

# RDSX™

Radially Divided Seal Range



- Minimum parts to assemble
- Patented assembled spring retainer
- External, visible indicator of correct installation
- Balanced stationary design with large internal clearances
- Unique 'O' ring design

## RDSX™ — Radially Divided Seal

The RDSX™ seal eliminates the need to remove or strip equipment for seal replacement. The self-aligning rotary makes the RDSX™ one of the easiest and quickest to install split seals on the market today.



### RDSX™ Features

- Self-aligning stationary and rotary seal faces
- Installation wear indicator
- Hydraulically balanced seal-faces
- Patented assembled spring retainer
- Unique 'O'ring design
- Minimum parts

### Benefits

- Enables quick and successful installation and a long seal life.
- Shows seal is correctly installed and indicates seal life.
- Reduces seal-face loading, maximizing seal life and allowing for vacuum service capability
- Springs are not under compression during installation
- Predictable and simple joining and assembly
- Quick and easy to assemble

The RDSX™ has been developed after extensive research and customer feedback to increase the ease of fitting the seal correctly – first time.

A comprehensive product development and dynamic testing process makes the RDSX™ the ideal product to offer mechanical seal benefits over traditional packing solutions without increasing maintenance costs or downtime.

### Key applications

- Pulp & Paper
- Clean Water
- Large equipment
- In expensive and difficult maintenance situations

### Self-aligning Seal

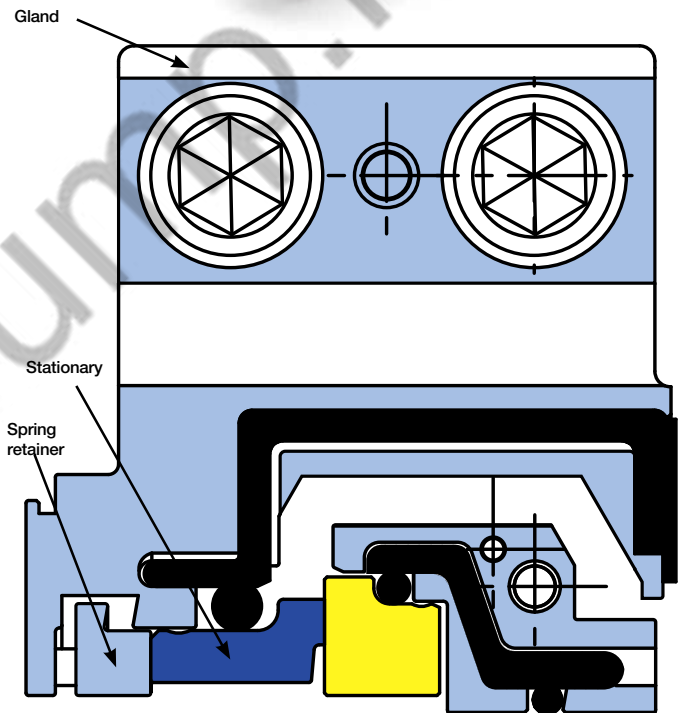
The RDSX™ with its spring-loaded stationary is specifically designed to accommodate typical misalignment problems.

In addition clearances have been optimized between the rotary and stationary members and the gland halves, which minimizes dead-ending or solidification problems that could be present in a stationary seal that had minimal clearances, particularly around the outside diameter of the stationary.

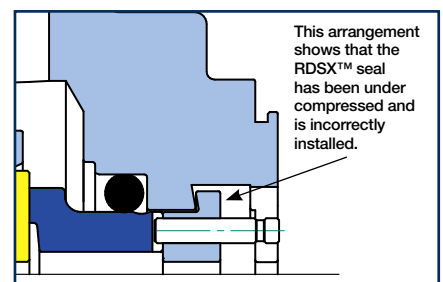
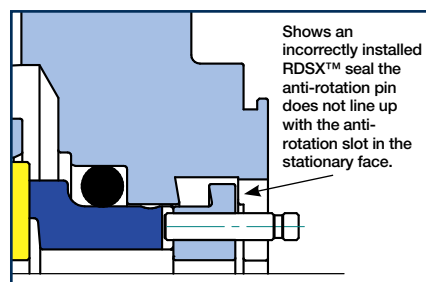
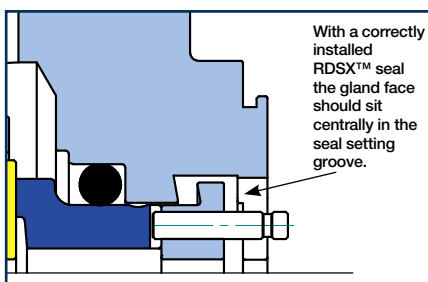
### Installation and Wear Indicator

The stationary anti-rotation pin acts as an indicator that the RDSX™ seal has been properly installed, before pressurising and running the equipment.

As the seal ages, the end of the pin will move progressively towards the RDSX™ gland as wear takes place, providing an indication of the remaining seal life. When the end of the pin is level with the gland, the RDSX™ seal face replacement kit should be installed.



RDSX™ seal anti rotation setting and wear indicator pin arrangement



Where no emissions or leakage, even on an occasional basis, can be tolerated, our radially divided mechanical seal should not be installed.

## Design Concept

The most important single objective was to design a radially divided seal that was easy to install. This was achieved by having the smallest possible number of parts to assemble.

The entire seal assembly comprises of only three 'O' rings, two rotary halves, two stationary halves and two gland cartridge halves, which include the springs and spring retainer. The only other parts are socket set screws and Allen keys.

A pre-assembled patented spring retainer ensures the springs are not under compression during the initial assembly. All seal parts are assembled, fixed to the shaft and tightened, before loading the springs, which are only compressed when the seal assembly is bolted to the face of the stuffing box.

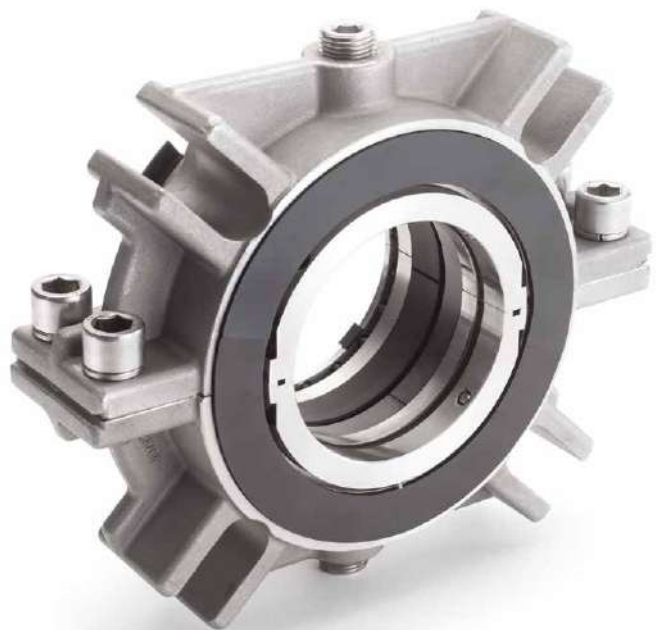
The elastomer seals for both the rotary face and gland assembly have been designed to simplify installation.



Dynamic test rig with 7.500" (190mm) RDSX™ installed



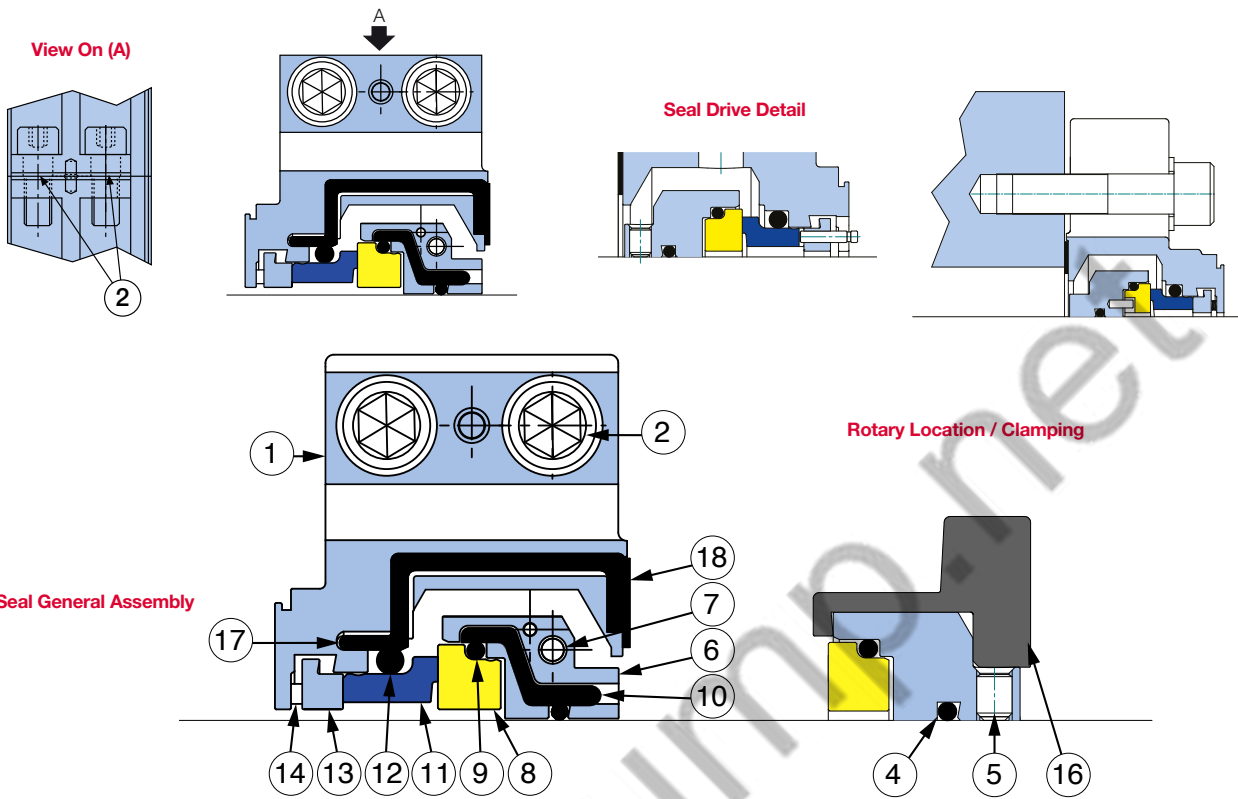
RDSX™ face testing equipment





### Gland Half Location and Bolting Detail

### Gland Bolting Detail



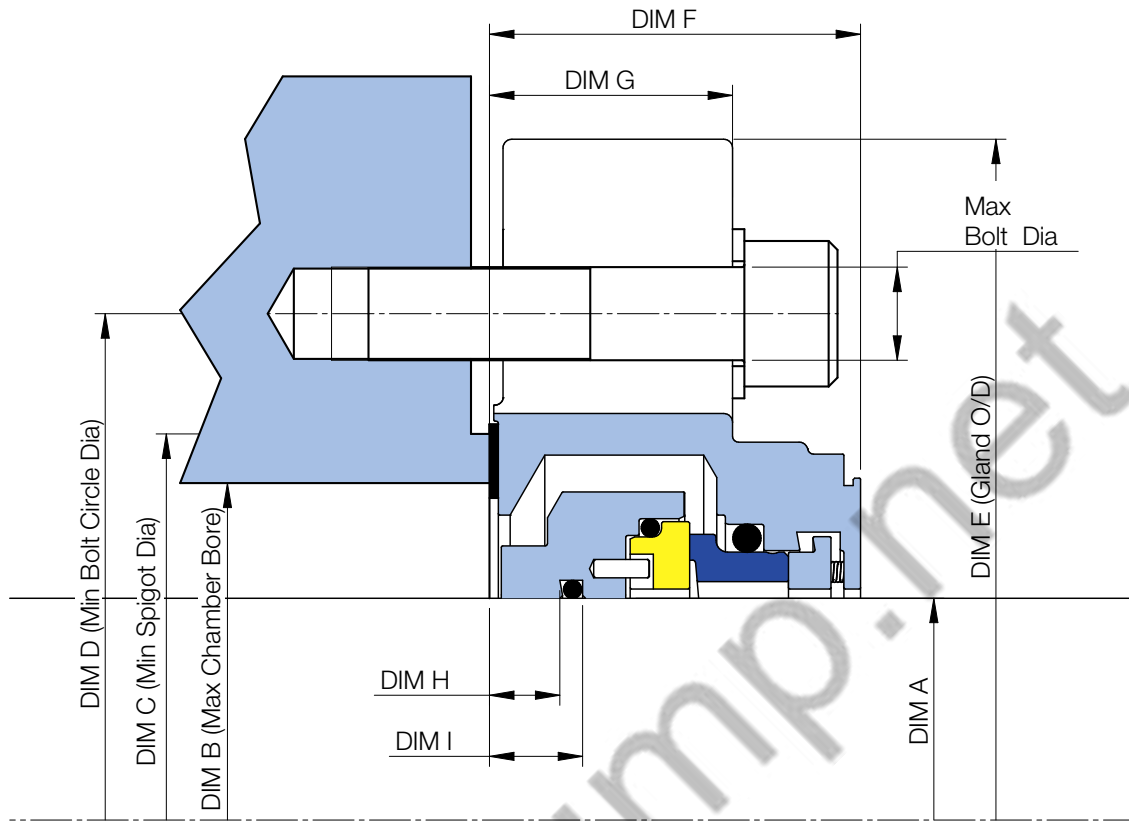
ITEM	DESCRIPTION	MATERIAL
1	Gland	316 SS
2	Gland Bolts	SS
3*	Centering Clips	Plastic
4	Shaft 'O' ring	FKM / TFE/P
5	Drive Screw	SS
6	Rotary Holder	316L SS
7	Rotary Caphead	SS
8	Rotary Face	SiC
9	Rotary 'O' ring	FKM / TFE/P

ITEM	DESCRIPTION	MATERIAL
10	Rotary Holder Gasket	FKM / TFE/P
11	Stationary Face	Carbon/SiC
12	Stationary 'O' ring	FKM / TFE/P
13	Spring Retainer	316L SS
14	Springs	Alloy 276
15*	Anti-Rotation Pins	316 SS
16	Rotary Setting Clips	Plastic
17	Gland 'U' Gasket	FKM / TFE/P
18	Gland Face Gasket	FKM / TFE/P

\* Item not shown

“ Our purpose is to give our customers such exceptional service that they need never consider alternative sources of supply. ”

# RDSX™ — Technical Information



Adaptor plates available, contact the AESSEAL® technical department

## RDSX™ — Dimensional Information (inches)

DIM A	DIM B	DIM C	DIM D	DIM E	DIM F	DIM G	DIM H	DIM I	Max Bolt Ø
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### 2.500" - 2.625" RDSX™ seal from -21 casting (Small Range)

2.500	3.750	4.250	5.125	6.500	1.883	1.659	0.417	0.514	0.625
2.625	3.750	4.250	5.125	6.500	1.883	1.659	0.417	0.514	0.625

### 2.625" - 2.750" RDSX™ seal from -22 casting

2.625	4.250	4.750	5.687	7.750	2.500	1.750	0.450	0.650	0.625
2.750	4.250	4.750	5.687	7.750	2.500	1.750	0.450	0.650	0.625

### 2.500" - 3.000" RDSX™ seal from -24/21 casting

2.500	4.500	5.000	5.937	8.000	2.500	1.750	0.450	0.650	0.625
2.875	4.500	5.000	5.937	8.000	2.500	1.750	0.450	0.650	0.625
3.000	4.500	5.000	5.937	8.000	2.500	1.750	0.450	0.650	0.625

### 2.500" - 3.250" RDSX™ seal from -26/20 casting)

3.125	4.750	5.250	6.250	8.250	2.500	1.750	0.450	0.650	0.625
3.250	4.750	5.250	6.250	8.250	2.500	1.750	0.450	0.650	0.625

### 2.625" - 3.500" RDSX™ seal from -28/22 casting

3.375	5.000	5.500	6.562	8.500	2.500	1.750	0.450	0.650	0.750
3.500	5.000	5.500	6.562	8.500	2.500	1.750	0.450	0.650	0.750

## RDSX™ — Dimensional Information (mm)

DIM A	DIM B	DIM C	DIM D	DIM E	DIM F	DIM G	DIM H	DIM I	Max Bolt Ø
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### 63mm - 65mm RDSX™ seal from -21 casting (Small Range)

63	95.3	108.0	130.2	165.1	47.8	42.1	10.6	13.1	16.0
65	95.3	108.0	130.2	165.1	47.8	42.1	10.6	13.1	16.0

### 65mm - 70mm RDSX™ seal from -22 casting)

65	108.0	120.7	144.4	196.9	63.5	44.5	11.5	16.5	16.0
70	108.0	120.7	144.4	196.9	63.5	44.5	11.5	16.5	16.0

### 65mm - 75mm RDSX™ seal from -24/21 casting

75	114.3	127.0	150.8	203.2	63.5	44.5	11.5	16.5	16.0
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### 65mm - 80mm RDSX™ seal from -26/20 casting

80	120.7	133.4	158.8	209.6	63.5	44.5	11.5	16.5	16.0
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### 65mm - 85mm RDSX™ seal from -28/22 casting

85	127.0	139.7	166.7	215.9	63.5	44.5	11.5	16.5	20.0
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All specified sizes are planned inventory item. For details on sizes not shown contact AESSEAL®



## RDSX™ – Dimensional Information (inches)

DIM A	DIM B	DIM C	DIM D	DIM E	DIM F	DIM G	DIM H	DIM I	Max Bolt Ø
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### 2.875" - 3.750" RDSX™ seal from -30/24 casting

3.625	5.250	5.750	6.750	8.750	2.500	1.750	0.450	0.650	0.750
3.750	5.250	5.750	6.750	8.750	2.500	1.750	0.450	0.650	0.750

### 3.125" - 4.000" RDSX™ seal from -32/26 casting

3.875	5.500	6.000	7.062	9.000	2.500	1.750	0.450	0.650	0.750
4.000	5.500	6.000	7.062	9.000	2.500	1.750	0.450	0.650	0.750

### 3.625" - 4.500" RDSX™ seal from -36/30 casting

4.375	6.000	6.500	7.562	9.500	2.500	1.750	0.450	0.650	0.750
4.500	6.000	6.500	7.562	9.500	2.500	1.750	0.450	0.650	0.750

### 4.125" - 5.000" RDSX™ seal from -40/34 casting

4.750	6.500	7.000	8.062	11.000	2.500	1.750	0.818	1.120	0.750
4.875	6.500	7.000	8.062	11.000	2.500	1.750	0.818	1.120	0.750
5.000	6.500	7.000	8.062	11.000	2.500	1.750	0.818	1.120	0.750

### 5.125" - 5.500" RDSX™ seal from -44 casting

5.125	7.500	8.000	9.000	11.750	3.187	2.375	0.530	0.666	1.000
5.250	7.500	8.000	9.000	11.750	3.187	2.375	0.530	0.666	1.000
5.500	7.500	8.000	9.000	11.750	3.187	2.375	0.530	0.666	1.000

### 5.750" - 6.000" RDSX™ seal from -48 casting

5.750	8.000	8.500	9.500	12.250	3.187	2.375	0.530	0.666	1.000
6.000	8.000	8.500	9.500	12.250	3.187	2.375	0.530	0.666	1.000

### 6.250" - 6.500" RDSX™ seal from -52 casting

6.250	8.500	9.000	10.000	12.750	3.187	2.375	0.530	0.666	1.000
6.500	8.500	9.000	10.000	12.750	3.187	2.375	0.530	0.666	1.000

### 6.750" - 7.000" RDSX™ seal from -56 casting

6.750	9.000	9.500	10.500	13.250	3.437	2.625	0.744	0.880	1.000
7.000	9.000	9.500	10.500	13.250	3.437	2.625	0.744	0.880	1.000

### 7.250" - 7.500" RDSX™ seal from -60 casting

7.250	9.500	10.000	11.000	13.750	3.437	2.625	0.744	0.880	1.000
7.500	9.500	10.000	11.000	13.750	3.437	2.625	0.744	0.880	1.000

### 7.750" - 8.000" RDSX™ seal from -64 casting

7.750	10.250	11.000	12.250	16.000	3.660	3.187	0.855	0.992	1.000
8.000	10.250	11.000	12.250	16.000	3.660	3.187	0.855	0.992	1.000

## RDSX™ – Dimensional Information (mm)

DIM A	DIM B	DIM C	DIM D	DIM E	DIM F	DIM G	DIM H	DIM I	Max Bolt Ø
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### 75mm - 95mm RDSX™ seal from -30/24 casting

90	133.4	146.1	171.5	222.3	63.5	44.5	11.5	16.5	20.0
95	133.4	146.1	171.5	222.3	63.5	44.5	11.5	16.5	20.0

### 80mm - 100mm RDSX™ seal from -32/26 casting

100	139.7	152.4	179.4	228.6	63.5	44.5	11.5	16.5	20.0
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### 90mm - 110mm RDSX™ seal from -36/30 casting

105	152.4	165.1	192.1	241.3	63.5	44.5	11.5	16.5	20.0
110	152.4	165.1	192.1	241.3	63.5	44.5	11.5	16.5	20.0

### 105mm - 125mm RDSX™ seal from -40/34 casting

120	165.1	177.8	204.8	279.4	63.5	44.5	20.7	28.4	20.0
125	165.1	177.8	204.8	279.4	63.5	44.5	20.7	28.4	20.0

### 130mm - 140mm RDSX™ seal from -44 casting

130	190.5	203.2	228.6	298.4	80.9	60.3	13.5	16.9	25.0
135	190.5	203.2	228.6	298.4	80.9	60.3	13.5	16.9	25.0
140	190.5	203.2	228.6	298.4	80.9	60.3	13.5	16.9	25.0

### 145mm - 150mm RDSX™ seal from -48 casting

145	203.2	215.9	241.3	311.1	80.9	60.3	13.5	16.9	25.0
150	203.2	215.9	241.3	311.1	80.9	60.3	13.5	16.9	25.0

### 160mm - 165mm RDSX™ seal from -52 casting

160	215.9	228.6	254.0	323.8	80.9	60.3	13.5	16.9	25.0
165	215.9	228.6	254.0	323.8	80.9	60.3	13.5	16.9	25.0

### 170mm - 175mm RDSX™ seal from -56 casting

170	228.6	241.3	226.7	336.5	87.3	66.7	18.9	22.4	25.0
175	228.6	241.3	226.7	336.5	87.3	66.7	18.9	22.4	25.0

### 180mm - 190mm RDSX™ seal from -60 casting

180	241.3	254.0	279.4	349.2	87.3	66.7	18.9	22.4	25.0
190	241.3	254.0	279.4	349.2	87.3	66.7	18.9	22.4	25.0

### 200mm - 205mm RDSX™ seal from -64 casting

200	260.4	275.4	311.2	406.4	93.0	81.0	21.7	25.2	25.0
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**ABOVE 8.000" (200mm) PLEASE CONSULT AESSEAL FOR AVAILABILITY**

All specified sizes are planned inventory item. For details on sizes not shown contact AESSEAL®



ENVIRONMENTAL TECHNOLOGY

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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

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