

Engineering Specification

Job Name _____

Contractor _____

Job Location _____

Approval _____

Engineer _____

Contractor's P.O. No. _____

Approval _____

Representative _____

LEAD FREE*

Series LFEMVII-6400SS

2-Piece, Standard Port, Lead Free* Electric Motor Valves

Sizes: 1/4" – 2"

The LFEMVII-6400SS series is a 2-Piece, Standard Port, Lead Free, Motorized Ball Valve. The LFEMVII -6400SS consist of an electrically actuated motor available in 115 or 24 VAC models and a Copper Silicon alloy body with Stainless Steel ball and stem available in 1/4" to 2". Features include a visual position indicator, manual override, and the ability to be mounted in with the actuator either in the vertical upright or horizontal plane. The LFEMVII-6400SS ball valve features a 316 stainless steel ball and stem, PTFE seats, stem packing, thrust washer and an adjustable packing nut. The LFEMVII-6400SS features Lead Free* construction to comply with Lead Free* installation requirements. This high quality product offers a reliable method to control the flow of steam, water, or air. This product is commonly used in commercial and industrial applications.

Features

- Ready to connect Actuator (no special wiring required)
- 316 stainless steel ball and stem bottom loaded blowout proof stem
- PTFE seats
- Adjustable PTFE packing
- Hole in stem slot of each ball valve to equalize pressure between the body cavity and the flow stream
- 115 VAC or 24 VAC motor
- 50% duty cycle 1/4" - 2"
- Standard auxiliary DPDT switches, 5 amps rating @ 115 VAC
- External plug-in connectors for simplified wiring and easy serviceability.
- High visibility position indicator.
- Manual override standard
- Motor can be changed without draining system
- Completely assembled and mountable in vertical or upright horizontal position
- Integrated anti-condensation heater
- Electronic Torque Limiter
- NEMA 4X Enclosure

Specifications

A 2-piece, standard port, Lead Free* ball valve with electrically actuated motor to be installed as indicated on the plans. The electric motor shall have manual override, position indicator, be available in 115 VAC or 24 VAC, with external plug-in connectors for simplified wiring. Factory adjusted cam for easy alignment of the ball in open or close position. Lead Free* electric Motor Valve shall be constructed using Lead Free* materials. Lead Free LFEMVII-6400SS shall comply with state codes and standards, where applicable, requiring reduced lead content.



LFEMVII-6400SS

The ball valve shall have a 316 stainless steel ball and stem, PTFE seats, and adjustable packing. Top loaded stems or valves without adjustable packing are not acceptable. Valves rated no less than 600psi (41 bar) WOG/100psi (7 bars) WSP 1/4" – 2". Supply valves tested, mounted, and fully assembled for installation. Valve shall be a Watts Series LFEMVII-6400SS.

Pressure – Temperature

Maximum Temperature: 131°F (55°C)

Minimum Temperature: 14°F (-10°C)

1/4" – 2"

600psi (41 bar) WOG

100psi (7 bar) WSP

Operating Data

115 VAC

0.52 amps max @ 10 sec. cycle time 1/4" – 2"

0.52 amps max @ 67 sec. cycle time 1/4" – 2"

24 VAC

2.5 amps max @ 10 sec. cycle time 1/4" – 2"

2.5 amps max @ 68 sec. cycle time 1/4" – 2"

Applications

- Zone control valve for space heating with hot water or steam
- Zone control valve for air conditioning with chilled water
- Remotely operated valve for control of process liquids or gases (ie: steam, water or air)
- Drain or blow-down valve to eliminate water from compressed air lines and systems

NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

NOTICE

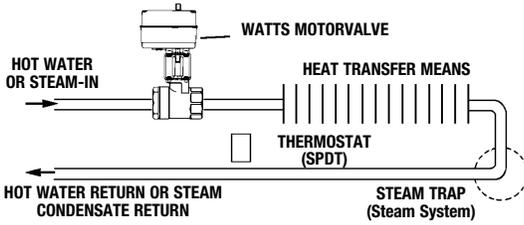
Inquire with governing authorities for local installation requirements

*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.

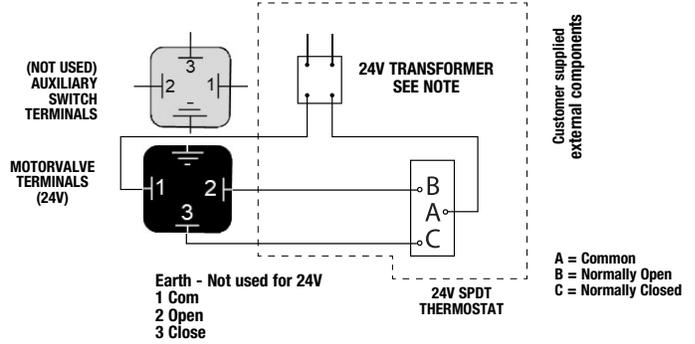
Sample Installation #1

Use of Watts Electric Motorvalve as a zone control for hot water or steam space heating. Valve opens upon temperature drop. Closes when demand for heat is satisfied.



Wiring Diagram #1 (1/4" - 2")

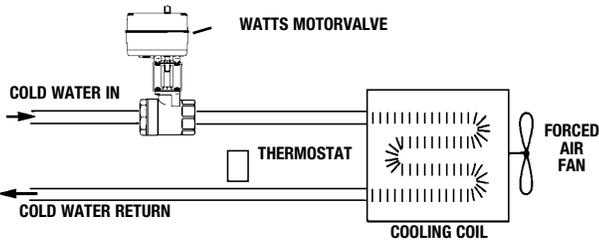
Electrical diagram with 24V control circuit, SPDT thermostat.



NOTE: 1/4" - 2" EMVII-6400SS-24-40 will operate with a 40 VA transformer. Thermostat must be capable of handling amp rating at stall.

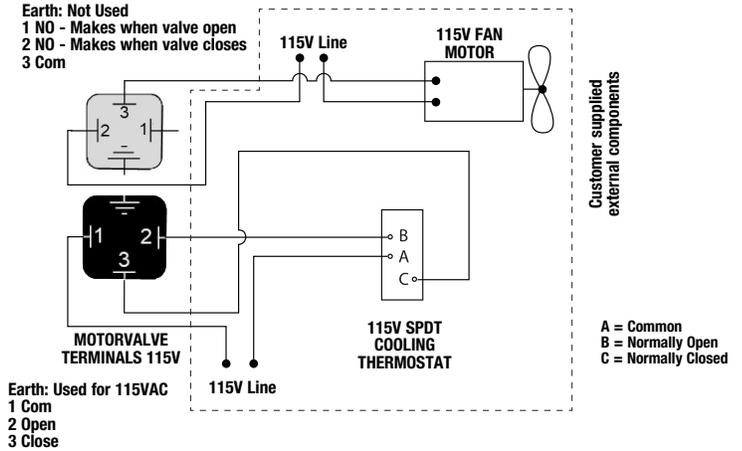
Sample Installation #2

Cooling with refrigerated water and operating forced air fan with auxiliary switch. Motorvalve opens and starts blower upon temperature rise. Shuts off blower and closes when temperature drops to thermostat setting.



Wiring Diagram #2 (1/4" - 2")

Electrical diagram with 115V control circuit, 115V Motorvalve, line voltage SPDT cooling thermostat, 115V blower.



POWER CONNECTOR (LABELED "POWER")

Earth: Not Used for 24V

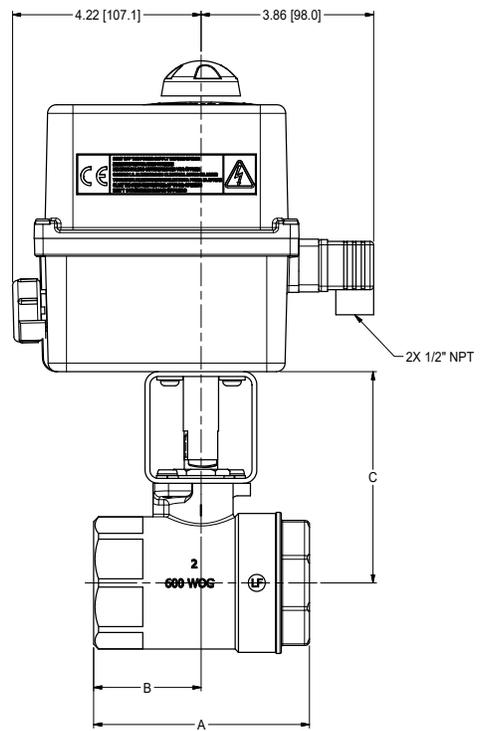
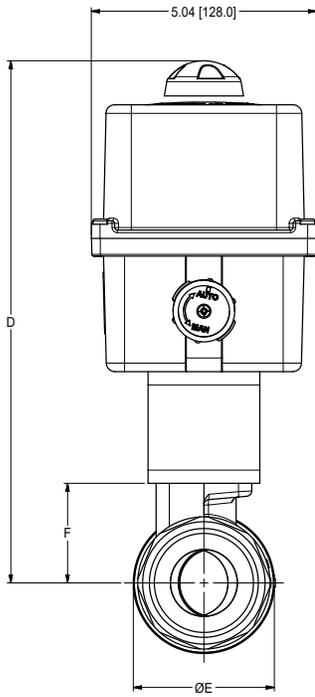
- 1 Com
- 2 Open
- 3 Close

AUXILIARY SWITCHES CONNECTOR (LABELED "ECD-1A")

Earth: Not Used

- 1 NO - Makes when valve opens
- 2 NO - Makes when valve closes
- 3 Com

Sizes 1/4"-2"



Dimensions – Weights

| SIZE IN | OPERATOR VOLTAGE (AC) | OPERATOR CYCLE (SEC) | DIMENSIONS | | | | | | | | | | | | CV FACTOR | | WEIGHT | |
|---------------------|--------------------------|-------------------------|------------|-----|---------|----|--------|-----|---------|-----|--------|----|---------|----|-------------------|-------|--------|--|
| | | | A | | B | | C | | D | | E | | F | | LBS | KG | | |
| | | | IN | MM | IN | MM | IN | MM | IN | MM | IN | MM | IN | MM | IN | MM | | |
| 1/4, 3/8, 1/2 | 115 | 67 | 2 1/4 | 57 | 1 1/8 | 29 | 3 1/16 | 78 | 10 1/16 | 255 | 1 1/4 | 32 | 9/16 | 14 | 1/4 3/8 1/2 | 6.30 | 2.9 | |
| | 115 | 10 | | | | | | | | | | | | | | | | |
| | 24 | 10 | | | | | | | | | | | | | | | | |
| | 24 | 68 | | | | | | | | | | | | | | | | |
| 3/4 | 115 | 67 | 2 7/8 | 72 | 1 7/16 | 37 | 3 1/4 | 83 | 10 1/4 | 260 | 1 1/2 | 38 | 3/4 | 19 | 24.5 | 6.60 | 3.0 | |
| | 115 | 10 | | | | | | | | | | | | | | | | |
| | 24 | 10 | | | | | | | | | | | | | | | | |
| | 24 | 68 | | | | | | | | | | | | | | | | |
| 1 | 115 | 67 | 3 7/16 | 87 | 1 11/16 | 43 | 3 7/16 | 87 | 10 3/8 | 264 | 1 7/8 | 48 | 15/16 | 24 | 33.5 | 7.42 | 3.4 | |
| | 115 | 10 | | | | | | | | | | | | | | | | |
| | 24 | 10 | | | | | | | | | | | | | | | | |
| | 24 | 68 | | | | | | | | | | | | | | | | |
| 1 1/4 | 115 | 67 | 3 15/16 | 100 | 2 | 51 | 4 3/16 | 106 | 11 1/8 | 283 | 2 5/16 | 59 | 1 11/16 | 43 | 45.5 | 8.27 | 3.8 | |
| | 115 | 10 | | | | | | | | | | | | | | | | |
| | 24 | 10 | | | | | | | | | | | | | | | | |
| | 24 | 68 | | | | | | | | | | | | | | | | |
| 1 1/2 | 115 | 67 | 4 5/16 | 110 | 2 3/16 | 56 | 4 3/8 | 111 | 11 5/16 | 288 | 2 3/4 | 70 | 1 7/8 | 48 | 73.0 | 9.41 | 4.3 | |
| | 115 | 10 | | | | | | | | | | | | | | | | |
| | 24 | 10 | | | | | | | | | | | | | | | | |
| | 24 | 68 | | | | | | | | | | | | | | | | |
| 2 | 115 | 67 | 4 7/8 | 124 | 2 7/16 | 62 | 4 3/4 | 121 | 11 3/4 | 298 | 3 1/8 | 79 | 2 1/4 | 57 | 102.0 | 11.43 | 5.2 | |
| | 115 | 10 | | | | | | | | | | | | | | | | |
| | 24 | 10 | | | | | | | | | | | | | | | | |
| | 24 | 68 | | | | | | | | | | | | | | | | |

Ordering Chart

| ORDERING CODE | DESCRIPTION | SIZE (INCHES) | OPERATOR VOLTAGE (AC) | OPERATOR CYCLE (SECONDS) |
|---------------|---------------------------|---------------|-----------------------|--------------------------|
| 0123854 | 1/4 LFEMVII6400SS 115-10 | 1/4 | 115 | 10 |
| 0123830 | 3/8 LFEMVII6400SS115-10 | 3/8 | 115 | 10 |
| 0123832 | 1/2 LFEMVII6400SS115-67 | 1/2 | 115 | 67 |
| 0123836 | 1/2 LFEMVII6400SS24-68 | 1/2 | 24 | 68 |
| 0123831 | 1/2 LFEMVII6400SS115-10 | 1/2 | 115 | 10 |
| 0123835 | 1/2 LFEMVII6400SS24-10 | 1/2 | 24 | 10 |
| 0123838 | 3/4 LFEMVII6400SS115-67 | 3/4 | 115 | 67 |
| 0123840 | 3/4 LFEMVII6400SS24-68 | 3/4 | 24 | 68 |
| 0123837 | 3/4 LFEMVII6400SS115-10 | 3/4 | 115 | 10 |
| 0123839 | 3/4 LFEMVII6400SS24-10 | 3/4 | 24 | 10 |
| 0123842 | 1 LFEMVII6400SS115-67 | 1 | 115 | 67 |
| 0123844 | 1 LFEMVII6400SS24-68 | 1 | 24 | 68 |
| 0123841 | 1 LFEMVII6400SS115-10 | 1 | 115 | 10 |
| 0123843 | 1 LFEMVII6400SS24-10 | 1 | 24 | 10 |
| 0123846 | 1 1/4 LFEMVII6400SS115-67 | 1 1/4 | 115 | 67 |
| 0123848 | 1 1/4 LFEMVII6400SS24-68 | 1 1/4 | 24 | 68 |
| 0123845 | 1 1/4 LFEMVII6400SS115-10 | 1 1/4 | 115 | 10 |
| 0123847 | 1 1/4 LFEMVII6400SS24-10 | 1 1/4 | 24 | 10 |
| 0123852 | 1 1/2 LFEMVII6400SS115-67 | 1 1/2 | 115 | 67 |
| 0123851 | 1 1/2 LFEMVII6400SS24-68 | 1 1/2 | 24 | 68 |
| 0123849 | 1 1/2 LFEMVII6400SS115-10 | 1 1/2 | 115 | 10 |
| 0123850 | 1 1/2 LFEMVII6400SS24-10 | 1 1/2 | 24 | 10 |
| 0123833 | 2 LFEMVII6400SS350 24-68 | 2 | 24 | 68 |
| 0123834 | 2 LFEMVII6400SS350 115-10 | 2 | 115 | 10 |
| 0123853 | 2 LFEMVII6400SS350 24-10 | 2 | 24 | 10 |
| 0123855 | 2 LFEMVII6400SS350 115-68 | 2 | 115 | 68 |

For additional information, visit our website at: www.watts.com

