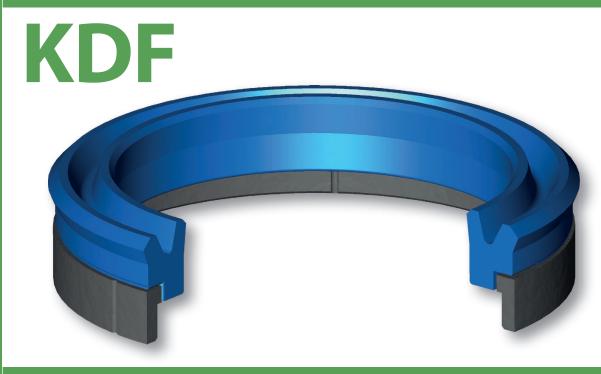
## SINGLE ACTING PISTON SEAL WITH ASYMMETRIC LIPS AND WEAR RING



The piston seal type Aston Seals KDF is composed of:

- A seal element which assures a good reaction against shock pressure peaks and low friction in the low pressure range. The asymmetric lips are designed to differentiate the behaviour of the lips on the static and dynamic surfaces. The static lip is flexible, more sensitive to pressure fluctuations and it guaranties a wide contact area. The dynamic lip is shorter and stronger to concentrate load against the dynamic surface
- An angular wear ring which guides the piston in the cylinder and supports radial loads

• Simple groove design

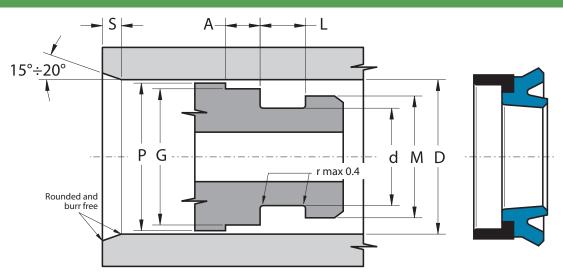
- Inexpensive sealing and guiding solution
- Extended service life
- High resistance against extrusion
- Excellent wear-resistance
- Good temperature resistance
- Easy installation without expensive auxiliaries

| MATERIAL  |   |   |  |  |  |  |  |  |  |  |
|---|---|---|--|--|--|--|--|--|--|--|
| 2 1   | <ol> <li>Type<br/>Designation<br/>Hardness</li> </ol>                                   | Polyurethane<br>SEALPUR 93<br>93 °ShA<br>Acetal resin with glass fibre<br>BEARITE |  |  |  |  |  |  |  |  |
|   | ② Type<br>Designation   |   |  |  |  |  |  |  |  |  |
| FIELD OF APPLICATION  |   |   |  |  |  |  |  |  |  |  |
| <b>Pressure</b><br>≤ 400 bar  | <b>0 bar</b> 100  200   |   |  |  |  |  |  |  |  |  |
| <b>Speed</b><br>≤ 0.5 m/s   | 0 m/s 2 4   | 6 8 10 12 14  |  |  |  |  |  |  |  |  |
| <b>Temperature</b><br>−40°C ÷ +100°C  | -200  -150  -100  | -50 0°C  50  100  150   |  |  |  |  |  |  |  |  |
| Fluids  | Hydraulic oils (mineral oil based)<br>For other fluids contact our technical department |   |  |  |  |  |  |  |  |  |
| SURFACE ROUGHNESS   |   |   |  |  |  |  |  |  |  |  |
| Dynamic surfa<br>Static surface   | <b>ce</b> Ra ≤ 0.3 μm<br>Ra ≤ 1.6 μm  | Rt ≤ 2.5 μm<br>Rt ≤ 6.3 μm  |  |  |  |  |  |  |  |  |
| LEAD-IN CHAMFERS  |   |   |  |  |  |  |  |  |  |  |
| С   | l   | Smin  |  |  |  |  |  |  |  |  |
| less 1<br>100÷2<br>over 2   | 200   | 5 mm<br>7 mm<br>10 mm   |  |  |  |  |  |  |  |  |
| To avoid damaging the sealing lips during installation, housing must have rounded chamfers. Sharp edges and burrs within the installation area of the seal must be removed. |   |   |  |  |  |  |  |  |  |  |
| The above data are maximum values, they may be maintained for short   |   |   |  |  |  |  |  |  |  |  |

The above data are maximum values, they may be maintained for short periods and can not be used at the same time simultaneously.

## SINGLE ACTING PISTON SEAL WITH ASYMMETRIC LIPS AND WEAR RING

**KDF** 



| Part.          | D H10 | d <sup>f8</sup> | L +0.25 | <b>A</b> ±0.1 | <b>G</b> <sup>-0.05</sup> | P ±0.2 | м  | Part.             | D <sup>H10</sup> | d <sup>f8</sup> | L +0.25 | <b>A</b> ±0.1 | <b>G</b> <sup>-0.05</sup> | P ±0.2 | м   |
|----------------|-------|-----------------|---------|---------------|---------------------------|--------|----|-------------------|------------------|-----------------|---------|---------------|---------------------------|--------|-----|
| KDF 32 20 8    | 32    | 20              | 9.0     | 6.35          | 28.50                     | 30.5   | 24 | KDF 60 45 10      | 60               | 45              | 11.0    | 6.35          | 55.40                     | 58.5   | 50  |
| KDF 35 22 9    | 35    | 22              | 10.0    | 6.35          | 31.40                     | 33.5   | 27 | KDF 63 45 10      | 63               | 45              | 11.0    | 6.35          | 58.40                     | 61.5   | 50  |
| KDF 40 25 8.5  | 40    | 25              | 9.5     | 6.35          | 35.40                     | 38.5   | 30 | KDF 65 50 10      | 65               | 50              | 11.0    | 6.35          | 60.40                     | 63.5   | 55  |
| KDF 40 26 8.5  | 40    | 26              | 9.5     | 6.35          | 35.40                     | 38.5   | 31 | KDF 70 50 13.5    | 70               | 50              | 14.5    | 6.35          | 64.20                     | 68.3   | 55  |
| KDF 40 30 8    | 40    | 30              | 9.0     | 6.35          | 35.40                     | 38.5   | 34 | KDF 80 60 12      | 80               | 60              | 13.0    | 6.35          | 74.15                     | 78.3   | 65  |
| KDF 40 30 8.5  | 40    | 30              | 9.5     | 6.35          | 35.40                     | 38.5   | 34 | KDF 80 60 13.5    | 80               | 60              | 14.5    | 6.35          | 74.15                     | 78.3   | 65  |
| KDF 45 30 9    | 45    | 30              | 10.0    | 6.35          | 40.40                     | 43.7   | 35 | KDF 90 70 12      | 90               | 70              | 13.0    | 6.35          | 84.15                     | 88.3   | 75  |
| KDF 45 35 8.5  | 45    | 35              | 9.5     | 6.35          | 40.40                     | 43.7   | 39 | KDF 90 70 13.5    | 90               | 70              | 14.5    | 6.35          | 84.15                     | 88.3   | 75  |
| KDF 50 30 13.5 | 50    | 30              | 14.5    | 6.35          | 44.30                     | 48.5   | 35 | KDF 100 80 13.5   | 100              | 80              | 14.5    | 6.35          | 93.15                     | 98.0   | 85  |
| KDF 50 35 10   | 50    | 35              | 11.0    | 6.35          | 45.35                     | 48.5   | 40 | KDF 100 80 13.5/A | 100              | 80              | 14.5    | 6.35          | 94.15                     | 98.3   | 85  |
| KDF 50 40 10   | 50    | 40              | 11.0    | 6.35          | 45.40                     | 48.5   | 44 | KDF 110 95 12     | 110              | 95              | 13.0    | 6.35          | 103.10                    | 108.0  | 100 |
| KDF 55 40 10   | 55    | 40              | 11.0    | 6.35          | 50.35                     | 53.5   | 45 | KDF 120 100 13.5  | 120              | 100             | 14.5    | 6.35          | 113.10                    | 118.1  | 105 |
| KDF 60 40 13.5 | 60    | 40              | 14.5    | 6.35          | 55.40                     | 58.5   | 45 |                   |                  |                 |         |               |                           |        |     |