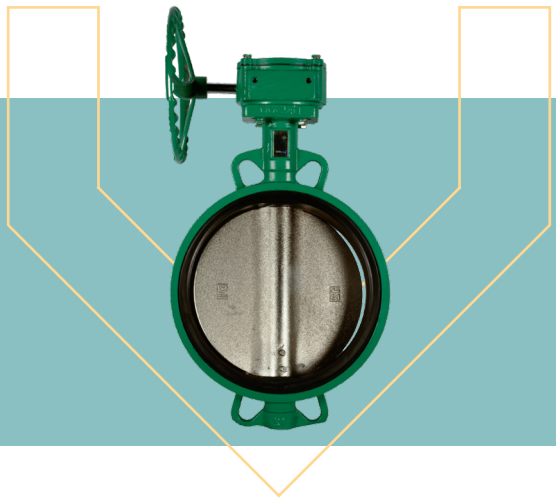
Ductile Iron Butterfly Valve Gearbox



Weights: 5.3kg – 316kg
Sizes: DN 50 – 700
Class: 150
Pressure: PN16
Temperatures: -10°C to 120°C

Application

The VT-N Ductile Iron Butterfly Valve Gearbox is a robust and versatile valve commonly used in industrial applications. Constructed with high-quality ductile iron, this valve exhibits excellent strength and durability, making it suitable for handling various media, including water, gases, and corrosive fluids.

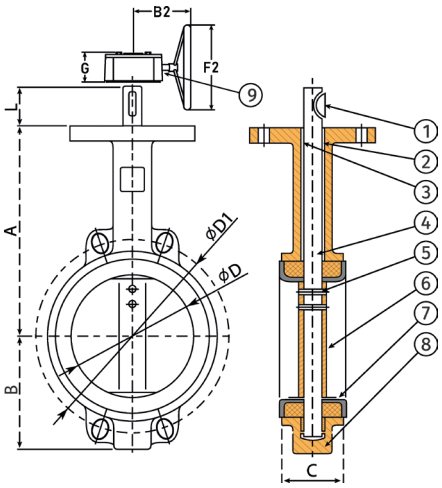
The inclusion of a gearbox enhances the valve's performance by providing smooth and precise control over the flow of fluids. The gearbox mechanism allows for easy manual operation, allowing users to adjust the valve's position quickly and efficiently. This feature is especially beneficial in situations where frequent adjustments are required to regulate the flow rate.

The Ductile Iron Butterfly Valve Gearbox design ensures minimal pressure loss, thanks to its streamlined disc and low-friction bearings. This design feature also promotes efficient flow control and reduces energy consumption. Additionally, the valve's tight shut-off capabilities prevent any leakage, enhancing its reliability and safety.

Dimensions

NPS	DN	A	B	C	ø D	ø D1	L	G	B2	F2	Kg
2	50	132	66	43	73	125	25	62	142	140	5
2.5	65	144	75	46	85	145	25	62	142	140	5
3	80	156	91	46	100	160	25	62	142	140	6
4	100	171	107	52	131	180	25	62	142	140	7
5	125	192	122	56	155	210	25	62	142	140	8
6	150	213	134	56	185	240	25	62	142	140	10
8	200	246	167	60	234	295	32	78	196	270	18
10	250	284	203	68	288	355	32	78	196	270	25
12	300	314	238	78	340	410	32	78	180	270	34
14	350	336	265	78	407	470	45	78	180	270	42
16	400	405	320	102	451	525	51	105	235	263	68
18	450	415	355	114	515	585	51	105	235	263	91
20	500	460	390	127	556	650	64	105	235	263	114
24	600	535	435	154	650	770	70	127	295	380	211
28	700	595	510	165	770	840	66	135	330	380	316

Diagram



#	Part	Material
1	Key	45# Steel
2	O-Ring	NBR
3	Brushing	PTFE
4	Stem	420 Stainless Steel
5	Pin	316 Stainless Steel
6	Disc	NPDI or CF8m (SS316)
7	Seat (replaceable)	EPDM (standard), Nitrile, or Teflon
8	Body	Ductile Iron A536
9	Gearbox	Ductile Iron A536

Specifications

Models
VT-N

Body Material
Ductile Iron

Iron Grade
ASTM A536 65-45-12

Seat
EPDM (standard), Nitrile, Teflon

Disc
Stainless Steel CF8M, NPDI

Standards
Design conforms to DIN EN593
End Standard conforms to DIN EN1092
Face to Face conforms to DIN EN558

Services
Water, Oil, Gas, Steam

Industries
Chemical Industries, Food Industries, Gasses and Oils, Heating and Conditioning (HVAC), Medical Industries, Power Plants, Utility Lines, Water Treatment and Distribution

Priority Media
Ammonium Bicarbonate, Cement (dry), Ethylene Glycol, Flour (dry), Hydrogen Gas, Plastics (dry), Sulphur Dioxide (dry), Sugars (dry), Nitrogen Gas

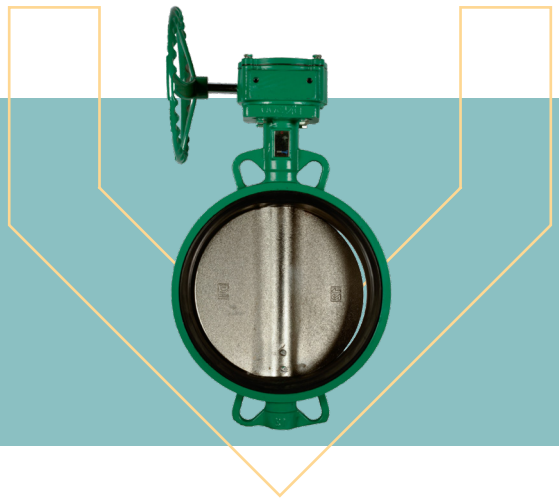
Inventory Code and Description
TVTNPDIG/BN
VT-N DI B/FLY WAFER NPDI G/B
Ductile Iron Butterfly Wafer Valve NPDI EPDM Disc Gearbox

TVTSSG/BN
VT-N DI B/FLY WAFER SS G/B
Ductile Iron Butterfly Wafer Valve Stainless Steel EPDM Disc Gearbox

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