

# Double Flanged Butterfly Valves

VA-29  
VA-33

## Salient Features:

- Heavy Duty One Piece Flanged Type Body Design.
- Full Bore area for Low Pressure Loss.
- Extended Neck Serves for 50mm (2") piping insulation from line media.
- Top Flange Drilled to fit ISO 5211 dimensions.
- Blow out Proof Stem Sealings.
- Both Single & Double Piece Stem Design with heavy duty square grooved Disc/Stem Connections.
- Moulded Ring seals to serve as flange gaskets.
- Self Lubricated Bearings for the Low Valve Operating Torques.

## Conformity to Standards and Codes:

### Design Standard:

API 609, BS5155, ISO5211

### Face to Face:

API 609, BS5155

### End Details:

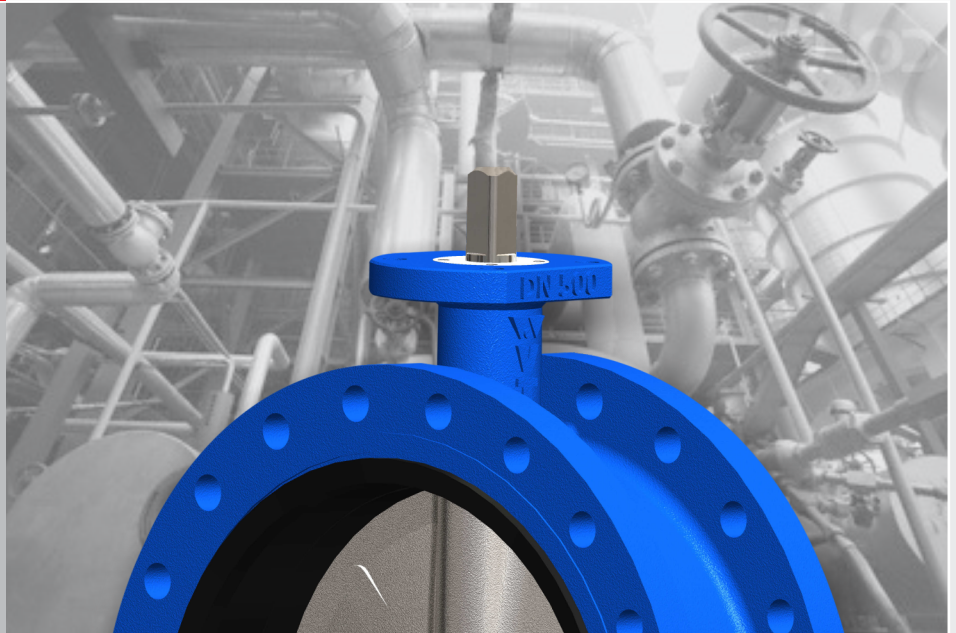
Flanged Ends to Suit ASME B16.5 #150 / BS4504 PN10/PN16 / BS10 Table D/E

**Range:** 50mm to 600mm

**Valve Testing:** API 598

## Applications:

- HVAC
- Marine / Sea Water
- Sugar
- Chemical and petro chemical
- Pulp and paper industries
- Food processing
- Water work systems
- Sewage plants
- Irrigation Systems



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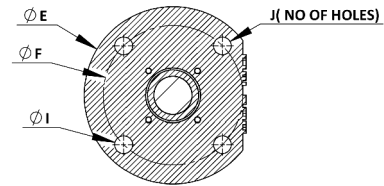
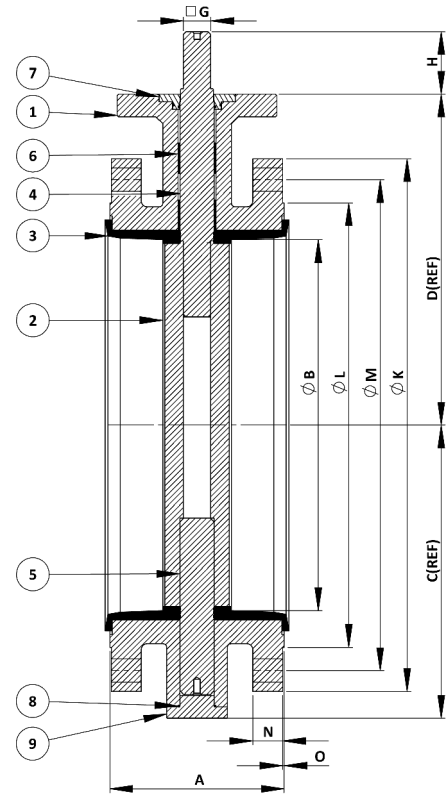
TÜVRheinland®  
Precisely Right.

**12**  
months  
GUARANTEE

[www.vtm-valves.com](http://www.vtm-valves.com)

## PART LIST

S. NO.	PART NAME	MATERIAL	SPECIFICATION	QTY.
1.	BODY	DUCTILE IRON / NICKEL ALUMINUM BRONZE	ASTM A536 GR. 65-45-12/ ASTM B148 GR. C95800	1
2.	DISC	DUCTILE IRON / STAINLESS STEEL/ NICKEL ALUMINUM BRONZE	ASTM A536 GR. 65-45-12/ ASTM A351 GR. CF8/CF8M ASTM B148 GR. C95800	1
3.	SEAT	RUBBER	NBR/EPDM	1
4.	MAIN STEM	STAINLESS STEEL	ASTM A276 GR. 410 / 304 / 316	4
5.	PIVOT STEM	STAINLESS STEEL	ASTM A276 GR. 410 / 304 / 316	1
6.	SELF LUBRICATED BUSH	CARBON STEEL BACKING + SINTERED BRONZE + PTFE	STEEL + BZ + PTFE	1
7.	STEM RETAINING PLATE	CARBON / STAINLESS STEEL	ASTM A105 /ASTM A276 GR. 410 / 304 / 316	1
8.	PLUG O- RING	RUBBER	NBR/EPDM	1
9.	PLUG	DUCTILE IRON/ NICKEL ALUMINUM BRONZE	ASTM A536 GR. 65-45-12/ ASTM B148 GR. C95800	1
10.	FASTNERS	STAINLESS STEEL	SS201	



## DIMENSIONS

SIZE	A	B	C	D	E	F	G	H	I	J	K	K	K	K	K
50MM	108	50	71	132	65	50	9.5	36	7.5	4	150	92.1	120.7	14.3	2
65MM	112	66	79	140	65	50	9.5	36	7.5	4	180	104.8	139.7	15.9	2
80MM	114	80	87	147	65	50	9.5	36	7.5	4	190	127.0	152.4	17.5	2
100MM	127	101	106	172	90	70	11	36	9.5	4	230	157.2	190.5	22.3	2
125MM	140	124	118	187	90	70	14	36	9.5	4	255	185.7	215.9	22.3	2
150MM	140	150	134	201	90	70	14	36	9.5	4	280	215.9	241.3	23.9	2
200MM	152	201	168	229	125	102	17	39	11.5	4	345	269.9	298.5	27.0	2
250MM	165	251	202	269	125	102	22	41	11.5	4	405	323.8	362.0	28.6	2
300MM	178	301	234	298	125	102	22	41	11.5	4	485	381.0	431.8	30.2	2
350MM	190	340	275	330	175	140	27	41	17.5	4	535	412.8	476.3	33.4	2
400MM	216	391	303	358	175	140	27	41	17.5	4	595	469.9	539.8	35.0	2
450MM	222	441	356	403	175	140	36	41	17.5	4	635	533.4	577.9	38.1	2
500MM	229	486	382	435	210	165	36	60	21.5	4	700	584.2	635.0	41.3	2
600MM	267	585	440	510	210	165	46	60	21.5	4	815	692.2	749.3	46.1	2

Note: 1. All Dimensions are in MM unless otherwise specified.

2. Flanged Ends given as per #150 in the table, same can be provided in other standards as Marked on front page.

### TORQUE TABLE

SIZE (mm)	LINE PRESSURE	
	10 BAR	16 BAR
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

### Cv VALUE CHART FOR "VTM" BUTTERFLY VALVES

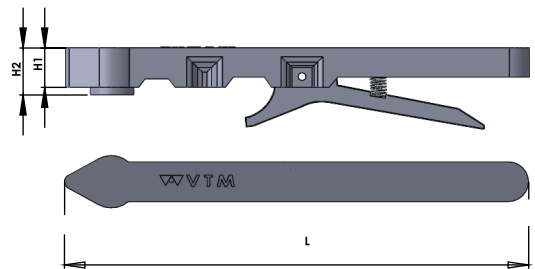
INCH	MM	10°	20°	30°	40°	50°	60°	70°	80°	90°
2"	50	0.2	5	9	17	27	53	70	115	145
2 ½"	65	0.4	8	15	26	42	83	105	175	244
3"	80	0.6	12	22	38	63	125	160	260	440
4"	100	0.8	17	42	73	120	235	305	510	720
5"	125	2	45	88	155	250	490	625	1000	1175
6"	150	3	89	145	250	410	800	1030	1650	2040
8"	200	4	148	250	420	700	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	8400
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%

## ACTUATION & ACCESSORIES

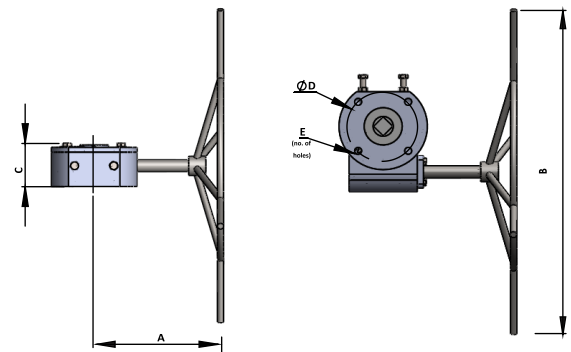
### HAND LEVER

SIZE	L	H1	H2
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
50 TO 150MM	25:1	6.25	125	145	200	60	50 or 70	4
200 TO 300MM	32:1	8.00	500	240	300	75	102	4
350 TO 450MM	47:1	11.75	2000	255	400	85	140	4
500 TO 600MM	45:1	11.25	4000	290	600	122	165	4



NOTE: VTM designed electrical actuators are available on demand.  
 VTM designed pneumatic actuators are available on demand.

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

### TEST PRESSURE

RATING	BODY(Kg/cm <sup>2</sup> )	SEAT (Kg/cm <sup>2</sup> )
PN 16	24.0	17.6

### 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.

## V.A. VALVES

ISO 9001-2008 Certified

Regd. Office & Works: Udyog Nagar, Gadaipur, Jalandhar City -144 004

Phone: +91-181-2601540, 2601541 Fax: +91-181-2601741

E-mail : marketing@vk-utam.com, info@vtm-valves.com

Website : [www.vk-utam.com](http://www.vk-utam.com), [www.vtm-valves.com](http://www.vtm-valves.com)

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