

Features

- Full Port lead free brass ball valve
- Visual valve position indicator
- Rugged aluminum Type 4X weatherproof enclosure
- Heavy duty motors with overload protection
- Anti-condensation heater, thermostatically controlled
- Manual override with end of travel mechanical stops
- Two auxiliary limit switches included (on-off models)
- Energized PTFE ball seats for lower torque and longer life
- Leak free Triple PTFE/FKM stem seal packing
- EPS - Electronic Positioner System models available
- Actuator listed per UL429 and CSA C22.2
- Valve certified NSF372 & NSF/ANSI/CAN 61-2020 for potable/drinking water

Applications

On-off control of water, air, oil and other media compatible with the materials of construction. Ideal where lead free and NSF approved construction are required for potable drinking water as well as general industrial applications. Suitable for vacuum service up to 29"Hg. EPS positioner is available for controlling flow using an analog input control signal. Actuator designed for 70% duty cycle.

Operation

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 ball 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. Valves with EPS positioner use an analog input signal to control the position of the ball (flow). Wire directly to terminal strip via 1/2" NPT connection or use supplied cable connector.

Construction

Valve Body	Lead free brass C69300
Ball/Stem	316 stainless steel
Ball Seats	PTFE (Teflon) energized with FKM (Viton)
Stem Seals	PTFE (Teflon) with (2) additional FKM (Viton) seals
Gear Drive	Heavy duty alloy steel and aluminium bronze worm
Actuator Enclosure	Aluminum polyester powder coated, Type 4X, IP67
Visual Valve Position Indicator	Clear polycarbonate cover, red/yellow open-closed
Fasteners	Stainless Steel
Auxiliary Limit Switches	2 x SPST (3A@125VAC resistive), on-off actuators



Description

Electric actuated full port lead free ball valves provide unrestricted flow and minimum pressure loss. Energized PTFE ball seats are designed for low torque and extended cycle life. Triple PTFE/FKM leak free stem seal design. Rugged Type 4X corrosion resistant electric actuator includes a manual override, valve position confirmation switches (on-off models), thermostatically controlled anti-condensation heater and over-torque protection. EPS positioner models allow positioning of the ball with a 4-20mA input control signal.

Approvals

Actuators

- CSA listed:
 - UL429 and CSA C22.2 No. 139
 - Type 4X, IP67 weatherproof enclosure
- CE conformance- EN 60204-1:2006
 - ISO5211 mounting



Valves

- IAPMO RT certified to:
 - NSF/ANSI 372 - 2011 Drinking Water
 - NSF/ANSI/CAN 61-2020
 - Weighted average lead content <= 0.25%
- Meets design MSS-SP-110



Construction Features



Visual Valve
Position Indicator

Pressure-Temperature*

Pressure Rating: 600 PSI CWP (41 Bar) non-shock 1/4"-2" sizes
300 PSI CWP (21 Bar) non-shock 2-1/2 & 3" sizes
29" Hg vacuum

Ball Valve Temperature Rating: -4 to 366° F (-20 to 186° C)

Actuator Temperature Rating: -13 to 131° F (-25 to 55° C)

*See P/T chart

Pressure/Temperature Chart (PSI/°F)

P/T Chart						
PSI	600	600	600	600	550	400
°F	0	50	100	176	200	266

Pressure/Temperature Chart (Bar/°C)

P/T Chart						
Bar	41	41	41	41	38	27
°C	-18	10	38	80	93	130

Specifications: On-Off Valves (English units)

Stock Number	Pipe Size (NPT)	Orifice Size (inch)	Cv Flow Factor	Pressure Max.(PSI)*	Cycle Time/90° (seconds)	Voltage	Current (amps)	Electrical Drawing
120 VAC ELECTRIC ACTUATED LF BRASS BALL VALVES: ON-OFF version								
567602C	1/4	0.4	8	600	12/10	110 VAC, 50/60Hz	0.27	B
567603C	3/8	0.5	10	600	12/10	110 VAC, 50/60Hz	0.27	B
567604C	1/2	0.6	15	600	12/10	110 VAC, 50/60Hz	0.27	B
567606C	3/4	0.8	35	600	12/10	110 VAC, 50/60Hz	0.27	B
567608C	1	1.0	60	600	12/10	110 VAC, 50/60Hz	0.27	B
567610C	1-1/4	1.2	89	600	12/10	110 VAC, 50/60Hz	0.27	B
567612C	1-1/2	1.5	125	600	12/10	110 VAC, 50/60Hz	0.27	B
567616C	2	2.0	240	600	25/21	110 VAC, 50/60Hz	0.27	B
567617C	2-1/2	2.5	320	300	25/21	110 VAC, 50/60Hz	0.27	B
567618A	3	3.0	551	300	30/25	110 VAC, 50/60Hz	0.64	B
24 VDC ELECTRIC ACTUATED LF BRASS BALL VALVES: ON-OFF version								
567644C	1/4	0.4	8	600	20	DC24	1.28	G
567645C	3/8	0.5	10	600	20	DC24	1.28	G
567646C	1/2	0.6	15	600	20	DC24	1.28	G
567647C	3/4	0.8	35	600	20	DC24	1.28	G
567649C	1	1.0	60	600	20	DC24	1.28	G
567650C	1-1/4	1.2	89	600	20	DC24	1.28	G
567651C	1-1/2	1.5	125	600	20	DC24	1.28	G
567652C	2	2.0	240	600	20	DC24	1.28	G
567653C	2-1/2	2.5	320	300	20	DC24	1.28	G
567654A	3	3.0	551	300	30	DC24	2.03	G

* Pressure at 176° F (see P/T chart for maximum pressure at higher temperatures)

On-Off Electric Actuated Valves

Valworx electric actuated valves use power-to-open and power-to-close, stays in the last known position with loss of power. The actuator will rotate the output drive 90° to open or close the ball valve. Limit switches automatically stop the motor drive in either the open or closed position as required. Two auxiliary limit switches are provided as standard with on-off actuators to confirm valve open or closed position.

Rugged primary gear drive system is made of heat treated alloy steel for high strength, excellent wear resistance and high torque. Final stage aluminium bronze worm gear drive is self-locking, no motor brake required. A manual override is provided for use in setup or power failure situations.

The override is operated with a standard hex wrench (included). The standard 4 watt thermostatically controlled anti-condensation heater will help prevent failures due to condensation buildup inside the actuator.

Robust aluminium alloy housing is corrosion-resistant, polyester powder coated, and weatherproof. The housing is rated Type 4X (IP67) and certified by CSA. Heavy duty motor is integral to the actuator housing providing the smallest physical size to power ratio of typical actuators on the market.

Electrical wiring is directly to a terminal strip via cable connectors (included) or optional 1/2" NPT conduit adapters.

Specifications: Valves with EPS Positioners (English units)

Stock Number	Pipe Size (NPT)	Orifice Size (inch)	Cv Flow Factor	Pressure Max.(PSI)*	Cycle Time/90° (seconds)	Voltage	Current (amps)	Electrical Drawing
120 VAC ELECTRIC ACTUATED LF BRASS BALL VALVES: EPS POSITIONER 4-20mA input								
567655C	1/4	0.4	8	600	25/21	110 VAC, 50/60Hz	0.27	E
567656C	3/8	0.5	10	600	25/21	110 VAC, 50/60Hz	0.27	E
567657C	1/2	0.6	15	600	25/21	110 VAC, 50/60Hz	0.27	E
567658C	3/4	0.8	35	600	25/21	110 VAC, 50/60Hz	0.27	E
567659C	1	1.0	60	600	25/21	110 VAC, 50/60Hz	0.27	E
567660C	1-1/4	1.2	89	600	25/21	110 VAC, 50/60Hz	0.27	E
567661C	1-1/2	1.5	125	600	25/21	110 VAC, 50/60Hz	0.27	E
567662C	2	2.0	240	600	25/21	110 VAC, 50/60Hz	0.27	E
567663C	2-1/2	2.5	320	300	25/21	110 VAC, 50/60Hz	0.27	E
567664E	3	3.0	551	300	30/25	110 VAC, 50/60Hz	0.64	E
24 VDC ELECTRIC ACTUATED LF BRASS BALL VALVES: EPS POSITIONER 4-20mA input								
567665C	1/4	0.4	8	600	20	DC24	1.0	GEY
567666C	3/8	0.5	10	600	20	DC24	1.0	GEY
567667C	1/2	0.6	15	600	20	DC24	1.0	GEY
567668C	3/4	0.8	35	600	20	DC24	1.0	GEY
567669C	1	1.0	60	600	20	DC24	1.0	GEY
567670C	1-1/4	1.2	89	600	20	DC24	1.0	GEY
567671C	1-1/2	1.5	125	600	20	DC24	1.0	GEY
567672C	2	2.0	240	600	20	DC24	1.0	GEY
567673C	2-1/2	2.5	320	300	20	DC24	1.0	GEY
567674E	3	3.0	551	300	30	DC24	2.0	GEY

* Pressure @ 176° F (see P/T chart for maximum pressure at higher temperatures)

EPS - Electronic Positioning System

Valworx electric actuators with EPS- Electronic Positioning System provide an accurate valve positioning function whereby the movement of the actuator is controlled by a 4-20mA input control signal. Any change in the control input signal results in a corresponding and proportional change in the position of the actuator (valve). The EPS module is fully potted to help protect the electronics from vibration and moisture resistance.

An internal microprocessor on the EPS circuit board continuously monitors the analog input and output signals and compares them to the physical position via a precision potentiometer feedback system, moving the actuator as required to balance the signals.

The EPS system is self-calibrating which virtually eliminates "hunting". The following functions are standard:

- Position monitoring output signal in same format as input. Ex: 4-20mA input, 4-20mA output
- Adjustable forward or reversing action.
- Sensitivity, Zero and Span adjustments
- Selectable fail mode: fail closed, fail open or stop in place (for loss of input command signal).
- Electric manual control with onboard selector switches
- Fault LED lights indicate valve jam or signal loss
- Electronic brake function

Specifications: On-Off Valves (Metric units)

Stock Number	Pipe Size (NPT)	Orifice Size (mm)	Kv Flow Factor	Pressure Max.(Bar)*	Cycle Time/90° (seconds)	Voltage	Current (amps)	Electrical Drawing
120 VAC ELECTRIC ACTUATED LF BRASS BALL VALVE: ON-OFF Version								
567602C	1/4	10.0	5.0	40	12/10	110 VAC, 50/60Hz	0.27	B
567603C	3/8	12.7	8.6	40	12/10	110 VAC, 50/60Hz	0.27	B
567604C	1/2	15.0	13.0	40	12/10	110 VAC, 50/60Hz	0.27	B
567606C	3/4	19.0	26.0	40	12/10	110 VAC, 50/60Hz	0.27	B
567608C	1	25.0	52.0	40	12/10	110 VAC, 50/60Hz	0.27	B
567610C	1-1/4	31.0	76.0	40	12/10	110 VAC, 50/60Hz	0.27	B
567612C	1-1/2	38.0	107.0	40	12/10	110 VAC, 50/60Hz	0.27	B
567616C	2	50.0	206.0	40	25/21	110 VAC, 50/60Hz	0.27	B
567617C	2-1/2	63.0	275.0	21	25/21	110 VAC, 50/60Hz	0.27	B
567618A	3	76.0	474.0	21	30/25	110 VAC, 50/60Hz	0.64	B
24 VDC ELECTRIC ACTUATED LF BRASS BALL VALVE: ON-OFF Version								
567644C	1/4	10.0	5.0	40	20	DC24	1.28	G
567645C	3/8	12.7	8.6	40	20	DC24	1.28	G
567646C	1/2	15.0	13.0	40	20	DC24	1.28	G
567647C	3/4	19.0	26.0	40	20	DC24	1.28	G
567649C	1	25.0	52.0	40	20	DC24	1.28	G
567650C	1-1/4	31.0	76.0	40	20	DC24	1.28	G
567651C	1-1/2	38.0	107.0	40	20	DC24	1.28	G
567652C	2	50.0	206.0	40	20	DC24	1.28	G
567653C	2-1/2	63.0	275.0	21	20	DC24	1.28	G
567654A	3	76.0	474.0	21	30	DC24	2.03	G

* Pressure at 80° C (see P/T chart for maximum pressure at higher temperatures)

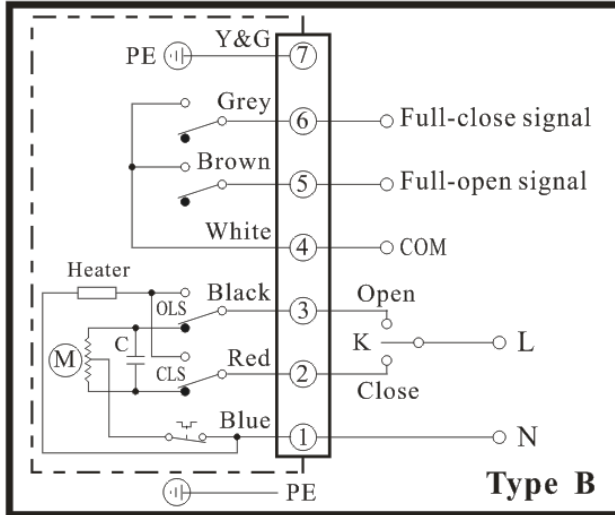
Specifications: Valves with EPS Positioners (Metric units)

Stock Number	Pipe Size (NPT)	Orifice Size (mm)	Kv Flow Factor	Pressure Max.(Bar)*	Cycle Time/90° (seconds)	Voltage	Current (amps)	Electrical Drawing
120 VAC ELECTRIC ACTUATED LF BRASS BALL VALVES: EPS POSITIONER 4-20mA input								
567655C	1/4	10.0	5.0	40	25/21	110 VAC, 50/60Hz	0.27	E
567656C	3/8	12.7	8.6	40	25/21	110 VAC, 50/60Hz	0.27	E
567657C	1/2	15.0	13.0	40	25/21	110 VAC, 50/60Hz	0.27	E
567658C	3/4	19.0	26.0	40	25/21	110 VAC, 50/60Hz	0.27	E
567659C	1	25.0	52.0	40	25/21	110 VAC, 50/60Hz	0.27	E
567660C	1-1/4	31.0	76.0	40	25/21	110 VAC, 50/60Hz	0.27	E
567661C	1-1/2	38.0	107.0	40	25/21	110 VAC, 50/60Hz	0.27	E
567662C	2	50.0	206.0	40	25/21	110 VAC, 50/60Hz	0.27	E
567663C	2-1/2	63.0	275.0	21	25/21	110 VAC, 50/60Hz	0.27	E
567664E	3	76.0	474.0	21	30/25	110 VAC, 50/60Hz	0.64	E
24 VDC ELECTRIC ACTUATED LF BRASS BALL VALVE: EPS POSITIONER 4-20mA input								
567665C	1/4	10.0	5.0	40	20	DC24	1.0	GEY
567666C	3/8	12.7	8.6	40	20	DC24	1.0	GEY
567667C	1/2	15.0	13.0	40	20	DC24	1.0	GEY
567668C	3/4	19.0	26.0	40	20	DC24	1.0	GEY
567669C	1	25.0	52.0	40	20	DC24	1.0	GEY
567670C	1-1/4	31.0	76.0	40	20	DC24	1.0	GEY
567671C	1-1/2	38.0	107.0	40	20	DC24	1.0	GEY
567672C	2	50.0	206.0	40	20	DC24	1.0	GEY
567673C	2-1/2	63.0	275.0	21	20	DC24	1.0	GEY
567674E	3	76.0	474.0	21	30	DC24	2.0	GEY

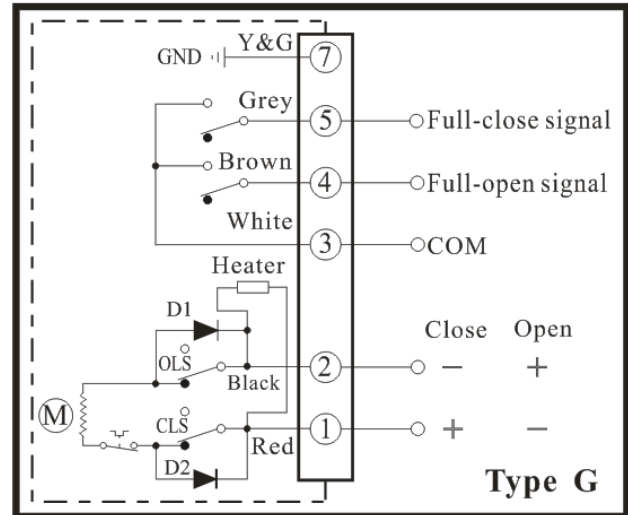
* Pressure at 80° C (see P/T chart for maximum pressure at higher temperatures)

Electrical Wiring

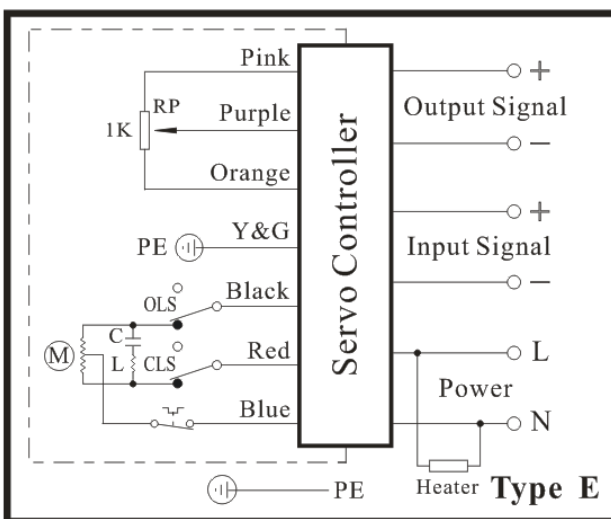
ON-OFF Valves AC Voltages



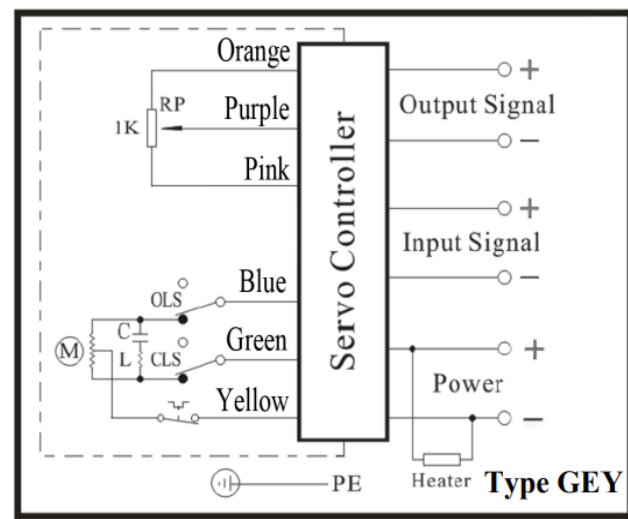
ON-OFF Valves DC Voltages



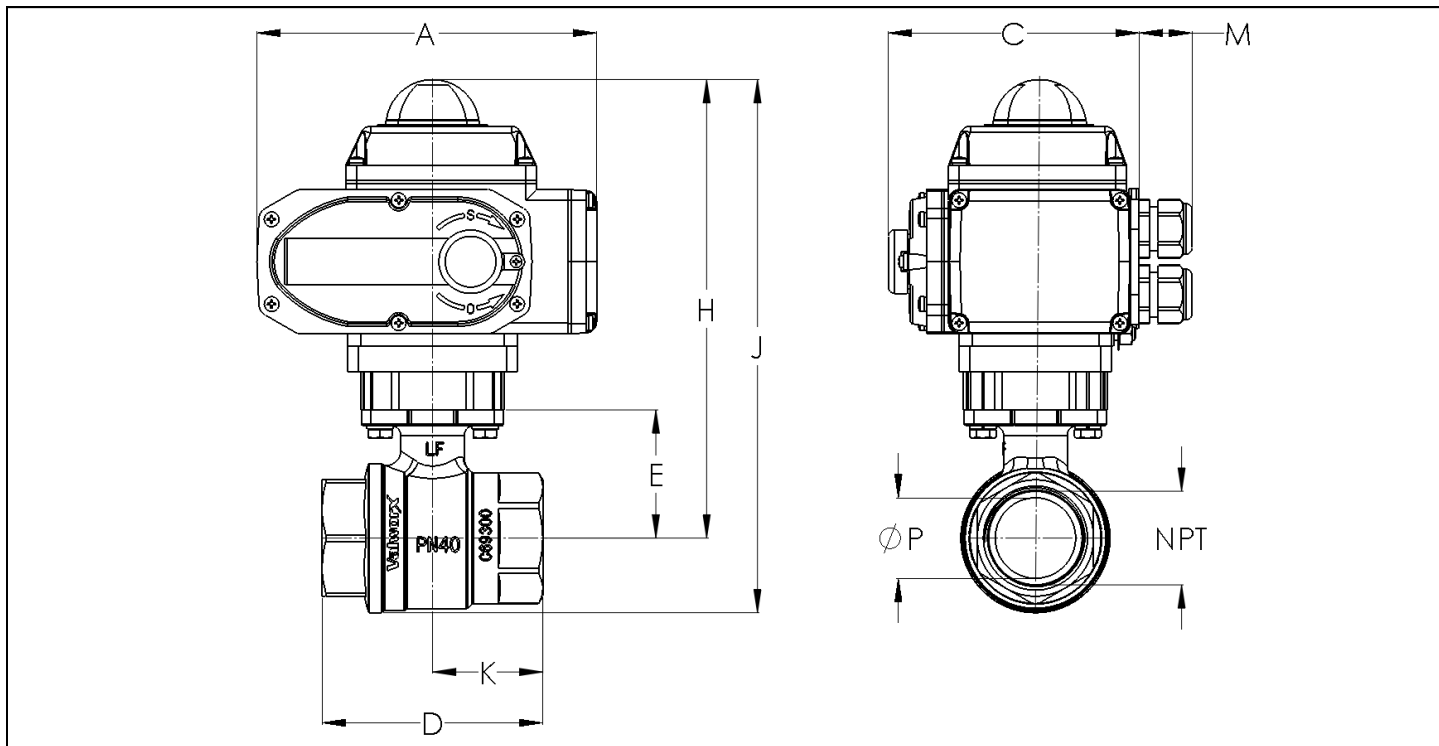
Valves with EPS Positioners AC Voltages



Valves with EPS Positioners DC Voltages



Dimensions:



Pipe Size (NPT)		A	C	D	E	H	J	K	M	P	Weight (AC/DC)
1/4	inch	6.4	4.7	1.9	0.9	7.2	7.7	0.9	1.0	0.4	6.5 / 9.7 lb
	mm	162.0	118.5	47.6	22.0	184.0	196.3	23.8	25.0	10.0	2.9 / 4.4 kg
3/8	inch	6.4	4.7	2.0	1.0	7.4	8.0	1.0	1.0	0.5	6.5 / 9.7 lb
	mm	162.0	118.5	51.4	26.5	188.5	202.8	25.7	25.0	12.7	2.9 / 4.4 kg
1/2	inch	6.4	4.7	2.5	1.3	7.6	8.3	1.3	1.0	0.6	6.5 / 9.7 lb
	mm	162.0	118.5	63.6	32.0	194.0	211.3	31.8	25.0	15.0	2.9 / 4.4 kg
3/4	inch	6.4	4.7	2.7	1.4	7.8	8.5	1.4	1.0	0.8	6.8 / 10.0 lb
	mm	162.0	118.5	69.0	34.8	196.9	216.8	34.5	25.0	19.0	3.1 / 4.5 kg
1	inch	6.4	4.7	3.3	1.8	8.1	9.1	1.7	1.0	1.0	7.4 / 10.6 lb
	mm	162.0	118.5	84.4	44.5	206.5	231.3	42.2	25.0	25.0	3.3 / 4.8 kg
1-1/4	inch	6.4	4.7	3.7	2.0	8.3	9.5	1.8	1.0	1.2	8.7 / 11.4 lb
	mm	162.0	118.5	92.7	49.5	211.5	241.0	46.3	25.0	31.0	3.9 / 5.2 kg
1-1/2	inch	6.4	4.7	4.1	2.4	8.6	10.1	2.1	1.0	1.5	10.2 / 12.9 lb
	mm	162.0	118.5	104.0	60.5	222.5	257.8	52.1	25.0	38.0	4.6 / 5.9 kg
2	inch	6.4	4.7	4.8	2.8	9.2	11.0	2.4	1.0	2.0	12.1 / 14.8 lb
	mm	162.0	118.5	121.0	72.0	234.0	279.0	60.6	25.0	50.0	5.5 / 6.7 kg
2-1/2	inch	6.4	4.7	6.1	3.4	9.8	12.0	3.0	1.0	2.5	15.5 / 18.7 lb
	mm	162.0	118.5	154.0	86.0	249.0	305.0	77.1	25.0	63.0	7.0 / 8.5 kg
3	inch	7.7	5.0	6.9	3.8	11.6	14.2	3.4	1.0	3.0	21.5 lb
	mm	196.5	126.0	175.0	97.0	293.5	360.5	87.6	25.0	76.0	10.1 kg