



# UL-FM 200 PSI RESILIENT WEDGE GATE VALVE, SERIES 8000'S, KS-FW 2" – 12"

## Overview

Kennedy Valve Series 8000 KS-FW gate valves are resilient EPDM encapsulated cast iron wedge gate valves that are used in fire protection systems and water service applications. They offer bubble tight, bi-directional, on-off flow control. Series 8000s are compliant with AWWA C509 2" to 12" and UL Listed and FM Approved as KS-FW.

The Series 8000 family utilize triple EPDM o-ring stem seals and o-rings at the bonnet to body connection offering best in class performance and serviceability. The OS&Y utilizes a single o-ring and packing. The two uppermost stem o-rings of the NRS valve as well as OS&Y packing can be replaced while the valve is in service (consult our O&M for details).

Several end conditions are available including: ANSI CL 125 flange, mechanical joint, push on for both C900 PVC and flange by MJ.

Series 8000s are coated with a high-performance heat curable, thermosetting fusion bonded epoxy system. This Kennedy Valve Powder coating system is FDA Title 21 section 175.300 accepted and is AWWA C550 compliant.

All OS&Y valves are manufactured with pre-grooved stems to accommodate tamper switches by others.

Valves can be manufactured to be compliant with Buy American, Buy America, and AIS requirements.

All Kennedy KS-FWs are manufactured and assembled at Kennedy Valve in Elmira, NY.

Manufacturing Standards - ISO 9001, ISO 14001, ISO 45001.



The KVOS2 tamper switch is an available option on 12" and smaller Kennedy OS&Ys.



61/372



## Technical Data

**Available Sizes:** 2" to 12"

**UL-FM Listed and Approved Pressure:** 200psi

### FLANGES

**Stocked:** ANSI B16.1 Flat Face Flange, CL 125, CL 150 Drilling

**Optional:** CL 125 with PN16 Drilling

### GROOVED

**Grooved Ends Stocked:** Standard IPS Grooves per ANSI/AWWA C606

### FASTENERS

**Stocked NRS:** 304 Stainless Steel

**Stocked OS&Y:** Plated Steel

**Optional:** 316 Stainless Steel, OS&Y also available in 304 Stainless Steel

### STEM

#### NON-RISING GATE VALVE

**Stocked:** ASTM B584 High Strength Manganese Bronze

**Optional:** ASTM A276 Type 304ss, Type 316ss or ASTM B763 NDZ Bronze

#### OS&Y GATE VALVE

**Stocked:** ASTM A276 Type 304ss

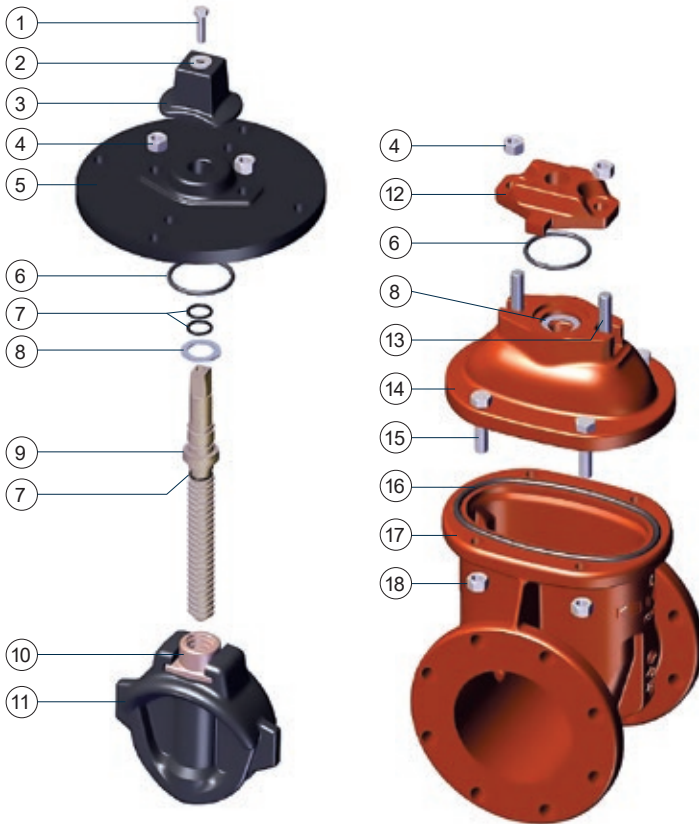
**Optional:** ASTM A276 Type 316ss, ASTM B98 Silicon Bronze (Everdur), or ASTM B371 (Equal to: Eco Brass™)

### BODY TAPPING

All 12" and down Kennedy KS-FWs can be tapped at up to four locations: A, B, E, F. See figure 3 on page 3 for locations on the valve body. All taps are 3/4" NPT except 4" and down flanged valves are 1/2" NPT taps. Plugs are coated over during the Kennedy Powder Coating process. Plugs can be either silicon bronze or low carbon steel. The plugs are easily removed by utilizing 4-point sockets.

### Components

#### NRS WITH POST PLATE



#### OS&Y



Figure 1

### Dimensions

| No. | NRS | OS&Y | Description                        | Material                                     |
|-----|-----|------|------------------------------------|--|
| 1   | •   |      | Op-Nut Bolt                        | Stainless Steel                              |
| 2   | •   |      | Op-Nut Washer                      | Stainless Steel                              |
| 3   | •   |      | Op-Nut                             | Ductile Iron                                 |
| 4   | •   |      | Post Plate/Stuffing Box Nut        | Stainless Steel                              |
| 5   | •   |      | Post Plate                         | Cast Iron                                    |
| 6   | •   |      | Post Plate/Stuffing Box O-Ring     | Rubber                                       |
| 7   | •   |      | Stem O-Rings                       | Rubber                                       |
| 8   | •   |      | Thrust Teflon Washer               | Plastic                                      |
| 9   | •   |      | Stem                               | Manganese Bronze                             |
| 10  | •   |      | Stem Nut                           | Bronze                                       |
| 11  | •   | •    | Resilient Wedge                    | EPDM Encapsulated Ductile Iron               |
| 12  | •   |      | Stuffing Box                       | Ductile Iron                                 |
| 13  | •   |      | Post Plate/Stuffing Box Plate Bolt | Ductile Iron/Stainless                       |
| 14  | •   |      | Cover                              | Ductile Iron                                 |
| 15  | •   | •    | Bonnet/Cover/Body Bolt             | Plated Steel (OS&Y)<br>Stainless Steel (NRS) |
| 16  | •   | •    | Bonnet/Cover/Body O-Ring           | Rubber                                       |

| No. | NRS | OS&Y | Description           | Material                                     |
|-----|-----|------|-----------------------|--|
| 17  | •   | •    | Body                  | Cast Iron                                    |
| 18  | •   | •    | Bonnet/Cover/Body Nut | Plated Steel (OS&Y)<br>Stainless Steel (NRS) |
| 19  |     | •    | Packing Gland         | Ductile Iron                                 |
| 20  |     | •    | Packing               | Garlock Style 18                             |
| 21  |     | •    | Handwheel Nut         | Bronze or Zinc Plated Yellow                 |
| 22  | •   | •    | Handwheel             | Cast Iron                                    |
| 23  |     | •    | Bonnet/Cover          | Ductile Iron                                 |
| 24  |     | •    | Yoke Washer           | Plastic                                      |
| 25  |     | •    | Yoke Nut              | Bronze                                       |
| 26  |     | •    | Packing Bolt          | Plated Steel                                 |
| 27  |     | •    | Hex Nut               | Brass  |
| 28  |     | •    | Stem                  | Pre-Grooved Stainless Steel                  |
| 29  |     | •    | Stem O-Ring           | Rubber                                       |
| 30  |     | •    | Stem Pin              | Stainless Steel                              |
| 31  |     | •    | Stem Nut              | Bronze                                       |
| 32  |     | •    | Handwheel Yoke Washer | Brass  |

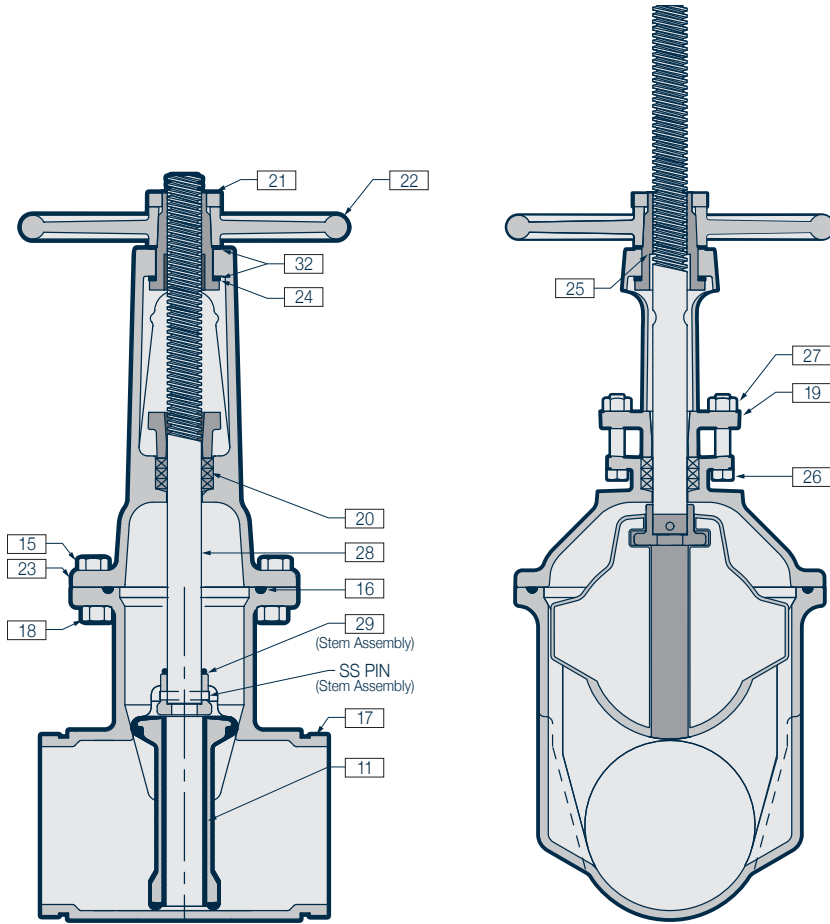


Figure 2

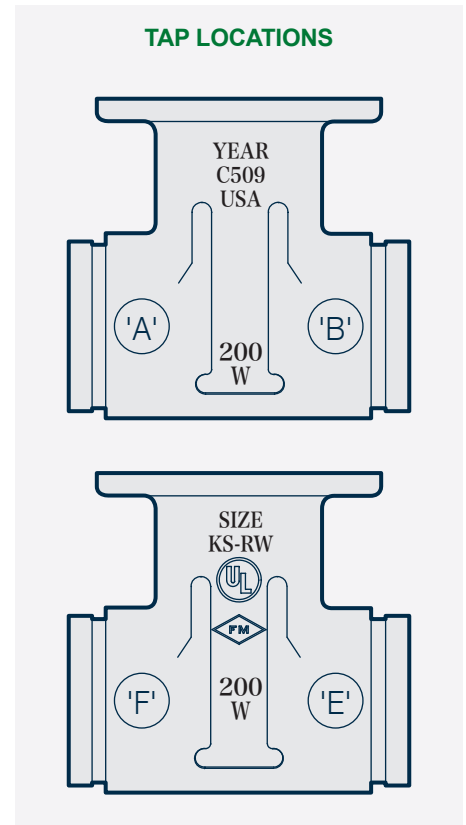


Figure 3

## Bill of Materials

| Item  | Description                 | No Req'd | Material  |
|-------|-----------------------------|----------|---|
| 21    | Handwheel Nut               | 1        | Bronze ASTM B584 C89833, 87850  |
| 22    | Handwheel                   | 1        | Cast Iron ASTM A-126 Class B  |
| 32    | Thrust Washer (upper/lower) | 1 ea     | Bronze ASTM B36 (2"/2.5" Delrin/Celcon)                                 |
| 24    | Anti-Friction Bearing       | 1        | Nylatron Sizes 3" - 12"   |
| 15/18 | Hex Head Bolts / Hex Nuts   | varies   | Plated Steel  |
| 23    | Bonnet/Cover                | 1        | Cast Iron   |
| 20    | Packing                     | 1        | Square Braided Non-Asbestos   |
| 28    | Stem                        | 1        | 304 Stainless Steel   |
| 16    | O-Ring                      | 1        | Buna-N  |
| 29    | O-Ring (Stem Assembly)      | 1        | Buna-N  |
| 17    | Body                        | 1        | Cast Iron   |
| 11    | Resilient Wedge             | 1        | DI ASTM A-536 (65-45-12 or 70-50-5), EPDM Encapsulated Wedge            |
| 25    | Yoke Nut                    | 1        | Bronze ASTM B584 C86700   |
| 27    | Hex Nuts                    | 2        | Brass   |
| 19    | Gland                       | 1        | Ductile Iron ASTM A-536 (65-45-12) or Ductile Iron ASTM A-536 (70-50-5) |
| 26    | Square Head Bolts           | 2        | Plated Steel  |

## Resilient Seated Gate Valves w/KVOS (Factory Installed Tamper)

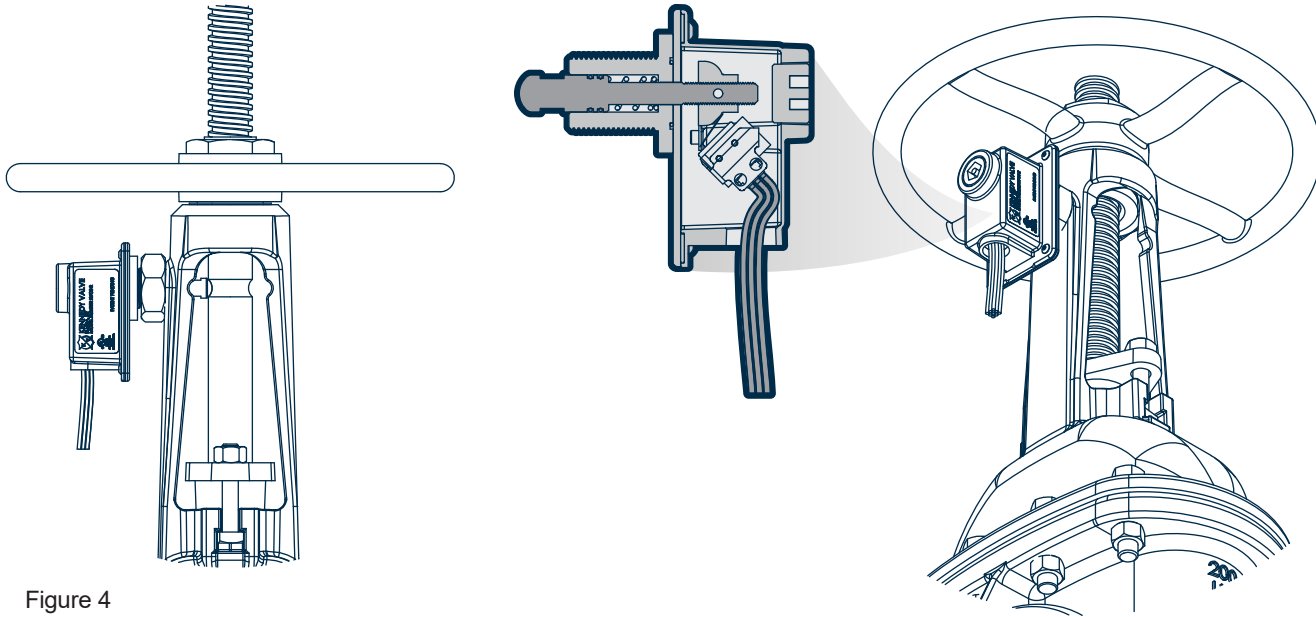


Figure 4



### KVOS-2 For 2"-12" OS&Y Valves

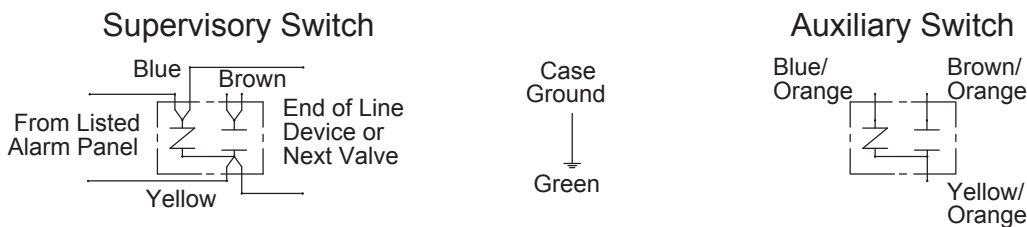


Figure 5

Rated: 120 VAC, 28 VDC, .25 A

**WIRING NOTES:** Connection to power limited circuitry is required. Auxiliary switch is for supplemental use only, and shall not be used for fire alarm signaling applications.

Switches are checked at factory, check continuity with valve fully open, switches activate within two turns from open.

**CAUTION:** PRIOR TO INSTALLATION OF SUPERVISORY SWITCHES IN FIRE PROTECTION SYSTEMS REFER TO THE FOLLOWING STANDARDS:

- NFPA 13: STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS
- NFPA 25: INSPECTION, TESTING, MAINTENANCE OF WATER BASED FIRE PROTECTION SYSTEMS
- NFPA 70: NATIONAL ELECTRICAL CODE
- NFPA 72: NATIONAL FIRE ALARM CODE
- CSA C22.1 NO.1 CANADIAN ELECTRICAL CODE, PART 1, SAFETY STANDARD FOR ELECTRICAL INSTALLATIONS SECTION 32
- CAN/ULC-S524, STANDARD FOR INSTALLATION OF FIRE ALARM SYSTEMS

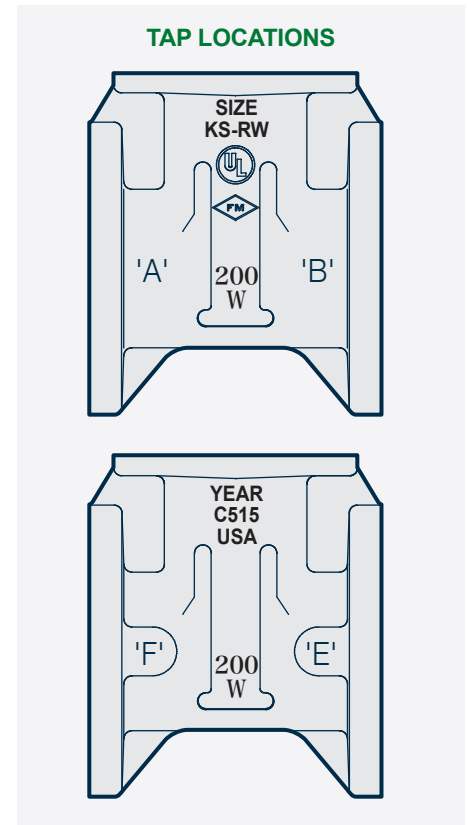
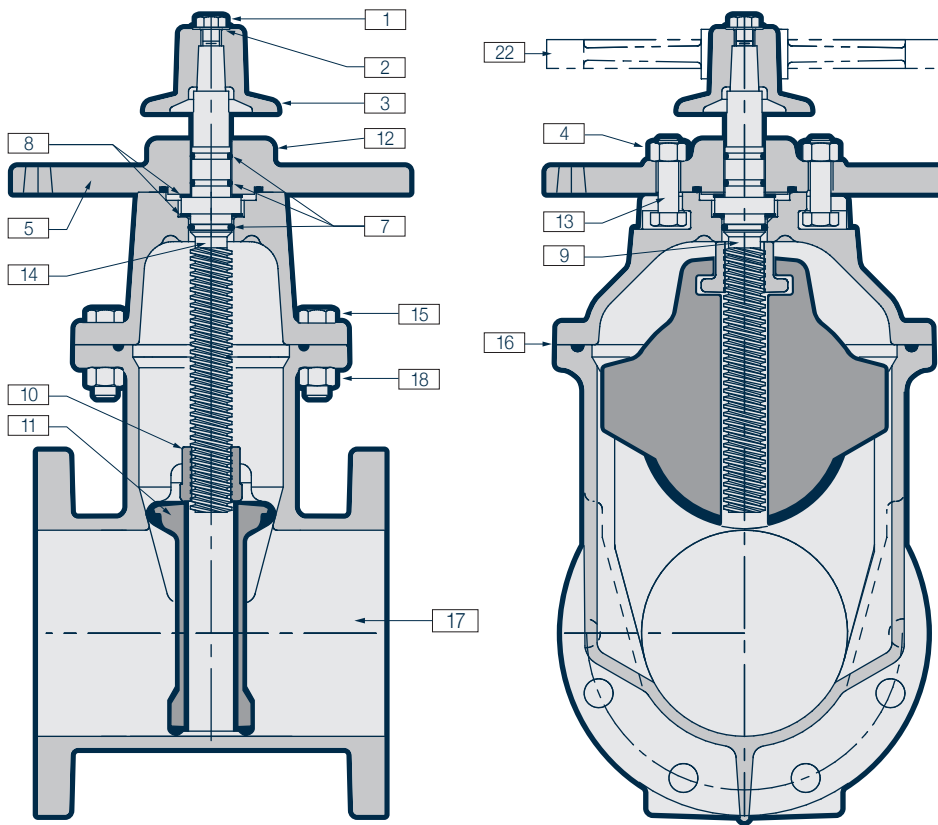


Figure 6

Figure 7

## Bill of Materials

| Item | Description                   | No Req'd | Material  |
|------|-------------------------------|----------|---|
| 1    | Hex Head Bolt                 | 1        | Stainless Steel                                       |
| 2    | Flat Washer                   | 1        | Steel, Plated   |
| 3    | Operating Nut                 | 1        | Cast Iron   |
| 12   | Stuffing Box                  | 1        | Ductile Iron  |
| 8    | Thrust Washer                 | 1        | 2" & 2.5" Delrin                                      |
|      |                               | 2        | 3" - 12" Delrin                                       |
| 5    | Post Adaptor Plate (Optional) | 1        | Cast Iron (4 – 3/4" holes on a 10 1/2" diameter B.C.) |
| 14   | Bonnet/Cover                  | 1        | Cast Iron   |
| 10   | Stem Nut                      | 1        | Bronze  |
| 11   | EPDM Encapsulated Wedge       | 1        | Ductile Iron  |
| 12   | Stuffing Box                  | 1        | Ductile Iron  |
| 7    | O-ring (Stem)                 | 3        | Buna-N  |
| 15   | Hex. Head Bolts               | Varies   | Stainless Steel                                       |
| 18   | Hex. Nuts                     | Varies   | Stainless Steel                                       |
| 17   | Body                          | 1        | Cast Iron   |
| 22   | Handwheel (Optional)          | 1        | Cast Iron   |
| 4    | Hex. Nuts                     | 2        | Stainless Steel                                       |
| 13   | Stuffing Box Bolts            | 2        | Stainless Steel                                       |
| 9    | Stem                          | 1        | Bronze  |
| 16   | O-ring (Cover)                | 1        | Buna-N  |

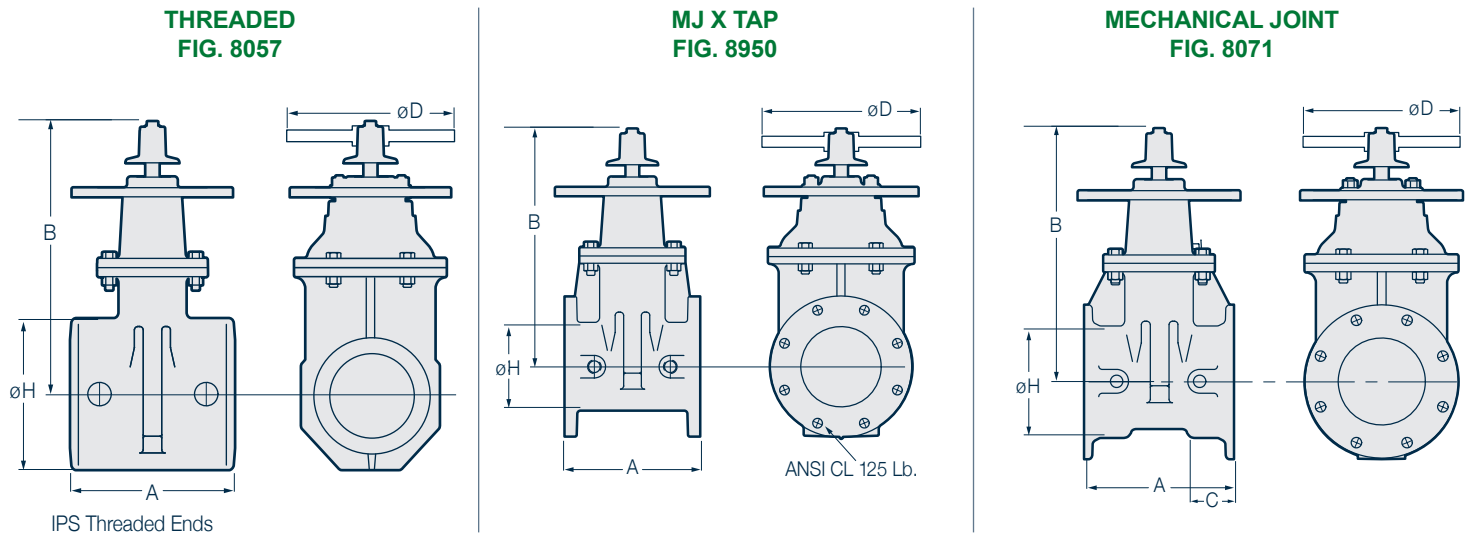


Figure 8  
All NRS Post Plates are 12" diameter unless otherwise noted.

### DIMENSIONS, WEIGHT, AND OPERATIONAL DATA – THREADED – FIG. 8057

| Size | Nominal Dimensions |    |      | C<br>(depth of<br>socket) | No. of Bolts<br>per Flange<br>and Bolt Size | Weight<br>with Plate | ØD Optional<br>Handwheel<br>Diameter | Turns to<br>Operate | Post Plate<br>Diameter | Cv<br>Full Open |
|------|--------------------|----|------|---------------------------|---|----------------------|--------------------------------------|---------------------|------------------------|-----------------|
|      | A                  | ØH | B    |                           |   |                      |                                      |                     |                        |                 |
| 2½"  | 7⅞"                |    | 12⅞" |                           | NA  | NA                   | -                                    | 7¼                  | 12"                    | 500             |
| 3"   | 7⅞"                |    | 13⅞" |                           | NA  | NA                   | -                                    | 10                  | 12"                    | 800             |

### DIMENSIONS, WEIGHT, AND OPERATIONAL DATA – FIG. 8950

| Size | Nominal Dimensions |      |      | No. of Bolts per Flange<br>and Bolt Size | Weight<br>with plate | ØD Optional<br>Handwheel<br>Diameter | Turns to<br>Operate | Post Plate<br>Diameter | Cv Full<br>Open |
|------|--------------------|------|------|--|----------------------|--------------------------------------|---------------------|------------------------|-----------------|
|      | A                  | ØH   | B    |  |                      |                                      |                     |                        |                 |
| 4"   | 9¼"                | 4¼"  | 15¼" | 8 (⅝")                                   | 102                  | 10"                                  | 14                  | 12"                    | 1500            |
| 6"   | 10½"               | 6¼"  | 18⅝" | 8 (¾")                                   | 139                  | 12"                                  | 20                  | 12"                    | 3600            |
| 8"   | 11½"               | 8¼"  | 22⅞" | 8 (¾")                                   | 208                  | 14"                                  | 26                  | 12"                    | 6700            |
| 10"  | 14⅞"               | 10¼" | 26¾" | 12 (⅞")                                  | 340                  | 18"                                  | 32                  | 12"                    | 10500           |
| 12"  | 15⅞"               | 12¼" | 30"  | 12 (⅞")                                  | 446                  | 18"                                  | 38                  | 12"                    | 15000           |

### DIMENSIONS, WEIGHT, AND OPERATIONAL DATA – MJ – FIG. FIG. 8071

| Size | Nominal Dimensions |      |      | C<br>(depth of<br>socket) | No. of Bolts<br>per Flange<br>and Bolt Size | Weight<br>with Plate | ØD Optional<br>Handwheel<br>Diameter | Turns to<br>Operate | Post Plate<br>Diameter | Cv<br>Full Open |
|------|--------------------|------|------|---------------------------|---|----------------------|--------------------------------------|---------------------|------------------------|-----------------|
|      | A                  | ØH   | B    |                           |   |                      |                                      |                     |                        |                 |
| 3"   | 8½"                | 3"   | 13⅞" | 2½"                       | 4 - ⅝"                                      | 60                   | -                                    | 10                  | 12"                    | 800             |
| 4"   | 9½"                | 4¼"  | 15¼" | 2½"                       | 4 - ¾"                                      | 90                   | 10"                                  | 14                  | 12"                    | 1500            |
| 6"   | 10½"               | 6¼"  | 18⅝" | 2½"                       | 6 - ¾"                                      | 128                  | 12"                                  | 20                  | 12"                    | 3600            |
| 8"   | 13⅞"               | 8¼"  | 22⅞" | 2½"                       | 6 - ¾"                                      | 189                  | 14"                                  | 26                  | 12"                    | 6700            |
| 10"  | 15½"               | 10¼" | 26¾" | 2½"                       | 8 - ¾"                                      | 301                  | 18"                                  | 32                  | 12"                    | 10500           |
| 12"  | 16"                | 12¼" | 30"  | 2⅝"                       | 8 - ¾"                                      | 384                  | 18"                                  | 38                  | 12"                    | 1500            |

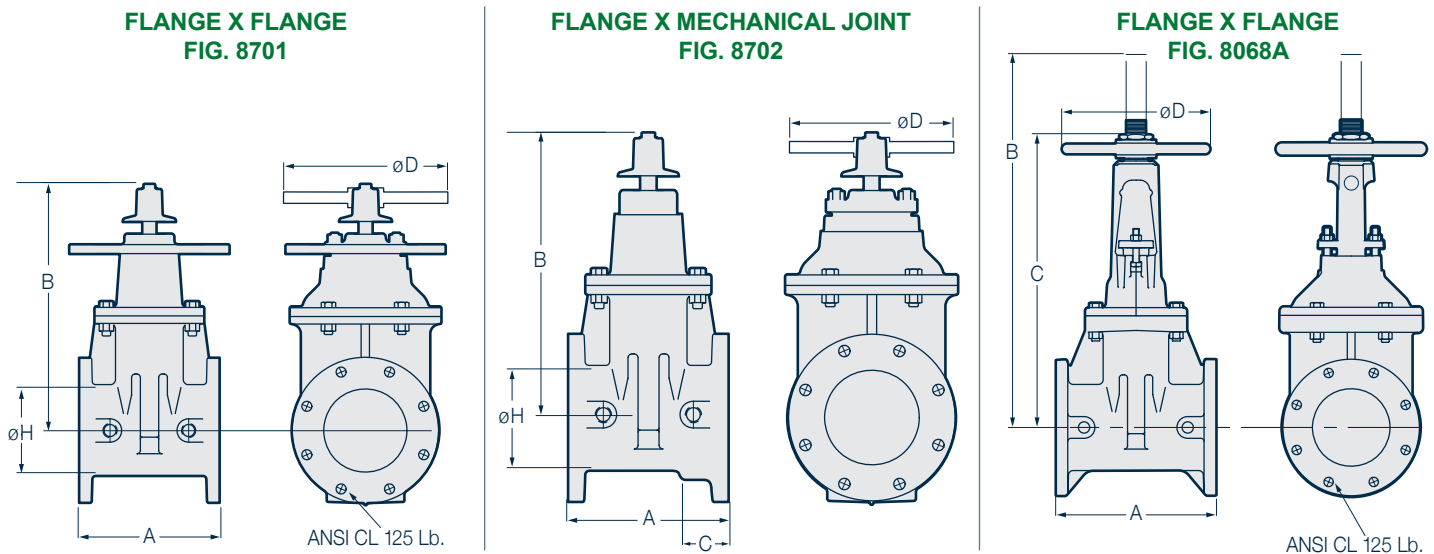


Figure 9  
All Images are shown with Post Plate.

**DIMENSIONS, WEIGHT, AND OPERATIONAL DATA – FLG NRS – FIG. 8071**

| Size | Nominal Dimensions |      |        | C<br>(depth of<br>socket) | No. of Bolts<br>per Flange<br>and Bolt Size | Weight<br>with Plate | ØD Optional<br>Handwheel<br>Diameter | Turns to<br>Operate | Post Plate<br>Diameter | Cv<br>Full Open |
|------|--------------------|------|--------|---------------------------|---|----------------------|--------------------------------------|---------------------|------------------------|-----------------|
|      | A                  | ØH   | B      |                           |   |                      |                                      |                     |                        |                 |
| 3"   | 8"                 | 3"   | 13½"   | NA                        | 4 - 5/8"                                    | 80                   | -                                    | 10                  | 12"                    | 800             |
| 4"   | 9"                 | 4¼"  | 15¼"   | NA                        | 8 - 5/8"                                    | 102                  | 10"                                  | 14                  | 12"                    | 1500            |
| 6"   | 10"                | 6¼"  | 185/8" | NA                        | 8 - ¾"                                      | 139                  | 12"                                  | 20                  | 12"                    | 3600            |
| 8"   | 11½"               | 8¼"  | 227/8" | NA                        | 8 - ¾"                                      | 208                  | 14"                                  | 26                  | 12"                    | 6700            |
| 10"  | 13"                | 10¼" | 26¾"   | NA                        | 12 - 7/8"                                   | 350                  | 18"                                  | 32                  | 12"                    | 10500           |
| 12"  | 14"                | 12¼" | 30"    | NA                        | 12 - 7/8"                                   | 445                  | 18"                                  | 38                  | 12"                    | 1500            |

**DIMENSIONS, WEIGHT, AND OPERATIONAL DATA – FLG X MJ – FIG. 8702**

| Size | Nominal Dimensions |       |        | C<br>(depth of<br>socket) | No. of Bolts<br>per Flange<br>and Bolt Size | Weight<br>with Plate | ØD Optional<br>Handwheel<br>Diameter | Turns to<br>Operate | Post Plate<br>Diameter | Cv<br>Full Open |
|------|--------------------|-------|--------|---------------------------|---|----------------------|--------------------------------------|---------------------|------------------------|-----------------|
|      | A                  | ØH    | B      |                           |   |                      |                                      |                     |                        |                 |
| 3"   | 8¼"                | 3.15" | 13½"   | 2½"                       | 4 - 5/8" 4 - 5/8"                           | NA                   | -                                    | 10                  | 12"                    | 800             |
| 4"   | 9¼"                | 4¼"   | 15¼"   | 2½"                       | 8 - 5/8" 4 - ¾"                             | 96                   | 10"                                  | 14                  | 12"                    | 1500            |
| 6"   | 10½"               | 6¼"   | 185/8" | 2½"                       | 8 - ¾" 6 - ¾"                               | 132                  | 12"                                  | 20                  | 12"                    | 3600            |
| 8"   | 125/16"            | 8¼"   | 227/8" | 2½"                       | 8 - ¾" 6 - ¾"                               | 199                  | 14"                                  | 26                  | 12"                    | 6700            |
| 10"  | 14¼"               | 10¼"  | 26¾"   | 2½"                       | 12 - 7/8" 8 - ¾"                            | 325                  | 18"                                  | 32                  | 12"                    | 10500           |
| 12"  | 15"                | 12¼"  | 30"    | 25/8"                     | 12 - 7/8" 8 - ¾"                            | 407                  | 18"                                  | 38                  | 12"                    | 1500            |

**DIMENSIONS, WEIGHT, AND OPERATIONAL DATA – FLG OS&Y – FIG. 8068A**

| Size | Nominal Dimensions |        |          |     | No. of Bolts<br>per Flange<br>and Bolt Size | Turns to<br>Operate | Weight in Pounds |       |       | Cv<br>Full Open |
|------|--------------------|--------|----------|-----|---|---------------------|------------------|-------|-------|-----------------|
|      | A                  | B      | C        | ØD  |   |                     | G x G            | G x F | F x F |                 |
| 2½"  | 7½"                | 163/8" | 13½"     | -   | 4 (5/8")                                    | 8                   | 37               | 40    | 52    | 500             |
| 3"   | 8"                 | 185/8" | 159/16"  | -   | 4 (5/8")                                    | 10                  | 48               | 57    | 67    | 800             |
| 4"   | 9"                 | 22¼"   | 163/16"  | 10" | 8 (5/8")                                    | 13½                 | 74               | 77    | 92    | 1500            |
| 6"   | 10½"               | 301/8" | 23¾"     | 12" | 8 (¾")                                      | 19½                 | 103              | 115   | 141   | 3600            |
| 8"   | 11½"               | 37¾"   | 30"      | 14" | 8 (¾")                                      | 25½                 | 139              | 171   | 213   | 6700            |
| 10"  | 13"                | 45¾"   | 3511/16" | 18" | 12 (7/8")                                   | 31½                 | 294              | NA    | 369   | 10500           |
| 12"  | 14"                | 531/8" | 4011/16" | 18" | 12 (7/8")                                   | 37¾                 | 326              | NA    | 479   | 1500            |