



CDMSC[™] Cartridge Double Mixer Seal



- EXTERNALLY MOUNTED CARTRIDGE SEAL
- ABILITY TO ACCOMMODATE AXIAL AND RADIAL MOVEMENT ON MIXER APPLICATIONS
- INTEGRAL COOLING JACKET
- MULTI-PORT FLUSH OPTION
- MONOLITHIC SEAL FACES
- EXOTIC ALLOY WETTED OPTIONS

CDMSC™ - the optimum mixer seal without bearings

The CDMSC™ is designed specifically for Mixer, Agitator and Reactor applications.

This externally mounted cartridge seal has many features incorporated into the design to help increase seal life.

The CDMSC™ is based around the modular technology of the patented DMSF™, thereby making it both available and affordable.

Radial Shaft Movement

Inevitably in most agitator applications, radial and/or axial shaft movement occurs.

Under slow shaft speed conditions, the CDMSC™ will accept moderate amounts of radial movement or Total Indicated Runout (TIR).

In any mechanical seal design, radial shaft movement is not preferred nor is it conducive to an optimum seal life.

Wherever possible this movement should be eliminated through the use of an appropriate bearing arrangement. Alternatively, this movement could be eliminated through the selection of an appropriate seal with integral bearing such as a Mixmaster V™, VI™ or VII™.

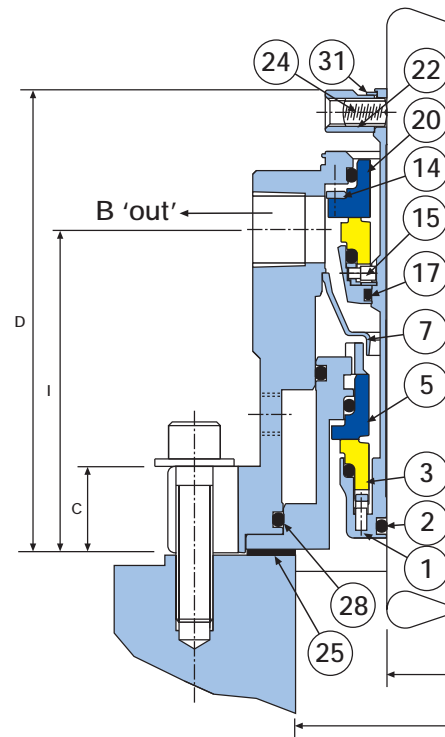
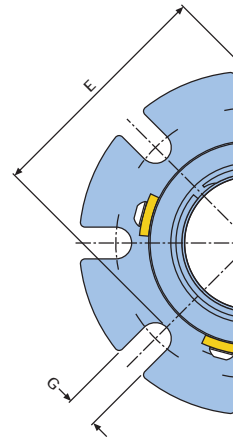
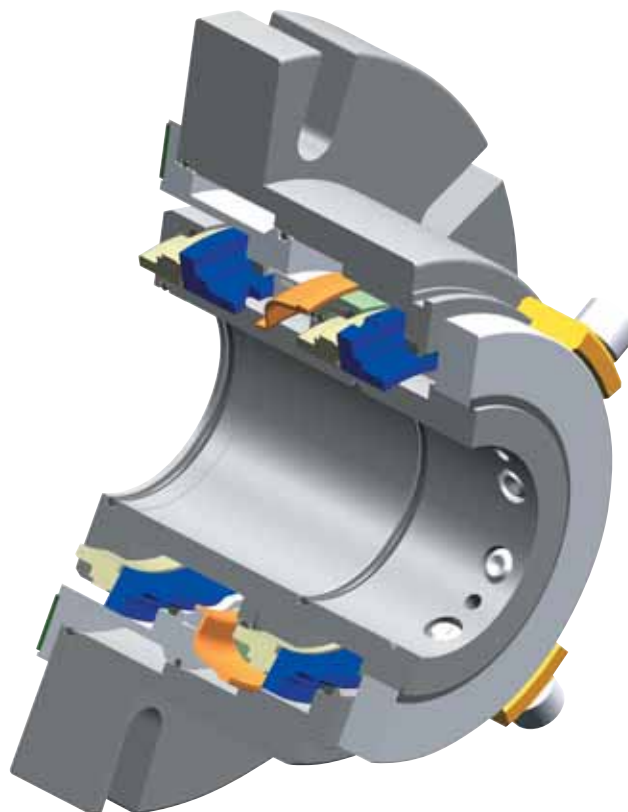
Axial Shaft Movement

Reciprocating shaft movement must also be eliminated.

It is not uncommon to find thermal shaft growth in Agitator applications.

The CDMSC™ will accept moderate amounts of axial shaft movement from thermal growth.

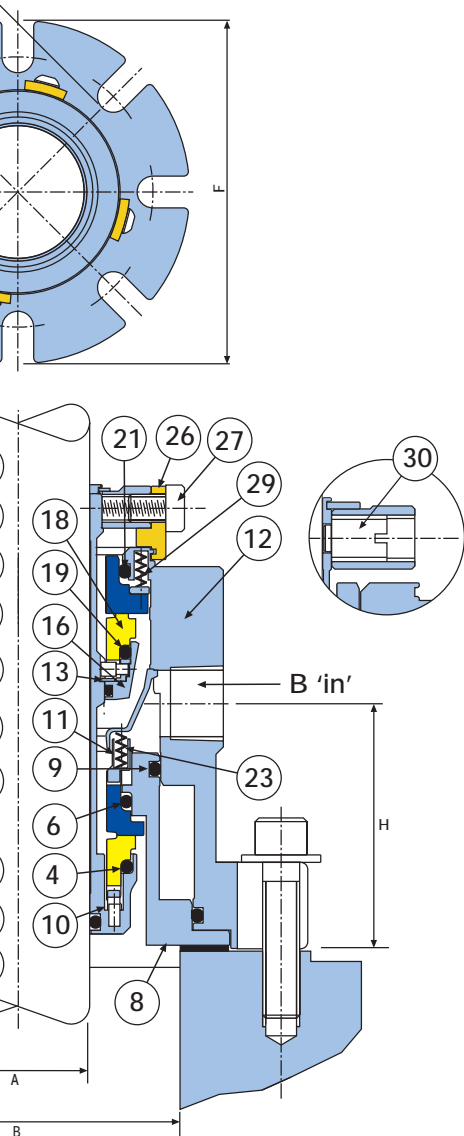
For shaft growth in excess of the stated figures, an alternate seal design such as a CSWIB-AX™ or BSWIB-AX™ is the preferred solution. In such cases consult the AESSEAL® technical department.



Item	Description
1	Sleeve
2	Sleeve O Ring
3	Internal Rotary Face*
4	Internal Rotary Face O Ring
5	Internal Stationary Face*
6	Internal Stationary Face O Ring
7	Deflector
8	Gland Insert
9	Gland Insert O Ring
10	Internal Drive Ring / Drive Pins*
11	Internal Spring Plate
12	Gland
13	Circlip
14	External Spring Plate
15	External Drive Ring / Drive Pins*
16	External Rotary Holder
17	External Rotary Holder O Ring
18	External Rotary Face*
19	External Rotary Face O Ring
20	External Stationary Face*
21	External Stationary Face O Ring
22	Clamp Ring
23	Internal Springs
24	Drive Screws
25	Gasket
26	Setting Clips
27	Clip Screws
28	Gland Insert O Ring
29	External Springs
30	Anti Tamper Screws
31	Circlip

CDMSC™ - dimensional information

Seal Sizes:- 60mm - 125mm (2.375" - 5.000")

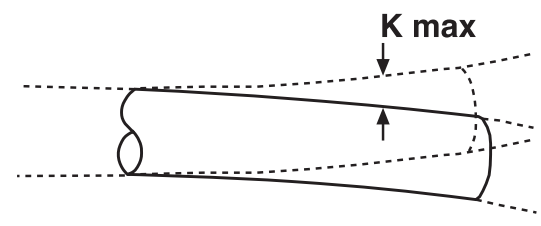


Seal Size	A	B Min	B Max	C	D	E	G (Qty.)	F	G	H	I	K (max)
60	60.0	85.0	133.0	36.8	122.6	154.0	8	210.0	14.0	67.2	83.7	6.0
65	65.0	90.0	139.0	36.8	122.6	154.0	8	210.0	14.0	67.2	83.7	6.0
70	70.0	95.0	139.0	36.8	122.6	154.0	8	210.0	14.0	67.2	83.7	6.0
75	75.0	100.0	139.0	36.8	122.6	156.0	8	219.0	14.0	67.2	83.7	6.0
80	80.0	105.0	165.0	36.8	127.0	189.2	8	261.0	14.0	67.2	83.7	6.0
85	85.0	110.0	165.0	36.8	127.0	189.2	8	261.0	14.0	67.2	83.7	6.0
90	90.0	115.0	190.5	36.8	127.0	212.7	8	261.0	14.0	67.2	83.7	6.0
95	95.0	120.0	190.5	36.8	127.0	212.7	8	261.0	14.0	67.2	83.7	6.0
100	100.0	125.0	190.5	36.8	127.0	212.7	8	261.0	14.0	67.2	83.7	6.0
105	105.0	130.0	203.2	36.8	127.0	233.5	8	273.0	14.0	67.2	83.7	6.0
110	110.0	135.0	203.2	36.8	127.0	233.5	8	273.0	14.0	67.2	83.7	6.0
115	115.0	140.0	222.2	36.8	127.0	259.0	8	305.0	14.0	67.2	83.7	6.0
120	120.0	145.0	222.2	36.8	127.0	259.0	8	305.0	14.0	67.2	83.7	6.0
125	125.0	150.0	222.2	36.8	127.0	259.0	8	305.0	14.0	67.2	83.7	6.0
2.375	2.375	3.375	5.236	1.447	4.829	6.063	8	8.260	0.551	2.647	3.294	0.236
2.500	2.500	3.500	5.236	1.447	4.829	6.063	8	8.260	0.551	2.647	3.294	0.236
2.625	2.625	3.625	5.472	1.447	4.829	6.063	8	8.260	0.551	2.647	3.294	0.236
2.750	2.750	3.750	5.472	1.447	4.829	6.063	8	8.260	0.551	2.647	3.294	0.236
2.875	2.875	3.875	5.472	1.447	4.829	6.063	8	8.260	0.551	2.647	3.294	0.236
3.000	3.000	4.000	5.472	1.447	4.829	6.142	8	8.620	0.551	2.647	3.294	0.236
3.125	3.125	4.125	6.500	1.447	5.000	7.449	8	10.276	0.551	2.647	3.294	0.236
3.250	3.250	4.250	6.500	1.447	5.000	7.449	8	10.276	0.551	2.647	3.294	0.236
3.375	3.375	4.375	6.500	1.447	5.000	7.449	8	10.276	0.551	2.647	3.294	0.236
3.500	3.500	4.500	6.500	1.447	5.000	7.449	8	10.276	0.551	2.647	3.294	0.236
3.625	3.625	4.625	7.500	1.447	5.000	8.375	8	10.276	0.551	2.647	3.294	0.236
3.750	3.750	4.750	7.500	1.447	5.000	8.375	8	10.276	0.551	2.647	3.294	0.236
3.875	3.875	4.875	7.500	1.447	5.000	8.375	8	10.276	0.551	2.647	3.294	0.236
4.000	4.000	5.000	7.500	1.447	5.000	8.375	8	10.276	0.551	2.647	3.294	0.236
4.125	4.125	5.125	8.000	1.447	5.000	9.193	8	10.750	0.551	2.647	3.294	0.236
4.250	4.250	5.250	8.000	1.447	5.000	9.193	8	10.750	0.551	2.647	3.294	0.236
4.375	4.375	5.375	8.000	1.447	5.000	9.193	8	10.750	0.551	2.647	3.294	0.236
4.500	4.500	5.500	8.000	1.447	5.000	9.193	8	10.750	0.551	2.647	3.294	0.236
4.625	4.625	5.625	8.750	1.447	5.000	10.197	8	12.000	0.551	2.647	3.294	0.236
4.750	4.750	5.750	8.750	1.447	5.000	10.197	8	12.000	0.551	2.647	3.294	0.236
4.875	4.875	5.875	8.750	1.447	5.000	10.197	8	12.000	0.551	2.647	3.294	0.236
5.000	5.000	6.000	8.750	1.447	5.000	10.197	8	12.000	0.551	2.647	3.294	0.236

• Check availability - most sizes are made to order only

Axial shaft movement under thermal expansion conditions only	
Seal Size	Axial Movement
60mm - 125mm	+/- 1.0mm
2.375" - 5.000"	+/- 0.040"

Material
316L SS
Viton® / EPR / Kalrez® / Aflas®
Carbon / SiC / TC
Viton® / EPR / Kalrez® / Aflas®
SiC / TC
Viton® / EPR / Kalrez® / Aflas®
316L SS
316L SS
Viton® / EPR / Kalrez® / Aflas®
316L SS
316L SS
316L SS
Stainless Steel
316L SS
316L SS
316L SS
Viton® / EPR / Kalrez® / Aflas®
Carbon / SiC / TC
Viton® / EPR / Kalrez® / Aflas®
SiC / TC
Viton® / EPR / Kalrez® / Aflas®
316L SS
Alloy 276
Stainless Steel
AF1 / GFT PTFE
Zinc Alloy / Brass
Stainless Steel
Viton® / EPR / Kalrez® / Aflas®
Alloy 276
Stainless Steel
Stainless Steel

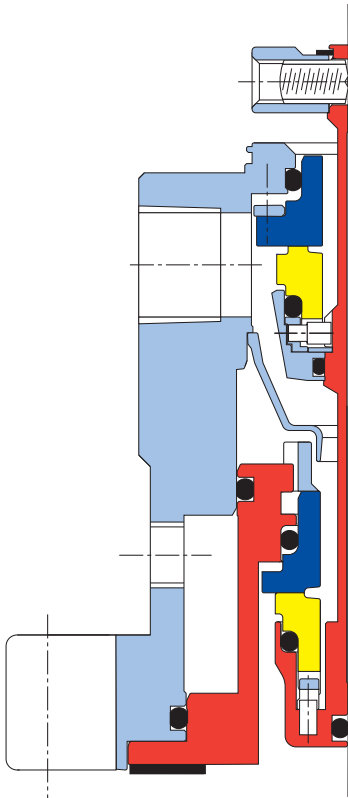


Thermal Applications

As the CDMSC™ incorporates FOUR monolithic seal faces, the design has an excellent ability to seal thermally challenging applications.

It is important to note that when selecting a seal to operate in the vapor space of a top entry agitator, the temperature at the inboard seal faces will be approximately 70% of the process temperature - See AESSEAL® Gold Training Course for further information.

*Size dependant features



The Importance of Correct Venting

If poorly vented, damage will occur to any mechanical seal face design, which is not designed for such "dry" running conditions.

Priming the seal faces is particularly important on vertical applications.

The CDMSC™ has a barrier outlet port positioned in such a manner as to correctly and reliably vent air from the barrier system.

Environmental Control

Often the most applicable solution to sealing difficult applications is to change the seal environment.

The CDMSC™ design includes an integral cooling / heating jacket. This can be used to cool or heat the seal environment helping to extend seal life in difficult thermal applications.

Furthermore, the gland insert used to create the environmental jacket can be offered to include a multi-port flush option. This ensures equal circumferential seal face quenching helping to eliminate un-quenched areas.

Exotic Alloy Options

Occasionally the process media in a reactor is chemically aggressive.

The CDMSC™ can be offered with wetted parts supplied in any commercially available material. Standard materials offered include Alloy 276, Titanium, Alloy 255 and Alloy 400.

In addition to a vast range of mechanical seals, AESSEAL® has a specialized systems division, dedicated to the design and manufacture of a comprehensive range of seal support packages for double mechanical seals. These support systems range from Thermosyphon systems, SWFF-TF™, FLOWTRUE™ and AES-15™, to the fully featured forced circulation system PUMPPAC™ for use on oil and water applications.

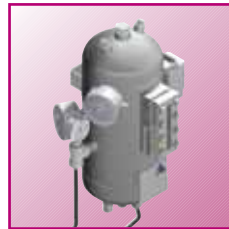
SWFF-TF™



FLOWTRUE™



AES-15™



PUMPPAC™



The systems above are compatible with a wide selection of barrier and buffer fluid media. They are supplied pre-assembled with all necessary components and fittings. On-site inventory costs are reduced by modular system construction.

THIS DOCUMENT IS DESIGNED TO PROVIDE DIMENSIONAL INFORMATION AND AN INDICATION OF AVAILABILITY. 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



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