



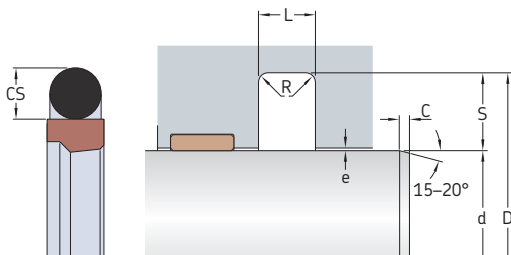
S9B profile data



Materials	O-ring energizer: NBR A-8501 Slide ring: PTFE 741 or X-ECOPUR
Pressure	X-ECOPUR slide ring → up to 600 bar (8 700 psi) PTFE 741 slide ring → up to 400 bar (5 800 psi)
Speed	Up to 2 m/s (6.5 ft/s)
Temperature range	<p>With PTFE 741 slide ring:</p> <p>-40 -30 -20 110 120 [°C] -40 -20 -5 230 250 [°F]</p> <p>With X-ECOPUR slide ring:</p> <p>-40 -30 -25 110 120 130 [°C] -40 -20 -15 230 250 265 [°F]</p> <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 these materials Temperatures above the recommended operating range: acceptable only with reduced pressure, speed, and/or e-gap 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.

S9B profile buffer seals, metric sizes d 8 – 40 mm



Maximum extrusion gap e with X-ECOPUR slide ring

Radial depth S	e_{\max} at 80 °C (175 °F) for pressures			
	160 bar	250 bar	400 bar	600 bar
mm	mm			
3,65	0,4	0,3	0,2	0,1
5,35	0,5	0,4	0,3	0,2
7,55	0,5	0,4	0,3	0,2
10,25	0,7	0,5	0,4	0,2

Maximum extrusion gap e with PTFE slide ring

Radial depth S	e_{\max} at 80 °C (175 °F) for pressures		
	160 bar	250 bar	400 bar
mm	mm		
3,65	0,35	0,25	0,15
5,35	0,4	0,3	0,2
7,55	0,5	0,35	0,25
10,25	0,6	0,45	0,35

Cylinder dimensions

d	D	L	S	R	C	CS
f8	H9	+0,2		max.	min.	nom.
mm						

Designations

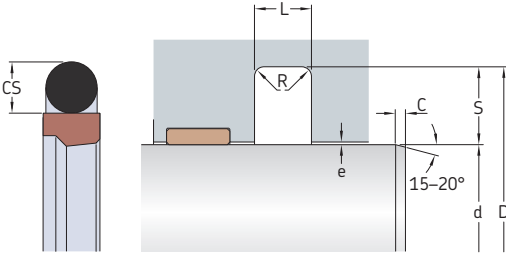
With slide ring made of
X-ECOPUR

PTFE 741

8	15,3	3,2	3,65	0,6	3,5	2,62	S9B-8x15,3x3,2	S9B-8x15,3x3,2-AD1
10	17,3	3,2	3,65	0,6	3,5	2,62	S9B-10x17,3x3,2	S9B-10x17,3x3,2-AD1
14	21,3	3,2	3,65	0,6	3,5	2,62	S9B-14x21,3x3,2	S9B-14x21,3x3,2-AD1
16	23,3	3,2	3,65	0,6	3,5	2,62	S9B-16x23,3x3,2	S9B-16x23,3x3,2-AD1
18	25,3	3,2	3,65	0,6	3,5	2,62	S9B-18x25,3x3,2	S9B-18x25,3x3,2-AD1
20	30,7	4,2	5,35	1	4,5	3,53	S9B-20x30,7x4,2	S9B-20x30,7x4,2-AD1
25	35,7	4,2	5,35	1	4,5	3,53	S9B-25x35,7x4,2	S9B-25x35,7x4,2-AD1
28	38,7	4,2	5,35	1	4,5	3,53	S9B-28x38,7x4,2	S9B-28x38,7x4,2-AD1
32	42,7	4,2	5,35	1	4,5	3,53	S9B-32x42,7x4,2	S9B-32x42,7x4,2-AD1
35	45,7	4,2	5,35	1	4,5	3,53	S9B-35x45,7x4,2	S9B-35x45,7x4,2-AD1
36	46,7	4,2	5,35	1	4,5	3,53	S9B-36x46,7x4,2	S9B-36x46,7x4,2-AD1
40	55,1	6,3	7,55	1,3	5	5,33	S9B-40x55,1x6,3	S9B-40x55,1x6,3-AD1

S9B profile buffer seals, metric sizes

d 45 – 240 mm



Maximum extrusion gap e with X-ECOPUR slide ring

Radial depth S	e_{\max} at 80 °C (175 °F) for pressures			
	160 bar	250 bar	400 bar	600 bar
mm	mm			
3,65	0,4	0,3	0,2	0,1
5,35	0,5	0,4	0,3	0,2
7,55	0,5	0,4	0,3	0,2
10,25	0,7	0,5	0,4	0,2

Maximum extrusion gap e with PTFE slide ring

Radial depth S	e_{\max} at 80 °C (175 °F) for pressures		
	160 bar	250 bar	400 bar
mm	mm		
3,65	0,35	0,25	0,15
5,35	0,4	0,3	0,2
7,55	0,5	0,35	0,25
10,25	0,6	0,45	0,35

Cylinder dimensions

d	D	L	S	R	C	CS
f8	H9	+0,2		max.	min.	nom.
mm						

Designations

With slide ring made of
X-ECOPUR

PTFE 741

45	60,1	6,3	7,55	1,3	5	5,33	S9B-45x60,1x6,3	S9B-45x60,1x6,3-AD1
50	65,1	6,3	7,55	1,3	5	5,33	S9B-50x65,1x6,3	S9B-50x65,1x6,3-AD1
55	70,1	6,3	7,55	1,3	5	5,33	S9B-55x70,1x6,3	S9B-55x70,1x6,3-AD1
63	78,1	6,3	7,55	1,3	5	5,33	S9B-63x78,1x6,3	S9B-63x78,1x6,3-AD1
75	90,1	6,3	7,55	1,3	5	5,33	S9B-75x90,1x6,3	S9B-75x90,1x6,3-AD1
80	95,1	6,3	7,55	1,3	5	5,33	S9B-80x95,1x6,3	S9B-80x95,1x6,3-AD1
90	105,1	6,3	7,55	1,3	5	5,33	S9B-90x105,1x6,3	S9B-90x105,1x6,3-AD1
100	115,1	6,3	7,55	1,3	5	5,33	S9B-100x115,1x6,3	S9B-100x115,1x6,3-AD1
110	125,1	6,3	7,55	1,3	5	5,33	S9B-110x125,1x6,3	S9B-110x125,1x6,3-AD1
125	140,1	6,3	7,55	1,3	5	5,33	S9B-125x140,1x6,3	S9B-125x140,1x6,3-AD1
140	155,1	6,3	7,55	1,3	5	5,33	S9B-140x155,1x6,3	S9B-140x155,1x6,3-AD1
160	175,1	6,3	7,55	1,3	5	5,33	S9B-160x175,1x6,3	S9B-160x175,1x6,3-AD1

Cylinder dimensions**Designations**
With slide ring made of
X-ECOPUR

PTFE 741

d f8	D H9	L +0,2	S	R max.	C min.	CS nom.
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mm

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180	195,1	6,3	7,55	1,3	5	5,33	S9B-180x195,1x6,3	S9B-180x195,1x6,3-AD1
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200	215,1	6,3	7,55	1,3	5	5,33	S9B-200x215,1x6,3	S9B-200x215,1x6,3-AD1
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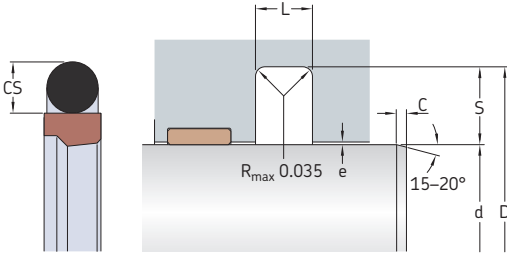
240	260,5	8,1	10,25	1,8	6	7	S9B-240x260,5x8,1	S9B-240x260,5x8,1-AD1
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Other sizes are available on request

**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

S9B profile buffer seals, inch sizes

d 1 – 10 in.



Maximum extrusion gap e with X-ECOPUR slide ring

Radial depth S	e_{\max} at 80 °C (175 °F) for pressures			
	2 300 psi	3 600 psi	5 800 psi	8 700 psi
in.	in.			
0.149	0.016	0.012	0.008	0.004
0.212	0.02	0.016	0.012	0.008
0.308	0.02	0.016	0.012	0.008
0.415	0.028	0.02	0.016	0.008

Maximum extrusion gap e with PTFE slide ring

Radial depth S	e_{\max} at 80 °C (175 °F) for pressures		
	2 300 psi	3 600 psi	5 800 psi
in.	in.		
0.149	0,014	0,01	0,006
0.212	0,016	0,012	0,008
0.308	0,020	0,014	0,01
0.415	0,024	0,018	0,014

Cylinder dimensions

Designations

With slide ring made of
X-ECOPUR PTFE 741

d	Tolerance	D	Tolerance	L +0.01	S	C min.	CS nom.	Designations	
in.								X-ECOPUR	PTFE 741
1	-0.002	1.298	+0.003	0.126	0.149	0.14	0.103	S9B1-1000	S9B1-1000-AD1
	-0.003	1.424	+0.004	0.166	0.212	0.18	0.139	S9B2-1000	S9B2-1000-AD1
1.125	-0.002	1.423	+0.003	0.126	0.149	0.14	0.103	S9B1-1125	S9B1-1125-AD1
1.25	-0.002	1.548	+0.003	0.126	0.149	0.14	0.103	S9B1-1250	S9B1-1250-AD1
	-0.003	1.674	+0.004	0.166	0.212	0.18	0.139	S9B2-1250	S9B2-1250-AD1
1.375	-0.003	1.799	+0.004	0.166	0.212	0.18	0.139	S9B2-1375	S9B2-1375-AD1
1.5	-0.002	1.798	+0.003	0.126	0.149	0.14	0.103	S9B1-1500	S9B1-1500-AD1
	-0.003	1.924	+0.004	0.166	0.212	0.18	0.139	S9B2-1500	S9B2-1500-AD1
	-0.004	2.116	+0.005	0.247	0.308	0.2	0.21	S9B3-1500	S9B3-1500-AD1
1.75	-0.002	2.048	+0.003	0.126	0.149	0.14	0.103	S9B1-1750	S9B1-1750-AD1
	-0.003	2.174	+0.004	0.166	0.212	0.18	0.139	S9B2-1750	S9B2-1750-AD1
	-0.004	2.366	+0.005	0.247	0.308	0.2	0.21	S9B3-1750	S9B3-1750-AD1
1.875	-0.003	2.299	+0.004	0.166	0.212	0.18	0.139	S9B2-1875	S9B2-1875-AD1
	-0.004	2.424	+0.005	0.247	0.308	0.2	0.21	S9B3-2000	S9B3-2000-AD1
2	-0.003	2.424	+0.004	0.166	0.212	0.18	0.139	S9B2-2000	S9B2-2000-AD1
	-0.004	2.616	+0.005	0.247	0.308	0.2	0.21	S9B3-2000	S9B3-2000-AD1
2.25	-0.003	2.674	+0.004	0.166	0.212	0.18	0.139	S9B2-2250	S9B2-2250-AD1
	-0.004	2.866	+0.005	0.247	0.308	0.2	0.21	S9B3-2250	S9B3-2250-AD1
2.5	-0.003	2.924	+0.004	0.166	0.212	0.18	0.139	S9B2-2500	S9B2-2500-AD1
	-0.004	3.116	+0.005	0.247	0.308	0.2	0.21	S9B3-2500	S9B3-2500-AD1
2.625	-0.004	3.241	+0.005	0.247	0.308	0.2	0.21	S9B3-2625	S9B3-2625-AD1
	-0.003	3.049	+0.004	0.166	0.212	0.18	0.139	S9B2-2750	S9B2-2750-AD1
	-0.004	3.241	+0.005	0.247	0.308	0.2	0.21	S9B3-2750	S9B3-2750-AD1

Cylinder dimensions								Designations With slide ring made of X-ECOPUR PTFE 741	
d	Tolerance	D	Tolerance	L +0.01	S	C min.	CS nom.		
in.								-	
3	-0.003	3.424	+0.004	0.166	0.212	0.18	0.139	S9B2-3000	S9B2-3000-AD1
	-0.004	3.616	+0.005	0.247	0.308	0.2	0.21	S9B3-3000	S9B3-3000-AD1
3.25	-0.004	3.866	+0.005	0.247	0.308	0.2	0.21	S9B3-3250	S9B3-3250-AD1
3.5	-0.004	4.116	+0.005	0.247	0.308	0.2	0.21	S9B3-3500	S9B3-3500-AD1
3.75	-0.004	4.366	+0.005	0.247	0.308	0.2	0.21	S9B3-3750	S9B3-3750-AD1
4	-0.003	4.424	+0.004	0.166	0.212	0.18	0.139	S9B2-4000	S9B2-4000-AD1
	-0.004	4.616	+0.005	0.247	0.308	0.2	0.21	S9B3-4000	S9B3-4000-AD1
	-0.005	4.83	+0.006	0.32	0.415	0.25	0.275	S9B4-4000	S9B4-4000-AD1
4.25	-0.004	4.866	+0.005	0.247	0.308	0.2	0.21	S9B3-4250	S9B3-4250-AD1
	-0.005	5.08	+0.006	0.32	0.415	0.25	0.275	S9B4-4250	S9B4-4250-AD1
4.5	-0.004	5.116	+0.005	0.247	0.308	0.2	0.21	S9B3-4500	S9B3-4500-AD1
	-0.005	5.33	+0.006	0.32	0.415	0.25	0.275	S9B4-4500	S9B4-4500-AD1
4.75	-0.004	5.366	+0.005	0.247	0.308	0.2	0.21	S9B3-4750	S9B3-4750-AD1
	-0.005	5.58	+0.006	0.32	0.415	0.25	0.275	S9B4-4750	S9B4-4750-AD1
5	-0.004	5.616	+0.005	0.247	0.308	0.2	0.21	S9B3-5000	S9B3-5000-AD1
	-0.005	5.83	+0.006	0.32	0.415	0.25	0.275	S9B4-5000	S9B4-5000-AD1
5.25	-0.004	5.866	+0.005	0.247	0.308	0.2	0.21	S9B3-5250	S9B3-5250-AD1
	-0.005	6.08	+0.006	0.32	0.415	0.25	0.275	S9B4-5250	S9B4-5250-AD1
5.5	-0.004	6.116	+0.005	0.247	0.308	0.2	0.21	S9B3-5500	S9B3-5500-AD1
	-0.005	6.33	+0.006	0.32	0.415	0.25	0.275	S9B4-5500	S9B4-5500-AD1
5.75	-0.004	6.366	+0.005	0.247	0.308	0.2	0.21	S9B3-5750	S9B3-5750-AD1
	-0.005	6.58	+0.006	0.32	0.415	0.25	0.275	S9B4-5750	S9B4-5750-AD1
6	-0.004	6.616	+0.005	0.247	0.308	0.2	0.21	S9B3-6000	S9B3-6000-AD1
	-0.005	6.83	+0.006	0.32	0.415	0.25	0.275	S9B4-6000	S9B4-6000-AD1
6.25	-0.004	6.866	+0.005	0.247	0.308	0.2	0.21	S9B3-6250	S9B3-6250-AD1
	-0.005	7.08	+0.006	0.32	0.415	0.25	0.275	S9B4-6250	S9B4-6250-AD1
6.5	-0.004	7.116	+0.005	0.247	0.308	0.2	0.21	S9B3-6500	S9B3-6500-AD1
	-0.005	7.33	+0.006	0.32	0.415	0.25	0.275	S9B4-6500	S9B4-6500-AD1
6.75	-0.004	7.366	+0.005	0.247	0.308	0.2	0.21	S9B3-6750	S9B3-6750-AD1
	-0.005	7.58	+0.006	0.32	0.415	0.25	0.275	S9B4-6750	S9B4-6750-AD1
7	-0.004	7.616	+0.005	0.247	0.308	0.2	0.21	S9B3-7000	S9B3-7000-AD1
	-0.005	7.83	+0.006	0.32	0.415	0.25	0.275	S9B4-7000	S9B4-7000-AD1
7.25	-0.004	7.866	+0.005	0.247	0.308	0.2	0.21	S9B3-7250	S9B3-7250-AD1
	-0.005	8.08	+0.006	0.32	0.415	0.25	0.275	S9B4-7250	S9B4-7250-AD1
7.5	-0.004	8.116	+0.005	0.247	0.308	0.2	0.21	S9B3-7500	S9B3-7500-AD1
	-0.005	8.33	+0.006	0.32	0.415	0.25	0.275	S9B4-7500	S9B4-7500-AD1
7.75	-0.004	8.366	+0.005	0.247	0.308	0.2	0.21	S9B3-7750	S9B3-7750-AD1
	-0.005	8.58	+0.006	0.32	0.415	0.25	0.275	S9B4-7750	S9B4-7750-AD1
8	-0.004	8.616	+0.005	0.247	0.308	0.2	0.21	S9B3-8000	S9B3-8000-AD1
	-0.005	8.83	+0.006	0.32	0.415	0.25	0.275	S9B4-8000	S9B4-8000-AD1
8.5	-0.005	9.33	+0.006	0.32	0.415	0.25	0.275	S9B4-8500	S9B4-8500-AD1
9	-0.005	9.83	+0.006	0.32	0.415	0.25	0.275	S9B4-9000	S9B4-9000-AD1
9.5	-0.005	10.33	+0.006	0.32	0.415	0.25	0.275	S9B4-9500	S9B4-9500-AD1
10	-0.005	10.83	+0.006	0.32	0.415	0.25	0.275	S9B4-10000	S9B4-10000-AD1

Other sizes are available on request