

# B311, 3-Way, Characterized Control Valve

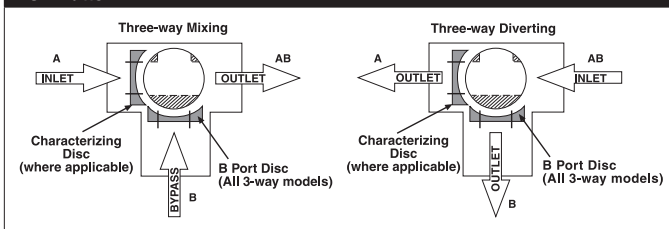
## Stainless Steel Ball and Stem



### Technical Data

|                                   |                                                                        |
|-----------------------------------|------------------------------------------------------------------------|
| Service                           | chilled, hot water, up to 60% glycol                                   |
| Flow Characteristic               | A-port equal percentage, B-port modified for constant common port flow |
| Controllable Flow Range           | 75°                                                                    |
| Size [mm]                         | 0.5" [15]                                                              |
| End Fitting                       | NPT female ends                                                        |
| Body                              | forged brass, nickel plated                                            |
| Ball                              | stainless steel                                                        |
| Stem                              | stainless steel                                                        |
| Stem Packing                      | EPDM (lubricated)                                                      |
| Seat                              | Teflon® PTFE                                                           |
| Seat O-ring                       | EPDM (lubricated)                                                      |
| Characterized Disc                | TEFZEL®                                                                |
| Body Pressure Rating [psi]        | 600                                                                    |
| Media Temperature Range (Water)   | 0°F to 250°F [-18°C to 120°C]                                          |
| Max Differential Pressure (Water) | 50 psi (345 kPa)                                                       |
| Close-Off Pressure                | 200 psi                                                                |
| Cv                                | 1.9                                                                    |
| Weight                            | 0.7 lb [0.3 kg]                                                        |
| Leakage                           | 0% for A to AB, <2.0% for B to AB                                      |
| Servicing                         | maintenance free                                                       |

### Flow Pattern



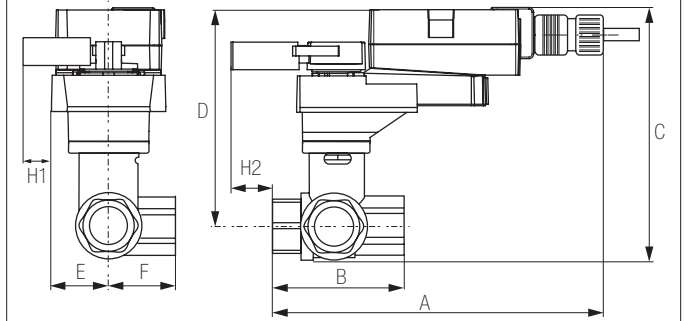
### Application

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 or constant flow.

### Suitable Actuators

|      | Non-Spring     | Spring     |
|------|----------------|------------|
| B311 | TR, LR, NRB(X) | TFB(X), LF |

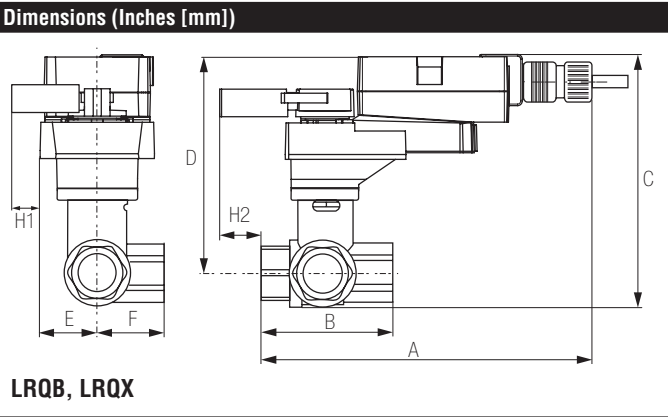
### Dimensions (Inches [mm])



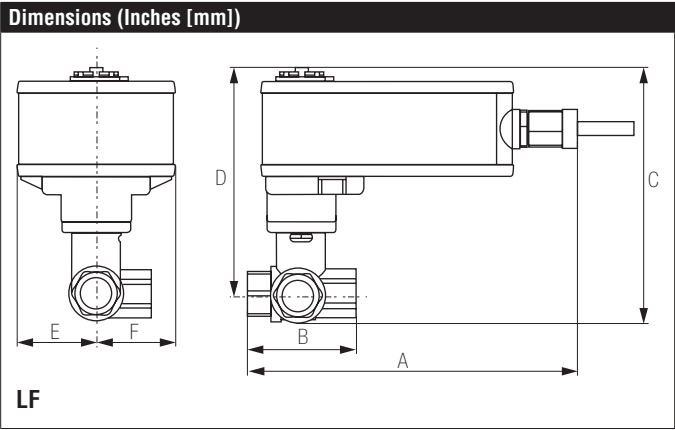
### LRB, LRX

| A     | B    | C     | D     | E         | F | H1    | H2        |
|-------|------|-------|-------|-----------|---|-------|-----------|
| 8.5"  | 2.4" | 5.19" | 4.61" | 1.3" [33] |   | 1.18" | 1.1" [28] |
| [216] | [61] | [132] | [117] |           |   | [30]  |           |

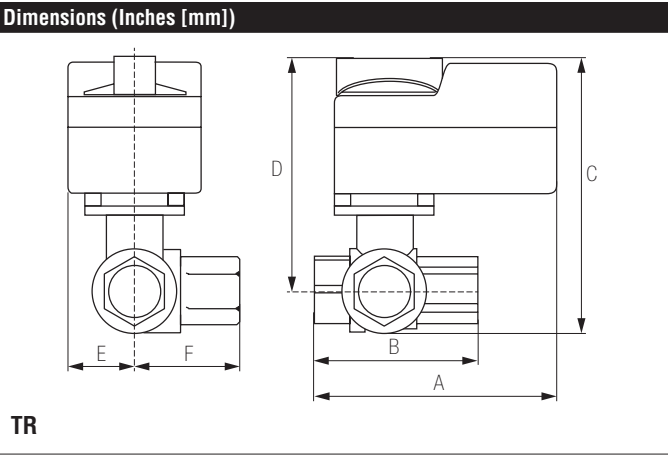
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Stainless Steel Ball and Stem



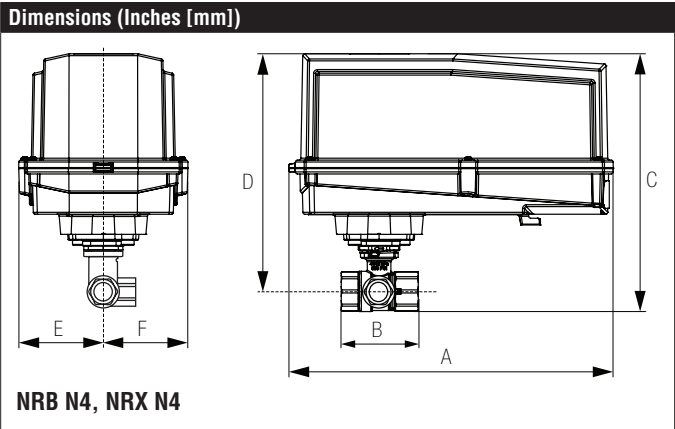
| A          | B         | C           | D           | E          | F | H1         | H2        |
|------------|-----------|-------------|-------------|------------|---|------------|-----------|
| 8.9" [226] | 2.4" [61] | 5.74" [146] | 5.16" [131] | 1.58" [40] |   | 1.18" [30] | 1.3" [33] |



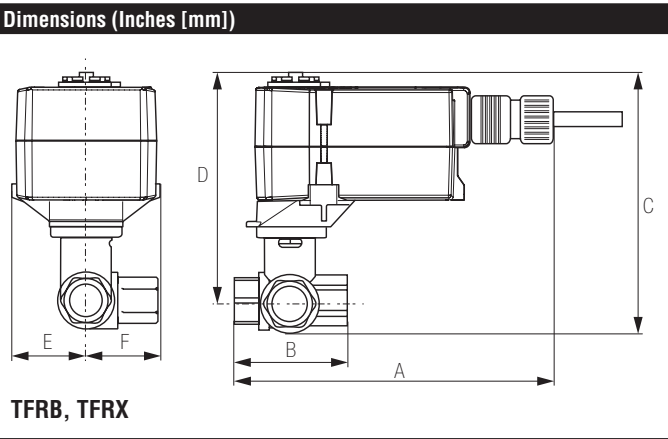
| A          | B         | C           | D           | E          | F |
|------------|-----------|-------------|-------------|------------|---|
| 7.9" [201] | 2.4" [61] | 5.67" [144] | 5.09" [129] | 1.82" [46] |   |



| A          | B         | C           | D           | E          | F         |
|------------|-----------|-------------|-------------|------------|-----------|
| 3.72" [95] | 2.4" [61] | 4.79" [122] | 4.21" [107] | 1.25" [32] | 1.2" [31] |



| A            | B         | C           | D           | E          | F |
|--------------|-----------|-------------|-------------|------------|---|
| 11.36" [289] | 2.4" [61] | 7.25" [184] | 6.67" [169] | 3.15" [80] |   |



| A           | B         | C          | D           | E          | F |
|-------------|-----------|------------|-------------|------------|---|
| 6.59" [167] | 2.4" [61] | 4.9" [124] | 4.32" [110] | 1.53" [38] |   |