

### Features

- 316 stainless steel body, ball & stem
- Full port design for unrestricted flow
- Swing-out center section
- RTFE (reinforced Teflon) ball seats
- Triple PTFE/Viton live loaded stem seals, adjustable
- Valves tested accordance with API 598/ EN12266-1
- Spring Return or Double Acting Actuators
- Type IP66 & IP68 weatherproof actuator
- Rugged scotch yoke construction tested for 1 million+ cycles
- Anodized aluminum body with epoxy-polyester end covers
- Namur and ISO mounting standards
- Highly visible valve position indicator
- Actuator factory lubricated for normal lifetime

### Applications

On-off control of water, air, oil, and other media compatible with the materials of construction. Cycle times 1 to 2 seconds per 90° rotation. Steam service up to 25 PSI with optional high temperature mounting bracket. Suitable for vacuum service to 29.92 InHg (2.3 x 10<sup>-3</sup> Torr).

### Operation

Double acting scotch yoke actuators use air pressure to open and air pressure to close the ball valve (4-way pilot). Spring return scotch yoke actuators use air pressure to open and springs to close the ball valve (3-way pilot). Actuator will work with filtered dry or lubricated compressed air. Recommended air supply pilot pressure should be between 58 and 87 PSI. Easy to read visual valve position indicator located on top of actuator.

### Construction

<b>Valve Body</b>	316 Stainless Steel ASTM A351 CF8M
<b>Ball/Stem</b>	316 Stainless Steel
<b>Ball Seats</b>	RTFE (reinforced Teflon)
<b>Stem Seals</b>	PTFE/ Viton
<b>Anti-Static Device</b>	Ball to Stem (1/4" - 3") + Stem to Body (1-1/2" - 3")
<b>Actuator Seals</b>	NBR
<b>Actuator Body/ End Covers</b>	Hard anodized aluminium/ Polyester coated aluminium
<b>Position Indicator</b>	Glass filled Polyamide
<b>Fasteners</b>	ASTM 304 Stainless Steel



### Description

Heavy duty quarter turn scotch yoke actuators designed for long life and tested for a minimum 1 million+ operations. Unique 3-piece investment cast bolted body design offers the advantage of a swing-out body for easy inline maintenance. 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 and pilot valves.

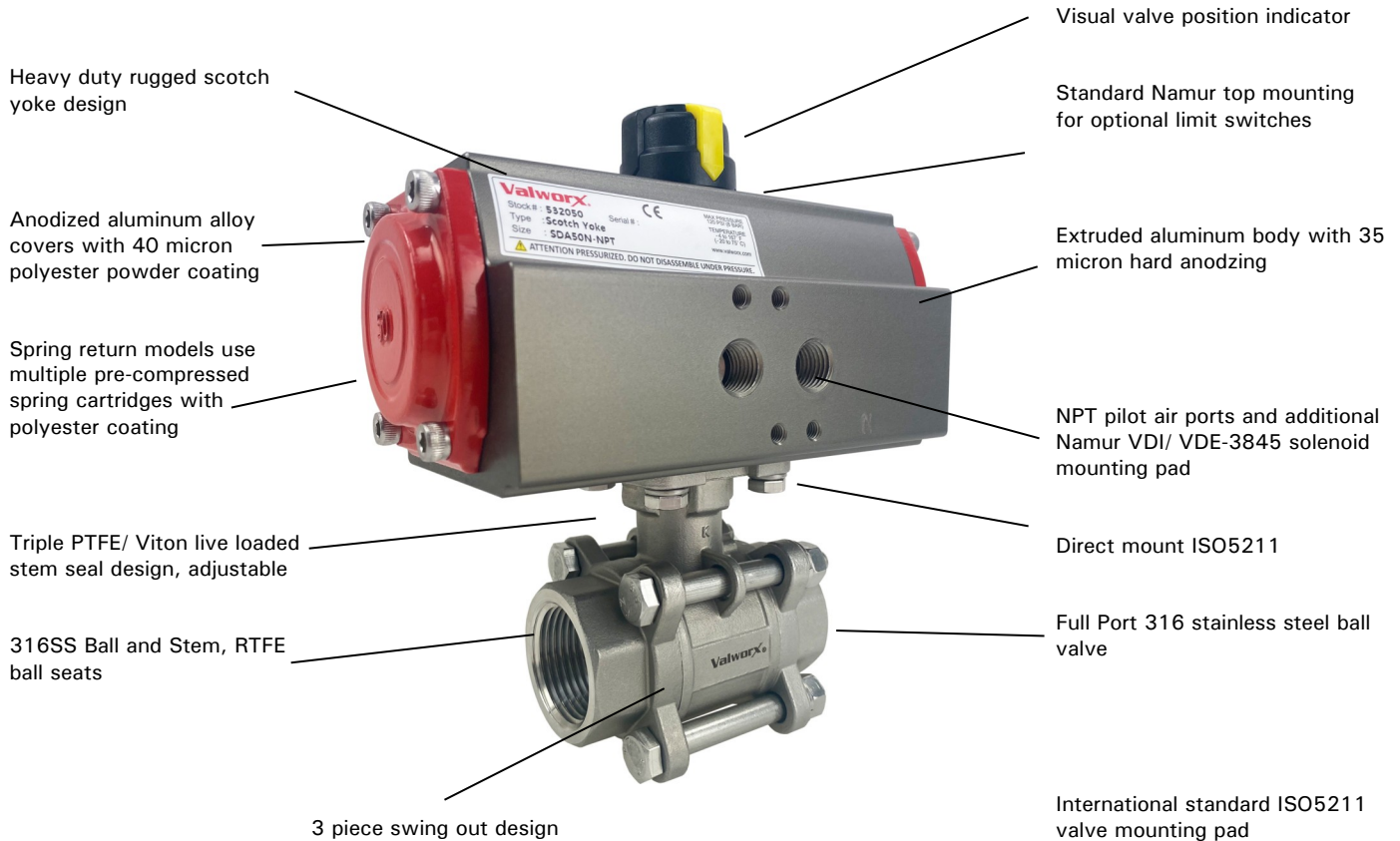
### Approvals- Actuators

- CE- MD 2006/42/CE
- EN ISO 12100:2010
- EN ISO 4414:2010
- ISO5211/ DIN3337 valve mounting
- Namur VDI/VDE 3845 accessory mounting
- SIL3- EN 17955:2024 & IEC 61508-1/-2:2010

### Standards- Valves

- Design: API 608
- Testing: API 598
- Threaded Connection: ASME B1.20.1 (NPT)/ ISO 228-1/ BS21
- Pressure/Temperature Rating: ASME B16.34
- Marking: MSS SP-25
- CE- PED 2014/68/UE

## Features



## Pressure-Temperature

**Pressure Rating\*:** 1000 PSI (69 Bar\*) CWP non-shock 1/4" to 2" sizes  
 800 PSI (55 Bar\*) CWP non-shock 2-1/2" and 4" sizes  
 25 PSI saturated steam with high temp kit,  
 Vacuum 29.92 InHg (2.3 x 10<sup>-3</sup> Torr)

\*See P/T Chart

**Pilot Air Pressure:** 43-120 PSI (3-8 Bar)

**Pilot Air Pressure-Recommended:** 58-87 PSI (4-6 Bar)

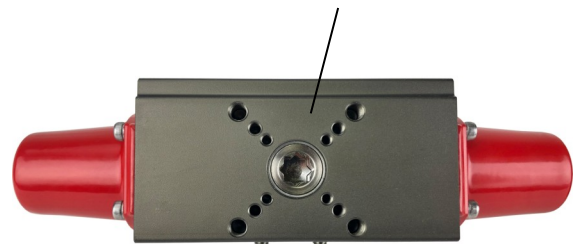
**Pilot Air Pressure- Maximum:** 120 PSI (8 Bar)

## Temperature Rating

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

**Actuator Temperature Rating:** -4 to 167° F (-20 to 75° 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
- HTB: High Temperature Bracket
- increases media working temperature
- DSP: Digital Smart Positioner
- simplify throttling applications

**Specifications (English units)**

Stock Number	Pipe Size (NPT)	Orifice Size (inch)	Cv Flow Factor	Pressure Max. (PSI)*	Cycle Time /90° (seconds)	Air Volume per Cycle (standard cubic inches)**	Pilot Air Port (NPT)
<b>STAINLESS 3PC VALVE WITH SRING RETURN ACTUATOR</b>							
552502A	1/4	0.5	6.9	1000	1-1	73.2	1/4
552503A	3/8	0.5	6.9	1000	1-1	73.2	1/4
552504A	1/2	0.6	9.7	1000	1-1	73.2	1/4
552506A	3/4	0.8	18.4	1000	1-1	73.2	1/4
552508A	1	1.0	55.4	1000	1-1	109.8	1/4
552510A	1-1/4	1.3	89.7	1000	1-1	109.8	1/4
552512A	1-1/2	1.5	144.2	1000	1-1	109.8	1/4
552516A	2	2.0	226.0	1000	1-1	256.3	1/4
552520A	2-1/2	2.6	289.0	800	2-1	512.6	1/4
552524A	3	3.2	454.0	800	2-1	1067.9	1/4
552532A	4	3.9	1364.7	800	4-1	1665.9	1/4
<b>STAINLESS 3PC VALVE WITH DOUBLE ACTING ACTUATOR</b>							
552402A	1/4	0.5	6.9	1000	1-1	146.5	1/4
552403A	3/8	0.5	6.9	1000	1-1	146.5	1/4
552404A	1/2	0.6	9.7	1000	1-1	146.5	1/4
552406A	3/4	0.8	18.4	1000	1-1	146.5	1/4
552408A	1	1.0	55.4	1000	1-1	146.5	1/4
552410A	1-1/4	1.3	89.7	1000	1-1	146.5	1/4
552412A	1-1/2	1.5	144.2	1000	1-1	219.7	1/4
552416A	2	2.0	226.0	1000	1-1	219.7	1/4
552420A	2-1/2	2.6	289.0	800	1-1	402.8	1/4
552424A	3	3.2	454.0	800	1-1	402.8	1/4
552432A	4	3.9	1364.7	800	1-1	842.1	1/4

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

\* Pressure @ 0° F to 100° F (reduced pressure at higher temperatures—see P/T chart)

**Specifications (Metric units)**

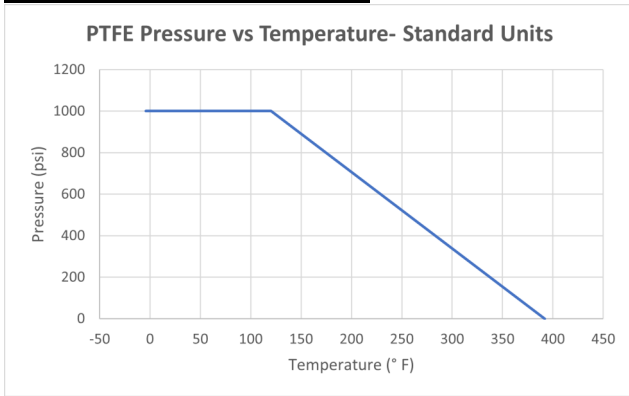
Stock Number	Pipe Size (NPT)	Orifice Size (mm)	Kv Flow Factor	Pressure Max.(Bar)*	Cycle Time/90° (seconds)	Air Volume per Cycle (standard cubic liters)**	Pilot Air Port (NPT)
<b>STAINLESS 3pc VALVE WITH SPRING RETURN ACTUATOR</b>							
552502A	1/4	11.5	5.9	69	1-1	1.2	1/4
552503A	3/8	12.5	5.9	69	1-1	1.2	1/4
552504A	1/2	15.0	8.4	69	1-1	1.2	1/4
552506A	3/4	20.0	15.9	69	1-1	1.2	1/4
552508A	1	25.0	47.9	69	1-1	1.8	1/4
552510A	1-1/4	32.0	77.6	69	1-1	1.8	1/4
552512A	1-1/2	38.0	124.7	69	1-1	1.8	1/4
552516A	2	50.0	195.5	69	1-1	4.2	1/4
552520A	2-1/2	65.0	249.7	55	2-1	8.4	1/4
552524A	3	80.0	392.3	55	2-1	17.5	1/4
552532A	4	100.0	1179.1	55	4-1	27.3	1/4
<b>STAINLESS 3pc VALVE WITH DOUBLE ACTING ACTUATOR</b>							
552402A	1/4	11.5	5.9	69	1-1	2.4	1/4
552403A	3/8	12.5	5.9	69	1-1	2.4	1/4
552404A	1/2	15.0	8.4	69	1-1	2.4	1/4
552406A	3/4	20.0	15.9	69	1-1	2.4	1/4
552408A	1	25.0	47.9	69	1-1	2.4	1/4
552410A	1-1/4	32.0	77.6	69	1-1	2.4	1/4
552412A	1-1/2	38.0	124.7	69	1-1	3.6	1/4
552416A	2	50.0	195.5	69	1-1	3.6	1/4
552420A	2-1/2	65.0	249.7	55	1-1	6.6	1/4
552424A	3	80.0	392.3	55	1-1	6.6	1/4
552432A	4	100.0	1179.1	55	1-1	13.8	1/4

\* Pressure range @ -18 to 38°C (reduced pressure for higher temperatures—see P/T chart)

## Pressure/ Temperature Chart

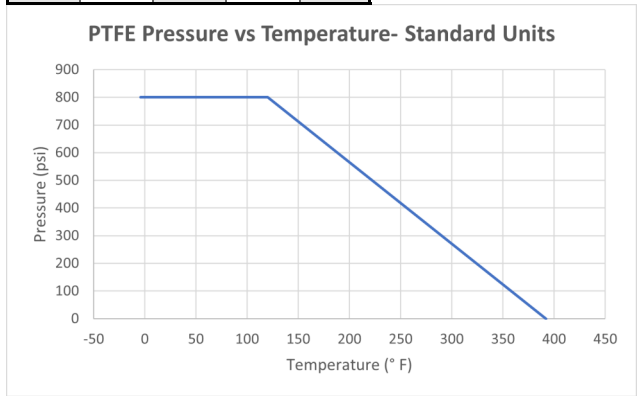
Pressure/Temp. Chart - 1000 PSI (69 Bar)

P/T Chart (PSI/°F)				
<b>PSI</b>	1000	1000	100	0
<b>°F</b>	-4	50	330	392



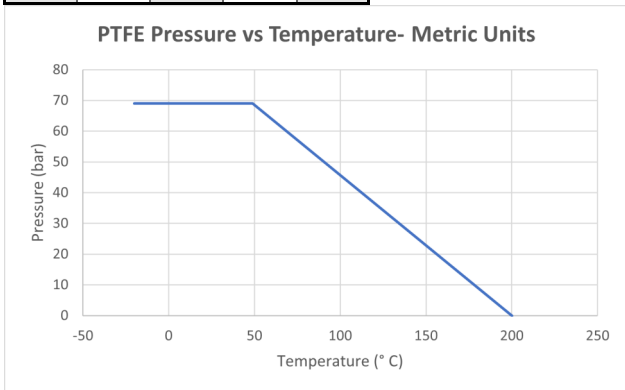
Pressure/Temp. Chart - 800 PSI (55 Bar)

P/T Chart (PSI/°F)				
<b>PSI</b>	800	800	100	0
<b>°F</b>	-4	50	330	392



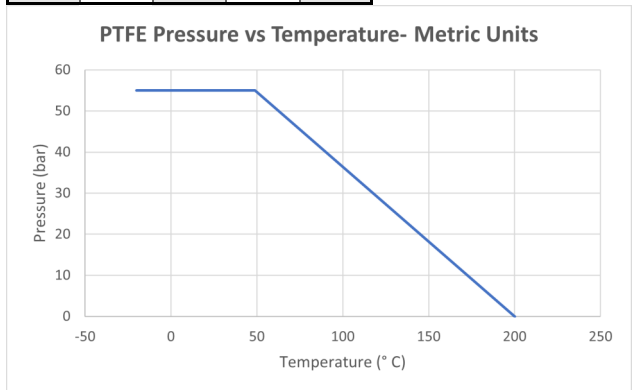
Pressure/Temp. Chart - 69 Bar (1000 PSI)

P/T Chart (BAR/°C)				
<b>Bar</b>	69	69	7	0
<b>°C</b>	-20	10	166	200

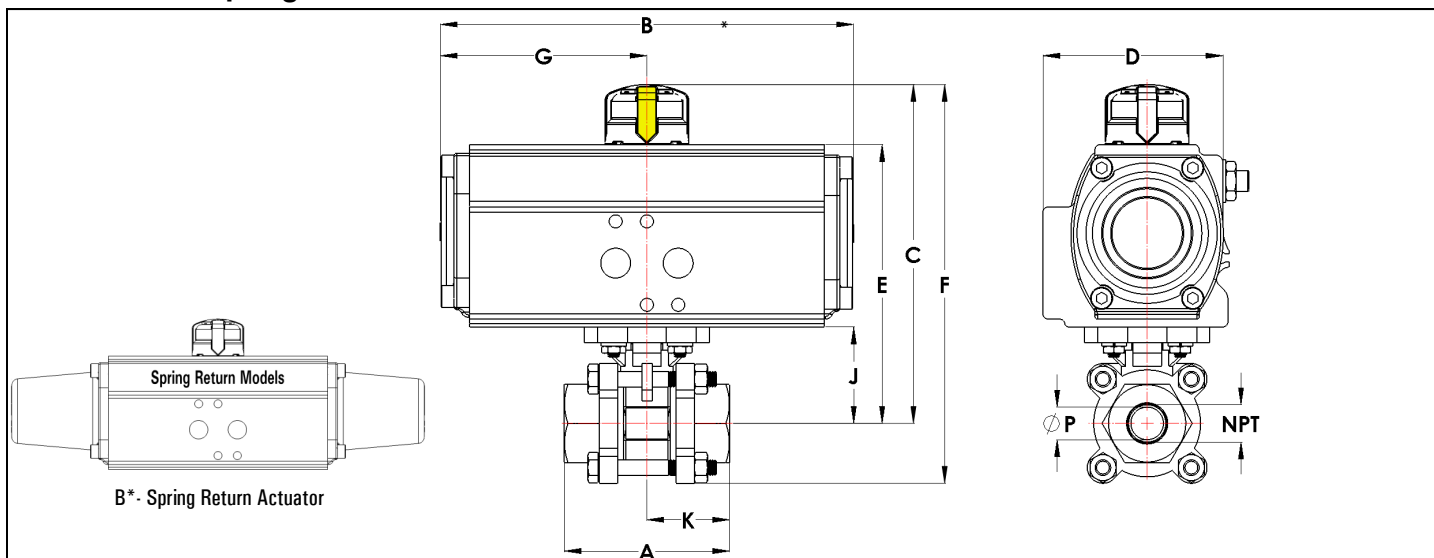


Pressure/Temp. Chart - 55 Bar (800 PSI)

P/T Chart (BAR/°C)				
<b>Bar</b>	55	55	7	0
<b>°C</b>	-20	10	166	200

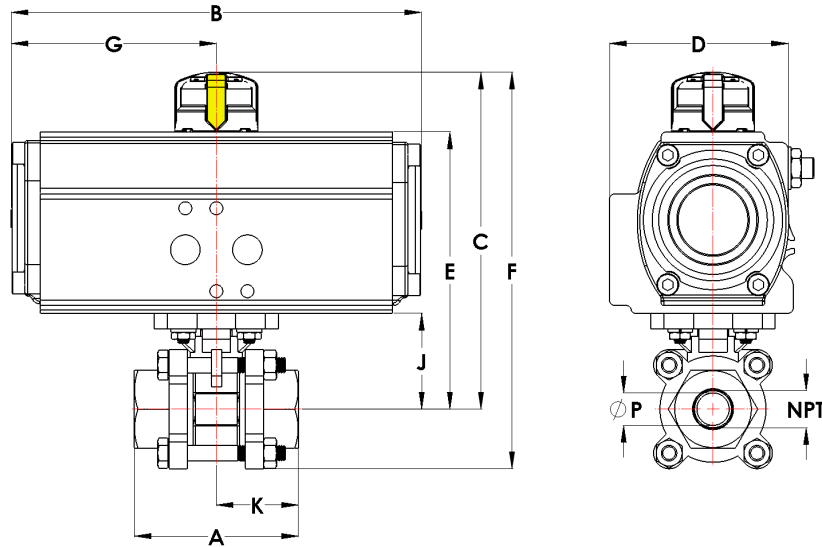


## Dimensions: Spring Return



Pipe Size (NPT)		A	B* (SR)	C	D	E	F	G	J	K	P	A & B Ports (NPT)	Weight
1/4	inch	2.5	10.1	4.9	2.9	4.2	5.8	5.1	1.5	1.4	0.5	1/4	4.7 lb
	mm	63.5	256.5	124.5	73.7	106.7	147.3	129.5	37.0	35.0	11.5	-	2.1 kg
3/8	inch	2.5	10.1	4.9	2.9	4.2	5.8	5.1	1.5	1.3	0.5	1/4	4.9 lb
	mm	63.5	256.5	124.5	73.7	106.7	147.3	129.5	37.0	32.4	12.5	-	2.2 kg
1/2	inch	2.5	10.1	4.9	2.9	4.2	5.8	5.1	1.5	1.3	0.6	1/4	4.7 lb
	mm	63.5	256.5	124.5	73.7	106.7	147.3	129.5	37.0	32.4	15.0	-	2.1 kg
3/4	inch	2.9	10.1	5.2	2.9	4.5	6.0	5.1	1.8	1.4	0.8	1/4	5.1 lb
	mm	72.5	256.5	132.1	73.7	114.3	152.4	129.5	45.0	36.3	20.0	-	2.3 kg
1	inch	3.2	12.3	6.2	3.5	5.5	7.3	6.2	21	1.6	1.0	1/4	8.9 lb
	mm	81.0	314.0	157.5	88.9	139.7	185.4	157.5	53.5	40.5	25.0	-	4.0 kg
1-1/4	inch	3.7	12.3	6.4	3.5	5.7	7.7	6.2	2.3	1.9	1.3	1/4	10.1 lb
	mm	94.5	314.0	162.6	88.9	144.8	195.6	157.5	59.0	47.3	32.0	-	4.6 kg
1-1/2	inch	4.3	12.3	7.0	3.5	6.3	8.5	6.2	2.9	2.1	1.5	1/4	12.0 lb
	mm	108.0	314.0	177.8	88.9	160.0	215.9	157.5	74.8	54.0	38.0	-	5.4 kg
2	inch	4.8	16.5	8.1	3.9	7.4	9.9	8.3	3.3	2.4	2.0	1/4	19.5 lb
	mm	121.5	419.1	205.7	99.1	188.0	251.5	210.8	83.5	60.8	50.0	-	8.8 kg
2-1/2	inch	6.2	19.6	10.0	5.0	9.3	12.2	9.8	4.3	3.1	2.6	1/4	37.6 lb
	mm	157.5	497.8	254.0	127.0	236.2	309.9	248.9	108.8	78.8	66.0	-	17.1 kg
3	inch	7.5	23.8	11.4	5.9	10.7	14.0	11.9	4.7	3.7	3.2	1/4	63.5 lb
	mm	190.0	604.5	289.6	127.0	271.8	355.6	302.3	118.3	95.0	81.3	-	28.9 kg
4	inch	8.9	26.8	13.5	6.4	12.2	16.8	13.4	6.1	4.4	3.9	1/4	95.5 lb
	mm	225.0	680.7	342.9	162.6	309.9	426.7	340.4	154.9	112.5	99.6	-	43.4 kg

## Dimensions: Double Acting



Pipe Size (NPT)		A	B	C	D	E	F	G	J	K	P	A & B Ports (NPT)	Weight
1/4	inch	2.5	6.3	4.9	2.9	4.2	5.8	3.2	1.5	1.4	0.5	1/4	4.3 lb
	mm	63.5	160.0	124.5	73.7	106.7	147.3	80.0	37.0	35.0	11.5	-	2.0 kg
3/8	inch	2.5	6.3	4.9	2.9	4.2	5.8	3.2	1.5	1.3	0.5	1/4	4.5 lb
	mm	63.5	160.0	124.5	73.7	106.7	147.3	80.0	37.0	32.4	12.5	-	2.0 kg
1/2	inch	2.5	6.3	4.9	2.9	4.2	5.8	3.2	1.5	1.3	0.6	1/4	4.3 lb
	mm	63.5	160.0	124.5	73.7	106.7	147.3	80.0	37.0	32.4	15.0	-	2.0 kg
3/4	inch	2.9	6.3	5.2	2.9	4.5	6.0	3.2	1.8	1.4	0.8	1/4	4.7 lb
	mm	72.5	160.0	132.1	73.7	114.3	152.4	80.0	45.0	36.3	20.0	-	2.1 kg
1	inch	3.2	6.3	5.5	3.5	4.8	6.6	3.2	2.1	1.6	1.0	1/4	5.4 lb
	mm	81.0	160.0	139.7	88.9	121.9	167.6	80.0	53.5	40.5	25.0	-	2.4 kg
1-1/4	inch	3.7	6.3	5.7	3.5	5.0	7.0	3.2	2.3	1.9	1.3	1/4	6.6 lb
	mm	94.5	160.0	144.8	88.9	127.0	177.8	80.0	59.0	47.3	32.0	-	3.0 kg
1-1/2	inch	4.3	7.9	7.0	3.5	6.3	8.5	3.9	2.9	2.1	1.5	1/4	10.5 lb
	mm	108.0	200.1	177.8	88.9	160.0	215.9	100.3	74.8	54.0	38.0	-	4.8 kg
2	inch	4.8	7.9	7.4	3.9	6.7	9.2	3.9	3.3	2.4	2.0	1/4	12.9 lb
	mm	121.5	200.1	188.0	99.1	170.2	233.7	100.3	83.5	60.8	50.0	-	5.9 kg
2-1/2	inch	6.2	9.9	9.1	3.9	8.4	11.3	4.9	4.3	3.1	2.6	1/4	25.3 lb
	mm	157.5	251.5	231.1	99.1	213.4	287.0	125.7	108.8	78.8	66.0	-	11.5 kg
3	inch	7.5	9.9	9.5	5.9	8.8	12.1	4.9	4.7	3.7	3.2	1/4	33.3 lb
	mm	190.0	251.5	241.3	149.9	223.5	307.3	125.7	118.3	95.0	81.3	-	15.1 kg
4	inch	8.9	12.2	11.8	6.4	11.1	15.1	6.1	6.1	4.4	3.9	1/4	61.0 lb
	mm	225.0	309.9	299.7	162.6	281.9	383.5	154.9	154.9	112.5	99.6	-	27.7 kg