# 2022

## FIRE PROTECTION AND MECHANICAL TECHNOLOGIES

ALEUM

Ver 02

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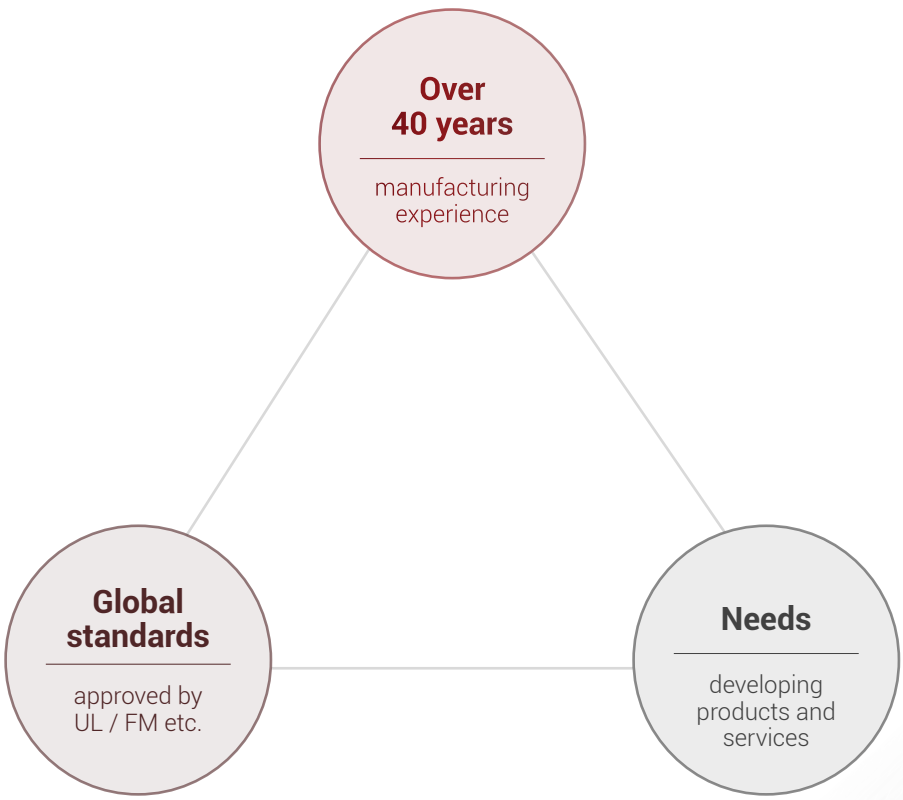
## The Source of Knowledge is **Experience**

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## With **over 40 years** of manufacturing experience in flow control products

Aleum has manufacturing and distribution facilities across Asia, America, and Europe that service **worldwide**. We pride ourselves in innovative engineering and superior construction that is built upon proven science and cutting-edge technology.
Commitment to quality and performance are at the top of our agenda, and from design to construction, each product is design for perfection.

Our products are designed, tested, and certified by leading testing agencies, including **Underwriters Laboratories and Factory Mutual**, who use a wide range of **global standards** to ensure top quality. Aleum has also been approved by many local jurisdictions i.e. the California Fire Marshal (SFM) certification, including California Fire Marshal.

Continued success and growth of our company can be credited to active and effective communication with our customers - listening to and understanding their needs and developing products and services that meet or even exceed those needs.
We are proud of our exceptional customer service and technical support, and our extensive inventory. Our swift shipments enhance our customers' competitive edge. At Aleum, we aim for excellence in everything we do.

c UL us LISTED · FM APPROVED · ISO International Organization for Standardization · ASTM INTERNATIONAL Standards Worldwide · ANSI · NSF

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2601 Walnut Ave, Tustin · CA 92780 · United States
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# Bronze Butterfly Valve Grooved 300PSI

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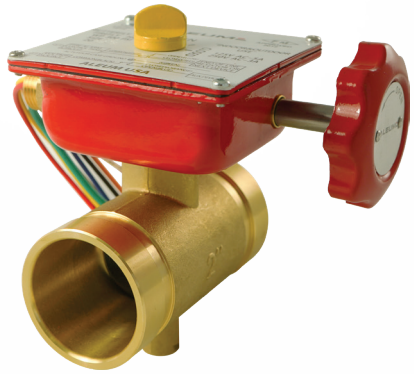
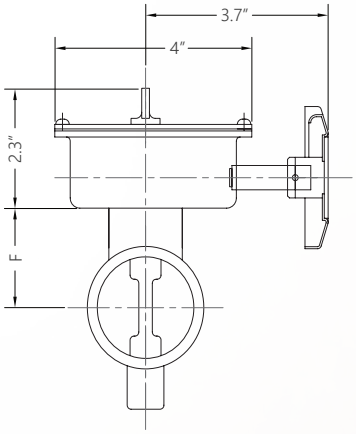
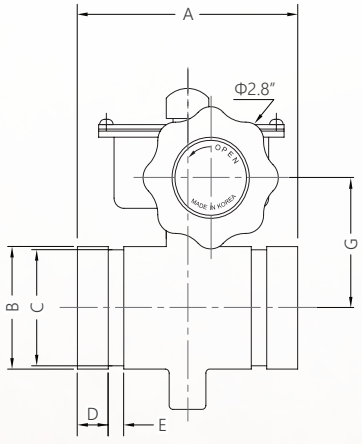
## Technical Features

- Connections: Grooved Ends (AWWA C606)
- Sizes: 1", 1-1/4", 1-1/2", 2", 2-1/2", 3"
- Approvals: UL, ULC, FM
- Maximum Working Pressure: 300PSI (Max. Test Pressure: 600PSI)
- Maximum Working Temperature: 250ºF (120ºC)
- Application: Indoor and Outdoor Use
- Factory-Installed Supervisory Tamper Switch Assembly



| Components | Material | Specification |
|---|---|---|
| Body | Bronze | ASTM B505 |
| Disc | Aluminum Bronze | ASTM B548 |
| Disc Encapsulation | EPDM Rubber | ASTM D2000 |
| Indicator | Brass | ASTM B16 |
| Housing | Steel | ASTM A619 |
| Handwheel | Steel | ASTM A619 |
| Stem | Stainless Steel | ASTM A564 Type XM12 |




## Dimensions

| Size | A | | B | | C | | D | | E | | F | | G | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm |
| 1" | 3.4 | 86 | 1.3 | 33.7 | 1.2 | 30.2 | 0.6 | 16.0 | 0.3 | 7.5 | 1.5 | 37 | 2.0 | 52 |
| 1-1/4" | 3.9 | 99 | 1.7 | 42.4 | 1.5 | 39.0 | 0.6 | 16.0 | 0.3 | 7.5 | 1.6 | 41 | 2.2 | 56 |
| 1-1/2" | 4.1 | 104 | 1.9 | 48.3 | 1.8 | 45.1 | 0.6 | 16.0 | 0.3 | 7.5 | 1.7 | 44 | 2.3 | 59 |
| 2" | 4.5 | 114 | 2.4 | 60.3 | 2.2 | 57.1 | 0.6 | 16.0 | 0.3 | 8.0 | 1.9 | 49 | 2.5 | 64 |
| 2-1/2" | 4.5 | 114 | 2.9 | 73.0 | 2.7 | 69.1 | 0.6 | 16.0 | 0.3 | 8.0 | 2.4 | 60 | 2.9 | 75 |
| 3" | 4.5 | 114 | 3.5 | 88.9 | 3.3 | 84.9 | 0.6 | 16.0 | 0.3 | 8.0 | 2.8 | 70 | 3.9 | 98.5 |

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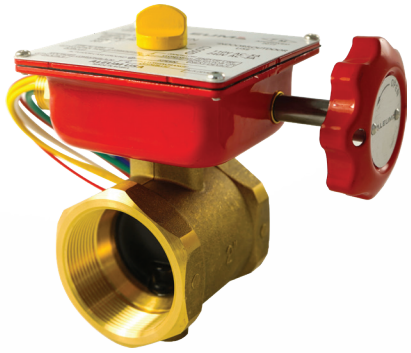
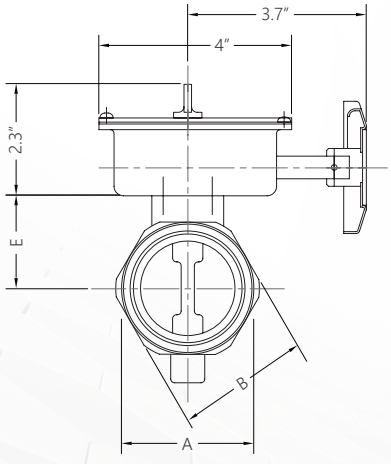
# Bronze Butterfly Valve Threaded 300PSI

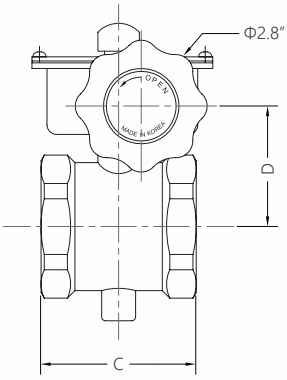
## Technical Features

- Connections: Threaded Ends (ANSI / ASME B1.20.1 NPT)
- Sizes: 1", 1-1/4", 1-1/2", 2", 2-1/2"
- Approvals: UL, ULC, FM
- Maximum Working Pressure: 300PSI (Max. Test Pressure: 600PSI)
- Maximum Working Temperature: 250ºF (120ºC)
- Application: Indoor and Outdoor Use
- Factory-Installed Supervisory Tamper Switch Assembly



| Components | Material | Specification |
|---|---|---|
| Body | Bronze | ASTM B505 |
| Disc | Aluminum Bronze | ASTM B548 |
| Disc Encapsulation | EPDM Rubber | ASTM D2000 |
| Indicator | Brass | ASTM B16 |
| Housing | Steel | ASTM A619 |
| Handwheel | Steel | ASTM A619 |
| Stem | Stainless Steel | ASTM A564 Type XM12 |




## Dimensions

| Size | A | | B | | C | | D | | E | |
|---|---|---|---|---|---|---|---|---|---|---|
| | in | mm | in | mm | in | mm | in | mm | in | mm |
| 1" | 1.7 | 43.7 | 1.6 | 39.7 | 2.1 | 54.0 | 2.0 | 52.0 | 1.5 | 37.0 |
| 1-1/4" | 2.1 | 54.0 | 1.9 | 49.0 | 2.6 | 67.0 | 2.2 | 56.0 | 1.6 | 41.0 |
| 1-1/2" | 2.4 | 60.0 | 2.2 | 56.0 | 2.9 | 73.0 | 2.3 | 59.0 | 2.4 | 61.3 |
| 2" | 3.0 | 76.0 | 2.8 | 70.0 | 3.2 | 82.4 | 2.5 | 64.0 | 1.9 | 49.0 |
| 2-1/2" | 3.5 | 90.0 | 3.3 | 84.0 | 4.1 | 104.0 | 2.7 | 69.5 | 2.1 | 54.5 |

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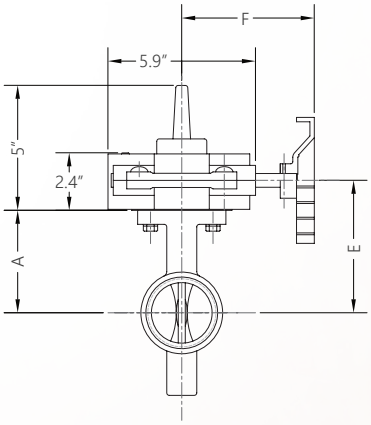
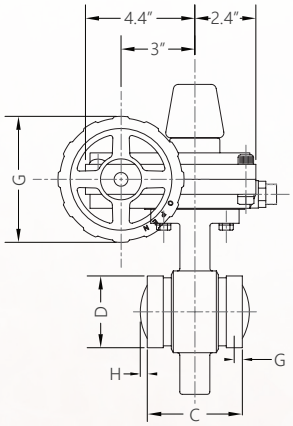
# Ductile Iron Butterfly Valve Grooved 300PSI

## Technical Features

- Connections: Grooved Ends (AWWA C606)
- Sizes: 2-1/2", 3", 4", 6", 8"
- Approvals: UL, ULC, FM, and California State Fire Marshal
- Maximum Working Pressure: 300PSI (Max. Test Pressure: 600PSI)
- Maximum Working Temperature: 250ºF (120ºC)
- Application: Indoor and Outdoor Use
- Double-Seal Disc; Resilient EPDM Coating
- Factory-Installed Supervisory Tamper Switch Assembly
- Also Available with Supervised Closed Switches

| Components | Material | Specification |
|---|---|---|
| Body | Ductile Iron | ASTM A526 Nylon-11 Coated |
| Disc | Ductile Iron | ASTM A536 EPDM Encapsulated |
| Indicator | Ductile Iron | ASTM A536 |
| Housing | Ductile Iron | ASTM A536 |
| Handwheel | Ductile Iron | ASTM A536 |
| Stem | Stainless Steel | AISI 420 |
| Worm Shaft | Stainless Steel | AISI 410 |
| Shear Pin | Steel | ASTM A510 |
| Gear Segment | Brass | ASTM B584 |
| Housing Gasket | EPDM | EPDM Grade E |
| O-Ring (All) | EPDM | EPDM Grade E |




## Dimensions

| Size | A | | C | | D | | E | | F | | G | | H | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | lbs |
| 2-1/2" | 4.1 | 105.0 | 3.8 | 96.4 | 2.9 | 73.0 | 5.3 | 135.0 | 5.3 | 135.0 | 5.0 | 128.0 | | | 20.0 |
| 3" | 4.4 | 112.0 | 3.8 | 96.4 | 3.5 | 88.9 | 5.6 | 142.0 | 5.3 | 135.0 | 5.0 | 128.0 | | | 21.0 |
| 4" | 5.7 | 145.0 | 4.5 | 115.4 | 4.5 | 114.3 | 6.9 | 175.0 | 5.3 | 135.0 | 5.0 | 128.0 | | | 26.0 |
| 6" | 7.0 | 179.0 | 5.2 | 132.4 | 6.6 | 168.3 | 8.2 | 209.0 | 7.6 | 193.0 | 8.7 | 220.0 | 0.3 | 6.8 | 39.0 |
| 8" | 8.0 | 204.0 | 5.8 | 147.4 | 8.6 | 219.1 | 9.2 | 234.0 | 7.6 | 193.0 | 8.7 | 220.0 | 1.0 | 24.2 | 51.0 |

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# Ductile Iron Butterfly Valve Wafer 300PSI

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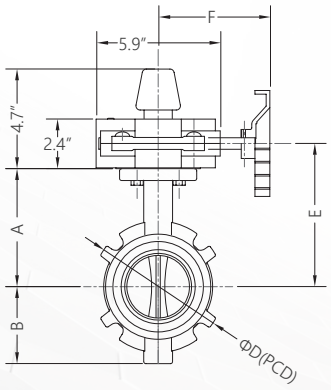
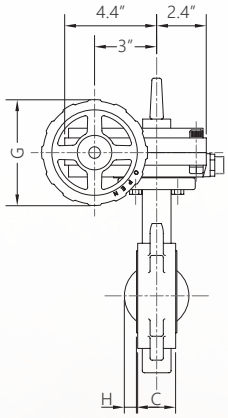
## Technical Features

- Connections: Wafer Ends (ANSI Class 125)
- Sizes: 2-1/2", 3", 4", 6", 8"
- Approvals: UL, ULC, FM, and California State Fire Marshal
- Maximum Working Pressure: 300PSI (Max. Test Pressure: 600PSI)
- Maximum Working Temperature: 250ºF (120ºC)
- Application: Indoor and Outdoor Use
- Double-Seal Disc; Resilient EPDM Coating
- Factory-Installed Supervisory Tamper Switch Assembly
- Also Available with Supervised Closed Switches

| Components | Material | Specification |
|---|---|---|
| Body | Ductile Iron | ASTM A526 Nylon-11 Coated |
| Disc | Ductile Iron | ASTM A536 EPDM Encapsulated |
| Indicator | Ductile Iron | ASTM A536 |
| Housing | Ductile Iron | ASTM A536 |
| Handwheel | Ductile Iron | ASTM A536 |
| Stem | Stainless Steel | AISI 420 |
| Worm Shaft | Stainless Steel | AISI 410 |
| Shear Pin | Steel | ASTM A510 |
| Gear Segment | Brass | ASTM B584 |
| Housing Gasket | EPDM | EPDM Grade E |
| O-Ring (All) | EPDM | EPDM Grade E |




## Dimensions

| Size | A | | B | | C | | D | | E | | F | | G | | H | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | lbs |
| 2-1/2" | 5.4 | 136.0 | 3.4 | 87.0 | 1.8 | 46.0 | 5.9 | 149.4 | 6.5 | 166.0 | 5.3 | 135.0 | 5.0 | 128.0 | 0.3 | 8.2 | 20.0 |
| 3" | 5.6 | 143.0 | 3.7 | 93.0 | 1.8 | 46.0 | 6.6 | 168.2 | 6.8 | 173.0 | 5.3 | 135.0 | 5.0 | 128.0 | 0.6 | 14.5 | 21.0 |
| 4" | 6.1 | 156.0 | 4.3 | 109.0 | 2.0 | 52.0 | 7.9 | 200.2 | 7.3 | 186.0 | 5.3 | 135.0 | 5.0 | 128.0 | 0.9 | 22.7 | 23.0 |
| 6" | 7.4 | 188.0 | 5.7 | 144.0 | 2.2 | 56.0 | 10.6 | 269.8 | 8.6 | 218.0 | 7.6 | 193.0 | 8.7 | 220.0 | 1.8 | 45.4 | 32.0 |
| 8" | 8.7 | 222.0 | 6.5 | 166.0 | 2.3 | 58.0 | 13.0 | 330.2 | 9.9 | 252.0 | 7.6 | 193.0 | 8.7 | 220.0 | 2.7 | 69.1 | 42.0 |

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# Ductile Iron Butterfly Valve Grooved & Wafer Supervised Closed 300PSI

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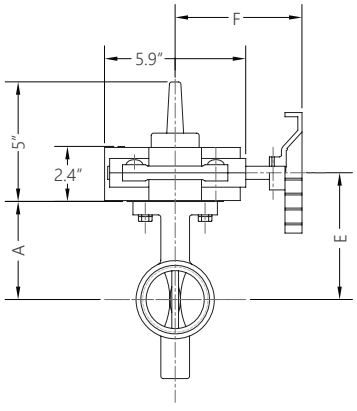
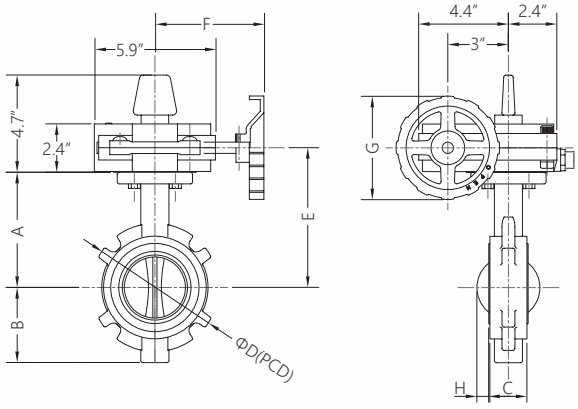
## Technical Features

- Connections: Grooved Ends (AWWA C606) / Wafer Ends (ANSI Class 125)
- Sizes: 2-1/2", 3", 4", 6", 8"
- Approvals: UL, ULC, FM, and California State Fire Marshal
- Working Pressure: Grooved & Wafer 300PSI (Max. Test Pressure: 600PSI)
- Maximum Working Temperature: 250ºF (120ºC)
- Application: Indoor and Outdoor Use
- Double-Seal Disc; Resilient EPDM Coating
- Indicator: Colored in White
- Factory-Installed Supervisory Tamper Switch Assembly
- Also Available with Normally Open Switches

Grooved




Wafer




## Dimensions : Grooved Supervised Closed Butterfly Valve

| Size | A | | C | | D | | E | | F | | G | | H | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | lbs |
| 2-1/2" | 4.1 | 105.0 | 3.8 | 96.4 | 2.9 | 73.0 | 5.3 | 135.0 | 5.3 | 135.0 | 5.0 | 128.0 | | | 20.0 |
| 3" | 4.4 | 112.0 | 3.8 | 96.4 | 3.5 | 88.9 | 5.6 | 142.0 | 5.3 | 135.0 | 5.0 | 128.0 | | | 21.0 |
| 4" | 5.7 | 145.0 | 4.5 | 115.4 | 4.5 | 114.3 | 6.9 | 175.0 | 5.3 | 135.0 | 5.0 | 128.0 | | | 26.0 |
| 6" | 7.0 | 179.0 | 5.2 | 132.4 | 6.6 | 168.3 | 8.2 | 209.0 | 7.6 | 193.0 | 8.7 | 220.0 | 0.3 | 6.8 | 39.0 |
| 8" | 8.0 | 204.0 | 5.8 | 147.4 | 8.6 | 219.1 | 9.2 | 234.0 | 7.6 | 193.0 | 8.7 | 220.0 | 1.0 | 24.2 | 51.0 |

## Dimensions : Wafer Supervised Closed Butterfly Valve

| Size | A | | B | | C | | D | | E | | F | | G | | H | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | lbs |
| 2-1/2" | 5.4 | 136.0 | 3.4 | 87.0 | 1.8 | 46.0 | 5.9 | 149.4 | 6.5 | 166.0 | 5.3 | 135.0 | 5.0 | 128.0 | 0.3 | 8.2 | 20.0 |
| 3" | 5.6 | 143.0 | 3.7 | 93.0 | 1.8 | 46.0 | 6.6 | 168.2 | 6.8 | 173.0 | 5.3 | 135.0 | 5.0 | 128.0 | 0.6 | 14.5 | 21.0 |
| 4" | 6.1 | 156.0 | 4.3 | 109.0 | 2.0 | 52.0 | 7.9 | 200.2 | 7.3 | 186.0 | 5.3 | 135.0 | 5.0 | 128.0 | 0.9 | 22.7 | 23.0 |
| 6" | 7.4 | 188.0 | 5.7 | 144.0 | 2.2 | 56.0 | 10.6 | 269.8 | 8.6 | 218.0 | 7.6 | 193.0 | 8.7 | 220.0 | 1.8 | 45.4 | 32.0 |
| 8" | 8.7 | 222.0 | 6.5 | 166.0 | 2.3 | 58.0 | 13.0 | 330.2 | 9.9 | 252.0 | 7.6 | 193.0 | 8.7 | 220.0 | 2.7 | 69.1 | 42.0 |

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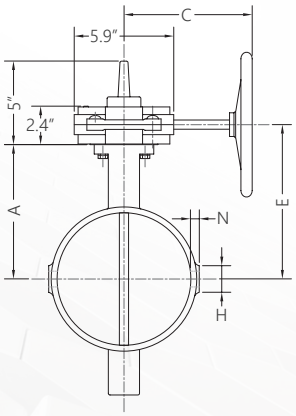
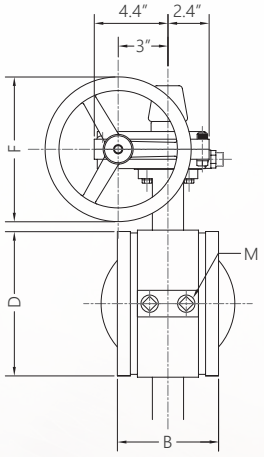
# Ductile Iron Butterfly Valve Grooved Tapped Body 300PSI

## Technical Features

- Connections: Grooved Ends (AWWA C606)
- Sizes: 2-1/2", 3", 4", 6", 8"
- Approvals: UL, ULC, FM, and California State Fire Marshal
- Maximum Working Pressure: 300PSI (Max. Test Pressure: 600PSI)
- Maximum Working Temperature: 250ºF (120ºC)
- Application: Indoor and Outdoor Use
- Double-Seal Disc; Resilient EPDM Coating
- Factory-Installed Supervisory Tamper Switch Assembly
- Also Available with Supervised Closed Switches

| Components | Material | Specification |
|---|---|---|
| Body | Ductile Iron | ASTM A526 Nylon-11 Coated |
| Disc | Ductile Iron | ASTM A536 EPDM Encapsulated |
| Indicator | Ductile Iron | ASTM A536 |
| Housing | Ductile Iron | ASTM A536 |
| Handwheel | Ductile Iron | ASTM A536 |
| Stem | Stainless Steel | AISI 420 |
| Worm Shaft | Stainless Steel | AISI 410 |
| Shear Pin | Steel | ASTM A510 |
| Gear Segment | Brass | ASTM B584 |
| Housing Gasket | EPDM | EPDM Grade E |
| O-Ring (All) | EPDM | EPDM Grade E |




## Dimensions

| Size | A | | B | | C | | D | | E | | F | | H | | N | | M | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | lbs |
| 2-1/2" | 4.1 | 105.0 | 5.0 | 127.0 | 3.8 | 96.4 | 2.9 | 73.0 | 5.3 | 135.0 | 5.3 | 135.0 | 1.2 | 30.0 | 0.5 | 13.0 | 4-1/2 | NPT | 20.0 |
| 3" | 4.4 | 112.0 | 5.0 | 127.0 | 3.8 | 96.4 | 3.5 | 88.9 | 5.6 | 142.0 | 5.3 | 135.0 | 1.2 | 30.0 | 0.5 | 13.0 | 4-1/2 | NPT | 21.0 |
| 4" | 5.7 | 145.0 | 5.0 | 127.0 | 4.5 | 115.4 | 4.5 | 114.3 | 6.9 | 175.0 | 5.3 | 135.0 | 1.6 | 40.4 | 0.6 | 15.0 | 4-1/2 | NPT | 26.0 |
| 6" | 7.0 | 179.0 | 5.6 | 143.5 | 5.2 | 132.4 | 6.6 | 168.3 | 8.2 | 209.0 | 7.6 | 193.0 | 1.6 | 40.4 | 0.6 | 15.0 | 4-1/2 | NPT | 39.0 |
| 8" | 8.0 | 204.0 | 6.0 | 152.4 | 5.8 | 147.4 | 8.6 | 219.1 | 9.2 | 234.0 | 7.6 | 193.0 | 1.6 | 40.4 | 0.6 | 15.0 | 4-1/2 | NPT | 51.0 |

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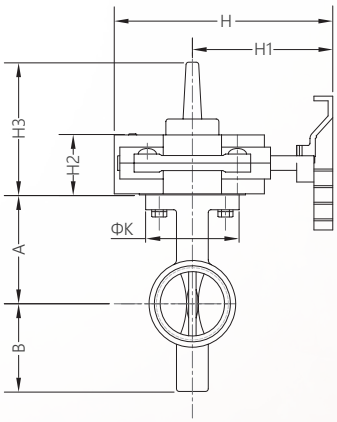
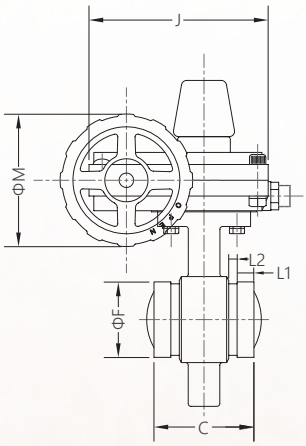
# 2", 5", 10" 12" Ductile Iron Butterfly Valve Grooved 300PSI

## Technical Features

- Connections: Grooved Ends (AWWA C606)
- Sizes: 2", 5", 10", 12"
- Approvals: UL, ULC, FM
- Maximum Working Pressure: 300PSI (Max. Test Pressure: 600PSI)
- Maximum Working Temperature: 250ºF (120ºC)
- Application: Indoor and Outdoor Use
- Double-Seal Disc; Resilient EPDM Coating
- Factory-Installed Supervisory Tamper Switch Assembly

| Components | Material | Specification |
|---|---|---|
| Body | Ductile Iron | ASTM A526 Nylon-11 Coated |
| Disc | Ductile Iron | ASTM A536 EPDM Encapsulated |
| Indicator | Ductile Iron | ASTM A536 |
| Housing | Ductile Iron | ASTM A536 |
| Handwheel | Ductile Iron | ASTM A536 |
| Stem | Stainless Steel | AISI 420 |
| Worm Shaft | Stainless Steel | AISI 410 |
| Shear Pin | Steel | ASTM A510 |
| Gear Segment | Brass | ASTM B584 |
| Housing Gasket | EPDM | EPDM Grade E |
| O-Ring (All) | EPDM | EPDM Grade E |




## Dimensions

| Size | A | | B | | C | | F | | H | | H1 | | H2 | | H3 | | J | | K | | L1 | | L2 | | M | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm |
| 2" | 3.5 | 89 | 2.6 | 65 | 3.2 | 81 | 2.4 | 60.3 | 8.2 | 208 | 5.9 | 151 | 2.6 | 65 | 4.3 | 108 | 5.8 | 147 | 3.5 | 90 | 0.6 | 15.88 | 0.31 | 7.93 | 5.9 | 150 |
| 5" | 5.6 | 141 | 4.4 | 111 | 5.8 | 148 | 5.6 | 141.3 | 8.2 | 208 | 5.9 | 151 | 2.6 | 65 | 4.3 | 108 | 5.8 | 147 | 3.5 | 90 | 0.6 | 15.88 | 0.37 | 9.53 | 5.9 | 150 |
| 10" | 8.5 | 216 | 7.7 | 196 | 6.3 | 159 | 10.8 | 273.0 | 11.9 | 303 | 9.4 | 239 | 2.9 | 73 | 4.5 | 115 | 7.5 | 190 | 4.9 | 125 | 0.75 | 19.05 | 0.5 | 12.70 | 9.8 | 250 |
| 12" | 10 | 254 | 8.9 | 226 | 6.5 | 165 | 12.8 | 323.9 | 11.9 | 303 | 9.4 | 239 | 2.9 | 73 | 4.7 | 120 | 7.5 | 190 | 4.9 | 125 | 0.75 | 19.05 | 0.5 | 12.70 | 9.8 | 250 |

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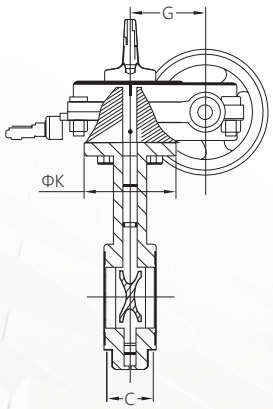
# 2", 5", 10" 12" Ductile Iron Butterfly Valve Wafer 300PSI

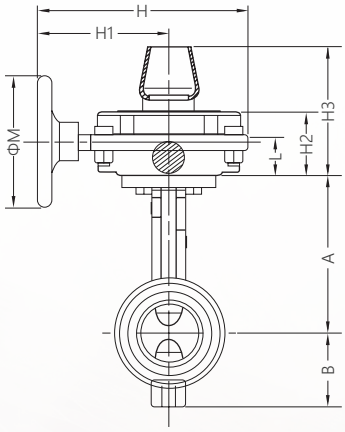
ALEUM

## Technical Features

- Connections: Wafer Ends (ANSI Class 125)
- Sizes: 2", 5", 10", 12"
- Approvals: UL, ULC, FM
- Maximum Working Pressure: 300PSI (Max. Test Pressure: 600PSI)
- Maximum Working Temperature: 250ºF (120ºC)
- Application: Indoor and Outdoor Use
- Double-Seal Disc; Resilient EPDM Coating
- Factory-Installed Supervisory Tamper Switch Assembly

| Components | Material | Specification |
|---|---|---|
| Body | Ductile Iron | ASTM A526 Nylon-11 Coated |
| Disc | Ductile Iron | ASTM A536 EPDM Encapsulated |
| Indicator | Ductile Iron | ASTM A536 |
| Housing | Ductile Iron | ASTM A536 |
| Handwheel | Ductile Iron | ASTM A536 |
| Stem | Stainless Steel | AISI 420 |
| Worm Shaft | Stainless Steel | AISI 410 |
| Shear Pin | Steel | ASTM A510 |
| Gear Segment | Brass | ASTM B584 |
| Housing Gasket | EPDM | EPDM Grade E |
| O-Ring (All) | EPDM | EPDM Grade E |




## Dimensions

| Size | A | | B | | C | | G | | H | | H1 | | H2 | | H3 | | K | | L | | M | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm |
| 2" | 5.5 | 140.5 | 2.5 | 64.5 | 1.7 | 43 | 2.3 | 59 | 8.2 | 208 | 5.9 | 151 | 2.6 | 65 | 4.3 | 108 | 3.5 | 90 | 1.3 | 32 | 5.9 | 150 |
| 5" | 7.5 | 191 | 4.4 | 112 | 2.2 | 56 | 2.3 | 59 | 8.2 | 208 | 5.9 | 151 | 2.6 | 65 | 4.3 | 108 | 3.5 | 90 | 1.3 | 32 | 5.9 | 150 |
| 10" | 10.7 | 273 | 7.6 | 194 | 2.7 | 68 | 2.9 | 75 | 11.7 | 298 | 8.8 | 223 | 3.0 | 77 | 4.8 | 121 | 4.9 | 125 | 1.8 | 45 | 7.9 | 200 |
| 12" | 12.2 | 311 | 8.8 | 223 | 3.1 | 78 | 2.9 | 75 | 11.7 | 298 | 8.8 | 223 | 3.0 | 77 | 4.8 | 121 | 4.9 | 125 | 1.8 | 45 | 9.8 | 250 |

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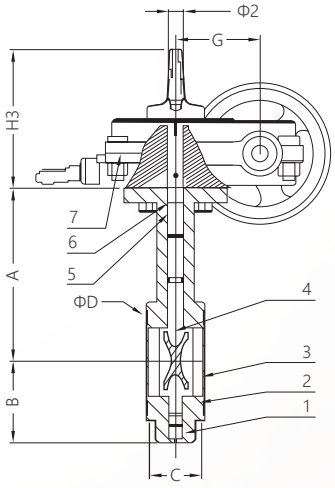
# Ductile Iron Butterfly Valve Lug Style 300PSI

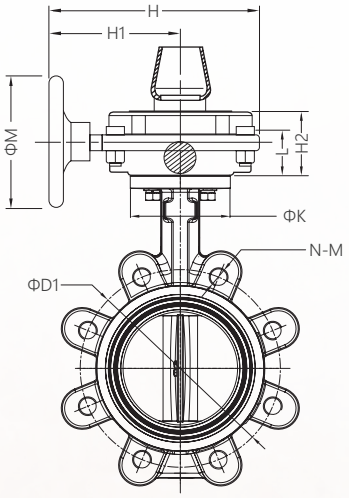
ALEUM

## Technical Features

- Connections: Lug Style Wafer Ends (ASME B16.1 Class 125)
- Sizes: 2-1/2", 3", 4", 6", 8"
- Approvals: UL, ULC, FM
- Maximum Working Pressure: 300PSI (Max. Test Pressure: 600PSI)
- Maximum Working Temperature: 176ºF (80ºC)
- Complies with AWWA C550
- Fusion Bonded Epoxy Coated Interior and Exterior to AWWA C550

| Parts | Components | Material | Specification |
|---|---|---|---|
| 1 | Body | Ductile Iron | ASTM A536 |
| 2 | Seat | EPDM | EPDM Grade E |
| 3 | Disc | Ductile Iron | ASTM A536<br>EPDM Encapsulated |
| 4 | Stem | Stainless Steel | AISI 420 |
| 5 | O-Ring (All) | EPDM | EPDM Grade E |
| 6 | Bushing | Polytetrafluoroethylene | PTFE |
| 7 | Housing | Ductile Iron | ASTM A536 |




## Dimensions

| Size | A | | B | | C | | N-M | D1 | | M | | H | | H1 | | H2 | | H3 | | K | | G | | D | | Φ2 | | L | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | in | mm | in | mm | in | mm | | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm |
| 2-1/2" | 6.0 | 153 | 2.8 | 72 | 1.8 | 46 | 4-5/8 | 5.5 | 139.7 | 5.9 | 150 | 8.2 | 208 | 5.9 | 151 | 2.6 | 65 | 4.3 | 108 | 3.5 | 90 | 2.3 | 59 | 2.6 | 65.2 | 0.6 | 14 | 1.3 | 32 |
| 3" | 6.2 | 157.5 | 3.4 | 86 | 1.8 | 46 | 4-5/8 | 6.0 | 152.4 | 5.9 | 150 | 8.2 | 208 | 5.9 | 151 | 2.6 | 65 | 4.3 | 108 | 3.5 | 90 | 2.3 | 59 | 3.1 | 79.7 | 0.6 | 14 | 1.3 | 32 |
| 4" | 6.9 | 176.0 | 3.9 | 100 | 2.0 | 52 | 8-5/8 | 7.5 | 190.5 | 5.9 | 150 | 8.2 | 208 | 5.9 | 151 | 2.6 | 65 | 4.3 | 108 | 3.5 | 90 | 2.3 | 59 | 4.1 | 105.0 | 0.6 | 14 | 1.3 | 32 |
| 6" | 8.0 | 202.5 | 5.0 | 128 | 2.2 | 56 | 8-3/4 | 9.5 | 241.3 | 5.9 | 150 | 8.2 | 208 | 5.9 | 151 | 2.6 | 65 | 4.3 | 108 | 3.5 | 90 | 2.3 | 59 | 6.1 | 155.8 | 0.8 | 20 | 1.3 | 32 |
| 8" | 9.6 | 243.5 | 6.4 | 162 | 2.4 | 60 | 8-3/4 | 11.8 | 298.5 | 7.9 | 200 | 11.7 | 298 | 8.8 | 223 | 3.0 | 77 | 4.8 | 121 | 4.9 | 125 | 3.1 | 77.5 | 8.1 | 206.7 | 1.0 | 26 | 1.8 | 45 |

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## Design Requirements

The Aleum grooved butterfly valve should be connected to the piping system with approved couplings or flange adapters. Flow may be from either direction, and the valve may be positioned in any direction.
Aleum butterfly valves have been designed with a slow close hand wheel operator which effectively minimizes water hammer. These valves feature minimum flow restriction and pressure loss when in the fully open position.

## Care & Maintenance

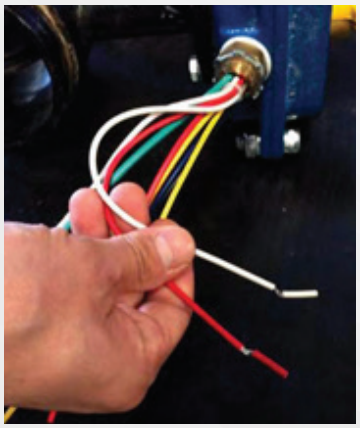
Aleum butterfly valves require no regular maintenance. However, it is advisable to inspect and verify proper operation of the unit annually or in accordance with the authority having jurisdiction.
The inspection should include a visual check for leakage at the valve pipe connection and body to operator connection. Inspection and maintenance should be performed by a qualified inspection service.

## Switch Installation

Aleum butterfly valves are provided with internal supervisor position switches. The tamper switch operates by a cam.

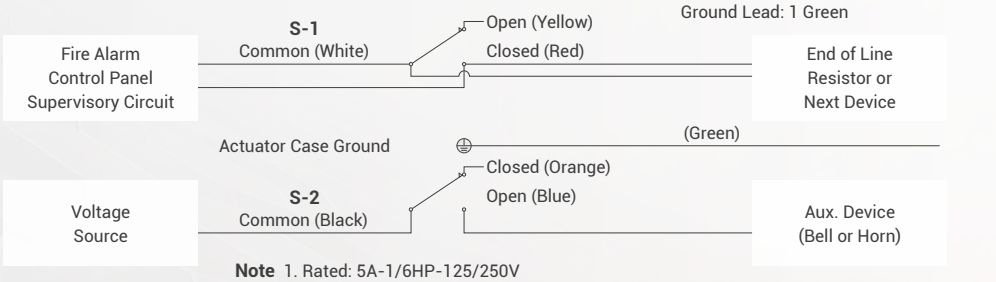
## Installation

When the valves are received from the manufacturer they should be handled carefully to avoid breakage and damage to the seating area. Before installation of the valve, clean piping, flange and coupling. When the valve closes hard, it is usually due to debris lodged in the sealing area. Often this may be corrected by backing off the hand wheel and closing again. The valve should never be forced to seat by applying a wrench to the hand wheel as this may distort the valve components or score the sealing surface. The use of excessive force to open or close the valve violates all warranties whether express or implied. The inlet and oulet pipe adjacent to the valve should be properly supported to prevent excessive stress on the valve body. The valve should not be used to force a pipeline into position as this may result in distortion of the valve body. Conduit and electrical connections to the optional tamper switch must be in accordance with National Electrical Code (NFPA 72) and or the requirements of the local authority having jurisdiction.



Switch #1
For connection to the supervisory circuit
Normally closed: 2 Red
Normally open: 2 Yellow
Common: 2 White

Switch #2
Auxiliary switch connected per authority
Normally closed: 1 Orange
Normally open: 1 Blue
Common: 1 Black
Ground Lead: 1 Green




**Note** 1. Rated: 5A-1/6HP-125/250V

For **NO SIGNAL** in fully open position "Normally Open". Use **RED / WHITE**

We are noticing a growing number of alarm techs nationwide are not properly practicing wiring procedures on butterfly valves. specifically, they are connecting wrong wires. This can ve easily avoided by using a voltmeter, but for whatever reason, they are skipping this mandatory, crucial step.

All our butterfly valves with a tamper switch (both Bronze and Ductile types), require connecting RED and WHITE wires to the alarm panel when used in normally open applications. Some are WRONGLY using white and yellow and claiming that our product is defective. Please be informed and educate all involved.

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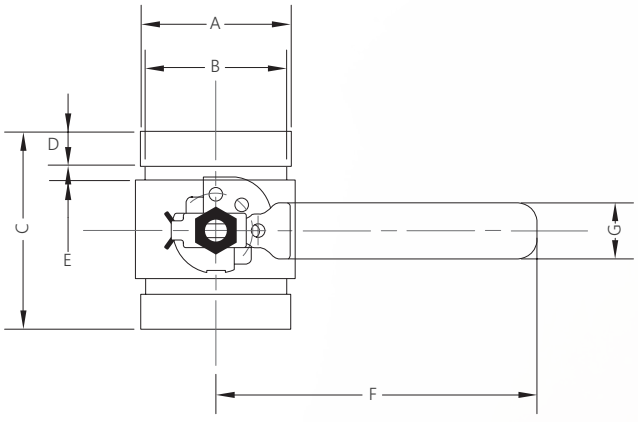
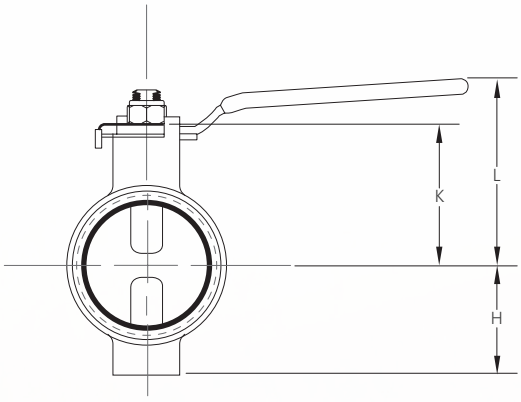
# Lever Type Handle Butterfly Valve Grooved 300 PSI

## Technical Features

- Connections: Grooved Ends (AWWA C606)
- Sizes: 2, 2-1/2", 3", 4", 5", 6", 8"
- Maximum Working Pressure: 300PSI (Max. Test Pressure: 450PSI)
- Maximum Working Temperature: 250ºF (120ºC)
- Application: Indoor and Outdoor Use

| Components | Material |
|---|---|
| Body | Epoxy Coated |
| Disc | Ductile Iron, EPDM or NBR Encapsulated |
| Stem | Stainless Steel |
| Latch Plate | Steel, Zinc Plated with 3-position lock-out. |
| Handle | Carbon Steel, Epoxy Coating or Casting |




## Dimensions

| Size | A | | B | | C | | D | | E | | F | | G | | H | | K | | L | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | lbs |
| 2" | 2.4 | 60.9 | 2.3 | 57.2 | 3.4 | 87.4 | 0.6 | 15.9 | 0.3 | 8.7 | 6.0 | 154.4 | 1.0 | 25.4 | 1.8 | 46.0 | 2.3 | 59.0 | 3.2 | 81 | 5.0 |
| 2-1/2" | 2.9 | 73.6 | 2.8 | 70.2 | 3.8 | 96.8 | 0.6 | 15.9 | 0.4 | 8.9 | 6.0 | 154.4 | 1.0 | 25.4 | 2.1 | 52.3 | 2.4 | 62 | 3.6 | 91.9 | 7.0 |
| 3" | 3.6 | 91.4 | 3.4 | 86.4 | 3.8 | 96.8 | 0.6 | 15.9 | 0.4 | 8.9 | 8.4 | 214.4 | 1.0 | 25.4 | 2.6 | 66.5 | 2.7 | 68.1 | 4.3 | 108 | 8.0 |
| 4" | 4.6 | 116.8 | 4.4 | 111.8 | 4.6 | 117.3 | 0.6 | 15.9 | 0.4 | 8.9 | 8.4 | 214.4 | 1.0 | 25.4 | 3.3 | 84.1 | 3.3 | 84.1 | 4.9 | 125.5 | 12.0 |
| 5" | 5.5 | 139.8 | 5.3 | 133.5 | 5.2 | 132.4 | 0.6 | 15.9 | 0.4 | 8.9 | 12.3 | 311.2 | 1.3 | 31.8 | 3.9 | 99.0 | 3.9 | 99.0 | 5.8 | 147.6 | - |
| 6" | 6.7 | 170.1 | 6.6 | 167.6 | 5.3 | 133.4 | 0.6 | 15.9 | 0.4 | 8.9 | 12.3 | 311.2 | 1.3 | 31.8 | 4.4 | 111.3 | 4.4 | 111.3 | 7.0 | 177.8 | 19.0 |
| 8" | 8.6 | 218.4 | 8.4 | 213.3 | 5.8 | 147 | 0.7 | 19.0 | 0.4 | 8.9 | 12.3 | 311.2 | 1.3 | 31.8 | 5.4 | 137.0 | 5.4 | 137.0 | 8.0 | 203.2 | 34.0 |

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# Lever Lock Handle Butterfly Valve Grooved 300 PSI

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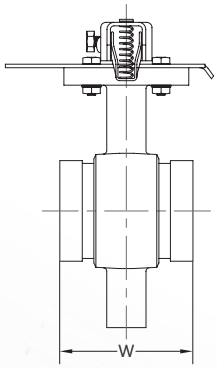
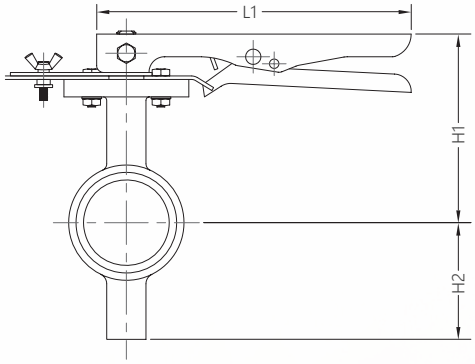
## Technical Features

- Connections: Grooved Ends (AWWA C606)
- Size: 2", 2-1/2", 3", 4", 5", 6", 8", 10", 12", 14"
- Maximum Working Pressure: 300PSI (Max. Test Pressure: 450PSI)
- Maximum Working Temperature: 250°F (120°C)
- Application: Indoor and Outdoor Use
- 10 Point Lock Position

| Components | Material | Specification |
|---|---|---|
| Body | Ductile Iron | ASTM A526 Nylon-11 Coated |
| Disc | Ductile Iron | ASTM A536 EPDM Encapsulated |
| Indicator | Ductile Iron | ASTM A536 |
| Housing | Ductile Iron | ASTM A536 |
| Stem | Stainless Steel | AISI 420 |
| Worm Shaft | Stainless Steel | AISI 410 |
| Shear Pin | Steel | ASTM A510 |
| Gear Segment | Brass | ASTM B584 |
| Housing Gasket | EPDM | EPDM Grade E |
| O-Ring (All) | EPDM | EPDM Grade E |




## Dimensions

| Size | L1 | | W | | H1 | | H2 | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| | in | mm | in | mm | in | mm | in | mm | lbs |
| 2" | 9.0 | 228.6 | 3.4 | 86 | 4.8 | 121 | 2.6 | 65 | - |
| 2-1/2" | 9.0 | 228.6 | 3.8 | 96.3 | 5.4 | 136.9 | 3.3 | 84.8 | 8.5 |
| 3" | 9.0 | 228.6 | 3.8 | 96.3 | 5.7 | 143.8 | 3.6 | 91.9 | 10.0 |
| 4" | 9.0 | 228.6 | 4.5 | 115.3 | 7.0 | 176.8 | 4.2 | 107.9 | 13.5 |
| 5" | 11.3 | 287.02 | 5.2 | 132.3 | 7.8 | 198.12 | 5.2 | 132.08 | N/A |
| 6" | 11.3 | 287.02 | 5.2 | 132.3 | 8.2 | 210.8 | 5.7 | 144.8 | 20.0 |
| 8" | 13.3 | 337.82 | 5.8 | 147.32 | 9.3 | 235.97 | 6.7 | 169.93 | 33.51 |
| 10" | 13.3 | 337.82 | 6.26 | 159 | 8.50 | 216 | 7.72 | 196 | N/A |
| 12" | 13.3 | 337.82 | 6.50 | 165 | 10 | 254 | 8.90 | 226 | N/A |
| 14" | 13.3 | 337.82 | 7.01 | 178 | 11.42 | 290 | 9.49 | 241 | N/A |

* 10", 12", 14" : Special Order

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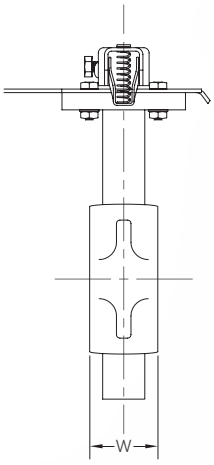
# Lever Lock Handle Butterfly Valve Wafer 300 PSI

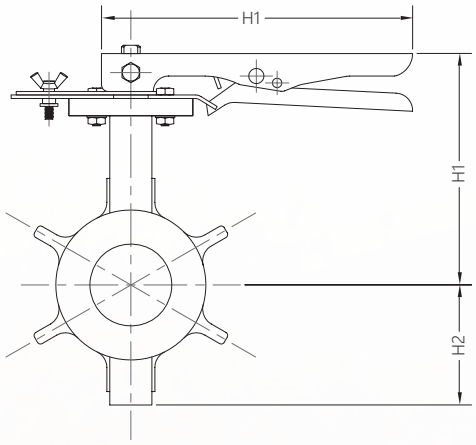
ALEUM

## Technical Features

- Connections: Wafer Ends (ANSI Class 125)
- Size: 2-1/2", 3", 4", 6", 8"
- Maximum Working Pressure: 300PSI (Max. Test Pressure: 450PSI)
- Maximum Working Temperature: 250ºF (120ºC)
- Application: Indoor and Outdoor Use
- 10 Point Lock Position

| Components | Material |
|---|---|
| Body | ASTM A526 Nylon-11 Coated |
| Disc | Ductile Iron, EPDM or NBR Encapsulated |
| Stem | Stainless Steel |
| Throttling Plate | Steel, Zinc Plated |
| ISO Mounting Pad | |
| Handle | Carbon Steel, Epoxy Coating or Casting |




## Dimensions

| Size | L1 | | W | | H1 | | H2 | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| | in | mm | in | mm | in | mm | in | mm | lbs |
| 2-1/2" | 9.0 | 228.6 | 1.8 | 46.0 | 6.6 | 167.9 | 3.4 | 86.9 | 7.5 |
| 3" | 9.0 | 228.6 | 1.8 | 46.0 | 6.9 | 174.8 | 3.7 | 93.0 | 8.0 |
| 4" | 9.0 | 228.6 | 2.0 | 52.0 | 7.4 | 188.0 | 4.3 | 109.0 | 12.0 |
| 6" | 11.3 | 285.75 | 2.2 | 56.0 | 8.7 | 220.0 | 5.7 | 143.8 | 22.5 |
| 8" | 13.3 | 337.82 | 2.4 | 60.0 | 10.0 | 254.0 | 6.7 | 170.0 | 33.51 |

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# Lever Lock Handle G-Mine Style Butterfly Valve Grooved 300 PSI

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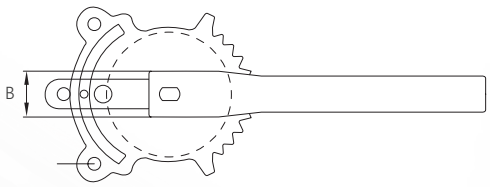
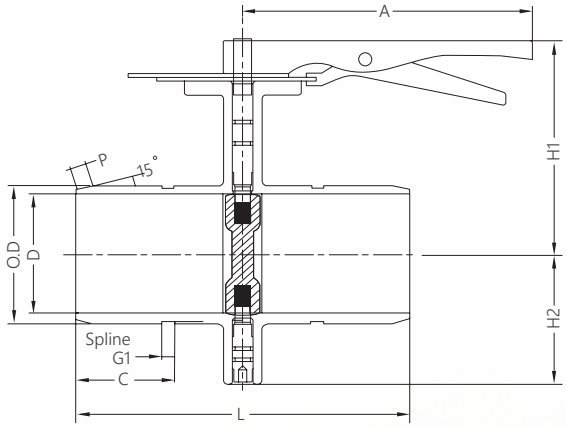
## Technical Features

- Connections: Grooved Ends (AWWA C606)
- Sizes: 2", 3", 4", 6", 8"
- Maximum Working Pressure: 300PSI (20 bar)
- Maximum Working Temperature: 32ºF to 140ºF (0ºC to 60ºC)
- 10 Point Lock Position

| Components | Material |
|---|---|
| Body | Epoxy Coated |
| Disc | Ductile Iron, EPDM or NBR Encapsulated |
| Stem | Stainless Steel |
| Throttling Plate | Steel, Zinc Plated |
| ISO Mounting Pad | |
| Handle | Carbon Steel, Epoxy Coating or Casting |




## Dimensions

| Size | A | | B | | C | | D | | O.D. | | G1 | | H1 | | H2 | | L | | P | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm |
| 2" | 7.95 | 202.0 | 1.42 | 36.0 | 1.75 | 44.50 | 1.89 | 48.00 | 2.38 | 60.30 | 0.25 | 6.40 | 5.16 | 131.0 | 2.52 | 63.90 | 7.52 | 191.10 | 0.19 | 4.78 |
| 3" | 7.95 | 202.0 | 1.42 | 36.0 | 2.50 | 63.50 | 2.88 | 73.20 | 3.50 | 88.90 | 0.38 | 9.50 | 5.75 | 146.0 | 3.62 | 92.0 | 9.18 | 233.20 | 0.19 | 4.78 |
| 4" | 7.95 | 202.0 | 1.42 | 36.0 | 3.00 | 76.20 | 3.85 | 97.80 | 4.50 | 114.30 | 0.38 | 9.50 | 7.05 | 179.0 | 4.25 | 108.0 | 10.18 | 258.60 | 0.19 | 4.78 |
| 6" | 10.28 | 261.0 | 1.46 | 37.0 | 3.00 | 76.20 | 5.74 | 145.80 | 6.63 | 168.30 | 0.38 | 9.50 | 8.39 | 213.0 | 5.71 | 145.0 | 10.42 | 264.60 | 0.31 | 7.95 |
| 8" | 12.40 | 315.0 | 1.57 | 40.0 | 2.50 | 63.50 | 7.65 | 194.20 | 8.63 | 219.10 | 0.50 | 12.70 | 9.37 | 238.0 | 6.69 | 170.0 | 10.96 | 278.47 | 0.31 | 7.95 |

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# 316 Stainless Butterfly Valve | Grooved 300 PSI

ALEUM

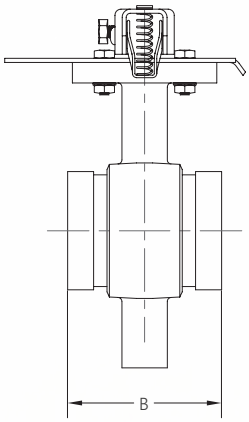
## Technical Features

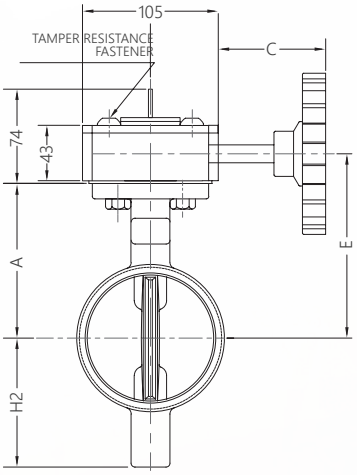
- Connections: Grooved Ends (AWWA C606)
- Size: 2", 2-1/2", 3", 4", 5" ,6", 8"
- Maximum Working Pressure: 300PSI (Max. Test Pressure: 600PSI)
- Maximum Working Temperature: 230ºF (110ºC)
- Application: Indoor and Outdoor Use
- 10-Position Epoxy-Coated Lever Handle with Memory Stop (Options: 316 SS Lever-Handle, Gear Operator)

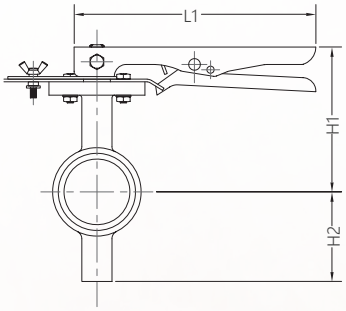
9200LG

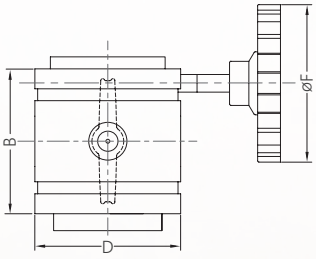
9200GO

| Components | Material | Specification |
|---|---|---|
| Body | 316SS | 316 (CF8M) Stainless Steel |
| Disc | Ductile Iron | Ductile Iron, EPDM or NBR Encapsulated |
| Stem | Stainless Steel | AISI 410 Stainless Steel |
| Stem Seals | EPDM | |
| ISO Mounting Pad | Stainless Steel | 4-Hole, ISO |
| Throttling Plate | Steel, Zinc-Plated | |
| Lever Handle | Carbon Steel | Epoxy Coated |
| Gear-Op. Housing | Coated Steel | Epoxy Coated |
| Handwheel | Ductile Iron | ASTM A536 |
| Worm Shaft | Stainless Steel | AISI 410 |
| Shear Pin | Steel | ASTM A510 |
| Gear Segment | Brass | ASTM B584 |
| Housing Gasket | EPDM | EPDM Grade E |




## Dimensions

| Size | A | | B | | C | | D | | E | | F | | L1 | | H1 | | H2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm |
| 2" | 3.8 | 97 | 3.3 | 86 | 5.1 | 132 | 2.3 | 60.3 | 4.8 | 122 | 5.0 | 128 | 9.0 | 228.6 | 4.8 | 121 | 2.6 | 65 |
| 2-1/2" | 4.1 | 105 | 3.7 | 96.4 | 5.1 | 132 | 2.8 | 73 | 5.1 | 130 | 5.0 | 128 | 9.0 | 228.6 | 5.4 | 136.9 | 3.3 | 84.8 |
| 3" | 4.4 | 112 | 3.7 | 96.4 | 5.1 | 132 | 3.5 | 88.9 | 5.3 | 137 | 5.0 | 128 | 9.0 | 228.6 | 5.7 | 143.8 | 3.6 | 91.9 |
| 4" | 5.7 | 145 | 4.5 | 115.4 | 5.1 | 132 | 4.5 | 114.3 | 6.6 | 170 | 5.0 | 128 | 9.0 | 228.6 | 7.0 | 176.8 | 4.2 | 107.9 |
| 5" | 6.3 | 162 | 5.2 | 132.4 | 5.1 | 132 | 5.5 | 141.3 | 7.3 | 187 | 5.0 | 128 | 11.3 | 287.0 | 8.0 | 203.2 | 5.0 | 127.0 |
| 6" | 7.0 | 179 | 5.2 | 132.4 | 7.4 | 190 | 6.6 | 168.3 | 8.0 | 204 | 8.6 | 220 | 11.3 | 287.0 | 8.2 | 210.8 | 5.7 | 144.8 |
| 8" | 8.0 | 204 | 5.8 | 147.4 | 7.4 | 190 | 8.6 | 219.1 | 8.6 | 219.1 | 8.6 | 220 | 11.3 | 287.0 | 9.3 | 235.97 | 6.7 | 169.93 |

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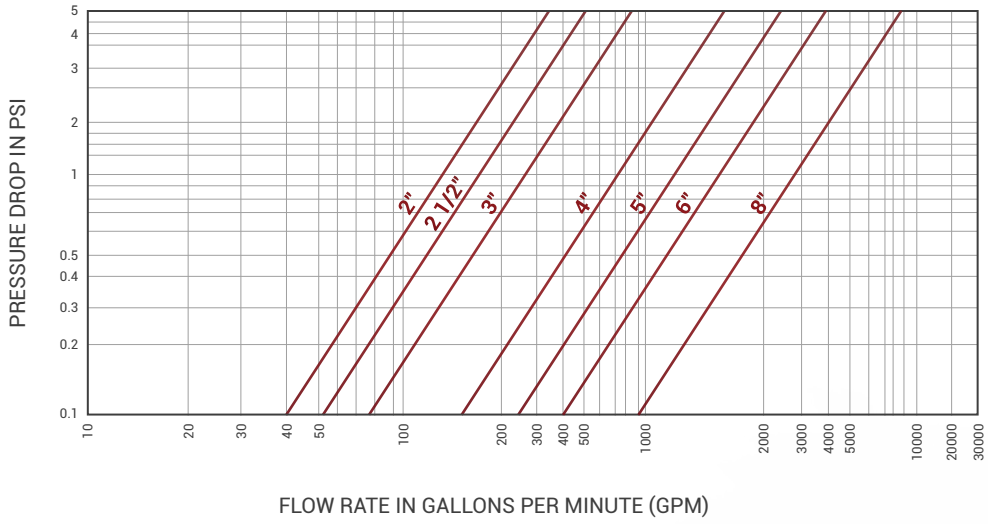
## Grooved End Flow Characteristics




FLOW RATE IN GALLONS PER MINUTE (GPM)

## Flow coefficient: Cv

| Size | Disk Open Angle | | | | | | |
|---|---|---|---|---|---|---|---|
| | 30º | 40º | 50º | 60º | 70º | 80º | 90º |
| 2" | 7 | 15 | 27 | 54 | 80 | 108 | 140 |
| 2-1/2" | 12 | 27.4 | 53.1 | 96 | 138 | 156 | 163 |
| 3" | 18.9 | 39.4 | 78.9 | 144 | 210 | 243 | 249 |
| 4" | 30 | 65.1 | 129 | 226 | 377 | 488 | 514 |
| 5" | 62 | 123 | 237 | 390 | 625 | 880 | 1010 |
| 6" | 84 | 184 | 369 | 634 | 964 | 1196 | 1286 |
| 8" | 165 | 339 | 677 | 1230 | 2002 | 2850 | 3129 |

## Torque Test Result

| Size / Test Item | 2" | 2.5" | 3" | 4" | 5" | 6" | 8" |
|---|---|---|---|---|---|---|---|
| | Value | Value | Value | Value | Value | Value | Value |
| open/close | open/close | open/close | open/close | open/close | open/close | open/close | open/close |
| Average | 20/35 | 30/45 | 35/75 | 85/135 | 100/140 | 135/185 | 185/265 |

• Pressure TEST Reference: 300PSI (basic) 21.09 Kgf/cm$^2$
low(100psi/7.03 Kgf/cm$^2$) | medium(300psi/21.09Kgf/cm$^2$) | high(600psi/42.18Kg/cm$^2$)

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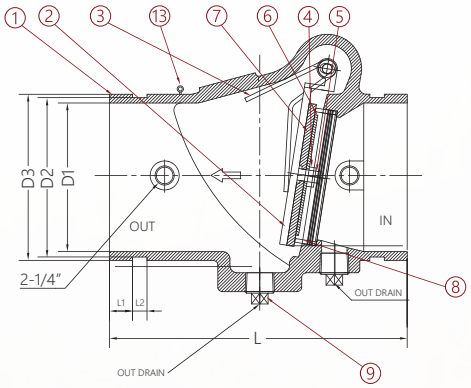
# Swing Check Valve Grooved

ALEUM

## Technical Features

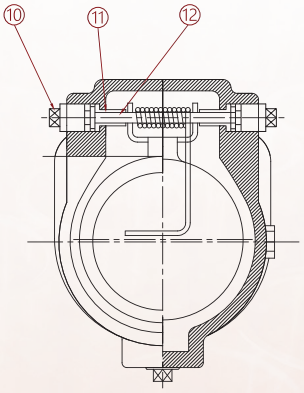
- Connections: Grooved Ends (AWWA C606)
- Sizes: 2", 2-1/2", 3", 4", 5", 6", 8", 10", 12"
- Approvals: UL, ULC, and FM
- Maximum Working Pressure: 300PSI (Max. Test Pressure: 600PSI)
- Maximum Working Temperature: 250ºF (120ºC)
- Application: Indoor and Outdoor Use
- Low pressure-drop, Non-slam performance

| Parts | Components | Material | Specification |
|---|---|---|---|
| 1 | Body | Ductile Iron,Epoxy Coated | A536 65-45-12 |
| 2 | Clapper | Stainless Steel | ANSI 304 |
| 3 | Coil Spring | Stainless Steel | ANSI 302 |
| 4 | Nut | Stainless Steel | ANSI 304 |
| 5 | Bolt | Stainless Steel | ANSI 304 |
| 6 | Washer | Stainless Steel | ANSI 304 |
| 7 | Facing Seal | Rubber | EPDM |
| 8 | Seat Ring | Stainless Steel | ANSI 304 |
| 9 | Drain Plug | Ductile Iron | Drain Plug |
| 10 | Pin Plug | Ductile Iron | Pin Plug |
| 11 | Bushing | AluminumBronze | Bushing |
| 12 | Hinge Pin | Stainless Steel | Hinge Pin |
| 13 | Hook | Steel | Hook |
| 14 | Oil Ring | | EPDM |
| 15 | Waser | | ASTM A-307 |




## Dimensions

| Size | D1 | | D2 | | D3 | | L | | L1 | | L2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm |
| 2" | 1.9 | 49.0 | 2.2 | 57.1 | 2.4 | 60.3 | 6.7 | 170.0 | 0.6 | 15.8 | 0.3 | 8.7 |
| 2-1/2" | 2.4 | 62.2 | 2.7 | 69.0 | 2.9 | 73.0 | 7.2 | 184.0 | 0.6 | 15.8 | 0.3 | 8.7 |
| 3" | 2.9 | 74.0 | 3.3 | 84.7 | 3.5 | 89.1 | 7.6 | 195.0 | 0.6 | 15.8 | 0.3 | 8.7 |
| 4" | 3.9 | 98.0 | 4.3 | 109.8 | 4.5 | 114.3 | 8.1 | 205.0 | 0.6 | 15.8 | 0.3 | 8.7 |
| 5" | | | 5.4 | 137.0 | 5.6 | 141.3 | 9.8 | 247.7 | 0.6 | 15.8 | 0.3 | 8.7 |
| 6" | 6.1 | 156.0 | 6.4 | 163.7 | 6.6 | 168.3 | 12.6 | 320.0 | 0.6 | 15.8 | 0.3 | 8.7 |
| 8" | 7.9 | 201.6 | 8.5 | 215.8 | 8.6 | 218.2 | 14.6 | 372.0 | 0.8 | 20.1 | 0.4 | 10.5 |
| 10" | | | 10.6 | 268.3 | 10.7 | 273.0 | 18.0 | 457.2 | 0.8 | 20.1 | 0.5 | 12.7 |
| 12" | | | 12.5 | 318.3 | 12.8 | 323.9 | 21.1 | 534.9 | 0.8 | 20.1 | 0.5 | 12.7 |



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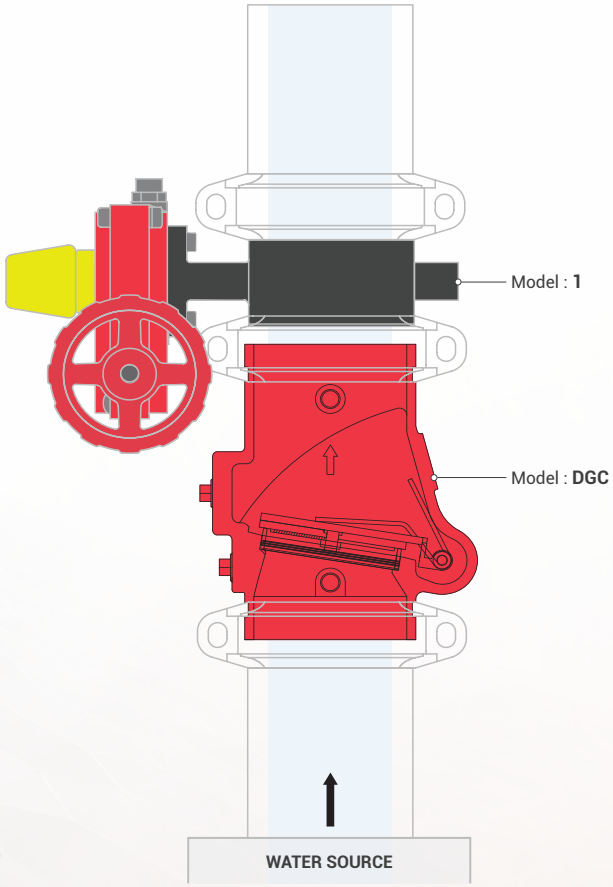
## Installation

When the valves are received by the end-user, they should be handled carefully to avoid damage to the end-connections, taps and clapper.
Before installing grooved-end or flanged valves, the mating pipe ends should be clean and free from oil, heavy paint or coatings, deep scratches or dirt.
The valve should not be used to force a pipeline into position as this may result in distortion of the valve body.
The inlet and outlet pipe adjacent to the valve should be properly supported to prevent excessive internal and external forces on the valve body.
Standard piping practice calls for check valves to be placed no closer than 10 pipe diameters to the pump discharge, where possible. This prevents the clapper from fluttering and work-hardening the spring.

## Design Requirements

The Aleum check valve should be connected to the piping system with approved couplings, flanges or flange adapters. Direction of flow is indicated on the valve body.

Aleum check valves have been designed to facilitate spring assisted closing of the clapper which effectively prevents water hammer. These valves feature minimum flow restriction and pressure loss when in the fully open position.




## Care & Maintenance

Aleum check valves require no regular maintenance. However, it is advisable to inspect and verify proper operation of the unit annually or in accordance with local codes and governing authorities.

The inspection should include a visual check for leakage at the valve-to-pipe connection and all body taps.
Inspection and maintenance should be performed by a qualified inspection service.

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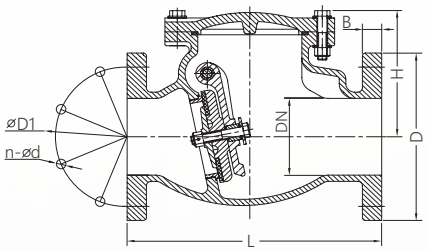
# Swing Check Valve Flanged

## Technical Features

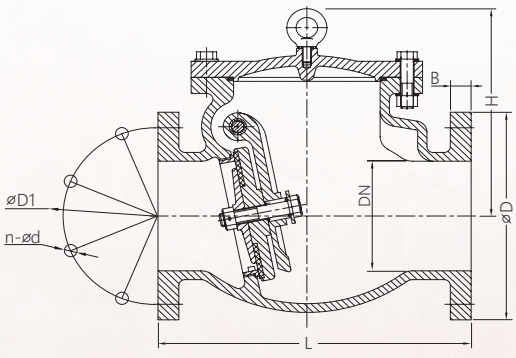
- Connections: Flanged Ends (ANSI B16.1 Class 125)
- Sizes: 2", 2-1/2", 3", 4", 5", 6", 8", 10", 12"
- Approvals: UL, ULC, FM, NSF/ANSI 61 and NSF/ANSI 372
- Maximum Working Pressure: 300PSI (Max. Test Pressure: 600PSI)
- Maximum Working Temperature: 180ºF (82ºC)
- Complies with AWWA C508, Clear Waterway Design
- Two Test Plugs Installed on One Side of Valve Body
- Fusion Bonded Epoxy Coated Interior and Exterior to AWWA C550

| No. | Part | Specification | Material/Options |
|---|---|---|---|
| 1 | Valve Body | 65-45-12 | Ductile Iron |
| 2 | Bonnet | 65-45-12 | Ductile Iron |
| 3 | Flat Washer | | Carbon Steel Zinc Plated |
| 4 | Bolts | | Carbon Steel Zinc Plated |
| 5 | Eye Bolt | | Carbon Steel Zinc Plated |
| 6 | O-Ring | | EPDM/NBR |
| 7 | Plug | | SS304/Bronze ASTM B584 |
| 8 | O-Ring | | EPDM/NBR |
| 9 | Hinge Pin | | SS304/SS316 |
| 10 | Washer | Brass ASTM B16 C36000/Hpb63-3 | SS304 |
| 11 | Hinge Bushing | Brass ASTM B16 C36000/Hpb63-3 | SS304 |
| 12 | Seat Ring | Brass ASTM B62 C836000/ZQSn5-5-5 (Pressed Fit) | SS304 |
| 13 | Disc Seat Bolts | SS304 | |
| 14 | Ratainer Washer | Brass ASTM B62 C836000/ZQSn5-5-5 | |
| 15 | Disc Seat Ring | EPDM | NBR |
| 16 | Disc | EN-GJS-450-10 | |
| 17 | Clapper Arm | EN-GJS-450-10 | |
| 18 | Disc Bushing | Brass ASTM B16 C36000/Hpb63-3 | |
| 19 | O-Ring | EPDM | NBR |
| 20 | Washer | Brass ASTM B16 C36000/Hpb63-3 | SS304 |
| 21 | Nut | Brass ASTM B62 C836000/ZQSn5-5-5 | SS304 |

Size 2" to 4"




Size 5" to 12"




## Dimensions

| Size | L | | ΦD | | ΦD1 | | B | | n-Φd | H | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | in | mm | in | mm | in | mm | in | mm | | in | mm |
| 2" | 8.0 | 203 | 6.0 | 152 | 4.7 | 120.5 | 0.6 | 16.0 | 4-Φ19.1 | 5.2 | 133 |
| 2-1/2" | 10.0 | 254 | 7.0 | 178 | 5.5 | 139.5 | 0.7 | 17.5 | 4-Φ19.1 | 5.9 | 150 |
| 3" | 10.9 | 278 | 7.5 | 191 | 6.0 | 152.5 | 0.7 | 19.0 | 4-Φ19.1 | 5.9 | 150 |
| 4" | 12.9 | 330 | 9.0 | 229 | 7.5 | 190.5 | 0.9 | 24.0 | 8-Φ19.1 | 8.6 | 218 |
| 6" | 15.9 | 406 | 11.0 | 279 | 9.5 | 241.5 | 1.0 | 25.5 | 8-Φ22.2 | 11.4 | 290 |
| 8" | 19.5 | 495 | 13.5 | 343 | 11.8 | 298.5 | 1.1 | 28.5 | 8-Φ22.2 | 13.0 | 330 |
| 10" | 24.5 | 622 | 16.0 | 406 | 14.2 | 362.0 | 1.2 | 30.5 | 12-Φ25.4 | 13.8 | 350 |
| 12" | 26.0 | 660 | 19.0 | 483 | 17.0 | 432.0 | 1.3 | 32.0 | 12-Φ25.4 | 14.8 | 376 |

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## Installation

Prior to installation, a check of the identification plate and body marking must be made to ensure that the correct valve is being installed. Valves are precision manufactured items, and as such, should not be subjected to misuse; such as: careless handling, allowing dirt to enter the valve through the end ports, failing to clean both the valve and system before operation, and using excessive force during bolting.

All packaging material must be removed. REMOVE WOODEN OR PAPER CHOCKS FROM INSIDE THE VALVE, which are fitted before shipping to prevent movement of the disk. In horizontal pipe-work the valve must be installed so that the bolted cover is upright and parallel with the ground-line.

Note: The valve must be installed with the direction arrow on the body corresponding to the direction of flow in the pipe-line. For vertical pipe-work the flow direction should be in an upwards direction only.

Large valves are provided with a lifting eye bolt, which should be used to lift the valve.

Immediately prior to valve installation, the pipe-work to which the valve is to be installed should be checked for cleanliness and freedom from debris. Valve end caps should only be permanently removed immediately before installation.

Each valve interior should be inspected through the end ports to determine that it is clean and free from foreign matter. The mating flange (both valve and pipe-work flanges) should be examined for correct gasket contact face, surface finish, and condition. If a condition is found which would potentially cause leakage, finally assembly should not be attempted until the condition is corrected.

The gaskets should be suitable for operating conditions and maximum pressure/temperature ratings. The gaskets should be inspected to ensure freedom from defects or damage.

The following steps should be taken to ensure correct alignment of the flanges being assembled. First, the installer should ensure that the initial contact of flange and gasket is parallel and that the faces are uniform. Then, the bolts should be tightened progressively by means of a crisscrossed pattern and should be repeated until all bolts are adequately tightened.

Parallel alignment and concentricity of flanges are especially important in the event of assembling a valve into an existing system; misalignment could cause damage to the valve body.

Flanged joints depend on compressive deformation of the gasket material between the flange surfaces. Thus, the bolting must be checked for correct size, length, material and that all connection flange bolt holes have been utilized.
At the conclusion of installation and before operating, all deposits or foreign material shall be removed from the equipment.

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## Operating

Swing Check Valves are designed to activate without external assistance.

## Maintenance

The valve should be at zero pressure and ambient temperature prior to any maintenance.

Maintenance personnel must use tools and equipment applicable for resilient-seated gate valves. Tools causing sparks are only permissible as long as no volatile conditions are present.

A full risk assessment must be undertaken prior to any maintenance. The assessment must take into account the possibility of exceeding the limits of use whereby a potential hazard could result. A maintenance program should therefore include checks on the development of unforeseen conditions, which could lead to failure.

Under normal working conditions, Swing Check Valves should not need further attention; however, when further attention is required, the following procedure is recommended:

Replace Cover Gasket

1. Isolate the valve from the system and drain.
2. Loosen and remove the nuts and bolts from the cover.
3. Remove the cover by placing a thin bladed screwdriver or wedge between thecover and body; tap with a rubber mallet to release adhesion.
4. Examine the internal parts to ensure correct operation.
5. Replace the existing Cover Gasket with the new Cover Gasket.
6. Carefully position the cover while ensuring that the new Cover Gasket is notdisplaced.
7. Replace the nuts and bolts, and tighten them diametrically

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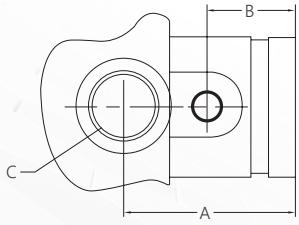
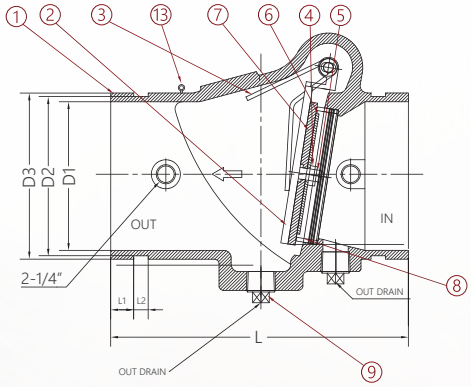
# Riser Swing Check Valve Grooved Ends

## Technical Features

- Connections: Grooved Ends (AWWA C606)
- Sizes: 2", 2-1/2", 3", 4", 6", 8"
- Approvals: UL, ULC, and FM
- Maximum Working Pressure: 300PSI (Max. Test Pressure: 600PSI)
- Maximum Working Temperature: 250ºF (120ºC)
- Application: Indoor and Outdoor Use
- Low pressure-drop, Non-slam performance

| Parts | Components | Material | Specification |
|---|---|---|---|
| 1 | Body | Ductile Iron | A536 65-45-12 |
| 2 | Clapper | Stainless Steel | ANSI 304 |
| 3 | Coil Spring | Stainless Steel | ANSI 302 |
| 4 | Nut | Stainless Steel | ANSI 304 |
| 5 | Bolt | Stainless Steel | ANSI 304 |
| 6 | Washer | Stainless Steel | ANSI 304 |
| 7 | Facing Seal | Rubber | EPDM |
| 8 | Seat Ring | Stainless Steel | ANSI 304 |
| 9 | Drain Plug | Ductile Iron | A536 65-45-12 |
| 10 | Pin Plug | Ductile Iron | A536 65-45-12 |
| 11 | Bushing | AluminumBronze | B148 |
| 12 | Hinge Pin | Stainless Steel | ANSI 304 |
| 13 | Hook | Steel | ASTM A307 |




## Dimensions

| Size | D1 | | D2 | | D3 | | L | | L1 | | L2 | | A | | B | | C | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | lbs |
| 2" | 1.9 | 49.0 | 2.2 | 57.1 | 2.4 | 60.3 | 6.7 | 170.0 | 0.6 | 15.8 | 0.3 | 8.7 | 3.7 | 95.0 | 1.7 | 43.0 | 1.0 | 25.4 | 8.0 |
| 2-1/2" | 2.4 | 62.2 | 2.7 | 69.0 | 2.9 | 73.0 | 7.2 | 184.0 | 0.6 | 15.8 | 0.3 | 8.7 | 3.7 | 93.0 | 1.6 | 41.0 | 1.3 | 31.8 | 8.5 |
| 3" | 2.9 | 74.0 | 3.3 | 84.7 | 3.5 | 89.1 | 7.7 | 195.0 | 0.6 | 15.8 | 0.3 | 8.7 | 3.8 | 97.0 | 1.7 | 42.0 | 1.3 | 31.8 | 10.5 |
| 4" | 3.9 | 98.0 | 4.3 | 109.8 | 4.5 | 114.3 | 8.1 | 205.0 | 0.6 | 15.8 | 0.3 | 8.7 | 4.4 | 113.0 | 2.0 | 50.0 | 2.0 | 50.8 | 17.0 |
| 6" | 6.1 | 156.0 | 6.4 | 163.7 | 6.6 | 168.3 | 12.6 | 320.0 | 0.6 | 15.8 | 0.3 | 8.7 | 5.7 | 146.0 | 2.4 | 60.0 | 2.0 | 50.8 | 42.5 |
| 8" | 7.9 | 201.6 | 8.5 | 215.8 | 8.6 | 218.2 | 14.6 | 372.0 | 0.8 | 20.1 | 0.4 | 10.5 | 6.9 | 176.0 | 2.8 | 70.0 | 2.0 | 50.8 | 66.5 |

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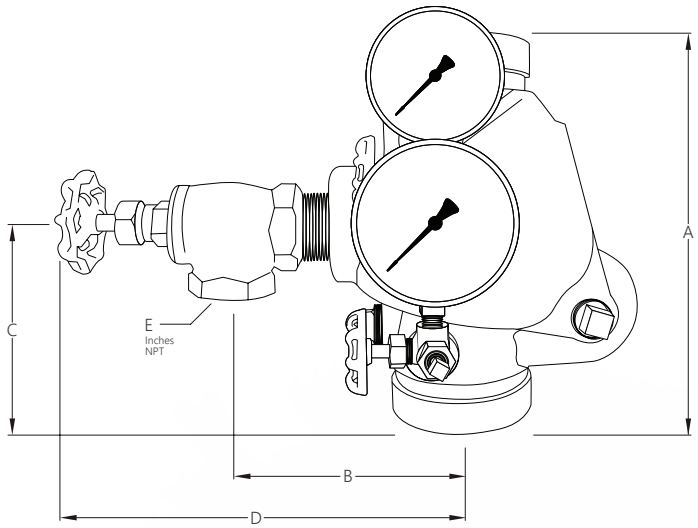
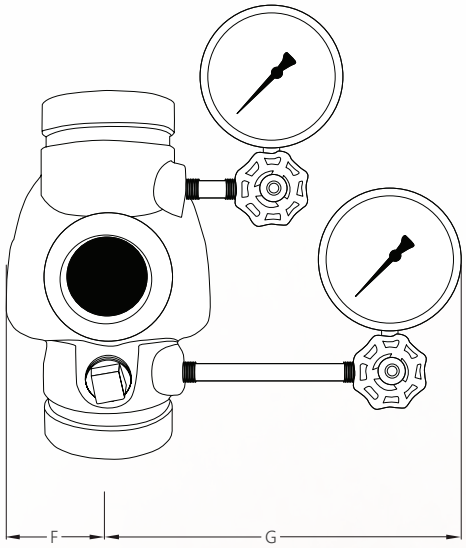
# Riser Swing Check Valve Grooved Ends




## Dimensions

| Size | A | | B | | C | | D | | E | | F | | G | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm |
| 2" | 6.7 | 170 | 5.0 | 127 | 3.9 | 99.06 | 8.7 | 220.98 | 1" | NPT | 1.75 | 44.45 | 7.25 | 184.15 |
| 2-1/2" | 7.2 | 184 | 5.2 | 132 | 3.6 | 91.44 | 8.75 | 222.25 | 1-1/4" | NPT | 1.75 | 44.45 | 8.75 | 222.25 |
| 3" | 7.7 | 195 | 5.4 | 137 | 4.0 | 101.6 | 9.0 | 228.6 | 0.3 | NPT | 1.5 | 38.1 | 8.75 | 222.25 |
| 4" | 8.1 | 205 | 6.75 | 171 | 4.5 | 114.3 | 13.4 | 340.36 | 2" | NPT | 2.75 | 69.85 | 8.5 | 215.9 |
| 6" | 12.6 | 320 | 7.75 | 197 | 5.75 | 146.05 | 14.5 | 368.3 | 2" | NPT | 4.0 | 101.6 | 9.25 | 234.95 |
| 8" | 14.6 | 372 | 8.7 | 221 | 6.25 | 158.75 | 15.0 | 381 | 2" | NPT | 5.0 | 127 | 11.75 | 298.45 |

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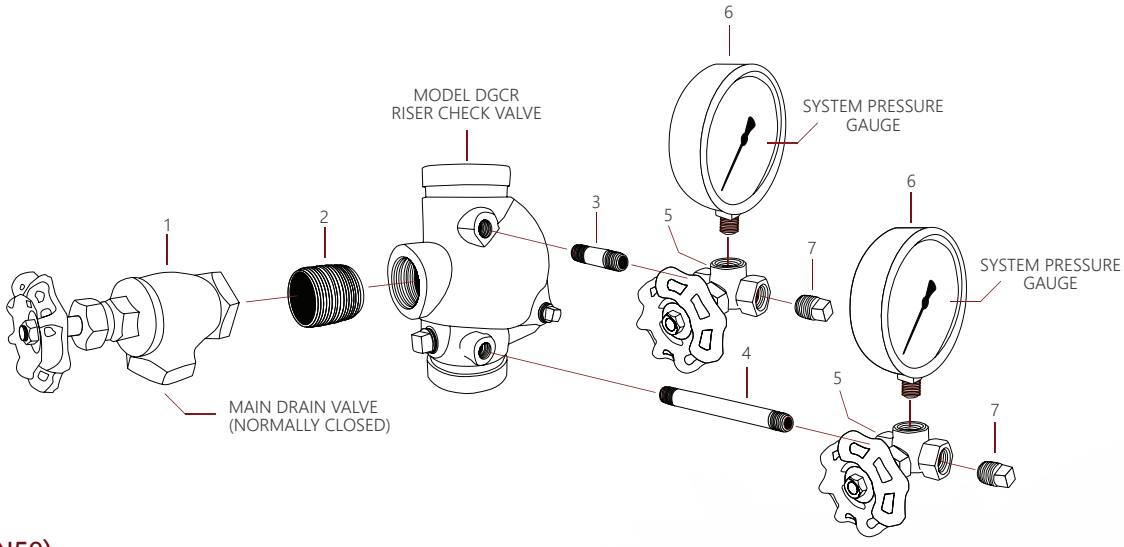
## Trim Parts List




### 2 Inch (DN50)

| Trim Kit Part# | Components | Components | Qty |
|---|---|---|---|
| 2" **STK200a** | 1 | 1"AngleValve | 1 |
| | 2 | 1" Close Nipple | 1 |
| | 3 | 1/4"x1-1/2"Nipple | 1 |
| | 4 | 1/4" x5-1/2" Nipple | 1 |
| | 5 | 1/4" 3WayValve | 2 |
| | 6 | WaterPressure Gauge 300PSI /2000kOa | 2 |
| | 7 | 1/4" Plug | 2 |

### 2-1/2 Inch (DN65) through 3 Inch (DN80)

| Trim Kit Part# | Components | Components | Qty |
|---|---|---|---|
| 2-1/2" **STK2050** 3" **STK300** | 1 | 1-1/4" AngleValve | 1 |
| | 2 | 1-1/4" Close Nipple | 1 |
| | 3 | 1/4" x1-1/2" Nipple | 1 |
| | 4 | 1/4" x5-1/2" Nipple | 1 |
| | 5 | 1/4" 3WayValve | 2 |
| | 6 | WaterPressure Gauge 300PSI /2000kOa | 2 |
| | 7 | 1/4" Plug | 2 |

### 4 Inch (DN100) through 12 Inch (DN300)

| Trim Kit Part# | Components | Components | Qty |
|---|---|---|---|
| 4" **STK450** 6" **STK600** 8" **STK800** | 1 | 2"AngleValve | 1 |
| | 2 | 2" Close Nipple | 1 |
| | 3 | 1/4" x1-1/2" Nipple | 1 |
| | 4 | 1/4" x5-1/2" Nipple | 1 |
| | 5 | 1/4" 3WayValve | 2 |
| | 6 | WaterPressure Gauge 300PSI /2000kOa | 2 |
| | 7 | 1/4" Plug | 2 |

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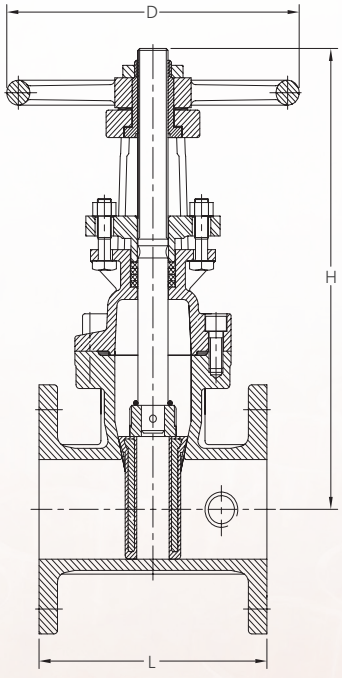
# OS&Y Gate Valve Flanged Ends

## Technical Features

- Connections: Flanged Ends (ANSI B16.1 Class 125)
- Sizes: 2-1/2", 3", 4", 5", 6", 8", 10", 12" (300 PSI) / 14",16",18"(250 PSI) / 20",24"(200 PSI)
- Approvals: UL, ULC, FM, NSF-61, and NSF-372, UL (14"-24") /FM (14"-16")
- Maximum Working Pressure: 300PSI (Max. Test Pressure: 600PSI)
- Maximum Working Temperature: 180°F (82°C)
- Complies with AWWA C515
- NPT Plug on Body
- Fusion Bonded Epoxy Coated Interior and Exterior to AWWA C550

| Components | Material | Specification |
|---|---|---|
| Body | Ductile Iron | A536 65-45-12 |
| Wedge | Ductile Iron, EPDM Encapsulated | |
| Wedge Nut | Stainless Steel | ANSI 304 |
| Stem | Stainless Steel | ANSI 420 |
| Bonnet | Ductile Iron | A536 65-45-12 |
| Gasket | Rubber | EPDM |
| Packing | Graphite | Commercial |
| Gland | Ductile Iron | A536 65-45-12 |
| Yoke Nut | Bronze | B62C83600 |
| Handwheel | Ductile Iron | A536 65-45-12 |
| Handwheel Nut | Ductile Iron | A536 65-45-12 |
| NPT Plug | Malleable Iron | Commercial |
| Gland Bolt | Stainless Steel | AISI 316 |
| Bonnet Bolt | Carbon Steel | A307B |




## Dimensions

| Size | L | | H (OPEN) | | H (CLOSE) | | D | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| | in | mm | in | mm | in | mm | in | mm | lbs |
| 2-1/2" | 7.5 | 190.5 | 16.3 | 414.0 | 13.8 | 350.5 | 7.2 | 182.9 | 46.3 |
| 3" | 8 | 203.2 | 18.9 | 480.0 | 15.7 | 398.8 | 10.0 | 254.0 | 65.8 |
| 4" | 9 | 228.6 | 21.7 | 551.2 | 17.7 | 449.6 | 10.0 | 254.0 | 74.9 |
| 5" | 10 | 254.0 | 25.8 | 655.3 | 20.9 | 530.9 | 12.0 | 304.8 | 92.5 |
| 6" | 10.5 | 266.7 | 29.1 | 739.1 | 23.2 | 589.3 | 12.0 | 304.8 | 104.1 |
| 8" | 11.5 | 292.1 | 36.6 | 929.6 | 28.7 | 728.0 | 14.0 | 355.6 | 191.3 |
| 10" | 13 | 330.2 | 44.5 | 1130.3 | 34.7 | 881.4 | 17.5 | 444.5 | 292.4 |
| 12" | 14 | 355.6 | 52.0 | 1320.8 | 40.2 | 1021.1 | 17.5 | 444.5 | 410.6 |
| 14" | 15 | 381.0 | 61.97 | 1574.0 | 48.19 | 1224.0 | 17.5 | 444.5 | 507.0 |
| 16" | 16 | 406.4 | 70.31 | 1785.8 | 54.57 | 1386.0 | 21.0 | 533.4 | 1256.6 |
| 18" | 17 | 431.8 | 79.53 | 2020.0 | 61.81 | 1570.0 | 24.0 | 609.6 | 1530.0 |
| 20" | 18 | 457.2 | 89.61 | 2276.0 | 69.92 | 1776.0 | 24.0 | 609.6 | 1785.74 |
| 24" | 20 | 508.0 | 102.36 | 2599.9 | 102.36 | 2600.0 | 30.0 | 762.0 | 2101.0 |

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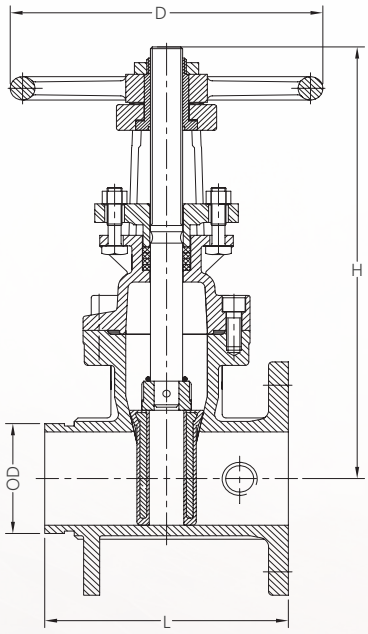
# OS&Y Gate Valve Flanged x Grooved

## Technical Features

- Connections: Flanged Ends (ANSI B16.1 Class 125)
  Grooved Ends (AWWA C606)
- Sizes: 2-1/2", 3", 4", 5", 6", 8", 10", 12"
- Approvals: UL, ULC, FM
- Maximum Working Pressure: 300PSI (Max. Test Pressure: 600PSI)
- Maximum Working Temperature: 180ºF (82ºC)
- Complies with AWWA C515
- NPT Plug on Body
- Fusion Bonded Epoxy Coated Interior and Exterior to AWWA C550




| Components | Material | Specification |
|---|---|---|
| Body | Ductile Iron | A536 65-45-12 |
| Wedge | Ductile Iron, EPDM Encapsulated | |
| Wedge Nut | Stainless Steel | ANSI 304 |
| Stem | Stainless Steel | ANSI 420 |
| Bonnet | Ductile Iron | A536 65-45-12 |
| Gasket | Rubber | EPDM |
| Packing | Graphite | Commercial |
| Gland | Ductile Iron | A536 65-45-12 |
| Yoke Nut | Bronze | B62 C83600 |
| Handwheel | Ductile Iron | A536 65-45-12 |
| Handwheel Nut | Ductile Iron | A536 65-45-12 |
| NPT Plug | Malleable Iron | Commercial |
| Gland Bolt | Stainless Steel | AISI 316 |
| Bonnet Bolt | Carbon Steel | A307B |

## Dimensions

| Size | OD | | L | | H (OPEN) | | H (CLOSE) | | D | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | in | mm | in | mm | in | mm | in | mm | in | mm | lbs |
| 2-1/2" | 2.9 | 73.7 | 7.5 | 190.5 | 16.3 | 414.0 | 13.8 | 350.0 | 7.2 | 182.9 | 40.9 |
| 3" | 3.5 | 88.9 | 8.0 | 203.0 | 18.9 | 480.0 | 15.7 | 398.8 | 10.0 | 254.0 | 52.9 |
| 4" | 4.5 | 114.3 | 9.0 | 229.0 | 21.7 | 551.2 | 17.7 | 450.0 | 10.0 | 254.0 | 57.6 |
| 5" | 5.6 | 142.3 | 10.0 | 254.0 | 25.8 | 655.0 | 20.9 | 530.0 | 12.0 | 305.0 | 89.2 |
| 6" | 6.6 | 167.6 | 10.5 | 267.0 | 29.1 | 740.0 | 23.2 | 589.3 | 12.0 | 305.0 | 93.9 |
| 8" | 8.6 | 218.4 | 11.5 | 292.0 | 36.6 | 930.0 | 28.7 | 729.0 | 14.0 | 356.0 | 162.0 |
| 10" | 10.7 | 271.9 | 13.0 | 330.0 | 44.5 | 1130.0 | 34.6 | 878.9 | 17.5 | 445.0 | 254.1 |
| 12" | 12.8 | 325.1 | 14.0 | 356.0 | 52.0 | 1320.0 | 40.2 | 1021.0 | 17.5 | 445.0 | 355.0 |

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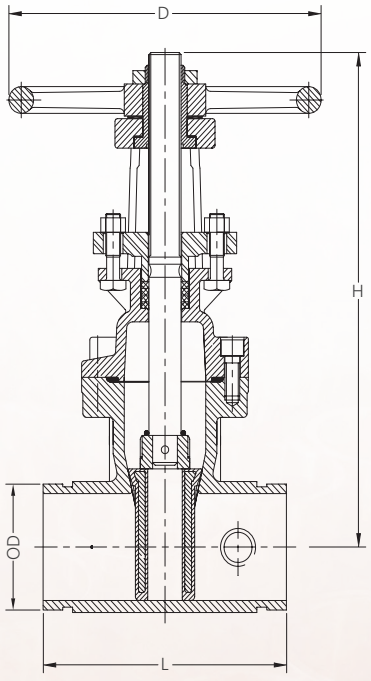
# OS&Y Gate Valve Grooved Ends

## Technical Features

- Connections: Grooved Ends (AWWA C606)
- Size: 2", 2-1/2", 3", 4", 5", 6", 8", 10", 12"
- Approvals: UL, ULC, FM
- Maximum Working Pressure: 300PSI (Max. Test Pressure: 600PSI)
- Maximum Working Temperature: 180ºF (82ºC)
- Complies with AWWA C515
- NPT Plug on Body
- Fusion Bonded Epoxy Coated Interior and Exterior to AWWA C550

| Components | Material | Specification |
|---|---|---|
| Body | Ductile Iron | A536 65-45-12 |
| Wedge | Ductile Iron, EPDM Encapsulated | |
| Wedge Nut | Stainless Steel | ANSI 304 |
| Stem | Stainless Steel | ANSI 420 |
| Bonnet | Ductile Iron | A536 65-45-12 |
| Gasket | Rubber | EPDM |
| Packing | Graphite | Commercial |
| Gland | Ductile Iron | A536 65-45-12 |
| Yoke Nut | Bronze | B62 C83600 |
| Handwheel | Ductile Iron | A536 65-45-12 |
| Handwheel Nut | Ductile Iron | A536 65-45-12 |
| NPT Plug | Malleable Iron | Commercial |
| Gland Bolt | Stainless Steel | AISI 316 |
| Bonnet Bolt | Carbon Steel | A307B |




## Dimensions

| Size | OD | | L | | H (OPEN) | | H (CLOSE) | | D | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | in | mm | in | mm | in | mm | in | mm | in | mm | lbs |
| 2" | 2.37 | 60.2 | 7.0 | 177.8 | 15.0 | 381.0 | 13.0 | 330.2 | 7.2 | 182.9 | 25.4 |
| 2-1/2" | 2.9 | 73.7 | 7.5 | 190.5 | 16.3 | 414.0 | 13.8 | 350.5 | 7.2 | 182.9 | 35.1 |
| 3" | 3.5 | 88.9 | 8.0 | 203.2 | 18.9 | 480.0 | 15.7 | 398.8 | 10.0 | 254.0 | 42.6 |
| 4" | 4.5 | 114.3 | 9.0 | 228.6 | 21.7 | 551.2 | 17.7 | 449.6 | 10.0 | 254.0 | 49.3 |
| 5" | 5.6 | 142.2 | 10.0 | 254.0 | 25.8 | 655.3 | 20.9 | 530.9 | 12.0 | 304.8 | 88.1 |
| 6" | 6.6 | 167.6 | 10.5 | 266.7 | 29.1 | 739.1 | 23.2 | 589.3 | 12.0 | 304.8 | 90.6 |
| 8" | 8.6 | 218.4 | 11.5 | 292.1 | 36.6 | 929.6 | 28.7 | 729.0 | 14.0 | 355.6 | 142.7 |
| 10" | 10.7 | 271.8 | 13.0 | 330.2 | 44.5 | 1130.3 | 34.6 | 878.9 | 17.5 | 444.5 | 229.9 |
| 12" | 12.8 | 325.1 | 14.0 | 355.6 | 52.0 | 1320.8 | 40.2 | 1021.1 | 17.5 | 444.5 | 321.4 |

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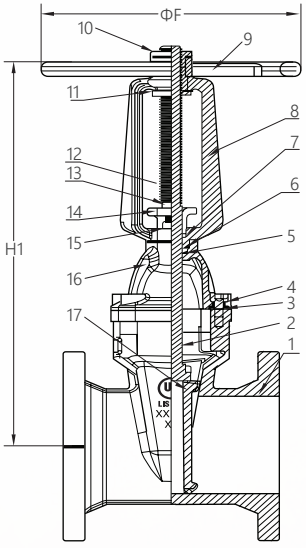
# OS&Y Gate Valve / Flanged Ends

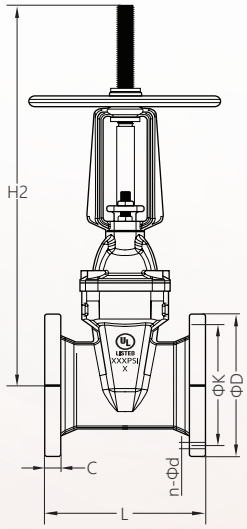
## Technical Features

- Connections: Flanged Ends (ANSI B16.1 Class 125)
- Sizes: 2", 2-1/2", 3", 4", 5", 6", 8", 10", 12"
- Approvals: UL, ULC, FM, > 4" NSF-61, NSF-372
- Maximum Working Pressure: 300 PSI
- Maximum Working Temperature: 180ºF (82ºC)
- Type: Resilient Wedge, Outside Stem & Yoke
- Finish: Epoxy Coated Interior and Exterior, AWWA C550
- Pre-Grooved Stem for Superviory Switch
- Specifications : Design and Dimensions Conform to AWWA C515-B




| | Parts | Standard Specification | Options |
|---|---|---|---|
| 1 | Valve Body | ASTM A536, 65-45-12 | |
| 2 | Resilient Wedge Disc | ASTM A536, 65-45-12+EPDM | |
| 3 | Stem | ANSI 420 | AISI 304, AISI 316, AISI 431, Al-bronze |
| 4 | Bonnet Gasket | EPDM | |
| 5 | Bonnet | ASTM A536, 65-45-12 | |
| 6 | Stem Packing | EPDM | |
| 7 | Yoke | ASTM A536, 65-45-12 | |
| 8 | Stem Bushing | Brass Hpb59-1 | |
| 9 | Gland | ASTM A536, 65-45-12 | |
| 10 | Stem Nut | Brass Hpb59-1 | Bronze ZQSn5-5-5 |
| 11 | Handwheel | ASTM A536, 65-45-12 | Pressed Steel |
| 12 | Washer | Brass Hpb59-1 | |
| 13 | Gland Nut | Carbon Steel Zinc Plated | AISI 304, AISI 316 |
| 14 | Stud | Carbon Steel Zinc Plated | AISI 304, AISI 316 |
| 15 | Flat Washer | Carbon Steel Zinc Plated | AISI 304, AISI 316 |
| 16 | Nut | Carbon Steel Zinc Plated | AISI 304, AISI 316 |
| 17 | O-ring | EPDM | NBR |

## Dimensions




| DN | | Dimension(mm) | | | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| in | mm | L | H1 | H2 | ΦD | ΦK | N-Φd | C | Φ F | lbs |
| 2" | 50A | 178 | 312 | 382 | 152 | 120.5 | 4-Φ19 | 19 | 200 | 19.84 |
| 2.5" | 65A | 190 | 338 | 408 | 178 | 139.5 | 4-Φ19 | 22 | 200 | 30.86 |
| 3" | 80A | 203 | 393 | 480 | 191 | 152.5 | 4-Φ19 | 24 | 200 | 46.30 |
| 4" | 100A | 229 | 441 | 544 | 229 | 190.5 | 8-Φ19 | 24 | 250 | 57.32 |
| 5" | 125A | 254 | 559 | 692 | 254 | 216 | 8-Φ22 | 24 | 300 | 98.11 |
| 6" | 150A | 267 | 598 | 759 | 279 | 241.5 | 8-Φ22 | 25.5 | 300 | 99.12 |
| 8" | 200A | 292 | 743 | 953 | 343 | 298.5 | 8-Φ22 | 28.5 | 350 | 147.71 |
| 10" | 250A | 330 | 880 | 1140 | 406 | 362 | 12-Φ25 | 30 | 400 | 205.03 |
| 12" | 300A | 356 | 1009 | 1319 | 483 | 432 | 12-Φ25 | 32 | 400 | 297.62 |

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## Installation

Prior to installation, a check of the identification plate and body marking must be made to ensure that the correct valve is being installed.

Should not be subjected to misuse such as careless handling, allowing dirt to enter the valve through the end ports, lack of cleaning both valve and system before operation and excessive force during bolting and handwheel operation.

All special packaging material must be removed.

Valves must be provided with adequate support. Adjoining pipework must be supported to avoid the imposition of pipeline strains on the valve body, which would impair its performance or crack the valve body.

Valves should not be lifted using the handwheel or stem.

Immediately prior to valve installation, the pipework to which the valve is to be fastened should be checked for cleanliness and freedom from debris.

Valve end protectors should only be permanently removed immediately before installation. The valve interior should be inspected through the end ports to determine whether it is clean and free from foreign matter. The mating flange (both valve and pipework flanges) should be checked for correct gasket contact face, surface finish and condition. If a condition is found which might cause leakage, no attempt to assemble should be made until the condition has been corrected.

The gasket should be suitable for operation conditions or maximum pressure/temperature ratings. The gaskets should be checked to ensure freedom from defects or damage.

Should be taken to provide correct alignment of the flanges being assembled. In assembly, bolts are tightened sequentially to make the initial contact of flanges and gaskets flat and parallel, followed by gradual and uniform

tightening in an opposite bolting sequence to avoid bending one flange relative to the other, particularly on flanges with raised faces.

Parallel alignment of flanges is especially important in the case of the assembly of a valve into an existing system. If not, that might damage the valve body.

Concentricity of flanges is especially important in the case of the assembly of a valve into an existing system. If not, that might damage the valve body.

Flanged joints depend on compressive deformation of the gasket material between the flange surfaces. The bolting must be checked for correct size, length, material and that all connection flange bolt holes are utilized.

At the conclusion of installation and before operating, all dust deposits shall be removed from the equipment.

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## Operating

The valve is opened by anti-clockwise rotation of the handwheel to a positive stop. Further effort is not necessary. When fully open it is advantageous to rotate the handwheel clockwise 1/2 turn.

To close the valve, the handwheel is rotated clockwise to a positive stop.

Wheelkeys or other similar devices should not be used.

Note:
When the valve is closed at extreme high temperature and then cooled, the wedge may become tight in the valve and prove difficult to open. Conversely, a valve closed at room temperature can be difficult to open if there is an increase in fluid temperature causing a linear expansion of the stem, which tightens the wedge further into the body seats. The operator should use suitable hand protection at extreme temperature conditions. The valve should only be used in the open or closed position. Regulating or throttling service should be avoided.

## Maintenance

The valve should be at zero pressure and ambient temperature prior to any maintenance.

Maintenance Engineers & Operators are reminded to use correct fitting tools and equipment.

Tools causing showers of sparks are only permissible if:
No hazardous explosive atmosphere is present. Dust deposits have been removed and no dust cloud is present.

A full risk assessment and methodology statement must be compiled prior to any maintenance. This must include the removal of dust deposits by good housekeeping.

The risk assessment must take into account the possibility of the limits of use being exceeded whereby a potential hazard could result.

A maintenance programme should therefore include checks on the development of unforeseen conditions, which could lead to failure.

In systems where corrosion could be a potential hazard, wall thickness checks on the body and bonnet should be made. This requires either the removal of the valve from the pipeline or removal of the bonnet with the system at zero pressure. If the wall thickness has reduced by 25%, the valve must be replaced.

**Gland Adjustment**

The gland may need adjustment during installation and then periodically thereafter to maintain a stem gland seal.
The following procedure is recommended:

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Each gland nut should be tightened evenly in a clockwise direction until increased resistance to operate the valve is obtained, or if leakage is present until the leakage stops.

Note:
It is recommended that within the 1st year the gland be inspected at 3 monthly intervals to check for gland leakage.

Under normal working conditions Gate Valves should not need further attention but when required the following procedures are recommended.

Fitting Additional Packing

1. Turn off circulating pumps.
2. Close valve by clockwise rotation of handwheel.
3. Loosen both gland nuts anti-clockwise and remove.
4. Lift the gland.
5. Fit additional packing by means of wrapping graphite tape packing round stem and pushing packing into stuffing box.
6. Refit the gland and both nuts, tighten gland nuts evenly in a clockwise direction until increased tension to operate the valve is obtained.

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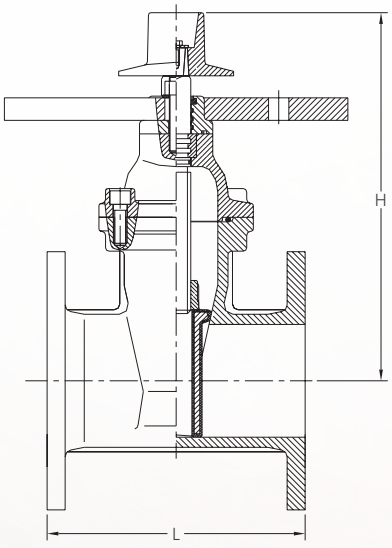
# PIV NRS Gate Valve Flanged Ends

## Technical Features

- Connections: Flanged Ends (ANSI B16.1 Class 125)
- Sizes: 2-1/2", 3", 4", 6", 8", 10", 12"
- Approvals: UL, ULC, FM, > 4" NSF-61, NSF-372
- Maximum Working Pressure: 300 PSI
- Maximum Working Temperature: 180ºF (82ºC)
- Type: Resilient Wedge, Non-Rising Stem
- Finish: Epoxy Coated Interior and Exterior Indicator Post Pattern (PIV), AWWA C550
- Specifications : Design and Dimensions Conform to AWWA C515-B




| | Parts | Standard Specification | Options |
|---|---|---|---|
| 1 | Valve Body | ASTM A536, 65-45-12 | |
| 2 | Resilient Wedge Disc | ASTM A536, 65-45-12+EPDM | |
| 3 | Stem | ANSI 431 | AISI 304, AISI 316, AISI 431, AI-bronze |
| 4 | Bonnet Gasket | EPDM | NBR |
| 5 | Bonnet | ASTM A536, 65-45-12 | |
| 6 | O-ring | NBR | EPDM |
| 7 | Gland | ASTM A536, 65-45-12 | |
| 8 | Post Flange | ASTM A536, 65-45-12 | |
| 9 | Square Operating Nut | ASTM A536, 65-45-12 | |
| 10 | Bolt | Carbon Steel Zinc Plated | AISI 304, AISI 316 |
| 11 | Flat Washer | Carbon Steel Zinc Plated | AISI 304, AISI 316 |
| 12 | Nut | Carbon Steel Zinc Plated | AISI 304, AISI 316 |
| 13 | Flat Washer | Carbon Steel Zinc Plated | AISI 304, AISI 316 |
| 14 | Ring Wiper | EPDM | NBR |
| 15 | O-ring | NBR | EPDM |
| 16 | Axis Guide | Brass Hpb59-1 | |
| 17 | Washer | Brass Hpb59-1 | |
| 18 | O-ring | NBR | EPDM |
| 19 | Nut | Carbon Steel Zinc Plated | AISI 304, AISI 316 |
| 20 | Wedge Nut | Brass Hpb59-1 | Bronze ZQSn5-5-5 |

## Dimensions

| Size | L | | H | | Weight |
|---|---|---|---|---|---|
| | in | mm | in | mm | lbs |
| 2-1/2" | 7.5 | 190.5 | 10.6 | 270.0 | 31.0 |
| 3" | 8.0 | 203.0 | 11.7 | 296.0 | 41.0 |
| 4" | 9.0 | 229.0 | 13.8 | 350.0 | 72.03 |
| 6" | 10.5 | 267.0 | 17.9 | 455.0 | 113.16 |
| 8" | 11.5 | 292.0 | 21.5 | 545.0 | 163.87 |
| 10" | 13.0 | 330.0 | 25.4 | 645.0 | 235.90 |
| 12" | 14.0 | 356.0 | 28.7 | 730.0 | 392.42 |

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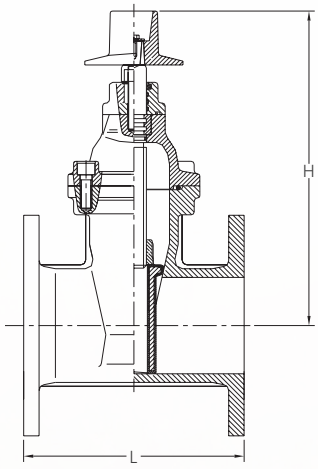
# PIV NRS Gate Valve Flanged Ends

## Technical Features

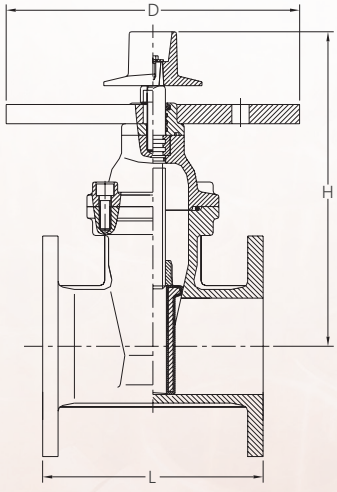
- Connections: Flanged Ends (ANSI B16.1 Class 125)
- Sizes: 2-1/2", 3", 4", 5", 6", 8", 10", 12",14", 16", 18", 20", 24"
- Approvals: UL, ULC, FM, NSF-61 & NSF-372, ANSI 61 & 372
- Maximum Working Pressure: 300PSI (Max. Test Pressure: 600PSI) 14", 16", 18" (250PSI) 20", 24" (200PSI)
- Maximum Working Temperature: 180°F (82°C)
- Complies with AWWA C515
- Fusion Bonded Epoxy Coated Interior and Exterior to AWWA C550

| Components | Material | Specification |
|---|---|---|
| Body | Ductile Iron | A536 65-45-12 |
| Wedge | Ductile Iron, EPDM Encapsulated | |
| Wedge Nut | Bronze | B62 C83600 |
| Stem | Stainless Steel | ANSI 420 |
| Bonnet | Ductile Iron | A536 65-45-12 |
| Gasket | Rubber | EPDM |
| Gland | Ductile Iron | A536 65-45-12 |
| Thrust Collar | Bronze | B62 C83600 |
| O-Ring | Rubber | EPDM |
| Post Flange | Ductile Iron | A536 65-45-12 |
| Operating Nut | Ductile Iron | A536 65-45-12 |
| NPT Plug | Malleable Iron | Commercial |
| Post Flange Bolt | Stainless Steel | AISI 316 |
| Bonnet Bolt | Stainless Steel | AISI 304 |

Size 2.5" & 3"




Size 4" to 12"




## Dimensions

| Size | L | | H | | D | | Weight |
|---|---|---|---|---|---|---|---|
| | in | mm | in | mm | in | mm | lbs |
| 2-1/2" | 7.5 | 190.5 | 10.6 | 270.0 | | | 31.0 |
| 3" | 8 | 203.0 | 11.7 | 296.0 | | | 41.0 |
| 4" | 9 | 229.0 | 13.8 | 350.0 | 12 | 305.0 | 64.0 |
| 5" | 10 | 254.0 | 16.1 | 410.0 | 12 | 305.0 | 79.0 |
| 6" | 10.5 | 267.0 | 17.9 | 455.0 | 12 | 305.0 | 103.0 |
| 8" | 11.5 | 292.0 | 21.5 | 545.0 | 12 | 305.0 | 161.0 |
| 10" | 13 | 330.0 | 25.4 | 645.0 | 12 | 305.0 | 235.0 |
| 12" | 14 | 356.0 | 28.7 | 730.0 | 12 | 305.0 | 339.0 |
| 14" | 15 | 381.0 | 32.87 | 835.0 | 12 | 305.0 | 462.9 |
| 16" | 16 | 406.0 | 35.83 | 910.0 | 12 | 305.0 | 930.3 |
| 18" | 17 | 432.0 | 41.34 | 1050.0 | 12 | 305.0 | 1313.9 |
| 20" | 18 | 457.0 | 44.09 | 1120.0 | 12 | 305.0 | 1565.2 |
| 24" | 20 | 508.0 | 50.79 | 1290.0 | 12 | 305.0 | 1829.8 |

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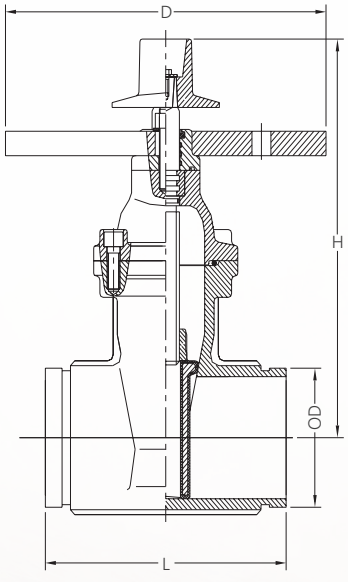
# PIV NRS Gate Valve Grooved Ends

## Technical Features

- Connections: Grooved Ends (AWWA C606)
- Sizes: 2-1/2", 3", 4", 5", 6", 8", 10", 12"
- Approvals: UL, ULC, FM
- Maximum Working Pressure: 300PSI (Max. Test Pressure: 600PSI)
- Maximum Working Temperature: 180ºF (82ºC)
- Complies with AWWA C515
- Fusion Bonded Epoxy Coated Interior and Exterior to AWWA C550

| Components | Material | Specification |
|---|---|---|
| Body | Ductile Iron | A536 65-45-12 |
| Wedge | Ductile Iron, EPDM Encapsulated | |
| Wedge Nut | Bronze | B62 C83600 |
| Stem | Stainless Steel | ANSI 420 |
| Bonnet | Ductile Iron | A536 65-45-12 |
| Gasket | Rubber | EPDM |
| Gland | Ductile Iron | A536 65-45-12 |
| Thrust Collar | Bronze | B62 C83600 |
| O-Ring | Rubber | EPDM |
| Post Flange | Ductile Iron | A536 65-45-12 |
| Operating Nut | Ductile Iron | A536 65-45-12 |
| NPT Plug | Malleable Iron | Commercial |
| Post Flange Bolt | Stainless Steel | AISI 316 |
| Bonnet Bolt | Stainless Steel | AISI 304 |




## Dimensions

| Size | OD | | L | | H | | D | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| | in | mm | in | mm | in | mm | in | mm | lbs |
| 2-1/2" | 2.9 | 73.0 | 7.5 | 190.5 | 10.6 | 270.0 | 7.24 | 184.0 | 24.8 |
| 3" | 3.5 | 88.9 | 8.0 | 203.0 | 11.7 | 296.0 | 10.0 | 254.0 | 29.9 |
| 4" | 4.5 | 114.3 | 9.0 | 229.0 | 13.8 | 350.0 | 10.0 | 254.0 | 61.7 |
| 5" | 5.6 | 141.3 | 10.0 | 254.0 | 16.1 | 410.0 | 12.0 | 305.0 | 80.4 |
| 6" | 6.6 | 168.3 | 10.5 | 267.0 | 17.9 | 455.0 | 12.0 | 305.0 | 93.3 |
| 8" | 8.6 | 219.1 | 11.5 | 292.0 | 21.5 | 545.0 | 12.0 | 305.0 | 144.0 |
| 10" | 10.7 | 273.0 | 13.0 | 330.0 | 25.4 | 645.0 | 12.0 | 305.0 | 237.0 |
| 12" | 12.8 | 323.9 | 14.0 | 356.0 | 28.7 | 730.0 | 12.0 | 305.0 | 329.1 |

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# PIV NRS Gate Valve Mechanical Joint Ends

## Technical Features

- Connections: Mechanical Joint Ends (ANSI/AWWA C153/A21.53 )
- Sizes: 3", 4", 6", 8", 10", 12"
- Approvals: UL, ULC, FM, NSF-61 & NSF-372, ANSI 61 & 372
- Maximum Working Pressure: 300PSI (Max. Test Pressure: 600PSI)
- Maximum Working Temperature: 180ºF (82ºC)
- Complies with AWWA C515
- Fusion Bonded Epoxy Coated Interior and Exterior to AWWA C550

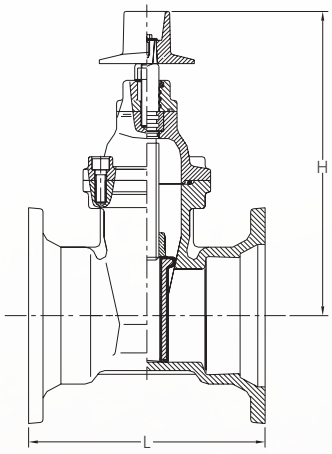
| Components | Material | Specification |
|---|---|---|
| Body | Ductile Iron | A536 65-45-12 |
| Wedge | Ductile Iron, EPDM Encapsulated | |
| Wedge Nut | Bronze | B62 C83600 |
| Stem | Stainless Steel | ANSI 420 |
| Bonnet | Ductile Iron | A536 65-45-12 |
| Gasket | Rubber | EPDM |
| Gland | Ductile Iron | A536 65-45-12 |
| Thrust Collar | Bronze | B62 C83600 |
| O-Ring | Rubber | EPDM |
| Post Flange | Ductile Iron | A536 65-45-12 |
| Operating Nut | Ductile Iron | A536 65-45-12 |
| NPT Plug | Malleable Iron | Commercial |
| Post Flange Bolt | Stainless Steel | AISI 316 |
| Bonnet Bolt | Stainless Steel | AISI 304 |

## Dimensions

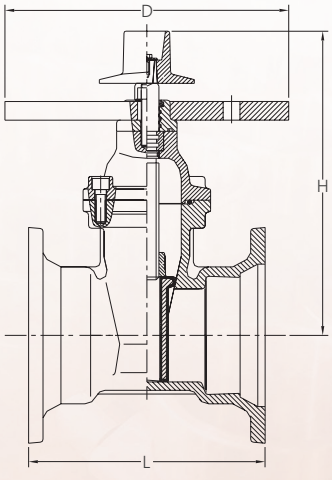
| Size | L | | H | | D | | Weight |
|---|---|---|---|---|---|---|---|
| | in | mm | in | mm | in | mm | lbs |
| 3" | 9.5 | 241.0 | 11.7 | 296.0 | | | 45.0 |
| 4" | 10 | 254.0 | 13.8 | 350.0 | 12 | 305.0 | 70.5 |
| 6" | 11.5 | 292.0 | 17.9 | 455.0 | 12 | 305.0 | 115.7 |
| 8" | 12.5 | 318.0 | 21.5 | 545.0 | 12 | 305.0 | 176.4 |
| 10" | 14.8 | 375.0 | 25.4 | 645.0 | 12 | 305.0 | 260.1 |
| 12" | 14.9 | 378.0 | 28.7 | 730.0 | 12 | 305.0 | 385.8 |

*** FxM Available**

Size 3"




Size 4" to 12"



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## Installation

Prior to installation, a check of the identification plate and body marking must be made to ensure that the correct valve is being installed.

Valves are precision manufactured items and as such, should not be subjected to misuse such as careless handling, allowing dirt to enter the valve through the end ports, lack of cleaning both valve and system before operation and excessive force during bolting and handle operation.

All special packaging material must be removed.
Valves must be provided with adequate support. Adjoining pipework must be supported to avoid the imposition of pipeline strains on the valve body, which would impair its performance.

Valves should not be lifted using the stem.

Immediately prior to valve installation, the pipework to which the valve is to be fastened should be checked for cleanliness and freedom from debris.

Valve end protectors should only be permanently removed immediately before installation. The valve interior should be inspected through the end ports to determine whether it is clean and free from foreign matter. The mating flange (both valve and pipework flanges) should be checked for correct gasket contact face, surface finish and condition. If a condition is found which might cause leakage, no attempt to assemble should be made until the condition has been corrected.

The gasket should be suitable for operation conditions or maximum pressure/temperature ratings.
The gaskets should be checked to ensure freedom from defects or damage.

Care should be taken to provide correct alignment of the flanges being assembled. Suitable lubricant on bolt threads should be used. In assembly, bolts are tightened sequentially to make the initial contact of flanges and gaskets flat and parallel followed by gradual and uniform tightening in an opposite bolting sequence to avoid bending one flange relative to the other, particularly on flanges with raised faces.

Parallel alignment of flanges is especially important in the case of the assembly of a valve into an existing system.

Flanged joints depend on compressive deformation of the gasket material between the flange surfaces.

The bolting must be checked for correct size, length, material and that all connection flange bolt holes areutilized.

At the conclusion of installation and before operating, all dust deposits shall be removed from the equipment.

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## Operating

The valve is opened by anti-clockwise rotation of the post indicator to a positive stop. Further effort is not necessary. When fully open it is advantageous to rotate the post indicator clockwise 1/2 turn.

To close the valve, the post indicator is rotated clockwise to a positive stop. Wheelkeys or other similar devices should not be used.

Note:
When the valve is closed at extreme high temperature and then cooled, the wedge may become tight in the valve and prove difficult to open.
Conversely, a valve closed at room temperature can be difficult to open if there is an increase in fluid temperature causing a linear expansion of the stem, which tightens the wedge further into the body seats.
The valve should only be used in the open or closed position. Regulating or throttling service should be avoided.

## Maintenance

The valve should be at zero pressure and ambient temperature prior to any maintenance.

Maintenance Engineers & Operators are reminded to use correct fitting tools and equipment.

Tools causing showers of sparks are only permissible if:
No hazardous explosive atmosphere is present.
Dust deposits have been removed and no dust cloud is present.

A full risk assessment and methodology statement must be compiled prior to any maintenance. This must include the removal of dust deposits by good housekeeping.

The risk assessment must take into account the possibility of the limits of use being exceeded whereby a potential hazard could result.

A maintenance programme should therefore include checks on the development of unforeseen conditions, which could lead to failure.

In systems where corrosion could be a potential hazard, wall thickness checks on the body and bonnet should be made. This requires either the removal of the valve from the pipeline or removal of the bonnet with the system at zero pressure. If the wall thickness has reduced by 25%, the valve must be replaced.

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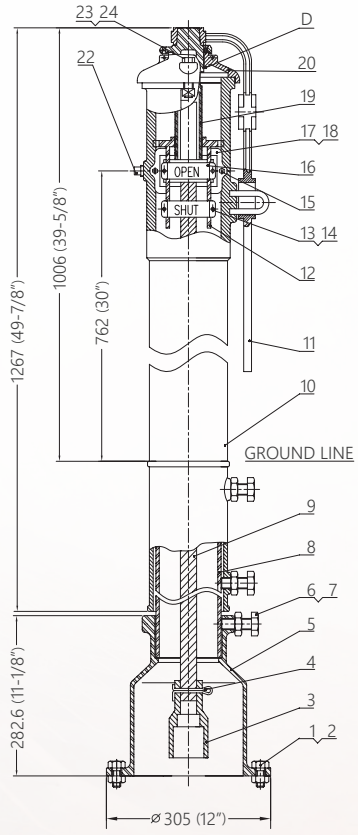
# Indicator Post Vertical Type

## Technical Features

- Vertical Type, Adjustable
- Approvals: UL, ULC, FM
- Corrosion Protection - Internal & External Epoxy Coated (RAL 3000)
- Weight(lbs): 211.6

| Parts | Components | Material | Specification |
|---|---|---|---|
| 1 | Hex Cap Screw | Carbon Steel | ASTM A307B |
| 2 | Hex Nut | Carbon Steel | ASTM A307B |
| 3 | Crane Coupling | Ductile Iron | ASTM A536 Gr.65-45-12 |
| 4 | Cotter Pin | Stainless Steel | ANSI 304 |
| 5 | Base Flange | Cast Iron | ASTM A126 ClassB |
| 6 | Hex Nut | Carbon Steel | ASTM A307B |
| 7 | Hex Cap Screw | Carbon Steel | ASTM A307B |
| 8 | Standpipe | Carbon Steel | ASTM A536 Gr.65-45-12 |
| 9 | Stem1" Square | Carbon Steel | AISI 1045 |
| 10 | Body | Cast Iron | ASTM A126ClassB |
| 11 | LockingWrench | Ductile Iron | ASTM A53 6Gr.65-45-12 |
| 12 | Target Carrier Nut | Bronze | ASTM B62C83600 |
| | | Stainless Steel | ANSI 304 |
| 13 | Hex Cap Screw | Carbon Steel | ASTM A307B |
| 14 | Hex Nut | Carbon Steel | ASTM A307B |
| 15 | Hex Cap Screw | Carbon Steel | ASTM A307B |
| 16 | Target | Cast Aluminium | Cast Aluminium |
| 17 | Window Glass | Plexiglass | Plexiglass |
| 18 | Gasket | PTFE | PTFE |
| 19 | Operating Nut | Bronze | ASTM B62C83600 |
| | | Stainless Steel | ANSI 304 |
| 20 | Top Section | Cast Iron | ASTM A126ClassB |
| 21 | Snap Ring | Stainless Steel | AISI 1066 |
| 22 | Plug | Malleable Iron | Malleable Iron |
| 23 | Square Nut | Carbon Steel | ASTM A307B |
| 24 | HexCap Screw | Carbon Steel | ASTM A307B |




## Field Adjustment

1. Remove the top section from the top of the Indicator Post assembly.
2. Cut the required length off the bottom of the Standpipe for the Ground Line to match up with Standpipe Ground Line mark.
3. Set the"Open"and "Shut"targets for the appropriate valve size.
4. Reattach the top section to the top of the Indicator Post assembly.
5. Design and dimensions are subject to change without notice.

* The adjustable dimension is 34.5" to suit deeper buried valves.

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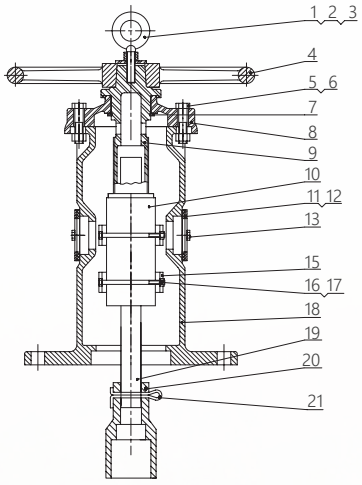
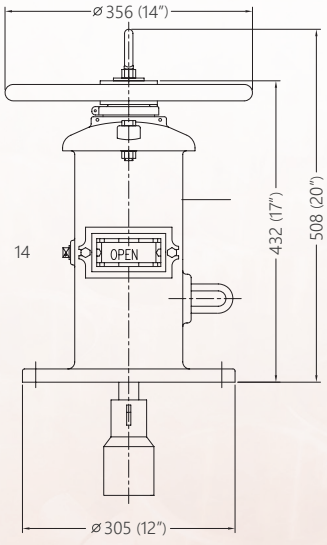
# Indicator Post Wall Type

## Technical Features

- Wall Type
- Approvals: UL, ULC, FM
- Corrosion Protection - Internal & External Epoxy Coated (RAL 3000)
- Weight(lbs): 99.2

| Parts | Components | Material | Specification |
|---|---|---|---|
| 1 | Eyebolt | Carbon Steel | ASTM A307B |
| 2 | Hex Nut | Carbon Steel | ASTM A307B |
| 3 | Washer | Carbon Steel | ASTM A570Gr.33 |
| 4 | Handwheel | Ductile Iron | ASTM A536 Gr.65-45-12 |
| 5 | Hex Cap Screw | Carbon Steel | ASTM A307B |
| 6 | Square Nut | Carbon Steel | ASTM A307B |
| 7 | Snap Ring | Stainless Steel | ASTM A307B |
| 8 | Cover | Cast Iron | ASTM A126ClassB |
| 9 | Operating Nut | Bronze | ASTM B62C83600 |
| | | Stainless Steel | AISI 304 |
| 10 | Target Carrier Nut | Bronze | ASTM B62C83600 |
| | | Stainless Steel | AISI 304 |
| 11 | Window Glass | Plexiglass | Plexiglass |
| 12 | Gasket | PTFE | PTFE |
| 13 | Hex Nut | Carbon Steel | ASTM A307B |
| 14 | Plug | Malleable Iron | Malleable Iron |
| 15 | Target | Cast Aluminium | Cast Aluminium |
| 16 | HexCap Screw | Carbon Steel | ASTM A307B |
| 17 | HexNut | Carbon Steel | ASTM A307B |
| 18 | Body | Cast Iron | ASTM A126ClassB |
| 19 | Stem | Carbon Steel | AISI 1045 |
| 20 | Crane Coupling | Ductile Iron | ASTM A536Gr.65-45-12 |
| 21 | Cotter Pin | Stainless Steel | AISI 304 |


## Field Adjustment

1. Remove the top section from the top of the indicator Post assembly
2. Set the"Open"and "Shut"targets for the appropriate valve size.
3. Reattach the top section to the top of the indicator post assembly.
4. Design and dimensions are subject to change without notice.

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## Installation

NOTE: Ensure that the non-rising stem gate valve is in the fully open position before installing the Wall Post Indicator.

1. Make the Walk Through Hole
   Make a clearance hole that is at least 4.7" (120mm) in diameter but not greater than 180MM (7.1") in diameter through the mounting wall. The clearance hole must be on-center and concentric with the operating nut of the non-rising stem gate valve. NOTE: A 4" / DN100 (114.3mm Outside Diameter) length of pipe can be used to line the inside of the through hole. Pipe of this diameter will fit snugly into a machined mating hole on the fl ange side of the Body (18) of the Wall Post Indicator.

2. Drill the Mounting Holes
   Drill 4 equally spaced holes on a 10.5" (267mm) bolt circle into the mounting wall using a 3/4" (19mm) drill bit. The bolt circle must be concentric and on center with the operating nut of the non-rising stem gate valve.

3. Mount the Wall Post Indicator
   Bolt the fl ange of the Body (18) of the Wall Pot Indicator to the wall using 4 bolts provided by the customer.

4. Remove the Cover
   With the Body (18) fl ange of the Wall Post Indicator securely bolted to the mounting wall, remove the Cover (8) by removing the two Bolts (5) and Nuts (6). Slide the Cover (8) off of the Wall Post Indicator body (18).

5. Insert and measure the Stem Rod
   With the Cover (8) still separated from the Body (18), slide the Stem (19) , Cotter Pin (21) and Crane Coupling (20) assembly through the Wall Post Indicator Body (18) and through the wall such that the Crane Coupling (20) fully engages with the operating nut of the non-rising stem gate valve. With the Crane Coupling (20) fully engaged on the operating nut of the non-rising stem gate valve, put a mark on the Stem (19) that is between 1.25" (32mm) below the top surface of the Body (18) but not more than 2" (50mm) above the top surface of the Body (18).

6. Cut the Stem Rod
   Cut the stem rod at the mark made in Step 5.

7. Adjust the Target Plates
   Adjust the "Open" Target Plates (15) such that they are squarely centered in the Windows (11) when the non-rising valve is in the fully open position, Repeat this procedure with the "Shut" Target Plates (15) when the non-rising stem gate valve is fully closed. Adjustment is made by loosening Hex Bolt (16) and Nut (17).

8. Re-assemble the Wall Post Indicator
   Insert the cover (8) back onto the Body (18) such that the ears on either side on the Target Nut (10) fi t into the grooves on the side edges of the Body (18). Tighten the two Nuts and Bolts (5) (6). Verify that the "Open" and "Shut" Target (15) is in the proper position by fully opening and closing the non-rising stem gate valve using the Handwheel (4). Adjust as necessary.

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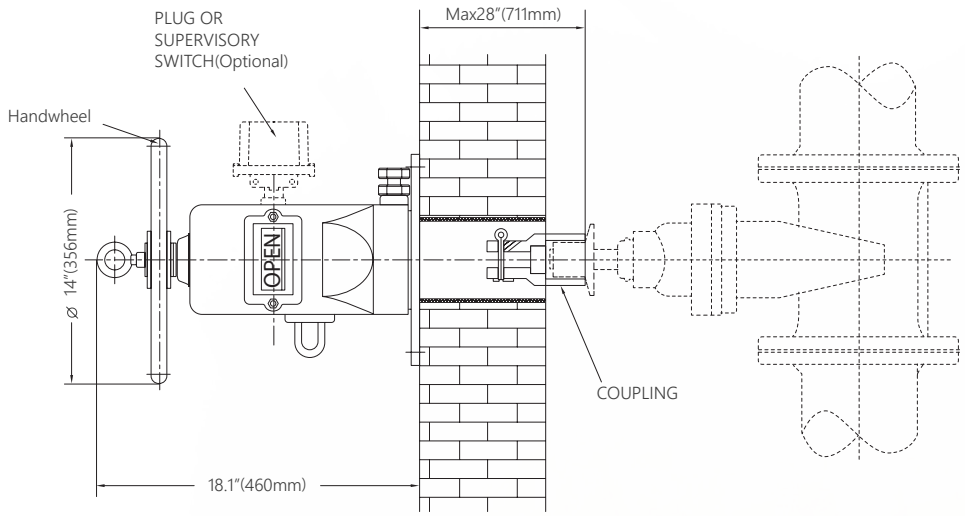
## Maintenance

### Lubrication

Oil the bearing in the Body (18) at least once a year by adding several drops of oil in the hole located on the top of the Operating Nut (9).



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# AWWA NRS Gate Valve Flanged Ends

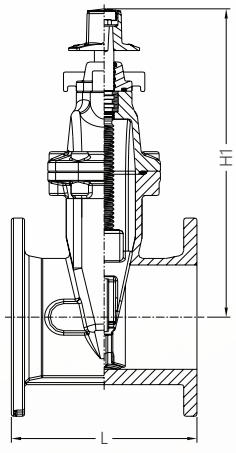
## Technical Features

- Connections: Flanged Ends (ANSI B16.1 Class 125)
- Sizes: 2-1/2", 3", 4", 5", 6", 8", 10", 12"
- Approvals: UL, ULC, FM, NSF-61 & NSF-372, ANSI 61 & 372
- Maximum Working Pressure: 300PSI (Max. Test Pressure: 600PSI)
- Maximum Working Temperature: 180ºF (82ºC)
- Complies with AWWA C515
- Fusion Bonded Epoxy Coated Interior and Exterior to AWWA C550

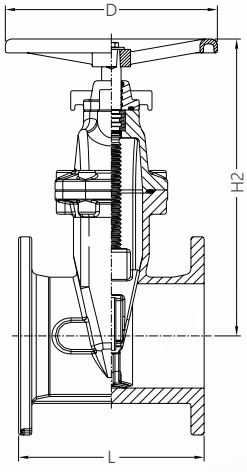
| Components | Material | Specification |
|---|---|---|
| Body | Ductile Iron | A536 65-45-12 |
| Wedge | Ductile Iron, EPDM Encapsulated | |
| Wedge Nut | Bronze | B62 C83600 |
| Stem | Stainless Steel | ANSI 420 |
| Bonnet | Ductile Iron | A536 65-45-12 |
| Gasket | Rubber | EPDM |
| Gland | Ductile Iron | A536 65-45-12 |
| Thrust Collar | Bronze | B62 C83600 |
| O-Ring | Rubber | EPDM |
| Operating Nut | Ductile Iron | A536 65-45-12 |
| Handwheel | Ductile Iron | A536 65-45-12 |
| Gland Bolt | Stainless Steel | AISI 304 |
| Bonnet Bolt | Stainless Steel | AISI 304 |

## Dimensions

| Size | L | | H1 | | H2 | | D | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| | in | mm | in | mm | in | mm | in | mm | lbs |
| 2-1/2" | 7.5 | 190.5 | 10.6 | 270.0 | 10.0 | 255.0 | 6.9 | 175.0 | 41.0 |
| 3" | 8.0 | 203.0 | 11.7 | 296.0 | 11.9 | 302.0 | 10.0 | 255.0 | 49.0 |
| 4" | 9.0 | 229.0 | 13.8 | 350.0 | 12.9 | 327.0 | 10.0 | 255.0 | 64.0 |
| 5" | 10.0 | 254.0 | 16.1 | 410.0 | 16.4 | 417.0 | 12.0 | 305.0 | 88.0 |
| 6" | 10.5 | 267.0 | 17.9 | 455.0 | 17.2 | 436.0 | 12.0 | 305.0 | 146.0 |
| 8" | 11.5 | 292.0 | 21.5 | 545.0 | 20.9 | 532.0 | 14.0 | 356.0 | 220.0 |
| 10" | 13.0 | 330.0 | 25.4 | 645.0 | 24.4 | 619.0 | 15.9 | 405.0 | 324.0 |
| 12" | 14.0 | 356.0 | 28.7 | 730.0 | 28.2 | 716.0 | 15.9 | 405.0 | 31.0 |




With Operating Nut




With Handwheel

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# AWWA NRS Gate Valve Mechanical Joint Ends

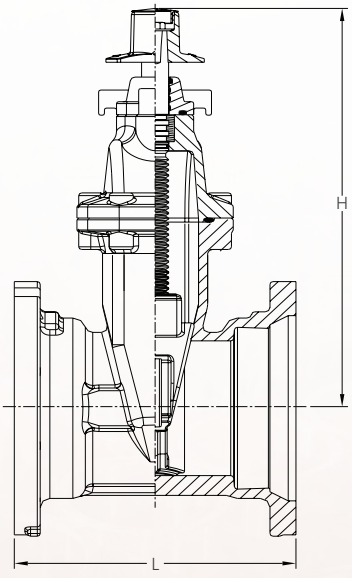
## Technical Features

- Connections: Mechanical Joint Ends (ANSI/AWWA C153/A21.53)
- Sizes: 3", 4", 5", 6", 8", 10", 12"
- Approvals: UL, ULC, FM, NSF-61 & NSF-372, ANSI 61 & 372
- Maximum Working Pressure: 300PSI (Max. Test Pressure: 600PSI)
- Maximum Working Temperature: 180ºF (82ºC)
- Complies with AWWA C515
- Fusion Bonded Epoxy Coated Interior and Exterior to AWWA C550

*** FxM Available**

| Components | Material | Specification |
|---|---|---|
| Body | Ductile Iron | A536 65-45-12 |
| Wedge | Ductile Iron, EPDM Encapsulated | |
| Wedge Nut | Bronze | B62 C83600 |
| Stem | Stainless Steel | ANSI 420 |
| Bonnet | Ductile Iron | A536 65-45-12 |
| Gasket | Rubber | EPDM |
| Gland | Ductile Iron | A536 65-45-12 |
| Thrust Collar | Bronze | B62 C83600 |
| O-Ring | Rubber | EPDM |
| Operating Nut | Ductile Iron | A536 65-45-12 |
| Gland Bolt | StainlessSteel | AISI 304 |
| Bonnet Bolt | Stainless Steel | AISI 304 |

## Dimensions




| Size | L | | H1 | | H2 | | D | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| | in | mm | in | mm | in | mm | in | mm | lbs |
| 2-1/2" | 7.5 | 190.5 | 10.6 | 270.0 | 10.0 | 255.0 | 6.9 | 175.0 | 31.0 |
| 3" | 8.0 | 203.0 | 11.7 | 296.0 | 11.9 | 302.0 | 10.0 | 255.0 | 41.0 |
| 4" | 9.0 | 229.0 | 13.8 | 350.0 | 12.9 | 327.0 | 10.0 | 255.0 | 49.0 |
| 5" | 10.0 | 254.0 | 16.1 | 410.0 | 16.4 | 417.0 | 12.0 | 305.0 | 64.0 |
| 6" | 10.5 | 267.0 | 17.9 | 455.0 | 17.2 | 436.0 | 12.0 | 305.0 | 88.0 |
| 8" | 11.5 | 292.0 | 21.5 | 545.0 | 20.9 | 532.0 | 14.0 | 356.0 | 146.0 |
| 10" | 13.0 | 330.0 | 25.4 | 645.0 | 24.4 | 619.0 | 15.9 | 405.0 | 220.0 |
| 12" | 14.0 | 356.0 | 28.7 | 730.0 | 28.2 | 716.0 | 15.9 | 405.0 | 324.0 |

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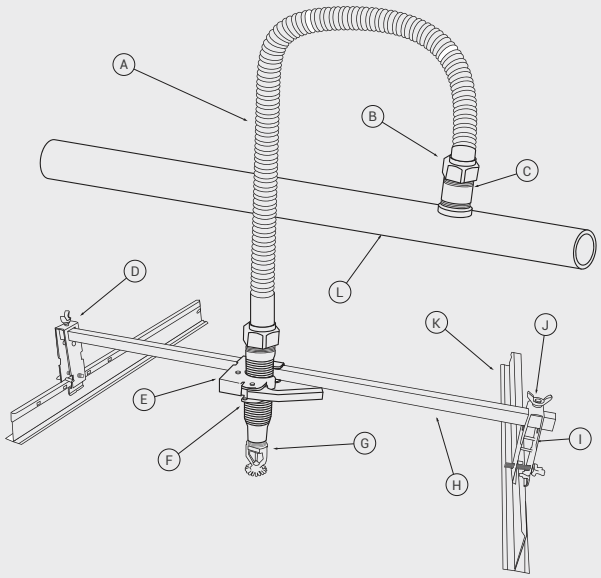
# Flexible Sprinkler Connector Braided & Unbraided

## Technical Features

- Hose Types: Braided or Unbraided
- Hose Lengths: 24",36",48",60",72"
- MaximumWorkingPressure: 175 PSI
- MaximumWorkingTemp:225˚F
- Kfactor: ½"Outlet 5.6,¾"Outlet 8.0
- Connections: To branch line (inlet) via 1"/25.4mm NPT male thread
- Connections: To sprinkler (outlet) via ½"or ¾"15mm or 20mm NPTfemale thread

## Approvals& Standards

- Braided: UL,ULC 2443,FM 1637
- Unbraided: UL,ULC 2443
- NFPA 13,NFPA 13D,NFPA 13R,ASTM C635,ASTM C636




## ASSEMBLYDRAWING:FXB (Braided)&FXU (Unbraided)

- Ⓐ StainlessSteel Flexible Hose
- Ⓑ Connection Nut
- Ⓒ 1"Inlet Nipple
- Ⓓ End Bracket withWing Nut
- Ⓔ Center Bracket
- Ⓕ 5.5"Reducer
- Ⓖ Sprinkler
- Ⓗ Steel Bar
- Ⓘ End Bracket withWing Nut
- Ⓙ Wing Nut
- Ⓚ Ceiling Rail (T-Bar)
- Ⓛ Branch Line

| Part | Material |
|---|---|
| Flexible Hose | Type 304StainlessSteel |
| Nut | S10C |
| Isolation Ring | Nylon 66 |
| Gasket Seal | Silicon |
| Reducer | Zinc Plated Grade 1020Steel |
| End & Center Brackets | Zinc Plated Steel ASTM A109 |
| Square Bar | Zinc Plated Steel Grade 1010Steel |

## FRICTIONLOSS DATA-Braided (FXB)

| Length | Outlet Size | Max# of 90° Bends | Min Bend Radius, in. | Equivalent Length of 1"Sch.40Pipe |
|---|---|---|---|---|
| in | in | | | |
| 24" | 1/2 | 1 | 7.5 | 26.4 |
| | 3/4 | 1 | 7.5 | 19.4 |
| 36" | 1/2 | 2 | 7.5 | 34.1 |
| | 3/4 | 2 | 7.5 | 28.4 |
| 48" | 1/2 | 2 | 7.5 | 46.8 |
| | 3/4 | 2 | 7.5 | 39.5 |
| 60" | 1/2 | 3 | 7.5 | 61.4 |
| | 3/4 | 3 | 7.5 | 54.8 |
| 72" | 1/2 | 4 | 7.5 | 76.1 |
| | 3/4 | 4 | 7.5 | 70.1 |

## FRICTIONLOSS DATA-Unbraided (FXU)

| Length | Outlet Size | Max# of 90° Bends | Min Bend Radius, in. | Equivalent Length of 1"Sch.40Pipe |
|---|---|---|---|---|
| in | in | | | |
| 24" | 1/2 | 1 | 4 | 24 |
| | 3/4 | 1 | 4 | 30 |
| 36" | 1/2 | 2 | 4 | 44 |
| | 3/4 | 2 | 4 | 48 |
| 48" | 1/2 | 2 | 4 | 49 |
| | 3/4 | 2 | 4 | 55 |
| 60" | 1/2 | 2 | 4 | 59 |
| | 3/4 | 2 | 4 | 64 |
| 72" | 1/2 | 3 | 4 | 64 |
| | 3/4 | 3 | 4 | 86 |

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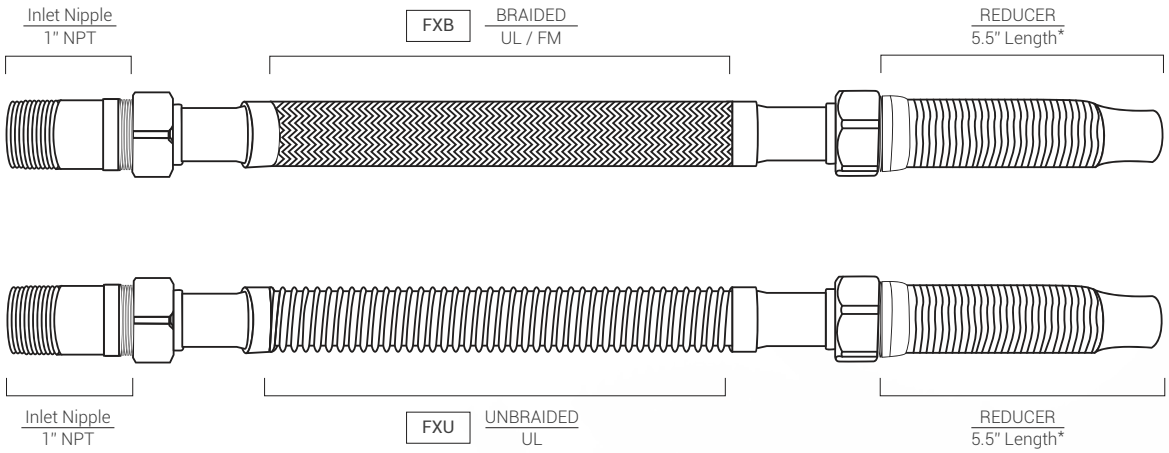
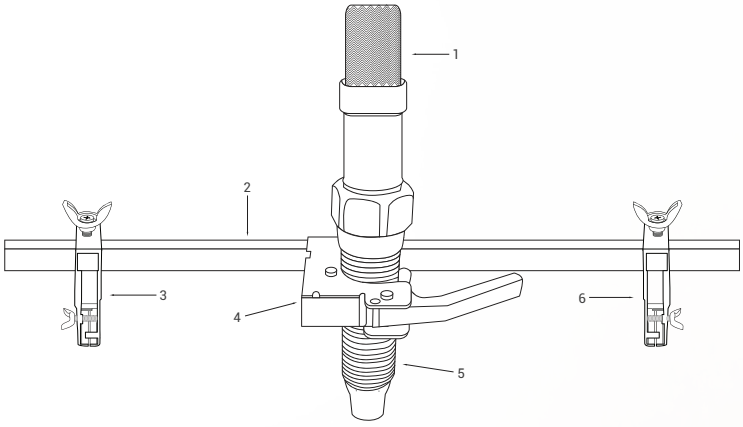
# Flexible Sprinkler Connector Braided & Unbraided




* Other Reducer lengths Availible

## ASSEMBLY DRAWING : Suspended Ceiling T-Bar Grid System




| No. | Item Description |
|---|---|
| 1 | Ductile Iron |
| 2 | Ductile Iron, EPDM Encapsulated |
| 3 | Bronze |
| 4 | Stainless Steel |
| 5 | Ductile Iron |
| 6 | Rubber |

## STANDARDS OF COMPLIANCE

- UL /ULCLISTING : UL 2443 standards for Flexible Sprinkler Hose with Fittings for fire protection service.
- FM APPROVAL : FM class number 1637 approved standard for Flexible Sprinkler Hose with Threaded Ends and Fittings.
- NFPA : NFPA 13 Standard for the installation of sprinkler system. NFPA 13D Standard for the installation of sprinkler systems in one and two family dwellings and manufactured homes. NFPA 13R Standard for the installation of sprinkler systems in residential occupancies up to and including four stories in height.
- ASTM : ASTM C635 Standards specification for the manufacture,performance, and testing of metal suspension systems for acoustical tile and lay-in panel ceilings. ASTM C636 Standards practice for installation of metal ceilings suspension systems for acoustical tile and lay-in panels.

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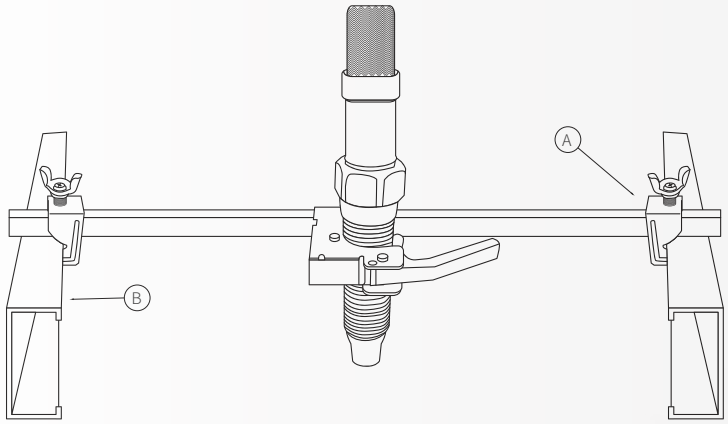
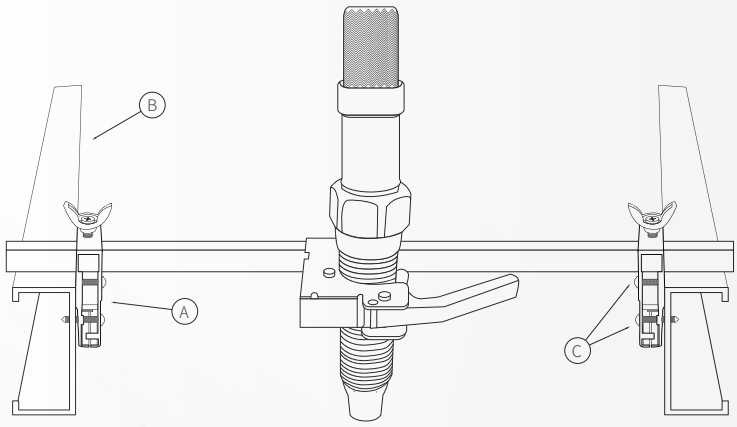



## Metal Joist / Stud (Option A)

Ⓐ Metal Stud End Bracket (Part# FX-EB-MTL)
Ⓑ Metal Stud (C Channel)

### Package Includes

(1) Stainless Steel Flexible Sprinkler Hose
(1) SteelSquareBar
(2) EndBrackets
(1) CenterBracket

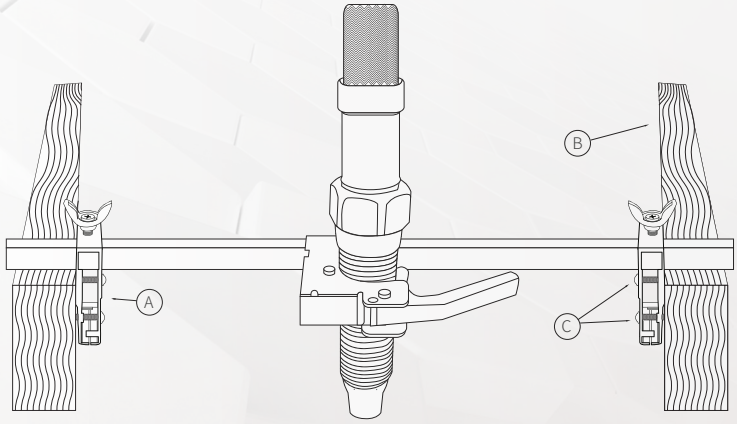



## Metal Joist / Stud (Option B)

Ⓐ End Bracket (Part# FX-EB-97MM)
Ⓑ Metal Stud (C Channel)
Ⓒ 1-1/4” #10 Self-Drilling Sheet Metal Screw

### Package Includes

(1) Stainless Steel Flexible Sprinkler Hose
(1) SteelSquareBar
(2) EndBrackets
(1) CenterBracket




## Wood Joist / Stud

Ⓐ End Bracket (Part# FX-EB-97MM)
Ⓑ Wood Joist
Ⓒ 1-1/2” #10 Self-Drilling Wood Screw

### Package Includes

(1) Stainless Steel Flexible Sprinkler Hose
(1) SteelSquareBar
(2) EndBrackets
(1) CenterBracket

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## Parts List

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| | Part # | Description |
|---|---|---|
|  | FX-NPT-050C | Straight Reducer 1/2" Outlet x 5-1/2" Length |
| | FX-NPT-075C | Straight Reducer 3/4" Outlet x 5-1/2" Length |

| | Part # | Description |
|---|---|---|
|  | FX-NPT-INL | Inlet Nipple 1" x 2-3/8" NPT |

| | Part # | Description |
|---|---|---|
|  | FX-NPT-700 | Straight Reducer 1/2" Outlet x 7" Length |
| | FX-NPT-900 | Straight Reducer 1/2" Outlet x 9" Length |

| | Part # | Description |
|---|---|---|
|  | FX-SB-25 | Square Bar - 25" |
| | FX-SB-50 | Square Bar - 50" |

| | Part # | Description |
|---|---|---|
|  | FX-90D-50C | 90º Degree Elbow Reducer 1/2" NPT |
| | FX-90D-75C | 90º Degree Elbow Reducer 3/4" NPT |

| | Part # | Description |
|---|---|---|
|  | FX-GSKT | EPDM Gasket |

| | Part # | Description |
|---|---|---|
|  | FX-CB-D | Center Bracket D TYPE |

| | Part # | Description |
|---|---|---|
|  | FX-EB-HAT CHNL | Hat Channel End Bracket |

| | Part # | Description |
|---|---|---|
|  | FX-EB-97MM | 97mm End Bracket |
| | FX-EB-78MM | 78mm End Bracket |

| | Part # | Description |
|---|---|---|
|  | FX-EB-MTL STUD | Metal Stud End Brackets |

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## Installation Instruction

* For ASTM C635 metal ceiling suspension systems installed in accordance with ASTM C636 standards.

**⚠ WARNING**

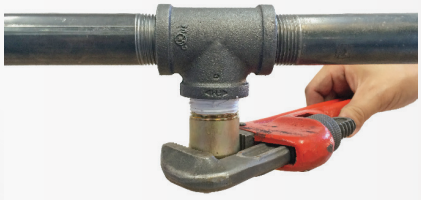
- Read and follow these installation instructions before attempting to install Aleum products.
- Installer must understand the purpose of these products with common standards of the industry for safety, and the consequences of improper product installation.
- Wear safety glasses, hardhat, and foot protection during installation.
- Failure to follow these instructions could cause improper sprinkler operation, resulting in serious personal injury and / or property damage.
- The flexible hose are not to be bent within 2.5 inches of the connection nut at both ends.

## | ASSEMBLY INSTRUCTIONS |

1

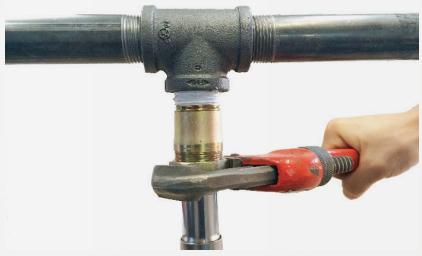
**(A)** Pipe side: Apply PTFE thread seal tape or pipe joint compound to the tapered threads of the inlet nipple.
**(B)** Flexible hose side: DO NOT use both pipe PTFE or pipe joint compound

2



Tighten the inlet nipple into branch line using pipe wrench.

3



Connect the nut of flexible hose to the inlet nipple using a pipe wrench. DO NOT use PTFE or pipe joint compound on the inlet nipple at the hose side since there is already a seal gasket in place to seal the joint. Tighten the connection to a maximum torque of 15 ft-lbs/20 N*m. Too much torque may cause damage to the seal gasket.

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## Installation Instruction

* For ASTM C635 metal ceiling suspension systems installed in accordance with ASTM C636 standards.

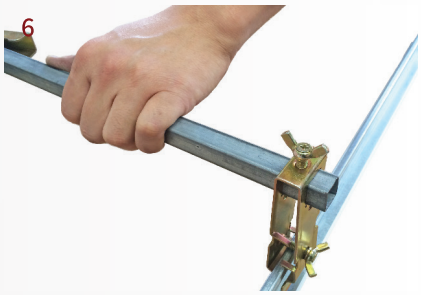
4

Connect the nut of the flexible hose to the outlet reducer. DO NOT use PTFE or pipe joint compound since on outlet reducer at the hose side since there is already a seal gasket in place to seal the joint. Tighten the
connection to a maximum torque of 15 ft-lbs / 20 N*m. Too much torque may cause damage to the seal gasket.

5

Identify the t-bar bracket assembly and confirm if all parts are in present: (1) end bracket at each side, (1) center bracket, (1) square steel bar. Adjust as necessary if the positions of the end brackets to match the length of the t-bar rails.

6



Attach the end brackets to the t-bar rails by loosening the wing nut and pushing in the end bracket into the t-bar rail.

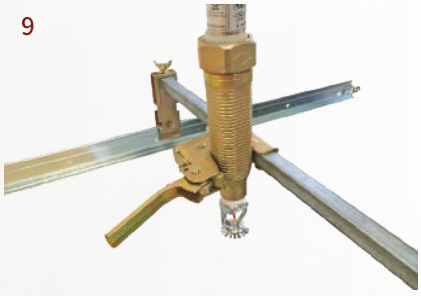
7

Tighten the wing nut to a torque of 3 ft-lbs / 4 N*m to secure end brackets to the rails.

8

Adjust the positions of the center bracket and the flexible hose to desired location.

9



Slide the outlet reducer into the center bracket.

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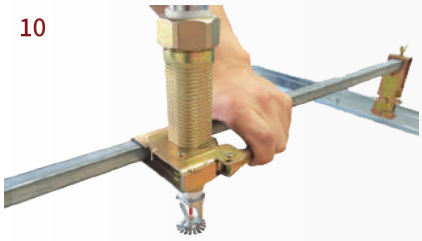
## Installation Instruction

* For ASTM C635 metal ceiling suspension systems installed in accordance with ASTM C636 standards.

10



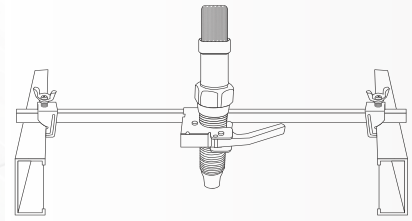
With outlet reducer positioned inside the center bracket, grasp and firmly close the handle completely to secure the reducer in place.

11

Apply PTFE or pipe joint compound to the male threads of sprinkler. Install the sprinkler into the female threads of the outlet reducer by following sprinkler manufacturer's installation instructions.

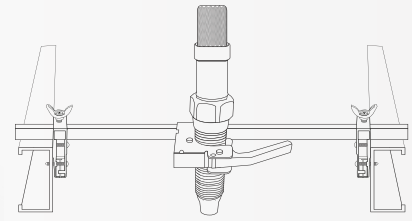
## | HARD-LID CEILING JOIST / STUD ASSEMBLY INSTRUCTIONS |

A



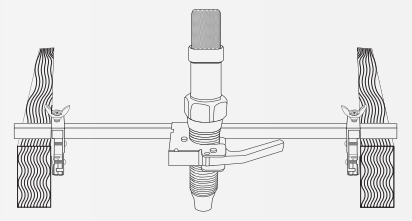
**Metal Joist / Stud (Option A)**
Refer to instructions for "ASTM C635 Metal Ceiling Suspension Systems"and perform steps 1 to 3. Slide the Metal Stud End Bracket (Part #FX-EB-MTL) on each end of square steel bar, making sure the "lip" of the bracket engages the metal joist/stud. Tighten the wing nuts to a torque of 3 ft-lbs/4 N*m to secure to the metal joist/stud. Perform steps 8 to 12 of the "ASTM C635 Metal Ceiling Suspension Systems".

B



**Metal Joist / Stud (Option B)**
Refer to instructions for "ASTM C635 Metal Ceiling Suspension Systems"and perform steps 1 to 3. Place the bracket assembly on top of the metal joist/stud, where the end brackets (Part #FX-EB-97MM) are on the inner side of each metal joist/stud. Drill 1-1/4 inch long #10 self-drilling sheet metal screws (4) in the locations shown in the picture. Perform steps 8 to 12 of the "ASTM C635 Metal Ceiling Suspension Systems".

C



**Wood Joist / Stud**
Refer to instructions for "ASTM C635 Metal Ceiling Suspension Systems"and perform steps 1 to 3. Place the bracket assembly on top of the wood joist/stud, where the end brackets (Part #FX-EB-97MM) are on the inner side of each wood joist/stud. Drill 1-1/4 inch long #10 self-drilling wood screws (4) in the locations shown in the picture. Perform steps 8 to 12 of the"ASTM C635 Metal Ceiling Suspension Systems".

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## Controlling Provisions

These terms and conditions shall control with respect to any and all purchase orders or sales of Aleum products. No alteration, modification or waiver of these terms and conditions whether on the customer's purchase order or otherwise shall be valid unless the alteration, modification, or waiver is specially accepted in writing by an authorized representative of Aleum.

## Shipping Terms

All orders are quoted F.O.B. shipping point unless otherwise agreed upon in writing.
Orders accepted are subject to approval by our Head Office and Credit Department and are contingent upon acts of God, war, civil unrest or disturbance, strikes, labor difficulties, governmental regulations or rulings, delays of carriers (land, air, or seas), inability to obtain materials, accidents or any other cause beyond our control.
Shipping dates are estimated, and we will make effort to ship within the time estimated. We cannot guarantee shipping dates, and in the event of a production or shipment delay, we reserve the right to change the estimated shipping date.
Under no circumstances shall Aleum be liable for damages of any kind, including but not limited to incidental or consequential damages for lost sales or profits or liquidated damages, directly or indirectly arising from delays or failure to meet shipping dates.
Orders accepted cannot be changed or cancelled without our written consent.
Orders for special (non-standard) goods may not be cancelled, nor will we accept return of these goods for credit.

## Claims for Shortages

All claims for shortages must be made within 10 days of receipt of goods. Our responsibility ceases when the goods are delivered to the carrier in good condition. Carriers are responsible for goods lost, damaged or delayed in transit.
For your own protection have the transportation company's agent verify any damage, shortage or delay and note them on the freight bill over his/her signature.

## Product Specs

All weights are approximate and subject to change without notice. Aleum reserves the right to change or modify product designs, specifications and/or standard equipment without notice andwithout incurring obligation.
Prices and Terms and Conditions of Sale are subject to change without notice.

## Warranty

We warrant all Aleum products to be free from defects in materials and workmanship under normal conditions of use and service.
Our obligation under this warranty is limited to repairing or replacing at our option at our factory or designated facility any product within 2 years after delivery to the original buyer, which shall be returned with transportation charges prepaid, and which our examination and inspection shall show to our satisfaction to have been defective.
This warranty is made expressly in lieu of any other warranties, expressed or implied, including any implied warranty of merchantability or fitness for a particular purpose.
The buyer's sole and exclusive remedy shall be for the replacement or repair of defective products as provided herein.
The buyer agrees that no other remedy, including but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property or any other incidental or consequential loss shall be available to him/her.

Aleum neither assumes nor authorizes any person to assume any other liability in connection with the sale of such products.
Item purchased by Aleum and resold will have the original equipment manufacturers warranty extended to Aleum customers where applicable.
This warranty shall not apply to any product which has been the subject to misuse, negligence or accident, which has been repaired or altered in any manner outside of Aleum's factory or designated facility or which has been used in a manner contrary to Aleum's instructions, recommendations or generally accepted practices. Aleum shall not be responsible for design errors due to inaccurate or incomplete information supplied by the buyer or his representatives.

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## Trade Agreement Act

Aleum Corporation certifies that products specified below comply with the **Trade Agreements Act (TAA) (19 U.S.C. 2501, et seq.)** that allows US contractors to supply and use products and services from South Korea :

| Model | Description |
|---|---|
| HBG, HBT | Bronze Butterfly Valve 300 PSI With Supervisory Switch |
| HPG, HPW, HPGT | Ductile Butterfly Valve 300 PSI With Supervisory Switch |
| HPG1C, HPW1C | Ductile Butterfly Valve With Normally Closed Supervisory Switch |
| DGC | Grooved Swing Check Valve |
| DGCR | Riser Grooved Swing Check Valve |
| FXB, FXU | Flexible Sprinkler Hose |
| ALOSY | OS&Y Gate Valve Flanged Ends |

Above listed Aleum products are manufactured in South Korea, which is one of the GPA countries eligible for TAA.

Unlike the Buy American Act, which creates only a preference for domestic end products, the Trade Agreements Act prohibits supplying products and services from countries not approved as TAA-eligible, including China, India, Malaysia, Thailand and Vietnam.

**Certifications/Listings:**

c UL us LISTED | FM APPROVED

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## Submittal Summary

ALEUM

- ☐ **HBG** Bronze Butterfly Valve Grooved 300 PSI
- ☐ **HBT** Bronze Butterfly Valve Threaded 300 PSI
- ☐ **HPG** Ductile Iron Butterfly Valve Grooved 300 PSI
- ☐ **HPW** Ductile Iron Butterfly Valve Wafer 300 PSI
- ☐ **HPG1C / HPW1C** Ductile Iron Butterfly Valve Grooved & Wafer Supervised Closed 300 PSI
- ☐ **HPGT** Ductile Iron Butterfly Valve Grooved Tapped Body 300 PSISupervised Closed 300 PSI
- ☐ **GBTS** 2", 5", 10", 12" Ductile Iron Butterfly Valve Grooved 300 PSI
- ☐ **WBTS** 2", 5", 10", 12" Ductile Iron Butterfly Valve Wafer 300 PSI
- ☐ **LBTS** Ductile Iron Butterfly Valve Lug Style 300 PSI
- ☐ **8100LG** Lever Type Handle Butterfly Valve Grooved 200 PSI
- ☐ **8200LG** Lever Lock Handle Butterfly Valve Grooved 300 PSI
- ☐ **8200LW** Lever Lock Handle Butterfly Valve Wafer 300 PSI
- ☐ **G8200LG** Lever Lock Handle G-Mine Style Butterfly Valve Grooved 300 PSI
- ☐ **9200LG / 9200GO** 316 Stainless Butterfly Valve Grooved 300 PSI
- ☐ **DGC** Swing Check Valve Grooved
- ☐ **FC** Swing Check Valve Flanged
- ☐ **DGCR** Riser Swing Check Valve Grooved Ends
- ☐ **AOSY-FF** Riser Swing Check Valve Grooved Ends
- ☐ **AOSY-FG** OS&Y Gate Valve Flanged x Grooved
- ☐ **AOSY-GG** OS&Y Gate Valve Grooved Ends
- ☐ **ALOSY3-FF** OS&Y Gate Valve / Flanged Ends
- ☐ **ALNRS3-FF** PIV NRS Gate Valve Flanged Ends
- ☐ **ANRS-FF** PIV NRS Gate Valve Flanged Ends
- ☐ **ANRS-GG** PIV NRS Gate Valve Grooved Ends
- ☐ **ANRS-MM** PIV NRS Gate Valve Mechanical Joint Ends
- ☐ **AIP** Indicator Post Vertical Type
- ☐ **AWP** Indicator Post Wall Type
- ☐ **AWNRS-FF** AWWA NRS Gate Valve Flanged Ends
- ☐ **AWNRS-MM** AWWA NRS Gate Valve Mechanical Joint Ends
- ☐ **FXB / FXU** Indicator Post Vertical Type

**REFER TO ANY NOTIFICATIONS AT THE END OF THIS DOCUMENT REGARDING PRODUCT INSTALLATION, MAINTENANCE OR SUPPORT.**

| System No. | | Location | |
|---|---|---|---|
| Submitted By | | Date | |

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ALEUM

Fire Protection and Mechanical Technologies