

Application

The Coperion (ZZB) rotary valve is specially designed for sanitary, food and chemical applications requiring the metering of bulk solids where frequent cleaning and ease of operation are imperative. The low capacity rotary valve offers a highly polished surface on both the interior and exterior of the unit, with all product surfaces compliant with FDA guidelines. The valve is constructed from a solid piece of DIN 1.4404 [AISI 316L] stainless steel and can be easily disassembled, cleaned and reassembled. The tri-clamp connection makes it simple to integrate this valve into any system.

Design

The standard ZZB offers pressure differential up to 0.2 bar(g) [3 psi(g)] or 1.0 bar(g) [15 psi(g)] as an option, and is suitable for handling products up to 100°C [212°F]. The ZZB is available in two sizes: DN 80 [3 in] and DN 100 [4 in]. Both sizes have a removable six-blade hubbed rotor (or optional ten-blade rotor subject to the application, see below) with rounded pockets and tri-clamp flange connections. All standard units are available with one outboard bearing and a direct drive with PTFE white shaft seal (FDA approved).

Technical Data

Standard Mechanical Specifications

- Round tri-clamp flange connections with adapters
- Material of construction stainless steel DIN 1.4404 (AISI 316L)
- Stainless steel hubbed rotor with rounded pockets and standard tips
- Interior and exterior finish highly polished Ra 0.8 µm [150 grit]
- Outboard bearing (thrust side) with lifetime seal
- PTFE white shaft seal - FDA approved
- Right angle direct drive (Bonfiglioli)
- CE compliant

Operating Temperature

- Up to 100°C [212°F]

Options

Shaft Seals

- Air purge diffuser with PTFE white shaft seals, filter regulator and gauge kit (factory installed)

Rotor

- Ten pocket rotor for higher differential pressures; applications above 0.2 bar(g) [3 psi(g)]
- Open rotor (ZZD)

Coating

- Nedox® (FDA approved)

Polish

- Surface finish Ra 0.4 µm [240 grit] smooth interior and exterior (consult factory for additional information)



Model ZZB 100, shown with Bonfiglioli drive

Drives

- Right angle direct drive with 5:1 turndown (SEW)

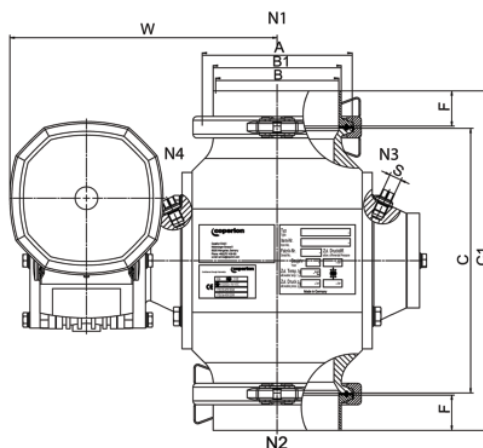
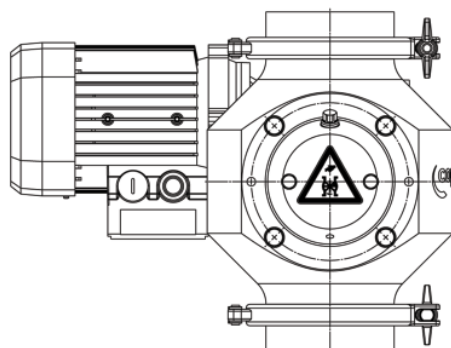
Electrical

- Consult factory for NEC or ATEX classifications
- Stainless steel motor
- Washdown duty motor

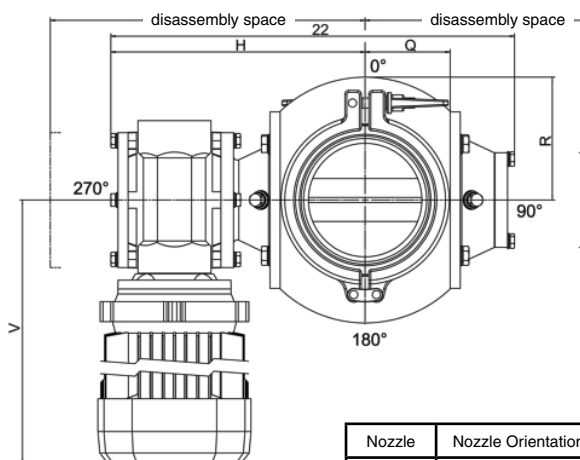
Accessories

- Rotation switch (voltage specified by customer)
- Custom outlet adapters
- Outlet guards for safety
- Custom transitions

Dimensions mm [in]



shown with Bonfiglioli drive



Nozzle	Nozzle Orientation	Function
N1	-	Inlet
N2	-	Outlet
N3	90°	Purge Gas
N4	270°	Purge Gas

Model	Displacement dm ³ /rev. [ft ³ /rev.]	Size	A	B	B1	C	C1	F
80	0.24 [0.008]	80 [3]	91 [3.58]	72.9 [2.87]	76.2 [3]	160 [6.3]	206.4 [8.13]	28 [1.10]
100	0.86 [0.03]	100 [4]	119 [4.69]	97.4 [3.83]	101.6 [4]	210 [8.27]	269.4 [10.61]	28 [1.10]

Model	Drive	H**	N**	Q	R	S***	W**	V**	Torque Nm [lbf-in]	Weight** kg [lb]
80	SEW	220.5 [8.68]	310.6 [12.23]	45 [1.77]	72.5 [2.85]	G1/8	248 [9.76]	286 [11.26]	30 [265.5]	10 [22.05]
	Bonfiglioli	171.8 [6.76]	261.9 [10.31]				203 [7.99]	283 [11.14]		
100	SEW	258 [10.16]	376.6 [14.83]	67.5 [2.66]	97.5 [3.84]	G1/8	274 [10.79]	297 [11.69]	45 [398.3]	23 [50.71]
	Bonfiglioli	201.9 [7.95]	320.5 [12.62]				223 [8.78]	254 [10]		

* Weight without gear drive

** Dimensions of gear drive may change. For details see order!

*** 1/8 British standard pipe thread (non-tapered)

Caution: Measurements are for general reference only. Please consult dimensional drawing for exact measurements.