

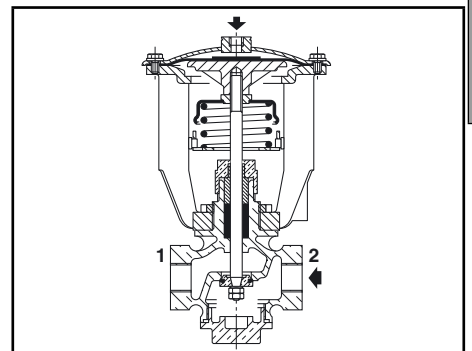
FEATURES

- Differential-action valve for high-pressure fluid control at reduced piloting pressure
- Heavy-duty valve recommended for demanding applications
- Available with several accessories and options to handle the majority of industrial applications
- The valves satisfy Pressure Equipment Directive 97/23/EC, category 1 (DN > 25) or article 3.3 (DN ≤ 25)

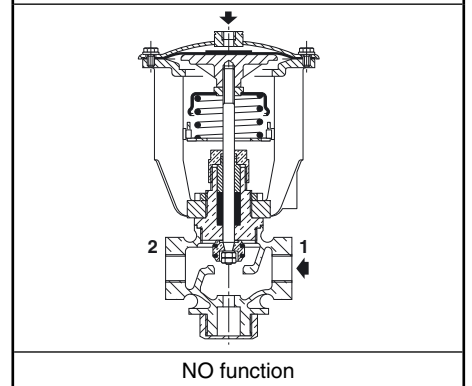
GENERAL

| 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 |

| | |
|-----------------------------------|--|
| Differential pressure | 0 to 16 bar [1 bar =100 kPa] |
| Steam | 0 to 10 bar |
| Maximum allowable pressure | 16 bar |
| Ambient temperature range | -5°C to +60°C |
| Maximum viscosity | 5000 cSt (mm ² /s) |
| Response time | See overleaf |
| Pilot fluid | Water, air, filtered |
| Max. pilot pressure | 10 bar |
| Min. pilot pressure | See graphs (lower pressure: see Options) |

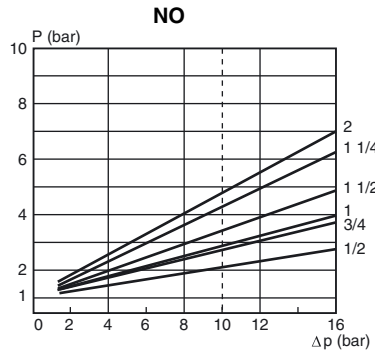
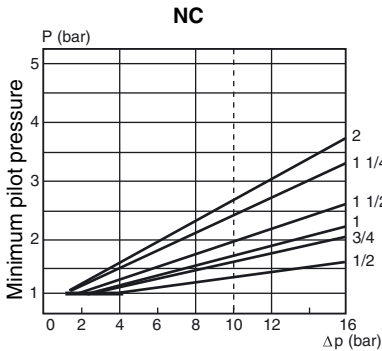


NC function



NO function

D



MATERIALS IN CONTACT WITH FLUID

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

| | |
|--------------------------|-----------------|
| Valve body | Bronze |
| Stem | Stainless steel |
| Disc | Brass |
| Stuffing-box seal | Braided PTFE |
| Disc seal | PTFE |
| Valve body seal | FPM |
| Plug body | Brass or bronze |

OTHER MATERIALS

| | |
|-----------------------------|-------|
| Diaphragm (operator) | NBR |
| Bonnet (operator) | Steel |

SPECIFICATIONS

| piping (ISO 6708) | | flow coefficient Kv | | maximum allowable pressure (bar) | pilot pressure (bar) | | NC normally closed | | NO normally open | |
|-------------------|----|---------------------|---------|----------------------------------|----------------------|------|--------------------|-----------|------------------|-------------|
| pipe size (G*) | DN | (m ³ /h) | (l/min) | | min. | max. | catalogue number | reference | catalogue number | reference |
| 1/2 | 15 | 4,5 | 75 | 16 | * | 10 | 16500087 | 2503-TBT | 16500101 | 2503-TBT-NO |
| 3/4 | 20 | 7,2 | 120 | 16 | * | 10 | 16500088 | 2504-TBT | 16500102 | 2504-TBT-NO |
| 1 | 25 | 12 | 200 | 16 | * | 10 | 16500089 | 2505-TBT | 16500103 | 2505-TBT-NO |
| 1 1/4 | 32 | 18 | 300 | 16 | * | 10 | 16500090 | 2506-TBT | 16500104 | 2506-TBT-NO |
| 1 1/2 | 40 | 31,8 | 530 | 16 | * | 10 | 16500091 | 2507-TBT | 16500105 | 2507-TBT-NO |
| 2 | 50 | 39 | 650 | 16 | * | 10 | 16500092 | 2508-TBT | 16500106 | 2508-TBT-NO |

* The minimum pilot pressure varies according to the differential pressure across the valve. See pilot graphs above.

OPTIONS AND ACCESSORIES

- Guard mounted on valves, 1/2 - 3/4: catalogue number **210555** / 1 - 1 1/4: catalogue number **210556** / 1 1/2 - 2: catalogue number **210557**
- Valves DN 15 to 50 to ATEX 94/9/EC for categories 2 (II 2 GD c T6 T85°C) and 3 (II 3 GD c T6 T85°C X)
- Dry IP66 contacts
- 2 explosionproof switches with contacts for potentially explosive atmospheres to ATEX:

| switch ambient temperature range | number of contacts | catalogue number | |
|----------------------------------|--------------------|------------------|---------------|
| | | DN 15..32 | DN 40..50 |
| -20°C to +80°C | 1 | 260657 | 260658 |
| -20°C to +80°C | 2 | 260660 | 260661 |
| -55°C to +82°C | 1 | 260663 | 260664 |

- Inductive M18 switch, IP66
- Inductive M18 switch, intrinsically safe to ATEX, II 1 GD EEx ia IIC T6 IP66 T85°C
- Manual override on the bonnet of the operator
- Accessories for adjustable response time (flow control, quick exhaust etc.)
- Anti-waterhammer device available with air-oil exchanger
- Backpressure applications possible by off-setting the yoke and using a reinforced spring
- Low pressure control (min. 1 bar) by off-setting the yoke
- Other types of stuffing-boxes are available depending on the nature of the fluid used
- Modifications for special environments (cold, hot, aggressive, marine etc.)
- Oxygen service, catalogue number **970509**, pressure/temperature limited to 15 bar / + 60°C
- Valve body degreased during assembly, catalogue number **970523**

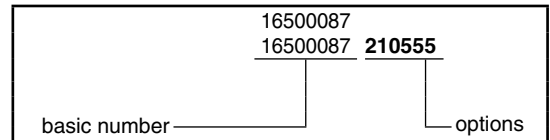
INSTALLATION

- The valves can be mounted in any position, except with the operator downwards
- Be sure to observe the direction of fluid flow (NC from 2 to 1 ; NO from 1 to 2)
- Pipe connections (G*) have standard combination thread according to ISO 228/1 and ISO 7/1. Pipe connection (G) has standard thread according to ISO 228/1

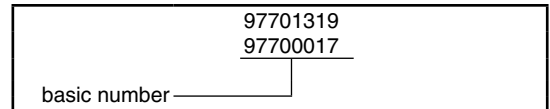
SPARE PARTS KITS

| DN | spare parts kit no. | | | | guard catalogue number |
|----|---------------------|-----------------|-------------------|-----------------|------------------------|
| | stem and disc unit | | stuffing-box unit | NBR diaphragm | |
| | NC | NO | | | |
| 15 | 97701319 | 97701351 | 97701320 | 97700017 | 88200035 |
| 20 | 97701321 | 97701352 | 97701320 | 97700017 | 88200035 |
| 25 | 97701322 | 97701353 | 97701320 | 97700018 | 88200036 |
| 32 | 97701323 | 97701354 | 97701324 | 97700018 | 88200036 |
| 40 | 97701325 | 97701355 | 97701324 | 97700019 | 88200037 |
| 50 | 97701326 | 97701356 | 97701327 | 97700019 | 88200037 |

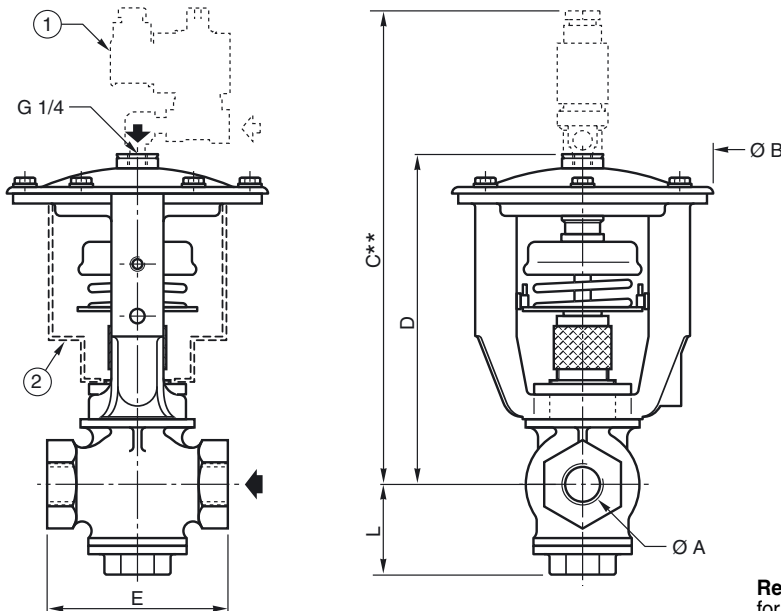
ORDERING EXAMPLES:



ORDERING EXAMPLES KITS:



DIMENSIONS (mm), WEIGHT (kg)



| ØA (G*) | ØB | C** | | D | | E | L | | weight ⁽¹⁾ |
|---------|-----|-----|-----|-----|-----|-----|----|----|-----------------------|
| | | NC | NO | NC | NO | | NC | NO | |
| 1/2 | 127 | 284 | 290 | 165 | 171 | 68 | 39 | 46 | 3,5 |
| 3/4 | 127 | 289 | 292 | 170 | 173 | 84 | 44 | 51 | 4 |
| 1 | 156 | 306 | 307 | 187 | 188 | 92 | 48 | 56 | 5 |
| 1 1/4 | 156 | 311 | 314 | 192 | 193 | 110 | 55 | 61 | 5,5 |
| 1 1/2 | 200 | 343 | 344 | 224 | 225 | 125 | 60 | 66 | 10 |
| 2 | 200 | 353 | 352 | 234 | 233 | 145 | 70 | 82 | 12 |

⁽¹⁾ Weight of valve without pilot.

** Maximum value given for reference and related to choice of electric pilot.

Response time (in sec.) for a valve with NC function

| ØA (G*) | pilot fluid (6 bar) | | | |
|---------|---------------------|-----|-------|---|
| | air | | water | |
| | O | C | O | C |
| 1/2 | 0,3 | 1 | 0,7 | 2 |
| 3/4 | 0,3 | 1 | 0,7 | 2 |
| 1 | 0,4 | 1,5 | 1,5 | 4 |
| 1 1/4 | 0,4 | 1,5 | 1,5 | 4 |
| 1 1/2 | 0,6 | 2,5 | 3 | 9 |
| 2 | 0,6 | 2,5 | 3 | 9 |

- ① Solenoid pilot valves: see V480
- ② Guard available as accessory, supplied separately or mounted on valve

- Response time is directly related to the Kv of the solenoid pilot valve. The time indicated at opening (O) and closing (C) of the valve is determined by a pilot (dia. 3 mm) with a Kv of 3,5.
- For an NO valve: swap the values of O and F.
- Consult us for shorter cycle times.