

**Butterfly valve with Lug type**

- For open and closed cold and warm water systems
- For switching heat generators or cooling machines on and off


**Type overview**

Type	DN [ ]	PN [ ]	kvmax [ m <sup>3</sup> /h]
D625NL	25	10 / 16	45
D632NL	32	10 / 16	55
D640NL	40	10 / 16	70
D650NL	50	10 / 16	90
D665NL	65	10 / 16	180
D680NL	80	10 / 16	300
D6100NL	100	10 / 16	580
D6125NL	125	10 / 16	820
D6150NL	150	10 / 16	1600
D6200NL	200	16	2900
D6250NL	250	16	4400
D6300NL	300	16	7300
D6350NL	350	16	10900
D6400NL	400	16	14200
D6450NL	450	16	18800
D6500NL	500	16	24100
D6600NL	600	16	37300
D6700NL	700	16	42800

**Technical data**

<b>Functional data</b>	Media	Cold and warm water, water with glycol up to max. 50% vol.
	Medium temperature	-20...120°C
	Permissible pressure ps	1600 kPa
	Leakage rate	Leakage rate A, tight (EN 12266-1)
	Pipe connectors	DN 50...DN 150: Flange PN 10/PN 16 (according to ISO 7005-2) DN 200...DN 700: Flange PN 16 (according to ISO 7005-2)
	Angle of rotation	90°
	Installation position	Upright to horizontal (in relation to the stem)
	Suitable connection flange	In accordance with ISO 7005-2 and EN 1092-2
	Maintenance	Maintenance-free
	<b>Materials</b>	Housing
Closing element		1.4301 (stainless steel)
Stem		1.4005 (stainless steel)
Stem seal		O-ring EPDM
Spindle bearing		RPTFE
Seat		EPDM

**Safety notes**


- The valve has been designed for use in stationary heating, ventilation and air-conditioning systems and is not allowed to be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.

### Safety notes

- Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied during installation.
- The valve does not contain any parts that can be replaced or repaired by the user.
- The valve may not be disposed of as household refuse. All locally valid regulations and requirements must be observed.
- When determining the flow rate characteristic of controlled devices, the recognised directives must be observed.
- The damper must be opened and closed slowly in order to avoid hydraulic shocks in the pipe system.

### Product features

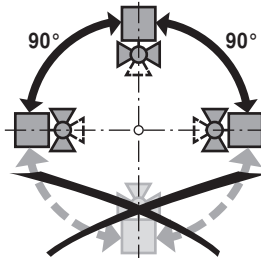
- Principle of operation** The butterfly valve is opened or closed completely by an open-close rotary actuator. Continuous rotary actuators are connected by a commercially available controller and move the valve to any position desired. The valve disk made of stainless steel is pressed into the soft-sealing EPDM seat by a rotary movement and ensures leakage rate A (tight). The pressure losses are slight in the open position and the kv value is at a maximum.
- Manual override** Manual throttling or shut-off can be carried out with a lever or a worm gear (see «Accessories»).
- With lever (DN25...150): Adjustable in 10 ratchet steps with position indication ( 0 = 0° (angle); 9 = 90° (angle) )
  - With worm gear (DN25...700): steplessly adjustable (self-locking) with position indication.

### Accessories

	Description	Type
<b>Electrical accessories</b>	Stem heating flange ISO 5211, F05 (30W)	ZR24-F05
	Description	Type
<b>Mechanical accessories</b>	Worm gear for D6.. butterfly valves, DN25...DN100	ZD6N-S100
	Manual control for D6.. butterfly valves, for DN25...DN100	ZD6N-H100
	Worm gear for D6.. butterfly valves, DN125...DN150	ZD6N-S150
	Manual control for D6.. butterfly valves, for DN125...DN150	ZD6N-H150
	Worm gear for D6.. butterfly valves, DN200	ZD6N-S200
	Worm gear for D6.. butterfly valves, DN250	ZD6N-S250
	Worm gear for D6.. butterfly valves, DN300...DN350	ZD6N-S350
	Worm gear for D6.. butterfly valves, DN400	ZD6N-S400
	Worm gear for D6.. butterfly valves, DN450	ZD6N-S450
	Worm gear for D6.. butterfly valves, DN500	ZD6N-S500
	Worm gear for D6.. butterfly valves, DN600	ZD6N-S600
	Worm gear for D6... butterfly valves, DN700	ZD6N-S700

## Installation notes

**Recommended installation positions** The butterfly valves may be mounted upright to horizontal. The butterfly valves may not be installed in a hanging position i.e. with the spindle pointing downwards.



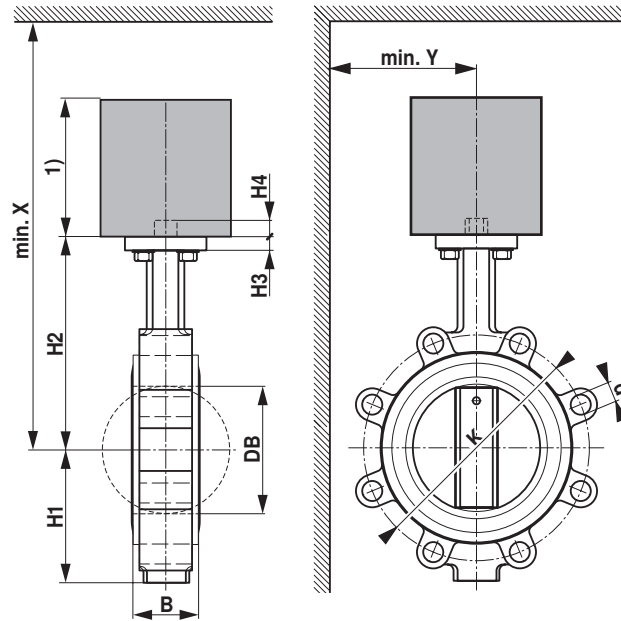
**Water quality requirements** The water quality requirements specified in VDI 2035 must be adhered to.

**Stem heating** In cold water applications and warm humid ambient air can cause condensation in the actuators. This can lead to corrosion in the gear box of the actuator and causes a breakdown of it. In such applications, the use of a stem heating is provided. The stem heating must be enabled only when the system is in operation, because it does not have temperature control.

**Maintenance** Butterfly valves and rotary actuators are maintenance-free. Before any kind of service work is carried out on the actuator, it is essential to isolate the rotary actuator from the power supply (by unplugging the electrical cable). Any pumps in the part of the piping system concerned must also be switched off and the appropriate slide valves closed (allow everything to cool down first if necessary and reduce the system pressure to ambient pressure level). The system must not be returned to service until the butterfly valve and the rotary actuator have been mounted properly in accordance with the instructions and the pipeline has been refilled in the proper manner. To avoid a torque increase during off season shut down, exercise the butterfly valve (full open and close) at least once a month.

## Dimensions / Weight

Dimensional drawings



Type	DN [ ]	B [ mm]	DB [ mm]	H1 [ mm]	H2 [ mm]	H3 [ mm]	H4 [ mm]	d (PN10) [ mm]	K (PN10) [ mm]
D625NL	25	32	30	53	90	10	13	4 x M12	85
D632NL	32	33	35	60	100	10	13	4 x M16	100
D640NL	40	33	42	68	119	10	13	4 x M16	110
D650NL	50	43	52	72	133	11	13	4 x M16	125
D665NL	65	46	64	81	147	11	13	4 x M16	145
D680NL	80	46	78	96	158	11	13	8 x M16	160
D6100NL	100	52	103	106	170	11	13	8 x M16	180
D6125NL	125	56	122	122	194	15	19	8 x M16	210
D6150NL	150	56	155	140	202	15	19	8 x M20	240
D6200NL	200	60	202	172	240	15	19		
D6250NL	250	68	250	206	268	15	24		
D6300NL	300	78	301	244	316	15	24		
D6350NL	350	78	333	266	361	15	24		
D6400NL	400	102	391	315	402	20	48		
D6450NL	450	114	442	328	420	20	48		
D6500NL	500	127	493	358	474	22	48		
D6600NL	600	154	594	454	559	22	48		
D6700NL	700	165	695	532	622	33	66		

Type	d (PN16) [ mm]	K (PN16) [ mm]	X [ mm]	Y [ mm]	Weight approx. [ kg]
D625NL	4 x M12	85	320	150	1.3
D632NL	4 x M16	100	340	150	1.6
D640NL	4 x M16	110	350	160	1.7
D650NL	4 x M16	125	370	160	2.6
D665NL	4 x M16	145	380	170	3.1
D680NL	8 x M16	160	390	180	4.4
D6100NL	8 x M16	180	410	190	5.1
D6125NL	8 x M16	210	530	210	7.7
D6150NL	8 x M20	240	540	220	7.5
D6200NL	12 x M20	295	580	250	16
D6250NL	12 x M24	355	630	280	20
D6300NL	12 x M24	410	680	310	35
D6350NL	16 x M24	470	730	340	46
D6400NL	16 x M27	525	1300	1300	92
D6450NL	20 x M27	585	1300	1400	120
D6500NL	20 x M30	650	1700	1500	150
D6600NL	20 x M33	770	1800	1800	250
D6700NL	24 x M33	840	1800	1900	330

**Further documentation**

- Overview Valve-actuator combinations
- Data sheets for actuators
- Installation instructions for actuators and/or butterfly valves
- General notes for project planning