

# NOVAZONE BALL

## MOTOR-DRIVEN BALL VALVE



Control of volume flows for different fluids in HVAC systems

### DESCRIPTION

Drive with relay for controlling volume flows in HVAC systems. System parts or individual units are supplied with fluid or switched off depending on the switching criterion (open/closed for 2-way valves and switching for 3-way valves). Range of applications for different fluids (water, glycol mixtures).

### INSTALLATION POSITION

The motor-driven ball valve can be installed horizontally or vertically [180°].

### OPERATION

System parts or individual units are supplied with fluid or switched off depending on the switching criterion. The ball valve is moved from its initial to its final position by means of a 1-pin control contact (thermostat, switch, etc.).

Depending on the control contact, the valve rotates forwards or backwards until it reaches its final position. In the case of an open control contact, the relay falls away and causes the direction to be reversed. The ball valve cannot be held in an intermediate position.

The motor-driven ball valve can allow flows in both directions.

### ADVANTAGES

#### NovaZone Ball up to 2"

- One potential-free auxiliary switch
- Short actuating times
- Lever for manual operation
- 3-way with inversion of direction of operation
- Valve setting is evident from the motor
- Protection class IP 42
- Low maintenance
- Low noise

#### NovaZone Ball up to 2½"

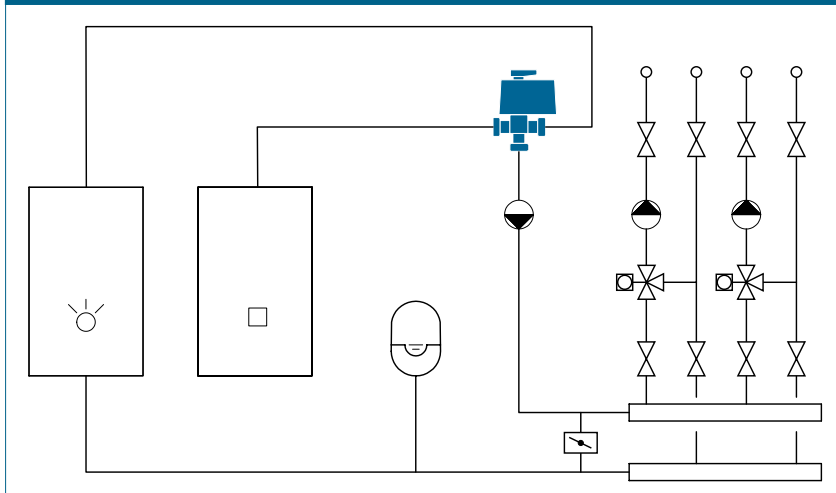
- Available in sizes up to DN 100 (2-way)
- Two potential-free auxiliary switches
- Two limit switches acting as toggles
- Protection type IP 65
- Low maintenance
- Low noise

### BUILDING CATEGORIES

For pipe installations in heating and cooling area:

- Apartment blocks, housing estates, multiple dwelling units
- Residential care facilities and hospitals
- Administration and service buildings
- Hotels and restaurants, industrial kitchens
- School buildings and sports halls / sports facilities
- Commercial and industrial buildings
- Facilities with partial use – for example, barracks, camping sites etc.

### SYSTEM/BASIC DIAGRAM



## NOVAZONE BALL | MOTOR-DRIVEN BALL VALVE

### TYPE OVERVIEW

**NovaZone Ball 2way** | 2-way motor-driven valve with relay, open/closed function

Order no. 230 V	DN	Rp	k <sub>vs</sub>	Weight (kg)	Protection standard	Duration	Auxiliary switch
256.2172.999	15	½"	30.0	1,330	IP 42	45 Sec	1 potential-free
256.2173.999	20	¾"	55.6	1,450	IP 42	45 Sec	1 potential-free
256.2174.999	25	1"	85.0	1,630	IP 42	45 Sec	1 potential-free
256.2175.999	32	1 ¼"	120.5	1,875	IP 42	45 Sec	1 potential-free
256.2176.999	40	1 ½"	240.0	2,230	IP 42	45 Sec	1 potential-free
256.2177.999	50	2"	360.0	2,845	IP 42	45 Sec	1 potential-free
256.2178.999	65	2 ½"	410.0	6,480	IP 65	60 Sec	2 potential-free
256.2179.999 *	80	3"	470.0	8,070	IP 65	60 Sec	2 potential-free
256.2180.999 *	100	4"	866.0	10,500	IP 65	60 Sec	2 potential-free

**NovaZone Ball 3way** | 3-way motor-driven valve with relay, switching function

Order no. 230 V	DN	Rp	k <sub>vs</sub>	Weight (kg)	Protection standard	Duration	Auxiliary switch
256.3172.999	15	½"	6.5	1,400	IP 42	90 Sec	1 potential-free
256.3173.999	20	¾"	10.5	1,510	IP 42	90 Sec	1 potential-free
256.3174.999	25	1"	16.5	1,680	IP 42	90 Sec	1 potential-free
256.3175.999	32	1 ¼"	27.2	2,300	IP 42	90 Sec	1 potential-free
256.3176.999	40	1 ½"	47.3	2,800	IP 42	90 Sec	1 potential-free
256.3177.999	50	2"	73.0	4,000	IP 42	90 Sec	1 potential-free
256.3178.999 *	80	3"	177.5	10,400	IP 65	120 Sec	2 potential-free

\* 8-week delivery time

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## SPECIFICATION TEXT

See [www.taconova.com](http://www.taconova.com)

## TECHNICAL DATA

### General

#### Drive

- Operating voltage
  - 230 V ( $\pm 10\%$ ) 50 Hz
  - $\leq 2''$ : 24 V [please order ball valve and drive (298.X...) separately (see pricelist)]
- Power consumption
  - Motor  $\leq 2''$ : 4,4 VA
  - Motor  $> 2\frac{1}{2}''$ : 10,3 VA
  - Relays: 1,75 VA
- Relay controlled
- Protection class I (earthed)
- Protection class of actuator:
  - $\leq 2''$ : IP42
  - $\geq 2\frac{1}{2}''$ : IP65
- NovaZone Ball 2-way limit switch
  - $> 2\frac{1}{2}''$ : Limit switches acting as toggles, not potential-free
- NovaZone Ball 3way limit switch
  - $> 2\frac{1}{2}''$ : Limit switches acting as toggles, not potential-free
- Switching current: 5 (2) A
- Angle of rotation limited by limit switches  
 NovaZone Ball 3-way: both limit switches acting as toggles, with terminal output
- Ambient temperature: -10 - 55 °C

#### Valve bodies

- Operating temperature  $T_{0\max}$ : 110 °C
- Operating pressure  $P_{0\max}$ : 10 bar
- Differential pressure: max. 10 bar
- Temperature of medium: -15 - 110 °C (NovaZone Ball 3way DN 80 to 95 °C)
- Inner thread Rp (cylindrical) under DIN 2999 / ISO 7

#### Material

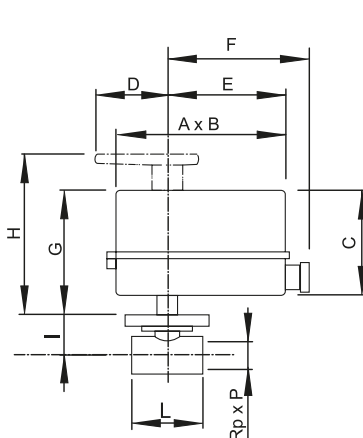
- Housing: Brass, nickel-plated
- Ball: Brass, hard-chrome plated
- Seal seat: PTFE
- Seals: EPDM

#### Fluids

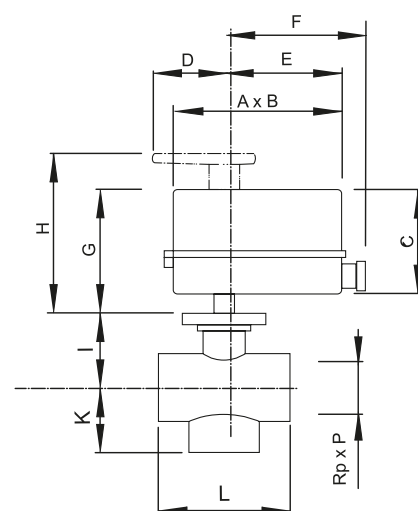
- Heating water (VDI 2035; SWKI BT 102-01; ÖNORM H 5195-1)
- Water and proprietary additives used against corrosion and freezing up to 45%

## DIMENSIONAL DRAWING

NovaZone Ball 2way



NovaZone Ball 3way



## MEASUREMENT TABLE

NovaZone Ball 2way

Order no.	DN	Rp x P	A x B	C	D	E	F	G	H	I	L
256.2172.999	15	1/2" x 14	130 x 73	84	55	90	110	100	129	41	56
256.2173.999	20	3/4" x 16	130 x 73	84	55	90	110	100	129	45	66
256.2174.999	25	1" x 16	130 x 73	84	55	90	110	100	129	49	76
256.2175.999	32	1 1/4" x 18	130 x 73	84	55	90	110	100	129	61	86
256.2176.999	40	1 1/2" x 19	130 x 73	84	55	90	110	100	129	66	97
256.2177.999	50	2" x 20	130 x 73	84	55	90	110	100	129	72	112
256.2178.999	65	2 1/2" x 22	168 x 95	107	-	76	102	145	-	103	141
256.2179.999	80	3" x 25	168 x 95	107	-	76	102	145	-	114.5	159
256.2180.999	100	4" x 28	168 x 95	107	-	76	102	145	-	145	190

NovaZone Ball 3way

Order no.	DN	Rp x P	A x B	C	D	E	F	G	H	I	L	K
256.3172.999	15	1/2" x 14	130 x 73	84	55	90	110	100	129	41	56	30
256.3173.999	20	3/4" x 16	130 x 73	84	55	90	110	100	129	45	66	35
256.3174.999	25	1" x 17	130 x 73	84	55	90	110	100	129	49	76	40
256.3175.999	32	1 1/4" x 23	130 x 73	84	55	90	110	100	129	61	86	54
256.3176.999	40	1 1/2" x 24	130 x 73	84	55	90	110	100	129	66	97	61
256.3177.999	50	2" x 28	130 x 73	84	55	90	110	100	129	72	112	73
256.3178.999	80	3" x 33	168 x 95	107	-	76	102	145	-	145	190	108

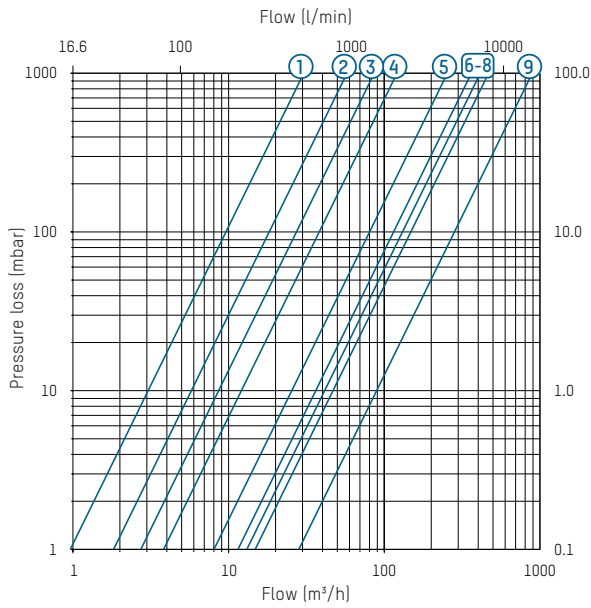
## NOTES

- Avoid formation of condensation in drive
- With the NovaZone Ball 3way, the volume flow is briefly interrupted when switching

# NOVAZONE BALL | MOTOR-DRIVEN BALL VALVE

## PRESSURE LOSS AND FLOW DIAGRAMS

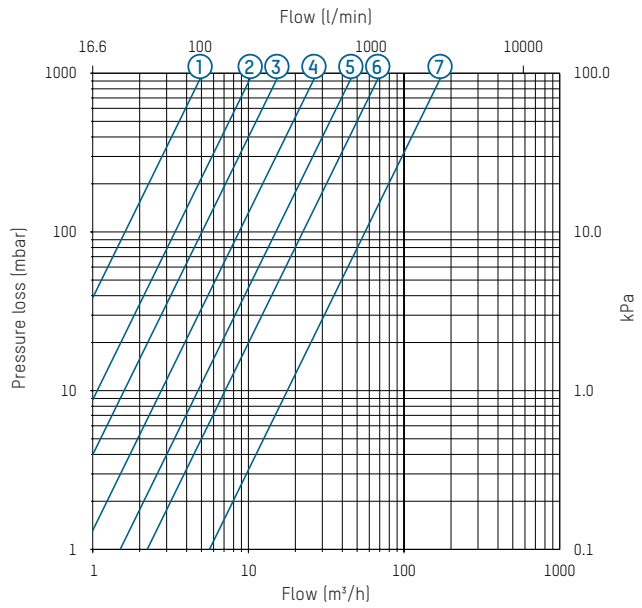
**NovaZone Ball 2way**



**Key**

1 256.2172.999	6 256.2177.999
2 256.2173.999	7 256.2178.999
3 256.2174.999	8 256.2179.999
4 256.2175.999	9 256.2180.999
5 256.2176.999	

**NovaZone Ball 3way**

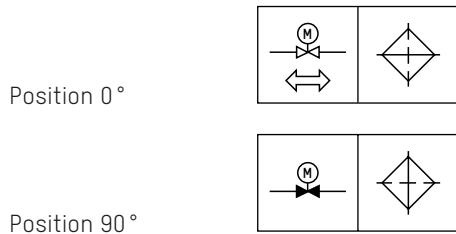


**Key**

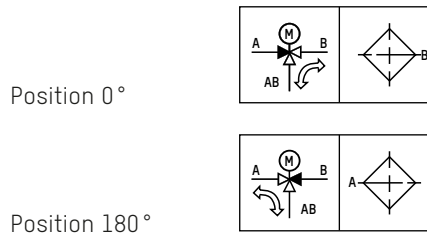
1 256.3172.999	5 256.3176.999
2 256.3173.999	6 256.3177.999
3 256.3174.999	7 256.3178.999
4 256.3175.999	

## ANGLE OF ROTATION

**NovaZone Ball 2way – Angle of rotation 90°**

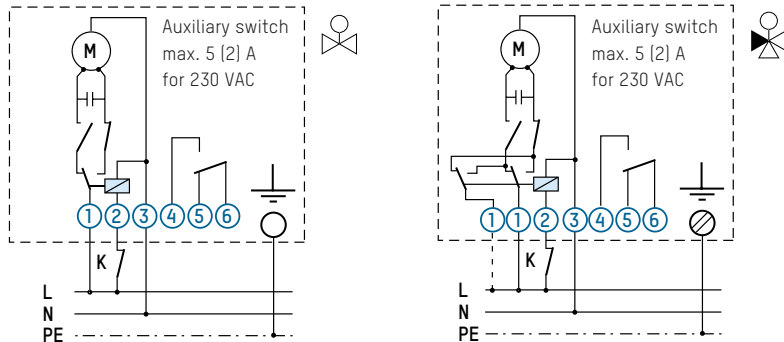


**NovaZone Ball 3way – Angle of rotation 180°**

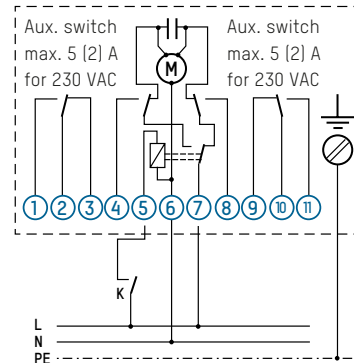


## CIRCUIT DIAGRAM

**NovaZone Ball 2way**



**NovaZone Ball 3way**



## NOVAZONE BALL | MOTOR-DRIVEN BALL VALVE

### SPARE PARTS



### DRIVE FOR BALL VALVE FROM ½" – 2"

Order no.	Fits
298.5625.999	NovaZone Ball 2way, 230 V
298.5635.999	NovaZone Ball 3way, 230 V
298.5627.999	NovaZone Ball 2way, 24 V
298.5637.999	NovaZone Ball 3way, 24 V

### DRIVE FOR BALL VALVE FROM 2 ½" – 4"

Order no.	Fits
298.5626.999	NovaZone Ball 2way
298.5636.999	NovaZone Ball 3way

### BALL VALVES FOR NOVAZONE BALL 2WAY

Bestell-Nr.	passend zu
298.5662.999 *	DN 15
298.5663.999 *	DN 20
298.5664.999 *	DN 25
298.5665.999 *	DN 32
298.5666.999 *	DN 40
298.5667.999 *	DN 50
298.5668.999 *	DN 65
298.5669.999 *	DN 80
298.5670.999 *	DN 100

### BALL VALVES FOR NOVAZONE BALL 3WAY

Bestell-Nr.	passend zu
298.5672.999 *	DN 15
298.5673.999 *	DN 20
298.5674.999 *	DN 25
298.5675.999 *	DN 32
298.5676.999 *	DN 40
298.5677.999 *	DN 50
298.5678.999 *	DN 80

\* on request (see pricelist)