

# Actuated Valves and Actuators

## Type 11C01 - Globe Valve FullX with actuator



Top-Entry pneumatic actuated Cryogenic-Globe Valves, forged steel body, up to PN63  
A001 series

- Stainless steel body and topwork,
- actuator - **spring to close**, air to open
- "live loaded" gland packing
- "cleaned and degreased for oxygen service"
- the actuator is not cleaned and degreased für oxygen

Butt weld connection for stainless steel pipes acc. to ISO 1127 oder ASTM A312

Available accessories/options:

- Solenoid valve · Limit switch · Electropneumatic positioner etc.
  - Actuator - cleaned and degreased for oxygen service
  - Bellow, top position
  - Bellow, bottom position
  - Bellow monitoring
  - Check function
  - Control function
  - Throttle function
  - Purge port
- On request only:
- Further connection types

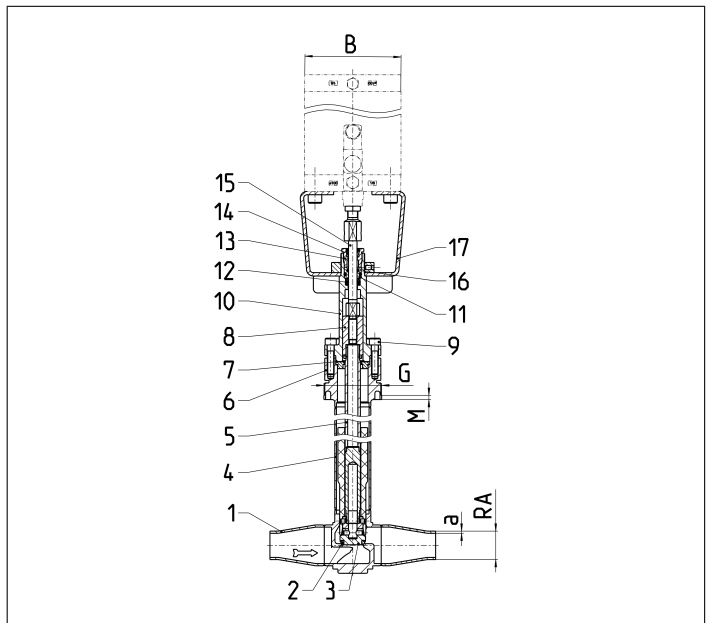


### Applications:

Approved for hydrogen, air gases, vapours and cryogenic liquefied gases incl. LNG.

Working temperature: -269°C / -452°F (4K) up to +80°C / +176°F (353K)

| Materials          | DIN EN                     | ASTM              |
|--------------------|----------------------------|-------------------|
| 1 Body             | 1.4571                     | A 313 Grade 316TI |
| 2 Valve seal       | PCTFE                      |                   |
| 3 Disc             | 1.4571                     | A 313 Grade 316TI |
| 4 Tube             | 1.4571                     | A 313 Grade 316TI |
| 5 Hollow stem      | 1.4571                     | A 313 Grade 316TI |
| 6 Flange           | 1.4404                     | A 276 Grade 316L  |
| 7 Bonnet gasket    | PTFE / Elektrocarbon (25%) |                   |
| 8 Bushing          | CW452K                     | B 159 UNS C51900  |
| 9 Bolt             | A4-70                      | A 194 B8M         |
| 10 Head peace      | 1.4404                     | A 276 Grade 316L  |
| 11 Sliding bushing | CW452K                     | B 159 UNS C51900  |
| 12 Gasket          | PTFE / Elektrocarbon (25%) |                   |
| 13 Gland bolt      | 1.4404                     | A 276 Grade 316L  |
| 14 Wiper           | PEEK                       | B 159 UNS C51900  |
| 15 Stem            | 1.4404                     | A 276 Grade 316L  |
| 16 O-ring          | FPM (VITON)                |                   |
| 17 Bracket         | 1.4404                     | A 276 Grade 316L  |



| Nominal size            | DN | 10                    | 15   | 20   | 25   | 32   | 40   | 50   |
|-------------------------|----|-----------------------|------|------|------|------|------|------|
| Collar-Ø                | G  | 68.0                  | 68.0 | 68.0 | 68.0 | 84.4 | 84.4 | 100  |
| Length                  | M  | 5                     | 5    | 5    | 5    | 5    | 5    | 5    |
| Actuator-Ø              | B  | dependent on actuator |      |      |      |      |      |      |
| Outside pipe-Ø ISO      | Ra | 17.2                  | 21.3 | 26.9 | 33.7 | 42.4 | 48.3 | 60.3 |
| Wall thickness pipe ISO | a  | 1.8                   | 2.0  | 2.3  | 2.6  | 2.6  | 2.6  | 2.9  |
| Pipe-Ø ASTM A312        |    | S10                   |      |      |      |      |      |      |

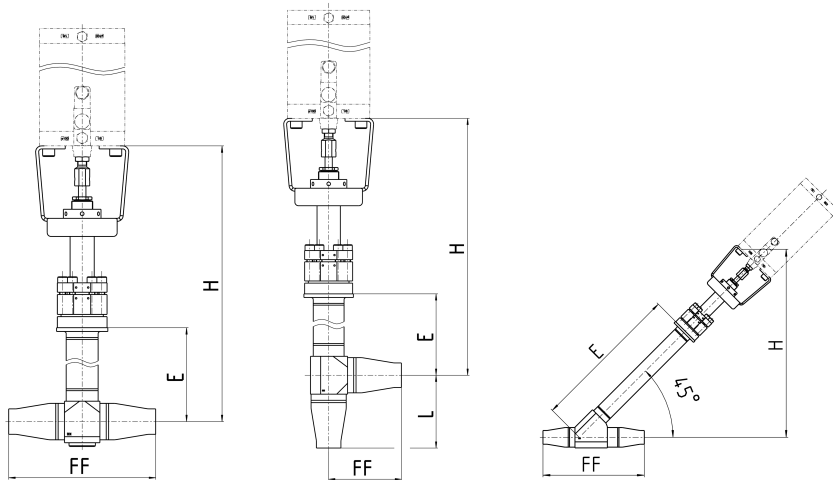
Dimensions in mm.

# Actuated Valves and Actuators

## Type 11C01 - Globe Valve FullX with actuator



### Body types



### Straight body

| Nominal size      | DN                | 10   | 15   | 20   | 25   | 32                    | 40   | 50    |
|-------------------|-------------------|------|------|------|------|-----------------------|------|-------|
| Face-to-face dim. | FF                | 150  | 150  | 195  | 195  | 235                   | 235  | 280   |
| Height            | H                 | 567  | 567  | 567  | 567  | dependent on actuator |      |       |
| Length            | E                 | 325  | 325  | 325  | 325  | 445                   | 445  | 525   |
| Kvs-value         | m <sup>3</sup> /h | 3.4  | 4.4  | 9.8  | 12.3 | 25.8                  | 28.3 | 44.0  |
| Kvs-value*        | m <sup>3</sup> /h | 3.4  | 4.4  | 9.5  | 12.0 | 25.8                  | 28.3 | 44.0  |
| Cv-value          | gal/min           | 4.0  | 5.1  | 11.4 | 14.3 | 30.0                  | 32.9 | 51.2  |
| Cv-value*         | gal/min           | 4.0  | 5.1  | 11.0 | 14.0 | 30.0                  | 32.9 | 51.2  |
| Weight**          | ca. kg            | 4.11 | 4.13 | 4.76 | 4.80 | 9.84                  | 9.87 | 13.01 |

\* with bellow, \*\* without actuator

### Body angle type

| Nominal size      | DN                | 10   | 15   | 20   | 25   | 32                    | 40   | 50    |
|-------------------|-------------------|------|------|------|------|-----------------------|------|-------|
| Face-to-face dim. | FF                | 80   | 80   | 100  | 100  | 120                   | 120  | 140   |
| Height            | H                 | 567  | 567  | 567  | 567  | dependent on actuator |      |       |
| Length            | E                 | 325  | 325  | 325  | 325  | 445                   | 445  | 525   |
| Length            | L                 | 80   | 80   | 100  | 100  | 120                   | 120  | 140   |
| Kvs-value         | m <sup>3</sup> /h | 4.7  | 5.7  | 19.8 | 22.3 | 41.1                  | 43.6 | 80.0  |
| Kvs-value*        | m <sup>3</sup> /h | 4.7  | 5.7  | 16.5 | 19.0 | 33.3                  | 35.8 | 63.0  |
| Cv-value          | gal/min           | 5.5  | 6.6  | 23.0 | 25.9 | 47.8                  | 50.7 | 93.0  |
| Cv-value*         | gal/min           | 5.5  | 6.6  | 19.2 | 22.1 | 38.7                  | 41.6 | 73.3  |
| Weight**          | ca. kg            | 4.07 | 4.09 | 4.70 | 4.74 | 9.58                  | 9.61 | 12.38 |

\* with bellow, \*\* without actuator

### Body Y type

| Nominal size      | DN                | 10   | 15   | 20   | 25   | 32                    | 40    | 50    |
|-------------------|-------------------|------|------|------|------|-----------------------|-------|-------|
| Face-to-face dim. | FF                | 185  | 185  | 250  | 250  | 285                   | 285   | 340   |
| Height            | H                 | 521  | 521  | 524  | 524  | dependent on actuator |       |       |
| Length            | E                 | 365  | 365  | 370  | 370  | 505                   | 505   | 600   |
| Kvs-value         | m <sup>3</sup> /h | 4.2  | 5.2  | 11.9 | 14.4 | 34.4                  | 36.9  | 69.8  |
| Kvs-value*        | m <sup>3</sup> /h | 4.2  | 5.2  | 7.7  | 10.2 | 28.6                  | 31.1  | 35.0  |
| Cv-value          | gal/min           | 4.9  | 6.0  | 13.8 | 16.7 | 40.0                  | 42.9  | 81.2  |
| Cv-value*         | gal/min           | 4.9  | 6.0  | 9.0  | 11.9 | 33.3                  | 36.2  | 40.7  |
| Weight**          | ca. kg            | 4.76 | 4.77 | 5.76 | 5.79 | 10.73                 | 10.76 | 17.20 |

\* with bellow, \*\* without actuator

# Actuated Valves and Actuators

## Type 11C01 - Globe Valve FullX with actuator



Top-Entry pneumatic actuated Cryogenic-Globe Valves, casted body, up to PN50  
A002 series

- Stainless steel body and topwork,
- actuator - **spring to close**, air to open
- "live loaded" gland packing
- "cleaned and degreased for oxygen service"
- the actuator is not cleaned and degreased für oxygen

Butt weld connection for stainless steel pipes acc. to ISO 1127 oder ASTM A312

Available accessories/options:

- Solenoid valve · Limit switch · Electropneumatic positioner etc.
  - Actuator - cleaned and degreased for oxygen service
  - Bellow, top position
  - Bellow, bottom position
  - Bellow monitoring
  - Check function
  - Control function
  - Throttle function
  - Purge port
- On request only:
- Further connection types

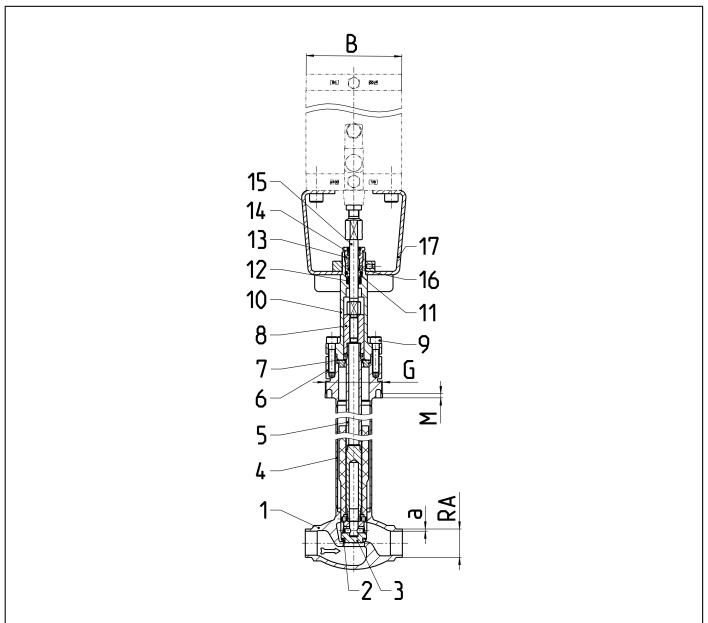


### Applications:

Approved for hydrogen, air gases, vapours and cryogenic liquefied gases incl. LNG.

Working temperature: -255°C / -427°F (18K) up to +80°C / +176°F (353K)

| Materials          | DIN EN                     | ASTM              |
|--------------------|----------------------------|-------------------|
| 1 Body             | 1.4409                     | A 351 CF3M        |
| 2 Valve seal       | PCTFE                      |                   |
| 3 Disc             | 1.4571                     | A 313 Grade 316TI |
| 4 Tube             | 1.4571                     | A 313 Grade 316TI |
| 5 Hollow stem      | 1.4571                     | A 313 Grade 316TI |
| 6 Flange           | 1.4404                     | A 276 Grade 316L  |
| 7 Bonnet gasket    | PTFE / Elektrocarbon (25%) |                   |
| 8 Bushing          | CW452K                     | B 159 UNS C51900  |
| 9 Bolt             | A4-70                      | A 194 B8M         |
| 10 Head piece      | 1.4404                     | A 276 Grade 316L  |
| 11 Sliding bushing | CW452K                     | B 159 UNS C51900  |
| 12 Gasket          | PTFE / Elektrocarbon (25%) |                   |
| 13 Gland bolt      | 1.4404                     | A 276 Grade 316L  |
| 14 Wiper           | PEEK                       | B 159 UNS C51900  |
| 15 Stem            | 1.4404                     | A 276 Grade 316L  |
| 16 O-ring          | FPM (VITON)                |                   |
| 17 Bracket         | 1.4404                     | A 276 Grade 316L  |



| Nominal size            | DN | 10                    | 15   | 20   | 25   | 32   | 40   | 50   |
|-------------------------|----|-----------------------|------|------|------|------|------|------|
| Collar-Ø                | G  | 68.0                  | 68.0 | 68.0 | 68.0 | 84.4 | 84.4 | 100  |
| Length                  | M  | 5                     | 5    | 5    | 5    | 5    | 5    | 5    |
| Actuator-Ø              | B  | dependent on actuator |      |      |      |      |      |      |
| Outside pipe-Ø ISO      | Ra | 13.5                  | 21.3 | 26.9 | 33.7 | 42.4 | 48.3 | 60.3 |
| Wall thickness pipe ISO | a  | 1.6                   | 2.0  | 2.0  | 2.6  | 2.6  | 2.6  | 2.9  |
| Pipe-Ø ASTM A312        |    | S10                   |      |      |      |      |      |      |

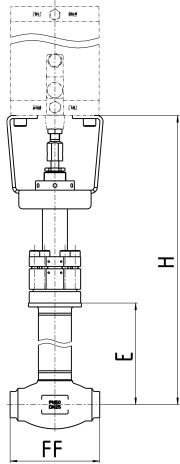
Dimensions in mm.

# Actuated Valves and Actuators

## Type 11C01 - Globe Valve FullX with actuator



### Body types



### Straight body

| Nominal size      | DN                | 10   | 15   | 20   | 25   | 32                    | 40   | 50    |
|-------------------|-------------------|------|------|------|------|-----------------------|------|-------|
| Face-to-face dim. | FF                | 85   | 85   | 115  | 115  | 130                   | 130  | 155   |
| Height            | H                 | 647  | 647  | 647  | 647  | dependent on actuator |      |       |
| Length            | E                 | 325  | 325  | 325  | 325  | 445                   | 445  | 525   |
| Kvs-value         | m <sup>3</sup> /h | 2.8  | 3.8  | 10.0 | 13.3 | 16.0                  | 25.0 | 46.0  |
| Kvs-value*        | m <sup>3</sup> /h | 3.4  | 4.4  | 9.5  | 12.0 | 25.8                  | 28.3 | 44.0  |
| Cv-value          | gal/min           | 2.8  | 4.4  | 11.6 | 15.4 | 18.5                  | 28.9 | 53.2  |
| Cv-value*         | gal/min           | 4.0  | 5.1  | 11.0 | 14.0 | 30.0                  | 32.9 | 51.2  |
| Weight**          | ca. kg            | 4.45 | 4.47 | 5.07 | 5.11 | 9.53                  | 9.56 | 12.62 |

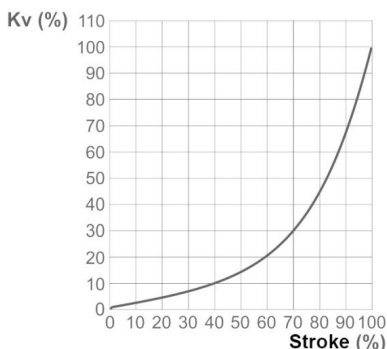
\* with bellow, \*\* without actuator

**Flow coefficient for Control Valves - Control characteristic equal percentage Kvs-Value in m<sup>3</sup>/h, Cv-Value in gal/min. These figures refer to measurements for the flow direction.**

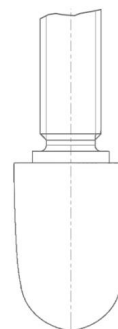
### Type 11C01 with actuator and control function - A001 and A002 series

| DN | Kvs [m <sup>3</sup> /h] | Cv [gal/min] | Stroke [mm] |
|----|-------------------------|--------------|-------------|
| 10 | 1.0                     | 1.2          | 10          |
| 15 | 3.5                     | 4.1          | 10          |
| 20 | 4.0                     | 4.7          | 10          |
| 25 | 6.3                     | 7.3          | 10          |
| 32 | 10.0                    | 11.6         | 20          |
| 40 | 19.0                    | 22.1         | 20          |
| 50 | 30.0                    | 34.9         | 20          |

Ideal inherent equal percentage characteristic curve acc. to DIN IEC 60534 Part 2-4



Sample drawing cone, control characteristic equal percentage



# Actuated Valves and Actuators

## Type 11C01 - Globe Valve FullX with actuator



### Configurable options

For configurable types, the HEROSE part number consists as follows:

| Type   | Series | Dimension code | Option codes                            |
|--------|--------|----------------|---|
| 11C01. | A001.  | 0250.          | ESR-MYJ-CBQ-QXY-KCZ-JRB-LYV-SNP-HTW-GCX |
| 1      | 2      | 3              | 4 up to 13                              |

| Selection of the type |                   |               |                |              | Type             |
|-----------------------|-------------------|---------------|----------------|--------------|------------------|
| 1                     | Type              | Product group | Market segment | Valve design | Product approval |
|                       | Globe Valve FullX | Cryogenic     | Top Entry      | PED          | 11C01            |

| Selection of the series |        |                              |                        | Series |
|-------------------------|--------|------------------------------|------------------------|--------|
| 2                       | Series | increased external tightness | medium pressure rating | A001   |
|                         |        | normal external tightness    | medium pressure rating | A002   |

| Selection of the nominal size |               |  | Dimension code |
|-------------------------------|---------------|--|----------------|
| 3                             | Nominal sizes |  |                |
|                               | DN10          |  | 0100           |
|                               | DN15          |  | 0150           |
|                               | DN20          |  | 0200           |
|                               | DN25          |  | 0250           |
|                               | DN32          |  | 0320           |
|                               | DN40          |  | 0400           |
|                               | DN50          |  | 0500           |

| Selection of options |                 |  | Option codes |
|----------------------|-----------------|--|--------------|
| 4                    | Pressure rating |  |              |
|                      | PN50            |  | JAT          |
|                      | PN63            |  | ESR          |

| 5 | Approvals | PED<br>DIN EN 1626 | MYJ |
|---|-----------|--------------------|-----|
|---|-----------|--------------------|-----|

| 6 | Body types | Body angle type | CBQ |
|---|------------|-----------------|-----|
|   |            | Straight body   | HJC |
|   |            | Body Y type     | PYU |

| 7 | Disc function | lockable function          | KCZ |
|---|---------------|----------------------------|-----|
|   |               | lockable check function    | JDA |
|   |               | lockable control function  | SWX |
|   |               | lockable throttle function | WVV |

| 8 | Operation | manual                        | YFW |
|---|-----------|-------------------------------|-----|
|   |           | actuated 'diaphragm actuator' | RQZ |
|   |           | actuated 'piston actuator'    | CEA |

| 9 | Handwheel options | Material 1.4409 | silver (natural) | JRB |
|---|-------------------|-----------------|------------------|-----|
|---|-------------------|-----------------|------------------|-----|

# Actuated Valves and Actuators

## Type 11C01 - Globe Valve FullX with actuator



| 10 | Bellow options | Bellow       | Bellow position | Bellow monitoring | Dimension bellow monitoring |     |
|----|----------------|--------------|-----------------|-------------------|-----------------------------|-----|
|    |                | not selected | not selected    | not selected      | not selected                | LYV |
|    |                | selected     | top             | not selected      | not selected                | MUR |
|    |                | selected     | bottom          | not selected      | not selected                | FYX |
|    |                | selected     | top             | selected          | DIN EN ISO 8434-1-WDS-S6    | GXD |
|    |                | selected     | bottom          | selected          | DIN EN ISO 8434-1-WDS-S6    | XHA |

| 11 | Collar options | Nominal size | Body type                         | Collar diameter Ø [mm] | Collar height (M) [mm] | Collar position (E) [mm] |     |
|----|----------------|--------------|-----------------------------------|------------------------|------------------------|--------------------------|-----|
|    |                | DN10-25      | Body angle type/<br>Straight body | 68.0                   | 5.0                    | 325.0                    | YWF |
|    |                | DN10/15      | Body Y type                       | 68.0                   | 5.0                    | 365.0                    | YTU |
|    |                | DN20/25      | Body Y type                       | 68.0                   | 5.0                    | 370.0                    | XCX |
|    |                | DN32/40      | Body angle type/<br>Straight body | 84.4                   | 5.0                    | 445.0                    | RBD |
|    |                | DN32/40      | Body Y type                       | 84.4                   | 5.0                    | 505.0                    | DML |
|    |                | DN50         | Body angle type/<br>Straight body | 100.0                  | 5.0                    | 525.0                    | UAC |
|    |                | DN50         | Body Y type                       | 100.0                  | 5.0                    | 600.0                    | WQA |

| 12            | Purge port |                |     |
|---------------|------------|----------------|-----|
|               |            | w/o purge port | CBG |
|               |            | with NPT 1/8"  | EPH |
| with VCR 1/4" | ANK        |                |     |

| 13 | Valve height | Nominal size | Body type                         | Bonnet extension | Valve height (H) [mm] |     |
|----|--------------|--------------|-----------------------------------|------------------|-----------------------|-----|
|    |              | DN10/15      | Body angle type/<br>Straight body | with             | 535.0                 | GCX |
|    |              | DN10/15      | Body Y type                       | with             | 430.0                 | HDP |
|    |              | DN20/25      | Body angle type/<br>Straight body | with             | 535.0                 | GCX |
|    |              | DN20/25      | Body Y type                       | with             | 440.0                 | VCG |
|    |              | DN32/40      | Body angle type/<br>Straight body | with             | 690.0                 | AKQ |
|    |              | DN32/40      | Body Y type                       | with             | 570.0                 | WAM |
|    |              | DN50         | Body angle type/<br>Straight body | with             | 775.0                 | QJN |
|    |              | DN50         | Body Y type                       | with             | 640.0                 | FTP |