Compressor Part

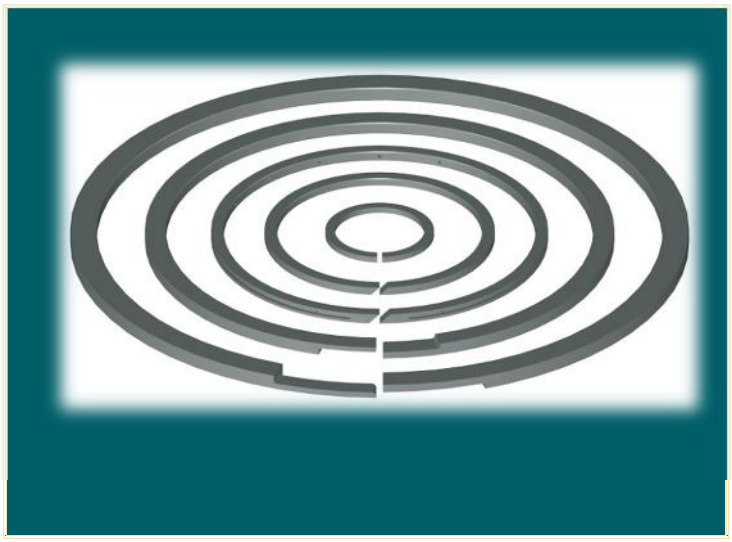
We manufacture and service pressure packing, piston rings and rider bands for original equipment manufacturers and for compressor operators. We design and test our sealing systems for the most challenging operating conditions: chemically inert to highly reactive gases, cryogenic to high operating temperatures, bone-dry to wet, vacuum to high pressures.

We offers the broadest range of materials for piston rings, rider bands and packing. High-performance polymers are engineered for lubricated and non- lubricated compressors in air, natural gas, air separation and petrochemical process applications. Our material selections included:

- PTFE
- PPS
- PEEK
- proprietary blends and alloyed materials which exceed traditional PEEK-based material offerings in wear and high temperature performance
- Polyimides, imidazoles, sulphones and benzimadizoles.

Compressor Part

Main functions of compression rings



Piston rings, mounted on the pistons of lubricated or non-lube (oil free) compressors, are designed to ensure that the gas is compressed and to provide a seal between the piston and the cylinder.

The piston ring is an essential part of a reciprocating compressor, as it enables the requested or required performance in terms of flow rates and pressures to be achieved.

High-performance piston rings :

- Manufactures its piston rings in a wide range of extremely wear-resistant materials.
- Also offers a wide range of designs for improving the sealing function according to the pressure, molecular weight of the gases (especially in the case of low density gases) and the materials used.

Compressor Part

Main functions of rider rings:

The function of rider rings, used mainly in oil free or mini-lube compressors, is to support or guide the piston and rod assembly and prevent contact between the piston and the cylinder (risk of seizure).

High-performance rider rings:

Different designs and types of cuts are also used.

The materials used have the same wear resistance as the piston rings, in order to meet the requirements of the most stringent conditions of service.

All of these parts are generally designed with decompression grooves to avoid their operating as piston rings which could cause premature wear.

Compressor Part

Main functions of rod packings :

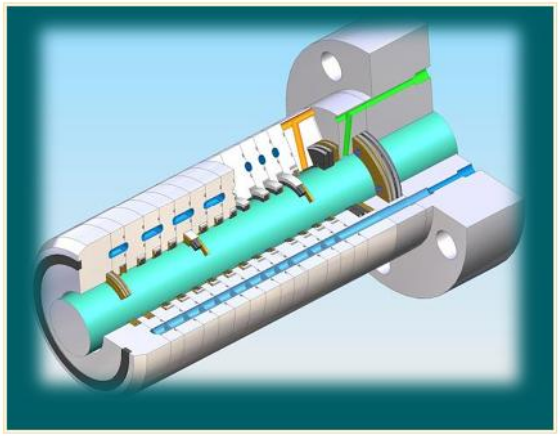
The purpose of the packing cases is to seal (dynamic sealing) any residual gas coming from the cylinder along the piston rod.

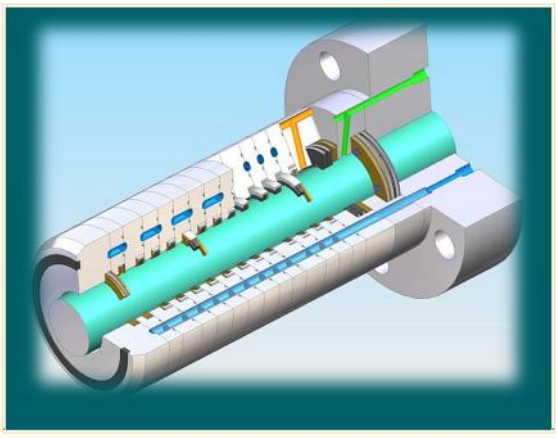
Rod pressure packing designed to-measure

These assemblies are designed according to the nature of the gas, the discharge pressures and temperatures as well as the linear speed and stroke of the piston rod, all of which contribute to the dissipation of the heat generated.

Different designs are proposed:

- with leaked gas recovery (venting)
- with (lubricated packing case) or without lubrication
- with internal cooling
- with inert buffer gas
- with inert purge gas
- with oil recovery





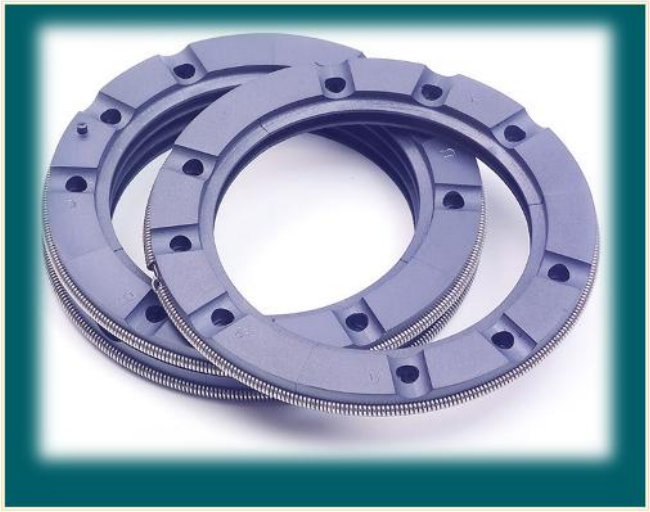
Compressor Part

Main functions of oil wiper packing:

Oil wiper packing is designed to seal the oil from the crankcase. By scraping away the excess oil generated along the piston rod by its back and forwards movements, the oil wiper rings prevent any accidental leakage outside the crankcase.

Highly reliable oil scraper rings:

- These components are essential to compressor efficiency, especially in the case of oil-free compressors where there should be absolutely no trace of oil.
- The oil wiper rings prevent any oil contaminating the cylinder.
- Reliable control of crankcase oil leaks is economically vital in view of the increasing price of oil. Care for the environment is also an important consideration.



Compressor Part

Compressor valves

In addition to its high-performance sealing parts for reciprocating compressors, OBI offer a complete range of valves for air and gas process compressors.

We can provide technical support and improve the performance of your machines.

We supply:

- New compressor valves that are perfectly interchangeable,
- Internal replacement parts (thermoplastic or steel valve plates, damper plates, spring plates, springs, etc.),
- Valve reconditioning services,
- Technical studies to design complete new compressor valve assemblies based on your conditions of service,
- Technical support to modify and optimize existing compressor valves,
- Control systems for suction valves.

High-performance valves with reinforced polymer plates:

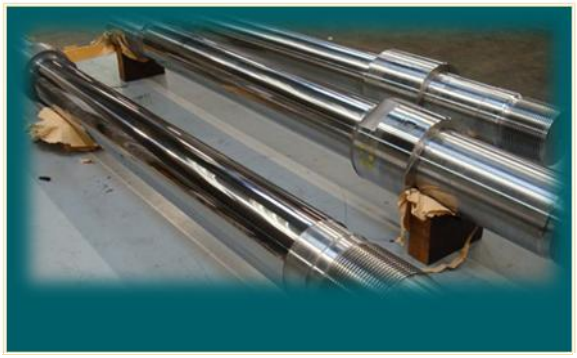
We offer valves equipped with discs fabricated from high-performance polymers which can increase valve service life in spectacular fashion, as well as reduce compressor energy loss.

Compressor Part

Piston rods Pistons Cylinder liners

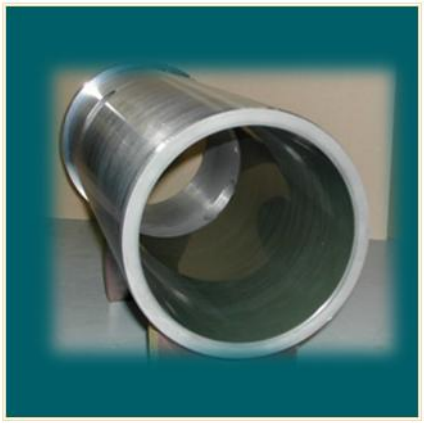
The quality of the friction surfaces is extremely important to ensure that the sealing components work efficiently. For an optimal seal, OBI can also supply:

Piston rods



Piston rods are often manufactured with conventional surface treatment processes. OBI has chosen to use **high quality coatings** in order to solve the problems of wear due to friction, abrasion or corrosion when the compressors operate intermittently or are unused for long periods.

CYLINDER LINEAR



To maximize the life of our piston and rider rings, OBI is able to provide custom-made cylinder liners for any operating conditions. They are made from high quality centrifugal cast iron, and in sizes ranging up to 1,000 mm diameter and 1,500 mm length.

Our cylinder liners are available in a wide range of materials

PISTONS

In addition to piston rods, OBI also manufactures complete pistons from materials like steel, cast iron or aluminum alloys.
In most cases, we offer multi-piece aluminum pistons with effective solutions to prevent wear to piston grooves.