

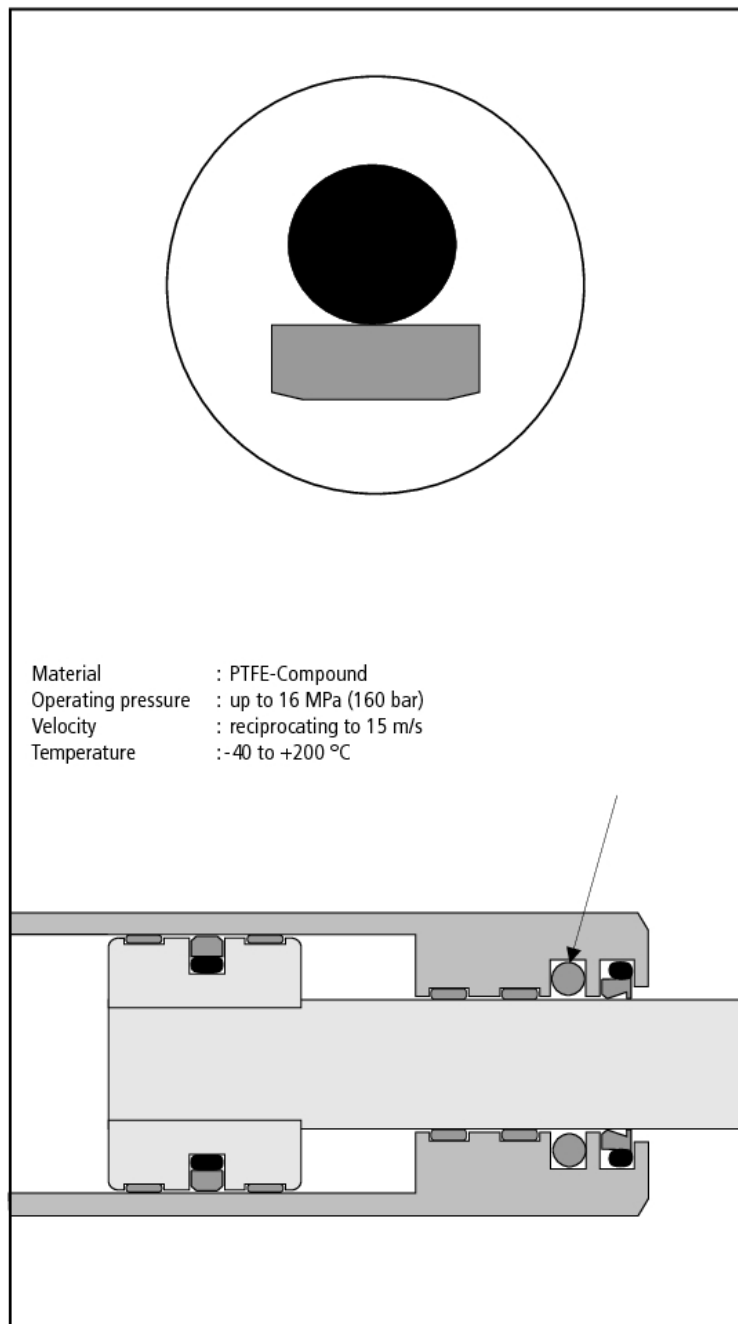


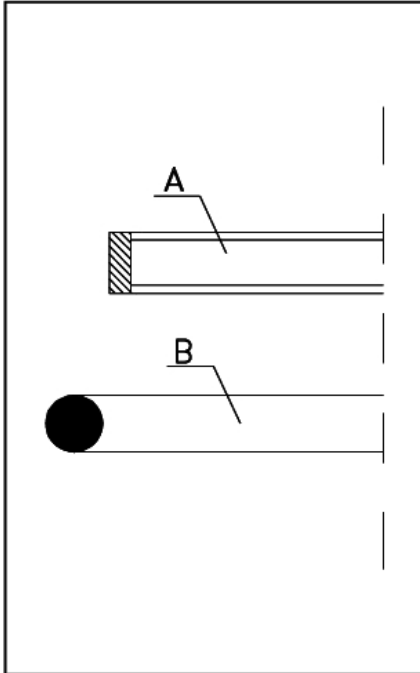
Rod seals of series HS 256 and HS 257 are preferably used in light duty hydraulic cylinders.

Due to their good shear characteristics and low friction, they can also be used for pneumatic cylinders.

Special Features:

- Two part composition comprising of profile gasket and O-ring
 - Outstanding shear characteristics, easy moving
 - Low friction, no stick-slip effect
 - Good dynamic and static safety
 - Wide temperature range and chemical resistance depending on choice of O-ring material
- Designed for use in undivided grooves
- Available for all rod diameters up to approx. 2500mm.





Profile Gasket (Part A)

Gasket section is rectangular and is provided with a chamfer on the dynamic side so as to simplify mounting.

Profile gaskets are manufactured from specially modified PTFE materials. PTFE bronze (compound N°. 55) is the standard material of construction that is used in hydraulics applications whereas PTFE carbon (compound N°. 30) is preferred in pneumatics applications.

O-Ring (Part B)

O-rings are standard sealing elements with circular cross section. Those used in the present application conform to the series of dimensions as per AS 568A (American norms). Standard material of construction for hydraulics applications is NBR (Acrylonitrile Butadiene Rubber) which guarantees particularly good resistance to hydraulic fluids. O-rings with hardness of 70 Shore A are preferred.

Materials Overview: Profile Gasket

01: Pure PTFE - Outstanding chemical resistance - used in chemical, foodstuffs and pharmaceutical industry with light mechanical stress.

12: Modified PTFE - Very good chemical resistance, outstanding shear characteristics - used for special purpose and intermediate-stress applications.

25: Modified PTFE + glass fiber - High abrasion resistance and inherent stability, good chemical resistance - used in various areas of industry and intermediate-stress hydraulic applications.

30: Modified PTFE + carbon - Good abrasion resistance and inherent stability, good chemical resistance - used in water and water-oil emulsions with intermediate-stress. Also designed for dry runs.

55: Modified PTFE + bronze - High abrasion resistance and inherent stability, very good shear characteristics, good chemical resistance - used in intermediate- to high-stress hydraulics applications.

67: Modified PTFE - Very high abrasion resistance and inherent stability - used in hydraulics and abrasive pressure fluid applications.

83: Modified Polyurethane - Very high abrasion resistance and inherent stability - used primarily in intermediate-stress hydraulics applications.

Materials Overview: O-Ring

N: Acrylonitrile-Butadiene-Rubber - Used in general machine construction, hydraulics, pneumatics. Resistant to mineral oil based pressure fluids, HFA, HFB and HFC fluids and water.

F: Fluorine containing Rubbers - Used at high temperatures and aggressive surrounding media, resistant to mineral based and synthetic pressure fluids, aliphatic, aromatic and chlorated hydrocarbons, phosphate-ester based poorly inflammable fluids.

E: Ethylene Propylene Diene Rubbers - Used in armature and pump industry. Resistant to hot water, steam, phosphate-ester based poorly inflammable fluids but is not resistant to mineral oils!

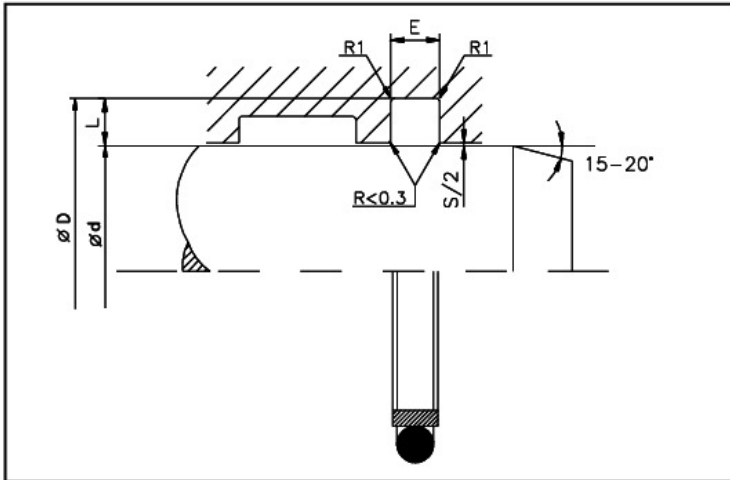
S: Silicon Rubbers.

C: Chloroprene Rubbers.

Rod seals of the series HS 256 and HS 257 have been used for years in hydraulic cylinders that call for easy mobility in use.

The seal can be used in divided and undivided (from approx. 20 mm onwards) grooves. For use in an undivided groove, the profile ring must be carefully bent to a kidney shape and subsequently calibrated.

For later designs, please use our models HS 255.



Limitations on Use	
Operating pressure	: up to 16 MPa (160 bar)
Velocity	: reciprocating to 15 m/s
Temperature	: -40 to +200 °C (depending on O-Ring material)

Media for Use	
Mineral oil based hydraulic fluids, flame resistant fluids (HFA, HFB, HFC), non-polluting pressure fluids (Bio Oils), water, air and other media (depending on O-ring material).	

Surface Finish			
Surfaces	Rmax	Rz	Ra
Faces	2,5 μ m	1,6 μ m	0,4 μ m
Groove root	10,0 μ m	6,3 μ m	1,6 μ m
Groove flanks	16,0 μ m	10,0 μ m	3,2 μ m

Recommended Sizes of Installation for Profile HS 256						
Section	O-Ring Cord- \varnothing mm	Recommended Diameter Standard D mm	Groove Width E mm	Groove Depth L mm	Max. Diameter Clearance 0 - 160 bar S mm	Radius R1 max. mm
01	1,78	3,0 - 10	2,00	1,95	0,10	0,2
02	2,62	10,1 - 18	2,80	2,90	0,10	0,2
03	3,53	18,1 - 38	3,80	3,65	0,15	0,3
04	5,33	38,1 - 110	5,60	6,00	0,15	0,3
05	7,00	115 - 150	7,55	7,30	0,20	0,4
06	7,00	151 - 239	7,55	8,70	0,20	0,4
07	7,00	240 - 380	7,55	11,70	0,20	0,4

Profil HS 256

d f8/h9	D H 9	E +0,2	O-Ring	Part N°
3,00	6,90	2,00	007	HS256 0030-01-55N
4,00	7,90	2,00	008	HS256 0040-01-55N
5,00	8,90	2,00	010	HS256 0050-01-55N
6,00	9,90	2,00	011	HS256 0060-01-55N
8,00	11,90	2,00	012	HS256 0080-01-55N
10,00	13,90	2,00	013	HS256 0100-01-55N
10,00	15,80	2,80	111	HS256 0100-02-55N
11,00	16,80	2,80	112	HS256 0110-02-55N
12,00	17,80	2,80	113	HS256 0120-02-55N
14,00	19,80	2,80	114	HS256 0140-02-55N
15,00	20,80	2,80	115	HS256 0150-02-55N
16,00	21,80	2,80	115	HS256 0160-02-55N
18,00	23,80	2,80	116	HS256 0180-02-55N
18,00	25,30	3,80	211	HS256 0180-03-55N
20,00	27,30	3,80	212	HS256 0200-03-55N
22,00	29,30	3,80	213	HS256 0220-03-55N
23,00	30,30	3,80	214	HS256 0230-03-55N
25,00	32,30	3,80	215	HS256 0250-03-55N
26,00	33,30	3,80	215	HS256 0260-03-55N
28,00	35,30	3,80	217	HS256 0280-03-55N
30,00	37,30	3,80	218	HS256 0300-03-55N
32,00	39,30	3,80	219	HS256 0320-03-55N
33,00	40,30	3,80	220	HS256 0330-03-55N
35,00	42,30	3,80	221	HS256 0350-03-55N
36,00	43,30	3,80	222	HS256 0360-03-55N
38,00	45,30	3,80	222	HS256 0380-03-55N
38,00	50,00	5,60	326	HS256 0380-04-55N

d f8/h9	D H 9	E +0,2	O-Ring	Part N°
40,00	52,00	5,60	327	HS256 0400-04-55N
44,00	56,00	5,60	328	HS256 0440-04-55N
45,00	57,00	5,60	328	HS256 0450-04-55N
50,00	62,00	5,60	330	HS256 0500-04-55N
53,00	65,00	5,60	331	HS256 0530-04-55N
56,00	68,00	5,60	332	HS256 0560-04-55N
60,00	72,00	5,60	333	HS256 0600-04-55N
63,00	75,00	5,60	334	HS256 0630-04-55N
65,00	77,00	5,60	334	HS256 0650-04-55N
68,00	80,00	5,60	335	HS256 0680-04-55N
70,00	82,00	5,60	336	HS256 0700-04-55N
75,00	87,00	5,60	338	HS256 0750-04-55N
80,00	92,00	5,60	339	HS256 0800-04-55N
85,00	97,00	5,60	341	HS256 0850-04-55N
88,00	100,00	5,60	342	HS256 0880-04-55N
90,00	102,00	5,60	342	HS256 0900-04-55N
95,00	107,00	5,60	344	HS256 0950-04-55N
98,00	110,00	5,60	345	HS256 0980-04-55N
100,00	112,00	5,60	345	HS256 1000-04-55N
105,00	117,00	5,60	347	HS256 1050-04-55N
107,00	119,00	5,60	348	HS256 1070-04-55N
110,00	122,00	5,60	349	HS256 1100-04-55N
115,00	129,60	7,55	426	HS256 1150-05-55N
117,00	131,60	7,55	427	HS256 1170-05-55N
120,00	134,60	7,55	428	HS256 1200-05-55N
123,00	137,60	7,55	429	HS256 1230-05-55N
125,00	139,60	7,55	429	HS256 1250-05-55N



Profil HS 256

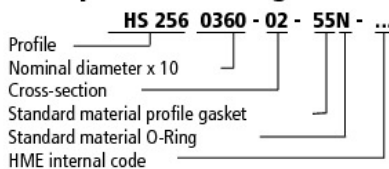
df8/h9	D H 9	E +0,2	O-Ring	Part N°	df8/h9	D H 9	E +0,2	O-Ring	Part N°
130,00	144,60	7,55	431	HS256 1300-05-55N	200,00	217,40	7,55	445	HS256 2000-06-55N
133,00	147,60	7,55	432	HS256 1330-05-55N	220,00	237,40	7,55	447	HS256 2200-06-55N
135,00	149,60	7,55	432	HS256 1350-05-55N	230,00	247,40	7,55	447	HS256 2300-06-55N
140,00	154,60	7,55	434	HS256 1400-05-55N	240,00	263,40	7,55	448	HS256 2400-07-55N
142,00	156,60	7,55	435	HS256 1420-05-55N	250,00	273,40	7,55	449	HS256 2500-07-55N
145,00	159,60	7,55	436	HS256 1450-05-55N	270,00	293,40	7,55	451	HS256 2700-07-55N
150,00	164,60	7,55	437	HS256 1500-05-55N	280,00	303,40	7,55	451	HS256 2800-07-55N
155,00	172,40	7,55	438	HS256 1550-06-55N	290,00	313,40	7,55	452	HS256 2900-07-55N
160,00	177,40	7,55	439	HS256 1600-06-55N	300,00	323,40	7,55	453	HS256 3000-07-55N
165,00	182,40	7,55	440	HS256 1650-06-55N	320,00	343,40	7,55	454	HS256 3200-07-55N
170,00	187,40	7,55	441	HS256 1700-06-55N	330,00	353,40	7,55	455	HS256 3300-07-55N
175,00	192,40	7,55	441	HS256 1750-06-55N	340,00	363,40	7,55	456	HS256 3400-07-55N
180,00	197,40	7,55	442	HS256 1800-06-55N	360,00	383,40	7,55	458	HS256 3600-07-55N
190,00	207,40	7,55	444	HS256 1900-06-55N	370,00	393,40	7,55	458	HS256 3700-07-55N
195,00	212,40	7,55	445	HS256 1950-06-55N	380,00	403,40	7,55	459	HS256 3800-07-55N

Further sizes up to Ø 2500 mm available on request.

Profil HS 257

df8/h9	D H 9	E +0,2	O-Ring	Part N°	df8/h9	D H 9	E +0,2	O-Ring	Part N°
10,00	16,20	3,20	12,3 x 2,4	HS257 0100-01-55N	45,00	52,20	4,00	46,2 x 3,0	HS257 0450-01-55N
12,00	18,20	3,20	14,3 x 2,4	HS257 0120-01-55N	48,00	55,20	4,00	50,2 x 3,0	HS257 0480-01-55N
14,00	20,20	3,20	16,3 x 2,4	HS257 0140-01-55N	50,00	57,20	4,00	52,0 x 3,0	HS257 0500-01-55N
15,00	21,20	3,20	17,3 x 2,4	HS257 0150-01-55N	52,00	59,20	4,00	54,2 x 3,0	HS257 0520-01-55N
16,00	22,20	3,20	18,3 x 2,4	HS257 0160-01-55N	55,00	62,20	4,00	57,2 x 3,0	HS257 0550-01-55N
18,00	24,20	3,20	20,3 x 2,4	HS257 0180-01-55N	56,00	63,20	4,00	58,0 x 3,0	HS257 0560-01-55N
20,00	26,20	3,20	22,3 x 2,4	HS257 0200-01-55N	60,00	72,20	7,50	62,2 x 5,7	HS257 0600-01-55N
22,00	28,20	3,20	23,3 x 2,4	HS257 0220-01-55N	63,00	75,20	7,50	64,2 x 5,7	HS257 0630-01-55N
25,00	32,20	4,00	27,0 x 3,0	HS257 0250-01-55N	65,00	77,20	7,50	67,2 x 5,7	HS257 0650-01-55N
28,00	35,20	4,00	30,2 x 3,0	HS257 0280-01-55N	70,00	82,20	7,50	71,2 x 5,7	HS257 0700-01-55N
30,00	37,20	4,00	32,2 x 3,0	HS257 0300-01-55N	75,00	87,20	7,50	77,2 x 5,7	HS257 0750-01-55N
32,00	39,20	4,00	32,2 x 3,0	HS257 0320-01-55N	80,00	92,20	7,50	81,2 x 5,7	HS257 0800-01-55N
35,00	42,20	4,00	36,2 x 3,0	HS257 0350-01-55N	85,00	97,20	7,50	87,2 x 5,7	HS257 0850-01-55N
36,00	43,20	4,00	38,0 x 3,0	HS257 0360-01-55N	90,00	102,20	7,50	92,2 x 5,7	HS257 0900-01-55N
38,00	45,20	4,00	40,2 x 3,0	HS257 0380-01-55N	95,00	107,20	7,50	97,2 x 5,7	HS257 0950-01-55N
40,00	47,20	4,00	42,2 x 3,0	HS257 0400-01-55N	100,00	112,20	7,50	100,0 x 5,7	HS257 1000-01-55N
42,00	49,20	4,00	44,2 x 3,0	HS257 0420-01-55N					

Example for ordering Rod Seal:



Material Key:

Profile gasket
01 - PTFE pure
12 - modified PTFE
25 - PTFE glass fiber
30 - PTFE carbon
55 - PTFE bronze
67 - modified PTFE
83 - modified PU

O-Ring
N - NBR
F - FPM
E - EPDM
S - Silicon
C - Chlorpren

Issue

01 | 05

WARNING: Limits of application stated herein are standard values. They could be individually transgressed with due consideration to respective service conditions. In the event of a large duty cycle, pulsating operation and other complex operational conditions, simultaneous transgression of these values is not recommended. Due to a large variety of service conditions that may arise in course of actual use, the company does not take responsibility of or guarantee the functional accuracy of the individual components. Rights for changes are reserved.