



The technical specifications might not be congruent.

- NVMZ series
- NENUTEC zone valves are especially designed and produced for applications in the HVAC systems, including AHUs and FCUs.
- Our wide range of NENUTEC zone valves have been developed to regulate the flow of water and steam demanded by a controller.

Product Features

Zone valve:

- Zone valve size DN 15 (1/2") to DN 25 (1")
- 2-way (open/closed) and 3-way (mixing)
- The demand of high-rise buildings with high-pressure pumping systems is assured.
- Low voltage or line voltage models provide applications flexibility.

Actuator:

- Power Supply AC/DC 24 V and AC 230 V
- Control 2 Point
- Manual lever allows manual position mode for servicing.
- Spring return mechanism to provide power fail safe position.

Accessories:

- Flexible extension NVMZ-ZG

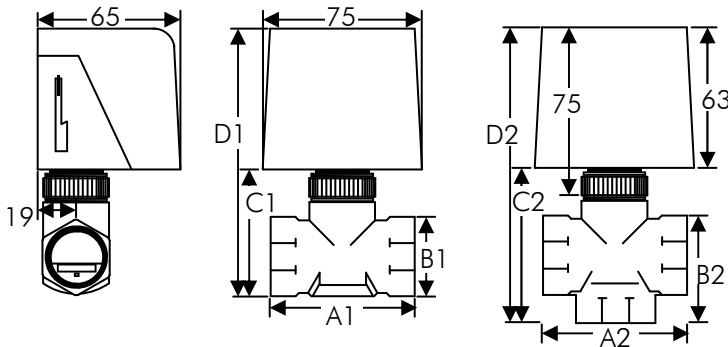
Model Selection Table 2-way

| DN | KVS | Running Time | Power Supply | Auxiliary Switch | Model / Type |
|-----------|-----|----------------------------|----------------|------------------|--------------|
| 15 (1/2") | 1.6 | Ⓜ 9...10 sec / Ⓞ 4...5 sec | AC 24 V ± 10% | No | NVMZ 2015-1B |
| 15 (1/2") | 1.6 | Ⓜ 9...10 sec / Ⓞ 4...5 sec | AC 230 V ± 10% | No | NVMZ 2015-2B |
| 20 (3/4") | 3.5 | Ⓜ 9...10 sec / Ⓞ 4...5 sec | AC 24 V ± 10% | No | NVMZ 2020-1B |
| 20 (3/4") | 3.5 | Ⓜ 9...10 sec / Ⓞ 4...5 sec | AC 230 V ± 10% | No | NVMZ 2020-2B |
| 25 (1") | 5.5 | Ⓜ 9...10 sec / Ⓞ 4...5 sec | AC 24 V ± 10% | No | NVMZ 2025-1B |
| 25 (1") | 5.5 | Ⓜ 9...10 sec / Ⓞ 4...5 sec | AC 230 V ± 10% | No | NVMZ 2025-2B |

Model Selection Table 3-way

| DN | KVS | Running Time | Power Supply | Auxiliary Switch | Model / Type |
|-----------|-----|----------------------------|----------------|------------------|--------------|
| 15 (1/2") | 1.6 | Ⓜ 9...10 sec / Ⓞ 4...5 sec | AC 24 V ± 10% | No | NVMZ 3015-1B |
| 15 (1/2") | 1.6 | Ⓜ 9...10 sec / Ⓞ 4...5 sec | AC 230 V ± 10% | No | NVMZ 3015-2B |
| 20 (3/4") | 3.5 | Ⓜ 9...10 sec / Ⓞ 4...5 sec | AC 24 V ± 10% | No | NVMZ 3020-1B |
| 20 (3/4") | 3.5 | Ⓜ 9...10 sec / Ⓞ 4...5 sec | AC 230 V ± 10% | No | NVMZ 3020-2B |
| 25 (1") | 5.5 | Ⓜ 9...10 sec / Ⓞ 4...5 sec | AC 24 V ± 10% | No | NVMZ 3025-1B |
| 25 (1") | 5.5 | Ⓜ 9...10 sec / Ⓞ 4...5 sec | AC 230 V ± 10% | No | NVMZ 3025-2B |

Dimensions (mm)



Dimensions of Valve Body (mm)

| Dimensions (~mm) | DN (mm) | A1 | B1 | C1 | D1 | Weight (kg) |
|------------------|---------|----|----|----|-----|-------------|
| 2-way | 15 | 52 | 29 | 54 | 115 | 0.263 |
| | 20 | 64 | 35 | 60 | 125 | 0.414 |
| | 25 | 71 | 42 | 67 | 130 | 0.609 |
| Dimensions (~mm) | DN (mm) | A2 | B2 | C2 | D2 | Weight (kg) |
| 3-way | 15 | 55 | 31 | 68 | 131 | 0.300 |
| | 20 | 66 | 54 | 74 | 138 | 0.469 |
| | 25 | 77 | 77 | 80 | 145 | 0.691 |

Technical Specifications

Zone Valve:

| | | |
|--|---|--------------------------|
| Service | Hot or cold water for HVAC | |
| Fluid Temperature limits | Water: +2°C...+105°C | |
| Non Operating Temperature | -30°C...+6°C / IEC 721-3-2 | |
| Valve Body Pressure / Temperature Rating | Valve body pressure / Temperature rating | |
| Maximum Pressure Resistance | Water: 300 psi | |
| Flow Characteristic (3-way) | Equal Percentage flow characteristic of A (Coil) and linear flow characteristic of B (Bypass) | |
| Leakage | 0.01% of KVS (maximum flow) / 1% of KVS (maximum flow) for 3-way Bypass Port | |
| Pipe Connection | BSP (European Standard) / NPT on request | |
| Thread Connection | Female Thread | |
| Body Sizes | DN 15(1/2") to DN 50(1") | |
| Configuration | Normally closed (NC) (standard). Normally open (NO) on request. | |
| Materials | Body | Forged Brass |
| | Plug | Synthetic rubber EPT |
| | Packing Ring | O-ring EPT |
| | Stem | AISI 303 stainless steel |
| | Spring | AISI 302 stainless |

Actuator:

| | | |
|-----------------------------|---------------------------|--|
| Torque | 20,2 Lb (90N) | |
| Stroke Range | 3 mm...5 mm | Full stroke time on: Nominal 10 sec. Full stroke time off: Nominal 5 sec. |
| Power Supply | AC 24V or AC 230V | |
| Frequency | 50 - 60 Hz | |
| Control Signal | 2 Point: on / off | |
| Motor | Synchronous stall motor | |
| Power Consumption | | |
| - Operating | 7.0 W | |
| - End stop | 5.0 W | |
| Fore Wire Sizing | 7.0 VA | |
| Protection Class | III | |
| Weight | 0.496 kg | |
| Life Cycle | 100'000 | |
| Sound level | 35 dB (A) | |
| IP Protection | IP 40 | NEMA 1 |
| Operating Temperature | +2°C...+50°C | |
| Non - operating Temperature | -20°C...+65°C | |
| CE Conformity | EMC Directive (89/336 EU) | |

Selection Formula

Legend

———— Δp_{max} = Maximum permitted pressure difference for a long-life cycle referred to the full cycle of opening.

- · - · - Δp_{max} = For low-noise operation.

Δp_{v100} = Pressure difference of ball valve when fully open

V_{100} = Nominal flow rate with Δp_{v100}

Formula k_{vs} for water

$$k_{vs} = \frac{V_{100}}{\sqrt{\frac{\Delta p_{v100}}{100}}}$$

k_{vs} [m³/h]

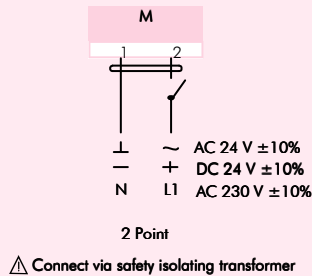
V_{100} [m³/h]

Δp_{v100} [kPa]

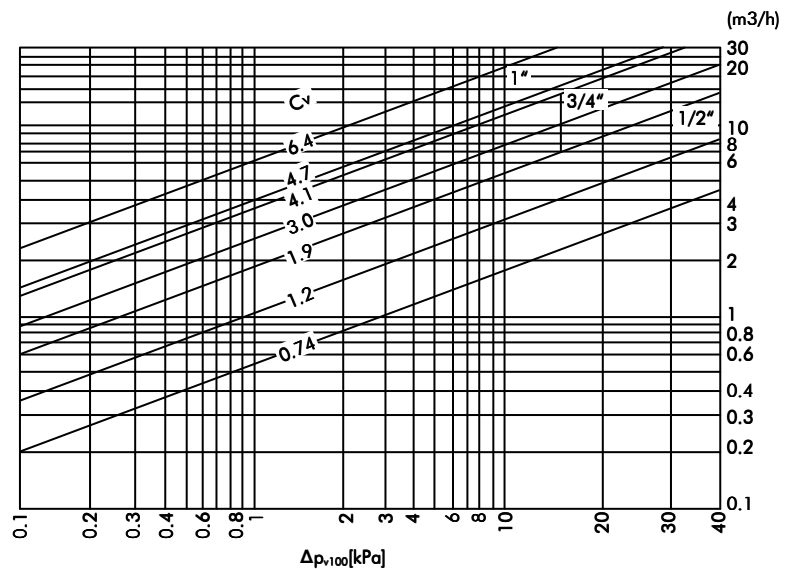
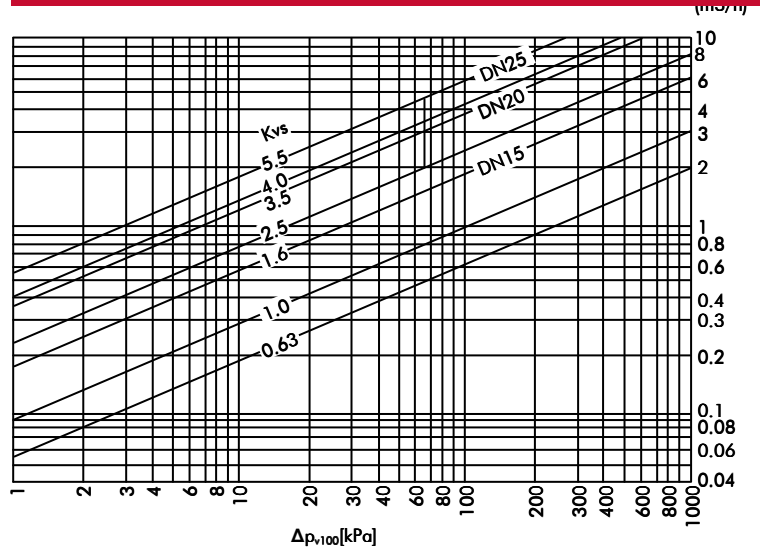
Definition of Δp_s

Closing pressure at which the actuator can still seal the valve tightly allowing for the appropriate leakage rate.

Wiring Diagram NVMZ

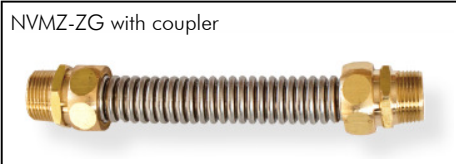
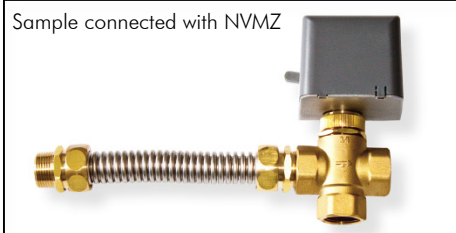


Flow Charts



Accessories

NENUTEC offer you for very easy installation for pipe connection different length of flexible extension.



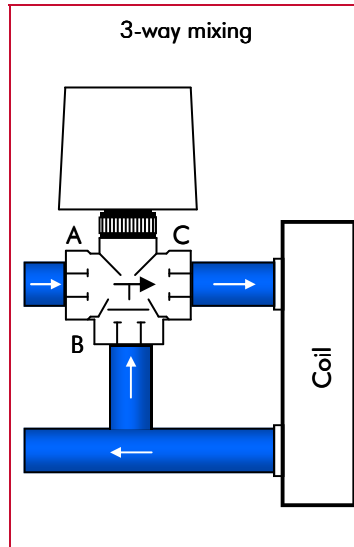
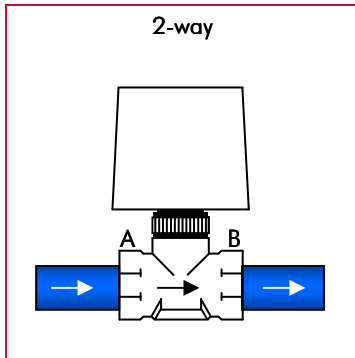
Technical Specifications

- Nominal rating pressure: 1.6 mPa.
- Suitable medium: water/oil.
- Working operating: -20° / + 120°C.

Dimension and coupler

| DN (mm) | Type designation/Length (mm) |
|---------|------------------------------|
| 15 | NVMZ-ZG 1/2" x 150 |
| 15 | NVMZ-ZG 1/2" x 250 |
| 20 | NVMZ-ZG 3/4" x 150 |
| 20 | NVMZ-ZG 3/4" x 250 |
| 25 | NVMZ-ZG 1" x 150 |
| 25 | NVMZ-ZG 1" x 250 |

Pipe Connections



Mixing Applications:

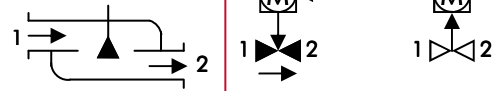
Fluid enters through two inlets (A and B) and exits through one outlet (C).

Piping Application

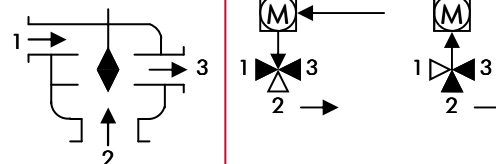
Valve Model

▶ = Flow
▷ = Non Flow

Normally Closed

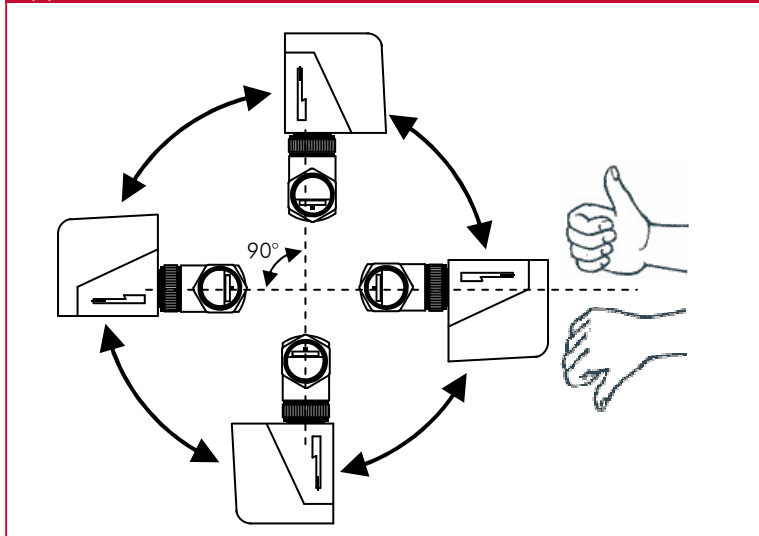


Normally Open Mixing



Diverting

Application



Electric wiring

⚠ WARNING: Electrical Shock Hazard

When servicing, make sure that the electrical supply to the actuator is switched off to avoid personal injury or shock. Do not attempt to connect or disconnect wires when the power is on.

⚠ WARNING: Equipment Damage Hazard

Check all wiring connections before applying power to the system. Short-circuited or improperly connected wires will result in permanent damage to the equipment.



This actuator includes electrical and electronic components and may not be disposed as household garbage. Please consider the local valid legislation.



AC / DC 24 V: Connect via safety isolating transformer.

AC 230 V: To isolate from the main power supply, the system must incorporate a device which disconnects the phase conductor (with at least a 3 mm contact gap).