

# B265 Technical Data Sheet

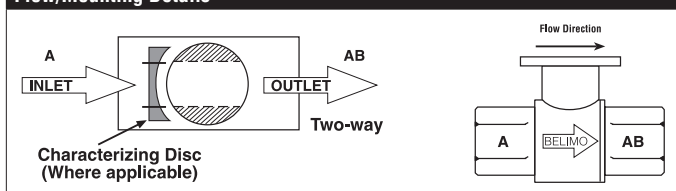
## Stainless Steel Ball and Stem



### Technical Data

|                                |                                      |
|--------------------------------|--------------------------------------|
| Fluid                          | chilled, hot water, up to 60% glycol |
| Flow characteristic            | equal percentage                     |
| Controllable flow range        | 75°                                  |
| Valve Size [mm]                | 2.5" [65]                            |
| Pipe connection                | NPT female ends                      |
| Housing                        | Nickel-plated brass body             |
| Ball                           | stainless steel                      |
| Stem                           | stainless steel                      |
| Stem seal                      | EPDM (lubricated)                    |
| Seat                           | PTFE                                 |
| O-ring                         | EPDM (lubricated)                    |
| Characterised disc             | No Disc (full flow)                  |
| Body Pressure Rating           | 400 psi                              |
| Close-off pressure $\Delta$ ps | 100 psi                              |
| Cv                             | 210                                  |
| Weight                         | 8.16 lb [3.7 kg]                     |
| Fluid Temp Range (water)       | 0...212°F [-18...100°C]              |
| Leakage rate                   | 0% for A – AB                        |
| Maintenance                    | maintenance-free                     |

### Flow/Mounting Details



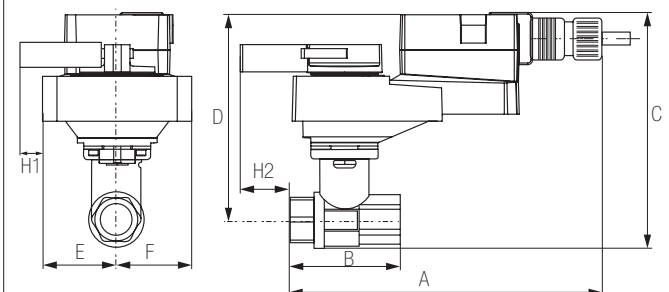
### Application

This valve is typically used in air handling units on heating or cooling coils, and fan coil unit heating or cooling coils. Some other common applications include Unit Ventilators, VAV box re-heat coils and bypass loops. This valve is suitable for use in a hydronic system with variable flow.

### Suitable Actuators

|      | Non-Spring | Spring  |
|------|------------|---------|
| B265 | ARB(X)     | AFRB(X) |

### Dimensions (Inches [mm])



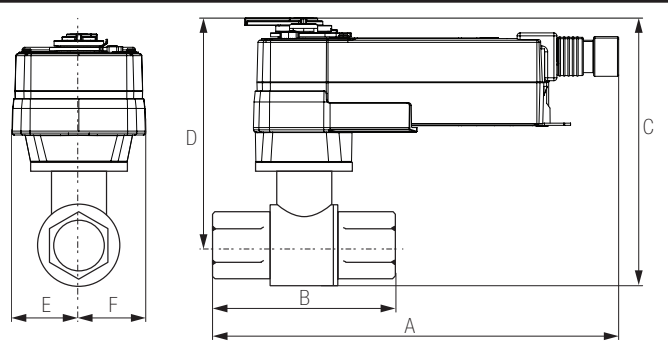
ARB, ARX

| A           | B          | C          | D          | E         | F | H1        |
|-------------|------------|------------|------------|-----------|---|-----------|
| 10.1" [257] | 5.6" [141] | 8.0" [203] | 6.0" [152] | 2.8" [71] |   | 1.9" [48] |

### Safety Notes

**WARNING:** For Belimo products sold in California: these products do or may contain chemicals which are known to the State of California to cause cancer and or birth defects or other reproductive harms. For more information see [www.p65warnings.ca.gov](http://www.p65warnings.ca.gov).

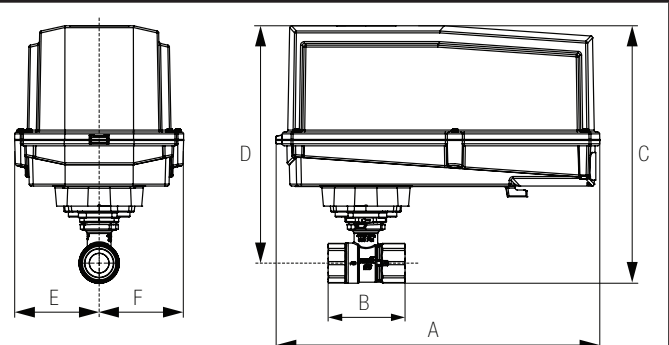
Dimensions (Inches [mm])



**AFRB, AFRX**

| A           | B          | C          | D          | E         | F |
|-------------|------------|------------|------------|-----------|---|
| 11.5" [293] | 5.6" [141] | 8.6" [219] | 6.6" [168] | 2.0" [51] |   |

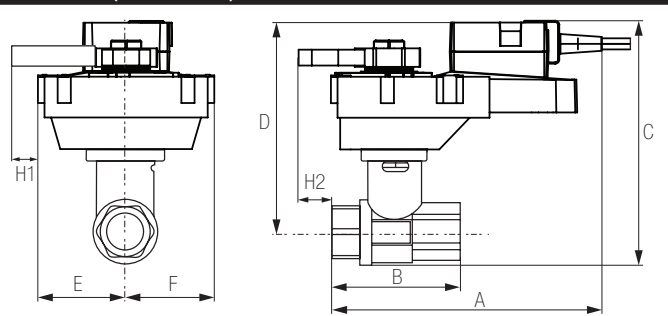
Dimensions (Inches [mm])



**ARB N4, ARX N4, NRB N4, NRX N4**

| A           | B          | C    | D          | E         | F |
|-------------|------------|------|------------|-----------|---|
| 11.4" [289] | 5.6" [141] | 7276 | 8.0" [203] | 3.1" [80] |   |

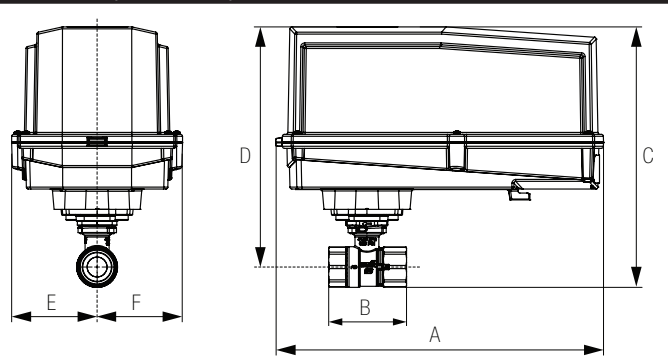
Dimensions (Inches [mm])



**ARQB, ARQX**

| A          | B          | C          | D          | E         | F | H1        | H2        |
|------------|------------|------------|------------|-----------|---|-----------|-----------|
| 9.9" [251] | 4.2" [107] | 8.1" [206] | 6.1" [155] | 2.3" [58] |   | 0.8" [20] | 0.6" [15] |

Dimensions (Inches [mm])



**AFRB N4, AFRX N4**

| A           | B          | C           | D          | E         | F |
|-------------|------------|-------------|------------|-----------|---|
| 13.0" [330] | 5.6" [141] | 10.3" [262] | 9.3" [235] | 3.4" [86] |   |

# AFRBUP Technical Data Sheet

## On/Off, Spring Return, AC 24...240 V



### Technical Data

|                                    |  |
|------------------------------------|--|
| Power Supply                       | 24...240 VAC, -20% / +10%, 50/60 Hz, 24...125 VDC, ±10%                                    |
| Power consumption in operation     | 7 W  |
| Power consumption in rest position | 3.5 W  |
| Transformer sizing                 | 7 VA @ 24 VAC (class 2 power source), 8.5 VA @ 120 VAC, 18 VA @ 240 VAC                    |
| Electrical Connection              | 18 GA appliance cable, 3 ft [1 m], with 1/2" conduit connector                             |
| Overload Protection                | electronic throughout 0...95° rotation   |
| Angle of rotation                  | 90°  |
| Torque motor                       | 180 in-lb [20 Nm]  |
| Direction of rotation motor        | reversible with CW/CCW mounting  |
| Direction of motion fail-safe      | reversible with cw/ccw mounting  |
| Position indication                | Mechanical   |
| Manual override                    | 5 mm hex crank (3/16" Allen), supplied   |
| Running Time (Motor)               | <75 s  |
| Running time fail-safe             | <20 s  |
| Ambient humidity                   | max. 95% r.H., non-condensing  |
| Ambient temperature                | -22...122°F [-30...50°C]   |
| Storage temperature                | -40...176°F [-40...80°C]   |
| Degree of Protection               | IP54, NEMA 2, UL Enclosure Type 2  |
| Agency Listing                     | 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)   |
| Noise level, fail-safe             | 62 dB(A)   |
| Maintenance                        | maintenance-free   |
| Quality Standard                   | ISO 9001   |
| Weight                             | 4.1 lb [1.9 kg]  |

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

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Wiring Diagrams

**INSTALLATION NOTES**

- (A)** Actuators with appliance cables are numbered.
- (UP)** Universal Power Supply (UP) models can be supplied with 24 VAC up to 240 VAC, or 24 VDC up to 125 VDC.
- 1** Provide overload protection and disconnect as required.
- 45** Actuators may be powered in parallel. Power consumption must be observed.
- 48** Parallel wiring required for piggy-back applications.
- ◆** 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.

