

SERVICE AND PERFORMANCE

Unparalleled in Industry

At Chesterton, we place strong emphasis on working together as partners to provide real solutions. Our high service levels are delivered by combining both industry and product knowledge with experience to implement Best Available Techniques. Our wide geographical reach and local service capabilities enable us to be responsive to your needs.

Reliability through Innovation

To be a full-service provider takes a wide array of high-quality, engineered sealing products that address your needs. Innovative, high performance products are the core of Chesterton's offerings as a premier sealing solution provider. Some of our standard offerings are:

- Split Seals
- Cartridge Seals
- Gas Seals
- Component Seals
- Pump Packing
- Bearing and Gearbox Protection
- Rotary Seals
- SpiralTrac™

Improving Productivity with High Impact Programs

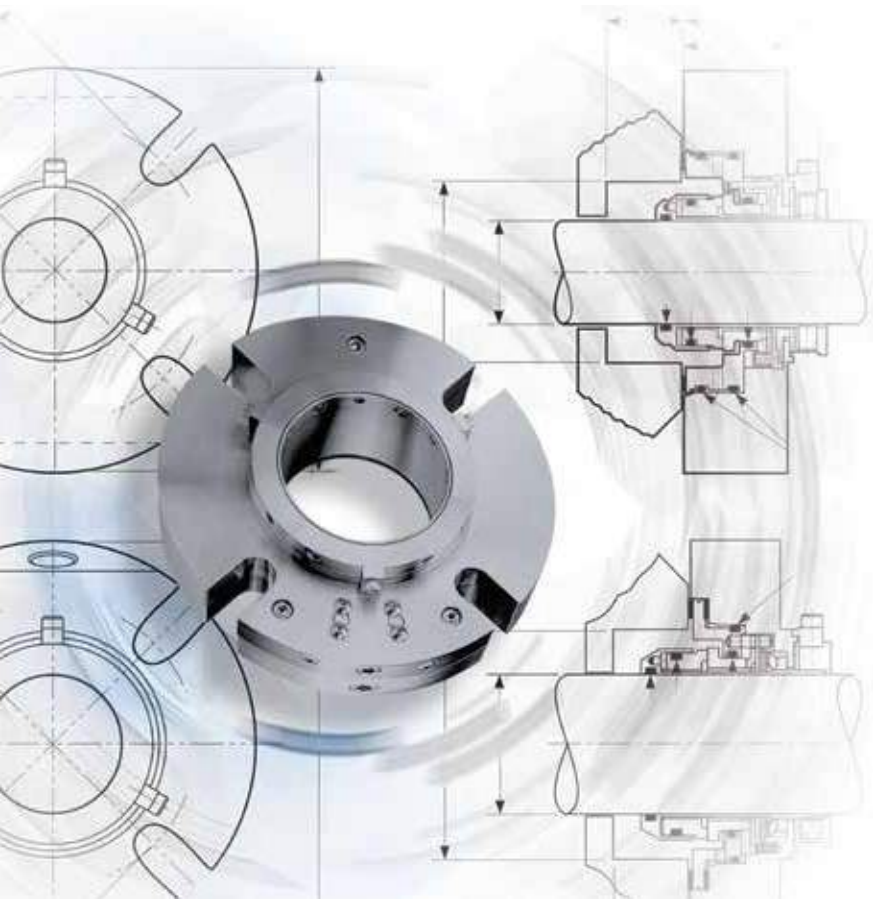
In today's global economy, our clients are faced with increased profitability pressures. Chesterton can assist users in achieving their productivity goals by improving asset reliability and lowering the total cost of ownership. Our programs are easily customized for each plant to:

- Improve equipment availability
- Increase process throughput
- Lower total cost of ownership

Delivering Results for Industry

Meeting industry needs requires a thorough knowledge and understanding of the key drivers specific to a plant. Chesterton's depth of experience allows us to deliver results such as:

- Increased equipment reliability
- Reduced water consumption
- Reduced environmental emissions
- Increased energy efficiency



SEALING SOLUTIONS FOR ROTATING EQUIPMENT

Mechanical Seals Application Guide

Please contact your local Chesterton Representative to help you select the best product for your application.

Family	Model	Equipment Types	Fit			Duty						
			ISO-3069-S	ISO-3069-C	EN-12756	Light Duty	Large Equipment	Solids	Crystallizing Media	Emissions Control	Corrosive Media	High Temperature
Split Seals Why disassemble the equipment? Chesterton's split mechanical seals offer a reliable sealing solution —reducing maintenance costs for larger equipment that is difficult and time-consuming to disassemble.	442C	Pumps	✓									
		Agitators				✓+	✓++	✓+*	✓		✓	✓
		Mixers										
	442M	Agitators Mixers					✓++	✓+*	✓		✓	
	442PR	Boiler Feed Pumps	✓				✓++	✓			✓	✓+
Cassette Seals All the wearing parts are contained in a single, replaceable cassette unit. Single and dual cassettes share a common universal gland. Repair becomes a matter of exchanging cassettes, making it faster and easier while significantly reducing costs associated with repair.	S10	Pumps	✓	✓		✓+	✓	✓	✓+	✓+	✓++	✓
	S20	Pumps	✓	✓			✓	✓+	✓+	✓++	✓+	✓++
Cartridge Seals Cartridge Seals have been designed to be rugged performers in sealing applications across industry segments. They are proven performers for plant-wide standardization, providing maximum reliability.	150	Pumps	✓	✓		✓++	✓	✓	✓		✓	
	250	Pumps	✓	✓			✓	✓	✓+	✓	✓	
	280	Pumps Reactors	✓	✓			✓+	✓+	✓++	✓	✓+	✓++
	170	Pumps		✓			✓+	✓++	✓+		✓+	
	180H	Pumps	✓	✓			✓+	✓+	✓++		✓	✓++
Gas Seals Chesterton gas seal technology overcomes performance limitations common to dual liquid cartridge seals. Reach your plant reliability goals with the addition of simple gas seal technology.	4400	Pumps		✓				✓+	✓	✓++	✓+	✓++
Component Seals Fits all DIN, ISO, ANSI, and other popular pumps, no shaft sleeve wear, self-aligning stationary compatible. All wearing parts, seal faces, O-Rings, screws, and springs are replaceable at low cost.	491	Pumps	✓		✓	✓++	✓	✓+	✓+		✓	
		Agitators										
	RBS	Pumps	✓		✓	✓+		✓				

*Solids handling capability enhanced by use of SpiralTrac split environmental controller

✓++ = Best Choice

✓+ = Better Choice

✓ = Good Choice

442™ C

Cartridge Split Mechanical Seal



Innovation on the inside!

The 442™ C Cartridge Split Mechanical Seal is the latest innovation in split seal technology combining superior performance with the ease of installation of a cartridge split seal.



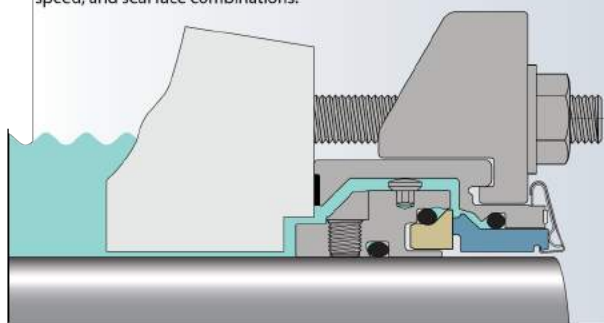
Sealing Solutions
for Rotating Equipment

Operating Conditions		Materials	
Sizes	25 mm to 120 mm (1.000" to 4.750")	Faces	CB, CER, RSC
Pressure*	710 mm (28") Hg Vacuum to 30 bar g (450 psi)	Elastomers	FKM, EPDM, FEPM, FFKM
Temperature Limit	120°C (250°F)	Metals	1.4401 (316SS)
Speed	up to 20 m/s (4 000 ft/min)	Springs	Elgiloy®

- Simplified split seal installation – without equipment disassembly
- Innovative design with superior performance
- Fits majority of rotating equipment
- Easy field repair

Fits ISO-3069

* Seal pressure capabilities are dependent on the fluid sealed, temperature, speed, and seal face combinations.



442 Split Seal Specialty Variants



442M
Split Mixer Seal

The mixer version of the 442 split seal accommodates large radial shaft motion associated with mixers, agitators, reactors, and blenders.



442PR
Split Pumping Ring Seal

The high-capacity pumping ring provides for maximum heat removal and reliability in hot water services such as heater drain and boiler feed pumps.

Standards and approvals available on page 90.

4400

Dual Concentric Gas Seal

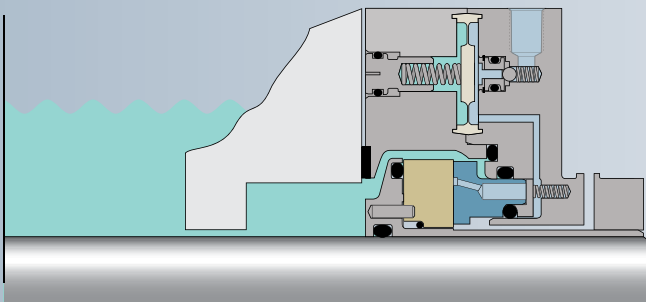
Advanced technology made simple in a gas seal design. The 4400 is a seal for all purposes and provides for an easy gas seal upgrade option. It is an ideal choice for upgrading under-performing, liquid lubricated seals to high performance, non-contacting operation.



Operating Conditions		Materials	
Sizes	25 mm to 90 mm (1.00" to 3.625")	Faces	CB, SSC
Pressure	711 mm (28") Hg Vacuum to 20 bar g (300 psig)	Elastomers	FKM, EPDM, FEPM, FFKM
Temperature	-55°C to 300°C (-67°F to 570°F)	Metals	1.4401 (316SS)
Speed	25 m/s (5 000 ft/min)	Springs	2.4819 (Alloy C-276)

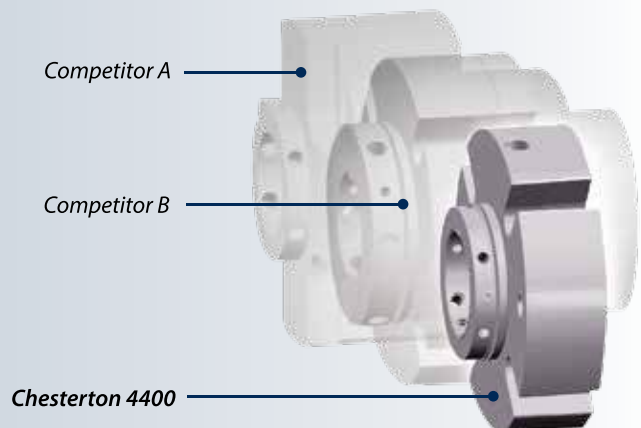
Fits ISO-3069-C

- Delivers low cost-of-ownership for a broad range of applications
- Advanced technology that is easy to install and operate
- Exclusive In-Gland Control System eliminates the need and expense of an external gas panel
- Eliminates Atmospheric Emissions



Compact Design for Greater Equipment Fit

The 4400 has been designed to fit popular process equipment including ANSI and API process pumps, top entry mixers, blowers, and compressors without equipment modification. Besides the obvious fitting and installation benefits, this also makes Chesterton gas-sealing technology available for a wider range of applications. Costly equipment modification is avoided.



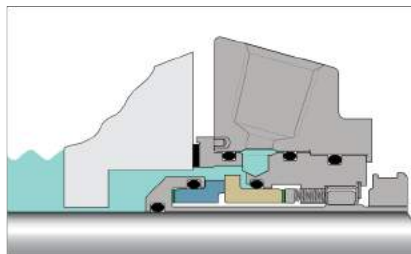
Standards and approvals available on page 90.

CASSETTE SEALS

S10

High Performance Single Cassette Seal

A unique, modular cassette that combines advanced seal technology with flexibility in maintenance and repair.



Operating Conditions		Materials	
Sizes	25 mm to 120 mm (1" to 4.75")	Faces	CB, SSC, TC
Pressure	711 mm (28") Hg Vacuum to 31 bar g (450 psig)	Elastomers	FKM, EPDM, FEPM, FFKM
Temperature	-55°C to 300°C (-67°F to 570°F)	Metals	1.4401 (316SS)
Speed	25 m/s (5 000 ft/min)	Springs	2.4819 (Alloy C-276)

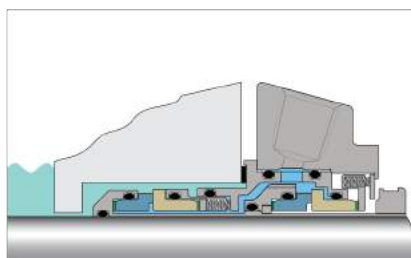
Fits ISO-3069, ASME B73.1, B73.2

- High performance sealing
- One optimized sealing concept for plant-wide standardization
- Easy to maintain

S20

High Performance Dual Cassette Seal

A unique, modular cassette that combines advanced seal technology with flexibility in maintenance and repair.



Operating Conditions		Materials	
Sizes	25 mm to 120 mm (1" to 4.75")	Faces	CB, SSC, TC
Pressure	711 mm (28") Hg Vacuum to 31 bar g (450 psig) 17 bar g (250 psig) inboard differential	Elastomers	FKM, EPDM, FEPM, FFKM
Temperature	-55°C to 300°C (-67°F to 570°F)	Metals	1.4401 (316SS)
Speed	25 m/s (5 000 ft/min)	Springs	2.4819 (Alloy C-276)

Fits ISO-3069, ASME B73.1, B73.2

- Advanced sealing performance
- One optimized sealing concept for plant-wide standardization
- Easy to maintain

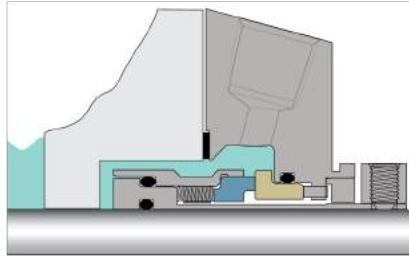
Standards and approvals available on page 90.

CARTRIDGE SEALS

150

General Purpose Cartridge Single Seal

Designed for baseline applications and for upgrading packed or component-sealed equipment—this seal is a value leader in its class.



- Simple upgrade to reduce plant maintenance costs
- Reliable cartridge design that increases seal life

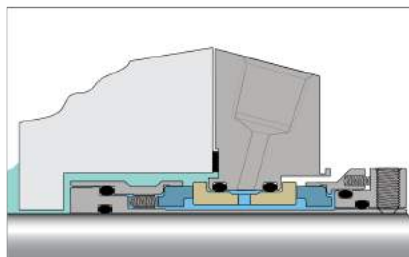
Operating Conditions		Materials	
Sizes	25 mm to 120 mm (1" to 4.75")	Faces	CB, SSC
Pressure	711 mm (28") Hg Vacuum to 20 bar g (300 psig)	Elastomers	FKM, EPDM, FEPM, FFKM
Temperature	-55°C to 300°C (-67°F to 570°F)	Metals	1.4401 (316SS)
Speed	20 m/s (4 000 ft/min)	Springs	2.4819 (Alloy C-276)

Fits ISO-3069, ASME B73.1, B73.2

250

General Purpose Cartridge Dual Seal

Designed for cost-effective upgrading from packing and underperforming single seals—this seal is a value leader in its class, further increasing plant reliability.



- Provides sealing security that conventional single seals cannot match
- Reliable cartridge design that increases seal life

Operating Conditions		Materials	
Sizes	25 mm to 120 mm (1" to 4.75")	Faces	CB, SSC
Pressure	711 mm (28") Hg Vacuum to 20 bar g (300 psig) 10 bar g (150 psig) inboard differential	Elastomers	FKM, EPDM, FEPM, FFKM
Temperature	-55°C to 300°C (-67°F to 570°F)	Metals	1.4401 (316SS)
Speed	20 m/s (4 000 ft/min)	Springs	2.4819 (Alloy C-276)

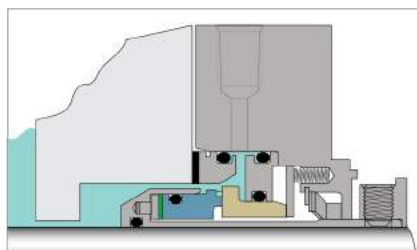
Fits ISO-3069, ASME B73.1, B73.2

Standards and approvals available on page 90.

180H

Cartridge Single Seal

Built-in Hydropad technology for improved reliability in high-temperature and pressure applications.



Operating Conditions		Materials	
Sizes	25 mm to 120 mm (1.00" to 4.75")	Faces	Premium Antimony Carbon, SC
Pressure	711 mm (28") Hg Vacuum to 40 bar g (600 psig)	Elastomers	EPDM E962-90
Temperature	-55°C to 300°C (-67°F to 570°F)	Metals	1.4401 (316SS)
Speed	25 m/s (5 000 ft/min)	Springs	2.4819 (Alloy C-276)

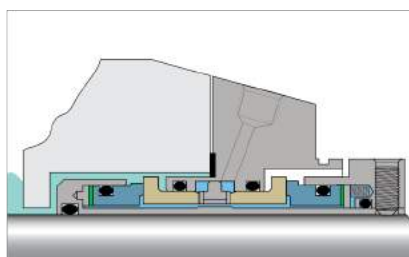
Fits ISO-3069-C

- Increased sealing reliability for high-temperature, speed, and pressure applications
- Eliminates the need for external environmental controls in most applications
- Advanced Hydropad geometry minimizes seal face wear and distortion
- Compact cartridge design for easy and reliable installation

280™

Heavy-Duty Cartridge Dual Seal

*A dual seal design for severe duty and greatest reliability in difficult applications—including mixers and agitators.**



Operating Conditions		Materials	
Sizes	25 mm to 120 mm (1.00" to 4.75")	Faces	CB, SSC, TC
Pressure	711 mm (28") Hg Vacuum to 40 bar g (600 psig) 17 bar g (250 psig) inboard differential	Elastomers	FKM, EPDM, FEPM, FFKM
Temperature	-55°C to 300°C (-67°F to 570°F)	Metals	1.4401 (316SS)
Speed	25 m/s (5 000 ft/min)	Springs	2.4819 (Alloy C-276)

Fits ISO-3069, ASME B73.1, B73.2

- High-reliability sealing
- Maximum solids handling capability
- Superior performance for demanding applications
- Motion tolerant for mixer applications*

*Extended motion capability available in 280M version

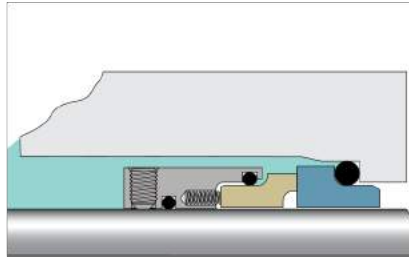
Standards and approvals available on page 90.

COMPONENT SEALS

491

DIN Component Seal

Designed for the replacement of low-technology component seals, resulting in increased overall reliability increase and maintenance efficiency.



Operating Conditions		Materials	
Sizes	16 mm to 110 mm	Faces	CB, SSC
Pressure	711 mm (28") Hg Vacuum to 10 bar g (150 psig)	Elastomers	FKM, EPDM, FEPM, FFKM
Temperature	-55°C to 300°C (-67°F to 570°F)	Metals	1.4401 (316SS)
Speed	20 m/s (4 000 ft/min)	Springs	2.4819 (Alloy C-276)

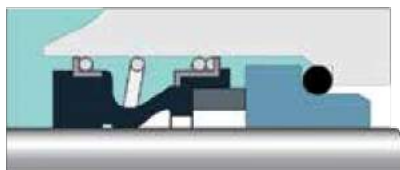
Fits EN12756, ISO-3069-S

- Reliable upgrade from original equipment seals
- Designed not to fret shaft or sleeves
- Fits EN12756 L1K with standard supplied DIN stationary

RBS

Single Component Seal for General Purpose Sealing

With proven Chesterton® quality, the RBS seal is the ideal choice for sealing small pumps where axial space is limited. Designed with a robust friction drive and large spring format, the RBS provides reliable sealing for a large range of fluids.

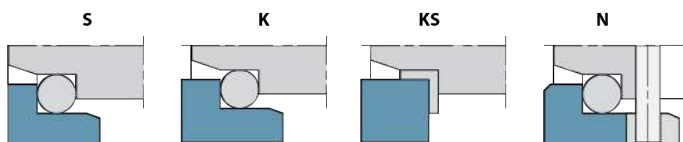


Operating Conditions		Materials	
Sizes	10 mm to 60 mm	Faces	CB, SSC
Pressure Limit	12 bar g (174 psig)	O-Rings	FKM, EPDM
Temperature	-15°C to 200°C (5°F to 392°F)	Springs	1.4301 (304SS)
Speed	10 m/s (2 000 ft/min)	Bellows	EPDM, FKM

Fits EN12756, ISO-3069-S

- Bidirectional seal with short axial length—fits most small pumps
- Robust frictional drive makes seal tolerant to unfavourable conditions
- Versatile enough to meet the needs of many applications
- Features a large spring that does not clog—suitable for media containing solids

Compatible Stationaries



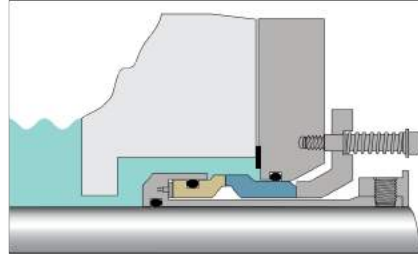
Standards and approvals available on page 90.

SLURRY SEALS

170 / 170 ISO

Slurry Cartridge Single Seal

Engineered to operate in harsh, heavy consistency slurry environments and to eliminate costly external seal flushes in the majority of applications.



- Runs longer in heavy abrasive slurries without the need for flush or quench water
- Reliable design that deals with real life slurry pumping conditions
- Easy to maintain

Operating Conditions		Materials	
Sizes	25 mm to 228 mm (1.00" to 9.00") 170 Version 40 mm to 110 mm (1.57" to 4.33") 170 ISO Version	Faces	SSC, TC
Pressure	711 mm (28") Hg Vacuum to 17 bar g (246 psig)	Elastomers	FKM, EPDM, FEPM, FFKM
Temperature	-55°C to 300°C (-67°F to 570°F)	Metals	1.4401 (316SS)*
Speed	11 m/s (2 200 ft/min)	Springs	2.4819 (Alloy C-276)

*Duplex and Super Duplex stainless steel available as an option

SEAL SUPPORT SYSTEMS

Intelli-Flow™ HT

Water Saver

Features a thermally activated valve that automatically drains hot barrier fluid (only when necessary) to keep dual seals running cool and reliable. Valve opening temperature preset to work with S20 Seals.

- Clean in place
- Maintenance-free
- Easy to install
- 95% water savings compared to open barrier fluid supply

Operating Conditions	
Pressure	20 bar g (300 psig)
Temperature Limit	125°C (257°F)
Temperature set point	80°C (176°F)
Connections	1/4 NPT
Materials	1.4401 (316SS)

Standards and approvals available on page 90.

Flow Guardian™

Pressure and Flow Regulator

Specifically designed to supply uninterrupted, regulated seal flush water and deliver operational efficiency to the pump population.

Managing flow rates while regulating important pressure differentials is possible. Costly seal failures are reduced while assisting in-plant water conservation initiatives.

Operating Parameters		Materials of Construction	
Flow Rate	0,1 - 3 l/min/2 -50 US gph	Flowmeter tube	Polysulfone (PSU)
Pressure Limit	10 bar g (145 psig)	Body of unit	Polyoxymethylene (POM)
Temperature Limit	100°C (212°F)	O-Ring	Fluorocarbon (FKM)
		Pressure gage	Oil-filled with 316SS Stainless Case and Wetted
		Pressure and flow rate regulating valve	316 Stainless Steel/EN 1.4401
		Clean out plugs	320 - 3/8" Tube Fittings (for Compression Connections) 316 Optional Barb Fittings
		Mounting bracket	316 Stainless Steel/EN 1.4401



- Provide regulated seal flush water
- Maintenance-free—automatic level and pressure management
- Plan 54DM (DP50)
- Plan 32 and 33S (SP50)

WSS

Water Saving System

Easy to install, complete solution with minimal water consumption for reliable operation of dual mechanical seals.

Designed to maintain water barrier pressure and levels without maintenance. Containing all the equipment required, the WSS is easy to install.

Technical Data		Components	
Tank Capacity	12 l to 9 l operating (3.17 to 2.38 US gallons operating)	Water line connection	Rp 1/2" female
Operating Pressure	16 bar g (232 psig)	Pressure gauge	0 - 10 bar Brass (0 - 145 psig)
Tank Material	316	Pressure regulator	0 - 10 bar Brass (0 - 145 psig)
Cooling Capacity	400W	Flow indicator	Stainless Steel
Auxiliary Connection	1 x R 1" and 1 x R 1/2"	Drain valve	R 1/2" - NiCr Plated Brass
		Hoses	Kit: 1 m and 1.5 m (39" and 59") Polyamide 12 mm (0.47") OD
		Seal Connections	Kit: 2 x NPT 1/2" S - Straight Push-in - Connectors NiCr Plated Brass

PED (97/23/EC) - TÜV



- Preconfigured system and options
- Maintenance-free—automatic level and pressure management
- Minimize seal support water usage
- Plan 53P Automated Water Support Tank

BSS

Buffer Support System

Easy to install, complete, non-pressurized solution for reliable operation of dual mechanical seals.

Complete solution for the environmental support of dual mechanical seals where product contamination from support fluid cannot be tolerated.

Technical Data		Components	
Tank Capacity	12 l to 9 l operating (3.17 to 2.38 US gallons operating)	Fluid line connection	Rp 1/2" female
Operating Pressure	16 bar g (232 psig)	Pressure gauge	0 - 10 bar Brass (0 - 145 psig)
Tank Material	316 Ti/1.457	Pressure regulator	0 - 10 bar Brass (0 - 145 psig)
Cooling Capacity	400W tank only 1.5 kW with cooling coil 4 kW with cooling coil and circulation pump	Fill valve	R 1/2" - NiCr Plated Brass
Auxiliary Connection	1 x R 2" and 1 x R 1/8"	Drain valve	R 1/2" - NiCr Plated Brass
		Hoses	Kit: 1 m and 1.5 m (39" and 59") Polyamide 12 mm (0.47") OD
		Seal connections	Kit: 2 x NPT 1/2"S - Straight Push-in - Connectors NiCr Plated Brass

PED (97/23/EC) - TÜV



- Runs longer in heavy abrasive slurries without the need for flush or quench water
- Reliable design that deals with real life slurry pumping conditions
- Easy to maintain

Sealing Solutions
for Rotating Equipment

PSS

Pressurized Support System

Easy to install, complete, pressurized solution, for reliable operation of dual mechanical seals.

Complete solution for the support of dual mechanical seals where product leakage cannot be tolerated.

Technical Data		Components	
Tank Capacity	12 l to 9 l operating (3.17 to 2.38 US gallons operating)	Fluid line connection	Rp 1/2" female
Operating Pressure	16 bar g (232 psig)	Pressure gauge	0 - 10 bar Brass (0 - 145 psig)
Tank Material	316 Ti/1.457	Pressure regulator	0 - 10 bar Brass (0 - 145 psig)
Cooling Capacity	400W tank only 1.5 kW with cooling coil 4 kW with cooling coil and circulation pump	Fill valve	R 1/2" - NiCr Plated Brass
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		Seal connections	Kit: 2 x NPT 1/2"S - Straight Push-in - Connectors NiCr Plated Brass

PED (97/23/EC) - TÜV



- Preconfigured system and options
- Maintenance-free—automatic level and pressure management
- Minimize seal support water usage
- Plan 53P Automated Water Support Tank

SpiralTrac™

Environmental Controllers

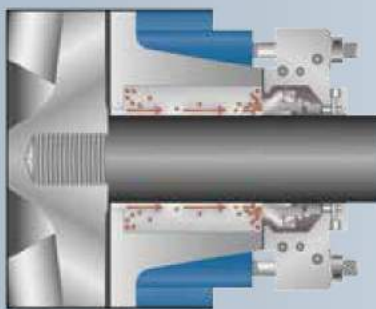
When used with Chesterton® mechanical seals, SpiralTrac Environmental Controllers greatly enhance seal reliability by effective removal of solids and improved cooling of the stuffing box.



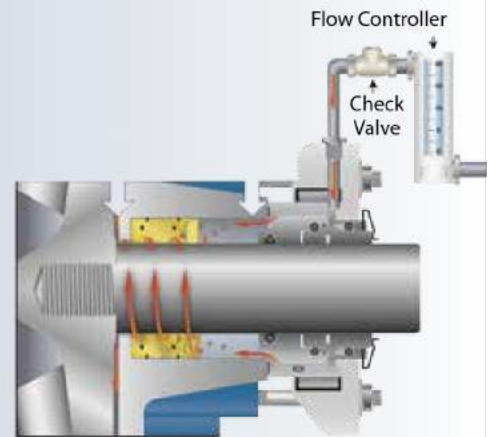
Versions	
F (Split)	Greatly reduced flush
N	Reduced/No flush in no fibrous fluids
D	Reduced/No flush in fibrous fluids
P (Split)	Packing version
C	With drain for crystallizing media

Available Materials
1.4401 (316SS)
416 SS
PTFE – Glass Filled
PTFE – Carbon Graphite Filled
Bronze
Ti/EN 3.7035
AWC800 – Red Polymer
Monel® K400 / EN 2.4360

- Extends seal reliability in most rotating equipment applications
- Reduces cost of flushing in abrasive applications
- Fits all rotating equipment

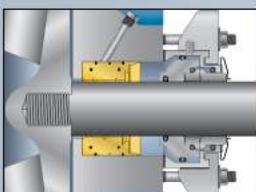


- 1 Air**
Vented from cavity when pump is stationary (eliminates crystallization, coking overheating due to air)
- 2 Circulation**
Driven around seal (excellent face cooling)
- 3 Exchange**
In and out of cavity (heat removed from cavity)
- 4 Particulate**
Immediately removed from cavity through the exit groove, flush or no flush

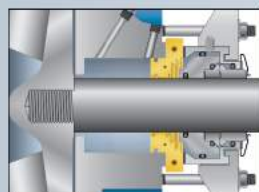


Configurations Available

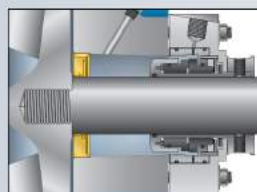
Split



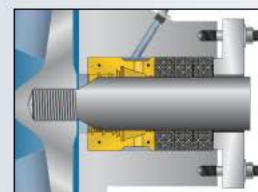
Adapter



Standard



Packing



MECHANICAL SEAL ORDERING INFORMATION

To place an order, please fill in the white boxes with the appropriate information and supply the type code to your Chesterton representative. Use the chart on the right for reference.

Component	Chesterton	EN12756	Description
Faces	CB	B	Carbon Graphite, Resin Impregnated
	SSC	Q1	Silicon Carbide, Sintered Pressureless
	RSC	Q2	Silicon Carbide, Reaction Bonded
	TC	U2	Tungsten Carbide, Ni-Binder
	CR	V	Aluminium Oxide, 99.5%
Metals	316	G	CrNiMo Steel (1.4401)
	Alloy-20	M3	20 Cb3 (2.4660)
	Ti	T2	Titanium (3.7035)
	HC	M5	Hastelloy® C-276 (2.4819)
	HB	M1	Hastelloy B-2 (2.4617)
	Monel	M4	Alloy K500 (2.4375)
Elastomers	FKM	V	Fluorocarbon
	EPDM	E	Ethylene Propylene Rubber
	FEPM	X	Tetra-ethylene Propylene Rubber
	FFKM	K	Perfluoroelastomer
	C550	K1	FFKM 550
	C250	K2	FFKM 250

Cartridge Single Seal

SEAL + SIZE + FACE + S + ELASTOMER = Type Code

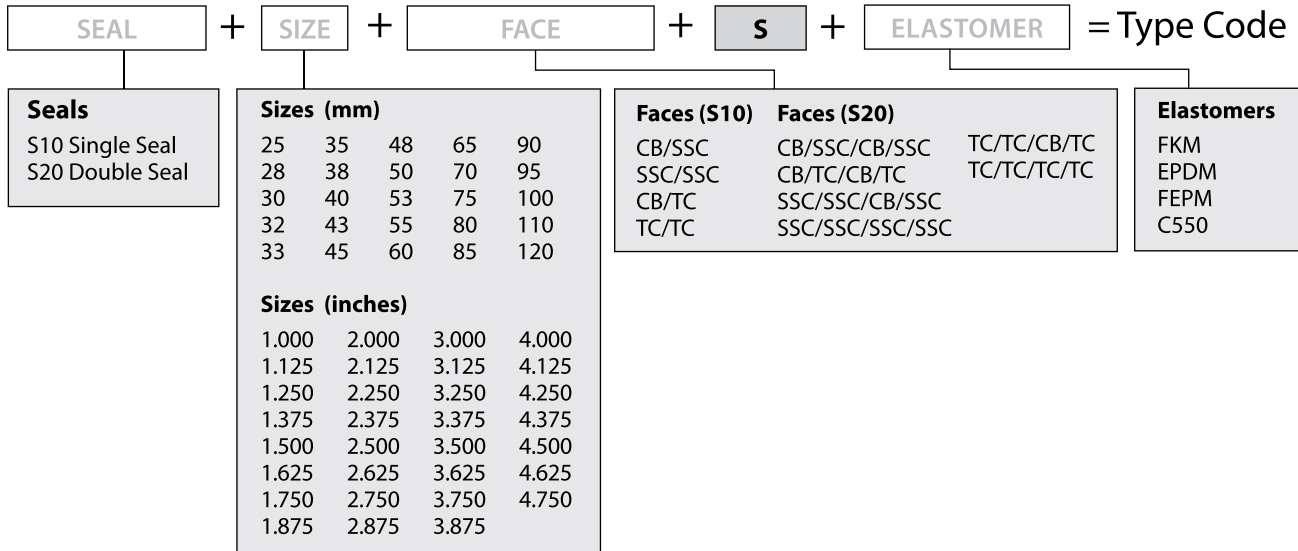
<p>Seals</p> <ul style="list-style-type: none"> 150 Single Seal 180H Single Seal 250 Double Seal 280™ Double Seal 	<p>Sizes (mm)</p> <table border="1"> <tr><td>25</td><td>40</td><td>55</td><td>75</td><td>110</td></tr> <tr><td>28</td><td>42³</td><td>58^{1,3}</td><td>80</td><td>115¹</td></tr> <tr><td>30</td><td>43</td><td>60</td><td>85</td><td>120</td></tr> <tr><td>32</td><td>45</td><td>63¹</td><td>90</td><td></td></tr> <tr><td>33</td><td>48</td><td>65</td><td>95</td><td></td></tr> <tr><td>35</td><td>50</td><td>68</td><td>100</td><td></td></tr> <tr><td>38</td><td>53</td><td>70</td><td>105¹</td><td></td></tr> </table> <p>Sizes (inches)</p> <table border="1"> <tr><td>1.000</td><td>2.000</td><td>3.000</td><td>4.125</td></tr> <tr><td>1.125</td><td>2.125</td><td>3.125</td><td>4.25</td></tr> <tr><td>1.250</td><td>2.25</td><td>3.250</td><td>4.375</td></tr> <tr><td>1.375</td><td>2.375</td><td>3.375</td><td>4.500</td></tr> <tr><td>1.500</td><td>2.500</td><td>3.500</td><td>4.750</td></tr> <tr><td>1.625</td><td>2.625</td><td>3.625</td><td>3.875¹</td></tr> <tr><td>1.75</td><td>2.750</td><td>3.75</td><td>4.625¹</td></tr> <tr><td>1.875</td><td>2.875</td><td>4.000</td><td></td></tr> </table>	25	40	55	75	110	28	42 ³	58 ^{1,3}	80	115 ¹	30	43	60	85	120	32	45	63 ¹	90		33	48	65	95		35	50	68	100		38	53	70	105 ¹		1.000	2.000	3.000	4.125	1.125	2.125	3.125	4.25	1.250	2.25	3.250	4.375	1.375	2.375	3.375	4.500	1.500	2.500	3.500	4.750	1.625	2.625	3.625	3.875 ¹	1.75	2.750	3.75	4.625 ¹	1.875	2.875	4.000		<table border="1"> <thead> <tr> <th>Faces (150)</th> <th>Faces (280)</th> </tr> </thead> <tbody> <tr> <td>CB/SSC</td> <td>CB/SSC/CB/SSC</td> </tr> <tr> <td>SSC/SSC</td> <td>CB/TC/CB/TC</td> </tr> <tr> <td>Faces (180H)</td> <td>SSC/SSC/CB/SSC</td> </tr> <tr> <td>CB/SSC</td> <td>TC/TC/CB/TC</td> </tr> <tr> <td>Faces (250)</td> <td></td> </tr> <tr> <td>CB/SSC/SSC/CB</td> <td></td> </tr> <tr> <td>SSC/SSC/SSC/CB</td> <td></td> </tr> <tr> <td>SSC/SSC/SSC/SSC</td> <td></td> </tr> </tbody> </table>	Faces (150)	Faces (280)	CB/SSC	CB/SSC/CB/SSC	SSC/SSC	CB/TC/CB/TC	Faces (180H)	SSC/SSC/CB/SSC	CB/SSC	TC/TC/CB/TC	Faces (250)		CB/SSC/SSC/CB		SSC/SSC/SSC/CB		SSC/SSC/SSC/SSC		<p>Elastomers</p> <ul style="list-style-type: none"> EPDM^{1,3} FKM^{1,3} FEPM FFKM² C550³ C250³
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¹ Only for 150/250

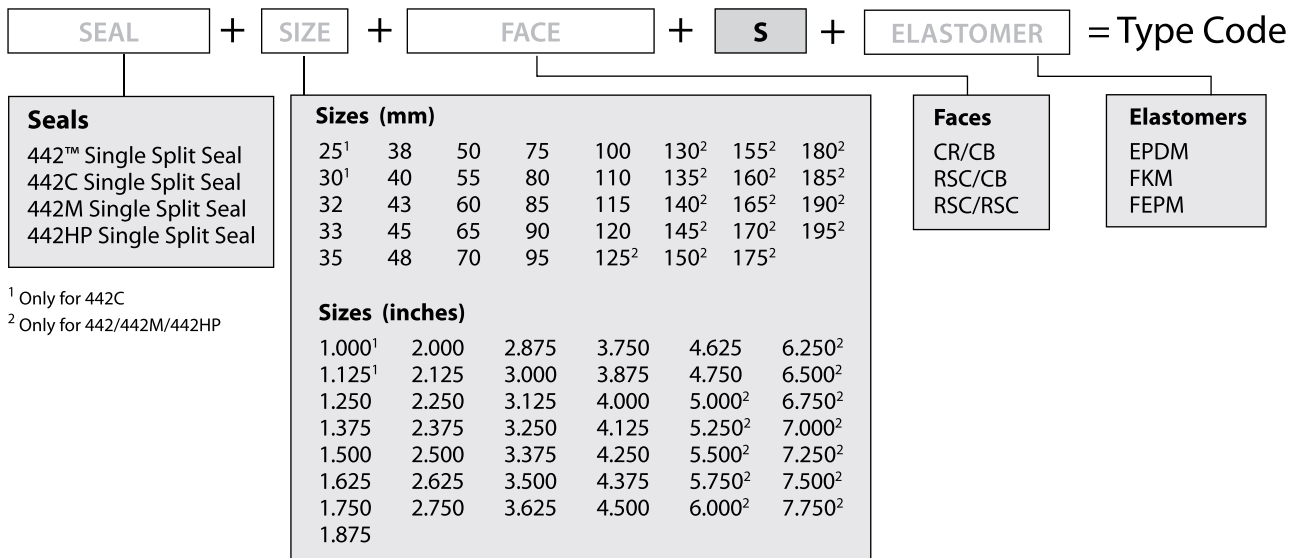
² Only for 180H/280

³ Only for 180H

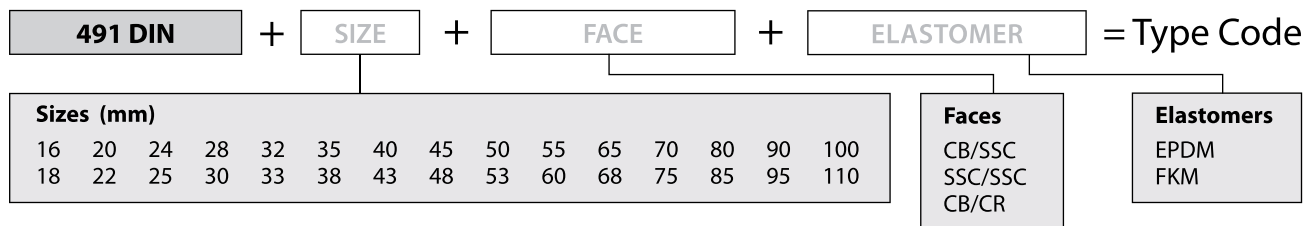
Cassette Seal



Single Split Seal



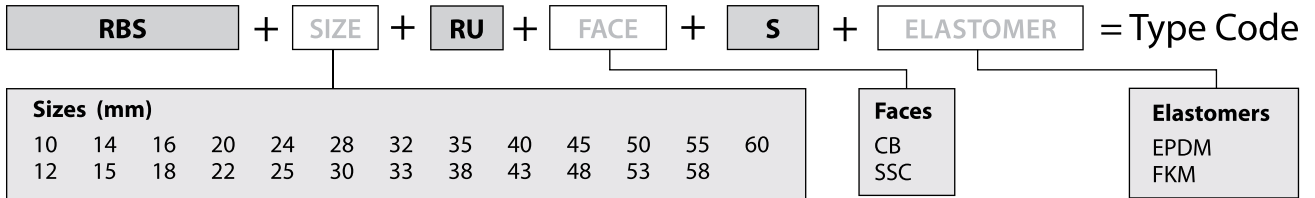
491 DIN Component Seal



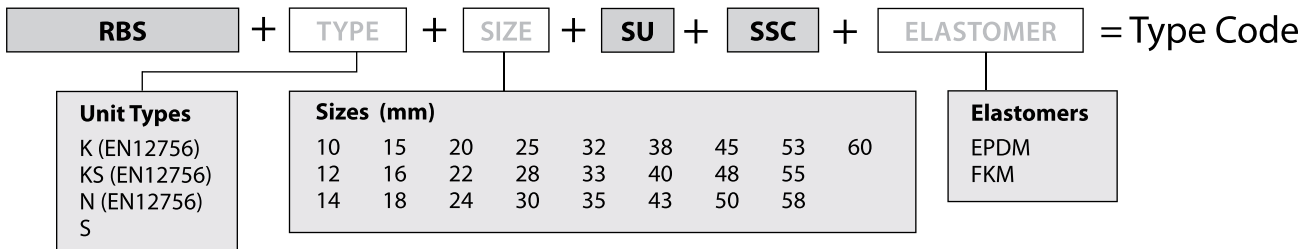
MECHANICAL SEAL ORDERING INFORMATION

RBS Seal

Rotary Unit¹

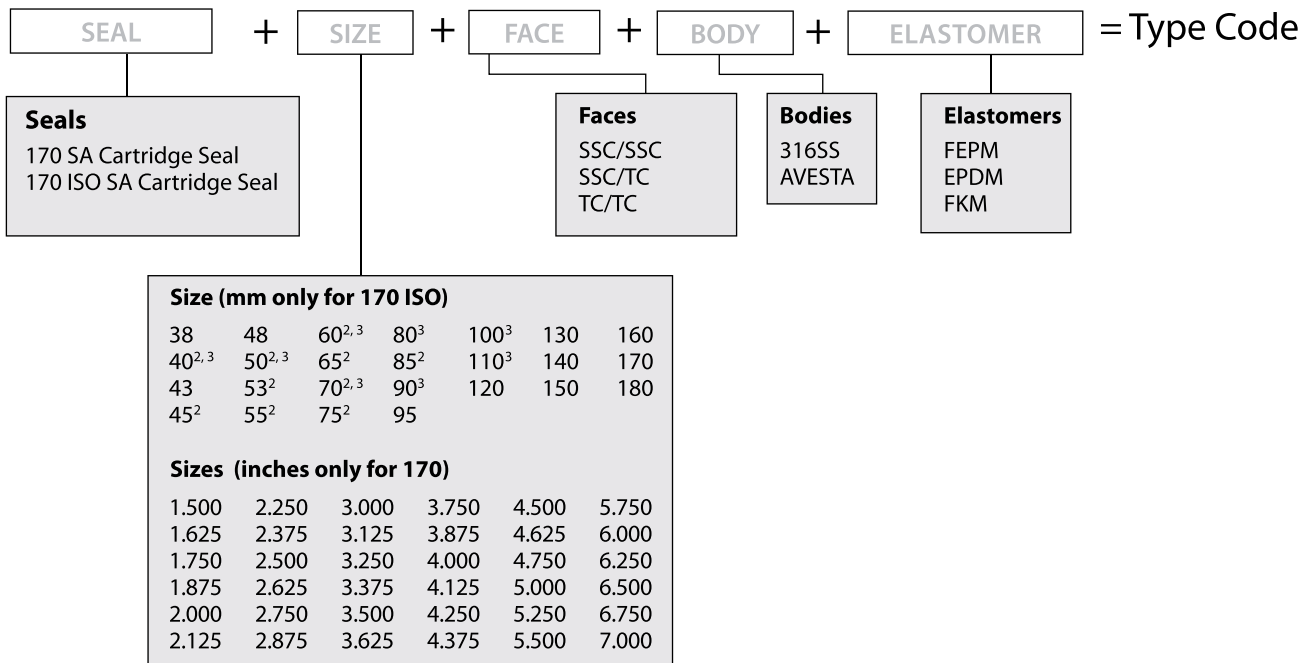


Stationary Unit³



¹ To order a complete RBS Seal, please order both rotary and stationary units.

170/170 ISO SA Cartridge Seal



² For 170 ISO seal that fits with ISO 3069-C Seal Chambers

³ For 170 ISO seal that fits with ISO 3069-H Seal Chambers

4400 Gas Seal

SEAL + SIZE + SA + SSC/SS + S + ELASTOMER = Type Code

Seals
4400-CW
4400-CCW

Sizes (mm)						
25	32	40	48	60	75	90
28	35	43	50	65	80	
30	38	45	55	70	85	
Sizes (inches)						
1.000	1.625	2.250	2.750	3.250		
1.125	1.750	2.375	2.875	3.375		
1.250	1.875	2.500	3.000	3.500		
1.375	2.000	2.625	3.125	3.625		
1.500	2.125					

Elastomers	
FEPM	C505
EPDM	K4079
FKM	

PRODUCT APPROVALS & CERTIFICATION

Compression Packing

Application	Certification/Approvals	Product
Drinking Water	WRAS	1935
Drinking Water	ACS	1725A
Food Contact	EC1935- 2004 - FDA 21 CFR	1935
Food Contact	FDA 21 CFR	1725A
Food Contact	FDA 21 CFR	CMS2000-FP
Fugitive Emission Control	API-589 (Fire Safe) - API-607 (Fire Safe)	1600
Fugitive Emission Control	API-622 - API-607 (Fire Safe) - TA Luft/VDI 2440 -ISO 15848-1* - Total**- Chevron Texaco**	1622
Fugitive Emission Control	API-589 (Fire Safe)	5800
Fugitive Emission Control	API-589 (Fire Safe)	1400R
Fugitive Emission Control	TA Luft/VDI 2440	1600/477-1 LL
Fugitive Emission Control	TA Luft/VDI 2440	1724/477-1 LL
Fugitive Emission Control	TA Luft/VDI 2440	1724 Low E
Fugitive Emission Control	API-589 (Fire Safe)	5300GTP/ One
Fugitive Emission Control	API-589 (Fire Safe)	5300GTPG/ 1600
Fugitive Emission Control	API-589 (Fire Safe)	5800E
Fugitive Emission Control	API-589 (Fire Safe)	5800T
Military	MIL P-24790(SH)	1760
Military	MIL P-24503B	5200GTP
Military	MIL P-24583B	Style ONE
Nuclear	Nuclear 10CFR pt21	1601
Nuclear	Nuclear 10CFR pt21	5800
Nuclear	Nuclear 10CFR pt21	5300GTP/ One
Nuclear	Nuclear 10CFR pt21	5300GTP/ 1601
Oxygen Compatible	BAM Oxygen	1730
Oxygen Compatible	BAM Oxygen	1830
Oxygen Compatible	BAM Oxygen	1400R
Oxygen Compatible	BAM Oxygen	1724-OX

* Valve Test Standard

** Customer Approval (special high purity version for total)

Mechanical Seals

Application	Certification/Approvals	Product
ATEX	ATEX Cat 1 (Group 2)	280™
ATEX	ATEX Cat 1 (Group 2)	280M
ATEX	ATEX Cat 1 (Group 2)	442™
ATEX	ATEX Cat 1 (Group 2)	491
ATEX	ATEX Cat 1 (Group 2)	442M™
Drinking Water	ACS	150
Drinking Water	ACS	442™
Drinking Water	ACS, KTW, WRAS	491
Drinking Water	ACS	442C™
Drinking Water	ACS	442M™
Food Approval	EC1935-2004	491
Food Contact	FDA - 21 CFR	280™
Food Contact	FDA - 21 CFR	442™
Food Contact	FDA - 21 CFR	442C™
Fugitive Emission Control	TA Luft/VDI 2440	280™
Fugitive Emission Control	TA Luft/VDI 2440	4400

Note: The above certifications and compliance are available on request.

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