

V-Ring Packing Kits for 591 Series Flowrite™ Valves

Product Description

These installation instructions describe the recommended method for repacking 591 Series Flowrite valves using V-ring packing kits.

Contents

When a kit has two packing gland assemblies, two gland spacers, or two washers, see Tables 3 and 4 and Figures 1, 2, and 3 to select the packing gland assembly (Figure 4, Item 1), gland spacer (Figure 4, Item 2), and washer (Figure 4, Item 3) for the valve size and type being serviced.

Only VF591SD and VF591ST valves 1/2-inch (13mm) through 2-inch (51mm) sizes, use the stem bearing (Figure 4, Item 7) included in each kit.

Only VF591ST valves 1-1/2-inch (38mm) and 2-inch (51mm) sizes normally closed, use the O-ring (Figure 5, Item 11) included in Kit 591-502.



Only the 8-inch actuators use the set screw (Figure 4, Item 8) and copper slug (Figure 4, Item 9) included in each kit.

Product Numbers

To select the appropriate packing kit from Table 1, determine the stem diameter of the valve to be repacked.

As an additional guide, Table 2 lists the valve product number and the packing kit normally used with it.

Warning/Caution Notations

WARNING		Personal injury/loss of life may occur if you do not perform a procedure as specified.
CAUTION		Equipment damage or loss of data may occur if you do not perform a procedure as specified.

Prerequisites

(See *Step-by-step procedures* before beginning to repack the valve.)

Table 1. Packing Kit Number/Application.

Packing Kit Number	Valve Stem Diameter	Packing Material and Type	Recommended Medium Temperature	Typical Application
591-501	1/4-inch (6.4mm)	EP V-ring	40 to 300°F (4 to 149°C)	Chilled water Hot water Saturated steam up to 50 psig (345 kPa)
591-502	3/8-inch (9.5mm)			

Table 2. Packing Kit/Valve Product Number.

Packing Kit Number	Valve Product Numbers
591-501	591-6000 thru -6470, -6600 thru -6710, -6840 thru -6890, -6930 thru -7010, -7060, -7070, -7080, -7100, -7110, -7850 thru -7853, -7860 thru -7863, -7870, -7871, -7875, -7876, -8071, -8072, -8073, -8077, -8078, -8079.
591-502	591-1560, -1580, -1600, -1620, -1640, -1760, -1780, -1800, -1820, -1840, -4260, -4280, -4300, -6480, -6490, -6500, -6540, -6550, -6560, -6720 thru -6770, -7190 thru -7260, -7854 thru -7859, -7864 thru -7869, -7872, -7873, -7874, -7877, -7878, -7879, -7891 thru-7901, 8016 thru -8032, -8074, -8075, -8076, -8080, -8081, -8082.

Table 3. Packing Kit Parts List.

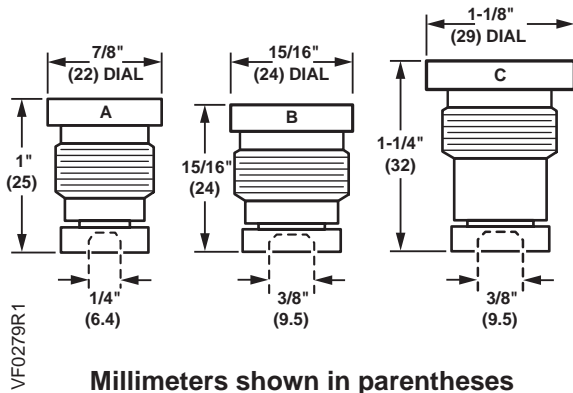
Item	Description	591-501 EP V-Ring Packing Kit For 1/4-inch (6.4 mm) Diameter Stems	591-502 EP V-Ring Packing Kit For 3/8-inch (9.5 mm) Diameter Stems
1	Packing Gland Assembly	A	B
1	Packing Gland Assay	-	C
2	Gland Spacer	D	F
2	Gland Spacer	E	-
3	Washer	G	H
4	V-Ring Packing Assay	x	x
5	Spring	x	x
6	Split Ring Packing	x	x
7	Stem Bearing	x	x
8	Set Screw	x	x
9	Copper Slug	x	x
10	Stem Nuts	x	x
11	O-Ring	-	x

An (x) indicates the part is in the kit. Letter designations are defined in Figure 1, Figure 2, and Figure 3.

Table 4. Packing Kit-Multiple Part Selection.

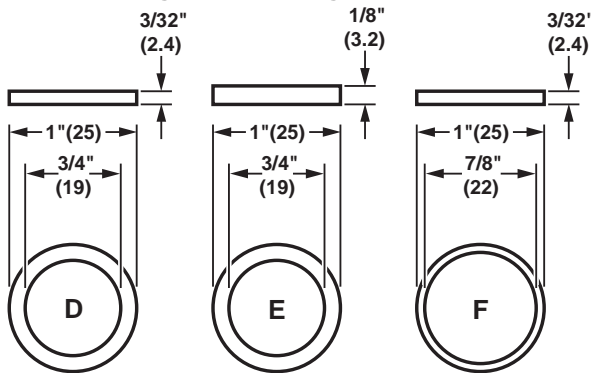
Valve Size	Valve Type	Packing Gland	Gland Spacer	Washer
1/2" - 2"	VF591CD	A	D	G
1/2" - 2"	VF591 WM	A	D	G
1/2" - 2"	VF591 V-PORT	A	D	G
3/4" - 1"	VF591SD	A	E	G
3/4" - 1"	VF591ST	A	E	G
1" - 4"	VF591DS	A	D	G
1-1/4" - 2"	VF591SD	B	F	H
1-1/4" - 2"	VF591ST	B	F	H
2-1/2" - 6"	VF591CD	C	F	H
2-1/2" - 6"	VF591WM	C	F	H
5" - 8"	VF591DS	C	F	H

Letter designations are defined in Figures 1, 2, and 3.



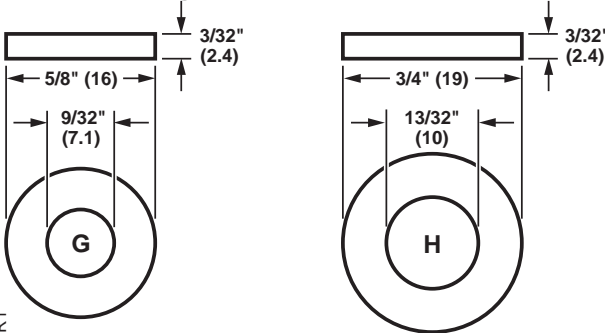
Millimeters shown in parentheses

Figure 1. Packing Glands.



Millimeters shown in parentheses

Figure 2. Gland Spacers.



Millimeters shown in parentheses

Figure 3. Washers.

Installation

Step-by-step procedures for repacking using V-ring packing (See Figure 4)



CAUTION:

Before proceeding, isolate valve so medium (water, steam, etc.) won't leak out of valve body when it is disassembled. Remove and cap air line to valve actuator.

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CAUTION:

1. You **MUST** remove the actuator from the valve body assembly and **REMOVE** the stem so the V-ring packing can be installed. V-ring packing material provides an improved seal over the split-ring type. See Step-by-step procedures for details.
2. Do not pack bonnet packing chamber with grease or lubricant.

1. Remove the actuator and disassemble the valve bonnet.
2. Check the stem. It must have a polished surface, and be free from roughness or pitting. If not, replace the stem.
3. Remove all the old packing. Clean packing chamber so it is free of dirt and grease.
4. For valves with a removable stem bearing (Item 7) remove old bearing from bonnet and use epoxy-type adhesive (not provided) to hold new bearing in place.

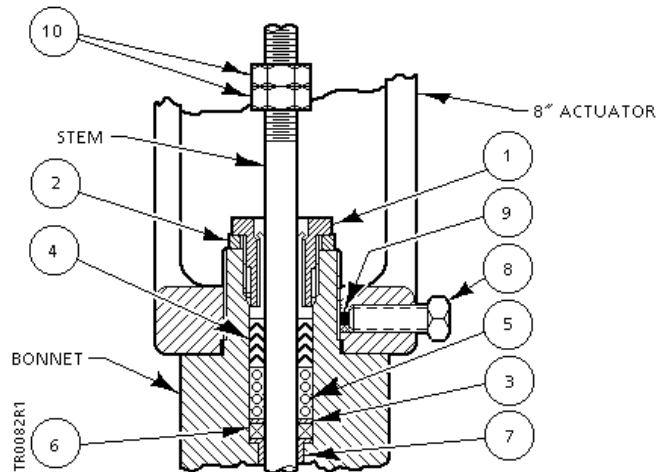


Figure 4.

5. Slide stem assembly into the bonnet.
6. The packing parts must be installed in the exact order shown in Figure 4. Place split ring (Item 6), washer (Item 3), and spring (Item 5) over stem and gently push each piece into packing chamber.

Installation, Continued

7. Remove the tie wrap holding the V-ring packing (Item 4) together and lightly lubricate each V-ring with silicone lubricant.
8. Slide each part over the stem and carefully push it into the packing chamber. Be careful not to damage the V-rings; even a small cut can prevent the rings from sealing against the stem. The V-rings must not be cut or split. Make sure the open ends of the V-rings face the valve body as shown in Item 4.
9. Place gland spacer (Item 2) on top of bonnet.
10. Thread the packing gland assembly (Item 1) into the bonnet. Finger tighten the gland assembly against the spacer.
11. For valves with an O-ring seal (Figure 5, Item 11) on bottom guide, remove old seal and replace it.

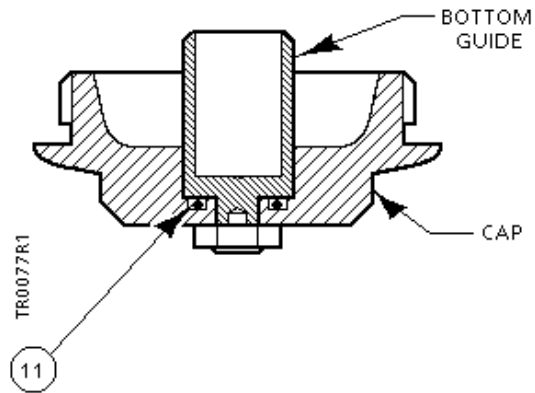


Figure 5.

12. Reassemble the valve body and attach the actuator to it.

The installation is now complete.

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