

Profile overview

Profile	Description	Additional information → page	Profile data → page
S1S 	Single-lip U-cup profile made of polyurethane; suitable for medium to heavy duty applications	116	122 (metric)
ZBR 	Double-lip U-cup profile made of polyurethane; suitable for medium to heavy duty applications	116	126 (metric and inch)
SIL 	Double-lip U-cup profile made of polyurethane; suitable for low temperatures and light to medium duty applications	117	134 (metric)
PTB 	Polyurethane U-cup profile with incorporated nitrile rubber X-ring, which provides good performance even at low pressure and temperature; suitable for medium duty applications	117	138 (metric and inch)
STD 	Polyurethane U-cup profile with incorporated nitrile rubber X-ring, which provides good performance even at low pressure and temperature; fits narrow housings; suitable for medium duty applications	118	164 (inch)
DZ 	Nitrile rubber primary sealing ring, polyurethane secondary sealing ring; low friction; suitable for medium to heavy duty applications	118	178 (metric and inch)
DZR 	Nitrile rubber primary sealing ring, polyurethane secondary sealing ring, integrated triangular polyamide anti-extrusion ring; improved gap extrusion resistance; suitable for heavy duty applications and extreme pressures	119	184 (metric and inch)

SIL profiles

SIL profiles (→ **fig. 6**) are made of ether-based TPU. They have a double-lip design and a secondary dynamic sealing lip. These seals provide good resistance to hydrolysis (attack from moisture) and good low temperature resilience. SIL profiles are suitable for pressures up to 350 bar (5 075 psi) in light to medium duty applications and are available in metric sizes. Some fit seal housings in accordance with ISO 5597.

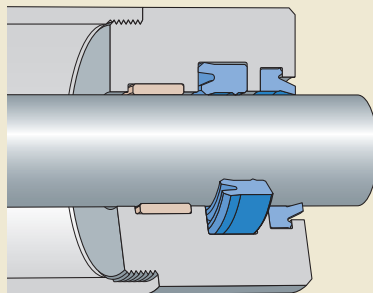
Energized U-cup rod seals

Energized U-cup rod seals incorporate a nitrile rubber (NBR) X-ring in their thermoplastic polyurethane (TPU) U-cup. The X-ring serves as energizer, provides additional sealing force and improves the long-term resilience of the sealing lips. This can be beneficial in applications with low operating pressure or low temperatures.

PTB profiles

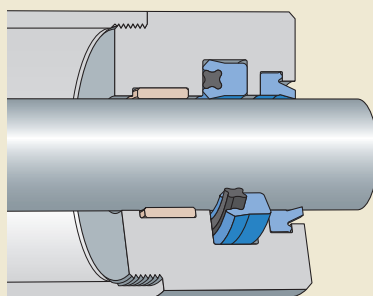
PTB profiles (→ **fig. 7**) are made of LUBRITHANE (TPU). They are suitable for pressures up to 400 bar (5 800 psi) in medium duty applications and are available in metric and inch sizes. Some metric sizes fit seal housings in accordance with ISO 5597.

Fig. 6



SIL

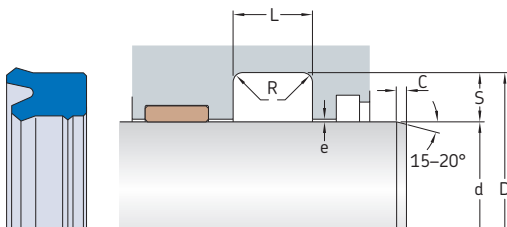
Fig. 7



PTB

3.3 SIL profile rod seals, metric sizes

d 32 – 150 mm



Maximum extrusion gap e

Radial depth S	e _{max} at 60 °C (140 °F) for pressures		
	160 bar	250 bar	350 bar
mm	mm		
3	0,2	0,1	–
4	0,35	0,2	–
5	0,45	0,25	0,1
7,5	0,5	0,3	0,15
10	0,55	0,3	0,15

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Dimensions						Designation
d f8 or h9	D H10	L +0,2	S	R max.	C min.	
mm						–
32	40	6,3	4	0,3	2	SIL 32x40x6.3
	40	9	4	0,3	2	SIL 32x40x9
	42	8	5	0,3	2,5	• SIL 32x42x8
	42	11	5	0,3	2,5	SIL 32x42x11
	47	12,5	7,5	0,4	4	• SIL 32x47x12.5
33	43	11	5	0,3	2,5	SIL 33x43x11
35	43	6,3	4	0,3	2	SIL 35x43x6.3
	45	8	5	0,3	2,5	SIL 35x45x8
	45	11	5	0,3	2,5	SIL 35x45x11
	50	11	7,5	0,4	4	SIL 35x50x11
36	46	8	5	0,3	2,5	• SIL 36x46x8
	51	12,5	7,5	0,4	4	• SIL 36x51x12.5
40	50	8	5	0,3	2,5	• SIL 40x50x8
	50	11	5	0,3	2,5	SIL 40x50x11
	55	11	7,5	0,4	4	SIL 40x55x11
	55	12,5	7,5	0,4	4	• SIL 40x55x12.5
	60	13	5	0,6	5	SIL 40x60x13
42	52	11	5	0,3	2,5	SIL 42x52x11
45	55	8	5	0,3	2,5	• SIL 45x55x8
	55	11	5	0,3	2,5	SIL 45x55x11
	60	11	7,5	0,4	4	SIL 45x60x11
	60	12,5	7,5	0,4	4	• SIL 45x60x12.5
46	56	11	5	0,3	2,5	SIL 46x56x11
50	60	8	5	0,3	2,5	• SIL 50x60x8
	60	11	5	0,3	2,5	SIL 50x60x11
	65	11	7,5	0,4	4	SIL 50x65x11
	65	12,5	7,5	0,4	4	• SIL 50x65x12.5
55	65	11	5	0,3	2,5	SIL 55x65x11
	70	12,5	7,5	0,4	4	SIL 55x70x12.5

• Dimensions in accordance with ISO 5597