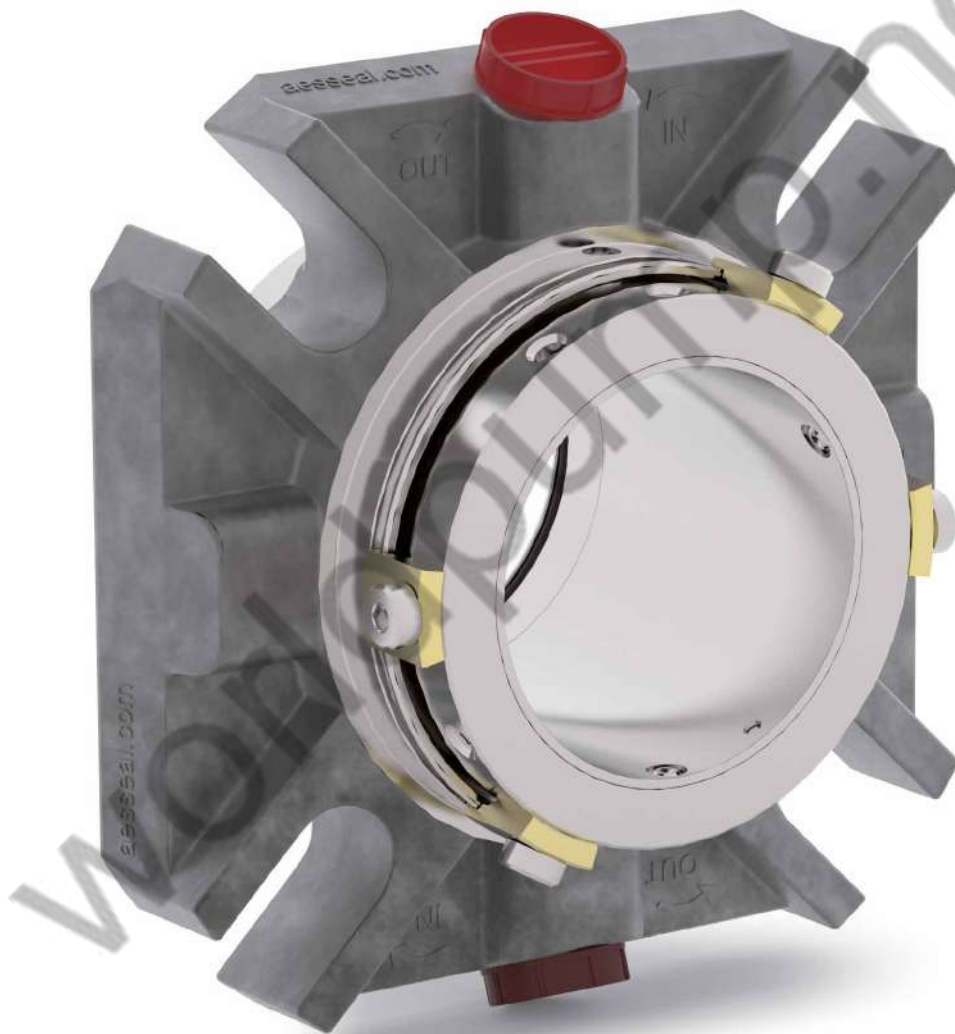


CKD™

Double Stationary Seal Range



- Stationary seal face technology to accommodate angular shaft to housing misalignment
- Bi-directional flow induction (patent pending) for effective barrier heat removal
- Monolithic seal face technology
- Modular design for enhanced customer service

“ Ineffective heat removal within the barrier fluid is estimated to account for over 40% of all double cartridge seal failures. ”

CKD™ — 21st Century Innovation

AESSEAL® is a leading global specialist in the design and manufacture of mechanical seals, bearing protectors and seal support systems.

The company sets new standards in reliability, performance, service and cost. Service has been the key to the success of AESSEAL® and is at the core of the company purpose statement:

‘to give our customers such exceptional service that they need never consider alternative sources of supply.’ Through continuous investment, unique modular technology and an unparalleled dedication to customer service we aim to constantly exceed expectation.

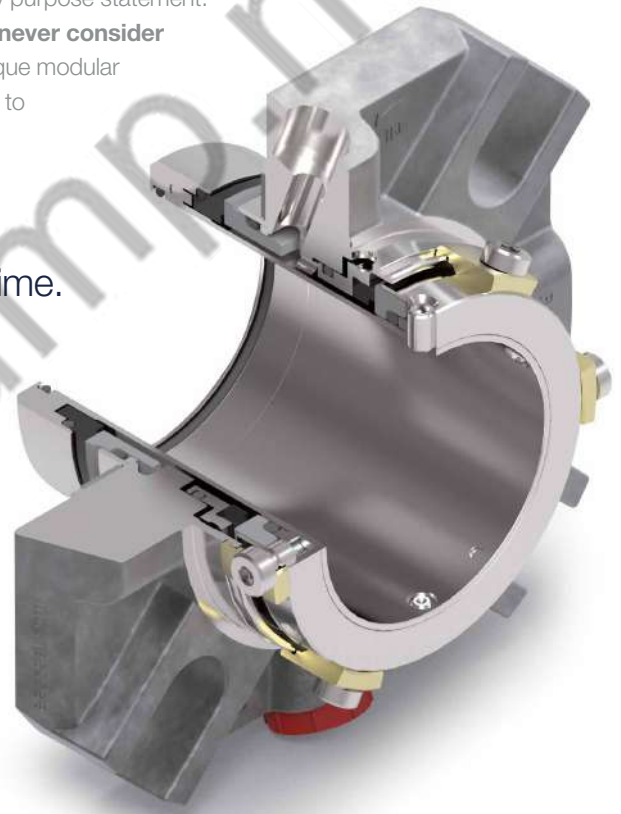
Industry leading modular design is proven to decrease costs and increase equipment uptime.

The CKD™ double stationary cartridge seal range provides highly technical, value-engineered sealing solutions applicable for all industry sectors.

Specification

Shaft diameter (d1) = 25mm to 100mm (1.000" to 4.000")

Pressure (max) = 25 bar (363 psi)



AESSEAL Global Technology Centre



Extensive AESSEAL® test facilities





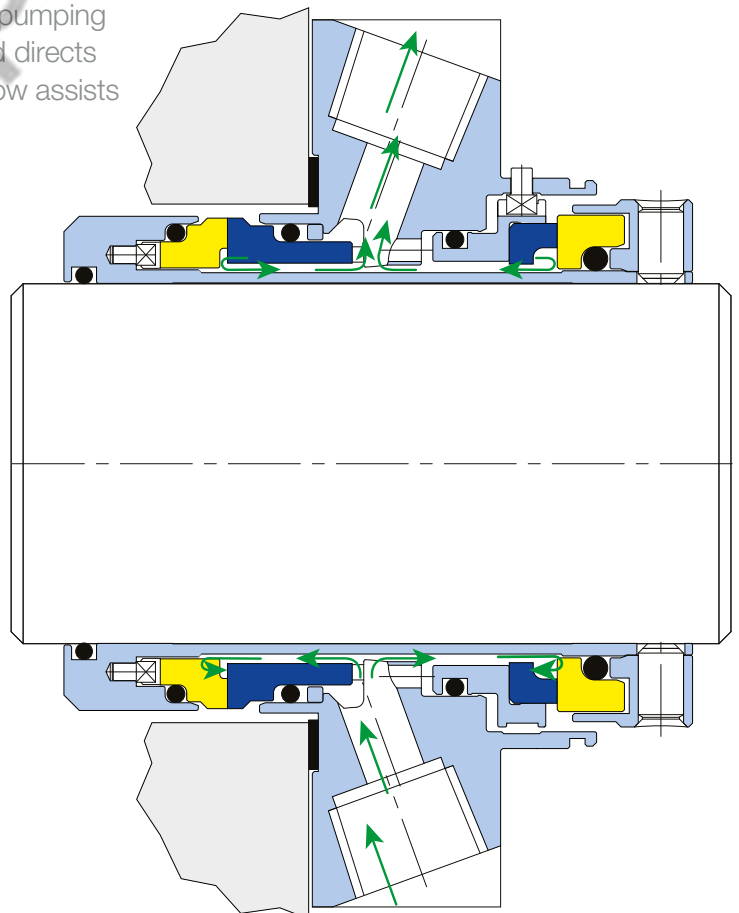
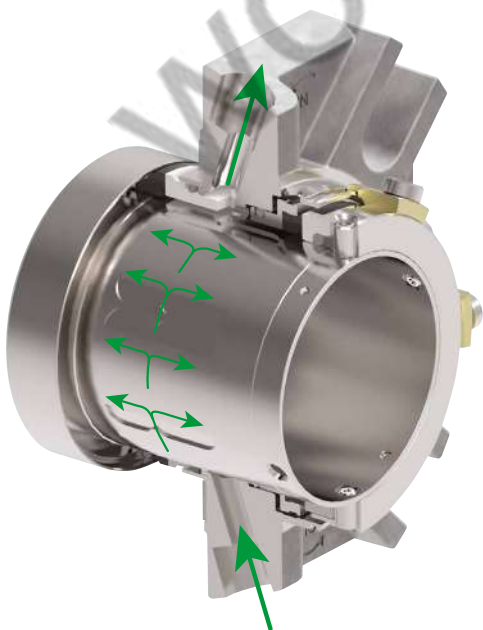
Design, manufacturing and testing at the AESSEAL Global Technology Centre

Features and Benefits

- Dual seal - suitable for a range of applications
- Cartridge design - simple to install.
- Hydraulically pressure balanced seal faces - ensures excellent sealing at high or low barrier to process pressure differentials. Double pressure balanced inboard seal faces minimize seal face distortion and help stable fluid film conditions between the seal faces.
- Patent pending flow inducer with a 'heat removal' flow path - helps with the removal of heat from the seal, optimising face cooling
- Monolithic seal face technology - one piece construction reduces distortion in high and low temperature applications
- Stationary seal face technology - facilitates angular shaft to housing misalignment

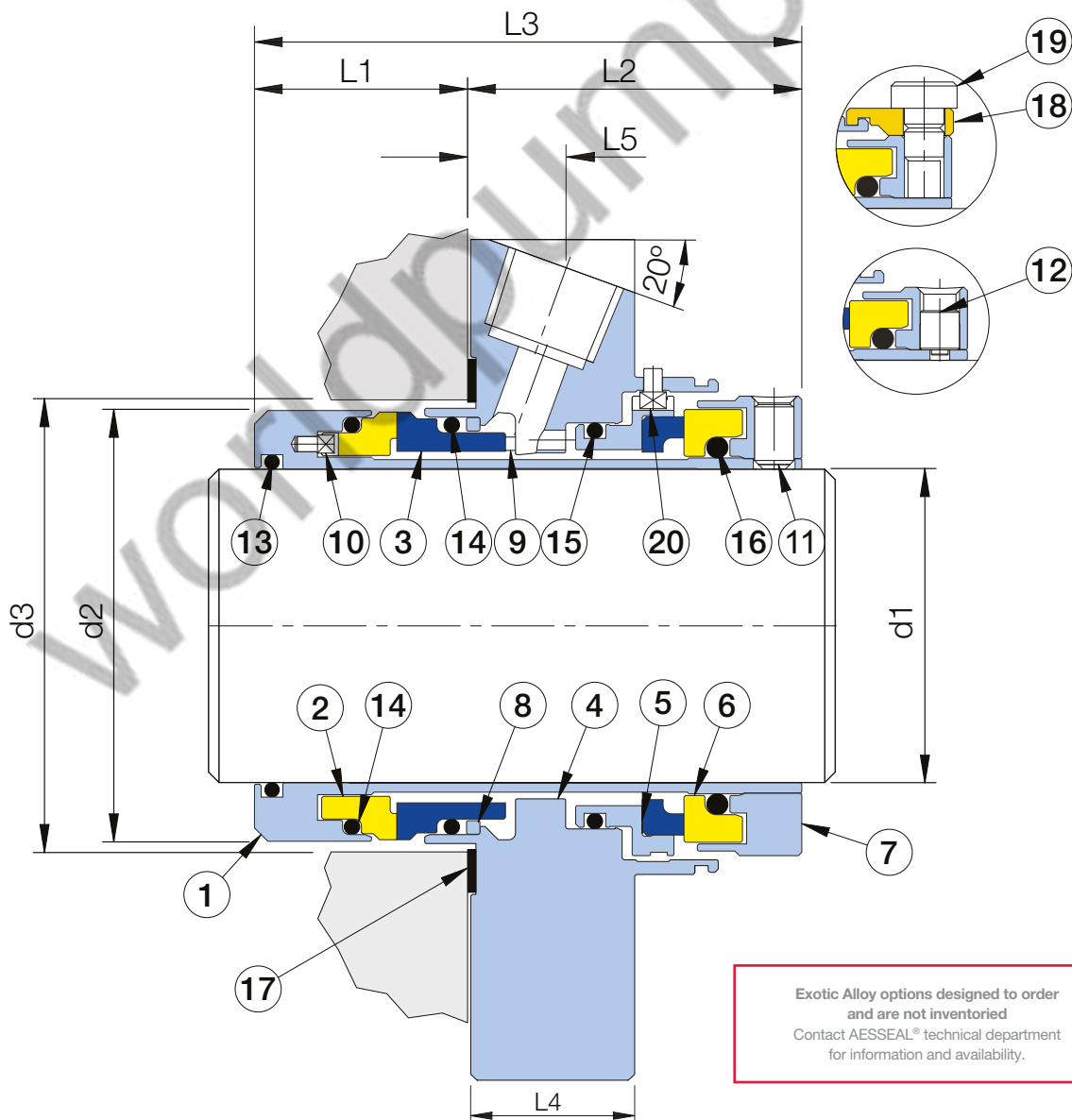
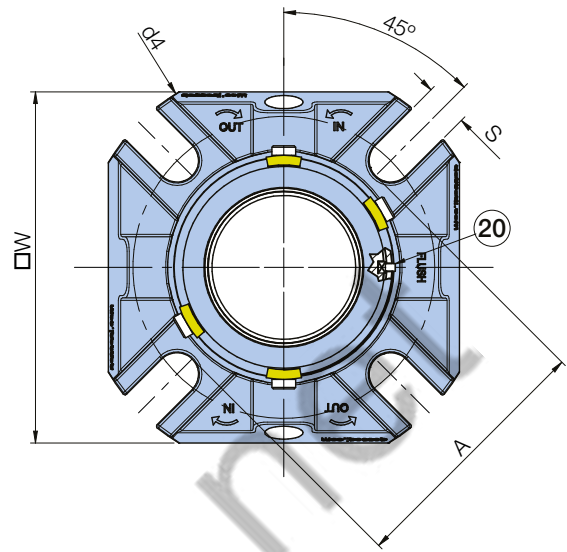
Improved Barrier Fluid Flow

The CKD™ includes an integral (patent pending) pumping device that increases barrier / buffer fluid flow and directs the flow towards the seal faces. This increased flow assists with heat removal and improves seal reliability.



CKD™ — Dimensional Information

Item	Description	Material
1	Sleeve	316L Stainless Steel
2	Inboard Rotary Face	Carbon / SiC / TC
3	Inboard Stationary Face	SiC / TC
4	Gland	316 Stainless Steel
5	Outboard Stationary Face Assembly	316L SS - Carbon
6	Outboard Rotary Face	SiC / TC
7	Clamp Ring	316L Stainless Steel
8	Back Up Ring	316L Stainless Steel
9	Springs	Alloy 276
10	Internal Drive Pin	316L Stainless Steel
11	Drive Screw	17-4PH SS
12	Anti-Tamper Screw	316 Stainless Steel
13	Sleeve O Ring	AES-ELAST / EPR / FFKM / FKM / TFE/P
14	Inboard Rotary/Stationary O Ring	AES-ELAST / EPR / FFKM / FKM / TFE/P
15	Outboard Stationary O Ring	AES-ELAST / EPR / FFKM / FKM / TFE/P
16	Outboard Rotary O Ring	AES-ELAST / EPR / FFKM / FKM / TFE/P
17	Gasket	AF1 / GFT
18	Setting Clip	Phosphor Bronze
19	Clip Screws	316 Stainless Steel
20	Anti-Rotation Pin	316L Stainless Steel



Exotic Alloy options designed to order and are not inventoried
 Contact AESSEAL® technical department for information and availability.



CKD™ – Dimensional Information (mm)

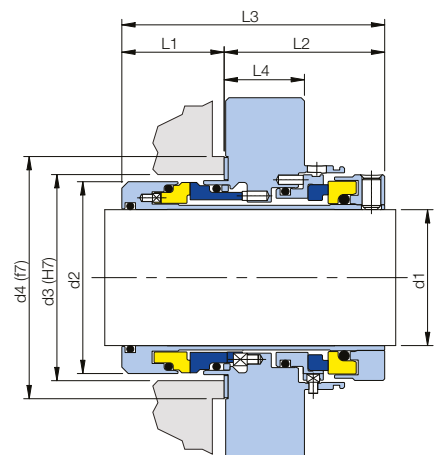
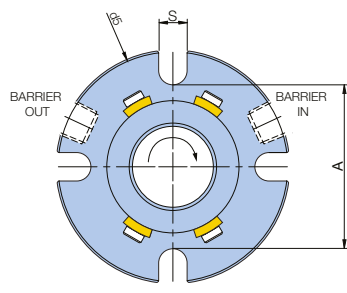
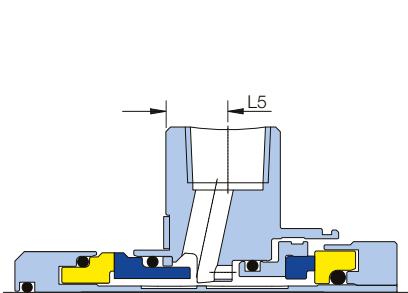
d1	d2	d3 (min)	d3 (max)	d4	L1	L2	L3	L4	L5	W	A	S	Port
25	43.0	44.0	51.0	105	32.4	50.8	83.2	25.4	15	98.4	61.0	14	3/8 NPT
28	46.0	47.0	52.0	105	32.4	50.8	83.2	25.4	15	98.4	61.0	14	3/8 NPT
30	47.6	49.0	55.5	105	32.4	50.8	83.2	25.4	15	98.4	66.7	14	3/8 NPT
32	49.6	51.0	57.0	110	32.4	50.8	83.2	25.4	15	101.6	68.6	14	3/8 NPT
33	49.6	51.0	57.0	110	32.4	50.8	83.2	25.4	15	101.6	68.6	14	3/8 NPT
35	52.8	54.0	62.0	113	32.4	50.8	83.2	25.4	15	104.8	72.0	14	3/8 NPT
38	56.0	57.0	66.5	135	32.4	50.8	83.2	25.4	15	114.3	80.7	14	3/8 NPT
40	57.5	59.0	68.0	135	32.4	50.8	83.2	25.4	15	114.3	80.7	14	3/8 NPT
42	60.7	61.5	69.5	135	32.4	50.8	83.2	25.4	15	114.3	80.7	14	3/8 NPT
43	60.7	61.5	69.5	135	32.4	50.8	83.2	25.4	15	114.3	80.7	14	3/8 NPT
45	62.3	63.5	73.0	139	32.4	50.8	83.2	25.4	15	117.5	83.7	14	3/8 NPT
48	65.5	66.7	73.0	139	32.4	50.8	83.2	25.4	15	117.5	83.7	14	3/8 NPT
50	68.0	69.0	76.2	150	32.4	50.8	83.2	25.4	15	127.0	87.6	18	3/8 NPT
53	71.8	73.0	85.0	150	32.4	50.8	83.2	25.4	15	136.5	97.0	18	3/8 NPT
55	72.8	74.0	85.0	150	32.4	50.8	83.2	25.4	15	136.5	97.0	18	3/8 NPT
60	78.2	79.0	90.0	164.5	32.4	50.8	83.2	25.4	15	139.7	102.4	18	3/8 NPT
63	81.4	83.0	96.0	170.8	32.4	50.8	83.2	25.4	15	147.3	108.7	18	3/8 NPT
65	84.5	85.7	96.0	170.8	32.4	50.8	83.2	25.4	15	147.3	108.7	18	3/8 NPT
70	87.7	89.0	100.0	180.3	32.4	50.8	83.2	25.4	15	152.4	111.9	18	3/8 NPT
75	99.6	101.6	116.0	189.2	40.6	62.5	103.1	28.6	18	169.4	131.4	18	3/8 NPT
80	105.9	108.0	127.0	201.9	40.6	62.5	103.1	28.6	18	182.1	142.5	22	3/8 NPT
85	109.1	111.1	127.0	201.9	40.6	62.5	103.1	28.6	18	182.1	142.5	22	3/8 NPT
90	115.4	117.5	136.5	214.6	40.6	62.5	103.1	28.6	18	194.8	152.0	22	3/8 NPT
95	118.6	120.7	136.5	214.6	40.6	62.5	103.1	28.6	18	194.8	152.0	22	3/8 NPT
100	125.0	127.0	139.7	227.3	40.6	62.5	103.1	28.6	18	207.5	155.2	22	3/8 NPT

CKD™ – Dimensional Information (inches)

d1	d2	d3 (min)	d3 (max)	d4	L1	L2	L3	L4	L5	W	A	S	Port
1.000	1.693	1.750	2.000	4.134	1.275	2.000	3.275	1.000	0.591	3.875	2.400	0.551	3/8 NPT
1.125	1.811	1.875	2.062	4.134	1.275	2.000	3.275	1.000	0.591	3.875	2.400	0.551	3/8 NPT
1.187	1.874	1.937	2.187	4.134	1.275	2.000	3.275	1.000	0.591	3.875	2.625	0.551	3/8 NPT
1.250	1.953	2.000	2.250	4.331	1.275	2.000	3.275	1.000	0.591	4.000	2.700	0.551	3/8 NPT
1.375	2.078	2.125	2.437	4.449	1.275	2.000	3.275	1.000	0.591	4.125	2.835	0.551	3/8 NPT
1.500	2.203	2.250	2.625	5.315	1.275	2.000	3.275	1.000	0.591	4.500	3.177	0.551	3/8 NPT
1.562	2.265	2.312	2.687	5.315	1.275	2.000	3.275	1.000	0.591	4.500	3.177	0.551	3/8 NPT
1.625	2.328	2.375	2.687	5.315	1.275	2.000	3.275	1.000	0.591	4.500	3.177	0.551	3/8 NPT
1.687	2.390	2.437	2.687	5.315	1.275	2.000	3.275	1.000	0.591	4.500	3.177	0.551	3/8 NPT
1.750	2.453	2.500	2.875	5.472	1.275	2.000	3.275	1.000	0.591	4.625	3.297	0.551	3/8 NPT
1.875	2.578	2.625	2.875	5.472	1.275	2.000	3.275	1.000	0.591	4.625	3.297	0.551	3/8 NPT
2.000	2.677	2.750	3.000	5.906	1.275	2.000	3.275	1.000	0.591	5.000	3.450	0.709	3/8 NPT
2.125	2.828	2.875	3.312	5.906	1.275	2.000	3.275	1.000	0.591	5.375	3.819	0.709	3/8 NPT
2.250	2.953	3.000	3.500	6.476	1.275	2.000	3.275	1.000	0.591	5.500	4.030	0.709	3/8 NPT
2.375	3.078	3.125	3.562	6.476	1.275	2.000	3.275	1.000	0.591	5.500	4.030	0.709	3/8 NPT
2.500	3.203	3.250	3.750	6.724	1.275	2.000	3.275	1.000	0.591	5.800	4.280	0.709	3/8 NPT
2.625	3.328	3.375	3.750	6.724	1.275	2.000	3.275	1.000	0.591	5.800	4.280	0.709	3/8 NPT
2.750	3.453	3.500	3.937	7.098	1.275	2.000	3.275	1.000	0.591	6.000	4.405	0.709	3/8 NPT
2.875	3.920	4.000	4.562	7.449	1.600	2.460	4.060	1.125	0.709	6.670	5.173	0.709	3/8 NPT
3.000	3.920	4.000	4.562	7.449	1.600	2.460	4.060	1.125	0.709	6.670	5.173	0.709	3/8 NPT
3.125	4.170	4.250	5.000	7.949	1.600	2.460	4.060	1.125	0.709	7.170	5.611	0.866	3/8 NPT
3.250	4.170	4.250	5.000	7.949	1.600	2.460	4.060	1.125	0.709	7.170	5.611	0.866	3/8 NPT
3.375	4.295	4.375	5.000	7.949	1.600	2.460	4.060	1.125	0.709	7.170	5.611	0.866	3/8 NPT
3.500	4.420	4.500	5.000	7.949	1.600	2.460	4.060	1.125	0.709	7.170	5.611	0.866	3/8 NPT
3.625	4.545	4.625	5.375	8.449	1.600	2.460	4.060	1.125	0.709	7.670	5.986	0.866	3/8 NPT
3.750	4.670	4.750	5.375	8.449	1.600	2.460	4.060	1.125	0.709	7.670	5.986	0.866	3/8 NPT
3.875	4.920	5.000	5.500	8.949	1.600	2.460	4.060	1.125	0.709	8.170	6.111	0.866	3/8 NPT
4.000	4.920	5.000	5.500	8.949	1.600	2.460	4.060	1.125	0.709	8.170	6.111	0.866	3/8 NPT

KSB Pump Specific

KSB CKD™ – Dimensional Information (mm)



d1	d2	d3	d4	d5	L1	L2	L3	L4	L5	A	S	Port
33	49.6	51.0	65.0	105	32.4	50.8	83.2	25.4	14	68.6	14	3/8 NPT
43	60.7	65.0	80.0	115	32.4	50.8	83.2	25.4	14	80.7	14	3/8 NPT
53	71.8	75.0	95.0	135	32.4	50.8	83.2	25.4	14	101.0	14	3/8 NPT



Seal Support Systems

AESSEAL® high performance barrier fluid systems help to increase plant uptime even further by enhancing the environment in which mechanical seals operate. Many of these barrier fluid systems are patented, which means that the technology is exclusive to AESSEAL®. A small selection is shown below, for more information please visit www.aesseal.com/systems



EasyClean™ — Split Vessel System

- **10 / 25 litre (2.8 / 6.6 gal US) 304 SS vessel construction** — Suitable for a range of challenging environments and is ideal in the Pharmaceutical and Food & Beverage industries
- **Split vessel design** — Simple patented design solves critical issues in applications requiring higher standards of cleanliness
- **Quick release clamp** — Allows easy access for in depth vessel inspection and cleaning
- **Optional cooling coil and weld pad** — Optimizes temperature control and monitors fluid level



SW Range (SW2™ and SW3™) — Water Management Systems

- **10 / 25 litre (2.8 / 6.6 gal US) 304 SS vessel construction** — Suitable for a range of challenging environments
- **Water regulator** — Maintains water level and pressure in the vessel
- **Flow indicator** — Visually alerts the user to an inboard seal failure
- **Non-return valve** — Protects plant water supply from contamination, and maintains vessel pressure in the event of supply interruption
- **Available with / without cooling coil** — Additional heat dump available if required



AES-15™ Systems

- **316 SS vessel construction** — Suitable for challenging plant environments
- **Higher pressure** — Suitable for a wide range of arduous environments. Vessel design rating 30 barg @ 200°C (435 psig @ 392°F)
- **Enhanced modular design** — Suitable for both American and European site applications
- **Cooling coil as standard** — Increases the surface area available for barrier fluid cooling



FDU™ — Fluid Distribution Unit

- **Independent pressurised fluid supply system** — Removes the expense of piping a pressurised clean water / oil supply to a new area of the plant
- **Feeds a number of seal support systems** — Removes the expense of purchasing one system per seal
- **Optional pressure switch and accumulator** — Enables greater control of water / oil line pressure
- **Reduced energy consumption** — The system can be operated intermittently to reduce energy costs via dead-ended piping



ENVIRONMENTAL TECHNOLOGY

Eliminate 52% of bearing failures

A major study into equipment reliability has shown 52% of all bearing failures are due to particle contamination and corrosion caused by water contamination.

The LabTecta®66 bearing protection range can reduce bearing oil contamination from 83% to 0.0003% significantly reducing bearing failure, which represents 20.8% of all rotating equipment failures.

Particle Contamination
48%

Lubrication
11%

Corrosion
4%

Other
5%

Overloading
4%

Misalignment
13%

Disassembly
15%





ENVIRONMENTAL TECHNOLOGY

To experience the exceptional, please contact your local representative. Discover full details on our website:

www.aesseal.com

This brochure is fully recyclable. When laminated, a sustainable, biodegradable and recyclable lamination is used.

For further information and safe operating limits contact our technical specialists at the locations below.



Use double mechanical seals with hazardous products.

Always take safety precautions:

- Guard your equipment
- Wear protective clothing



WARNING

AESSEAL plc is certified to ISO 9001, ISO 14001, ISO/IEC 20000, ISO/IEC 27001, ISO/TS 29001, ISO 37001, ISO 45001 & ISO 50001

UK Sales & Technical advice:

AESSEAL plc
Mill Close
Bradmarsh Business Park
Rotherham,
S60 1BZ, UK
Tel: +44 (0) 1709 369966
E-mail: enquiries@aesseeal.info
www.aesseal.com



AESSEAL plc is Net Zero for Manufacturing in the UK



USA Sales & Technical advice:

AESSEAL Inc.
355 Dunavant Drive
Rockford,
TN. 37853,
USA
Tel: +1 865 531 0192
E-mail: usa@aesseeal.com
www.aesseal.com

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