

CARCO®

LARGE DIAMETER SEALS

CARCOSEAL/ATLMP/SCA “ANTI TWIST LIP” FOR ROLLING MILLS

High performance radial lip seals
Protection of the bearing
Saving in maintenance

Manufacturing sealing solutions
for heavy duty applications

since 1900



A SEAL PROTECTING THE BEARING

In heavy duty machinery with rotary shafts, the bearings are sometimes exposed to contamination, which might enter the bearing and cause premature wear and shorter life.

Bearings in hot and cold rolling mills in steel and aluminium plants are a perfect example of severe working conditions.

The radial lip seals are fitted in the chock to prevent ingress of cooling water and dirty particles into the bearing and to avoid leakage of the bearing lubricant.

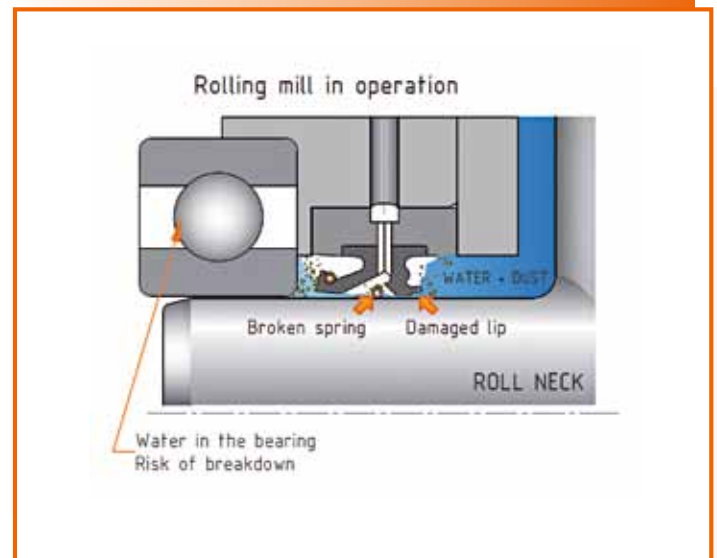
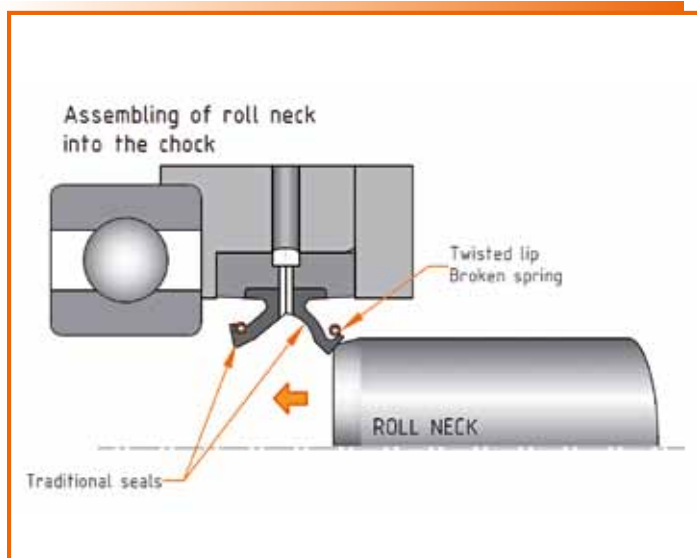
The rolls require periodic machining of the surface; after that the roll neck is fitted into the chock:



PROBLEM: during the fitting of the roll neck into the chock, the lip of the seals can be damaged and “twisted back”:

- Cooling water gets in the bearing causing corrosion;
- The seal spring pops out from its pocket causing bearing breakdown.

BEARING DAMAGED BY WATER



CARCOSEAL® WITH “ANTI TWIST LIP”

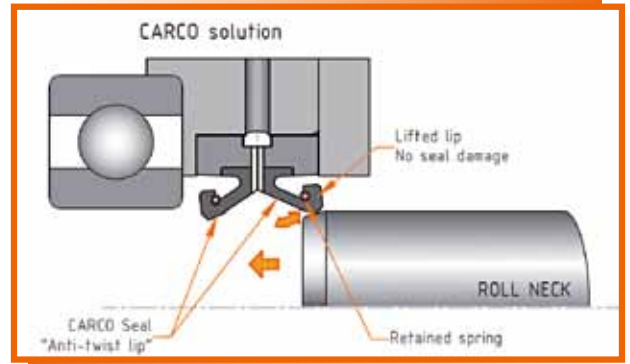
Carco has developed a Carcoseal® radial lip seal dedicated to the protection of the bearing value and to the extension of the bearing service life:

CARCOSEAL/ATLMP/SCA

- No twisting back of the lip
- Spring protected in its pocket
- High seal performance
- Reusable, easy seal assembling and disassembling

DESCRIPTION

- CARCOSEAL/ATLMP/SCA: fabric rubber, requiring a retaining plate.
- CARCOSEAL/ATLMP/SCA/MB: full rubber with metal band, self retaining.
- Ports and grooves for middle lubrication.
- Stainless steel garter spring for best seal efficiency at high speed.

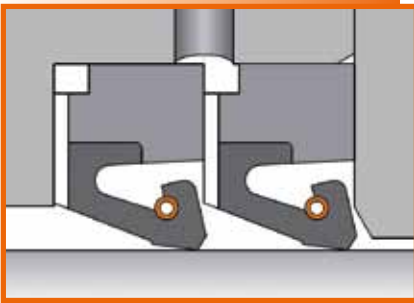


MATERIALS AND WORKING CONDITIONS

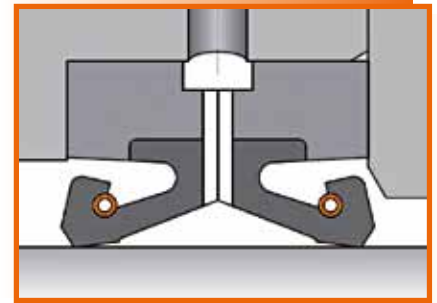
MATERIAL CODE	DESCRIPTION	PRESSURE (bar/psi)	SPEED (m/s - ft/min)	WORKING TEMPERATURE (°C - °F)	PEAK TEMPERATURE (°C - °F)
S800	Standard use	<0,5/7	15/3000	-20 +100 / -4 +210	-30 +120 / -22 +250
HT700	High speed and temperature	<0,5/7	25/5000	-30 +140 / -22 +280	-40 +160 / -40 +320
Z400	High temp. and chemical resistance	<0,5/7	25/5000	-20 +150 / -4 +300	-30 +170 / -22 +340

Peak temperatures are respectively the lowest admissible survival temperature in static conditions and the highest admissible under-lip temperature.

SEAL ASSEMBLING



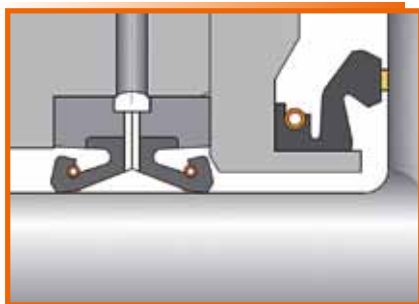
“Tandem” arrangement
Double barrier against contamination



“Back to Back” arrangement
Sealing in opposite directions

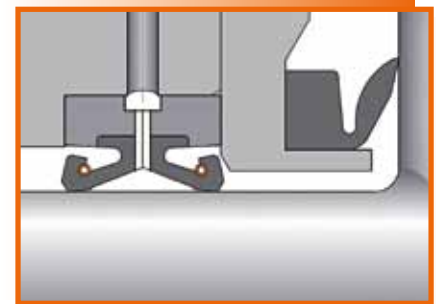
FACE SEAL

In rolling mills the first barrier to cooling water is usually a standard V-ring; we recommend to replace it with our superior face seals, providing higher seal efficiency and longer life:



CARCOSEAL/FM/02

Special lip design with co-molded PTFE ring for lowest friction coefficient. Seal efficiency is combined with very long seal life thanks to the very low friction coefficient of the PTFE ring.



CARCOSEAL/FM/03

Robust lip profile in full rubber.

Longer life and higher efficiency in comparison to standard V-rings.

CARCO IS A LEADING SUPPLIER OF SEALING SOLUTIONS IN THE FOLLOWING MARKETS



HEAVY INDUSTRY



HEAVY HYDRAULICS



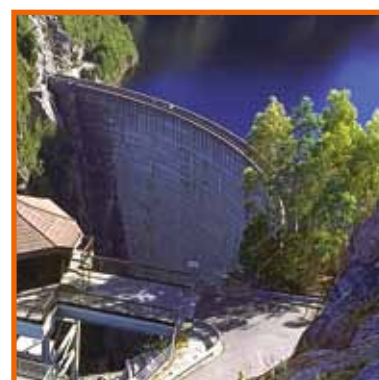
SHIPBUILDING



WINDPOWER



TUNNELLING



HYDROPOWER

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