

# Control Valves

## Series 2000

Heavy Duty valve 2 way



**RAM UNIVERSAL LTD.**

Unit 19, Cottage Lane Ind Est.

Broughton Astley

Leicestershire, LE9 6TU

T: +44(0)1455 285428

F: +44(0)1455 285404

W: ramuniversal.co.uk

### Technical data

|                 |                                               |
|-----------------|-----------------------------------------------|
| Size (DN)       | DN 15 — 150                                   |
| Pressure rating | PN16, PN40                                    |
|                 | ANSI 300                                      |
| Connections     | Flanges UNI/DIN PN16, PN40                    |
|                 | Flanges ANSI 300                              |
| Type sealing    | Metallic (Class IV - V), soft (Class VI)      |
| Characteristic  | Equalpercentage (eqp%)                        |
| Action          | Pneumatic with diaphragm (supply max 3,5 bar) |
| Temperature     | -196 to +350 °C                               |

### Description

The Series 2000 “Heavy Duty” control valve offers superior performance in nearly all types in liquid and gaseous services within a wide temperature range. Due to the modular body construction the valves can easily be upgraded to special applications. The Series 2000 is the industry choice for a reliable and tough control valve. All valves are delivered as tested units and ready for a long lasting, maintenance free operation.



### Options

- ⇒ Characteristic linear
- ⇒ Soft seal
- ⇒ High temperature extension (finned bonnet)
- ⇒ Extension (- 60 / - 100 °C)
- ⇒ Cryogenic extension (- 196 °C)
- ⇒ Bellows seal (double wall PN16, triple wall PN40)
- ⇒ Flanges drilling ANSI 150, (face to face) and rating UNI/DIN
- ⇒ Full stainless steel actuator for corrosive environment
- ⇒ 3-way (mixing or diverting) valves (see brochure 2003)
- ⇒ Low Noise
- ⇒ Stroke limiter
- ⇒ Handwheel for emergency operation
- ⇒ Valve positioners
- ⇒ Limit switches
- ⇒ Position feedback
- ⇒ Airset
- ⇒ Electric linear actuators (230 V AC, 24 V AC/DC)

### Flow rate coefficient (CV)

| DN  | CV  |           |           |           |           |           |
|-----|-----|-----------|-----------|-----------|-----------|-----------|
| 15  | 4   | 2,5 - 1,5 | 1 - 0,5   | 0,3 - 0,1 | -         | -         |
| 20  | 7   | 4         | 2,5 - 1,5 | 1 - 0,5   | 0,3 - 0,1 | -         |
| 25  | 12  | 7         | 4         | 2,5 - 1,5 | 1 - 0,5   | 0,3 - 0,1 |
| 32  | 18  | 12        | 7         | 4         | 2,5 - 1,5 | 1 - 0,5   |
| 40  | 28  | 18        | 12        | 7         | 4         | 2,5 - 1,5 |
| 50  | 48  | 28        | 18        | 12        | 7         | 4         |
| 65  | 72  | 48        | 28        | 18        | -         | -         |
| 80  | 105 | 72        | 48        | 28        | -         | -         |
| 100 | 160 | 105       | 72        | 48        | 28        | -         |
| 150 | 300 | 210       | 160       | 105       | -         | -         |

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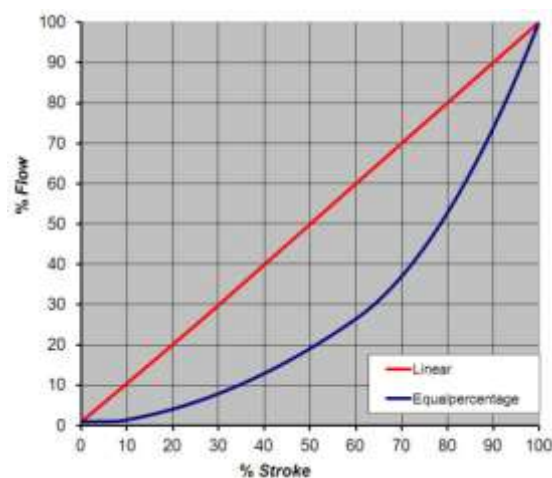
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| Materials          |                                         |
|--------------------|-----------------------------------------|
| Valve body *       | Nodular cast iron GGG 40 (PN16)         |
|                    | Carbon steel ASTM A216WCB               |
|                    | Stainless steel ASTM CF8M               |
| Trim (plug - seat) | 316L / 17-4PH / 316L+Stellite /         |
| Stem               | 316L / Hastelloy / Monel                |
| Packing            | PTFE, PTFE/CG, graphite, special        |
| Body gasket        | SIL C4500, NOVAPHIT, PTFE, special      |
| Acuator            | FE (epoxy varnish), stainless steel     |
| Yoke               | GGG 40 (epoxy varnish), stainless steel |

\* Special body material on request

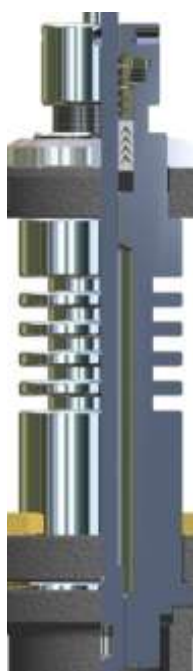
### Control characteristic



### Bonnet specifications (temperatures limit employment )



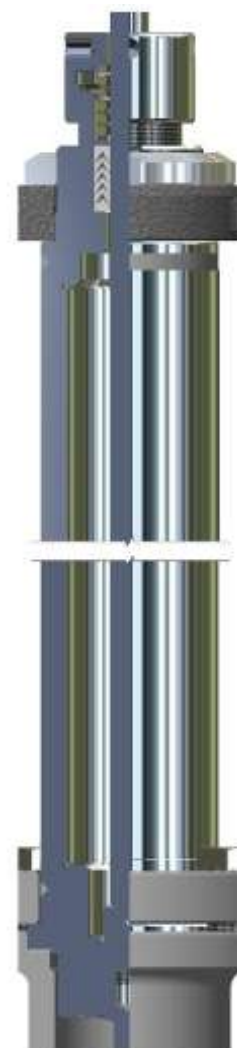
Standar (-30°C / +250 °C)



Finned (-30°C / +350 °C)



Bellows (-100°C / +350 °C)



Criogenic (-196°C / +180 °C)

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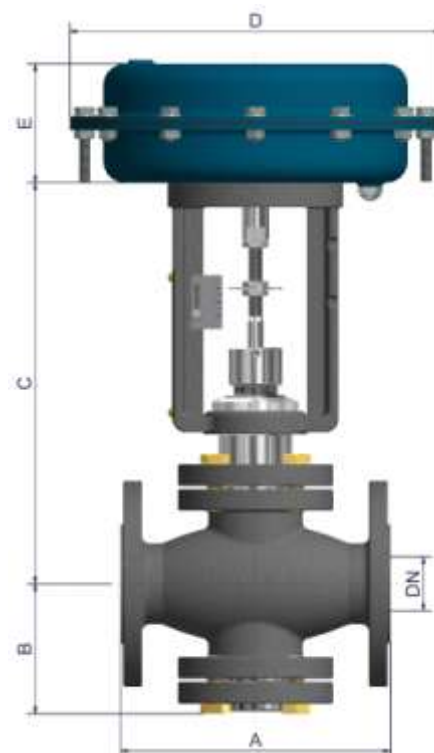
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### Dimensions (mm) and weight (kg) serie 2000 - UNI/DIN PN16/40

Special actuator double for DN100/150



| Actuator S430 DOUBLE    | DN100 | DN150 |         |
|-------------------------|-------|-------|---------|
|                         | S430  | S430  | S430 HP |
| E (mm)                  | 270   | 310   | 390     |
| Indicative weight (kg)* | 98    | 207   | 223     |



### Dimensions (mm)

| DN  | A   | B   | C        |                       |                        |                        |                        |            | D                       | E         |
|-----|-----|-----|----------|-----------------------|------------------------|------------------------|------------------------|------------|-------------------------|-----------|
|     |     |     | Standard | -60 °C<br>(extension) | -100 °C<br>(extension) | -200 °C<br>(criogenic) | High.Temp.<br>(finned) | Bellows    |                         |           |
| 15  | 130 | 96  | 297      | 359                   | 434                    | 729                    | 382                    | 403        | 205 / 275               | 88 / 100  |
| 20  | 150 | 96  | 297      | 359                   | 434                    | 729                    | 382                    | 403        | 205 / 275               | 88 / 100  |
| 25  | 160 | 96  | 297      | 359                   | 434                    | 729                    | 382                    | 403        | 205 / 275               | 88 / 100  |
| 32  | 180 | 96  | 297      | 359                   | 434                    | 729                    | 382                    | 403        | 275 / 340               | 100 / 135 |
| 40  | 200 | 96  | 297      | 359                   | 434                    | 729                    | 382                    | 403        | 275 / 340               | 100 / 135 |
| 50  | 230 | 100 | 297      | 359                   | 434                    | 729                    | 382                    | 403        | 275 / 340               | 100 / 135 |
| 65  | 290 | 137 | 333      | 395                   | 470                    | 765                    | 418                    | 439        | 340 / 430               | 135       |
| 80  | 310 | 137 | 333      | 395                   | 470                    | 765                    | 418                    | 439        | 340 / 430               | 135       |
| 100 | 350 | 159 | 350      | 412                   | 487                    | 782                    | 435                    | 456        | 430                     | 135       |
| 150 | 480 | 233 | 495      | -                     | 642                    | 990                    | 642                    | On request | 430 / 430 <sub>HP</sub> | 160 / 200 |

### Indicative weight \*

| DN | 15      | 20      | 25      | 32      | 40      | 50      | 65      | 80      | 100 | 150       |
|----|---------|---------|---------|---------|---------|---------|---------|---------|-----|-----------|
| kg | 17 / 20 | 18 / 21 | 19 / 22 | 24 / 30 | 25 / 31 | 31 / 37 | 55 / 61 | 59 / 65 | 80  | 185 / 193 |

\* without positioner, airset or other accessories

### Extra weight with bonnet extension

| DN     | -60 / -100 °C | -200 °C | High Temp. | Bellows    |
|--------|---------------|---------|------------|------------|
| 15-50  | + 2           | + 3,5   | + 1        | + 1,5      |
| 65-100 | + 2           | + 4     | + 3        | + 2        |
| 150    | + 5           | + 15    | + 10       | On request |

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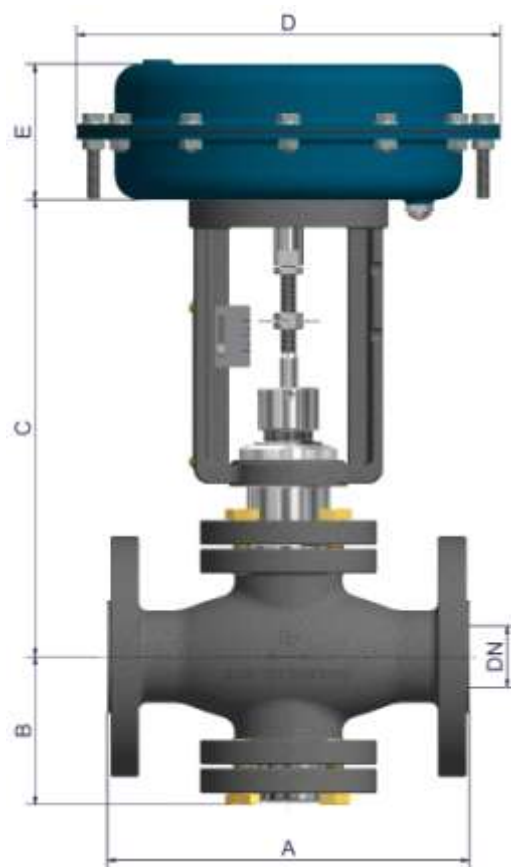
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Dimensions (mm) and weight (kg) serie 2000 - ANSI 300

Special actuator double for DN100/150



| Actuator S430 DOUBLE    | DN100 | DN150 |         |
|-------------------------|-------|-------|---------|
|                         | S430  | S430  | S430 HP |
| E (mm)                  | 270   | 310   | 390     |
| Indicative weight (kg)* | 100   | 217   | 233     |



Dimensions (mm)

| DN  | A   | B   | C        |                       |                        |                        |                        |            | D           | E         |
|-----|-----|-----|----------|-----------------------|------------------------|------------------------|------------------------|------------|-------------|-----------|
|     |     |     | Standard | -60 °C<br>(extension) | -100 °C<br>(extension) | -200 °C<br>(cryogenic) | High.Temp.<br>(finned) | Bellows    |             |           |
| 25  | 197 | 96  | 297      | 359                   | 434                    | 729                    | 382                    | 403        | 205 / 275   | 88 / 100  |
| 40  | 235 | 96  | 297      | 359                   | 434                    | 729                    | 382                    | 403        | 275 / 340   | 100 / 135 |
| 50  | 267 | 100 | 297      | 359                   | 434                    | 729                    | 382                    | 403        | 275 / 340   | 100 / 135 |
| 80  | 318 | 137 | 333      | 395                   | 470                    | 765                    | 418                    | 439        | 340 / 430   | 135       |
| 100 | 368 | 159 | 350      | 412                   | 487                    | 782                    | 435                    | 456        | 430         | 135       |
| 150 | 473 | 233 | 495      | -                     | 642                    | 990                    | 642                    | On request | 430 / 430HP | 160 / 200 |

Indicative weight\*

| DN | 25      | 40      | 50      | 80      | 100 | 150       |
|----|---------|---------|---------|---------|-----|-----------|
| kg | 19 / 22 | 25 / 31 | 32 / 38 | 60 / 66 | 82  | 195 / 203 |

\* without positioner, airset or other accessories

Extra weight with bonnet extension

| DN     | -60 / -100 °C | -200 °C | High Temp. | Bellows    |
|--------|---------------|---------|------------|------------|
| 25-50  | + 2           | + 3,5   | + 1        | + 1,5      |
| 80-100 | + 2           | + 4     | + 3        | + 2        |
| 150    | + 5           | + 15    | + 10       | On request |

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