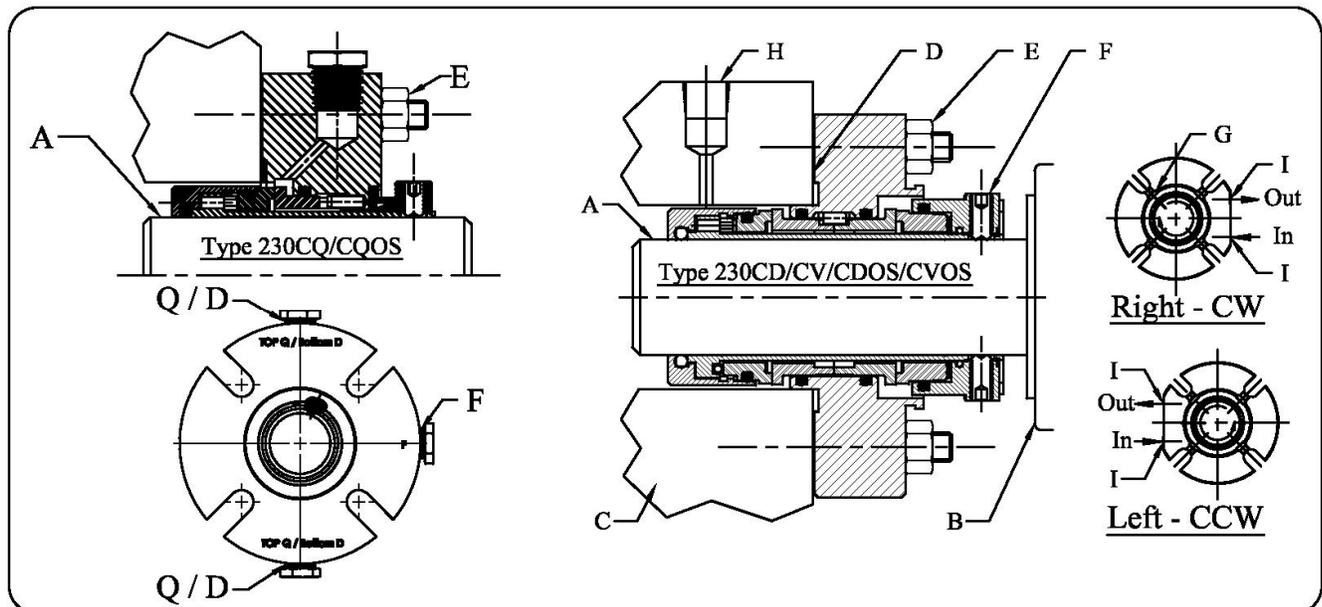


## Type 230 Cartridge Seal Installation

- 1) Study Assembly drawing of seal to be installed – the drawing is always enclosed with seal. Any specific instructions showing on seal drawing overrule these general purpose instructions.
- 2) Verify seal chamber face (D) to be flat and smooth, shaft to be in proper condition.
- 3) Verify that pump, shaft and seal chamber meet accepted specifications and norms - Shaft: Axial movement to 0.10 mm (.004"), Radial movement to 0.08 mm (.003"), Rotational TIR to 0.08 mm (.003"); Seal Chamber: Squareness within 0.08 mm (.003"), Concentricity within 0.13 mm (.005").
- 4) Verify that shaft or sleeve (A) leading edge is smooth, rounded or chamfered to prevent O-ring damage.
- 5) Verify Surface Finish shaft or sleeve to be within 0.8 micrometers (32 micro-inches) or 0.4 micrometers (16 micro-inches) for O-ring Teflon®.
- 6) Thoroughly clean shaft and lightly grease leading edge with silicon based grease or liquid soap.
- 7) Install and carefully slide seal assembly toward bearing chamber (B).
- 8) Install pump's back-plate (C) (or seal chamber assembly) and secure in position.
- 9) Verify final positioning of shaft. No shaft movement is allowed after seal is secured!
- 10) Verify that threaded connections are positioned per direction of rotation and specific drawing instructions.
- 11) Move seal to contact (D) with seal chamber face.
- 12) Tighten nuts (E) equally around per torque specifications of table (See Sheet 2).
- 13) Tighten setscrews (F) firmly and equally around.
- 14) Remove setting tabs (G) (these tabs must be engaged in position before seal removal!). Note: Cartridge seals Type 140C & 140CQ are "Mount and Start" designs with no setting tabs to remove.
- 15) Verify proper installation of piping (H). Plug unused ports.
- 16) Connect ports (I) of seal and ports of Buffer Fluid Tank (See SPEC-BFT001 or specific drawing).
- 17) Fill Buffer Fluid System as required.



p/n IS230\_Eng, Revision \_\_, Date 14Jul2011, Approval

*RP3*

Filename: R:\So

IS230\IS230\_Eng.doc