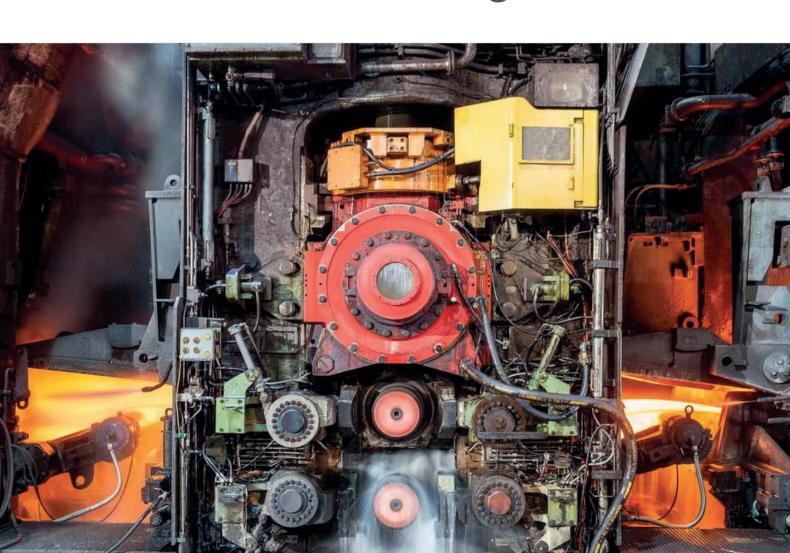


# Sealing Solutions for Metal Processing Industries

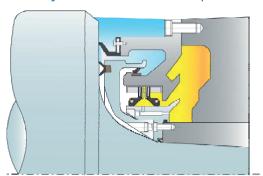


### Hot & Cold Rolling Mill

Rotary Seals & V-rings (Water Guard Seals) arrangements in Bearing Chocks. In this range we offer wide range of fabric & metallic rotary seals in combinations of V-Ring as a coolant or water guard seals.

These combinations are widely use in Hot & Cold rolling mill in steel plants.

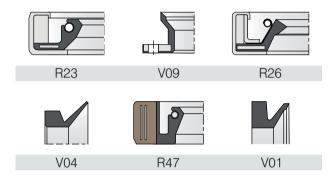
### Rotary Seals for Backup Rolls Chocks



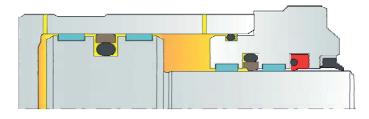
Working Parameters				
	NBR	HNBR	FKM	
Temperature	-30°C to +100°C	-30°C to +140°C	-40°C to +220°C	
Speed	20 m/s	25 m/s	30 m/s	
Size Range		5" to 60"		

### Some typical profiles:

Some of the typical rotary seal profiles use in rolling mill applications. Our improved V-Ring design geometry gives maximum and effective water or coolant sealing efficiency compare to standard designs.



### Seals for Balancing & Bending Cylinder (Typical Seal Combination)



Working Parameters		
Pressure	Upto 300 Bar	
Temperature	-30° C to +100° C (Viton matl. upto +220° C)	
Speed	1 mtr/sec	
Size Range	Upto 7"	





- Many special designed seal combinations are available.
- Customised development for improving work life without extra cost.



### Hydraulic Seals for Automatic Gauge Control Cylinder



WUINING FAI AINGLEIS		
ressure	Upto 500 Bar	
emperature	-30° C to +100° C (Viton matl. upto +220° C)	
Speed	1 mtr/sec	
Size Range	20" to 60"	

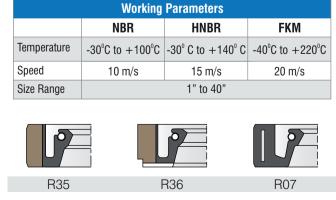
W13

PG1

P46

S16





## Other application overview in Metal Processing Line



#### **Continuous Casting**

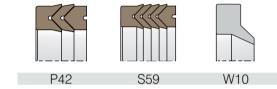
Continuous Casting Plant is operating 7 days a week. Thus required reliability of seals. Shutdown of this process leads to high production losses.

Seal Pool offers high end Rubber & Thermoplastic Material in combination of seal profile which given optimum life of the seals in working condition.

Working Conditions		
Pressure	400 Bar	
Temperature	-40° C to + 250° C	
Speed	10 mtr/sec	



Sealing system for Guide Segment Hydraulic Cylinders in CCP



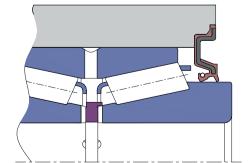
#### Front Vavle Seals

This seals are developed in WRM for module. Specially design sealing element with steel band offers high wear resistance and excellent performance.

- Material:Special HNBR compound
- Speed: from 2 mtr / sec upto 30 mtr / sec
- Size Range 4", 6" and 8"



### Taper Roller Bearing Seals -



\* Assembly shown is just for an example purpose, it may vary to the actual bearing assembly.

Seal Pool had developed inner & outer seals for Taper Roller Bearings used in work roll and intermediate roll chocks. AZI & AZZ seals are constructed with a metal insert with rubber covered outer diameter. Spring loaded single and dual lip made out of FKM or HNBR elastomer.

Working Conditions		
Pressure	400 Bar	
Temperature	-40° C to + 250° C	
Speed	10 mtr/sec	



### Success Stories

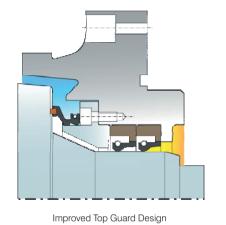
Improving performance & sealing with different customised creations.

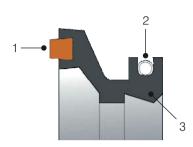


### Development of Topguard:

Seal Pool is offering customised sealing solution in steel mill according to the requirement and encountering the problems by giving best sealing solution without doing major modification in existing assembly. Below shown design is one of an example of such development.



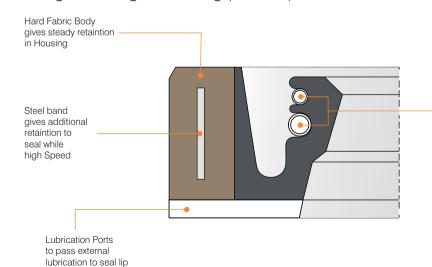




- 1. Bronze filled PTFE insert Lip for good wear resistance.
- 2. Spring to hold the Lip tight on flange
- Sealing lip profile to seal coolant from opposite side

### Force - 2K10 type Rotary Seal for Backup Roll Chock. (Hot Rolling & Cold Rolling Mill)

Designed for high excentring (± 5 mm)



Both Springs adjacent to each other give good force on the sealing Lip, and grip on the shaft during high speed and also keep Lip in contact with shaft incase of mis-alignment

Working Parameters		
Pressure	1 Bar	
Temperature	-40° C to +140° C	
Speed	15 mtr/sec	



### Sealing Solutions for Aluminum Processing Line



### Aluminum processing areas:

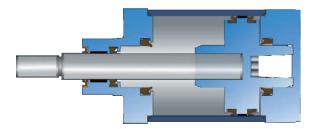
- Pot Shop
- Auto Shop
- Billet Casting
- Smelter
- Rolling Mill
- Cast House



### POT Shop:

#### Crust Breaker Cylinder / Feeder Cylinder Seal Kit:

Crust Breaker Cylinder are use in harsh environment in an aluminum reduction in  $+150^{\circ}\text{C}$  and intermittent temperature upto  $+200^{\circ}\text{C}$ . We supply seals in FKM material having excellent wear resistant property inn high temperature. Also improved bearing rings on piston and rod for side load performance. All bearing materials are electrically nonconductive.









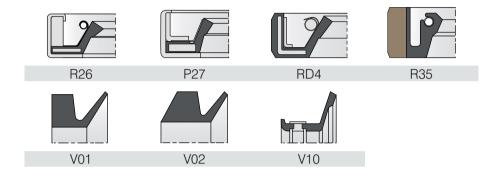
#### Other seal applications:

- Bath Grab Hydraulic Cylinder Seal Kit
- Hopper Gate Cylinder
- Anode Column Hydraulic & Rotary Seals
- Breaker lowering Hydraulic Cylinder
- Transfer & Intermidieate hopper cylinder
- Rodding bench bracket pneumatic cylinder

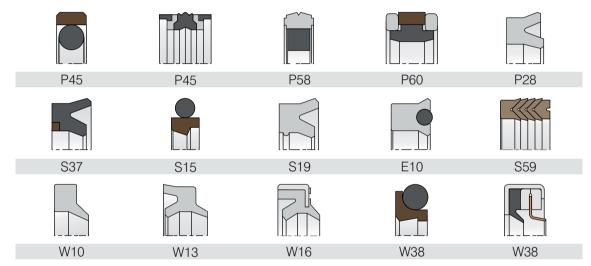
### Rotary Seals for Aluminum Rolling Mills:

Many special Rotary Seals are also possible after analysis. We will offer you our best options.

### Some common profiles



### Hydraulic Cylinder Seals:

















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