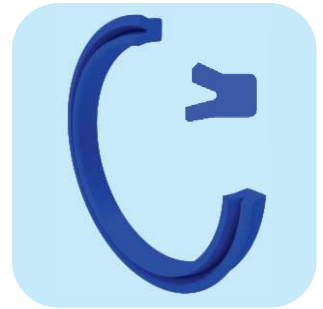


## PISTON SEAL

## PS040



### Features:

Piston seal profile PS040 is a single acting U cup type seal which has a very good static and dynamic tightness. The seal can be used for double acting applications by fitting back to back in separate grooves. The outer dynamic lip is more robust to provide improved sealing and compression set characteristics.

### Composition:

SEAL COMBINATION	SEAL RING COMPOUND	TEMP. RANGE	WORKING PRESSURE (Max.)	SURFACE SPEED (Max.)
PS040-01	PU20	-40 to 100°C	350 Bar*	0.5 m/s
PS040-02	VT04	-25 to 200°C	160 Bar*	0.5 m/s
PS040-03	NB01	-35 to 100°C	160 Bar*	0.5 m/s

\* Maximum working pressure can be extended for PS040-01 up to 400 bar and for PS040-02 & 03 up to 250 bar with the use of a back up ring. If this option is required ask ROYAL.

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

### Properties:

- High resistance to abrasion
- Easy installation
- Perfect sealing effect

### Application:

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

### 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
Sides of groove	≤ 15 μm	≤ 3 μm

### 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 Ø considering respective tolerances.

Profile Type	Maximum permissible gap (S) for Metric Sizes (mm)			
	160 bar	260 bar	320 bar	400 bar
PS040-01	0.25	0.20	0.17	Ask ROYAL
PS040-02	0.20	Ask ROYAL	-	-
PS040-03	0.20	Ask ROYAL	-	-

Profile Type	Maximum permissible gap (S) for Imperial Sizes (inch)			
	160 bar	260 bar	320 bar	400 bar
PS040-01	0.010	0.008	0.007	Ask ROYAL
PS040-02	0.008	Ask ROYAL	-	-
PS040-03	0.008	Ask ROYAL	-	-

### Fitting:

PS040 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 16 X 8 X 6.3

Order code for PU01 Material is **PS040-M-01-016.00 X 008.00 X 05.7/06.3**

Order code for VT04 Material is **PS040-M-02-016.00 X 008.00 X 05.7/06.3**

Example: Imperial Size 2.000"X1.500"X0.375"/0.413"

Order code for PU01 Material is **PS040-I-01-02.000 X 01.500 X 0.375/0.413**

Order code for VT04 Material is **PS040-I-02-02.000 X 01.500 X 0.375/0.413**

Order code for NB01 Material is **PS040-I-03-02.000 X 01.500 X 0.375/0.413**

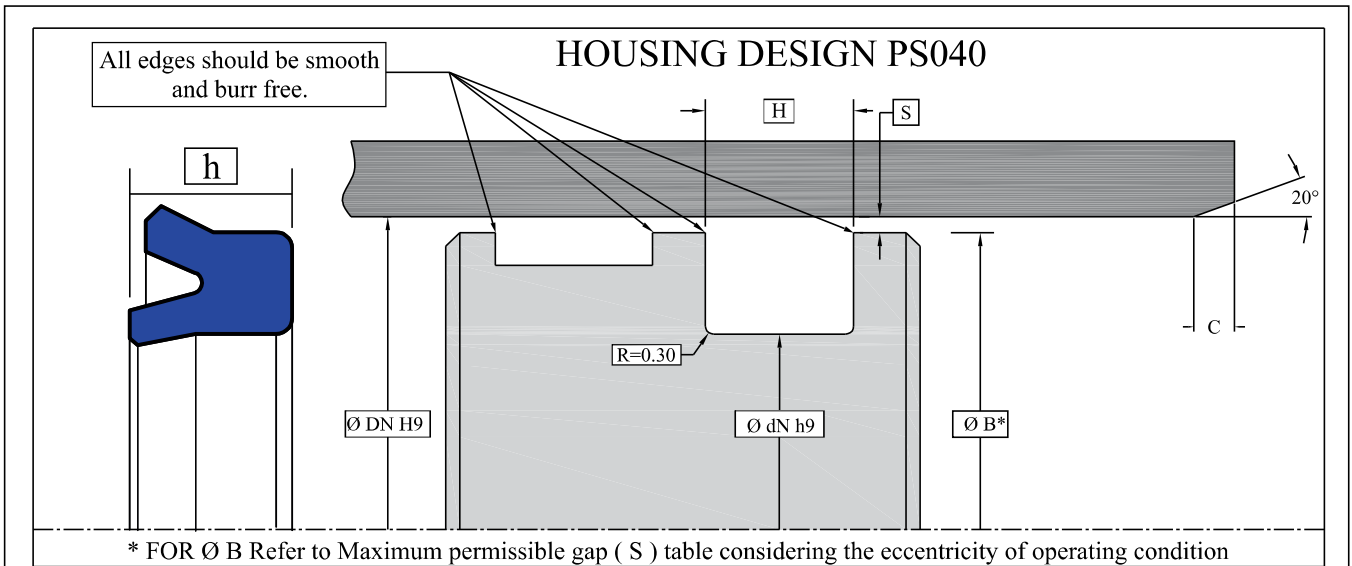
Please Contact ROYAL at [info@royalcomposites.co.in](mailto:info@royalcomposites.co.in) for availability of PS040-02 & PS040-03 Series before placing your order.

Please contact ROYAL at [info@royalcomposites.co.in](mailto:info@royalcomposites.co.in) / [info@royalseals.co.in](mailto:info@royalseals.co.in) if your required size is not mentioned in Royal standard size list



**ROYAL**

SEALS FOR HYDRAULICS & PNEUMATICS



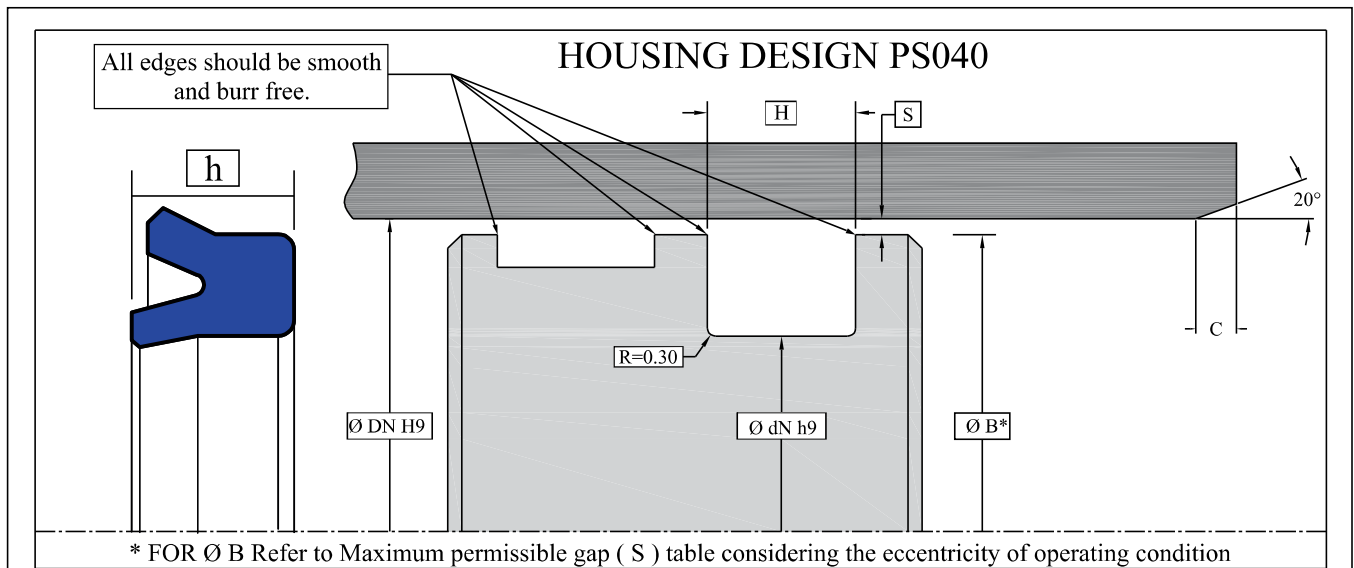
**ROYAL STANDARD SIZE LIST**

DN (H9)	dN (h9)	h	H (+0.20)	ORDER CODE
10.00	4.00	4.00	4.50	PS040-M-01-010.00 X 004.00 X 04.0/04.5
16.00	8.00	5.70	6.30	PS040-M-01-016.00 X 008.00 X 05.7/06.3
18.00	8.00	7.30	8.00	PS040-M-01-018.00 X 008.00 X 07.3/08.0
18.00	10.00	5.70	6.30	PS040-M-01-018.00 X 010.00 X 05.7/06.3
20.00	12.00	5.70	6.30	PS040-M-01-020.00 X 012.00 X 05.7/06.3
20.00	12.00	7.90	8.70	PS040-M-01-020.00 X 012.00 X 07.9/08.7
22.00	14.00	5.70	6.30	PS040-M-01-022.00 X 014.00 X 05.7/06.3
22.00	14.00	9.10	10.00	PS040-M-01-022.00 X 014.00 X 09.1/10.0
25.00	17.00	5.70	6.30	PS040-M-01-025.00 X 017.00 X 05.7/06.3
26.00	18.00	5.70	6.30	PS040-M-01-026.00 X 018.00 X 05.7/06.3
28.00	20.00	5.70	6.30	PS040-M-01-028.00 X 020.00 X 05.7/06.3
28.00	22.00	3.60	4.00	PS040-M-01-028.00 X 022.00 X 03.6/04.0
30.00	20.00	6.70	7.50	PS040-M-01-030.00 X 020.00 X 06.7/07.5
32.00	24.00	5.70	6.30	PS040-M-01-032.00 X 024.00 X 05.7/06.3
35.00	20.00	6.80	7.50	PS040-M-01-035.00 X 020.00 X 06.8/07.5
35.00	25.00	7.30	8.00	PS040-M-01-035.00 X 025.00 X 07.3/08.0
36.00	26.00	7.30	8.00	PS040-M-01-036.00 X 026.00 X 07.3/08.0
40.00	25.00	10.00	11.00	PS040-M-01-040.00 X 025.00 X 10.0/11.0
40.00	28.00	10.00	11.00	PS040-M-01-040.00 X 028.00 X 10.0/11.0
40.00	30.00	7.30	8.00	PS040-M-01-040.00 X 030.00 X 07.3/08.0
40.00	30.00	10.00	11.00	PS040-M-01-040.00 X 030.00 X 10.0/11.0
40.00	32.00	5.70	6.30	PS040-M-01-040.00 X 032.00 X 05.7/06.3
40.00	32.00	7.30	8.00	PS040-M-01-040.00 X 032.00 X 07.3/08.0
45.00	30.00	10.00	11.00	PS040-M-01-045.00 X 030.00 X 10.0/11.0
45.00	35.00	7.30	8.00	PS040-M-01-045.00 X 035.00 X 07.3/08.0
50.00	35.00	7.30	8.00	PS040-M-01-050.00 X 035.00 X 07.3/08.0
50.00	35.00	9.10	10.00	PS040-M-01-050.00 X 035.00 X 09.1/10.0
50.00	35.00	10.00	11.00	PS040-M-01-050.00 X 035.00 X 10.0/11.0
50.00	35.00	11.80	13.00	PS040-M-01-050.00 X 035.00 X 11.8/13.0
50.00	36.00	10.00	11.00	PS040-M-01-050.00 X 036.00 X 10.0/11.0
50.00	38.00	7.30	8.00	PS040-M-01-050.00 X 038.00 X 07.3/08.0



**ROYAL**

SEALS FOR HYDRAULICS & PNEUMATICS



**ROYAL STANDARD SIZE LIST**

DN (H9)	dN (h9)	h	H (+0.20)	ORDER CODE
50.00	40.00	7.30	8.00	PS040-M-01-050.00 X 040.00 X 07.3/08.0
50.00	42.00	10.00	11.00	PS040-M-01-050.00 X 042.00 X 10.0/11.0
50.80	28.57	11.60	12.70	PS040-M-01-050.80 X 028.57 X 11.6/12.7
51.00	35.50	9.00	10.00	PS040-M-01-051.00 X 035.50 X 09.0/10.0
55.00	45.00	7.30	8.00	PS040-M-01-055.00 X 045.00 X 07.3/08.0
60.00	35.00	16.00	17.00	PS040-M-01-060.00 X 035.00 X 16.0/17.0
60.00	40.00	9.10	10.00	PS040-M-01-060.00 X 040.00 X 09.1/10.0
60.00	40.00	10.00	11.00	PS040-M-01-060.00 X 040.00 X 10.0/11.0
60.00	45.00	10.00	11.00	PS040-M-01-060.00 X 045.00 X 10.0/11.0
60.00	50.00	7.30	8.00	PS040-M-01-060.00 X 050.00 X 07.3/08.0
63.00	43.00	11.80	13.00	PS040-M-01-063.00 X 043.00 X 11.8/13.0
63.00	45.00	10.00	11.00	PS040-M-01-063.00 X 045.00 X 10.0/11.0
63.00	48.00	10.00	11.00	PS040-M-01-063.00 X 048.00 X 10.0/11.0
63.00	48.00	11.40	12.50	PS040-M-01-063.00 X 048.00 X 11.4/12.5
63.00	50.00	7.30	8.00	PS040-M-01-063.00 X 050.00 X 07.3/08.0
63.00	53.00	6.30	7.00	PS040-M-01-063.00 X 053.00 X 06.3/07.0
63.00	53.00	7.30	8.00	PS040-M-01-063.00 X 053.00 X 07.3/08.0
63.00	53.00	9.10	10.00	PS040-M-01-063.00 X 053.00 X 09.1/10.0
63.00	53.00	10.00	11.00	PS040-M-01-063.00 X 053.00 X 10.0/11.0
65.00	45.00	10.00	11.00	PS040-M-01-065.00 X 045.00 X 10.0/11.0
70.00	50.00	11.80	13.00	PS040-M-01-070.00 X 050.00 X 11.8/13.0
70.00	55.00	10.00	11.00	PS040-M-01-070.00 X 055.00 X 10.0/11.0
70.00	55.00	13.20	14.50	PS040-M-01-070.00 X 055.00 X 13.2/14.5
70.00	58.00	13.20	14.50	PS040-M-01-070.00 X 058.00 X 13.2/14.5
70.00	60.00	7.30	8.00	PS040-M-01-070.00 X 060.00 X 07.3/08.0
73.00	53.00	10.00	11.00	PS040-M-01-073.00 X 053.00 X 10.0/11.0
73.00	57.00	10.00	11.00	PS040-M-01-073.00 X 057.00 X 10.0/11.0
75.00	45.00	13.70	15.00	PS040-M-01-075.00 X 045.00 X 13.7/15.0
75.00	55.00	11.40	12.50	PS040-M-01-075.00 X 055.00 X 11.4/12.5
75.00	63.00	8.20	9.00	PS040-M-01-075.00 X 063.00 X 08.2/09.0
75.00	63.00	8.60	9.50	PS040-M-01-075.00 X 063.00 X 08.6/09.5



## SEALS FOR HYDRAULICS & PNEUMATICS

### ROYAL STANDARD SIZE LIST

DN (H9)	dN (h9)	h	H (+0.20)	ORDER CODE
76.20	60.53	12.30	13.50	PS040-M-01-076.20 X 060.53 X 12.3/13.5
78.00	54.30	11.40	12.50	PS040-M-01-078.00 X 054.30 X 11.4/12.5
78.00	62.00	10.00	11.00	PS040-M-01-078.00 X 062.00 X 10.0/11.0
80.00	60.00	9.00	10.00	PS040-M-01-080.00 X 060.00 X 09.0/10.0
80.00	60.00	11.80	13.00	PS040-M-01-080.00 X 060.00 X 11.8/13.0
80.00	65.00	8.20	9.00	PS040-M-01-080.00 X 065.00 X 08.2/09.0
80.00	65.00	10.00	11.00	PS040-M-01-080.00 X 065.00 X 10.0/11.0
80.00	65.00	11.80	13.00	PS040-M-01-080.00 X 065.00 X 11.8/13.0
80.00	68.00	7.70	8.50	PS040-M-01-080.00 X 068.00 X 07.7/08.5
80.00	68.00	8.60	9.50	PS040-M-01-080.00 X 068.00 X 08.6/09.5
80.00	68.00	13.30	14.60	PS040-M-01-080.00 X 068.00 X 13.3/14.6
80.00	70.00	7.30	8.00	PS040-M-01-080.00 X 070.00 X 07.3/08.0
80.00	72.00	10.90	12.00	PS040-M-01-080.00 X 072.00 X 10.9/12.0
85.00	65.00	9.10	10.00	PS040-M-01-085.00 X 065.00 X 09.1/10.0
90.00	70.00	11.80	13.00	PS040-M-01-090.00 X 070.00 X 11.8/13.0
90.00	75.00	10.00	11.00	PS040-M-01-090.00 X 075.00 X 10.0/11.0
90.00	78.00	7.70	8.50	PS040-M-01-090.00 X 078.00 X 07.7/08.5
90.00	78.00	8.60	9.50	PS040-M-01-090.00 X 078.00 X 08.6/09.5
90.00	80.00	7.30	8.00	PS040-M-01-090.00 X 080.00 X 07.3/08.0
90.00	80.00	12.70	14.00	PS040-M-01-090.00 X 080.00 X 12.7/14.0
99.00	82.00	8.60	9.50	PS040-M-01-099.00 X 082.00 X 08.6/09.5
100.00	75.00	18.20	20.00	PS040-M-01-100.00 X 075.00 X 18.2/20.0
100.00	80.00	11.80	13.00	PS040-M-01-100.00 X 080.00 X 11.8/13.0
100.00	80.00	12.70	14.00	PS040-M-01-100.00 X 080.00 X 12.7/14.0
100.00	85.00	9.10	10.00	PS040-M-01-100.00 X 085.00 X 09.1/10.0
100.00	88.00	8.60	9.50	PS040-M-01-100.00 X 088.00 X 08.6/09.5
100.00	90.00	6.80	7.50	PS040-M-01-100.00 X 090.00 X 06.8/07.5
100.00	90.00	9.10	10.00	PS040-M-01-100.00 X 090.00 X 09.1/10.0
100.00	90.00	9.60	10.50	PS040-M-01-100.00 X 090.00 X 09.6/10.5
100.00	90.00	11.40	12.50	PS040-M-01-100.00 X 090.00 X 11.4/12.5
101.60	83.60	12.70	14.00	PS040-M-01-101.60 X 083.60 X 12.7/14.0
105.00	85.00	10.00	11.00	PS040-M-01-105.00 X 085.00 X 10.0/11.0
105.00	95.00	11.80	13.00	PS040-M-01-105.00 X 095.00 X 11.8/13.0
107.95	92.46	12.30	13.50	PS040-M-01-107.95 X 092.46 X 12.3/13.5
110.00	75.00	14.60	16.00	PS040-M-01-110.00 X 075.00 X 14.6/16.0
110.00	85.00	18.20	20.00	PS040-M-01-110.00 X 085.00 X 18.2/20.0
110.00	90.00	11.80	13.00	PS040-M-01-110.00 X 090.00 X 11.8/13.0
110.00	94.00	18.20	20.00	PS040-M-01-110.00 X 094.00 X 18.2/20.0
110.00	95.00	11.80	13.00	PS040-M-01-110.00 X 095.00 X 11.8/13.0
110.00	98.00	13.70	15.00	PS040-M-01-110.00 X 098.00 X 13.7/15.0
110.00	100.00	7.20	8.00	PS040-M-01-110.00 X 100.00 X 07.2/08.0
115.00	95.00	11.80	13.00	PS040-M-01-115.00 X 095.00 X 11.8/13.0
120.00	100.00	11.80	13.00	PS040-M-01-120.00 X 100.00 X 11.8/13.0
125.00	100.00	11.80	13.00	PS040-M-01-125.00 X 100.00 X 11.8/13.0
125.00	100.00	12.70	14.00	PS040-M-01-125.00 X 100.00 X 12.7/14.0
125.00	100.00	14.60	16.00	PS040-M-01-125.00 X 100.00 X 14.6/16.0
125.00	103.00	14.60	16.00	PS040-M-01-125.00 X 103.00 X 14.6/16.0



