



**Ex** Mechanical Seals are Machinery Elements for ATEX 2014/34/EU & IECEx equipment. Documentation available on request.

**Pre-Installation Checks.**

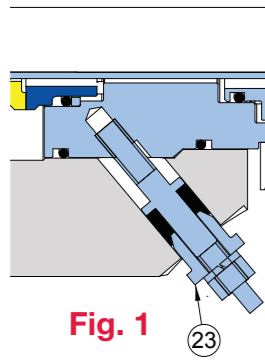
- (i) Shaft Outside Diameter is within tolerance (h7).
- (ii) Housing Inside Diameter is within tolerance (H8).
- (iii) Shaft run out < 0.004" (0.1mm) T.I.R.
- (iv) Seal chamber face runout (shaft squareness relative to mounting face) < 0.5 µm/mm (0.0005 in./in) of seal chamber bore diameter.
- (v) Shaft end float < 0.005" (0.13mm).
- (vi) There are no sharp edges over which the seal 'O' Ring (Item 13) must pass.

**Installation instructions.**

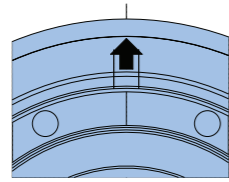
1. Lubricate the shaft with the grease provided.
2. Slide the seal onto the shaft, care should be taken to align the engraved arrow on the FMG (Item 4) to the 12 o'clock position fig (2)
3. Once aligned place the split holding ring (Item 21) in place as shown fig (4) and tighten items (17) to 2.2Nm (1.6 LBF.ft).
4. Begin to tighten items (22) in numerical order to 4.3Nm (3.2 LBF.ft). These bolts will draw the seal into place and provide anti-rotation fig (3).
5. Insert spacer sleeve (Item 24).
6. Once seal is correctly in place, fit item (23) and tighten nut until a suitable seal is formed, follow instructions as per General Arrangement drawing. Lubricate the impeller O Ring (Item 25) with the grease provided.
7. Refit the impeller and fully tighten.
8. Assemble rest of equipment in final running position.
9. Equally tighten drive screws (Item 11) down onto the shaft.
11. Remove setting clips (Item 18 & 19).
12. Spin the shaft by hand. Listen and feel for any shaft binding.
13. Connect the Barrier & Flush connections if required.
14. Ensure the pump is primed and barrier fluid is present prior to start up.
15. Retain clips and clip screws for future use.



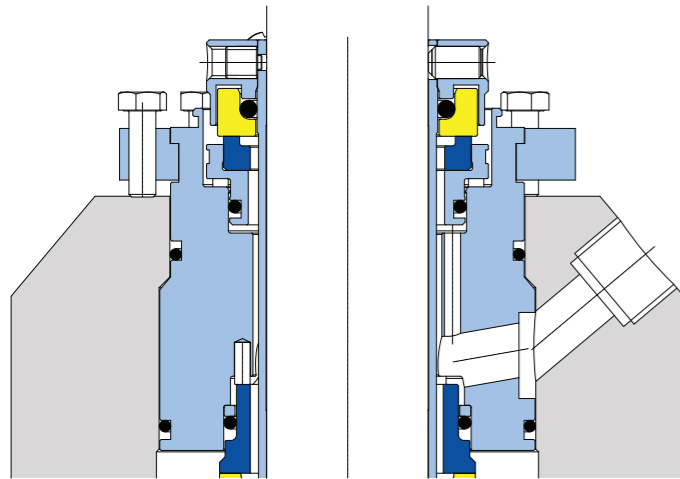
All metallic components are widely recyclable. Once the seal has reached the end of its life, it should be disposed of in accordance with local regulations and with due regard to the environment.



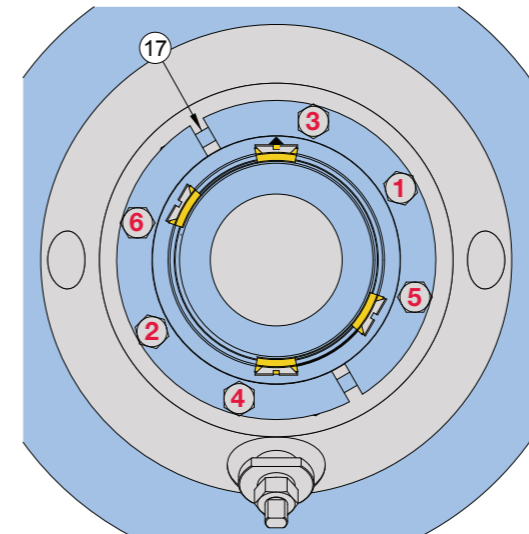
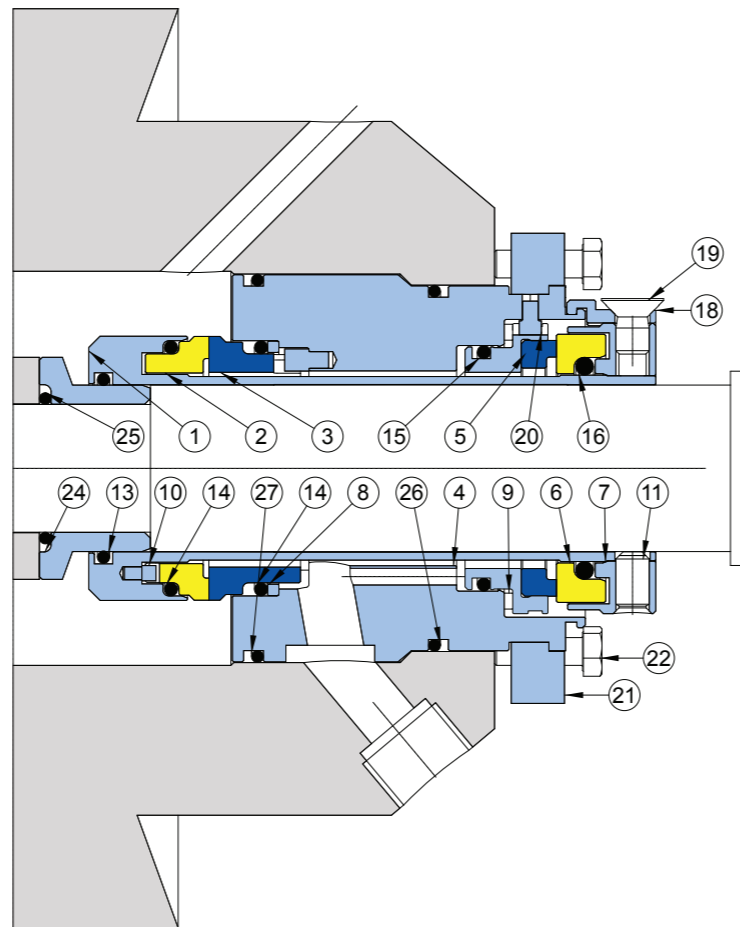
**Fig. 1**



**Fig. 2**



**Fig. 3**



**Fig. 4**

Item	Description	Material
1	Sleeve	316L SS
2	Inboard Rotary	Carbon FH82Z5 / Sintered SiC / TC
3	Inboard Stationary	Sintered SiC
4	FMG	316 SS
5	Stationary Assembly	316L SS / CARBON
6	Outboard Rotary	Reaction Bonded SiC
7	Clamp Ring	316L SS
8	Back Up Ring	316L SS
9	Spring	ALLOY 276
10	Drive Pin	316L SS
11	Grub Screw	17-4PH SS
12	Anti Tamper	316 SS
13	O Ring	FKM / EPR / FFKM / TFE/P
14	O Ring	FKM / EPR / FFKM / TFE/P
15	O Ring	FKM / EPR / FFKM / TFE/P
16	O Ring	FKM / EPR / FFKM / TFE/P
17	Cap Head Screw	316 SS
18	Setting Clip	Phospher Bronze
19	Countersunk Slot Screw	316 SS
20	Drive Pin	316L SS
21	Split Holding Ring	316L SS
22	Hexagon Head Bolt	316 SS
23	Plug (Graphite)	316L SS / Graphite
24	Spacer Sleeve	316L SS
25	O Ring	FKM / EPR / FFKM / TFE/P
26	O Ring	FKM / EPR / FFKM / TFE/P
27	O Ring	FKM / EPR / FFKM / TFE/P

**CKDA™**

Cartridge Mechanical Seal

**INSTALLATION INSTRUCTIONS**



**II 2 G D**

**Ex h Gb/Db**



ENVIRONMENTAL TECHNOLOGY

**AESSEAL plc**  
Mill Close, Bradmarsh Business Park  
Rotherham, S60 1BZ, ENGLAND

tel: +44 (0) 1709 369966  
email: enquiries@aesseal.info

[www.aesseal.com](http://www.aesseal.com)