

Pilot-Operated NAMUR Valve for Process Actuation



0590 EExi

3/2-, 5/2- and 5/3-Way, PN 1 – 10 bar

- ✓ PTB EEx ia IIC T6 approved
- ✓ FM IS / I, II, III / ABCDEFG approved
- ✓ Very high flow rates
- ✓ 3/2-, 5/2- and 5/3-way
- ✓ Long service life
- ✓ Impulse version

Hazardous Areas

0590
EExi

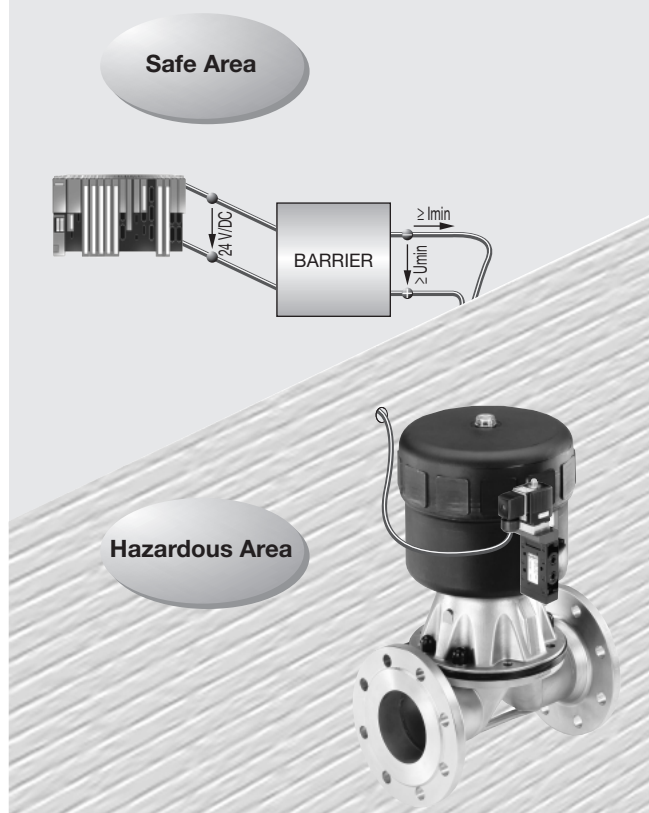
The 0590 EExi valves are used for process actuation in hazardous areas. It consists of a pilot valve and an aluminum valve body.

Thanks to the intrinsically safe design and the choice of corrosion resistant materials, the valves can be used in a wide variety of demanding applications. The NAMUR flange allows easy mounting directly to process valves.

Process Specification

| | |
|---|--|
| Nominal voltage | 24 V/DC <small>(for further information also consult our data sheet „Recommended Barriers“)</small> |
| Pneumatic connections Supply port 1, 3 and 5 Service port 2 and 4 | G 1/4 NAMUR flange, G 1/4 |
| Protection class | IP 65 with cable plug |
| Materials Pilot valve Body Adapter Seal | Brass or stainless steel (1.4305) Aluminum, plastic coated Aluminum, anodized FPM |
| Fluids | Lubricated or unlubricated compressed air, instrument air and nitrogen |
| Ambient temperatures | -35 up to +60°C (T6) -35 up to +75°C (T5) |
| Electrical power of coil | 3 W |
| Environmental conditions | Outdoor, chemical atmosphere |
| Cycling rate | 100% continuously rated |
| Electrical connections | Tag connectors according to DIN 43650A for cable plug type 2508 |
| Mounting position | Any, preferably solenoid system upright |

- Applications:**
- Chemical industry
 - Pharmaceutical processing equipment
 - Industrial waste water treatment
 - Oil and gas industry



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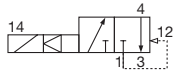
Pilot-Operated NAMUR Valve for Process Actuation



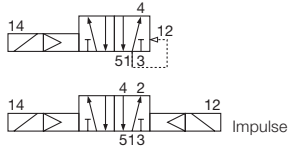
Technical Data

Circuit Function

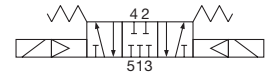
C 3/2-way valve, servo-assisted, normally closed



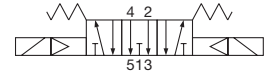
H 5/2-way valve, servo-assisted, in de-energized position, port 2 pressurized and port 4 exhausted
- Spring return or impulse valve



L 5/3-way valve, servo-assisted, in middle position all ports locked



N 5/3-way valve, servo-assisted, in middle position ports 2 and 4 exhausted



| Circuit function | Orifice DN [mm] | QNn-Value (air) [l/min] | Pressure range [bar] | Response times [ms] | | Weight [g] |
|------------------------------------|-----------------|-------------------------|----------------------|---------------------|---------|------------|
| | | | | opening | closing | |
| C / H (with one coil) | 13.0 | 1600 | 1 - 10 | 38 | 70 | 600 |
| H impulse / L / N (with two coils) | 13.0 | 1600 | 1 - 10 | 38 | 70 | 600 |

Flow rate: QNn-value air [l/min]

Measured at +20°C, 6 bar pressure at valve inlet and 1 bar pressure difference

Pressure ranges [bar]

Measured as overpressure to the atmospheric pressure

Response times [ms]

Measured at valve outlet at 6 bar and +20°C
Opening Pressure rise from 0 to 90%
Closing Pressure drop from 100 to 10%

Specifications - Ordering Chart (Other Versions on Request)

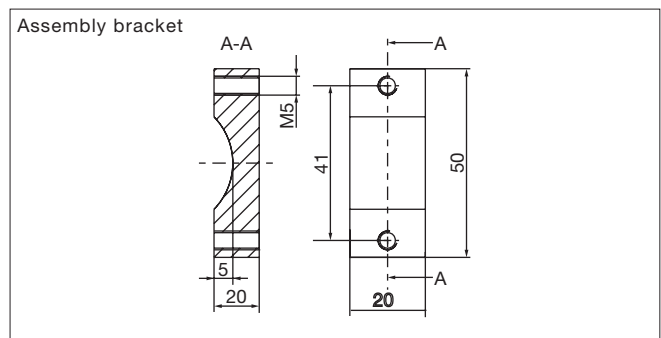
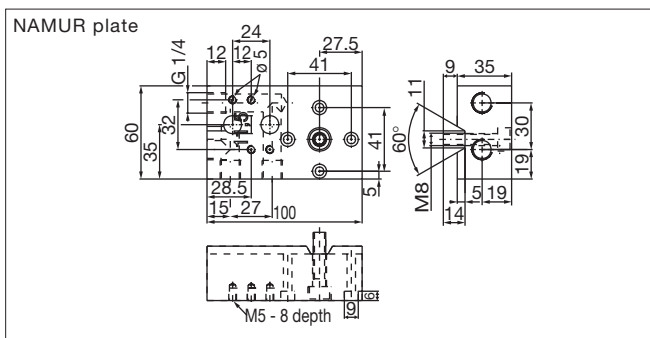
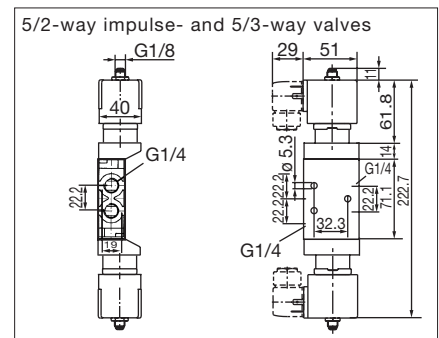
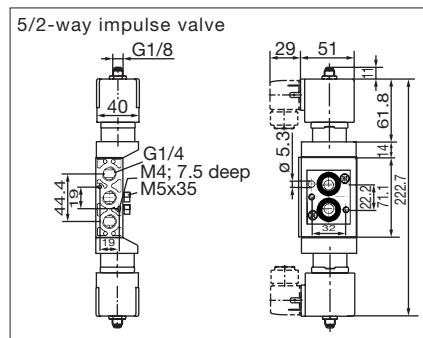
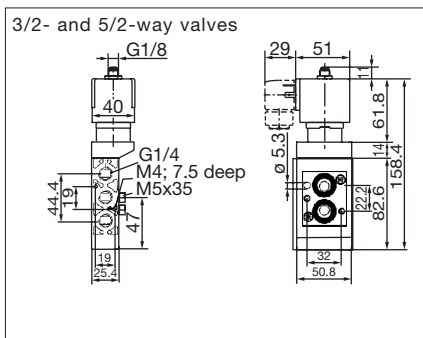
| Circuit function | Service port 2 and 4 | Supply port 1, 3 and 5 | Orifice DN [mm] | QNn-Value (air) [l/min] | Seal material | Nominal pressure [bar] | Item-No. |
|------------------|----------------------|------------------------|-----------------|-------------------------|---------------|------------------------|-----------|
| C (3/2-way) | NAMUR | G 1/4 | 13.0 | 1600 | FPM | 1 - 10 | 195 308 B |
| H (5/2-way) | NAMUR | G 1/4 | 13.0 | 1600 | FPM | 1 - 10 | 195 305 Y |
| H impulse | NAMUR | G 1/4 | 13.0 | 1600 | FPM | 1 - 10 | 195 314 Q |
| H (5/2-way) | G 1/4 | G 1/4 | 13.0 | 1600 | FPM | 1 - 10 | 195 311 M |
| H impulse | G 1/4 | G 1/4 | 13.0 | 1600 | FPM | 1 - 10 | 195 317 K |
| N (5/3-way) | G 1/4 | G 1/4 | 13.0 | 1600 | FPM | 1 - 10 | 195 320 S |
| L (5/3-way) | G 1/4 | G 1/4 | 13.0 | 1600 | FPM | 1 - 10 | 195 323 R |

Ordering Chart Accessories



| Item | Description | Material | Item-No. |
|---------|--|-----------------|-----------|
| Cap nut | Additional protection against moisture | Stainless steel | 649 554 P |

Dimensions [mm]



In case of special requirements please consult for advice.

We reserve the right to make technical changes without notice.
112-GB/ 1-0251