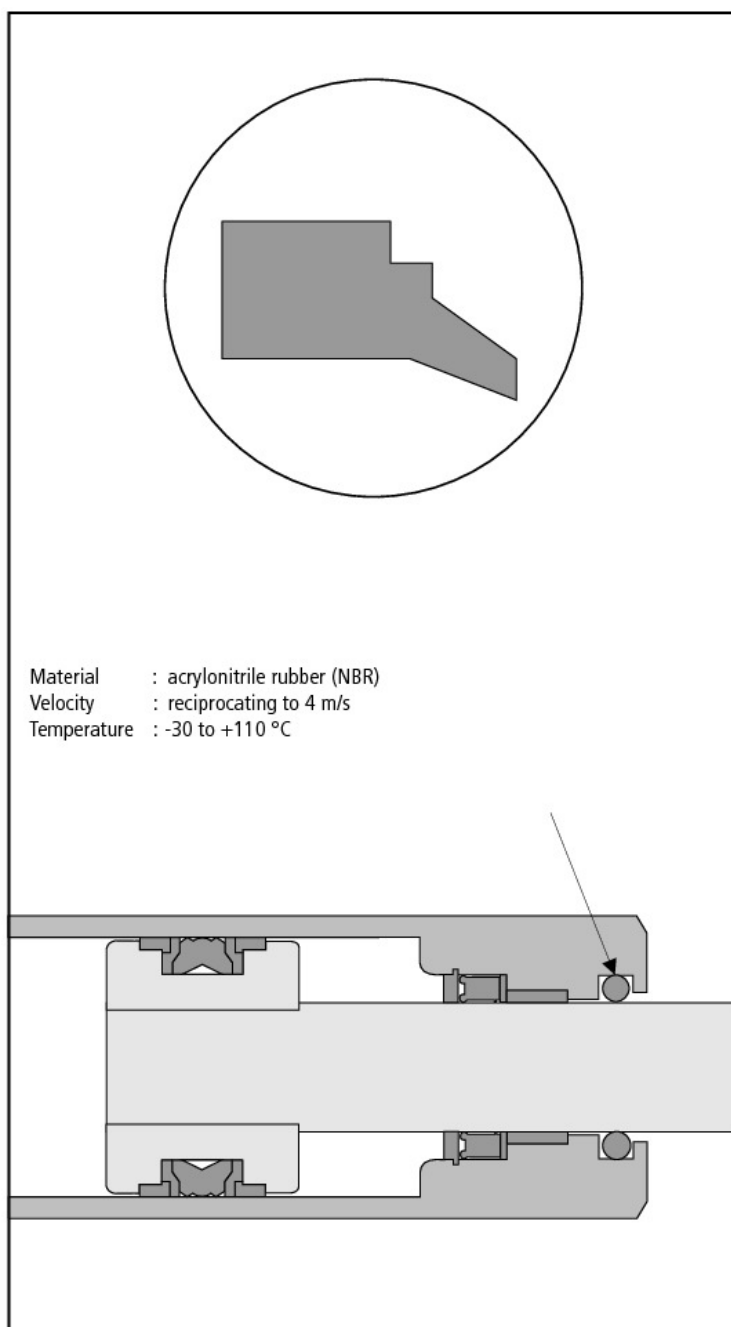


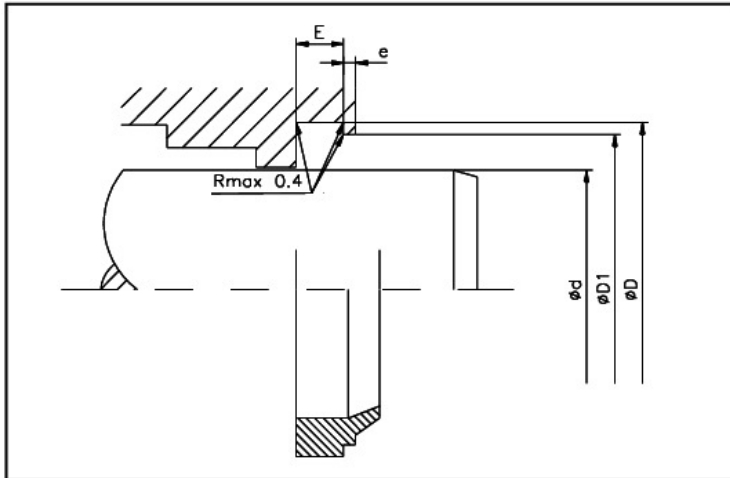


Single acting wiper HA 315 reliably blocks entry of dust particles and water in the hydraulic cylinder. It can be used both in hydraulics and pneumatics.

Special Features:

- Very good wiper action
- Anti-wear NBR material
- Special form-closing in the housing achieved by steps on outer diameter
- Easy snap assembly in groove
- Also available in FPM for special applications.





Limitations on Use

Velocity : reciprocating to 4 m/s
Temperature : -30 bis +110 °C

Media for Use

Mineral oil based hydraulic oils, flame resistant pressure media and emulsions (HFA, HFB, HFC), non-polluting pressure fluids (Bio Oils).

Surface Finish

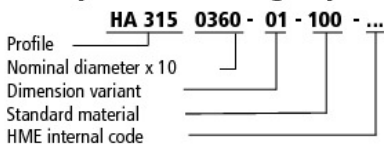
| Surfaces | Rmax | Rz | Ra |
|---------------|---------|---------|--------|
| Faces | 2,5 µm | 1,6 µm | 0,4 µm |
| Groove root | 16,0 µm | 10,0 µm | 3,2 µm |
| Groove flanks | 16,0 µm | 10,0 µm | 3,2 µm |

| d f8/h9 | D H 11 | E +0,2 | D1 +0,2 | e min | Part N°. |
|---------------|---------------|-------------|---------------|-------------|--------------------------|
| 8,00 | 16,00 | 4,00 | 14,00 | 1,00 | HA315 0080-01-100 |
| 10,00 | 18,00 | 4,00 | 16,00 | 1,00 | HA315 0100-01-100 |
| 12,00 | 20,00 | 4,00 | 18,00 | 1,00 | HA315 0120-01-100 |
| 14,00 | 22,00 | 4,00 | 20,00 | 1,00 | HA315 0140-01-100 |
| 16,00 | 24,00 | 4,00 | 22,00 | 1,00 | HA315 0160-01-100 |
| 18,00 | 26,00 | 4,00 | 24,00 | 1,00 | HA315 0180-01-100 |
| 20,00 | 28,00 | 4,00 | 26,00 | 1,00 | HA315 0200-01-100 |
| 22,00 | 30,00 | 4,00 | 28,00 | 1,00 | HA315 0220-01-100 |
| 25,00 | 33,00 | 4,00 | 31,00 | 1,00 | HA315 0250-01-100 |
| 28,00 | 36,00 | 4,00 | 34,00 | 1,00 | HA315 0280-01-100 |
| 30,00 | 38,00 | 4,00 | 36,00 | 1,00 | HA315 0300-01-100 |
| 32,00 | 40,00 | 4,00 | 38,00 | 1,00 | HA315 0320-01-100 |
| 35,00 | 43,00 | 4,00 | 41,00 | 1,00 | HA315 0350-01-100 |
| 36,00 | 44,00 | 4,00 | 42,00 | 1,00 | HA315 0360-01-100 |
| 40,00 | 48,00 | 4,00 | 46,00 | 1,00 | HA315 0400-01-100 |
| 42,00 | 50,00 | 4,00 | 48,00 | 1,00 | HA315 0420-01-100 |
| 45,00 | 53,00 | 4,00 | 51,00 | 1,00 | HA315 0450-01-100 |
| 50,00 | 58,00 | 4,00 | 56,00 | 1,00 | HA315 0500-01-100 |
| 55,00 | 63,00 | 4,00 | 61,00 | 1,00 | HA315 0550-01-100 |
| 56,00 | 64,00 | 4,00 | 62,00 | 1,00 | HA315 0560-01-100 |
| 60,00 | 68,00 | 4,00 | 66,00 | 1,00 | HA315 0600-01-100 |
| 63,00 | 71,00 | 4,00 | 69,00 | 1,00 | HA315 0630-01-100 |
| 70,00 | 78,00 | 4,00 | 76,00 | 1,00 | HA315 0700-01-100 |
| 80,00 | 88,00 | 4,00 | 86,00 | 1,00 | HA315 0800-01-100 |
| 90,00 | 98,00 | 4,00 | 96,00 | 1,00 | HA315 0900-01-100 |
| 95,00 | 103,00 | 4,00 | 101,00 | 1,00 | HA315 0950-01-100 |
| 100,00 | 108,00 | 4,00 | 106,00 | 1,00 | HA315 1000-01-100 |
| 110,00 | 122,00 | 5,50 | 119,00 | 1,50 | HA315 1100-01-100 |
| 120,00 | 132,00 | 5,50 | 129,00 | 1,50 | HA315 1200-01-100 |
| 125,00 | 137,00 | 5,50 | 134,00 | 1,50 | HA315 1250-01-100 |
| 140,00 | 152,00 | 5,50 | 149,00 | 1,50 | HA315 1400-01-100 |
| 160,00 | 172,00 | 5,50 | 169,00 | 1,50 | HA315 1600-01-100 |
| 180,00 | 192,00 | 5,50 | 189,00 | 1,50 | HA315 1800-01-100 |
| 200,00 | 212,00 | 5,50 | 209,00 | 1,50 | HA315 2000-01-100 |
| 220,00 | 235,00 | 6,50 | 231,00 | 2,00 | HA315 2200-01-100 |
| 250,00 | 265,00 | 6,50 | 261,00 | 2,00 | HA315 2500-01-100 |

Sizes also available in FPM. Extensive range of inch measurement diagrams available on request.
Bold figures correspond to rod diameters as per ISO 3320.



Example for ordering Wipers:



Material Key:

Wiper ring
 100 - NBR
 120 - FPM

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.