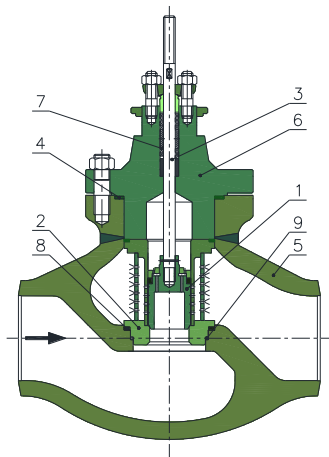


# HCVB2 PN250÷PN600 GLOBE CONTROL VALVE TECHNICAL BRIEF

|                                                                                  |         |               |             |      |                      |
|----------------------------------------------------------------------------------|---------|---------------|-------------|------|----------------------|
|  | Client: | Quotation No: | Valve desc: | KKs: | Valve specification: |
|----------------------------------------------------------------------------------|---------|---------------|-------------|------|----------------------|



High Trim Control Valves **HCVB** are dedicated to operate under extremely tough conditions PN40÷600, T(-50÷600°C). The construction is based on cast body for PN40÷160 and cored forged shape body for PN250÷600, which is unique. The seat is put-in type, sealed with spiral gasket and additionally by metal C-ring. A wide variety of different trim designs makes the valves able to cope with heavy cavitation, flashing, choked flow and noise excessive conditions. This particular **HCVB2** type is applicable in common solutions. High Pressure Recovery Factor dedicates the valve to operate where high noise or cavitation reduction is demanded. The valve works with FTO direction.

## Benefits:

Interchangeable trim designs of wide variety  
Rangeability 1:100 available, high Pressure Recovery Factor  
High leakage class available (when unbalanced)  
Metal/metal planed bonnet with spiral gasket  
Any soft seals inside the body  
Easy maintenance – put-in seat.  
Butt weld ends / flange connection matching the pipe size  
All actuator systems are adaptable

**Alternative solutions: Economic- MCV-P**

|                                 |                                    |
|---------------------------------|------------------------------------|
| Rangeability:                   | 1:50 (Standard), 1:100 (Available) |
| 100% open-main coefficients FTO | FL=0,97; XT=0,8; Fd=0,1; xFz=0,78  |

| Kvs  | Stroke | Seat diam.C | Seat diam.P | DN min | DN max |
|------|--------|-------------|-------------|--------|--------|
| 0,1  | 20     | 6           | -           | 15     | 50     |
| 0,16 | 20     | 6           | -           | 15     | 50     |
| 0,25 | 20     | 6           | -           | 15     | 50     |
| 0,4  | 20     | 6           | -           | 15     | 50     |
| 0,63 | 20     | 6           | -           | 15     | 50     |
| 1    | 20     | 9           | 9           | 15     | 50     |
| 1,6  | 20     | 9           | 14          | 15     | 50     |
| 2,5  | 20     | 14          | 14          | 15     | 50     |
| 4    | 20     | 14          | 19          | 15     | 50     |
| 6,3  | 20     | 19          | 19          | 20     | 50     |
| 10   | 20     | 19          | 25          | 25     | 50     |
| 16   | 20     | 25          | 34          | 32     | 65     |
| 25   | 20     | 34          | 44          | 40     | 80     |
| 40   | 20     | 44          | 50          | 50     | 100    |
| 63   | 40     | 50          | 70          | 65     | 150    |
| 94   | 40     | 70          | 90          | 80     | 200    |
| 125  | 40     | 90          | 100         | 100    | 250    |
| 160  | 40     | 100         | 110         | 125    | 250    |
| 250  | 50     | 110         | 125         | 150    | 250    |
| 320  | 50     | 125         | 160         | 150    | 250    |
| 500  | 63     | 160         | 194         | 200    | 300    |
| 630  | 63     | 194         | 194         | 200    | 300    |
| 800  | 100    | 194         | 240         | 250    | 300    |
| 1000 | 100    | 240         | 240         | 300    | 300    |
| 1300 | 100    | 240         | 270         | 300    | 300    |

C – profiled plug , P – perforated plug

| Part No | Part Name       | Specification, position     | Symbol                         | Material/performance | Part No | Part Name   | Specification, position  | Symbol                 | Material/performance |
|---------|-----------------|-----------------------------|--------------------------------|----------------------|---------|-------------|--------------------------|------------------------|----------------------|
| 1       | Plug            | X1 Performance              | C                              | Profiled             | 5       | Body        | X8 Performance           | 1                      | DIN/PN Flanged       |
|         |                 | X2 Ballancing               | U                              | Unbalanced           |         |             |                          | 2                      | ANSI Flanged         |
|         |                 |                             | 3                              | BW Standard          |         |             |                          |                        |                      |
|         |                 | X3 Material                 | 1                              | 1.4571               |         |             |                          | 4                      | BW Specified         |
|         |                 |                             | 2                              | 1.4571+stellite      |         |             | 1                        | 1.0460                 |                      |
|         |                 |                             | 3                              | 1.4571+nitrogen      |         |             | 3                        | 1.5415                 |                      |
|         |                 |                             | 4                              | 1.4057 hard. 35 HRC  |         |             | 4                        | 1.7335                 |                      |
|         |                 |                             | 5                              | 1.4125 hard. 55 HRC  |         |             | 7                        | 1.4541                 |                      |
|         |                 |                             | 6                              | Other                |         |             | 8                        | 1.4404                 |                      |
|         |                 | X4 Characteristic           | L                              | Linear               |         |             | 11                       | 1.7380                 |                      |
|         |                 |                             | P                              | Equal-percentage     |         |             | 12                       | 1.7715                 |                      |
|         |                 |                             | M                              | Modified             |         |             | 13                       | 1.4903 (P91)           |                      |
|         |                 |                             | S                              | Other                |         |             | 14                       | 1.4901 (P92)           |                      |
|         |                 | 2                           | Seat                           | X5 Material          |         |             | 1                        | 1.4571                 | 33                   |
| 2       | 1.4541+Stellite |                             |                                |                      | 6       | Bonnet      | X10 Performance          | 1                      | Standard             |
|         |                 |                             |                                |                      |         |             |                          | 2                      | Spring strained      |
|         |                 |                             |                                |                      |         |             |                          | 3                      | TA-LUFT              |
| 5       | Other           | 4                           | Bellows                        |                      |         |             |                          |                        |                      |
| -       | -               | X6 Leakage class EN-60534-4 | 1                              | IV Standard          | 7       | Packing     | X11 Material/Performance | 1                      | PTFE                 |
|         |                 | 2                           | V Enhanced                     | 2                    |         |             |                          | PTFE V                 |                      |
|         |                 |                             |                                | 3                    |         |             |                          | PTFE Oxygen            |                      |
| -       | -               | X7 Flow Direction           | FO                             | Flow to Open         |         |             |                          | 4                      | Graphite Brained     |
|         |                 |                             |                                |                      |         |             | 5                        | Graphite Expanded      |                      |
| 3       | Stem            |                             | 1.4571, 1.4057 Hardened 35 HRC |                      | 8       | Seat Gasket |                          | 1.4404+Graphite Spiral |                      |
| 4       | Body Gasket     |                             | 1.4404+Graphite Spiral         |                      | 9       | C-ring      |                          | Metal                  |                      |

## VALVE SPECIFICATION

Full specification of the valve consists of:

**HCVB2** – symbol

**X1...X11** symbols from the table on left  
**PN, DN, Kvs**

**Medium**

**Design medium parameters**

**Shut-off pressure**

Example:

**HCVB2-C-U-2-P-2-2-FO-1-1-1-5, DN100, PN250, Kvs94.**

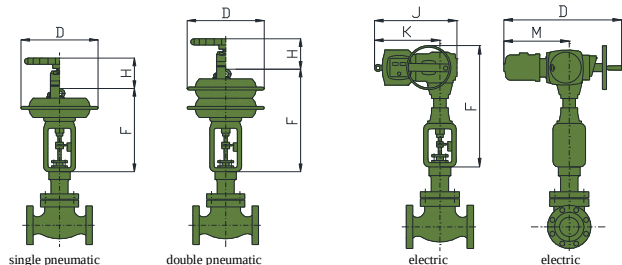
**Medium Water, Td=200°C, Pd=150bar**

**Shut-off pressure=100bar**

It is also recommended to specify working parameters as working pressure, temperature, pressure drop, flow and additional remarks if needed.

## CAUTION:

The client is not obligated to specify the valve when order. You can simply describe your expectations and INTEC sales person will specify adequate valve for you.

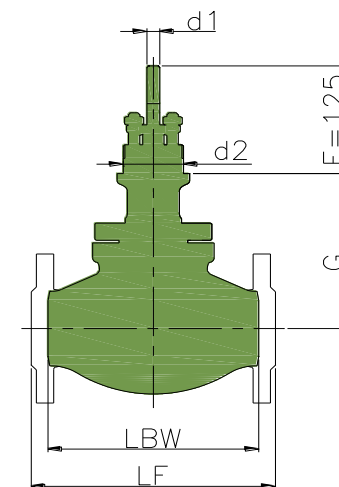


| PNEUMATIC   | Stroke | F   | H   | D   | -   | -   | Mass |
|-------------|--------|-----|-----|-----|-----|-----|------|
| 250         |        |     |     |     |     |     |      |
| 400         | 25     | 385 | 175 | 305 | -   | -   | 20   |
| 2x400       | 25     | 500 | 175 | 305 | -   | -   | 40   |
| 630         | 40     | 485 | 315 | 375 | -   | -   | 40   |
| 2x630       | 40     | 715 | 315 | 375 | -   | -   | 55   |
| 1000        | 60     | 650 | 300 | 480 | -   | -   | 70   |
| 2x1000      | 60     | 920 | 300 | 480 | -   | -   | 95   |
| ELECTRIC    | Stroke | F   | M   | D   | J   | K   | Mass |
| XIRa, XIRSa | 50     | 612 | 318 | 586 | 393 | 322 | 25   |
| XIRb, XIRSc | 50     | 651 | 335 | 602 | 422 | 335 | 34   |
| XIRc, XIRSc | 80     | 841 | 449 | 765 | 490 | 374 | 78   |
| XIRa, XIRSa | 100    | 732 | 318 | 586 | 393 | 322 | 25   |
| XIRb, XIRSc | 100    | 771 | 335 | 602 | 422 | 335 | 34   |
| XIRc, XIRSc | 160    | 991 | 449 | 765 | 490 | 374 | 85   |

Other actuators adaptable. For example AUMA actuators have closely similar dimensions and the same mechanical connections.

| PN/DN | Dim. | 15       | 20  | 25  | 32  | 40      | 50  | 65  | 80  | 100     | 125 | 150 | 200  | 250     | 300  |
|-------|------|----------|-----|-----|-----|---------|-----|-----|-----|---------|-----|-----|------|---------|------|
| 250   | LF   | 230      | 260 | 260 | 300 | 300     | 350 | 400 | 450 | 520     | 600 | 700 | 800  | 900     | 1050 |
|       | LBW  | 160      | 160 | 160 | 300 | 300     | 300 | 340 | 380 | 430     | 500 | 550 | 650  | 775     | 900  |
|       | G    | 200      | 200 | 200 | 211 | 222     | 225 | 255 | 285 | 302     | 402 | 575 | 625  | 678     | 728  |
|       | GM*  | -        | -   | -   | -   | -       | -   | -   | -   | -       | -   | -   | -    | -       | -    |
|       | d1   | M12x1,25 |     |     |     | M16x1,5 |     |     |     | M20x1,5 |     |     |      | M24x1,5 |      |
|       | d2   | Ø57,15   |     |     |     | Ø84,15  |     |     |     | Ø95,25  |     |     |      | Ø125    |      |
|       | Mass | 15       | 15  | 15  | 19  | 25      | 36  | 48  | 57  | 97      | 144 | 202 | 315  | 492     | 708  |
|       | LF   | 230      | 260 | 260 | 300 | 300     | 350 | 400 | 450 | 520     | 600 | 700 | 800  | 900     | 1050 |
|       | LBW  | 160      | 160 | 160 | 300 | 300     | 300 | 340 | 380 | 430     | 500 | 550 | 650  | 775     | 900  |
|       | G    | 200      | 200 | 200 | 211 | 222     | 225 | 255 | 285 | 302     | 402 | 575 | 625  | 678     | 728  |
| 320   | GM*  | -        | -   | -   | -   | -       | -   | -   | -   | -       | -   | -   | -    | -       | -    |
|       | d1   | M12x1,25 |     |     |     | M16x1,5 |     |     |     | M20x1,5 |     |     |      | M24x1,5 |      |
|       | d2   | Ø57,15   |     |     |     | Ø84,15  |     |     |     | Ø95,25  |     |     |      | Ø125    |      |
|       | Mass | 15       | 15  | 15  | 19  | 25      | 36  | 48  | 57  | 97      | 144 | 202 | 315  | 492     | 708  |
|       | LF   | 264      | 273 | 308 | 349 | 384     | 451 | 508 | 578 | 673     | 794 | 914 | 1022 | 1270    | 1422 |
|       | LBW  | 160      | 160 | 160 | 300 | 300     | 300 | 340 | 380 | 430     | 500 | 550 | 650  | 775     | 900  |
|       | G    | 200      | 200 | 200 | 211 | 222     | 225 | 255 | 285 | 302     | 402 | 575 | 625  | 678     | 728  |
|       | GM*  | -        | -   | -   | -   | -       | -   | -   | -   | -       | -   | -   | -    | -       | -    |
|       | d1   | M12x1,25 |     |     |     | M16x1,5 |     |     |     | M20x1,5 |     |     |      | M24x1,5 |      |
|       | d2   | Ø57,15   |     |     |     | Ø84,15  |     |     |     | Ø95,25  |     |     |      | Ø125    |      |
|       | Mass | 15       | 15  | 15  | 19  | 25      | 36  | 48  | 57  | 97      | 144 | 202 | 315  | 492     | 708  |
| 400   | LF   | 264      | 273 | 308 | 349 | 384     | 451 | 508 | 578 | 673     | 794 | 914 | 1022 | 1270    | 1422 |
|       | LBW  | 160      | 160 | 160 | 300 | 300     | 300 | 340 | 380 | 430     | 500 | 550 | 650  | 775     | 900  |
|       | G    | 200      | 200 | 200 | 211 | 222     | 225 | 255 | 285 | 302     | 402 | 575 | 625  | 678     | 728  |
|       | GM*  | -        | -   | -   | -   | -       | -   | -   | -   | -       | -   | -   | -    | -       | -    |
|       | d1   | M12x1,25 |     |     |     | M16x1,5 |     |     |     | M20x1,5 |     |     |      | M24x1,5 |      |
|       | d2   | Ø57,15   |     |     |     | Ø84,15  |     |     |     | Ø95,25  |     |     |      | Ø125    |      |
|       | Mass | 15       | 15  | 15  | 19  | 25      | 36  | 48  | 57  | 97      | 144 | 202 | 315  | 492     | 708  |
|       | LF   | 264      | 273 | 308 | 349 | 384     | 451 | 508 | 578 | 673     | 794 | 914 | 1022 | 1270    | 1422 |
|       | LBW  | 160      | 160 | 160 | 300 | 300     | 300 | 340 | 380 | 430     | 500 | 550 | 650  | 775     | 900  |
|       | G    | 200      | 200 | 200 | 211 | 222     | 225 | 255 | 285 | 302     | 402 | 575 | 625  | 678     | 728  |
| 600   | GM*  | -        | -   | -   | -   | -       | -   | -   | -   | -       | -   | -   | -    | -       | -    |
|       | d1   | M12x1,25 |     |     |     | M16x1,5 |     |     |     | M20x1,5 |     |     |      | M24x1,5 |      |
|       | d2   | Ø57,15   |     |     |     | Ø84,15  |     |     |     | Ø95,25  |     |     |      | Ø125    |      |
|       | Mass | 15       | 15  | 15  | 19  | 25      | 36  | 48  | 57  | 97      | 144 | 202 | 315  | 492     | 708  |

GM\* - The height measured with bellows or TA-LUFT bonnet. Masses are given for the valves with standard bonnet and BW ends.



**Zakład Automatyki Przemysłowej INTEC Sp. z o.o.**  
Bacciarellego 54; 51-649 Wrocław  
tel./fax +48 71 3481818  
e-mail: [biuro@intec.com.pl](mailto:biuro@intec.com.pl)  
<http://www.intec.com.pl>



**Fabryka Armatury Przemysłowej WAKMET sp. j.**  
Bodzanów 75, 48-340 Glucholazy 1  
tel./fax +48 77 4394020  
e-mail: [wakmet@wakmet.com.pl](mailto:wakmet@wakmet.com.pl)  
<http://www.wakmet.com.pl>