



## APR profile data

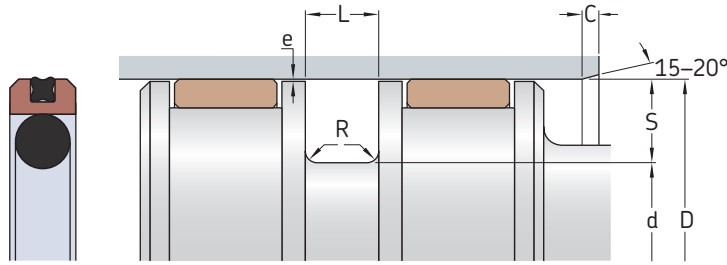


<b>Material codes</b>	Slide ring: 741 X-ring and energizer: A-8501
<b>Pressure</b>	Up to 350 bar (5 075 psi)
<b>Speed</b>	Up to 1 m/s (3.2 ft/s)
<b>Temperature range</b>	<p>-60 -50 -40 100 120 140 [°C] -75 -60 -40 210 250 285 [°F]</p> <ul style="list-style-type: none"><li> Extreme low temperature range: may be intermittently exposed (e.g. cold start-up) without seal damage, but seal performance may be compromised while in this range</li><li> Temperatures below the recommended operating range: seal performance depends on system design (precision guiding arrangement recommended)</li><li> <b>Recommended operating temperature range for this profile and material</b></li><li> Temperatures above the recommended operating range: acceptable only with reduced pressure, speed, and/or e-gap</li><li> Extreme high temperature range: only occasional short-term exposure (e.g. cylinder in curing oven of a powder coating process)</li></ul>
<b>Dimension standards</b>	Some metric sizes fit seal housings in accordance with ISO 7425-1.

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

## APR profile piston seals, metric sizes

D 20 – 90 mm



### Maximum extrusion gap e

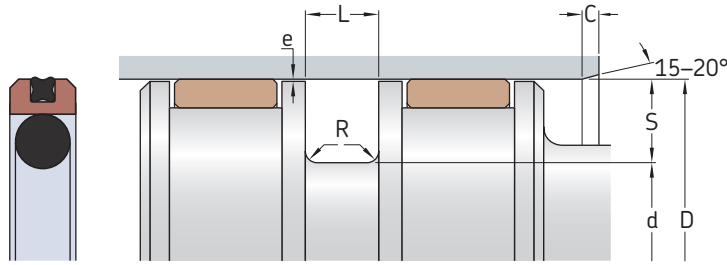
Radial depth S	e <sub>max</sub> at 80 °C (175 °F) for pressures		
	70 bar	200 bar	350 bar
mm	mm		
5,5	0,46	0,15	0,1
7,75	0,6	0,2	0,13
10,5	0,76	0,25	0,15

Dimensions						Designation
D H9	d h9	L +0,2	S	R max.	C min.	
mm						-
20	9	4,2	5,5	0,4	3	APR-20x9x4.2-AD1
22	11	4,2	5,5	0,4	3	APR-22x11x4.2-AD1
25	14	4,2	5,5	0,4	3	• APR-25x14x4.2-AD1
28	17	4,2	5,5	0,4	3	APR-28x17x4.2-AD1
30	19	4,2	5,5	0,4	3	APR-30x19x4.2-AD1
35	24	4,2	5,5	0,4	3	APR-35x24x4.2-AD1
40	29	4,2	5,5	0,4	3	• APR-40x29x4.2-AD1
42	31	4,2	5,5	0,4	3	APR-42x31x4.2-AD1
45	34	4,2	5,5	0,4	3	APR-45x34x4.2-AD1
50	39	4,2	5,5	0,4	3	• APR-50x39x4.2-AD1
55	44	4,2	5,5	0,4	3	APR-55x44x4.2-AD1
60	49	4,2	5,5	0,4	3	APR-60x49x4.2-AD1
63	52	4,2	5,5	0,4	3	• APR-63x52x4.2-AD1
65	54	4,2	5,5	0,4	3	APR-65x54x4.2-AD1
70	59	4,2	5,5	0,4	3	APR-70x59x4.2-AD1
75	64	4,2	5,5	0,4	3	APR-75x64x4.2-AD1
80	69	4,2	5,5	0,4	3	• APR-80x69x4.2-AD1
85	69,5	6,3	7,75	0,6	4	APR-85x69.5x6.3-AD1
90	74,5	6,3	7,75	0,6	4	APR-90x74.5x6.3-AD1

• Seal housing dimensions in accordance with ISO 7425-1

## APR profile piston seals, metric sizes

D 95 – 190 mm



### Maximum extrusion gap e

Radial depth S	e <sub>max</sub> at 80 °C (175 °F) for pressures		
	70 bar	200 bar	350 bar
mm	mm		
5,5	0,46	0,15	0,1
7,75	0,6	0,2	0,13
10,5	0,76	0,25	0,15

### Dimensions

### Designation

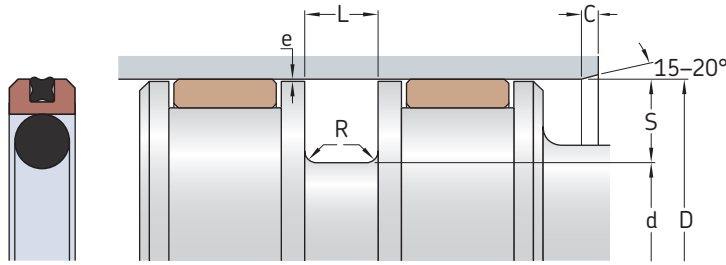
D	d	L	S	R	C	Designation
H9	h9	+0,2		max.	min.	
mm						-
95	79,5	6,3	7,75	0,6	4	APR-95x79.5x6.3-AD1
100	84,5	6,3	7,75	0,6	4	• APR-100x84.5x6.3-AD1
105	89,5	6,3	7,75	0,6	4	APR-105x89.5x6.3-AD1
110	94,5	6,3	7,75	0,6	4	APR-110x94.5x6.3-AD1
115	99,5	6,3	7,75	0,6	4	APR-115x99.5x6.3-AD1
120	104,5	6,3	7,75	0,6	4	APR-120x104.5x6.3-AD1
125	109,5	6,3	7,75	0,6	4	• APR-125x109.5x6.3-AD1
130	114,5	6,3	7,75	0,6	4	APR-130x114.5x6.3-AD1
132	116,5	6,3	7,75	0,6	4	APR-132x116.5x6.3-AD1
135	119,5	6,3	7,75	0,6	4	APR-135x119.5x6.3-AD1
140	124,5	6,3	7,75	0,6	4	APR-140x124.5x6.3-AD1
145	129,5	6,3	7,75	0,6	4	APR-145x129.5x6.3-AD1
150	134,5	6,3	7,75	0,6	4	APR-150x134.5x6.3-AD1
155	139,5	6,3	7,75	0,6	4	APR-155x139.5x6.3-AD1
160	139	8,1	10,5	0,75	4	• APR-160x139x8.1-AD1
165	144	8,1	10,5	0,75	4	APR-165x144x8.1-AD1
170	149	8,1	10,5	0,75	4	APR-170x149x8.1-AD1
175	154	8,1	10,5	0,75	4	APR-175x154x8.1-AD1
180	159	8,1	10,5	0,75	4	APR-180x159x8.1-AD1
190	169	8,1	10,5	0,75	4	APR-190x169x8.1-AD1

Other sizes are available on request

- Seal housing dimensions in accordance with ISO 7425-1

## APR profile piston seals, inch sizes

D 1 – 6 in.



### Maximum extrusion gap e

Radial depth S  
 Series e<sub>max</sub> at 80 °C (175 °F)  
 for pressures  
 1 000 psi 3 000 psi 5 075 psi

in. – in.

<b>0.212</b>	APR2	0.018	0.006	0.004
<b>0.308</b>	APR3	0.024	0.008	0.005
<b>0.42</b>	APR4	0.03	0.01	0.006
<b>0.46</b>	APR5	0.03	0.01	0.006

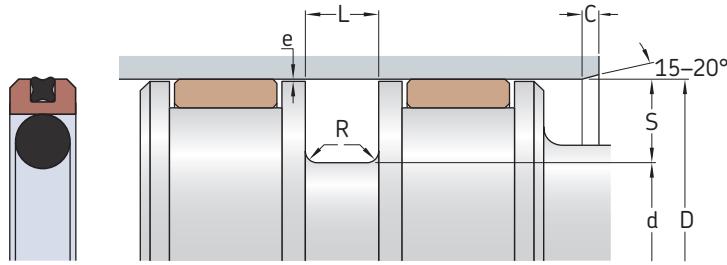
### Dimensions

### Designation

D	Tolerance	d	Tolerance	L +0.005	S	R max.	C min.	Designation
in.								–
<b>1</b>	+0.003	0.576	-0.003	0.21	0.212	0.015	0.156	<b>APR2-1000-AD1</b>
<b>1.25</b>	+0.003	0.826	-0.003	0.21	0.212	0.015	0.156	<b>APR2-1250-AD1</b>
<b>1.5</b>	+0.003	1.076	-0.003	0.21	0.212	0.015	0.156	<b>APR2-1500-AD1</b>
<b>1.75</b>	+0.003	1.326	-0.003	0.21	0.212	0.015	0.156	<b>APR2-1750-AD1</b>
<b>2</b>	+0.003	1.576	-0.003	0.21	0.212	0.015	0.156	<b>APR2-2000-AD1</b>
<b>2.25</b>	+0.004	1.634	-0.004	0.288	0.308	0.025	0.187	<b>APR3-2250-AD1</b>
<b>2.5</b>	+0.004	1.884	-0.004	0.288	0.308	0.025	0.187	<b>APR3-2500-AD1</b>
<b>2.75</b>	+0.004	2.134	-0.004	0.288	0.308	0.025	0.187	<b>APR3-2750-AD1</b>
<b>3</b>	+0.004	2.384	-0.004	0.288	0.308	0.025	0.187	<b>APR3-3000-AD1</b>
<b>3.25</b>	+0.004	2.634	-0.004	0.288	0.308	0.025	0.187	<b>APR3-3250-AD1</b>
<b>3.5</b>	+0.004	2.884	-0.004	0.288	0.308	0.025	0.187	<b>APR3-3500-AD1</b>
<b>3.75</b>	+0.004	3.134	-0.004	0.288	0.308	0.025	0.187	<b>APR3-3750-AD1</b>
<b>4</b>	+0.004	3.384	-0.004	0.288	0.308	0.025	0.187	<b>APR3-4000-AD1</b>
<b>4.25</b>	+0.004	3.634	-0.004	0.288	0.308	0.025	0.187	<b>APR3-4250-AD1</b>
<b>4.5</b>	+0.004	3.884	-0.004	0.288	0.308	0.025	0.187	<b>APR3-4500-AD1</b>
<b>4.75</b>	+0.004	4.134	-0.004	0.288	0.308	0.025	0.187	<b>APR3-4750-AD1</b>
<b>5</b>	+0.004	4.384	-0.004	0.288	0.308	0.025	0.187	<b>APR3-5000-AD1</b>
<b>5.25</b>	+0.004	4.634	-0.004	0.288	0.308	0.025	0.187	<b>APR3-5250-AD1</b>
<b>5.5</b>	+0.005	4.66	-0.005	0.375	0.42	0.035	0.25	<b>APR4-5500-AD1</b>
<b>5.75</b>	+0.005	4.91	-0.005	0.375	0.42	0.035	0.25	<b>APR4-5750-AD1</b>
<b>6</b>	+0.005	5.16	-0.005	0.375	0.42	0.035	0.25	<b>APR4-6000-AD1</b>

## APR profile piston seals, inch sizes

D 6.25 – 14 in.



### Maximum extrusion gap e

Radial Series  $e_{max}$  at 80 °C (175 °F)  
depth for pressures  
S 1 000 psi 3 000 psi 5 075 psi

in.	–	in.		
<b>0.212</b>	APR2	0.018	0.006	0.004
<b>0.308</b>	APR3	0.024	0.008	0.005
<b>0.42</b>	APR4	0.03	0.01	0.006
<b>0.46</b>	APR5	0.03	0.01	0.006

### Dimensions

D	Tolerance	d	Tolerance	L	S	R	C	Designation
				+0.005		max.	min.	
in.								–
<b>6.25</b>	+0.005	5.41	–0.005	0.375	0.42	0.035	0.25	<b>APR4-6250-AD1</b>
<b>6.5</b>	+0.005	5.66	–0.005	0.375	0.42	0.035	0.25	<b>APR4-6500-AD1</b>
<b>6.75</b>	+0.005	5.91	–0.005	0.375	0.42	0.035	0.25	<b>APR4-6750-AD1</b>
<b>7</b>	+0.005	6.16	–0.005	0.375	0.42	0.035	0.25	<b>APR4-7000-AD1</b>
<b>7.25</b>	+0.005	6.41	–0.005	0.375	0.42	0.035	0.25	<b>APR4-7250-AD1</b>
<b>7.5</b>	+0.005	6.66	–0.005	0.375	0.42	0.035	0.25	<b>APR4-7500-AD1</b>
<b>7.75</b>	+0.005	6.91	–0.005	0.375	0.42	0.035	0.25	<b>APR4-7750-AD1</b>
<b>8</b>	+0.006	7.16	–0.006	0.375	0.42	0.035	0.25	<b>APR4-8000-AD1</b>
<b>8.5</b>	+0.006	7.66	–0.006	0.375	0.42	0.035	0.25	<b>APR4-8500-AD1</b>
<b>9</b>	+0.006	8.16	–0.006	0.375	0.42	0.035	0.25	<b>APR4-9000-AD1</b>
<b>9.5</b>	+0.006	8.66	–0.006	0.375	0.42	0.035	0.25	<b>APR4-9500-AD1</b>
<b>10</b>	+0.006	9.16	–0.006	0.375	0.42	0.035	0.25	<b>APR4-10000-AD1</b>
<b>10.5</b>	+0.008	9.58	–0.008	0.375	0.46	0.035	0.25	<b>APR5-10500-AD1</b>
<b>11</b>	+0.008	10.08	–0.008	0.375	0.46	0.035	0.25	<b>APR5-11000-AD1</b>
<b>11.5</b>	+0.008	10.58	–0.008	0.375	0.46	0.035	0.25	<b>APR5-11500-AD1</b>
<b>12</b>	+0.008	11.08	–0.008	0.375	0.46	0.035	0.25	<b>APR5-12000-AD1</b>
<b>12.5</b>	+0.008	11.58	–0.008	0.375	0.46	0.035	0.25	<b>APR5-12500-AD1</b>
<b>13</b>	+0.008	12.08	–0.008	0.375	0.46	0.035	0.25	<b>APR5-13000-AD1</b>
<b>13.5</b>	+0.008	12.58	–0.008	0.375	0.46	0.035	0.25	<b>APR5-13500-AD1</b>
<b>14</b>	+0.008	13.08	–0.008	0.375	0.46	0.035	0.25	<b>APR5-14000-AD1</b>

Other sizes are available on request

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