

# Control Valves

## Series 3003

Valve 3-way diverting/mixing

**BUROCCO**  
INDUSTRIAL VALVES srl

### Technical data

|                 |                                                                                      |
|-----------------|--------------------------------------------------------------------------------------|
| Size (DN)       | DN 15—50 (½" - 2")                                                                   |
| Pressure rating | UNI/DIN PN16-100, ANSI 150-600#                                                      |
| Connections     | Flanges UNI PN16-100; Flanges ANSI 150-600#<br>Threaded G, NPT; Welded BW, SW; Clamp |
| Type sealing    | Soft (Class VI), metallic (Class IV - V - VI)                                        |
| Characteristic  | Linear, equalpercentage (eqp%)                                                       |
| Action          | Pneumatic with diaphragm (supply max 3 bar)                                          |
| Temperature     | -196 to +350 °C                                                                      |

### Description

The control valves serie 3003 are three way with function DIVERTING or MIXING. The body is manufactured from bar stock stainless steel or special alloys and is easily adapted to meet application requirements. Cryogenic, high temperature or bellows sealed designs are available and can be delivered with very short delivery times. All Burocco valves are delivered as tested units and ready for a long lasting, maintenance free operation.

### Options

- ⇒ High temperature extension (finned bonnet)
- ⇒ Extension (- 100°C)
- ⇒ Cryogenic extension (- 196 °C)
- ⇒ Bellows seal (double wall PN16, triple wall PN40)
- ⇒ Full stainless steel actuator for corrosive environment
- ⇒ Special alloys for body: Hastelloy, Duplex, Monel
- ⇒ Special rating PN160/250
- ⇒ Handwheel for emergency operation
- ⇒ Valve positioners
- ⇒ Limit switches
- ⇒ Position feedback
- ⇒ Airset
- ⇒ Electric linear actuators (230 V AC, 24 V AC/DC)
- ⇒ Hand operating (manual)
- ⇒ Pneumatic with piston actuator (service ON/OFF)



### Flow rate coefficient (CV)

| DN | ¼" (10) | ½" (15) | ¾" (20) | 1" (25) | 1½" (40) | 2" (50) |
|----|---------|---------|---------|---------|----------|---------|
| CV | -       | -       | -       | -       | -        | 48      |
|    | -       | -       | -       | -       | 28       | 28      |
|    | -       | -       | -       | -       | 18       | 18      |
|    | -       | -       | -       | 12      | 12       | 12      |
|    | -       | -       | 7       | 7       | 7        | 7       |
|    | -       | 4       | 4       | 4       | 4        | 4       |
|    | 2,5     | 2,5     | 2,5     | 2,5     | -        | -       |

Burocco reserves the right to make improvements without prior notice



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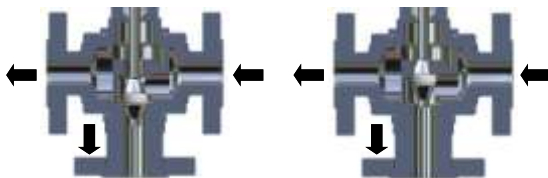
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| Materials          |                                            |
|--------------------|--------------------------------------------|
| Valve body         | 316L                                       |
| Trim (plug - seat) | 316L / 17-4PH / Hastelloy / Duplex / Monel |
| Steam              | 316L / Hastelloy / Duplex / Monel          |
| Packing            | PTFE, PTFE+'OR' FPM, special               |
| Body gasket        | PTFE, SIL C4500, special                   |
| Acuator            | FE (epoxy varnish), stainless steel        |
| Yoke               | Stainless steel                            |

### Function overview

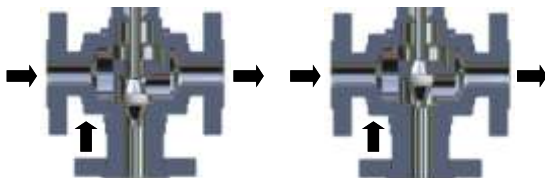
#### Diverting serie 3003D



Normally open straight way

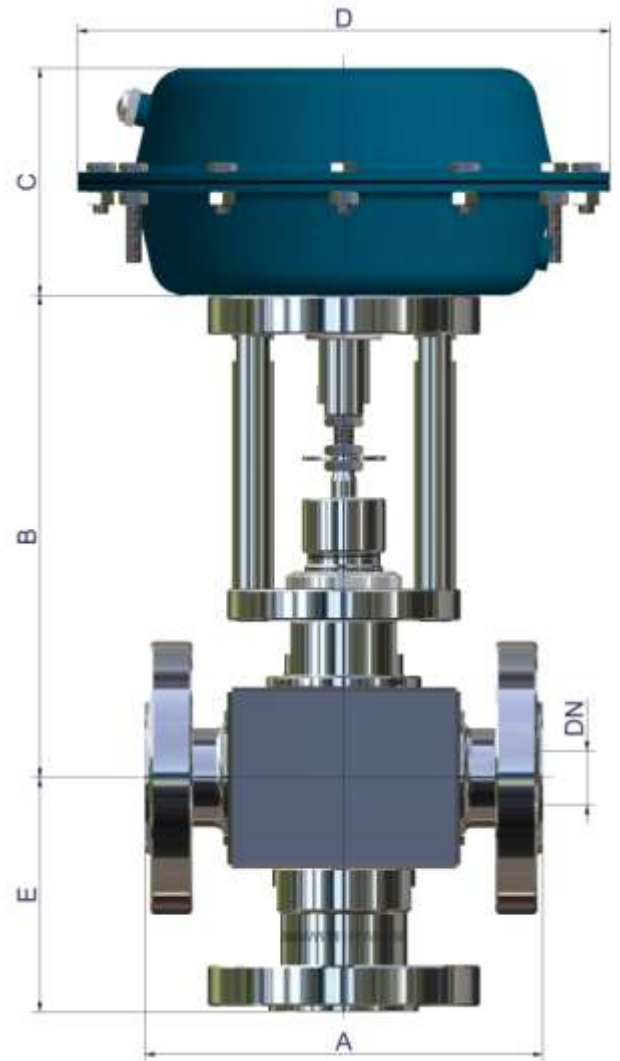
Normally open square way

#### Mixing serie 3003M



Normally open straight way

Normally open square way



Dimensions Series 3003

**A =** face-to-face (mm)

**E =** center-to-face (mm)

| A - E Flanged valves |          |           |            |           |           | A - E Threaded / welding valves |                |          |         |
|----------------------|----------|-----------|------------|-----------|-----------|---------------------------------|----------------|----------|---------|
| DN                   | DIN PN   |           | ANSI CLASS |           |           | DN                              | G / NPT Female | BW       | SW      |
|                      | 16-40    | 63-100    | 150        | 300       | 600       |                                 |                |          |         |
| 15                   | 130 - 70 | 210 - 110 | 178 - 110  | 190 - 110 | 203 - 110 | 1/4" - 1/2"                     | 112 - 56       | 124 - 65 | 124-65  |
| 20                   | 150 - 90 | 230 - 130 | 181 - 130  | 194 - 130 | 206 - 130 | 3/4"                            | 142 - 71       | 145 - 85 | 142-85  |
| 25                   | 160 - 90 | 230 - 130 | 184 - 130  | 197 - 130 | 210 - 130 | 1"                              | 142 - 71       | 155 - 85 | 142-85  |
| 40                   | 200 - ** | 260 - **  | 222 - **   | 235 - **  | 251 - **  | 1 1/2"                          | 190 - **       | 194 - ** | 190- ** |
| 50                   | 230 - ** | 300 - **  | 254 - **   | 267 - **  | 286 - **  | 2"                              | 190 - **       | 224 - ** | 190- ** |

\*\* on request

Burocco reserves the right to make improvements without prior notice

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#### End connections



Flanges UNI/DIN - ANSI



Threaded GAS - NPT



Welded BW



Welded SW



Clamp ISO



DIN 11851 (male)



DIN 11851 (female)

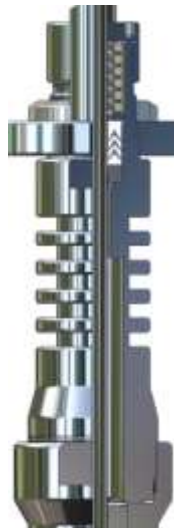


Special (on request)

#### Bonnet specifications (temperatures limit employment )



Standars (-30°C / +250 °C)



Finned (-30°C / +350 °C)



Bellows (-100°C / +250 °C)



Criogenic (-196°C / +180 °C)

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Dimensions Series 3003 (mm)

| B at different bonnet designs |         |          |                     |                     |                     |         |
|-------------------------------|---------|----------|---------------------|---------------------|---------------------|---------|
| DN                            |         | Standard | -100 °C (extension) | -200 °C (cryogenic) | High Temp. (finned) | Bellows |
| 15                            | ¼" - ½" | 180      | 305                 | 660                 | 305                 | 300     |
| 20                            | ¾"      | 190      | 310                 | 665                 | 310                 | 305     |
| 25                            | 1"      | 190      | 310                 | 665                 | 310                 | 305     |
| 40                            | 1 ½"    | 220      | on request          | on request          | on request          | 405     |
| 50                            | 2"      | 220      | on request          | on request          | on request          | 405     |

Weight Series 3003 (kg) flanged valves (without actuator)

| DN | Weight with standard bonnet |            |            |            |            | Extra weight with bonnet extension |            |            |         |
|----|-----------------------------|------------|------------|------------|------------|------------------------------------|------------|------------|---------|
|    | PN16-40                     | PN63-100   | ANSI 150   | ANSI 300   | ANSI 600   | -100 °C                            | -200 °C    | High Temp. | Bellows |
| 15 | 6                           | 8,5        | 6          | 6,5        | 8          | + 1                                | + 3        | + 1        | + 1,5   |
| 20 | 9,5                         | 12,5       | 9,5        | 9,5        | 12,5       | + 1                                | + 3        | + 1        | + 1,5   |
| 25 | 11,5                        | 13,5       | 11         | 11,5       | 13,5       | + 1                                | + 3        | + 1        | + 1,5   |
| 40 | 19,5                        | on request | on request | on request | on request | on request                         | on request | on request | + 3     |
| 50 | 23                          | on request | on request | on request | on request | on request                         | on request | on request | + 3     |

Weight Series 3003 (kg) threaded, welded valves

| DN      | Weight with standard bonnet (without actuator) | Extra weight with bonnet extension |            |            |         |
|---------|------------------------------------------------|------------------------------------|------------|------------|---------|
|         |                                                | -100 °C                            | -200 °C    | High Temp. | Bellows |
| ¼" - ½" | 4,0                                            | + 1                                | + 3        | + 1        | + 1,5   |
| ¾"      | 6,0                                            | + 1                                | + 3        | + 1        | + 1,5   |
| 1"      | 6,5                                            | + 1                                | + 3        | + 1        | + 1,5   |
| 1 ½"    | 13                                             | on request                         | on request | on request | + 3     |
| 2"      | 14,5                                           | on request                         | on request | on request | + 3     |

Dimensions (mm) and weight (kg) Actuators

| Actuator | C   | D   | Air connection | Weight (kg) |
|----------|-----|-----|----------------|-------------|
| S-200    | 90  | 205 | 1/8" GAS FF    | 2,5         |
| S-275    | 100 | 275 | 1/4" GAS FF    | 6           |
| S-340    | 135 | 340 | 1/4" GAS FF    | 13          |
| S-430    | 140 | 430 | 1/4" GAS FF    | 17          |