

## Ball Valve, Metal - Sanitary

### Construction

GEMÜ K740, 740, 741 and 748 are 3-piece 2/2-way metal ball valves with top flange EN ISO 5211 in sizes 1/4" to 4" (DN 8 to DN 100). They are particularly suitable for sanitary/hygienic applications. The top flange enables the operators to be exchanged at any time.

**GEMÜ K740** is the ball valve body without actuator for GEMÜ 740, 741 and 748

**GEMÜ 740** is manually operated and has a plastic sleeved hand lever.

**GEMÜ 741** is operated by a low maintenance, pneumatic piston actuator in single acting (spring return) or double acting design. The actuator has a robust Alodur coated aluminium housing. An integral optical position indicator as standard.

**GEMÜ 748** has a low maintenance electric actuator with a powerful DC motor. The reduction gear in the motor, consisting of a threaded spindle with a lever, provides the rotation through 90°. The actuator has an optical position indicator and a manual override as standard.

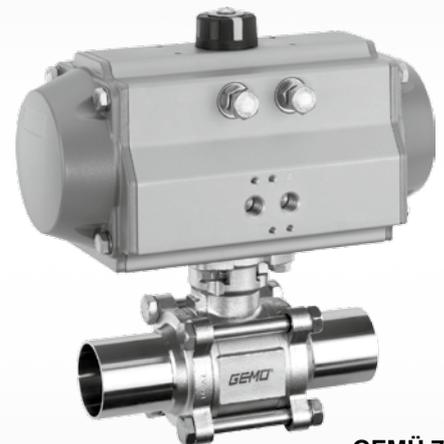
### Features

- Suitable for inert, corrosive\*, liquid and gaseous media and steam
- The ball valves comply with the safety requirements of Annex I of the European Pressure Equipment Directive 2017/68 EU for fluids of groups 1 and 2
- Suitable for vacuum applications
- Very low surface roughness - internal 0.6 µm
- Reworked welds for a minimal deadleg valve body and smooth surfaces
- Tightness tested with helium gas to 0.001 mbar
- Full flow bore (connection code 59 and 80)
- ATEX version II 2G/2D ATEX 2014/34/EU on request

\*see information on working medium on page 3



GEMÜ 740



GEMÜ 741



GEMÜ 748



3D - illustration



## Product description

### Specifications

Nominal sizes: 1/4" – 4"

Connection options:

- Butt weld spigots DIN 11850
- Spigots ASME BPE \*
- Spigots SMS 3008
- Spigots EN ISO 1127
- Clamps ASME BPE \*

See overview on page 6

Valve body material: CF3M (316L)

Ball material: DN 8 - 15: SS316L, DN 20 - 100: CF3M

Seal material: PTFE, TFM™ (FDA compliant)

Surface finish: Internal 0.6µm polished, electropolished external

FDA compliant to FDA 21 CFR 177.1550

Max. operating pressure: 63 bar

Max. perm. operating temperature: 220 °C

CIP and SIP cleaning possible.

- BSE / TSE free (body)
- Oil and grease free (body)

\* with full-flow bore

### Dyneon TFM\* 1600 PTFE

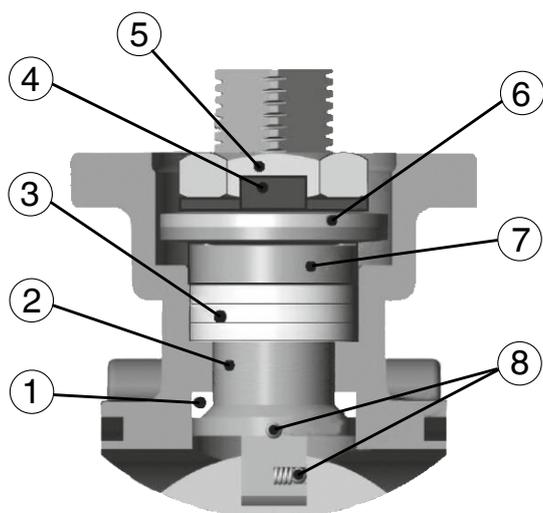
TFM™ is a modified PTFE, also called 2nd generation PTFE. It has the same chemical and heat resistance as conventional PTFE but a considerably lower melt viscosity which leads to a much better fusion of the chips during the sintering process. Better fusion results in a smoother surface which substantially reduces the torque.

#### Features:

- Very smooth surface
- Reduced cold flow properties
- Very low deformation under load
- Significantly improved surface properties
- Small pore volume
- Almost universal chemical resistance

\* TFM is a registered trademark of Dyneon

## The spindle seal system



### Long service life due to triple spindle seal

1. Conical spindle seal: The seal ① arranged at an angle of 45° effectively prevents the leakage of medium when operating the spindle.
2. Machined spindle surface ②: reduces the friction force of the spindle making it very smooth-running and low wear.
3. V-rings: When compressed, three V-rings expand sideways and prevent the leakage of the medium..
4. Lock washer: Prevents the loosening of the spindle nut during operation.
5. Spindle nut: fixes the entire spindle system.
6. Spring washers: compress the gland packing to prevent leakage of medium.
7. Stainless steel bush: equally distributes the force on the packing.
8. Antistatic device: between spindle/ball and spindle/body.

- |                        |                                 |
|------------------------|---------------------------------|
| ① Spindle seal (PTFE)  | ⑤ Spindle nut (1.4301)          |
| ② Valve spindle (316L) | ⑥ Spring washers (1.4301)       |
| ③ V-rings (PTFE)       | ⑦ Stainless steel bush (1.4301) |
| ④ Lock washer (1.4301) | ⑧ Antistatic device (1.4401)    |

## Cavity filled PTFE seat 5C

The cavity filled seat made of PTFE is designed to minimise the cavity around the ball. Media remaining in the deadlegs of a valve are undesirable for example in food production. These deposits accumulate and contaminate the entire process. The cavity filled seat also enables easier cleaning of the valve.



## General technical data

### Working medium

Corrosive\*, inert, gaseous and liquid media and steam which have no negative impact on the physical and chemical properties of the body and seal material.

Maximum permissible pressure of the working medium see diagram

(for water and non-hazardous media to which the body material is resistant)

Maximum permissible operating temperature

Seal material: PTFE 180 °C

Seal material: TFM 220 °C

Maximum permissible ambient temperature 60 °C

### Leakage rate

Leakage rate to ANSI FCI70 – B16.104

Leakage rate A to EN12266, 6bar air

### Control medium (only GEMÜ 741)

Control pressure 6 - 8 bar

Max. perm. temperature of control medium 60 °C

DN	INCH	Torque*	Kv values [m <sup>3</sup> /h]		Weight [kg]		
			DIN	ASME	Ball valve without operator		
		[Nm]	Spigots / Clamp ASME BPE / SMS	Spigots DIN / ISO	Clamp ASME BPE	Spigots ASME BPE / SMS	Spigots DIN / ISO
8	1/4"	9	-	7.0	-	-	0.60
10	3/8"	9	-	7.0	-	0.63	0.60
15	1/2"	10	9.0	13.0	0.76	0.71	0.62
20	3/4"	12	26.0	34.0	0.87	0.91	0.77
25	1"	18	55.0	60.0	1.44	1.26	1.14
32	1¼"	22	-	94.0	-	-	1.83
40	1½"	40	170.0	213.0	3.29	3.24	2.89
50	2"	48	349.0	366.0	4.57	3.59	4.28
65	2½"	98	510.0	595.0	9.46	9.90	8.62
80	3"	111	893.0	935.0	12.91	13.19	12.42
100	4"	161	1645.0	1700.0	20.33	21.13	20.62

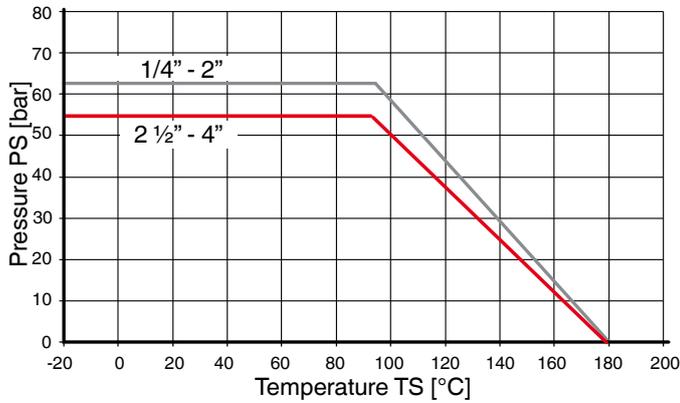
\* incl. 30% safety margin

## General technical data

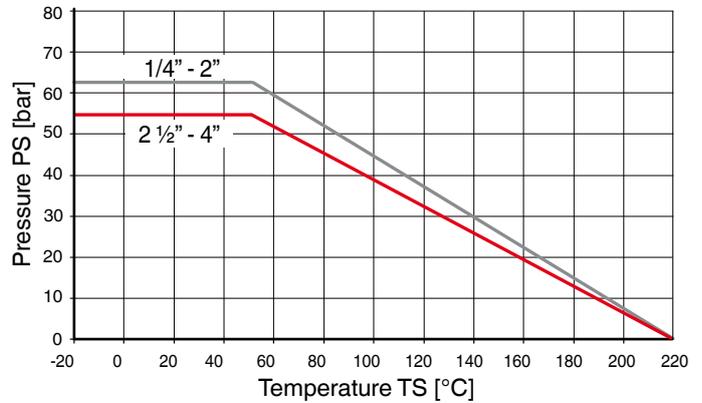
### Pressure-temperature diagram

#### Spigots ASME BPE / SMS

Seat material PTFE

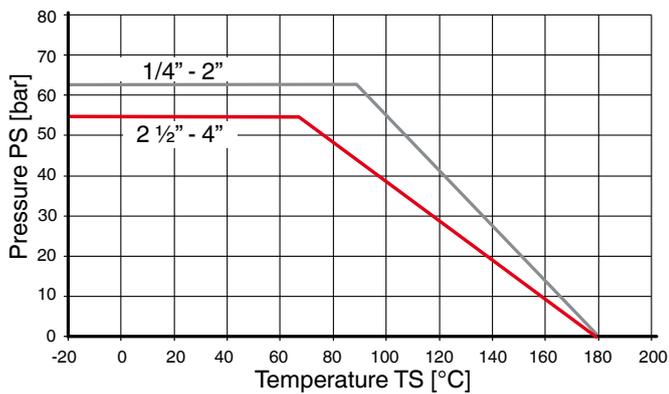


Seat material TFM™ 1600

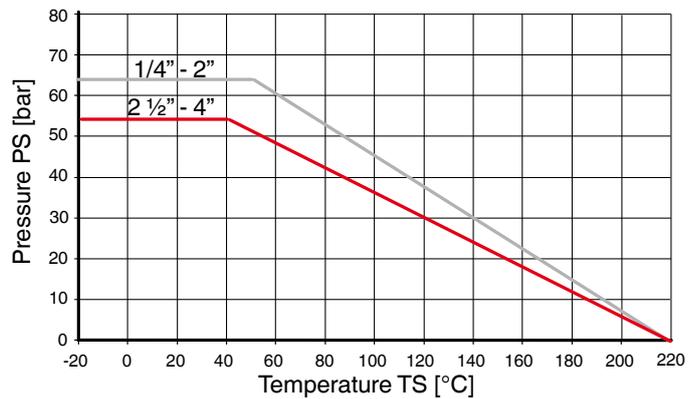


#### Clamps ASME BPE

Seat material PTFE



Seat material TFM™ 1600



according to pipe class of the welding ends  
(housing pressure max. 63 bar)

#### Overview

DN	INCH	Spigots				Clamp
DIN	ASME	DIN 11850 series 2 code 17	SMS 3008 code 37	ASME BPE code 59	ISO code 60	ASME BPE code 80
8	1/4"	-	-	-	X	-
10	3/8"	X	-	-	X	-
15	1/2"	X	X	X	X	X
20	3/4"	X	X	X	X	X
25	1"	X	X	X	X	X
32	1 1/4"	X	-	-	X	-
40	1 1/2"	X	X	X	X	X
50	2"	X	X	X	X	X
65	2 1/2"	X	X	X	X	X
80	3"	X	X	X	X	X
100	4"	X	X	X	X	X

## Order data - GEMÜ K740 - without actuator

1 Type	Code
Ball valve with top flange	K715

2 Nominal size	Code
DN 8      1/4" (only connection code 60)	8
DN 10     3/8" (only connection code 17, 60)	10
DN 15     1/2"	15
DN 20     3/4"	20
DN 25     1"	25
DN 32     1 1/4" (not connection code 59, 80)	32
DN 40     1 1/2"	40
DN 50     2"	50
DN 65     2 1/2"	65
DN 80     3"	80
DN 100    4"	100

3 Body configuration	Code
Straight through (2/2-way)	D
Multi-port design on request	

4 Connection	Code
Butt weld spigots DIN 11850, series 2	17
Spigots SMS 3008	37
Spigots ASME BPE	59
Spigots EN ISO 1127	60
Clamps ASME BPE	80

5 Valve body material	Code
Body: CF3M (316L) Ball: SS316L, for DN 8 - 15, CF3M for DN 20 - 100	C1

6 Seat material	Code
PTFE, (FDA-compliant) cavity filled seat	5C
TFM™ 1600, (FDA-compliant)	5T

7 Control function	Code
Manually operated with lockable hand lever	L

Order example	1	2	3	4	5	6	7
	K740	15	D	60	C1	5T	L

**Note:** Wearing parts kit - order code: SPK740-DN... (dependent on nominal size) contains replacement parts for the spindle seal and seat: Conical spindle seal (PTFE), V-ring spindle packing (PTFE), seat and flange seals (PTFE)

## Order data - GEMÜ 740 - manually operated

1 Type	Code
Ball valve with hand lever	740

2 Nominal size	Code
DN 8 1/4" (only connection code 60)	8
DN 10 3/8" (only connection code 17, 60)	10
DN 15 1/2"	15
DN 20 3/4"	20
DN 25 1"	25
DN 32 1 1/4" (not connection code 59, 80)	32
DN 40 1 1/2"	40
DN 50 2"	50
DN 65 2 1/2"	65
DN 80 3"	80
DN 100 4"	100

3 Body configuration	Code
Straight through (2/2-way)	D
Multi-port design on request	

4 Connection	Code
Butt weld spigots DIN 11850, series 2	17
Spigots SMS 3008	37
Spigots ASME BPE	59
Spigots EN ISO 1127	60
Clamps ASME BPE	80

5 Valve body material	Code
Body: CF3M (316L) Ball: SS316L, for DN 8 - 15, CF3M for DN 20 - 100	C1

6 Seat material	Code
PTFE, (FDA-compliant) cavity filled seat	5C
TFM™ 1600, (FDA-compliant)	5T

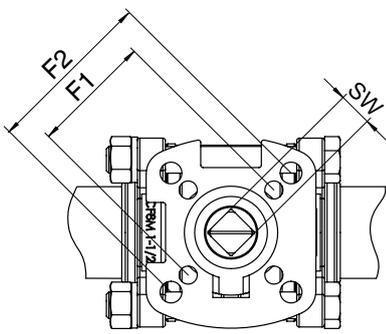
7 Control function	Code
Manually operated with lockable hand lever	L

Order example	1	2	3	4	5	6	7
	740	15	D	60	C1	5T	L

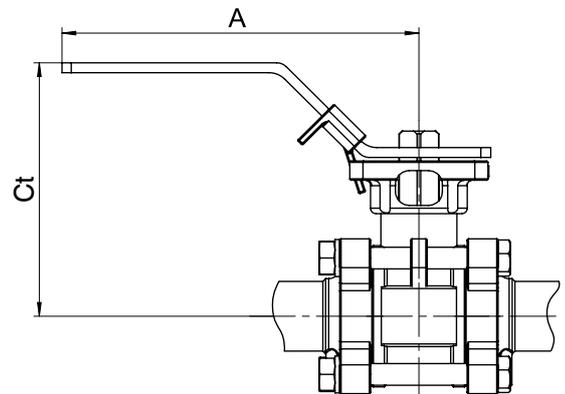
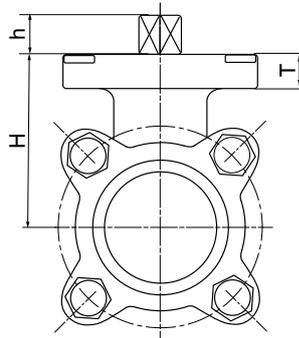
**Note:** Wearing parts kit - order code: SP.K740-DN... (dependent on nominal size) contains replacement parts for the spindle seal and seat: Conical spindle seal (PTFE), V-ring spindle packing (PTFE), seat and flange seals (PTFE)

## Body dimensions [mm]

All versions											GEMÜ 740	
DN	INCH	Top flange EN ISO 5211									Hand lever	
DIN	ASME	F1			F2		SW	H	h ±0,5	T	A	Ct
8	1/4"	F03	36	Ø6x4	F04	Ø6x4	9	42.1	6.4	5	139	77
10	3/8"	F03	36	Ø6x4	F04	Ø6x4	9	42.1	6.4	5	139	77
15	1/2"	F03	36	Ø6x4	F04	Ø6x4	9	42.1	6.4	5	139	77
20	3/4"	F03	36	Ø6x4	F04	Ø6x4	9	48.0	6.9	5	139	83
25	1"	F04	42	Ø6x4	F05	Ø7x4	11	56.6	11.2	7	165	96
32	1 1/4"	F04	42	Ø6x4	F05	Ø7x4	11	60.9	11.2	7	165	100
40	1 1/2"	F05	50	Ø7x4	F07	Ø9x4	14	77.5	14.2	10	215	127
50	2"	F05	50	Ø7x4	F07	Ø9x4	14	85.2	14.2	10	215	134
65	2 1/2"	F07	70	Ø9x4	F10	Ø11x4	17	108.7	17.1	10	300	167
80	3"	F07	70	Ø9x4	F10	Ø11x4	17	117.7	18.1	10	370	176
100	4"	F07	70	Ø9x4	F10	Ø11x4	17	132.6	17.1	10	370	192



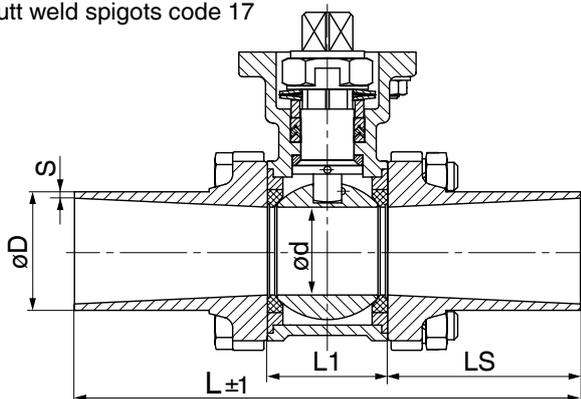
Top flange



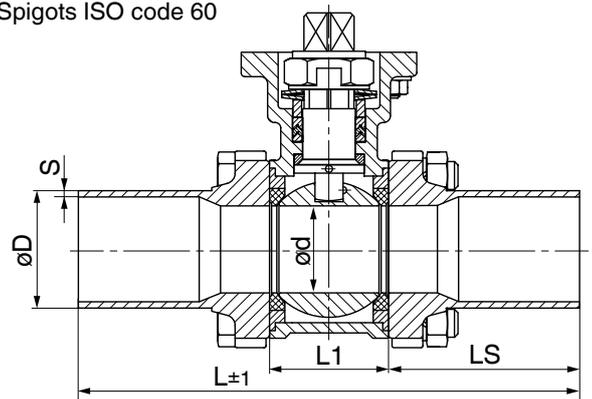
GEMÜ 740 Hand lever

		Spigots										
DN	INCH	DIN 11850 series 2 (Code 17)					ISO (Code 60)					L1
DIN	ASME	L	LS	øD	S	ød	L	LS	øD	S	ød	
8	1/4"	-	-	-	-	-	120.2	48.3	13.5	1.6	10.3	23.6
10	3/8"	120.2	48.2	13	1.5	10	120.2	48.3	17.2	1.6	12.7	23.6
15	1/2"	140.2	58.3	19	1.5	15	140.2	58.3	21.3	1.6	15.0	23.6
20	3/4"	140.0	56.0	23	1.5	20	140.0	56.0	26.9	1.6	20.0	28.0
25	1"	152.2	59.2	29	1.5	25	152.2	59.2	33.7	2.0	25.0	33.9
32	1 1/4"	165.1	61.3	35	1.5	32	165.1	61.3	42.4	2.0	32.0	42.5
40	1 1/2"	190.4	68.6	41	1.5	38	190.4	68.6	48.3	2.0	38.0	53.2
50	2"	203.0	69.2	53	1.5	50	203.0	69.2	60.3	2.0	50.0	64.6
65	2 1/2"	254.0	83.5	70	2.0	65	254.0	83.5	76.1	2.0	65.0	87.0
80	3"	280.2	90.6	85	2.0	80	280.2	90.6	88.9	2.3	80.0	99.0
100	4"	317.0	95.0	104	2.0	100	317.0	95.0	114.3	2.3	100.0	127.0

Butt weld spigots code 17



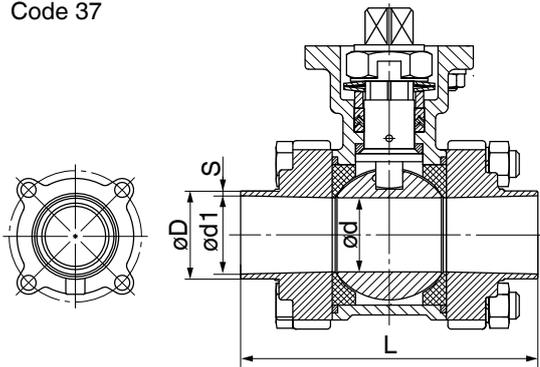
Spigots ISO code 60



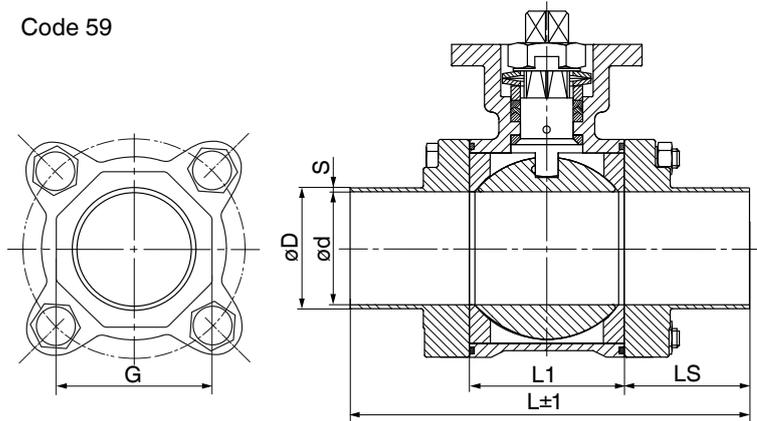
## Body dimensions [mm]

		ASME BPE (Code 59)									
DN	INCH	L	øD	S	ød	L	LS	øD	S	ød	L1
DIN	ASME										
15	1/2"	-	-	-	-	139.8	58.1	12.7	1.65	9.4	23.6
20	3/4"	75.0	18.0	1.0	16.0	146.0	59.0	19.0	1.63	15.8	28.0
25	1"	94.2	25.0	1.2	22.2	158.7	62.4	25.4	1.60	22.2	33.9
40	1½"	114.7	38.0	1.2	34.9	190.6	68.7	38.1	1.60	34.9	53.2
50	2"	128.0	51.0	1.2	47.5	216.0	75.7	50.8	1.65	47.5	64.6
65	2½"	160.0	63.5	1.6	60.3	247.6	80.3	63.5	1.60	60.3	87.0
80	3"	176.2	76.1	1.6	72.9	266.8	83.9	76.2	1.60	73.0	99.0
100	4"	210.0	101.6	2.0	97.6	317.6	95.3	101.6	2.10	97.4	127.0

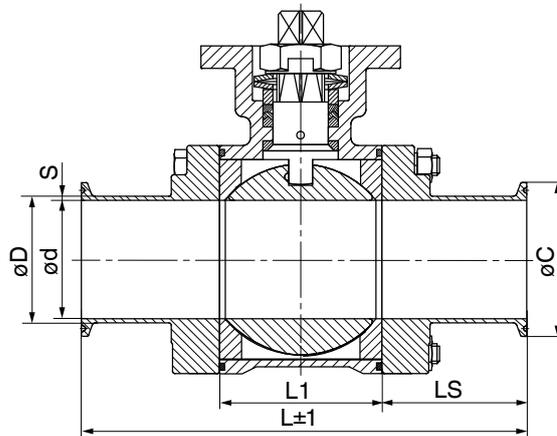
Code 37



Code 59



		Clamp							L1
DN	INCH	ASME BPE (Code 80)							
DIN	ASME	L	LS	øC	øD	S	ød		
15	1/2"	89.1	32.8	25.2	12.7	1.65	9.4	23.6	
20	3/4"	101.6	36.8	25.2	19.0	1.63	15.8	28.0	
25	1"	114.5	40.4	50.4	25.4	1.60	22.1	33.9	
40	1½"	140.1	43.5	50.5	38.1	1.60	34.8	53.2	
50	2"	159.0	47.2	63.9	50.8	1.65	47.5	64.6	
65	2½"	174.0	43.5	77.4	63.5	1.60	60.2	87.0	
80	3"	193.2	47.1	90.9	76.2	1.60	72.9	99.0	
100	4"	226.0	49.5	118.9	101.6	2.10	97.4	127.0	



## Order data - GEMÜ 741 - pneumatically operated

1 Type	Code
Ball valve with pneumatic actuator	741

2 Nominal size	Code
DN 8      1/4" (only connection code 60)	8
DN 10     3/8" (only connection code 17, 60)	10
DN 15     1/2"	15
DN 20     3/4"	20
DN 25     1"	25
DN 32     1 1/4" (not connection code 59, 80)	32
DN 40     1 1/2"	40
DN 50     2"	50
DN 65     2 1/2"	65
DN 80     3"	80
DN 100    4"	100

3 Body configuration*	Code
Straight through (2/2-way)	D
* Multi-port design on request	

4 Connection	Code
Butt weld spigots DIN 11850, series 2	17
Spigots SMS 3008	37
Spigots ASME BPE	59
Spigots EN ISO 1127	60
Clamps ASME BPE	80

5 Valve body material	Code
Body: CF3M (316L) Ball: SS316L, for DN 8 - 15, CF3M for DN 20 - 100	C1

6 Seat material	Code
PTFE, (FDA-compliant) cavity filled seat	5C
TFM™ 1600, (FDA-compliant)	5T

7 Control function	Code
Normally closed (NC)	1
Normally open (NO)	2
Double acting (DA)	3

8 Actuator size		Code
DN	Single acting SC	
DN 8-15	SC0015U 8 F04NS11A	SU01K00
DN 20	SC0030U 6 F04NS11A	SU03K00
DN 25, 32	SC0060U 6 F05F07NS14A	SU06KP0
DN 40	SC0150U 6 F07F10NS17A	SU15KC0
DN 50, 65	SC0220U 6 F07F10NS22A	SU22KD0
DN 80	SC0300U 6 F07F10NS22A	SU30KD0
DN 100	SC0450U 6 F10F12NS27A	SU45KG0

Double acting DR		
DN 8-20	DR0015U F04NS11A	DU01AO0
DN 25, 32	DR0030U F05F07NS14A	DU03AP0
DN 40	DR0060U F05F07NS17A	DU06AC0
DN 50, 65	DR0100U F05F07NS17A	DU10AC0
DN 80	DR0150U F07F10NS22A	DU15AD0
DN 100	DR0220U F07F10NS22A	DU22AD0

Single acting ASR		
DN 8-20	ASR0020U S08 F04YS14/S11A	AU02FA0
DN 25	ASR0040U S14 F05YS14/S11A	AU04KB0
DN 32, 40	ASR0080U S14 F05707YS17/S11A	AU08KC0
DN 50	ASR0130U S14 F05F07YS17/S14A	AU13KC0
DN 65	ASR0200U S14 F07F10YS17/S14A	AU20KE0
DN 80	ASR0300U S14 F07F10YS22A	AU30KD0
DN 100	ASR0500U S14 F10YS22A	AU50KF0

Double acting ADA		
DN 8-25	ADA0020U F04YS11A	BU02AA0
DN 32	ADA0040U F05F07YS17/S14A	BU04AB0
DN 40, 50	ADA0080U F05F07YS17/S14A	BU08AC0
DN 65	ADA0130U F05F07YS17/S14A	BU13AC0
DN 80	ADA0200U F07F10YS17/S14A	BU20AE0
DN 100	ADA0300U F07F10YS22A	BU30AD0

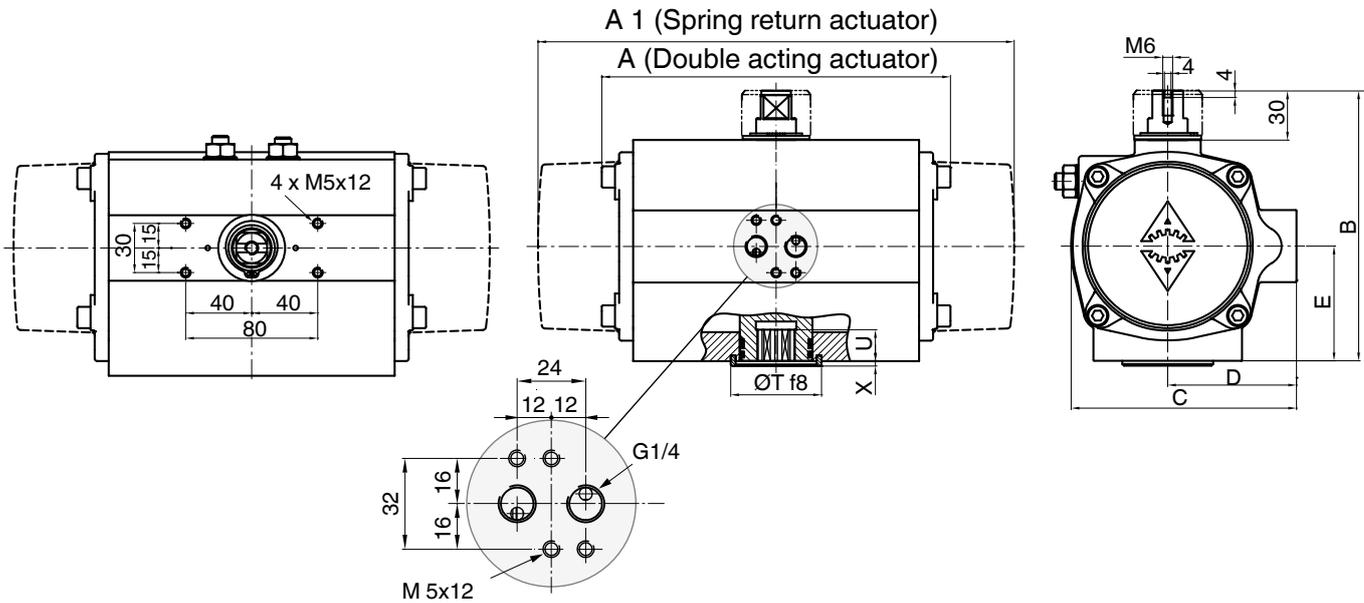
9 K number	Code
Mounting flange with adapter (galvanized)	5222
Mounting flange with adapter (stainless steel)	5227
For operating temperatures > 100 °C a mounting flange with an adapter is required between ball valve and actuator! See data sheet: -Accessories for quarter turn valves-	

Order example	1	2	3	4	5	6	7	8	9
	741	15	D	59	C1	5T	1	<b>SU01K00</b>	-

**Note:** Wearing parts kit - order code: SP.K741-DN... (dependent on nominal size) contains replacement parts for the spindle seal and seat: Conical spindle seal (PTFE), V-ring spindle packing (PTFE), seat and flange seals (PTFE)

## Actuator dimensions - GEMÜ 741 - pneumatically operated

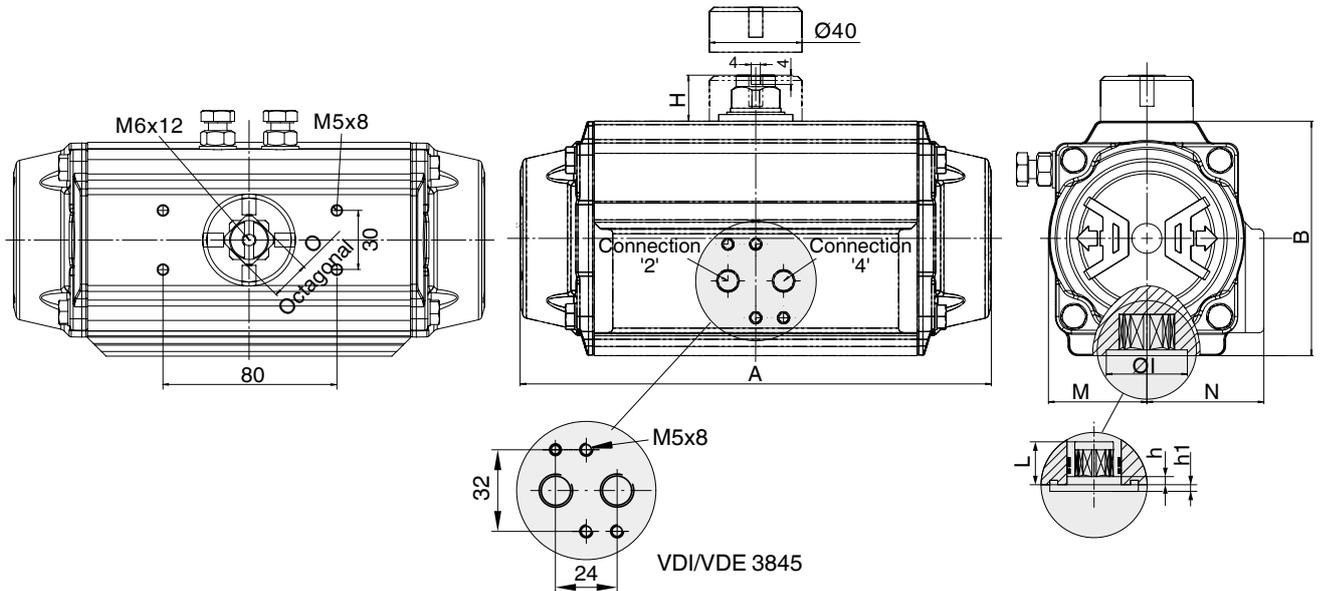
### Actuator ADA/ASR [mm]



ADA/ASR	0020U		0040U		0080U	0130U	0200U	0300U	0500U	
	F03/F05	F04	F05	F04	F05	F05	F05	F07	F10	
ISO 5211	F03/F05	F04	F05	F04	F05	F05	F05	F07	F10	
Octagonal	9	14		14		17	17	17	22	
Air connector		G $\frac{1}{4}$		G $\frac{1}{4}$		G $\frac{1}{4}$	G $\frac{1}{4}$	G $\frac{1}{4}$	G $\frac{1}{4}$	
A		145		158		177	196	225	304	
A1		163		195		217	258	299	348,5	
B		96		115		137	147	165	182	
C		76		91		111	122	135,5	152,5	
D		48		56		66	71	78	86	
E		34		45		55	60	70	80	
ØT	25	35		35		55	55	55	70	
U	10	12		12		19	22	23	32	
<b>Weight [kg]</b>										
ADA		1,4		2,1		3,0	3,8	5,6	8,5	11,2
ASR		1,5		2,3		3,7	4,8	7,3	10,8	15,4

## Actuator dimensions - GEMÜ 741 - pneumatically operated

### Actuator DR/SC [mm]



Typ	0015U	0030U	0060U	0100U	0150U	0220U	0300U	0450U
<b>ISO Flange</b>	F04	F04/05	F05/07	F05/07	F07/10	F07/10	F07/10	F10/12
<b>Octagonal</b>	11	14	14	17	17	22	22	27
<b>Air Connector</b>	G 1/8	G 1/8	G 1/8	G 1/8	G 1/4	G 1/4	G 1/4	G 1/4
<b>A</b>	136.0	153.5	203.5	241.0	259.0	304.0	333.0	394.5
<b>B</b>	69.0	85.0	102.0	115.0	127.0	145.0	157.0	177.0
<b>H</b>	20	20	20	20	20	30	30	30
<b>Ø I</b>	30	35	35	40	55	55	55	70
<b>M</b>	29.0	36.0	42.5	49.5	55.5	64.0	69.5	80.0
<b>N</b>	43.0	48.5	50.5	56.5	63.0	72.0	77.0	86.0
<b>O</b>	11	11	17	17	17	27	27	27
<b>h</b>	0.5	0.5	0.5	1.5	1.5	1.5	1.5	1.5
<b>h1</b>	1.5	2.0	2.0	1.5	2.0	2.0	2.0	3.0
<b>L</b>	11	11	19	19	19	19	25	32
<b>Weight [kg]</b>								
<b>DR</b>	1.0	1.6	2.7	3.7	5.2	8.0	9.8	14.0
<b>SC</b>	1.1	1.7	3.1	4.3	6.1	9.3	12.0	17.0

Stroke limiter on request

## Technical data - GEMÜ 748 - motorized

### Travel range

Nominal travel range	90°
Max. travel range	93°
Setting range limit switch Min.	-2 to 12°
Setting range limit switch Max.	76 to 91°

### Manual override

With Allen key SW3 for actuator version 1015, 2015, 3035
With hand crank for actuator version 2070, 4100, 4200

### Permissible temperatures

Ambient temperature	-10 to +60° C
Storage temperature	-20 to +60° C

### Weight

Actuator version 1015	1.0 kg
Actuator version 2015	1.2 kg
Actuator version 3035	2.4 kg
Actuator version 2070	4.6 kg
Actuator version 4100, 4200	11.0 kg

### Protection class to EN 60529

IP 65

### Actuator materials

Actuator version	1015	2015, 3035	2070	4100, 4200
Housing base	PP (30% glass reinforced)	PP (30% glass reinforced)	ABS	Aluminium
Housing cover	PPO (10% glass reinforced)	PP (30% glass reinforced)	ABS	Aluminium
Optical position indicator	PPR natural	PPR natural	PPR natural	PMMA

### Correlation Actuator / Ball valve type 748

Ball valve			Actuator version					
DN	Flange type	SW	1015 15 Nm	2015 15 Nm	3035 35 Nm	2070 70 Nm	4100 100 Nm	4200 200 Nm
8	F04	9	X	X	-	-	-	-
10	F04	9	X	X	-	-	-	-
15	F04	9	X	X	-	-	-	-
20	F04	9	X	X	-	-	-	-
25	F05	11	-	-	X	X	-	-
32	F05	11	-	-	X	X	-	-
40	F07	14	-	-	-	X	-	-
50	F07	14	-	-	-	X	-	-
65	F10	17	-	-	-	-	X	-
80	F10	17	-	-	-	-	-	X
100	F10	17	-	-	-	-	-	X

**Note: For connection and wiring diagrams for motorized GEMÜ actuators see data sheet**

Data sheet GEMÜ 9428: Actuator version code 1006, 1015, 2006, 2015, 3035

Data sheet GEMÜ 9468: Actuator version code 2070, 4100, 4200, 6400

## Technical data - GEMÜ 748 - motorized

### Correlation Actuator version (torque) / Voltage-frequency

Voltage/Frequency		B1 12V DC	C1 24V DC	B4 12V AC	C4 24V AC	G4 120V AC	L4 230V AC	O4 100-250V DC
Actuator version	1015 ( 15 Nm)	X	X	-	-	-	-	-
	2015 ( 15 Nm)	-	-	X	X	-	-	X
	3035 ( 35 Nm)	-	X	-	X	-	-	X
	2070 ( 70 Nm)	-	X	-	X	X	X	-
	4100 (100 Nm)	-	X	-	X	X	X	-
	4200 (200 Nm)	-	X	-	X	X	X	-

### Correlation Actuator version (torque) / Functional module

Functional module		A0	AE	AP	E2	E1	00	0E	0P
Actuator version	1015 ( 15 Nm)	X	X	-	-	-	-	-	-
	2015 ( 15 Nm)	X	X	-	-	-	-	-	-
	3035 ( 35 Nm)	X	X	-	-	-	-	-	-
	2070 ( 70 Nm)	X	X	X	X	X	X	X	X
	4100 (100 Nm)	X	X	X	X	X	X	X	X
	4200 (200 Nm)	X	X	X	X	X	X	X	X

### Leistungsaufnahme [W]

Spannung / Frequenz		B1 12V DC	C1 24V DC		B4 12V AC	C4 24V AC		G4 120V AC		L4 230V AC		O4 100-250 V DC
Funktionsmodul		A0,AE,AP E1,E2	A0,AE,AP E1,E2	00,0E 0P	A0,AE,AP E1,E2	A0,AE,AP E1,E2	00,0E 0P	A0,AE,AP E1,E2	00,0E 0P	A0,AE,AP E1,E2	00,0E 0P	A0,AE
Antriebsaufst.	1015 ( 15 Nm)	30	30	-	-	-	-	-	-	-	-	-
	2015 ( 15 Nm)	-	-	-	30	30	-	-	-	-	-	50
	3035 ( 35 Nm)	-	30	-	-	30	-	-	-	-	-	50
	2070 ( 70 Nm)	-	96	63	-	-	63	160	-	161	-	-
	4100 (100 Nm)	-	96	105	-	-	140	160	105	161	130	-
	4200 (200 Nm)	-	96	90	-	-	110	160	90	161	105	-

### Electrical connection

Actuator version	1015, 2015, 3035			2070, 4100, 4200				
Supply voltages	12 V / 24 V		100 - 250 V		24 V, 120 V, 230 V			
Functional module	A0, AE			A0, AE, AP	00, 0E, 0P	E1	E2	
Control input voltage	Motor voltage		20 - 250 V AC/DC		24 - 250 V AC/DC	Motor voltage	0 to 10 V	-
Control input current	-		typ. 1 mA		typ. 1 mA			4 to 20 mA
Rating	Continuously rated		rated 40%		Continuously rated			
Connection	Cable connection PG 13,5		Hirschmann plug type Typ N6RFFS11		Flange plug Binder 692/693			
Cable diameter	7,5 ... 12,5 mm		7 ... 9 mm		max. 8 mm			
Max. cross section of wire	1,5 mm <sup>2</sup>		1,5 mm <sup>2</sup>		0,75 mm <sup>2</sup>			
Recommended connection cable	5x1 mm <sup>2</sup>		1 connector (standard): 7x1 mm <sup>2</sup>		7x1 mm <sup>2</sup>			
Overload protection	Motor protective system by customer		Integrated stall and overload protection plus excess current release T 1A 5x20 mm		Motor protective system by customer			

## Order data - GEMÜ 748 - motorized

1 Type	Code
Ball valve with motorized actuator	748

2 Nominal size	Code
DN 8 1/4" (only connection code 60)	8
DN 10 3/8" (only connection code 17, 60)	10
DN 15 1/2"	15
DN 20 3/4"	20
DN 25 1"	25
DN 32 1 1/4" (not connection code 59, 80)	32
DN 40 1 1/2"	40
DN 50 2"	50
DN 65 2 1/2"	65
DN 80 3"	80
DN 100 4"	100

3 Body configuration*	Code
Straight through (2/2-way)	D

\* Multi-port design on request

4 Connection	Code
Butt weld spigots DIN 11850, series 2	17
Spigots SMS 3008	37
Spigots ASME BPE	59
Spigots EN ISO 1127	60
Clamps ASME BPE	80

5 Valve body material	Code
Body: CF3M (316L) Ball: SS316L, for DN 8 - 15, CF3M for DN 20 - 100	C1

6 Seat material	Code
PTFE, (FDA-compliant) cavity filled seat	5C
TFM™ 1600, (FDA-compliant)	5T

7 Voltage/Frequency	Code
12 V DC	B1
12 V AC 50/60Hz	B4
24 V DC	C1
24 V AC 50/60Hz	C4
120 V AC 50/60Hz	G4
100-250 V AC 50/60Hz	O4
230 V AC 50/60Hz	L4

8 Functional module	Code
OPEN / CLOSE control with relay, not reversible	00
OPEN / CLOSE control with 2 additional potential-free limit switches, with relay, not reversible	0E
OPEN / CLOSE control with potentiometer output, with relay, not reversible	0P
Standard OPEN/CLOSE control	A0
OPEN/CLOSE control with 2 additional potential-free limit switches	AE
AOPEN/CLOSE control with potentiometer output	AP
Control module for external set value 0-10V DC	E1
Control module for external set value 4-20 mA	E2

9 Actuator version	Code
DN 8-20 (Torque 15 Nm), operating time 11 sec; supply voltage B1/C1	1015
DN 8-20 (Torque 15 Nm), operating time 11 sec; supply voltage B4/C4/O4	2015
DN 25-50 (Torque 70 Nm), operating time 15 sec; supply voltage C1/C4/G4/L4	2070
DN 25 - 32 (Torque 35 Nm) supply voltage C1,O4	3035
DN 25-32 (Torque 100 Nm), operating time 20 sec; supply voltage C1/C4/G4/L4	4100
DN 100 (Torque 200 Nm), operating time 16 sec; supply voltage C1/C4/G4/L4	4200

10 K number	Code
Mounting flange with adapter (galvanized)	5222
Mounting flange with adapter (stainless steel)	5227

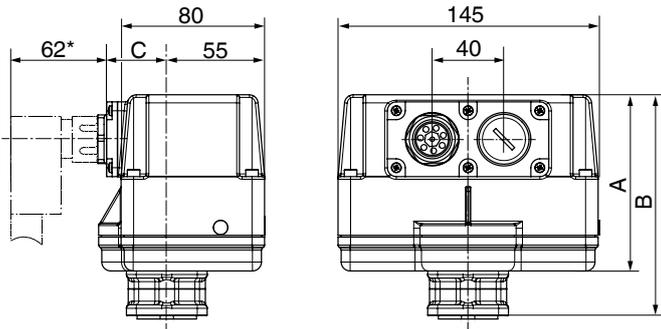
For operating temperatures > 100 °C a mounting flange with an adapter is required between ball valve and actuator!  
See data sheet: -Accessories for quarter turn valves-

Order example	1	2	3	4	5	6	7	8	9	10
	748	25	D	60	C1	5T	C1	A0	1015	-

**Note:** Wearing parts kit - order code: SP.K740-DN... (dependent on nominal size) contains replacement parts for the spindle seal and seat: Conical spindle seal (PTFE), V-ring spindle packing (PTFE), seat and flange seals (PTFE)

## Actuator dimensions - GEMÜ 748 - motorized

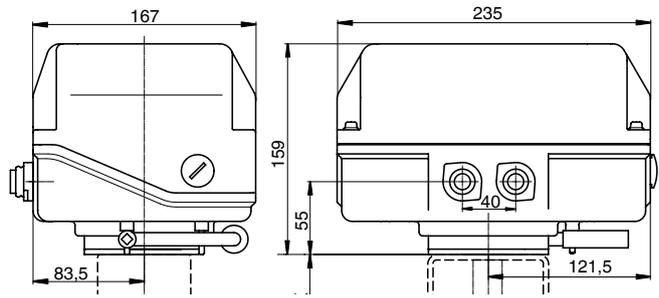
### Actuator version 1015, 2015



\* Standard with supply voltage code O4

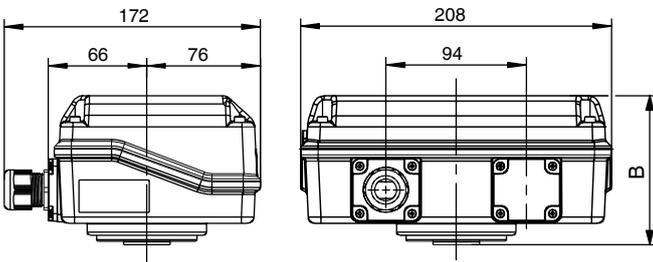
Voltages	ISO 5211	SW square drive socket	A	B	C
12 V, 24 V	F04 / F05	9	69	94	34
100 - 250 V			99	124	38

### Actuator version 2070



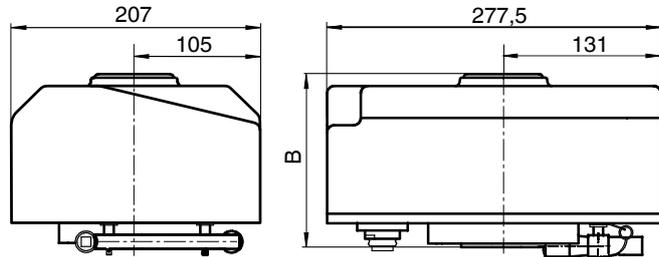
DN	ISO 5211 without mounting bracket	SW square drive socket
15, 20	F04	9
40, 50	F07	14
80, 100	F10	17
with mounting bracket		
25	F05	11
65	F10	17

### Actuator version 3035



Voltages	B
24 V	100.5
100 V - 250 V	124.5

### Actuator version 4100, 4200



Functional module	ISO 5211	SW square drive socket	B
00, 0E, 0P	F07 + F10	17 / 22	146
A0, AE, AP, E2, E1			201

For further ball valves and other products, please see our Product Range catalogue and Price List.  
Contact GEMÜ.

Technical data sheet

Should there be any doubts or misunderstandings, the German version of this data sheet is the authoritative document!

Subject to alteration - 02/2019 - 88339646