

## SYMMETRIC SEAL

## SS001



### Features :

SS001 is a single acting U cup type seal with O ring energizer used for both piston and rod seal.

### Composition:

SEAL COMBINATION	SEAL RING COMPOUND	O-RING COMPOUND	TEMP. RANGE	WORKING PRESSURE (Max.)	SURFACE SPEED (Max.)
SS001-01	PU09	NB02	-35 to 100°C	400 Bar*	0.5 m/s
SS001-02	NB01	VT01	-25 to 200°C	160 Bar	0.5 m/s
SS001-03	VT04	NB02	-35 to 100°C	160 Bar	0.5 m/s

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

\* Maximum working pressure can be extended up to 400 bar with the use of a back up ring. If this option is required ask ROYAL.

### Properties:

- High resistance to abrasion
- Easy installation
- Suitable for very low to high pressure

### Application:

- Mobile Hydraulics
- Injection molding machines
- Machine tools
- Agricultural equipment
- Standard cylinders

### 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 the minimum piston OD and max bore  $\varnothing$  considering respective tolerances as well as maximum gland bush groove inner dia and minimum rod dia considering respective tolerances.

Maximum permissible gap dimension (s) for Metric sizes (mm)			
160 bar	260 bar	320 bar	400 bar
0.2	0.2	0.17	0.15

Maximum permissible gap dimension (s) for Imperial sizes (inch)			
160 bar	260 bar	320 bar	400 bar
0.008	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:**

SS001 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 5.00 X 12.00 X 5.90 /6.50

Order code is **SS001-M-01-005.00 X 012.00 X 05.90/06.50**

Example: Imperial Size 0.750" X 1.000" X 0.125"/0.135"

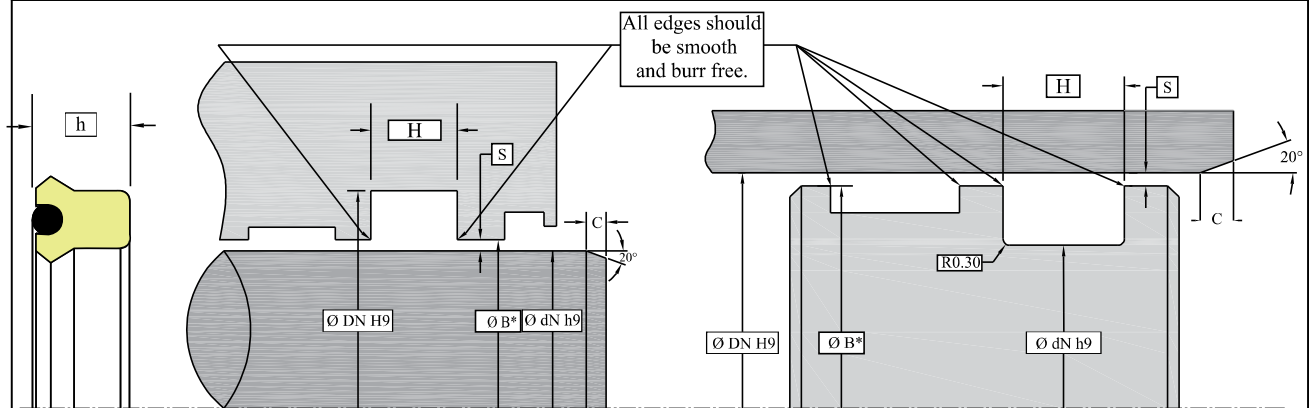
Order code is **SS001-I-01-00.750 X 01.000 X 0.125/0.135**



**ROYAL**

SEALS FOR HYDRAULICS & PNEUMATICS

**SS001 FOR ROD AND PISTON APPLICATION**



\* FOR Ø B Refer to Maximum permissible gap ( S ) table considering the eccentricity of operating condition

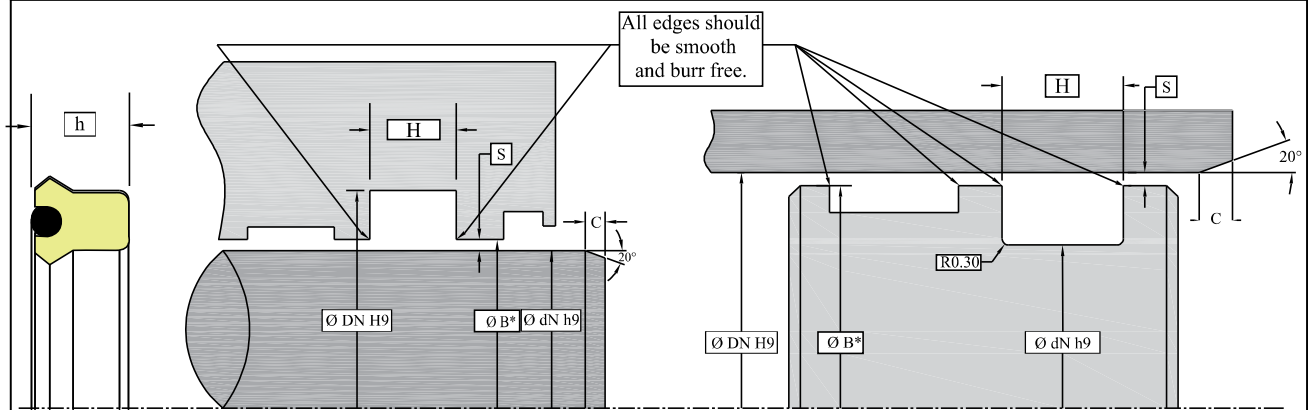
**ROYAL STANDARD SIZE LIST**

dN (f8)	DN (H9)	h	H (+0.20)	ORDER CODE
5.00	12.00	5.90	6.50	SS001-M-01-005.00 X 012.00 X 05.9/06.5
10.00	15.00	3.60	4.00	SS001-M-01-010.00 X 015.00 X 03.6/04.0
12.00	18.00	5.50	6.00	SS001-M-01-012.00 X 018.00 X 05.5/06.0
12.00	22.00	7.30	8.00	SS001-M-01-012.00 X 022.00 X 07.3/08.0
18.00	26.00	5.30	5.80	SS001-M-01-018.00 X 026.00 X 05.3/05.8
20.00	28.00	5.70	6.30	SS001-M-01-020.00 X 028.00 X 05.7/06.3
25.00	33.00	5.50	6.00	SS001-M-01-025.00 X 033.00 X 05.5/06.0
25.00	33.00	6.40	7.00	SS001-M-01-025.00 X 033.00 X 06.4/07.0
25.00	38.00	9.10	10.00	SS001-M-01-025.00 X 038.00 X 09.1/10.0
26.00	36.00	7.30	8.00	SS001-M-01-026.00 X 036.00 X 07.3/08.0
30.00	40.00	7.30	8.00	SS001-M-01-030.00 X 040.00 X 07.3/08.0
30.00	40.00	9.10	10.00	SS001-M-01-030.00 X 040.00 X 09.1/10.0
31.50	41.50	6.20	6.80	SS001-M-01-031.50 X 041.50 X 06.2/06.8
35.00	45.00	7.30	8.00	SS001-M-01-035.00 X 045.00 X 07.3/08.0
40.00	50.00	7.30	8.00	SS001-M-01-040.00 X 050.00 X 07.3/08.0
45.00	55.00	7.30	8.00	SS001-M-01-045.00 X 055.00 X 07.3/08.0
45.00	55.00	9.10	10.00	SS001-M-01-045.00 X 055.00 X 09.1/10.0
45.00	55.00	10.00	11.00	SS001-M-01-045.00 X 055.00 X 10.0/11.0
45.00	65.00	11.40	12.50	SS001-M-01-045.00 X 065.00 X 11.4/12.5
48.00	58.00	10.00	11.00	SS001-M-01-048.00 X 058.00 X 10.0/11.0
50.00	60.00	7.30	8.00	SS001-M-01-050.00 X 060.00 X 07.3/08.0
50.00	70.00	14.50	16.00	SS001-M-01-050.00 X 070.00 X 14.5/16.0
55.00	65.00	11.80	13.00	SS001-M-01-055.00 X 065.00 X 11.8/13.0
55.00	70.00	9.10	10.00	SS001-M-01-055.00 X 070.00 X 09.1/10.0
55.00	70.00	10.90	12.00	SS001-M-01-055.00 X 070.00 X 10.9/12.0
55.00	75.00	14.50	16.00	SS001-M-01-055.00 X 075.00 X 14.5/16.0
56.00	66.00	10.00	11.00	SS001-M-01-056.00 X 066.00 X 10.0/11.0
56.00	71.00	9.10	10.00	SS001-M-01-056.00 X 071.00 X 09.1/10.0
58.00	72.00	9.10	10.00	SS001-M-01-058.00 X 072.00 X 09.1/10.0
60.00	70.00	7.20	8.00	SS001-M-01-060.00 X 070.00 X 07.2/08.0
60.00	73.00	12.80	14.00	SS001-M-01-060.00 X 073.00 X 12.8/14.0





SS001 FOR ROD AND PISTON APPLICATION



\* FOR Ø B Refer to Maximum permissible gap ( S ) table considering the eccentricity of operating condition

ROYAL STANDARD SIZE LIST

IMPERIAL SIZES

dN (f8)	DN (H9)	h	H (+0.008")	ORDER CODE
0.750	1.000	0.125	0.135	SS001-I-01-00.750 X 01.000 X 0.125/0.135
0.750	1.000	0.250	0.275	SS001-I-01-00.750 X 01.000 X 0.250/0.275
1.000	1.250	0.125	0.135	SS001-I-01-01.000 X 01.250 X 0.125/0.135
1.125	1.500	0.312	0.343	SS001-I-01-01.125 X 01.500 X 0.312/0.343
1.125	1.625	0.343	0.375	SS001-I-01-01.125 X 01.625 X 0.343/0.375
1.125	1.750	0.391	0.430	SS001-I-01-01.125 X 01.750 X 0.391/0.430
1.125	1.750	0.430	0.478	SS001-I-01-01.125 X 01.750 X 0.430/0.478
1.250	1.500	0.250	0.275	SS001-I-01-01.250 X 01.500 X 0.250/0.275
1.250	1.625	0.295	0.325	SS001-I-01-01.250 X 01.625 X 0.295/0.325
1.250	1.625	0.312	0.343	SS001-I-01-01.250 X 01.625 X 0.312/0.343
1.250	1.625	0.325	0.365	SS001-I-01-01.250 X 01.625 X 0.325/0.365
1.500	1.875	0.184	0.202	SS001-I-01-01.500 X 01.875 X 0.184/0.202
1.500	1.875	0.343	0.375	SS001-I-01-01.500 X 01.875 X 0.343/0.375
1.500	2.000	0.343	0.375	SS001-I-01-01.500 X 02.000 X 0.343/0.375
1.500	2.000	0.375	0.413	SS001-I-01-01.500 X 02.000 X 0.375/0.413
1.500	2.125	0.397	0.437	SS001-I-01-01.500 X 02.125 X 0.397/0.437
1.625	2.000	0.375	0.412	SS001-I-01-01.625 X 02.000 X 0.375/0.412
1.750	2.250	0.343	0.375	SS001-I-01-01.750 X 02.250 X 0.343/0.375
1.750	2.375	0.455	0.500	SS001-I-01-01.750 X 02.375 X 0.455/0.500
1.750	2.500	0.625	0.688	SS001-I-01-01.750 X 02.500 X 0.625/0.688
2.000	2.375	0.375	0.413	SS001-I-01-02.000 X 02.375 X 0.375/0.413
2.000	2.500	0.343	0.375	SS001-I-01-02.000 X 02.500 X 0.343/0.375
2.000	2.500	0.375	0.410	SS001-I-01-02.000 X 02.500 X 0.375/0.410
2.000	2.625	0.343	0.375	SS001-I-01-02.000 X 02.625 X 0.343/0.375
2.125	2.500	0.250	0.275	SS001-I-01-02.125 X 02.500 X 0.250/0.275
2.250	2.750	0.343	0.375	SS001-I-01-02.250 X 02.750 X 0.343/0.375
2.250	2.750	0.375	0.413	SS001-I-01-02.250 X 02.750 X 0.375/0.413
2.375	2.875	0.375	0.410	SS001-I-01-02.375 X 02.875 X 0.375/0.410
2.500	3.000	0.227	0.250	SS001-I-01-02.500 X 03.000 X 0.227/0.250

