

Butterfly Valves

VA-18
VA-19
VA-20



Design Features:

- Heavy Duty One Piece wafer Body Design.
- Top Flange Drilled to fit ISO 5211 dimensions.
- Semi Lugged Body Design with Guiding Holes for Better Alignment.
- Heavy Duty Square Grooved Disc/Stem Connections.
- Extended Neck Serves for 50mm(2") piping insulation from line media.
- Blow Out Proof Stem Sealing Design.
- Hard Backed Rubber Liner Design for Field Replacement.
- Moulded Ring seals on Liner to serve as flange gaskets.
- Sliding Bearing for minimize operating torques.

Conformity to Standard & Codes: Applications

Design Standard:

API 609, BS 5155, ISO 5211

Face to Face Dimension:

API 609

End Detail:

ASME B16.5 (Suitable for insertion between PN10/ PN16/ #150/ BS-10 Table D/ E Flanges)

Valve Testing:

API 598

• HVAC

• Sugar

• Pulp and Paper

• Pharmaceutical

• Chemical and Petro Chemical

• Irrigation Systems

• Sewage Plants

• Food Processing

• Water Work Systems



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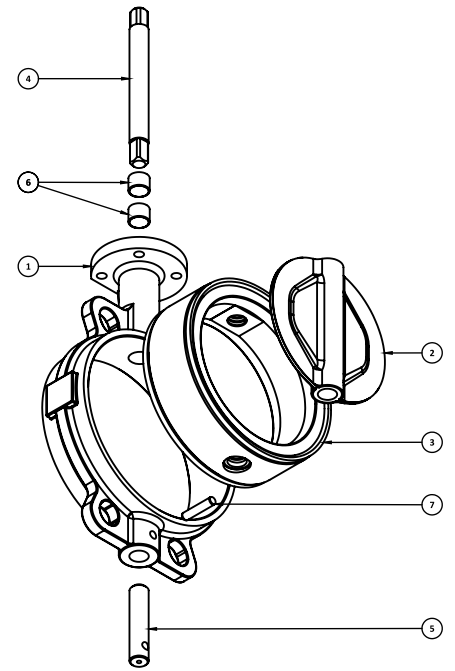


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PART LIST

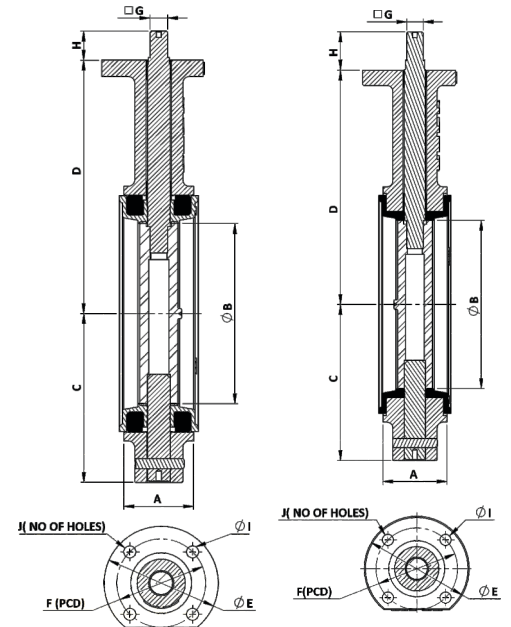
S. NO.	PART NAME	MATERIAL	SPECIFICATION	QTY.
1.	BODY	CAST IRON / DUCTILE IRON	IS210 GR. FG200/220 / ASTM A536 GR. 65-45-12/60-40-18	1
2.	DISC	DUCTILE IRON / STAINLESS STEEL	ASTM A536 GR. 65-45-12/60-40-18 / ASTM A351 GR. CF8/CF8M	1
3.	RUBBER SUPPORTED BACK-UP RING	PLASTIC/METAL + RUBBER	BACKLITE/ALUMINUM + NBR/EPDM	1
4.	MAIN STEM	STAINLESS STEEL	ASTM A 276 GR. 410/304/316	1
5.	PIVOT STEM	STAINLESS STEEL	ASTM A 276 GR. 410/304/316	1
6.	SELF LUBRICATED BUSH	STEEL + BRNZ + PTFE	CARBON STEEL BACKING + SINTERED BRONZE & PTFE	2
7.	DOWEL PIN	CARBON STEEL	ASTM A105	1
8.	FASTNERS	STAINLESS STEEL	SS201	--

Note: 1. Special Seat Material like PTFE lined EPDM/NBR, Body Moulded Fixed Seat, Silicon, Viton and UHMWPE Available on Demand.
 2. Special Coatings available on Demand.
 3. Contact Technical Team for Any Kind of Special Material.



DIMENSIONS

SIZE	INCH	A	B	C	D	E	F	G	H	I	J
DN32	1¼"	33	32	73	109	65	50	9.5	10	7.5	4
DN40	1½"	33	40	73	109	65	50	9.5	10	7.5	4
DN50	2"	43	50	77	132	65	50	9.5	10	7.5	4
DN65	2½"	46	66	84	140	65	50	9.5	10	7.5	4
DN80	3"	46	80	96	147	65	50	9.5	10	7.5	4
DN100	4"	52	101	112	172	90	70	11	12	9.5	4
DN125	5"	56	124	121	187	90	70	11	12	9.5	4
DN150	6"	56	150	134	201	90	70	11	12	9.5	4
DN200	8"	60	201	168	229	125	102	17	19	11.5	4
DN250	10"	68	251	202	269	125	102	20	21	11.5	4
DN300	12"	78	301	234	298	125	102	20	21	11.5	4
DN350	14"	78	340	275	330	175	140	24	24	17.5	4
DN400	16"	102	391	303	358	175	140	36	38	17.5	4
DN450	18"	114	442	356	403	175	140	36	38	17.5	4
DN500	20"	127	486	382	435	210	165	46	48	21.5	4
DN600	24"	154	585	440	510	210	165	55	57	21.5	4
DN700	28"	165	680	490	560	300	254	55	57	17.5	8
DN750	30"	165	699	540	615	300	254	55	57	17.5	8
DN900	36"	200	850	630	705	300	254	55	57	17.5	8



*All dimensions are in mm unless and otherwise specified.

TORQUE TABLE

SIZE (mm)	LINE PRESSURE	
	10 BAR	16 BAR
32	5	7
40	6	8
50	7	9
65	15	18
80	18	24
100	25	37
125	45	59
150	110	125
200	140	200
250	200	240
300	280	360
350	610	700
400	750	850
450	860	1500
500	2255	3690
600	3000	3840
700	3600	6500
750	4000	7250
900	4200	7600

Cv VALUE CHART FOR "VTM" BUTTERFLY VALVES

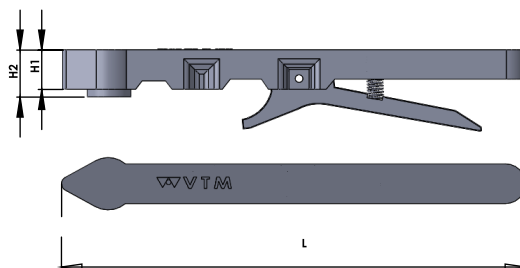
INCH	MM	10°	20°	30°	40°	50°	60°	70°	80°	90°
1 1/2"	40	0.7	3	6	14	20	38	53	62	73
2"	50	0.2	5	9	17	27	53	70	115	145
2 1/2"	65	0.4	8	15	26	42	83	105	175	240
3"	80	0.6	12	22	38	63	125	160	260	440
4"	100	0.8	17	42	73	120	235	305	510	720
5"	125	2	45	88	155	250	490	625	1000	1175
6"	150	3	89	145	250	410	800	1030	1650	2040
8"	200	4	148	250	420	700	1300	1750	2725	3472
10"	250	5	232	390	670	1150	2150	2750	4300	5950
12"	300	6	342	550	1000	1600	3100	4050	5000	8402
14"	350	6	338	715	1549	2761	4568	7230	10844	11917
16"	400	8	464	983	2130	3797	6282	9942	14913	16388
18"	450	11	615	1302	2822	5028	8320	13168	19752	21705
20"	500	14	791	1674	3628	6465	10698	16931	25396	27908
24"	600	22	1222	2587	5605	9989	16528	26157	39236	43116

- NOTE:
- All Torque values are in Nm.
 - All Actuator are selected on basis by adding 30% factor of safety in the torque value required to operate.
 - For Powdery/Non Lubricant media, torque values shall increase by 25%
 - For Dry Gases/Viscous media, torque shall increase by 20%

ACTUATORS & ACCESSORIES

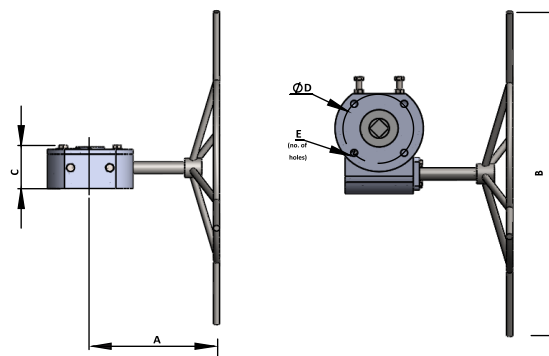
HAND LEVER

SIZE	L	H1	H2
32/40/50/65/80MM	240.00	25.00	31.00
100/125/150MM	290.00	25.00	31.00
200MM	340.00	28.00	33.00
250/300MM	550.00	32.00	35.00



GEAR BOX SIZES

SIZE	RATIO	TURN TO CLOSE 90°	MAX. OUTPUT TORQUE (NM)	A	B	C	D	E
32 TO 150mm (1 1/4" - 6")	25:1	6.25	125	145	200	60	50 or 70	4
200 TO 300mm (8" - 12")	32:1	8.00	500	240	300	75	102	4
350 TO 450mm (14" - 18")	47:1	11.75	2000	255	400	85	140	4
500 TO 600mm (20" - 24")	45:1	11.25	4000	290	600	122	165	4
700 TO 900mm (28" - 36")	52:1	13.00	8000	250	800	152	254	8



NOTE: VTM Designed Electric & Pneumatic Actuators are available on Demand.

CHEMICAL RESISTANCE GUIDE

FLUID / MATERIAL	DISC			SEAT		
	AL-BRZ	DUCTILE	304/316	NBR	EPDM	VITON
Acetic Acid (10%)	Very Poor	Poor	Excellent	Very Poor	Good	Very Poor
Air	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Ammonia (anhydrous liquid)	Very Poor	Good	Excellent	Poor	Good	Very Poor
Ammonia (soluton)	Very Poor	Good	Excellent	Good	Good	Very Poor
Ammonium Sulfate	Very Poor	Poor	Good	Excellent	Excellent	Good
Animal Oil	Good	Excellent	Excellent	Excellent	Good	Good
Calcium Carbonate	Very Poor	Very Poor	Good	Excellent	Excellent	Excellent
Carbonic Acid	--	Very Poor	Good	Good	Good	Excellent
Chlorinated Water	Very Poor	--	Poor	Good	--	Excellent
Ethane	--	Good	Good	Excellent	Very Poor	Excellent
Ethyl Alcohol	Good	Good	Excellent	Good	Excellent	Good
Freon12	Excellent	Good	Excellent	Good	Excellent	Poor
Gasoline (refined/unleaded)	Good	Good	Excellent	Poor	Very Poor	Excellent
Hydrochloric Acid	Very Poor	Very Poor	Very Poor	Poor	Good	Excellent
Hydrogen Gas (cold)	Excellent	Good	Excellent	Good	Good	Excellent
Lubricatng Oil (petroleum base)	Good	Excellent	Excellent	Excellent	Very Poor	Excellent
Methyl Alcohol	Excellent	Good	Excellent	Good	Excellent	Poor
Mineral Oil	Good	Good	Excellent	Excellent	Very Poor	Excellent
Natural Gas	Excellent	Excellent	Excellent	Good	Very Poor	Excellent
Oxygen (cold)	Excellent	Good	Excellent	Good	Good	Excellent
Petroleum Oil (refined)	Good	--	--	Good	Very Poor	Good
Propane Gas	--	Good	Excellent	Excellent	Very Poor	Excellent
Sea Water	Excellent	Very Poor	Good	Excellent	Excellent	Excellent
Soybean Oil	--	Poor	Excellent	Excellent	Poor	Excellent
Sulfuric Acid (7%)	Very Poor	Very Poor	Good	Good	Good	Excellent
Sulfuric Acid (20%)	Very Poor	Very Poor	Very Poor	Very Poor	Good	Excellent
Sulfuric Acid (50% & larger)	Very Poor	Very Poor	Very Poor	Very Poor	Good	Good
Sulfurous Acid	Very Poor	Very Poor	Good	Poor	Poor	Excellent
Steam (100°C)	Excellent	Excellent	Excellent	Very Poor	Good	Poor
Vegetable Oil	Good	Poor	Excellent	Excellent	Poor	Excellent
Water (hot, 150°F)	Excellent	Poor	Excellent	Very Poor	Good	Excellent

The above performance data has been developed from field testing, customer field reports and/or in-house testing. Properties/applications shown are typical. Your specific application should not be undertaken without independent study and evaluation for suitability. While the utmost care has been used in compiling this data, we assume no responsibility for errors

VALVE PRESSURE RATING

RATING	SHELL(Kg/cm ²)	SEAT(Kg/cm ²)
PN-10	15.0	11.0
PN-16	24.0	17.6
PN-25	38	28

V.A. VALVES

ISO 9001-2008 Certified

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Due to continuous development program, design and data in this leaflet are subject to change without prior notice.

GUARANTEE

All valves are guaranteed against any manufacturing defects for a period of 12 months from date of supply, provided the valves have not been misused, damaged or installed for services they are not recommended. The company shall be liable to furnish part / parts thereof or full valve as the company may deem fit.

Authorized Stockist

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PIONEERING FLUID CONTROLS

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