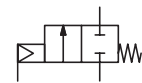




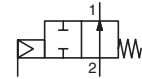
MINI-VALVES

pressure operated
stainless steel body
threaded ports, G 1/2 to 1

NC



NO



2/2
Series
U290

FEATURES

- High flow due to angled seat design
- Anti-waterhammer design (fluid entry under the disc)
- External threads to ISO 228/1 for industrial applications
- Vacuum operation up to 10^{-2} mbar
- Piston-type operators 32 mm dia. rotatable through 360°
- High performance, maintenance-free stuffing box
- The valves satisfy Pressure Equipment Directive 97/23/EC, article 3.3
- The valves in conformity with IEC 61508 Standard (2010 route 2_H 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 (mm ² /s) |
| Pilot fluid | Filtered air or water ⁽¹⁾ |
| Max. pilot pressure | 10 bar |
| Min. pilot pressure | See below |
| Pilot fluid temperature | -10°C to +60°C |
| Response time | See page V402-7 |



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

MATERIALS IN CONTACT WITH FLUID

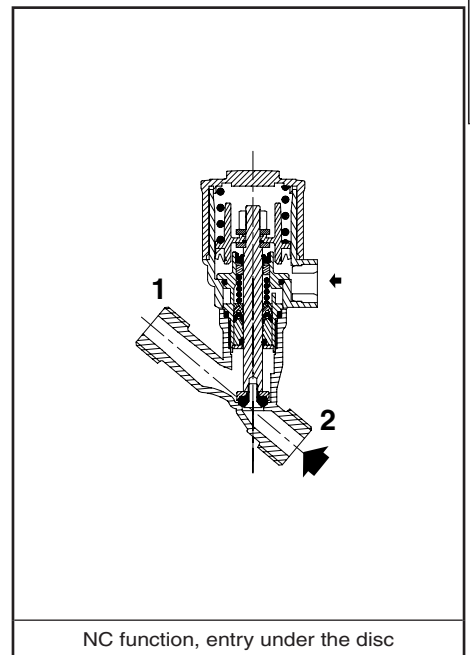
(*) Ensure that the compatibility of the fluids in contact with the materials is verified

| | |
|-----------------------------|-----------------|
| Valve body | AISI 316L |
| Stuffing box housing | AISI 316L |
| Stem | Stainless steel |
| Disc | Stainless steel |
| 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 | Optional on NC valves |

⁽¹⁾ For dia. 32 operators: At service fluid temperatures inside the valve body above 100°C, it is prohibited to pilot the valve with water.



SPECIFICATIONS

| piping (ISO 6708) | | flow coefficient Kv | | pilot pressure (bar) | | operating pressure differential (bar) | | | | operator diameter (mm) | catalogue number |
|--|----|---------------------|---------|----------------------|------|---------------------------------------|---------------------------------------|---|--------------------|------------------------|------------------|
| pipe size (G) | DN | (m ³ /h) | (l/min) | min. | max. | max. | | | | | |
| | | | | | | min.. | air, inert gas, aggressive fluids (*) | water, oil, liquids, aggressive liquids (*) | steam (*) (≤184°C) | | |
| NC - Normally closed, entry under the disc ⁽³⁾ | | | | | | | | | | | |
| 1/2 | 10 | 2,8 | 47 | 4 | 10 | 0 | 16 | 16 | 10 | 32 | U290A791 |
| 3/4 | 15 | 4,1 | 68 | 4 | 10 | 0 | 12 | 12 | 10 | 32 | U290A792 |
| 1 | 20 | 6,5 | 108 | 4 | 10 | 0 | 6 | 6 | 6 | 32 | U290A793 |
| NO - Normally open, entry under the disc | | | | | | | | | | | |
| 1/2 | 10 | 2,8 | 47 | IX (*) | 10 | 0 | 16 | 16 | 10 | 32 | U290A794 |
| 3/4 | 15 | 4,1 | 68 | IX (*) | 10 | 0 | 16 | 16 | 10 | 32 | U290A795 |
| 1 | 20 | 6,5 | 108 | IX (*) | 10 | 0 | 16 | 16 | 10 | 32 | U290A796 |
| NC - Normally closed, entry above the disc (version recommended for rapid-cycling steam applications) | | | | | | | | | | | |
| 1/2 | 10 | 2,8 | 47 | X (*) | 10 | 0 | 10 | - | 10 | 32 | U290A797 |
| 3/4 | 15 | 4,1 | 68 | X (*) | 10 | 0 | 10 | - | 10 | 32 | U290A798 |
| 1 | 20 | 6,5 | 108 | X (*) | 10 | 0 | 10 | - | 10 | 32 | U290A799 |

(*) Minimum pilot pressure varies with differential pressure, see page V402-7.

⁽³⁾ Calculation of the minimum pilot pressure at max. ΔP with allowable backpressure, contact us (backpressure not recommended with liquids as waterhammer may occur).

OPTIONS AND ACCESSORIES (see page V435/V436)

- Optical position indicator, NC function
- Oxygen service, pressure limited to 15 bar, temperature limited to + 60°C
- Vacuum applications up to 1,33 10⁻³ mbar
- NET-INOX passivation treatment
- ATEX 94/9/EC versions for potentially explosive atmospheres
- Other pipe connections are available on request

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
- Pipe connection identifier is G = G (ISO 228/1)
- Installation/maintenance instructions are included with each valve

SPARE PARTS KITS

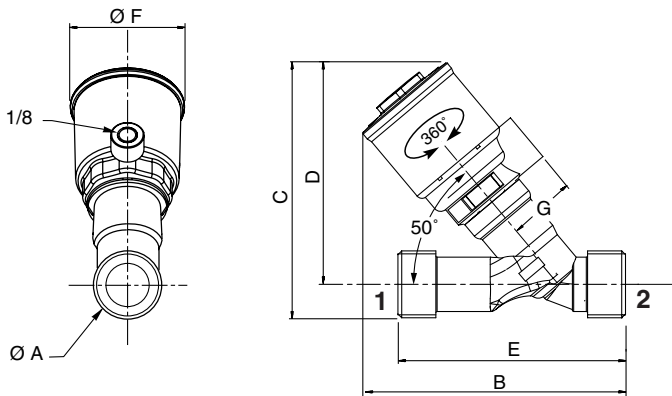
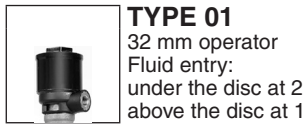
| DN | spare parts kit no. | |
|----|---------------------|---------|
| | | Ø 32 mm |
| 10 | C140100 | |
| 15 | C140101 | |
| 20 | C140102 | |

ORDERING EXAMPLES:

| | | | | |
|---|-----|---|-----|----|
| U | 290 | A | 791 | |
| U | 290 | A | 792 | VI |
| U | 290 | A | 792 | NI |
| U | 290 | A | 797 | |

pipe thread ———
 basic number ———
 suffix ———

DIMENSIONS (mm), WEIGHT (kg)



| type | operator diameter | ØA | B | C | D | E | ØF | G | weight ⁽¹⁾ |
|------|-------------------|-----|-------|-------|------|-----|------|----|-----------------------|
| 01 | 32 mm | 1/2 | 102,5 | 98,2 | 87,7 | 80 | 43,5 | 27 | 0,36 |
| | | 3/4 | 104,9 | 102 | 88,8 | 90 | 43,5 | 27 | 0,43 |
| | | 1 | 109,5 | 104,9 | 88,4 | 110 | 43,5 | 27 | 0,54 |

⁽¹⁾ Weight of valve without pilot.

Solenoid pilot valves: see V439 (32 mm operator).

ORDERING EXAMPLES KITS:

| | |
|--|---------|
| | C140102 |
|--|---------|

basic number ———

