



# Series e-82 Packing Seal Instructions



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# 1 Introduction and Safety

## 1.1 Introduction

### Purpose of this manual

The purpose of this manual is to serve as an IOM addendum for operation and installation of packing in e-82 series twin inline pumps.

For the e-82 twin inline pump installation, operation, and maintenance use P2004729 Series e-82 Instruction Manual.



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**CAUTION:**

Read this manual carefully before installing and using the product. Improper use of the product can cause personal injury and damage to property, and may void the warranty.

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**NOTICE:**

Save this manual for future reference, and keep it readily available at the location of the unit.

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## 1.2 Safety



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**WARNING:**

- The operator must be aware of safety precautions to prevent physical injury.
- All safety precautions and instructions must be followed as outlined in the Series e-82 Instruction Manual, P2004729.



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**CAUTION:**

You must observe the instructions contained in this and the Series e-82 Instruction Manual, P2004729. Failure to do so could result in physical injury, damage, or delays.

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# 2 Product Description

## 2.1 Operation specifications

See P2004729, Series e-82 Instruction Manual Section 3.1 for more information.

Use packing on open or closed systems which require a large amount of makeup water, as well as systems that are subject to a wide variety of chemical conditions and solids buildups.

Parameter	Packing
Operating temperature range, F° (C°)	0 to 200 (-18 to 93)
pH range limits	7.0 to 9.0
Resistance to dissolved solids	Medium
Maximum glycol/water concentration	Not recommended

# 3 Operation

## 3.1 Note on the packed pump operation

See P2004729, Series e-82 Instruction Manual Chapter 5 for more information.

### Tighten the gland nuts

Before you start the pump, back off the packing gland nuts or screws until the gland is loose. Hand tighten until the gland is snug against the first packing ring. Initially, water might freely run from the packing. This is normal and should be allowed to continue for a period of time before you continue to tighten the gland. Tighten the gland nuts slowly and one flat at a time.

### Leakage rate

An adequate leakage rate is not one single value for all pumps and installations, but is the amount required to provide adequate cooling and lubrication. The required leakage is influenced by operating pressure, fluid temperature, shaft speed, and so forth. For fluid temperatures in the range of 32°F to 190°F (0°C to 88°C), average leakage rates of 60 to 80 drops per minute are recommended. However, each individual pump and installation has unique operating conditions that result in widely-variable leakage rate requirements.

### Maximum fluid temperature

At fluid operating temperatures near the upper limit of 190°F (88°C), the maximum temperature rise of the leakage is important. Never operate a packed pump with steam forming at the gland. This limits the temperature rise to a maximum of about 20°F (-7°C). If the formation of steam persists at higher leakage rates, you must provide cooling water by means of an external supply, or a heat exchanger used to cool the bypass flush.

# 4 Maintenance

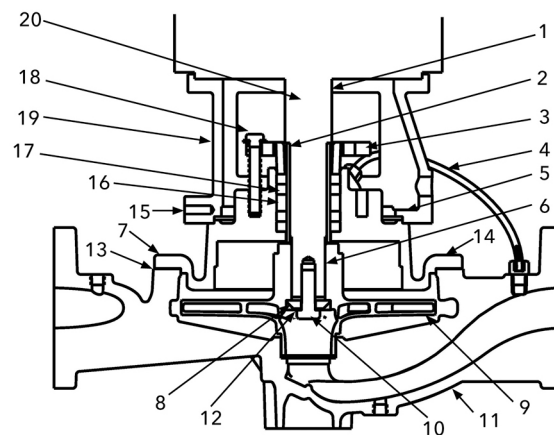
## 4.1 Remove the seal or packing rings

This information replaces P2004729, Series e-82 Instruction Manual Section 6.4.5.

1. Remove the hex nuts from the seal cap bolts.
2. For the 80-PF, remove the hex nuts that hold the packing gland to the stuffing box.
3. Remove the cover plate screws.
4. Remove the cover plate from the bracket.
5. Remove the seal assembly or packing rings.

## 4.2 Assemble the packed stuffing box

This information replaces P2004729, Series e-82 Instruction Manual Section 6.6.1.



1. Slinger
2. Shaft sleeve
3. Packing gland
4. Flush line
5. Coverplate capscrew
6. Impeller key
7. Volute capscrew
8. Impeller washer
9. Impeller
10. Impeller capscrew
11. Volute
12. Impeller lockwasher
13. Volute gasket
14. Coverplate
15. Drip drain
16. Lantern ring
17. Packing
18. Gland bolt
19. Bracket
20. Shaft

Figure 1: Packed stuffing box

1. Insert two packing rings into the stuffing box.
2. Insert the lantern ring and the last two pieces of packing.  
Make sure that the joints on the packing rings are staggered 90°.
3. Install, but do not tighten, the packing gland.
4. Install the cover plate over the pump shaft.
5. Tighten the capscrews according to the Capscrew torque table in the P2004729, Series e-82 Instruction Manual Chapter 6: Maintenance.
6. Tighten the packing gland to compress the packing.

See the note on the packed pump operation in the Operation chapter for more information.









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- 2) a leading global water technology company.

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The original instruction is in English. All non-English instructions are translations of the original instruction.

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