

Teil Nr. Part No.	Bezeichnung Description	Material	
		KG4 2366 E	KG4 2366 B
1	Gehäuse Body	EN-GJS-400-15 Sphäroguss GGG40 Ductile iron GGG40	EN-GJS-400-15 Sphäroguss GGG40 Ductile iron GGG40
2*	Sitzring Seat	EPDM	NBR
3	Klappenscheibe Disc	1.4408	1.4408
4	Welle Stem	1.4021	1.4021
5	Kerbstift Grooved pin	A2	A2
6*	O-Ring	NBR	NBR

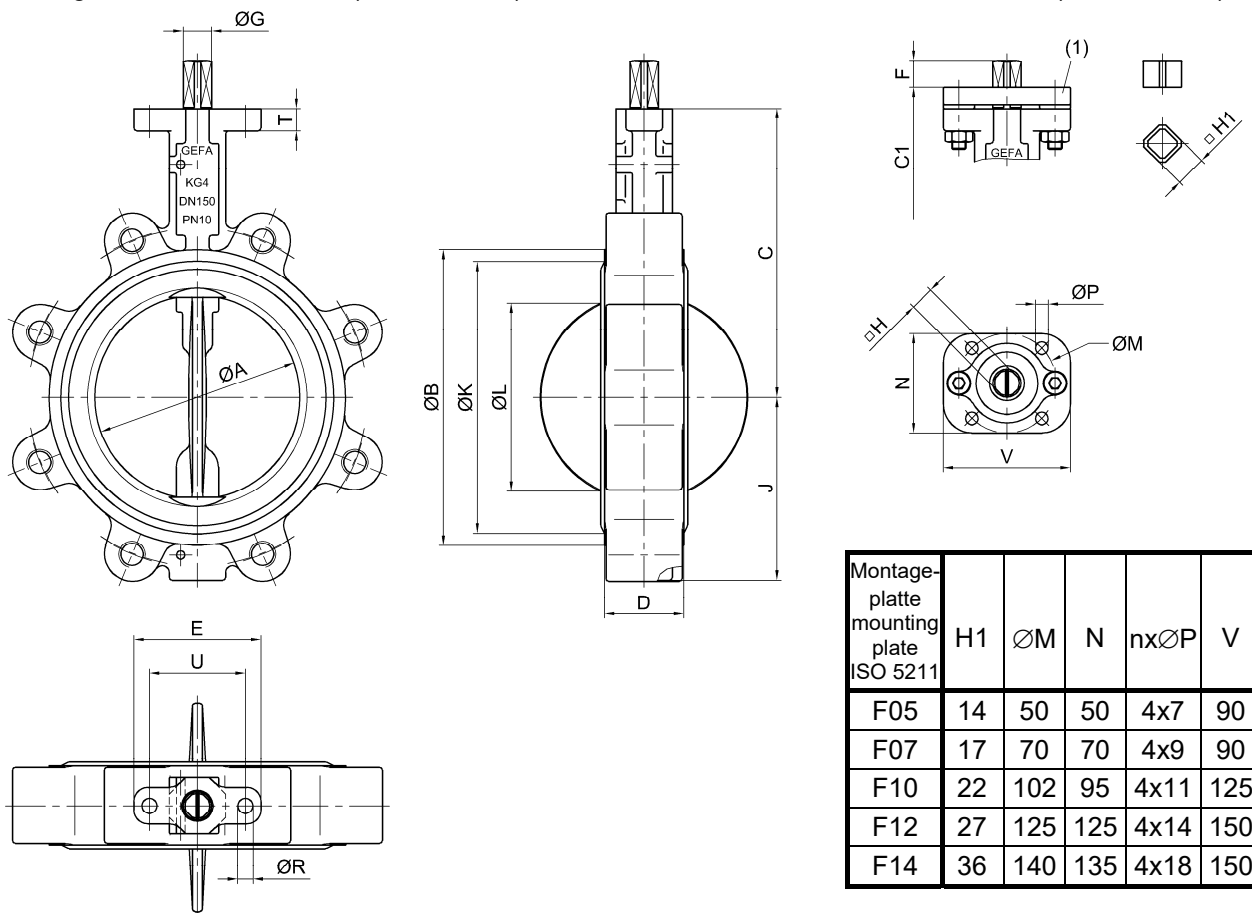
* = Verschleißteile / Wearing parts

Wahlweise andere Werkstoffe lieferbar

Other materials available

Maße Einteilige Absperrklappe Serie KG4 Dimensions One-piece butterfly valve series KG4 DN 40 - DN 300

Baulänge: EN 558-1 Reihe 20 (DIN 3202-K1) Face to face dimension: EN 558-1 line 20 (DIN 3202-K1)



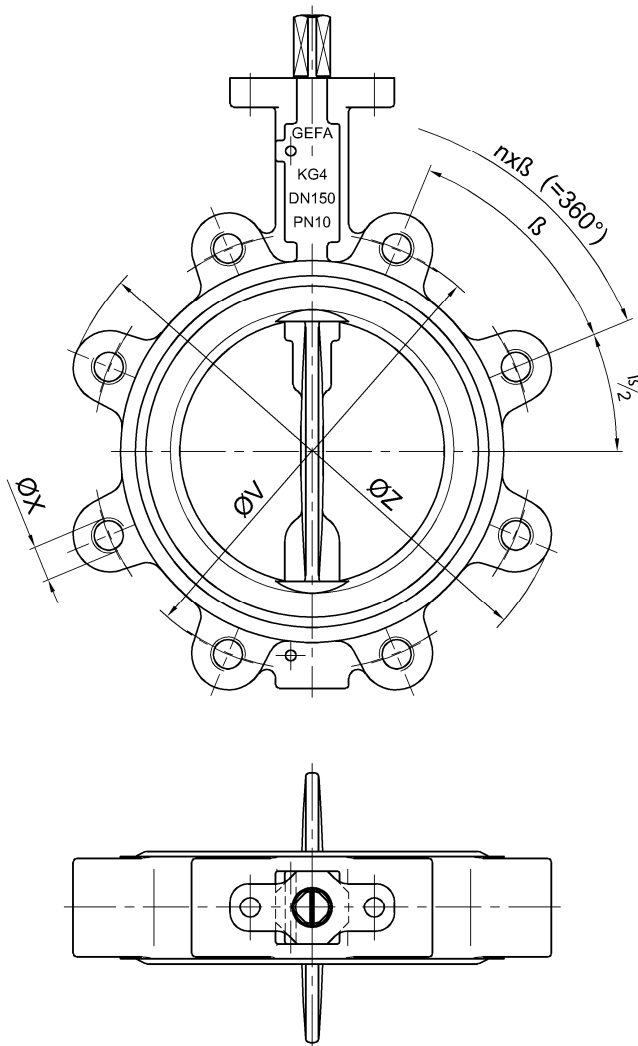
(1) MULTITOP Montageplatte und Vierkant-Adapter zum Direktaufbau von Antrieben mit größerem Anschlussflansch. Sonderaufbauten möglich.
MULTITOP mounting plate and square-adapter for direct mounting of actuators with larger connection flange. Special designs possible.

ØK = Sitzring-Außendurchmesser / Seat outside diameter

ØL = kleinster Flanschinnendurchmesser / smallest inside diameter of flange

DN	NPS	ØA	ØB	C	C1	D	E	F	ØG	H	J	ØK	ØL	ØR	T	U	kleinster Anschluss min. mounting plate DIN 3337/ISO 5211
40	1½"	51	98	130	145	43*	90	16	14	11	74	86	30	11	14	68	F05
50	2"	51	98	130	145	43	90	16	14	11	74	86	30	11	14	68	F05
65	2½"	64	109	150	165	46	90	16	14	11	81	97	47	11	14	68	F05
80	3"	76	125	156	171	46	90	16	14	11	88	112	63	11	14	68	F05
100	4"	101	158	180	195	52	90	16	16	14	104	144	90	11	16	68	F07/SW14
125	5"	126	180	195	210	56	90	19	20	17	120	166	116	11	16	68	F07
150	6"	145	210	205	220	56	90	19	20	17	130	194	136	11	16	68	F07
200	8"	197	270	240	258	60	125	19	22	17	160	252	189	13	21	95	F10
250	10"	247	322	274	292	68	125	24	28	22	187	302	240	13	21	95	F10
300	12"	298	371	300	318	78	125	24	28	22	213	350	290	13	21	95	F10

* GEFA Baulänge / GEFA face to face dimension



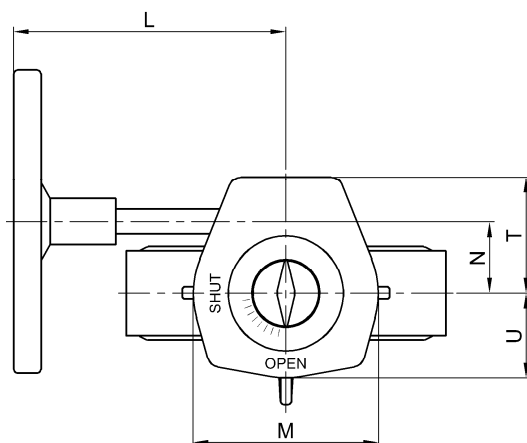
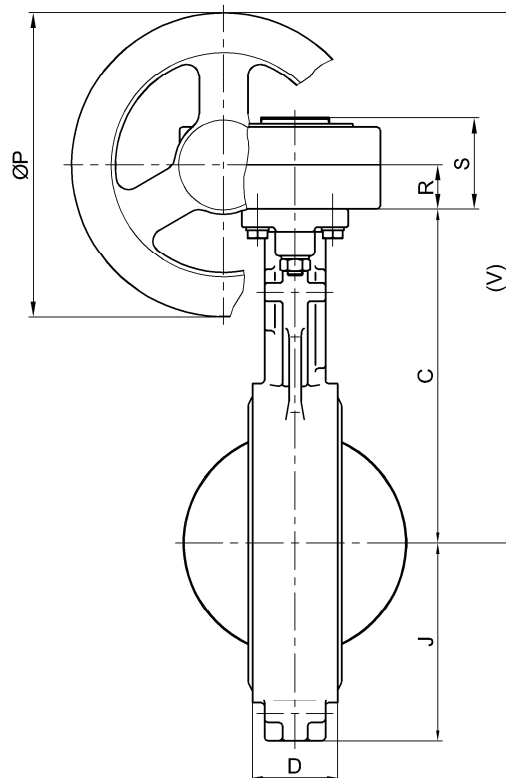
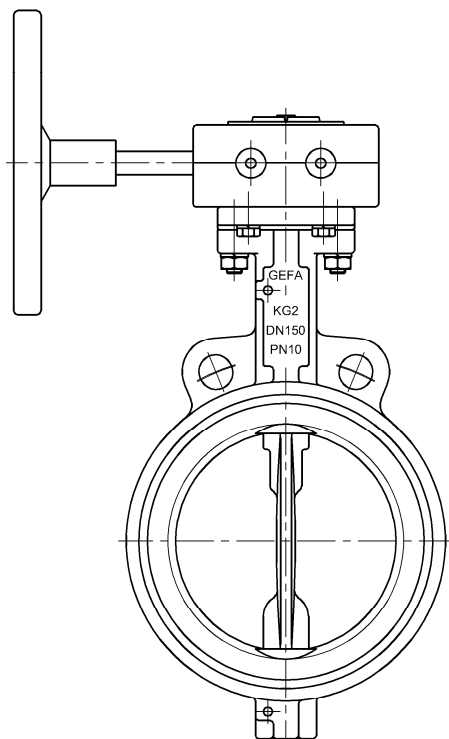
DN	NPS	Druckstufe Pressure class	ØV	ØX	ØZ	n	β	kg	DN	NPS	Druckstufe Pressure class	ØV	ØX	ØZ	n	β	kg
40	1 1/2"	PN10	110	M16	155	4	90°	3,0	125	5"	PN10	210	M16	252	8	45°	9,5
		PN16									PN16						
		Class 150	-	-	-	-	-	-			Class 150	215,9	3/4"-10UNC				
50	2"	PN10	125	M16	155	4	90°	3,0	150	6"	PN10	240	M20	280	8	45°	11,0
		PN16									PN16						
		Class 150	120,7	5/8"-11UNC							Class 150	241,3	3/4"-10UNC				
65	2 1/2"	PN10	145	M16	175	4	90°	3,5	200	8"	PN10	295	M20	335	8	45°	15,8
		PN16									PN16			335	12	30°	16,9
		Class 150	139,7	5/8"-11UNC							Class 150	298,5	3/4"-10UNC	335	8	45°	15,8
80	3"	PN10	160	M16	190	8	45°	5,8	250	10"	PN10	350	M20	402	12	30°	26,0
		PN16									PN16						
		Class 150	152,4	5/8"-11UNC	190	4	90°				Class 150	362	7/8"-9UNC				
100	4"	PN10	180	M16	220	8	45°	7,0	300	12"	PN10	400	M20	482	12	30°	43
		PN16									PN16						
		Class 150	190,5	5/8"-11UNC							Class 150	431,8	7/8"-9UNC				

Maximale Druckbelastung: siehe Druck-Temperatur-Diagramm

Maximum pressure: please refer to pressure-temp. range diagram

Änderungen vorbehalten
subject to changes

Einteilige Absperrklappe Serie KG2 /KG4 mit Aluminium Getriebe BGH One-piece butterfly valve series KG2/KG4 with aluminium gear operator BGH DN 40 - DN 300



Getriebewerkstoffe / Gear materials

Gehäuse / Body: Aluminium / aluminium
Welle / Stem: Edelstahl / stainless steel
Handrad / Handwheel: Stahl / steel

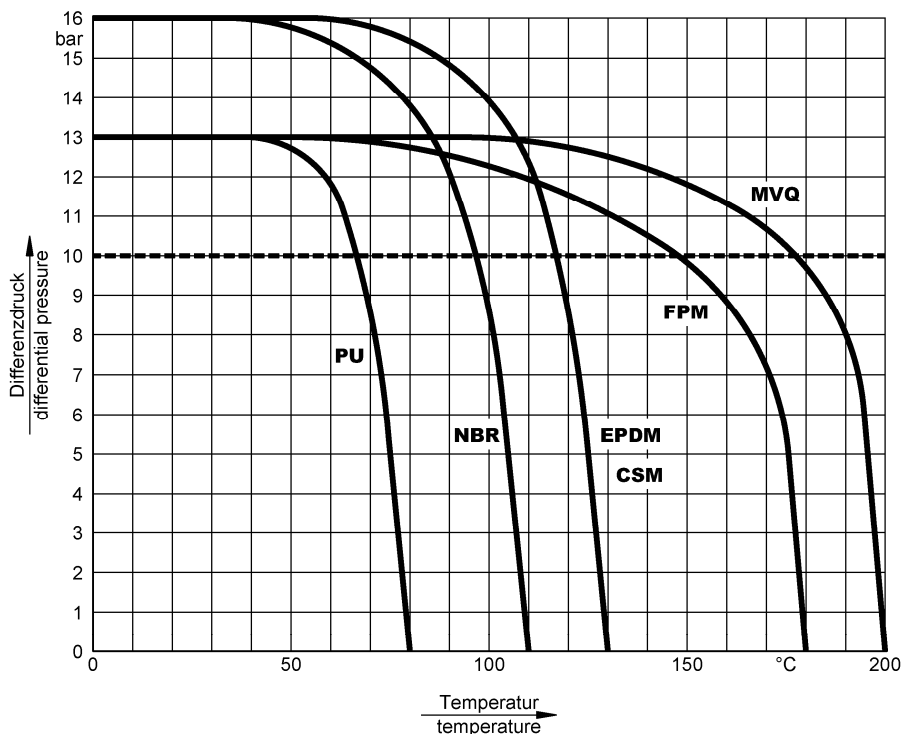
Gewicht des Getriebes inklusive Handrad und Montageplatte.

Klappenspezifische Daten entnehmen Sie bitte den entsprechenden Datenblättern.

Weight of gear operator including handwheel and mounting plate.

Regarding valve data please refer to relevant data sheets.

DN	NPS	Getriebe Typ Gear type	C	D	J	L	M	N	ØP	R	S	T	U	V	kg
40	1 1/2"	BGH200900711140	145	43	74	160	100	50	140	28	58	73	57	243	1,8
50	2"	BGH200900711140	145	43	74	160	100	50	140	28	58	73	57	243	1,8
65	2 1/2"	BGH200900711140	165	46	81	160	100	50	140	28	58	73	57	263	1,8
80	3"	BGH200900711140	171	46	88	160	100	50	140	28	58	73	57	269	1,8
100	4"	BGH200900714140	195	52	104	160	100	50	140	28	58	73	57	293	1,8
125	5"	BGH200900717200	210	56	120	163	100	50	200	28	58	73	57	338	2,2
150	6"	BGH200900717200	220	56	130	163	100	50	200	28	58	73	57	348	2,2
200	8"	BGH201251017300	258	60	160	225	142	65	300	40	73	96	75	448	4,2
250	10"	BGH201251222300	292	68	187	225	142	65	300	40	73	96	75	482	4,2
300	12"	BGH201251222300	318	78	213	225	142	65	300	40	73	96	75	508	4,2



Ab DN 200 ist bei einem Differenzdruck über 13 bar der Einsatz von Sitzringen mit erhöhter Shore Härte erforderlich.

Folgende Serien sind bis zu einem maximalen Differenzdruck von 10 bar geeignet:

K11: DN 50-DN150

KG9 mit Edelstahlgehäuse: DN200-DN300

KG2/KG4 und Armaturen ab DN 600

Bei Einbau der Processklappe mit Anflanschgehäuse als Endarmatur beträgt der maximale Betriebsdruck 6bar. Der freie Anschluss ist zusätzlich mit einem Gegenflansch abzusichern.

Serie K optional Vakuumdicht bis 1×10^{-2} mbar

For a differential pressure of more than 13 bar valves > DN 200 have to be equipped with a seat having a higher shore hardness.

The following series are suitable up to a maximum differential pressure of 10 bar:

K11: DN 50-DN150

KG9 Body stainless steel: DN200-DN300

KG2/KG4 and valves \geq DN 600

When installing the lug type butterfly valve as end-in-line valve, the max. differential pressure is 6 bar. The free port must be secured by a counter flange.

Series K optional vacuum tight up to 1×10^{-2} mbar

Drehmomente für Absperrklappen Serie KG2/KG4

Torques for butterfly valves series KG2/KG4

DN		Anwendungsfall 1 Application 1		Anwendungsfall 2 Application 2	
mm	inch	Δp 5 bar (Nm)	Δp 10 bar (Nm)	Δp 5 bar (Nm)	Δp 10 bar (Nm)
50	2"	15	16	18	19
65	2½"	18	20	22	24
80	3"	24	28	29	34
100	4"	34	40	41	48
125	5"	50	57	60	70
150	6"	80	100	100	120
200	8"	155	190	190	230
250	10"	220	280	275	340
300	12"	270	370	325	450
350	14"	340	420	410	505
400	16"	470	660	625	770
500	20"	1015	1415	1250	1770

Anwendungsfall 1:

Drehmomente bei normalen Anwendungen, bei denen weder eine Schwellung noch Verhärtung des Sitzringes zu erwarten ist
z.B.:

- Wasser (Kühlwasser - Seewasser etc.)
- schmierfähige Medien
- Temperaturen 0 - 80 °C
- Betätigung der Armaturen sollte einmal im Monat erfolgen.

Anwendungsfall 2:

Drehmomente bei Anwendungen, bei denen die spezifischen Einflüsse unbekannt sind
z.B.:

- Kohlenwasserstoffe - Säuren - Trockenservice - Dispersionen - hohe Temperaturen
- Armaturen bleiben über längere Zeiträume geschlossen.

Application 1:

Torques for normal applications, if neither swelling nor hardening of the seat is expected
e.g.:

- water (cooling water - sea water etc.)
- lubricating media
- temperatures ranging from 0 - 80 °C
- valves should be actuated once a month.

Application 2:

Torques for applications with unknown specific influences
e.g.:

- hydrocarbon, acids, dry media, dispersions, high temperatures
- valves remain shut for a longer period.

- Das zu erwartende Betätigungsmoment ergibt sich aus der Summe aller Reibungswiderstände beim Öffnen und Schließen der Armatur gegen die angegebenen Differenzdrücke.
- Der Einfluss des dynamischen Momentes ist in der Tabelle nicht berücksichtigt.
- Bei der Auslegung von Antrieben ist es nicht erforderlich, einen zusätzlichen Sicherheitsfaktor zu berücksichtigen.

- The expected torque results from all frictional resistances during opening and closing of the valve against above mentioned differential pressures.
- The influence of the dynamic moment has not been considered in the table.
- An additional security factor is not necessary for actuator selection.

Durchflussbeiwert K_v für Processklappe Serie K K_v value for butterfly valve series K

DN	NPS	Klappen Öffnungswinkel / Degree of disc rotation								
		10°	20°	30°	40°	50°	60°	70°	80°	90°
25 / 32	1" / 1 1/4"	0,5	1,8	4,5	7,0	12	18	30	46	53
40	1 1/2"	0,9	4,5	10	17	28	42	67	104	125
50	2"	1,8	7,0	16	26	44	70	115	175	210
65	2 1/2"	2,8	10	23	39	60	95	155	280	340
80	3"	3,5	14	33	57	95	146	240	380	510
100	4"	5,5	25	54	95	155	240	395	620	820
125	5"	8,6	38	86	155	240	385	635	950	1200
150	6"	15	52	120	215	342	547	940	1380	1800
200	8"	21	95	215	376	590	940	1540	2400	3200
250	10"	33	154	342	607	940	1540	2310	4000	5300
300	12"	49	222	504	855	1455	2310	3760	6000	8000
350	14"	65	290	658	1200	1880	2900	4790	8000	9500
400	16"	86	380	855	1540	2395	3850	6325	9500	12000
500	20"	130	610	1370	2480	3930	6160	10260	16000	19000
600	24"	188	855	1970	3420	5470	8550	14100	23000	26000
700	28"	255	1145	2710	4670	7470	11970	19530	30000	36000
800	32"	335	1600	3530	6120	9920	15670	25665	38000	47000
900	36"	430	2220	4440	7770	12820	19660	32500	54000	66000
1000	40"	575	2570	5990	10260	16700	26500	43600	64000	78000

K_v = Durchflussmenge in m³/h bei einem Druckverlust von 1 bar für Wasser ($\rho=1000 \text{ kg/m}^3$)

K_v = Water flow ($\rho=1000 \text{ kg/m}^3$) in m³/h passing through the valve at a pressure drop of 1 bar

C_v = Durchflussmenge in US gal/min bei einem Druckverlust von 1 psi für Wasser ($\rho=1000 \text{ kg/m}^3$)

C_v = Water flow ($\rho=1000 \text{ kg/m}^3$) in US gal/min passing through the valve at a pressure drop of 1 psi

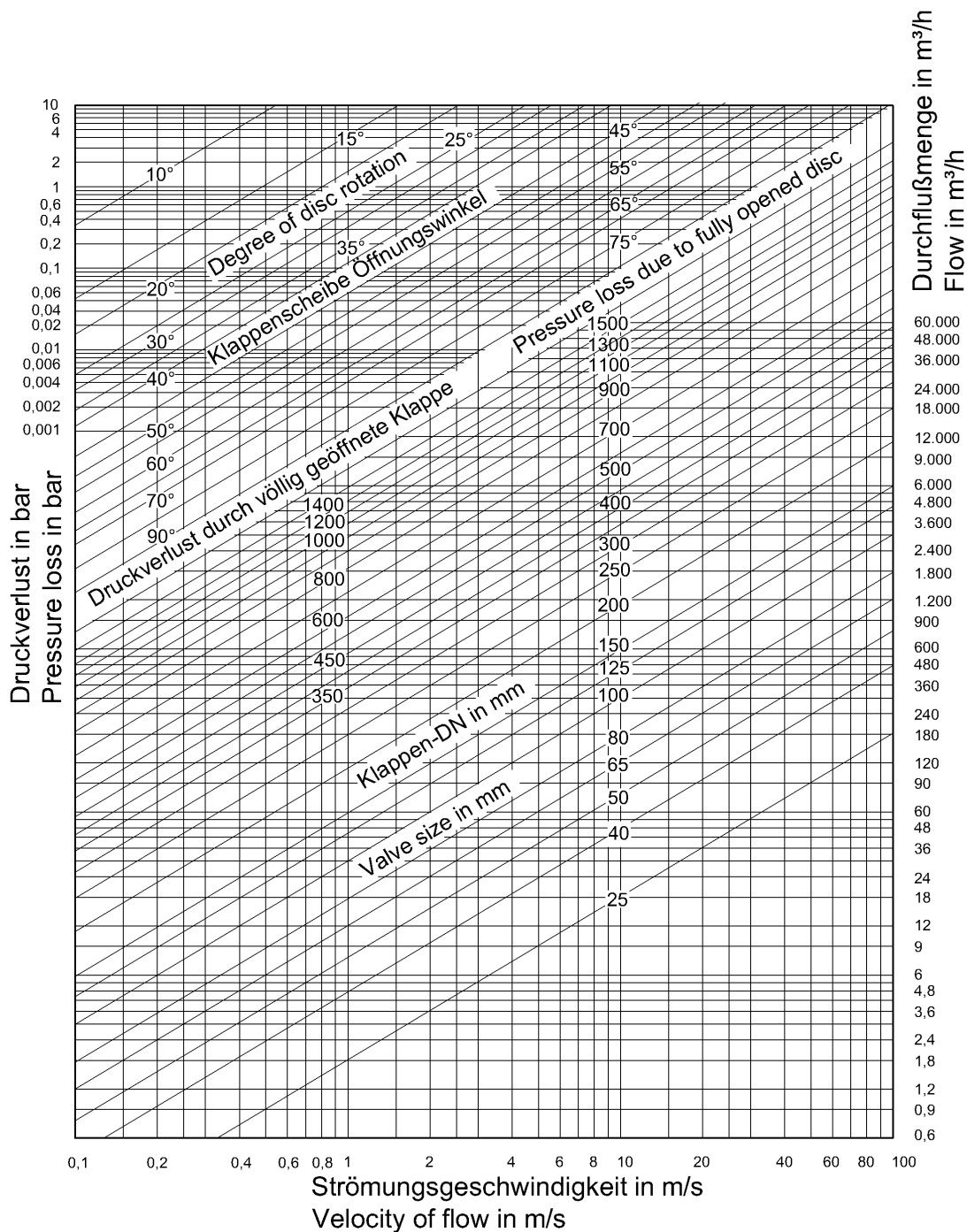
$C_v = K_v \times 1,16$

Formeln für die Berechnung des K_v -Wertes / Basic formula for calculation of K_v -value

Differenzdruck pressure drop	Flüssigkeit liquid	Gas gas	Dampf steam
$p_2 > \frac{p_1}{2} / \Delta p < \frac{p_1}{2}$	$K_v = Q \cdot \sqrt{\frac{\rho}{1000 \cdot \Delta p}}$	$K_v = \frac{Q_N}{514} \cdot \sqrt{\frac{\rho_N \cdot (t_1 + 273^\circ)}{\Delta p \cdot p_2}}$	$K_v = \frac{G}{31,6} \cdot \sqrt{\frac{v_2}{\Delta p}}$
$p_2 < \frac{p_1}{2} / \Delta p > \frac{p_1}{2}$	$K_v = Q \cdot \sqrt{\frac{\rho}{1000 \cdot \Delta p}}$	$K_v = \frac{2 \cdot Q_N}{514 \cdot p_1} \cdot \sqrt{\rho_N \cdot (t_1 + 273^\circ)}$	$K_v = \frac{G}{31,6} \cdot \sqrt{\frac{2 \cdot v}{p_1}}$

Q (m³/h) Durchflussmenge im Betriebszustand
 Q_N (m³/h) Durchflussmenge bei 0 °C, 1013,3 mbar
 G (kg/h) Massenstrom
 p_1 (bar) abs. Vordruck
 p_2 (bar) abs. Nachdruck
 Δp (bar) Differenzdruck ($p_1 - p_2$)
 ρ (kg/m³) Dichte im Betriebszustand
 ρ_N (kg/m³) Dichte bei 0 °C, 1013,3 mbar
 v_2 (m³/kg) spezifisches Volumen bei p_2
 v (m³/kg) spezifisches Volumen bei $p_1/2$ und t_1
 t_1 (°C) Betriebstemperatur

Flow during operation
Flow at 0 °C, 1013,3 mbar
Mass flow
abs. inlet pressure
abs. outlet pressure
Pressure drop ($p_1 - p_2$)
Specific gravity of fluid during operation
Specific gravity of fluid at 0 °C, 1013,3 mbar
Specific volume at p_2
Specific volume at $p_1/2$ and t_1
Working temperature



Anmerkung: Alle Werte beziehen sich auf Wasser von 15° C.
Bei einer Strömungsgeschwindigkeit von über 8 m/s bei voll geöffnete Klappe ist Rücksprache mit dem Lieferwerk erforderlich.

Remarks: Values refer to water at 15° C.
In case of velocity of flow with more than 8 m/s at fully opened disc consultation with the supplier is necessary.

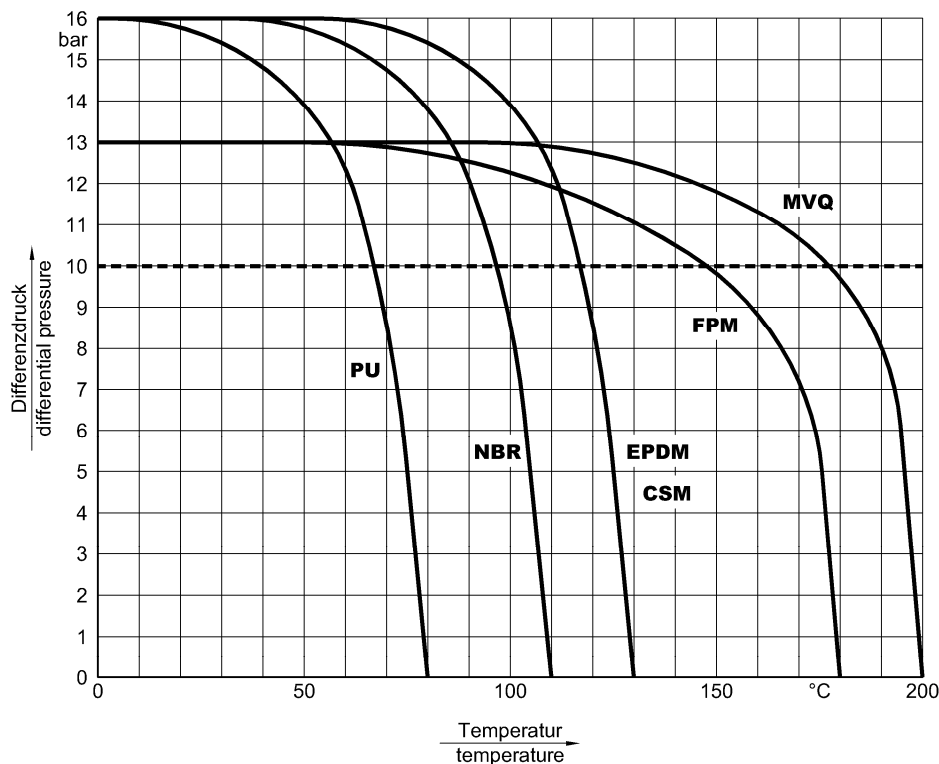
Änderungen vorbehalten
subject to changes

Introduction

The following information and instructions are important for perfect installation and safe operation of the valve. Prior to installation and initial use of the valve, the qualified staff in charge of installing and operating the valve has to be instructed according to this information.

Proper use

The soft-seated butterfly valve series K may only be used to stop, throttle and control media flows within the permissible pressure/temperature limits.



From DN 200 the use of seats with higher shore hardness is necessary at a differential pressure of more than 13 bar.
Lug type valves: Max. differential pressure 6 bar for valves used in an end-of-line function.

KG2 / KG4, K11 DN 50 – DN 150,
KG9 66.. DN 200 – DN 300
and valves from DN 600:

Max. differential pressure 10 bar.

The suitability of the product-related parts used and their chemical resistance properties have to be clarified before start-up of the plant. The usual flow rate must not be exceeded. Vibrations, water hammers and cavitation as well as abrasive components result in damage of the valve and affect its service life.

Valves must not be used to support the pipeline nor as a step-up.

This includes the different kinds of operation like hand levers, gear operators, actuators, feedback and control systems.

When using a hand lever, handwheel and manual emergency operation, take care that there is enough space for a proper operation.

Earthing the valve

If the butterfly valve is supplied with anti-static device and used in potentially explosive zones, the earthing strap supplied with the valve must be connected effectively at site with the potential compensation cable before the valve is put into operation.

Transport and storage

The valve must be transported and stored dry and clean.

In humid rooms, a drying material or heating must be used to avoid condensation.

During transport and intermediate storage the butterfly valve should not be outside a temperature range of -15°C and +30°C.

The transport packaging protects the valve against soiling and damage. Impact and vibrations must be avoided.

The outer paintwork (coating) must remain undamaged, otherwise the faulty spots must be repaired immediately.

The factory-adjusted basic setting (position of the disc at delivery) must not be changed.

Conditions for mounting the valve

The soft-seated butterfly valve series K is installed between pipeline flanges acc. to DIN2501 or ANSI B16.5.

The pipeline must not have any axial or angular offset, since otherwise the disc could be damaged and the seat can become deformed, which is not permitted.

The seat of the GEFA butterfly valve has a sealing lip.

Due to this seat design the butterfly valve is "self-sealing" to the flanges and does not require additional flange gaskets.

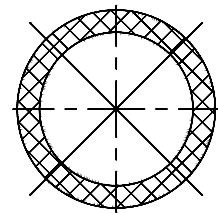
Pre-condition: The flange sealing surfaces have been checked to make sure that they have a smooth surface structure.

Residues (welding beads) must be removed.

No cross marks may be visible.

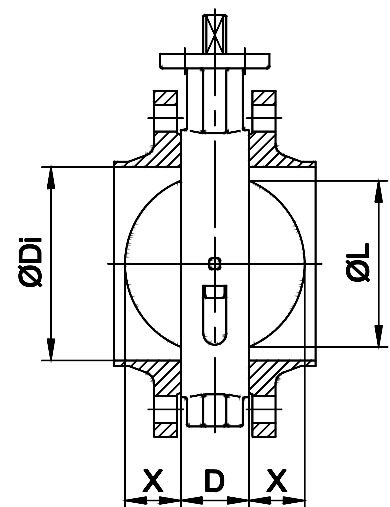
The "clearance" of the mating flanges - including inner coating- has to be sufficient to allow the disc to be fully opened without touching ($\varnothing Di \geq \varnothing L + 6 \text{ mm}$). This must be checked before the valve is installed and compared with the space necessary for the valve according to the table.

Do not use flange gaskets



(Seat serves as flange gasket)

DN	D	ØL	X
50	43	33	6
65	46	48	10
80	46	64	17
100	52	91	27
125	56	117	37
150	56	137	46
200	60	190	70
250	68	240	91
300	78	290	111
350	78	330	131
400	102	377	144
500	127	475	182
600	149	567	215
700	169	665	255
800	189	763	295
900	209	859	334
1000	229	967	378



Transport packaging

Transport packaging protects the interior of the valve from soiling and damage.

Do not remove the packaging until the valve is going to be installed.

Installation position

Basically the butterfly valve series K can be installed in any position. The recommended position, however, is with the shaft being horizontal.

The lower disc edge should open in flow direction.

Installation

The soft-seated butterfly valve series K has to be switched to a slightly angled position.
The position of the disc must be within the face-to-face dimension of the valve.

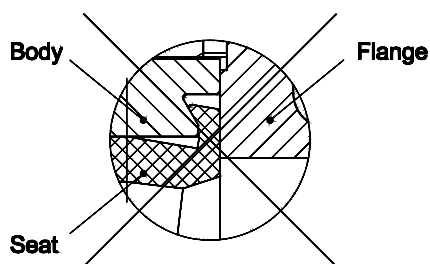
Spread the mating flanges and insert the valve carefully between the flanges.

If the pipeline is to be welded at site, temporary fitting blocks should be installed instead of the butterfly valve, since flying sparks and welding residues can damage the seat due to high temperatures.
Never leave the butterfly valve installed when welding of the pipeline/flanges has to be completed.

Center the butterfly valve using the flange screws. The outside diameter of the valve body is used for full centering!

NOTE!

If the valve is inserted incorrectly between the flanges, the seat can become displaced and destroyed.



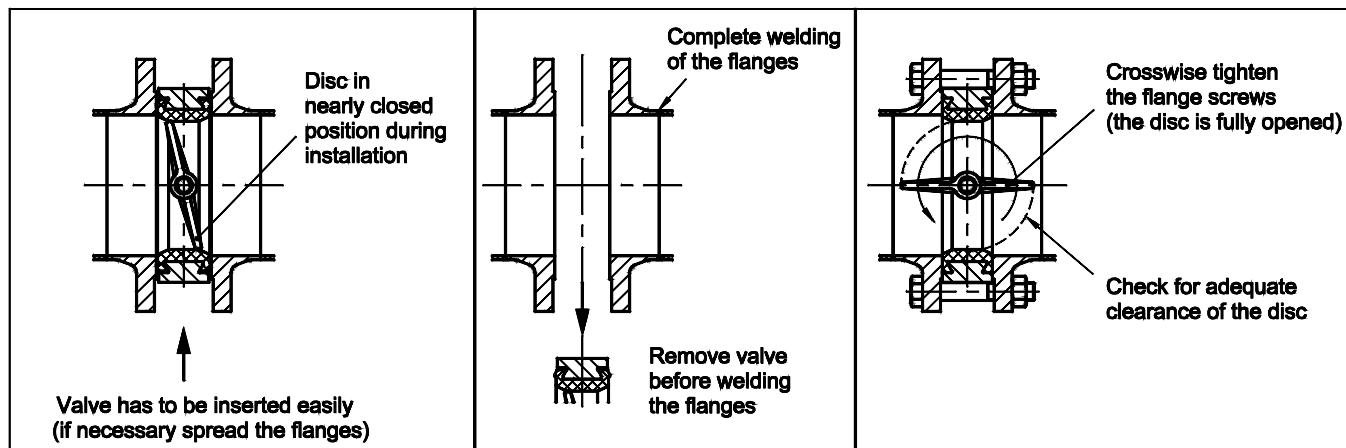
Remove the flange-spreaders and tighten the flange screws slightly and evenly crosswise with the disc fully opened.

During this procedure, check that the valve is centered between the mating flanges.

Open and close the valve several times and cross-tighten the flange screws once again with the disc in closed position. (Tightening torque: please refer to below table).

Check that the disc has adequate clearance.

When installing the lug type butterfly valve as end-in-line valve, the free port must be secured by a blind flange.



Tightening torque for flange screws

DN	40	50	65	80	100	125	150	200	250	300	350	400	500	600	700	800	900	1000
NPS	1 ½"	2"	2 ½"	3"	4"	5"	6"	8"	10"	12"	14"	16"	20"	24"	28"	32"	36"	40"
Tightening torque [Nm]	85	85	85	85	85	85	165	165	165	165	165	285	285	415	415	570	570	760

Mounting of actuators

It must be ensured that the actuator is centred on the valve shaft.
The weight of a mounted actuator must not place a one-sided load on the shaft of the valve:
if necessary actuators must be supported without fixing.
External loads must not be applied to actuators, this can damage or destroy the valve.

Initial operation

The butterfly valve has been tested for leakage using air or water. Residues of the test medium may still be on the contact surfaces of the valve. Possible reactions with the operating medium must be observed.
Prior to initial operation, the pipeline must be flushed effectively with the valve fully opened to eliminate soiling and to avoid damage to the sealing surfaces. The valve must not be switched during the flushing process.

During a system pressure test the following pressures must not be exceeded:

1,5 x PN with disc in open position
1,1 x PN with disc in closed position

Impermissible operation

Never operate the butterfly valve without actuating devices and/or locking of the shaft.
Do not operate the valve in the cavitation area.
Do not exceed the pressure/temperature range.
Avoid all foreign particles on the sealing surfaces.

Removing the valve

Before removing the butterfly valve make sure that the pipe section is depressurised and evacuated.
In case of toxic, caustic and other outgasing media the pipe section must also be ventilated.
Safety classification is the responsibility of the system operator.

The butterfly valve is removed by loosening the flange screws and sufficient spreading of the mating flanges.

The valve disc must be closed at an angle within the face-to-face dimension of the valve to prevent damage to the disc. Actuators either have to be dismantled before the valve is removed or they have to be secured against unauthorized or unintentional operation.

Disposal / repair of the valve

After having removed the valve it has to be disassembled and cleaned to prevent injuries caused by residues of the medium.
If the valve is returned to the manufacturer, a safety data sheet relating to the media must be included.

Subject to modifications without notice.

Edition: 2015-03-18

Maintenance

- The valves do not require any special maintenance. For valves with DVGW approval according to DIN EN 13774 - tightness class 2 / DIN EN 1074-2 (DG-4313 BU0327 and DW-6201BU0331) maintenance must be done by the manufacturer. Otherwise the approval is no longer valid.

Disassembly (Valves without DVGW approval)

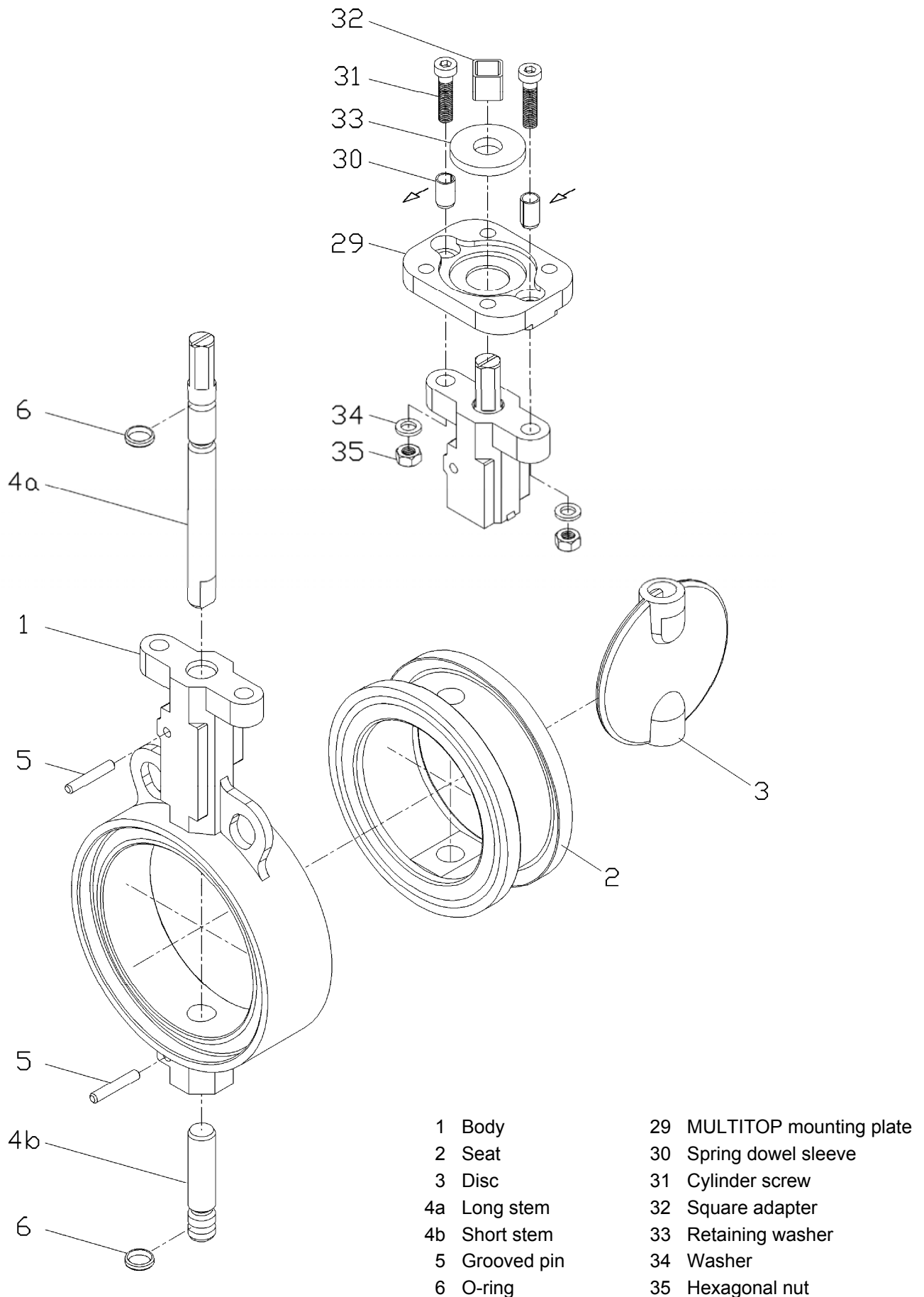
- Valves with hand lever:
Loosen the lateral screw joint of the hand lever and pull the hand lever off the valve stem (4).
Loosen the fastening screws of the throttle plate and remove the throttle plate, if required.
- Valves with actuator:
Loosen the fastening screws between the MULTITOP mounting plate (29) and the actuator or between the valve and the bracket and remove the actuator.
If required, remove the MULTITOP mounting plate (29) from the valve by loosening the fastening screws (31) and the spring dowel sleeves (30).
- Knock out the grooved pins (5). Take note that the direction of knocking must be from the ungrooved to the grooved side.
- Turn the disc (3) to "OPEN" position.
After removing the stems, the disc is no longer secured in the valve and must be prevented from falling out.
- Pull the long stem (4a) including the O-ring (6) out of the body.
- Pull the short stem (4b) including the O-ring (6) out of the body, if necessary by using a screwed-in treaded rod or screw.
- Press the disc (3) out of the seat (2).
- Lever the seat (2) with a suitable, blunt tool out of the body (1).
- Check all part for flawless condition and renew them, if required. Only use original GEFA spare parts.

Assembly (Valves without DVGW approval)

- Thoroughly clean all parts and check them for wear. Parts that show wear or corrosion must be replaced to ensure operational safety in future.
Use silicone oil for the assembly, if the application permits this.
- Insert the seat (2) according to the holes into the body (1). The two holes in the body and the seat must be aligned.
- Place the O-rings (6) into the small groove (width 4 mm) of the short and the long stem.
- Insert the disc (3) into the seat (2) in a way that the double flat is pointing to the top flange. The disc should be in position "OPEN". It has to be ensured that the stem holes of the disc are in line with the upper and lower holes in the seat (2) and the body (1).
- Insert the long stem (4a) with the double flat side into the body (1). The surfaces of the double flat and the groove on the square must be aligned parallel to the disc (3). Push the stem in until the lower edge of the square fits flush with the upper edge of the body.
- Insert the short stem (4b) into the body (1). The thread at the front side points outwards.
Push in the stem until the front side fits flush with the lower edge of the body.
- Check whether the holes in the body (1) are in line with the bigger grooves of the stem (4a, 4b) before inserting the grooved pins (5). When a stem covers a part of the hole, the position of the stem must be corrected.
- Place the grooved pins (5) with the ungrooved side into the holes of the body (1) and push them in by tapping them gently with a hammer.
- After the assembly the disc has to be switched for several times (at least 4x) by 180°.
- Check the seat and the stem tightness. Test pressure 1.1 times nominal pressure.
- Valves with hand lever:
Loosely attach the throttle plate with the screws to the top flange. Slide the hand lever onto the stem and position the throttle plate. Tighten the fastening screws of the throttle plate and attach the lever with the lateral screw joint.
- Valves with actuator:
Attach the whole actuator unit, align it and fasten it with screws.

Mounting of the MULTITOP mounting plate.

- Position the mounting plate (29) on the body.
- Insert the spring dowel sleeves (30) through the mounting plate into the body. The slot in the spring dowel sleeve must point in the force direction (see arrow in the assembly drawing) to achieve a rigid connection. Do not insert the mounting plate without using spring dowel sleeves, as the transverse forces cannot be absorbed by the screws.
- Insert the cylinder screws (31) and tighten them.
- Slide a square adapter (32) onto the stem, if required. Prevent the square adapter from sliding down the stem by using the attached washer (33), if required.



Maintenance

- The valves do not require any special maintenance. For valves with DVGW approval according to DIN EN 13774 - tightness class 2 / DIN EN 1074-2 (DG-4313 BU0327 and DW-6201BU0331) maintenance must be done by the manufacturer. Otherwise the approval is no longer valid.

Disassembly (Valves without DVGW approval)

- Valves with actuator:
Loosen the fastening screws between the valve and the actuator or between the valve and the bracket and remove the actuator.
- Turn the disc (3) to "OPEN" position.
After removing the stem, the disc is no longer secured in the valve and must be prevented from falling out.
- Loosen the hexagon screws (5) at the disc (3) and remove them.
- Remove the O-rings (6).
- Pull the stem (4) out of the body (1).
- Press the disc (3) out of the seat (2).
- Lever the seat (2) out of the body (1), using a suitable blunt tool
- Remove the bearing including O-rings (7) from the body (1).
- Check all parts for flawless condition and renew them, if required. Only use original GEFA spare parts.

Assembly (Valves without DVGW approval)

- Thoroughly clean all parts and check them for wear. Parts that show wear or corrosion must be replaced to ensure operational safety in future.
Use silicone oil for the assembly, if the application permits this.
- Insert the seat (2) according to the holes into the body (1). The two holes in the body and the seat must be aligned.
- Insert the disc (3) into the seat (2) in a way that the two holes for the connection of the stem are pointing to the top flange. The disc should be in position "OPEN". It has to be ensured that the stem holes of the disc are in line with the upper and lower holes in the seat (2) and the body (1).
- Insert the stem (4) into the body (1) in a way that the key/square is pointing to the top flange. The key respectively the groove on the square must be aligned parallel to the disc (3). Push in the stem until the holes in the disc (3) and the threads in the stem (4) are in true alignment.
- Insert the hexagon screws (5) with new O-rings (6) into the disc and tighten them.
- Insert the bearing including O-rings (7) into the body (1).
- After the assembly the disc has to be switched for several times (at least 4x) by 180°.
- Check the seat and the stem tightness. Test pressure 1.1 x nominal pressure.
- Valves with actuator:
Attach the whole actuator unit, align it and fasten it with screws.



CERT

DVGW type examination certificate

DVGW-Baumusterprüfzertifikat

DG-4313BU0327

Registration Number
Registriernummer

Field of Application <i>Anwendungsbereich</i>	products of gas supply <i>Produkte der Gasversorgung</i>
Owner of Certificate <i>Zertifikatinhaber</i>	GEFA Processtechnik GmbH Germaniastraße 28, D-44379 Dortmund
Distributor <i>Vertreiber</i>	GEFA Processtechnik GmbH Germaniastraße 28, D-44379 Dortmund
Product Category <i>Produktart</i>	gas fittings: Shut-off valve for local gas distribution <= PN 16 (4313)
Product Description <i>Produktbezeichnung</i>	centrically butterfly valve
Model <i>Modell</i>	KG 2; KG 4
Test Reports <i>Prüfberichte</i>	laboratory control test: 148713a K2019 from 05.04.2019 (GWI)
Test Basis <i>Prüfgrundlagen</i>	DIN EN 13774 (01.05.2013)

Date of Expiry / File No. 26.08.2024 / 19-0264-GNV
Ablaufdatum / Aktenzeichen

21.05.2019 Fi A-1/2

Date, Issued by, Sheet, Head of Certification Body
Datum, Bearbeiter, Blatt, Leiter der Zertifizierungsstelle

DVGW CERT GmbH is an accredited body by DAkkS according to DIN EN ISO/IEC 17065:2013 for certification of products for energy and water supply industry.

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Gas Category <i>Gasart</i>	Remarks <i>Bemerkungen</i>
fuel gases according to G260	second gas family

Type <i>Typ</i>	Technical Data <i>Technische Daten</i>	Remarks <i>Bemerkungen</i>
KG 2; KG 4	pressure rating: PN 10 nominal diameter: DN 50	
KG 2; KG 4	pressure rating: PN 10 nominal diameter: DN 65	
KG 2; KG 4	pressure rating: PN 10 nominal diameter: DN 80	
KG 2; KG 4	pressure rating: PN 10 nominal diameter: DN 100	
KG 2; KG 4	pressure rating: PN 10 nominal diameter: DN 125	
KG 2; KG 4	pressure rating: PN 10 nominal diameter: DN 150	
KG 2; KG 4	pressure rating: PN 10 nominal diameter: DN 200	
KG 2; KG 4	pressure rating: PN 10 nominal diameter: DN 250	
KG 2; KG 4	pressure rating: PN 10 nominal diameter: DN 300	
KG 2; KG 4	pressure rating: PN 10 nominal diameter: DN 350	
KG 2; KG 4	pressure rating: PN 10 nominal diameter: DN 400	
KG 2; KG 4	pressure rating: PN 10 nominal diameter: DN 500	
KG 2; KG 4	pressure rating: PN 10 nominal diameter: DN 600	

Type Variation <i>Ausführungsvariante</i>	Explanations <i>Erläuterungen</i>
KG 2	with flange eyes without thread
KG 4	with flange eyes with thread, the application as end-fitting is not allowed

certified Components**zertifizierte Bauteile / Werkstoffe**

Registr. No. <i>Registrier-Nr.</i>	Component <i>Bauteil (Produktart)</i>	Model/Type <i>Modell/Typ</i>	Manufacturer <i>Hersteller</i>
NG-5162BN0547	Materials for greasing of gas appliance	KLÜBERSYNTH UH1 64-2403/KLÜBERSYNTH UH1 64-2403	Klüber Lubrication München SE & Co. KG
NG-5113BP0468	Elastomer sealant for gas supply mains and pipelines	SunaFlex® E9642/SunaFlex® E9642	Compounds AG

Hints of Utilization / Remarks**Verwendungshinweise / Bemerkungen**

connection: butterfly valve for mounting between flanges according to DIN EN 1092-1
 ambient temperature range: -20...+60 °C
 length: basic series 20 according to DIN EN 558-1





CERT

DVGW type examination certificate

DVGW-Baumusterprüfzertifikat

DW-6201BU0331

Registration Number
Registriernummer

Field of Application <i>Anwendungsbereich</i>	products of water supply <i>Produkte der Wasserversorgung</i>
Owner of Certificate <i>Zertifikatinhaber</i>	GEFA Processtechnik GmbH Germaniastraße 28, D-44379 Dortmund
Distributor <i>Vertreiber</i>	GEFA Processtechnik GmbH Germaniastraße 28, D-44379 Dortmund
Product Category <i>Produktart</i>	valves for water supply: butterfly valve (6201)
Product Description <i>Produktbezeichnung</i>	central pivoted butterfly valve for the drinking water supply
Model <i>Modell</i>	KG...
Test Reports <i>Prüfberichte</i>	supplement test: 17596 from 17.10.2017 (GWI) laboratory control test: 148 723a Ü2017 from 24.08.2017 (GWI) supplement test: 17024 from 31.05.2013 (GWI) laboratory control test: 148 723a Ü2011 from 19.12.2011 (GWI)
Test Basis <i>Prüfgrundlagen</i>	DVGW W 363-(P) (01.06.2010) DIN EN 1074-1 (01.07.2000) DIN EN 1074-2 (01.07.2004) UBA METALLE (15.03.2017) UBA ELASTOM (16.03.2016) UBA SCHMIER (30.11.2010) DVGW W 270 (01.11.2007)
Date of Expiry / File No. <i>Ablaufdatum / Aktenzeichen</i>	26.08.2022 / 17-0361-WNV

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07.12.2017 Fk A-1/2

Date, Issued by, Sheet, Head of Certification Body
Datum, Bearbeiter, Blatt, Leiter der Zertifizierungsstelle

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Type <i>Typ</i>	Technical Data <i>Technische Daten</i>	Remarks <i>Bemerkungen</i>
KG...	pressure rating: PN 10 nominal diameter: DN 40	
KG...	pressure rating: PN 10 nominal diameter: DN 50	
KG...	pressure rating: PN 10 nominal diameter: DN 65	
KG...	pressure rating: PN 10 nominal diameter: DN 80	
KG...	pressure rating: PN 10 nominal diameter: DN 100	
KG...	pressure rating: PN 10 nominal diameter: DN 125	
KG...	pressure rating: PN 10 nominal diameter: DN 150	
KG...	pressure rating: PN 10 nominal diameter: DN 200	
KG...	pressure rating: PN 10 nominal diameter: DN 250	
KG...	pressure rating: PN 10 nominal diameter: DN 300	
KG...	pressure rating: PN 10 nominal diameter: DN 350	
KG...	pressure rating: PN 10 nominal diameter: DN 400	
KG...	pressure rating: PN 10 nominal diameter: DN 500	

Type Variation <i>Ausführungsvariante</i>	Explanations <i>Erläuterungen</i>
KG2	for installation between flanges
KG4	for installation between flanges, with threaded lugs