

## ROD SEAL

## RS045

### Features:

Rod seal profile RS045 is a single acting U cup type seal commonly in use.

### Composition:

| SEAL COMBINATION | SEAL RING COMPOUND | TEMP. RANGE  | WORKING PRESSURE (Max.) | SURFACE SPEED (Max.) |
|------------------|--------------------|--------------|-------------------------|----------------------|
| RS045-01         | PU15/PU02/PU20     | -40 to 100°C | 350 Bar*                | 0.5 m/s              |
| RS045-02         | VT04               | -25 to 200°C | 160 Bar                 | 0.5 m/s              |
| RS045-03         | NB01               | -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
- Minimum contact friction

### 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    |
| 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.

| Seal Profile  | Maximum permissible gap (S) for Metric Sizes (mm) |           |         |           |
|---------------|---|-----------|---------|-----------|
|               | 160 bar   | 260 bar   | 320 bar | 400 bar   |
| RS045-01      | 0.25  | 0.20      | 0.17    | Ask ROYAL |
| RS045-02 & 03 | 0.005   | Ask ROYAL | -       | -         |

| Seal Profile  | Maximum permissible gap (S) for Imperial Sizes (inch) |           |         |           |
|---------------|---|-----------|---------|-----------|
|               | 160 bar   | 260 bar   | 320 bar | 400 bar   |
| RS045-01      | 0.010   | 0.008     | 0.006   | Ask ROYAL |
| RS045-02 & 03 | Ask ROYAL   | Ask ROYAL | -       | -         |

### 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:

RS045 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 4.00 X 10.00 X 4.10/4.50

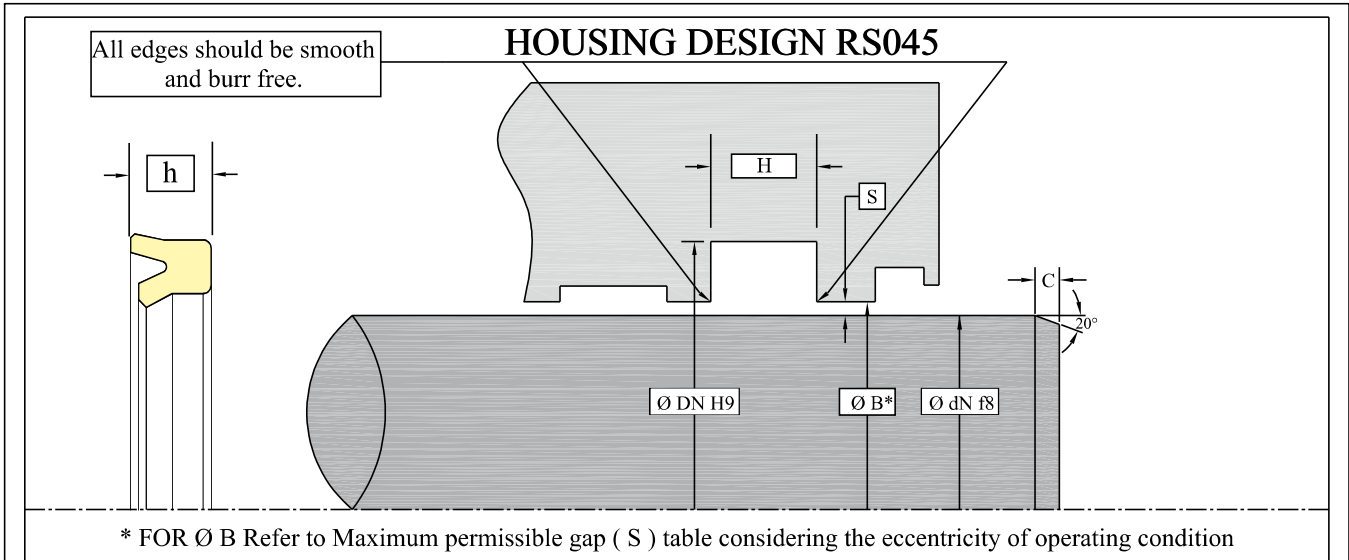
For Order code is **RS045-M-01-004.00 X 010.00 X 04.1/04.5**

Example: Imperial Size 0.500" X 0.750" X 0.154"/0.170"

For Order code is **RS045-I-01-00.500 X 00.750 X 0.154/0.170**

\* For size list of RS045-02 (FPM Material) & 03(NBR Material) contact ROYAL at [info@royalcomposites.co.in](mailto:info@royalcomposites.co.in) / [info@royalseals.co.in](mailto:info@royalseals.co.in)

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 STANDARD SIZE LIST**

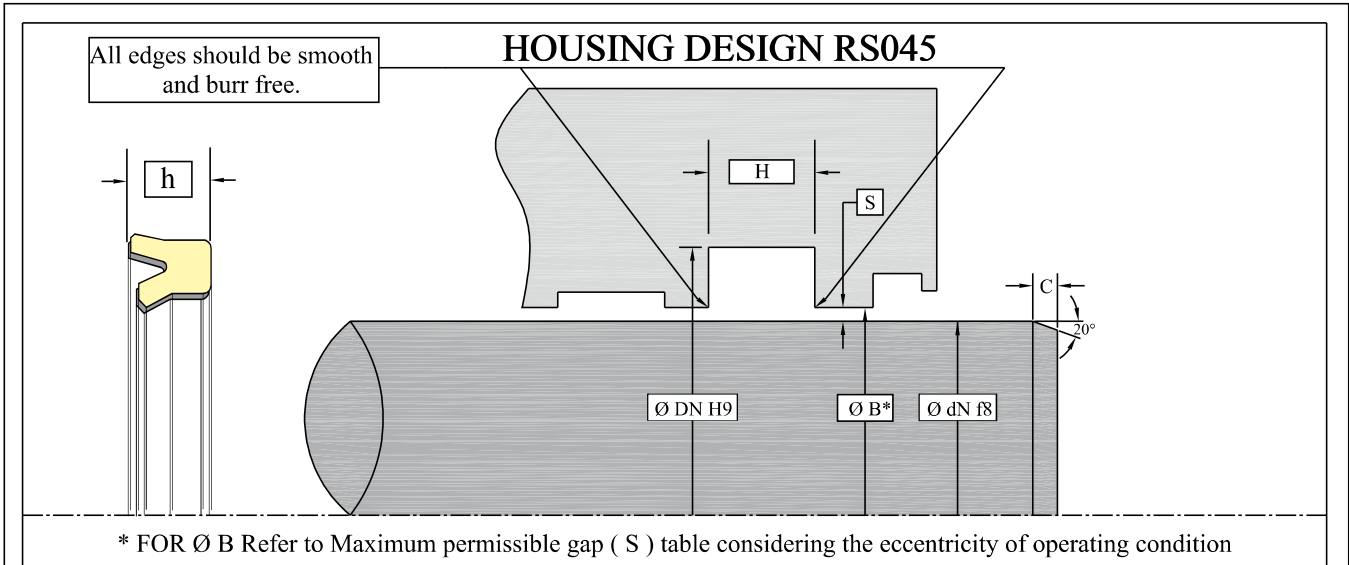
| dN (f8) | DN (H9) | h     | H (+0.20) | ORDER CODE                             |
|---------|---------|-------|-----------|--|
| 4.00    | 10.00   | 4.10  | 4.50      | RS045-M-01-004.00 X 010.00 X 04.1/04.5 |
| 10.00   | 20.00   | 10.00 | 11.00     | RS045-M-01-010.00 X 020.00 X 10.0/11.0 |
| 12.00   | 20.00   | 5.20  | 5.70      | RS045-M-01-012.00 X 020.00 X 05.2/05.7 |
| 12.00   | 20.00   | 7.30  | 8.00      | RS045-M-01-012.00 X 020.00 X 07.3/08.0 |
| 14.00   | 24.00   | 10.00 | 11.00     | RS045-M-01-014.00 X 024.00 X 10.0/11.0 |
| 14.00   | 26.00   | 11.00 | 12.00     | RS045-M-01-014.00 X 026.00 X 11.0/12.0 |
| 16.00   | 22.00   | 4.10  | 4.50      | RS045-M-01-016.00 X 022.00 X 04.1/04.5 |
| 16.00   | 22.30   | 4.40  | 4.80      | RS045-M-01-016.00 X 022.30 X 04.4/04.8 |
| 16.00   | 24.00   | 4.50  | 5.00      | RS045-M-01-016.00 X 024.00 X 04.5/05.0 |
| 16.00   | 26.00   | 10.00 | 11.00     | RS045-M-01-016.00 X 026.00 X 10.0/11.0 |
| 18.00   | 27.50   | 7.00  | 8.00      | RS045-M-01-018.00 X 027.50 X 07.0/08.0 |
| 19.05   | 31.75   | 11.80 | 13.00     | RS045-M-01-019.05 X 031.75 X 11.8/13.0 |
| 20.00   | 26.00   | 5.00  | 5.60      | RS045-M-01-020.00 X 026.00 X 05.0/05.6 |
| 20.00   | 28.00   | 5.20  | 5.70      | RS045-M-01-020.00 X 028.00 X 05.2/05.7 |
| 20.00   | 30.00   | 10.00 | 11.00     | RS045-M-01-020.00 X 030.00 X 10.0/11.0 |
| 25.00   | 33.00   | 5.20  | 5.70      | RS045-M-01-025.00 X 033.00 X 05.2/05.7 |
| 25.00   | 33.00   | 5.70  | 6.30      | RS045-M-01-025.00 X 033.00 X 05.7/06.3 |
| 25.40   | 38.00   | 12.70 | 14.00     | RS045-M-01-025.40 X 038.00 X 12.7/14.0 |
| 28.00   | 36.00   | 5.20  | 5.70      | RS045-M-01-028.00 X 036.00 X 05.2/05.7 |
| 28.00   | 38.00   | 10.00 | 11.00     | RS045-M-01-028.00 X 038.00 X 10.0/11.0 |
| 30.00   | 40.00   | 5.70  | 6.30      | RS045-M-01-030.00 X 040.00 X 05.7/06.3 |
| 30.00   | 40.00   | 6.40  | 7.00      | RS045-M-01-030.00 X 040.00 X 06.4/07.0 |
| 30.00   | 40.00   | 7.30  | 8.00      | RS045-M-01-030.00 X 040.00 X 07.3/08.0 |
| 30.00   | 40.00   | 8.20  | 9.00      | RS045-M-01-030.00 X 040.00 X 08.2/09.0 |
| 30.00   | 45.00   | 9.10  | 10.00     | RS045-M-01-030.00 X 045.00 X 09.1/10.0 |
| 32.00   | 42.00   | 8.00  | 9.00      | RS045-M-01-032.00 X 042.00 X 08.0/09.0 |
| 32.00   | 42.00   | 10.00 | 11.00     | RS045-M-01-032.00 X 042.00 X 10.0/11.0 |
| 35.00   | 45.00   | 7.30  | 8.00      | RS045-M-01-035.00 X 045.00 X 07.3/08.0 |
| 35.00   | 45.00   | 8.20  | 9.00      | RS045-M-01-035.00 X 045.00 X 08.2/09.0 |
| 35.00   | 47.00   | 6.80  | 7.50      | RS045-M-01-035.00 X 047.00 X 06.8/07.5 |



## SEALS FOR HYDRAULICS & PNEUMATICS

### ROYAL STANDARD SIZE LIST

| dN (f8) | DN (H9) | h     | H (+0.20) | ORDER CODE                             |
|---------|---------|-------|-----------|--|
| 35.00   | 47.70   | 11.80 | 13.00     | RS045-M-01-035.00 X 047.70 X 11.8/13.0 |
| 35.00   | 50.00   | 9.10  | 10.00     | RS045-M-01-035.00 X 050.00 X 09.1/10.0 |
| 36.00   | 46.00   | 7.30  | 8.00      | RS045-M-01-036.00 X 046.00 X 07.3/08.0 |
| 40.00   | 50.00   | 7.30  | 8.00      | RS045-M-01-040.00 X 050.00 X 07.3/08.0 |
| 40.00   | 50.00   | 8.20  | 9.00      | RS045-M-01-040.00 X 050.00 X 08.2/09.0 |
| 40.00   | 50.00   | 9.00  | 10.00     | RS045-M-01-040.00 X 050.00 X 09.0/10.0 |
| 40.00   | 50.00   | 10.00 | 11.00     | RS045-M-01-040.00 X 050.00 X 10.0/11.0 |
| 40.00   | 53.00   | 10.00 | 11.00     | RS045-M-01-040.00 X 053.00 X 10.0/11.0 |
| 40.00   | 55.00   | 9.10  | 10.00     | RS045-M-01-040.00 X 055.00 X 09.1/10.0 |
| 40.00   | 60.00   | 11.80 | 13.00     | RS045-M-01-040.00 X 060.00 X 11.8/13.0 |
| 42.00   | 52.00   | 7.30  | 8.00      | RS045-M-01-042.00 X 052.00 X 07.3/08.0 |
| 43.00   | 53.00   | 6.40  | 7.00      | RS045-M-01-043.00 X 053.00 X 06.4/07.0 |
| 45.00   | 55.00   | 7.30  | 8.00      | RS045-M-01-045.00 X 055.00 X 07.3/08.0 |
| 45.00   | 55.00   | 8.20  | 9.00      | RS045-M-01-045.00 X 055.00 X 08.2/09.0 |
| 45.00   | 58.00   | 10.00 | 11.00     | RS045-M-01-045.00 X 058.00 X 10.0/11.0 |
| 45.00   | 60.00   | 9.10  | 10.00     | RS045-M-01-045.00 X 060.00 X 09.1/10.0 |
| 50.00   | 60.00   | 7.30  | 8.00      | RS045-M-01-050.00 X 060.00 X 07.3/08.0 |
| 50.00   | 60.00   | 8.00  | 9.00      | RS045-M-01-050.00 X 060.00 X 08.0/09.0 |
| 50.00   | 60.00   | 10.00 | 11.00     | RS045-M-01-050.00 X 060.00 X 10.0/11.0 |
| 50.00   | 63.00   | 10.00 | 11.00     | RS045-M-01-050.00 X 063.00 X 10.0/11.0 |
| 50.00   | 65.00   | 9.10  | 10.00     | RS045-M-01-050.00 X 065.00 X 09.1/10.0 |
| 50.00   | 65.00   | 11.40 | 12.50     | RS045-M-01-050.00 X 065.00 X 11.4/12.5 |
| 50.00   | 70.00   | 11.80 | 13.00     | RS045-M-01-050.00 X 070.00 X 11.8/13.0 |
| 55.00   | 65.00   | 5.70  | 6.30      | RS045-M-01-055.00 X 065.00 X 05.7/06.3 |
| 55.00   | 65.00   | 7.30  | 8.00      | RS045-M-01-055.00 X 065.00 X 07.3/08.0 |
| 55.00   | 65.00   | 10.00 | 11.00     | RS045-M-01-055.00 X 065.00 X 10.0/11.0 |
| 55.00   | 68.00   | 10.00 | 11.00     | RS045-M-01-055.00 X 068.00 X 10.0/11.0 |
| 55.00   | 70.00   | 9.10  | 10.00     | RS045-M-01-055.00 X 070.00 X 09.1/10.0 |
| 55.00   | 71.00   | 11.80 | 13.00     | RS045-M-01-055.00 X 071.00 X 11.8/13.0 |
| 55.00   | 75.00   | 11.80 | 13.00     | RS045-M-01-055.00 X 075.00 X 11.8/13.0 |
| 56.00   | 66.00   | 7.30  | 8.00      | RS045-M-01-056.00 X 066.00 X 07.3/08.0 |
| 56.00   | 66.00   | 10.00 | 11.00     | RS045-M-01-056.00 X 066.00 X 10.0/11.0 |
| 56.00   | 71.00   | 11.40 | 12.50     | RS045-M-01-056.00 X 071.00 X 11.4/12.5 |
| 60.00   | 70.00   | 7.30  | 8.00      | RS045-M-01-060.00 X 070.00 X 07.3/08.0 |
| 60.00   | 70.00   | 11.80 | 13.00     | RS045-M-01-060.00 X 070.00 X 11.8/13.0 |
| 60.00   | 73.00   | 10.00 | 11.00     | RS045-M-01-060.00 X 073.00 X 10.0/11.0 |
| 60.00   | 75.00   | 9.10  | 10.00     | RS045-M-01-060.00 X 075.00 X 09.1/10.0 |
| 60.00   | 75.00   | 11.40 | 12.50     | RS045-M-01-060.00 X 075.00 X 11.4/12.5 |
| 65.00   | 75.00   | 7.30  | 8.00      | RS045-M-01-065.00 X 075.00 X 07.3/08.0 |
| 65.00   | 75.00   | 9.00  | 10.00     | RS045-M-01-065.00 X 075.00 X 09.0/10.0 |
| 65.00   | 78.00   | 10.00 | 11.00     | RS045-M-01-065.00 X 078.00 X 10.0/11.0 |
| 65.00   | 80.00   | 9.10  | 10.00     | RS045-M-01-065.00 X 080.00 X 09.1/10.0 |
| 65.00   | 80.00   | 11.40 | 12.50     | RS045-M-01-065.00 X 080.00 X 11.4/12.5 |
| 65.00   | 80.00   | 11.80 | 13.00     | RS045-M-01-065.00 X 080.00 X 11.8/13.0 |
| 70.00   | 80.00   | 5.50  | 6.00      | RS045-M-01-070.00 X 080.00 X 05.5/06.0 |



**ROYAL STANDARD SIZE LIST**

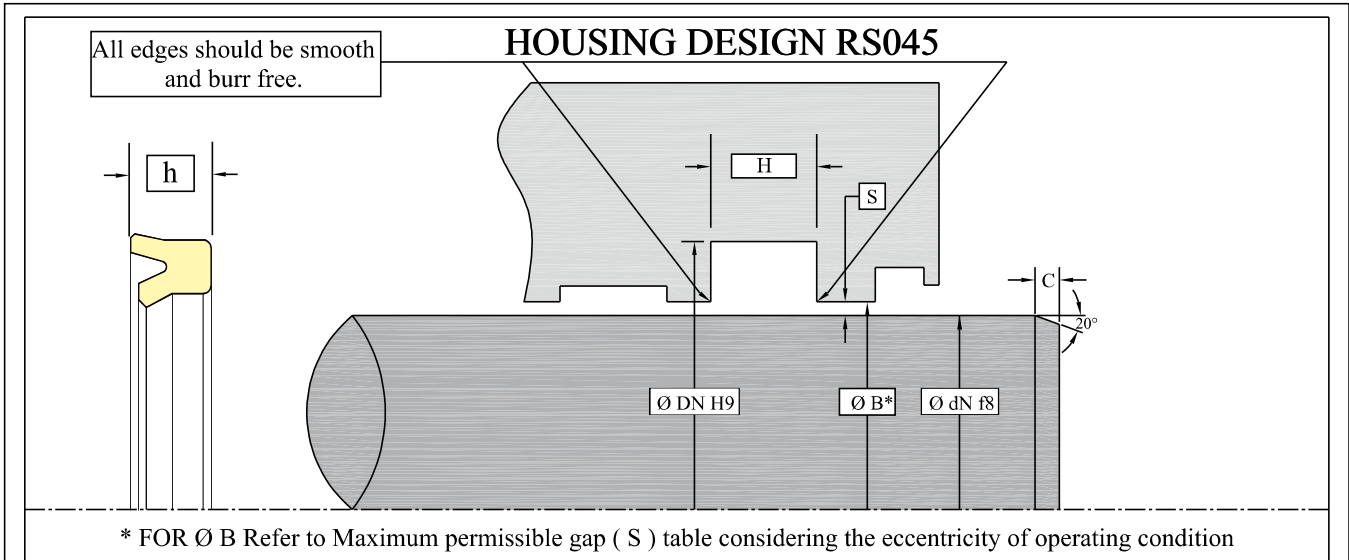
| dN (f8) | DN (H9) | h     | H (+0.20) | ORDER CODE                             |
|---------|---------|-------|-----------|--|
| 70.00   | 80.00   | 6.30  | 7.00      | RS045-M-01-070.00 X 080.00 X 06.3/07.0 |
| 70.00   | 80.00   | 9.20  | 10.00     | RS045-M-01-070.00 X 080.00 X 09.2/10.0 |
| 70.00   | 83.00   | 10.00 | 11.00     | RS045-M-01-070.00 X 083.00 X 10.0/11.0 |
| 70.00   | 85.00   | 9.10  | 10.00     | RS045-M-01-070.00 X 085.00 X 09.1/10.0 |
| 70.00   | 85.00   | 11.40 | 12.50     | RS045-M-01-070.00 X 085.00 X 11.4/12.5 |
| 70.00   | 90.00   | 11.80 | 13.00     | RS045-M-01-070.00 X 090.00 X 11.8/13.0 |
| 75.00   | 85.00   | 6.30  | 7.00      | RS045-M-01-075.00 X 085.00 X 06.3/07.0 |
| 75.00   | 85.00   | 9.10  | 10.00     | RS045-M-01-075.00 X 085.00 X 09.1/10.0 |
| 75.00   | 85.00   | 11.80 | 13.00     | RS045-M-01-075.00 X 085.00 X 11.8/13.0 |
| 75.00   | 88.00   | 10.00 | 11.00     | RS045-M-01-075.00 X 088.00 X 10.0/11.0 |
| 75.00   | 90.00   | 9.10  | 10.00     | RS045-M-01-075.00 X 090.00 X 09.1/10.0 |
| 75.00   | 90.00   | 10.00 | 11.00     | RS045-M-01-075.00 X 090.00 X 10.0/11.0 |
| 75.00   | 95.00   | 11.80 | 13.00     | RS045-M-01-075.00 X 095.00 X 11.8/13.0 |
| 75.00   | 95.00   | 14.50 | 16.00     | RS045-M-01-075.00 X 095.00 X 14.5/16.0 |
| 77.50   | 87.50   | 6.30  | 7.00      | RS045-M-01-077.50 X 087.50 X 06.3/07.0 |
| 80.00   | 90.00   | 6.40  | 7.00      | RS045-M-01-080.00 X 090.00 X 06.4/07.0 |
| 80.00   | 92.00   | 10.00 | 11.00     | RS045-M-01-080.00 X 092.00 X 10.0/11.0 |
| 80.00   | 93.00   | 10.00 | 11.00     | RS045-M-01-080.00 X 093.00 X 10.0/11.0 |
| 80.00   | 95.00   | 9.10  | 10.00     | RS045-M-01-080.00 X 095.00 X 09.1/10.0 |
| 80.00   | 95.00   | 10.00 | 11.00     | RS045-M-01-080.00 X 095.00 X 10.0/11.0 |
| 80.00   | 100.00  | 11.80 | 13.00     | RS045-M-01-080.00 X 100.00 X 11.8/13.0 |
| 85.00   | 98.00   | 10.00 | 11.00     | RS045-M-01-085.00 X 098.00 X 10.0/11.0 |
| 85.00   | 100.00  | 9.10  | 10.00     | RS045-M-01-085.00 X 100.00 X 09.1/10.0 |
| 85.00   | 100.00  | 10.00 | 11.00     | RS045-M-01-085.00 X 100.00 X 10.0/11.0 |
| 85.00   | 100.00  | 11.80 | 13.00     | RS045-M-01-085.00 X 100.00 X 11.8/13.0 |
| 85.00   | 105.00  | 11.80 | 13.00     | RS045-M-01-085.00 X 105.00 X 11.8/13.0 |
| 90.00   | 103.00  | 10.00 | 11.00     | RS045-M-01-090.00 X 103.00 X 10.0/11.0 |
| 90.00   | 104.00  | 11.40 | 12.50     | RS045-M-01-090.00 X 104.00 X 11.4/12.5 |
| 90.00   | 105.00  | 9.00  | 10.00     | RS045-M-01-090.00 X 105.00 X 09.0/10.0 |
| 90.00   | 105.00  | 10.00 | 11.00     | RS045-M-01-090.00 X 105.00 X 10.0/11.0 |



## SEALS FOR HYDRAULICS & PNEUMATICS

### ROYAL STANDARD SIZE LIST

| dN (f8) | DN (H9) | h     | H (+0.20) | ORDER CODE                             |
|---------|---------|-------|-----------|--|
| 90.00   | 105.00  | 11.40 | 12.50     | RS045-M-01-090.00 X 105.00 X 11.4/12.5 |
| 90.00   | 110.00  | 11.80 | 13.00     | RS045-M-01-090.00 X 110.00 X 11.8/13.0 |
| 90.00   | 110.00  | 12.70 | 14.00     | RS045-M-01-090.00 X 110.00 X 12.7/14.0 |
| 95.00   | 108.00  | 10.00 | 11.00     | RS045-M-01-095.00 X 108.00 X 10.0/11.0 |
| 95.00   | 110.00  | 9.00  | 10.00     | RS045-M-01-095.00 X 110.00 X 09.0/10.0 |
| 95.00   | 110.00  | 10.00 | 11.00     | RS045-M-01-095.00 X 110.00 X 10.0/11.0 |
| 95.00   | 115.00  | 11.80 | 13.00     | RS045-M-01-095.00 X 115.00 X 11.8/13.0 |
| 98.00   | 112.00  | 8.60  | 9.50      | RS045-M-01-098.00 X 112.00 X 08.6/09.5 |
| 100.00  | 110.00  | 8.20  | 9.00      | RS045-M-01-100.00 X 110.00 X 08.2/09.0 |
| 100.00  | 112.00  | 14.00 | 15.50     | RS045-M-01-100.00 X 112.00 X 14.0/15.5 |
| 100.00  | 115.00  | 9.10  | 10.00     | RS045-M-01-100.00 X 115.00 X 09.1/10.0 |
| 100.00  | 115.00  | 10.00 | 11.00     | RS045-M-01-100.00 X 115.00 X 10.0/11.0 |
| 100.00  | 120.00  | 11.80 | 13.00     | RS045-M-01-100.00 X 120.00 X 11.8/13.0 |
| 100.00  | 120.00  | 12.70 | 14.00     | RS045-M-01-100.00 X 120.00 X 12.7/14.0 |
| 105.00  | 120.00  | 10.00 | 11.00     | RS045-M-01-105.00 X 120.00 X 10.0/11.0 |
| 105.00  | 125.00  | 11.80 | 13.00     | RS045-M-01-105.00 X 125.00 X 11.8/13.0 |
| 108.00  | 118.00  | 5.70  | 6.30      | RS045-M-01-108.00 X 118.00 X 05.7/06.3 |
| 108.00  | 118.00  | 6.40  | 7.00      | RS045-M-01-108.00 X 118.00 X 06.4/07.0 |
| 110.00  | 125.00  | 9.00  | 10.00     | RS045-M-01-110.00 X 125.00 X 09.0/10.0 |
| 110.00  | 125.00  | 10.00 | 11.00     | RS045-M-01-110.00 X 125.00 X 10.0/11.0 |
| 110.00  | 130.00  | 10.00 | 11.00     | RS045-M-01-110.00 X 130.00 X 10.0/11.0 |
| 110.00  | 130.00  | 11.80 | 13.00     | RS045-M-01-110.00 X 130.00 X 11.8/13.0 |
| 110.00  | 130.00  | 12.70 | 14.00     | RS045-M-01-110.00 X 130.00 X 12.7/14.0 |
| 115.00  | 130.00  | 5.70  | 6.30      | RS045-M-01-115.00 X 130.00 X 05.7/06.3 |
| 115.00  | 130.00  | 10.00 | 11.00     | RS045-M-01-115.00 X 130.00 X 10.0/11.0 |
| 115.00  | 135.00  | 11.80 | 13.00     | RS045-M-01-115.00 X 135.00 X 11.8/13.0 |
| 115.00  | 135.00  | 14.50 | 16.00     | RS045-M-01-115.00 X 135.00 X 14.5/16.0 |
| 115.00  | 140.00  | 14.50 | 16.00     | RS045-M-01-115.00 X 140.00 X 14.5/16.0 |
| 120.00  | 135.00  | 9.00  | 10.00     | RS045-M-01-120.00 X 135.00 X 09.0/10.0 |
| 120.00  | 135.00  | 10.00 | 11.00     | RS045-M-01-120.00 X 135.00 X 10.0/11.0 |
| 120.00  | 140.00  | 11.80 | 13.00     | RS045-M-01-120.00 X 140.00 X 11.8/13.0 |
| 120.00  | 140.00  | 12.70 | 14.00     | RS045-M-01-120.00 X 140.00 X 12.7/14.0 |
| 125.00  | 145.00  | 11.80 | 13.00     | RS045-M-01-125.00 X 145.00 X 11.8/13.0 |
| 130.00  | 145.00  | 9.00  | 10.00     | RS045-M-01-130.00 X 145.00 X 09.0/10.0 |
| 130.00  | 145.00  | 10.00 | 11.00     | RS045-M-01-130.00 X 145.00 X 10.0/11.0 |
| 130.00  | 150.00  | 12.70 | 14.00     | RS045-M-01-130.00 X 150.00 X 12.7/14.0 |
| 140.00  | 150.00  | 6.40  | 7.00      | RS045-M-01-140.00 X 150.00 X 06.4/07.0 |
| 140.00  | 155.00  | 9.00  | 10.00     | RS045-M-01-140.00 X 155.00 X 09.0/10.0 |
| 140.00  | 155.00  | 10.00 | 11.00     | RS045-M-01-140.00 X 155.00 X 10.0/11.0 |
| 140.00  | 160.00  | 11.80 | 13.00     | RS045-M-01-140.00 X 160.00 X 11.8/13.0 |
| 140.00  | 160.00  | 14.50 | 16.00     | RS045-M-01-140.00 X 160.00 X 14.5/16.0 |
| 145.00  | 155.00  | 6.40  | 7.00      | RS045-M-01-145.00 X 155.00 X 06.4/07.0 |
| 150.00  | 160.00  | 6.40  | 7.00      | RS045-M-01-150.00 X 160.00 X 06.4/07.0 |
| 150.00  | 170.00  | 14.50 | 16.00     | RS045-M-01-150.00 X 170.00 X 14.5/16.0 |
| 155.00  | 165.00  | 6.40  | 7.00      | RS045-M-01-155.00 X 165.00 X 06.4/07.0 |
| 160.00  | 175.00  | 9.00  | 10.00     | RS045-M-01-160.00 X 175.00 X 09.0/10.0 |



**ROYAL STANDARD SIZE LIST**

| dN (f8) | DN (H9) | h     | H (+0.20) | ORDER CODE                             |
|---------|---------|-------|-----------|--|
| 160.00  | 185.00  | 11.80 | 13.00     | RS045-M-01-160.00 X 185.00 X 11.8/13.0 |
| 200.00  | 220.00  | 18.20 | 20.00     | RS045-M-01-200.00 X 220.00 X 18.2/20.0 |
| 200.00  | 225.00  | 14.60 | 16.00     | RS045-M-01-200.00 X 225.00 X 14.6/16.0 |
| 210.00  | 230.00  | 18.20 | 20.00     | RS045-M-01-210.00 X 230.00 X 18.2/20.0 |

**IMPERIAL SIZE**

| dN (f8) | DN (H9) | h     | H (+0.008") | ORDER CODE                               |
|---------|---------|-------|-------------|--|
| 0.500   | 0.750   | 0.154 | 0.170       | RS045-I-01-00.500 X 00.750 X 0.154/0.170 |
| 0.750   | 1.250   | 0.457 | 0.500       | RS045-I-01-00.750 X 01.250 X 0.457/0.500 |
| 0.875   | 1.250   | 0.312 | 0.413       | RS045-I-01-00.875 X 01.250 X 0.312/0.413 |
| 1.000   | 1.250   | 0.200 | 0.220       | RS045-I-01-01.000 X 01.250 X 0.200/0.220 |
| 1.250   | 1.750   | 0.375 | 0.413       | RS045-I-01-01.250 X 01.750 X 0.375/0.413 |
| 1.375   | 1.875   | 0.375 | 0.413       | RS045-I-01-01.375 X 01.875 X 0.375/0.413 |
| 1.500   | 1.875   | 0.264 | 0.290       | RS045-I-01-01.500 X 01.875 X 0.264/0.290 |
| 1.500   | 2.000   | 0.375 | 0.413       | RS045-I-01-01.500 X 02.000 X 0.375/0.413 |
| 1.750   | 2.125   | 0.264 | 0.290       | RS045-I-01-01.750 X 02.125 X 0.264/0.290 |
| 1.750   | 2.250   | 0.375 | 0.413       | RS045-I-01-01.750 X 02.250 X 0.375/0.413 |
| 1.875   | 2.250   | 0.313 | 0.350       | RS045-I-01-01.875 X 02.250 X 0.313/0.350 |
| 1.875   | 2.375   | 0.375 | 0.413       | RS045-I-01-01.875 X 02.375 X 0.375/0.413 |
| 2.000   | 2.500   | 0.300 | 0.330       | RS045-I-01-02.000 X 02.500 X 0.300/0.330 |
| 2.000   | 2.500   | 0.375 | 0.413       | RS045-I-01-02.000 X 02.500 X 0.375/0.413 |
| 2.125   | 2.625   | 0.375 | 0.413       | RS045-I-01-02.125 X 02.625 X 0.375/0.413 |
| 2.250   | 2.625   | 0.375 | 0.413       | RS045-I-01-02.250 X 02.625 X 0.375/0.413 |
| 2.250   | 2.750   | 0.375 | 0.413       | RS045-I-01-02.250 X 02.750 X 0.375/0.413 |
| 2.375   | 2.875   | 0.375 | 0.413       | RS045-I-01-02.375 X 02.875 X 0.375/0.413 |
| 2.500   | 3.000   | 0.300 | 0.330       | RS045-I-01-02.500 X 03.000 X 0.300/0.330 |
| 2.500   | 3.000   | 0.375 | 0.413       | RS045-I-01-02.500 X 03.000 X 0.375/0.413 |

