



Mechanical Sealing Products

Garlock
an EnPro Industries family of companies

BACKGROUND

Garlock Sealing Technologies, established in 1887, is the acknowledged global leader in high-performance fluid sealing products for the world's processing industries. With 15 global operations, that employ in excess of 1800 people serving Industrial Market needs in 75 countries, Garlock provides a wide range of products to customers in: chemicals and petrochemicals, refining, pulp and paper, power generation, semiconductor, primary metals, food and pharmaceuticals, mining and original equipment manufacturers, among others.

Products:

Garlock offers a complete range of fluid sealing solutions, including compression packing, gasketing, hydraulic components, dynamic seals, metal gaskets, critical-service flange gaskets, oil seals, bearing Isolators, plus expansion joints and high-performance metal seals.

Mechanical Seals:

This catalogue brings a focus on the wide range of Mechanical Seals available through Garlock for virtually every rotating application typically found in pumps, mixers, agitators, compressors, ribbon blenders, autoclaves, homogenisers, to name just a few.

Garlock has a long history in the supply of mechanical seals dating back to 1953 including such brands as:

- Mechani-Pak
- Anchor Packing
- Fluidtec
- Klozure
- Cefilac
- Syntron
- Colossus

This catalogue provides a brief overview that covers a combination of these brands. Each seal type has been categorised to allow easy selection within an industry group. These groups include:



Pulp & Paper



Power Generation



Pharmaceutical



Chemical



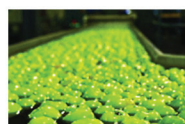
Primary Metal
Aluminium/Steel



Water Treatment



Mining



Food & Beverage



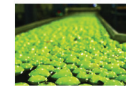
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RUBBER BELLOWS

340H, 340E, 340A, 340B SERIES



EQUIPMENT:

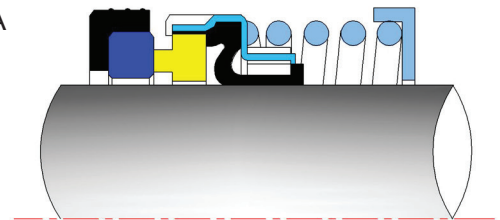
- General service pumps, air & refrigeration compressors, and hydraulic motors

DESIGN FEATURES:

- General purpose rubber bellows seal
- Single seal head for each shaft size with selection of seats and springs for simple interchange
- Simple unbalanced rubber bellows design that eliminates shaft fretting
- Bi-directional application, and interchangeable/removable faces
- 340H is dimensionally interchangeable with Crane Type 21
- 340E is dimensionally interchangeable with DIN dimensions
- 340A is dimensionally interchangeable with Crane Type 1A
- 340B is dimensionally interchangeable with Crane Type 2

OPERATING LIMITS:

- Temperature: -40° to 150° C
- Pressure: up to 16 bar (230 psi)
(size & speed dependent)
- Speed: up to 13m/s (size dependent)
- Shaft Size: 10mm to 100mm (metric)
0.375" to 4.000" (imperial)



CR01, CR02, CR03 SERIES



EQUIPMENT:

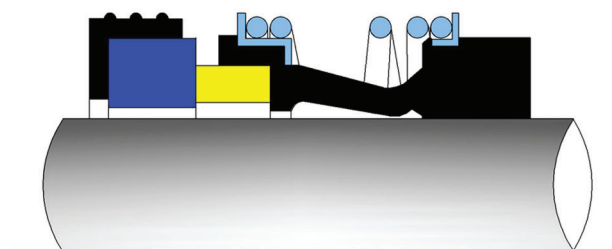
- General service pumps

DESIGN FEATURES:

- Robust unbalanced rubber bellows design independent of rotation
- Positive elastomeric drive eliminates shaft fretting
- Suitable for media with solids as in waste water and sewerage
- Ease of installation
- CR01 equal to Burgmann MG1
- CR02 equal to Burgmann MG12 (DIN L1K)
- CR03 equal to Burgmann MG13 (DIN L1N)

OPERATING LIMITS:

- Temperature: -20° to 140° C
(elastomer dependent)
- Pressure: up to 16 bar (230 psi)
(size & speed dependent)
- Speed: up to 10m/s
- Shaft Size: 10mm to 100mm (metric)



RUBBER BELLOWS

CR04 - CR07 SERIES



EQUIPMENT:

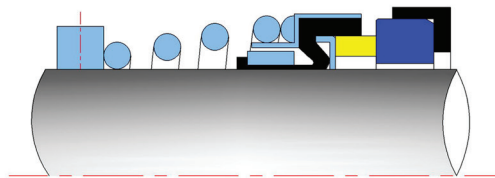
- General service pumps

DESIGN FEATURES:

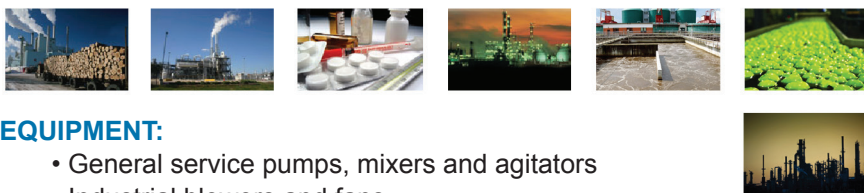
- Robust unbalanced rubber bellows design independent of rotation
- Positive elastomeric drive eliminates shaft fretting
- Small external diameter
- CR04 equal to Burgmann MG910
- CR05 equal to Burgmann MG912
- CR06 equal to Burgmann MG920
- CR07 equal to Burgmann MG921

OPERATING LIMITS:

- Temperature: -40° to 140° C
- Pressure: up to 12 bar (174 psi)
(size & speed dependent)
- Speed: up to 10m/s
- Shaft Size: 10mm to 100mm (metric)
0.375" to 4.000" (imperial)



G302 SERIES



EQUIPMENT:

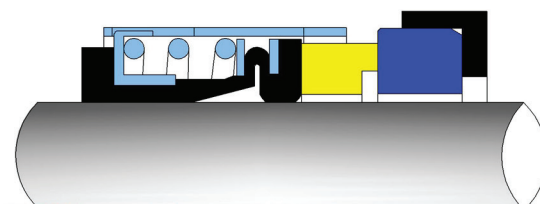
- General service pumps, mixers and agitators
- Industrial blowers and fans

DESIGN FEATURES:

- Robust unbalanced rubber bellows design independent of rotation
- Positive elastomeric drive eliminates shaft fretting
- Non-clogging single spring design
- Suitable for media with solids as in waste water and sewerage
- G302 equal to Crane 502

OPERATING LIMITS:

- Temperature: -42° to 205° C
(elastomer dependent)
- Pressure: up to 40 bar (580 psi)
(size & speed dependent)
- Speed: up to 13m/s
- Shaft Size: 14 to 100mm (metric)



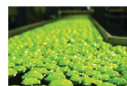
WELDED METAL BELLOWS

CM01, CM02, CM03 SERIES



EQUIPMENT:

- Pumps
- All rotating equipment

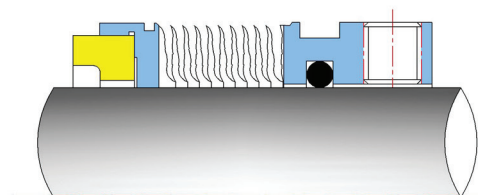


DESIGN FEATURES:

- Rotary Welded Metal Bellows with static shaft elastomer eliminates fretting
- Available with carbon, silicon carbide and tungsten carbide faces
- Range of metal parts including AM350, Hast-C276, 316 SS
- 45° ID bellows for superior performance
- Balanced design with excellent radial and axial tracking
- Suitable for a wide range of media; low/medium temperatures, high corrosives & viscosities
- Grub screw drive

OPERATING LIMITS:

- Temperature: -40° to 260° C (elastomer dependent)
- Pressure: up to 25 bar (367 psi) Single Ply
up to 68 bar (1000 psi) Double Ply
(both size & speed dependent)
- Speed: up to 25m/s
- Shaft Size: 18mm to 150mm (metric)
0.750" to 6.000" (imperial)



CM04 SERIES



EQUIPMENT:

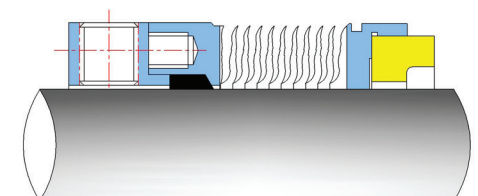
- Pumps and all rotating equipment in applicable industries

DESIGN FEATURES:

- Rotary Welded Metal Bellows with static GRAPHLOCK shaft sealing eliminates fretting
- Available with carbon, silicon carbide and tungsten carbide faces
- Range of metal parts including AM350, Carp 42 and Inconel 718
- 45° ID bellows for superior performance
- Balanced design with excellent radial and axial tracking
- Suitable for high temperature, hydrocarbon corrosive duties
- Grub Screw Drive

OPERATING LIMITS:

- Temperature: -75° to 425° C (elastomer dependent)
- Pressure: up to 25 bar (367 psi) Single Ply
up to 68 bar (1000 psi) Double Ply
(both size & speed dependent)
- Speed: up to 25m/s
- Shaft Size: 18mm to 150mm (metric)
0.750" to 6.000" (imperial)



WELDED METAL BELLOWS

GHT4 SERIES



EQUIPMENT:

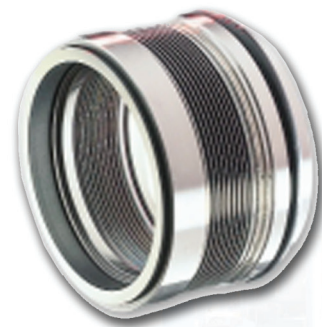
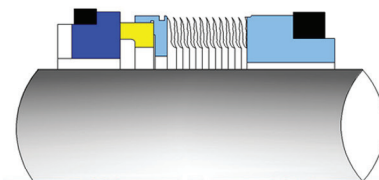
- Pumps and all rotating equipment in applicable industries

DESIGN FEATURES:

- Stationary Welded Metal Bellows with static GRAPHLOCK shaft sealing
- Available with carbon, silicon carbide and tungsten carbide faces
- Range of metal parts including AM350, Carp 42 and Inconel 718
- 45° ID bellows for superior performance
- Balanced design with excellent radial and axial tracking
- Suitable for high temperature, hydrocarbon corrosive duties
- Handles high shaft speed and high shaft to chamber misalignment

OPERATING LIMITS:

- Temperature: -75° to 425° C (elastomer dependent)
- Pressure: up to 25 bar (367 psi) Single Ply
up to 68 bar (1000 psi) Double Ply
(both size & speed dependent)
- Speed: up to 50m/s
- Shaft Size: 18mm to 150mm (metric)
0.750" to 6.000" (imperial)



GHT6 SERIES



EQUIPMENT:

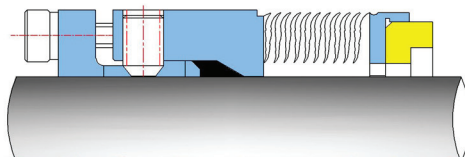
- Pumps and all rotating equipment in applicable industries

DESIGN FEATURES:

- Rotary Welded Metal Bellows with static GRAPHLOCK shaft sealing
- Available with carbon, silicon carbide and tungsten carbide faces
- Range of metal parts including AM350, Carp 42 and Inconel 718
- 45° ID bellows for superior performance
- Balanced design with excellent radial and axial tracking
- Suitable for high temperature, hydrocarbon corrosive duties
- Internal drive lugs provide maximum torsional strength for viscous applications

OPERATING LIMITS:

- Temperature: -75° to 425° C (elastomer dependent)
- Pressure: up to 25 bar (367 psi) Single Ply; up to 68 bar (1000 psi) Double Ply
(both size & speed dependent)
- Speed: up to 25m/s
- Shaft Size: 25mm to 150mm (metric)
1.000" to 6.000" (imperial)



SINGLE SPRING SEALS

CP26, CP27 SERIES



EQUIPMENT:

- Pumps and all rotating equipment in applicable industries

DESIGN FEATURES:

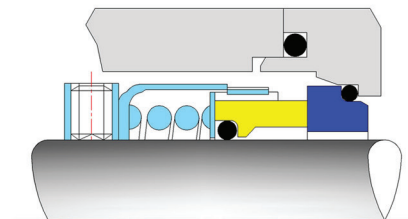
- Balanced and unbalanced options in single-spring design
- Set screws for shaft location
- Complies to DIN24960
- Self cleaning single spring design reduces potential for clogging
- Available with carbon and tungsten carbide faces

OPERATING LIMITS:

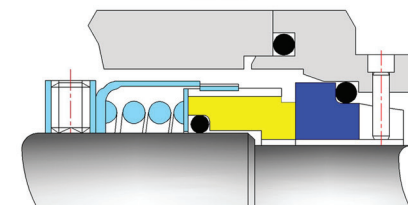
- Temperature: -40° to 220° C
- Pressure: up to 15 bar (220 psi) - CP26
up to 50 bar (725 psi) - CP27
- Speed: up to 25m/s
- Shaft Size: 14mm to 100mm (metric)



CP26



CP27



G442, G450, G452, G454 SERIES



EQUIPMENT:

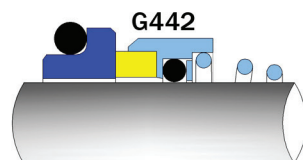
- All rotating equipment in applicable industries

DESIGN FEATURES:

- Balanced (G450) and unbalanced (G452, G454, G442) options in single-spring design
- Rotating Conical Spring design (dependent on rotation)
- Type G452 and G454 seal and seat faces can be rotated
- Self cleaning single spring design reduces potential for clogging
- Available with carbon and silicon carbide faces

OPERATING LIMITS:

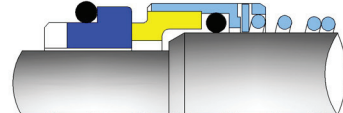
- Temperature: -40° to 220° C (elastomer dependent)
- Pressure: up to 10 bar (145 psi) - G452/G454/G442
up to 25 bar (360 psi) - G450
- Speed: up to 20m/s
- Shaft Size: 10mm to 40mm (metric) G452 and G454 Unbalanced
10mm to 80mm (metric) G442 Balanced
14mm to 80mm (metric) G450 Unbalanced



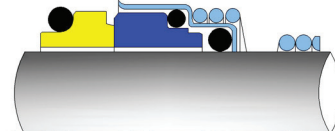
G442



G450



G452



G454



WAVE SPRING SEALS

CP51, CP52 SERIES



EQUIPMENT:

- Pumps and all rotating equipment in applicable industries

DESIGN FEATURES:

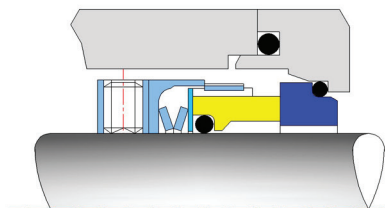
- Balanced (CP52) and unbalanced (CP51) options in Wave Spring design
- Rotating Wave Spring design (independent on rotation)
- Complies to DIN24960
- Suitable for clean products in confined space
- Available with carbon and tungsten carbide faces

OPERATING LIMITS:

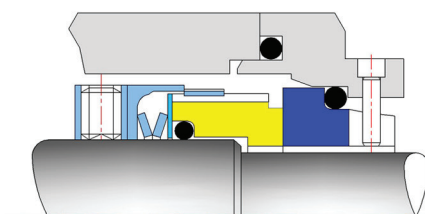
- Temperature: -40° to 220° C (elastomer dependent)
- Pressure: up to 15 bar (217 psi) - CP51
up to 40 bar (580 psi) - CP52
- Speed: up to 25m/s
- Shaft Size: 14 to 100mm (metric)



CP51



CP52



G557, G558, G559 SERIES



EQUIPMENT:

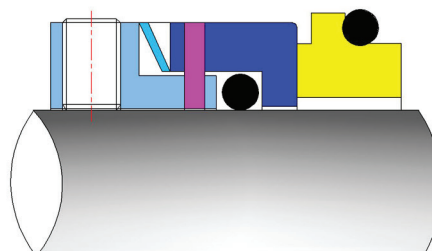
- Rotary Lobe Pumps found in food industries

DESIGN FEATURES:

- Unbalanced options in Wave Spring design independent of rotation
- Hygienic design when installed externally
- Complies to dimensions for standard Lobe Pumps
- Suitable for food industry products in confined space
- Available with carbon and tungsten carbide faces

OPERATING LIMITS:

- Temperature: -30° to 200° C
- Pressure: up to 10 bar (145 psi)
- Speed: up to 25m/s
- Shaft Size: 16mm to 100mm (metric)
0.625" to 3.000" (imperial)



MULTI-SPRING SEALS

CP01, CP02 SERIES



EQUIPMENT:

- Pumps and all rotating equipment in applicable industries

DESIGN FEATURES:

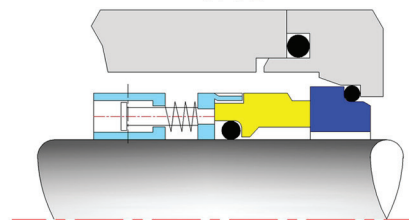
- Balanced (CP02) and unbalanced (CP01) options
- Rotating Multi-spring design (independent on rotation)
- Complies to DIN24960
- Suitable for clean products in confined space
- Available with carbon and silicon carbide faces

OPERATING LIMITS:

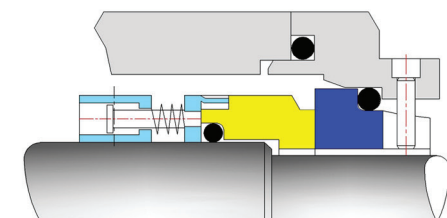
- Temperature: -40° to 220° C (elastomer dependent)
- Pressure: up to 15 bar (217 psi) - CP01
up to 50 bar (730 psi) - CP02
- Speed: up to 25m/s
- Shaft Size: 14mm to 100mm (metric)



CP01



CP02



KP01 SERIES



EQUIPMENT:

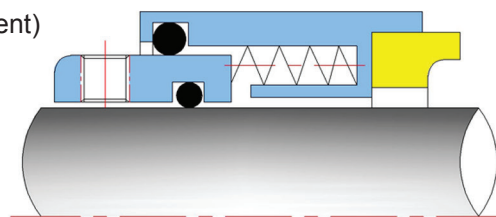
- Pumps and rotating equipment in applicable industries

DESIGN FEATURES:

- Balanced Multi-spring design (independent on rotation)
- Springs are external to the product
- Compact design to fit most stuffing boxes
- Suitable for wide range of products in confined space
- Available with carbon and silicon carbide faces

OPERATING LIMITS:

- Temperature: -50° to 220° C (elastomer dependent)
- Pressure: up to 25 bar (360 psi)
- Speed: up to 20m/s
- Shaft Size: 18mm to 155mm (metric)
0.750" to 6.000" (imperial)



MULTI-SPRING SEALS

G961/G981 & G960/G983 SERIES



EQUIPMENT:

- Pumps, mixers, agitators and refrigeration compressors

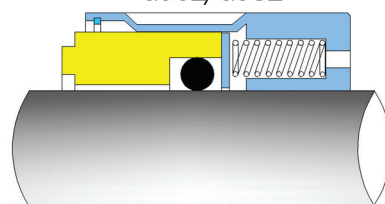
DESIGN FEATURES:

- Balanced (G960/G983) and unbalanced (G961/G981) multi-spring o-ring design
- Springs are exposed to product
- Compact design to fit most stuffing boxes and complies to DIN24960 (G961/G960)
- Suitable for wide range of products in confined space
- Available with carbon and silicon carbide faces

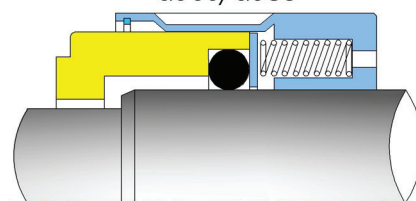
OPERATING LIMITS:

- Temperature: -40° to 260° C (elastomer dependent)
- Pressure:
 - up to 17 bar (250 psi) - G961, G981
 - up to 62 bar (911 psi) - G960
 - up to 76 bar (1100 psi) - G983
- Speed: up to 25m/s
- Shaft Size:
 - 14mm to 100mm (metric) - G960, G961
 - 1.000" to 6.000" (imperial) - G983
 - 0.500" to 6.000" (imperial) - G981

G961/G981



G960/G983



G971/G995 & G970/G996 SERIES



EQUIPMENT:

- Pumps, mixers, agitators and refrigeration compressors

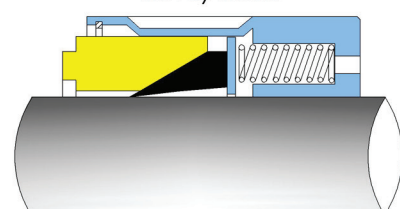
DESIGN FEATURES:

- Balanced (G970/G996) and unbalanced (G971/G995) multi-spring PTFE wedge design
- Ideal for extremely corrosive fluid applications
- Compact design to fit most stuffing boxes and complies to DIN24960 (G971/G970)
- Teflon/Graphite wedge provides higher temperature sealing capability
- Available with carbon and silicon carbide faces

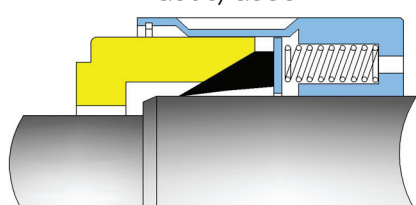
OPERATING LIMITS:

- Temperature: -100° to 500° C
- Pressure:
 - up to 17 bar (250 psi) G971, G995
 - up to 50 bar (725 psi) G970
 - up to 52 bar (764 psi) G996
- Speed: up to 25m/s
- Shaft Size:
 - 14mm to 100mm (metric) - G970, G971
 - 1.000" to 6.000" (imperial) - G995
 - 0.625" to 6.000" (imperial) - G996

G971/G995

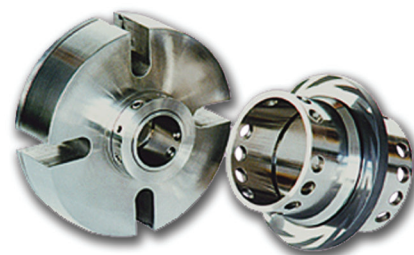


G970/G996



— GAS SEALS —

CC27 SERIES



EQUIPMENT:

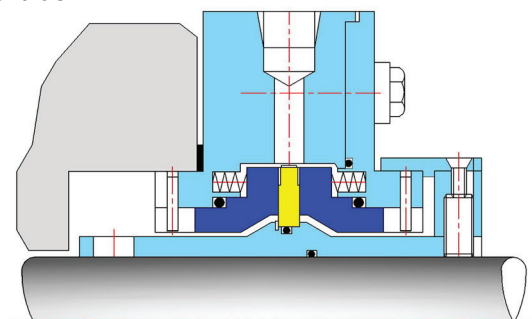
- Pumps and specialty equipment

DESIGN FEATURES:

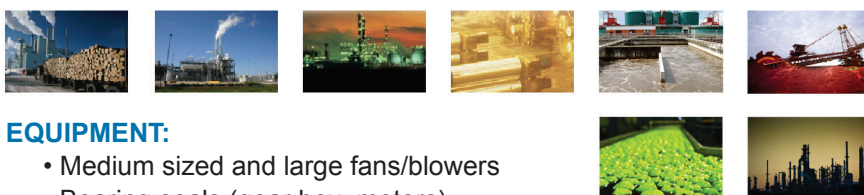
- Non-contact Face Seal Technology
- Advanced non-contact spiral groove technology maximizes service life & reduces power consumption
- Symmetrical arrangement allows one cartridge to be used in either direction
- Zero atmospheric emissions achieved with gas barrier system
- Standard faces are carbon/silicon carbide or tungsten carbide
- Additional Non-contact Seals available in Tandem design for Gas Compressor applications.

OPERATING LIMITS:

- Temperature: -40° to 220° C
- Pressure: up to 20 bar (300 psi)
- Speed: up to 25m/s
- Shaft Size: 20 to 100mm (metric)



LABYRINTH SEAL



EQUIPMENT:

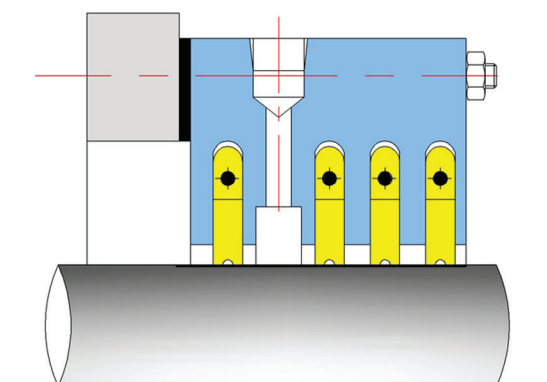
- Medium sized and large fans/blowers
- Bearing seals (gear box, motors)
- Steam turbines, mixers, agitators, mills and dryers

DESIGN FEATURES:

- Multi-part self-adjusting seal rings (radially split)
- Radial split housing design
- Very small operation gap - low leakage
- Dry running
- No sealing components mounted on shaft - hence no additional vibration
- Seal rings run contact free - no additional power

OPERATING LIMITS:

- Temperature: -120° to 800° C (Carbon)
- Pressure: up to 25 bar (360 psi)
- Speed: up to 40m/s
- Shaft Size: 20 to 340mm (metric)
1.57" to 13.87" (imperial)



SLURRY SEALS

GPA SERIES



EQUIPMENT:

- Pumps, mixers and agitators

DESIGN FEATURES:

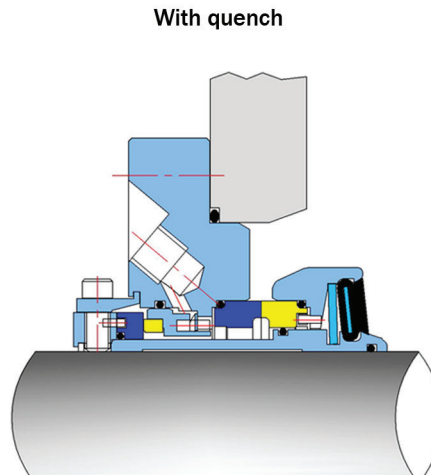
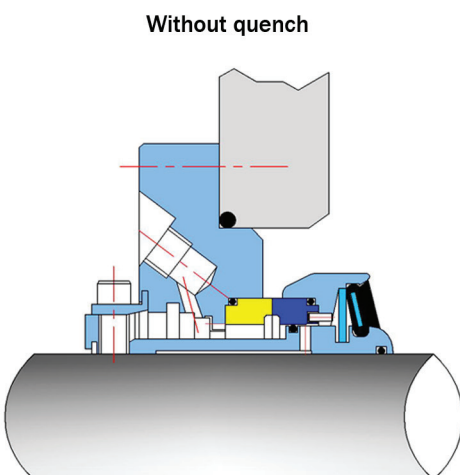
- Simple, robust, and proven balanced cone spring design suits a wide range of applications
- Specifically designed to handle highly abrasive slurries up to 60% by weight
- Does not require a flush
- Unique cone spring design eliminates clogging which improves seal life
- Flexible design ensures wider applicability
- Cartridge design for ease of installation
- Available in a wide range of materials

DESIGN OPTIONS:

- Seal options:
 - Single or quench
- Installation options:
 - Cartridge type, allows for ease of installation
 - Cartridge type with ball bearing
- Quench options
 - With or without quench port
- Material options
 - O-rings/Membrane: Aflas
 - Metal Parts: CD4MCu Duplex SS or T/C wetted parts

OPERATING LIMITS:

- Temperature: 0° to 80° C (without quench)
0° to 200° C (with quench)
- Pressure: up to 20 bar (294 psi)
- Speed: up to 25m/s
- Shaft Size: 20 to 180mm (metric)



— SLURRY SEALS —

KS01, KS02 SERIES



EQUIPMENT:

- Slurry pumps and other rotating equipment

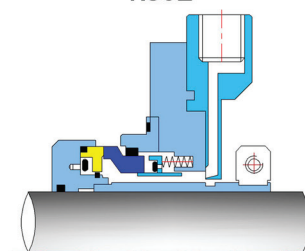
DESIGN FEATURES:

- Solids up to 60% by weight
- Single and double cartridge slurry seal
- Hydraulically balanced design
- Multi-spring external to the product
- Anti-rotation pin with o-ring protects seal face
- Axial shaft movement up to 8mm (0.315")

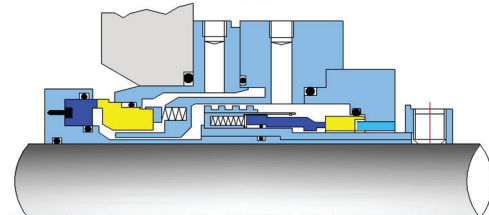
OPERATING LIMITS:

- Temperature: 0° to 80° C (without quench)
0° to 200° C (with water quench)
- Pressure: up to 30 bar (435 psi)
- Speed: up to 20m/s
- Shaft Size: 30 to 220mm (metric)
1.125" to 9.250" (imperial)

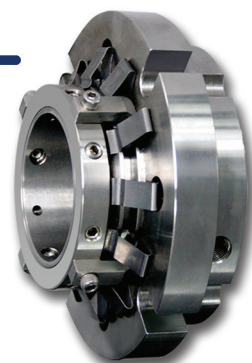
KS01



KS02



CS01 SERIES



EQUIPMENT:

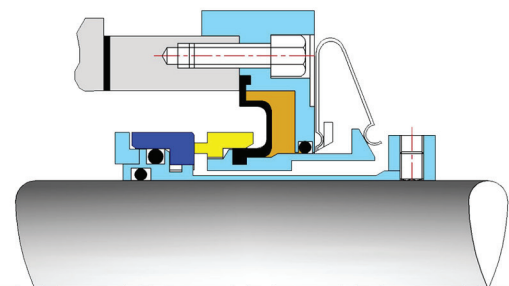
- Slurry pumps

DESIGN FEATURES:

- Solids up to 40%
- Single cartridge slurry seal
- Finger springs external to the product
- Able to handle with pressure reversals
- Rubber diaphragm protection from products
- Grease pocket to absorb vibration
- Set screw location

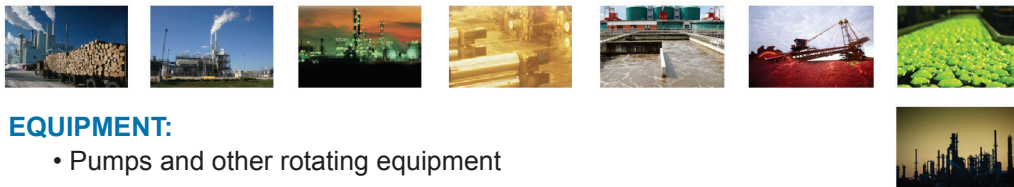
OPERATING LIMITS:

- Temperature: -30° to 220° C
- Pressure: up to 25 bar (360 psi)
- Speed: up to 25m/s
- Shaft Size: 45 to 200mm (metric)
1.750 to 8.000" (imperial)



CARTRIDGE SEALS

CC26 SERIES



EQUIPMENT:

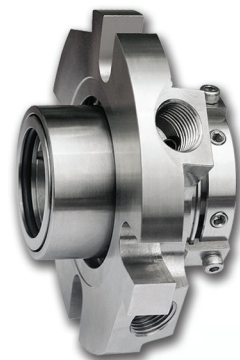
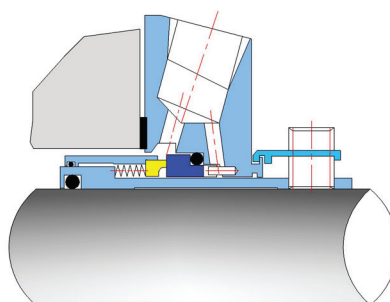
- Pumps and other rotating equipment

DESIGN FEATURES:

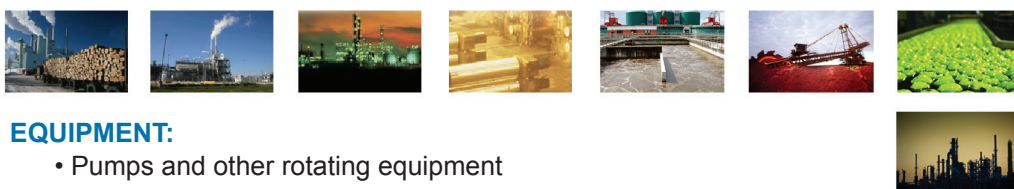
- Balanced multi-spring single cartridge seal
- Unique drive mechanism improves efficiency
- Optimized seal face design using finite element analysis minimises radial and angular deflection
- Low profile balanced design suits a wide range of applications
- Externally mounted multi-spring provides even loading and reduces corrosion
- Complies with ANSI & DIN standards
- Available in a wide range of materials

OPERATING LIMITS:

- Temperature: -30° to 200° C
- Pressure: up to 25 bar (360 psi)
- Speed: up to 25m/s
- Shaft Size: 16 to 100mm (metric)
1.000" to 4.000" (imperial)



CC01, CC02 SERIES



EQUIPMENT:

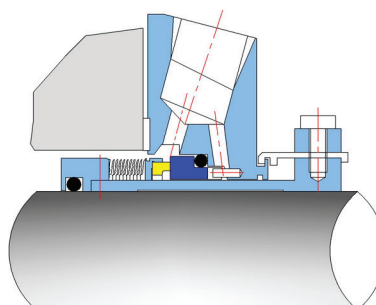
- Pumps and other rotating equipment

DESIGN FEATURES:

- Balanced welded metal bellows single cartridge seal
- Unique drive mechanism improves efficiency
- Optimized seal face design minimises radial and angular deflection
- Locating set screws allows easy installation
- Superior 45° tilt edge at bellows ID optimizes stress dispersion
- Complies with ANSI & DIN standards
- Available in a wide range of materials

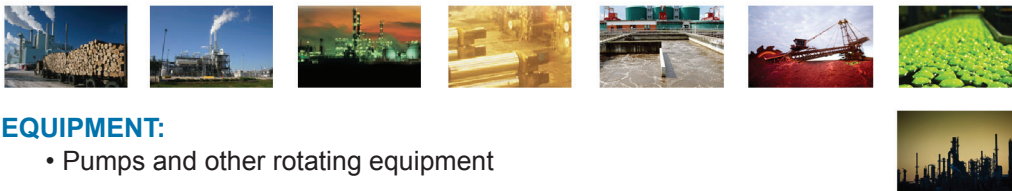
OPERATING LIMITS:

- Temperature: -30° to 200° C
- Pressure: up to 25 bar (360 psi)
- Speed: up to 25m/s
- Shaft Size: 24 to 100mm (metric)
1.000" to 4.000" (imperial)



CARTRIDGE SEALS

KC01, KC02 SERIES



EQUIPMENT:

- Pumps and other rotating equipment

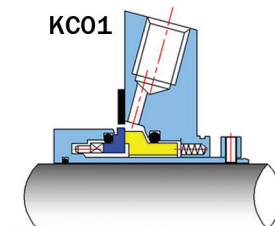
DESIGN FEATURES:

- Single (KC01) or double (KC02, balanced) cartridge seals
- Optimized seal face design minimises radial and angular deflection
- Double balanced seal (KC02) arrangements allow both pressurised and unpressurised operation
- Design ensures flexibility in mounting the seal faces
- Stationary seal configuration
- Available in a wide range of materials

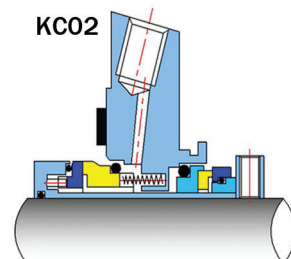
OPERATING LIMITS:

- Temperature: -40° to 220° C
- Pressure: up to 25 bar (360 psi)
- Speed: up to 25m/s
- Shaft Size: 22 to 120mm (metric)
1.000" to 4.500" (imperial)

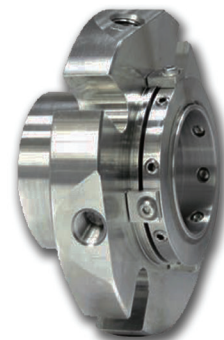
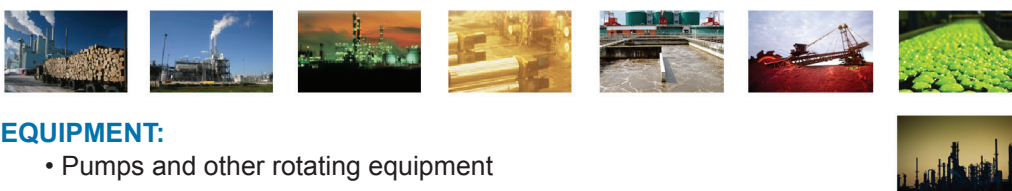
KC01



KC02



KC03, KC04 SERIES



EQUIPMENT:

- Pumps and other rotating equipment

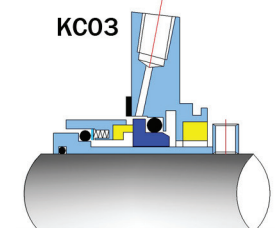
DESIGN FEATURES:

- Single (KC03) or double (KC04, balanced) cartridge seal
- Unique drive mechanism improves efficiency
- Modular seal face design minimises radial and angular deflection
- Throttle bushing acts as a containment seal in case of primary failure. (KC03)
- Design ensures flexibility in mounting the seal faces
- Multi-spring design optimises even loading
- Available in a wide range of materials

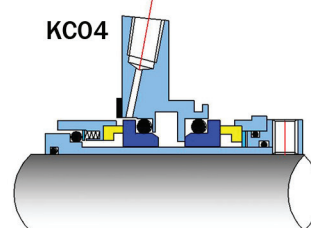
OPERATING LIMITS:

- Temperature: -20° to 180° C
- Pressure: up to 21 bar (305 psi)
- Speed: up to 20m/s
- Shaft Size: 24 to 120mm (metric)
1.000" to 4.750" (imperial)

KC03



KC04



SYNTRON SEALS

KLOZURE SYNTRON



EQUIPMENT:

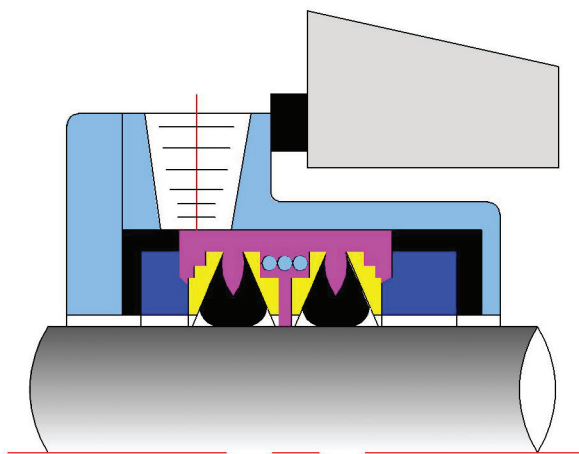
- Pumps, industrial fans, autoclaves, propellers and shafts

DESIGN FEATURES:

- Double canister seal utilized in confined spaces
- Fully repairable onsite with readily available repair kits
- Metal Parts available in brass/stainless steel, with carbon faces and viton/buna/neoprene rubber
- Excluder available for mildly abrasive services
- Simple and compact design provides even face loading
- Seals on either direction
- Flexible driving rings provide a positive seal between the precision-lapped mating rings
- Flexible driving rings are free to move axially, and thus compensates for limited vibration, chatter or misalignment
- Suitable for gas or liquid applications

OPERATING LIMITS:

- Temperature: -12° to 149° C
- Pressure: up to 10 bar (150 psi)
- Speed: up to 3600 rpm (Speed, pressure and diameter dependent)
- Shaft Size: 0.500" to 3.930" (imperial)
12.7mm to 100mm (metric)



MIXER/AGITATOR SEALS

MIXER SEALS



EQUIPMENT:

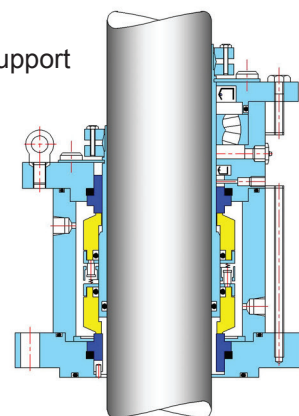
- Mixers, agitators, filters, filter dryers and reactors

DESIGN FEATURES:

- Wide range of options and designs to suit every requirement
- Cartridge designs to suit specific applications with Top, Bottom and Side Entry designs
- Available as Single or Double seal arrangements, with or without bearing support
- Double seals available as Back to Back and Tandem arrangements
- Materials can be selected to suit any product requirement
- Liquid lubricated, Dry Running, or Non Contacting face technology
- Seals to comply with ISO, DIN and Industry Standards or special requirements
- Seals for Sanitary requirements

OPERATING LIMITS:

- Temperature: -40° to 200° C
- Pressure: Vacuum to 250 bar (3625 psi)
- Speed: up to 10m/s
- Shaft Size: 40 to 220mm (metric)



P/SII 3D MIXER/AGITATOR SEAL



EQUIPMENT:

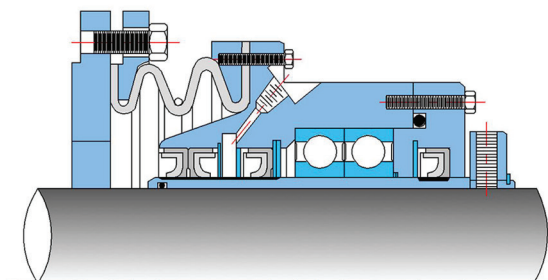
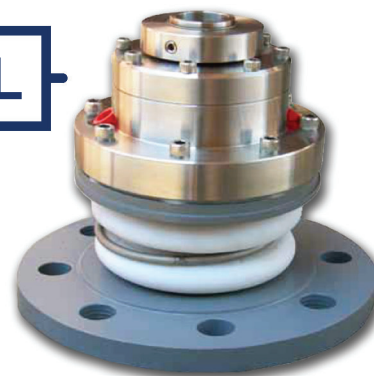
- Mixers, agitators, filters and filter dryers

DESIGN FEATURES:

- Designed for excessive shaft misalignment - up to 1" (25.4mm)
- Teflon or metal expansion joint acts as a flexible member to absorb movement and misalignment
- Gylon sealing elements are non-clogging and non-sticking and offers excellent chemical resistance
- Unique multi-lip cartridge design is unaffected by axial end play, intermittent operation and torque; but permits pump reversal
- Mechanical seal option available
- Hard coated sleeve prevents damage (with lip seal)

OPERATING LIMITS:

- Temperature: 0° to 135° C
- Pressure: 0 to 10 bar (150 psi)
Vacuum to 20 bar (300 psi) with mechanical seal
- Speed: up to 12.7m/s
- Shaft Size: 40 to 220mm (metric)



SEAL SUPPORT SYSTEMS

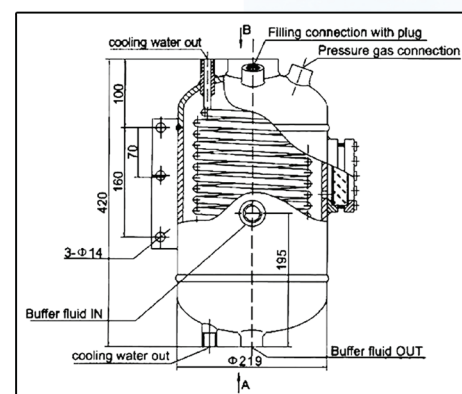
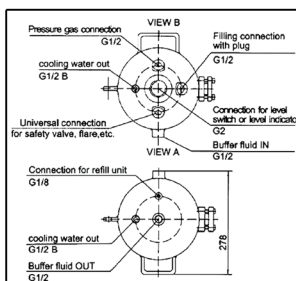
CA01 - CA10 SERIES

DESIGN FEATURES:

- Basic tank with inbuilt coil and a range of connections for all general applications and equipped with welded pad sight glass (CA01-CA02).
- Each tank is pressure welded using a Mig process & tested to 80 bar prior to delivery
- A range of options can be added to the basic tank to suit specific applications as below:
 - CA03/CA04 consists of CA01 or CA02 with pressure gauge, isolation valves, orifice, and connections for fill, drain etc.
 - CA05/CA06 consists of CA01 or CA02 with pressure gauge, isolation valves, orifice, hand-fill pump, and connections for fill, drain etc
 - CA07/CA08 consists of CA01 or CA02 with pressure gauge, isolation valves, orifice, level switch and connections for fill, drain etc.
 - CA09/CA10 consists of CA01 or CA02 with pressure gauge, isolation valves, orifice, hand-fill pump, level switch and connections for fill, drain etc

OPERATING LIMITS:

- Temperature: -60° to 200° C
- Pressure: up to 63 bar (up to 910 psi)
- Volume: 10L
- Heat exchanger area: 0.3m^2



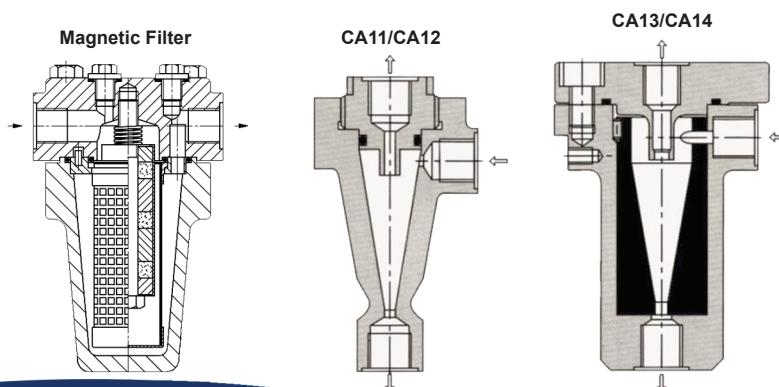
CA11 - CA14 SERIES

DESIGN FEATURES:

- Cyclone separators and magnetic filters used to separate solids in liquids
- Complies with JB/T 6633-1993
- Thread connections suit most commonly used auxilliary connections

OPERATING LIMITS:

- Temperature: 0° to 150° C
- Pressure: up to 63 bar (910 psi)
- Thread connections: G1/2
- O-ring: Viton



SEAL SUPPORT SYSTEMS

FLOW CONTROL GAUGES

Full range available to suit flow and pressure conditions required. Designs can control, flow, pressure, back pressure, with vertical taper flow tubes that resist blockage. Single, double and multiple tube designs to suit site requirements.



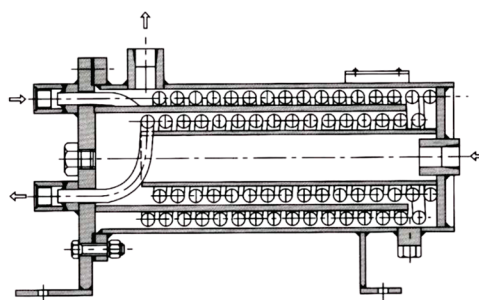
CA15, CA16, CA17 SERIES

DESIGN FEATURES:

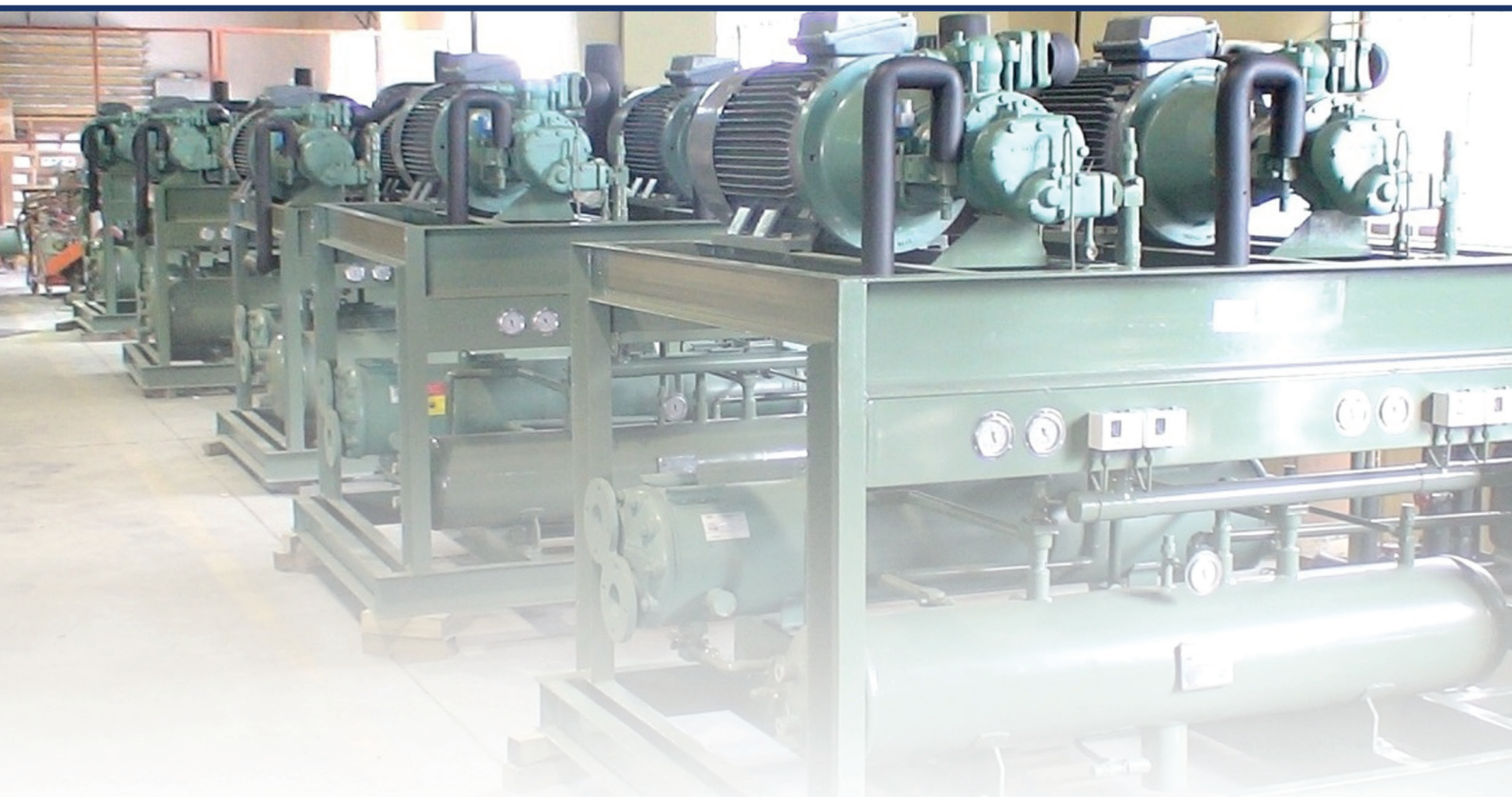
- Heat exchanger with wound double helix around a guide tube
- Complies with JB/T6631-1993
- Vertical or horizontal installation
- Cooling area options: 0.4m², 0.6m², 0.8m²
- Converse flow of cooling medium and buffer medium optimizes efficiency

OPERATING LIMITS:

- Temperature: < 300° C
- Pressure: 63 bar (910 psi) for tube; 7.5 bar (108 psi) for shell
- Volume: 10L
- Heat exchanger area: CA15 - 0.4m²; CA16 - 0.6m²; CA17 - 0.8m²



REFRIGERATION COMPRESSOR SEALS



• Single Seals

• Double Seals

• Cartridge Seals

A wide range of seals are available to suit common refrigeration compressors found in cold storage, building services and industrial plant room applications.

These seals are available to fit as direct alternatives to the standard OEM supplied items, in multi-spring, single spring and welded metal bellows options. In many cases, the application of a welded metal bellows seal will provide increased service life when compared to the older multi-spring or single spring pusher seal being used.

Seals are available for the following compressors used widely in Industry today including: Howden, Stal, Grasso, J&E Hall, Sabroe, Lightfoot, Mycom, Trane, Dunham Bush, Vilter, York, Frick, Bitzer, Dorin and Bock to name just a few.



— SUBMERSIBLE PUMP SEALS —



• Single Seals



• Double Seals



• Cartridge Seals



A full range of seals are available to suit submersible pumps and mixers commonly found in Drainage, Dewatering, Wastewater, Slurry, Irrigation and Water Treatment applications in Municipal and Industrial Operations.

Seals offered are designed to fit directly into existing dimensions of the standard pump or mixer without modification. The seals are available as Single, Double and Cartridge arrangements with common face materials of Silicon Carbide, Tungsten Carbide and Carbon. Elastomers in Viton, Nitrile and EPDM are standards used to suit the requirement at hand.

Sealing solutions are available for Flygt, Grundfos, Ebara, Tsurumi, Gorman Rupp, Forrers, Hydrostal, ABS, Lowara, Grindex, and Sakuragawa pumps found in these applications.

PHARMACEUTICAL INDUSTRY

Challenges within the Pharmaceutical Industry demand high performance seals that meet exacting standards for hygiene and sanitary conditions along with environmental compliance. Consideration must be given to:

- Product contamination
- Low leakage rates/environmental containment measures
- Sanitary glands and debris wells
- Clean-in-place (CIP) and steam-in-place (SIP) requirements with caustic and acidic solutions in contact with products.

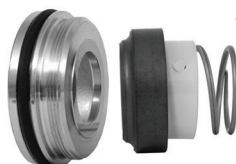
Mechanical seals are available to suit mixers, agitators, blenders, dryers, autoclaves, centrifuges, bioreactors and pumps found in these plants.



FOOD AND BEVERAGE INDUSTRY

- Single Seals
- Double Seals
- Cartridge Seals

A wide range of seals are available to suit pumps and rotary equipment found in the Food, Beverage and Dairy processing industries that comply with FDA requirements. Seals are able to fit centrifugal, lobe rotor, deep drawn stainless plate pumps, centrifuges, homogenisers etc. Pumps commonly found in these Industries include: Alfa Laval, APV, Mono, Waukesha, Fristam, Johnson, Albin, Inoxpa, Tri-Clover, Jabsco and Albin to name a few.



Garlock® HIGH-PERFORMANCE DYNAMIC SEALS

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an EnPro Industries family of companies



6/165 Rookwood Road, Yagoona,
NSW 2199, Australia.

Phone: 1800 GARLOCK

Fax: +61 2 9793 3008

E-mail: austsales@garlock.com

Web: www.garlock.com.au

Bring Garlock® Mechanical Seals to all your sealing requirements



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Properties/applications shown throughout this brochure are typical. Your specific application should not be undertaken without independent study and evaluation for suitability. For specific application recommendations consult Garlock. Failure to select the proper sealing products could result in property damage and/or serious personal injury. Performance data published in this brochure has been developed from field testing, customer field reports and/or in-house testing. While the utmost care has been used in compiling this brochure, we assume no responsibility for errors. Specifications subject to change without notice. This edition cancels all previous issues. Subject to change without notice.