

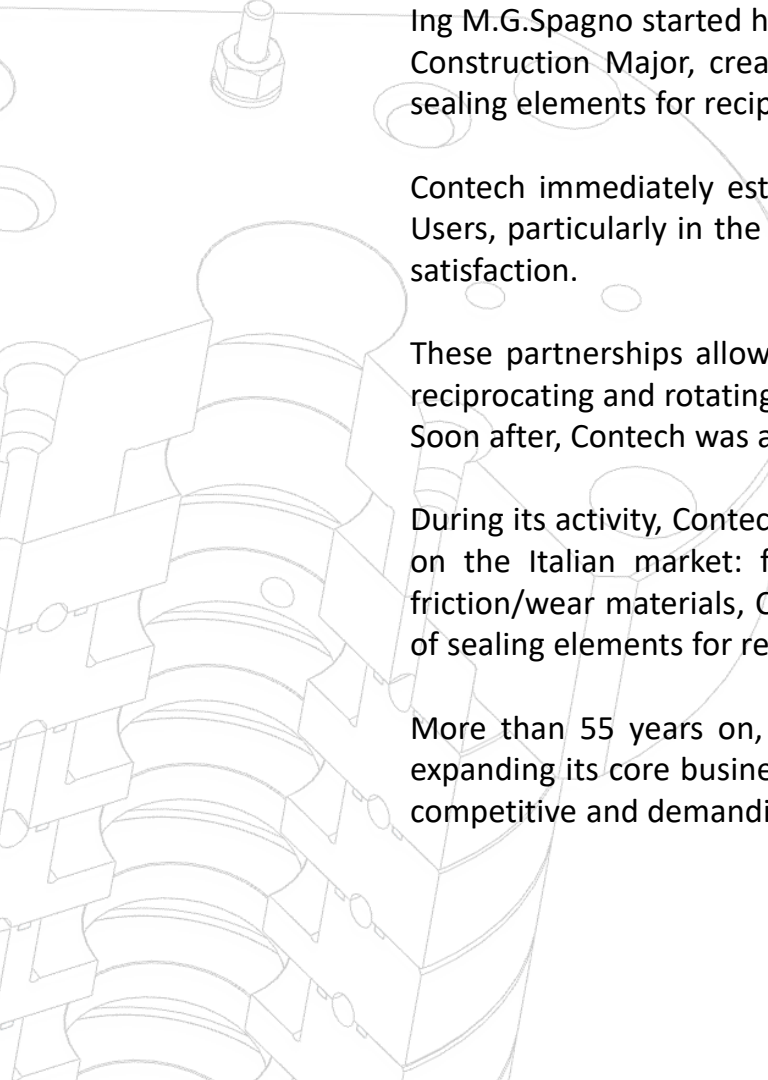


Innovative Engineering Solutions
Critical Sealing Components

In the heart of the machine,
since 1961.

Contech

Design
Engineering
Supply



Ing M.G.Spagno started his own business at 28 in 1961, soon after graduating in Mechanical Engineering with Automotive Construction Major, creating Contech, a small engineering consultancy company, focused on the study and design of sealing elements for reciprocating and rotating machines, initially aimed mainly at non-lubricated applications.

Contech immediately established successful cooperations with all of the major OEM Manufacturers and numerous End Users, particularly in the compressor industry, which soon resulted in actual partnerships that still last today with mutual satisfaction.

These partnerships allowed Contech to accumulate vast and important experiences concerning the problems related to reciprocating and rotating machines and their heavy duty employ.

Soon after, Contech was asked by its customers to directly supply also the parts, beside their design and engineering.

During its activity, Contech has given an important contribution to the development of sealing technology and engineering on the Italian market: from new designs to the introduction and diffusion of new breakthrough plastic-based low friction/wear materials, Contech was the very first company to introduce PTFE and polyimide resins in the manufacturing of sealing elements for reciprocating compressors on the Italian market.

More than 55 years on, Contech is still an independent family company, where the second generation is successfully expanding its core business and new ideas in the digital era, facing new challenges and supporting its customers in highly competitive and demanding markets, true to the core values and that have made it successful over the years.

Contech is an independent Italian company specialized in designing, engineering and supplying advanced sealing solutions, products and critical components mainly for industrial reciprocating and rotating machines.

Products and solutions come in a wide range of advanced plastic and metallic matrix materials, to meet any process requirement even in the most demanding applications and extreme operating conditions.

Contech focuses on supporting major OEMs with design, engineering, specifications and complete supply of fully custom designed components and sealing systems for both existing and new units, single or fleet, aimed at periodic maintenance or for upgrading purposes.

On a daily basis, we help our customers optimize the performance of their machines, that have to comply with the highest industry standards.

Contech can supply the whole majority of the critical sealing components specified by the major OEM manufacturers for their machines.

With huge experience in the field, high technical skills, thousands of reference data, technical trouble shooting attitude, very quick response capacity and flexibility, Contech has gained a reputation as a reliable, strategic supplier/partner, with over 50.000 parts delivered on average every year.

RECIPROCATING MACHINES

ROD SEALING COMPONENTS

Rod Packing Rings
Special High Pressure Applications
Oil Scraper & Sealing Rings
Static Sealing Groups
Complete Packing Cases

CYLINDER SEALING & WEAR COMPONENTS

Piston Rings
Rider Bands

RECIPROCATING MOTION COMPONENTS

Piston Rods with Treatments & Coatings
Pistons
Liners

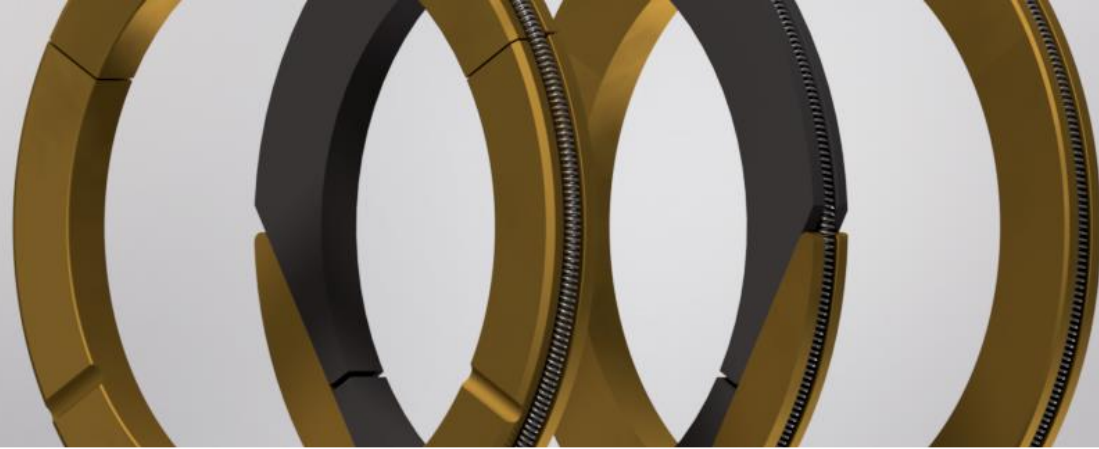
CENTRIFUGAL & ROTATING MACHINES

WEAR COMPONENTS FOR PUMPS

Bushing guides
Bearings
Wear Parts

VARIOUS PRODUCTS

Sealing Rings for Centrifugal Machines
Gaskets
Bushings
Bearings
Guide components



ROD SEALING COMPONENTS

FOR RECIPROCATING MACHINES



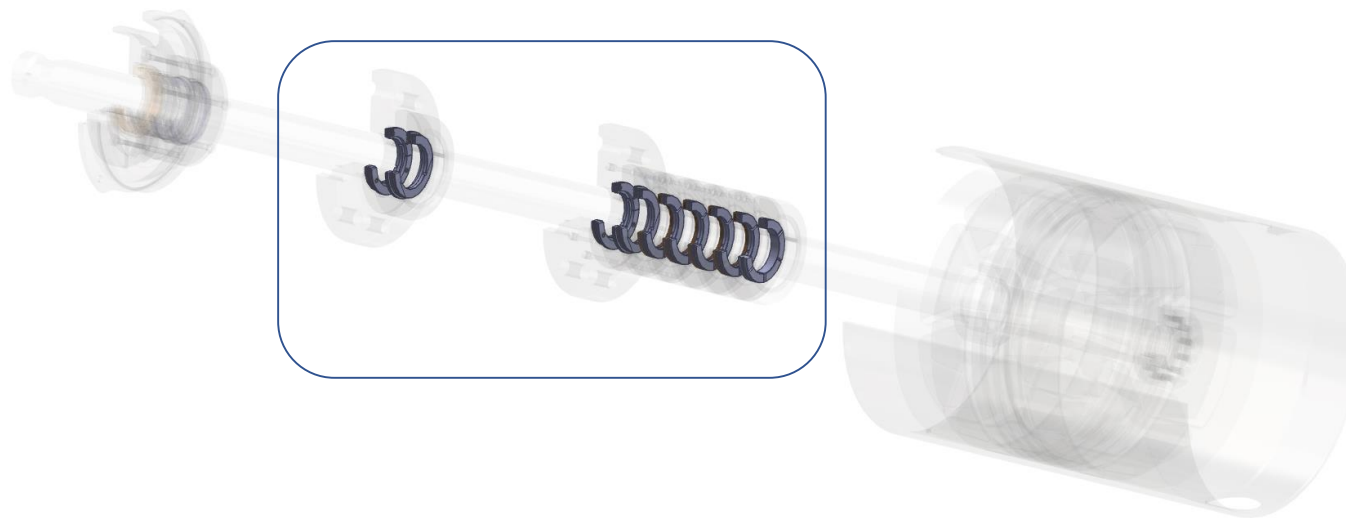
Design
Engineering
Supply

PACKING RINGS

Packing rings ensure gas sealing along the piston rod, avoiding gas leakage from the cylinder to the crankcase.

Contech can supply the most common type of packing rings in a wide range of materials, and also high performance special rings for the most demanding applications, such as the production of LDPE - Low Density PolyEthylene, where operating pressure vary between 1200 and 3500+ bar.

For these kind of severe applications on Hyper-Compressors, where usually the traditional sealing set ups with piston rings and rider bands are replaced by special piston-rods and special packing cases, we supply specially designed packing rings, manufactured in high performing, low frictional bronzes.

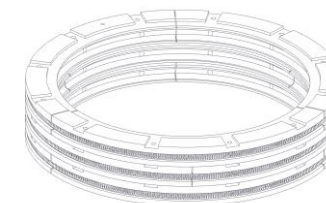


RECIPROCATING MACHINES

ROD SEALING COMPONENTS

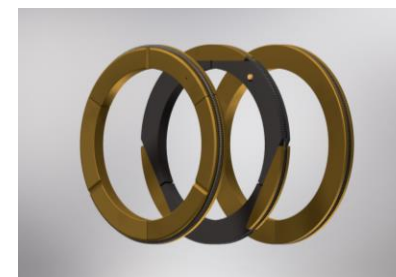
STANDARD DESIGN

- Pressure Breaker Rings
- Radial/Tangential Pairs
- Tangential/Tangential Pairs
- Rod Tangential Cut/Backup pairs
- Radial/Tangential/Backup Set
- Radial/Tangential/Axially Loaded Ring Set



SPECIAL HIGH PRESSURE PACKING RINGS

- Pressure Breaker Rings
- Radial/Tangential Pairs
- Radial/Tangential/Backup set
- Guide Bushings



OIL SCRAPER & SEALING RINGS

Oil scraper rings are specially designed to scrape oil in excess from the rod and to evacuate it through the draining channels, delimiting the areas interested by the lubrication and separating them from the pumping areas (cylinders).

These elements prevent oil leakages and are very important to both optimize the oil consumption of the machine (thus the maintenance and running costs) and, in some specific applications for safety and/or environmental reasons, where the contact between lubricant and processed gas must be avoided.

Materials are usually metallic-based bronze, aluminium, cast iron, white metal (Babbitt) - with the possibility to specify hybrid set-up designs, as well as plastic special materials for particular applications.



RECIPROCATING MACHINES

ROD SEALING COMPONENTS

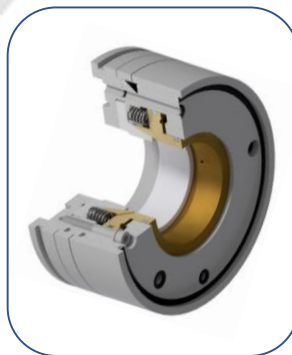
STATIC SEALING GROUPS

Traditional packing rings are designed to ensure the correct gas sealing mainly when the compressor is running, but their sealing efficacy rapidly decreases when the machine is stopped, allowing gas leakage along the piston rod.

Static rod seals solutions in our product range are designed to guarantee gas sealing along the rod when the compressor is not in operation, they are specified when processing toxic and highly expensive gases, and as a general rule, for all the applications where it is mandatory to eliminate gas leakage, as requested by plants' and environmental guidelines.

RECIPROCATING
MACHINES

ROD SEALING
COMPONENTS

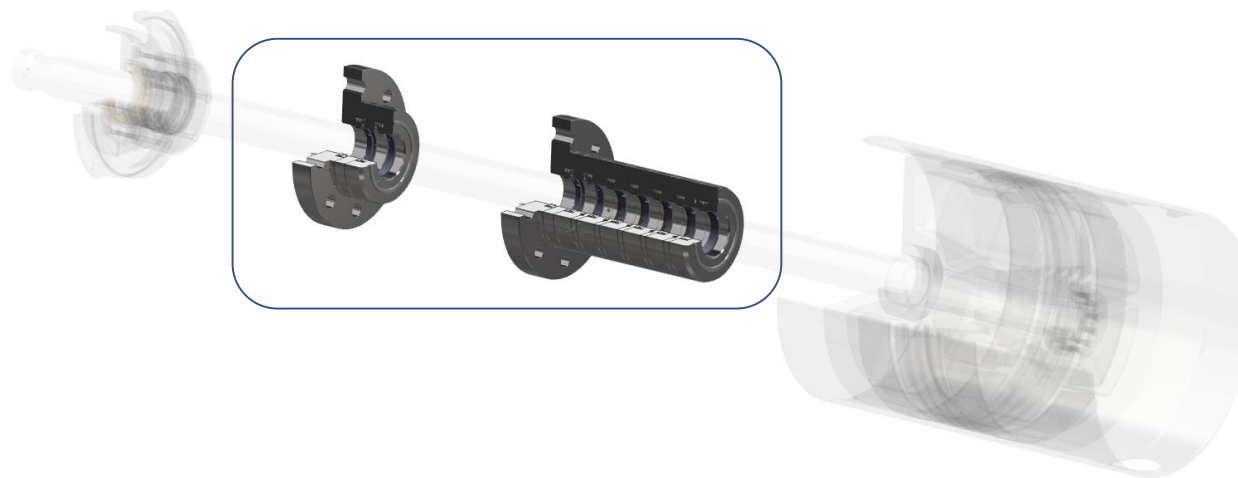


COMPLETE ROD & OIL PACKING CASES

Packing cases are composed by metallic cups containing the rod sealing rings. The design and the accuracy in manufacturing the packing cases are paramount to achieve the optimum performance of the sealing elements in terms of reliability, efficiency and lifetime.

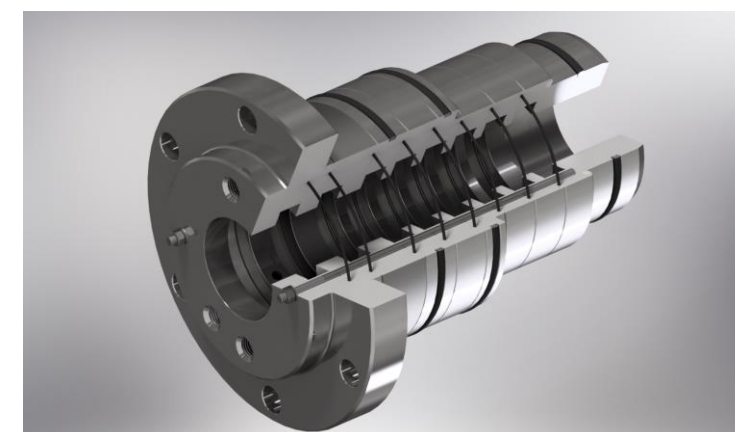
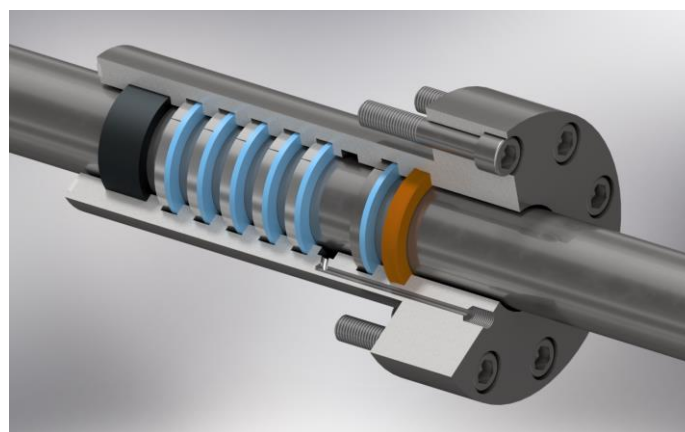
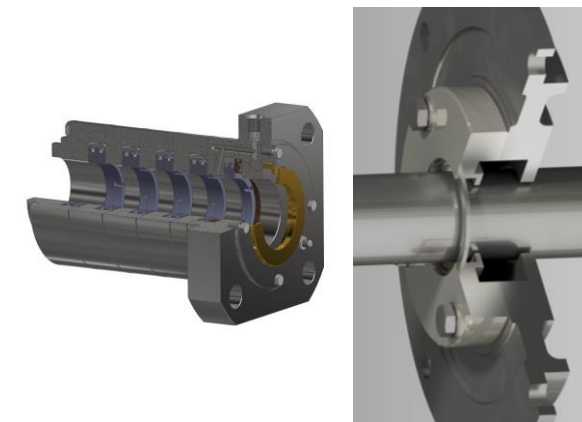
Contech designs and supplies standard and fully customized complete packing cases, that include:

- Single or Multi Lubrication Points
- Gas Recovery Points
- Inert Gas Buffer
- Internal Cooling
- Arrangement for Instrumental Monitoring



RECIPROCATING MACHINES

ROD SEALING COMPONENTS





CYLINDER WEAR, SEALING & MOTION COMPONENTS

FOR RECIPROCATING MACHINES



Design
Engineering
Supply

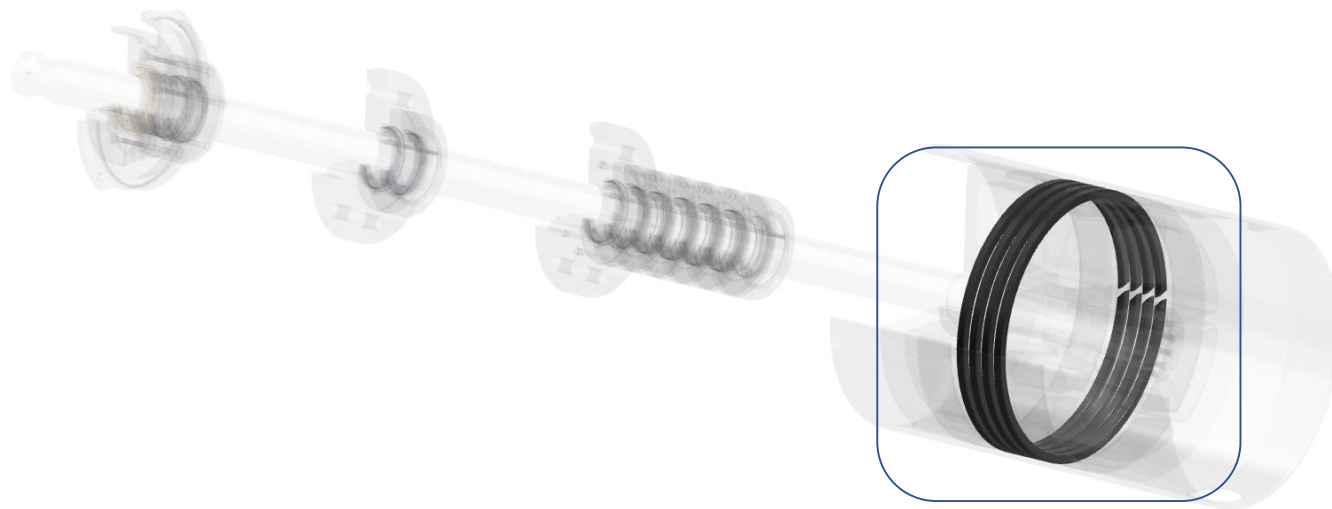
PISTON RINGS

Piston rings, installed in grooves machined on the piston, will ensure the correct gas sealing between the piston and the cylinder/liner, maximizing the performance of the machine.

These components can be manufactured in one or more pieces, in different materials - with standard or special design - and can be also configured as multi-elemental multimaterial sealing solution.

Choosing the correct combination will allow the achievement of long durations of the sealing elements, which can in turn lead to significant savings on energy and maintenance costs.

Dimensions: 25mm to 1250 mm



RECIPROCATING
MACHINES

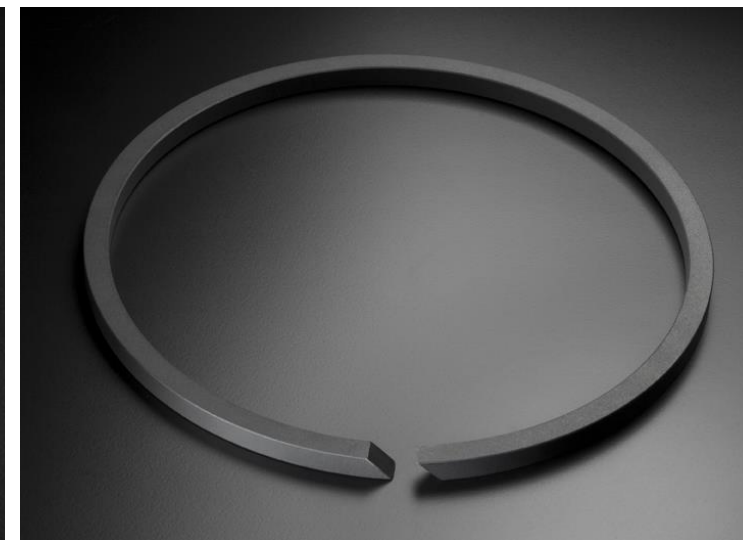
CYLINDER
SEALING
COMPONENTS

STANDARD DESIGN

Piston Rings straight cut
Piston Rings angle cut
Piston rings step cut
Balanced piston rings

SPECIAL DESIGNS, MULTI-ELEMENTAL & MULTI-MATERIAL SOLUTIONS

Piston rings with seal joint cut
Piston rings with 2 combined rings
Piston rings-solid rider band coupling
Piston rings with expander springs



RIDER BANDS

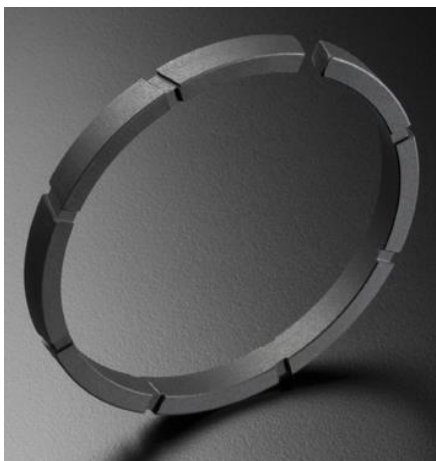
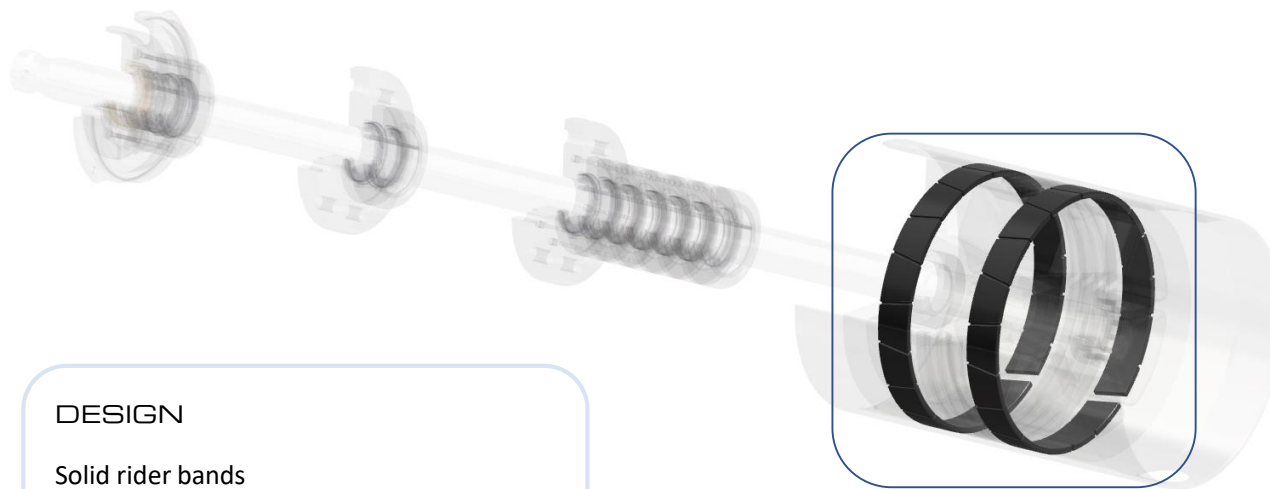
Rider bands guide and support the piston during its reciprocating motion inside the cylinder, avoiding any possible contact between the metallic surfaces.

We can supply rider bands in a wide variety of designs and dimensions: from the simple solid rings, up to the most complex Angle Cut + External V-Grooves Rider Bands.

Dimensions: 25mm to 1250mm

DESIGN

Solid rider bands
Angle cut + External V-Grooves Rider Bands
Custom Design



RECIPROCATING
MACHINES

CYLINDER
WEAR
COMPONENTS

PISTONS, PISTON RODS & LINERS

The quality of the mating surfaces, which are in direct contact with the sealing elements inside the cylinders and the packing case, is a key factor to achieve the best performances with a longer lifetime.

With a variety of different heating treatments and coatings, for liners, pistons and rods, Contech can specify the right solution to achieve the best durations and performance and prevent premature and expensive failures.

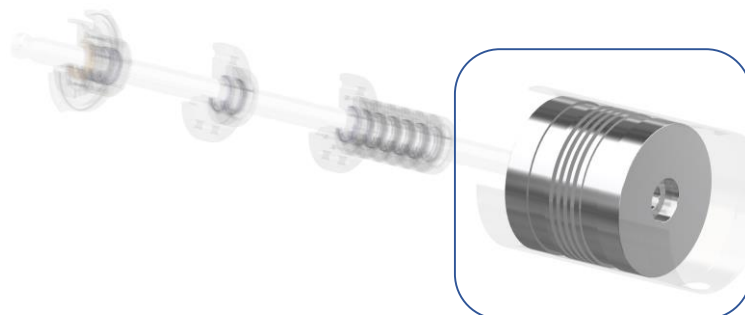
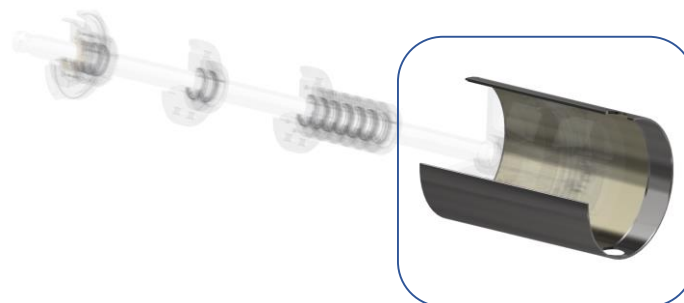
Contech designs and supplies standard and fully customized complete critical reciprocating motion components:

Pistons - single or multi-pieces

Liners

Piston Rods

Special treatments and coatings



RECIPROCATING MACHINES

RECIPROCATING MOTION COMPONENTS





SEALING & WEAR COMPONENTS

FOR CENTRIFUGAL, ROTATING & TURBO MACHINERY



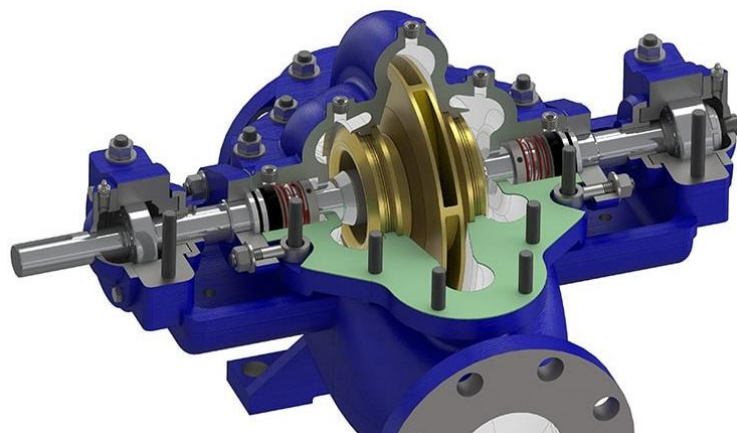
Design
Engineering
Supply

CENTRIFUGAL PUMPS

Contech supplies bushings and case wear rings for centrifugal pumps, manufactured in a range of special materials (polyimide resins, impregnated graphite alloys, filled PEEKs) that can help solve several of the most critical troubles derived from the use of metallic items (low or absent lubrication, vibrations, resistance to aggressive environments).

A full range of specific graphite-based materials for throat bushings, lineshaft bushings and case rings allow us identify the best solution for any application, even in the most extreme critical environments.

All items are available for either new installations, existing machines or revamping.

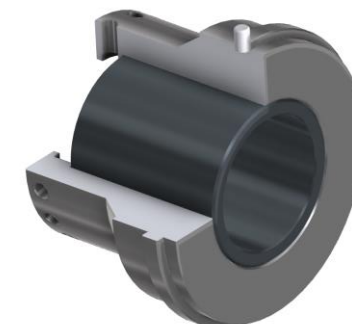
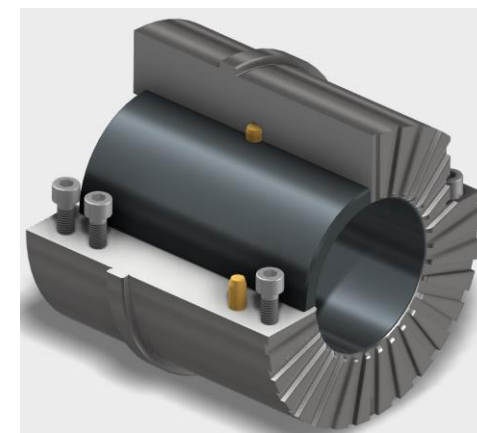


WEAR COMPONENTS

Case Wear Rings
Throat Bushings
Interstage Bushings
Lineshaft Bushings
Sealing Elements for Metallic Holders

CENTRIFUGAL & ROTATING MACHINES

WEAR COMPONENTS FOR PUMPS



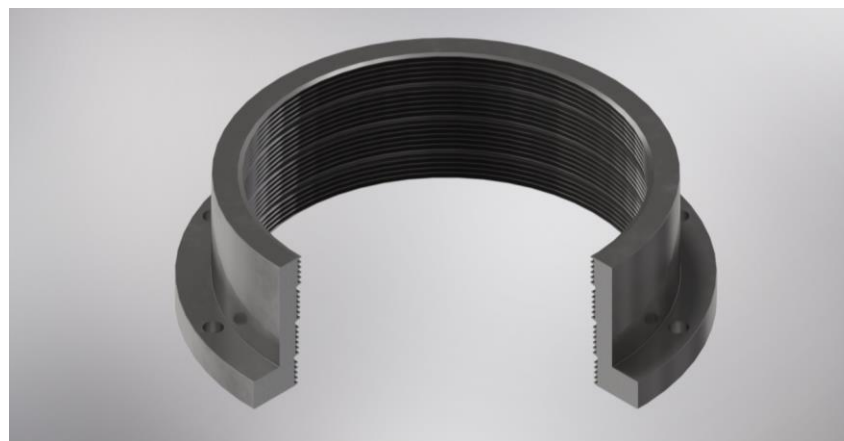
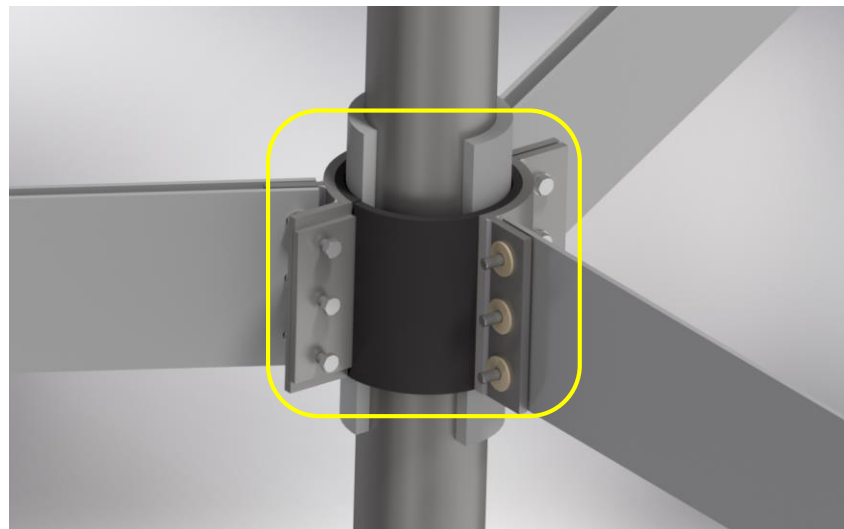
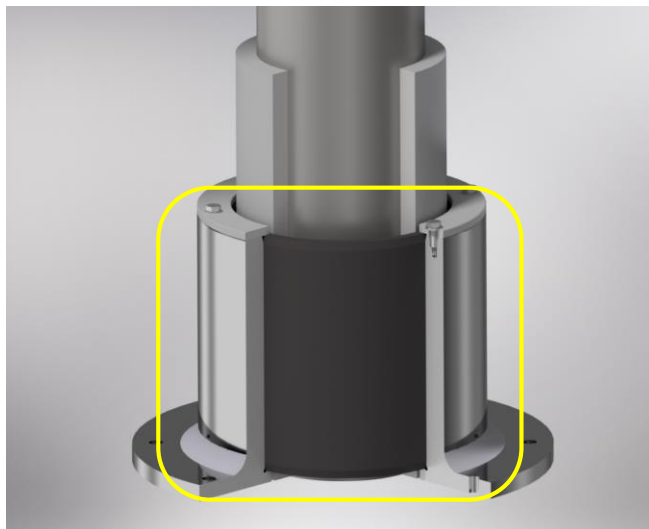
VARIOUS PRODUCTS

CENTRIFUGAL & ROTATING Sealing & Wear

In addition to a complete product range for reciprocating compressors, Contech can supply various parts (sealing related) aimed at centrifugal and rotating industrial equipment, when the customer is looking for a solution that may include special materials with self-lubricating properties, particular coatings and in any special application.

COMPONENTS

Sealing Rings for Centrifugal Compressors
Components for Turbomachinery
Bushings & Bearings for Rotating Machinery
Guide Elements for Mixers
Gaskets





Selecting the most appropriate material is the first crucial step when it comes down to specifying sealing solutions for a complex industrial machine: it will have a relevant influence on performance, sealing behaviour, lifetime of the sealing elements and maintenance costs.

In more than 55 years, Contech has gained considerable experience in the Reciprocating Compressor Industry, building important partnerships with the major OEM Manufacturers and End Users that enabled to test, verify and assess the validity of many materials for each specific application, over thousands of successful cases.

The end result is a wide range of dedicated Plastic/TechnoPolymer based and Metallic matrix materials, which are combined with the most appropriate design and set up of the sealing solution, standard or customized, to achieve the perfect combination for any specific application.

Our products and solutions are used in many application fields for many different services, with a huge range of operating conditions.

Complete, high quality, reliable sealing solutions which meet the technical requirements for the most demanding markets.

PLASTIC & POLYMER-BASED MATERIALS

- Filled PTFEs
- Filled PEEKs
- Polyimide Resins, pure or filled
- Special Techno-polymers
- Impregnated Graphite alloys
- Elastomers

METALLIC MATERIALS

- Bronzes
- Cast Irons
- Stainless Steels
- Low Frictional Metals
- Special Alloys



In the heart of the machine, since 1961.

Markets & Applications

OIL & GAS



ENERGY



TECHNICAL GAS



PET MANUFACTURING



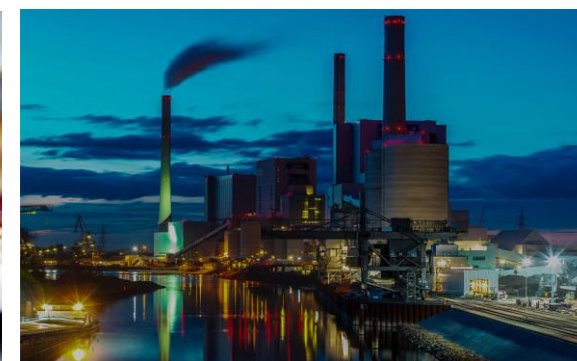
PHARMACEUTICAL



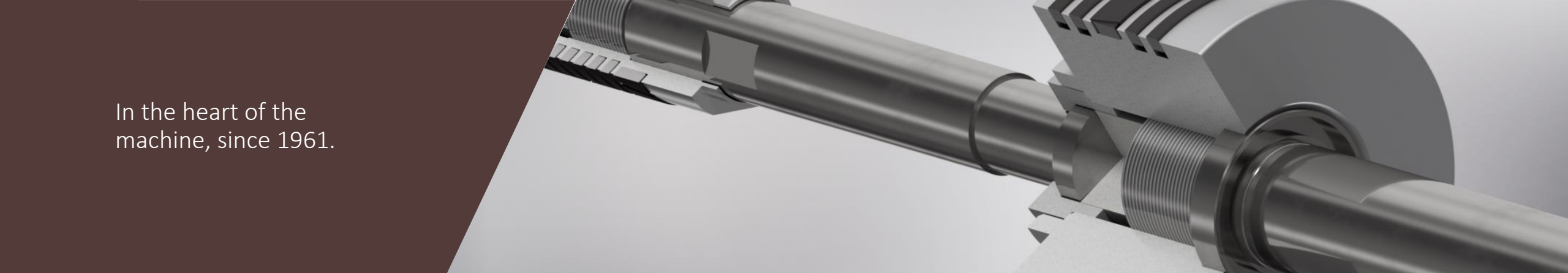
CNG FILLING NETWORKS



FOOD INDUSTRY



HEAVY INDUSTRY



In the heart of the
machine, since 1961.

We do not sell solutions.

WE SHARE VISIONS.

Contech

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