SEALING SOLUTIONS FOR THE FOOD AND BEVERAGE INDUSTRY

HIGH PERFORMANCE CUSTOMISED ENGINEERED SEALING SOLUTIONS

CHESTERTON
CUSTOMSEAL

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Important Note: *This Catalog provides general guidelines and general information about product operating conditions and product options for experienced users to consider. Operating conditions not referred to in this catalogue may affect product selection and/or product performance. This Catalog should not be considered advice, a guarantee of product performance, or a replacement for addressing product application questions with a qualified professional. Chesterton Customseal and its affiliates assume no responsibility for any action or inaction you take based on or made in reliance on the information contained in this document.*

We are Chesterton Customseal part of Chesterton® group of companies

Visit us at chestertoncustomseal.com.au

At Chesterton Customseal we produce high-performance elastomeric polymer seals designed for use in a wide range of hydraulic, pneumatic and rotary equipment.

The solutions we offer range from a vast collection of standardised polymeric seals to customised solutions designed for specific applications, to always provide an optimal product to our customers.

Our fully integrated state-of-the-art production facility relies on advanced computer-controlled equipment combined with flexible tools and semifinished material to offer a wide selection of proven designs and a wide range of high-performance materials with the capabilities of providing same-day shipping.

The real strength of Chesterton Customseal stems from the depth of industry knowledge, quality of the skills and experience that our technical-leading team has.

This experience triggers our ability to implement economic and innovative solutions, always in support of a professional and transparent service for our client.

Chesterton® Polymer Seals Program

Chesterton Customseal provides Chesterton® polymer seals

Speed of Service

Dedicated Service Centers

Chesterton® is a technology leader in the polymer seal industry. Our SpeedSeal™ capability brings same-day service of this advanced technology to customers worldwide. Strategically located and integrated service centers use innovative manufacturing methods to provide you with the broad selection of proven designs and wide range of high-performance materials.

Superior Materials

Chesterton's world-renowned materials are widely considered to be the highest performing polyurethane materials for heavy-duty fluid power applications on the market today. In addition, we utilize the full range of advanced materials for the most demanding applications.

- Polyurethanes
- Fluoroplastics
- Metal Detectable (MDx)
- Elastomers (rubbers)
- Fluoroplastics
- Engineered plastics

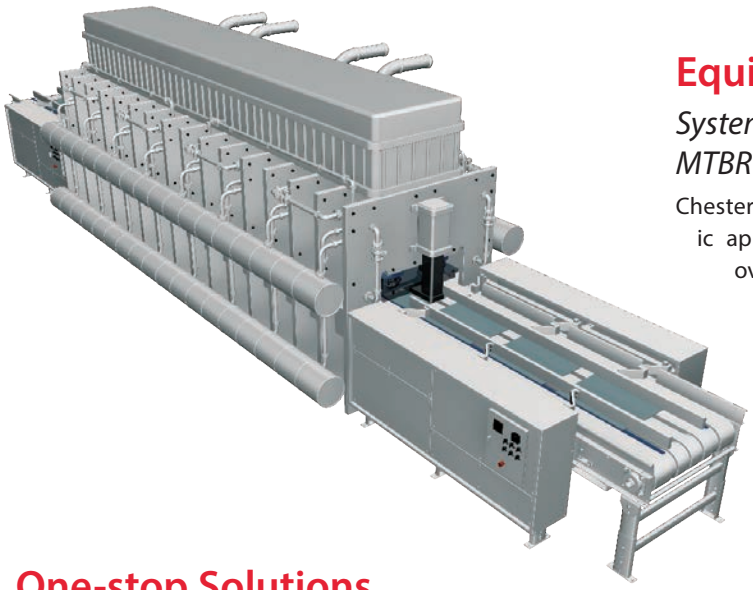
Engineered Solutions

High Performance Custom Seals

We leverage our engineering experience in design and materials to develop custom seals that solve today's most difficult sealing challenges. Our custom designs provide leading-edge technology that has been used around the world with documented success and recognition.

CHESTERTON

Global Solutions, Local Service.



Equipment Upgrade

Systematic Approach to Improve MTBR and Reduce MTTR

Chesterton's equipment upgrade program applies a systematic approach for improving seal performance during repair and overhaul of equipment. This approach, in combination with high-performance sealing products and systems, will assist in improving equipment reliability, availability, and performance productivity.

One-stop Solutions

Wide Range of Product Portfolio

We specialize in the development, design, and manufacture of system solutions tailor-made to customer's requirements. Polymer sealing products is the term to describe the broad range of sealing devices to provide sealing function in all types of fluid power and associated equipment in dynamic linear, rotational, and oscillating motion.

Customer Support

Global Solutions, Local Service

Chesterton's skilled field specialists work in collaboration with customers to understand their needs and provide the best solution for their applications. Our local service is supported by a global distribution and logistics network that enables us to reach and react to the shifting needs of industrial customers around the world.

Training Programs

The Know-How Advantage

Build a skilled workforce of fluid power equipment specialists by providing Chesterton's maintenance and operational best practices training to impact reliability, efficiency, and life cycle costs. Chesterton has been in the business of providing knowledge of this type for decades and can assist you with your training and development needs.

The Food and Beverage Industry

FOOD AND BEVERAGE

Managing food and beverage processing equipment has its challenges. Chesterton Customseal delivers extensive knowledge of sanitary and non-sanitary sealing applications. We provide a comprehensive collection of seals to boost the efficiency and long-term reliability of your food processing equipment.

Chesterton Customseal offers innovative technologies to increase your machinery service life with less process interruption. Our goal is to have your equipment running to maximum productivity and operating efficiency, at minimum costs. Benefits of using Chesterton Customseal products are:

- Customised innovative solutions designed to withstand extreme operating conditions
- Optimal levels of process performance improvements
- Extension of your equipment life and lower overall operational costs
- Maximised uptime and reduced maintenance time

STANDARDS AND REGULATIONS

Standards are imperative for consistency across all sectors. Especially with products designed for human consumption, all the required guidelines and certifications must be meticulously followed. Many types of industrial materials are suitable for sealing oil, gas, mines and other particularly aggressive media, but they would not be suitable for the food or beverage processing industries.

Our production and quality processes are independently controlled by the International Organization for Standardization (ISO). We are ISO 9001: 2015 certified which covers the quality management system for the production of seals and seal kits for hydraulic, pneumatic, rotary and static applications. We constantly focus on improving customer experience, with a goal of providing the best service & product on the market, with an eye always open to continuous improvement and sustainability.

Chesterton Customseal complies with the highest national and international regulatory standards, including:

- FDA
- NSF
- By drinking water
- Pharmaceutical regulations

Material certification provided upon request.

IT'S ALL ABOUT SAFETY FOR YOU AND YOUR CUSTOMERS

Our focus on safety comes from our business ethics, culture and our dedication to maintaining integrity.

At Chesterton Customseal, we take care of the safety of our employees and customers. Chesterton Customseal solutions are tested to meet and exceed industry regulatory requirements. Our main goal is to go beyond compliance to establish a higher standard that defines who we are and what we stand for. It is for this reason that our tagline is "Innovative solutions in high-performance seals."

The food and beverage processing industries represent some of the most rigorous and delicate operating environments for the use of sealing components.

Seals in these applications are often exposed to extreme temperatures and pressures, with no margin of error when it comes to long-term hygienic sealing performance. The impact of process fluids and chemicals used in cleaning and sterilisation can also have a significant effect on the durability and reliability of the seal.

In the processing of food and drink, hygiene is the most critical factor of everything else. Compromised sealing systems must be diagnosed and isolated quickly and efficiently before the risk of effecting end consumers. The decision regarding the solution of the sealing material is essential. Chesterton Customseal listens to customers like you and your needs. Chesterton Customseal has a specialised and highly qualified team that analyses the process for you, finding the right solution for your application. We analyse the technical specifications, of course, with careful consideration of the environment, and taking into account various variables involved in the process (including unexpected ones) and in the regulatory landscape in which your product must function; Chesterton Customseal selects specialised materials on the market to optimise the life cycle of your equipment. Our team create solutions, following each project from A to Z, with an in-depth look at the details, research and improvement.

CUSTOM ENGINEERED SEALS

Chesterton Customseal offers custom-made high-performance seals, specialised in the complete sealing service for the food and beverage industries. We provide our customers with customised sealing solutions to meet specific requirements, offering a wide range of materials and speed of service. Chesterton Customseal has a dedicated application engineering service that works close to customers like you, to find the optimised solution for your specific application.

Ask our experts for advice on how to best support your requirements and we will provide you with an effective and efficient solution based on our extensive technical and service experience.

Premium Materials

MATERIAL CHOICE

Chesterton Customseal seals are made only with world-class materials, especially our selection of elastomeric polymeric materials. Chesterton Customseal materials are developed in compliance with various application fields in the food and beverage sector, to ensure that the product always meets industry requirements, thermal performance, pressure and other key parameters in an optimal way.

Implementing an effective seal in the food and beverage industry begins with the right choice of material. An effective sealing material for the food industry must demonstrate a broad profile of chemical compatibility, agreeable with all process media and able to withstand cleaning regimes and sterilization practices including solvents, vapors and amines. Mechanical and thermal resistance is required, with an operating temperature range between -200 °C to +260 °C.
Here is the list of some materials that Chesterton Customseal offers:

POLYURETHANES

Polyurethane material is designed to provide optimum sealing durability for light- and medium-duty fluid power equipment and industry-standard hydraulic pneumatic cylinders.

Some of the material futures are:

- Superior wear and abrasion resistance to increase seal performance
- Long-term elastic memory maintains pre-load under low pressure and withstands compression settings
- Excellent chemical compatibility
- Sizes available up to 2 m (78.74 “) in diameter

RUBBERS

One of the major applications for elastomers and special plastics is in food and beverage processing equipment. Great characteristic for elstomeric materials is elevated chemical resistance.
Chesterton Customseal can produce custom molded rubber shapes and profiles to meet any requirements.

PTFE AND HARD PLASTIC

PTFE has demonstrable benefits in the food and beverage process lines, including:

- Reduction of process contamination
- Reduced downtime
- Longer seal life
- Lower Maintenance Repair Time (MTR)

The properties of PTFE do not interfere with foods that come in contact with, at extreme temperatures, during food processing.

Additionally, Chesterton Customseal advanced engineered hard plastic solutions offer a tailor-made portfolio of materials for the food and beverage sector. To ensure extended sealing performance, we continuously investigate and work with our customers to identify the optimum compound for each application, to cope with a wide variety of process media along with CIP (Cleaning In Place) and SIP (Sterilization In Place).

In addition to the choice of the basic sealing material, Chesterton Customseal has a good range of innovative products to offer high-quality and high-performance seal. An example is the development of metal detectable elastomers.

The sealing components produced from metal detectable elastomers provide additional contamination detection screening for the food and beverage industry. Some metals can be detected by metal detection and X-ray equipment in fragments of only 2 millimeters (mm). Considering this, it is more desirable to prevent contamination in the first place - contamination events are often very expensive, with investigations, scrapping of the product, cleaning and replacement of seals and gaskets as required. Chesterton Customseal offers a solution for every challenge.

Material	Colour	Min Temp	Max Temp	Hardness	Standards	Main applications	Description
AWC520 PTFE	White	-200 °C	260 °C	55 Shore D +/-3	FDA EU 1935/2004 EU 10/2011 USP Class VI(**)	Flat seal, guide belt, O-rings, roof shaped sleeves, WDR.	Fluorine-containing thermoplastic. Resistant to almost all corrosive material.
AWC703 FPM	Brown	-20 °C	220 °C	80 Shore A +/-5	FDA EU 1935 / 2004	O-rings, wipers, grooved rings, shaft seals, piston seals.	Maximum resistance to temperature. High resistance to oil and fuels.
AWC707 FKM MDx (***)	Blue	-30 °C	200 °C	80 Shore A +/-5	FDA EU 1935 / 2004	O-ring, wipers, grooved rings, shaft seals, piston seals, static seals	Excellent resistance to high temperature. Food and Metal Detectable approved.
AWC737 NBR MDx (***)	Blue	-30 °C	100 °C	80 Shore A +/-5	FDA EU 1935/2004	O-ring, static seals, grooved rings, wipers, pneumatics, oil seals.	Food and metal detectable approved.
AWC753 AWC754 EPDM	Black White	-45 °C	130 °C	AWC753 Black 85 Shore A +/-5 AWC754 White 82 Shore A +/-5	AWC753 - Drinking Water Approved (*) AWC754 - FDA	O-rings, flat seals, funnels, grooved rings, wipers, special profiles, translational and rotational wipers.	Exceptional resistance to ageing and the impact of weathering and against ozone, light and UV. Particularly suitable for use in steam and suds.
AWC755 EPDM MDx (***)	Blue	-40 °C	135 °C	81 Shore A +/-5	FDA	O-rings, flat seals, funnels, grooved rings, wipers, special profiles, translational and rotational wipers.	Exceptional resistance to ageing and the impact of weathering and against ozone, light and UV. Food and metal detectable approved.
AWC767 AWC768 MVQ	Transparent White	-60 °C	200 °C	85 Shore A +/-5	AWC767 - FDA AWC767 - EU 10 / 2011 AWC768 - FDA	O-rings, flat seals, flange seals (gaskets)	Excellent flexibility to withstand cold temperatures with negligible loss in elasticity.
AWC809 PU	Red	-20 °C	115 °C	95 Shore A +/-2	FDA (*), EU 1935/2004 EU 10/2011	O-rings, grooved rings, wipers, slip rings, special seals.	Excellent wear resistance, high level of tear strength and good elasticity. Hydrolysis resistance and can be used in hot water.
AWC822 PU MDx (***)	Dark Blue	-40 °C	90 °C	93 Shore A +/-2	FDA EU 1935 / 2004	O-rings, grooved rings, wipers, slip rings, special seals for the food and beverage Industry.	Hydrolysis resistance and can be used in hot water. up to 80 °C.

(*) Approved to 3A Sanitary Standard 18-03 (**) Material produces no medical or surgical qualities (***) FDA METAL DETECTABLE
Please contact your Chesterton Customseal representative for specific applications.

ALL FDA POLYMER SEALS MATERIALS

AWC341	AWC515	AWC610	AWC664	AWC717	AWC754	AWC768
AWC342	AWC520	AWC615	AWC703	AWC718	AWC755	AWC809
AWC351	AWC600	AWC630	AWC707	AWC737	AWC762	AWC822
AWC405	AWC603	AWC650	AWC715	AWC741	AWC764	AWC830
AWC510	AWC605	AWC651	AWC716	AWC753	AWC767	AWC835

The Seal Suitable for your Biggest Challenges

CHEMICAL COMPATIBILITY

Oils, acids, salts and sugars, a hygienic seal in a food or beverage process application must be able to withstand a wide range of challenges with chemical compatibility. Continuous contact with the food or drink itself, or its constituent ingredients, can be a source of damage to the seals and subsequent contamination of the process. The selection of the right material is critical: different types of materials react differently in various media. A sealing material that is suitable for dairy processing may be unsuitable for use with beverages containing acetic acid.

CLEANING PROCEDURES

Some types of sealing material can be significantly damaged by aggressive chemicals used in CIP and SIP cleaning procedures. While the use of these powerful chemicals is essential in killing sources of microbial contamination after performing the process, the chemicals are at risk of colliding with the sealing components with irreparable damage to the structural integrity of the seal . The chemicals used in the CIP attack many elastomeric seals, causing swelling, leaching, loss of mechanical strength, embrittlement and ultimately failure. Chesterton Customseal selects for you the correct sealing material with the properties to resist the thermal and chemical needs of the cleaning method, addresses the risk of breakage of the seal, leakage and consequent contamination of the product.

Working Hard at Peak Performance – Over and Over Again

INSTALLATION

If the seal has been positioned incorrectly or if the seal has been damaged superficially during installation - however imperceptibly - this leaves weak points of the seal, which could be exposed through the thermal and chemical pressures of the application. A simpler sealing system, or more comprehensive training, can help nullify these effects. Chesterton Customseal supervises all phases of the process, to give you peace of mind in all phases from design to installation.

TEMPERATURE

The temperatures used in the production of food and beverage can vary drastically. Sometimes, it is necessary to maintain incredibly rigid tolerances to maintain the final product, without causing any modification.

Chesterton Customseal offers a wide variety of customized solutions with materials tested throughout the food and beverage industry.

SUMMARY

Sealing products in the food industry is not merely a matter of regulatory compliance. A unique set of specifications and technical requirements must be addressed.

First of all, safety and hygiene.

Any bypasses taken in choosing sealing products, and seal suppliers could potentially put consumers and your operation at risk.

Chesterton Customseal ensures that the seals are compliant and used in the correct way to significantly reduce the risks listed above. All this contributes to ensuring the safety and longevity of the products in the food and beverage production and the safety of the final consumer.

Metal Detectable Seals

OUR CAPABILITY

Chesterton Customseal has introduced a range of metal detectable (MDx) elastomeric materials. Using metal detectable materials provides increased flexibility to produce elastomer sealing components to the food and beverage industry using best practice requirements. The metal detectable material assists in reducing the risk of contaminating the products being processed.

Utilising metal detectable products provides assurance to food, dairy and beverage manufacturers by protecting product safety and integrity.

These innovative solutions have been intended to offer companies in the food and beverage, pharmaceutical, and other contamination-sensitive industries, the peace of mind at any stage of the production.

AS THE SEALS WEAR OUT, THE RISK OF CONTAMINATION INCREASES.

Metal detectable compounds recognise unexpected contamination, offering the opportunity to stop the production line and remove the contaminated product on time.

Chesterton Customseal supplies a range of metal detectable materials:

- EPDM ethylene propylene diene monomer rubber
- FKM fluoroelastomer
- NBR acrylonitrile butadiene rubber
- PU polyurethane

All these materials are specifically designed to meet the needs of the food, beverage, dairy and pharmaceutical industries.

As elastomer seals degrade, there is a high risk of rubber fragment contamination. Metal detectable o-rings and seals are designed to work with inline X-ray detection, metal detection and magnetic separator equipment for immediate contamination alert.

BESPOKE ENGINEERING ELASTOMER COMPONENTS

Chesterton Customseal also offers bespoke engineering elastomer components for a diverse array of production line applications. Our metal detectable seals are offered in a range of shapes and sizes, with a variety of grades of elastomer available.

All of our Chesterton Customseal products using metal detectable materials have some key features that make them an ideal choice for the food and beverage industries.

SOME OF THE KEY ADVANTAGES:

- Easy detection of lost elastomer fragments
- Reduction of the risk of product failure or recall
- Prevention of the distribution of contaminated products
- FDA compliance for use with drinks and food
- Highly durable, reducing the likelihood of unplanned downtime
- Wide range of operating temperatures for greater safety

Innovative Sealing Solutions

W21K Wiper Seals

Protect the System from Entering Contaminants

Chesterton® positive rake wipers are designed to effectively clean and dislodge foreign matter from retracting rods or rams thus preventing scoring and system contamination. The sharp, rugged, flared profile provides protection against abrasive particles which can contaminate the system and lead to premature equipment failure. These wipers provide excellent performance on rods or rams in hydraulic and pneumatic applications.

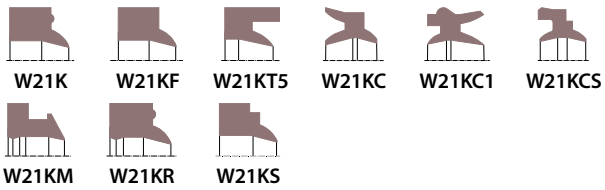
Single- and double-acting wiper designs are available thus providing the best possible function and performance, depending on the application, operating conditions, and utilized seal system. Single-acting wiper seal's function is to keep out contamination from the operating environment. Double-acting wiper seals wipe off the possible residual oil film from the rod, reducing the risk of hydraulic media's external leakage.

The W21K design is manufactured using a machining process which allows for the flexibility to create any size based on equipment dimensions. This design incorporates a built-in static seal on the flange to block contaminants from migrating along the stationary side of the wiper during operation.

Additional custom designs were developed to meet specific application and equipment needs which include snap-in, stepped, and bidirectional wipers.

- Positive rake lip design effectively wipes contaminants away from surface
- Outstanding protection against ingress of particles into the system
- Prolongs service life of seals and hydraulic/pneumatic cylinders
- Manufacturing process allows flexibility to create any size
- Sizes made to accommodate international standards including ISO

PRODUCT PROFILES



SPECIFICATIONS

Material (designation)	Size Range* mm (inch)	Temperature °C (°F)
AWC341 (MVQ)	6 – 2000 (1/4 – 78.74)	-30 – 200 (-20 – 400)
AWC351 (FKM)	6 – 2000 (1/4 – 78.74)	-30 – 220 (-20 – 428)
AWC742 (NBR)	6 – 2000 (1/4 – 78.74)	-30 – 100 (-20 – 212)
AWC753 (EPDM)	6 – 2000 (1/4 – 78.74)	-49– 130 (-56 – 266)
AWC809 (PU)	6 – 2000 (1/4 – 78.74)	-20 – 115 (-4 – 239)

**Please contact your Chesterton Customseal representative for larger sizes.*
Applicable standards: ISO 6195A, ISO 6195C

R22KN Rod Seals

Low Friction Design for Food and Beverage Sealing

Chesterton® R22KN are single-acting, continuous U-Cup designs. The special lip design provides an optimal amount of radial sealing load with excellent tribological and sealing characteristics thus resulting in minimal frictional resistance and low heat generation. Utilization of R22KN U-Cup assists to reduce breakaway force and dynamic frictional force during operation.

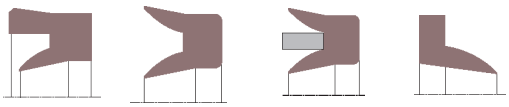
The optimum seal design facilitates controlled pressure distribution through the entire seal component, while the proper expansion space provides free space for deformation under pressure, optimizing seal contact area on the sliding surface.

The positive rake lip profile wipes contaminants away from the mating surface while in operation thus prolonging seal and equipment service life. This seal design is offered as a rod seal and provides outstanding performance in food and beverage applications.

The R22KN design is manufactured using a machining process which allows the flexibility to create any size based on equipment dimensions. A number of unique designs have been derived from the original R22KN to address specific needs and applications in the market. These include designs to address pressure reversal, pressure spikes, and system vacuuming.

- Single-acting, U-Cup design minimizes frictional resistance and breakaway force
- Positive rake lip design wipes contaminants away from mating surface
- Abrasion-resistant design; outstanding performance in food and beverage applications
- Manufacturing process allows flexibility to create any size
- Sizes made to accommodate international standards including ISO

PRODUCT PROFILES



R22KN5 R22KN R22KN1 R22KNH

SPECIFICATIONS

Material (designation)	Size Range* mm (inch)	Temperature °C (°F)	Pressure bar (psi)
AWC341 (MVQ)	6 – 2000 (1/4 – 78.74)	-30 – 200 (-20 – 400)	150 (2,175)
AWC351 (FKM)	6 – 2000 (1/4 – 78.74)	-30 – 220 (-20 – 428)	150 (2,175)
AWC742 (NBR)	6 – 2000 (1/4 – 78.74)	-30 – 100 (-20 – 212)	150 (3,620
AWC753 (EPDM)	6 – 2000 (1/4 – 78.74)	-49 – 130 (-56 – 266)	150 (2,175)
AWC809 (PU)	6 – 2000 (1/4 – 78.74)	-20 – 115 (-4 – 239)	400 (5,800)

** Please contact your Chesterton Customseal representative for larger sizes.*
Applicable standard: ISO 5597

R27K Rod Seals

Pressure-sensitive, Stacked Set Sealing

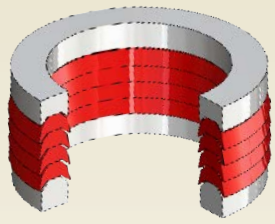
The Chesterton® R27K is a single-acting, stacked V-Ring set with a positive rake design to provide optimum operating performance in heavy-duty rod applications. Unlike conventional stacked sets, these designs make contact through the center to enable even loading which minimizes friction and provides longer sealing life.

The minimal gland pressure enables these sets to withstand greater sliding speed than conventional stacked sets. No readjustment of the seal precompression is needed after installation. Flared, pressure-sensitive lip design provides optimum sealing forces on seal rings, which are reactive to pressure thus reducing breakaway and frictional force.

The set is available in various material combinations to accommodate new or used equipment and can be supplied in split or solid designs.

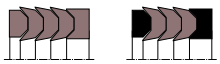
The R27K is manufactured using a machining process which allows the flexibility to create any size to suit the equipment. Each set incorporates a male and female adapter to align and support the seal rings.

Additional profiles have been derived from the original R27K design to address specific needs and applications in the market. These include designs for excessive clearances and deep stuffing boxes.



- Minimal gland pressure offers greater speed capability than conventional sets
- Even stack load design minimizes friction and extends service life
- Flared, pressure-sensitive lip; sealing forces are reactive to pressure
- Material combinations for use in both new and worn equipment
- Delivered as split components for ease of installation

PRODUCT PROFILES



R27K **R27K1**

SPECIFICATIONS

Material (designation)	Size Range* mm (inch)	Temperature °C (°F)	Pressure Dynamic bar (psi)
AWC351 (FKM) / AWC630 (PEEK)	20 – 2000 (0.787 –78.74)	-30 – 220 (-20 – 428)	150 (2,175)
AWC809 (PU) / AWC650 (POM)	20 – 2000 (0.787 –78.74)	-20 – 100 (-4 – 212)	400 (5,800)

**Please contact your Chesterton Customseal representative for larger sizes.*

30K PTFE Lip Seals

Advanced Seal for Rotary Equipment

Chesterton® 30K Lip Seals are high performance PTFE lip seals that are ideal for dynamic rotary seal applications. These seals minimize risk of penetration of external contaminants from entering the housing and provide excellent sealing service in bearing and gear box applications which prolongs bearing and equipment service life even in hostile working environments.

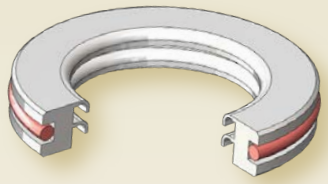
The unique 30K lip seal design is mechanically formed to provide optimal sealing force manufactured from distinct PTFE material developed specifically for sealing applications. The PTFE compounds, coupled with the seal design, provide:

- Excellent fluid compatibility
- Broad range of temperature resistance (low and high temp too)
- High resistance against wear - even in cases of abrasive media or abrasive environment
- High- speed handling capability
- Low friction, reducing contact heat on lips and wear rate
- Outstanding sealing performance compared to conventional rubber lip seals

30K utilizes an O-Ring on the outer diameter of the seal which provides excellent static sealing in the seal cavity. Further, the O-Ring works as an anti-rotational device to protect the seal from rotating with the shaft.

The 30K is manufactured individually, using our unique machining process, which eliminates the need for tooling costs associated with new sizes. The 30K is offered in other unique designs based on your application requirements - whether a built-in wiper is required or space is limited. High pressure version 30KP is available (please see 30KP specification chart for further technical details).

Performance depends on concurrent conditions including shaft hardness, shaft surface roughness, material, lubrication, temperature, and pressure.



- High performance lip seals minimize risk of penetration of external contaminants
- Mechanically formed lips provide optimal sealing force to extend MTBR
- Machining process allows the flexibility to create any size without tooling cost
- Static O-Ring seal prevents rotation and allows for easy installation
- Unique materials ensure plant-wide usage

PRODUCT PROFILES

30K | 30KW | 30KSW | 30KB | 30KWB | 30KP

30K SPECIFICATIONS

Material (designation)	Size Range* mm (inch)	Temperature °C (°F)	Pressure MPa (psi)	Speed m/s (ft/min)
AWC510 (PTFE)	20 – 2000 (0.787 –78.74)	-20 – 100 (-4 – 212)	0.07 (10)	Up to 20 (4000)

30KP SPECIFICATIONS

Material (designation)	Size Range* mm (inch)	Temperature °C (°F)	Pressure MPa (psi)	Speed m/s (ft/min)
AWC510 (PTFE)	20 – 2000 (0.787 –78.74)	-20 – 100 (-4 – 212)	Up to 1 (150)	Up to 5 (984)

Hygienic Seals

BSM, BSM-Modified, TRri-Clover, SMS

Hygienic / Sanitary seals are used where Cleaning-In-Place (CIP) and Sterilization-In-Place (SIP) of food contact equipment is required. The hygienic / sanitary seal allows for quick removal, cleaning and disinfecting of equipment without major disassembly and assembly work.

The health and safety of consumers are of fundamental importance in the production processes of food and beverage: applications involving contact with food, beverage and drinking water require high-quality and high-performance materials. In the production process, sealing compounds must not release any elements that would affect the quality of the final product and neutrality concerning taste and smell.

Chesterton Customseal hygienic seals protect your products from contamination, avoiding unnecessary downtime associated with seal failure and replacement by the use of unsuitable materials.

The main benefits of using Chesterton Customseal products:

- Resistance to most CIP solutions
- Excellent abrasion resistance
- Superior compression set characteristics
- High-pressure capabilities.
- Longevity of seal life
- FDA approved materials (including polyurethanes, elastomers, fluorinated plastics and materials detectable to metal) to guarantee compatibility and longevity

- CNC machined finish eliminates food entrapment where "skirts" are sometimes found on moulded rubber products
- Custom made to suit various fittings
- Customization without the need for new moulds
- Quick delivery
- No minimum orders.

PRODUCT PROFILES

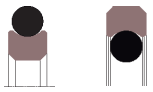
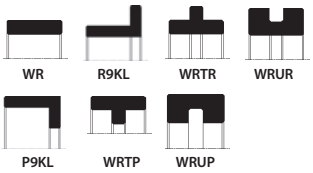
BSM | BSM MOD | DIN | SMS | RJT NZ | TRICLOVER NON-FLANGED | TRICLOVER FLANGED

SPECIFICATIONS

Material (designation)	Size Range* mm (inch)	Temperature °C (°F)	Pressure Static bar (psi)
AWC341 (MVQ)	20 – 2000 (0.787 –78.74)	-30 – 200 (-20 – 400)	200 (2,900)
AWC351 (FKM)	20 – 2000 (0.787 –78.74)	-30 – 220 (-20 – 428)	300 (4,350)
AWC510 (PTFE)	20 – 2000 (0.787 –78.74)	-200 – 260 (-328 – 500)	N/A
AWC753 (EPDM)	20 – 2000 (0.787 –78.74)	-49– 130 (-56 – 266)	300 (4,350)
AWC809 (PU)	20 – 2000 (0.787 –78.74)	-20 – 115 (-4 – 239)	700 (10,150)

**Please contact your Chesterton Customseal representative for larger sizes.*

OTHERS RECOMMENDED PROFILES FOR FOOD AND BEVERAGE APPLICATIONS

20K	R20KDR 20KDRFS P20KDR	Face and Static Seals	• Upgrade perfomance of conventional face seal and O-Ring designs • Superior wear and extrusion resistance versus conventional materials • Low compression set characteristics • Unique manufacturing process allows the flexibility to create any size • Sizes made to accommodate international standards including ISO
33K	33K	Split Rotary Seals	• Patent-pending split design eliminates the need for equipment disassembly • Unitized design provides easy mounting to the equipment • Proven to outperform conventional lip seals • Flexible design, locate sealer rings away from previously fretted shaft • Large sizes available; cost-effective solution to equipment teardown • Non suitable for food contact applications – E.g Pumps, motors etc
CCS	 RCCS PCCS	Piston or Rod Seals	• Second-generation PTFE compounds and high performance polyurethanes offer improved performance • Compression seal design increases sealing force with system pressure • Proven seal design provides predictable performance • Low breakaway and frictional force for smooth movement; reducing risk of stick-slip • High performance solutions for the most demanding hydraulic • Pneumatic applications
PLS	PLS1 PLS2	Polymer Labyrinth Seals	• High performance, non-contact design eliminates fretting caused by lip seals • Keeps lubrication in and seals out external contamination • Unitized design and durable non-sparking material provide easy, reliable installation • Available in a variety of configurations to meet plant-wide equipment needs • Standard sizes available for popular equipment, custom sizes available upon request • IP56 (third party certification) resistant to dust and water • Non suitable for food contact applications – E.g Pumps, motors etc
SES	EPS100 EPS200 EPS300	Spring	• The spring design has excellent loading capabilities with minimal deflection • Maximize seal and hardware life • All seals are made-to-order no equipment modifications required • Highly dynamic and static applications; plant-wide usage • Miniature profiles accommodate small diameters
WR	 WR R9KL WRTR WRUR P9KL WRTP WRUP	Custom Wear Rings	• Replaceable wear rings; cost effective method for improving equipment performance • Reduce radial movement; reduce probability of metal-to-metal contact while extending seal life • Custom Wear Rings eliminate unnecessary modifications • Reduce probability the buildup of hydrodynamic pressure, thus prolonging seal life • Machining process allows the flexibility to create any size

Industry Application Table

Industry	Process	Application	Challenges	Product Solution
Chocolate	Several	Pump Seals	Increase reliability, reduce friction	R22KN
Chocolate, Dairy, Beverage, Soybean	Various	Bearing Protection (Pumps, Conveyors), Rotary Valves	High viscosity fluids, reduce friction.	30K, 33K, 30KC, PLS, R22KN5
Chocolate	Alkalization	Rotary	Reduce friction.	R22KN5
Chocolate	Cacao butter extraction	Hydraulic Press	High pressure causing conventional rubber seals failure.	R22KN, AER, WR, PCCS, RCCS
Chocolate, Confectionery	Dispensing	Depositors	Improve MTBF, increase life.	20KD
Dairy, Chocolate	Homogenizing	Homogenizers - Plunger packing seals	Improve MTBF, increase reliability, high pressure, increase life.	R27K, Spring Energized Seals, Vrings
Donut	Dispensing	Piston Pumps	Hot oil application.	20K
Several	Mixing	Mixers	Improve MTBF, reduce friction, increase life.	Spring Energized Seals, R22KN5
Several	Dispensing	Dispensers	Improve MTBF, increase life.	Silicone filled Spring Energized Seals, PEEK
Several	Dosing	Dosing pistons	Improve MTBF, hot temperature application.	R22K, Silicone filled Spring Energized Seals, WR, 22KAER, PCCS, RCCS.
Beverage	Bottling distribution	Rotary distributors	Improve MTBF, increase life.	30K, 33K, Spring Energized Seals, Vrings
Beverage	Bottle Filling	Rotary Unions, Swivel joints	Roll & twist of OEM seals, reduce friction, wear, chemical resistance, improve MTBF, increase life.	30K, 33K, Spring Energized Seals, Vrings, R22KN5

More than a Seal

Training

The Know-How Advantage

Continual development of personnel is one way of attracting and retaining a capable workforce, and it is an area which receives a great deal of attention from Chesterton Customseal. We regard training as a value adding product which delivers tangible benefits, both short and long term. Appropriate training ensures the correct use of equipment which will deliver longer life for the lowest overall total cost of ownership, and a rapid return on your training investment.

Contact us to know about our latest training schedule.

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Wide Range of Product Portfolio

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Where to from here?

Contact your local Sales Representative to discuss your specific needs.

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