

Technical data sheet

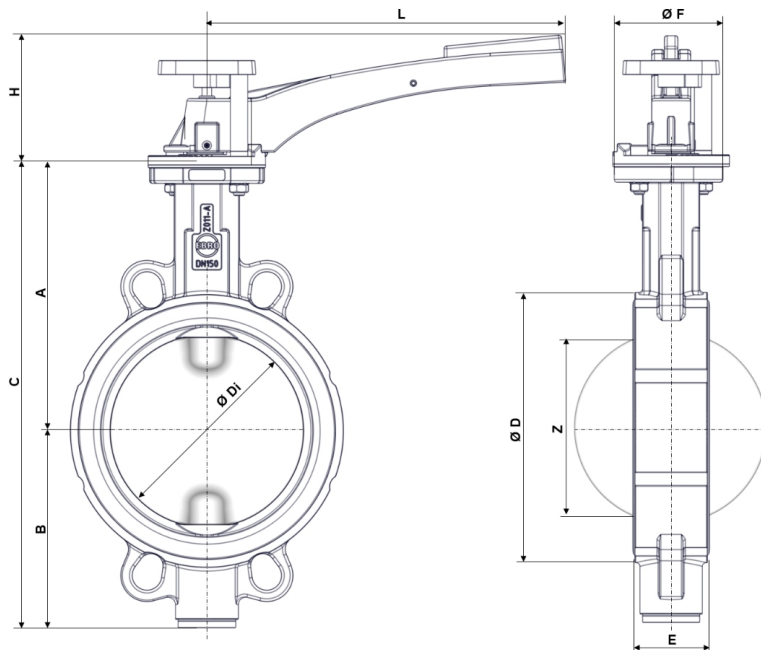
Wafer-type butterfly valve Z011-A THERM
with indexing lever



WAFER-TYPE BUTTERFLY VALVE Z011-A THERM
RESILIENT-SEATED WAFER-TYPE BUTTERFLY VALVE
 TECHNICAL DATA SHEET



Dimension sheet

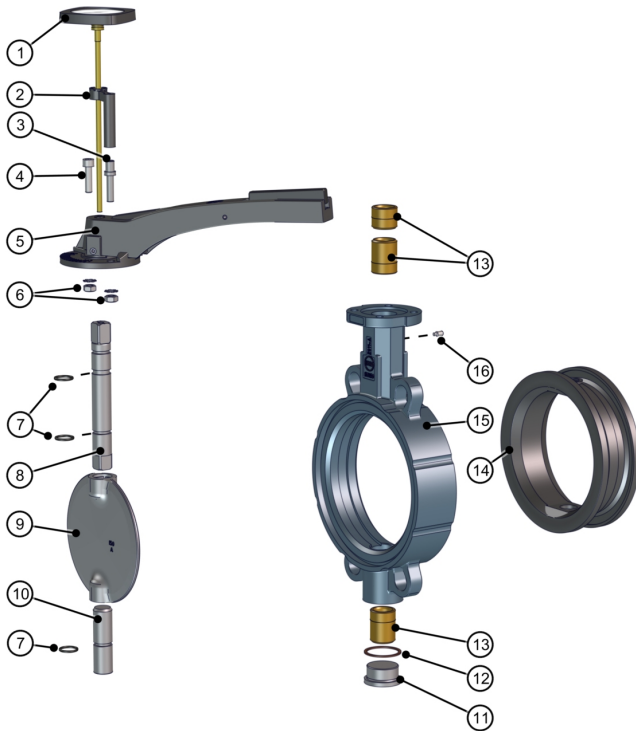


		Main dimensions [mm]										Weight [kg]
DN	NPS	A	B	C	Ø D	Ø Di	E	Ø F	H	L	Z	
20	¾	104	39	143	59	31.5	33	54	68.5	155	-	1.6
25	1	104	45	149	63	31.5	33	54	68.5	155	-	1.6
32	1¼	104	50	154	68	31.5	33	54	68.5	155	-	1.7
40	1½	113	66	179	80	38	33	54	68.5	155	22	2.1
50	2	126	85	211	95	47.6	43	54	68.5	155	25	2.5
65	2½	134.5	93.5	228	115	62.7	46	54	68.5	155	45	3.2
80	3	157	104.5	261.5	133	77.8	46	65	80	195	65	4.4
100	4	167.5	115.5	283	155	97.8	52	65	80	195	85	5.6
125	5	180	128	308	185	122.8	56	65	80	195	111	7.3
150	6	203	152	355	210	147.6	56	90	100	276	139	10.1
200	8	228.5	177.5	406	265	197.8	60	90	100	276	190	13.8

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Material specifications & bill of materials



Item	Naming	Piece	Material group ¹	Material no.
1	Thermometer (optional)	1		
2	Thermometer holder (optional)	1	Polypropylene	
3	Screw	1	Galvanized steel	
4	Cheese head screw	1	Galvanized steel	
5	Locking lever complete	1		
6	Hexagon nut	2	Galvanized steel	
7	O-ring	3	NBR	
8	Upper shaft	1	Stainless steel	1.4104
9	Valve disc	1	Stainless steel	1.4408
10	Lower shaft	1	Stainless steel	1.4104
11	Screw plug	1	Stainless steel	1.4408
12	Seal ring	1	Copper	
13	Bearing bushing	3	Brass	2.0401
14	Liner	1	EPDM	
15	Valve body	1	Cast iron	5.1301
16	Blow-out protection ²	1	Stainless steel	1.4401
			Steel	45 H galvanized

¹ Materials in the default version. Other materials and surface treatments available upon request
² Operation without blow-out protection not allowable!

Torques

NOTICE



The values listed in the table are breakaway torques determined for liquid/lubricating media from the position of the valve disc. They should be considered reference values since the actual torques depend on various factors such as operating pressure, medium, operating conditions, etc. The safety factor for the design of the actuation is also necessary.

		Torque (Md) / pressure rating [Nm]		
DN	NPS	3 bar	6 bar	10 bar
20	¾	5	5	5
25	1	5	5	5
32	1¼	5	5	5
40	1½	8	8	8
50	2	9	9	9
65	2½	18	18	18
80	3	24	24	24
100	4	18	18	28
125	5	15	22	45
150	6	36	45	78
200	8	59	76	140

K_v values

NOTICE



The K_v value [m³/h] indicates the water flow rate at a temperature of 5 °C to 30 °C and a Δp of 1 bar.
 The allowable flow velocity V_{max} is 4.5 m/s for liquids and 70 m/s for gases.
 At an opening angle of 30° to 70°, the valve disc is in the optimum control range. The curve is flat between 20° and 30° and between 70° and 90°, so that changing the opening angle has little effect on the flow control. Avoid cavitation.

		Opening angle α°							
DN	NPS	20°	30°	40°	50°	60°	70°	80°	90°
20	¾	-	3.46	5.95	7.97	9.7	11.2	12.8	14.5
25	1	-	3.53	7.33	11.5	15.8	20.0	24.0	27.3
32	1¼	-	2.56	7.97	15.5	24.2	33.0	40.8	46.6
40	1½	0.94	4.96	11.9	20.7	30.4	40.2	49.0	55.8
50	2	3.84	10.1	20.7	34.4	49.7	65.2	79.5	91.2
65	2½	9.5	16.6	39.1	72.6	113	157	199	235
80	3	15.6	20.6	51.4	102	165	234	304	368
100	4	24.9	39.8	96.5	183	288	398	503	589
125	5	51.8	67.2	135	256	428	652	926	1250
150	6	76.5	97.3	197	375	629	957	1360	1830
200	8	137	187	373	697	1160	1760	2510	3400
Information in m ³ /h.									

Technical features

Designation	Description
Nominal size	DN 20 - DN 200
Body design	Wafer-type (1-piece)
Temperature range ¹	-10 °C to +120 °C ²
Maximum allowable pressure (PS)	10 bar
Notice ¹ Depending on pressure, medium and material selection ² Higher temperatures upon request	

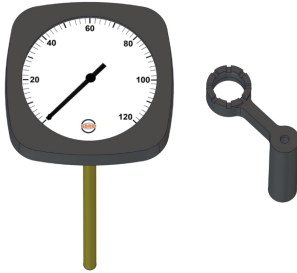
Standards

Designation	Description
Standard of use	DIN EN 593:2018-01
Marking	DIN EN 19:2024-03
Top flange	DIN EN ISO 5211:2024-10
Face-to-face	DIN EN 558:2022-09 Series 20
	ISO 5752:2021-06 Series 20
	API STD 609:2021-04 Table 1
Flange connection ¹	DIN EN 1092-1:2018-12 (Form A/B) PN 6/10/16
	ASME B16.3:2021 Class 150 (RF, FF)
Tightness test ¹	DIN EN 12266-1:2012-06 (Leakage rate A)
	ISO 5208:2015-06, category AA
Notices ¹ Others upon request	

Certificates and approvals

Designation	Description
Pressure equipment	Directive 2014/68/EU; TSG D7002-2006
Notice Further certificates and approvals available upon request. Applicable only for specific nominal sizes and material combinations (except for directive on pressure equipment and safety integrity level).	

Option
Thermometer



Bimetal thermometer with holder	
Accuracy class	1
Display range for cold water	-20 °C to +40 °C
Display range for hot water	0 °C to +120 °C
For nominal sizes	DN 20-32 DN 40 DN 50-65 DN 80-125 DN 150-200