

Features

- Fire safe approved (API 607)
- Fugitive Emission approved (API 641)
- Pipeline use approved (API 608)
- Fugitive Emission Stem Seal approved (API 622)
- RTFE (reinforced Teflon) ball seats
- Braided graphite stem seals
- Valve tested per API598
- Rack and pinion quarter turn (90°) rotation
- Spring Return or Double Acting Actuators
- Type IP67 weatherproof actuator
- Variable open/close stroke setting
- ATEX approved

Applications

Pneumatic/manual actuated stainless steel ball valves with braided graphite seals are typically used for on-off control of water, air, oil, vacuum and other media compatible with the materials of construction. Also for use in pipeline, firesafe and low-emission applications. The de-clutch option can be used for manual operation or to set a stop limit for opening or closing. Cycle times approx. 1 to 5 seconds per 90° rotation. Suitable for vacuum service to 29.92 InHg (2.3 x 10⁻³ Torr).

*Not suitable for potable water, oxygen or high purity fluid applications.

Operation

Double acting actuators require air pressure to open and air pressure to close. Spring return actuators require air pressure to open and utilize springs to close for failsafe operation. Pulling the handwheel détente pin allows manual operation of the valve via the handwheel. Re-engaging the détente pin mid-stroke creates a partial stroke position, ie the automatic stroke begins/ends at the locked handwheel position. Rotating the handwheel counterclockwise rotates the output drive counter-clockwise when viewed from the top.

Pilot Air should be filtered, dry or lubricated.

Construction

Valve Body	316SS ASTM A351, CF8M
Ball/Stem	316SS CF8M
Ball Seats	RTFE (reinforced Teflon)
Stem Seals	Braided Graphite (Slade 3300i), Viton
Actuator Seals	NBR (Buna-N)
Actuator Body	Extruded aluminium- 35 micron anodizing, 40 micron polyester coated end covers
Position Indicator	Glass filled Polyamide
Fasteners	Stainless Steel



Description

Dual certified (low emission/fire safe) investment cast 2-piece full port stainless steel body/ball for unrestricted flow and minimum pressure loss. Heavy duty pneumatic/manual combination actuator features hard anodized aluminum enclosure, type IP67. Actuators are available in double acting and spring return models. Adjustable live loaded stem seal packing helps compensate for wear, pressure or temperature fluctuations, extending the cycle life of the valve. Blow-out proof stem. Standard Namur mounting pads for optional accessory confirmation switches, pilot valves and valve positioners. Rotation adjustment +5° at the 0° and 90° positions. The integral handwheel is used for manual operation and setting a limit stop.

Approvals- Actuators

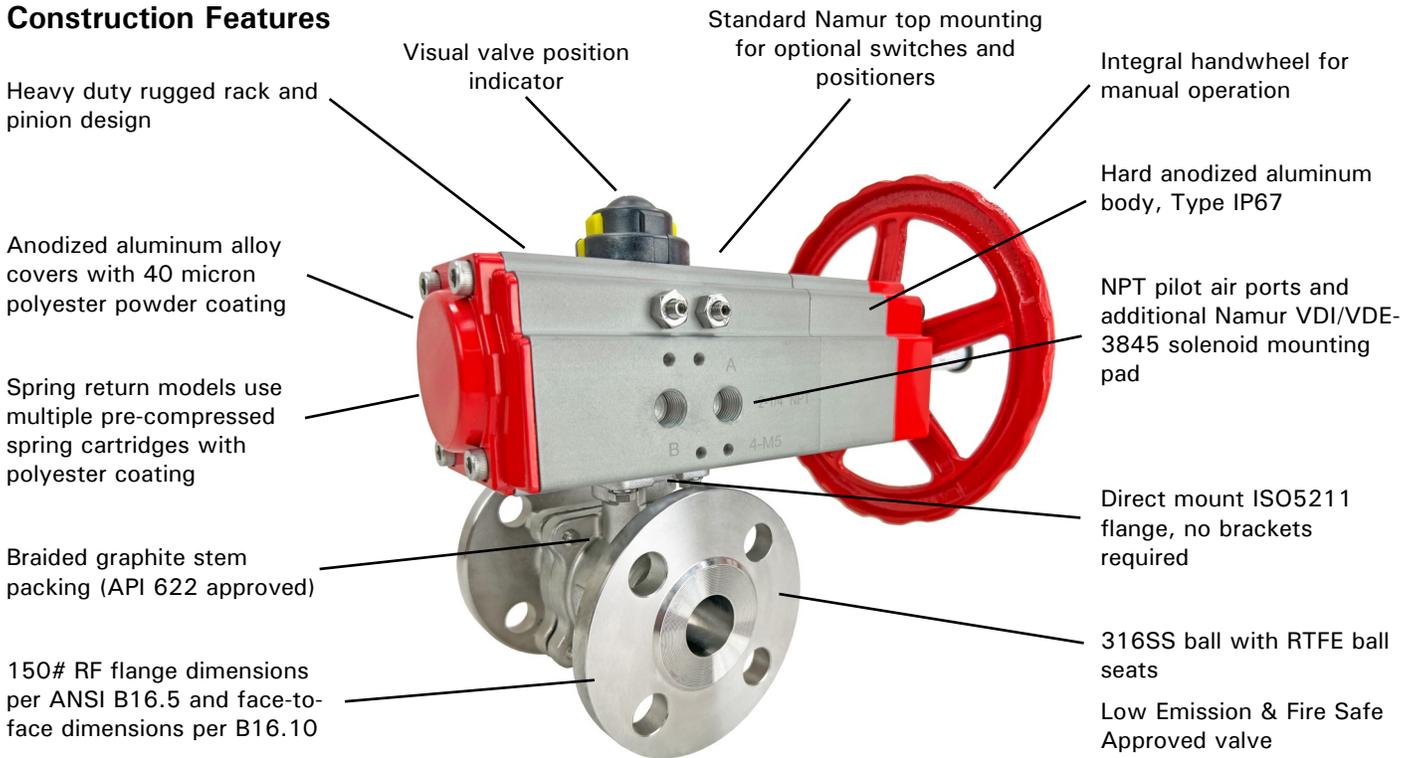
- CE Declaration of conformity
- EN ISO 12100:2010
- EN ISO 4414:2010
- ISO5211/ DIN3337 valve mounting
- Namur VDI/VDE 3845 accessory mounting
- ATEX- Ex II 2 G Ex h IIC T6 Gb; Ex II 2 D Ex H IIIB T85°C Db
- SIL3 per IEC 61508:2010



Standards- Valves

- Fire Safe: API 607(VI)/ISO10497(III)
- Fugitive Emission: API 641 (I)
- Pipeline Use: API 608
- Stem Packing: API 622
- Construction: ASME B16:34
- End Connection: ANSI Class 150 Flange RF
- Face to Face: ANSI B16.10 Class 150
- Flange Dimensions: ANSI B16.5 Class 150
- Pressure Testing: API 598, EN12266
- Direct Mounting Pad: ISO5211, square stem
- CE Declaration of conformity: PED 2014/68/UE

Construction Features



*Inline option shown below-
A5317/A5318 Accessory



International standard ISO5211
valve mounting



Pressure Rating

Pressure Rating: 275 PSI (19 Bar),
Vacuum 29.92 InHg (2.3 x 10⁻³ Torr)

*See P/T chart

Pilot Air Pressure– Double Acting: 43-120 PSI (3-8 Bar)

Pilot Air Pressure– Spring Return: 87-120 PSI (6-8 Bar)

Temperature Rating

Ball Valve Temperature Rating: -4 to 392° F (-20 to 200° C)

Actuator Temperature Rating: -4 to 176° F (-20 to 80° C)

*See P/T chart

Optional Accessories

- DMS: Direct Mount Solenoid
- pilot to electrically operate the ball valve
- VPS: Valve Position Switches
- limit switches to confirm valve position
- PVP: Pneumatic Valve Positioner
- position the ball with 4-20mA
- HTB: High Temperature Bracket
- increases media working temperature
- Lock out/Tag out device

Specifications (English units)

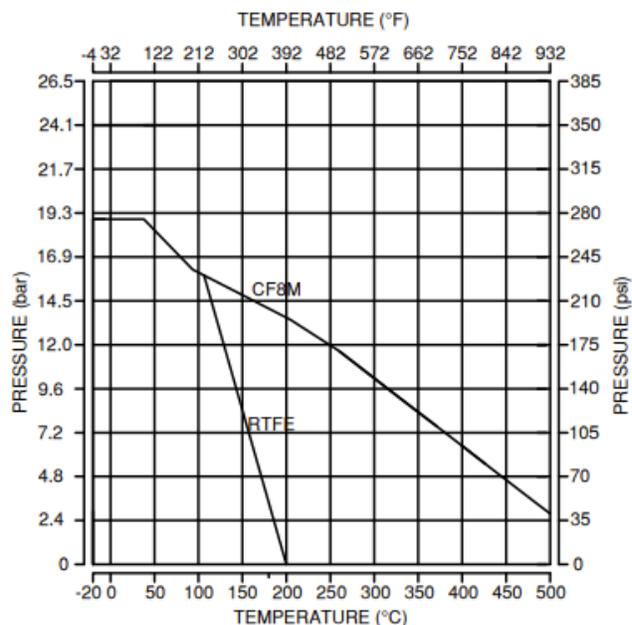
Stock Number	Pipe Size (inch)	Orifice Size (inch)	Cv Flow Factor	Pressure Max.(PSI)*	Air Volume/90° (cubic inches)	Cycle Time /90° (open-close)	Pilot Air Port (NPT)
STAINLESS FLANGE VALVE WITH PNEUMATIC/ MANUAL SPRING RETURN ACTUATOR							
531808	1	1.0	60	275	42.7	1-1	1/4
531812	1-1/2	1.5	125	275	54.9	2-1	1/4
531816	2	2.0	240	275	91.5	3-1	1/4
531824	3	3.2	580	275	201.4	4-1	1/4
531832	4	4.0	1020	275	341.7	5-1	1/4
STAINLESS FLANGE VALVE WITH PNEUMATIC/ MANUAL DOUBLE ACTING ACTUATOR							
531708	1	1.0	60	275	24.4	1-1	1/4
531712	1-1/2	1.5	125	275	24.4	1-1	1/4
531716	2	2.0	240	275	42.7	1-1	1/4
531724	3	3.2	580	275	91.5	1-1	1/4
531732	4	4.0	1020	275	201.4	2-2	1/4

Cv is the GPM of water at 60° F that will pass through the valve with 1 PSI pressure drop

* Pressure @ 100° F (see P/T chart)

Pressure/Temperature Chart

P/T Chart (PSI/°F)					
PSI	275	275	210	125	0
°F	-4	100	248	302	392



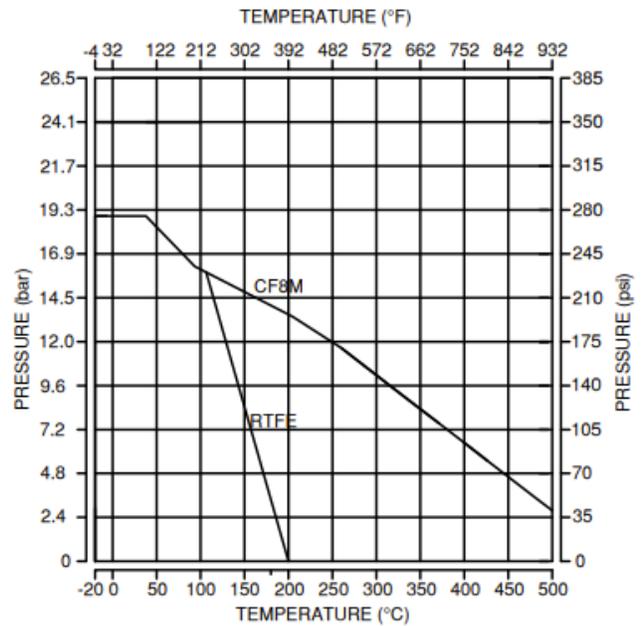
Specifications (Metric units)

Stock Number	Pipe Size (inch)	Orifice Size (mm)	Kv Flow Factor	Pressure Max.(Bar)*	Air Volume/90° (standard liters)	Cycle Time /90° (open-close)	Pilot Air Port (NPT)
STAINLESS FLANGE VALVE WITH PNEUMATIC/ MANUAL SPRING RETURN ACTUATOR							
531808	1	25	52	19	0.7	1-1	1/4
531812	1-1/2	38	108	19	0.9	2-1	1/4
531816	2	50	207	19	1.5	3-1	1/4
531824	3	80	501	19	3.3	4-1	1/4
531832	4	98	882	19	5.6	5-1	1/4
STAINLESS FLANGE VALVE WITH PNEUMATIC/ MANUAL DOUBLE ACTING ACTUATOR							
531708	1	25	52	19	0.4	1-1	1/4
531712	1-1/2	38	108	19	0.4	1-1	1/4
531716	2	50	207	19	0.7	1-1	1/4
531724	3	80	501	19	1.5	1-1	1/4
531732	4	98	882	19	3.3	2-2	1/4

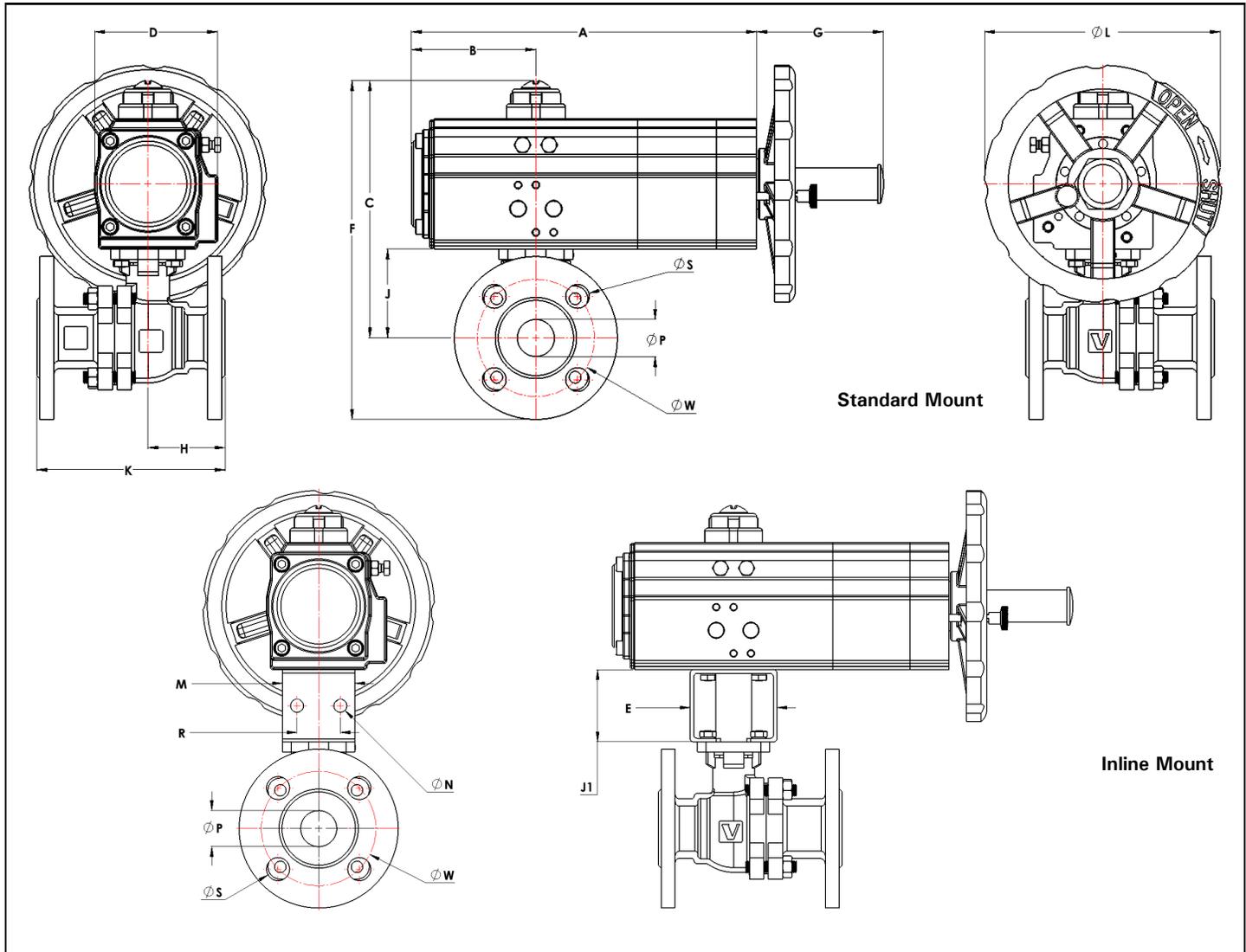
* Pressure @ -18 to 38° C (see P/T chart)

Pressure/Temperature Chart

P/T Chart (BAR/°C)					
Bar	19	19	14.5	8.4	0
°C	-20	38	120	150	200

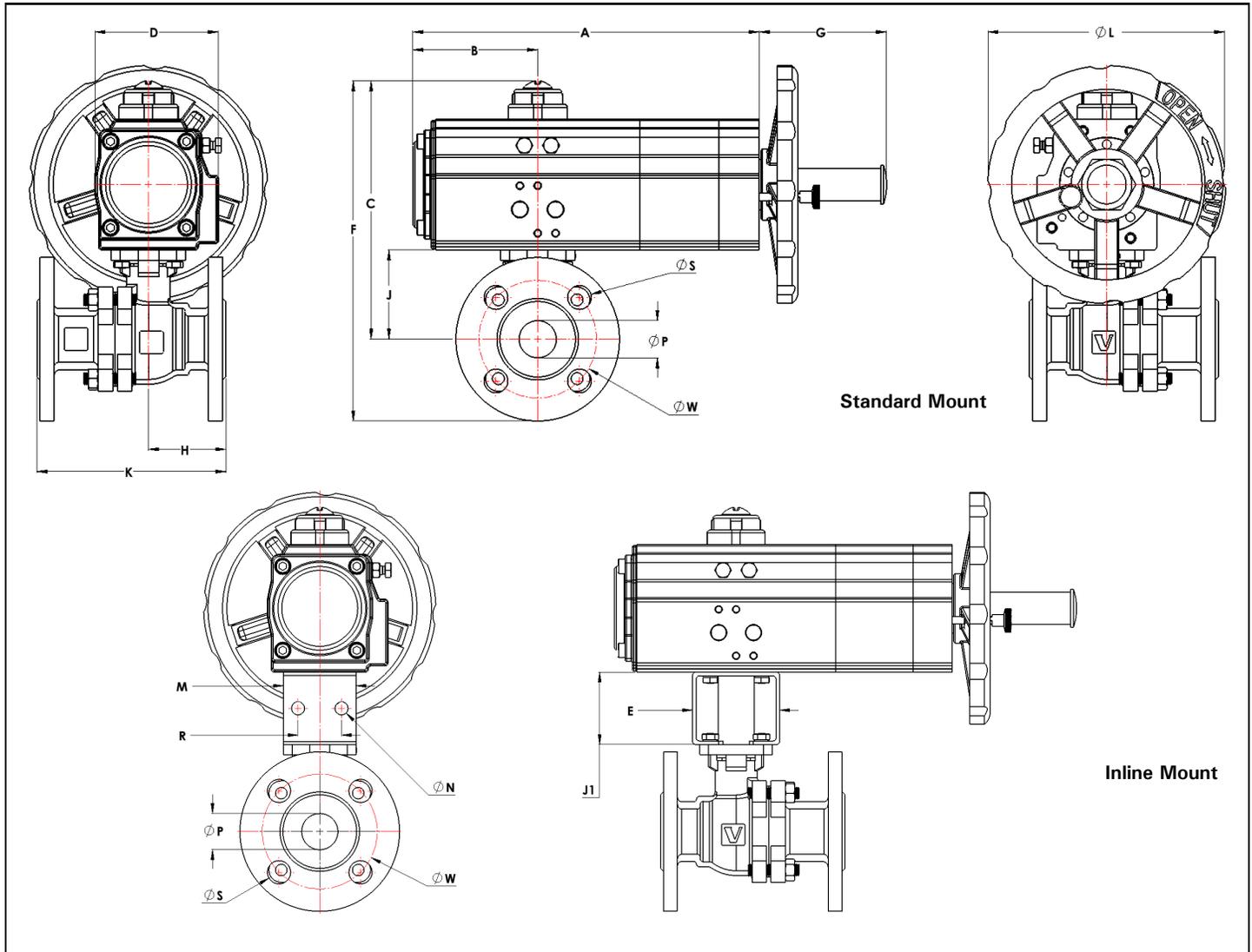


Dimensions: Spring Return



Pipe Size		A	B	C	D	E	F	G	H	J	J1	K	L	M	N	P	R	S	W	Ports (NPT)	Weight
1	inch	9.6	3.6	6.4	3.1	2.4	9.2	3.5	3.0	2.4	2.0	5.0	7.1	2.0	0.3	1.0	1.2	4) 0.6	3.1	1/4	18.3 lb
	mm	244.0	91.4	162.6	80.0	60.0	233.7	89.0	75.0	60.0	50.0	127.0	180.0	50.0	9.0	25.0	30.0	4) 16.0	79.4	-	8.3 kg
1-1/2	inch	10.7	4.2	8.2	3.6	3.1	10.9	4.0	3.6	3.1	2.0	6.5	7.7	2.8	0.3	1.5	1.4	4) 0.6	3.9	1/4	27.0 lb
	mm	272.0	106.7	208.3	92.0	80.0	276.9	101.0	92.0	78.0	50.0	165.0	195.0	70.0	9.0	38.0	35.0	4) 16.0	98.4	-	12.3 kg
2	inch	13.4	5.2	8.8	3.9	3.1	11.8	4.3	3.8	3.4	2.0	7.0	9.8	2.8	0.3	2.0	1.4	4) 0.6	4.8	1/4	41.9 lb
	mm	341.0	132.1	223.5	98.0	80.0	299.7	109.0	96.2	87.0	50.0	178.0	250.0	70.0	9.0	50.0	35.0	4) 16.0	120.7	-	19.0 kg
3	inch	15.8	5.9	11.5	5.0	4.7	15.2	5.2	4.0	4.6	2.0	8.0	15.7	4.0	0.4	3.1	2.0	4) 0.8	6.0	1/4	84.4 lb
	mm	402.0	149.9	292.1	128.0	120.0	386.1	133.0	102.0	116.0	50.0	203.0	400.0	102.0	11.0	78.0	50.0	4) 19.0	152.4	-	38.4 kg
4	inch	20.1	7.8	13.3	5.4	4.7	17.8	6.3	4.5	5.5	2.0	9.0	19.7	4.0	0.4	3.9	2.0	8) 0.8	7.5	1/4	130.5 lb
	mm	511.0	198.1	337.8	138.0	120.0	452.1	161.0	115.0	140.0	50.0	229.0	500.0	102.0	11.0	100.0	50.0	8) 19.0	190.5	-	59.3 kg

Dimensions: Double Acting



Pipe Size		A	B	C	D	E	F	G	H	J	J1	K	L	M	N	P	R	S	W	Ports (NPT)	Weight
1	inch	9.2	3.3	6.7	2.8	2.4	8.8	3.3	3.0	2.4	2.0	5.0	7.7	2.0	0.3	1.0	1.2	4) 0.6	3.1	1/4	16.7 lb
	mm	233.0	83.8	170.2	72.0	60.0	223.5	83.8	75.0	60.0	50.0	127.0	195.0	50.0	9.0	25.0	30.0	4) 16.0	79.4	-	7.6 kg
1-1/2	inch	9.2	3.3	7.4	2.8	3.1	9.8	3.3	3.6	3.1	2.0	6.5	7.7	2.8	0.3	1.5	1.4	4) 0.6	3.9	1/4	22.8 lb
	mm	233.0	83.8	188.0	72.0	80.0	248.9	83.8	92.0	78.0	50.0	165.0	195.0	70.0	9.0	38.0	35.0	4) 16.0	98.4	-	10.4 kg
2	inch	9.6	3.6	8.1	3.1	3.1	11.1	3.5	3.8	3.4	2.0	7.0	7.1	2.8	0.3	2.0	1.4	4) 0.6	4.8	1/4	30.4 lb
	mm	244.0	91.4	205.7	80.0	80.0	281.9	88.9	96.2	87.0	50.0	178.0	180.0	70.0	9.0	50.0	35.0	4) 16.0	120.7	-	13.8 kg
3	inch	13.4	5.2	10.0	3.9	4.7	13.7	4.3	4.0	4.6	2.0	8.0	9.8	4.0	0.4	3.1	2.0	4) 0.8	6.0	1/4	60.1 lb
	mm	341.0	132.1	254.0	98.0	120.0	348.0	109.2	102.0	116.0	50.0	203.0	250.0	102.0	11.0	78.0	50.0	4) 19.0	152.4	-	27.3 kg
4	inch	15.8	5.9	12.4	5.0	4.7	16.9	5.2	4.5	5.5	2.0	9.0	15.7	4.0	0.4	3.9	2.0	8) 0.8	7.5	1/4	88.9 lb
	mm	402.0	149.9	315.0	128.0	120.0	429.3	132.1	115.0	140.0	50.0	229.0	400.0	102.0	11.0	100.0	50.0	8) 19.0	190.5	-	40.4 kg