

FEATURES

- Extremely compact and lightweight pressure-operated valve and solenoid pilot valve unit
- Ready-for-use solution (pre-assembled unit)
- Easy maintenance due to standard ISO 15218 mounting pad (CNOMO size 15 mm)
- Quick installation with coupling-type pilot supply connection (2,7/4 mm or 4/6 mm)
- Easy operation with manual operator on solenoid pilot valve
- Large choice of series 302 solenoid pilot valves with standard mounting pads
- Low 2 W power consumption
- Easy electrical connection (DIN 43650)

GENERAL (VALVE)

| | |
|-----------------------------------|--|
| 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 (mm ² /s) |
| Pilot fluid | Filtered air |
| Max. pilot pressure | 10 bar |
| Min. pilot pressure | See following page |
| Response time | See page V402-5 |
| Pilot mounting pad | ISO 15218 (CNOMO E06.36.120N, size 15) |

| valve | fluids (*) | fluid temperature range (TS) | disc seal (*) |
|------------|---|------------------------------|---------------|
| series 290 | air and gas group 1 & 2 water, oil, liquids groups 1 & 2 and steam | - 10°C to + 184°C | PTFE |

| pilot | fluids (*) | pilot fluid temperature range (TS) | seal materials (*) |
|------------|------------------------|------------------------------------|--------------------------------------|
| series 302 | air, filtered at 50 µm | - 10°C to + 40°C | NBR (nitrile), FPM (fluoroelastomer) |

MATERIALS IN CONTACT WITH FLUID

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

| | Valve | 302 pilot |
|------------------------------------|----------------------|-------------------------------|
| Body | St. steel, AISI 316L | PAA |
| Stuffing box housing | St. steel, AISI 316L | - |
| Stem | Stainless steel | - |
| Disc | Stainless steel | - |
| Stuffing box seal | PTFE chevrons | - |
| Wiper seal | FPM | - |
| Disc seal | PTFE | - |
| Valve body seal | PTFE | - |
| Pilot internal parts | - | POM, PET, st. steel and brass |
| Pneumatic mounting pad seal | NBR | - |

OTHER MATERIALS AND CONSTRUCTION

| | | |
|-------------------------------|---------------------------------------|--------|
| 32 mm operator | Glass fibre filled PA | - |
| Inlet pilot port | Instant fitting 2,7/4 mm or 4/6 mm | - |
| Pilot support plate | Aluminium | - |
| 302 pilot orifice size | - | 1,1 mm |

ELECTRICAL CHARACTERISTICS OF 302 PILOT

| | |
|--|--|
| Coil insulation class | F |
| Connector | Spade plug (cable Ø 4-6 mm) |
| Connector specification | DIN 43650, 9,4 mm, industry standard B |
| Electrical safety | IEC 335 |
| Electrical enclosure protection | Moulded IP65 (EN 60529) |
| Standard voltages | DC (=): 24V |
| (Other voltages and 60 Hz on request) | AC (~): 230V / 50 Hz |

| prefix option | power ratings | | | | operator ambient temperature range (TS) (C°) | replacement coil | | type ⁽¹⁾ |
|---------------|---------------|-----|---------|--------|--|------------------|---------|---------------------|
| | inrush | | holding | | | ~ | = | |
| | (VA) | (W) | (VA) | (W) | | 230 V/50 Hz | 24 V DC | |
| CFSC | 2,1 | 1,6 | 1,5 | - | -10 to + 60 | 230 | - | 01 |
| | - | - | - | 2/2,65 | -10 to + 50 | - | 24 | |

⁽¹⁾ Refer to the dimensional drawings on the following page.



NC valve with 32 mm operator + 302 pilot

SPECIFICATIONS

| piping (ISO 6708) | | flow coefficient Kv | | pilot pressure (bar) | | operating pressure differential (bar) | | | | operator diameter (mm) | catalogue number 290 pressure-operated valve with 32 mm operator and mounting pad to ISO 15218 | catalogue number 290 pressure-operated valve with 32 mm operator + 302 pilot unit [302 pilot with connector (DIN 43650, 9,4 mm) and maintained-type manual operator mounted on valve] |
|--|----|---------------------|---------|----------------------|------|---------------------------------------|------|---------------------------------------|---|------------------------|---|---|
| pipe size | DN | (m ³ /h) | (l/min) | min. | max. | min. | max. | max. | | | | |
| (G [*]) | | | | | | | | | | | | |
| | | | | | | | | air, inert gas, aggressive fluids (*) | water, oil, liquids, aggressive liquids (*) | steam (*) (≤ 184°C) | | |
| NC - Normally closed, entry under the disc ⁽¹⁾ | | | | | | | | | | | | |
| 3/8 | 10 | 2,8 | 47 | 4 | 10 | 0 | 16 | 16 | 10 | 32 | E290F791 | CFSCE290F791MS |
| 1/2 | 15 | 4,1 | 68 | 4 | 10 | 0 | 12 | 12 | 10 | 32 | E290F792 | CFSCE290F792MS |
| 3/4 | 20 | 6,5 | 108 | 4 | 10 | 0 | 6 | 6 | 6 | 32 | E290F793 | CFSCE290F793MS |

(*) Minimum pilot pressure varies with differential pressure, see page V402-5.

(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) - 32 mm operator, 4 bar minimum pilot pressure version: add 2 bar to the minimum pilot pressure of chart V or X, page V402-5.

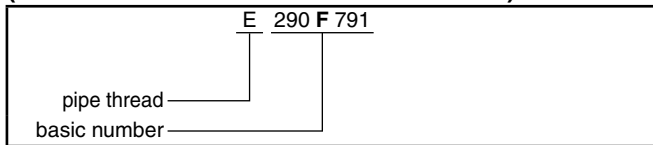
OPTIONS

- Collectable pilot exhaust for pilot, port 2,7/4 mm or port 4/6 mm
- Impulse manual operator for pilot
- Options/accessories for 32 mm valve operator, see page V435
- Explosionproof enclosures for use in zones 0/20-1/21-2/22, categories 1-2-3 to ATEX Directive 94/9/EC (see V436 for pressure-operated valves and "Explosionproof Solenoids" section for 302 pilot)
- Other electrical pilot connections, contact us
- LED and electrical protection for pilot, see Section E, page V579 (Series 302, 3/2 NC)
- Plug with visual indication and peak voltage suppression or with cable length of 2 m (see Solenoids, Coils & Accessories section)

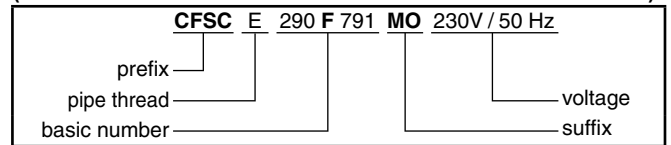
INSTALLATION

- The pressure-operated valve equipped with a solenoid pilot valve can be mounted in any position without affecting operation
- Pilot supply port with instant fitting for 2,7x4 mm pipe. Right-angle instant fitting for 4x6 mm pipe standard supplied with the product
- Installation/maintenance instructions are included with each valve

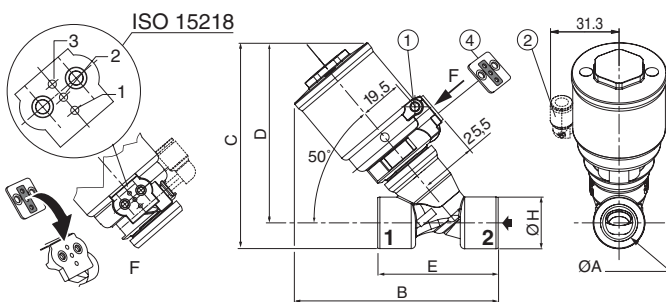
ORDERING EXAMPLES: (PRESSURE-OPERATED VALVE ALONE)



ORDERING EXAMPLES: (PRESSURE-OPERATED VALVE + 302 SOLENOID PILOT VALVE)



DIMENSIONS (mm), WEIGHT



| DN | ØA | B | C | D | E | ØH |
|----|-----|-----|-------|------|----|------|
| 10 | 3/8 | 92 | 93,2 | 81,4 | 55 | 23,5 |
| 15 | 1/2 | 99 | 97,1 | 83,4 | 65 | 28 |
| 20 | 3/4 | 107 | 104,3 | 88,3 | 75 | 30 |

- 1 Pilot exhaust port 3 protected by sintered bronze pellet
- 2 Right-angle instant fitting for 4x6 mm pipe (standard supplied)
- 3 Instant fitting for 2,7x4 mm pipe (standard mounted)
- 4 Plate and seal (supplied with the pressure-operated valve alone)
- 5 Manual 302 pilot operator location



TYPE 01
Prefix "CFSC"
Polyarylamide, IEC 335 / IP65
DIN 43650, 9,4 mm

