systemseals

HEAVY-DUTY
DOUBLE-ACTING WIPER

318 *series*

Features:

High-performance wiping ability

Low-friction PTFE-filled scraper ring

Excellent wear resistance

Notched inner lip prevents pressure trapping

Available in large diameter up to 2100 mm

MATERIAL

The 318 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 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

	MT23		MT26	
Temperature	**°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 (16.5 ft/sec)			
pressure	-			

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

DESCRIPTION

The 318 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 unique umbrella feature that wraps around the face of the cylinder to create an impenetrable barrier as well as 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

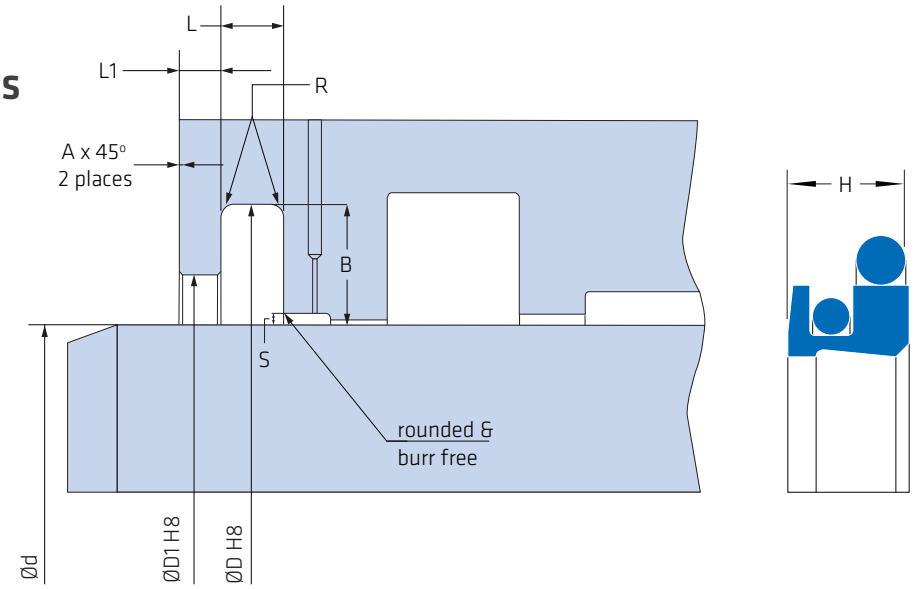
The 318 Series Wiper prevents contamination ingress in harsh environments, while maintaining low friction.

Typical applications include:

- Steel and Aluminum Processing
- Cold and Hot Strip Mills
- Automatic Gauge Control Cylinders

Above: *Installation Drawing*

DESIGN GUIDELINES



METRIC SERIES

	Rod Diameter Ød	B	ØD	ØD1	L +0.20	L1 -0.10	R	A	S	H
Series 1	100.00 mm to 220.00 mm	11.10	d+22.20	d+10.70	6.30	4.20	1.20	0.50	2.50	13.50
Series 2	up to 295.00 mm	12.10	d+24.20	d+10.70	6.30	4.20	1.20	0.50	2.50	13.50
Series 3	up to 600.00 mm	16.50	d+33.00	d+15.10	8.10	6.30	1.20	0.50	2.50	18.40
Series 4	up to 1,000.00 mm	18.25	d+36.50	d+15.10	9.50	6.30	2.00	0.50	2.50	19.80

INCH SERIES

	Rod Diameter Ød	B	ØD	ØD1	L +0.008	L1 -0.004	R	A	S	H
Series 1	4.000 to 8.625 in	0.437	d+0.874	d+0.421	0.248	0.165	0.050	0.020	0.100	0.531
Series 2	up to 11.625 in	0.476	d+0.952	d+0.421	0.248	0.165	0.050	0.020	0.100	0.531
Series 3	up to 23.625 in	0.650	d+1.300	d+0.595	0.319	0.248	0.050	0.020	0.100	0.724
Series 4	up to 40.000 in	0.719	d+1.438	d+0.595	0.374	0.248	0.080	0.020	0.100	0.780

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	≤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