

## Description

The 301 Series dirt wiper is fabricated from high quality moulded polyurethane which enhances its strength and elasticity. Its groove design holds the wiper tightly to the rod, ensuring that there is no twisting or turning within the assembly

## Product Benefits

- No twisting, sloping or turning
- Minimal leakage
- Prevents back contamination
- No pressure build-up between wiper and seal

## Material

The standard material for the 301 dirt wiper is high-grade H-PU polyurethane. However, to suit a variety of applications it is also available in robust NBR, H-NBR, high temperature resistant FPM and EPDM.

Material	Code
Polyurethane H-PU	P03
Nitrile NBR	N01
Fluoroelastomer FPM	F01

## Operating Parameters

Temperature	P03	
	°C	°F
hydraulic oil	-20...+115	-5...+240
water oil emulsions (HFA)	+5...+55	+40...+130
water-glycol fluids (HFC)	-20...+55	-5...+130
polyol esters (HFD)	-	-
water	+5...+55	+40...+130

Speed	2 m/s (6.5 ft/sec)
Pressure	-

Note: for other materials or fluids please contact our engineering department

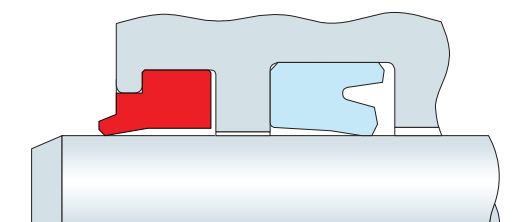
## Applications

The 301 dirt wiper is used in a range of standard applications where heavy contamination is not present.

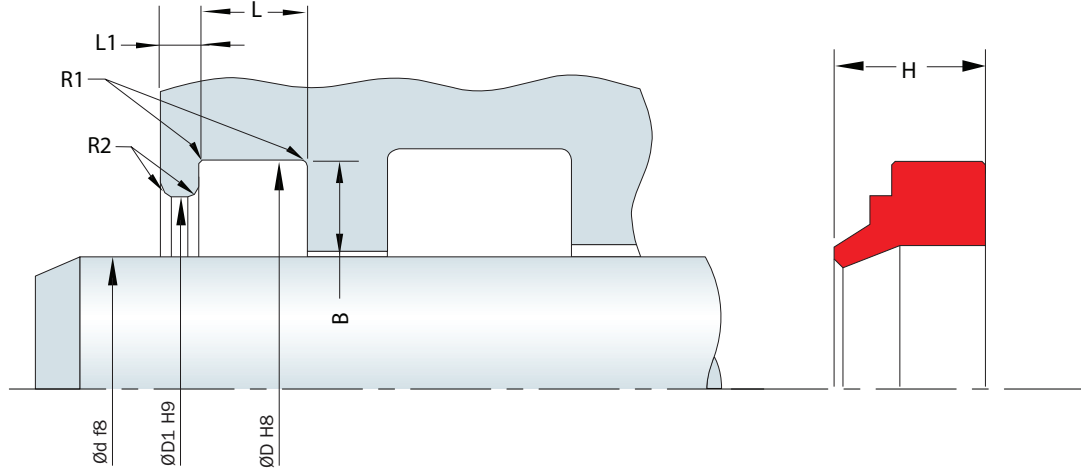
Typical applications include:

- Mobile hydraulics
- Agricultural machinery
- Standard cylinders

## Installation Drawing



## Design Guidelines



### Metric Series

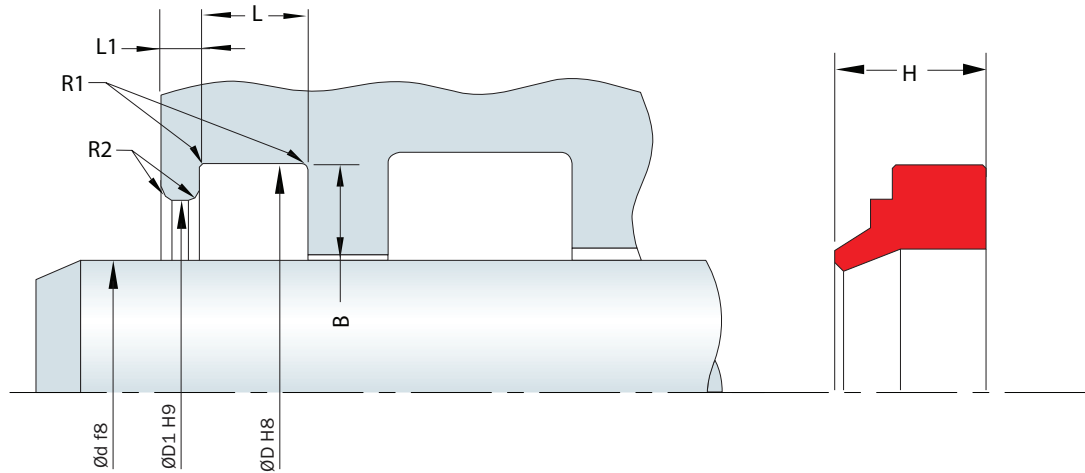
	Rod Diameter d	B	D	D1	L <sup>+0.2</sup>	H	R1	L1	R2
Series 1	up to 42	4.00	+8.00	+6.00	4.00	7.00	0.30	1.00	0.50
Series 2	up to 42	4.00	+8.00	+5.50	5.00	7.80	0.30	1.00	0.50
Series 3	up to 70	5.00	+10.00	+7.00	6.30	9.00	0.30	1.00	0.50
Series 4	up to 175	6.00	+12.00	+9.00	5.50	10.00	0.30	1.50	0.50
Series 5	up to 250	7.50	+15.00	+10.00	9.50	13.00	0.30	1.50	0.50

### Inch Series

	Rod Diameter d	B	D	D1	L <sup>+0.2</sup>	H	R1	L1	R2
Series 1	up to 1.654	0.157	+0.315	+0.236	0.157	0.276	0.012	0.039	0.020
Series 2	up to 1.654	0.157	+0.315	+0.217	0.197	0.307	0.012	0.039	0.020
Series 3	up to 2.756	0.197	+0.394	+0.276	0.248	0.354	0.012	0.039	0.020
Series 4	up to 6.890	0.236	+0.472	+0.354	0.217	0.394	0.012	0.059	0.020
Series 5	up to 9.843	0.295	+0.591	+0.394	0.374	0.512	0.012	0.059	0.020

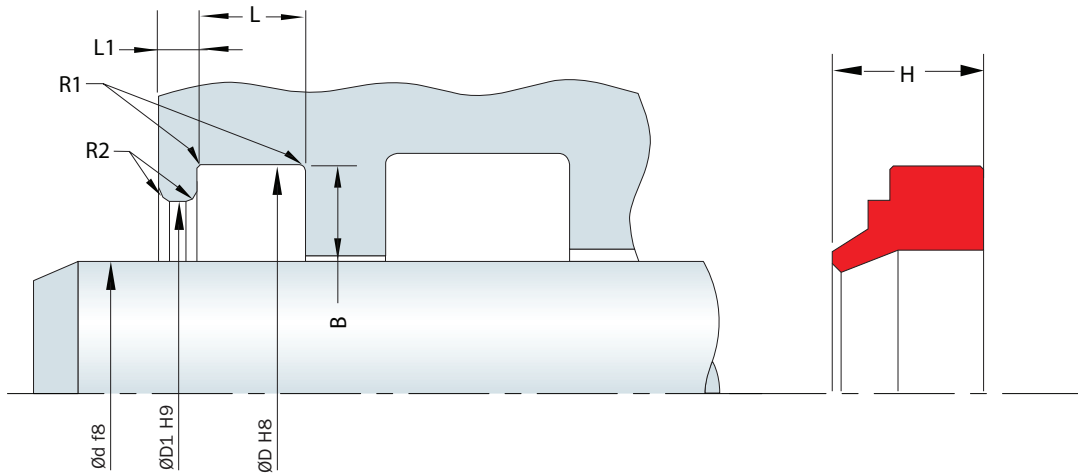
### Surface Finish

Surface roughness	Ra	Rt	RMS
Sliding surface	≤0.3 µm	≤3 µm	8 RMS
Surface of groove I.D.	≤1.8 µm	≤10 µm	64 RMS
Sides of groove	≤3 µm	≤16 µm	125 RMS



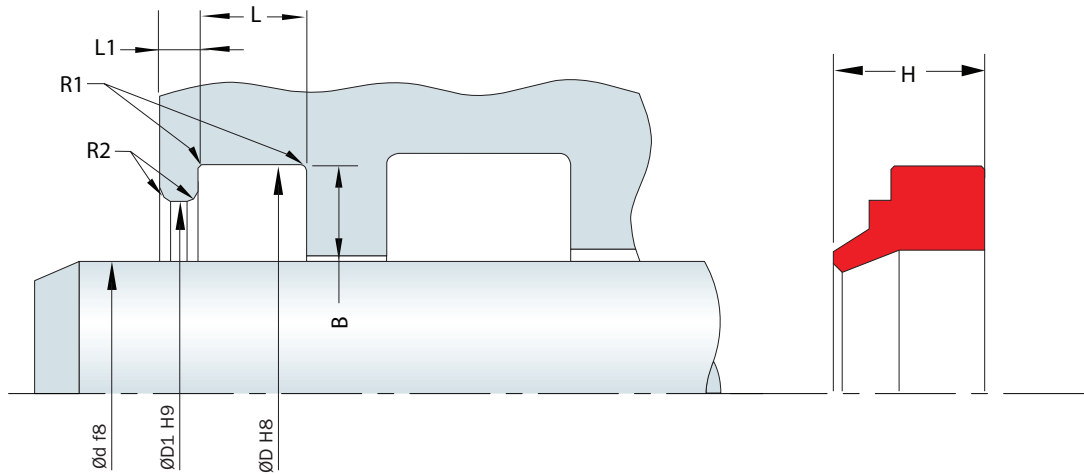
### Parts List

ød	ØD	B	L	H	D1	S	n	P03 H-PU	N01 NBR
16.00	24.00	4.00	5.00	7.80	21.50	4.00	1.00	301.92000	301.92357
16.00	24.00	4.00	4.00	7.00	22.00	4.00	1.00	301.92628	301.92271
18.00	26.00	4.00	5.00	7.80	23.50	4.00	1.00	301.92362	301.92427
18.00	26.00	4.00	4.00	7.00	24.00	4.00	1.00	301.91940	301.92448
20.00	28.00	4.00	4.00	7.00	26.00	4.00	1.00	301.92022	301.92413
20.00	28.00	4.00	5.00	7.80	25.50	4.00	1.00	301.92422	301.91967
22.00	30.00	4.00	4.00	7.00	28.00	4.00	1.00	301.92294	301.92688
22.00	30.00	4.00	5.00	7.80	27.50	4.00	1.00	301.92471	301.91944
25.00	33.00	4.00	4.00	7.00	31.00	4.00	1.00	301.91832	301.92187
25.00	33.00	4.00	5.00	7.80	30.50	4.00	1.00	301.92256	301.92403
28.00	36.00	4.00	4.00	7.00	34.00	4.00	1.00	301.92201	301.92544
28.00	36.00	4.00	5.00	7.80	33.50	4.00	1.00	301.91779	301.92174
30.00	38.00	4.00	4.00	7.00	36.00	4.00	1.00	301.91902	301.92678
32.00	40.00	4.00	4.00	7.00	38.00	4.00	1.00	301.92426	301.92486
32.00	40.00	4.00	5.00	7.80	37.50	4.00	1.00	301.91856	301.92139
35.00	43.00	4.00	4.00	7.00	41.00	4.00	1.00	301.92153	301.92568
36.00	44.00	4.00	4.00	7.00	42.00	4.00	1.00	301.92132	301.92545
36.00	44.00	4.00	5.00	7.80	41.50	4.00	1.00	301.91754	301.92237
40.00	48.00	4.00	4.00	7.00	46.00	4.00	1.00	301.92189	301.92520
40.00	48.00	4.00	5.00	7.80	45.50	4.00	1.00	301.92263	301.91807
45.00	53.00	4.00	4.00	7.00	51.00	4.00	1.00	301.91740	301.92679
45.00	53.00	4.00	5.00	7.80	50.50	4.00	1.00	301.91858	301.92553
50.00	58.00	4.00	5.00	7.80	55.50	4.00	1.00	301.91753	301.91961
50.00	58.00	4.00	4.00	7.00	56.00	4.00	1.00	301.92472	301.91722
55.00	63.00	4.00	4.00	7.00	61.00	4.00	1.00	301.91993	301.92674
56.00	64.00	4.00	4.00	7.00	62.00	4.00	1.00	301.92637	301.92574
56.00	66.00	5.00	6.30	9.00	63.00	4.00	1.00	301.91966	301.92694
60.00	68.00	4.00	4.00	7.00	66.00	4.00	1.00	301.91877	301.91878
60.00	70.00	5.00	6.30	9.00	67.00	4.00	1.00	301.91976	301.91719
60.00	72.00	6.00	5.50	10.00	69.00	4.00	1.00	301.91763	301.91995



### Parts List

ød	ØD	B	L	H	D1	S	n	P03 H-PU	N01 NBR
63.00	71.00	4.00	4.00	7.00	69.00	4.00	1.00	301.92186	301.91928
63.00	73.00	5.00	6.30	9.00	70.00	4.00	1.00	301.92327	301.92113
65.00	73.00	4.00	4.00	7.00	71.00	4.00	1.00	301.92361	301.92013
70.00	78.00	4.00	4.00	7.00	76.00	4.00	1.00	301.91794	301.91853
70.00	80.00	5.00	6.30	9.00	77.00	4.00	1.00	301.92354	301.92387
70.00	82.00	6.00	5.50	10.00	79.00	4.00	1.00	301.91971	301.92643
75.00	83.00	4.00	4.00	7.00	81.00	4.00	1.00	301.92548	301.92151
80.00	88.00	4.00	4.00	7.00	86.00	4.00	1.00	301.92033	301.91747
80.00	90.00	5.00	6.30	9.00	87.00	4.00	1.00	301.92131	301.92526
80.00	92.00	6.00	5.50	10.00	89.00	4.00	1.00	301.92453	301.92654
85.00	93.00	4.00	4.00	7.00	91.00	4.00	1.00	301.92084	301.92646
85.00	95.00	5.00	6.30	9.00	92.00	4.00	1.00	301.91703	301.92191
90.00	98.00	4.00	4.00	7.00	96.00	4.00	1.00	301.92350	301.91805
90.00	100.00	5.00	6.30	9.00	97.00	4.00	1.00	301.92297	301.92536
90.00	102.00	6.00	5.50	10.00	99.00	4.00	1.00	301.92253	301.92255
100.00	108.00	4.00	4.00	7.00	106.00	4.00	1.00	301.92066	301.91922
100.00	115.00	7.50	9.50	13.00	110.00	4.00	1.00	301.92519	301.92217
110.00	122.00	6.00	5.50	10.00	119.00	5.50	1.50	301.91792	301.92510
110.00	125.00	7.50	9.50	13.00	120.00	5.50	1.50	301.92115	301.92322
115.00	127.00	6.00	5.50	10.00	124.00	5.50	1.50	301.92570	301.92529
120.00	132.00	6.00	5.50	10.00	129.00	5.50	1.50	301.92140	301.92231
125.00	137.00	6.00	5.50	10.00	134.00	5.50	1.50	301.91811	301.92266
125.00	140.00	7.50	9.50	13.00	135.00	5.50	1.50	301.91934	301.92213
130.00	142.00	6.00	5.50	10.00	139.00	5.50	1.50	301.92681	301.91931
140.00	152.00	6.00	5.50	10.00	149.00	5.50	1.50	301.92083	301.91801
140.00	155.00	7.50	9.50	13.00	150.00	5.50	1.50	301.91959	301.91963
150.00	162.00	6.00	5.50	10.00	159.00	5.50	1.50	301.92484	301.92058
160.00	172.00	6.00	5.50	10.00	169.00	5.50	1.50	301.92311	301.92074
160.00	175.00	7.50	9.50	13.00	170.00	5.50	1.50	301.92433	301.91991
170.00	182.00	6.00	5.50	10.00	179.00	5.50	1.50	301.92224	301.92004



**Parts List**

ød	ØD	B	L	H	D1	S	n	P03 H-PU	N01 NBR
180.00	192.00	6.00	5.50	10.00	189.00	5.50	1.50	301.92589	301.92122
180.00	195.00	7.50	9.50	13.00	190.00	5.50	1.50	301.92598	301.92347
200.00	212.00	6.00	5.50	10.00	209.00	5.50	1.50	301.92351	301.92105
200.00	215.00	7.50	9.50	13.00	210.00	5.50	1.50	301.92641	301.92295