

CARCO®

Large diameter seals and packings

Long life seals for wind turbines
Split Seals for easy maintenance



PRP

Composite Seals

WIND POWER SEALS



The Company

We do not sell just a seal, we can manufacture sealing solutions with the longest service life.

Maintenance cost reduction and customer satisfaction are our goals.

Also large diameter seals - 2 meters and more - are available at CARCO.

Our PRP division can offer composite seals for a larger product range.

The sealing solutions

CARCO can supply the most critical seals into the wind turbine.

CARCOSEAL rotary shaft seals are available in different profiles and used to protect the bearings, keeping the lubricant inside and the contamination outside, helping the customer get longest bearing life and maintenance cost savings, particularly on wind turbines located offshore or in the mountains.

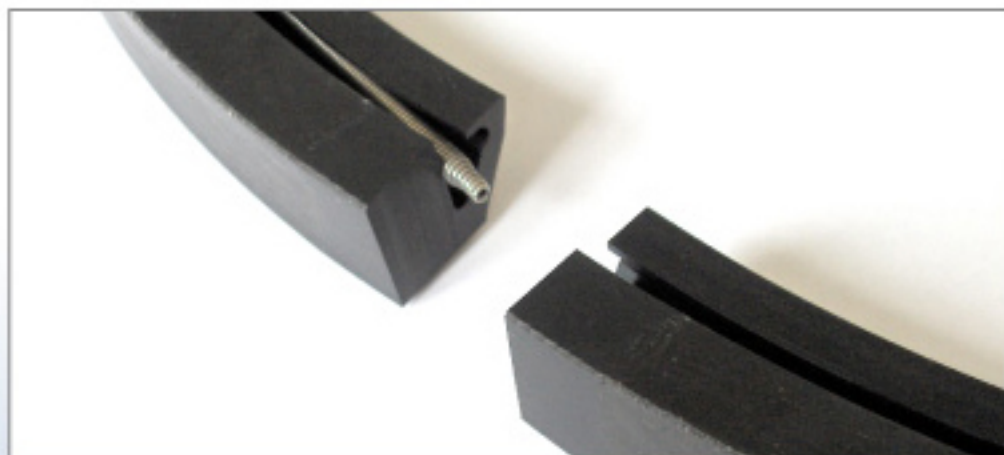
Our seals are fitted on:

- main shaft bearing
- rotor bearing
- multiplier shafts
- generator output shaft
- blade pitch bearing
- yaw bearing

CARCOSEAL is easy to fit, can be unfit and re-used several times and it seals also on the static side. The lip is homogeneously kept in contact with the shaft by the stainless steel garter spring.

CARCOFLON surface treatment (PTFE coating) is provided on the lip of all Carcoseals, giving the following advantages:

- friction and heat generation reduction
- longer seal life
- no stick-slip effect
- low breakaway force after long static position



Split seals for on-site maintenance

When original seals start leaking, seal replacement is needed to prevent bearing troubles. Split seals are needed as shafts cannot be removed.

CARCOSEAL is supplied in its split version for this purpose. The cut is into a full rubber portion and the spring can be easily jointed for easy fitting.

With CARCOSEAL SPLIT seals we can offer superior solutions to ease the maintenance on existing wind turbines.

C a r c o s e a l

All Carcoseal undergo our exclusive Carcoflon surface treatment which gives friction and heat generation reduction.



UN

By far the most popular covering the majority of applications.



UN/SF

Special reinforced seal back suitable for housing without retaining plates.



UN/LA

Offers protection to the bearing from risk of damage by abrasive particles, scale and dust.



SCA

Where two seals are fitted (back to back) SCA has a peripheral groove and radial ports thus allowing inlet of lubricant to avoid dry running.



SCA/SF

The same of SCA made in a special reinforced seal back, suitable for housing without retaining plates.



TM

Carcoseal/TM seals are installed behind the cutting head to protect the bearings from water, slurries, highly abrasive dust and sand.



UN/LL

The lip is of a special geometry capable of sealing satisfactorily even large clearances and eccentricities.



UN/LA/FS

All the carcoseal UN advantages combined with V-Ring protection.



ATLMP

Special rotary shaft seal designed to minimize damage during the fitting operation.



LDS

Axial seal suitable to perform with the maximum values of eccentricity.



API/WT

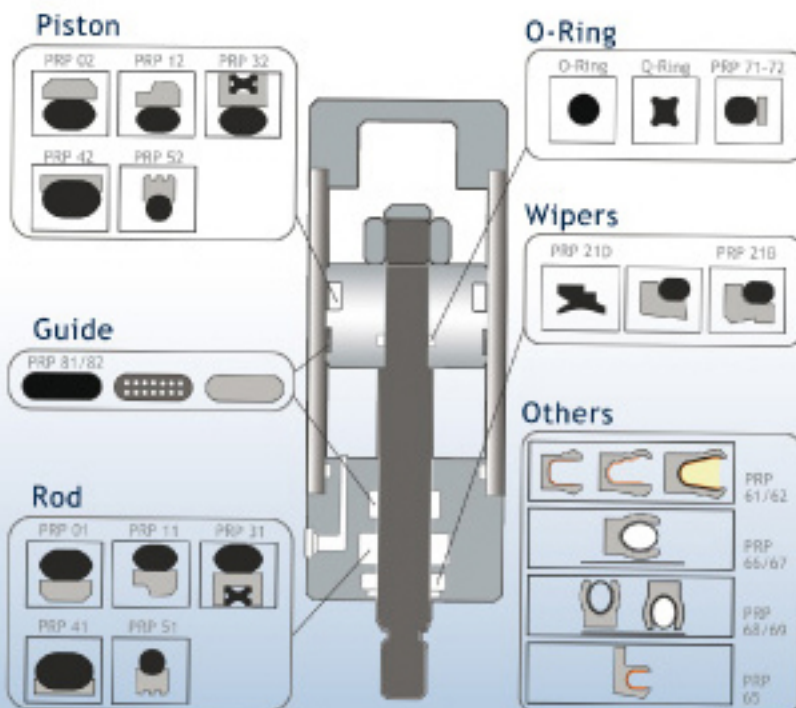
Designed to operate under pressure, with modified lip design.



V-Ring

Available in most popular styles. It seals axially against a counterface. Has been proved to be reliable against dust, dirt, water and oil splash and other media.

P R P



PRP 01-02: A double-acting sealing elements energized by an O-Ring .

PRP 11-12: Single-acting sealing elements .

PRP 31-32: A double-acting rod/Piston seals designed for reciprocating or helical applications.

PRP 41-42: A true slipper seals.

PRP 51-52: Used to seal rods, axles, rotary swivels and steering units with rotary, helical or oscillating movement.

PRP 21D: Double effect scraper.

PRP 21A: A solid ring with a scraper lip contact, activated by an O-Ring.

PRP 21B: A solid ring with dual scraper lip contact.

PRP O-RING: The O-Ring is the most simple seal, used in static and dynamic sealing applications.

Composite Seals

PRP Q-RING: Self energizing double-acting sealing elements .

PRP 71-72: Back-up Rings used to protect seals from the effects of extrusion .

PRP 81/82: PTFE, Duratex or Tufcot wear rings.

PRP 61-62: Single acting sealing element for medium to high-pressure, ideally suited to high speed reciprocating.

PRP 65: Single - acting sealing element for rotating movement.

PRP 66-67 - 68-69: A single acting sealing elements optimised for sealing high -pressure fluid and gas.

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PPA

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Photograph by courtesy of Acciona Energia Spain

Testing Capabilities

We are able to analyze the most critical applications and parameters that influence the seals system with our test rigs for rotary shaft seals (up to \varnothing 500mm) and for Vee-Packings. We supplement our in-house research facilities with those at University and other centres of excellence.

Technical Support Engineering Capabilities

Our technical department and Application Engineers are always ready to listen to the customer's requirements and understand his needs in order to provide the correct solution. CARCO enhances the value of its products with technical services and, if there is the need, comprehensive training programs.

Quality assurance

Quality, at Carco, is a principle which is integral in every aspect of our activities. It is the service we supply to our customer. The CARCO Quality System is committed to following the prescriptive requirements of ISO Standard 9001:2000. 100% visual and dimensional controls are carried out on our products.

Fast Delivery Dedicated Team:

Carco can offer very short lead time, from 1 week down to 1 day, also for large diameter.