

**CLARK****MJ-SDC Multi-Jet Totalizing Water Meter**

1", 1-1/2" &amp; 2" With or Without Pulse/Reed Switch Output

**DESCRIPTION**

Model MJ-SDC meters are multi-jet, dry type totalizing water meters. They are an ideal choice for a range of municipal, private and industrial water metering applications.

A pulse/reed switch output of one pulse per 0.1, 1.0, 10 or 100 gallons is available.

MJ-SDC meters are accurate and reliable. They are produced in an ISO9001 certified production facility and are constructed in conformance with AWWA C708 standards. The cold water meters are certified by NSF to meet ANSI/NSF 61 for materials safety and ANSI/NSF 372 for lead free compliance and conform with lead free plumbing as defined by California, Vermont, Maryland and Louisiana state laws and the U.S Safe Drinking Water Act.

**SPECIFICATIONS****GENERAL**

Measuring Principle: Multi-Jet

Meter Type: Dry, magnetic coupling between rotor and register movement

Meter Sizes: 1", 1-1/2", 2"

Max Operating Temperature: Cold Water

Meter :122°F (50°C); Hot Water Meter 194°F (90°C)

Max Operating Pressure: 150 PSI

Proof Pressure: 300 PSI

Materials:

Main Casing: ECO Brass (C87850)

Couplings/Tailpieces: ECO Brass (C87850)

Other Materials: See Table 2

Registration Accuracy, with water <80°F (27°C):

Normal Test Flow Range (Table 1): The meter will register 98.5% to 101.5% of the water that passes through it.

At Minimum Test Flow (Table 1): The meter will register 97% to 103% of the water that passes through it.

Pressure Drop: <15 PSI , see curve (fig. 1)

Installation: Horizontal orientation recommended



Inlet Strainer: Internal and can be cleaned without breaking security seal

Casing Spud Connections: External straight threads according to ANSI/ASME B1.20.1. See Dimensions, Connections and Weights (Table 2) for details.

Accessories: Meter coupling (tailpiece) sets that include 2 couplings and 2 gaskets, are optionally available.

**OPTIONAL PULSE/REED SWITCH OUTPUT:**

The pulse emitter consists of a plastic housing with a reed switch that is closed when a magnet mounted on one of the meters register totalizers comes into its activation proximity. A 1.5 meter (59") length of 2-conductor wire 3.5 mm inch diameter is standard. One conductor has red insulation and one has black.

Max Voltage: 24V AC/DC

Max Current: 0.01 A

Gallons per pulse: 0.1, 1 (standard), 10, 100

Capacitance: 0.2 pF

Output Bounce Time: 0.01 second

Table 1- Operating Characteristics								
Model	Size	Safe Max. Flow GPM	Recommended Maximum Continuous Flow Rate GPM	Min. Test Flow GPM	Normal Test Flow Limits GPM	Min. Reading Gallons	Max. Reading Gallons	Gallons/Pulse Output Option
MJ-SDC	1"	50	25	.75	3-50	0.005	9,999,999.99	0.1, 1, 10, 100
MJ-SDC	1-1/2"	100	50	1.5	5-100	0.05	9,999,999.9	1, 10, 100
MJ-SDC	2"	160	80	2.0	8-160	0.05	9,999,999.9	1, 10, 100



MJ-SDC with Reed Switch Output

Table 2 Meter Parts		
1	Lid-Pin-Cap	
1.1	Lid	ABS
1.2	Pin	Brass
1.3	Head Ring	Brass
2	Sliding Gasket	HDPE
3	Register Assembly	
3.1	Register Chamber Gasket	EPDM
3.2	Register	PET, PC, SS, Rubber, Glass, ABS
3.2.1	Glass	Glass
3.2.2	Gasket	ABS
3.2.3	O-ring	Rubber
3.2.4	Indicator	PC, SS, Rubber, Glass, ABS
3.2.5	Central Gear	POM, Magnet
3.2.6	Register Chamber	PA757, POM, SiO <sub>2</sub>
3.2.7	Upper Protect Ring	Iron

Meter Parts		
3.3	Impeller Assembly	
3.3.1	Impeller	POM
3.3.2	Magnet	Ferrite
3.3.3	Bearing	SiO <sub>2</sub>
3.4	Measuring Chamber Assembly	
3.4.1	Measuring Chamber	ABS
3.4.2(A)	Measuring Chamber Shaft	SS, POM
3.4.2(B)	Measuring Chamber Shaft Tip	Carbon Fiber Reinforced Polyamide
3.4.3	Nut	Stainless Steel
3.4.4	Screw	Stainless Steel
3.4.5	Calibration Plate	ABS
3.5	Inside Strainer	PP
4	Body Parts	
4.1	Body	C87850
4.2	Inlet Strainer	PP
4.3	Calibration Bolt	PA
4.4	Calibration Gasket	EPDM
4.5	Calibration Screw	POM
5	Copper Wire	Copper
6	Seal	Lead, Plastic

fig. 3 Meter Parts

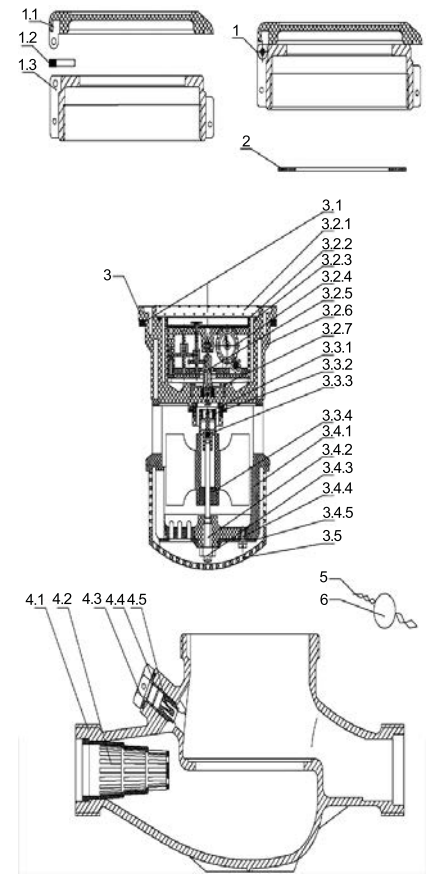


fig. 1- Pressure Drop

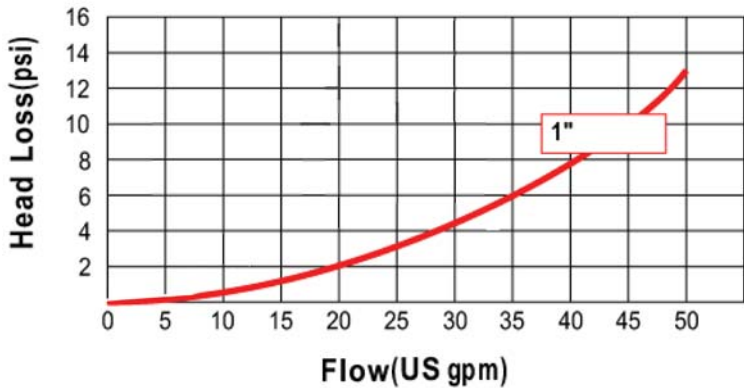
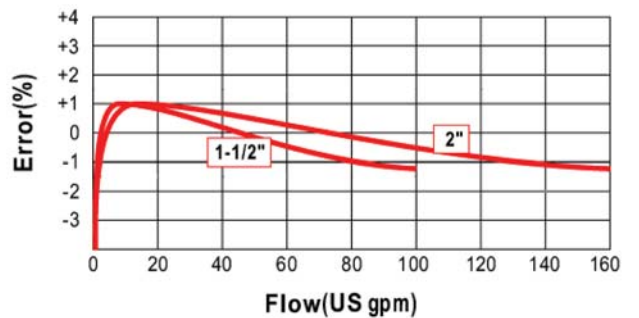
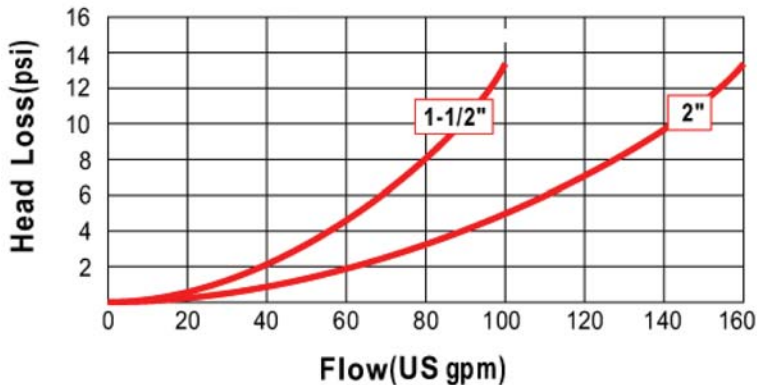
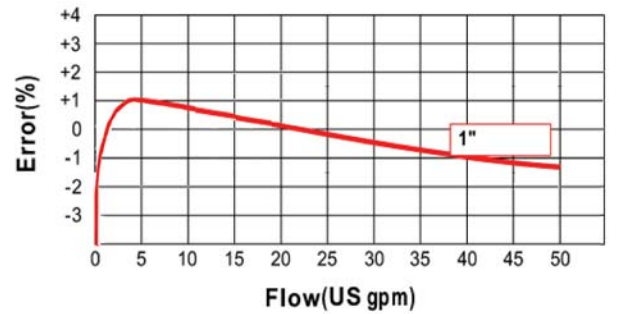
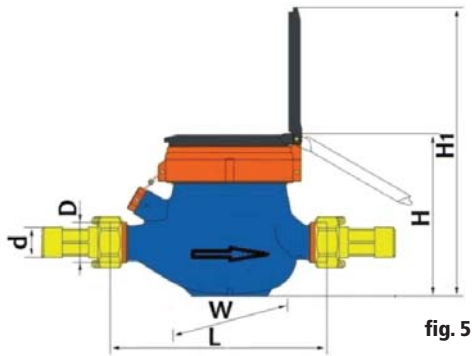


fig. 2- Accuracy



## DIMENSIONS, CONNECTIONS & WEIGHT



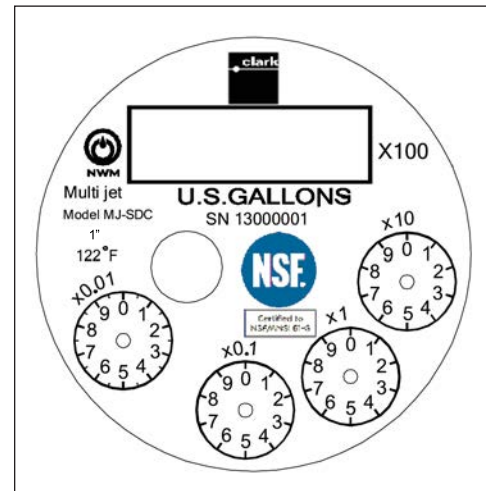
Model	Size	L Length Inches (mm)	W Width Inches (mm)	H Height Inches (mm)	H <sub>1</sub> Height Inches (mm)	D Spud Threads (NPS)	d NPT	Weight lbs (kgs)
MJ-SDC-1	1"	10-1/4 (260)	3.86 (98)	4.63 (117.5)	8.13 (206.5)	1-1/4"	1"	5.29 (2.4)
MJ-SDC-1.5	1.5"	11-7/8 (300)	4.80 (122)	5.57 (141.5)	10.10 (256.5)	2"	1-1/2"	11.20 (5.1)
MJ-SDC-2	2.0"	11-7/8 (300)	4.80 (122)	5.57 (141.5)	10.10 (256.5)	2-1/2"	2"	13.7 (6.2)

## ORDERING INFORMATION

**BUILD PART NUMBER FROM BELOW CHART: A-B**  
**EXAMPLE: MJ-SDC-1X1**

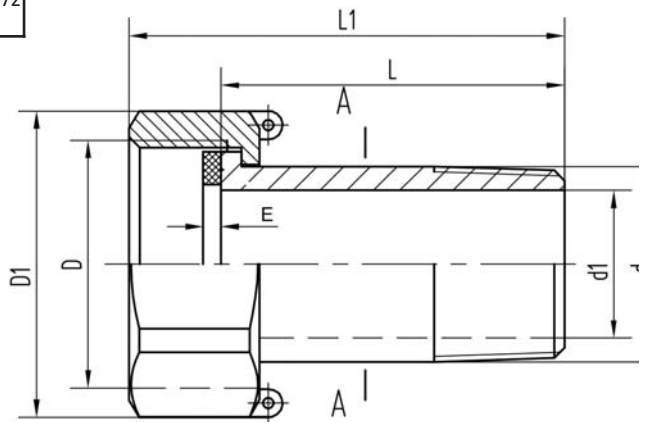
A Model	B Meter Type	B *Pulse Output
MJ-SDC-1 MJ-SDC-1.5 MJ-SDC-2	No entry = Cold Water Meter **H-NLB= Hot Water Meter	-- None x0.01= Pulse every .1 gal x0.1= Pulse every 1 gal <b>x1= Pulse every 10 gal (standard)</b> x10= Pulse every 100 gal *MJ-SDC-1 Only

\* Units are standardly available without pulse output and with a pulse output of one pulse every 10 gallons. Consult factory for other pulse output values, minimum order quantities may apply.  
 \*\* Hot water meters have not as yet been third party tested for NSF/ANSI 61 and NSF/ANSI 372 compliance



## METER COUPLINGS (TAILPIECES)

Dimension	Description	Dimension (mm) 1" Meter	Dimension (mm) 1 1/2" Meter	Dimension (mm) 2" Meter
d1	Hole Diameter	25	40	50
L	Coupling Length	58	62	70
L1	Length	73.5	78	92
d	Coupling Thread	1-11.5 NPT	1 1/2-11.5 NPT	2-11.5 NPT
D	Nut Thread	1 1/4-11.5 NPSM	2-11.5 NPSM	2 1/2-8 NPSM
D1	Dimension	51.8	70	89
E	Gasket Thickness	3	3.5	4



ECO-Connection tailpiece assemblies are certified by NSF to meet ANSI/NSF 61 for materials safety and ANSI/NSF 372 for lead free compliance

Model	Description	Weight
<b>ECO-Connection 1"</b>	Contractor Coupling Pack includes 2 ea. tailpiece and nut assemblies and 2 ea. EPDM gaskets	1.04 lb
<b>ECO-Connection 1.5"</b>	Contractor Coupling Pack includes 2 ea. tailpiece and nut assemblies and 2 ea. EPDM gaskets	2.32 lb
<b>ECO-Connection 2"</b>	Contractor Coupling Pack includes 2 ea. tailpiece and nut assemblies and 2 ea. EPDM gaskets	4.4 lb