

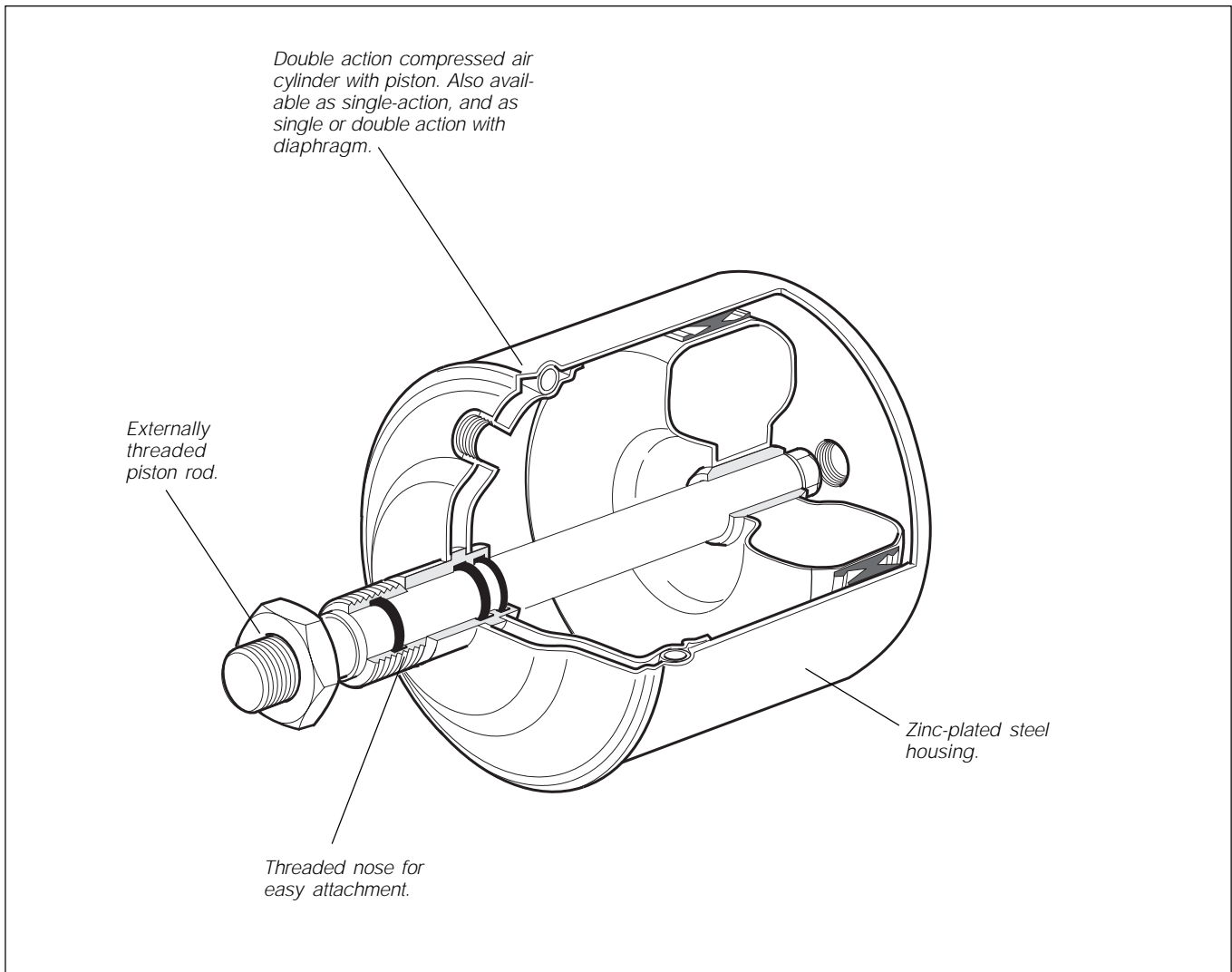


# Thrust Cylinders

*Series C0D and C0P*

*Catalogue 9127004102GB-ul*





**COD and COP**

**Thrust cylinders**

The thrust cylinders are linear actuators, designed for a high force to size ratio. This makes the cylinder ideal to use for clamping, riveting, punching and similar applications where a high force is required.

The range includes 14 different versions, providing forces from 1600 to 25 000 N (at 6 bar), single- as well as double-acting and in piston or diaphragm design.

The single-acting version has a built in powerful spring for the return stroke, but for applications where a high force is required in both directions there is the double-acting version.

The cylinder body is an all zinc plated sheet of steel and the piston rod, which is guided in two maintenance free bearings, is provided with flats and a male thread.


To facilitate the installation, the guiding sleeve is provided with a thread which can be used either for direct mounting in a threaded hole or for installation in a free running hole using a lock nut.

**On request:**

Stainless steel piston rod, +B00

Piston rod according to ISO 4395, for rod mountings +A06

**NOTE!**  
Compressed air cylinders, types COP and COD should not be used in vertical applications without an external stop.



**Important**  
Before attempting any external or internal work on the thrust cylinder or any connected components, make sure the thrust cylinder is vented and disconnect the air supply in order to ensure isolation of the air supply.

## Main data

Thrust cylinder	Force <sup>1)</sup> at	Stroke <sup>2)</sup>	Spring force		Weight	Displacement <sup>3)</sup>		Conn thread
	600 kPa (6 bar)		Max	Min		plus	minus	
	N	mm	N	N	Kgs	dm <sup>3</sup>	dm <sup>3</sup>	
<b>Double acting</b>								
<b>COD300-40</b>	3000	40	-	-	2,6	0,50	0,42	G1/4
<b>COD600-50</b>	6000	50	-	-	5,4	1,05	0,92	G1/4
<b>COD1200-50</b>	12000	50	-	-	11,4	1,96	1,90	G1/2
<b>COP2500-60</b>	25000	60	-	-	21,4	3,50	3,40	G1/2
<b>COP2500-80</b>	25000	80	-	-	21,6	4,40	4,30	G1/2
<b>Single acting</b>								
<b>COP160-50S</b>	1600	50	314	128	1,0	0,12	-	G1/4
<b>COP160-80S</b>	1600	80	314	128	1,0	0,20	-	G1/4
<b>COP300-50S</b>	3000	50	314	128	1,5	0,30	-	G1/4
<b>COP300-80S</b>	3000	80	314	128	1,5	0,50	-	G1/4
<b>COD300-40S</b>	3000	40	294	98	2,8	0,50	-	G1/4
<b>COD600-50S</b>	6000	50	638	98	5,6	1,05	-	G1/4
<b>COD1200-50S</b>	12000	50	981	235	12,2	1,96	-	G1/2
<b>COP2500-60S</b>	25000	60	2700	883	22,0	3,50	-	G1/2
<b>COP2500-100S</b>	25000	100	2700	883	22,2	5,40	-	G1/2

1) In the case of single-acting thrust cylinders, spring force must be considered in calculation of performance.

2) Tolerance ±3 mm (COP2500 +6/-1)

3) The displacement relates to plus and minus chambers and includes dead volume.

### Data

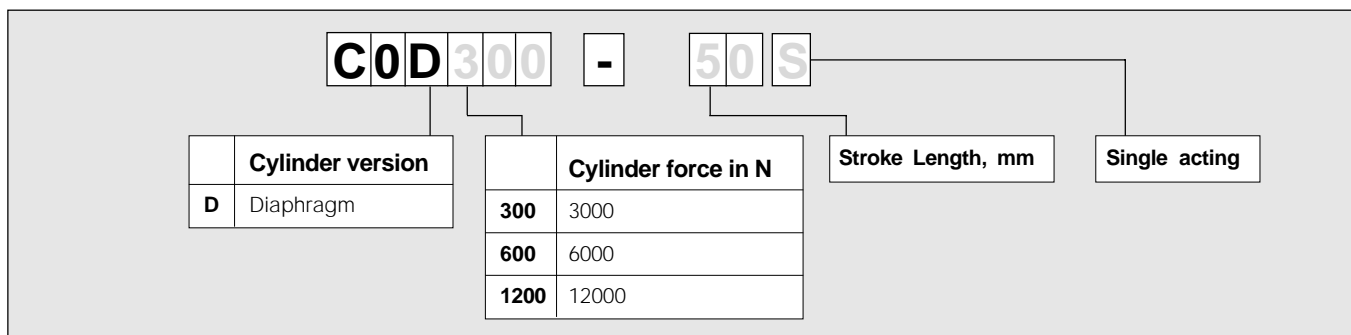
Working pressure Max 8 bar  
 Working temperature -20 °C to +70 °C

Prelubricated, further lubrication is not normally necessary.  
 If additional lubrication is introduced it has to be continued.

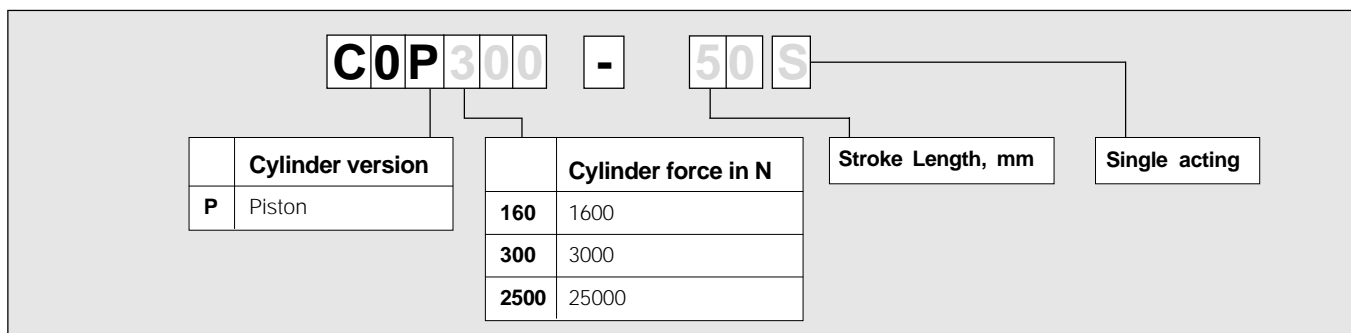
### Material specification

Cylinder housing Painted steel plate  
 Piston Steel  
 Piston rod Steel  
 Diaphragm, COD Textile reinforced nitrile rubber, NBR  
 Seals Nitrile rubber, NBR  
 Piston rod bearings Lubricant filled thermoplastic  
 Return spring Spring steel

### Order key, Diaphragm type



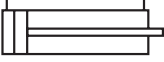
### Order key, Piston type

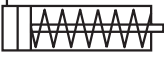


**Note**  
 Air quality is essential for maximum cylinder service life (see ISO 8573).

**Note**  
 All technical data in this catalogue is typical data only.

**Main data for COD and COP cylinders**

Symbol	Force at 6 bar, N	Conn.	Stroke mm	Weight Kg	Order code
	3000	G1/4	40	2,7	<b>COD300-40</b>
	6000	G1/4	50	5,7	<b>COD600-50</b>
	12000	G1/2	50	11,5	<b>COD1200-50</b>
	25000	G1/2	60	21,4	<b>COP2500-60</b>
	25000	G1/2	80	21,6	<b>COP2500-80</b>

Symbol	Force at 6 bar, N	Spring force		Conn.	Stroke mm	Weight Kg	Order code
		Max N	Min N				
	1600	314	128	G1/4	50	0,9	<b>COP160-50S</b>
	1600	314	128	G1/4	80	1,1	<b>COP160-80S</b>
	3000	314	128	G1/4	50	1,2	<b>COP300-50S</b>
	3000	314	128	G1/4	80	1,4	<b>COP300-80S</b>
	3000	294	98	G1/4	40	2,8	<b>COD300-40S</b>
	6000	638	98	G1/4	50	5,9	<b>COD600-50S</b>
	12000	981	235	G1/2	50	12,4	<b>COD1200-50S</b>
	25000	2700	883	G1/2	60	22,0	<b>COP2500-60S</b>
	25000	2700	883	G1/2	100	22,4	<b>COP2500-100S</b>

The spring forces in single acting cylinders are sufficient to return the piston rod without load.



**Accessories**

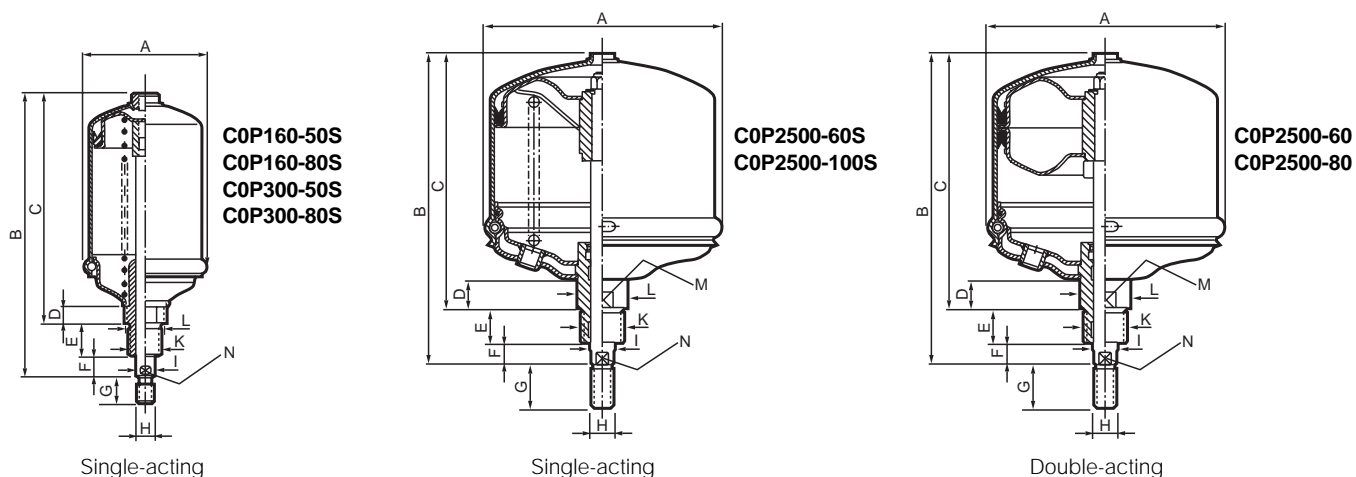
Locknut thread	Weight Kg	For cylinder	Order code
M24x2	0,04	COD300-40	<b>9141 1000-00</b>
M36x3	0,14	COD600-50	<b>9141 1001-00</b>
M36x3	0,14	COD1200-50	<b>9141 1001-00</b>
M48x3	0,10	COP2500-60	<b>9141 1002-00</b>
M48x3	0,10	COP2500-80	<b>9141 1002-00</b>
M24x3	0,04	COP160-50S	<b>9141 1003-00</b>
M24x3	0,04	COP160-80S	<b>9141 1003-00</b>
M24x3	0,04	COP300-50S	<b>9141 1003-00</b>
M24x3	0,04	COP300-80S	<b>9141 1003-00</b>
M24x2	0,04	COD300-40S	<b>9141 1000-00</b>
M36x3	0,14	COD600-50S	<b>9141 1001-00</b>
M36x3	0,14	COD1200-50S	<b>9141 1001-00</b>
M48x3	0,10	COP2500-60S	<b>9141 1002-00</b>
M48x3	0,10	COP2500-100S	<b>9141 1002-00</b>



**Accessories**

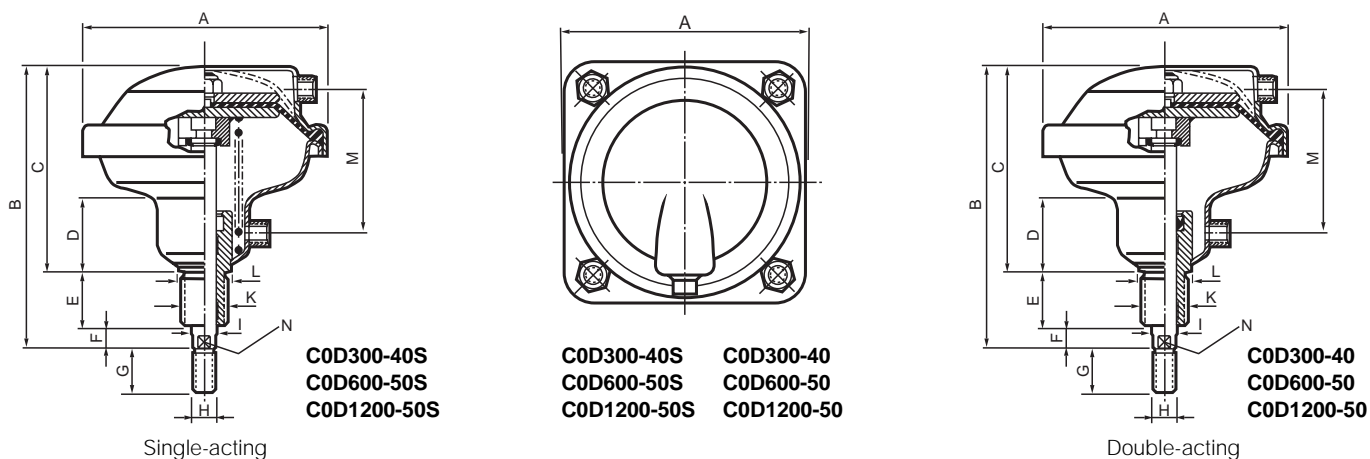
Piston rod nut thread	Weight Kg	For cylinder	Order code
M12	0,01	COD300-40	<b>0266 2112-00</b>
M16	0,02	COD600-50	<b>0266 2114-00</b>
M20	0,03	COD1200-50	<b>0266 2116-00</b>
M24	0,04	COP2500-60	<b>0266 2118-00</b>
M24	0,04	COP2500-80	<b>0266 2118-00</b>
M12	0,01	COP160-50S	<b>0266 2112-00</b>
M12	0,01	COP160-80S	<b>0266 2112-00</b>
M12	0,01	COP300-50S	<b>0266 2112-00</b>
M12	0,01	COP300-80S	<b>0266 2112-00</b>
M12	0,01	COD300-40S	<b>0266 2112-00</b>
M16	0,02	COD600-50S	<b>0266 2114-00</b>
M20	0,03	COD1200-50S	<b>0266 2116-00</b>
M24	0,04	COP2500-60S	<b>0266 2118-00</b>
M24	0,04	COP2500-100S	<b>0266 2118-00</b>

## Dimensions: piston type



Type	Connection thread	A	B	C	D	E	F	G	H	I	K Ø	L	M Ø	N
COP160-50S	G1/4	66	192	151	18	30	11	24	M12x1,75	14	M24x3	30	30	12
COP160-80S	G1/4	66	222	181	18	30	11	24	M12x1,75	14	M24x3	30	30	12
COP300-50S	G1/4	93	192	151	18	30	11	24	M12x1,75	14	M24x3	30	30	12
COP300-80S	G1/4	93	222	181	18	30	11	24	M12x1,75	14	M24x3	30	30	12
COP2500-60S	G1/2	268	345	285	33	40	20	48	M24x3	28	M48x3	56	50	25
COP2500-100S	G1/2	268	385	325	33	40	20	48	M24x3	28	M48x3	56	50	25
COP2500-60	G1/2	268	345	285	33	40	20	48	M24x3	28	M48x3	56	50	25
COP2500-80	G1/2	268	385	325	33	40	20	48	M24x3	28	M48x3	56	50	25

## Dimensions: diaphragm type



Type	Connection thread	A	B	C	D	E	F	G	H	I	K Ø	L	M Ø	N
COD300-40S	G1/4	150	183	131	48	38	14	24	M12x1,75	16	M24x2	30	90	13
COD300-40	G1/4	150	183	131	48	38	14	24	M12x1,75	16	M24x2	30	90	13
COD600-50S	G1/4	195	212	154	55	38	20	32	M16x2	20	M36x3	43	107	17
COD600-50	G1/4	195	212	154	55	38	20	32	M16x2	20	M36x3	43	107	17
COD1200-50S	G1/2	261	243	178	58	45	20	40	M20x2,5	25	M36x3	43	117	22
COD1200-50	G1/2	261	243	178	58	45	20	40	M20x2,5	25	M36x3	43	117	22