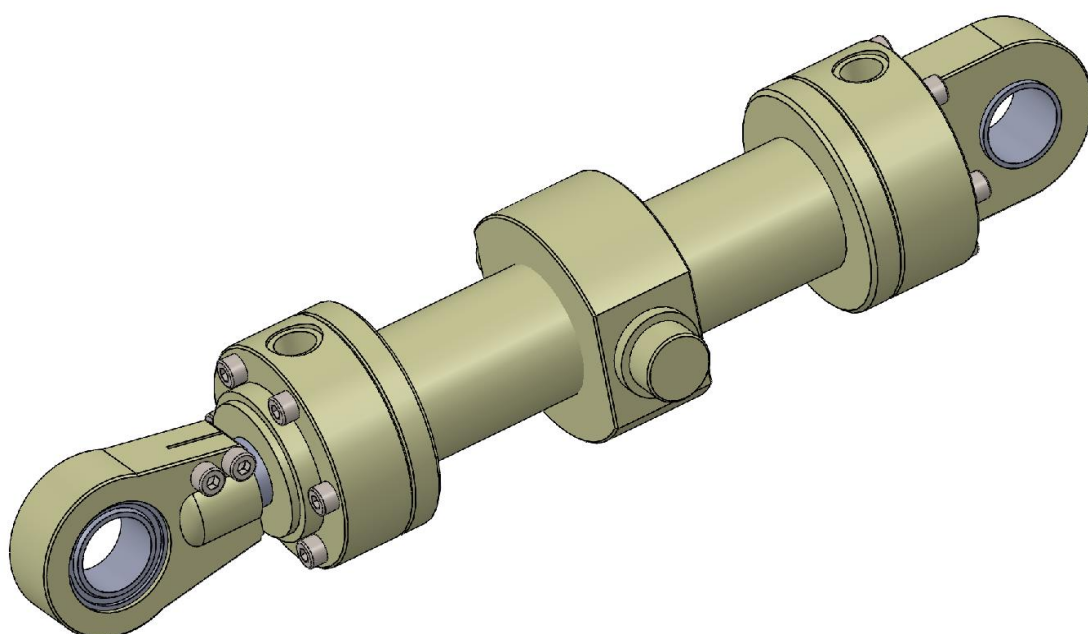


Hydraulic cylinder

Nominal pressure 250 bar (25 MPa)



Series:25XC

In conformity with ISO 6022 and DIN 24333

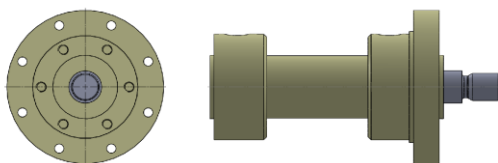
Nominal pressure 250 bar (25 MPa)

Mounting types

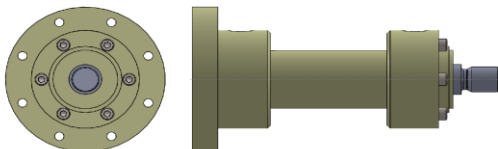
1. Basic cylinder



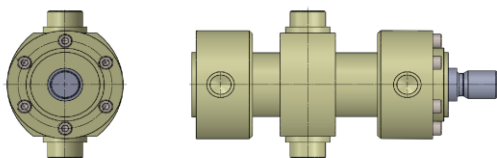
2. Round flange at head



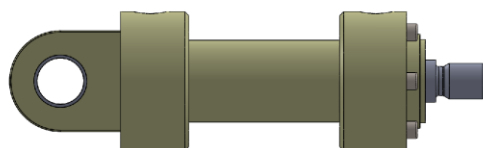
3. Round flange at base



4. Trunnion



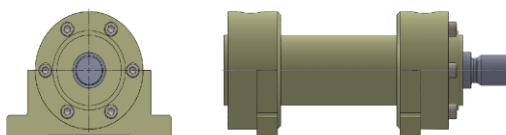
5. Swivel eye at base



6. Self-aligning clevis at base



7. Foot mounting



DESCRIPTION

The hydraulic cylinder series 25XC complies with DIN 24333 and ISO 6022 norms. Due to the specification of the mounting, installation length, area ratios, piston rod ends and connection thread, international exchangeability of this hydro cylinder is guaranteed.

The same installation dimensions apply for cylinders with and without end position cushioning. The Series 25XC is engineered in a modular system. All mounting types, with the exception of the type "Trunnion" are based upon one basic cylinder and are built by screwing mounting components. This cylinder can be used under the most severe conditions because of its construction design, its threaded cylindrical design, its sufficiently dimensioned guide lengths at the piston rod as well as its heavy-duty seals.

CONSTRUCTION

Construction is based on the screwing method. The head and bottom of the cylinder are made from steel. The cylinder-pipe is made by high precision pulled pipe, or laminated pipe. The piston rods are made of high-strength steel or stainless steel, hard chrome-plated and polished, on customer request they can be surface hardened, grinded and hard chrome-plated. The screwed design in conjunction with guide elements that are generously dimensioned for the rod and piston, as well as the use of high-performance sealing elements, allow the cylinders to be used in heavy-duty working conditions.

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



S.C.PRODMEC S.A.

Hydraulic Cylinders

Series: 25XC

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	End position cushioning O - without V - on the cylinder head H - on the cylinder bottom B - on both ends	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:

Standard hydraulic cylinder nominal pressure 250bar (25MPa), -round flange at head, -piston diameter Ø 63 mm, -piston rod diameter Ø 45 mm, -cushioning on both ends, -piston rod seal - sliding ring PTFE-Compound/NBR, - piston seal - sliding ring set PTFE-Compound/NBR, -piston rod design – hardened and hard chromium-plated, -piston rod end – spherical bearing head TAPR-CE, -cylinder stroke length 515 mm, -Line connection pipe thread.

Order code: 252C063/045.B.DN.HS.0515.R



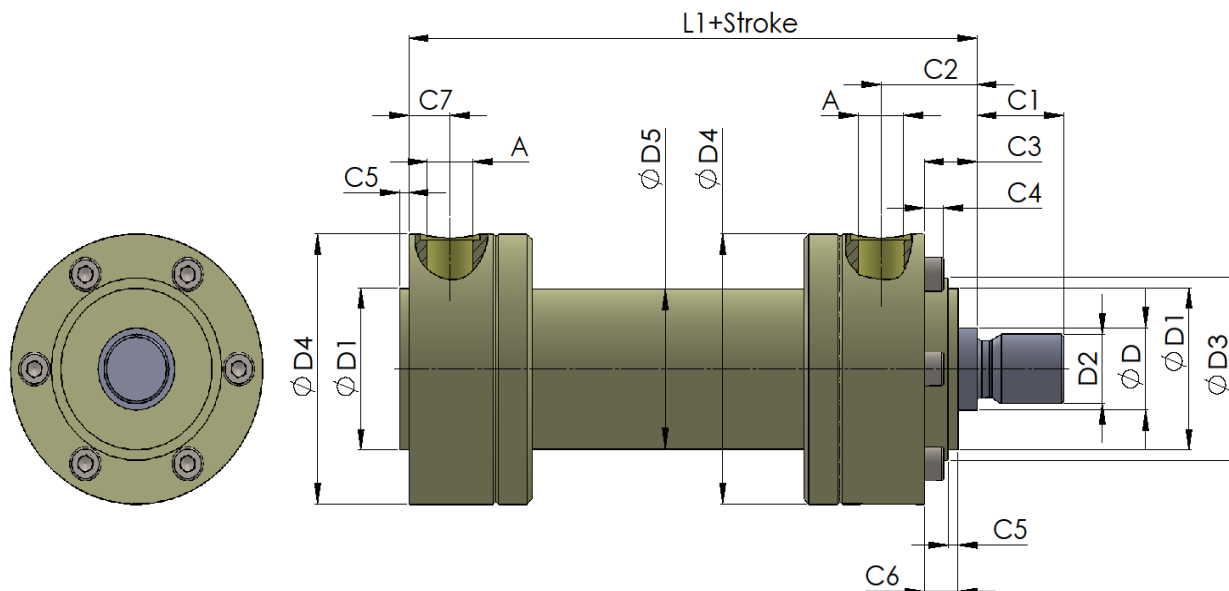
S.C.PRODMEC S.A.

Hydraulic Cylinders

Series: 25XC

Type 251C

Basic



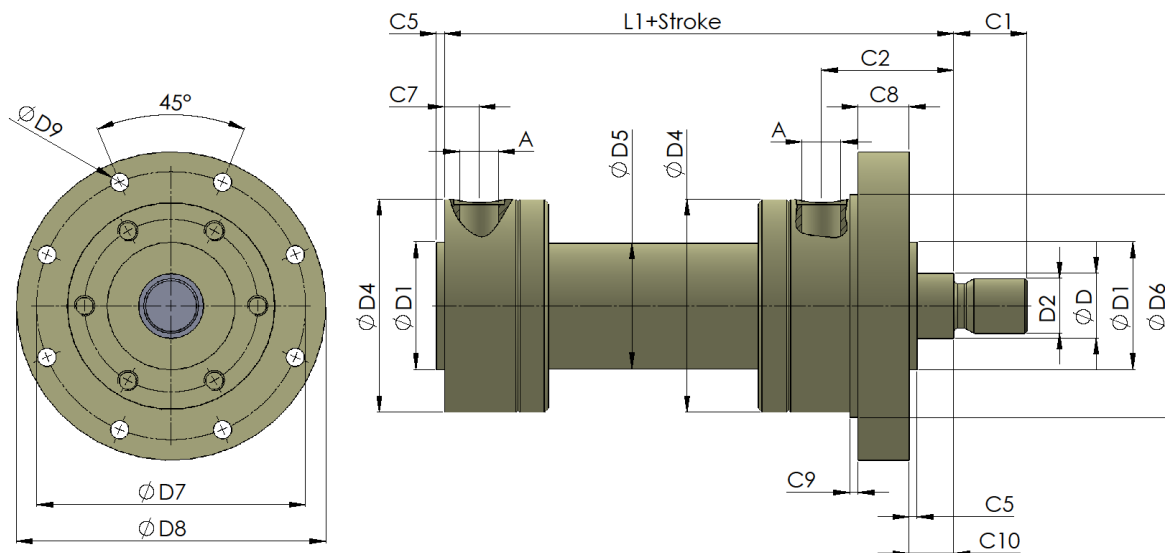
Ø Piston	50	63	80	100	125	160	200	250
Ø Rod D	32/36	40/45	50/56	63/70	80/90	100/110	125/140	160/180
L1	240	270	300	335	390	460	540	640
D1	63	75	90	110	132	160	200	250
Rod thread D2	M 27x2	M 33x2	M 42x2	M 48x2	M 64x3	M 80x3	M 100x3	M 125x4
D3	70	75	94	114	134	175	216	272
D4	105	122	145	170	208	265	315	385
D5	62	80	95	120	145	190	244	298
A	G ½	G ¾	G ¾	G1	G1	G1 ¼	G1 ¼	G1 ½
C1	36	45	56	63	85	95	112	125
C2	96	110	118	130	150	184	220	250
C3	22	25	28	32	81	100	112	135
C4	10	12	12	16	20	24	27	30
C5	4	4	4	5	5	5	5	8
C6	-	-	-	-	60	75	72	93
C7	22	26	26	30	38	44	45	55
Damping length	22	25	28	35	45	50	60	75

Hydraulic Cylinders

Series: 25XC

Type 252C

Round flange at head



Ø Piston	50	63	80	100	125	160	200	250
Ø Rod D	32/36	40/45	50/56	63/70	80/90	100/110	125/140	160/180
L1	240	270	300	335	390	460	540	640
D1	63	75	90	110	132	160	200	250
Rod thread D2	M 27x2	M 33x2	M42x2	M48x2	M 64x3	M80x3	M100x3	M 125x4
D4	105	122	145	170	208	265	315	385
D5	62	80	95	120	145	190	244	298
D6	110	130	145	175	212	270	324	396
D7	132	150	180	212	250	315	385	475
D8	155	175	210	250	290	360	440	540
D9	12	12	18	22	22	26	33	39
A	G 1/2	G 3/4	G 3/4	G1	G1	G1 1/4	G1 1/4	G1 1/2
C1	36	45	56	63	85	95	112	125
C2	96	110	118	130	150	184	220	250
C5	4	4	4	5	5	5	5	8
C7	22	26	26	30	38	44	45	55
C8	25	28	32	36	40	45	56	63
C9	4	4	4	5	5	5	5	8
C10	22	25	28	32	36	40	45	50
Damping length	22	25	28	35	45	50	60	75



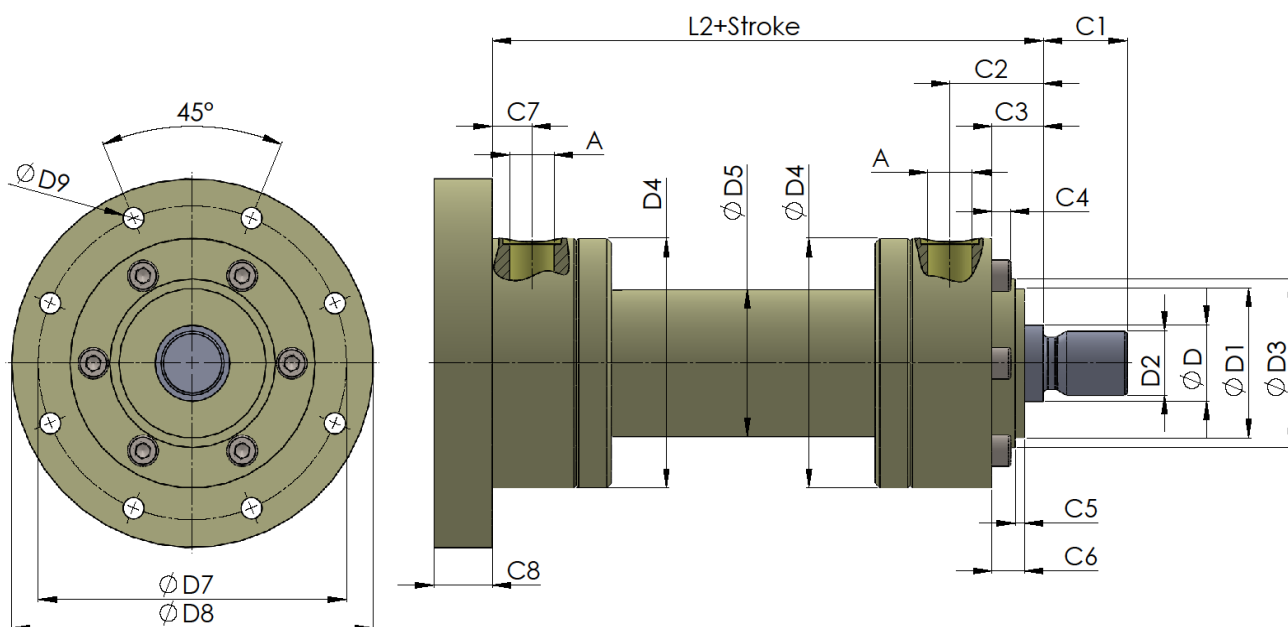
S.C.PRODMEC S.A.

Hydraulic Cylinders

Series: 25XC

Type 253C

Round flange at base



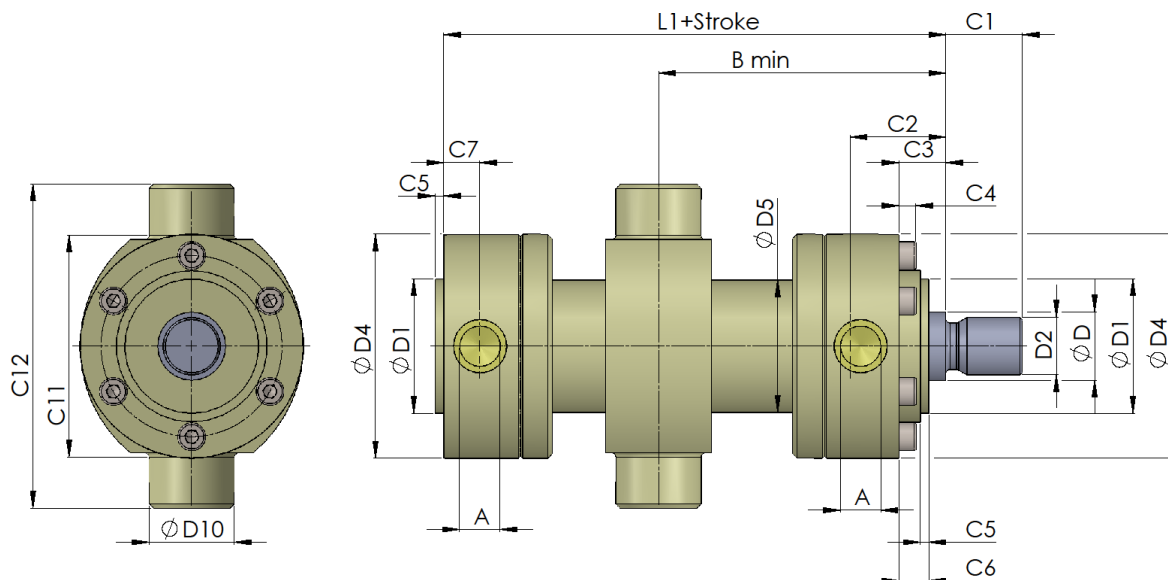
Ø Piston	50	63	80	100	125	160	200	250
Ø Rod D	32/36	40/45	50/56	63/70	80/90	100/110	125/140	160/180
L2	265	298	332	371	430	505	595	703
D1	63	75	90	110	132	160	200	250
Rod thread D2	M 27x2	M 33x2	M 42x2	M 48x2	M 64x3	M 80x3	M 100x3	M 125x4
D3	70	75	94	114	134	175	216	272
D4	105	122	145	170	208	265	315	385
D5	62	80	95	120	145	190	244	298
D7	132	150	180	212	250	315	385	475
D8	155	175	210	250	290	360	440	540
D9	14	14	18	22	22	26	33	39
Oil link A	G 1/2	G 3/4	G 3/4	G1	G1	G1 1/4	G1 1/4	G1 1/2
C1	96	110	118	130	150	184	220	250
C3	22	25	28	32	81	100	112	135
C4	10	12	12	16	20	24	27	30
C5	4	4	4	5	5	5	5	8
C6	-	-	-	-	60	75	72	93
C7	22	26	26	30	38	44	45	55
C8	25	28	32	36	40	45	56	63
Damping length	22	25	28	35	45	50	60	75

Hydraulic Cylinders

Series: 25XC

Type 254C

Trunnion



Ø Piston	50	63	80	100	125	160	200	250
Ø Rod D	32/36	40/45	50/56	63/70	80/90	100/110	125/140	160/180
L1	240	270	300	335	390	460	540	640
D1	63	75	90	110	132	160	200	250
Rod thread D2	M 27x2	M 33x2	M 42x2	M 48x2	M 64x3	M 80x3	M 100x3	M 125x4
D4	105	122	145	170	208	265	315	385
D5	62	80	95	120	145	190	244	298
D10	32	40	50	63	80	100	125	160
Oil link A	G 1/2	G 3/4	G 3/4	G1	G1	G1 1/4	G1 1/4	G1 1/2
B min	190	215	240	300	345	400	470	550
C1	36	45	56	63	85	95	112	135
C2	96	110	118	130	150	184	220	250
C3	22	25	28	32	81	100	112	135
C4	10	12	12	16	20	24	27	30
C5	4	4	4	5	5	5	5	8
C6	-	-	-	-	60	75	72	93
C7	22	26	26	30	38	44	45	55
C11	112	125	150	180	224	280	335	425
C12	137	189	230	280	350	440	535	675
Damping length	22	25	28	35	45	50	60	75



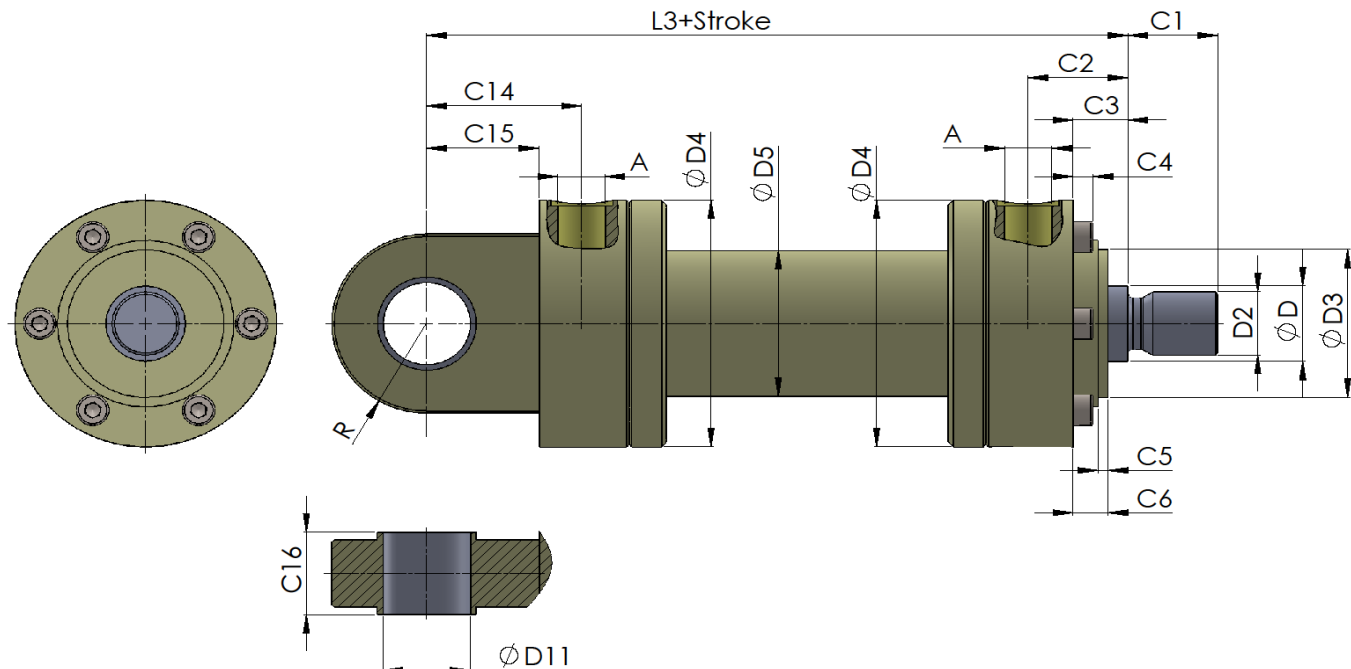
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Hydraulic Cylinders

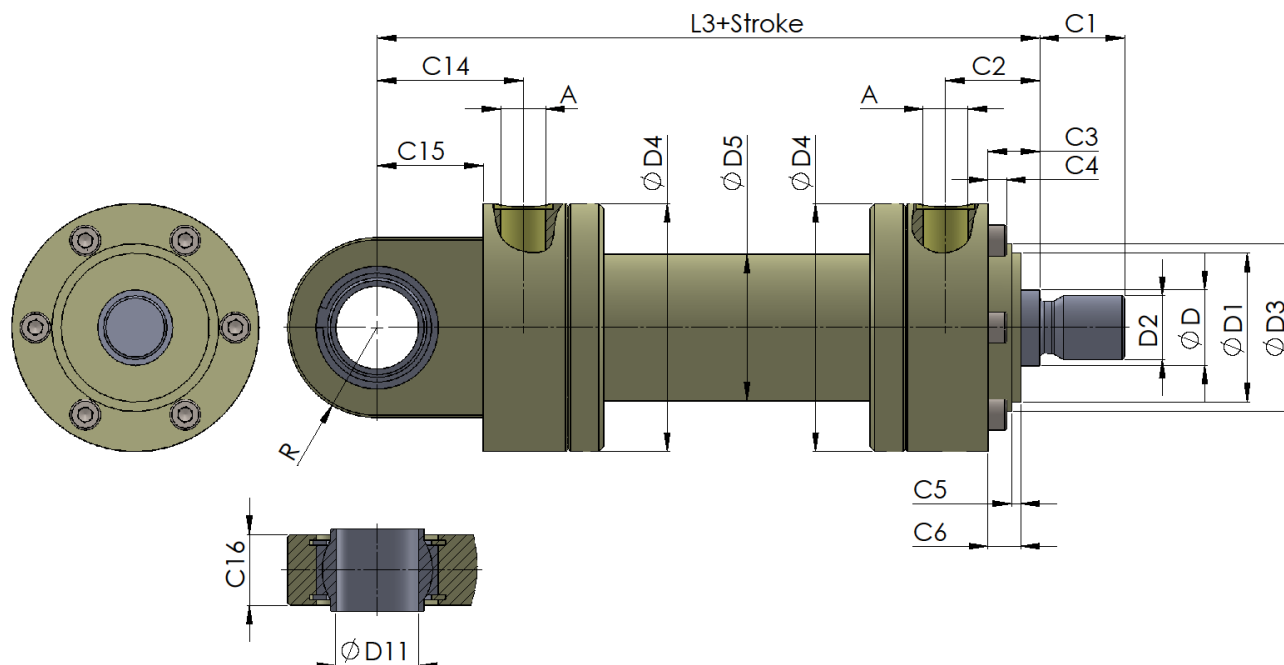
Series: 25XC

Type 255C

Swivel eye at the base



Ø Piston	50	63	80	100	125	160	200	250
Ø Rod D	32/36	40/45	50/56	63/70	80/90	100/110	125/140	160/180
L3	305	348	395	442	520	617	756	903
D1	63	75	90	110	132	160	200	250
Rod thread D2	M 27x2	M 33x2	M 42x2	M 48x2	M 64x3	M 80x3	M 100x3	M 125x4
D3	70	75	94	114	134	175	216	272
D4	105	122	145	170	208	265	315	385
D5	62	80	95	120	145	190	244	298
D11	32	40	50	63	80	100	125	160
A	G 1/2	G 3/4	G 3/4	G1	G1	G1 1/4	G1 1/4	G1 1/2
C1	36	45	56	63	85	95	112	125
C2	96	110	118	130	150	184	220	250
C3	22	25	28	32	81	100	112	135
C4	10	12	12	16	20	24	27	30
C5	4	4	4	5	5	5	5	8
C6	-	-	-	-	60	75	72	93
C14	87	104	121	137	168	201	261	318
C15	40	50	63	71	90	112	160	200
C16	32	40	50	63	80	100	125	160
R	40	50	63	71	90	112	160	200
Damping length	22	25	28	35	45	50	60	75



Ø Piston	50	63	80	100	125	160	200	250
Ø Rod D	32/36	40/45	50/56	63/70	80/90	100/110	125/140	160/180
L3	305	348	395	442	520	617	756	903
D1	63	75	90	110	132	160	200	250
Rod thread D2	M 27x2	M 33x2	M 42x2	M 48x2	M 64x3	M 80x3	M 100x3	M 125x4
D3	70	75	94	114	134	175	216	272
D4	105	122	145	170	208	265	315	385
D5	62	80	95	120	145	190	244	298
D11	32	40	50	63	80	100	125	160
A	G 1/2	G 3/4	G 3/4	G1	G1	G1 1/4	G1 1/4	G1 1/2
C1	36	45	56	63	85	95	112	125
C2	96	110	118	130	150	184	220	250
C3	22	25	28	32	81	100	112	135
C4	10	12	12	16	20	24	27	30
C5	4	4	4	5	5	5	5	8
C6	-	-	-	-	60	75	72	93
C14	87	104	121	137	168	201	261	318
C15	40	50	63	71	90	112	160	200
C16	32	40	50	63	80	100	125	160
R	40	50	63	71	90	112	160	200
Damping length	22	25	28	35	45	50	60	75



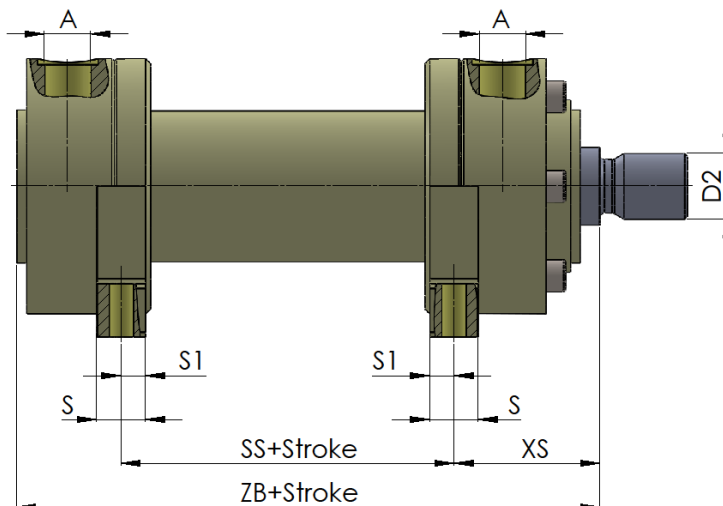
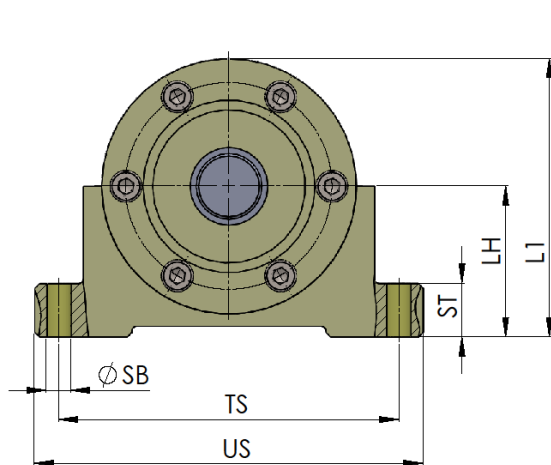
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Hydraulic Cylinders

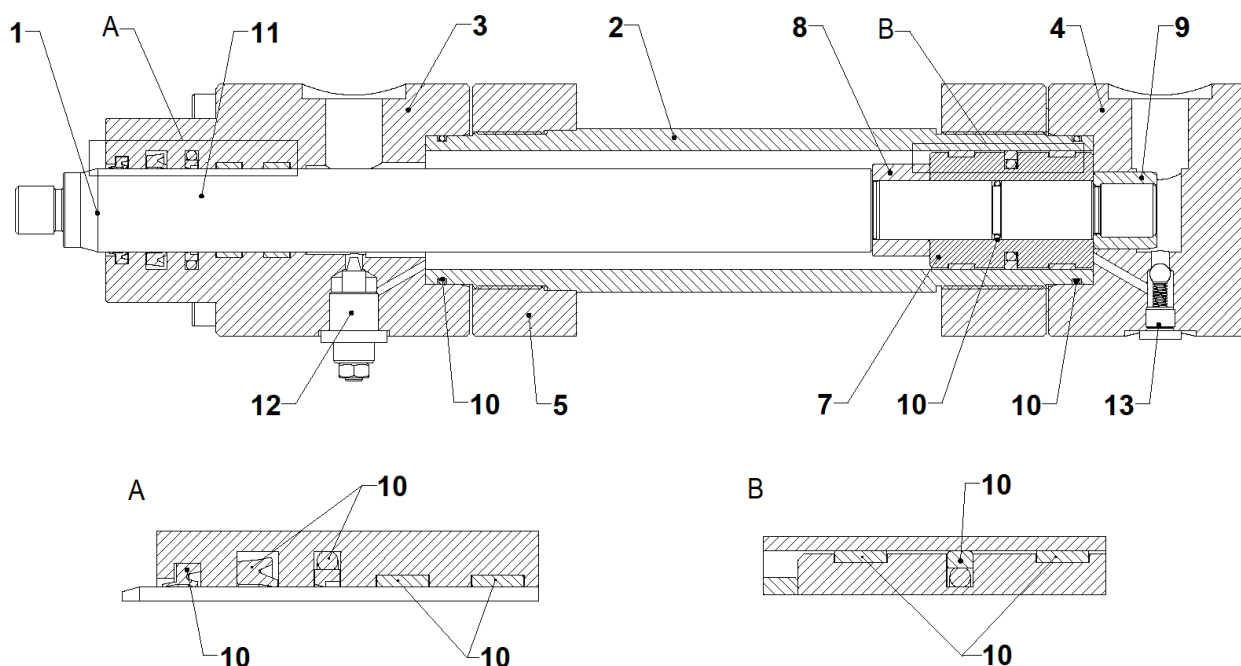
Series: 25XC

Type 257C

Foot mounting



Ø Piston	40	50	63	80	100	125	140	160	180	200
Ø Rod D	22/28	28/36	36/45	45/56	56/70	70/90	90/100	100/110	110/125	125/140
D2(M)	16x1.5	22x1.5	28x1.5	35x1.5	45x1.5	58x1.5	65x1.5	80x2	100x2	110x2
LH	45	55	65	75	90	105	115	135	150	160
L1	89	106	125	145	175	208	228	267.5	296	315
S	30	35	40	50	60	70	85	105	115	125
S1	15	17.5	20	25	30	35	42.5	52.5	57.5	62.5
SB	11	11	13.5	17.5	22	26	30	33	40	40
SS	50	45	49	52	61	75	70	65	69	73
ST	32	37	42	47	57	67	72	77	92	97
TS	110	130	150	180	210	255	290	330	360	385
US	135	155	180	220	255	305	350	400	440	465
XS	114	124.5	142	151	179	200	230.5	272.5	296.5	307.5
ZB	226	234	262	280	330	382	420	475	515	535
A	G ½	G ½	G ¾	G ¾	G1	G1	G1 ¼	G1 ¼	G1 ¼	G1 ¼



- | | | |
|--------------------|--------------------|--------------------|
| 1. Rod | 6. Nut back flange | 11. Screw |
| 2. Pipe | 7. Piston | 12. Throttle valve |
| 3. Head flange | 8. Brake nut | 13. Check valve |
| 4. Back flange | 9. Brake nut | |
| 5. Nut head flange | 10. Sealing set | |

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.



S.C.PRODMEC S.A.

Hydraulic Cylinders

Series: 25XC

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 magneto strictive 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

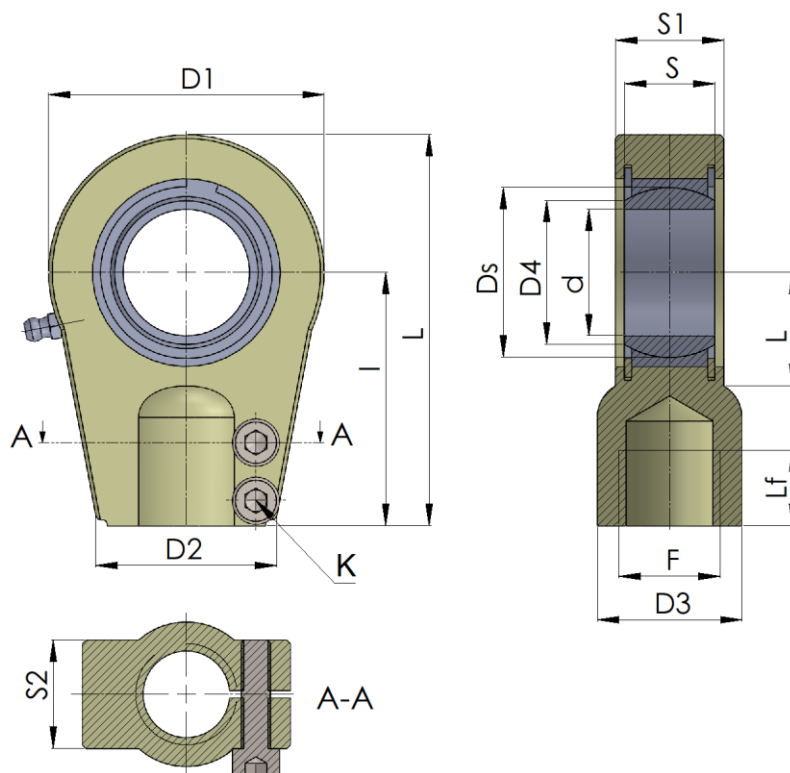
In order to make the running surfaces and seals of hydraulic cylinders storable over a longer period and to protect them against corrosion, the cylinders must be completely filled with oil with the piston rod retracted. Make sure that there is no air in the cylinder and that the connections are sealed 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.

Hydraulic Cylinders

Series: 25XC

Spherical bearing head

Type: TAPR... U



ID.	Sizes in mm													Weight	Screw with hex place DIN 912-8.8	Tightening momentum 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	M28x1,5	1,20	M8x30	25
TAPR 40 U	40	28	85	36	94	60	49	45	35	33	135	45	M35x1,5	2,00	M8x35	25
TAPR 50 U	50	35	105	46	116	72	61	55,9	40	37	168	55	M45x1,5	3,50	M10x35	49
TAPR 60 U	60	44	130	59	130	90	75	66,8	50	46	200	65	M58x1,5	6,00	M10x45	49
TAPR 70 U	70	49	150	66	154	100	86	77,8	55	51	232	75	M65x1,5	9,00	M12x50	80
TAPR 80 U	80	55	170	81	176	125	102	89,4	60	55	265	80	M80x2	13,10	M16x55	195
TAPR 90 U	90	60	210	101	206	146	124	98,1	65	60	323	90	M100x2	19,50	M16x60	195
TAPR 100 U	100	70	235	111	230	166	138	109,5	70	65	360	105	M110x2	26,25	M20x65	385
TAPR 110 U	110	70	265	125	265	190	152	121,2	80	75	407,5	115	M120x3	39,85	M20x70	385
TAPR 120 U	120	85	310	135	340	257	172	135,5	90	85	490	140	M130x3	75,00	M24x80	660



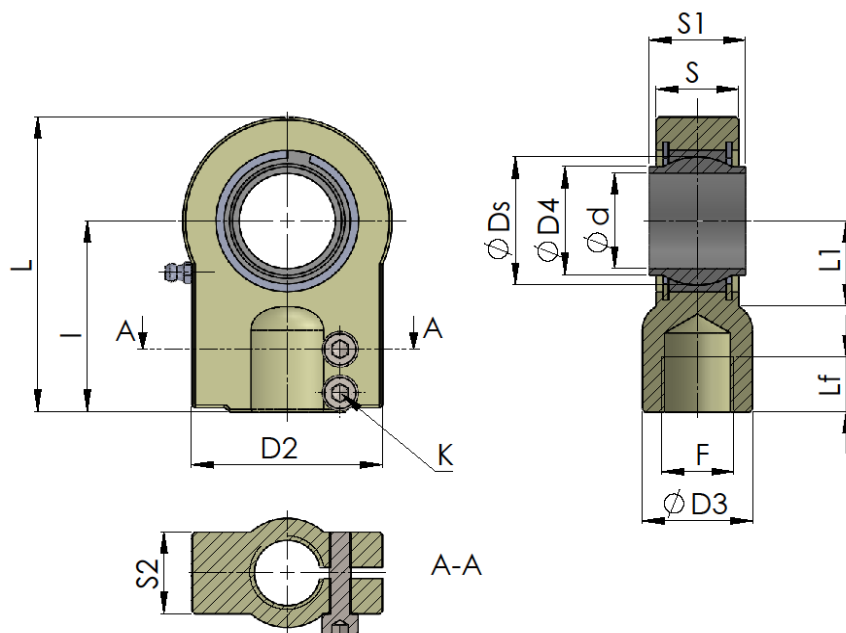
S.C.PRODMEC S.A.

Hydraulic Cylinders

Series: 25XC

Spherical bearing head

Type: TAPR... CE



Id.	Sizes in mm													Cylinder nominal power kN	Weight	Screw with hex place DIN 912-8.8	Tightening momentum 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 Cylinders

Series: 25XC

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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.

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