

Lightest aerospace  
potable water  
MOVs on the market



INTERNATIONAL  
**Water·Guard**



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**MOV**  
FEATHERWEIGHT

MOTOR OPERATED VALVE

International Water-Guard Industries Inc. (IWG) as the world leader in onboard UV potable water treatment and water protection on aircraft continues introducing innovative water system solutions to the industry. IWG's mission is to develop water system components that improve performance and contribute to a reduction in the weight of an aircraft for OEM aircraft manufacturers, commercial airlines and completion centers worldwide.

We are proud to introduce the "Featherweight" (FW) Motor Operated Valve series. It is based on a robust design that has over 20,000 units in service today in business jet water systems. The FW valves are a lighter weight derivative of the in-service valve achieved by redesigning the actuator housing assembly into a single part. IWG is offering the FW valves at competitive prices with industry best lead-times.

# PHYSICAL

## Overall Dimensions:

- High: 4.2" (107mm)
- Wide: 3.2" (81mm)
- Deep: 2.6" (51mm)
- Net Weight Dry: 1.2-1.7 lb (0.55-0.77 kg)
- Hydraulic Interface: AS1656, AS33514 (Clamshell & Straight Thread)
- Port Configuration and Size: 2, 3 or 4 way 3/8", 1/2", 3/4"
- Positions: 2 or 3.

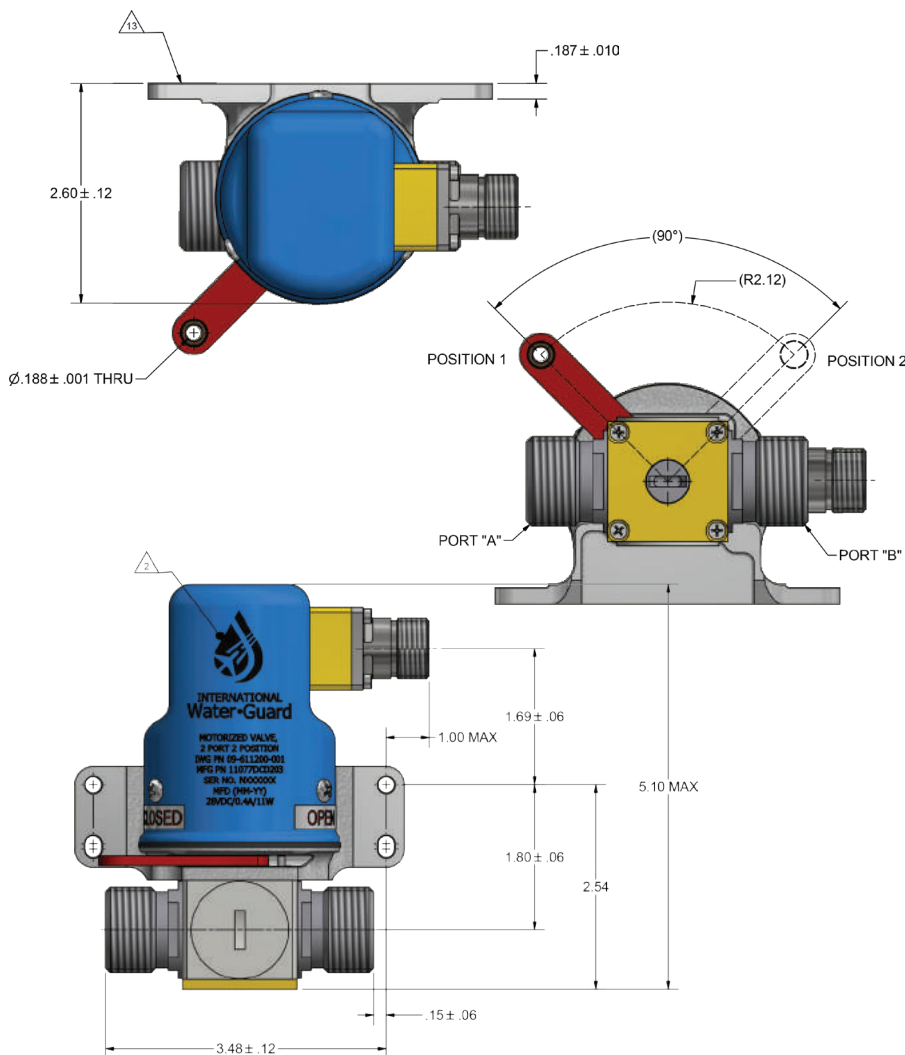
# ELECTRICAL

- Input Voltage: 16-32 VDC
- Power: nominal 11W
- Nominal Current Draw: 0.4A (2.5A Stall)
- Electrical Interface: D38999/20MB35P

*This valve series is a derivative of a reliable in-service aerospace MOV designed specifically for potable water applications of which there are already over 20,000 in service.*

# PERFORMANCE

- Flow Rate vs Delta P: 2 gpm (7.4 lpm) MIN at 0.5 psid MAX
- Temperature, Non-Operational: -40F to 158F (-40C to 70C)
- Pressure, Operational: 60 psig MAX
- Rotation Time: 0.1 -1.5 secs
- Torque: nominal 15 in-ibf (1.7 Nm), stall 45 in-ib (5.1 Nm)
- MTBF: 45,000 hours
- Protection: self-protecting electronic clutch with original command memory, 115 VAC input protection



## QUALIFICATION PLAN MATRIX

Test	DO-160G	Method
Endurance	n/a	Test
Burst Pressure	n/a	Similarity
Proof Pressure	n/a	Test
Temperature	Section 4, Category A3	Test
Altitude	Section 4, Category A3	Test
Temperature Variation	Section 5, Category B	Test
Operational Shock & Crash Safety	Section 7, Category B	Test
Vibration	Section 8, Category S Curve C	Test
Humidity	Section 6, Category A	Test
Waterproofness	Section 10, Category W	Test
Fluids Susceptibility	Section 11, Category F	Analysis
Fungus Resistance	Section 13, Category F	Analysis
Magnetic Affects	Section 15, Class A	Test
Power Input	Section 16, Category Z	Similarity
Voltage Spike	Section 17, Category A	Similarity
Audio Frequency Conducted Susceptibility	Section 18, Category Z	Similarity
Induced Signal Susceptibility	Section 19, Category ZC	Similarity
Radio Frequency Suceptibility	Section 20, Category T	Similarity
Emissions of Radio Frequency Energy	Section 21, Category M	Test
Lighting Induced Transient Effects	Section 22, Category A3E3XX	Similarity
Electrostatic Discharge	Section 25 Category A	Test
Fire, Flammability	Section 26, Category C	Analysis