

Hy-Lok

INTEGRAL BLOCK & BLEED VALVES

Catalog No. H - 100PIV
Feb. 2006



*Think... Hy-Lok...
Your Best Solution!*



HY-LOK CORPORATION

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Hy-Lok Integral Block & Bleed Valves have been specifically designed to provide a compact installation for gauge or transmitter instruments.

Used as an alternative to multivalve systems the advantages of reduced weight and minimum leakpaths provide for a higher integrity system. And the reduced height of the installation reduces the risk of damage through vibration as well.

Hy-Lok Integral Block & Bleed Valves is a leader in its field. A company that has built its reputation on inspired development, precision engineering and high quality customer service satisfies the demands of industry worldwide.

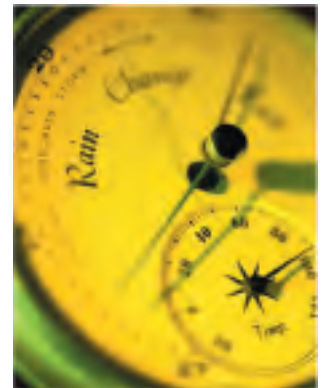
Today, Hy-Lok Integral Block & Bleed Valves is uniquely placed to offer an unrivalled range of standard products from stock, together with a supreme manufacturing capability to handle specific requirements and exotic materials. In addition, the company has the technical ability and resources to develop bespoke products for the most demanding or unusual applications.



A team of dedicated engineering specialists brought together to solve problems and deliver high quality solutions worldwide.



Consistently high levels of performance in design, manufacturing, inventory management, quality, system development and service.



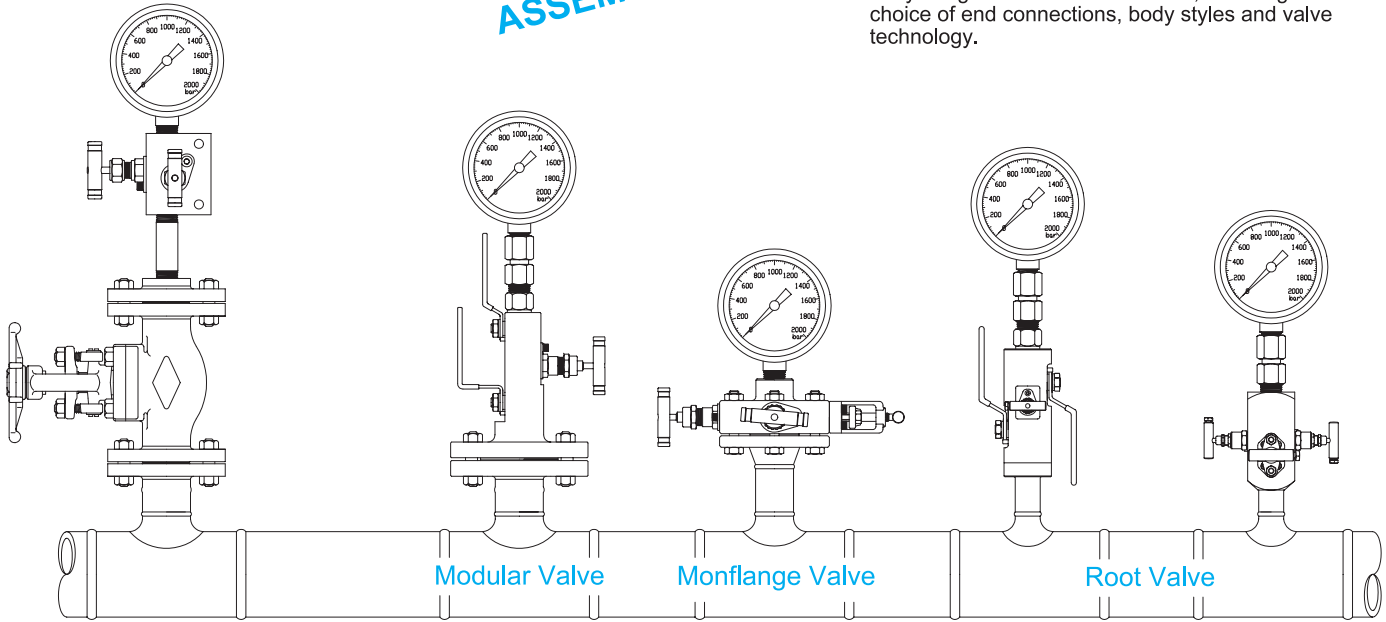
Design excellence, drawing on engineering expertise from project experience the world over. Meeting the most demanding applications.



CONVENTIONAL ASSEMBLY

Hy-Lok Integral Block & Bleed Valve ASSEMBLY

Hy-Lok Instrumentation Products has the ultimate solutions for a compact range of one-piece forged body Integral block & bleed valves, featuring a choice of end connections, body styles and valve technology.



Modular Valve

Ball and Globe style Needle Valves
Flange and Threaded Connections
Integrally Forged Body

Monoflange Valve

Globe Style Needle Valves
Flanged and Threaded Connections
Slimline Integrally Forged Body

Root Valve

Ball and Globe Style Needle Valves
Weld or Threaded Connections
Direct Connection to the Vessel
Integrally Forged Body

APPLICATION

- Double block and bleed instrument isolation
- Gauge isolation
- Instrument drain
- Chemical injection connection
- Sample connections
- Chemical seal instrument isolation
- Piping / instrument interface
- Direct mounting of instruments
- Remote mounting of instruments

ADVANTAGES

- More compact design
- Reduced weight
- Reduced height
- Reduced leakage points
- Reduced effect of system vibration
- Supporting brackets are not required
- Reduced bending moment acting on the vessel branch fitting weld
- Reduced installation cost
- Reduced gaskets and bolting

MARKETS

- Offshore oil and gas production
- Onshore terminals
- Chemical, petro-chemical, refining
- Control panel manufacturers
- Process/power industry contractors
- Compressor manufacturers
- LNG Carriers

GENERAL

Design

ANSI/ASME B16.34
 -Material wall thickness
 ANSI/ASME B16.5
 -Flange dimensions
 ASME VIII
 -Design procedures materials
 ANSI/ASME B1.20.1
 -National pipe threads
 API 607/BS 6755
 -Fire tested

Tough Handles

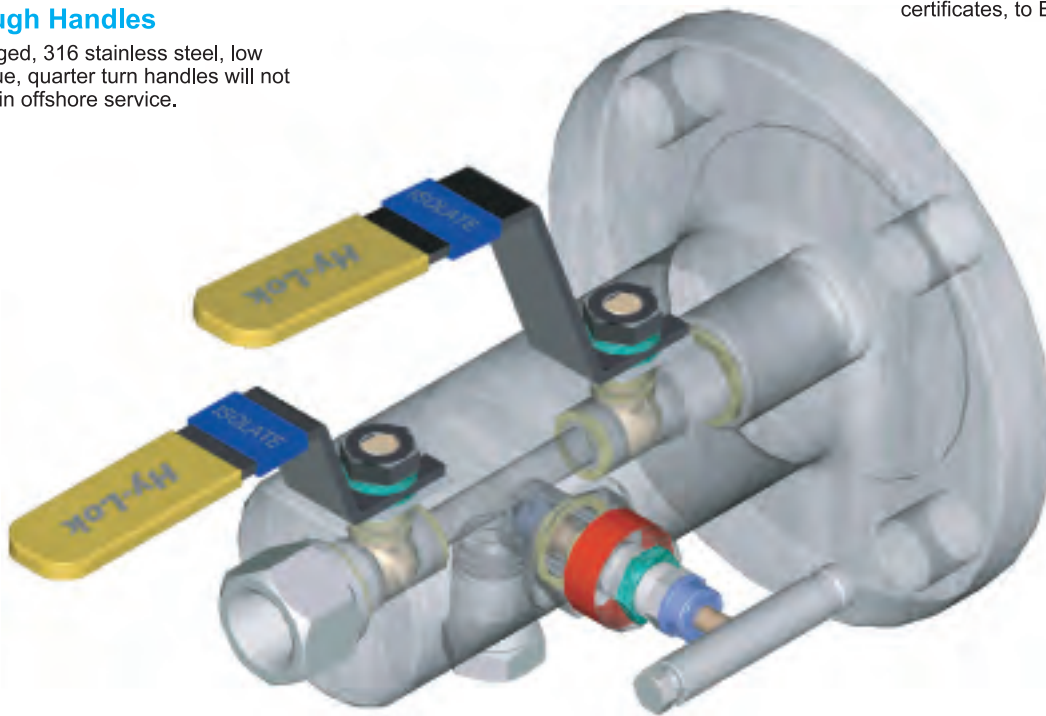
Rugged, 316 stainless steel, low torque, quarter turn handles will not rust in offshore service.

Quality Assurance

All quality assurance performance shall be applied with ISO 9001, API 6D, CE procedure.

Traceability

All major pressure containing components exhibit unique identification coding and material test certificates, to EN 10204 3.1.B.



Positive Stop Pins

A 316 stainless steel pin held into the body by a machined anti-vibration spline assures an absolute 90° turn.

Testing

All products receive hydrostatic testing at the full rated pressure with proof shell test at 1.5 times full rated pressure and pneumatic test of the seats at 100psi thereby ensuring suitability for use across a wide operating range. And a 1.1 times full rated hydrostatic seat test.

High Performance Seats

Unique enclosed seats offer great process compatibility but restrict creep or distortion in service. Our approach achieves high levels of seat integrity at low and high pressures.

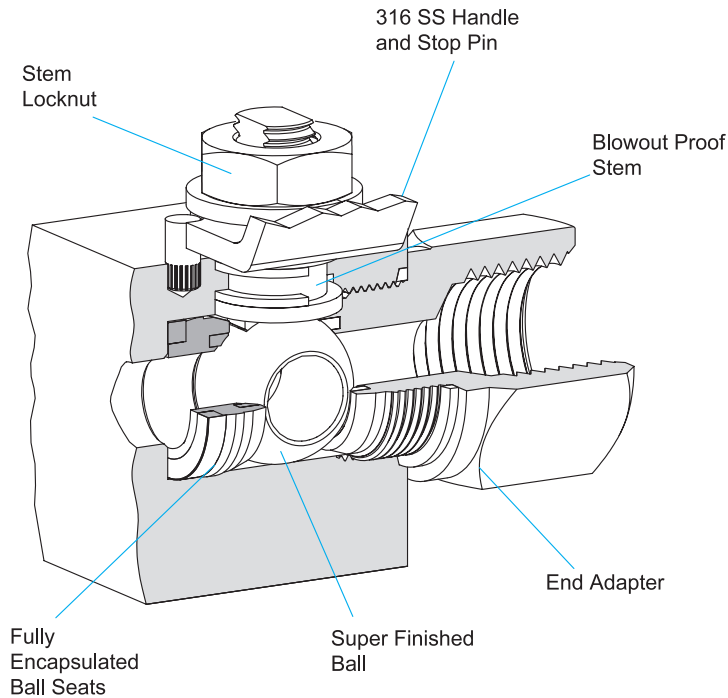
Sour Service

Compliance to NACE specification MR 01-75 latest revision-suitable for sour service- resistant to sulphide stress corrosion cracking.

Flanged Valve Ratings

Comply with, and are affected by, the material class pressure and temperatures of ANSI B16.5 unless the temperature limitations above apply. For clarification consult Hy-Lok Corporation.

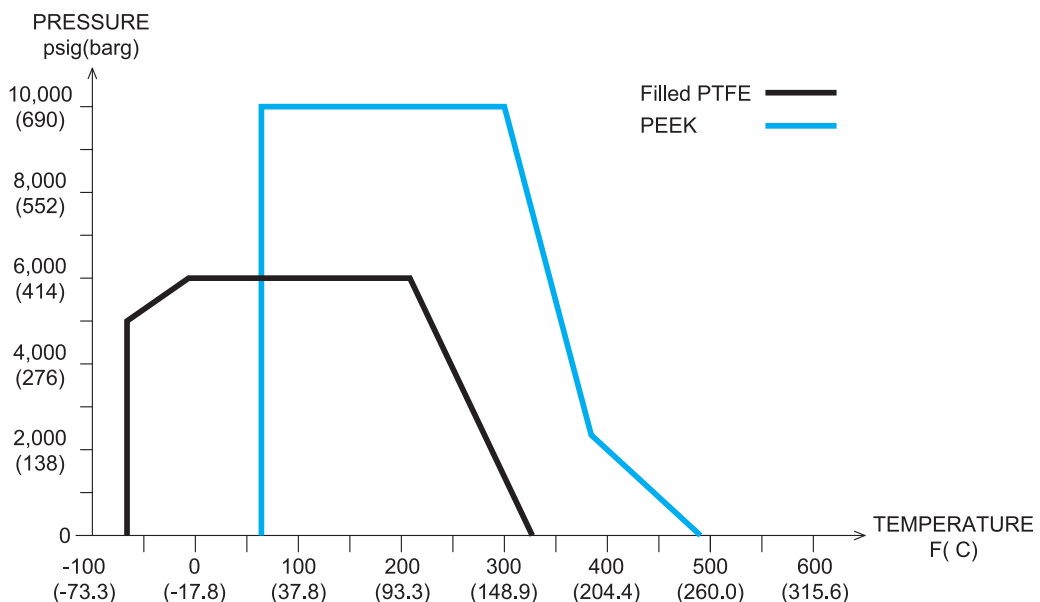
BALL VALVE



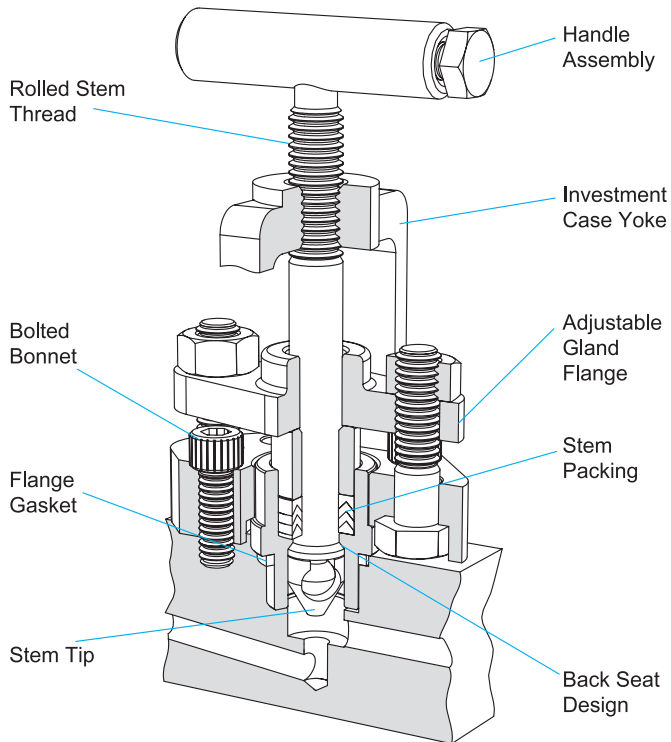
Features

- Stainless steel handle and positive machined stop.
- Full grip PVC handle sleeve.
- Blowout proof one-piece stem spindle.
- Low operating torque.
- Fully encapsulated ball seats minimize seat seal extrusion and allow high working pressures.
- Super finished ball for low operating torque and long life.
- End adapter threads are fully isolated from process by primary and secondary static seals.
- Stem locknut is vibration resistant to avoid working loose.
- Color coded and function identified handles.
- Firesafe to API 607, BS 6755 part2.
- Bore size available 0.4"(10mm), 0.55"(14mm).
- Ball seats choice of seat materials: PVDF, PTFE(virgin or filled), PCTFE or PEEK.
- Anti-static design as standard.
- Pressure rating up to 10,000psig (690barg).
- Temperature rating -70.6 °F to +482 °F (-57 °C to +250 °C).
- Optional : NACE compliance, Handle Locking Device, Full bore size.

Pressure and Temperature Ratings



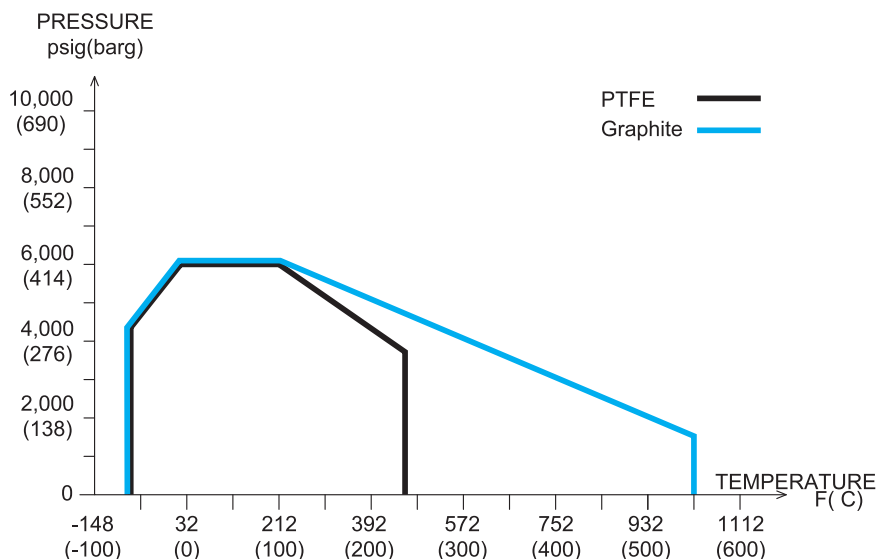
OS&Y NEEDLE TYPE GLOBE VALVE



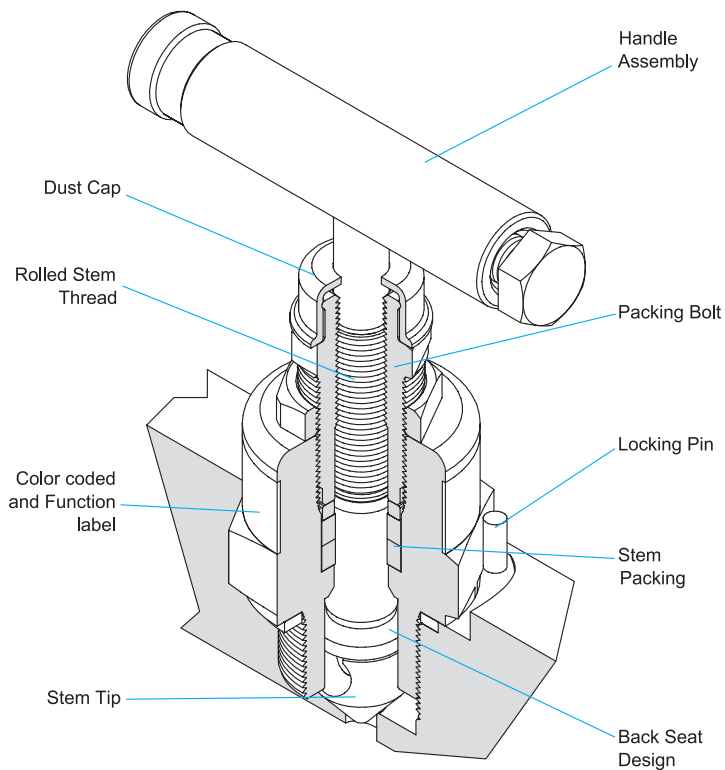
Features

- Rolled stem threads prevent galling. Stem threads are completely isolated from the process.
- Stem packing with Graphite or PTFE rings for bubble-tight seal.
- Bolted bonnet for strength and reliability.
- Stem tip construction : non-rotating self-centering, Anti-galling tip positive bubble-tight and field interchangeable tip.
- Flange gasket seal ensures a bubble-tight between body and bonnet.
- Backseat design provides secondary stem sealing and prevents stem blowout.
- Adjustable gland flange allows easy access to the packing gland, and packing adjustment for an effective stem seal.
- Investment cast yoke is precision casted for strength and perfect stem alignment.
- Robust bar handle is standard.
- Color coded and function label for easy identification.
- Firesafe to API 607, BS 6755 part2.
- Orifice size 0.2"(5mm).
- Pressure rating up to 6,000psig (414barg).
- Temperature rating -70.6 °F to +1022 °F (-57 °C to +550 °C).

Pressure and Temperature Ratings



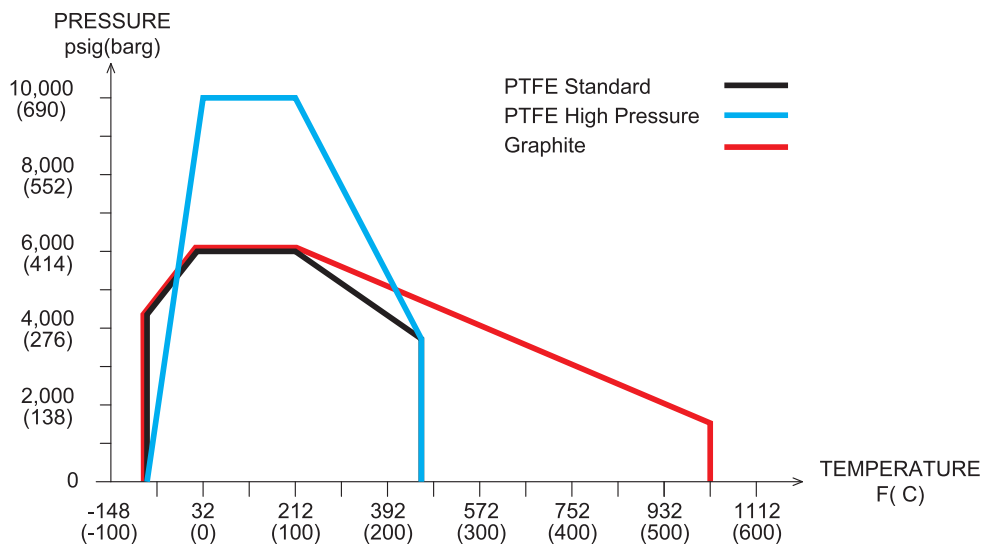
NEEDLE TYPE GLOBE VALVE



Features

- Rolled stem threads prevent galling. Stem threads are completely isolated from the process.
- Stem packing with Graphite or PTFE rings for bubble-tight seal.
- Stem tip construction : non-rotating self-centering, Anti-galling tip positive bubble-tight and field interchangeable tip.
- Backseat design provides secondary stem sealing and prevents stem blowout.
- Packing bolt allows easy access to adjust the packing gland.
- Robust bar handle is standard.
- Color coded and function label for easy identification.
- Firesafe to API 607, BS 6755 part2.
- Orifice size 0.2"(5mm).
- Pressure rating up to 10,000psig (690barg).
- Temperature rating -70.6 °F to +1022 °F (-57 °C to +550 °C).
- Anti-Temper bonnets are available with a removable T-bar key to prevent unauthorized operation of vent valves.

Pressure and Temperature Ratings



| TYPE | DESCRIPTION | MATERIAL | | | | |
|---------------------------------|-------------------------|---|--------------|----------|------|------------|
| MODULAR | Body / End Connector | A182 F51 | A182 F316 | A350 LF2 | A105 | UNS N04400 |
| MONOFLANGE | | A182 F51 | A182 F316 | A350 LF2 | A105 | UNS N04400 |
| ROOT VALVE | | UNS-S31803 | A479 TYPE316 | A350 LF2 | A105 | UNS N04400 |
| Ball Valve | Ball | UNS-S31803 | A479 TYPE316 | | | UNS N04400 |
| | Stem | UNS-S31803 | A479 TYPE316 | | | UNS N04400 |
| | Retainer | UNS-S31803 | A479 TYPE316 | | | UNS N04400 |
| | Socket | UNS-S31803 | A479 TP316 | | A105 | UNS N04400 |
| | Ball Seat | PVDF, PTFE(virgin or filled), PCTFE or PEEK | | | | |
| OS&Y Needle Type Globe Valve | Stem Tip | UNS-S31803 | A564 TP630 | | | UNS N04400 |
| | Stem | UNS-S31803 | A479 TYPE316 | | | UNS N04400 |
| | Bonnet | UNS-S31803 | A479 TYPE316 | | | UNS N04400 |
| | Yoke | A351 CF8M | | | | |
| Needle Type Globe Valve | Stem Tip | UNS-S31803 | A564 TP630 | | | UNS N04400 |
| | Stem | UNS-S31803 | A479 TYPE316 | | | UNS N04400 |
| | Bonnet | UNS-S31803 | A479 TYPE316 | | | UNS N04400 |

NOTE.

Stainless steel is standard body material but such a Monel, Duplex, Super Duplex, Hasteloy, Inconel and other special material are available upon request.

Modular Valves are integrally forged, one-piece double block and bleed assemblies for primary isolation of pressure take-offs, where the valve is directly mounted to the vessel or process pipe. Instruments may be directly mounted to the valve outlet or alternatively remotely with gauge lines/impulse pipe work.

Applications

- Block and Bleed(SB Series)
- Double Block and Bleed(DB Series)
- Pressure Measurement
- Chemical Injection
- Level Measurement
- Sampling
- Flow Measurement

Standard Features

- ANSI B16.5 flanged Inlet connections 1/2" to 2" sizes.
- Class150 rated to Class2500 rated.
- API flanged Inlet connections sizes to 2 1/16".
- 1/2" NPT threaded female outlet to ANSI/ASME B1.20.1.
- 1/2" NPT threaded female vent connection to ANSI/ASME B1.20.1.
- Material thickness to ANSI B16.34.
- Bolted Body construction (Inlet or Outlet) is options.
- Firesafe to API 607, BS6755 Part2.

Standard Pressure Testing

to BS6755 Part1.

Standard Material Traceability

to EN 10204 3.1.B (Body only).

Ball Isolation Valve Seat Materials

a choice of PVDF, PTFE(virgin or filled), PCTFE and PEEK are available.

OS&Y Needle Type and Needle Type Globe Valve Packing Materials

Standard valves are offered with Graphite. PTFE is also available as an option.



SB50 SERIES

Single Block & Bleed Valve
Flange x 1/2"NPT
Isolate : Ball
Bleed : Ball or OS & Y or Needle

DB50 SERIES

Double Block & Bleed Valve
Flange x 1/2"NPT
Primary : Ball
Secondary : Ball
Bleed : OS & Y or Needle

SB55 SERIES

Single Block & Bleed Valve
Flange x 1/2"NPT
Isolate : OS & Y or Needle
Bleed : OS & Y or Needle

DB55 SERIES

Double Block & Bleed Valve
Flange x 1/2"NPT
Primary : OS & Y
Secondary : OS & Y or Needle
Bleed : OS & Y or Needle

SB60 SERIES

Single Block & Bleed Valve
Flange x Flange
Primary : Ball
Bleed : Ball or OS & Y or Needle

DB60 SERIES

Double Block & Bleed Valve
Flange x Flange
Primary : Ball
Secondary : Ball
Bleed : OS & Y or Needle

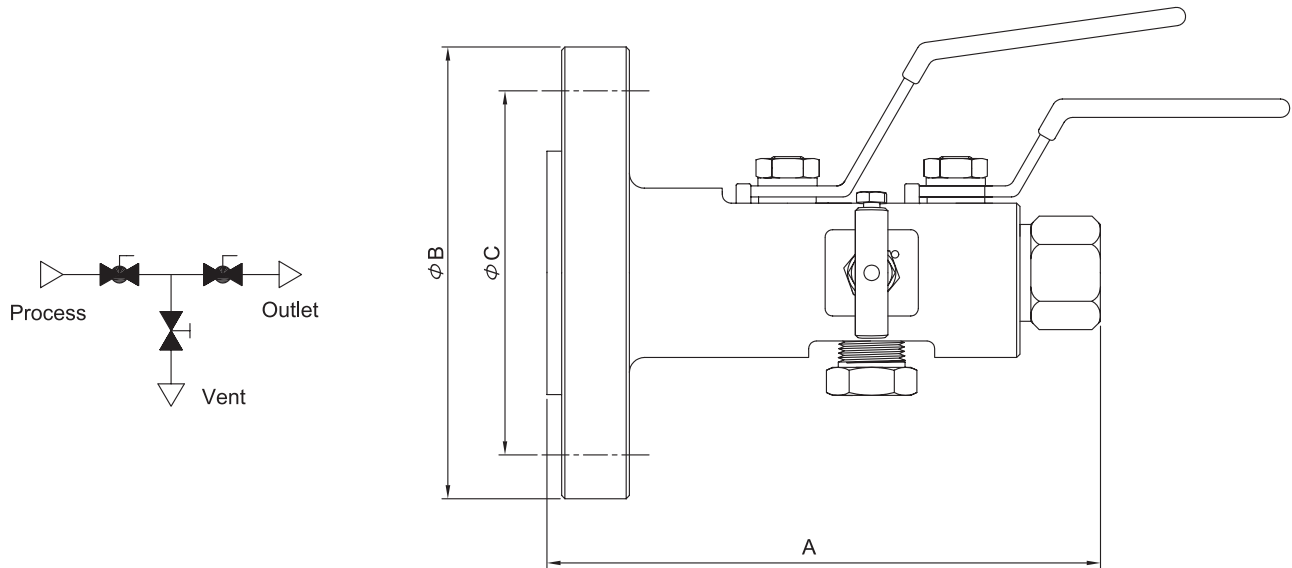
SB65 SERIES

Single Block & Bleed Valve
Flange x Flange
Primary : OS & Y
Bleed : OS & Y or Needle

DB65 SERIES

Double Block & Bleed Valve
Flange x Flange
Primary : OS & Y
Secondary : OS & Y or Needle
Bleed : OS & Y or Needle

DB50 Series

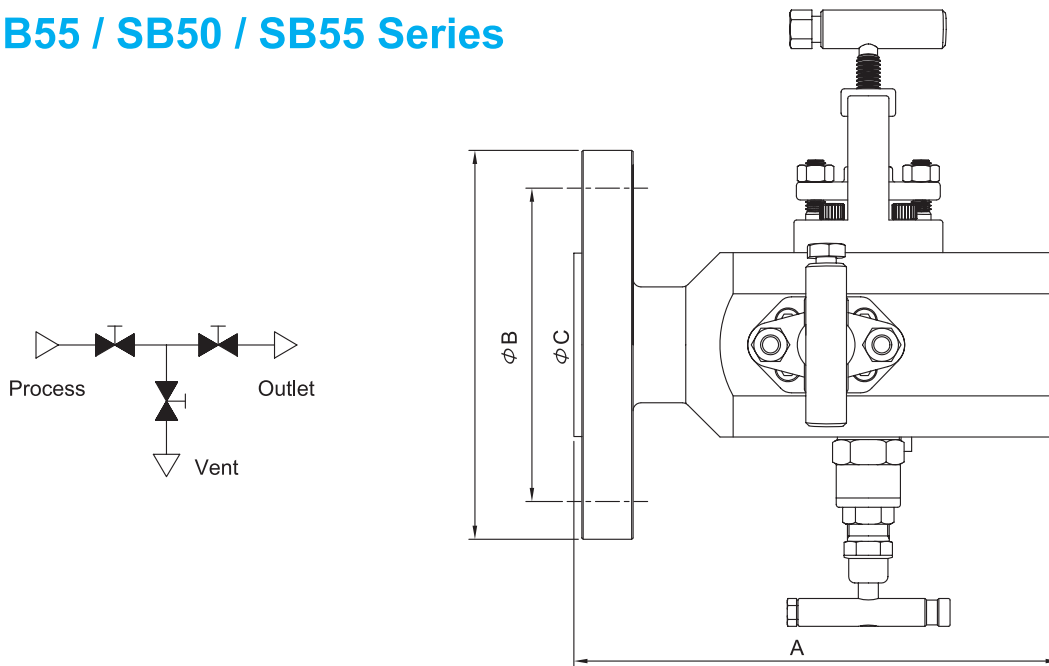


•Dimensions & Weights

| SIZE (inch) | RATING lb | DIMENSIONS (mm) | | | | Weight (kg) |
|-------------|-----------|-----------------|---------|-----|-------|-------------|
| | | A (RF) | A (RTJ) | B | C | |
| 1/2 | 150 | 188 | - | 89 | 60.3 | 3.6 |
| 1/2 | 300 | 188 | 193 | 96 | 66.7 | 3.9 |
| 1/2 | 600 | 188 | 196 | 96 | 66.7 | 4.0 |
| 1/2 | 900/1500 | 206 | 213 | 121 | 82.5 | 5.4 |
| 1/2 | 2500 | 206 | 213 | 134 | 88.9 | 6.9 |
| 3/4 | 150 | 188 | - | 99 | 69.8 | 3.9 |
| 3/4 | 300 | 188 | 196 | 118 | 82.5 | 4.6 |
| 3/4 | 600 | 188 | 196 | 118 | 82.5 | 4.7 |
| 3/4 | 900/1500 | 206 | 213 | 130 | 88.9 | 6.3 |
| 3/4 | 2500 | 206 | 213 | 140 | 95.2 | 7.5 |
| 1 | 150 | 178 | 183 | 108 | 79.4 | 4.0 |
| 1 | 300 | 180 | 185 | 124 | 88.9 | 4.6 |
| 1 | 600 | 180 | 188 | 124 | 88.9 | 4.7 |
| 1 | 900/1500 | 191 | 198 | 150 | 101.6 | 7.0 |
| 1 | 2500 | 206 | 206 | 159 | 108.0 | 8.6 |
| 1 1/2 | 150 | 180 | 185 | 127 | 98.4 | 4.6 |
| 1 1/2 | 300 | 183 | 188 | 156 | 114.3 | 6.0 |
| 1 1/2 | 600 | 193 | 193 | 156 | 114.3 | 6.5 |
| 1 1/2 | 900/1500 | 203 | 203 | 178 | 123.8 | 9.4 |
| 1 1/2 | 2500 | 216 | 216 | 203 | 146.1 | 15.9 |
| 2 | 150 | 183 | 188 | 153 | 120.6 | 6.6 |
| 2 | 300 | 185 | 192 | 165 | 127.0 | 8.0 |
| 2 | 600 | 196 | 197 | 165 | 127.0 | 8.3 |
| 2 | 900/1500 | 226 | 210 | 216 | 165.1 | 15.0 |
| 2 | 2500 | 221 | 223 | 235 | 171.5 | 22.0 |

Dimensions are for reference only, subject to change.

DB55 / SB50 / SB55 Series

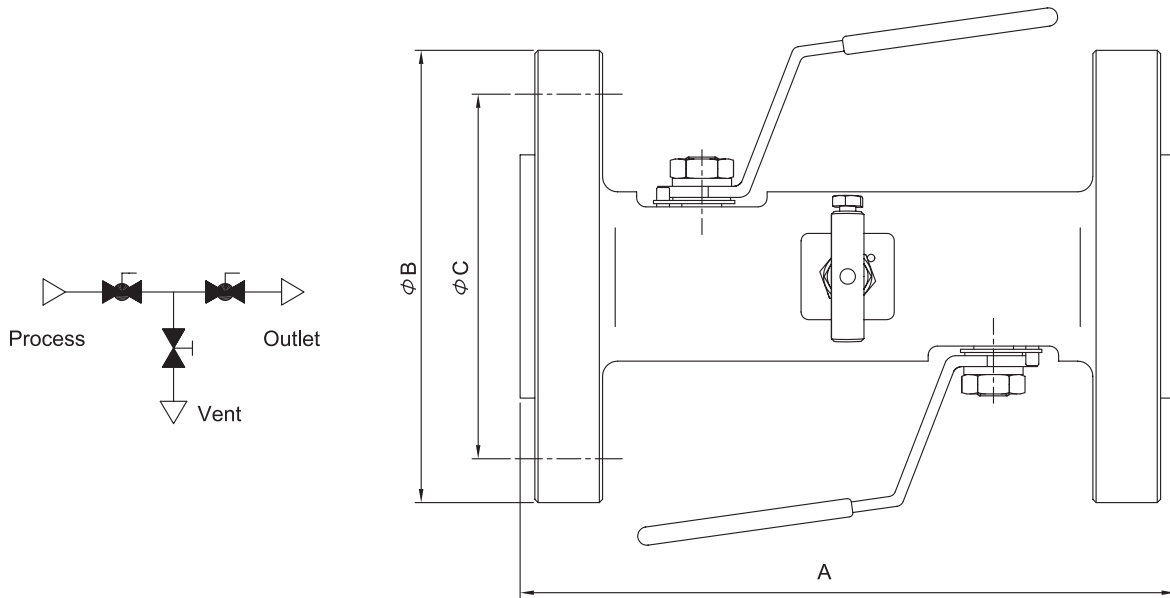


•Dimensions & Weights

| SIZE (inch) | RATING lb | DIMENSIONS (mm) | | | | Weight (kg) |
|-------------|-----------|-----------------|---------|-----|-------|-------------|
| | | A (RF) | A (RTJ) | B | C | |
| 1/2 | 150 | 161 | - | 89 | 60.3 | 3.6 |
| 1/2 | 300 | 161 | 163 | 96 | 66.7 | 3.9 |
| 1/2 | 600 | 166 | 165 | 96 | 66.7 | 4.0 |
| 1/2 | 900/1500 | 184 | 184 | 121 | 82.5 | 5.4 |
| 1/2 | 2500 | 184 | 184 | 134 | 88.9 | 6.9 |
| 3/4 | 150 | 161 | - | 99 | 69.8 | 3.9 |
| 3/4 | 300 | 161 | 165 | 118 | 82.5 | 4.6 |
| 3/4 | 600 | 166 | 165 | 118 | 82.5 | 4.7 |
| 3/4 | 900/1500 | 184 | 184 | 130 | 88.9 | 6.3 |
| 3/4 | 2500 | 184 | 184 | 140 | 95.2 | 7.5 |
| 1 | 150 | 156 | 161 | 108 | 79.4 | 4.0 |
| 1 | 300 | 159 | 164 | 124 | 88.9 | 4.6 |
| 1 | 600 | 159 | 166 | 124 | 88.9 | 4.7 |
| 1 | 900/1500 | 169 | 177 | 150 | 101.6 | 7.0 |
| 1 | 2500 | 183 | 183 | 159 | 108.0 | 8.6 |
| 1 1/2 | 150 | 159 | 164 | 127 | 98.4 | 4.6 |
| 1 1/2 | 300 | 162 | 167 | 156 | 114.3 | 6.0 |
| 1 1/2 | 600 | 170 | 170 | 156 | 114.3 | 6.5 |
| 1 1/2 | 900/1500 | 180 | 180 | 178 | 123.8 | 9.4 |
| 1 1/2 | 2500 | 193 | 194 | 203 | 146.1 | 15.9 |
| 2 | 150 | 161 | 166 | 153 | 120.6 | 6.6 |
| 2 | 300 | 164 | 170 | 165 | 127.0 | 8.0 |
| 2 | 600 | 173 | 175 | 165 | 127.0 | 8.3 |
| 2 | 900/1500 | 186 | 188 | 216 | 165.1 | 15.0 |
| 2 | 2500 | 199 | 201 | 235 | 171.5 | 22.0 |

Dimensions are for reference only, subject to change.

DB60 Series

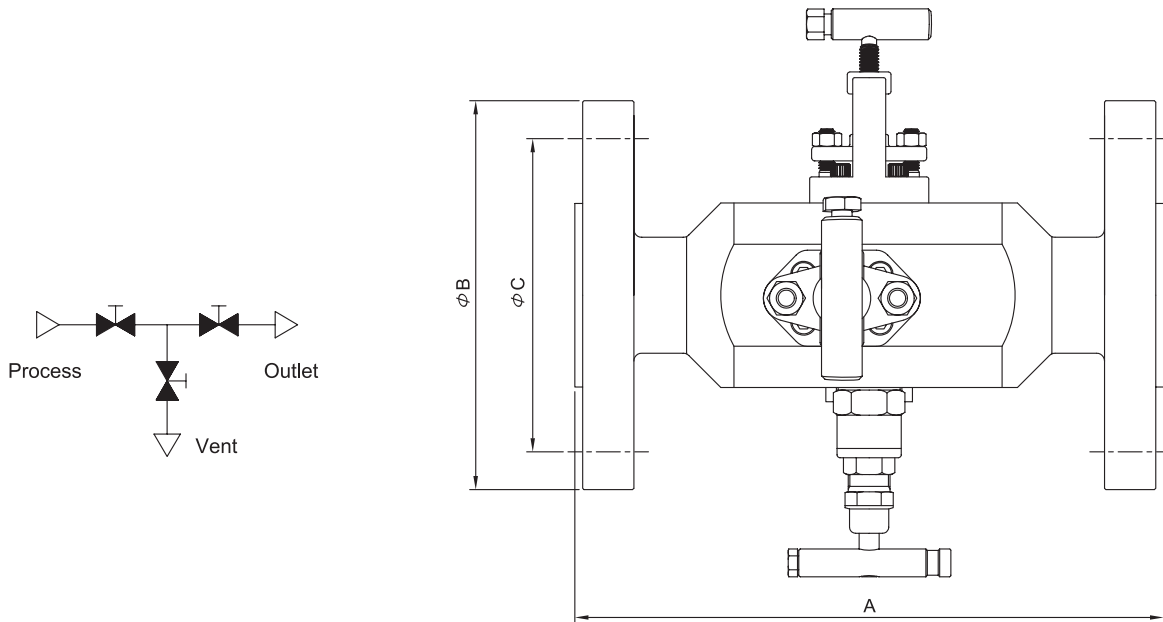


•Dimensions & Weight/s

| SIZE (inch) | RATING lb | DIMENSIONS (mm) | | | | Weight (kg) |
|-------------|-----------|-----------------|---------|-----|-------|-------------|
| | | A (RF) | A (RTJ) | B | C | |
| 1/2 | 150 | 208 | - | 89 | 60.3 | 4.3 |
| 1/2 | 300 | 208 | 221 | 96 | 66.7 | 5.0 |
| 1/2 | 600 | 208 | 221 | 96 | 66.7 | 5.2 |
| 1/2 | 900/1500 | 243 | 256 | 121 | 82.5 | 7.9 |
| 1/2 | 2500 | 243 | 256 | 134 | 88.9 | 10.8 |
| 3/4 | 150 | 208 | - | 99 | 69.8 | 4.9 |
| 3/4 | 300 | 208 | 221 | 118 | 82.5 | 6.3 |
| 3/4 | 600 | 208 | 221 | 118 | 82.5 | 6.5 |
| 3/4 | 900/1500 | 243 | 256 | 130 | 88.9 | 9.5 |
| 3/4 | 2500 | 243 | 256 | 140 | 95.2 | 12.0 |
| 1 | 150 | 180 | 189 | 108 | 79.4 | 5.0 |
| 1 | 300 | 186 | 196 | 124 | 88.9 | 6.3 |
| 1 | 600 | 199 | 199 | 124 | 88.9 | 6.5 |
| 1 | 900/1500 | 221 | 221 | 150 | 101.6 | 11.2 |
| 1 | 2500 | 234 | 234 | 159 | 108.0 | 14.3 |
| 1 1/2 | 150 | 186 | 196 | 127 | 98.4 | 6.4 |
| 1 1/2 | 300 | 192 | 202 | 156 | 114.3 | 9.1 |
| 1 1/2 | 600 | 208 | 208 | 156 | 114.3 | 10.1 |
| 1 1/2 | 900/1500 | 227 | 227 | 178 | 123.8 | 16.0 |
| 1 1/2 | 2500 | 253 | 256 | 203 | 146.1 | 27.8 |
| 2 | 150 | 189 | 199 | 153 | 120.6 | 9.9 |
| 2 | 300 | 196 | 208 | 165 | 127.0 | 11.9 |
| 2 | 600 | 215 | 218 | 165 | 127.0 | 13.4 |
| 2 | 900/1500 | 240 | 243 | 216 | 165.1 | 27.2 |
| 2 | 2500 | 265 | 268 | 235 | 171.5 | 40.0 |

Dimensions are for reference only, subject to change.

DB65 / SB60 / SB65 Series



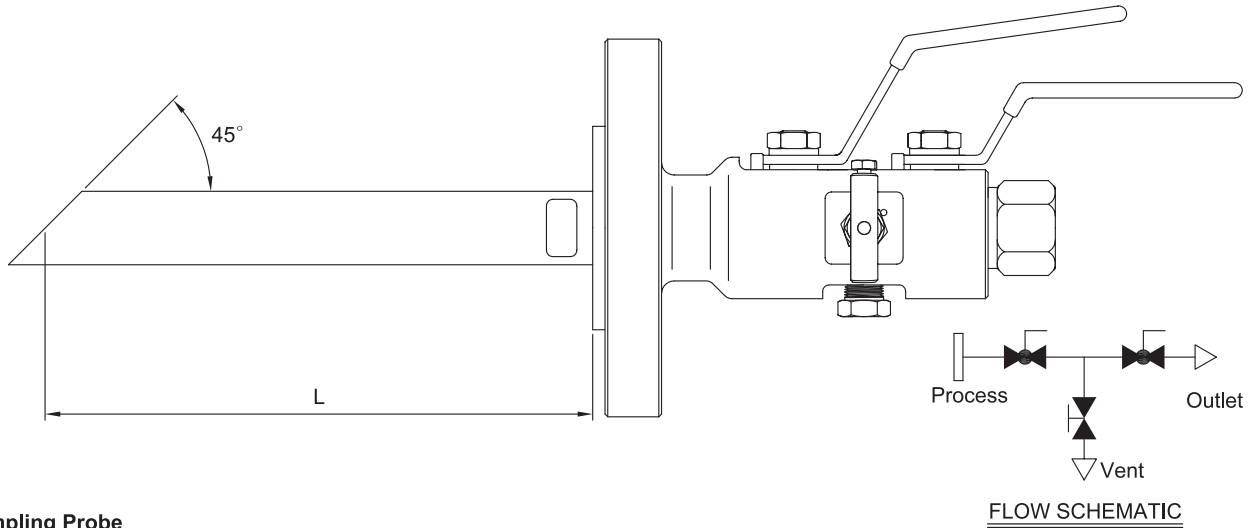
•Dimensions & Weight/s

| SIZE (inch) | RATING lb | DIMENSIONS (mm) | | | | Weight (kg) |
|-------------|-----------|-----------------|---------|-----|-------|-------------|
| | | A (RF) | A (RTJ) | B | C | |
| 1/2 | 150 | 197 | - | 89 | 60.3 | 4.3 |
| 1/2 | 300 | 197 | 206 | 96 | 66.7 | 5.0 |
| 1/2 | 600 | 206 | 206 | 96 | 66.7 | 5.2 |
| 1/2 | 900/1500 | 243 | 243 | 121 | 82.5 | 7.9 |
| 1/2 | 2500 | 243 | 243 | 134 | 88.9 | 10.8 |
| 3/4 | 150 | 197 | - | 99 | 69.8 | 4.9 |
| 3/4 | 300 | 197 | 206 | 118 | 82.5 | 6.3 |
| 3/4 | 600 | 206 | 206 | 118 | 82.5 | 6.5 |
| 3/4 | 900/1500 | 243 | 243 | 130 | 88.9 | 9.5 |
| 3/4 | 2500 | 243 | 243 | 140 | 95.2 | 12.0 |
| 1 | 150 | 180 | 189 | 108 | 79.4 | 5.0 |
| 1 | 300 | 186 | 196 | 124 | 88.9 | 6.3 |
| 1 | 600 | 199 | 199 | 124 | 88.9 | 6.5 |
| 1 | 900/1500 | 221 | 221 | 150 | 101.6 | 11.2 |
| 1 | 2500 | 234 | 234 | 159 | 108.0 | 14.3 |
| 1 1/2 | 150 | 186 | 196 | 127 | 98.4 | 6.4 |
| 1 1/2 | 300 | 192 | 202 | 156 | 114.3 | 9.1 |
| 1 1/2 | 600 | 208 | 208 | 156 | 114.3 | 10.1 |
| 1 1/2 | 900/1500 | 227 | 227 | 178 | 123.8 | 16.0 |
| 1 1/2 | 2500 | 253 | 256 | 203 | 146.1 | 27.8 |
| 2 | 150 | 189 | 199 | 153 | 120.6 | 9.9 |
| 2 | 300 | 196 | 208 | 165 | 127.0 | 11.9 |
| 2 | 600 | 215 | 218 | 165 | 127.0 | 13.4 |
| 2 | 900/1500 | 240 | 243 | 216 | 165.1 | 27.2 |
| 2 | 2500 | 265 | 268 | 235 | 171.5 | 40.0 |

Dimensions are for reference only, subject to change.

SAMPLING VALVE

Sampling the process stream can be accomplished with this valve design, where a sampling can be taken even at full system pressure directly from the process line. The product allows double isolations from process for safety.

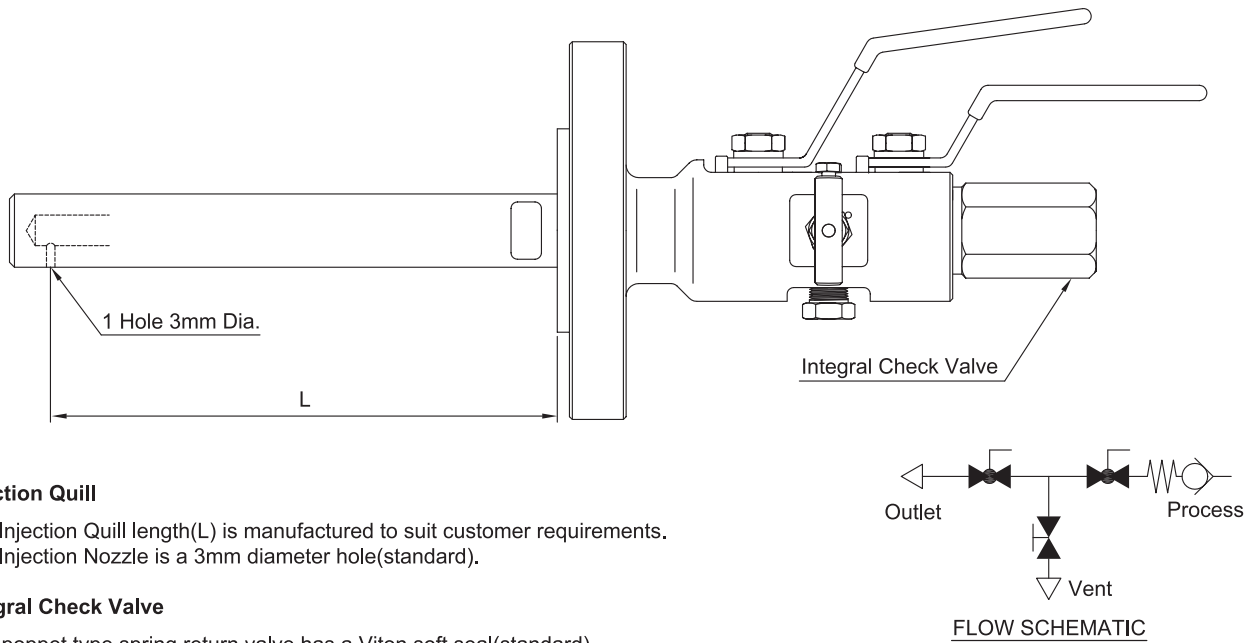


Sampling Probe

The Sampling Probe length(L) is manufactured to suit customer requirements.

CHEMICAL INJECTION VALVE

Injection of chemicals and other media into the process stream can be accomplished with this valve design. The valve inlet houses a one way check valve which opens for injection and goes normally closed to eliminate process fluid outflow.



Injection Quill

The Injection Quill length(L) is manufactured to suit customer requirements. The Injection Nozzle is a 3mm diameter hole(standard).

Integral Check Valve

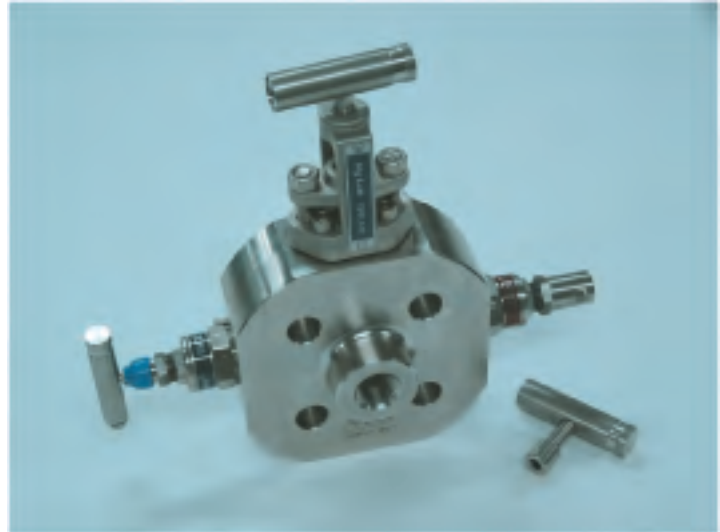
This poppet type spring return valve has a Viton soft seal(standard).

Monoflange Valves

are integrally forged, one-piece double block and bleed assemblies for primary isolation of pressure take-offs, where the valve is directly mounted to the vessel or process pipe. Instruments may be directly mounted to the valve outlet or alternatively remotely with gauge lines/impulse pipe work.

Applications

- Isolation(MF45)
- Block and Bleed(MF55)
- Double Block and Bleed(MF65)
- Pressure Measurement
- Chemical Injection
- Level Measurement
- Sampling
- Flow Measurement



Standard Features

- ANSI B16.5 flanged Inlet connections 1/2" to 2" sizes.
- Class150 rated to Class2500 rated.
- API flanged Inlet connections sizes to 2 1/16".
- 1/2" NPT threaded female outlet to ANSI/ASME B1.20.1.
- 1/2" NPT threaded female vent connection to ANSI/ASME B1.20.1.
- Material thickness to ANSI B16.34.
- Firesafe to API 607, BS6755 Part2.

Standard Pressure Testing

to BS6755 Part1.

Standard Material Traceability

to EN 10204 3.1.B (Body only).

OS&Y Needle Type and Needle Type Globe Valve Packing Materials

Standard valves are offered with Graphite. PTFE is also available as an option.

MN45 SERIES

- Single Block Valve
- Flange x 1/2"NPT
- Isolate : OS&Y or Needle

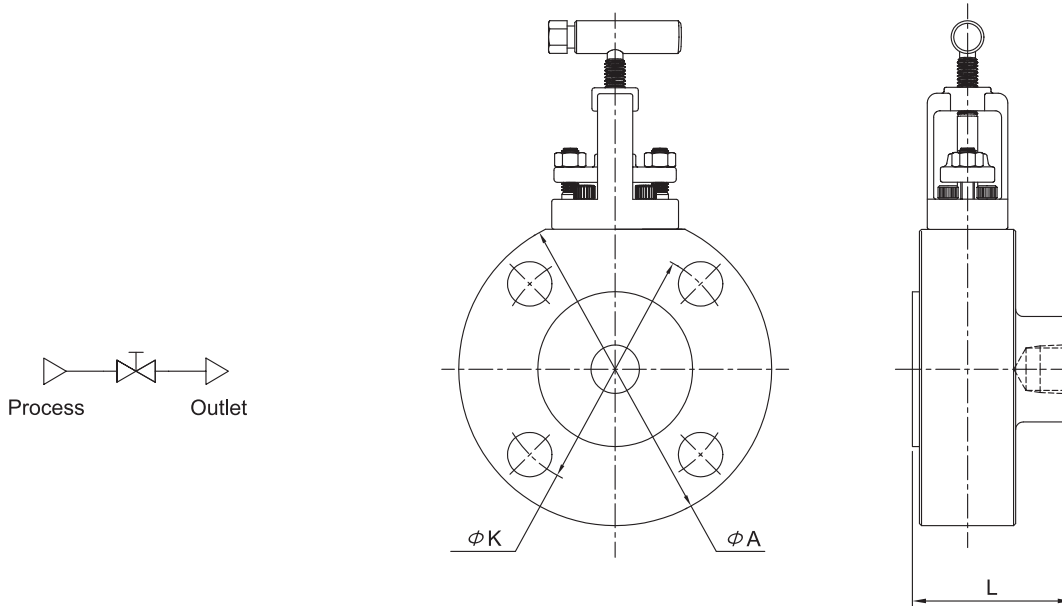
MN55 SERIES

- Single Block & Bleed Valve
- Flange x 1/2"NPT
- Isolate : OS&Y or Needle
- Bleed : OS&Y or Needle

MN65 SERIES

- Double Block & Bleed Valve
- Flange x 1/2"NPT
- Primary : OS&Y or Needle
- Secondary : OS&Y or Needle
- Bleed : OS&Y or Needle

MN45 Series

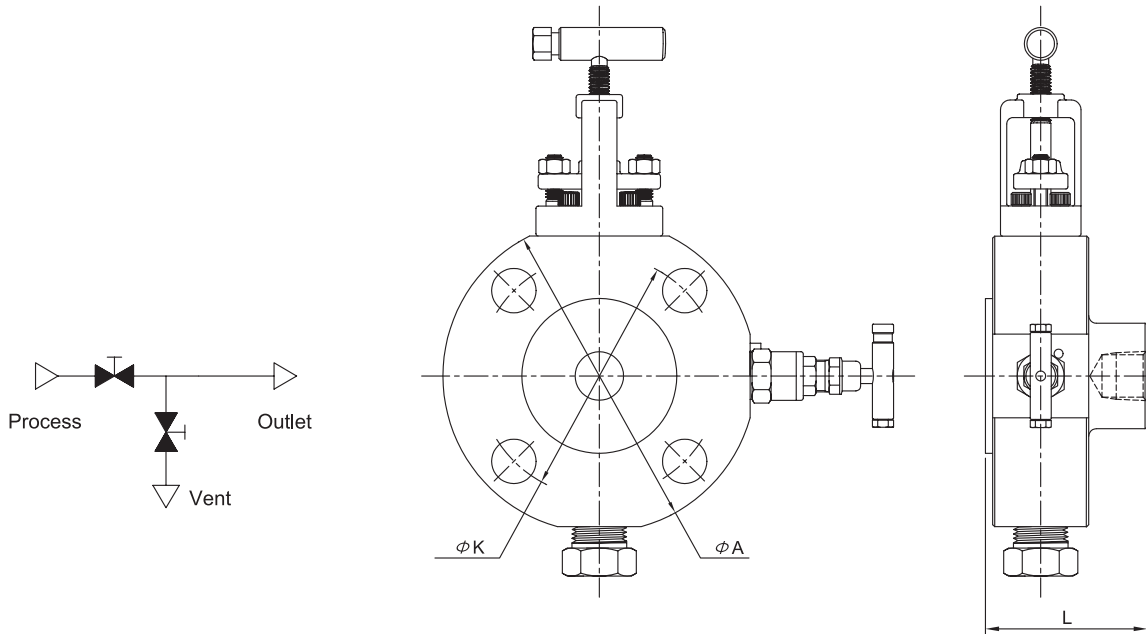


•Dimensions & Weights

| SIZE (inch) | RATING lb | DIMENSIONS (mm) | | | | Weight (kg) |
|----------------|--------------|-----------------|---------|-----|-------|----------------|
| | | L (RF) | L (RTJ) | A | K | |
| 1/2 | 150 | 64 | - | 99 | 60.3 | 2.0 |
| 1/2 | 300 | 64 | 68 | 99 | 66.7 | 2.0 |
| 1/2 | 600 | 68 | 68 | 99 | 66.7 | 2.0 |
| 1/2 | 900/1500 | 68 | 68 | 133 | 82.5 | 3.4 |
| 1/2 | 2500 | 68 | 68 | 133 | 88.9 | 3.4 |
| 3/4 | 150 | 64 | - | 99 | 69.8 | 2.0 |
| 3/4 | 300 | 64 | 68 | 133 | 82.5 | 3.4 |
| 3/4 | 600 | 68 | 68 | 133 | 82.5 | 3.4 |
| 3/4 | 900/1500 | 68 | 68 | 133 | 88.9 | 3.4 |
| 3/4 | 2500 | 73 | 73 | 159 | 95.2 | 5.5 |
| 1 | 150 | 64 | 68 | 133 | 79.4 | 2.4 |
| 1 | 300 | 64 | 68 | 133 | 88.9 | 3.4 |
| 1 | 600 | 68 | 68 | 133 | 88.9 | 3.4 |
| 1 | 900/1500 | 73 | 73 | 159 | 101.6 | 5.5 |
| 1 | 2500 | 73 | 73 | 159 | 108.0 | 5.5 |
| 1 1/2 | 150 | 64 | 68 | 127 | 98.4 | 3.2 |
| 1 1/2 | 300 | 69 | 69 | 159 | 114.3 | 5.5 |
| 1 1/2 | 600 | 73 | 73 | 159 | 114.3 | 5.5 |
| 1 1/2 | 900/1500 | 73 | 73 | 178 | 123.8 | 7.8 |
| 1 1/2 | 2500 | 82 | 84 | 235 | 146.1 | 11.4 |
| 2 | 150 | 69 | 73 | 159 | 120.6 | 5.5 |
| 2 | 300 | 69 | 75 | 178 | 127.0 | 7.8 |
| 2 | 600 | 73 | 75 | 178 | 127.0 | 7.8 |
| 2 | 900/1500 | 82 | 84 | 235 | 165.1 | 11.4 |

Dimensions are for reference only, subject to change.

MN55 Series

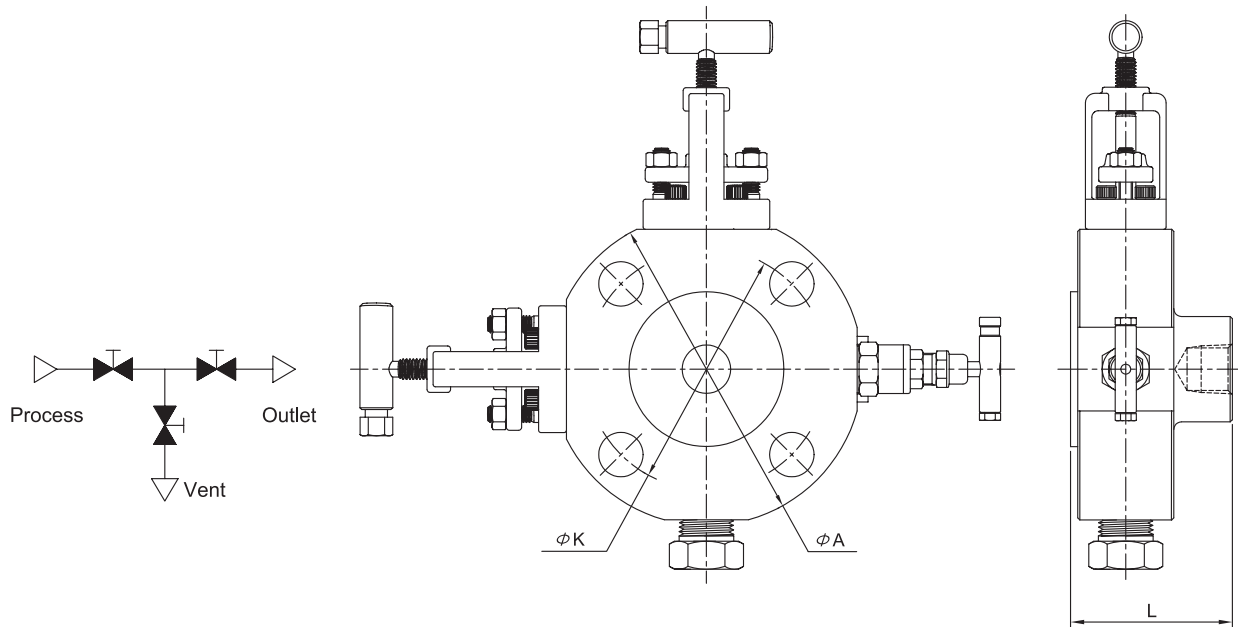


•Dimensions & Weights

| SIZE (inch) | RATING lb | DIMENSIONS (mm) | | | | Weight (kg) |
|----------------|--------------|-----------------|---------|-----|-------|----------------|
| | | L (RF) | L (RTJ) | A | K | |
| 1/2 | 150 | 64 | - | 99 | 60.3 | 2.0 |
| 1/2 | 300 | 64 | 68 | 99 | 66.7 | 2.0 |
| 1/2 | 600 | 68 | 68 | 99 | 66.7 | 2.0 |
| 1/2 | 900/1500 | 68 | 68 | 133 | 82.5 | 3.4 |
| 1/2 | 2500 | 68 | 68 | 133 | 88.9 | 3.4 |
| 3/4 | 150 | 64 | - | 99 | 69.8 | 2.0 |
| 3/4 | 300 | 64 | 68 | 133 | 82.5 | 3.4 |
| 3/4 | 600 | 68 | 68 | 133 | 82.5 | 3.4 |
| 3/4 | 900/1500 | 68 | 68 | 133 | 88.9 | 3.4 |
| 3/4 | 2500 | 73 | 73 | 159 | 95.2 | 5.5 |
| 1 | 150 | 64 | 68 | 133 | 79.4 | 2.4 |
| 1 | 300 | 64 | 68 | 133 | 88.9 | 3.4 |
| 1 | 600 | 68 | 68 | 133 | 88.9 | 3.4 |
| 1 | 900/1500 | 73 | 73 | 159 | 101.6 | 5.5 |
| 1 | 2500 | 73 | 73 | 159 | 108.0 | 5.5 |
| 1 1/2 | 150 | 64 | 68 | 127 | 98.4 | 3.2 |
| 1 1/2 | 300 | 69 | 69 | 159 | 114.3 | 5.5 |
| 1 1/2 | 600 | 73 | 73 | 159 | 114.3 | 5.5 |
| 1 1/2 | 900/1500 | 73 | 73 | 178 | 123.8 | 7.8 |
| 1 1/2 | 2500 | 82 | 84 | 235 | 146.1 | 11.4 |
| 2 | 150 | 69 | 73 | 159 | 120.6 | 5.5 |
| 2 | 300 | 69 | 75 | 178 | 127.0 | 7.8 |
| 2 | 600 | 73 | 75 | 178 | 127.0 | 7.8 |
| 2 | 900/1500 | 82 | 84 | 235 | 165.1 | 11.4 |

Dimensions are for reference only, subject to change.

MN65 Series



•Dimensions & Weights

| SIZE (inch) | RATING lb | DIMENSIONS (mm) | | | | Weight (kg) |
|----------------|--------------|-----------------|---------|-----|-------|----------------|
| | | L (RF) | L (RTJ) | A | K | |
| 1/2 | 150 | 64 | - | 99 | 60.3 | 2.0 |
| 1/2 | 300 | 64 | 68 | 99 | 66.7 | 2.0 |
| 1/2 | 600 | 68 | 68 | 99 | 66.7 | 2.0 |
| 1/2 | 900/1500 | 68 | 68 | 133 | 82.5 | 3.4 |
| 1/2 | 2500 | 68 | 68 | 133 | 88.9 | 3.4 |
| 3/4 | 150 | 64 | - | 99 | 69.8 | 2.0 |
| 3/4 | 300 | 64 | 68 | 133 | 82.5 | 3.4 |
| 3/4 | 600 | 68 | 68 | 133 | 82.5 | 3.4 |
| 3/4 | 900/1500 | 68 | 68 | 133 | 88.9 | 3.4 |
| 3/4 | 2500 | 73 | 73 | 159 | 95.2 | 5.5 |
| 1 | 150 | 64 | 68 | 133 | 79.4 | 2.4 |
| 1 | 300 | 64 | 68 | 133 | 88.9 | 3.4 |
| 1 | 600 | 68 | 68 | 133 | 88.9 | 3.4 |
| 1 | 900/1500 | 73 | 73 | 159 | 101.6 | 5.5 |
| 1 | 2500 | 73 | 73 | 159 | 108.0 | 5.5 |
| 1 1/2 | 150 | 64 | 68 | 127 | 98.4 | 3.2 |
| 1 1/2 | 300 | 69 | 69 | 159 | 114.3 | 5.5 |
| 1 1/2 | 600 | 73 | 73 | 159 | 114.3 | 5.5 |
| 1 1/2 | 900/1500 | 73 | 73 | 178 | 123.8 | 7.8 |
| 1 1/2 | 2500 | 82 | 84 | 235 | 146.1 | 11.4 |
| 2 | 150 | 69 | 73 | 159 | 120.6 | 5.5 |
| 2 | 300 | 69 | 75 | 178 | 127.0 | 7.8 |
| 2 | 600 | 73 | 75 | 178 | 127.0 | 7.8 |
| 2 | 900/1500 | 82 | 84 | 235 | 165.1 | 11.4 |

Dimensions are for reference only, subject to change.

Root Valves are integrally forged, one-piece double block and bleed assemblies for primary isolation of pressure take-offs, where the valve is directly mounted to the vessel or process pipe. Instruments may be directly mounted to the valve outlet or alternatively remotely with gauge lines/impulse pipe work.

Applications

- Isolation(RV4 Series)
- Block and Bleed(RV5 Series)
- Double Block and Bleed(RV6 Series)
- Pressure Measurement
- Flow Measurement

Standard Features

- Weld inlet connections 1/2" to 2" sizes
- Class150 rated to Class2500 rated.
- 1/2" NPT threaded female outlet to ANSI/ASME B1.20.1.
- 1/2" NPT threaded female vent connection to ANSI/ASME B1.20.1.
- Material thickness to ANSI B16.34.
- Firesafe to API 607, BS6755 Part2.



Standard Pressure Testing

to BS6755 Part1.

Standard Material Traceability

to EN 10204 3.1.B (Body only).

Ball Isolation Valve Seat Material

A choice of PVDF, PTFE(virgin or filled), PCTFE and PEEK are available.

OS&Y Needle Type and Needle Type Globe Valve Packing Materials

Standard valves are offered with Graphite. PTFE is also available as an option.

Options

Options requirement are the same as the Modular and Monoflange range.

RV40 SERIES

Single Block Valve
Plain End x 1/2"NPT
Isolate : Ball

RV45 SERIES

Single Block Valve
Plain End x 1/2"NPT
Isolate : OS&Y or Needle

RV50 SERIES

Single Block & Bleed Valve
Plain End x 1/2"NPT
Primary : Ball
Bleed : OS&Y or Needle

RV55 SERIES

Single Block & Bleed Valve
Plain End x 1/2"NPT
Primary : OS&Y or Needle
Bleed : OS&Y or Needle

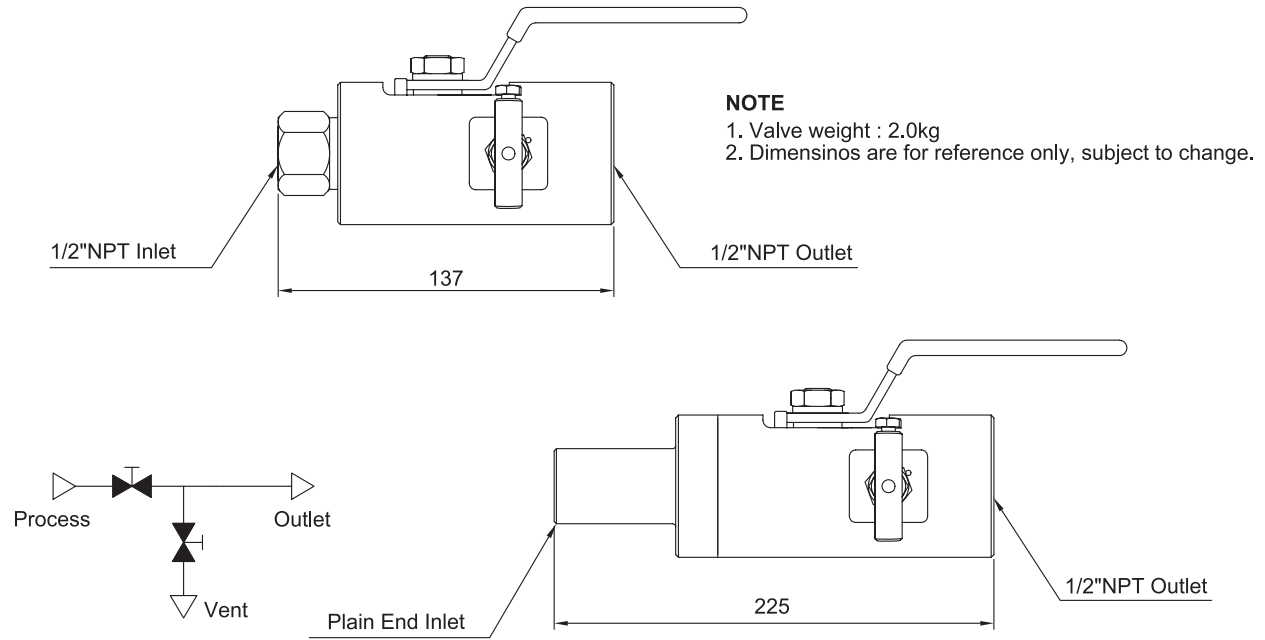
RV60 SERIES

Double Block & Bleed Valve
Plain End x 1/2"NPT
Primary : Ball
Secondary : Ball
Bleed : OS&Y or Needle

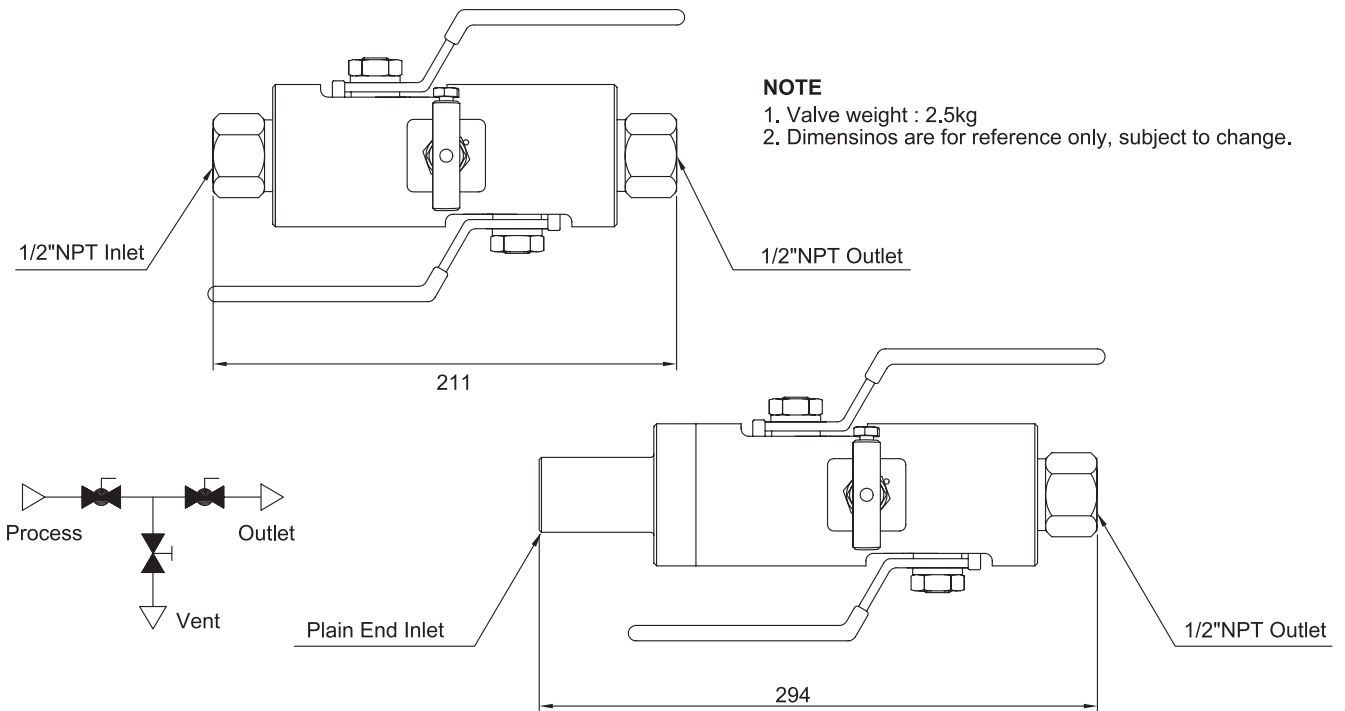
RV65 SERIES

Double Block & Bleed Valve
Plain End x 1/2"NPT
Primary : OS&Y
Secondary : OS&Y or Needle
Bleed : OS&Y or Needle

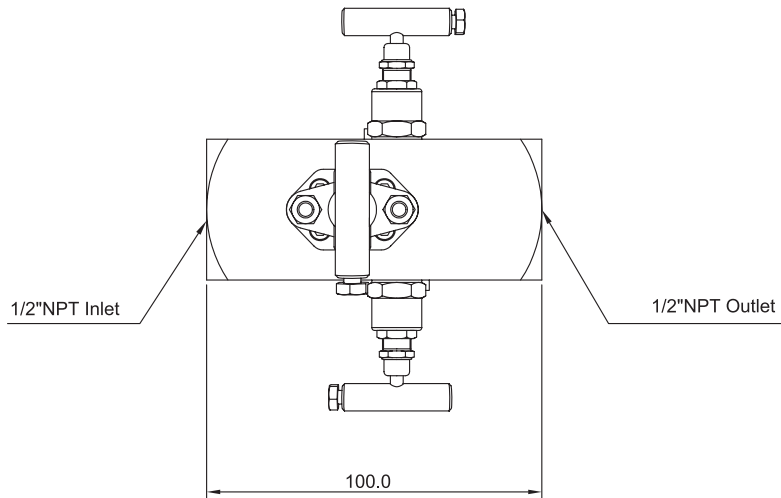
RV40 / RV45 / RV50 Series



RV60 Series

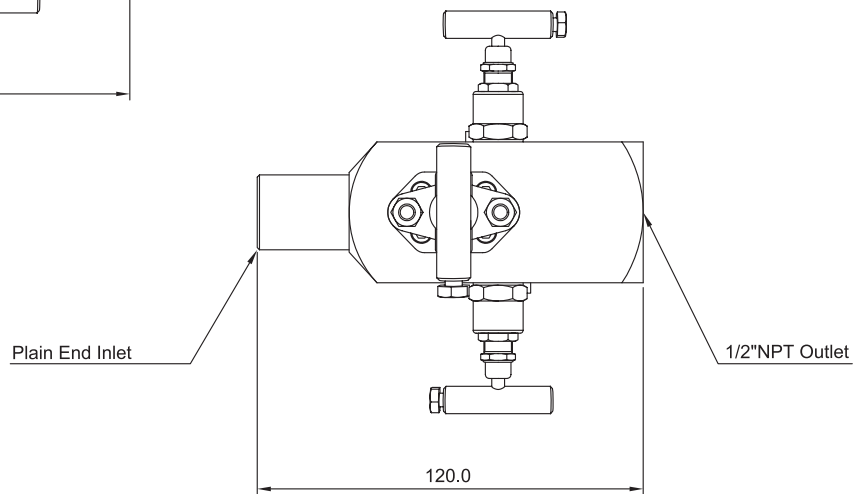
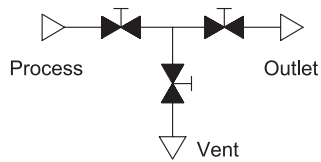


RV55 / RV65 Series

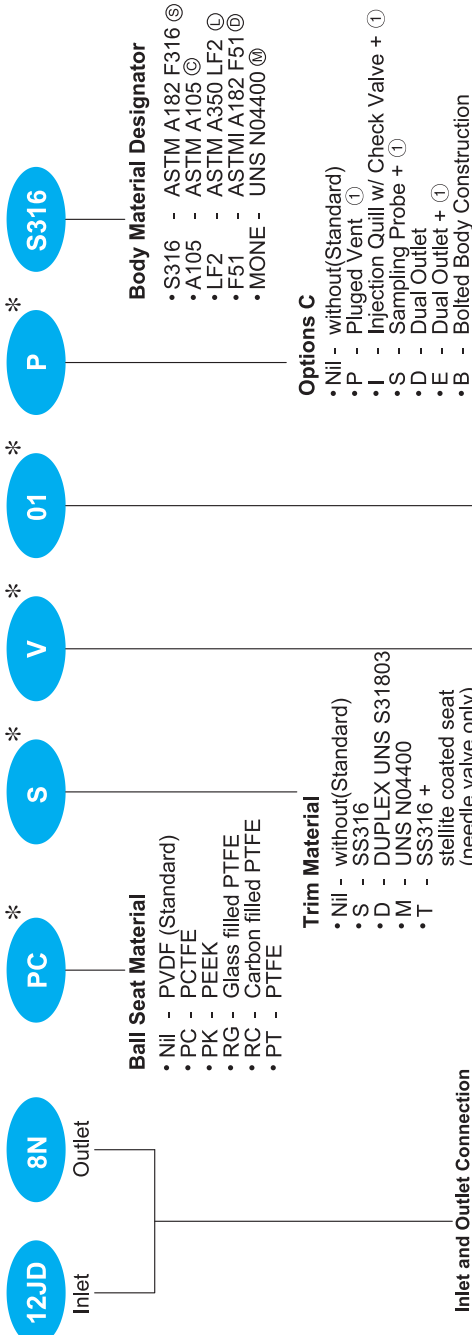


NOTE

- 1. Valve weight : 1.7kg
- 2. Dimensinos are for reference only, subject to change.



ORDERING INFORMATION



Valve Series

| MODULAR - Single Block & Bleed | | | |
|--------------------------------|--------|--------|--------|
| Series I.D. | Block | Block | Bleed |
| SBA | Ball | Needle | - |
| SBE | Ball | OS & Y | - |
| SB50 | Ball | OS & Y | - |
| SB60 | Ball | OS & Y | - |
| SBG | Ball | OS & Y | - |
| Full Bore, Dual Flange | | | |
| SBB | OS & Y | OS & Y | - |
| SBC | OS & Y | Needle | - |
| SB65 | SBD | Needle | Needle |

| MODULAR - Double Block & Bleed | | | |
|--------------------------------|--------|--------|--------|
| Series I.D. | Block | Block | Bleed |
| DBA | Ball | Ball | Needle |
| DBE | Ball | Ball | OS & Y |
| DBG | Ball | Ball | OS & Y |
| Full Bore, Dual Flange | | | |
| DBH | Ball | Ball | - |
| DB60 | DBI | Ball | Needle |
| DBJ | Ball | Ball | Ball |
| DBK | Ball | Needle | Needle |
| DBL | Ball | Needle | Needle |
| DBB | OS & Y | OS & Y | OS & Y |
| DB55 | DBC | OS & Y | OS & Y |
| DB65 | DBD | Needle | Needle |
| DBF | OS & Y | Needle | Needle |

MONOFLANGE VALVE

| Series I.D. | Block | Block | Bleed |
|-------------|-------|--------|--------|
| MN45 | MNA | OS & Y | - |
| MN55 | MNB | Needle | - |
| MN65 | MNC | OS & Y | - |
| MN75 | MND | Needle | - |
| MN85 | MNE | OS & Y | Needle |
| MN95 | MNF | Needle | Needle |

ROOT VALVE

| Series I.D. | Block | Block | Bleed |
|-------------|-------|--------|--------|
| RV40 | MNA | Ball | - |
| RV45 | MNB | OS & Y | - |
| RV50 | MNC | Ball | - |
| RV55 | MND | OS & Y | - |
| RV60 | MNE | Ball | Needle |
| RV65 | MNF | OS & Y | Needle |

Ball Seat Material

- Nil - PVDF (Standard)
- PC - PCTFE
- PK - PEEK
- RG - Glass filled PTFE
- RC - Carbon filled PTFE
- PT - PTFE

Trim Material

- Nil - without(Standard)
- S - SS316
- D - DUPLEX UNS S31803
- M - UNS N04400
- T - SS316 + stellite coated seat (needle valve only)

Inlet and Outlet Connection

| Size | Flange Identifier | Description | Class Identifier | Type Identifier |
|-------|-------------------|----------------------------|------------------|-----------------|
| 1/4 | -4 | Spiral Finish Raised Faced | R | 150 A |
| 3/8 | -6 | Smooth Finish Raised Faced | S | 300 B |
| 1/2 | -8 | Stock Finish Raised Faced | F | 600 C |
| 3/4 | -12 | Ring Type Joint | J | 900 D |
| 1 | -16 | Stock Finish Flate Faced | L | 1500 E |
| 1 1/2 | -24 | | | 2500 F |
| 2 | -32 | | | |
| 3 | -48 | | | |

Options B

- Nil - without(Standard)
- 01 - NACE MR-01-75
- 02 - Anti Tamper on vent
- 03 - PTFE Packing
- 04 - 1/4"NPT Bleed Port
- 05 - 1 + 2
- 06 - 1 + 3
- 07 - 1 + 4
- 08 - 1 + 2 + 3
- 09 - 1 + 2 + 4
- 10 - 1 + 2 + 3 + 4
- 11 - 2 + 3
- 12 - 2 + 4
- 13 - 2 + 3 + 4
- 14 - 3 + 4

Options C

- Nil - without(Standard)
- P - Plugged Vent
- I - Injection Quill w/ Check Valve + 1
- S - Sampling Probe + 1
- D - Dual Outlet
- E - Dual Outlet + 1
- B - Bolted Body Construction
- C - Bolted Body Construction + 1
- Z - Special Requirements

Options A

Stem and End connector O-ring

- Nil - without(Standard)
- V - Viton
- I - AFLAS
- E - Elastolion

Standard Construction

Trim Construction
 C, L and S Body : S Trim
 D Body : D Trim
 M Body : M Trim

Ball Valve : Firesafe, Anti-Static, Locking-device
 Packing : Graphite

Bore size :
 Ball : 10mm, Needle : 5mm
 but DBE, SBE - Ball : 14mm, Needle : 5mm
 but DBG, SBG - Ball : Full bore, Needle : 5mm
 but DBK, DBL - Ball : 10mm, Needle : 10mm

* Note : No designator is required for standard items, e.g. DBA-12JD8N-S316(Double Block & Bleed valve)
 Inlet - 3/4" RTJ Class600 (ANSI/ASME B16.5)
 Outlet - 1/2" Female NPT
 Vent : 1/2" Female NPT