



UNP profile data

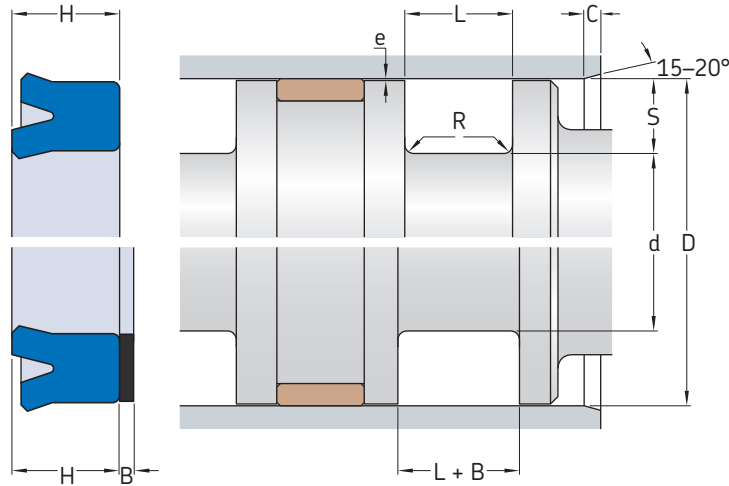


Material codes	Metric sizes → U-1029 Inch sizes → U-1023
Pressure	Up to 350 bar (5 075 psi)
Speed	Pressure ≤ 250 bar (3 625 psi) → up to 1 m/s (3.2 ft/s) Pressure > 250 bar (3 625 psi) → up to 0,5 m/s (1.6 ft/s)
Temperature range	<div style="display: flex; align-items: center;"><div style="margin-right: 10px;">-60 -75</div><div style="margin-right: 10px;">-40 -35 -40 -30</div><div style="margin-right: 10px;"></div><div style="margin-right: 10px;">100 210</div><div style="margin-right: 10px;">120 250</div><div style="margin-right: 10px;">130 [°C] 265 [°F]</div></div> <ul style="list-style-type: none">■ Extreme low temperature range: may be intermittently exposed (e.g. cold start-up) without seal damage, but seal performance may be compromised while in this range■ Temperatures below the recommended operating range: seal performance depends on system design (precision guiding arrangement recommended)■ Recommended operating temperature range for this profile and material■ Temperatures above the recommended operating range: acceptable only with reduced pressure, speed, e-gap and/or with the use of a full-face anti-extrusion ring■ Extreme high temperature range: only occasional short-term exposure (e.g. cylinder in curing oven of a powder coating process)

Maximum values of application parameters (e.g. pressure, speed, temperature, e-gap) should not be applied continuously nor simultaneously.

UNP profile piston seals, metric sizes

D 45 – 250 mm



Maximum extrusion gap e

Radial depth S
 e_{max} at 80 °C (175 °F)
 for pressures

S mm	e_{max} at 80 °C (175 °F) for pressures		
	160 bar	250 bar	350 bar
5	0,45	0,25	0,1
7,5	0,5	0,3	0,15
10	0,55	0,3	0,15
12,5 to 15	0,6	0,3	0,2

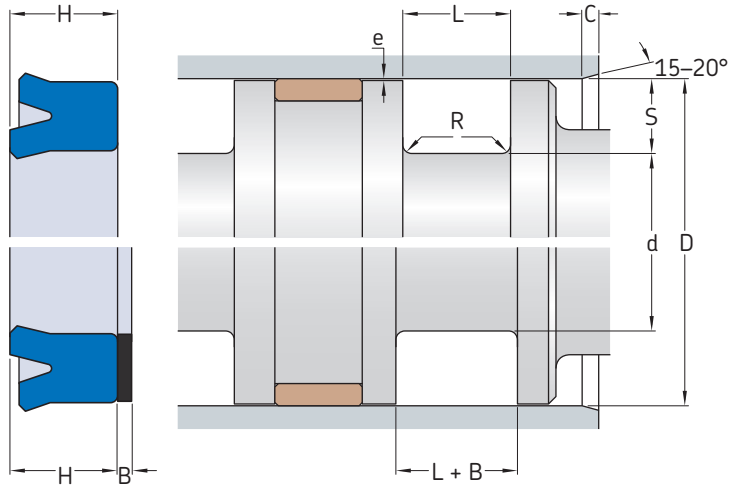
With and without full-face anti-extrusion ring¹⁾

Dimensions								Designation
D	d	L	L+B	H	S	R	C	
H9	h9	+0,2	+0,2	nom.		max.	min.	
mm								-
45	35	7	9	6	5	0,4	5	UNP-45x35x7-E6W
50	40	7	9	6	5	0,4	5	UNP-50x40x7-E6W
	40	8,3	10,3	7,3	5	0,4	5	UNP-50x40x8.3-E6W
63	48	11	13	10	7,5	0,5	7	UNP-63x48x11-E6W
	53	7	9	6	5	0,4	5	UNP-63x53x7-E6W
	53	8,3	10,3	7,3	5	0,4	5	UNP-63x53x8.3-E6W
75	65	7	9	6	5	0,4	5	UNP-75x65x7-E6W
130	115	10	12	9	7,5	0,5	7	UNP-130x115x10-E6W
140	120	16,5	18,5	15	10	0,75	7	UNP-140x120x16.5-E6W
150	135	10	12	9	7,5	0,6	7	UNP-150x135x10-E6W
160	140	16	18	14,5	10	0,75	7	UNP-160x140x15.5-E6W
170	150	13,2	15,2	12	10	0,75	7	UNP-170x150x13-E6W
	155	10	12	9	7,5	0,5	7	UNP-170x155x10-E6W
180	150	20	22	18	15	0,75	7	UNP-180x150x19.5-E6W
	165	10	12	9	7,5	0,5	7	UNP-180x165x10-E6W
190	175	10	12	9	7,5	0,5	7	UNP-190x175x10-E6W
200	175	20,2	22,2	18,2	12,5	0,75	12	UNP-200x175x19.7-E6W
210	190	13,2	15,2	12	10	0,75	7	UNP-210x190x13-E6W
220	200	16,5	18,5	15	10	0,75	7	UNP-220x200x16.5-E6W
230	205	22	24	20	12,5	0,75	12	UNP-230x205x22-E6W
240	220	13,2	15,2	12	10	0,75	7	UNP-240x220x13-E6W
250	230	16,5	18,5	15	10	0,75	7	UNP-250x230x16.5-E6W

¹⁾ In case of higher pressures, SKF provides full-face anti-extrusion rings on request. For additional information, contact SKF.

UNP profile piston seals, metric sizes

D 280 – 300 mm



Maximum extrusion gap e

Radial depth S e_{max} at 80 °C (175 °F) for pressures

	160 bar	250 bar	350 bar
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mm	mm		
5	0,45	0,25	0,1
7,5	0,5	0,3	0,15
10	0,55	0,3	0,15
12,5 to 15	0,6	0,3	0,2

With and without full-face anti-extrusion ring¹⁾

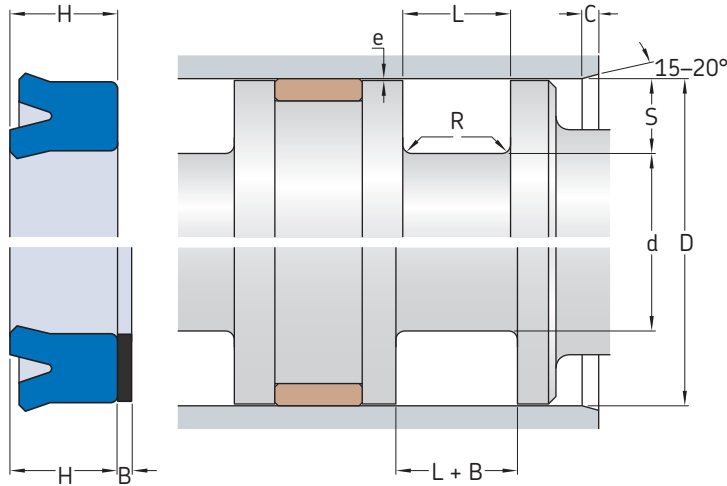
Dimensions								Designation
D	d	L	L+B	H	S	R	C	
H9	h9	+0,2	+0,2	nom.		max.	min.	
mm								-
280	255	21	23	19	12,5	0,75	12	UNP-280x255x20.5-E6W
290	265	21	23	19	12,5	0,75	12	UNP-290x265x20.5-E6W
300	275	17,6	19,6	16	12,5	0,75	12	UNP-300x275x17.5-E6W

Other sizes are available on request

¹⁾ In case of higher pressures, SKF provides full-face anti-extrusion rings on request. For additional information, contact SKF.

UNP profile piston seals, inch sizes

D 1.125 – 5 in.



Maximum extrusion gap e

Radial depth S	e _{max} at 80 °C (175 °F) for pressures		
	2 300 psi	3 600 psi	5 075 psi
in.	in.		
0.125	0.008	0.004	–
0.187	0.014	0.008	–
0.25	0.018	0.01	0.004
0.375	0.02	0.012	0.006
0.5	0.022	0.012	0.006

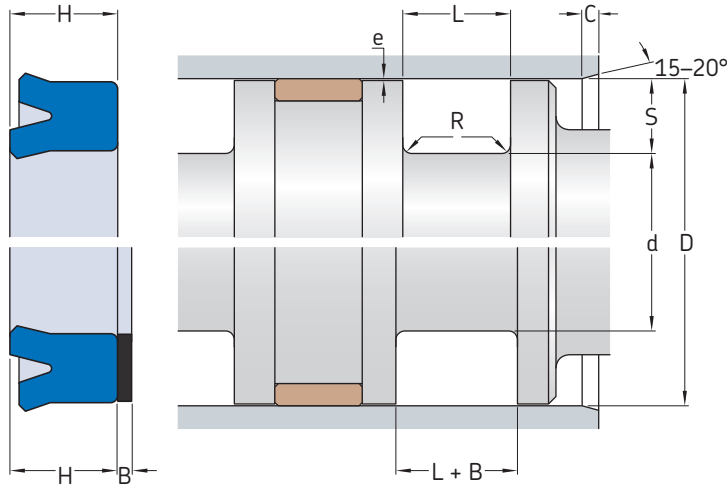
With and without full-face anti-extrusion ring¹⁾

Dimensions										Designation
D	Tolerance	d	Tolerance	L	L+B	H	S	R	C	
				+0.01	+0.01	nom.		max.	min.	
in.										–
1.125	+0.002	0.75	-0.002	0.343	0.437	0.312	0.187	0.015	0.25	UNP187-750-312-H9J
1.5	+0.002	1.125	-0.002	0.275	0.369	0.25	0.187	0.015	0.25	UNP187-1125-250-H9J
	+0.002	1.25	-0.002	0.275	0.338	0.25	0.125	0.01	0.25	UNP125-1250-250-H9J
1.75	+0.002	1.375	-0.002	0.275	0.369	0.25	0.187	0.015	0.25	UNP187-1375-250-H9J
2	+0.002	1.625	-0.002	0.206	0.299	0.187	0.187	0.015	0.25	UNP187-1625-187-H9J
	+0.002	1.625	-0.002	0.343	0.437	0.312	0.187	0.015	0.25	UNP187-1625-312-H9J
2.25	+0.002	1.875	-0.002	0.343	0.437	0.312	0.187	0.015	0.25	UNP187-1875-312-H9J
2.5	+0.003	2	-0.003	0.413	0.538	0.375	0.25	0.02	0.312	UNP250-2000-375-H9J
	+0.002	2.125	-0.002	0.275	0.369	0.25	0.187	0.015	0.25	UNP187-2125-250-H9J
	+0.002	2.125	-0.002	0.413	0.506	0.375	0.187	0.015	0.25	UNP187-2125-375-H9J
2.625	+0.002	2.25	-0.002	0.343	0.437	0.312	0.187	0.015	0.25	UNP187-2250-312-H9J
2.75	+0.003	2.25	-0.003	0.413	0.538	0.375	0.25	0.02	0.312	UNP250-2250-375-H9J
3	+0.002	2	-0.007	0.550	0.800	0.5	0.5	0.04	0.375	UNP500-2000-500-H9J
	+0.003	2.5	-0.003	0.343	0.468	0.312	0.25	0.02	0.312	UNP250-2500-312-H9J
	+0.003	2.5	-0.003	0.413	0.538	0.375	0.25	0.02	0.312	UNP250-2500-375-H9J
	+0.002	2.625	-0.002	0.413	0.506	0.375	0.187	0.015	0.25	UNP187-2625-375-H9J
3.25	+0.005	2.25	-0.007	0.550	0.800	0.5	0.5	0.04	0.375	UNP500-2250-500-H9J
	+0.002	2.875	-0.002	0.413	0.506	0.375	0.187	0.015	0.25	UNP187-2875-375-H9J
3.5	+0.004	2.75	-0.005	0.688	0.875	0.625	0.375	0.032	0.375	UNP375-2750-625-H9J
	+0.003	3	-0.003	0.413	0.538	0.375	0.25	0.02	0.312	UNP250-3000-375-H9J
4	+0.005	3	-0.007	0.550	0.800	0.5	0.5	0.04	0.375	UNP500-3000-500-H9J
	+0.003	3.5	-0.003	0.413	0.538	0.375	0.25	0.02	0.312	UNP250-3500-375-H9J
4.5	+0.004	3.75	-0.005	0.688	0.875	0.625	0.375	0.032	0.375	UNP375-3750-625-H9J
5	+0.004	4.25	-0.005	0.550	0.738	0.5	0.375	0.032	0.375	UNP375-4250-500-H9J
	+0.003	4.5	-0.003	0.413	0.538	0.375	0.25	0.02	0.312	UNP250-4500-375-H9J

¹⁾ In case of higher pressures, SKF provides full-face anti-extrusion rings on request. For additional information, contact SKF.

UNP profile piston seals, inch sizes

D 5.5 – 6.5 in.



Maximum extrusion gap e

Radial depth e_{max} at 80 °C (175 °F) for pressures

S 2 300 psi 3 600 psi 5 075 psi

in.	in.		
0.125	0.008	0.004	–
0.187	0.014	0.008	–
0.25	0.018	0.01	0.004
0.375	0.02	0.012	0.006
0.5	0.022	0.012	0.006

For additional information → page 34

With and without full-face anti-extrusion ring¹⁾

Dimensions										Designation
D	Tolerance	d	Tolerance	L	L+B	H	S	R	C	
in.				+0.01	+0.01	nom.		max.	min.	
										–
5.5	+0.004	4.75	-0.005	0.688	0.875	0.625	0.375	0.032	0.375	UNP375-4750-625-H9J
6	+0.004	5.25	-0.005	0.413	0.600	0.375	0.375	0.032	0.375	UNP375-5250-375-H9J
6.5	+0.004	5.75	-0.005	0.688	0.875	0.625	0.375	0.032	0.375	UNP375-5750-625-H9J

Other sizes are available on request

¹⁾ In case of higher pressures, SKF provides full-face anti-extrusion rings on request. For additional information, contact SKF.

Seal & Design Able Division

5533 Steeles Avenue West Unit 11
Toronto, Ontario M9L 1S7
Ph: (416) 741-0750
Gasket@AbleSealAndDesign.com

Seal & Design Corporate Headquarters

4015 Casilio Parkway
Clarence, NY 14031
Ph: (716) 759-2222
Info@SealAndDesign.com
www.SealAndDesign.com

Seal & Design Higbee Division

6741 Thompson Rd N
Syracuse, NY 13221
Ph: (315) 432-8021
Sales@Higbee-Inc.com