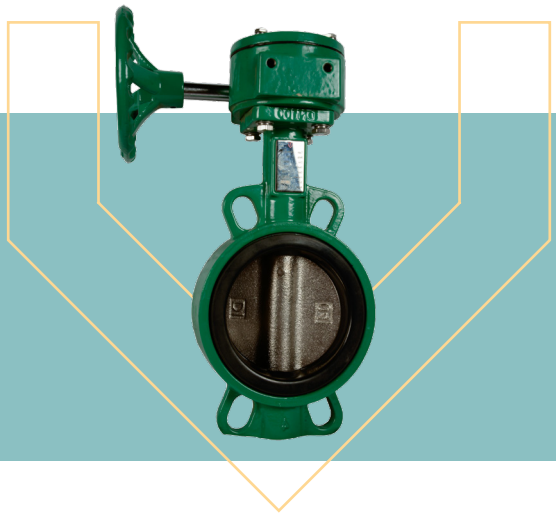
Cast Iron Butterfly Valve Gearbox



Weights: 9kg – 205kg
Sizes: DN 50 – 700
Class: 150
Pressure: PN16
Temperatures: -10°C to 120°C

Application

The VT Cast Iron Butterfly Valve Gearbox is a reliable and efficient solution for controlling the flow of fluids in industrial applications. This type of valve is constructed with a durable cast iron body, which ensures its strength and longevity, making it suitable for demanding environments. The VT Cast Iron Butterfly Valve Gearbox design incorporates a disc that rotates on a shaft to regulate the flow by either fully opening or closing the valve.

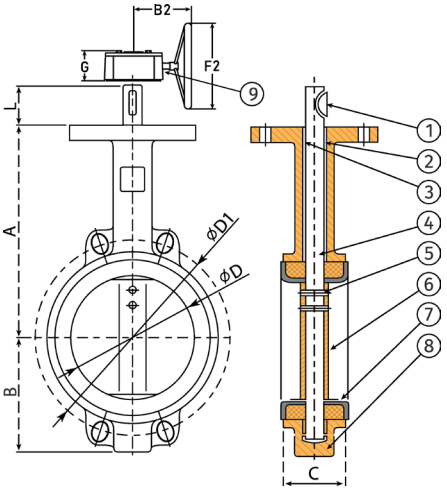
The addition of a gearbox to the butterfly valve enhances its functionality and ease of operation. The gearbox provides a mechanical advantage, allowing for smooth and precise control of the valve, even in situations with high pressure or large pipe diameters. It enables operators to adjust the valve's position accurately and effortlessly, ensuring optimal flow control and system performance.

The cast iron construction of the valve and the robust gearbox make it capable of withstanding harsh conditions, including high temperatures, corrosive substances, and abrasive media. This combination of durability, versatility, and efficient control makes the VT Cast Iron Butterfly Valve Gearbox an ideal choice for various industrial applications, including chemical plants, water treatment facilities, power generation, and HVAC systems.

Dimensions

NPS	DN	A	B	C	ø D	ø D1	L	G	B2	F2	Kg
2	50	161	80	42	53	100	32	73	155	150	9
2.5	65	175	89	44.7	65	120	32	73	155	150	10
3	80	181	95	45.2	79	127	32	73	155	150	10
4	100	200	114	52.1	104	156	32	73	155	150	11
5	125	213	127	54.5	124	190	32	73	155	150	12
6	150	226	139	55.8	156	212	32	73	155	150	14
8	200	260	175	60.6	203	268	45	89	222	300	22
10	250	292	203	65.6	251	325	45	89	222	300	28
12	300	337	242	76.9	302	402	45	89	213	300	51
14	350	368	267	79.5	334	436	45	86	213	300	61
16	400	400	297	90	390	488	51	125	251	300	82
18	450	422	315	109	441	539	51	125	251	400	117
20	500	480	348	135	492	593	64	154	270	300	170
24	600	562	444	156	593	816	70	154	338	300	205

Diagram



#	Part	Material
1	Key	45# Steel
2	O-Ring	NBR
3	Brushing	PTFE
4	Stem	416 Stainless Steel
5	Pin	316 Stainless Steel
6	Disc	NPDI or CF8m (SS316)
7	Seat (replaceable)	EPDM (standard), Nitrile, or Teflon
8	Body	Cast Iron (ASTM A126 B)
9	Gearbox	Ductile Iron (A536)

Specifications

Models
VT

Body Material
Cast Iron

Iron Grade
ASTM A126 B

Seat
EPDM (standard), Nitrile, Teflon

Disc
Stainless Steel CF8M, NPDI

Standards
Design Standard conforms to MSS SP-67
Face to Face conforms to MSS SP-67-90
Shell Test 2.4Mps
Seal Test 1.76Mpa
Air Test 0.6Mpa

Services
Water, Oil, Gas, Steam

Industries
Petrochemicals and Petroleum, Refineries, Primary Energy, Agriculture, Water Works, HVAC

Priority Media
Acetone, Acetylene, Ammonium Bicarbonate, Dry Cement, Diesel Oil Fuels, Ethane, Dry Flour, Heptane, Nitrogen Gas, Dry Plastics, Dry Sugars, Dry Sulphur Dioxide

Inventory Code and Description
TVTSSG/B
VT CI B/FLY WAFER SS G/B
Cast Iron Butterfly Valve Wafer Stainless Steel Disc EPDM Seat Gearbox

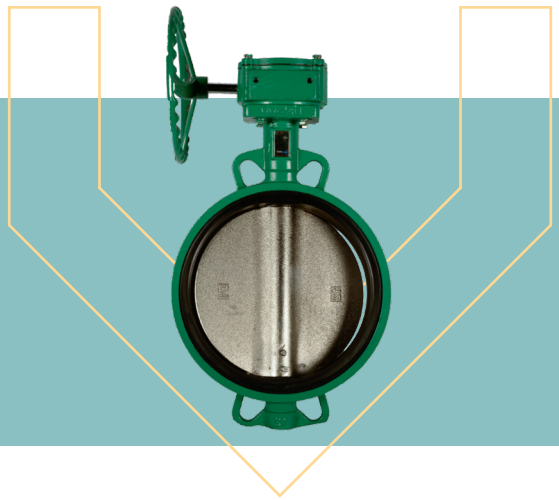
TVTNPDIG/B
VT CI B/FLY WAFER NPDI G/B
Cast Iron Butterfly Valve Wafer NPDI Disc EPDM Seat Gearbox

TVTSSG/BTEF
VT CI B/FLY WAFER SS G/B TEFLON
Cast Iron Butterfly Valve Wafer Stainless Steel Disc Gearbox Teflon Seat

Also Known As:
Duplex Valve, Lug Valve, Quarter Turn Valve, Uni-Flow Valve

Butterfly Valves

Models:	VT-N ; VT
Class:	150
Sizes:	DN 50 – 300; DN 50 – 700
Pressure:	PN16
Body Material:	Ductile Iron ; Cast Iron ; CF8M/NPDI Disc
Temperatures:	-10°C to 120°C
Weights:	2kg -27kg ; 5kg - 316kg



Butterfly Valve Detail

A thinner design makes the Butterfly Valve versatile and well suited for the industrial management of high volumes low-pressure flow of liquids and gasses. Butterfly Valves are excellent for large-flow and pressure applications as well.

Liners are available in EPDM (Standard), Nitrile, and Teflon, and come with two separate Disc options:

- **Stainless Steel CF8M** for use with abrasive and corrosive media such as acids, alkalis, chemicals, and diesel. Must be used with a suitable NBR or Teflon Liner
- **NPDI** for use with idle or non-abrasive or corrosion-resistant media such as water, oil and gas. Can be used with a suitable EPDM Liner

Application

The Wafer Style Butterfly Valve has lugs to secure and align the valve with two mating flanges. From DN50 to DN300, a 90° rotation of the handle opens or closes the valve. For sizes larger than DN300, a gearbox and handwheel enables full and partial opening and closing operations.

The disk is approximately the same size as the adjoining pipe and rotates on a vertical axis. Because the seat is softer, the disc gets pressed firmly against it creating a tight seal when closed.

Specifications

Services

Petrochemicals and Petroleum, Refineries, Primary Energy, Agriculture, Water Works, HVAC

Industries

Water, Oil, Gas, Steam

Priority Media

Acetone, Acetylene, Ammonium Bicarbonate, Dry Cement, Diesel Oil Fuels, Ethane, Dry Flour, Heptane, Nitrogen Gas, Dry Plastics, Dry Sugars, Dry Sulphur Dioxide

Also Known As:

Duplex Valve
Lug Valve
Uni-Flow Valve
Quarter Turn Valve

Torque Figures

DN	NPS	PN6		PN10		PN16	
		Wet	Dry	Wet	Dry	Wet	Dry
DN50	2"	13	20.8	13.9	22.1	15.1	24.2
DN65	2.5"	13.8	26.1	15.4	29.2	17.2	32.7
DN80	3"	21	39.9	21.7	41.1	23.1	43.7
DN100	4"	34.9	63.8	37.1	67.8	39.8	72.8
DN125	5"	53.8	93.8	57.9	101	61.9	108
DN150	6"	84.5	149	93.9	165	102	174
DN200	8"	154	264	173	297	192	330
DN250	10"	249	423	286	486	323	549
DN300	12"	371	605	429	699	490	799
DN350	14"	466	699	550	825	625	969
DN400	16"	632	947	755	1133	846	1307
DN450	18"	831	1246	1012	1518	1131	1787
DN500	20"	1093	1639	1350	2025	1431	2288
DN600	24"	1679	2519	2111	3166	2301	3711
DN700	28"	3008	4515	3269	4908	5670	6380

Butterfly Valve Torque is measured in Newton-Meters and is provided for both Wet and Dry media. It is the Turning Force needed to rotate the valve disc and is dependent on the Gear Ratio (number of turns to open or close the valve).

All measurements listed are expressed in millimetres, unless otherwise noted. Product weight is represented in kilograms. DN size is provided in millimetres and NPS size is given in inches. These values correspond to the diagram label and its associated part.

Advantages:

- **Low maintenance costs** as there are minimal moving parts
- **No spaces** where pockets of gas and media can accumulate
- **Low pressure drop** when fully opened, but can also be used in high flow rate applications
- **Easy installation** and less maintenance as the valve is thin
- **Economical savings** due to its reduced weight and space requirements

Common Industry Uses:

- **Used to start, stop, and regulate flow**
- **Agricultural purposes** used by compressed air, gas, and oil
- **Controlling the flow, pressure, and distribution of water treatment services**
- **Heating and Conditioning (HVAC)** for regulating the flow and cooling of air, water, and gasses
- **Transporting chemicals**, where the Butterfly Valve's compact design and low weight make it ideal for chemical processing