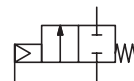


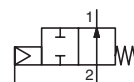
## VALVES

pressure operated  
bronze body  
with flanges PN16, DN 25 to 50

NC



NO



2/2  
Series  
**T290**

### FEATURES

- Remote-controlled valves with disc for industrial fluids
- Anti-waterhammer design (fluid entry under the disc)
- Vacuum operation up to  $10^{-2}$  mbar
- Wide range of piston-type operators (63 - 90 - 125 mm dia.) rotatable through 360°, for maximum performance at different minimum pilot pressures
- High performance, maintenance-free stuffing box
- The valves satisfy Pressure Equipment Directive 2014/68/EU, category 1 (DN > 25) or article 4.3 (DN 25)
- The valves in conformity with IEC 61508 Standard (2010 route 2<sub>H</sub> version) certified with integrity levels: SIL 2 for HFT = 0

### GENERAL

|                            |                                                               |
|----------------------------|---------------------------------------------------------------|
| Differential pressure      | See «SPECIFICATIONS» [1 bar = 100 kPa]                        |
| Maximum allowable pressure | 16 bar                                                        |
| Ambient temperature range  | -10°C to +60°C                                                |
| Maximum viscosity          | 600 cSt (mm²/s)                                               |
| Pilot fluid                | Filtered air or water <sup>(1)</sup>                          |
| Max. pilot pressure        | 10 bar                                                        |
| Min. pilot pressure        | See below and following page                                  |
| Pilot fluid temperature    | -10°C to +60°C                                                |
| Response time              | See page 7 ( <a href="http://www.asco.com">www.asco.com</a> ) |

| fluids (*)                                                             | temperature range | disc seal (*) |
|------------------------------------------------------------------------|-------------------|---------------|
| air and gas groups 1 & 2<br>water, oil, liquids groups 1 & 2 and steam | - 10°C to + 184°C | PTFE          |

### CONSTRUCTION

Connection Flange type 21 (ISO 7005) - PN 16  
Facing Type A

### MATERIALS IN CONTACT WITH FLUID

(\*) Ensure that the compatibility of the fluids in contact with the materials is verified

|                      |                 |
|----------------------|-----------------|
| Valve body           | Bronze          |
| Stuffing box housing | Brass           |
| Stem                 | Stainless steel |
| Disc                 | Brass           |
| Stuffing box packing | PTFE chevrons   |
| Wiper seal           | FPM             |
| Disc seal            | PTFE            |
| Valve body seal      | PTFE            |

### OTHER MATERIALS

|                            |                                                                     |
|----------------------------|---------------------------------------------------------------------|
| Operator                   | Glass fibre filled PA                                               |
| Optical position indicator | PA 12, supplied standard on valves with 63, 90 and 125 mm operators |

<sup>(1)</sup> For dia. 63, 90 and 125 mm operators: At service fluid temperatures inside the valve body above 100°C, it is prohibited to pilot the valve with water.

### SPECIFICATIONS

| DN                                                        | orifice size | flow coefficient Kv |         | pilot pressure (bar) |      | operating pressure differential (bar) |                   |                         |                    | operator diameter | catalogue number |
|-----------------------------------------------------------|--------------|---------------------|---------|----------------------|------|---------------------------------------|-------------------|-------------------------|--------------------|-------------------|------------------|
|                                                           | (mm)         | (m³/h)              | (l/min) | min.                 | max. | min.                                  | max.              |                         |                    |                   |                  |
|                                                           |              |                     |         |                      |      |                                       | air inert gas (*) | water, oil, liquids (*) | steam (*) (≤184°C) | (mm)              |                  |
| NC - Normally closed, entry under the disc <sup>(1)</sup> |              |                     |         |                      |      |                                       |                   |                         |                    |                   |                  |
| 25                                                        | 25           | 12                  | 200     | 4                    | 10   | 0                                     | 10                | 10                      | 10                 | 63                | T290A010         |
|                                                           |              |                     |         |                      |      |                                       | 16                | 16                      | 10                 | 90                | T290A011         |
|                                                           |              |                     |         | 2,5                  | 10   | 0                                     | 6                 | 6                       | 6                  | 63                | T290A008         |
|                                                           |              |                     |         |                      |      |                                       | 12                | 12                      | 10                 | 90                | T290A009         |
| 32                                                        | 32           | 18                  | 300     | 4                    | 10   | 0                                     | 6                 | 6                       | 6                  | 63                | T290A016         |
|                                                           |              |                     |         |                      |      |                                       | 12                | 12                      | 10                 | 90                | T290A017         |
|                                                           |              |                     |         | 2,5                  | 10   | 0                                     | 7                 | 7                       | 7                  | 90                | T290A015         |
|                                                           |              |                     |         |                      |      |                                       | 4                 | 4                       | 4                  | 63                | T290A020         |
| 40                                                        | 40           | 32                  | 530     | 4                    | 10   | 0                                     | 8                 | 8                       | 8                  | 90                | T290A021         |
|                                                           |              |                     |         |                      |      |                                       | 16                | 16                      | 10                 | 125               | T290A482         |
|                                                           |              | 35                  | 583     | 4                    | 10   | 0                                     | 10                | 10                      | 10                 | 125               | T290A481         |
|                                                           |              |                     |         | 2,5                  | 10   | 0                                     | 2,5               | 2,5                     | 2,5                | 63                | T290A024         |
| 50                                                        | 50           | 39                  | 650     | 4                    | 10   | 0                                     | 6                 | 6                       | 6                  | 90                | T290A025         |
|                                                           |              |                     |         |                      |      |                                       | 10                | 10                      | 10                 | 125               | T290A485         |
|                                                           |              | 44                  | 733     | 4                    | 10   | 0                                     | 10                | 10                      | 10                 | 125               | T290A485         |
|                                                           |              |                     |         | 2,5                  | 10   | 0                                     | 5                 | 5                       | 5                  | 125               | T290A484         |
| NO - Normally open, entry under the disc                  |              |                     |         |                      |      |                                       |                   |                         |                    |                   |                  |
| 25                                                        | 25           | 12                  | 200     | II (*)               | 10   | 0                                     | 16                | 16                      | 10                 | 63                | T290A028         |
|                                                           |              |                     |         | III (*)              | 10   | 0                                     | 16                | 16                      | 10                 | 90                | T290A029         |
| 32                                                        | 32           | 18                  | 300     | II (*)               | 10   | 0                                     | 16                | 16                      | 10                 | 63                | T290A030         |
|                                                           |              | 19                  | 317     | IV (*)               | 10   | 0                                     | 16                | 16                      | 10                 | 125               | T290A643         |

| DN                                                        | orifice size | flow coefficient Kv |         | pilot pressure (bar) |      | operating pressure differential (bar) |                   |                         |                    | operator diameter | catalogue number |
|-----------------------------------------------------------|--------------|---------------------|---------|----------------------|------|---------------------------------------|-------------------|-------------------------|--------------------|-------------------|------------------|
|                                                           | (mm)         | (m³/h)              | (l/min) | min.                 | max. | min.                                  | max.              |                         |                    |                   |                  |
|                                                           |              |                     |         |                      |      |                                       | air inert gas (*) | water, oil, liquids (*) | steam (*) (≤184°C) | (mm)              |                  |
| NC - Normally closed, entry under the disc <sup>(1)</sup> |              |                     |         |                      |      |                                       |                   |                         |                    |                   |                  |
| 25                                                        | 25           | 12                  | 200     | 4                    | 10   | 0                                     | 10                | 10                      | 10                 | 63                | T290A010         |
|                                                           |              |                     |         |                      |      |                                       | 16                | 16                      | 10                 | 90                | T290A011         |
|                                                           |              |                     |         | 2,5                  | 10   | 0                                     | 6                 | 6                       | 6                  | 63                | T290A008         |
|                                                           |              |                     |         |                      |      |                                       | 12                | 12                      | 10                 | 90                | T290A009         |
| 32                                                        | 32           | 18                  | 300     | 4                    | 10   | 0                                     | 6                 | 6                       | 6                  | 63                | T290A016         |
|                                                           |              |                     |         |                      |      |                                       | 12                | 12                      | 10                 | 90                | T290A017         |
|                                                           |              |                     |         | 2,5                  | 10   | 0                                     | 7                 | 7                       | 7                  | 90                | T290A015         |
|                                                           |              |                     |         |                      |      |                                       | 4                 | 4                       | 4                  | 63                | T290A020         |
| 40                                                        | 40           | 32                  | 530     | 4                    | 10   | 0                                     | 8                 | 8                       | 8                  | 90                | T290A021         |
|                                                           |              |                     |         |                      |      |                                       | 16                | 16                      | 10                 | 125               | T290A482         |
|                                                           |              | 35                  | 583     | 4                    | 10   | 0                                     | 10                | 10                      | 10                 | 125               | T290A481         |
|                                                           |              |                     |         | 2,5                  | 10   | 0                                     | 2,5               | 2,5                     | 2,5                | 63                | T290A024         |
| 50                                                        | 50           | 39                  | 650     | 4                    | 10   | 0                                     | 6                 | 6                       | 6                  | 90                | T290A025         |
|                                                           |              |                     |         |                      |      |                                       | 10                | 10                      | 10                 | 125               | T290A485         |
|                                                           |              | 44                  | 733     | 4                    | 10   | 0                                     | 10                | 10                      | 10                 | 125               | T290A485         |
|                                                           |              |                     |         | 2,5                  | 10   | 0                                     | 5                 | 5                       | 5                  | 125               | T290A484         |
| NO - Normally open, entry under the disc                  |              |                     |         |                      |      |                                       |                   |                         |                    |                   |                  |
| 25                                                        | 25           | 12                  | 200     | II (*)               | 10   | 0                                     | 16                | 16                      | 10                 | 63                | T290A028         |
|                                                           |              |                     |         | III (*)              | 10   | 0                                     | 16                | 16                      | 10                 | 90                | T290A029         |
| 32                                                        | 32           | 18                  | 300     | II (*)               | 10   | 0                                     | 16                | 16                      | 10                 | 63                | T290A030         |
|                                                           |              | 19                  | 317     | IV (*)               | 10   | 0                                     | 16                | 16                      | 10                 | 125               | T290A643         |

All leaflets are available on: [www.asco.com](http://www.asco.com)

Pressure Operated Valves (2/2) - 35

传真: (86-532)585-10-365  
Email: [sales@bechinass.com](mailto:sales@bechinass.com)

## SPECIFICATIONS

| DN                                                                                                    | orifice size | flow coefficient Kv |         | pilot pressure (bar) |      | operating pressure differential (bar) |                   |                         |                    | operator diameter | catalogue number |
|-------------------------------------------------------------------------------------------------------|--------------|---------------------|---------|----------------------|------|---------------------------------------|-------------------|-------------------------|--------------------|-------------------|------------------|
|                                                                                                       |              |                     |         |                      |      | min.                                  | max.              |                         |                    |                   |                  |
|                                                                                                       | (mm)         | (m³/h)              | (l/min) | min.                 | max. |                                       | air inert gas (*) | water, oil, liquids (*) | steam (*) (≤184°C) | (mm)              |                  |
| NO - Normally open, entry under the disc                                                              |              |                     |         |                      |      |                                       |                   |                         |                    |                   |                  |
| 40                                                                                                    | 40           | 32                  | 530     | II (*)               | 10   | 0                                     | 11                | 11                      | 10                 | 63                | T290A032         |
|                                                                                                       |              |                     |         | III (*)              | 10   | 0                                     | 16                | 16                      | 10                 | 90                | T290A033         |
|                                                                                                       |              | 35                  | 583     | IV (*)               | 10   | 0                                     | 16                | 16                      | 10                 | 125               | T290A489         |
| 50                                                                                                    | 50           | 39                  | 650     | III (*)              | 10   | 0                                     | 13                | 13                      | 10                 | 90                | T290A035         |
|                                                                                                       |              | 44                  | 733     | IV (*)               | 10   | 0                                     | 16                | 16                      | 10                 | 125               | T290A490         |
| NC - Normally closed, entry above the disc (version recommended for rapid-cycling steam applications) |              |                     |         |                      |      |                                       |                   |                         |                    |                   |                  |
| 25                                                                                                    | 25           | 12                  | 200     | VI (*)               | 10   | 0                                     | 10                | -                       | 10                 | 63                | T290A038         |
| 32                                                                                                    | 32           | 18                  | 300     | VI (*)               | 10   | 0                                     | 10                | -                       | 10                 | 63                | T290A039         |
|                                                                                                       |              |                     |         | VII (*)              | 10   | 0                                     | 10                | -                       | 10                 | 90                | T290A136         |
| 40                                                                                                    | 40           | 32                  | 530     | VI (*)               | 10   | 0                                     | 10                | -                       | 10                 | 63                | T290A040         |
|                                                                                                       |              |                     |         | VII (*)              | 10   | 0                                     | 10                | -                       | 10                 | 90                | T290A041         |
| 50                                                                                                    | 50           | 39                  | 650     | VI (*)               | 10   | 0                                     | 9                 | -                       | 9                  | 63                | T290A042         |
|                                                                                                       |              |                     |         | VII (*)              | 10   | 0                                     | 10                | -                       | 10                 | 90                | T290A043         |

(\*) Minimum pilot pressure varies with differential pressure, see page: 7 ([www.asco.com](http://www.asco.com))

(1) Calculation of the minimum pilot pressure at a ΔP of max. 10 bar with allowable backpressure (backpressure not recommended with liquids as waterhammer may occur) - 63, 90 and 125 mm operators, 4 bar minimum pilot pressure version: add 1,5 bar to the minimum pilot pressure of chart VI, VII or VIII [see page: 7 ([www.asco.com](http://www.asco.com))]

## OPTIONS AND ACCESSORIES [see pages: 37 ([www.asco.com](http://www.asco.com)) / 43 ([www.asco.com](http://www.asco.com))]

- Signaling box or compact signaling unit
- Stroke limiter for opening
- Manual safety device
- Adapter plate for NAMUR pad mounting pilot
- Oxygen service, pressure limited to 15 bar, temperature limited to + 60°C
- Vacuum applications up to 1,33 10<sup>-3</sup> mbar
- ATEX 2014/34/EU versions for potentially explosive atmospheres ([www.asco.com](http://www.asco.com))

## INSTALLATION

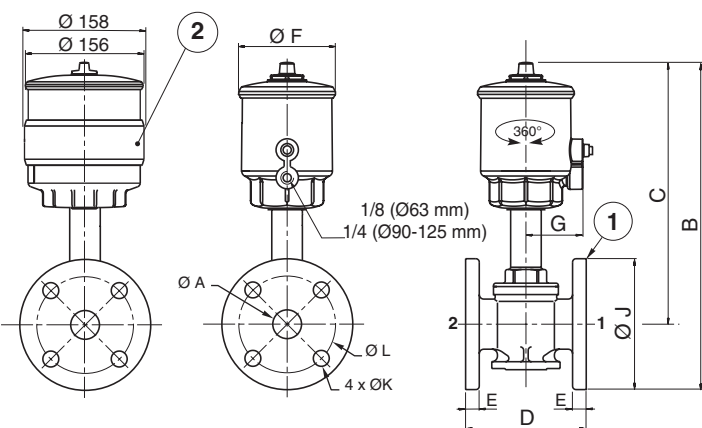
- The valves can be mounted in any position without affecting operation
- Compatible with ASTM 1, 2 and 3 oils
- Check temperature range of valve body and solenoid pilot valves for suitability. For probability of failure, contact us
- Installation/maintenance instructions are included with each valve

## SPARE PARTS KITS

| DN | spare parts kit no.    |
|----|------------------------|
|    | Ø 63-90-125 mm         |
| 25 | C140017 <sup>(2)</sup> |
| 32 | C140018 <sup>(2)</sup> |
| 40 | C140019 <sup>(2)</sup> |
| 50 | C140020 <sup>(2)</sup> |

(2) Standard suffix VM also applies to kits. [see page: 37 ([www.asco.com](http://www.asco.com))].

## DIMENSIONS (mm), WEIGHT



(1) Flange type 21 with flat faces, type A (ISO 7005)

(2) Operator dia. 125 mm, NO function

All leaflets are available on: [www.asco.com](http://www.asco.com)

## 36 - Pressure Operated Valves (2/2)



青岛秉诚自动化设备有限公司  
地址：中国·青岛市重庆南路99号海尔云街甲3号楼7F

## ORDERING EXAMPLES:

|              |           |        |
|--------------|-----------|--------|
| T            | 290 A 010 |        |
| T            | 290 A 011 | SM2    |
| T            | 290 A 030 |        |
| pipe thread  |           |        |
| basic number |           | suffix |

## ORDERING EXAMPLES KITS:

|              |        |
|--------------|--------|
| C140017      |        |
| C140018      |        |
| C140019      | VM     |
| basic number | suffix |

| type | operator diameter | ØA | B   | C   | D   | E  | ØF  | G    | ØJ  | ØK | ØL  | weight <sup>(3)</sup> |
|------|-------------------|----|-----|-----|-----|----|-----|------|-----|----|-----|-----------------------|
| 01   | 63                | 25 | 288 | 230 | 110 | 12 | 85  | 50,5 | 115 | 14 | 85  | 3,9                   |
|      |                   | 32 | 313 | 243 | 130 | 14 | 85  | 50,5 | 140 | 18 | 100 | 5,9                   |
|      |                   | 40 | 329 | 254 | 140 | 14 | 85  | 50,5 | 150 | 18 | 110 | 7,1                   |
|      |                   | 50 | 354 | 271 | 160 | 16 | 85  | 50,5 | 165 | 18 | 125 | 10,5                  |
|      |                   | 50 | 354 | 271 | 160 | 16 | 85  | 50,5 | 165 | 18 | 125 | 10,5                  |
| 02   | 90                | 25 | 303 | 246 | 110 | 12 | 118 | 67   | 115 | 14 | 85  | 4,5                   |
|      |                   | 32 | 325 | 255 | 130 | 14 | 118 | 67   | 140 | 18 | 100 | 6,5                   |
|      |                   | 40 | 341 | 266 | 140 | 14 | 118 | 67   | 150 | 18 | 110 | 7,7                   |
|      |                   | 50 | 365 | 283 | 160 | 16 | 118 | 67   | 165 | 18 | 125 | 11,1                  |
|      |                   | 50 | 365 | 283 | 160 | 16 | 118 | 67   | 165 | 18 | 125 | 11,1                  |
| 03   | 125               | 32 | 378 | 308 | 130 | 14 | 156 | 86   | 140 | 18 | 100 | 9                     |
|      |                   | 40 | 394 | 319 | 140 | 14 | 156 | 86   | 150 | 18 | 110 | 10,2                  |
|      |                   | 50 | 418 | 336 | 160 | 16 | 156 | 86   | 165 | 18 | 125 | 13,6                  |

(3) Weight of valve without pilot. Add 0,2 for dia. 125 mm operator NO.

Solenoid pilot valves, see pages: 49 ([www.asco.com](http://www.asco.com)) [63 mm operator]

51 ([www.asco.com](http://www.asco.com)) [90 and 125 mm operators]