

GOLD SERIES - PUMP LESS VOLUTE KITS | FOR SELECT 2, 3, 4, AND 5, AND 1050 SERIES IN-LINE CIRCULATOR MODELS | INSTALLATION AND OPERATING INSTRUCTIONS

File No: 10.801
Date: OCTOBER 26, 2015
Supersedes: 10.801
Date: OCTOBER 15, 2013

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CAUTION



Always disconnect power supply from motor before servicing.

1.0 APPLICATION

Armstrong Gold series – Pump Less Volute kits may be used to replace, upgrade, and renew all working parts of any compatible 3 piece circulator. The kits are suitable for both hydronic fluid and potable water applications. Refer to Armstrong cross reference information to determine compatibility.

2.0 INSTALLATION

In-line circulators should always be installed with the shaft in a horizontal position. The circulator should be mounted by the volute pipe connections only. No other support for the circulator should be used.

Circulator replacement should only be performed by qualified personnel. To avoid personal injury or property damage, before attempting circulator replacement:

- 1 Hydraulically isolate the circulator from the system in which it is installed.
- 2 Disconnect / lockout power at the electrical panel.
- 3 Carefully alleviate pressure and drain the fluid from the circulator.
- 4 Avoid spillage of, or physical contact with, the system fluid.

To remove the original circulator:

- 1 Disconnect the power wiring at the terminal box.
- 2 Remove the screws that connect the sealed bearing assembly to the volute (casing).

- 3 Pull the circulator straight out, avoiding impeller contact with the inside of the volute.
- 4 Remove any remaining gasket from the mating surface of the volute.
- 5 Be careful not to damage gasket mating surfaces.

To install the new Gold Series – Pump Less Volute kit:

- 1 Apply the new gasket (supplied) to the volute mating surface.
- 2 Position the kit with the oil filling cup located on top of the sealed bearing assembly.
- 3 Mate the kit up with the original volute, ensuring the gaskets seats squarely.
- 4 Ensure the impeller does not contact the inside volute surfaces.
- 5 While holding the kit steady, start two screws, diagonally opposed, to secure the mating parts.
- 6 Insert the remaining screws finger-tight, noting the gap between the bearing body and volute.
- 7 Progressively tighten the mating screws in a diagonal pattern. Avoid over-tightening.
- 8 Rotate the pump shaft at the coupler to ensure it turns freely and impeller doesn't bind.
- 9 Verify nameplate voltage before connecting power wiring.

3.0 STARTING UP

The pump must be fully primed on start-up. Fill system piping and pump body with liquid and vent complete system, turning pump by hand to dislodge air from body. Make sure fittings and drain valves are airtight, then add any additional fill required.

Check motor electrics against available supply, then start pump making sure rotation is correct. When viewed from motor end, rotation is counter-clockwise on Models s-25 to s-46 and H-32 to H-41. On all other models, rotation is clockwise. If pressure does not develop, stop pump, re-check, vent and fill. Never attempt to fill system when pump is running.

4.0 LUBRICATION

CAUTION



Do not put oil in the maintenance free PLVs. These models contain MF in their item numbers and are labelled: '**This bearing assembly contains permanently lubricated bearings and does not need any oiling or greasing**'.

PUMP LUBRICATION

Immediately after pump is installed and before running, slowly add the oil (SAE 30 non-detergent regular, supplied with pump) to pump oil cup, located on top of bearing bracket:

s-25 to s-57, H-32 to H-54 and series 1050 (1B to 2B) $\frac{1}{4}$ oz. At the start of each following heating season, lubricate with SAE 30 oil. For models s-25 to s-57, H-32 to H-54 and series 1050 (1B to 2B), add approximately $\frac{1}{4}$ oz. (Lubricate every six months for high temperature or constant operation.)

MOTOR LUBRICATION

Gold series - Pump Less Volute motors are permanently lubricated and require no maintenance.

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5.0 SEAL REPLACEMENT

Remove pump bracket from body. Remove the impeller, damaged seal assembly, ceramic insert and rubber cup. Clean the recess in bearing bracket coverplate and install a new retainer cup and ceramic. Check the condition of the shaft sleeve. If scored, replace the shaft assembly. Otherwise, clean shaft extension and polish sleeve with fine crocus cloth, using a rotating motion, if required.

Press against coupler end of shaft to take up play while pressing new seal firmly against the stationary face. A slight amount of clean vaseline may be put on shaft sleeve to assist installation. Press down firmly and evenly, using 2 screwdrivers and pushing against the 4 ears of driving band (the metal ring around rubber bellows), or around top outer edge of driving band on models s-25 to s-57, H-32 to H-54 and series 1050 (1B to 2B).

Do not use spring washer on models s-25, s-35 and H-32 current style circulators, where recess to locate spring is provided on impeller hub.

Continue pressing against coupler end of shaft, re-mount impeller and re-assemble the seal bearing assembly into body. If necessary, install a new body gasket and clean gasket surface of both volute and bracket.

CAUTION

Before operating pump, carefully check:



- 1 Is the pump primed?
- 2 Is rotation correct?
- 3 Is pump properly lubricated?
- 4 Does the power supply agree with data on motor nameplate?
- 5 Is overload protection provided?
- 6 Is the system clean?