

Description

The 318 Series dirt wiper is a heavy duty double-acting wiper consisting of a PTFE compound profile ring and two energising o-rings. The profile ring has both a wiping lip to prevent contamination entering the cylinder, and a sealing lip to remove any oil film from the extending rod. The o-rings individually energise these lips. In most applications, using a pressure relief port between the wiper and the rod seal is recommended.

Material

The 318 Series dirt wiper features a profile ring in PTFE-Bronze with two energising rings in NBR. For high temperature applications, the energising rings are also available in FPM.

Material	Code
PTFE-Bronze compound + NBR o-ring	T23
PTFE-Bronze compound + FPM o-ring	T26

Operating Parameters

Temperature	T23		T26	
	°C	°F	°C	°F
hydraulic oil	-30...+100	-22...+212	-10...+200	+15...+392
water oil emulsions (HFA)	-	-	-	-
water-glycol fluids (HFC)	-	-	-	-
polyol esters (HFD)	-	-	-10...+200	+15...+392
water	-	-	-	-

Speed	5 m/s (16.4 ft/sec)
Pressure	-

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

Product Benefits

- Optimum sealing effect
- Excellent wear resistance
- Low friction
- No stick-slip

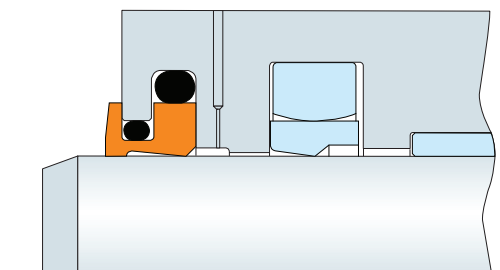
Applications

The 318 Series dirt wiper is used as part of a zero-leakage sealing system for applications requiring low-friction and high wear resistance.

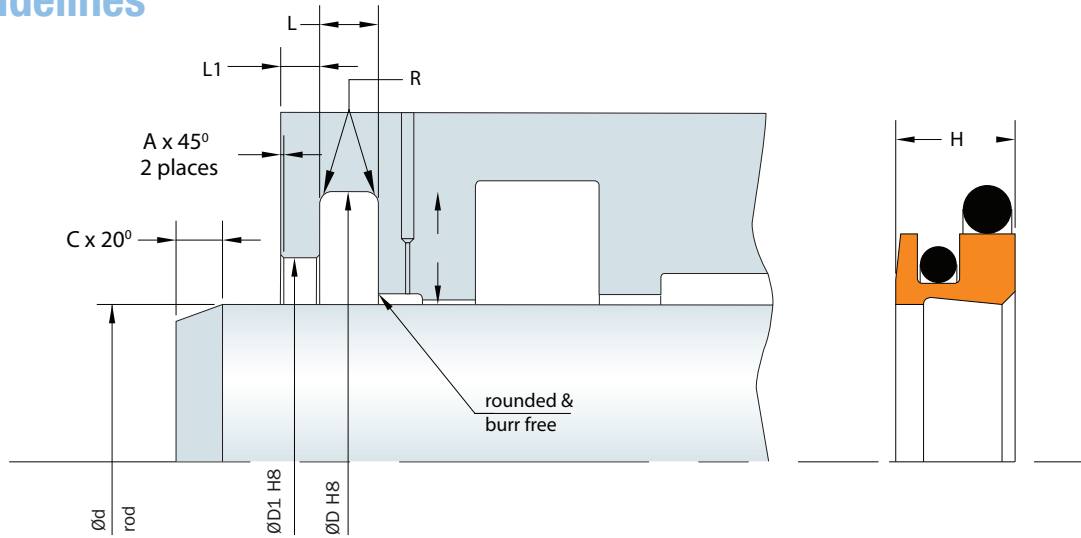
Typical applications include:

- Injection moulding machines
- Pull-back/return cylinders
- Mobile hydraulics
- Bending balance cylinders in rolling mills

Installation Drawing



Design Guidelines



Metric Series

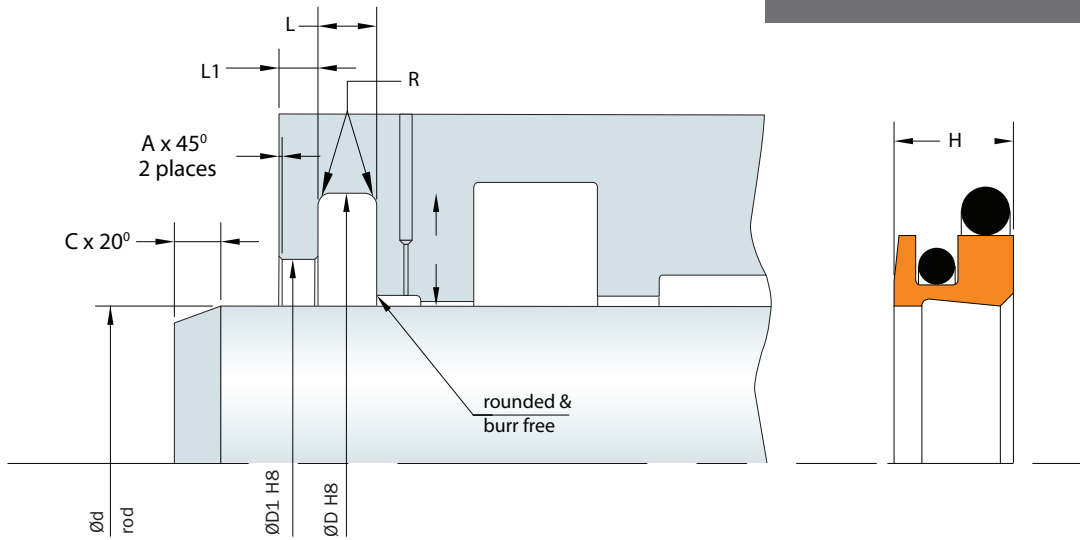
	Rod Diameter d	B	D	D1	L+0.2	C	R	n
Series 1	Up to 45 mm	3.8	d + 7.6	d + 1.0	4.2	3.0	0.4	4.0
Series 2	Up to 70 mm	4.4	d + 8.8	d + 1.5	6.3	4.0	1.2	4.0
Series 3	Up to 140 mm	6.1	d + 12.2	d + 2.0	8.1	4.0	2.0	4.0
Series 4	Up to 400 mm	8.0	d + 16.0	d + 2.0	11.5	8.0	2.0	4.0
Series 5	Up to 650 mm	12.0	d + 24.0	d + 2.5	15.5	8.0	2.0	4.0
Series 6	Up to 1000 mm	13.65	d + 27.3	d + 2.5	18.0	11.0	2.0	5.0

Inch Series

	Rod Diameter d	B	D	D1	L+0.008	C	R	n
Series 1	Up to 1.75 inches	0.150	d + 0.300	d + 0.039	0.165	0.118	0.016	0.158
Series 2	Up to 2.75 inches	0.173	d + 0.346	d + 0.059	0.248	0.157	0.067	0.158
Series 3	Up to 5.50 inches	0.240	d + 0.480	d + 0.079	0.319	0.157	0.079	0.158
Series 4	Up to 15.75 inches	0.315	d + 0.630	d + 0.079	0.453	0.157	0.079	0.158
Series 5	Up to 25.5 inches	0.472	d + 0.944	d + 0.098	0.610	0.315	0.079	0.158
Series 6	Up to 40.0 inches	0.537	d + 1.074	d + 0.098	0.709	0.433	0.079	0.197

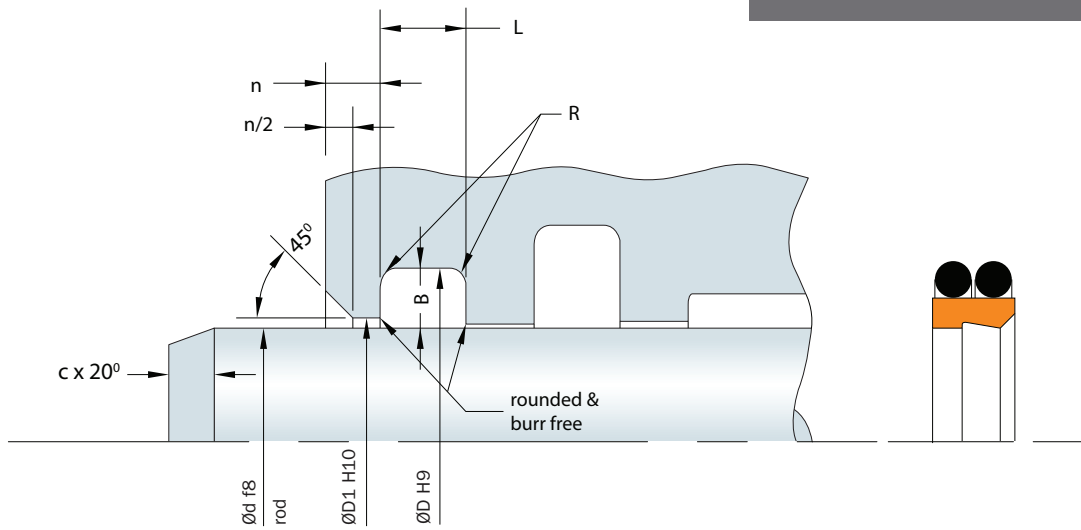
Surface Finish

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



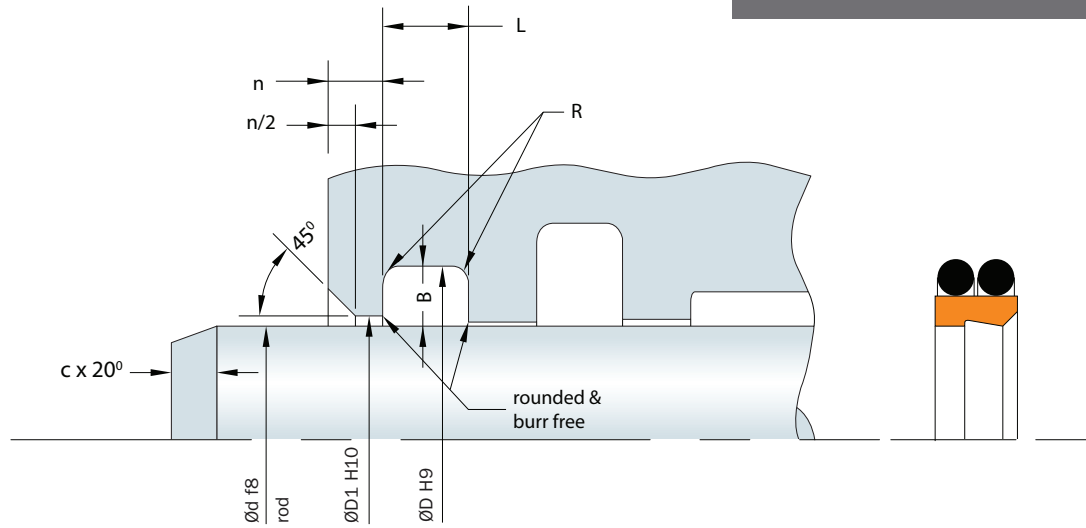
Parts List

Rod Diameter	Material	Y_ID	D	D1	L	L1
250	318.28449	250.00	274.20	260.70	6.30	4.20
260	318.10748	260.00	284.20	270.70	6.30	4.20
265	318.24439	265.00	289.20	275.70	6.30	4.20
270	318.28450	270.00	294.20	280.70	6.30	4.20
280	318.10811	280.00	304.20	290.70	6.30	4.20
290	318.28451	290.00	314.20	300.70	6.30	4.20
342.9	318.02674	342.90	367.10	353.60	6.30	4.20
254	318.03217	254.00	278.20	264.70	6.30	4.20
304.8	318.02038	304.80	329.00	315.50	6.30	4.20
279.4	318.04724	279.40	303.60	290.10	6.30	4.20
419.1	318.11626	419.10	452.10	434.20	8.10	6.30
304.8	318.04631	304.80	337.80	319.90	8.10	6.30
311.15	318.09588	311.15	344.15	326.25	8.10	6.30
368.3	318.04540	368.30	401.30	383.40	8.10	6.30
422.28	318.10141	422.28	455.28	437.38	8.10	6.30
457.2	318.20938	457.20	490.20	472.30	8.10	6.30
533.4	318.15315	533.40	566.40	548.50	8.10	6.30
546.1	318.03036	546.10	579.10	561.20	8.10	6.30
603.25	318.02086	603.25	636.25	618.35	8.10	6.30
609.6	318.10824	609.60	642.60	624.70	8.10	6.30
676.28	318.03058	676.28	709.28	691.38	8.10	6.30
676.28	318.13280	676.28	709.28	691.38	8.10	6.30
682.63	318.16111	682.63	715.63	697.73	8.10	6.30
495.3	318.04573	495.30	528.30	510.40	8.10	6.30
355.6	318.03471	355.60	388.60	370.70	8.10	6.30
359.5624	318.07670	359.56	392.56	374.66	8.10	6.30
482.6	318.03557	482.60	515.60	497.70	8.10	6.30
558.8	318.03793	558.80	591.80	573.90	8.10	6.30
635	318.04269	635.00	668.00	650.10	8.10	6.30
685.8	318.04162	685.80	718.80	700.90	8.10	6.30



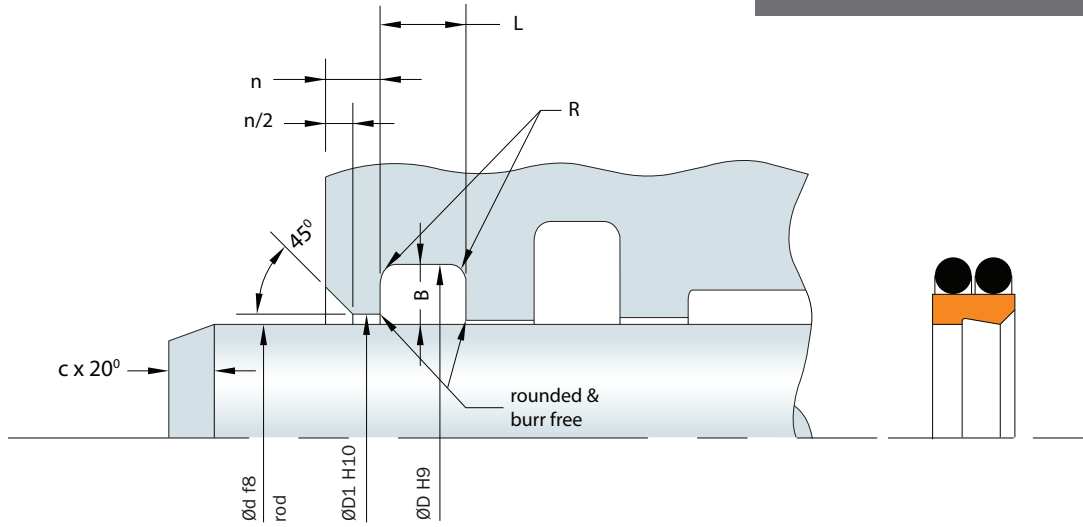
Parts List

Rod Diameter	Material	Y_ID	D	D1	L	L1
711.2	318.04555	711.20	744.20	726.30	8.10	6.30
300	318.28452	300.00	333.00	315.10	8.10	6.30
310	318.28453	310.00	343.00	325.10	8.10	6.30
315	318.28454	315.00	348.00	330.10	8.10	6.30
316.2	318.28455	316.20	349.20	331.30	8.10	6.30
320	318.28506	320.00	353.00	335.10	8.10	6.30
320	318.11818	320.00	353.00	335.10	8.10	6.30
325	318.28456	325.00	358.00	340.10	8.10	6.30
330	318.08694	330.00	363.00	345.10	8.10	6.30
330	318.11061	330.00	363.00	345.10	8.10	6.30
340	318.28457	340.00	373.00	355.10	8.10	6.30
350	318.28458	350.00	383.00	365.10	8.10	6.30
360	318.28512	360.00	393.00	375.10	8.10	6.30
370	318.28459	370.00	403.00	385.10	8.10	6.30
377	318.28460	377.00	410.00	392.10	8.10	6.30
380	318.28521	380.00	413.00	395.10	8.10	6.30
390	318.28461	390.00	423.00	405.10	8.10	6.30
398	318.28462	398.00	431.00	413.10	8.10	6.30
400	318.09441	400.00	433.00	415.10	8.10	6.30
410	318.28463	410.00	443.00	425.10	8.10	6.30
420	318.28464	420.00	453.00	435.10	8.10	6.30
430	318.28465	430.00	463.00	445.10	8.10	6.30
440	318.28466	440.00	473.00	455.10	8.10	6.30
450	318.28467	450.00	483.00	465.10	8.10	6.30
460	318.05764	460.00	493.00	475.10	8.10	6.30
470	318.28468	470.00	503.00	485.10	8.10	6.30
480	318.28469	480.00	513.00	495.10	8.10	6.30
490	318.28470	490.00	523.00	505.10	8.10	6.30
500	318.28522	500.00	533.00	515.10	8.10	6.30
510	318.28471	510.00	543.00	525.10	8.10	6.30



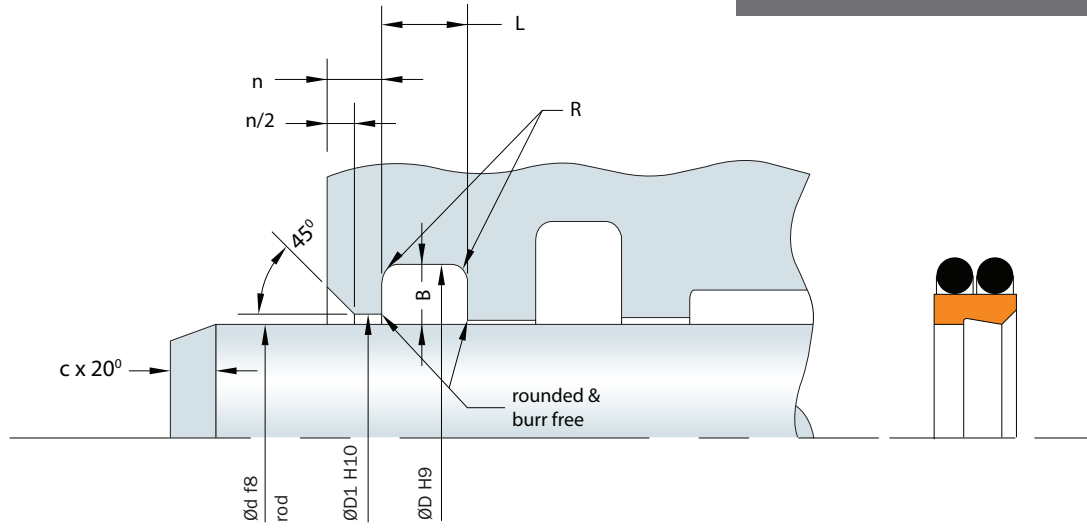
Parts List

Rod Diameter	Material	Y_ID	D	D1	L	L1
520	318.28472	520.00	553.00	535.10	8.10	6.30
530	318.28473	530.00	563.00	545.10	8.10	6.30
533.4	318.28517	533.40	566.40	548.50	8.10	6.30
540	318.28474	540.00	573.00	555.10	8.10	6.30
550	318.28475	550.00	583.00	565.10	8.10	6.30
560	318.28476	560.00	593.00	575.10	8.10	6.30
570	318.28477	570.00	603.00	585.10	8.10	6.30
578.2	318.28478	578.20	611.20	593.30	8.10	6.30
580	318.23352	580.00	613.00	595.10	8.10	6.30
590	318.28479	590.00	623.00	605.10	8.10	6.30
596.9	318.28480	596.90	629.90	612.00	8.10	6.30
600	318.28481	600.00	633.00	615.10	8.10	6.30
609.6	318.11430	609.60	642.60	624.70	8.10	6.30
620	318.28482	620.00	653.00	635.10	8.10	6.30
660.4	318.03302	660.40	693.40	675.50	8.10	6.30
640	318.11706	640.00	676.50	655.10	9.30	6.30
787.4	318.04572	787.40	823.90	802.50	8.10	6.30
914.4	318.03686	914.40	950.90	929.50	8.10	6.30
533.4	318.07435	533.40	569.90	548.50	9.50	6.36
630	318.28483	630.00	666.50	645.10	9.50	6.30
640	318.05553	640.00	676.50	655.10	9.50	6.30
650	318.28484	650.00	686.50	665.10	9.50	6.30
660.4	318.10226	660.40	696.90	675.50	9.50	6.30
670	318.28485	670.00	706.50	685.10	9.50	6.30
676.28	318.28510	676.28	712.78	691.38	9.50	6.30
680	318.28486	680.00	716.50	695.10	9.50	6.30
699	318.28487	699.00	735.50	714.10	9.50	6.30
700	318.28488	700.00	736.50	715.10	9.50	6.30
720	318.28489	720.00	756.50	735.10	9.50	6.30
723.9	318.11728	723.90	760.40	739.00	9.50	6.30



Parts List

Rod Diameter	Material	Y_ID	D	D1	L	L1
730	318.28490	730.00	766.50	745.10	9.50	6.30
740	318.28523	740.00	776.50	755.10	9.50	6.30
750	318.28491	750.00	786.50	765.10	9.50	6.30
760	318.28492	760.00	796.50	775.10	9.50	6.30
770	318.28493	770.00	806.50	785.10	9.50	6.30
800	318.28505	800.00	836.50	815.10	9.50	6.30
800	318.28513	800.00	836.50	815.10	9.50	6.30
820	318.05118	820.00	856.50	835.10	9.50	6.30
830	318.28494	830.00	866.50	845.10	9.50	6.30
850	318.28511	850.00	886.50	865.10	9.50	6.30
850	318.314623	850.00	886.50	865.10	9.50	6.30
860	318.28495	860.00	896.50	875.10	9.50	6.30
863.6	318.04811	863.60	900.10	878.70	9.50	6.30
870	318.11055	870.00	906.50	885.10	9.50	6.30
890	318.28514	890.00	926.50	905.10	9.50	6.30
890	318.04298	890.00	926.50	905.10	9.50	6.30
890	318.343530	890.00	926.50	905.10	9.50	6.30
900	318.28496	900.00	936.50	915.10	9.50	6.30
920	318.11056	920.00	956.50	935.10	9.50	6.30
950	318.28497	950.00	986.50	965.10	9.50	6.30
965.2	318.28498	965.20	1001.70	980.30	9.50	6.30
970	318.28504	970.00	1006.50	985.10	9.50	6.30
970	318.28508	970.00	1006.50	985.10	9.50	6.30
970	318.28524	970.00	1006.50	985.10	9.50	6.30
970	318.10212	970.00	1006.50	985.10	9.50	6.30
1000	318.10211	1000.00	1036.50	1015.10	9.50	6.30
1060	318.11918	1060.00	1096.50	1075.10	9.50	6.30
1075	318.28499	1075.00	1111.50	1090.10	9.50	6.30
1150	318.28516	1150.00	1186.50	1165.10	9.50	6.30
1150	318.11273	1150.00	1186.50	1165.10	9.50	6.30



Parts List

Rod Diameter	Material	Y_ID	D	D1	L	L1
1170	318.28500	1170.00	1206.50	1185.10	9.50	6.30
1450	318.28501	1450.00	1486.50	1465.10	9.50	6.30
1455	318.28502	1455.00	1491.50	1470.10	9.50	6.30
1545	318.28503	1545.00	1581.50	1560.10	9.50	6.30