

Description

The 302 Series dirt wiper is a standard duty wiper for light- to medium-duty applications. It is diametrically oversized to ensure a secure fit in the housing, and its scraping lip is protected from damage by the housing.

Product Benefits

- Excellent wear resistance
- Compatible with a wide range of fluids
- Easily installed
- Wide range of sizes and compounds available

Material

The standard material for the 302 Series 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

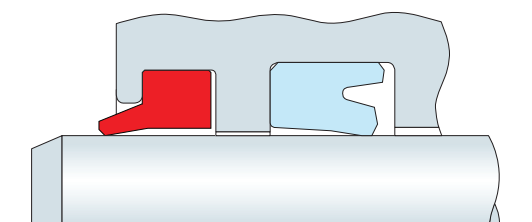
Applications

The 302 Series dirt wiper is particularly suited for cylinders operating in light to moderately contaminated environments.

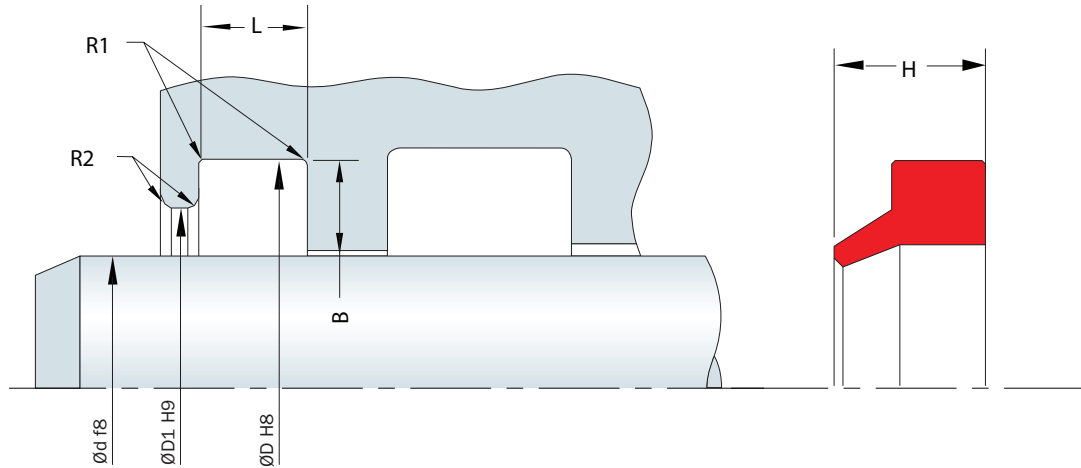
Typical applications include:

- Mobile hydraulics
- Agricultural hydraulics
- Presses
- Injection moulding machines

Installation Drawing



Design Guidelines



Metric Series

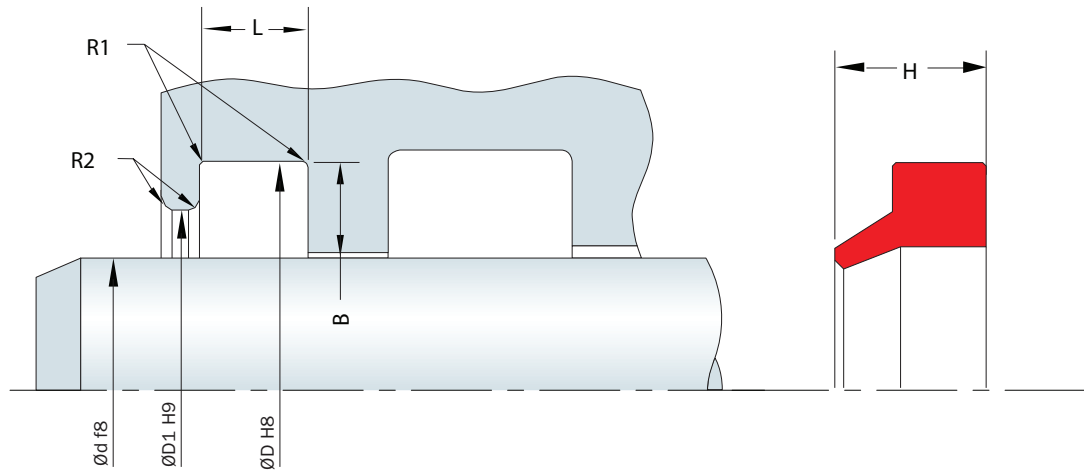
	Rod Diameter d	B	D	D1	L ^{+0.20}	H
Series 1	Up to 42 mm	4.30	d + 8.60	d + 3.00	5.30	7.00
Series 2	Up to 70 mm	5.30	d + 10.60	d + 3.00	5.30	7.00
Series 3	Up to 175 mm	7.50	d + 15.00	d + 7.60	10.20	16.00
Series 4	Up to 250 mm	10.00	d + 20.00	d + 10.00	10.20	18.00
Series 5	Up to 350 mm	12.50	d + 25.00	d + 12.60	12.70	20.00
Series 6	Up to 1000 mm	15.00	d + 30.00	d + 15.00	15.20	25.00

Inch Series

	Rod Diameter d	B	D	D1	L ^{+0.008}	H
Series 1	Up to 1.654 inches	0.169	d + 0.339	d + 0.118	0.209	0.276
Series 2	Up to 2.756 inches	0.209	d + 0.417	d + 0.118	0.209	0.276
Series 3	Up to 6.890 inches	0.295	d + 0.591	d + 0.299	0.402	0.630
Series 4	Up to 9.843 inches	0.394	d + 0.787	d + 0.394	0.402	0.709
Series 5	Up to 13.780 inches	0.492	d + 0.984	d + 0.496	0.500	0.787
Series 6	Up to 39.370 inches	0.591	d + 1.181	d + 0.591	0.598	0.984

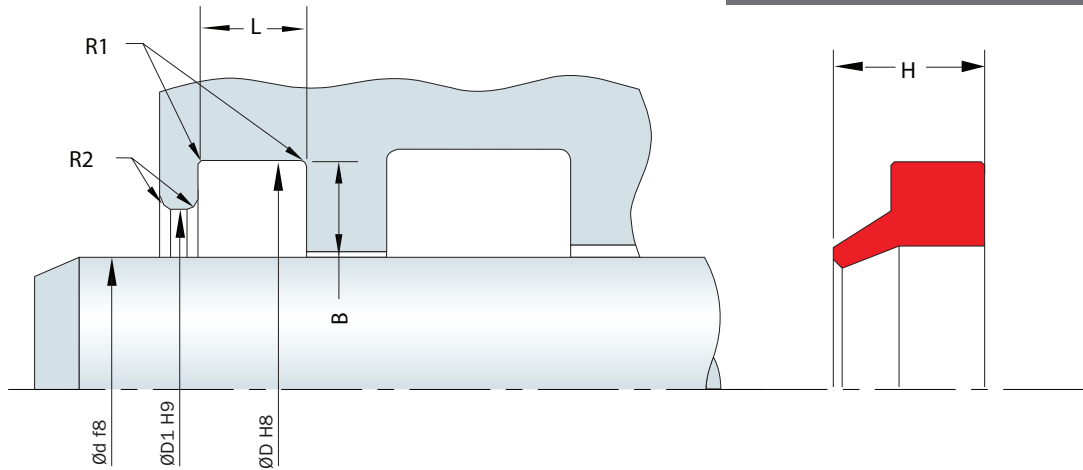
Surface Finish

Surface roughness	Ra	Rt	RMS
Sliding surface	≤0.3 µm	≤3 µm	6-12 RMS
Surface of groove I.D.	≤1.8 µm	≤10 µm	64 RMS
Sides of groove	≤3 µm	≤16 µm	64 RMS



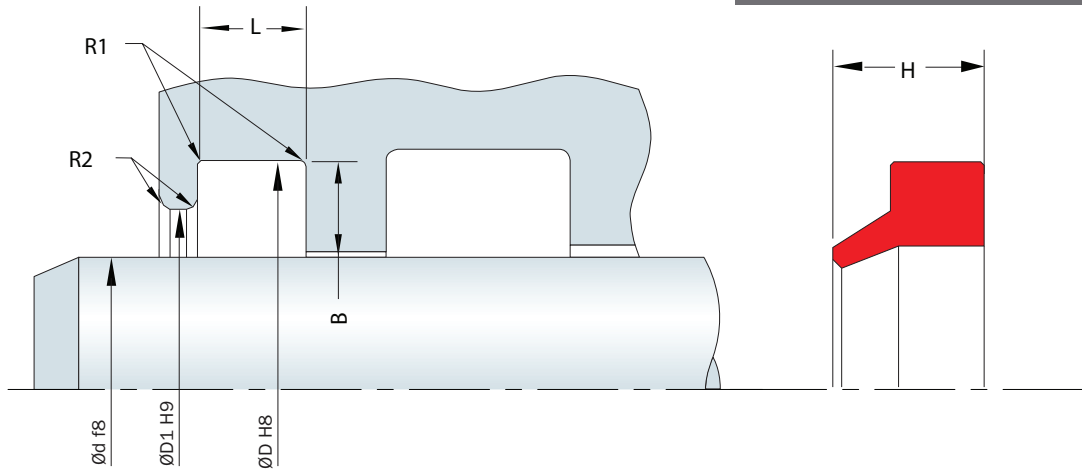
Parts List

Ød	ØD	D1	B	L	H	P03 H-PU	N01 NBR
16.00	24.60	19.00	4.30	5.30	7.00	302.92219	302.91919
20.00	28.60	23.00	4.30	5.30	7.00	302.92449	302.92016
24.00	32.60	27.00	4.30	5.30	7.00	302.92020	302.92542
25.00	33.60	28.00	4.30	5.30	7.00	302.92594	302.91989
28.00	36.60	31.00	4.30	5.30	7.00	302.91707	302.92573
30.00	38.60	33.00	4.30	5.30	7.00	302.91733	302.91947
32.00	40.60	35.00	4.30	5.30	7.00	302.91716	302.91797
35.00	43.60	38.00	4.30	5.30	7.00	302.92319	302.92144
42.00	50.60	45.00	4.30	5.30	7.00	302.92279	302.92692
45.00	53.60	48.00	4.30	5.30	7.00	302.92445	302.92481
45.00	55.60	48.00	5.30	5.30	7.00	302.92389	302.92407
50.00	58.60	53.00	4.30	5.30	7.00	302.92606	302.92378
55.00	65.60	58.00	5.30	5.30	7.00	302.92554	302.92019
56.00	66.60	59.00	5.30	5.30	7.00	302.92106	302.92659
60.00	70.60	63.00	5.30	5.30	7.00	302.92564	302.92466
60.00	75.00	66.00	7.50	8.20	13.00	302.91808	302.91986
63.00	73.60	66.00	5.30	5.30	7.00	302.92656	302.92323
65.00	75.60	68.00	5.30	5.30	7.00	302.91715	302.92046
70.00	78.60	73.00	4.30	5.30	7.00	302.92188	302.91951
70.00	80.60	73.00	5.30	5.30	7.00	302.92587	302.92675
75.00	87.20	81.00	6.10	7.20	12.00	302.92037	302.91911
80.00	88.60	83.00	4.30	5.30	7.00	302.91751	302.92621
80.00	92.20	86.00	6.10	7.20	12.00	302.92170	302.92591
85.00	97.20	91.00	6.10	7.20	12.00	302.92684	302.92494
90.00	102.20	96.00	6.10	7.20	12.00	302.92563	302.92133
100.00	108.60	103.00	4.30	5.30	7.10	302.91936	302.92556
100.00	112.20	106.00	6.10	7.20	12.00	302.92288	302.92245
105.00	117.20	111.00	6.10	7.20	12.00	302.91852	302.92696
110.00	122.20	116.00	6.10	7.20	12.00	302.91786	302.92065
115.00	127.20	121.00	6.10	7.20	12.00	302.92234	302.92138
120.00	130.60	125.00	5.30	5.30	7.00	302.92537	302.91782



Parts List

Ød	ØD	D1	B	L	H	P03 H-PU	N01 NBR
120.00	132.20	126.00	6.10	7.20	12.00	302.91920	302.92629
140.00	155.00	147.60	7.50	10.20	16.00	302.92469	302.92040
150.00	165.00	157.60	7.50	10.20	16.00	302.92076	302.91839
160.00	175.00	167.60	7.50	10.20	16.00	302.92207	302.92490
180.00	200.00	187.60	10.00	10.20	18.00	302.92441	302.91932
190.00	210.00	197.60	10.00	10.20	18.00	302.92091	302.92515
200.00	220.00	207.60	10.00	10.20	18.00	302.91829	302.91721
205.00	220.00	212.60	7.50	7.70	16.00	302.92680	302.91869
210.00	225.00	217.60	7.50	10.20	16.00	302.92450	302.92164
220.00	235.00	227.60	7.50	10.20	16.00	302.92275	302.92226
220.00	240.00	230.00	10.00	10.20	18.00	302.92257	302.92008
225.00	245.00	235.00	10.00	10.20	18.00	302.92499	302.91912
230.00	245.00	237.00	7.50	10.20	16.00	302.92050	302.91965
230.00	250.00	240.00	10.00	10.20	18.00	302.92315	302.92376
240.00	260.00	250.00	10.00	10.20	18.00	302.92299	302.91709
250.00	270.00	260.00	10.00	10.20	18.00	302.92408	302.91720
260.00	280.00	270.00	10.00	10.20	18.00	302.92634	302.92458
265.00	280.00	272.60	7.50	10.20	16.00	302.92539	302.92304
270.00	290.00	280.00	10.00	10.20	18.00	302.92343	302.92460
280.00	310.00	295.00	15.00	15.20	25.00	302.92369	302.92566
290.00	305.00	298.00	7.50	7.70	15.00	302.92578	302.92664
290.00	305.00	298.00	7.50	7.70	13.50	302.92514	302.92478
300.00	320.00	310.00	10.00	10.20	18.00	302.91949	302.92251
320.00	340.00	330.00	10.00	10.20	18.00	302.92689	302.92196
350.00	375.00	362.60	12.50	12.70	20.00	302.91743	302.92640
350.00	380.00	365.00	15.00	15.20	25.00	302.92647	302.92639
360.00	380.00	370.00	10.00	10.20	18.00	302.92149	302.91780
365.00	390.00	377.60	12.50	12.70	20.00	302.92212	302.92501
370.00	390.00	380.00	10.00	10.20	18.00	302.91954	302.91796
380.00	400.00	390.00	10.00	10.20	18.00	302.92690	302.91873
380.00	410.00	395.00	15.00	15.20	25.00	302.92104	302.92666



Parts List

Ød	ØD	D1	B	L	H	P03 H-PU	N01 NBR
400.00	420.00	410.00	10.00	10.20	18.00	302.91771	302.92215
420.00	440.00	430.00	10.00	10.20	18.00	302.91824	302.92623
420.00	450.00	435.00	15.00	15.20	25.00	302.91745	302.91799
430.00	455.00	442.60	12.50	12.70	20.00	302.92395	302.92090
440.00	460.00	450.00	10.00	10.20	18.00	302.92195	302.92630
450.00	470.00	460.00	10.00	10.20	18.00	302.92507	302.92130
460.00	480.00	470.00	10.00	10.20	18.00	302.91833	302.92051
500.00	520.00	510.00	10.00	10.20	18.00	302.92177	302.92602
510.00	540.00	525.00	15.00	15.20	25.00	302.92503	302.91842
520.00	550.00	535.00	15.00	15.20	25.00	302.92583	302.91987
530.00	560.00	545.00	15.00	15.20	25.00	302.92031	302.91718
555.00	580.00	567.60	12.50	12.70	20.00	302.92650	302.91916
560.00	585.00	572.60	12.50	12.70	20.00	302.92532	302.92268
575.00	600.00	587.60	12.50	12.70	20.00	302.91749	302.92178
600.00	625.00	612.60	12.50	12.70	20.00	302.92402	302.91806
610.00	635.00	622.60	12.50	12.70	20.00	302.92282	302.92063
630.00	655.00	642.60	12.50	12.70	20.00	302.92320	302.92017
640.00	665.00	652.60	12.50	12.70	20.00	302.92197	302.91773
670.00	695.00	682.60	12.50	12.70	20.00	302.91816	302.92267
680.00	705.00	692.60	12.50	12.70	20.00	302.92126	302.91761
700.00	725.00	712.60	12.50	12.70	20.00	302.92073	302.92543
710.00	735.00	722.60	12.50	12.70	20.00	302.91770	302.91950
720.00	745.00	732.60	12.50	12.70	20.00	302.92607	302.92259
750.00	775.00	762.60	12.50	12.70	20.00	302.91818	302.91769
770.00	795.00	782.60	12.50	12.70	20.00	302.91985	302.91727
780.00	805.00	792.60	12.50	12.70	20.00	302.92569	302.92364
800.00	825.00	812.60	12.50	12.70	20.00	302.91742	302.92011
800.00	830.00	815.00	15.00	15.20	25.00	302.92622	302.91849
850.00	875.00	862.60	12.50	12.70	20.00	302.92316	302.91789
880.00	905.00	892.60	12.50	12.70	20.00	302.92054	302.92493
900.00	925.00	912.60	12.50	12.70	20.00	302.92551	302.91728