



S.C.PRODMEC S.A.

Hydraulic cylinder

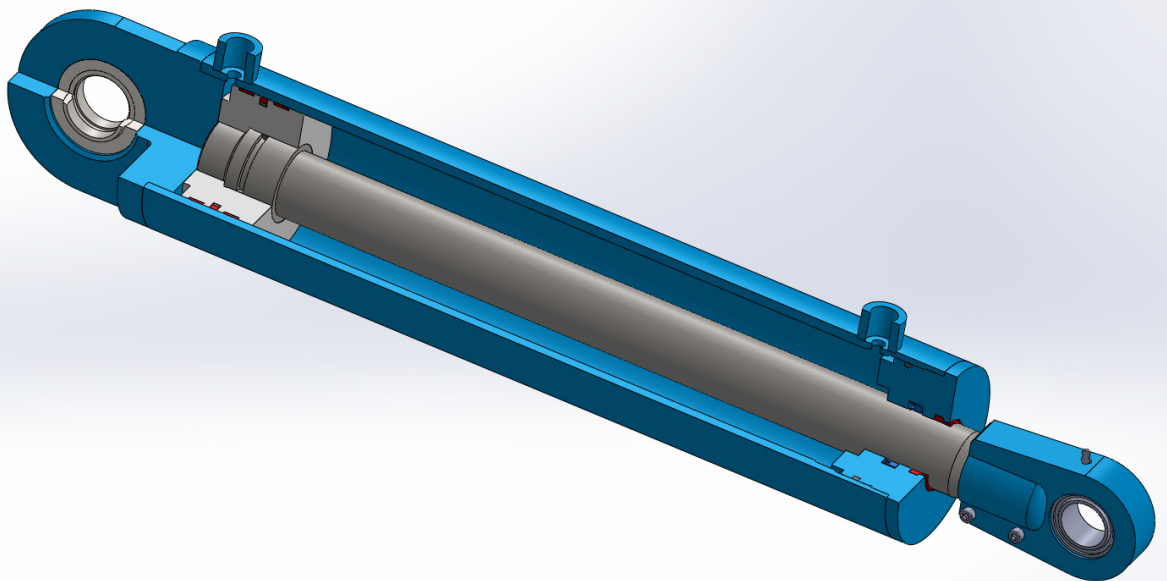
Nominal pressure 250 bar (25 MPa)

Series:24XC

Hydraulic cylinder

Nominal pressure 250 bar (25 MPa)

Series:24XC





Mounting

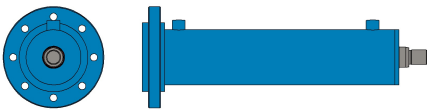
1.Basic design



2. Round flange at head



3. Round flange at base



4. Trunnion



5. Swivel eye at base



6. Self-aligning clevis at base



7. Foot mounting



Description

The hydraulic cylinders of the 24XC series are designed in a proven welding / screw construction design. This robust construction, made of high-performance materials and with a low-wear seal, makes this construction series very reliable and universally applicable.

This cylinder series is used in many industrial areas, such as in mechanical engineering, agricultural machinery, the chemical industry, in mobile hydraulics or in machine tools. These cylinders can be used in areas with very high or very low ambient temperatures.

The cylinders are delivered primed as standard. We are also happy to manufacture hydraulic cylinders according to customer requirements.

TEHNICAL DATA

-Nominal pressure	250 bar (25MPa)
-Static test pressure	375 bar (37,5MPa)
-Hydraulic fluid temperature range:	-20 °C to +80°C
-Medium viscosity range:	20 to 100 mm ² / s
-Stroke velocity	≤0,5 m/s

HYDRAULIC FLUID

- Mineral oils DIN 51524 HL, HLP (90220)
- Oil-in-water emulsion HFA (90223)
- Water glycol HFC (90223)

SAFETY NOTE

When designing hydraulic cylinders, the permissible buckling load for the corresponding stroke must be observed! If you cannot calculate the cylinder with the documents available to you, we will be happy to do this for you



Order Key

Types of mounting 2- Round flange at head 3- Round flange at base 4- Trunnion 5- Swivel eye at base 6-Self-aligning clevis 7-Foot mounting	Piston – diameter in mm	Piston rod diameter in mm	Piston rod seal A – Rod lip seal L - Veepac seal-textile/NBR M - Veepac seal-textile /FPM S - Special sealing ring set D - Sliding ring set(PTFE-Compound/NBR) E - Sliding ring set (PTFE-Compound/FPM)	Piston seal K - Compact piston sealing set L - Veepac seal-textile/NBR M - Veepac seal-textile / FPM P - Polyurethane piston lip seal N - Sliding ring set (PTFE-Compound/NBR) O - Sliding ring PTFE-Compound/FPM	Piston rod design C - Hard chromium-platrd H - Hardened and hard chromium-platrd N – Nickel-platrd and hard chromium-plated S - Stainless steel	Piston rod end A - With external thread C - Spherical bearing head TAPR_U S - Spherical bearing head TAPR_CE B - With internal thread	Stroke in mm	Line connection R - With pipe thread M - With metric thread
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Order example

Hydraulic Cylinder nominal pressure of 250 bar with Foot mounting, piston diameter Ø100 mm,piston rod diameter Ø70mm,with piston rod seal with sliding ring set PTFE-Compound/NBR, with piston seal with sliding ring set PTFE-Compound/NBR,with piston rod hard chromium-platrd, with Spherical bearing head TAPR_U, with a stroke of 525 mm, and Line connection with pipe thread.

Order code: 247C100/070.DN.CC.0525.R



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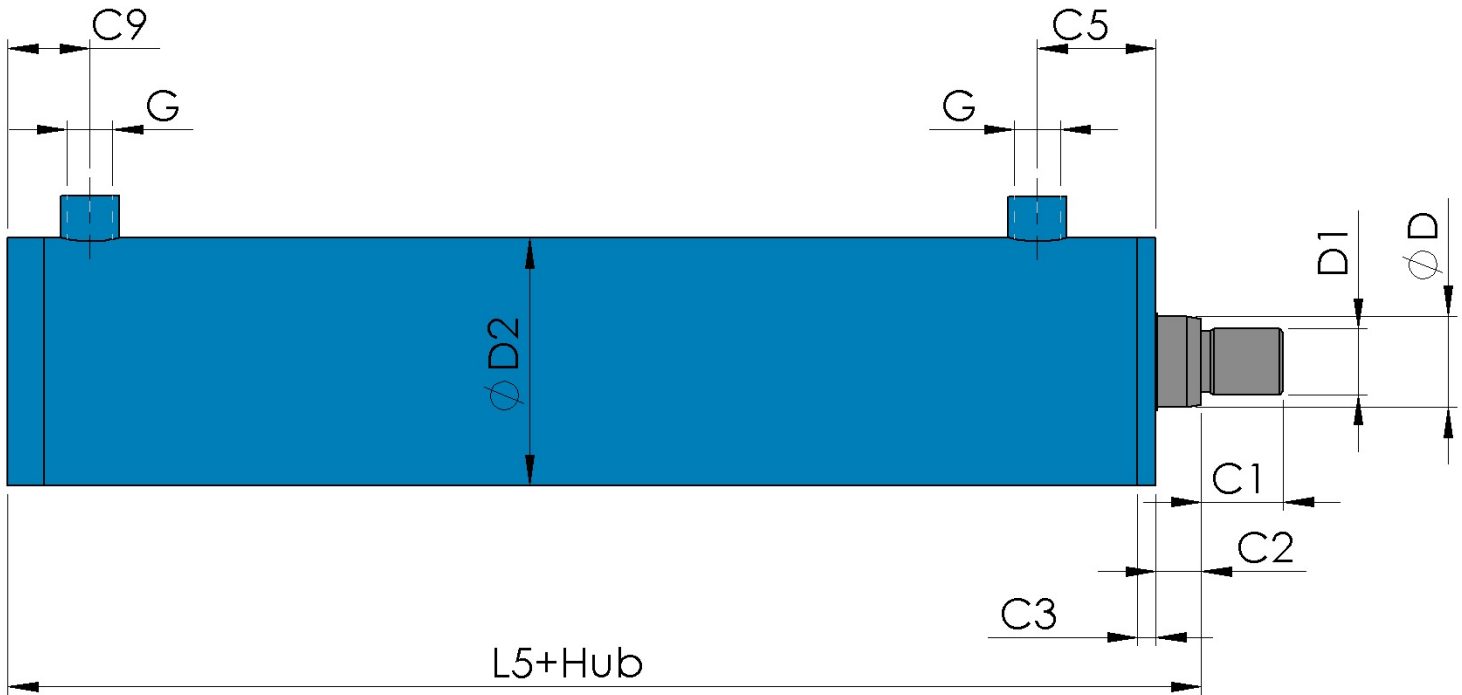
Hydraulic cylinder

Nominal pressure 250 bar (25 MPa)

Series:24XC

Type 241C

Basic design



Ø Piston		32	40	50	63	80	100	125	140	160
Ø Rod	D	18/22	22/28	28/36	36/45	45/56	56/70	70/90	90/100	100/110
	L5	120	145	175	200	220	280	310	325	365
Rod thread	D1	M 16x1,5	M 16x1,5	M 22x1,5	M 28x1,5	M 35x1,5	M 45x1,5	M 58x1,5	M 65x1,5	M 80x1,5
	D2	42	50	62	78	95	120	145	165	190
Oil link (metric)	G	M 18x1,5	M 18x1,5	M 22x1,5	M 22x1,5	M 22x1,5	M 27x2	M 27x2	M 33x2	M 33x2
Oil link (pipe)	G	G3/8"	G3/8"	G1/2"	G1/2"	G1/2"	G3/4"	G3/4"	G1"	G1"
	C1	16	16	22	28	35	45	58	65	80
	C2	12	15	15	15	15	25	25	25	25
	C3	8	8	10	10	10	10	12	12	12
	C5	46	58	72	76	95	130	150	155	160
	C9	24	30	34	40	45	60	62	65	65



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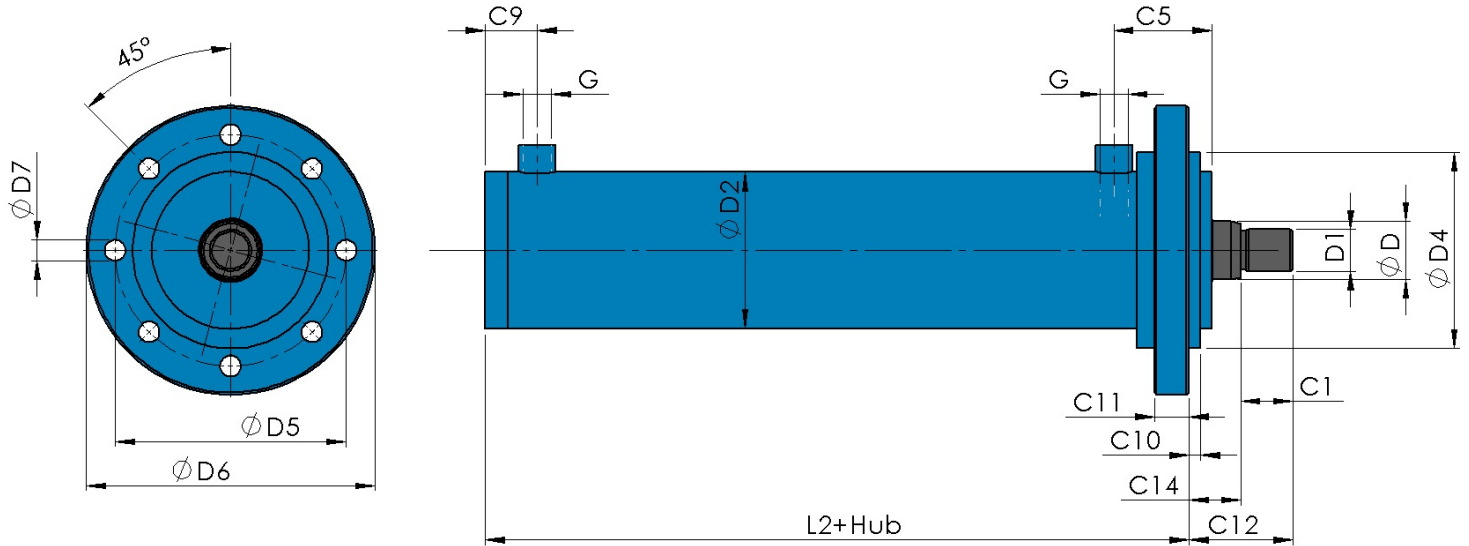
Hydraulic cylinder

Nominal pressure 250 bar (25 MPa)

Series:24XC

Type 242C

Round flange at head



Ø Piston		32	40	50	63	80	100	125	140	160
Ø Rod	D	18/22	22/28	28/36	36/45	45/56	56/70	70/90	90/100	100/110
	L2	96	118	146	170	190	237	268	283	323
Rod thread	D1	M16x1,5	M16x1,5	M22x1,5	M28x1,5	M35x1,5	M45x1,5	M58x1,5	M65x1,5	M80x2
	D2	42	50	62	78	95	120	145	165	190
	D4	56	65	75	90	115	140	170	190	220
	D5	78	90	100	115	150	175	210	235	270
	D6	100	110	125	140	180	210	250	280	320
	D7	8,5	11	11	13	17	17	22	30	30
Oil link (metric)	G	M18x1,5	M18x1,5	M22x1,5	M22x1,5	M22x1,5	M27x2	M27x2	M33x2	M33x2
Oil link (pipe)	G	G3/8"	G3/8"	G1/2"	G1/2"	G1/2"	G3/4"	G3/4"	G1"	G1"
	C1	16	16	22	28	35	45	58	65	80
	C5	46	58	72	76	95	130	150	155	160
	C9	24	30	34	40	45	60	62	65	65
	C10	4	4	4	5	5	5	5	5	5
	C11	12	15	18	22	25	35	40	45	50
	C12	40	43	51	58	65	88	100	107	122
	C14	24	27	29	30	30	40	42	42	42



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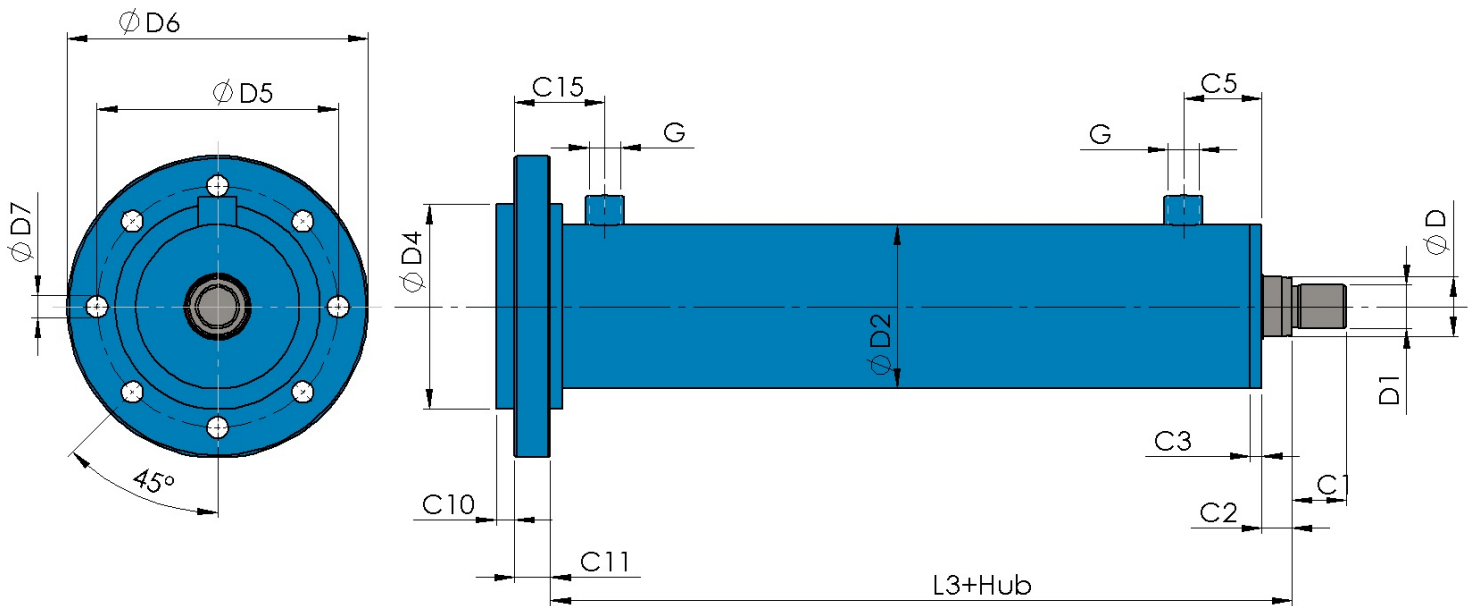
Hydraulic cylinder

Nominal pressure 250 bar (25 MPa)

Series:24XC

Type 243C

Round flange at base



Ø Piston		32	40	50	63	80	100	125	140	160
Ø Rod		18/22	22/28	28/36	36/45	45/56	56/70	70/90	90/100	100/110
L3		132	160	193	222	245	315	350	370	415
Rod thread	D1	M16x1,5	M16x1,5	M22x1,5	M28x1,5	M35x1,5	M45x1,5	M58x1,5	M65x1,5	M80x2
	D2	42	50	62	78	95	120	145	165	190
D4		56	65	75	90	115	140	170	190	220
D5		78	90	100	115	150	175	210	235	270
D6		100	110	125	140	180	210	250	280	320
D7		8,5	11	11	13	17	17	22	30	30
Oil link (metric)	G	M18x1,5	M18x1,5	M22x1,5	M22x1,5	M22x1,5	M27x2	M27x2	M33x2	M33x2
Oil link (pipe)	G	G3/8"	G3/8"	G1/2"	G1/2"	G1/2"	G3/4"	G3/4"	G1"	G1"
C1		16	16	22	28	35	45	58	65	80
C2		12	15	15	15	15	25	25	25	25
C3		8	8	10	10	10	10	12	12	12
C55		46	58	72	76	95	130	150	155	160
C10		4	4	4	5	5	5	5	5	5
C11		12	15		22	25	35	40	45	50
C15		30	39		52	60	75	85	110	115



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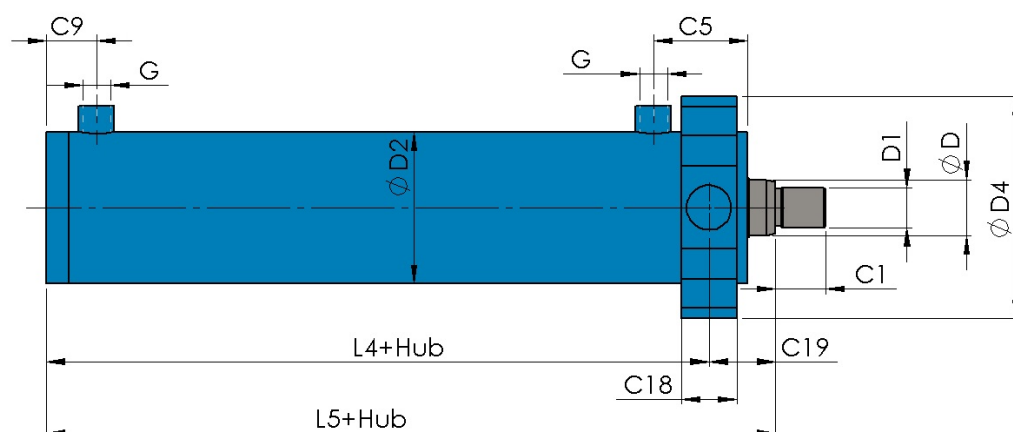
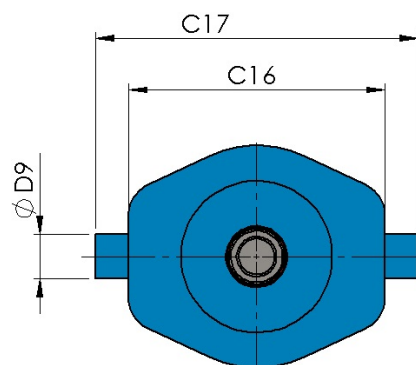
Hydraulic cylinder

Nominal pressure 250 bar (25 MPa)

Series:24XC

Type 244C

Trunnion



Ø Piston	32	40	50	63	80	100	125	140	160	
Ø Rod	18/22	22/28	28/36	36/45	45/56	56/70	70/90	90/100	100/110	
L4	87,5	107	132,5	155	172,5	214,5	240,5	253	288	
L5	120	145	175	200	220	280	310	325	365	
Rod thread	D1	M16x1,5	M16x1,5	M22X1,5	M28x1,5	M35x1,5	M45x1,5	M58x1,5	M65x1,5	M80x2
D2	42	50	62	78	95	120	145	165	190	
D8	60	65	80	90	110	140	165	190	215	
D9	20	25	30	35	40	50	60	65	75	
Oil link (metric)	G	M18x1,5	M18x1,5	M22x1,5	M22x1,5	M22x1,5	M27x2	M27x2	M33x2	M33x2
Oil (pipe)	G	G3/8"	G3/8"	G1/2"	G1/2"	G1/2"	G3/4"	G3/4"	G1"	G1"
C1	16	16	22	28	35	45	58	65	80	
C5	46	58	72	76	95	130	150	155	160	
C9	24	30	34	40	45	60	62	65	65	
C16	70	80	90	115	140	170	190	220	240	
C17	100	115	130	155	190	230	260	300	345	
C18	25	30	35	40	45	55	65	70	80	
C19	32,5	38	42,5	45	47,5	62,5	69,5	72	77	



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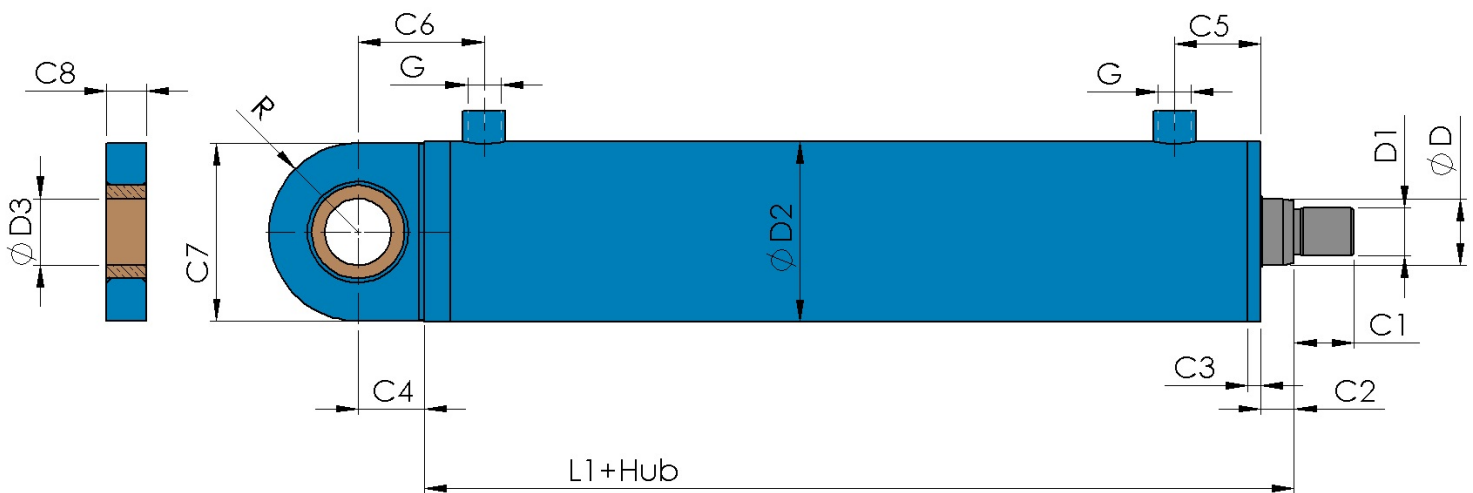
Hydraulic cylinder

Nominal pressure 250 bar (25 MPa)

Series:24XC

Type 245C

Swivel eye at base



Ø Piston		32	40	50	63	80	100	125	140	160
Ø Rod	D	18/22	22/28	28/36	36/45	45/56	56/70	70/90	90/100	100/110
	L1	150	180	215	250	280	350	385	410	460
Rod thread	D1	M16x1,5	M16x1,5	M22x1,5	M28x1,5	M35x1,5	M45x1,5	M58x1,5	M65x1,5	M80x2
	D2	42	50	62	78	95	120	145	165	190
	D3	20	25	30	35	40	50	60	70	80
Oil link (metric)	G	M18x1,5	M18x1,5	M22x1,5	M22x1,5	M22x1,5	M27x2	M27x2	M33x2	M33x2
Oil link (pipe)	G	G3/8"	G3/8"	G1/2"	G1/2"	G1/2"	G3/4"	G3/4"	G1"	G1"
	C1	16	16	22	28	35	45	58	65	80
	C2	12	15	15	15	15	25	25	25	25
	C3	8	8	10	10	10	10	12	12	12
	C4	30	35	40	50	60	70	75	85	95
	C5	46	58	72	76	95	130	150	155	160
	C6	54	65	74	90	105	130	132	150	160
	C7	56	56	64	78	100	123	140	164	180
	C8	19	23	28	30	35	40	50	55	60
	R	28	28	32	39	50	61,5	70	82	90



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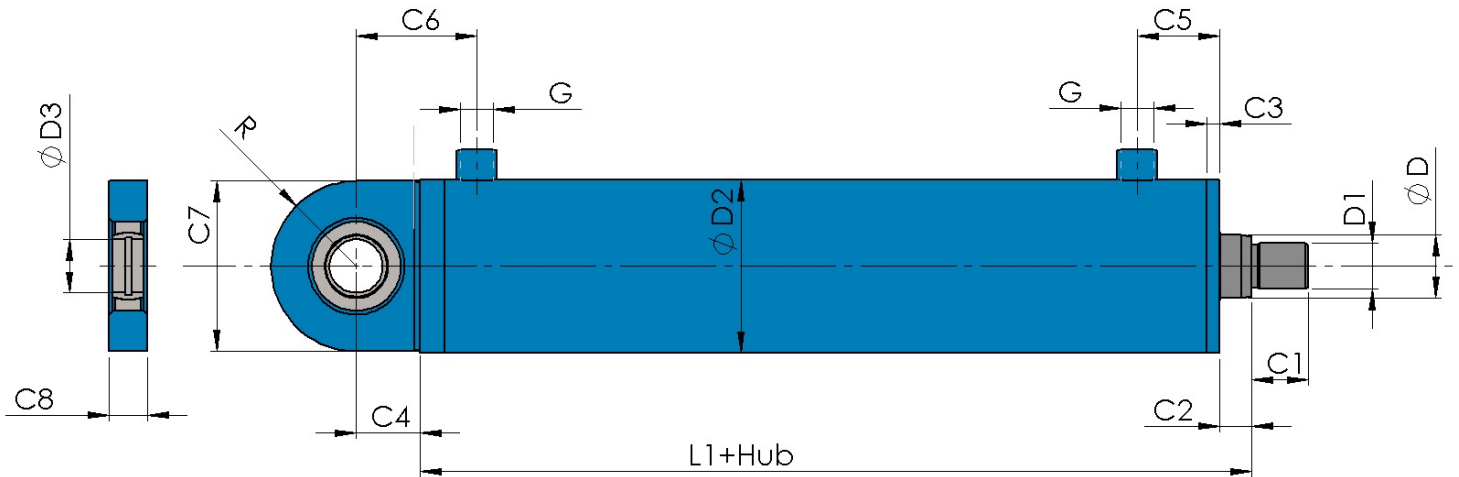
Hydraulic cylinder

Nominal pressure 250 bar (25 MPa)

Series:24XC

Type 246C

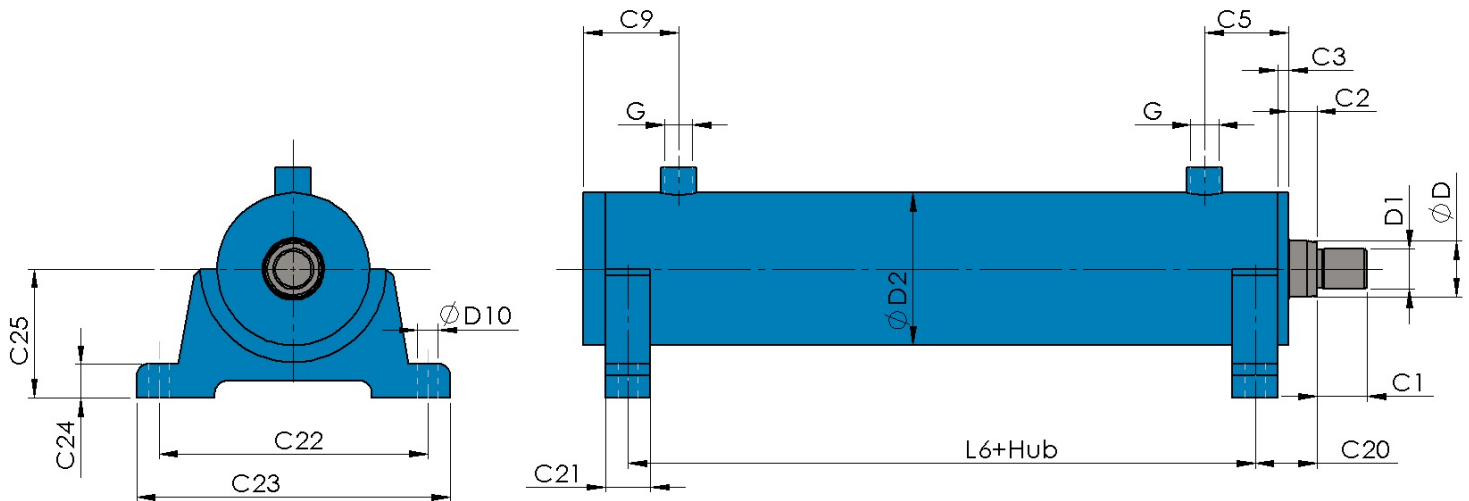
Self-aligning clevis at base



Ø Piston		32	40	50	63	80	100	125	140	160
Ø Rod	D	18/22	22/28	28/36	36/45	45/56	56/70	70/90	90/100	100/110
	L1	150	180	215	250	280	350	385	410	460
Rod thread	D1	M16x1,5	M16x1,5	M22x1,5	M28x1,5	M35x1,5	M45x1,5	M58x1,5	M65x1,5	M80x2
	D2	42	50	62	78	95	120	145	165	190
	D3	20	25	30	35	40	50	60	70	80
Oil link (metric)	G	M18x1,5	M18x1,5	M22x1,5	M22x1,5	M22x1,5	M27x2	M27x2	M33x2	M33x2
Oil link (pipe)	G	G3/8"	G3/8"	G1/2"	G1/2"	G1/2"	G3/4"	G3/4"	G1"	G1"
	C1	16	16	22	28	35	45	58	65	80
	C2	12	15	15	15	15	25	25	25	25
	C3	8	8	10	10	10	10	12	12	12
	C4	30	35	40	50	60	70	75	85	95
	C5	46	58	72	76	95	130	150	155	160
	C6	54	65	74	90	105	130	132	150	160
	C7	56	56	64	78	100	123	140	164	180
	C8	19	23	28	30	35	40	50	55	60
	R	28	28	32	39	59	61,5	70	82	90

Type 247C

Foot mounting



Ø Piston		32	40	50	63	80	100	125	140	160
Ø Rod	D	18/22	22/28	28/36	36/45	45/56	56/70	70/90	90/100	100/110
	L6	75	91	115	134	150	189	211	222	252
Rod thread	D1	M16x1,5	M16x1,5	M22x1,5	M28x1,5	M35x1,5	M45x1,5	M58x1,5	M65x1,5	M80x2
	D2	42	50	62	78	95	120	145	165	190
	D10	11	11	13	13	17	21	25	28	31
Oil link (metric)	G	M18x1,5	M18x1,5	M22x1,5	M22x1,5	M22x1,5	M27x2	M27x2	M33x2	M33x2
Oil link (pipe)	G	G3/8"	G3/8"	G1/2"	G1/2"	G1/2"	G3/4"	G3/4"	G1"	G1"
	C1	16	16	22	28	35	45	58	65	80
	C2	12	15	15	15	15	25	25	25	25
	C3	8	8	10	10	10	10	12	12	12
	C5	46	58	72	76	95	130	150	155	160
	C9	24	30	34	40	45	60	62	65	65
	C20	35	41	45	48	50	66	71	73	78
	C21	20	25	30	35	40	50	55	60	70
	C22	90	105	120	140	175	215	240	260	290
	C23	110	130	150	175	215	265	295	320	360
	C24	20	25	30	35	40	50	55	60	70
	C25	30	35	40	50	60	70	85	95	110

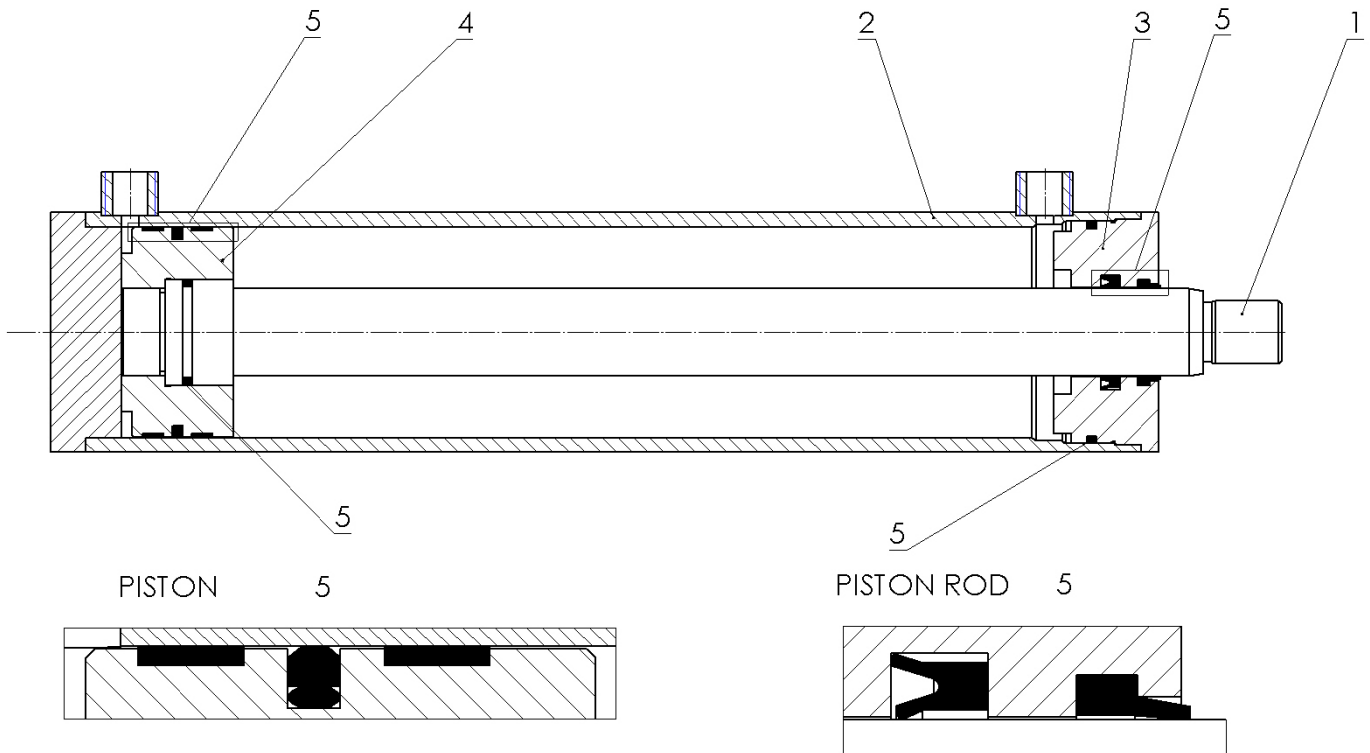


S.C.PRODMEC S.A.

Hydraulic cylinder

Nominal pressure 250 bar (25 MPa)

Series:24XC



1. Piston rod
2. Pipe
3. Head
4. Base
5. Seal Kit:Scraper, rod seal, piston seal,O ring, guide ring

SPARE PARTS

If spare parts are required, or for the replacement of the complete cylinder, we need the serial number (PRxxxx) on the type label on the cylinder for a clear assignment.

If this is no longer legible or the type label is no longer available, the serial number is also marked on the cylinder head or cylinder base.

In addition, this information can be found on all documents (order confirmation, delivery note and invoice) that you have received from us for this cylinder.

The scope of delivery of the cylinder also includes a spare parts drawing and a spare parts list.



Selection criteria for piston rod seals

Id.	Name	Material	Medium temperature	Velocity	Working medium	Application Examples
A Standard	Rod lip seal	Polyurethane	-20°...+80°C	≤ 0,5 m/s	HL, HLP	General hydraulic cylinders, Injection molding machines, Lift trucks, Agricultural machines
L	Veepac Sealing set	Cotton reinforced NBR	-20° ... +90°C	≤ 0,3 m/s	HL, HLP, HFA, HFB, HFC	Ship hydraulics, Heavy industry, Excavators, Steel mills, Presses, Mining equipment
M	Veepac Sealing set	Cotton reinforced FPM	-10° ... +150°C	≤ 0,3 m/s	HL, HLP, HFA, HFB, HFC, HFD	Ship hydraulics, Heavy industry, Excavators, Steel mills, Presses, Mining equipment
D	Sliding ring set	PTFE Compound NBR	-20° ... +100°C	≤ 1 m/s	HL, HLP, HFA, HFB, HFC	Reduced friction, Servo quality, Machine tools, Presses, - Injection molding machines
E	Sliding ring set	PTFE Compound FPM	-10° ... +180°C	≤ 1 m/s	HL, HLP, HFA, HFB, HFC, HFD	Reduced friction, Servo quality, Machine tools, Presses, - Injection molding machines

Selection criteria for piston seals

Id.	Name	Material	Medium temperature	Velocity	Working medium	Application Examples
K Standard	Compact piston sealing set	NBR / POM	-20° ... +90°C	≤ 0,5 m/s	HL, HLP, HFA, HFB, HFC	Position, holding and command servomotors for general industrial use at hydraulic actions
L	Veepac Sealing set	Cotton reinforced NBR	-20° ... +90°C	≤ 0,3 m/s	HL, HLP, HFA, HFB, HFC	Ship hydraulics, Heavy industry, Excavators, Steel mills, Presses, Mining equipment
M	Veepac Sealing set	Cotton reinforced FPM	-10° ... +150°C	≤ 0,3 m/s	HL, HLP, HFA, HFB, HFC, HFD	Ship hydraulics, Heavy industry, Excavators, Steel mills, Presses, Mining equipment
N	Sliding sealing ring set	PTFE Compound NBR	-20° ... +100°C	≤ 1 m/s	HL, HLP, HFA, HFB, HFC	Reduced friction, Servo quality, Machine tools, Presses, - Injection molding machines
O	Sliding sealing ring set	PTFE Compound FPM (	-10° ... +180°C	≤ 1 m/s	HL, HLP, HFA, HFB, HFC, HFD	Reduced friction, Servo quality, Machine tools, Presses, - Injection molding machines



SPECIAL VERSIONS

1.End position control

- The hydraulic cylinders can be equipped with inductive proximity switches for reliable end position control
- High degree of operational safety by sensing the end position directly on the piston
- Low installation effort, no external mechanical parts required
- Integration possible on all mounting types

2.Position measurement system

- The hydraulic cylinders can be equipped with magnetostrictive sensors for position measurement
- Insensitive to shocks, vibrations, temperature, pollution and moisture
- Wear and maintenance-free due to the contactless detection of the measuring position
- Absolute output signal, no reference run necessary even after voltage interruption
- High resolution, reproducibility and linearity
- Pressure-resistant up to 600 bars, for integration in hydraulic cylinders
- Reliable use, even under extreme environmental conditions
- Individual zero-point adjustment possible
- Not possible for mounting types swivel eye at base or self-aligning clevis at base

INSTALLATION

The following points must be observed when installing hydraulic cylinders:

- Before installing the hydraulic cylinder in the system, compare the type designation with the order data
- The operating medium must be compatible with the sealing material
- Before installation, the pipes must be cleaned of dirt, scale and chips
- The hydraulic cylinders must be installed and operated free of radial forces and tension. These transverse forces put a load on the piston and piston rod guide of the hydraulic cylinder and lead to a reduction in the service life and to leaks and even destruction.
- The hydraulic cylinder must be purged before commissioning. At idling pressure, loosen the purge screw or the oil connection on the bottom and head side and let the air escape. If the escaping oil is free of bubbles, tighten the bleed screw or screw connection again.

STORAGE

In order to make the running surfaces and seals of hydraulic cylinders storable over a longer period and to protect them against corrosion, the cylinders must be completely filled with oil with the piston rod retracted. Make sure that there is no air in the cylinder and that the connections are sealed airtight. The piston rod thread, the free piston rod end and the spherical plain bearings must be lubricated with a corrosion-protecting grease. If the cylinders are stored in fluctuating ambient temperatures, they must be secured with a pressure relief valve on each connection side. After a long period of storage, pressure points may appear on the seals, but they recede by repeatedly moving the piston rod in and out.



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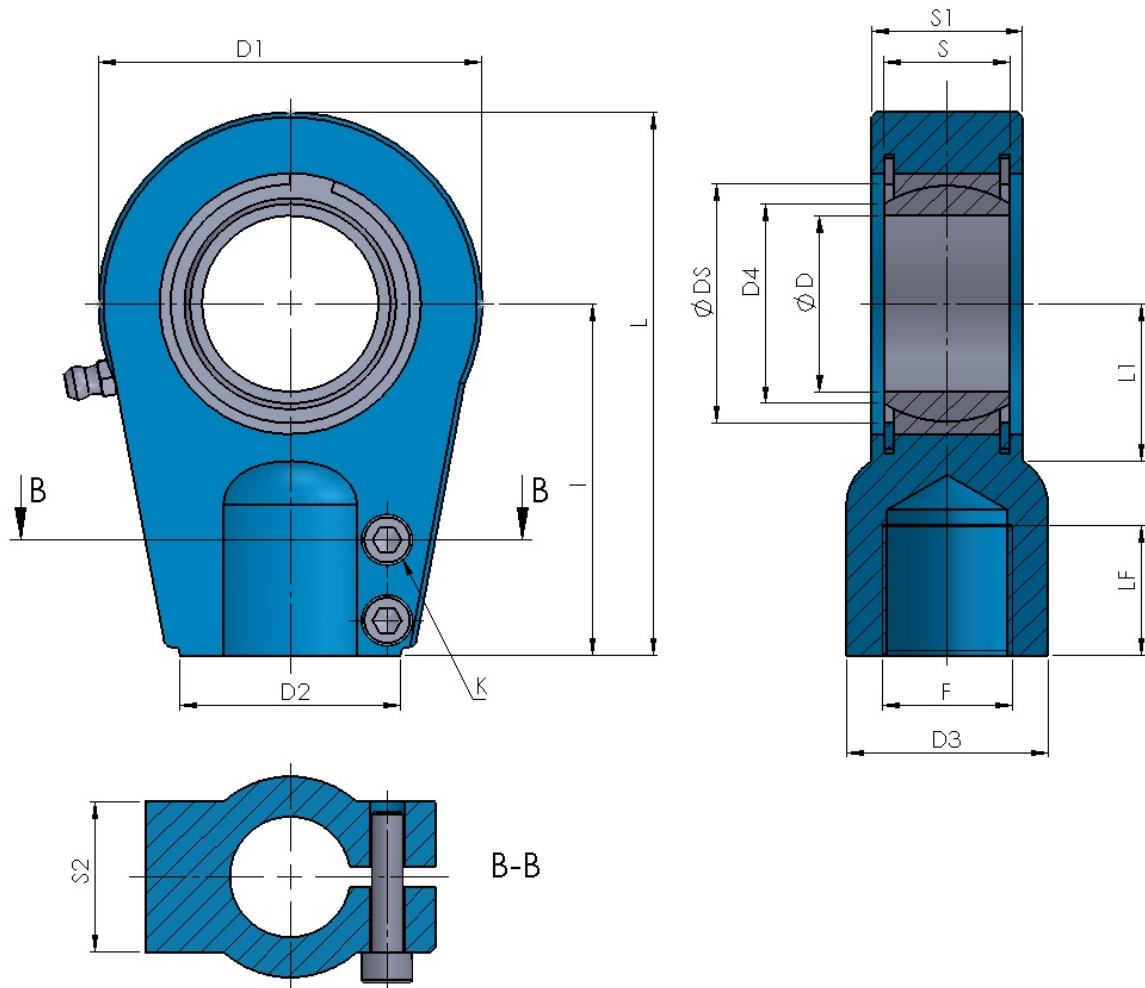
Hydraulic cylinder

Nominal pressure 250 bar (25 MPa)

Series:24XC

Spherical bearing head

Type: TAPR... U



Individual symbol code	Sizes in mm													Weight kg	Hexagon screw DIN 912-8.8	Tightening moment Ma Nm
	d H8	S H12	I	LF	D1	D2	D3	D4	S1	S2	L	L1	F			
TAPR 35 U	35	25	70	29	78	50	40	39,7	30	28	112	38	M 28x1,5	1,20	M8x30	25
TAPR 40 U	40	28	85	36	94	60	49	45	35	33	135	45	M 35x1,5	2,00	M8x35	25
TAPR 50 U	50	35	105	46	116	72	61	55,9	40	37	168	55	M 45x1,5	3,50	M10x35	49
TAPR 60 U	60	44	130	59	130	90	75	66,8	50	46	200	65	M 58x1,5	6,00	M10x45	49
TAPR 70 U	70	49	150	66	154	100	86	77,8	55	51	232	75	M 65x1,5	9,00	M12x50	80
TAPR 80 U	80	55	170	81	176	125	102	89,4	60	55	265	80	M 80x2	13,10	M16x55	195
TAPR 90 U	90	60	210	101	206	146	124	98,1	65	60	323	90	M 100x2	19,50	M16x60	195
TAPR 100 U	100	70	235	111	230	166	138	109,5	70	65	360	105	M 110x2	26,25	M20x65	385
TAPR 110 U	110	70	265	125	265	190	152	121,2	80	75	407,5	115	M 120x3	39,85	M20x70	385
TAPR 120 U	120	85	310	135	340	257	172	135,5	90	85	490	140	M 130x3	75,00	M24x80	660

Spherical bearing head

Type: TAPR... CE

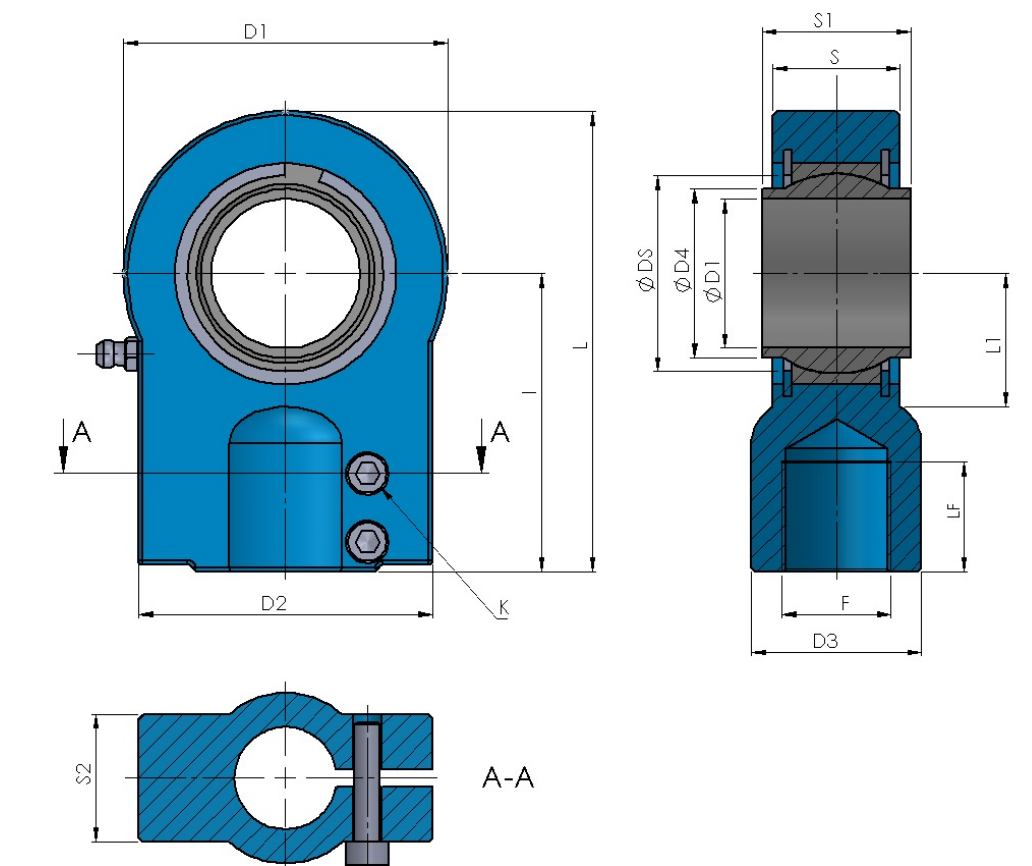


S.C.PRODMEC S.A.

Hydraulic cylinder

Series:24XC

Nominal pressure 250 bar (25 MPa)



Individual symbol code	Sizes in mm													Servomotor nominal power KN	Weight Kg	Hexagon screw DIN 912-8.8	Tightening moment Ma Nm
	d H8	S1 h12	I	LF	D1	D2	D3	D4	S	S2	L	L1	F				
TAPR 32 CE	32	32	80	37	70	66	38	38	27	22	118	32	M27x2	50	1,20	M8x20	25
TAPR 40 CE	40	40	97	46	89	80	47	46	32	26	145	41	M33x2	80	2,15	M8x25	25
TAPR 50 CE	50	50	120	57	108	96	58	57	40	32	179	50	M42x2	125	3,75	M10x30	49
TAPR 63 CE	63	63	140	64	132	114	70	71,5	52	38	211	62	M48x2	200	7,00	M12x40	80
TAPR 70 CE	70	70	160	76	155	135	80	79	57	42	245	70	M56x2	250	10,10	M12x40	195
TAPR 80 CE	80	80	180	86	168	148	90	91	66	48	270	78	M64x3	320	13,80	M16x50	195
TAPR 90 CE	90	90	195	91	185	160	100	99	72	52	296	85	M72x3	400	17,50	M16x50	195
TAPR 100 CE	100	100	210	96	210	178	110	113	84	62	322	98	M80x3	500	25,00	M20x60	385
TAPR 110 CE	110	110	235	101	235	190	125	124	88	62	364	105	M90x3	635	32,00	M20x60	385
TAPR 125 CE	125	125	260	106	264	200	135	138	103	72	405	120	M100x3	800	46,40	M20x70	385
TAPR 160 CE	160	160	310	126	326	250	165	177	130	82	488	150	M125x4	1250	81,00	M24x80	660



S.C. PRODMEC S.A.

Hydraulic cylinder

Nominal pressure 250 bar (25 MPa)

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The above data are only for the product description.

No statements about a certain suitability for a certain application can be derived from this data and information. This data and information does not relieve the user from the obligation to make his own assessment and review.

It should be noted that our products are subject to a natural process of wear and aging.

We reserve the right to make technical changes in this datasheet.

S.C. PRODMEC S.A. Resita
Str.Valea Terovei Nr.14
320044 Resita , Romania
Tel.: 0040/255/225590
E-mail: office@prodmec.ro
www.prodmec.ro