



ROD SEAL

RS027

Features:

Rod seal profile RS027 is a single acting U cup type seal with energizer and anti extrusion polyamide ring for very high pressure and heavy duty application.

Composition:

SEAL COMBINATION	SEAL RING COMPOUND	O-RING COMPOUND	AE-RING COMPOUND	TEMP. RANGE	WORKING PRESSURE (Max.)	SURFACE SPEED (Max.)
RS027-01	PU36/ PU20/PU09	NB02	PA22	-35 to 110°C	500 Bar	0.5 m/s

For compound detail please refer Royal seal compounds. (Section - III)

Properties:

- High resistance to abrasion
- Easy installation
- Anti-extrusion ring prevent extrusion in high pressure conditions

Application:

- Mobile Hydraulics
- Injection molding machines
- Machine tools
- Agricultural equipment
- Construction Machineries.

Surface finish:

Roughness depth	R(max)	Ra
Sliding surface	≤ 2.5 μm	0.05-0.3 μm
Bottom of groove	≤ 6.3 μm	≤ 1.6 μm
Side of groove	≤ 15 μm	≤ 3μm

Extrusion gap dimension :

The gap dimension on the non-pressurised side of the seal is decisive for sealing function. Figures show the maximum radial clearance on each side using maximum gland bush groove inner dia and minimum rod dia considering respective tolerances.

Maximum permissible gap (S) for Metric Sizes (mm)			
160 bar	260 bar	320 bar	400 bar
0.25	0.20	0.18	0.15

Maximum permissible gap (S) for Imperial Sizes (inch)			
160 bar	260 bar	320 bar	400 bar
0.010	0.008	0.007	0.006



Minimum chamfer C for :

Metric Sizes (mm)						
DN - dN	Up to 8	8.1 to 10	10.1 to 15	15.1 to 20	20.1 to 25	25.1 and above
C	4.0	4.5	6.0	7.5	8.0	10.0

Imperial Sizes (inch)						
DN - dN	Up to 0.314	0.315 to 0.393	0.394 to 0.590	0.591 to 0.787	0.788 to 0.984	0.985 and above
C	0.157	0.177	0.236	0.295	0.315	0.393

Fitting:

RS027 is very easy to fit. Careful fitting of the seal is a prerequisite for its perfect functioning.

Ordering format:

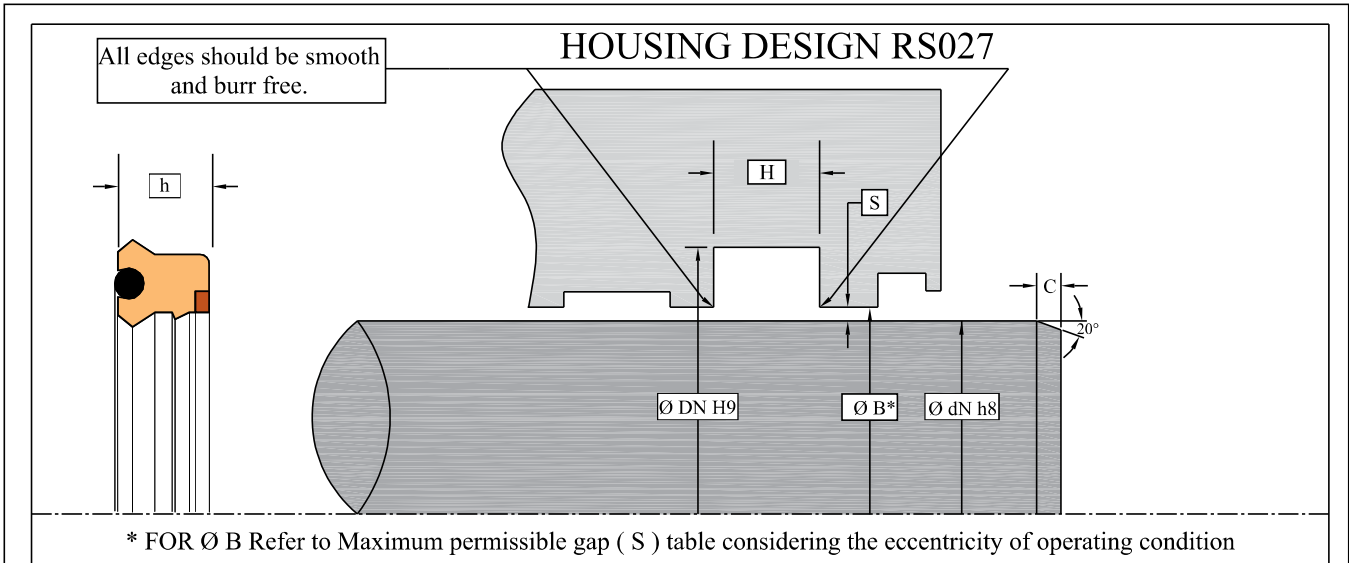
Please mention ROYAL order code in your order.

Example: Metric Size 30.00 X 40.00 X 5.70/6.30

Order code is **RS027-M-01-030.00 X 040.00 X 05.7/06.3**

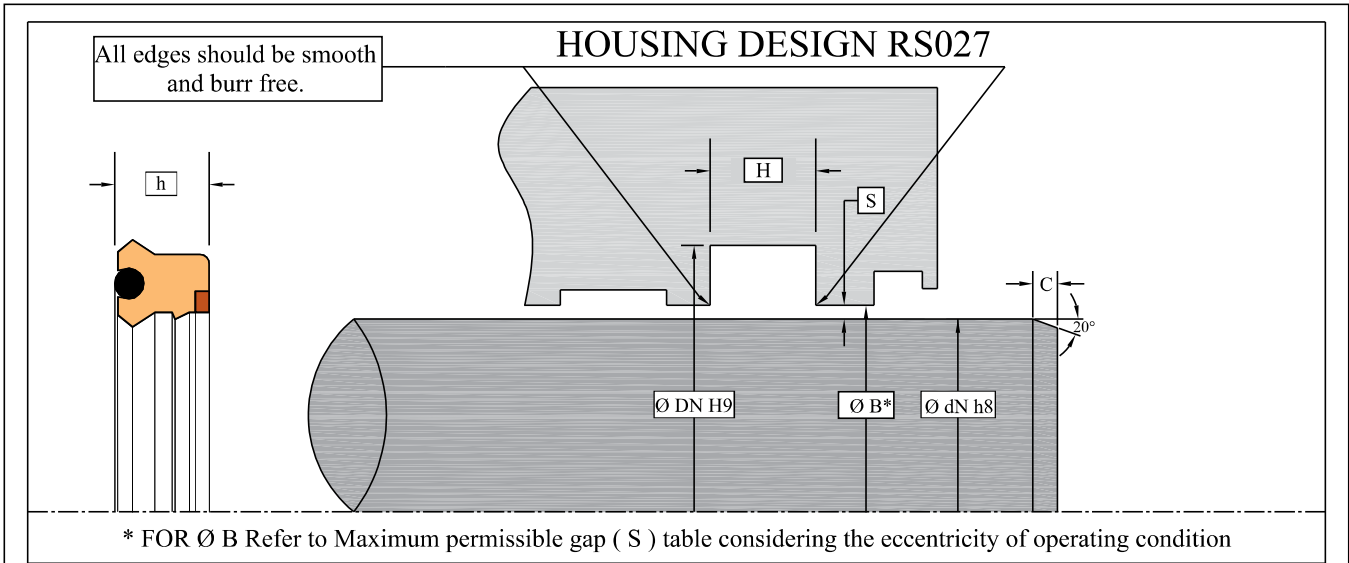
Example: Imperial Size 1.500" X 2.000" X 0.375"/0.413"

Order code is **RS027-I-01-01.500 X 02.000 X 0.375/0.413**



ROYAL STANDARD SIZE LIST

DN (H9)	dN (h9)	h	H (+0.20)	ORDER CODE
30.00	40.00	5.70	6.30	RS027-M-01-030.00 X 040.00 X 05.7/06.3
30.00	40.00	7.20	8.00	RS027-M-01-030.00 X 040.00 X 07.2/08.0
30.00	42.00	8.50	9.50	RS027-M-01-030.00 X 042.00 X 08.5/09.5
32.00	42.00	8.00	9.00	RS027-M-01-032.00 X 042.00 X 08.0/09.0
35.00	45.00	7.20	8.00	RS027-M-01-035.00 X 045.00 X 07.2/08.0
36.00	46.00	7.20	8.00	RS027-M-01-036.00 X 046.00 X 07.2/08.0
40.00	50.00	7.20	8.00	RS027-M-01-040.00 X 050.00 X 07.2/08.0
40.00	50.00	8.00	9.00	RS027-M-01-040.00 X 050.00 X 08.0/09.0
40.00	52.00	9.50	10.50	RS027-M-01-040.00 X 052.00 X 09.5/10.5
40.00	53.00	10.00	11.00	RS027-M-01-040.00 X 053.00 X 10.0/11.0
40.00	55.00	11.40	12.50	RS027-M-01-040.00 X 055.00 X 11.4/12.5
45.00	55.00	7.20	8.00	RS027-M-01-045.00 X 055.00 X 07.2/08.0
45.00	55.00	8.00	9.00	RS027-M-01-045.00 X 055.00 X 08.0/09.0
45.00	60.00	9.00	10.00	RS027-M-01-045.00 X 060.00 X 09.0/10.0
45.00	60.00	11.40	12.50	RS027-M-01-045.00 X 060.00 X 11.4/12.5
50.00	60.00	7.20	8.00	RS027-M-01-050.00 X 060.00 X 07.2/08.0
50.00	60.00	8.00	9.00	RS027-M-01-050.00 X 060.00 X 08.0/09.0
50.00	63.00	10.00	11.00	RS027-M-01-050.00 X 063.00 X 10.0/11.0
50.00	65.00	9.00	10.00	RS027-M-01-050.00 X 065.00 X 09.0/10.0
50.00	65.00	11.40	12.50	RS027-M-01-050.00 X 065.00 X 11.4/12.5
50.00	70.00	12.00	13.00	RS027-M-01-050.00 X 070.00 X 12.0/13.0
55.00	65.00	7.20	8.00	RS027-M-01-055.00 X 065.00 X 07.2/08.0
55.00	65.00	8.00	9.00	RS027-M-01-055.00 X 065.00 X 08.0/09.0
55.00	68.00	10.00	11.00	RS027-M-01-055.00 X 068.00 X 10.0/11.0
55.00	70.00	9.00	10.00	RS027-M-01-055.00 X 070.00 X 09.0/10.0
55.00	70.00	11.40	12.50	RS027-M-01-055.00 X 070.00 X 11.4/12.5
55.00	75.00	12.00	13.00	RS027-M-01-055.00 X 075.00 X 12.0/13.0
60.00	70.00	7.20	8.00	RS027-M-01-060.00 X 070.00 X 07.2/08.0
60.00	73.00	10.00	11.00	RS027-M-01-060.00 X 073.00 X 10.0/11.0
60.00	75.00	9.00	10.00	RS027-M-01-060.00 X 075.00 X 09.0/10.0



ROYAL STANDARD SIZE LIST

DN (H9)	dN (h9)	h	H (+0.20)	ORDER CODE
60.00	75.00	11.40	12.50	RS027-M-01-060.00 X 075.00 X 11.4/12.5
63.00	78.00	11.40	12.50	RS027-M-01-063.00 X 078.00 X 11.4/12.5
65.00	75.00	8.00	9.00	RS027-M-01-065.00 X 075.00 X 08.0/09.0
65.00	78.00	10.00	11.00	RS027-M-01-065.00 X 078.00 X 10.0/11.0
65.00	80.00	9.00	10.00	RS027-M-01-065.00 X 080.00 X 09.0/10.0
65.00	80.00	11.40	12.50	RS027-M-01-065.00 X 080.00 X 11.4/12.5
70.00	80.00	5.50	6.00	RS027-M-01-070.00 X 080.00 X 05.5/06.0
70.00	80.00	6.30	7.00	RS027-M-01-070.00 X 080.00 X 06.3/07.0
70.00	83.00	10.00	11.00	RS027-M-01-070.00 X 083.00 X 10.0/11.0
70.00	85.00	9.00	10.00	RS027-M-01-070.00 X 085.00 X 09.0/10.0
70.00	85.00	11.40	12.50	RS027-M-01-070.00 X 085.00 X 11.4/12.5
70.00	90.00	12.00	13.00	RS027-M-01-070.00 X 090.00 X 12.0/13.0
75.00	85.00	6.30	7.00	RS027-M-01-075.00 X 085.00 X 06.3/07.0
75.00	85.00	7.20	8.00	RS027-M-01-075.00 X 085.00 X 07.2/08.0
75.00	88.00	10.00	11.00	RS027-M-01-075.00 X 088.00 X 10.0/11.0
75.00	90.00	9.00	10.00	RS027-M-01-075.00 X 090.00 X 09.0/10.0
75.00	90.00	11.40	12.50	RS027-M-01-075.00 X 090.00 X 11.4/12.5
75.00	95.00	12.00	13.00	RS027-M-01-075.00 X 095.00 X 12.0/13.0
77.50	87.50	6.30	7.00	RS027-M-01-077.50 X 087.50 X 06.3/07.0
80.00	90.00	6.30	7.00	RS027-M-01-080.00 X 090.00 X 06.3/07.0
80.00	93.00	10.00	11.00	RS027-M-01-080.00 X 093.00 X 10.0/11.0
80.00	95.00	9.00	10.00	RS027-M-01-080.00 X 095.00 X 09.0/10.0
80.00	95.00	11.40	12.50	RS027-M-01-080.00 X 095.00 X 11.4/12.5
80.00	100.00	12.00	13.00	RS027-M-01-080.00 X 100.00 X 12.0/13.0
85.00	100.00	9.00	10.00	RS027-M-01-085.00 X 100.00 X 09.0/10.0
85.00	100.00	11.40	12.50	RS027-M-01-085.00 X 100.00 X 11.4/12.5
85.00	105.00	12.00	13.00	RS027-M-01-085.00 X 105.00 X 12.0/13.0
90.00	105.00	9.00	10.00	RS027-M-01-090.00 X 105.00 X 09.0/10.0
90.00	105.00	11.40	12.50	RS027-M-01-090.00 X 105.00 X 11.4/12.5
90.00	110.00	12.00	13.00	RS027-M-01-090.00 X 110.00 X 12.0/13.0



SEALS FOR HYDRAULICS & PNEUMATICS

ROYAL STANDARD SIZE LIST

DN (H9)	dN (h9)	h	H (+0.20)	ORDER CODE
90.00	110.00	13.00	14.00	RS027-M-01-090.00 X 110.00 X 13.0/14.0
90.00	110.00	15.15	16.58	RS027-M-01-090.00 X 110.00 X 15.2/16.6
90.00	110.00	14.60	16.00	RS027-M-01-090.00 X 110.00 X 14.6/16.0
98.00	112.00	8.90	9.50	RS027-M-01-098.00 X 112.00 X 08.9/09.5
95.00	110.00	9.00	10.00	RS027-M-01-095.00 X 110.00 X 09.0/10.0
95.00	110.00	11.40	12.50	RS027-M-01-095.00 X 110.00 X 11.4/12.5
95.00	115.00	12.00	13.00	RS027-M-01-095.00 X 115.00 X 12.0/13.0
100.00	115.00	9.00	10.00	RS027-M-01-100.00 X 115.00 X 09.0/10.0
100.00	115.00	11.40	12.50	RS027-M-01-100.00 X 115.00 X 11.4/12.5
100.00	120.00	12.00	13.00	RS027-M-01-100.00 X 120.00 X 12.0/13.0
105.00	120.00	9.00	10.00	RS027-M-01-105.00 X 120.00 X 09.0/10.0
105.00	120.00	12.00	13.00	RS027-M-01-105.00 X 120.00 X 12.0/13.0
105.00	125.00	12.00	13.00	RS027-M-01-105.00 X 125.00 X 12.0/13.0
108.00	118.00	5.70	6.30	RS027-M-01-108.00 X 118.00 X 05.7/06.3
110.00	125.00	9.00	10.00	RS027-M-01-110.00 X 125.00 X 09.0/10.0
110.00	125.00	10.00	11.00	RS027-M-01-110.00 X 125.00 X 10.0/11.0
110.00	125.00	11.40	12.50	RS027-M-01-110.00 X 125.00 X 11.4/12.5
110.00	125.00	14.50	16.00	RS027-M-01-110.00 X 125.00 X 14.5/16.0
110.00	130.00	12.00	13.00	RS027-M-01-110.00 X 130.00 X 12.0/13.0
110.00	130.00	14.60	16.00	RS027-M-01-110.00 X 130.00 X 14.6/16.0
115.00	130.00	9.00	10.00	RS027-M-01-115.00 X 130.00 X 09.0/10.0
115.00	130.00	10.00	11.00	RS027-M-01-115.00 X 130.00 X 10.0/11.0
115.00	135.00	12.00	13.00	RS027-M-01-115.00 X 135.00 X 12.0/13.0
115.00	135.00	14.80	16.00	RS027-M-01-115.00 X 135.00 X 14.8/16.0
120.00	135.00	9.00	10.00	RS027-M-01-120.00 X 135.00 X 09.0/10.0
120.00	140.00	12.00	13.00	RS027-M-01-120.00 X 140.00 X 12.0/13.0
120.00	140.00	13.00	14.00	RS027-M-01-120.00 X 140.00 X 13.0/14.0
125.00	145.00	12.00	13.00	RS027-M-01-125.00 X 145.00 X 12.0/13.0
130.00	145.00	9.00	10.00	RS027-M-01-130.00 X 145.00 X 09.0/10.0
130.00	150.00	12.00	13.00	RS027-M-01-130.00 X 150.00 X 12.0/13.0
130.00	150.00	13.00	14.00	RS027-M-01-130.00 X 150.00 X 13.0/14.0
140.00	150.00	6.30	7.00	RS027-M-01-140.00 X 150.00 X 06.3/07.0
140.00	155.00	9.00	10.00	RS027-M-01-140.00 X 155.00 X 09.0/10.0
140.00	155.00	10.00	11.00	RS027-M-01-140.00 X 155.00 X 10.0/11.0
140.00	160.00	12.00	13.00	RS027-M-01-140.00 X 160.00 X 12.0/13.0
140.00	160.00	13.00	14.00	RS027-M-01-140.00 X 160.00 X 13.0/14.0
140.00	160.00	14.80	16.00	RS027-M-01-140.00 X 160.00 X 14.8/16.0
145.00	155.00	6.30	7.00	RS027-M-01-145.00 X 155.00 X 06.3/07.0
150.00	170.00	12.00	13.00	RS027-M-01-150.00 X 170.00 X 12.0/13.0
150.00	170.00	14.60	16.00	RS027-M-01-150.00 X 170.00 X 14.6/16.0
155.00	165.00	6.30	7.00	RS027-M-01-155.00 X 165.00 X 06.3/07.0
160.00	175.00	9.00	10.00	RS027-M-01-160.00 X 175.00 X 09.0/10.0
160.00	180.00	13.00	14.00	RS027-M-01-160.00 X 180.00 X 13.0/14.0
160.00	180.00	14.60	16.00	RS027-M-01-160.00 X 180.00 X 14.6/16.0
180.00	200.00	14.60	16.00	RS027-M-01-180.00 X 200.00 X 14.6/16.0

