Pneumatic/ Manual Combo Ball Valves

2 Way Stainless Steel, Full Port
1/2" to 4" Tri-Clamp

SERIES
5753
5754

Features

- All valve materials comply with FDA and USDA requirements
- Pneumatic actuator with integral manual override
- Tri-Clamp ends for hygienic connections
- Dyneon® TF-1641 (PTFE) FDA approved ball seats and cavity fillers
- Triple PTFE/Viton® high cycle live loaded stem seal packing
- Highly polished internals and end caps with 8-12 Ra finish
- Rack and pinion quarter turn (90°) rotation
- Spring Return or Double Acting Actuators
- Type IP67 weatherproof actuator
- Variable open/close stroke setting
- ATEX approved
- Highly visible valve position indicator
- Actuator factory lubricated for normal lifetime

Applications

Pneumatic/ manual actuated sanitary ball valves are typically used for food, beverage, pharmaceutical, personal care, and pet care applications where sanitary construction is required, as well as for utility and process applications where quick clamp connections are beneficial. 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 7 seconds per 90° rotation.

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 counterclockwise when viewed from the top.

Pilot Air should be filtered, dry or lubricated.

Construction

Valve Body	ASTM 316 Stainless Steel
Ball/Stem	ASTM 316 stainless steel
Ball Seats/ Cavity Filler	Dyneon® PTFE
Stem Seals	PTFE/ Viton®
Actuator Seals	NBR (Buna-N)
Actuator Body	Extruded aluminium– 35 micron anodizing, 40 micron
Position Indicator	Glass filled Polyamide
Fasteners	Stainless Steel

Description

Valworx heavy duty pneumatic/manual combination actuator features hard anodized aluminum enclosure, type IP67. Actuators are available in double acting and spring return models. Investment cast 3-piece full port stainless steel body and end caps for unrestricted flow and minimum pressure loss. Valve seals are cavity filled Dyneon® PTFE. Self adjusting live loaded stem seal packing helps compensate for wear, pressure or temperature fluctuations, extending the cycle life of the valve. Blow-out proof stem. Cavity fillers avoid media entrapment and quick clamp end connections allow for easy cleaning. 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

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 conformance- EPED 2014/68/UE

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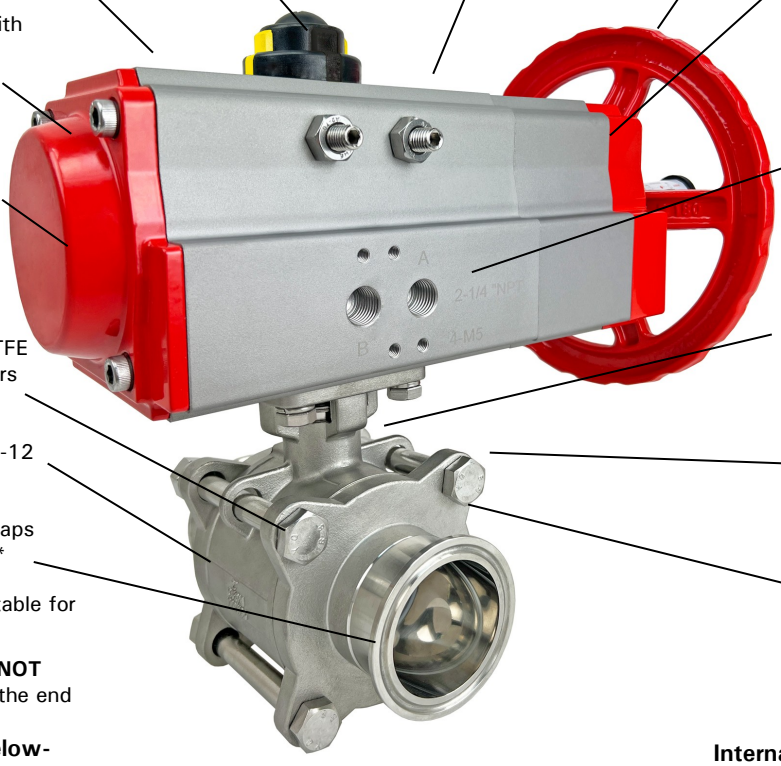
Features



- Visual valve position indicator
- Standard Namur top mounting for optional switches and positioners
- Integral handwheel for manual operation
- Heavy duty rugged rack and pinion design
- Hard anodized aluminum body, Type IP67
- Aluminum alloy covers with 60-80 micron polyester powder coating
- NPT pilot air ports and additional Namur VDI/ VDE-3845 solenoid mounting pad
- Spring return models use multiple pre-compressed spring cartridges with polyester coating
- Encapsulated Dyneon® PTFE ball seats with cavity fillers
- Live-loaded triple PTFE stem seal
- Internals polished to Ra 8-12
- ASTM 316 (CF8M) investment grade casting (body & end caps)
- Standard Tri-Clamp end caps for sanitary connections *
- ASTM 304 stainless steel fasteners

* Refer to specifications table for Tri-Clamp size

* Note: Tri-Clamp size is **NOT** determined by the OD of the end

***Inline option shown below-**
A5753/A5754 Accessory

International standard ISO5211 valve mounting pad

Pressure Rating

Shell Pressure Rating (Max)*: 1000 PSI @ 120°F (1/2" to 2"),
800 PSI (2 1/2" to 4")

*See P/T chart

Pilot Air Pressure– Double Acting: 29-120 PSI (2-8 Bar)

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

Temperature Rating

Valve Temperature Rating: -4° to 356° F (-20 to 180° 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
Inline mounting

Specifications (English units)

Stock Number	Pipe Size (inch)	Tri-Clamp Size (inch)	Cv Flow Factor	Shell Pressure Max.(PSI)*	Cycle Time /90° (seconds)	Air volume (standard cubic inches)	Pilot Air Port (NPT)
SANITARY VALVE WITH PNEUMATIC/MANUAL SPRING RETURN ACTUATOR							
575300	1/2	3/4	13.0	1000	2-1	24.4	1/4
575301	3/4	3/4	18.0	1000	2-1	24.4	1/4
575302	1	1-1/2	48.0	1000	2-1	24.4	1/4
575303	1-1/2	1-1/2	165.0	1000	2-1	54.9	1/4
575304	2	2	207.0	1000	3-1	91.5	1/4
575305	2-1/2	2-1/2	450.0	800	4-1	201.4	1/4
575306	3	3	780.0	800	7-1	341.7	1/4
575307	4	4	1050.0	800	7-1	341.7	1/4
SANITARY VALVE WITH PNEUMATIC/MANUAL DOUBLE ACTING ACTUATOR							
575400	1/2	3/4	13.0	1000	1-1	18.3	1/4
575401	3/4	3/4	18.0	1000	1-1	18.3	1/4
575402	1	1-1/2	48.0	1000	1-1	18.3	1/4
575403	1-1/2	1-1/2	165.0	1000	1-1	24.4	1/4
575404	2	2	207.0	1000	1-1	42.7	1/4
575405	2-1/2	2-1/2	450.0	800	2-2	91.5	1/4
575406	3	3	780.0	800	1-1	128.1	1/4
575407	4	4	1050.0	800	2-2	201.4	1/4

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

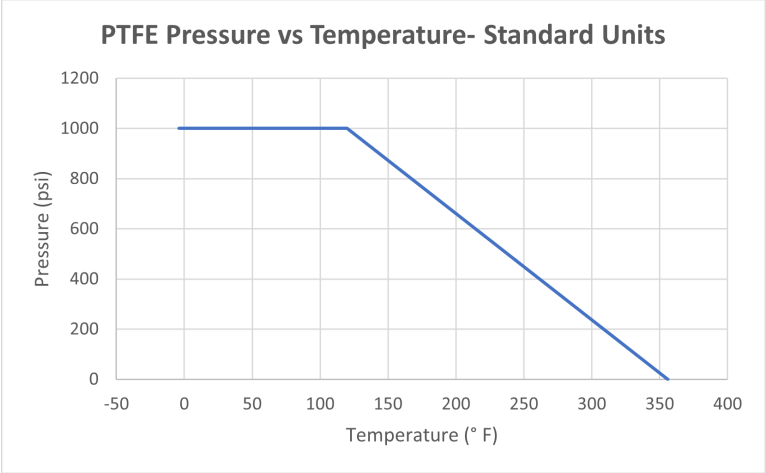
* Pressure @ -4° to 356° F (reduced pressure at higher temperatures—see P/T chart)

• Torque at 1000 PSI and 72°F

Pressure/Temperature Chart (PSI/°F)

Standard Units

Temp °F	-4	120	356
Pressure	1000	1000	0



Specifications (Metric units)

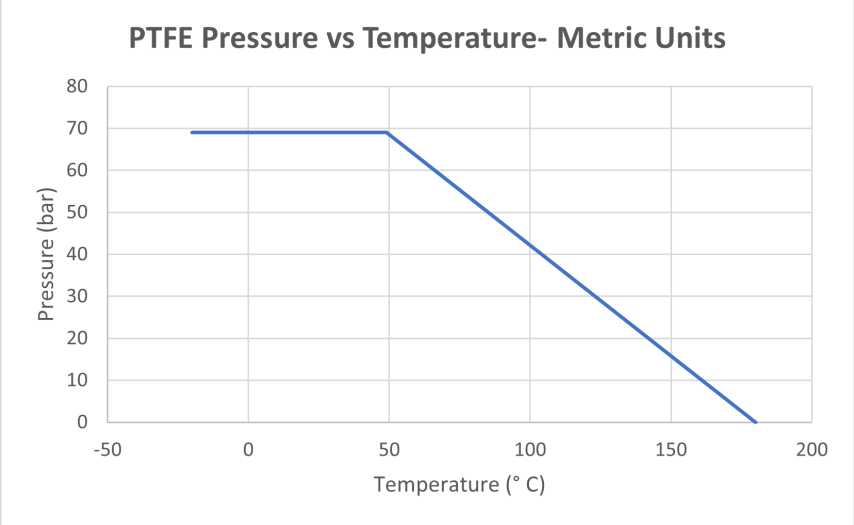
Stock Number	Pipe Size (mm)	Tri-Clamp Size (inch)	Kv Flow Factor	Shell Pressure Max.(Bar)*	Cycle Time/90° (seconds)	Air volume (standard liters)	Pilot Air Port (NPT)
SANITARY VALVE WITH PNEUMATIC/MANUAL SPRING RETURN ACTUATOR							
575300	12.7	3/4	11.2	69	2-1	0.4	1/4
575301	19.1	3/4	15.6	69	2-1	0.4	1/4
575302	25.4	1-1/2	41.5	69	2-1	0.4	1/4
575303	38.1	1-1/2	142.7	69	2-1	0.9	1/4
575304	50.8	2	179.1	69	3-1	1.5	1/4
575305	63.5	2-1/2	389.3	55	4-1	3.3	1/4
575306	76.2	3	674.7	55	7-1	5.6	1/4
575307	101.6	4	908.3	55	7-1	5.6	1/4
SANITARY VALVE WITH PNEUMATIC/MANUAL DOUBLE ACTING ACTUATOR							
575400	12.7	3/4	11.2	69	1-1	0.3	1/4
575401	19.1	3/4	15.6	69	1-1	0.3	1/4
575402	25.4	1-1/2	41.5	69	1-1	0.3	1/4
575403	38.1	1-1/2	142.7	69	1-1	0.4	1/4
575404	50.8	2	179.1	69	1-1	0.7	1/4
575405	63.5	2-1/2	389.3	55	2-2	1.5	1/4
575406	76.2	3	674.7	55	1-1	2.1	1/4
575407	101.6	4	908.3	55	2-2	3.3	1/4

* Pressure range @ -20° to 180° C (reduced pressure for higher temperatures—see P/T chart)

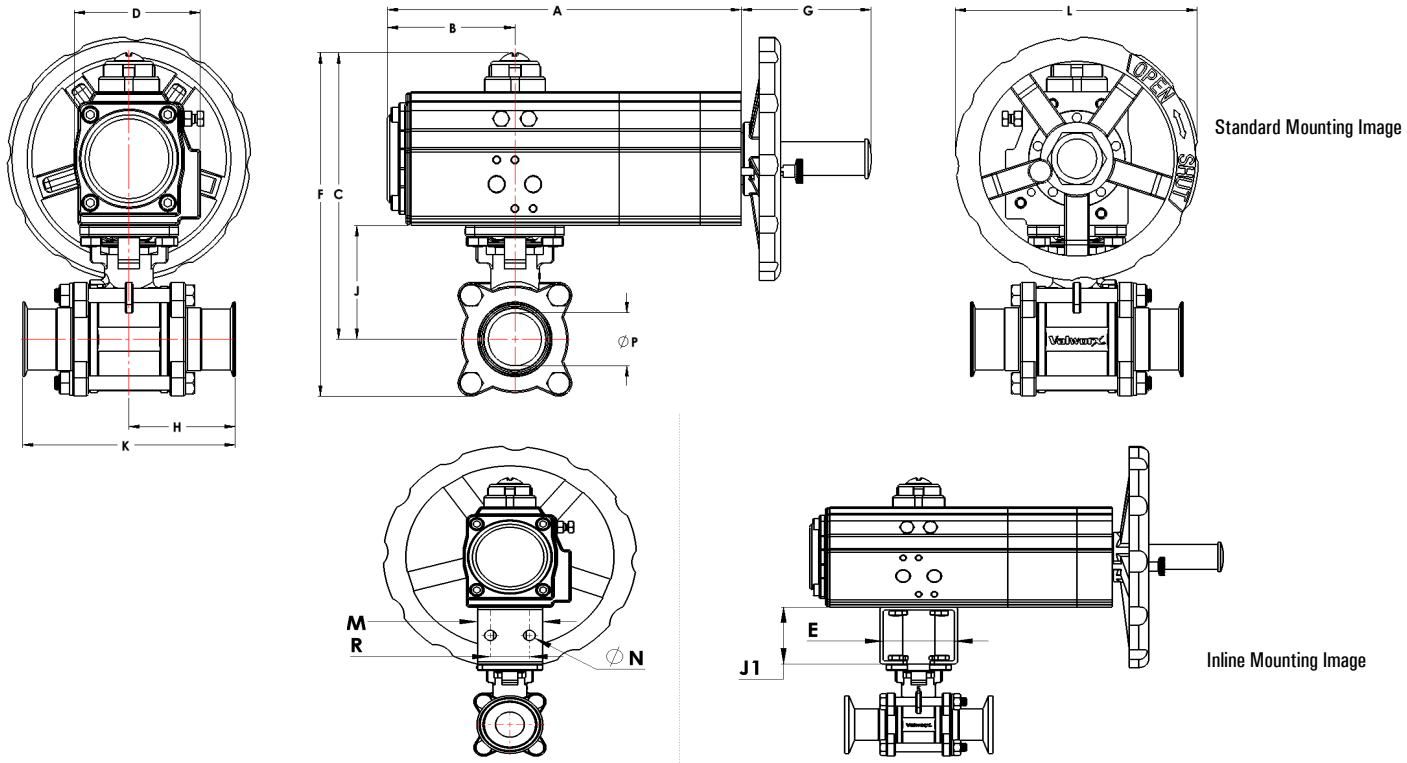
Pressure/Temperature Chart (Bar/°C)

Metric Units

Temp °C	-20	49	180
Pressure	69	69	0



Dimensions: Spring Return

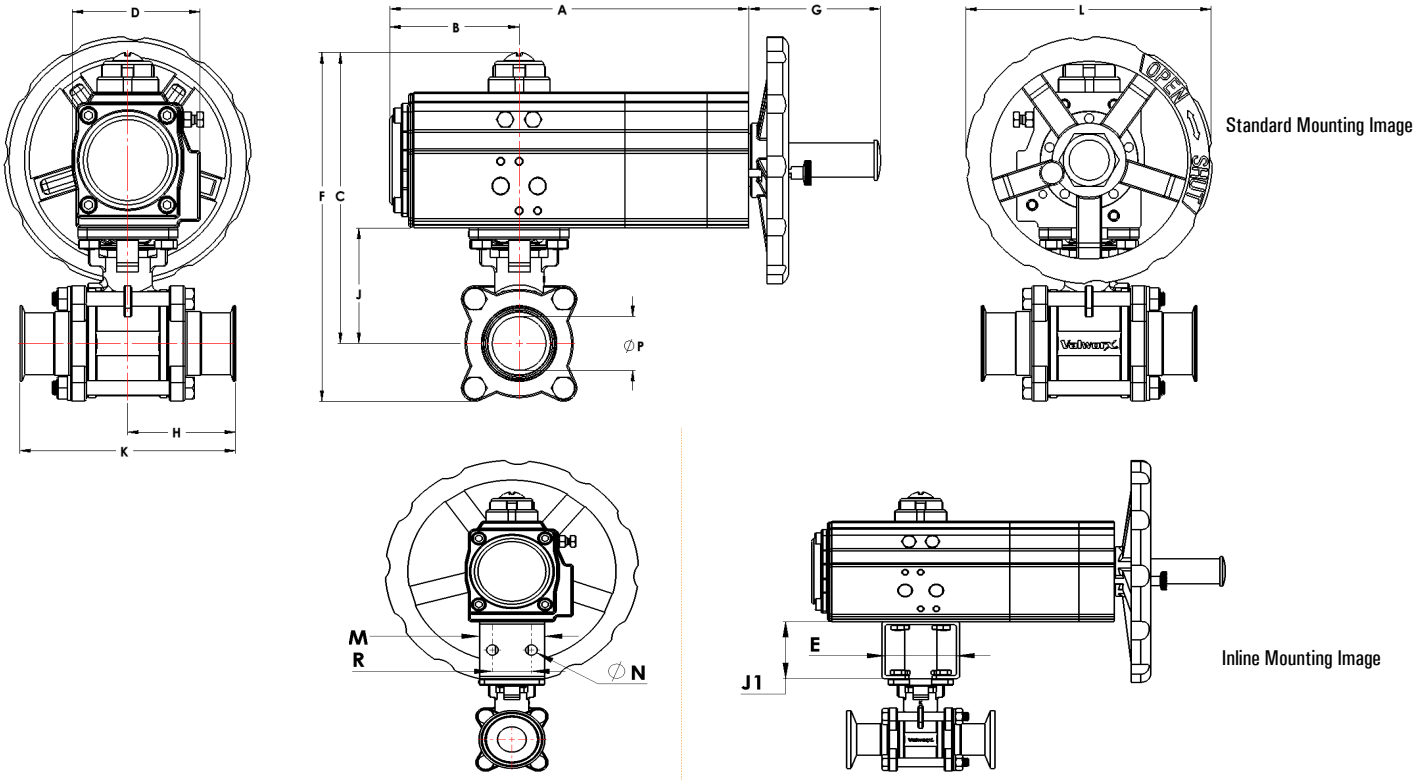


Standard Mounting Image

Inline Mounting Image

Pipe Size		A	B	C	D	E	F	G	H	J	J1	K	M	N	P	R	Weight
1/2	inch	9.2	3.3	5.8	2.8	2.4	6.7	7.7	1.8	1.5	1.9	3.5	2.0	0.3	0.4	1.2	11.1 lb
	mm	233.7	83.8	147.3	71.1	60.0	170.2	195.0	44.5	37.0	50.0	89.0	50.0	9.0	9.4	30.0	5.0 kg
3/4	inch	9.2	3.3	6.1	2.8	2.4	7.1	7.7	2.0	1.8	1.9	4.0	2.0	0.3	0.6	1.2	11.4 lb
	mm	233.7	83.8	154.9	71.1	60.0	180.3	195.0	50.5	45.0	50.0	101.0	50.0	9.0	15.8	30.0	5.2 kg
1	inch	9.2	3.3	6.4	2.8	2.4	7.5	7.7	2.2	2.1	1.9	4.5	2.0	0.3	0.9	1.2	12.6 lb
	mm	233.7	83.8	162.6	71.1	60.0	190.5	195.0	57.0	57.0	50.0	114.0	50.0	9.0	22.2	30.0	5.7 kg
1-1/2	inch	10.7	4.2	8.0	3.6	3.1	9.5	7.7	2.8	2.9	1.9	5.5	2.8	0.3	1.4	1.4	19.2 lb
	mm	271.8	106.7	203.2	91.4	80.0	241.3	195.0	70.0	70.0	50.0	140.0	70.0	9.0	34.9	35.0	8.7 kg
2	inch	13.4	5.2	8.7	3.9	3.1	10.5	9.8	3.1	3.3	1.9	6.1	2.8	0.3	1.9	1.4	30.8 lb
	mm	340.4	132.1	221.0	99.1	80.0	266.7	250.0	78.0	78.0	50.0	156.0	70.0	9.0	47.5	35.0	14.0 kg
2-1/2	inch	15.8	5.9	11.2	5.0	4.7	13.4	15.7	3.9	4.3	1.9	7.8	4.0	0.4	2.4	2.0	61.3 lb
	mm	401.3	149.9	284.5	127.0	120.0	340.4	400.0	98.5	98.5	50.0	197.0	102.0	11.0	60.3	50.0	27.9 kg
3	inch	20.1	7.8	12.5	5.4	4.7	15.1	19.7	4.5	4.7	1.9	9.0	4.0	0.4	2.9	2.0	90.9 lb
	mm	510.5	198.1	317.5	137.2	120.0	383.5	500.0	114.5	114.5	50.0	229.0	102.0	11.0	73.0	50.0	41.3 kg
4	inch	20.1	7.8	13.9	5.4	4.7	17.8	19.7	4.8	6.1	1.9	9.5	4.0	0.4	3.8	2.0	114.5 lb
	mm	510.5	198.1	353.1	137.2	120.0	452.1	500.0	121.5	121.5	50.0	243.0	102.0	11.0	97.4	50.0	52.0 kg

Dimensions: Double Acting



Standard Mounting Image

Inline Mounting Image

Pipe Size		A	B	C	D	E	F	G	H	J	J1	K	M	N	P	R	Weight
1/2	inch	8.3	3.1	5.1	2.6	2.4	6.0	7.1	1.8	1.5	1.9	3.5	2.0	0.3	0.4	1.2	7.7 lb
	mm	210.8	78.7	129.5	66.0	60.0	152.4	180.0	44.5	37.0	50.0	89.0	50.0	9.0	9.4	30.0	3.5 kg
3/4	inch	8.3	3.1	5.4	2.6	2.4	6.4	7.1	2.0	1.8	1.9	4.0	2.0	0.3	0.6	1.2	7.8 lb
	mm	210.8	78.7	137.2	66.0	60.0	162.6	180.0	50.5	45.0	50.0	101.0	50.0	9.0	15.8	30.0	3.5 kg
1	inch	8.3	3.1	5.7	2.6	2.4	6.8	7.1	2.2	2.1	1.9	4.5	2.0	0.3	0.9	1.2	8.6 lb
	mm	210.8	78.7	144.8	66.0	60.0	172.7	180.0	57.0	57.0	50.0	114.0	50.0	9.0	22.2	30.0	3.9 kg
1-1/2	inch	9.2	3.3	7.2	2.8	3.1	8.7	7.7	2.8	2.9	1.9	5.5	2.8	0.3	1.4	1.4	15.0 lb
	mm	233.7	83.8	182.9	71.1	80.0	221.0	195.0	70.0	70.0	50.0	140.0	70.0	9.0	34.9	35.0	6.8 kg
2	inch	9.6	3.6	8.0	3.1	3.1	9.8	7.1	3.1	3.3	1.9	6.1	2.8	0.3	1.9	1.4	19.3 lb
	mm	243.8	91.4	203.2	78.7	80.0	248.9	180.0	78.0	78.0	50.0	156.0	70.0	9.0	47.5	35.0	8.8 kg
2-1/2	inch	13.4	5.2	9.7	3.9	3.1	11.9	9.8	3.9	4.3	1.9	7.8	2.8	0.3	2.4	1.4	37.1 lb
	mm	340.4	132.1	246.4	99.1	80.0	302.3	250.0	98.5	98.5	50.0	197.0	70.0	9.0	60.3	35.0	16.9 kg
3	inch	13.6	5.3	10.7	4.3	4.7	13.3	9.8	4.5	4.7	1.9	9.0	4.0	0.4	2.9	2.0	49.3 lb
	mm	345.4	134.6	271.8	109.2	120.0	337.8	250.0	114.5	114.5	50.0	229.0	102.0	11.0	73.0	50.0	22.4 kg
4	inch	15.8	5.9	12.1	5.0	4.7	16.0	15.7	4.8	6.1	1.9	9.5	4.0	0.4	3.8	2.0	90.2 lb
	mm	401.3	149.9	307.3	127.0	120.0	406.4	400.0	121.5	121.5	50.0	243.0	102.0	11.0	97.4	50.0	41.0 kg