

Features

- All materials comply with FDA, USDA, and 3-A requirements
- Highly polished internals and end caps with 32 Ra finish
- Forged ASTM 316L stainless steel valve body and end caps
- Tri-Clamp ends for hygienic connections
- Valve body machining and chamfering done by a single CNC process for precise fit
- 316L mirror finish disc/stem for minimal flow resistance
- Bi-directional flow
- Single piece forged & machined stem/disc
- 100% tested with full traceability of all components
- Multi-voltage brushless motor with auto-voltage sensing
- IP67 polyamide weatherproof enclosure with UV protection
- Electronic torque limiter– protects against valve jams
- Anti-condensation heater
- Manual override with dome style visual valve position indicator
- Electrical connections via external DIN plugs
- Auxiliary limit switches to confirm open/closed valve position

Applications

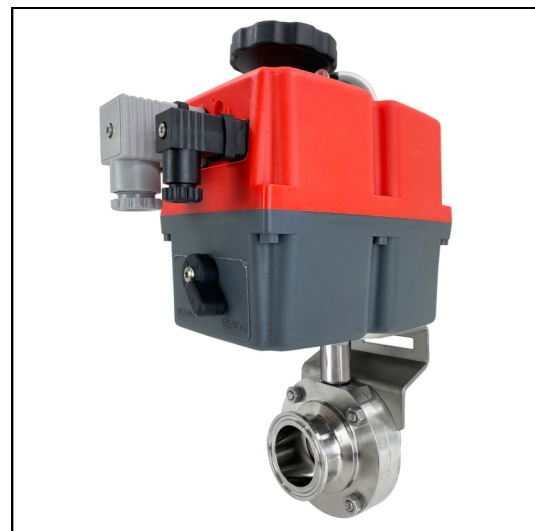
Sanitary butterfly valves are used to control the flow of waters, oils, air, certain caustics, and other media compatible with the materials of construction for general service and where an expanded temperature range or higher pressure is required.

Operation

On-Off electric actuated valve uses power-to-open and power-to-close, stays in the last known position with loss of power. On receipt of a continuous voltage signal, the motor runs and via a rugged all metal gear system rotates the disc 90°. The motor is automatically stopped by internal cams striking limit switches. On receipt of a reversing continuous signal, the motor turns in the opposite direction reversing the valve position.

Construction

| | |
|------------------------------------|---|
| Valve Body | ASTM 316L Stainless Steel |
| Disc/ Stem | 316L Stainless Steel |
| Disc Liner | EPDM |
| Fasteners | 304 Stainless Steel |
| Actuator Enclosure | Anti-corrosive Polyamide, UV protection |
| Manual Override/Position Indicator | Glass-filled Polyamide / Clear Polyamide Dome |
| Auxiliary Limit Switches | 2 x SPST 3A@125/250VAC, 30VDC resistive load |



Description

Electric operated direct mount sanitary butterfly valves are designed for commercial and industrial applications. 316L stainless steel valve body for excellent corrosion resistance. Single piece 316L disc/stem with disc polished to mirror finish to minimize flow turbulence. Sanitary tri-clamp ends for quick, sanitary connections and easy cleaning.

Approvals-Actuators

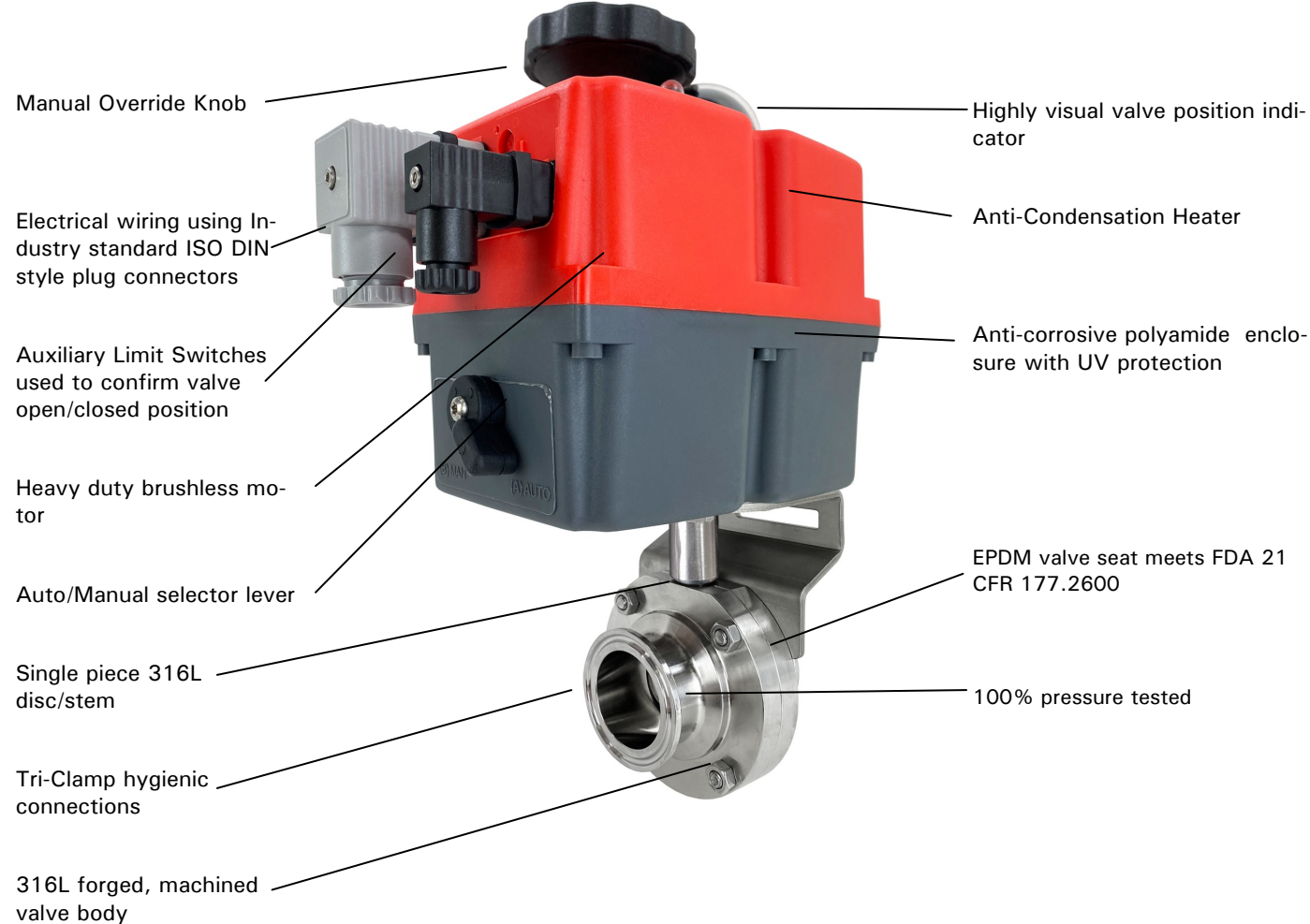
- CE mark conforming to:
 - Machinery directive
 - Low voltage directive
 - EMC Compatibility directive
- ISO5211 valve mounting



Standards-Valves

- Construction
 - FDA 21 CFR 177.2600
- Testing
 - API598

Construction Features



Pressure Rating

Pressure Rating: 1-2", 160 PSI @ 68 °F,
3-4" 140 PSI @ 68 °F

Temperature Rating

Actuator Temperature Rating: -4 to +158° F (-20 to 70° C)
Valve Temperature Rating: EPDM seals: -68 to 302°F (-55 to 150°C)

Optional Functions

BSR: Battery Spring Return Kit
- actuator fails to a safe position with loss of power
DPS: Digital Positioning System
- valve position controlled by 4-20mA or 0-10V control signal

Specifications (English units)

| Stock Number | Pipe Size (inch) | Orifice Diam. (inch) | Cv Flow Factor | Pressure* Max. (PSI) | Cycle Time /90° (sec) +/- 10% | Max. Current Draw (Amps) | | | |
|--|------------------|----------------------|----------------|----------------------|-------------------------------|--------------------------|--------|-------|-------|
| | | | | | | 110VAC | 240VAC | 24VAC | 24VDC |
| Sanitary Butterfly Valve: 24-240V AC or 24-135V DC | | | | | | | | | |
| 574502 | 1 | 0.9 | 23.0 | 160 | 9 | 0.3 | 0.2 | 1.3 | 1.0 |
| 574503 | 1-1/2 | 1.4 | 80.0 | 160 | 9 | 0.3 | 0.2 | 1.3 | 1.0 |
| 574504 | 2 | 1.9 | 230.0 | 160 | 13 | 0.4 | 0.2 | 2.0 | 1.6 |
| 574506 | 3 | 2.9 | 372.0 | 140 | 13 | 0.4 | 0.2 | 2.0 | 1.6 |
| 574507 | 4 | 3.8 | 800.0 | 140 | 29 | 0.3 | 0.2 | 1.5 | 1.2 |

* Pressure @ -67° to 302° F (reduced pressure at higher temperatures—see P/T chart)

Pressure Temperature Chart

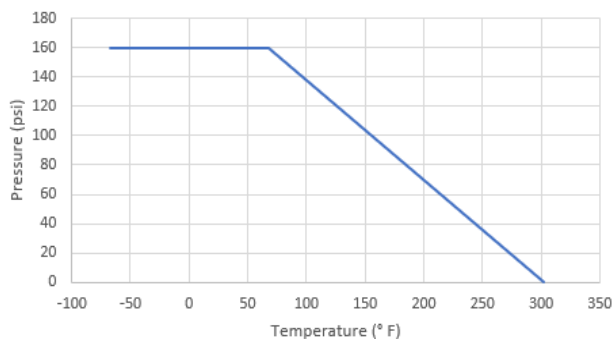
Standard Units 1-2"

| | | | |
|----------|-----|-----|-----|
| Temp °F | -67 | 68 | 302 |
| Pressure | 160 | 160 | 0 |

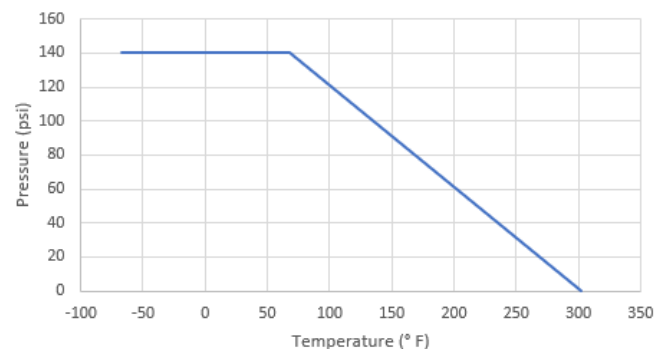
Standard Units 3-4"

| | | | |
|----------|-----|-----|-----|
| Temp °F | -67 | 68 | 302 |
| Pressure | 140 | 140 | 0 |

Pressure vs Temperature- Standard Units



Pressure vs Temperature- Standard Units



Specifications (Metric units)

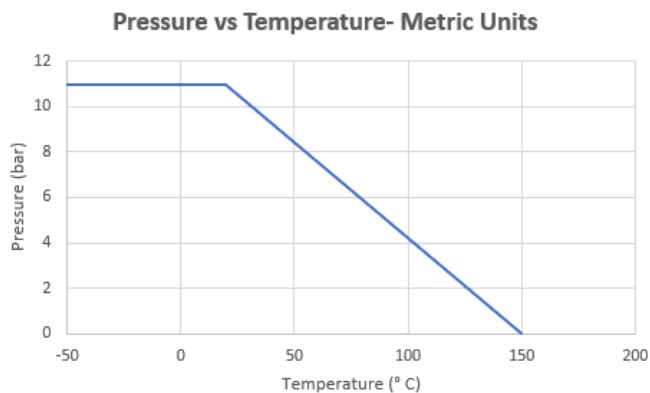
| Stock Number | Pipe Size (DN) | Orifice Diam. (mm) | Kv Flow Factor | Pressure* Max. (Bar) | Cycle Time /90° (sec) + /- 10% | Max. Current Draw (Amps) | | | |
|--|----------------|--------------------|----------------|----------------------|--------------------------------|--------------------------|--------|-------|-------|
| | | | | | | 110VAC | 240VAC | 24VAC | 24VDC |
| Sanitary Butterfly Valve: 24-240V AC or 24-135V DC | | | | | | | | | |
| 574502 | 1 | 22.1 | 19.9 | 11.0 | 9 | 0.3 | 0.2 | 1.3 | 1.0 |
| 574503 | 1-1/2 | 34.8 | 69.2 | 11.0 | 9 | 0.3 | 0.2 | 1.3 | 1.0 |
| 574504 | 2 | 47.5 | 199.0 | 11.0 | 13 | 0.4 | 0.2 | 2.0 | 1.6 |
| 574506 | 3 | 72.9 | 321.8 | 9.7 | 13 | 0.4 | 0.2 | 2.0 | 1.6 |
| 574507 | 4 | 97.6 | 692.0 | 9.7 | 29 | 0.3 | 0.2 | 1.5 | 1.2 |

* Pressure range @ -55° to 150° C (reduced pressure for higher temperatures—see P/T chart)

Pressure Temperature Chart

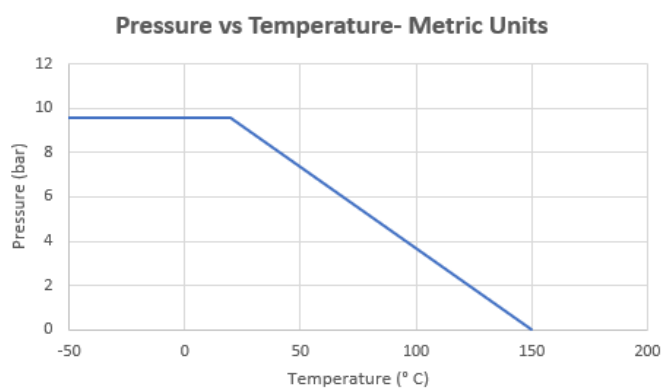
Metric Units 1-2"

| Temp °C | -55 | 20 | 150 |
|----------|-----|----|-----|
| Pressure | 11 | 11 | 0 |



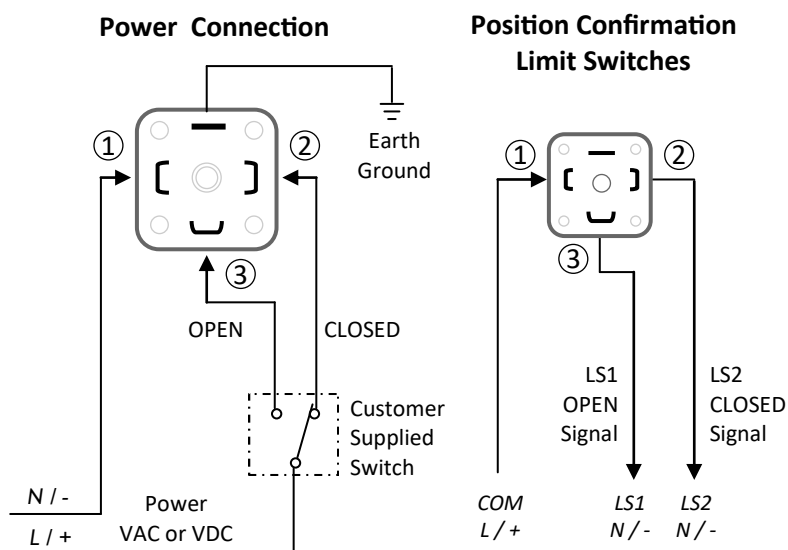
Metric Units 3-4"

| Temp °C | -55 | 20 | 150 |
|----------|-----|-----|-----|
| Pressure | 9.6 | 9.6 | 0 |



Electrical Wiring: On/Off and BSR Battery Spring Return Versions

Voltage: 24-240 Volts AC or 24-135 Volts DC, 1ph, -0/+ 5% (Auto-voltage sensing)



Function: ON-OFF version

Power Connections

Power to PIN 1 and 2
- actuator CLOSED (pos 1)

Power to PIN 1 and 3
- actuator OPEN (pos 2)

Stays in last known position with loss of power.

Function: ON-OFF version with BSR option

Wiring is the same as standard ON-OFF version.

Power to open, power to close - maintain power to trickle charge the battery system in either open or closed position.

Actuator sent by battery power to failsafe position with power failure.

Actuator returns to pre-failure position on power resumption.

Function: Position confirmation limit switches

Dry contact 3A @ 125/250 VAC, 30VDC resistive load

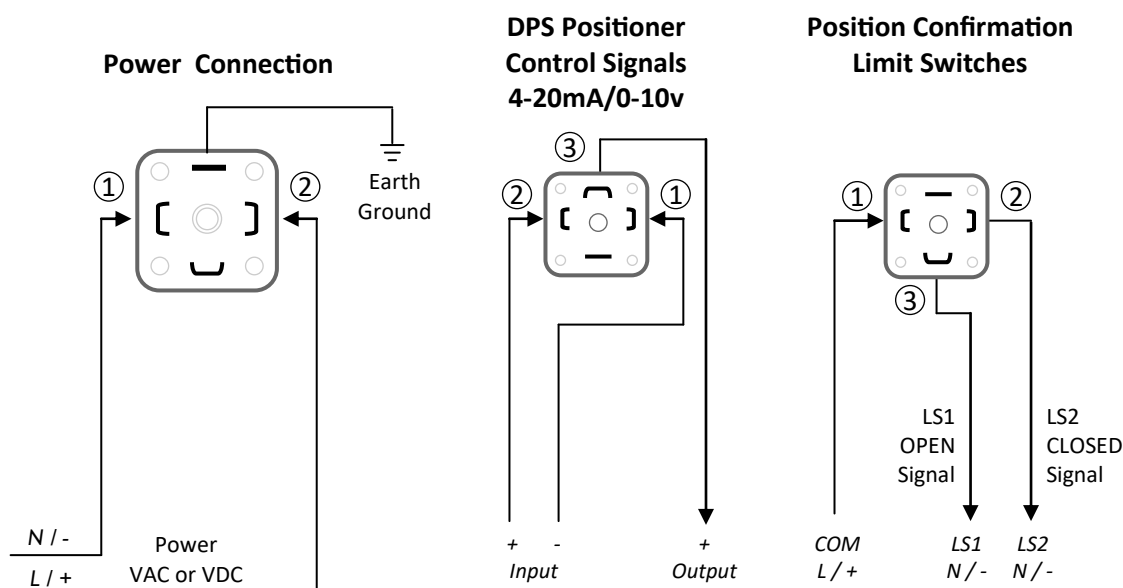
PIN 1 (COM) and 2 to confirm actuator is closed

PIN 1 (COM) and 3 to confirm actuator is open

Electrical Wiring: Actuators with DPS Digital Positioner Option

Voltage: 24-240 Volts AC or 24-135 Volts DC, 1 ph, -0/+ 5% (Auto-voltage sensing)

Control Signal: 4-20mA or 0-10 VDC



Function: Actuators with DPS—Digital Positioner Option

Power open, power close - actuator movement controlled by 4-20mA or 0-10VDC input signal.

Standard operation: 4mA or 0V = actuator closed, 20mA or 10V = actuator open (can be set-up reverse acting).

Actuator closes with loss of control signal, stays in last known position with loss of main power.

Output monitoring signal (in same format as supply signal) provided as standard.

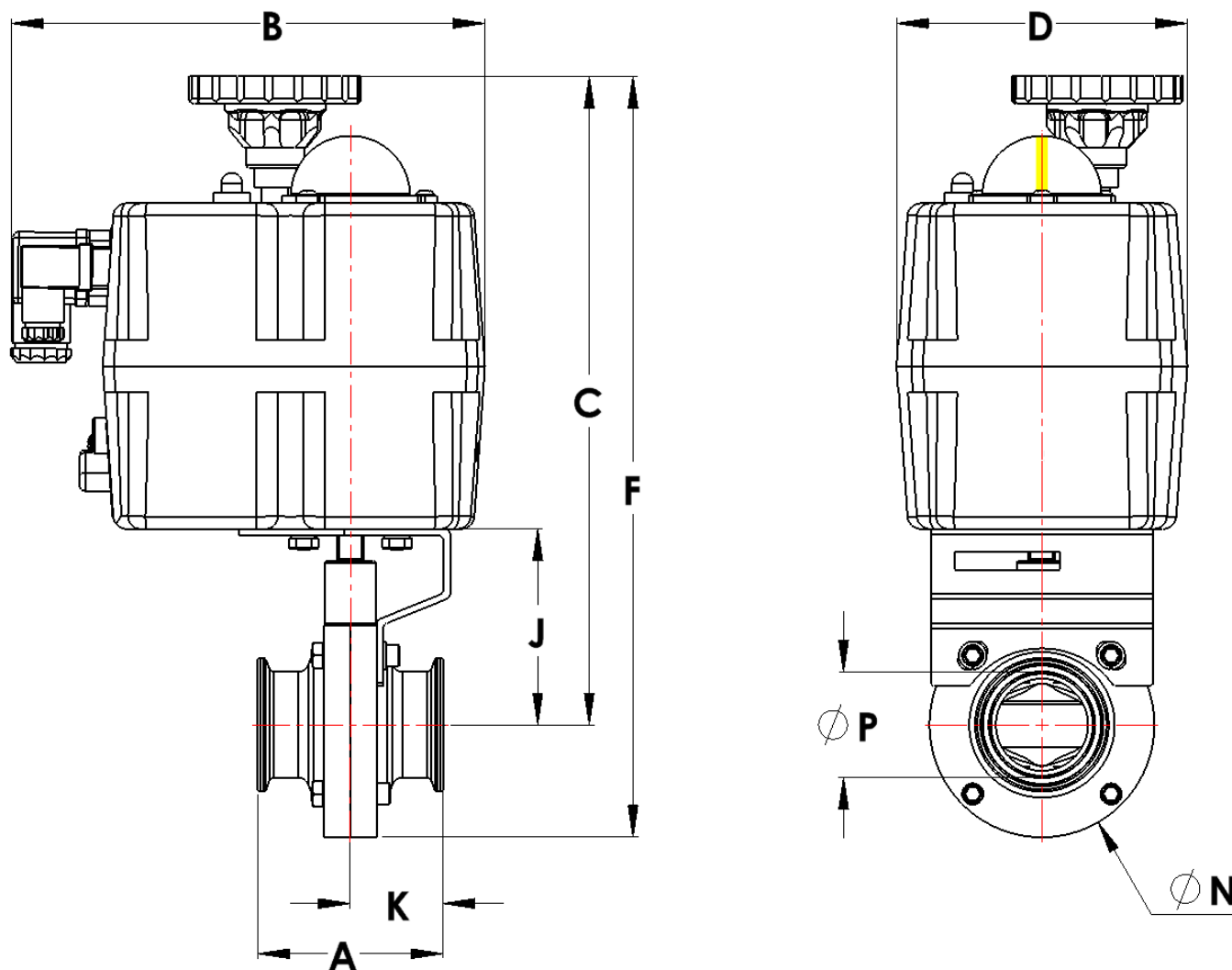
Function: Position confirmation limit switches

Dry contact 3A @ 125/250 VAC, 30VDC resistive load

PIN 1 (COM) and 2 to confirm actuator is closed

PIN 1 (COM) and 3 to confirm actuator is open

Dimensions:



| Pipe Size | | A | B | C | D | F | J | K | N | P | Weight |
|-----------|------|------|-------|-------|-------|-------|-------|------|-------|------|---------|
| 1 | inch | 2.8 | 7.1 | 9.5 | 4.3 | 11.0 | 2.8 | 1.4 | 3.1 | 0.9 | 7.0 lb |
| | mm | 70.0 | 179.0 | 240.9 | 110.0 | 280.4 | 69.9 | 35.0 | 79.0 | 22.1 | 3.2 kg |
| 1-1/2 | inch | 2.8 | 7.1 | 9.6 | 4.3 | 11.3 | 2.9 | 1.4 | 3.3 | 1.4 | 6.7 lb |
| | mm | 70.0 | 179.0 | 245.0 | 110.0 | 287.5 | 74.0 | 35.0 | 85.0 | 34.8 | 3.0 kg |
| 2 | inch | 2.9 | 7.0 | 10.8 | 4.3 | 12.7 | 3.1 | 1.5 | 3.9 | 1.9 | 8.7 lb |
| | mm | 74.0 | 177.0 | 273.2 | 110.0 | 323.2 | 77.7 | 37.0 | 100.0 | 47.5 | 3.9 kg |
| 3 | inch | 3.1 | 7.0 | 11.4 | 4.3 | 13.9 | 3.7 | 1.5 | 5.0 | 2.9 | 10.5 lb |
| | mm | 78.0 | 177.0 | 290.0 | 110.0 | 353.5 | 94.5 | 39.0 | 127.0 | 72.9 | 4.8 kg |
| 4 | inch | 3.5 | 7.0 | 12.0 | 4.3 | 15.0 | 4.3 | 1.8 | 6.1 | 3.8 | 14.2 lb |
| | mm | 90.0 | 177.0 | 304.2 | 110.0 | 382.2 | 108.7 | 45.0 | 156.0 | 97.6 | 6.4 kg |