



# EPM Series Reversing Electric Actuators

**Innovative Quarter-Turn Actuators that Look the Same on the Outside—with the **Hayward Difference** on the INSIDE!**

## Overview

### On/Off and Proportional Control Models

Designed for use with all ball and butterfly valves up to 24" in size and torque outputs from 300-13,500 in. lb, all on/off and proportional control models feature a Modular Design and Superior Gear Design as standard.

### Unique EPM Standard Features:

#### Modular Design

All EPM Series actuators utilize modular PC boards designed and manufactured in North America. By eliminating 90% of the internal wiring found in most actuation products, we're producing a higher quality, more reliable product that is easier to install, operate, and maintain.

#### Superior Gear Design

All EPM Series actuators employ an epicyclic gear design to provide tough, dependable torque transmission in a compact, quiet, smooth package.

#### Thermal Management

Our Proportional Control Actuators utilize proprietary, microprocessor-based algorithms to automatically control motor temperatures in real time with close-loop feedback.

#### Data Logging and Diagnostics

Our Proportional Control Actuators respond to a variety of control signals which are user-selectable through a simple joystick/menu interface. The microprocessor-based control monitors and records operating parameters that can be used for process diagnostics, advanced alarming functions or maintenance scheduling.

### Proportional Control Models

All EPM Series Proportional Control Models feature added Thermal Management and Data Logging and Diagnostics capabilities not found on the basic EPM on/off models.

### Other Standard Features

- Four Limit Switches (Two Auxiliary)
- Internal Low Power Heater
- NEMA 4/4X Enclosure
- Position Indicator
- Clutchless Manual Override
- Self-Locking Drive
- Permanently Lubricated
- Thermal Overload Protection
- CE and CSA Approved
- ISO 5211 Mounting Base
- Choice of Voltages: 12 VAC/DC, 24VAC/DC, 120 VAC, 230 VAC

### Options\*

- Positioners
- Extended Duty Motors
- 0-90°-180°
- Feedback Potentiometer
- Two Additional Auxiliary Switches
- Local Control Station
- Power Supply Flexibility—3 Phase w/230 VAC, 380 VAC, or 460 VAC

\*Not available on all models



# Technical Information

## Actuator Specifications



	EPM2*	EPM3	EPM8	EPM13	EPM35	EPM130
Torque Output (in. lb/Nm)	135/15	300/35	800/90	1300/150	3500/400	13500/1500
Supply Voltage	12 VDC 24 VDC 120 VAC 230 VAC	12 VAC/DC 24 VAC/DC 120 VAC 230 VAC	12 VAC/DC 24 VAC/DC 120 VAC 230 VAC	12 VAC/DC 24 VAC/DC 120 VAC 230 VAC	12 VAC 24 VAC 120 VAC 230 VAC	120 VAC 230 VAC
Duty Cycle	12 V & 24 V—75% 120 V & 230 V— 25% to 50%	12 V & 24 V—75% 120 V & 230 V— 25% to 50% Proportional Control—75%	25% to 50% On/Off Control, Proportional Control 100% Managed			
Thermal Overload	Standard					
Cycle Time—Secs. @ 90°	8	12	15	22	16	46
Auxiliary Limit Switch Rating	3A @ 250 V			10A @ 250 V		
Conduit Entry (2)	1/2" NPT			3/4" NPT		
Enclosure	NEMA 4/4X					
Enclosure Material	Aluminum Alloy Powder Coated					
Maximum Inrush Current	5.1A @ 12 VDC 5.4A @ 24 VDC 1.5A @ 120 VAC 1.0A @ 230 VAC	3.0A @ 12 VAC/DC 0.8A @ 24 VAC/DC 1.5A @ 120 VAC 1.0A @ 230 VAC	5.0A @ 12 VAC/DC 5.0A @ 24 VAC/DC 3.0A @ 120 VAC 1.5A @ 230 VAC	5.0A @ 12 VAC/DC 5.0A @ 24 VAC/DC 3.0A @ 120 VAC 1.5A @ 230 VAC	8.5A @ 12 VAC 8.0A @ 24 VAC 3.1A @ 120 VAC 1.5A @ 230 VAC	14.0A @ 120 VAC 3.6A @ 230 VAC
Running Current	1.7A @ 12 VDC 1.8A @ 24 VDC 0.5A @ 120 VAC 0.3A @ 230 VAC	0.5A @ 12 VAC/DC 0.6A @ 24 VAC/DC 0.5A @ 120 VAC 0.3A @ 230 VAC	3.4A @ 12 VAC/DC 3.0 A @ 24 VAC/DC 1.0A @ 120 VAC 0.5A @ 230 VAC	3.4A @ 12 VAC/DC 3.0 A @ 24 VAC/DC 1.0A @ 120 VAC 0.5A @ 230 VAC	12.0A @ 12 VAC 6.0A @ 24 VAC 1.3A @ 120 VAC 0.5A @ 230 VAC	4.0A @ 120 VAC 2.0A @ 230 VAC
Weight (lb/kg)	5/2	5/2	25/11	25/11	49/22	80/36

\*On/Off Only

## Ball Valve Selection Chart\*

Size	True Union Ball Valve	Three-Way Ball Valve
1/2" – 2"	EPM2 / EPM3	EPM2 / EPM3
2-1/2" – 3"	EPM3	EPM3
4" – 6"	EPM3	EPM8

\*Actuator size selections based on clean water at 70°F

**Please Note:** All EPM, EPS, and EPL Series Reversing Electric Actuators are considerably heavier than those typically used with plastic ball and butterfly valves, and they must be supported independently of the valves on which they are mounted. The weight must not be borne by the valve or piping. Please consult the factory if you need help with your particular application.

## Butterfly Valve Selection Chart\*

Size	Butterfly Valve
1-1/2", 2", 3"	EPM3
4", 6"	EPM8
8"	EPM13
10", 12"	EPM35
14" – 24"	EPM130

\*Actuator size selections based on clean water at 70°F