

ΒΑΛΒΙΔΕΣ ΔΥΝΑΜΙΚΗΣ (ΑΥΤΟΜΑΤΗΣ) ΕΞΙΣΟΡΡΟΠΗΣΗΣ

## FlowCon ABV 15-40mm

*Dynamic Balancing Valve - Adjustable Cartridge*



### SPECIFICATIONS

|                            |  |
|----------------------------|--|
| Pressure rating:           | 2500 kPa / 360 psi   |
| Temperature rating, media: | -20°C to +120°C / -4°F to +248°F   |
| Material:                  |  |
| - Cartridge:               | Composite cartridges: POM (Polyoxymethylene)<br>E-JUST cartridges: PSU (Polysulfone)                     |
| - Diaphragm:               | Hydrogenated acrylonitrile-butadiene-rubber or EPDM depending on type                                    |
| - Body:                    | Forged brass ASTM CuZn40Pb2  |
| - Ball valve:              | Chemically nickel plated brass ball  |
| - Union end connections:   | Brass alloy ISO or NPT   |
| - O-rings:                 | EPDM   |
| Body tappings:             | 1/4" ISO   |
| Flow rate range:           | 0.0081 l/sec - 1.43 l/sec (standard composite cartridge)<br>0.0278 l/sec - 1.39 l/sec (E-JUST cartridge) |

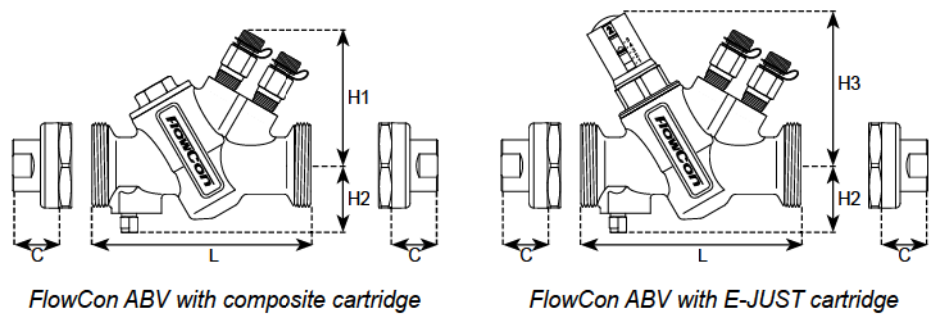


**CHRYSSAFIDIS**

**DIMENSIONS AND WEIGHTS (NOMINAL) (measured in mm unless noted)**

| Model no. | Valve size | Cartridge size | L   | H1 | H2 | H3 | End connections C <sup>1</sup> |          |       | Weight (kgs.) w/o end conn. | Kv <sup>2</sup> (m <sup>3</sup> /hr) |
|-----------|------------|----------------|-----|----|----|----|--------------------------------|----------|-------|-----------------------------|--------------------------------------|
|           |            |                |     |    |    |    | ISO female                     | ISO male | Sweat |                             |                                      |
| ABV1      | 15         | 20             | 122 | 66 | 33 | 78 | 22                             | 25       | 20    | 0.8                         | 2.6                                  |
|           | 20         |                |     |    |    |    | 22                             | 25       | 20    |                             |                                      |
|           | 25         |                |     |    |    |    | N/A                            | 39       | 22    |                             |                                      |
| ABV2      | 25         | 40             | 162 | 75 | 42 | 99 | 35                             | 40       | 34    | 2.5                         | 12.5                                 |
|           | 32         |                |     |    |    |    | 35                             | 40       | 37    |                             |                                      |
|           | 40         |                |     |    |    |    | 40                             | 42       | N/A   |                             |                                      |

Note 1: Add end connection length to body length.  
 Note 2: For valve body.



**MODEL NUMBER SELECTION<sup>3</sup>**

**ABV**

Insert body size:  
**1**=ABV1 (union end 15/20/25mm)    **2**=ABV2 (union end 25/32/40mm)

Leave it **blank** if taps open    **B**=pressure temperature plugs    **P**=taps plugged

Insert inlet x outlet union end connections:

| Body size   | Female threaded   | Male treaded  | Sweat  |
|---|---|---|--|
| Union end 15-20mm, 1/2"-1" with 20mm composite cartridge or 20mm E-JUST cartridge   | <b>E</b> =15mm=1/2"<br><b>F</b> =20mm=3/4"                          | <b>H</b> =15mm=1/2"<br><b>I</b> =20mm=3/4"<br><b>J</b> =25mm=1"     | <b>K</b> =15mm<br><b>L</b> =18mm<br><b>M</b> =22mm |
| Union end 25-40mm, 1"-1 1/2" with 40mm composite cartridge or 40mm E-JUST cartridge | <b>G</b> =25mm=1"<br><b>P</b> =32mm=1 1/4"<br><b>Q</b> =40mm=1 1/2" | <b>J</b> =25mm=1"<br><b>S</b> =32mm=1 1/4"<br><b>T</b> =40mm=1 1/2" | <b>N</b> =28mm<br><b>W</b> =35mm                   |

Insert connection standard:  
**I**=ISO    **N**=NPT

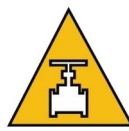
Insert a kPaD control range:  
**0** if no cartridge required  
**Y**= 15-130 kPaD (20mm standard composite cartridge)  
 17-200 kPaD (20mm E-JUST red - white pawl)  
 17-210 kPaD (20mm E-JUST black or green - white pawl)  
 17-400 kPaD (40mm E-JUST - white pawl)  
**G**=30-400 kPaD (20mm standard composite cartridge)  
 30-400 kPaD (20mm E-JUST red - grey pawl)  
 35-400 kPaD (20mm E-JUST black or green - grey pawl)  
**X**= 15-130 kPaD (40mm standard composite cartridge)  
**C**= 22-300 kPaD (40mm standard composite cartridge)  
**D**= 30-410 kPaD (40mm standard composite cartridge)  
 (Determine from cartridge selection chart)

Insert automatic flow limiting cartridge code:  
**0** if no cartridge required    **Y**=grey    **R**=red    **U**=blue    **B**=black    **G**=green    **W**=white  
 (Determine from cartridge selection chart)

Insert cartridge dial setting/type:  
**1 to 8**=dial setting on standard composite cartridge  
**0**=standard pre-setting of 2 on standard composite cartridge  
**E**=E-JUST cartridge  
 (Determine from cartridge selection chart)

Example: ABV1.B.E.E.I.Y.B.E=ABV1-body with p/t plugs, 15mm ISO female threaded union end connections with a Y-type black E-JUST cartridge.

Note 3: Flow rate, color and dial setting of cartridge are indicated on label affixed to body.



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**FLOW RATE SETTING - COMPOSITE CARTRIDGE - FOR VALVES DN15-DN25 SMALL**

| 20mm · 3/4" · composite cartridge · Y-type                                      |           |      |       |          |          |          |          |          |
|---|-----------|------|-------|----------|----------|----------|----------|----------|
| Pressure range, ΔP: 20-130 kPaD (15-130 kPaD)* · 2.9-18.9 psid (2.2-18.9 psid)* |           |      |       |          |          |          |          |          |
| Controlled flow rate  | Model no. |      |       | ABV1.Y.Y | ABV1.Y.R | ABV1.Y.U | ABV1.Y.B | ABV1.Y.G |
|   | l/sec     | l/hr | GPM   | Grey*    | Red      | Blue     | Black    | Green    |
|   | 0.0081    | 29.2 | 0.128 | 1        |          |          |          |          |
|   | 0.0133    | 47.9 | 0.211 | 2        |          |          |          |          |
|   | 0.0175    | 63.0 | 0.277 | 3        |          |          |          |          |
|   | 0.0222    | 79.9 | 0.352 | 4        |          |          |          |          |
|   | 0.0311    | 112  | 0.493 | 5        |          |          |          |          |
|   | 0.0353    | 127  | 0.560 | 6        |          |          |          |          |
|   | 0.0383    | 138  | 0.607 | 7        |          |          |          |          |
|   | 0.0431    | 155  | 0.683 | 8        |          |          |          |          |
|   | 0.0450    | 162  | 0.713 |          |          |          | 3        |          |
|   | 0.0575    | 207  | 0.911 |          | 4        |          |          |          |
|   | 0.0619    | 223  | 0.981 |          |          | 4        |          |          |
|   | 0.0669    | 241  | 1.06  |          |          |          | 4        |          |
|   | 0.0922    | 332  | 1.46  |          | 5        |          |          |          |
|   | 0.0978    | 352  | 1.55  |          |          |          |          | 1        |
|   | 0.105     | 378  | 1.66  |          | 6        |          |          |          |
|   | 0.114     | 409  | 1.80  |          | 7        |          |          |          |
|   | 0.115     | 415  | 1.83  |          |          | 5        |          |          |
|   | 0.118     | 426  | 1.88  |          |          |          |          | 2        |
|   | 0.119     | 430  | 1.89  |          | 8        |          |          |          |
|   | 0.136     | 489  | 2.15  |          |          |          |          | 3        |
|   | 0.137     | 492  | 2.17  |          |          | 6        |          |          |
|   | 0.138     | 498  | 2.19  |          |          |          |          | 4        |
|   | 0.146     | 524  | 2.31  |          |          | 7        |          |          |
|   | 0.146     | 526  | 2.32  |          |          | 8        |          |          |
|   | 0.155     | 557  | 2.45  |          |          |          | 5        |          |
|   | 0.176     | 635  | 2.80  |          |          |          | 6        |          |
|   | 0.180     | 647  | 2.85  |          |          |          | 7        |          |
|   | 0.193     | 695  | 3.06  |          |          |          | 8        |          |
|   | 0.231     | 830  | 3.66  |          |          |          |          | 5        |
|   | 0.237     | 854  | 3.76  |          |          |          |          | 6        |
|   | 0.253     | 909  | 4.00  |          |          |          |          | 7        |
|   | 0.273     | 984  | 4.33  |          |          |          |          | 8        |

Accuracy: Greatest of either ±10% of controlled flow rate or 20 l/hr (0.0056 l/sec or 0.088 GPM).

| 20mm · 3/4" · composite cartridge · G-type                                  |           |      |       |          |          |          |          |          |
|---|-----------|------|-------|----------|----------|----------|----------|----------|
| Pressure range, ΔP: 40-400 kPaD (30-400 kPaD)* · 5.8-58 psid (4.4-58 psid)* |           |      |       |          |          |          |          |          |
| Controlled flow rate  | Model no. |      |       | ABV1.G.Y | ABV1.G.R | ABV1.G.U | ABV1.G.B | ABV1.G.G |
|   | l/sec     | l/hr | GPM   | Grey*    | Red      | Blue     | Black    | Green    |
|   | 0.0117    | 42.1 | 0.185 | 1        |          |          |          |          |
|   | 0.0189    | 68.0 | 0.300 | 2        |          |          |          |          |
|   | 0.0247    | 88.9 | 0.392 | 3        |          |          |          |          |
|   | 0.0325    | 117  | 0.515 | 4        |          |          |          |          |
|   | 0.0472    | 170  | 0.748 | 5        |          |          |          |          |
|   | 0.0528    | 190  | 0.837 | 6        |          |          |          |          |
|   | 0.0564    | 203  | 0.894 |          |          | 3        |          |          |
|   | 0.0597    | 215  | 0.946 |          |          |          | 3        |          |
|   | 0.0639    | 230  | 1.01  | 7        |          |          |          |          |
|   | 0.0694    | 250  | 1.10  | 8        |          |          |          |          |
|   | 0.0781    | 281  | 1.24  |          | 4        |          |          |          |
|   | 0.0908    | 327  | 1.44  |          |          | 4        |          |          |
|   | 0.0958    | 345  | 1.52  |          |          |          | 4        |          |
|   | 0.137     | 493  | 2.17  |          | 5        |          |          |          |
|   | 0.147     | 529  | 2.33  |          |          |          |          | 1        |
|   | 0.161     | 581  | 2.56  |          | 6        |          |          |          |
|   | 0.173     | 624  | 2.75  |          | 7        |          |          |          |
|   | 0.181     | 652  | 2.87  |          |          | 5        |          |          |
|   | 0.181     | 653  | 2.88  |          | 8        |          |          |          |
|   | 0.186     | 670  | 2.95  |          |          |          |          | 2        |
|   | 0.210     | 755  | 3.32  |          |          |          |          | 3        |
|   | 0.216     | 779  | 3.43  |          |          | 6        |          |          |
|   | 0.218     | 785  | 3.46  |          |          | 7        |          |          |
|   | 0.220     | 792  | 3.49  |          |          | 8        |          |          |
|   | 0.237     | 853  | 3.75  |          |          |          | 5        |          |
|   | 0.241     | 869  | 3.83  |          |          |          |          | 4        |
|   | 0.266     | 957  | 4.21  |          |          |          | 6        |          |
|   | 0.269     | 968  | 4.26  |          |          |          | 7        |          |
|   | 0.277     | 998  | 4.39  |          |          |          | 8        |          |
|   | 0.365     | 1320 | 5.79  |          |          |          |          | 5        |
|   | 0.369     | 1330 | 5.85  |          |          |          |          | 6        |
|   | 0.392     | 1410 | 6.21  |          |          |          |          | 7        |
|   | 0.408     | 1470 | 6.46  |          |          |          |          | 8        |

Accuracy: Greatest of either ±10% of controlled flow rate or 20 l/hr (0.0056 l/sec or 0.088 GPM).





**FLOW RATE SETTING - COMPOSITE CARTRIDGE - FOR VALVES DN25 LARGE-DN40**

**40mm · 1 1/2" · composite cartridge · X-type**  
 Pressure range, ΔP: 15-130 kPaD · 2.2-18.9 psid

|                      | Model no. |      |      | ABV2.X.W | ABV2.X.R |
|----------------------|-----------|------|------|----------|----------|
|                      | l/sec     | l/hr | GPM  | White    | Red      |
| Controlled flow rate | 0.17      | 612  | 2.69 | 1        |          |
|                      | 0.23      | 828  | 3.64 | 2        |          |
|                      | 0.26      | 936  | 4.12 |          | 1        |
|                      | 0.33      | 1190 | 5.23 | 3        |          |
|                      | 0.38      | 1370 | 6.02 | 4        |          |
|                      | 0.39      | 1400 | 6.18 |          | 2        |
|                      | 0.48      | 1730 | 7.61 | 5        | 3        |
|                      | 0.54      | 1940 | 8.56 | 6        |          |
|                      | 0.62      | 2230 | 9.83 | 7        |          |
|                      | 0.63      | 2270 | 9.99 |          | 4        |
|                      | 0.66      | 2380 | 10.5 | 8        |          |
|                      | 0.67      | 2410 | 10.6 |          | 5        |
|                      | 0.76      | 2740 | 12.0 |          | 6        |
|                      | 0.85      | 3060 | 13.5 |          | 7        |



Accuracy: Greatest of either ±10% of controlled flow rate or 20 l/hr (0.0056 l/sec or 0.088 GPM).

**40mm · 1 1/2" · composite cartridge · C-type**  
 Pressure range, ΔP: 22-300 kPaD · 3.2-43.5 psid

|                      | Model no. |      |      | ABV2.C.W | ABV2.C.R |
|----------------------|-----------|------|------|----------|----------|
|                      | l/sec     | l/hr | GPM  | White    | Red      |
| Controlled flow rate | 0.23      | 828  | 3.65 | 1        |          |
|                      | 0.31      | 1120 | 4.91 | 2        |          |
|                      | 0.38      | 1370 | 6.02 |          | 1        |
|                      | 0.42      | 1510 | 6.66 | 3        |          |
|                      | 0.47      | 1690 | 7.45 | 4        |          |
|                      | 0.50      | 1800 | 7.93 |          | 2        |
|                      | 0.60      | 2160 | 9.51 | 5        |          |
|                      | 0.64      | 2300 | 10.1 |          | 3        |
|                      | 0.68      | 2450 | 10.8 | 6        |          |
|                      | 0.78      | 2810 | 12.4 | 7        |          |
|                      | 0.83      | 2990 | 13.2 |          | 4        |
|                      | 0.84      | 3020 | 13.3 | 8        |          |
|                      | 0.90      | 3240 | 14.3 |          | 5        |
|                      | 1.07      | 3850 | 17.0 |          | 6        |
|                      | 1.17      | 4210 | 18.5 |          | 7        |
| 1.21                 | 4360      | 19.2 |      | 8        |          |

Accuracy: Greatest of either ±10% of controlled flow rate or 20 l/hr (0.0056 l/sec or 0.088 GPM).

**40mm · 1 1/2" · composite cartridge · D-type**  
 Pressure range, ΔP: 30-410 kPaD · 4.4-59.5 psid

|                      | Model no. |      |      | ABV2.D.W | ABV2.D.R |
|----------------------|-----------|------|------|----------|----------|
|                      | l/sec     | l/hr | GPM  | White    | Red      |
| Controlled flow rate | 0.27      | 972  | 4.28 | 1        |          |
|                      | 0.36      | 1300 | 5.71 | 2        |          |
|                      | 0.44      | 1580 | 6.97 |          | 1        |
|                      | 0.52      | 1870 | 8.24 | 3        |          |
|                      | 0.58      | 2090 | 9.19 | 4        |          |
|                      | 0.60      | 2160 | 9.51 |          | 2        |
|                      | 0.74      | 2660 | 11.7 | 5        |          |
|                      | 0.76      | 2740 | 12.0 |          | 3        |
|                      | 0.83      | 2990 | 13.2 | 6        |          |
|                      | 0.93      | 3350 | 14.7 | 7        |          |
|                      | 0.99      | 3560 | 15.7 | 8        | 4        |
|                      | 1.07      | 3850 | 17.0 |          | 5        |
|                      | 1.28      | 4610 | 20.3 |          | 6        |
|                      | 1.39      | 5000 | 22.0 |          | 7        |
|                      | 1.43      | 5150 | 22.7 |          | 8        |

Accuracy: Greatest of either ±10% of controlled flow rate or 20 l/hr (0.0056 l/sec or 0.088 GPM).



**CHRYSSAFIDIS**

**FLOW RATE SETTING - E-JUST CARTRIDGE - FOR VALVES DN15-DN25 SMALL**

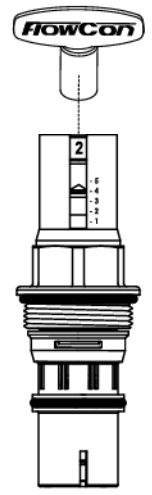
| 20mm · 3/4" · E-JUST · Y-type · White pawl    |           |      |       |             |             |
|---|-----------|------|-------|-------------|-------------|
| Pressure range, ΔP: 17-210 kPaD · 2.5-30 psid |           |      |       |             |             |
| Controlled flow rate                          | Model no. |      |       | E-JUST1.Y.B | E-JUST1.Y.G |
|   | l/sec     | l/hr | GPM   | Black       | Green       |
|   |           |      |       | Setting     | Setting     |
|   | 0.0278    | 100  | 0.440 | 1.0         |             |
|   | 0.0299    | 108  | 0.475 | 1.1         |             |
|   | 0.0321    | 116  | 0.509 | 1.2         |             |
|   | 0.0343    | 123  | 0.543 | 1.3         |             |
|   | 0.0364    | 131  | 0.578 | 1.4         |             |
|   | 0.0386    | 139  | 0.612 | 1.5         |             |
|   | 0.0408    | 147  | 0.646 | 1.6         |             |
|   | 0.0429    | 155  | 0.681 | 1.7         |             |
|   | 0.0436    | 157  | 0.691 |             | 1.0         |
|   | 0.0451    | 162  | 0.715 | 1.8         |             |
|   | 0.0468    | 168  | 0.741 |             | 1.1         |
|   | 0.0473    | 170  | 0.749 | 1.9         |             |
|   | 0.0494    | 178  | 0.784 | 2.0         |             |
|   | 0.0499    | 180  | 0.791 |             | 1.2         |
|   | 0.0516    | 186  | 0.818 | 2.1         |             |
|   | 0.0530    | 191  | 0.841 |             | 1.3         |
|   | 0.0538    | 194  | 0.852 | 2.2         |             |
|   | 0.0559    | 201  | 0.887 | 2.3         |             |
|   | 0.0562    | 202  | 0.890 |             | 1.4         |
|   | 0.0581    | 209  | 0.921 | 2.4         |             |
|   | 0.0593    | 214  | 0.940 |             | 1.5         |
|   | 0.0603    | 217  | 0.955 | 2.5         |             |
|   | 0.0624    | 225  | 0.990 | 2.6         | 1.6         |
|   | 0.0646    | 233  | 1.02  | 2.7         |             |
|   | 0.0656    | 236  | 1.04  |             | 1.7         |
|   | 0.0668    | 240  | 1.06  | 2.8         |             |
|   | 0.0687    | 247  | 1.09  |             | 1.8         |
|   | 0.0689    | 248  | 1.09  | 2.9         |             |
|   | 0.0711    | 256  | 1.13  | 3.0         |             |
|   | 0.0719    | 259  | 1.14  |             | 1.9         |
|   | 0.0733    | 264  | 1.16  | 3.1         |             |
|   | 0.0750    | 270  | 1.19  |             | 2.0         |
|   | 0.0754    | 272  | 1.20  | 3.2         |             |
|   | 0.0776    | 279  | 1.23  | 3.3         |             |
|   | 0.0781    | 281  | 1.24  |             | 2.1         |
|   | 0.0798    | 287  | 1.26  | 3.4         |             |
|   | 0.0813    | 293  | 1.29  |             | 2.2         |
|   | 0.0819    | 295  | 1.30  | 3.5         |             |
|   | 0.0841    | 303  | 1.33  | 3.6         |             |
|   | 0.0844    | 304  | 1.34  |             | 2.3         |
|   | 0.0863    | 311  | 1.37  | 3.7         |             |
|   | 0.0876    | 315  | 1.39  |             | 2.4         |
|   | 0.0884    | 318  | 1.40  | 3.8         |             |

Continue next column...



| 20mm · 3/4" · E-JUST · Y-type · White pawl    |           |      |      |             |             |
|---|-----------|------|------|-------------|-------------|
| Pressure range, ΔP: 17-210 kPaD · 2.5-30 psid |           |      |      |             |             |
| Controlled flow rate                          | Model no. |      |      | E-JUST1.Y.B | E-JUST1.Y.G |
|   | l/sec     | l/hr | GPM  | Black       | Green       |
|   |           |      |      | Setting     | Setting     |
|   | 0.0906    | 326  | 1.44 | 3.9         |             |
|   | 0.0907    | 327  | 1.44 |             | 2.5         |
|   | 0.0928    | 334  | 1.47 | 4.0         |             |
|   | 0.0938    | 338  | 1.49 |             | 2.6         |
|   | 0.0949    | 342  | 1.50 | 4.1         |             |
|   | 0.0970    | 349  | 1.54 |             | 2.7         |
|   | 0.0971    | 350  | 1.54 | 4.2         |             |
|   | 0.0993    | 357  | 1.57 | 4.3         |             |
|   | 0.100     | 360  | 1.59 |             | 2.8         |
|   | 0.101     | 365  | 1.61 | 4.4         |             |
|   | 0.103     | 372  | 1.64 |             | 2.9         |
|   | 0.104     | 373  | 1.64 | 4.5         |             |
|   | 0.106     | 381  | 1.68 | 4.6         |             |
|   | 0.106     | 383  | 1.69 |             | 3.0         |
|   | 0.108     | 389  | 1.71 | 4.7         |             |
|   | 0.110     | 394  | 1.74 |             | 3.1         |
|   | 0.110     | 396  | 1.75 | 4.8         |             |
|   | 0.112     | 404  | 1.78 | 4.9         |             |
|   | 0.113     | 406  | 1.79 |             | 3.2         |
|   | 0.114     | 412  | 1.81 | 5.0         |             |
|   | 0.116     | 417  | 1.84 |             | 3.3         |
|   | 0.119     | 428  | 1.89 |             | 3.4         |
|   | 0.122     | 440  | 1.94 |             | 3.5         |
|   | 0.125     | 451  | 1.98 |             | 3.6         |
|   | 0.128     | 462  | 2.03 |             | 3.7         |
|   | 0.132     | 473  | 2.08 |             | 3.8         |
|   | 0.135     | 485  | 2.13 |             | 3.9         |
|   | 0.138     | 496  | 2.18 |             | 4.0         |
|   | 0.141     | 507  | 2.23 |             | 4.1         |
|   | 0.144     | 519  | 2.28 |             | 4.2         |
|   | 0.147     | 530  | 2.33 |             | 4.3         |
|   | 0.150     | 541  | 2.38 |             | 4.4         |
|   | 0.153     | 553  | 2.43 |             | 4.5         |
|   | 0.157     | 564  | 2.48 |             | 4.6         |
|   | 0.160     | 575  | 2.53 |             | 4.7         |
|   | 0.163     | 586  | 2.58 |             | 4.8         |
|   | 0.166     | 598  | 2.63 |             | 4.9         |
|   | 0.169     | 609  | 2.68 |             | 5.0         |

Accuracy: Greatest of either ±5% of controlled flow rate or ±2% of maximum flow rate



Use the FlowCon adjustment key (part number ACC0001) for adjusting the flow rate.

A setting of 4.2 corresponds to a flow rate of 0.144 l/sec for the 20mm green cartridge, range 17-210 kPaD.



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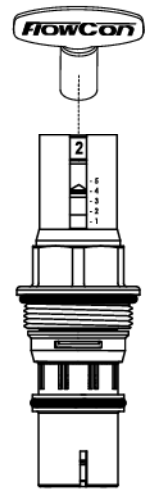
**FLOW RATE SETTING - E-JUST CARTRIDGE - FOR VALVES DN15-DN25 SMALL (continued)**

| 20mm · 3/4" · E-JUST · Y-type · White pawl    |           |        |      |             |
|---|-----------|--------|------|-------------|
| Pressure range. ΔP: 17-200 kPaD · 2.5-29 psid |           |        |      |             |
| Controlled flow rate                          | Model no. |        |      | E-JUST1.Y.R |
|   | I/sec     | I/hr   | GPM  | Red Setting |
|   |           | 0.0767 | 276  | 1.22        |
|   | 0.0813    | 293    | 1.29 | 1.1         |
|   | 0.0860    | 310    | 1.36 | 1.2         |
|   | 0.0907    | 326    | 1.44 | 1.3         |
|   | 0.0953    | 343    | 1.51 | 1.4         |
|   | 0.100     | 360    | 1.58 | 1.5         |
|   | 0.105     | 377    | 1.66 | 1.6         |
|   | 0.109     | 393    | 1.73 | 1.7         |
|   | 0.114     | 410    | 1.80 | 1.8         |
|   | 0.118     | 426    | 1.88 | 1.9         |
|   | 0.123     | 443    | 1.95 | 2.0         |
|   | 0.128     | 459    | 2.02 | 2.1         |
|   | 0.132     | 475    | 2.09 | 2.2         |
|   | 0.136     | 491    | 2.16 | 2.3         |
|   | 0.141     | 507    | 2.23 | 2.4         |
|   | 0.145     | 523    | 2.30 | 2.5         |
|   | 0.150     | 539    | 2.37 | 2.6         |
|   | 0.154     | 554    | 2.44 | 2.7         |
|   | 0.158     | 569    | 2.51 | 2.8         |
|   | 0.162     | 584    | 2.57 | 2.9         |
|   | 0.166     | 599    | 2.64 | 3.0         |
|   | 0.170     | 614    | 2.70 | 3.1         |
|   | 0.174     | 628    | 2.76 | 3.2         |
|   | 0.178     | 642    | 2.83 | 3.3         |
|   | 0.182     | 655    | 2.89 | 3.4         |
|   | 0.186     | 669    | 2.94 | 3.5         |
|   | 0.189     | 682    | 3.00 | 3.6         |
|   | 0.193     | 695    | 3.06 | 3.7         |
|   | 0.196     | 707    | 3.11 | 3.8         |
|   | 0.200     | 719    | 3.17 | 3.9         |
|   | 0.203     | 731    | 3.22 | 4.0         |
|   | 0.206     | 742    | 3.27 | 4.1         |
|   | 0.209     | 753    | 3.32 | 4.2         |
|   | 0.212     | 764    | 3.36 | 4.3         |
|   | 0.215     | 774    | 3.41 | 4.4         |
|   | 0.218     | 784    | 3.45 | 4.5         |
|   | 0.220     | 793    | 3.49 | 4.6         |
|   | 0.223     | 802    | 3.53 | 4.7         |
|   | 0.225     | 810    | 3.57 | 4.8         |
|   | 0.227     | 818    | 3.60 | 4.9         |
|   | 0.229     | 825    | 3.60 | 5.0         |

Accuracy: Greatest of either ±5% of controlled flow rate or ±2% of maximum flow rate

| 20mm · 3/4" · E-JUST · G-type · Grey pawl     |           |       |      |             |
|---|-----------|-------|------|-------------|
| Pressure range. ΔP: 30-400 kPaD · 4.4-58 psid |           |       |      |             |
| Controlled flow rate                          | Model no. |       |      | E-JUST1.G.R |
|   | I/sec     | I/hr  | GPM  | Red Setting |
|   |           | 0.113 | 406  | 1.79        |
|   | 0.119     | 427   | 1.88 | 1.1         |
|   | 0.125     | 449   | 1.98 | 1.2         |
|   | 0.131     | 470   | 2.07 | 1.3         |
|   | 0.137     | 492   | 2.17 | 1.4         |
|   | 0.143     | 513   | 2.26 | 1.5         |
|   | 0.149     | 535   | 2.36 | 1.6         |
|   | 0.155     | 556   | 2.45 | 1.7         |
|   | 0.161     | 578   | 2.54 | 1.8         |
|   | 0.167     | 599   | 2.64 | 1.9         |
|   | 0.172     | 621   | 2.73 | 2.0         |
|   | 0.178     | 642   | 2.83 | 2.1         |
|   | 0.184     | 664   | 2.92 | 2.2         |
|   | 0.190     | 685   | 3.02 | 2.3         |
|   | 0.196     | 707   | 3.11 | 2.4         |
|   | 0.202     | 728   | 3.21 | 2.5         |
|   | 0.208     | 750   | 3.30 | 2.6         |
|   | 0.214     | 771   | 3.40 | 2.7         |
|   | 0.220     | 793   | 3.49 | 2.8         |
|   | 0.226     | 814   | 3.59 | 2.9         |
|   | 0.232     | 836   | 3.68 | 3.0         |
|   | 0.238     | 857   | 3.78 | 3.1         |
|   | 0.244     | 879   | 3.87 | 3.2         |
|   | 0.250     | 900   | 3.96 | 3.3         |
|   | 0.256     | 922   | 4.06 | 3.4         |
|   | 0.262     | 943   | 4.15 | 3.5         |
|   | 0.268     | 965   | 4.25 | 3.6         |
|   | 0.274     | 987   | 4.34 | 3.7         |
|   | 0.280     | 1010  | 4.44 | 3.8         |
|   | 0.286     | 1030  | 4.53 | 3.9         |
|   | 0.292     | 1050  | 4.63 | 4.0         |
|   | 0.298     | 1070  | 4.72 | 4.1         |
|   | 0.304     | 1090  | 4.82 | 4.2         |
|   | 0.310     | 1120  | 4.91 | 4.3         |
|   | 0.316     | 1140  | 5.01 | 4.4         |
|   | 0.322     | 1160  | 5.10 | 4.5         |
|   | 0.328     | 1180  | 5.20 | 4.6         |
|   | 0.334     | 1200  | 5.29 | 4.7         |
|   | 0.340     | 1220  | 5.38 | 4.8         |
|   | 0.346     | 1240  | 5.48 | 4.9         |
|   | 0.352     | 1270  | 5.57 | 5.0         |

Accuracy: Greatest of either ±5% of controlled flow rate or ±2% of maximum flow rate



Use the FlowCon adjustment key (part number ACC0001) for adjusting the flow rate.

A setting of 4.2 corresponds to a flow rate of 0.304 l/sec for the 20mm red cartridge, range 30-400 kPaD.



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**FLOW RATE SETTING - E-JUST CARTRIDGE - FOR VALVES DN15-DN25 SMALL (continued)**

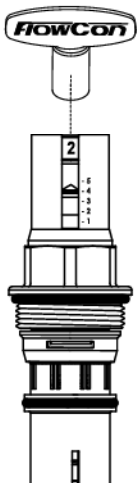
| 20mm · 3/4" · E-JUST · G-type · Grey pawl     |           |      |       |             |             |
|---|-----------|------|-------|-------------|-------------|
| Pressure range, ΔP: 35-400 kPaD · 5.1-58 psid |           |      |       |             |             |
| Controlled flow rate                          | Model no. |      |       | E-JUST1.G.B | E-JUST1.G.G |
|   | l/sec     | l/hr | GPM   | Black       | Green       |
|   |           |      |       | Setting     | Setting     |
|   | 0.0383    | 138  | 0.607 | 1.0         |             |
|   | 0.0416    | 150  | 0.660 | 1.1         |             |
|   | 0.0449    | 162  | 0.712 | 1.2         |             |
|   | 0.0483    | 174  | 0.765 | 1.3         |             |
|   | 0.0516    | 186  | 0.817 | 1.4         |             |
|   | 0.0549    | 198  | 0.870 | 1.5         |             |
|   | 0.0582    | 210  | 0.922 | 1.6         |             |
|   | 0.0615    | 221  | 0.975 | 1.7         |             |
|   | 0.0648    | 233  | 1.03  | 1.8         |             |
|   | 0.0660    | 238  | 1.05  |             | 1.0         |
|   | 0.0681    | 245  | 1.08  | 1.9         |             |
|   | 0.0706    | 254  | 1.12  |             | 1.1         |
|   | 0.0714    | 257  | 1.13  | 2.0         |             |
|   | 0.0748    | 269  | 1.18  | 2.1         |             |
|   | 0.0751    | 271  | 1.19  |             | 1.2         |
|   | 0.0781    | 281  | 1.24  | 2.2         |             |
|   | 0.0797    | 287  | 1.26  |             | 1.3         |
|   | 0.0814    | 293  | 1.29  | 2.3         |             |
|   | 0.0843    | 304  | 1.34  |             | 1.4         |
|   | 0.0847    | 305  | 1.34  | 2.4         |             |
|   | 0.0880    | 317  | 1.40  | 2.5         |             |
|   | 0.0889    | 320  | 1.41  |             | 1.5         |
|   | 0.0913    | 329  | 1.45  | 2.6         |             |
|   | 0.0934    | 336  | 1.48  |             | 1.6         |
|   | 0.0946    | 341  | 1.50  | 2.7         |             |
|   | 0.0979    | 353  | 1.55  | 2.8         |             |
|   | 0.0980    | 353  | 1.55  |             | 1.7         |
|   | 0.101     | 365  | 1.61  | 2.9         |             |
|   | 0.103     | 369  | 1.63  |             | 1.8         |
|   | 0.105     | 377  | 1.66  | 3.0         |             |
|   | 0.107     | 386  | 1.70  |             | 1.9         |
|   | 0.108     | 388  | 1.71  | 3.1         |             |
|   | 0.111     | 400  | 1.76  | 3.2         |             |
|   | 0.112     | 402  | 1.77  |             | 2.0         |
|   | 0.115     | 412  | 1.82  | 3.3         |             |
|   | 0.116     | 419  | 1.84  |             | 2.1         |
|   | 0.118     | 424  | 1.87  | 3.4         |             |
|   | 0.121     | 435  | 1.92  |             | 2.2         |
|   | 0.121     | 436  | 1.92  | 3.5         |             |
|   | 0.124     | 448  | 1.97  | 3.6         |             |
|   | 0.125     | 452  | 1.99  |             | 2.3         |
|   | 0.128     | 460  | 2.03  | 3.7         |             |
|   | 0.130     | 468  | 2.06  |             | 2.4         |
|   | 0.131     | 472  | 2.08  | 3.8         |             |

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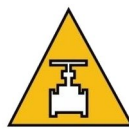
| 20mm · 3/4" · E-JUST · G-type · Grey pawl     |           |      |      |             |             |
|---|-----------|------|------|-------------|-------------|
| Pressure range, ΔP: 35-400 kPaD · 5.1-58 psid |           |      |      |             |             |
| Controlled flow rate                          | Model no. |      |      | E-JUST1.G.B | E-JUST1.G.G |
|   | l/sec     | l/hr | GPM  | Black       | Green       |
|   |           |      |      | Setting     | Setting     |
|   | 0.134     | 484  | 2.13 | 3.9         |             |
|   | 0.135     | 485  | 2.13 |             | 2.5         |
|   | 0.138     | 496  | 2.18 | 4.0         |             |
|   | 0.139     | 501  | 2.21 |             | 2.6         |
|   | 0.141     | 508  | 2.24 | 4.1         |             |
|   | 0.144     | 517  | 2.28 |             | 2.7         |
|   | 0.144     | 520  | 2.29 | 4.2         |             |
|   | 0.148     | 532  | 2.34 | 4.3         |             |
|   | 0.148     | 534  | 2.35 |             | 2.8         |
|   | 0.151     | 544  | 2.39 | 4.4         |             |
|   | 0.153     | 550  | 2.42 |             | 2.9         |
|   | 0.154     | 556  | 2.45 | 4.5         |             |
|   | 0.157     | 567  | 2.50 |             | 3.0         |
|   | 0.158     | 567  | 2.50 | 4.6         |             |
|   | 0.161     | 579  | 2.55 | 4.7         |             |
|   | 0.162     | 583  | 2.57 |             | 3.1         |
|   | 0.164     | 591  | 2.60 | 4.8         |             |
|   | 0.167     | 600  | 2.64 |             | 3.2         |
|   | 0.168     | 603  | 2.66 | 4.9         |             |
|   | 0.171     | 615  | 2.71 | 5.0         |             |
|   | 0.171     | 616  | 2.71 |             | 3.3         |
|   | 0.176     | 633  | 2.79 |             | 3.4         |
|   | 0.180     | 649  | 2.86 |             | 3.5         |
|   | 0.185     | 666  | 2.93 |             | 3.6         |
|   | 0.189     | 682  | 3.00 |             | 3.7         |
|   | 0.194     | 699  | 3.08 |             | 3.8         |
|   | 0.199     | 715  | 3.15 |             | 3.9         |
|   | 0.203     | 731  | 3.22 |             | 4.0         |
|   | 0.208     | 748  | 3.29 |             | 4.1         |
|   | 0.212     | 764  | 3.37 |             | 4.2         |
|   | 0.217     | 781  | 3.44 |             | 4.3         |
|   | 0.221     | 797  | 3.51 |             | 4.4         |
|   | 0.226     | 814  | 3.58 |             | 4.5         |
|   | 0.231     | 830  | 3.66 |             | 4.6         |
|   | 0.235     | 847  | 3.73 |             | 4.7         |
|   | 0.240     | 863  | 3.80 |             | 4.8         |
|   | 0.244     | 880  | 3.87 |             | 4.9         |
|   | 0.249     | 896  | 3.95 |             | 5.0         |

Accuracy: Greatest of either ±5% of controlled flow rate or ±2% of maximum flow rate



Use the FlowCon adjustment key (part number ACC0001) for adjusting the flow rate.

A setting of 4.2 corresponds to a flow rate of 0.212 l/sec for the 20mm green cartridge, range 35-400 kPaD.

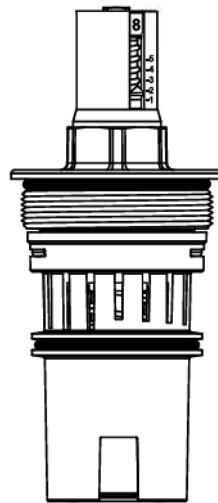


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**FLOW RATE SETTING - E-JUST CARTRIDGE - FOR VALVES DN25 LARGE-DN40**

| 40mm · 1 1/2" · E-JUST · Y-type · White pawl  |                       |      |      |         |
|---|-----------------------|------|------|---------|
| Pressure range. ΔP: 17-400 kPaD · 2.5-58 psid |                       |      |      |         |
| Controlled flow rate                          | Model no. E-JUST2.Y.B |      |      | Setting |
|   | l/sec                 | l/hr | GPM  |         |
|   | 0.291                 | 1050 | 4.61 | 1.0     |
|   | 0.334                 | 1200 | 5.30 | 1.1     |
|   | 0.377                 | 1360 | 5.97 | 1.2     |
|   | 0.418                 | 1510 | 6.63 | 1.3     |
|   | 0.459                 | 1650 | 7.28 | 1.4     |
|   | 0.499                 | 1800 | 7.91 | 1.5     |
|   | 0.538                 | 1940 | 8.53 | 1.6     |
|   | 0.577                 | 2080 | 9.14 | 1.7     |
|   | 0.614                 | 2210 | 9.73 | 1.8     |
|   | 0.651                 | 2340 | 10.3 | 1.9     |
|   | 0.687                 | 2470 | 10.9 | 2.0     |
|   | 0.722                 | 2600 | 11.4 | 2.1     |
|   | 0.756                 | 2720 | 12.0 | 2.2     |
|   | 0.790                 | 2840 | 12.5 | 2.3     |
|   | 0.823                 | 2960 | 13.0 | 2.4     |
|   | 0.855                 | 3080 | 13.5 | 2.5     |
|   | 0.886                 | 3190 | 14.0 | 2.6     |
|   | 0.916                 | 3300 | 14.5 | 2.7     |
|   | 0.946                 | 3400 | 15.0 | 2.8     |
|   | 0.974                 | 3510 | 15.4 | 2.9     |
|   | 1.00                  | 3610 | 15.9 | 3.0     |
|   | 1.03                  | 3710 | 16.3 | 3.1     |
|   | 1.06                  | 3800 | 16.7 | 3.2     |
|   | 1.08                  | 3890 | 17.1 | 3.3     |
|   | 1.11                  | 3980 | 17.5 | 3.4     |
|   | 1.13                  | 4070 | 17.9 | 3.5     |
|   | 1.15                  | 4150 | 18.3 | 3.6     |
|   | 1.18                  | 4230 | 18.6 | 3.7     |
|   | 1.20                  | 4310 | 19.0 | 3.8     |
|   | 1.22                  | 4380 | 19.3 | 3.9     |
|   | 1.24                  | 4460 | 19.6 | 4.0     |
|   | 1.26                  | 4530 | 19.9 | 4.1     |
|   | 1.28                  | 4590 | 20.2 | 4.2     |
|   | 1.29                  | 4650 | 20.5 | 4.3     |
|   | 1.31                  | 4710 | 20.8 | 4.4     |
|   | 1.33                  | 4770 | 21.0 | 4.5     |
|   | 1.34                  | 4830 | 21.3 | 4.6     |
|   | 1.36                  | 4880 | 21.5 | 4.7     |
|   | 1.37                  | 4930 | 21.7 | 4.8     |
|   | 1.38                  | 4970 | 21.9 | 4.9     |
|   | 1.39                  | 5020 | 22.1 | 5.0     |

Accuracy: Greatest of either  $\pm 5\%$  of controlled flow rate or  $\pm 2\%$  of maximum flow rate



Use the FlowCon adjustment key (part number ACC0001) for adjusting the flow rate.

A setting of 4.2 corresponds to a flow rate of 1.28 l/sec for the 40mm cartridge, range 17-400 kPaD.





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## ACCESSORIES

- P/t plugs: 2 x ACC00101
- Blind cap: ACC0080 / ACC0081 (cap (small / medium) without a cartridge for flushing out the system)
- Adjustment key: ACC0001 (key for adjusting the flow rate on E-JUST cartridges and turning the ball valve).

## GENERAL SPECIFICATIONS

### 1. AUTOMATIC BALANCING VALVES WITH INTEGRAL ISOLATION BALL VALVE - FLOWCON ABV

- 1.1. Contractor shall install automatic balancing valves where indicated in drawings.
- 1.2. Valve shall consist of dynamic, accessible, adjustable flow limiting device and integral isolation ball valve.

### 2. VALVE HOUSING AND BALL VALVE

- 2.1. Valve housing shall consist of forged brass ASTM CuZn40Pb2, rated at no less than 2500 kPa static pressure and +120°C.
- 2.2. Valve ball shall consist of chemically nickel plated brass (ASTM CuZn40Pb2).
- 2.3. Valve housing shall be permanently marked to show direction of flow.
- 2.4. Valve housing shall be double union end constructed with a range of pipe connections available for the appropriate pipe size.
- 2.5. Optional dual pressure/temperature test plugs for verifying accuracy of flow performance shall be available for all valve sizes.
- 2.6. Housing shall be configured for flow regulation unit accessibility.

### 3.a. FLOW REGULATOR / AUTOMATIC BALANCING UNIT / COMPOSITE CARTRIDGE

- 3.a.1. Flow regulation unit assembly shall be manufactured of polyoxymethylene with a hydrogenated acrylonitrile-butadiene rubber or EPDM diaphragm and stainless steel 18-8 spring.
- 3.a.2. Flow regulation unit shall be readily accessible for change-out or maintenance.
- 3.a.3. Flow regulation unit shall be adjustable to 1 of 8 different flow rates; shall be available in 2 different kPaD operational ranges for DN15/20/25 and 3 different kPaD operational ranges for DN25/32/40; minimum range shall be capable of being activated by minimum 15 kPaD. Further, the flow regulation unit shall be capable of controlling flow within  $\pm 10\%$  of rated flow rate or 20l/hr.
- 3.a.4. Identification tags shall be available for all valves; tags shall be indelibly marked with flow rate, color and dial setting.

OR...

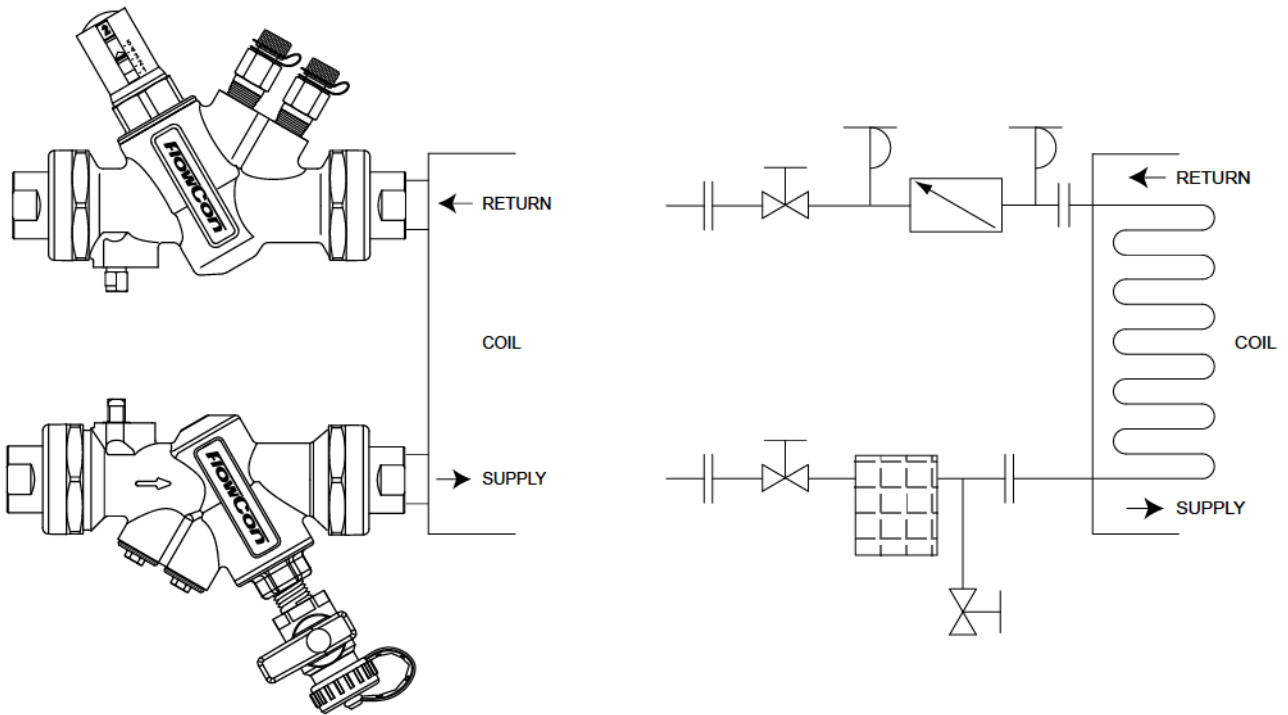
### 3.b. FLOW REGULATOR / AUTOMATIC BALANCING UNIT / E-JUST CARTRIDGE

- 3.b.1. Flow regulation unit assembly shall be manufactured of polysulfone with a hydrogenated acrylonitrile-butadiene rubber or EPDM diaphragm and stainless steel 18-8 spring.
- 3.b.2. Flow regulation unit shall be readily accessible for change-out or maintenance.
- 3.b.3. Flow regulation unit shall be adjustable with the valve in-line and the system in operation.
- 3.b.4. Flow regulation unit shall be externally adjustable to 1 of 41 different flow rates; shall be available in 4 different kPaD operational ranges for DN15/20/25 and 1 kPaD operational ranges for DN25/32/40; minimum range shall be capable of being activated by minimum 17 kPaD. Further, the flow regulation unit shall be capable of controlling flow within  $\pm 5\%$  of rated flow or  $\pm 2\%$  of maximum flow.
- 3.b.5. Identification tags shall be available for all valves; tags shall be indelibly marked with flow rate, color and dial setting.



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## APPLICATION EXAMPLE



## UPDATES

For latest updates please see [www.flowcon.com](http://www.flowcon.com)

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