

Teil Nr. Part no.	Bezeichnung	Description	Material
1	Gehäuse	Body	1.4408 / PFA
2	Teilgehäuse	Body connector	1.4408 / PFA
3	Kugel	Ball	1.4408 / PFA
4	Schaltwelle	Stem	1.4313 / PFA
5*	Sitzring	Seat	PTFE
6*	Packung	Packing	PTFE
7	Stopfbuchsbrille	Gland flange	1.4308
8	Stopfbuchse	Gland	1.4301
9	Tellerfeder	Disc spring washer	1.4310
10	Sechskantschraube	Hexagon screw	DIN 933 - A2 - Stainless steel
11	Sechskantschraube	Hexagon screw	DIN933 - A2 - Stainless steel
12	Handhebel	Hand lever	1.4308
13	Zyl.-schraube/Mutter	Cylinder screw / nut	DIN 912 / DIN 934 - A2 / Stainless steel
14	Zyl.-schraube/Mutter	Cylinder screw / nut	DIN 912 / DIN 934 - A2 / Stainless steel
15	Zyl.-schraube/Scheibe	Cylinder screw / washer	DIN 912 / DIN 125 - A2 / Stainless steel

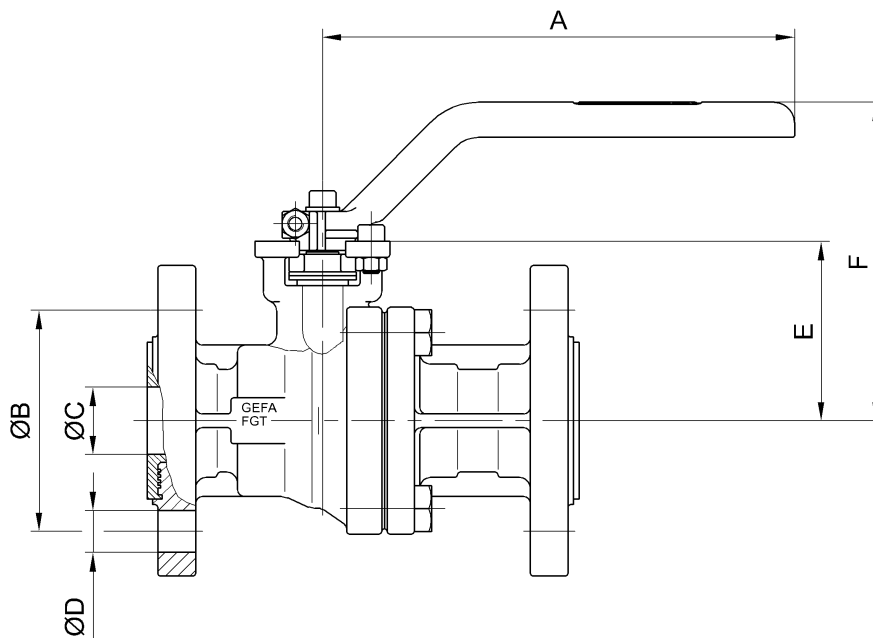
* = Verschleißteile (Dichtungssatz)

* = Wearing parts (repair kit)

Wahlweise andere Werkstoffe lieferbar
Other materials available

Änderungen vorbehalten
 subject to changes

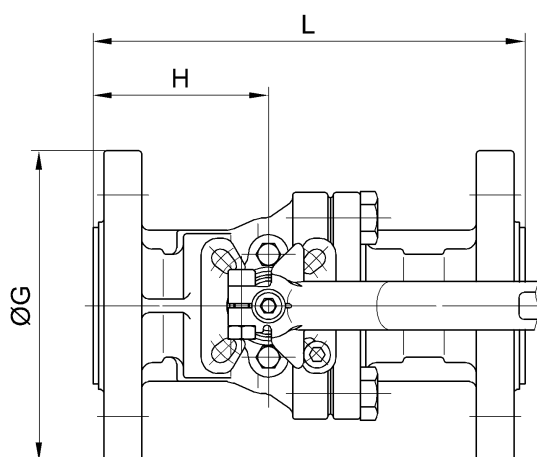
Maße Flansch-Kugelhahn Serie FGT Dimensions flanged ball valve series FGT DN 15 - DN 50



MULTITOP
Antriebsanschluss:
 DIN 3337 / ISO 5211

Baulänge:
 DIN 3202 – F1
 EN 558-1 - Reihe 1

Flansche:
 DIN 2501 – PN 10 - PN 40
 ASME B16.5 – Class 150



MULTITOP
Mounting plate:
 DIN 3337 / ISO 5211

**Face to face
dimension:**
 DIN 3202 – F1
 EN 558-1 - line 1

Flanges:
 DIN 2501 - PN 10 – PN 40
 ASME B16.5 – Class 150

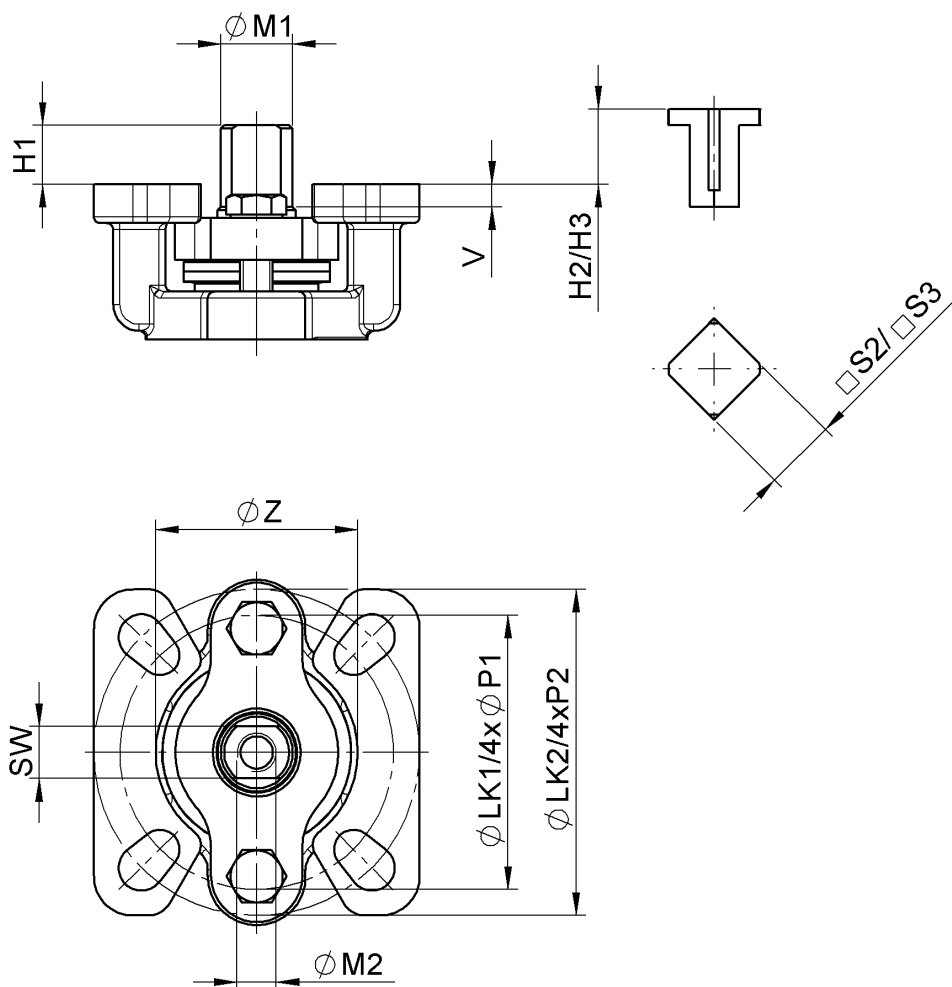
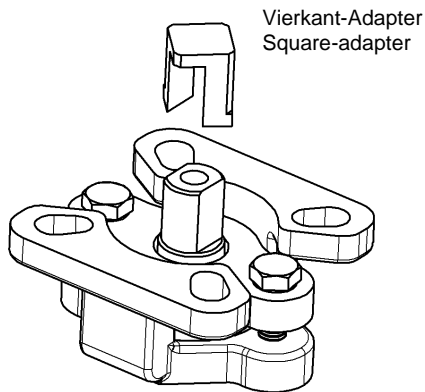
DN	NPS	A	ØB		ØC	ØD		E	F	ØG	H	L	kg
			PN10-40	Class150		PN10-40	Class150						
15	1/2"	160	65	60,5	17	4x14	4x15,7	53	102	95	58	130	2,5
20	3/4"	160	75	69,9	20	4x14	4x15,7	56	104	105	65	150	3,3
25	1"	175	85	79,2	25	4x14	4x15,7	67	120	115	65	160	4,2
32	1 1/4"	175	100	88,9	32	4x18	4x15,7	72	125	140	75	180	5,7
40	1 1/2"	220	110	98,6	40	4x18	4x15,7	83	140	150	85	200	7,3
50	2"	220	125	120,7	50	4x18	4x19,1	91	147	165	100	230	10,0

Gewicht inklusive Handhebel / Weight including hand lever

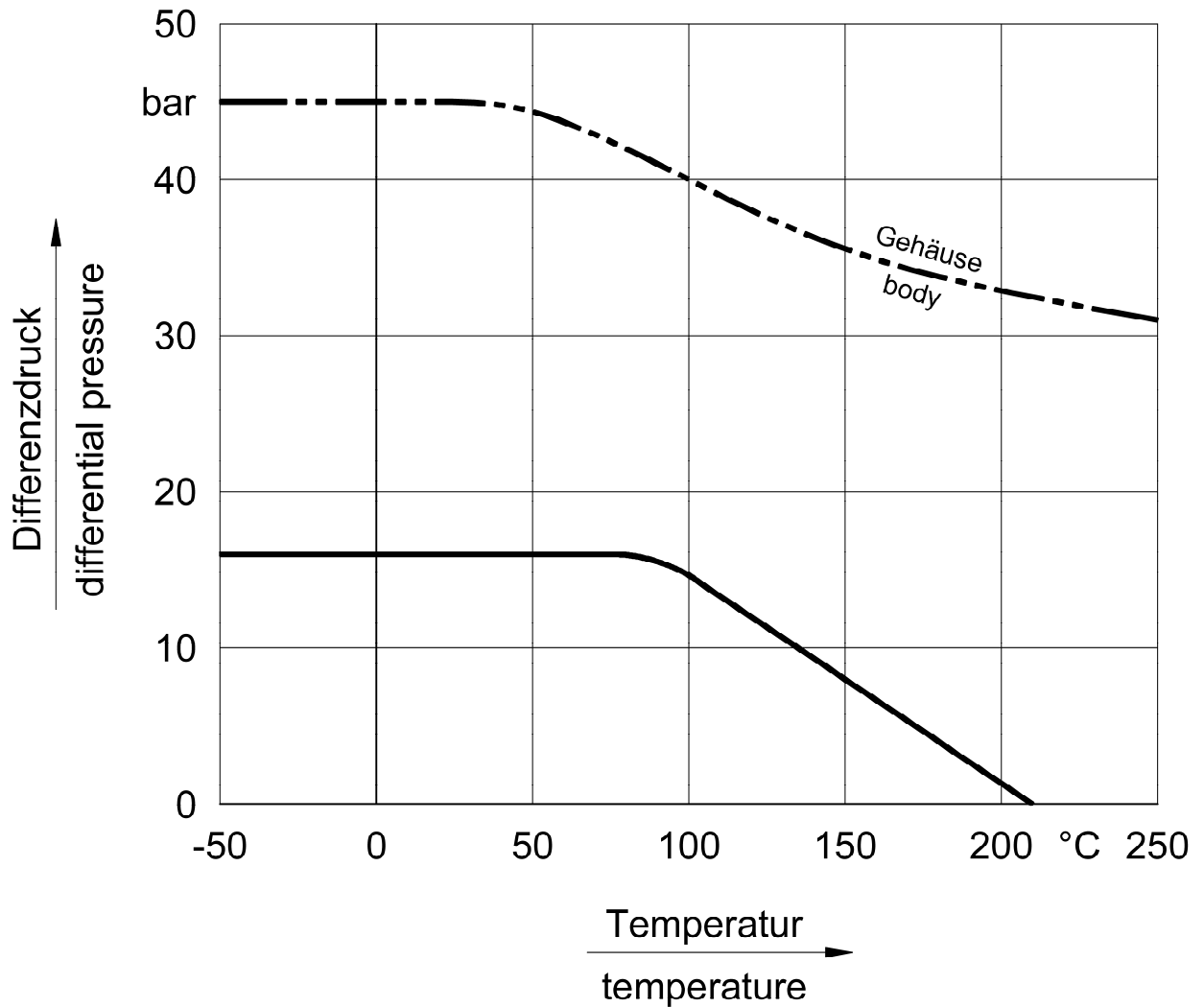
DN	Antriebsanschluss actuatur mounting connection	Losbrechmoment in Nm basierend auf Medium Wasser bei Raumtemperatur mit Sitzringen aus PTFE breakaway torque Nm based on medium water at ambient temperature, seat material PTFE	Durchflußbeiwert flow coefficient K_{vs}
	Flansch / flange DIN 3337 / ISO 5211	voller Durchgang full bore	voller Durchgang full bore
15	F04/F05	12	20
20	F04/F05	12	40
25	F04/F05	18	75
32	F04/F05	25	130
40	F05/F07	35	170
50	F05/F07	55	270
65	F07	65	526
80	F07	85	789
100	F010	124	1211

Die Losbrechmomente beziehen sich auf den drucklosen Zustand.
 Sie können je nach Medium, Temperatur, Druck und Schalthäufigkeit variieren.

Breakaway torques refer to ball valves in depressurized condition.
 They may vary acc. to medium, temperature, pressure and frequency of operation.



DN	H1	LK1	LK2	ØM1	ØM2	ØP1	ØP2	SW	V	ØZ	Vierkant-Adapter/Square-adapter				
											DIN 3337 ISO 5211	□S2	H2	□S3	H3
15 / 20	8	42	50	9	M5/9 tief	6	7	7	2,5	31	F04/F05	11	12	14	16
25 / 32	9	42	50	11	M6/9 tief	6	7	8	3,5	31	F04/F05	11	12	14	16
40 / 50	13	50	70	14	M6/9 tief	7	9	10	4,5	36	F05/F07	14	16	17	19



General information

- The valve may be fitted in any position in the pipework.
- The pipes must not have any tension.
- Do not carry out welding work on the flanges and pipelines when the ball valve has been installed, as this could cause damage to the valve.
- The ball valves are supplied with end caps for protecting the flange connections and the interior space of the valves. The caps must not be removed before installation of the valves.
- The ball valves are shipped in fully open position to prevent damage of seats and ball surface.
- **CAUTION:** The rotating ball may cause injury. Keep away from space between ball and body!

Flange connection:

The GEFA flanged ball valve series FGT is designed for mounting between DIN-flanges. It should be taken into account, that a valve which is designed for a particular flange standard cannot be normally used for other flanges. If pipeline flanges are to be used which are not in accordance with the specifications of the order, the manufacturer is to be consulted.

Installation

- Prior to the mounting of the valve, flush the pipeline to remove all traces of soiling, welding residues, etc.
- Remove the end caps, flange facings must be undamaged and clean.
- Check whether the flange clearance is in accordance with the face-to-face dimension of the ball valve.
- Before mounting the valve, the flanges are to be sufficiently spread using a suitable tool.
- The valve must be completely opened.
- Insert the ball valve between the flanges.
- Install the valve with shaft top side or horizontal.
- Insert the flange screws and nuts.
- Remove the spreader and hand-tighten the screws.
- Check whether the valve and the counter-flanges are in true alignment.
- Tighten the flange screws crosswise using the specified torque. □(see table for tightening torques for flange screws).
- **CAUTION:** Do not operate the valve before flushing, **the valve must stay in open position,** as otherwise the seats may be damaged!

Tightening torques for flange screw

DN	15	20	25	32	40	50
NPS	½"	¾"	1"	1 ¼"	1 ½"	2"
tightening torques for flange screws [Nm]	12	18	24	36	44	67

Putting into operation

- Flush the ball valve and pipe thoroughly again.
- Open and close the valve for test run.

Mounting of actuators

- It must be ensured that the actuator is centred on the valve shaft.
- The mounted actuator must not cause a thrust load on the valve shaft. If necessary the actuator must be fastened / supported. NOTE: In case of moving pipelines the fastening of the actuator must not be rigid.
- For working temperatures up to max. 140°C the actuators can be directly mounted. If temperatures are higher a mounting bracket should be used as thermal isolation between actuator and valve.
- We recommend the use of air throttles for pneumatic actuators to achieve optimal durability.

Removal

- Ensure that the pipeline has been rendered depressurised and emptied.
- Loosen and remove the flange screws and nuts.
- Spread the flanges using a suitable tool and remove the valve.

Maintenance

- The ball valves are maintenance-free.
- Should a leakage occur at the gland packing, retighten the gland screws (10). Take care that the gland screws are not tightened too much. Moderate tightening is usually sufficient to stop the leakage.

Replacement of seats and seals

- Ensure that the pipeline has been rendered depressurised and emptied.
- Loosen and remove the flange screws and nuts.
- Spread the flanges using a suitable tool and remove the valve.
- Close the valve.
- Remove the body screws (11).
- Remove the body connector (2) from the body (1).
- Remove seats (5) and ball (3). Be careful not to damage the ball.
- Loosen the hand lever screw and remove the sleeve and the hand lever.
- Unscrew the gland screws (10).
- Take off the gland flange (7) and the disk spring washers (9). Remove the gland (8).
- Push stem (4) into the valve body and remove it carefully.
- Remove the stem packing (6).
- Clean all parts, especially the sealing surfaces.

Assembly

- Insert the stem (4) from the inside of the body.
- Push the stem packing (6), the gland (8) and the disk spring washers (9) onto the stem.
- Replace the gland flange (7) and fix it using the screws (10).
See table tightening torques for gland screws.
- Replace the hand lever and the sleeve and fasten them with the hand lever screw.
- Insert ball (3) and seats (5).
- Leave ball in **closed position**, put the body connector (2) on the body (1), insert the body screws (11) and fasten them crosswise.
See table tightening torques for body screws.
- **CAUTION:** The metallic contact areas of the body and the body connector must be in full contact!
- Open and close the valve for test run.
- **CAUTION:** The rotating ball may cause injury. Keep away from space between ball and body!

Tightening torques for body screws

The max. tightening torques must not be significantly exceeded.

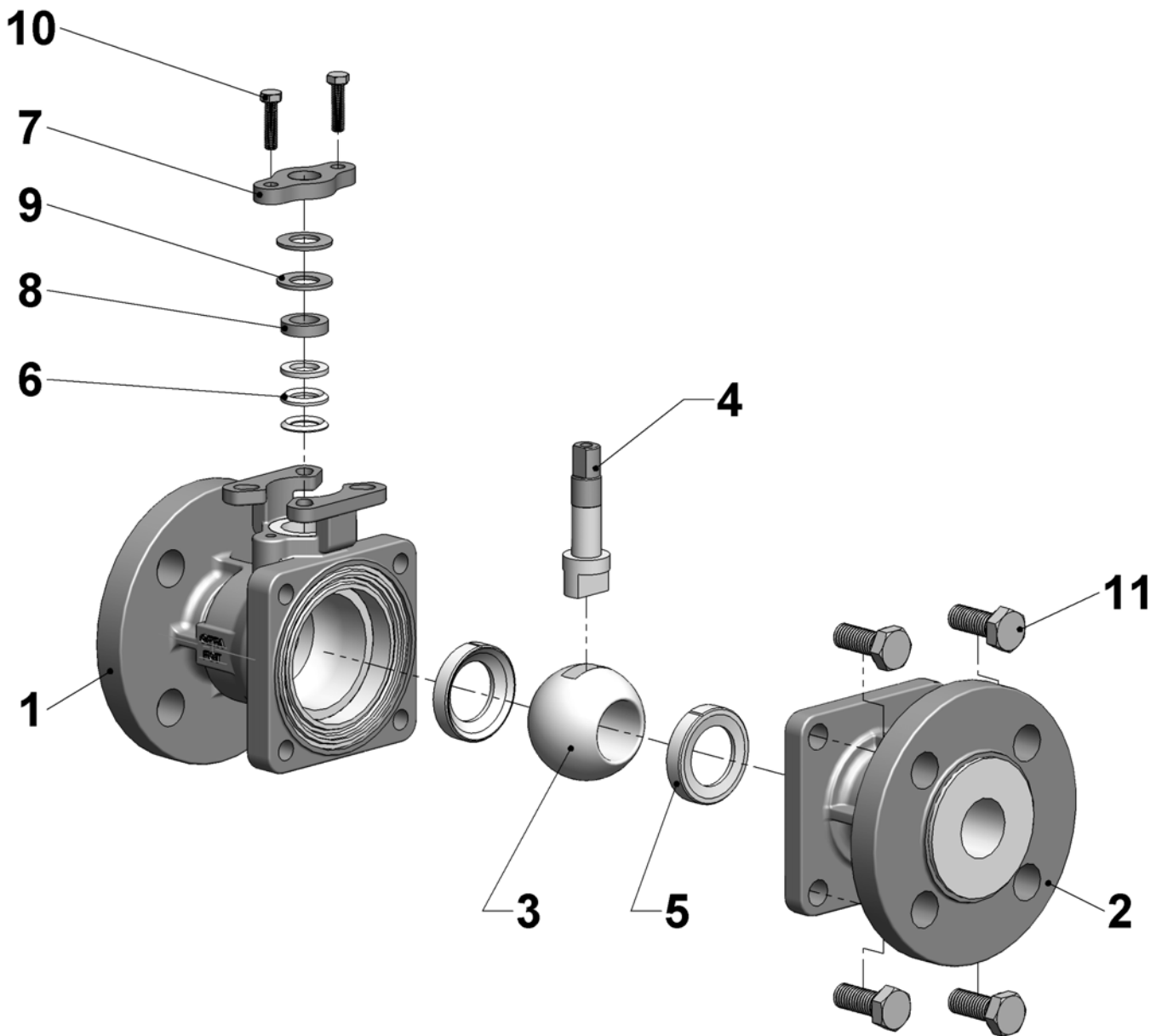
DN	15	20/25	32-50
M [Nm]	15	30	55

Tightening torques for gland screws

DN	15-32	40/50
M [Nm]	4	6.5

Storage

- Storage and transport of the valves to be dry and clean (without any dirt).
- Temperatures for storing: - 15°C to + 30°C
- In humid rooms drying material respectively heating is necessary to avoid condensation of water.
- Valves have to be protected against force (shock, blow, vibration etc.).
- The factory-adjusted basic setting (position of the ball at delivery) must not be changed.



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|------------------|----------------|----------------------|
| 1 Body | 5 Seat | 9 Disc spring washer |
| 2 Body connector | 6 Packing | 10 Hexagon screw |
| 3 Ball | 7 Gland flange | 11 Body screw |
| 4 Stem | 8 Gland | |

Subject to modifications without notice.

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