



The technical specifications might not be congruent.

- NVMZ series
- NENUTEC zone valves are especially designed and produced for applications in the HVAC systems.
- 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/diverting)
- The demand of high-rise buildings with high-pressure pumping systems is assured.

Fan Coil Actuator:

- Power Supply AC/DC 24 V and AC 230 V
- Control 2 / 3 Point
- Customer version on request

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/DC 24 V ± 10%	No	NVMZ 2015-1B
15 (1/2")	1.6	Ⓜ 9...10 sec / Ⓢ 4...5 sec	AC/DC 24 V ± 10%	No	NVMZ 2015-2B
20 (3/4")	3.5	Ⓜ 9...10 sec / Ⓢ 4...5 sec	AC/DC 24 V ± 10%	No	NVMZ 2020-1B
20 (3/4")	3.5	Ⓜ 9...10 sec / Ⓢ 4...5 sec	AC/DC 24 V ± 10%	No	NVMZ 2020-2B
25 (1")	5.5	Ⓜ 9...10 sec / Ⓢ 4...5 sec	AC/DC 24 V ± 10%	No	NVMZ 2025-1B
25 (1")	5.5	Ⓜ 9...10 sec / Ⓢ 4...5 sec	AC/DC 24 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/DC 24 V ± 10%	No	NVMZ 3015-1B
15 (1/2")	1.6	Ⓜ 9...10 sec / Ⓢ 4...5 sec	AC/DC 24 V ± 10%	No	NVMZ 3015-2B
20 (3/4")	3.5	Ⓜ 9...10 sec / Ⓢ 4...5 sec	AC/DC 24 V ± 10%	No	NVMZ 3020-1B
20 (3/4")	3.5	Ⓜ 9...10 sec / Ⓢ 4...5 sec	AC/DC 24 V ± 10%	No	NVMZ 3020-2B
25 (1")	5.5	Ⓜ 9...10 sec / Ⓢ 4...5 sec	AC/DC 24 V ± 10%	No	NVMZ 3025-1B
25 (1")	5.5	Ⓜ 9...10 sec / Ⓢ 4...5 sec	AC/DC 24 V ± 10%	No	NVMZ 3025-2B

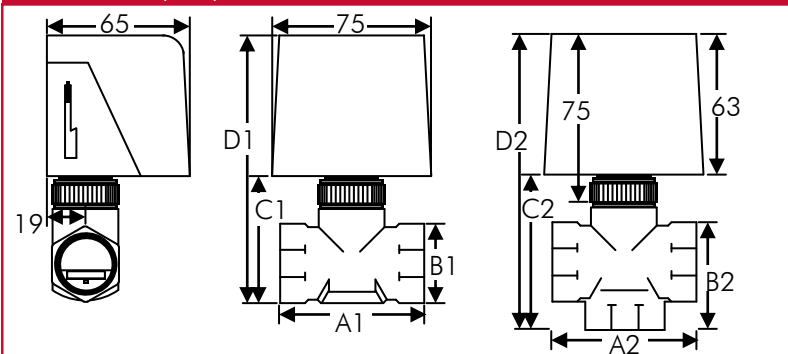
The performance specifications are nominal and conform to acceptable industry standards. NENUTEC shall not be liable for damages resulting from misapplication or misuse of its products.

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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	
Ambient Operating Temperature	+2°C...+60°C	
Valve Body Pressure / Temperature Rating	Water: 232 psig (1.6 mPa) (PN16)	
Maximum Pressure Resistance	Water: 300 psi	
Normal stroke	3 mm	
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	105 N ± 10 % (24 Lb ± 10 %)
Stroke Range	3 mm...5 mm
Power Supply	AC/DC 24V or AC 230V
Frequency	50 - 60 Hz
Control Signal	2 Point
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
Operating Temperature	+2°C...+60°C
Non - operating Temperature	-20°C...+65°C

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

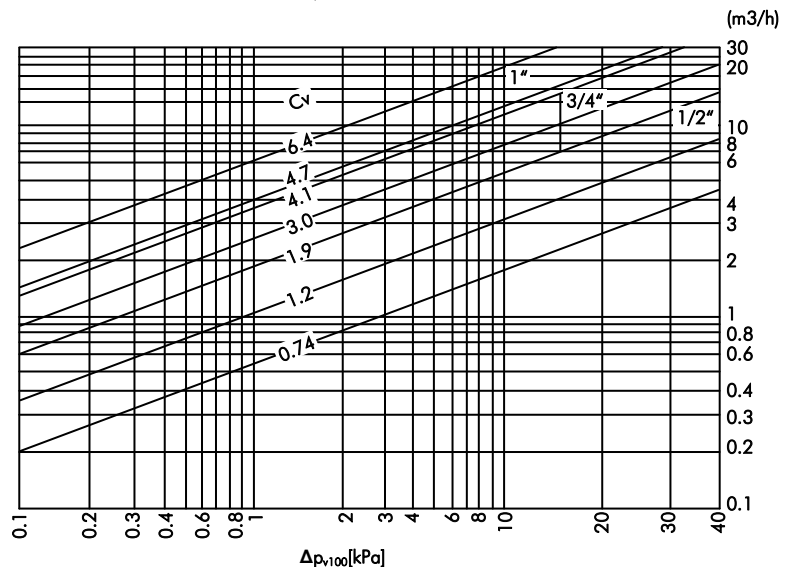
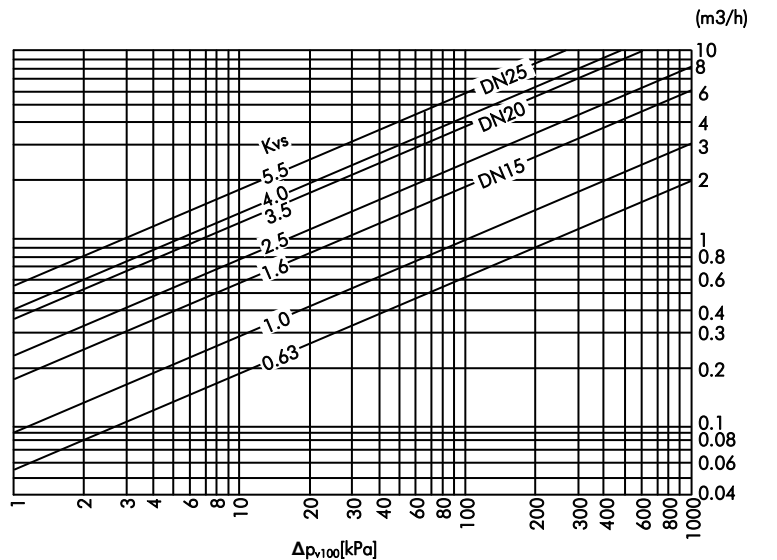
$$k_{vs} = \frac{V_{100}}{\sqrt{\frac{\Delta p_{v100}}{100}}}$$

k_{vs} [m³/h]
 V_{100} [m³/h]
 Δp_{v100} [kPa]

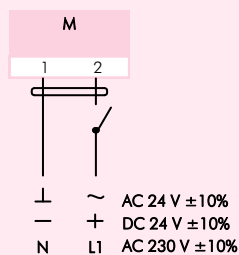
Definition of Δp_s

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

Flow Charts



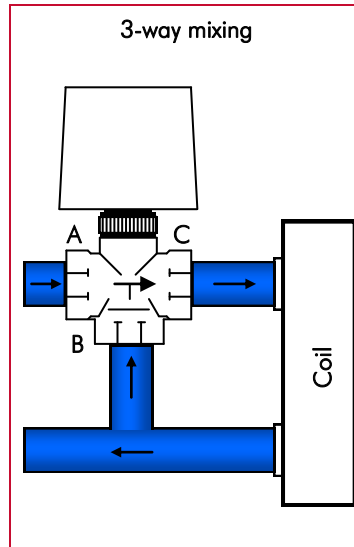
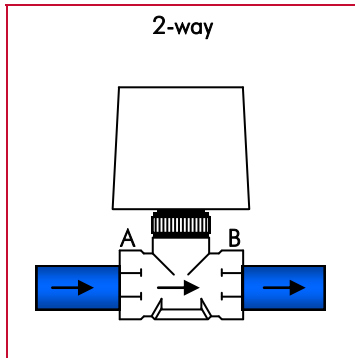
Wiring Diagram NVMZ Power Supply AC/DC 24 V - AC 230 V



2 Point

⚠ Connect via safety isolating transformer

Pipe Connections



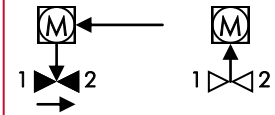
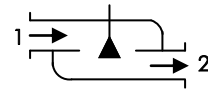
Mixing Applications:
Fluid enters through two inlets
(A and B) and exits through one
outlet (C).

Piping Application

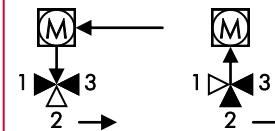
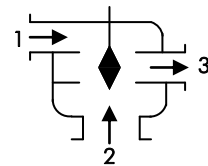
Valve Model

▶ = Flow
▷ = Non Flow

Normally Closed



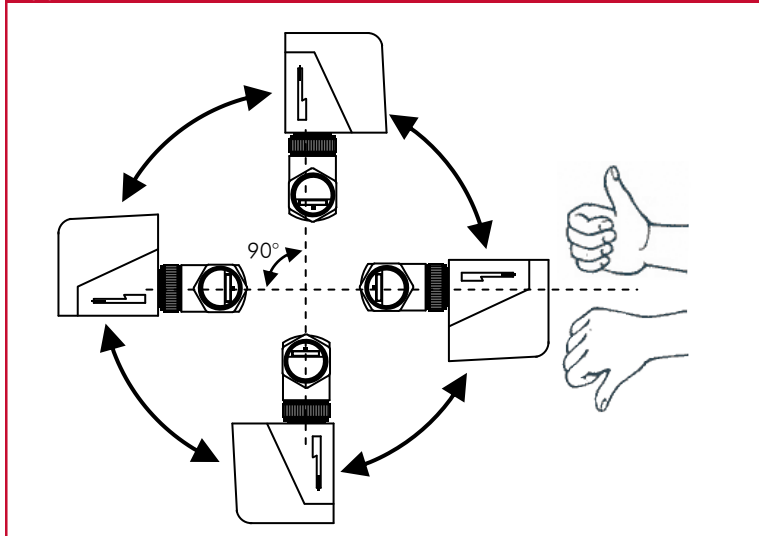
Normally Open Mixing



Diverting



Application



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).



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