

Features:

- High-performance wiping ability
- Low-friction PTFE-filled scraper ring
- Excellent wear resistance
- Available in large diameter up to 2100 mm



DESCRIPTION

The 314 Series Heavy-Duty, Double-Acting Wiper is one of the most popular mill-duty wipers in the steel industry. It includes a reinforced PTFE-filled scraper ring and two energizing O-rings. The design incorporates a wiping lip to prevent contamination from entering the cylinder and an inner sealing lip to remove any oil film from the rod as it cycles. The O-rings individually energize the two wiper lips. In most applications, a pressure relief port between the wiper and the rod seal is recommended.

PRODUCT BENEFITS

- Protects the hydraulic cylinder internals
- Self-lubricating
- Works in short stroke applications
- Works in high-temperature environments

APPLICATIONS

The 314 Series Wiper prevents contamination ingress in harsh environments, while maintaining low friction.

Typical applications include:

- Steel and Aluminum Mills
- Positive and Negative Bending Cylinder
- Work Roll Balance Cylinders
- Injection Molding Machines
- Pullback/Return Cylinders
- Traverse Cylinders
- Cold and Hot Strip Mills



Above: Installation Drawing

MATERIAL

The 314 Series wiper consists of a custom-blended PTFE-filled compound that provides ultra-low friction and high-speed performance with minimal wear. The standard compound is PTFE-filled with Bronze filler. The temperature range of the wiper can be increased by selecting an FPM energizer in place of the standard NBR energizer.

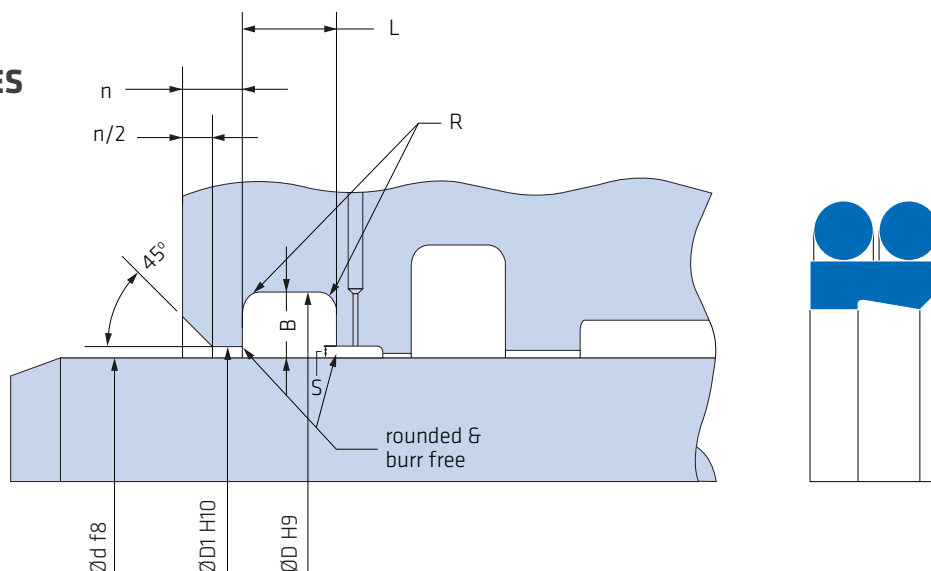
Material	Code
PTFE-Bronze compound + NBR o-ring (shown in photo)	MT23
PTFE-Bronze compound + FPM o-ring	MT26

OPERATING PARAMETERS

Temperature	MT23		MT26	
	°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)	-	-	-	-
water	-	-	-10... +200	-15... +392
speed	5 m/s (16.5 ft/sec)			
pressure	-			

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

DESIGN GUIDELINES



METRIC SERIES

	Rod Diameter $\varnothing d$	B	$\varnothing D$	$\varnothing D1$	$L^{+0.20}$	R	n	S
Series 1	up to 45.00 mm	3.80	d+7.60	d+1.00	4.20	0.40	4.00	2.50
Series 2	up to 70.00 mm	4.40	d+8.80	d+1.50	6.30	1.20	4.00	2.50
Series 3	up to 140.00 mm	6.10	d+12.20	d+2.00	8.10	2.00	4.00	2.50
Series 4	up to 400.00 mm	8.00	d+16.00	d+2.00	11.50	2.00	4.00	2.50
Series 5	up to 650.00 mm	12.00	d+24.00	d+2.50	15.50	2.00	4.00	2.50
Series 6	up to 1,000.00 mm	13.65	d+27.30	d+2.50	18.00	2.00	5.00	2.50

INCH SERIES

	Rod Diameter $\varnothing d$	B	$\varnothing D$	$\varnothing D1$	$L^{+0.008}$	R	n	S
Series 1	up to 1.750 in	0.150	d+0.300	d+0.040	0.165	0.015	0.160	0.100
Series 2	up to 2.750 in	0.173	d+0.346	d+0.060	0.248	0.050	0.160	0.100
Series 3	up to 5.500 in	0.240	d+0.480	d+0.080	0.319	0.080	0.160	0.100
Series 4	up to 15.750 in	0.315	d+0.630	d+0.080	0.453	0.080	0.160	0.100
Series 5	up to 25.500 in	0.472	d+0.944	d+0.100	0.610	0.080	0.160	0.100
Series 6	up to 40.000 in	0.537	d+1.074	d+0.100	0.709	0.080	0.200	0.100

Note: for a complete list of available sizes please refer to the System Seals online product catalogue at www.systemseals.com.

SURFACE FINISH

Surface roughness	Ra	Rt	RMS
Sliding surface	$\leq 0.3 \mu\text{m}$	$\leq 3 \mu\text{m}$	8 RMS
Surface of groove I.D.	$\leq 1.8 \mu\text{m}$	$\leq 10 \mu\text{m}$	64 RMS
Sides of groove	$\leq 3 \mu\text{m}$	$\leq 16 \mu\text{m}$	125 RMS