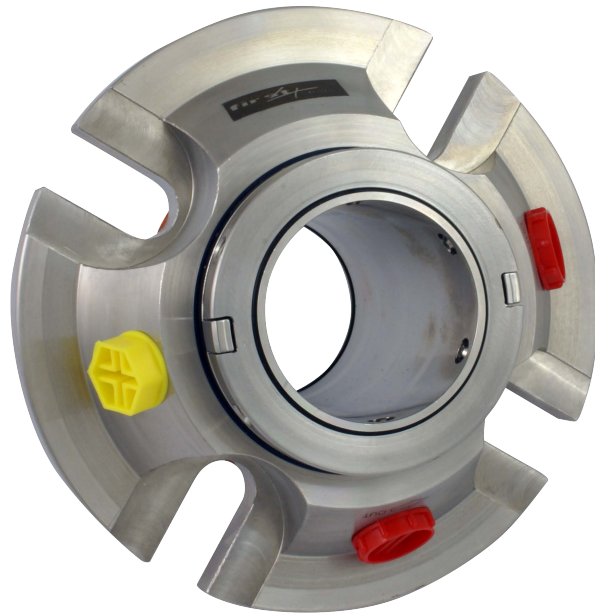


# Installation Instructions



## 302™ US VERSION

AESSEAL Marine plc, Unit 4 Venlo Industrial Estate, Knowles Street, Bradford, West Yorkshire, BD4 6HA, UK

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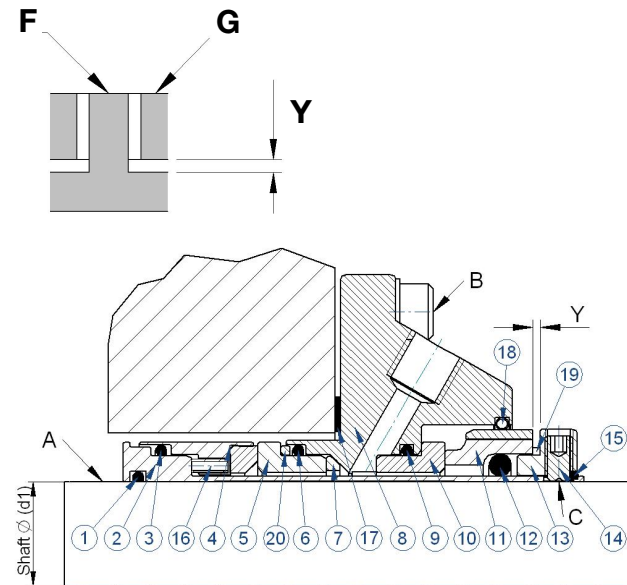
Email: seals@first4seals.com - Web: www.first4seals.com

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### WARNING

Extreme care must be taken to ensure safe operation of equipment.  
If in doubt seek expert advice. For Technical Support:  
Email: technical@first4seals.com Telephone: +44 (0)1274 720775.



ITEM	DESCRIPTION
1	INBOARD STATIC O-RING
2	SLEEVE
3	INBOARD DYNAMIC O-RING
4	INBOARD OUTER BARREL ASSY
5	INBOARD STATIONARY FACE
6	INBOARD STATIONARY O-RING
7	ALIGNMENT RING
8	GLAND
9	OUTBOARD STATIONARY O-RING
10	OUTBOARD STATIONARY FACE
11	OUTBOARD ROTARY ASSY
12	OUTBOARD DYNAMIC O-RING
13	CLAMP RING
14	DRIVE SCREWS
15	CLAMP RING O-RING
16	INBOARD SPRING
17	GASKET
18	CENTRALISING RING
19	OUTBOARD SPRING
20	BACKUP RING

#### Pre-Installation:

- ✓ Check shaft diameter (d1) is in tolerance:  
Imperial Shafts +/- 0.002". Metric Shafts +0 / -0.05mm
- ✓ Check shaft run out is in tolerance: < 0.005" (0.13mm).
- ✓ Check shaft end float is in tolerance: < 0.005" (0.13mm).
- ✓ Check stuffing box face finish to ensure suitable for creating a fluid seal.
- ✓ Check shaft (ref. A) for sharp edges to ensure no damage to secondary seal during installation.

#### Installation:

- ✓ Disassemble equipment to allow seal location on shaft.
- ✓ Apply suitable lubricant to shaft.
- ✓ Push seal on to shaft using the sleeve rather than gland.
- ✓ Re-assemble equipment into operational position.
- ✓ Affix seal to mounting with appropriate fixings & washers (Not included) and tighten (ref. B) ensuring the gland is not moved off centre.
- ✓ Ensure the seal is set to the correct working length. Gap Y should be approximately 1.5mm, the back surface of the rotary holder drive lugs (ref. F) should be flush with the back surface of the clamp ring (ref. G).
- ✓ Tighten all fixing screws (ref. C) onto shaft equally.
- ✓ Check for shaft binding or rubbing by rotating the shaft slowly by hand.
- ✓ If fouling occurs, remove the seal, check shaft and start installation again.
- ✓ If problem persists contact first4seals.
- ✓ Connect the Barrier ports (ref. D & E) as shown relative to direction of shaft rotation.
- ✓ Connect Safety Drain port if required (ref. F).
- ✓ Confirm barrier fluid is present before operation.

#### DECLARATION OF INCORPORATION

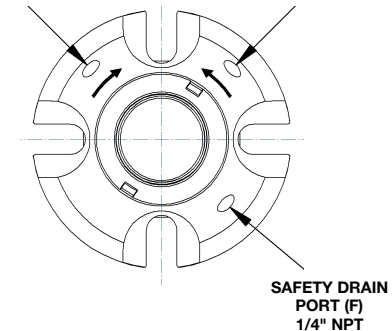
This mechanical seal must not be put into service until the relevant machinery into which it is incorporated has been declared to be in conformity with the provisions of the Machinery Directive.

#### 302™ barrier fluid porting arrangement

The 302™ seal design incorporates a pumping feature to aid barrier fluid circulation. Barrier fluid flow is directly related to the direction of shaft rotation. It is therefore necessary to ensure the barrier fluid system is connected correctly during installation.

Connections should be made as shown below. Each barrier fluid port is etched with an arrow to indicate the direction of shaft rotation and the word 'OUTLET'.

BARRIER PORT (D) 1/4" NPT Inlet for Anti-Clockwise rotation  
BARRIER PORT (E) 1/4" NPT Inlet for Clockwise rotation  
Outlet for Clockwise rotation Outlet for Anti-Clockwise rotation



Seal viewed from atmospheric side