

2-way flange ball valve, article 460-GS with electrical actuator

Diameter DN 65 up to DN 200 pressure range PN 10 / PN 16

2-way flange ball valve designed for industrial use. High-quality processing and diverse qualifications enable a wide range of applications. Version as 2-part, flanged housing, pressure range up to 16,0 bar. Full bore, floating ball, both sides 100% tight closing. Shaft seal consisting of multilayer graphite rings, preloaded and self-adjusting by belleville washers and additional FKM O-ring.

Suitable for gaseous and liquid media, for the steam area ball seals made of R-PTFE (TFM 4215) are available. In any case, the material resistance cast steel GP240GH must be observed.

- both sides flange connection according to DIN EN 1092-1, form B pressure class PN 10 / PN 16
- ball above with pressure compensation bore
- ISO 5211 mounting flange for actuators (direct mounting)

Operation optionally with lever (lockable), pneumatic or electrical actuator. Unit (ball valve / actuator) is mounted ready for connection including functional test.



	TÜV TA-Luft certified
	Antistatic design ATEX 94/9/EC
	0035
	Safety Integrity Level (IEC 61508)
	API 607/5
	ambient -10° C...+80° C
	medium -10° C...+200° C

- Design Standard DIN EN 12516-1
- Housing strength DIN EN 12516-2
- Design pressure PN 10 / PN 16
- Marking EN 19, MSS SP-25
- Examination / test DIN EN 12266 P10 / P11 / P12
- Housing cast AD 2000-Merkblatt W0 (TÜV)

Operating-variants

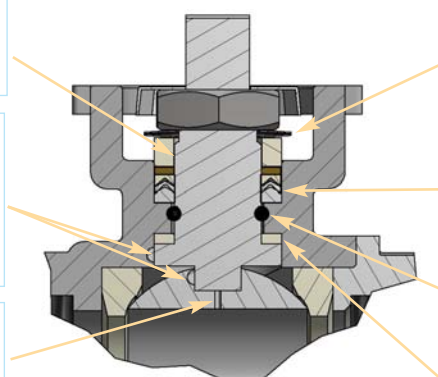


shaft sealing according to VDI 2440 (TA-Luft)

Operating stem is inserted into the body shaft from inside. This guarantees blow-out safety stem.

ATEX-antistatic, the ball-stem connection and the stem-body connection have a anti static feature, which ensures electrical continuity contact between those parts. As a result the ball valve complies with the ATEX Directive 2014/34/EU (Ex II 2 G/D Ex-c II)

The highly polished solid ball has a **pressure relief hole** in the stem slot in order to avoid pressure build-up in the body cavity. This ensures a right shutoff and a long service life



Disc springs ensure the permanent pretensioning of the chevron ring set.

primary shaft seal 3-ply V-ring chevron packing set (PTFE)

secondary shaft seal (O-ring FPM)

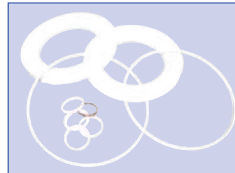
tertiary shaft feedthrough (PTFE sealing washer)

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Seal kit (standard), consisting of:

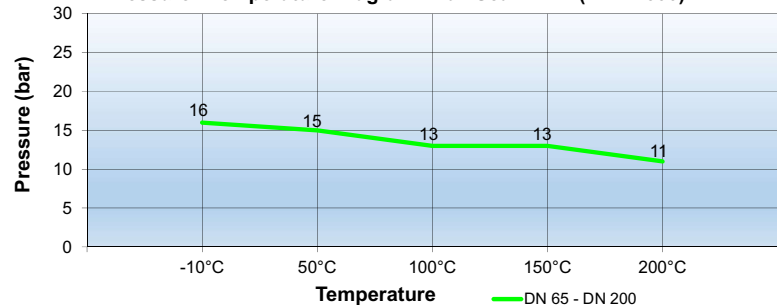
Pos.	Description	Material
4	ball seal (2x)	PTFE (TFM-1600)
8	thrust ring	PTFE
9	O-ring	FKM (Viton)
10	chevron packing set	graphite (3-parts)
12	thrust ring	stainless steel 1.4401
21	body seal	stainless steel-graphite-PTFE



Seal kit PTFE TFM 1600 (standard)

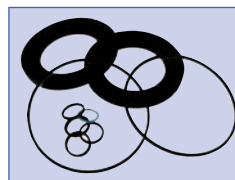
Diameter	Article-No.
DN 65	215.7882.18.24
DN 80	215.7882.18.25
DN 100	215.7882.18.27
DN 125	215.7882.18.28
DN 150	215.7882.18.29
DN 200	215.7882.18.31

Pressure - Temperature Diagram Ball Seal PTFE (TFM-1600)



Seal kit for the steam sector, Tmax. 240° C, consisting of:

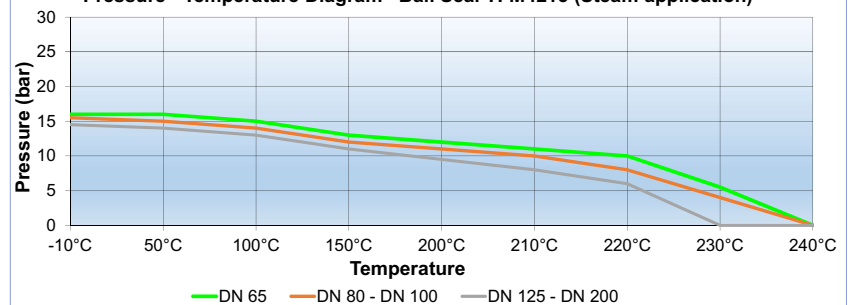
Pos.	Description	Material
4	ball seal (2x)	R-PTFE (TFM-4215)
8	thrust ring	PTFE
9	O-ring	FKM (Viton)
10	chevron packing set	graphite (3-parts)
12	pressure ring	stainless steel 1.4401
21	body seal	stainless steel-graphite-PTFE



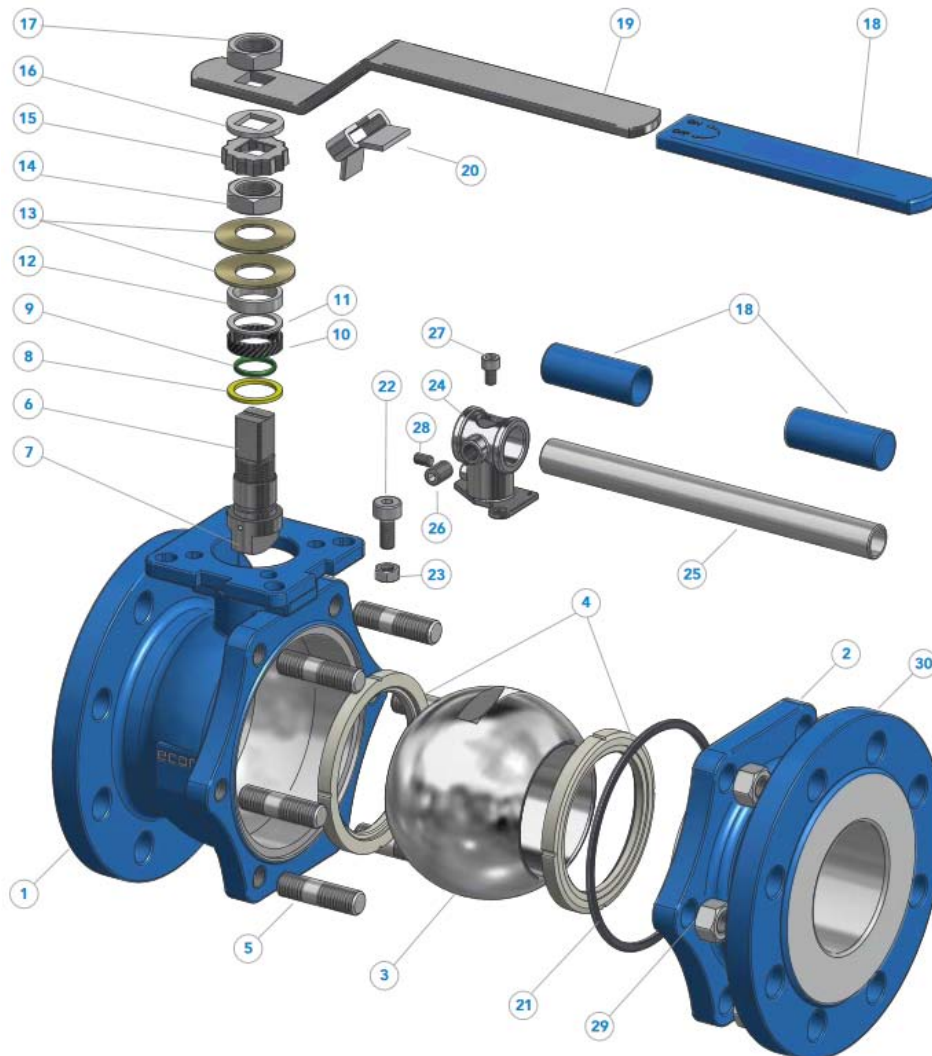
Seal kit TFM4215

Diameter	Article-No.
DN 65	215.7882.46.24
DN 80	215.7882.46.25
DN 100	215.7882.46.27
DN 125	215.7882.46.28
DN 150	215.7882.46.29
DN 200	215.7882.46.31

Pressure - Temperature Diagram Ball Seal TFM4215 (Steam application)



2-way flange ball valve, article 460-GS



Pos.	Description	Material	Pos.	Description	Material
1	body with ISO top flange	cast steel 1.6019 (GP240GH) with epoxy coating	2	body end	cast steel 1.6019 (GP240GH) with epoxy coating
3	ball	stainless steel 1.4308	4	seat ring	PTFE profile shells (TFM 1600)
5	stud	steel 1.7225	6	stem	stainless steel 1.4301
7	Anti-static device	stainless steel 1.4301	8	thrust washer seal	PTFE
9	O-ring	FKM (Viton)	10	glandpacking	graphite (3-parts)
11	bushing	stainless steel 1.4301	12	gland	stainless steel 1.4401
13	belleville washer	stainless steel 1.4310	14	nut	stainless steel 1.4301
15	locking cap	stainless steel 1.4301	16	ring	stainless steel 1.4301
17	nut	stainless steel 1.4301	18	sleeve	plastic
19	hand lever	stainless steel 1.4301	20	locking device	stainless steel 1.4301
21	body gasket	stainless steel-graphite-PTFE (spiral wound)	22	socket head screw	stainless steel 1.4301
23	nut	stainless steel 1.4301	24	T-bar support	stainless steel 1.4308
25	T-bar	steel zinc plated	26	allen set screw	stainless steel 1.4301
27	socket head screw	stainless steel 1.4301	28	allen set screw	stainless steel 1.4301
29	nut	steel 1.0503	30	name plate	stainless steel 1.4301

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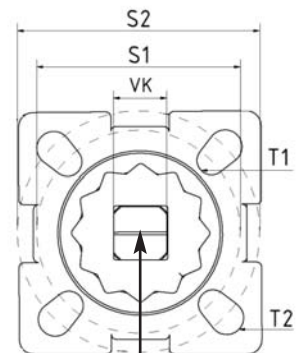
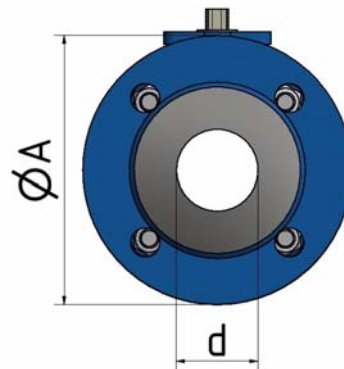
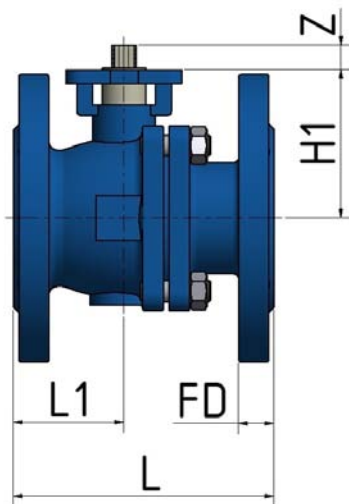
Ball valve and electric actuator, each with standardized interface according to ISO 5211, enable direct, backlash-free assembly.

Modern design and compact construction characterize this series of electric part-turn actuators. The simple but robust and reliable design guarantees high availability in daily industrial use. The actuators are maintenance-free and completely pre-wired internally. The self-locking gear with high-performance grease filling guarantees a long service life. The unit is delivered ready for connection, adjusted and tested.

Depending on the process requirements, there are two versions to choose from:

- a) OPEN / CLOSED operation class A according to EN 15714-2
- b) Jog mode or positioning operation, class B (S4 - 30%, motor power up to 120 starts per hour at peak load) according to EN 15714-2.

Further information on the electric drives can be found in the individual data sheets.



Ground joint indicates position of ball bore

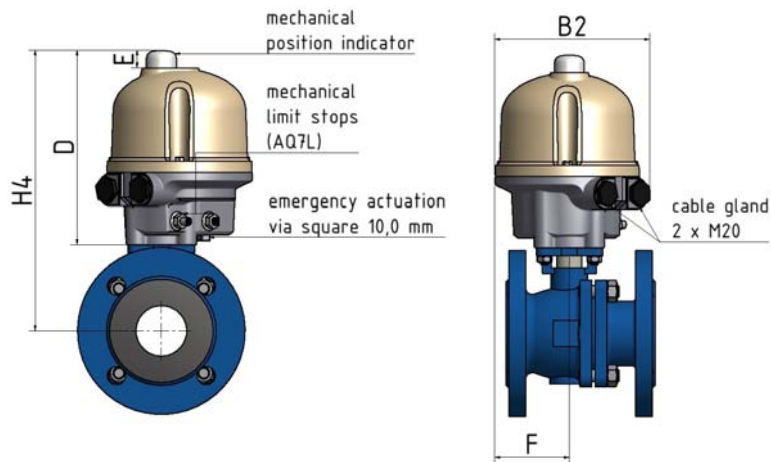
Diameter	L (mm)	L1 (mm)	FD (mm)	H1 (mm)	Z (mm)	d (mm)	ØA (mm)	S1/S2	VK (mm)	T1 (mm)	T2 (mm)	Pressure range
DN 65 (2 1/2")	170	69	18	102	17	63	185	F07 / F10	17	4x9	4x11	PN 10 / PN 16
DN 80 (3")	180	75	20	112	17	76	200	F07 / F10	17	4x9	4x11	PN 10 / PN 16
DN 100 (4")	190	83	20	140	22	100	220	F10	22	-	4x11	PN 10 / PN 16
DN 125 (5")	325	153	22	183	27	125	250	F12	27	-	4x14	PN 10 / PN 16
DN 150 (6")	350	162	22	204	27	150	285	F12	27	-	4x14	PN 10 / PN 16
DN 200 (8")	400	191	24	253	36	200	340	F14	36	-	4x14	PN 10 / PN 16

Diameter	DN 65	DN 80	DN 100	DN 125	DN 150	DN 200
Ø	63,5 mm	76,0 mm	100,0 mm	125,0 mm	150,0 mm	200,0 mm
KV	387,0	670,8	1.169,6	1.462,0	2.236,0	3.612,0

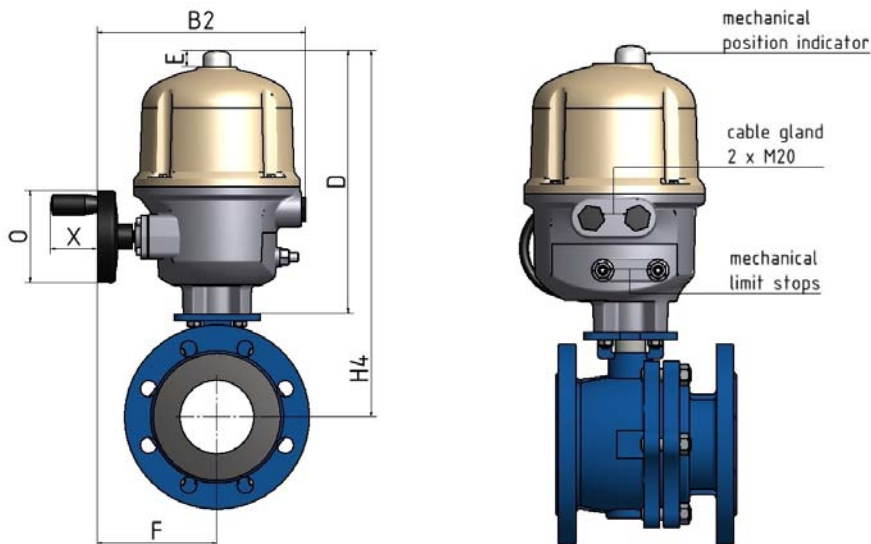
2-way flange ball valve, article 460-GS

Diameter DN 65 up to DN 200 pressure range PN 10 / PN 16

Voltage 230 V / 24 V



Article 460-GS DN 65
Actuator size AQ7L



Article 460-GS DN 80 - DN 200
Actuator size AQ10 ... AQ50

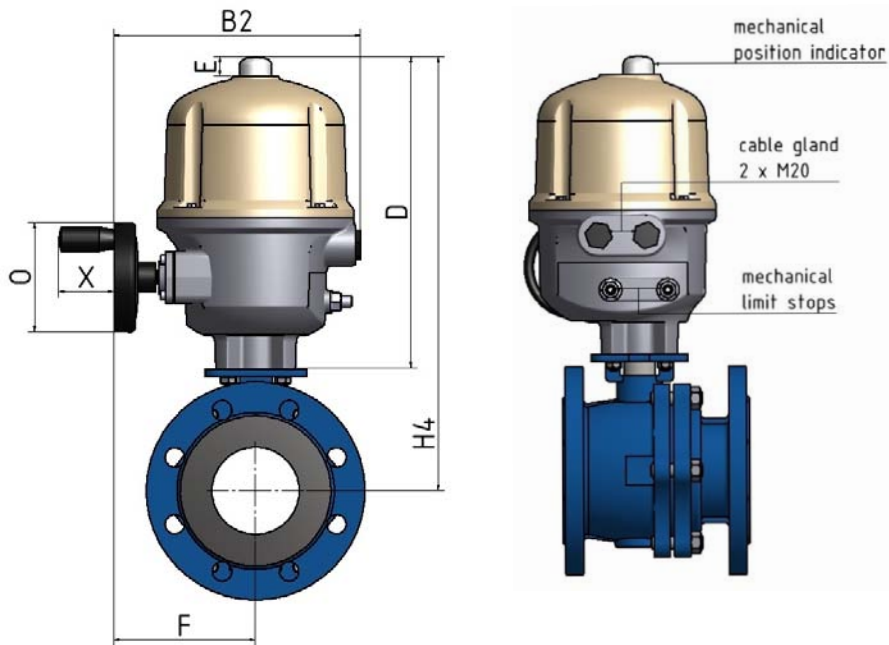
electrical actuator design max. 10 bar

Diameter	Article-No.	Voltage	H4 (mm)	D (mm)	B2 (mm)	E (mm)	F (mm)	O (mm)	X (mm)	Weight (kg)
DN 65	215.3840.4.24	230 V / 24 V	297	195	145	17,5	89,5	-	-	17,3
	171.8093.7L.15									
	171.8092.7L.15									
DN 80	215.3840.4.25	230 V / 24 V	402	290	225	20,5	130,0	100	50,5	24,7
	171.8089.10.25									
	171.8088.10.21									
DN 100	215.3840.4.27	230 V / 24 V	460	320	315	24,0	200,0	120	63,5	38,5
	171.8089.25.30									
	171.8088.25.25									
DN 125	215.3840.4.28	230 V	513	330	350	24,0	230,0	160	80,0	75,0
	AQ30									
DN 150	215.3840.4.29	230 V	534	330	350	24,0	210,0	160	80,0	86,8
	AQ50									
DN 200	215.3840.4.31	230 V	583	330	350	24,0	210,0	160	80,0	142,0
	AQ50									

2-way flange ball valve, article 460-GS

Diameter DN 65 up to DN 200 pressure range PN 10 / PN 16

Voltage 400 V



Article 460-GS DN 80 - DN 200
Actuator size AQ10 ... AQ50

electrical actuator design max. 10 bar										
Diameter	Article-No.	Voltage	H4 (mm)	D (mm)	B2 (mm)	E (mm)	F (mm)	O (mm)	X (mm)	Weight (kg)
DN 80	215.3840.4.25	400 V	402	290	225	24	130	100	50,5	24,7
AQ10	171.8090.10.25									
DN 100	215.3840.4.27	400 V	460	320	315	24	200	120	50,5	38,2
AQ25	171.8090.25.30									
DN 125	215.3840.4.28	400 V	513	330	350	24	230	160	63,5	75,0
AQ30	171.8090.30.35									
DN 150	215.3840.4.29	400 V	534	330	350	24	210	160	80,0	86,8
AQ50	171.8090.50.35									
DN 200	215.3840.4.31	400 V	583	330	350	24	210	160	80,0	142,0
AQ50	171.8090.50.35									