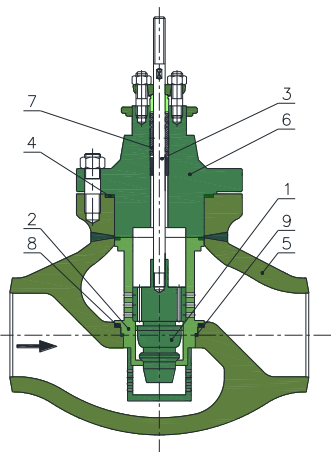


# HCVB6 PN250÷PN600 GLOBE CONTROL VALVE TECHNICAL BRIEF

|                                                                                  |         |               |             |      |                      |
|----------------------------------------------------------------------------------|---------|---------------|-------------|------|----------------------|
|  | 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 **HCVB6** type is dedicated to work wherever high pressure drop, specially water injection valves and pump bypass valves also steam reduction valves. The pressure drop is divided into 3 steps with pressure recovery between them, which reduces cavitation. To avoid pollution the valve is equipped with internal filter. The valve works with FTO direction.

## Benefits:

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=0.98; XT=0.82; Fd=0.1; xFz=0.8  |

| 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 Balancing                | U                              | Unbalanced           |         |             |                           | 2                      | ANSI Flanged         |
|         |                 |                             |                                |                      |         |             |                           | 3                      | BW Standard          |
|         |                 |                             |                                |                      |         |             |                           | 4                      | BW Specified         |
|         |                 |                             | X3 Material                    | 1                    |         |             | 1.4571                    | 1                      | 1.0460               |
|         |                 | 2                           |                                | 1.4571+stellite      |         |             | 3                         | 1.5415                 |                      |
|         |                 | 3                           |                                | 1.4571+nitrogen      |         |             | 4                         | 1.7335                 |                      |
|         |                 | 4                           |                                | 1.4057 hard. 35 HRC  |         |             | 7                         | 1.4541                 |                      |
|         |                 | 5                           |                                | 1.4125 hard. 55 HRC  |         |             | 8                         | 1.4404                 |                      |
|         |                 | 6                           |                                | Other                |         |             | 11                        | 1.7380                 |                      |
|         |                 | X4 Characteristic           | L                              | Linear               |         |             | 12                        | 1.7715                 |                      |
|         |                 |                             | P                              | Equal-percentage     |         |             | 13                        | 1.4903 (P91)           |                      |
|         |                 |                             | M                              | Modified             |         |             | 14                        | 1.4901 (P92)           |                      |
|         |                 |                             | S                              | Other                |         |             | 33                        | Other                  |                      |
| 1       | 1.4571          |                             |                                |                      |         |             |                           |                        |                      |
| 2       | 1.4541+Stellite |                             |                                |                      |         |             |                           |                        |                      |
| 2       | Seat            | X5 Material                 |                                |                      | 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               |
| -       | -               | X7 Flow Direction           | FO                             | Flow to Open         |         |             |                           | 3                      | PTFE Oxygen          |
|         |                 |                             |                                |                      |         |             |                           | 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:

**HCVB6** – symbol

**X1-...X11**- symbols from the table on left

**PN, DN, Kvs**

**Medium**

**Design medium parameters**

**Shut-off pressure**

Example:

**HCVB6-C-U-2-P-2-2-FO-1-1-1-5, DN100, PN250, Kvs94.**

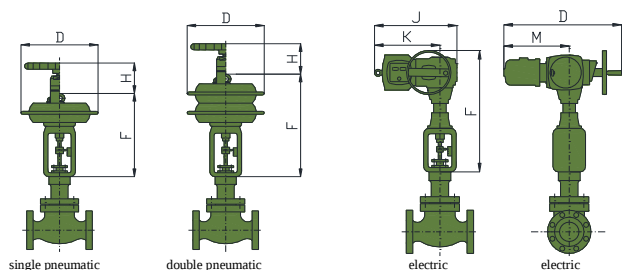
**Medium Water, Td=200°C, Pd=150bar**

**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.

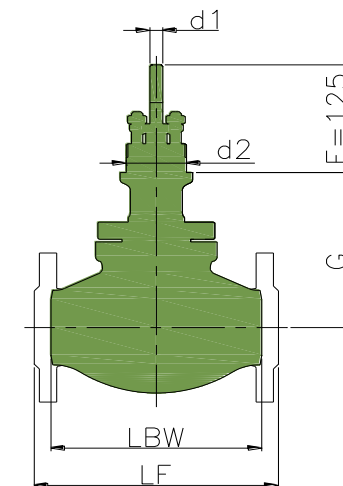


| PNEUMATIC   | Stroke | F   | H   | D   | -   | -   | Mass |
|-------------|--------|-----|-----|-----|-----|-----|------|
| 250         |        |     |     |     |     |     |      |
| 400         | 25     | 385 | 175 | 305 | -   | -   | 20   |
| 2x400       | 25     | 500 | 175 | 305 | -   | -   | 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, XIRb  | 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, XIRb  | 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  |     |     |      |         |      |
|       | 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  |     |     |      |         |      |
|       | 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  |     |     |      |         |      |
|       | 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  |     |     |      |         |      |
|       | 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  |     |     |      |         |      |
|       | 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.



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