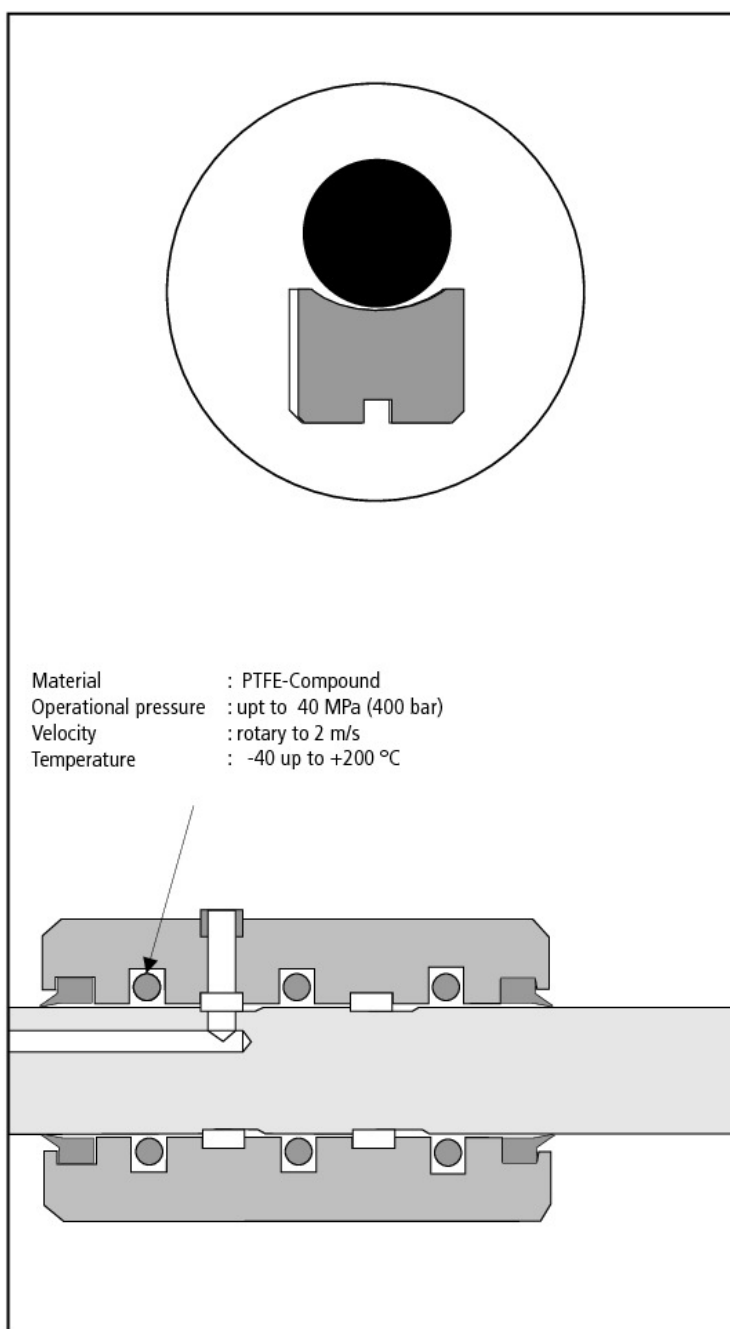


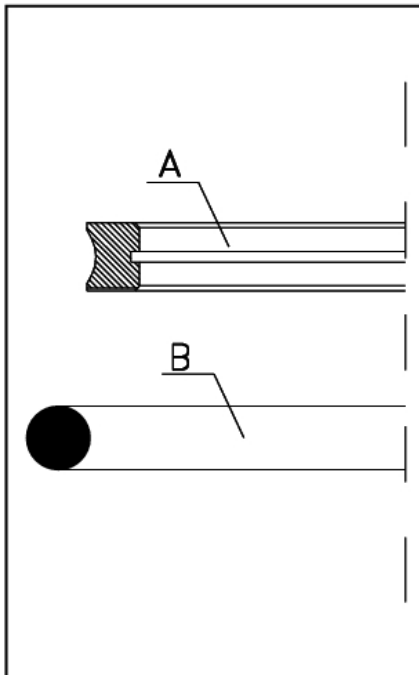


HR 185 series has been specially designed for use in sealing of swivel or rotary transmissions. This double acting sealing system is used in cases of internal sealing. It has a particularly versatile range of materials to serve respective applications.

#### Special Features:

- low friction and very low wear
- reduced stick slip tendency even at low velocity
- high extrusion durability
- small assembly dimensions
- suitability to almost all medias concerning the PTFE part and a possibility of variation with O-ring





### Profile Gasket (Part A)

Profile gasket cross section has been specially designed taking into account the turning action. The dynamic side is provided with a small chamfer to simplify assembly. The circumventing / surrounding groove on the dynamic side yields a high specific surface pressure. The radius on the inner diameter ensures a central and secure fit for the pre-stressing element. The expanded frictional area between O-ring and the profile ring also curtails relative movement with respect to each other. Depending on the section of the seal, there may be one or two grooves incorporated on the dynamic side.

The response behavior of the pre-stressing element is improved by providing for grooves on the lateral plane faces as a standard feature.

### O-ring (Part B)

O-rings are standard sealing elements with circular cross section. Those used in the present application conform to the series of dimensions as per AS 568 A (American norms). Standard MOC for hydraulics applications is NBR, which guarantees particularly good resistance to hydraulic fluids. For use with profile gaskets O-rings with hardness of 70 Shore A are preferred.

### Material overview: Profile Gaskets

**25:** Modified PTFE + Glass fiber - High abrasion resistance and inherent stability, good chemical resistance, used in various areas of industry and intermediate-stress hydraulic applications.

**30:** Modified PTFE + Carbon - Good abrasion resistance and inherent stability, good chemical resistance, used in water- and water-oil emulsions with intermediate stress. Also designed for dry runs.

**67:** Modified PTFE - Very high abrasion resistance and inherent stability, used in hydraulics and abrasive pressure fluid applications.

**74:** Modified PTFE + Carbon fiber - Very good abrasion resistance and inherent stability. Used in hydraulics and also intended for dry runs.

### Material overview: O-Rings

**N:** Acrylnitrile-Butadiene-Rubber - Used in general machine constructions, hydraulics, pneumatics. Resistant to mineral oil based pressure fluids, HFA, HFB and HFC fluids and water.

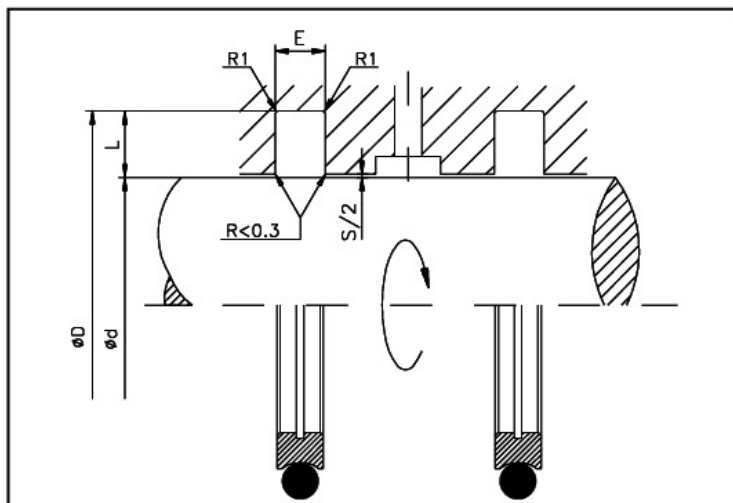
**F:** Fluorine-containing Rubbers - Used at high temperatures and aggressive surrounding media, resistant to mineral based and synthetic pressure fluids, aliphatic, aromatic and chlorated hydrocarbons, phosphate-ester based poorly inflammable fluids.

**E:** Ethylene-Propylene-Diene Rubbers - Used in valve and pump industry. Resistant to hot water, steam, phosphate-ester based poorly inflammable fluids, but is not resistant to mineral oils.

**S:** Silicone-Rubbers

**C:** Chloroprene-Rubbers

HR 185 can be assembled in divided and undivided grooves: devided <20 mm, closed >20 mm.



### Limitations of Use

Operational pressure : bis 40 MPa (400 bar)  
Velocity : rotary to 2 m/s  
Temperature : -40 up to +200 °C  
(depending on O-ring material)

### Media for Use

Mineral oil based pressure fluids, flame resistant fluids, (HFA, HFB, HFC,) bio oils, water, air and other media depending on O-ring material

### Surface Finish

| Surface          | Rmax                                 | Rz      | Ra     |
|------------------|--------------------------------------|---------|--------|
| Faces            | 2,5 µm                               | 1,6 µm  | 0,4 µm |
| Groove root      | 10,0 µm                              | 6,3 µm  | 1,6 µm |
| Groove flanks    | 16,0 µm                              | 10,0 µm | 3,2 µm |
| Surface hardness | ≥ 55 HRC; Depth of hardness ≥ 0,3 mm |         |        |

### Preferred assembly dimensions

| Section | O-Ring<br>Cord-ø<br>mm | Recommend<br>Diameter<br>Standard<br>d<br>mm | Groove<br>Width<br>E<br>mm | Groove<br>Depth<br>L<br>mm | Max. Diameter Clearance<br>S |                     | Radius<br>R1 max.<br>mm |
|---------|------------------------|----------------------------------------------|----------------------------|----------------------------|------------------------------|---------------------|-------------------------|
|         |                        |                                              |                            |                            | 0 - 150 bar<br>mm            | 150 - 300 bar<br>mm |                         |
| 01      | 1,78                   | 4,0 - 7,9                                    | 2,2                        | 2,45                       | 0,4 - 0,2                    | 0,2 - 0,1           | 0,5                     |
| 02      | 2,62                   | 8,0 - 18,9                                   | 3,2                        | 3,75                       | 0,4 - 0,2                    | 0,2 - 0,1           | 0,5                     |
| 03      | 3,53                   | 19,0 - 37,9                                  | 4,2                        | 5,50                       | 0,6 - 0,3                    | 0,3 - 0,2           | 0,5                     |
| 04      | 5,33                   | 38,0 - 199,9                                 | 6,3                        | 7,75                       | 0,8 - 0,4                    | 0,4 - 0,2           | 0,9                     |
| 05      | 7,00                   | 200,0 - 255,9                                | 8,1                        | 10,50                      | 1,0 - 0,5                    | 0,5 - 0,3           | 0,9                     |
| 06      | 7,00                   | 256,0 - 649,9                                | 8,1                        | 12,25                      | 1,0 - 0,5                    | 0,5 - 0,3           | 0,9                     |
| 07      | 8,40                   | 650,0 - 999,9                                | 9,5                        | 14,00                      | 1,0 - 0,5                    | 0,5 - 0,3           | 0,9                     |

| d f8/h9 | D H10 | E +0,2 | O-Ring | Part N°           |
|---------|-------|--------|--------|-------------------|
| 3,00    | 7,90  | 2,20   | 008    | HR185 0030-01-74N |
| 4,00    | 8,90  | 2,20   | 010    | HR185 0040-01-74N |
| 5,00    | 9,90  | 2,20   | 011    | HR185 0050-01-74N |
| 6,00    | 10,90 | 2,20   | 011    | HR185 0060-01-74N |
| 7,00    | 11,90 | 2,20   | 012    | HR185 0070-01-74N |
| 8,00    | 12,90 | 2,20   | 012    | HR185 0080-01-74N |
| 8,00    | 15,50 | 3,20   | 111    | HR185 0080-02-74N |
| 10,00   | 14,90 | 2,20   | 013    | HR185 0100-01-74N |
| 10,00   | 17,50 | 3,20   | 112    | HR185 0100-02-74N |
| 12,00   | 16,90 | 2,20   | 015    | HR185 0120-01-74N |
| 12,00   | 19,50 | 3,20   | 114    | HR185 0120-02-74N |
| 14,00   | 18,90 | 2,20   | 016    | HR185 0140-01-74N |
| 14,00   | 21,50 | 3,20   | 115    | HR185 0140-02-74N |
| 15,00   | 19,90 | 2,20   | 016    | HR185 0150-01-74N |
| 15,00   | 22,50 | 3,20   | 116    | HR185 0150-02-74N |
| 16,00   | 20,90 | 2,20   | 017    | HR185 0160-01-74N |
| 16,00   | 23,50 | 3,20   | 116    | HR185 0160-02-74N |
| 18,00   | 22,90 | 2,20   | 018    | HR185 0180-01-74N |
| 18,00   | 25,50 | 3,20   | 117    | HR185 0180-02-74N |
| 20,00   | 27,50 | 3,20   | 118    | HR185 0200-02-74N |
| 20,00   | 31,00 | 4,20   | 214    | HR185 0200-03-74N |
| 22,00   | 29,50 | 3,20   | 120    | HR185 0220-02-74N |
| 22,00   | 33,00 | 4,20   | 215    | HR185 0220-03-74N |
| 25,00   | 32,50 | 3,20   | 122    | HR185 0250-02-74N |
| 25,00   | 36,00 | 4,20   | 217    | HR185 0250-03-74N |

| d f8/h9 | D H10 | E +0,2 | O-Ring | Part N°           |
|---------|-------|--------|--------|-------------------|
| 28,00   | 35,50 | 3,20   | 124    | HR185 0280-02-74N |
| 28,00   | 39,00 | 4,20   | 219    | HR185 0280-03-74N |
| 30,00   | 37,50 | 3,20   | 125    | HR185 0300-02-74N |
| 30,00   | 41,00 | 4,20   | 220    | HR185 0300-03-74N |
| 32,00   | 39,50 | 3,20   | 126    | HR185 0320-02-74N |
| 32,00   | 43,00 | 4,20   | 221    | HR185 0320-03-74N |
| 35,00   | 42,50 | 3,20   | 128    | HR185 0350-02-74N |
| 35,00   | 46,00 | 4,20   | 222    | HR185 0350-03-74N |
| 36,00   | 43,50 | 3,20   | 129    | HR185 0360-02-74N |
| 36,00   | 47,00 | 4,20   | 223    | HR185 0360-03-74N |
| 38,00   | 49,00 | 4,20   | 224    | HR185 0380-03-74N |
| 38,00   | 53,50 | 6,30   | 327    | HR185 0380-04-74N |
| 40,00   | 51,00 | 4,20   | 224    | HR185 0400-03-74N |
| 40,00   | 55,50 | 6,30   | 328    | HR185 0400-04-74N |
| 42,00   | 53,00 | 4,20   | 224    | HR185 0420-03-74N |
| 42,00   | 57,50 | 6,30   | 328    | HR185 0420-04-74N |
| 45,00   | 56,00 | 4,20   | 226    | HR185 0450-03-74N |
| 45,00   | 60,50 | 6,30   | 329    | HR185 0450-04-74N |
| 48,00   | 59,00 | 4,20   | 226    | HR185 0480-03-74N |
| 48,00   | 63,50 | 6,30   | 330    | HR185 0480-04-74N |
| 50,00   | 61,00 | 4,20   | 227    | HR185 0500-03-74N |
| 50,00   | 65,50 | 6,30   | 331    | HR185 0500-04-74N |
| 52,00   | 63,00 | 4,20   | 228    | HR185 0520-03-74N |
| 52,00   | 67,50 | 6,30   | 331    | HR185 0520-04-74N |
| 55,00   | 66,00 | 4,20   | 229    | HR185 0550-03-74N |



| d f8/h9 | D H10  | E +0,2 | O-Ring | Part N°           |
|---------|--------|--------|--------|-------------------|
| 55,00   | 70,50  | 6,30   | 332    | HR185 0550-04-74N |
| 56,00   | 67,00  | 4,20   | 229    | HR185 0560-03-74N |
| 56,00   | 71,50  | 6,30   | 333    | HR185 0560-04-74N |
| 60,00   | 71,00  | 4,20   | 230    | HR185 0600-03-74N |
| 60,00   | 75,50  | 6,30   | 334    | HR185 0600-04-74N |
| 63,00   | 74,00  | 4,20   | 231    | HR185 0630-03-74N |
| 63,00   | 78,50  | 6,30   | 335    | HR185 0630-04-74N |
| 65,00   | 80,50  | 6,30   | 335    | HR185 0650-04-74N |
| 70,00   | 85,50  | 6,30   | 337    | HR185 0700-04-74N |
| 75,00   | 90,50  | 6,30   | 339    | HR185 0750-04-74N |
| 80,00   | 95,50  | 6,30   | 340    | HR185 0800-04-74N |
| 85,00   | 100,50 | 6,30   | 342    | HR185 0850-04-74N |
| 90,00   | 105,50 | 6,30   | 343    | HR185 0900-04-74N |
| 95,00   | 110,50 | 6,30   | 345    | HR185 0950-04-74N |
| 100,00  | 115,50 | 6,30   | 346    | HR185 1000-04-74N |
| 105,00  | 120,50 | 6,30   | 348    | HR185 1050-04-74N |
| 110,00  | 125,50 | 6,30   | 350    | HR185 1100-04-74N |
| 115,00  | 130,50 | 6,30   | 351    | HR185 1150-04-74N |
| 120,00  | 135,50 | 6,30   | 353    | HR185 1200-04-74N |
| 125,00  | 140,50 | 6,30   | 354    | HR185 1250-04-74N |
| 130,00  | 145,50 | 6,30   | 356    | HR185 1300-04-74N |
| 135,00  | 150,50 | 6,30   | 358    | HR185 1350-04-74N |
| 140,00  | 155,50 | 6,30   | 359    | HR185 1400-04-74N |
| 150,00  | 165,50 | 6,30   | 361    | HR185 1500-04-74N |
| 160,00  | 175,50 | 6,30   | 363    | HR185 1600-04-74N |
| 160,00  | 181,00 | 8,10   | 439    | HR185 1600-05-74N |
| 170,00  | 185,50 | 6,30   | 365    | HR185 1700-04-74N |
| 180,00  | 195,50 | 6,30   | 366    | HR185 1800-04-74N |
| 180,00  | 201,00 | 8,10   | 442    | HR185 1800-05-74N |
| 190,00  | 205,50 | 6,30   | 368    | HR185 1900-04-74N |

| d f8/h9 | D H10  | E +0,2 | O-Ring | Part N°           |
|---------|--------|--------|--------|-------------------|
| 200,00  | 221,00 | 8,10   | 445    | HR185 2000-05-74N |
| 210,00  | 231,00 | 8,10   | 446    | HR185 2100-05-74N |
| 220,00  | 241,00 | 8,10   | 447    | HR185 2200-05-74N |
| 230,00  | 251,00 | 8,10   | 448    | HR185 2300-05-74N |
| 240,00  | 261,00 | 8,10   | 448    | HR185 2400-05-74N |
| 250,00  | 271,00 | 8,10   | 449    | HR185 2500-05-74N |
| 260,00  | 284,50 | 8,10   | 450    | HR185 2600-06-74N |
| 270,00  | 294,50 | 8,10   | 451    | HR185 2700-06-74N |
| 280,00  | 304,50 | 8,10   | 452    | HR185 2800-06-74N |
| 290,00  | 314,50 | 8,10   | 453    | HR185 2900-06-74N |
| 300,00  | 324,50 | 8,10   | 453    | HR185 3000-06-74N |
| 310,00  | 334,50 | 8,10   | 454    | HR185 3100-06-74N |
| 320,00  | 344,50 | 8,10   | 455    | HR185 3200-06-74N |
| 330,00  | 354,50 | 8,10   | 456    | HR185 3300-06-74N |
| 340,00  | 364,50 | 8,10   | 457    | HR185 3400-06-74N |
| 350,00  | 374,50 | 8,10   | 457    | HR185 3500-06-74N |
| 360,00  | 384,50 | 8,10   | 458    | HR185 3600-06-74N |
| 370,00  | 394,50 | 8,10   | 459    | HR185 3700-06-74N |
| 380,00  | 404,50 | 8,10   | 460    | HR185 3800-06-74N |
| 390,00  | 414,50 | 8,10   | 461    | HR185 3900-06-74N |
| 400,00  | 424,50 | 8,10   | 461    | HR185 4000-06-74N |
| 410,00  | 434,50 | 8,10   | 462    | HR185 4100-06-74N |
| 420,00  | 444,50 | 8,10   | 463    | HR185 4200-06-74N |
| 430,00  | 454,50 | 8,10   | 464    | HR185 4300-06-74N |
| 440,00  | 464,50 | 8,10   | 464    | HR185 4400-06-74N |
| 450,00  | 474,50 | 8,10   | 465    | HR185 4500-06-74N |
| 460,00  | 484,50 | 8,10   | 466    | HR185 4600-06-74N |
| 470,00  | 494,50 | 8,10   | 467    | HR185 4700-06-74N |
| 480,00  | 504,50 | 8,10   | 468    | HR185 4800-06-74N |
| 490,00  | 514,50 | 8,10   | 469    | HR185 4900-06-74N |
| 500,00  | 524,50 | 8,10   | 469    | HR185 5000-06-74N |

Further and intermediate sizes up to Ø 2500 mm available on request.

### Example for ordering:

**HR 185 0360 - 03 - 74N - ...**  
 Profile \_\_\_\_\_  
 Nominal diameter x 10 \_\_\_\_\_  
 Cross section \_\_\_\_\_  
 Standard material profile gasket \_\_\_\_\_  
 Standard material O-Ring \_\_\_\_\_  
 HME internal code \_\_\_\_\_

### Material Key:

**Profile gasket**  
 25 - PTFE glass fiber  
 30 - PTFE carbon  
 67 - modifiziertes PTFE  
 74 - PTFE carbon fiber

### O - Ring

N - NBR  
 F - FPM  
 E - EPDM  
 S - Silicon  
 C - Chloropren

Issue

01 05

**WARNING:** Limits of application stated herein are standard values. They could be individually transgressed with due consideration to respective service conditions. In the event of a large duty cycle, pulsating operation and other complex operational conditions, simultaneous transgression of these values is not recommended. Due to a large variety of service conditions that may arise in course of actual use, the company does not take responsibility of or guarantee the functional accuracy of the individual components. Rights for changes are reserved.