Ambient temperature range: -5°C to +75°C  
 Protection class: IP67  
 Status indicator: LED  
 Housing material: plastic



Code	Description
33.20.601	with cable L = 2000 mm
33.20.681	socket M8, cable L = 300 mm

### Position Transmitter REED (3 pole)

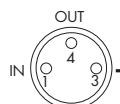
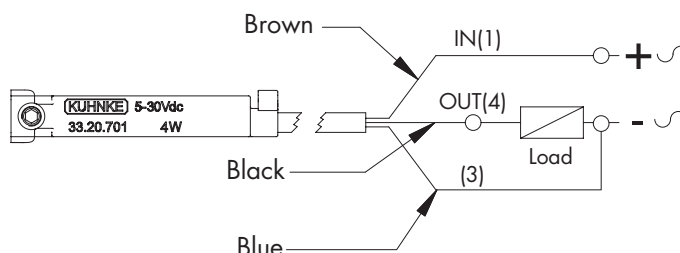
Contact type: N.O.  
 Cable: 3 x 0.14 mm<sup>2</sup>  
 Switching capacity: max 6 W  
 Switching voltage: 5-30 V AC/DC  
 Switching current: max 500 mA  
 Voltage drop: 0.1 V  
 Switching time: 0.6 ms  
 Switching rate: max 400 Hz  
 Service life: 10<sup>7</sup> operations, depending on the load  
 Ambient temperature range: -5°C to +75°C  
 Protection class: IP67  
 Status indicator: LED  
 Housing material: plastic



Code	Description
33.20.501	with cable L = 2000 mm
33.20.581	socket M8, cable L = 300 mm

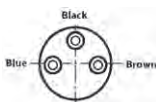
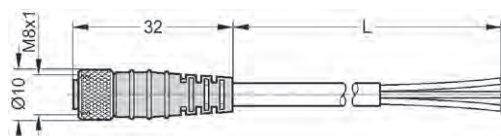
### Electronic Position Transmitter

Contact Type: PNP (N.O.)  
 Cable: 3 x 0.14 mm<sup>2</sup>  
 Switching capacity: max 4 W  
 Switching voltage: 5-30 V DC  
 Switching current: max 200 mA  
 Voltage drop: 0.7 V  
 Switching time: 0.8 μs  
 Switching rate: max 1 kHz  
 Service life: 10<sup>11</sup> operations, depending on the load  
 Ambient temperature range: -5°C to +75°C  
 Protection class: IP67  
 Status indicator: LED  
 Housing material: plastic



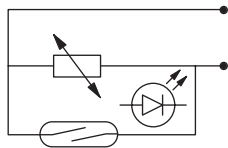
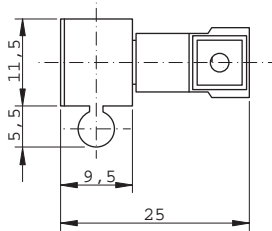
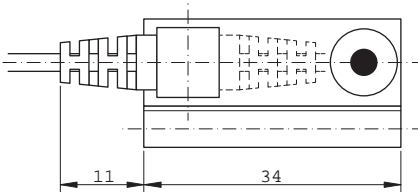
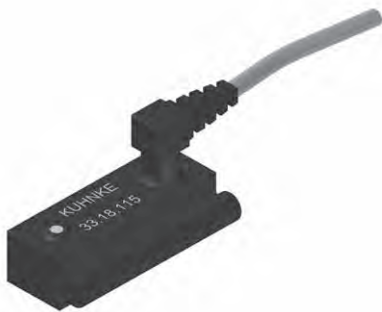
Code	Description
33.20.701	with cable L = 2000 mm
33.20.781	socket M8, cable L = 300 mm

### M8 Connectors (female-straight)



Code	Description
PL08B3.V250.30	cable L = 3000 mm
PL08B3.V250.50	cable L = 5000 mm

Position Transmitter REED (2 pole with plug connector)

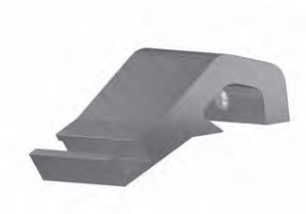


Switching output: N.O.  
Switching capacity: max 10 VA  
Switching voltage: 3-230 V AC/DC  
Switching current: max 500 mA  
Voltage drop: -  
Switching time: 0.5 ms  
Service life: 107 operations, depending on the load  
Housing material: plastic  
Protection class: IP67  
Ambient temperature range: -20°C to +85°C  
Status indicator: LED

Code	Description
33.18.115	with cable L = 3000 mm

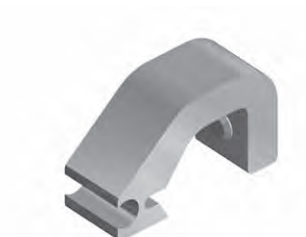
Fastening Clamps

a) to assemble position transmitters 33.20.xxx  
For fitting to Cnomo cylinders Ø 32 to Ø 100 only



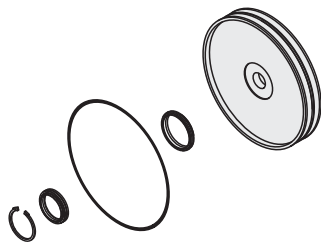
Ø	Code
32	33.008.16.01
40	
50	
63	
80	33.008.16.05
100	

b) to assemble position transmitter 33.18.115  
For fitting to Cnomo cylinders Ø 32 to Ø 200 only



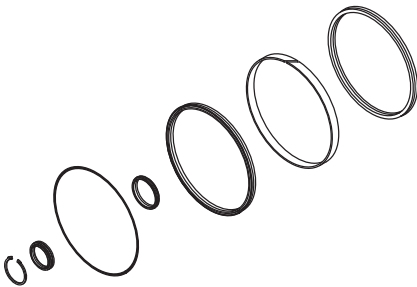
Ø	Code
32	33.009.08
40	
50	
63	
80	33.009.09
100	
125	
160	
200	

Seal Kit for Standard Version (A)



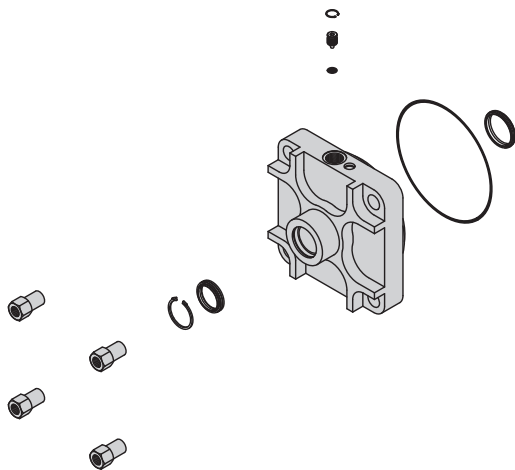
Ø	Code
32	SG.032A.DOM
40	SG.040A.DOM
50	SG.050A.DOM
63	SG.063A.DOM
80	SG.080A.DOM
100	SG.100A.DOM
125	SG.125A.DOM
160	SG.160A.DOM
200	SG.200A.DOM
250	SG.250A.DOM
320	SG.320A.DOM

Seal Kit for Magnetic Version (C)



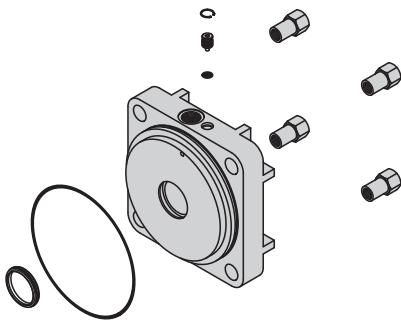
Ø	Code
32	SG.032C.DOM
40	SG.040C.DOM
50	SG.050C.DOM
63	SG.063C.DOM
80	SG.080C.DOM
100	SG.100C.DOM
125	SG.125C.DOM
160	SG.160C.DOM
200	SG.200C.DOM
250	SG.250C.DOM
320	SG.320C.DOM

Front Cover Kit



Ø	Standard Version (A)	Magnetic Version (C)
32	16.109.95	16.109.93
40	16.209.95	16.209.93
50	16.309.95	16.309.93
63	16.409.95	16.409.93
80	16.509.95	16.509.93
100	16.609.95	16.609.93
125	16.709.95	16.709.93
160	16.809.95	16.809.93
200	16.909.95	16.909.93

Rear Cover Kit



Ø	Standard Version (A)	Magnetic Version (C)
32	16.109.96	16.109.94
40	16.209.96	16.209.94
50	16.309.96	16.309.94
63	16.409.96	16.409.94
80	16.509.96	16.509.94
100	16.609.96	16.609.94
125	16.709.96	16.709.94
160	16.809.96	16.809.94
200	16.909.96	16.909.94



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