

# F6125HDU, 5", 2-Way Butterfly Valve

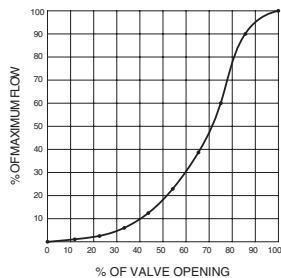
Resilient Seat, 304 Stainless Steel Disc



### Technical Data

|                                 |   |
|---------------------------------|---|
| Service                         | chilled, hot water, up to 60% glycol    |
| Flow Characteristic             | modified equal percentage               |
| Controllable Flow Range         | 90° rotation                            |
| Size [mm]                       | 5" [125]                                |
| End Fitting                     | for use with ansi class 125/150 flanges |
| Body                            | ductile iron ASTM A536                  |
| Body Finish                     | epoxy powder coated                     |
| Stem Packing                    | EPDM (lubricated)                       |
| Seat                            | EPDM                                    |
| Shaft                           | 416 stainless steel                     |
| Bushings                        | RPTFE                                   |
| Disc                            | 304 stainless steel                     |
| Body Pressure Rating [psi]      | ANSI 125, standard class B              |
| Number of Bolt Holes            | 8                                       |
| Lug Threads                     | 3/4-10 UNC                              |
| Media Temperature Range (Water) | -22°F to 250°F [-30°C to 120°C]         |
| Close-Off Pressure              | 50 psi                                  |
| Rangeability                    | 10:1 (for 30° to 70° range)             |
| Maximum Velocity                | 12 FPS                                  |
| Cv                              | 1022                                    |
| Weight                          | 19 lb [8.6 kg]                          |
| Leakage                         | 0%                                      |
| Servicing                       | maintenance free                        |

### Flow Pattern



### Application

Valve is designed for use in ANSI flanged piping systems to meet the needs of bi-directional high flow HVAC hydronic applications with 0% leakage. Typical applications include cooling tower bypass, primary flow change-over systems, and large air handler coil control.

### Jobsite Note

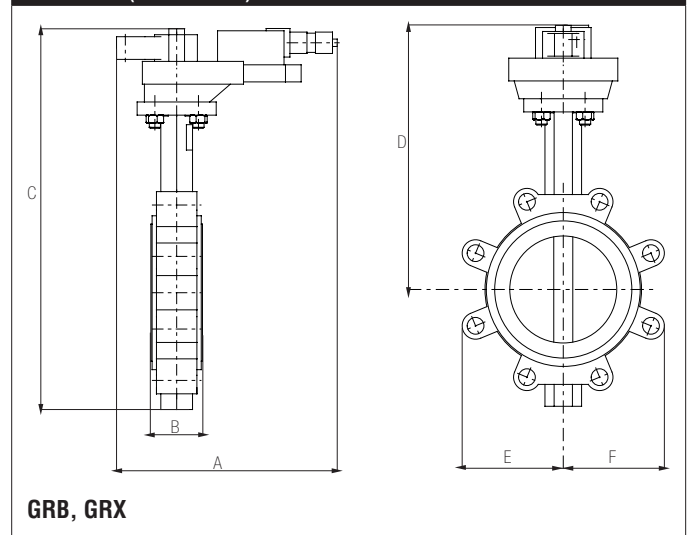
Valve assembly should be stored in a weather protected area prior to installation. Reference the butterfly valve installation instruction for additional information.

| Flow/Cv |        |        |        |        |        |        |        |        |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|
| Cv 10°  | Cv 20° | Cv 30° | Cv 40° | Cv 50° | Cv 60° | Cv 70° | Cv 80° | Cv 90° |
| 0.5     | 29     | 61     | 133    | 237    | 392    | 620    | 930    | 1022   |

### Suitable Actuators

|          | Non-Spring     |
|----------|----------------|
| F6125HDU | GRB(X), PRB(X) |

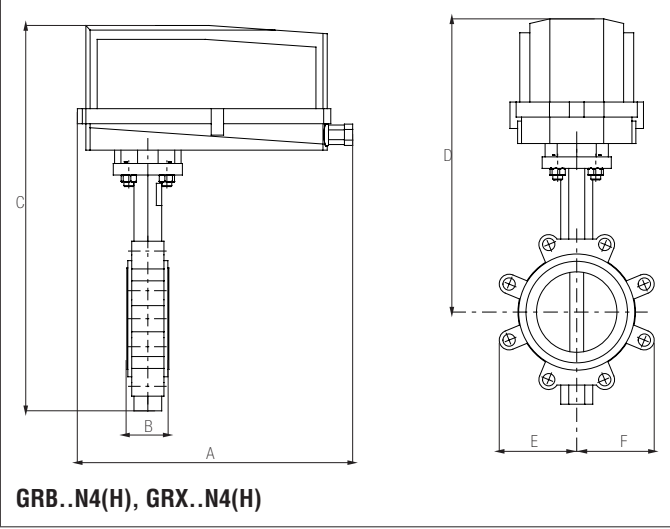
### Dimensions (Inches [mm])



| A               | B            | C           | D               | E           | F |
|-----------------|--------------|-------------|-----------------|-------------|---|
| 15.51"<br>[394] | 2.21" [56.1] | 11.8" [300] | 11.81"<br>[300] | 4.48" [114] |   |

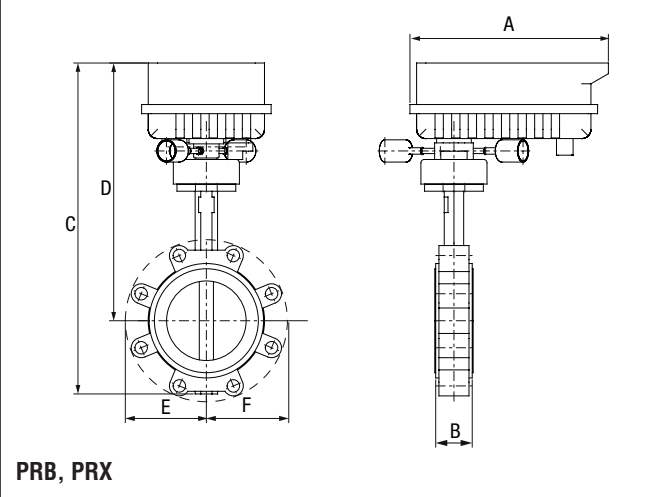
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**Dimensions (Inches [mm])**



| A           | B            | C            | D            | E           | F |
|-------------|--------------|--------------|--------------|-------------|---|
| 14.1" [358] | 2.21" [56.1] | 19.57" [497] | 15.00" [381] | 4.48" [114] |   |

**Dimensions (Inches [mm])**

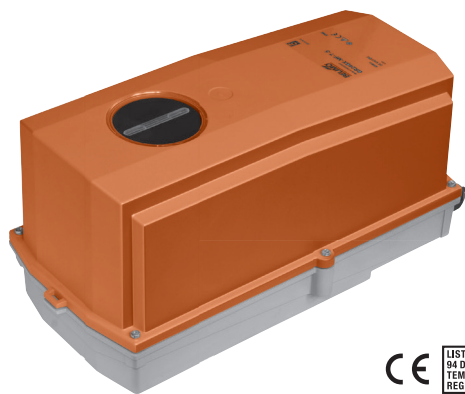


| A              | B            | C              | D              | E           | F | J            |
|----------------|--------------|----------------|----------------|-------------|---|--------------|
| 11.95" [303.5] | 2.21" [56.1] | 19.93" [506.2] | 15.52" [394.2] | 4.48" [114] |   | 30.87" [784] |

# GRX24-MFT-T N4

NEMA 4X, Modulating Control, Non-Spring Return, Direct Coupled,  
24 V, Multi-Function Technology®

**BELIMO**



## Technical Data

|                               |   |
|-------------------------------|---|
| Power Supply                  | 24 VAC, ±20%, 50/60 Hz, 24 VDC, ±10%  |
| Power Consumption Running     | 8 W   |
| Power Consumption Holding     | 2.5 W   |
| Transformer Sizing            | 11 VA (class 2 power source)  |
| Electrical Connection         | terminal block  |
| Overload Protection           | electronic throughout 0° to 90° rotation  |
| Operating Range Y             | 2 to 10 VDC, 4 to 20 mA w/ ZG-R01 (500 Ω, 1/4 W resistor), variable (VDC, floating point, on/off) |
| Input Impedance               | 600 Ω   |
| Feedback Output U             | 2 to 10 VDC, 0.5 mA max, VDC variable   |
| Angle of Rotation             | 90°, adjustable with mechanical stop  |
| Direction of Rotation (Motor) | reversible with built-in switch   |
| Position Indication           | reflective visual indicator (snap on)   |
| Manual Override               | under cover   |
| Running Time (Motor)          | default 150 sec, variable 90...150 sec  |
| Ambient Humidity              | 5 to 100% RH (UL Type 4)  |
| Ambient Temperature Range     | -22°F to 122°F [-30°C to 50°C]  |
| Storage Temperature Range     | -40°F to 176°F [-40°C to 80°C]  |
| Housing                       | NEMA 4X, IP66/67, UL Enclosure Type 4X  |
| Housing Material              | polycarbonate   |
| Agency Listings†              | cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC        |
| Noise Level (Motor)           | <45 dB (A)  |
| Servicing                     | maintenance free  |
| Quality Standard              | ISO 9001  |
| Weight                        | 9.9 lb [4.5 kg]   |
| Degree of Protection IEC/EN   | IP66/67   |

†Rated Impulse Voltage 800V, Type of action 1.AA, Control Pollution Degree 3

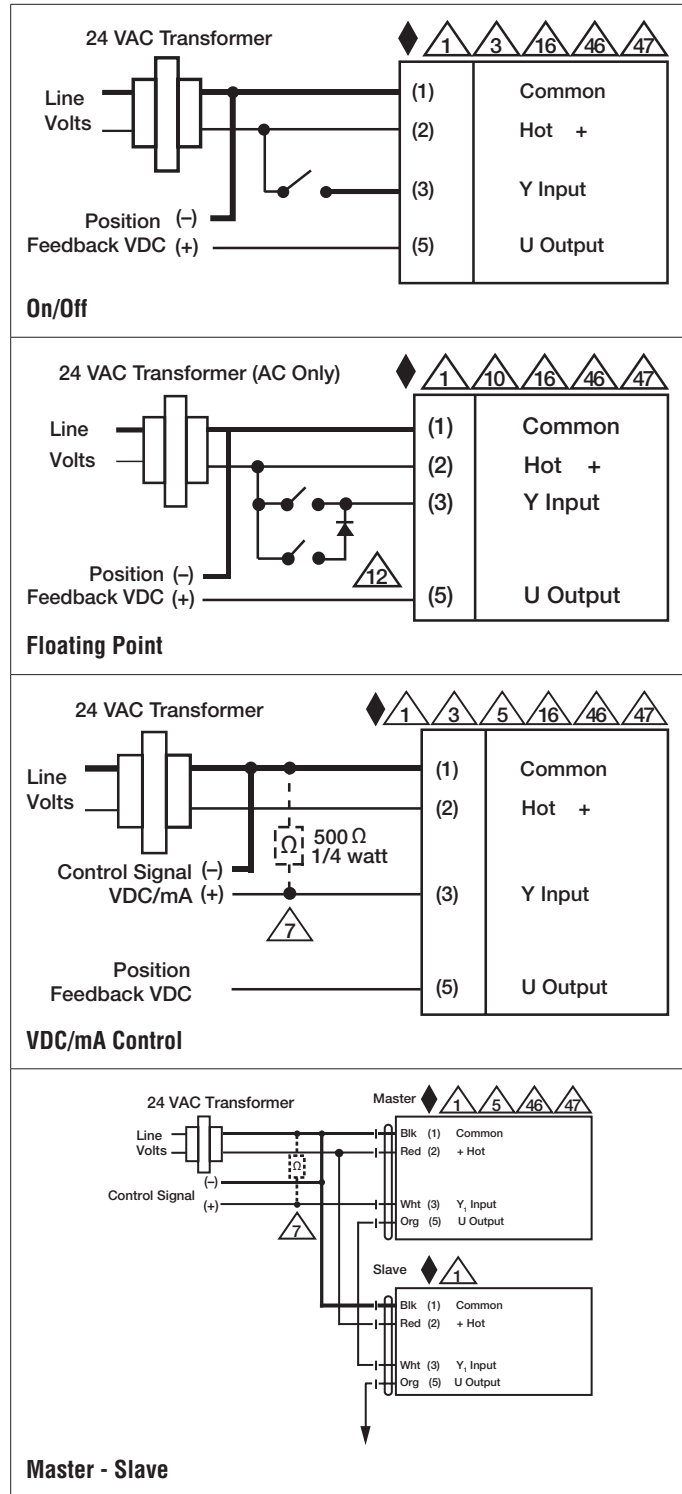
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**Wiring Diagrams**

**INSTALLATION NOTES**

- Provide overload protection and disconnect as required.
- Actuators may also be powered by 24 VDC.
- Only connect common to negative (-) leg of control circuits.
- A 500 Ω resistor (ZG-R01) converts the 4 to 20 mA control signal to 2 to 10 VDC.
- Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 VAC line.
- For triac sink the Common connection from the actuator must be connected to the Hot connection of the controller. Position feedback cannot be used with a triac sink controller; the actuator internal common reference is not compatible.
- IN4004 or IN4007 diode. (IN4007 supplied, Belimo part number 40155).
- Actuators are provided with a numbered screw terminal strip instead of a cable.
- Actuators may be controlled in parallel. Current draw and input impedance must be observed.
- Master-Slave wiring required for piggy-back applications. Feedback from Master to control input(s) of Slave(s).
- Meets cULus requirements without the need of an electrical ground connection.

**WARNING! LIVE ELECTRICAL COMPONENTS!**  
 During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.



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