

ECON® Ball valve Type: 7422 Steel Internal thread (BSPP) Class 300/600



Characteristics

Type: 7422

Norm: ASME

Construction type: 2-way

Housing construction: 3-part

Housing material: Steel

Material quality: ASTM A216 WCB

Surface protection: Chemical blackened

Connection: Internal thread (BSPP)

Standard thread connection: ISO 228-1

Face to Face norm: Manufacturer standard

Top flange standard: ISO 5211 Direct Mount

Material ball: ASTM A351 CF8M

Spindle material: ASTM A276 316 Grade S

Primary spindle seal material: RPTFE

Secondary spindle seal material: FPM (FKM)

Tertiary spindle seal material: RPTFE

Body seal: RPTFE

Material connection piece: ASTM A216 WCB

Actuator material: 1.4301

Minimum medium temperature (continuous): -29 °C

Application

- Industrial and maritime applications.
- Liquid and gaseous media.
- Recommended in: Chemical

Technical Information

- Connection according to ISO 228-1 BSPP.
- Floating ball.
- Pressure class: Class 600 up to and including 2.1/2". Class 300 for 3" and 4".
- With direct-mount top flange according to ISO 5211.
- Closed neck design with leak detection opening.
- The chevron seal set used as a spindle seal and the axial seal ensure a longer service life and lower torque.
- Equipped with a robust, lockable lever.
- Average temperature for a tap with standard TF 4103 seats: -29°C/+220°C. Up to a maximum of 280° C for taps with PEEK seats.

Construction

- Three-part housing construction.
- Design certified according to ISO 7121, MSS SP-110 and MSS SP-72.
- Wall thickness according to EN 12516-1 and ASME B16.34.
- Full or reduced bore.
- Design with antistatic equipment between ball and housing.

Approval

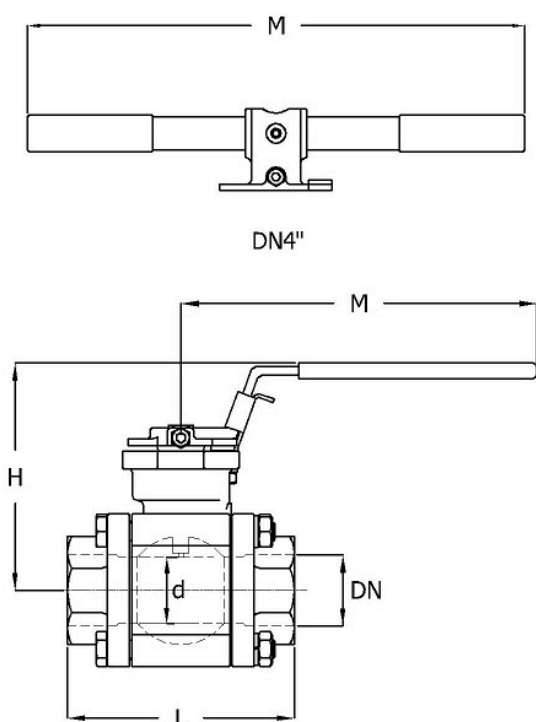
- Fugitive emission certified according to the German Technical Instructions on Air Quality Control [TA-Luft], VDI 2440, point 3.3.1.3.
- Fugitive emission certified according to ISO 15848-1, CO1 and CO2.
- Safety integrity level [SIL] 2.

Options

- Design with worm gearbox, pneumatic, electric or hydraulic drives.
- Position feedback for manual and automatic valves.
- Available with different seat materials such as TF 4215, TFM 1600 and PEEK.
- Fire-safe design available.
- Stainless steel extended spindle for insulation.
- With connection for earthing.
- With 30°, 60° or 90° V-shaped ball bore for modulating applications.
- Connections with NPT thread according to ASME B1.20.1, socket weld according to ASME B16.11 or EN 12760, and butt weld according to ASME B16.25 S40 or EN 12627.

Size table:

DN	Full bore	d mm	L mm	H mm	M mm	Weight kg
1/4" [8]	Yes	15	71	83	140	0.9
3/8" [10]	Yes	15	71	83	140	0.9
1/2" [15]	Yes	15	72	83	140	1
3/4" [20]	No	15	72	83	140	1
3/4" [20]	Yes	20	97	88	140	1.5
1" [25]	No	20	97	88	140	1.5
1" [25]	Yes	25	109	97	165	2
1.1/4" [32]	No	25	109	97	165	2
1.1/4" [32]	Yes	31.8	118	103	165	3
1.1/2" [40]	No	31.8	118	103	165	3
1.1/2" [40]	Yes	38	129	130	202	4.5
2" [50]	No	38	129	130	202	4.5
2" [50]	Yes	50	145	139	202	6.5
2.1/2" [65]	No	50	145	139	202	6.5
2.1/2" [65]	Yes	65	185	178	257	12.5
3" [80]	Yes	76	205	188	257	16.5
3" [80]	Yes	76	205	188	257	16
3" [80]	No	65	185	178	257	12.5
4" [100]	No	76	205	188	257	16.5
4" [100]	Yes	100	240	207.5	405	26



Pressure and temperature range								
Seat material + DN full bore	-29	50	100	150	200	250	300	[°C]
TF4103 & TFM1600 1/4" - 1"	102.1	100.2	68	34	0	-	-	[bar]
TF4215 1/4" - 1"	102.1	100.2	93.2	63	32	0	-	[bar]
PEEK 1/4" - 1"	102.1	100.2	93.2	77	48	18	0	[bar]
TF4103 & TFM1600 1.1/4" - 1.1/2"	80	80	55	28	0	-	-	[bar]
TF4215 1.1/4" - 1.1/2"	80	80	80	55	28	0	-	[bar]
PEEK 1.1/4" - 1.1/2"	80	80	80	77	48	18	0	[bar]
TF4103 & TFM1600 2"	76	76	53	27	0	-	-	[bar]
TF4215 2"	76	76	76	51	25	0	-	[bar]
PEEK 2"	76	76	76	76	47	18	0	[bar]
TF4103 & TFM1600 2.1/2"	69	69	48	24	0	-	-	[bar]

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Pressure and temperature range								
Seat material + DN full bore	-29	50	100	150	200	250	300	[°C]
TF4215 2.1/2"	69	69	69	47	24	0	-	[bar]
PEEK 2.1/2"	69	69	69	69	42	16	0	[bar]
TF4103 & TFM1600 3" - 4"	51.1	50.1	34	17	0	-	-	[bar]
TF4215 3" - 4"	51.1	50.1	46.6	45.1	23	0	-	[bar]
PEEK 3" - 4"	51.1	50.1	46.6	45.1	43.8	17	0	[bar]

Nominal inner diameter	Pressure rating	Manual operation	Mounting flange	Mounting flange 2	Bore	With locking device	Seat material	Maximum medium temperature (continuous) °C	Maximum operating pressure bar	Article
1/4" [8]	Class 600	Handle	F03	F04	Full bore	Yes	TF 4215	230	102	14228443
1/4" [8]	Class 600	Handle	F03	F04	Full bore	Yes	TF 4103	220	102	13278830
3/8" [10]	Class 600	Handle	F03	F04	Full bore	Yes	TF 4103	220	102	13278831
3/8" [10]	Class 600	Handle	F03	F04	Full bore	Yes	TF 4215	230	102	14228444
1/2" [15]	Class 600	Handle	F03	F04	Full bore	Yes	TF 4215	230	102	14228445
1/2" [15]	Class 600	Handle	F03	F04	Full bore	Yes	TF 4103	220	102	13278832
3/4" [20]	Class 600	Handle	F03	F04	Reduced bore	Yes	TF 4215	230	102	14228455
3/4" [20]	Class 600	Handle	F03	F04	Reduced bore	Yes	TF 4103	220	102	13278812
3/4" [20]	Class 600	Handle	F03	F04	Full bore	Yes	TF 4103	220	102	13278833
3/4" [20]	Class 600	Handle	F03	F04	Full bore	Yes	TF 4215	230	102	14228446
1" [25]	Class 600	Handle	F03	F04	Reduced bore	Yes	TF 4103	220	102	13278810
1" [25]	Class 600	Handle	F03	F04	Reduced bore	Yes	TF 4215	230	102	14228454
1" [25]	Class 600	Handle	F04	F05	Full bore	Yes	TF 4103	220	102	13278834
1" [25]	Class 600	Handle	F04	F05	Full bore	Yes	TF 4215	230	102	14228447
1.1/4" [32]	Class 600	Handle	F04	F05	Reduced bore	Yes	TF 4215	230	102	14228456
1.1/4" [32]	Class 600	Handle	F04	F05	Reduced bore	Yes	TF 4103	220	102	13278824
1.1/4" [32]	Class 600	Handle	F04	F05	Full bore	Yes	TF 4215	230	80	14228448
1.1/4" [32]	Class 600	Handle	F04	F05	Full bore	Yes	TF 4103	220	80	13278835
1.1/2" [40]	Class 600	Handle	F04	F05	Reduced bore	Yes	TF 4103	220	80	13278825
1.1/2" [40]	Class 600	Handle	F04	F05	Reduced bore	Yes	TF 4215	230	80	14228457
1.1/2" [40]	Class 600	Handle	F07		Full bore	Yes	TF 4103	220	80	13278836
1.1/2" [40]	Class 600	Handle	F07		Full bore	Yes	TF 4215	230	80	14228449
2" [50]	Class 600	Handle	F07		Reduced bore	Yes	TF 4103	220	80	13278826
2" [50]	Class 600	Handle	F07		Reduced bore	Yes	TF 4215	230	80	14228458
2" [50]	Class 600	Handle	F07		Full bore	Yes	TF 4215	230	76	14228450
2" [50]	Class 600	Handle	F07		Full bore	Yes	TF 4103	220	76	13278837
2.1/2" [65]	Class 600	Handle	F07		Reduced bore	Yes	TF 4103	220	76	13278827
2.1/2" [65]	Class 600	Handle	F07		Reduced bore	Yes	TF 4215	230	76	14228459
2.1/2" [65]	Class 600	Handle	F07	F10	Full bore	Yes	TF 4103	220	69	13278838
2.1/2" [65]	Class 600	Handle	F07	F10	Full bore	Yes	TF 4215	230	69	14228451
3" [80]	Class 300	Handle	F07	F10	Full bore	Yes	TF 4215	230	51	14228452
3" [80]	Class 300	Handle	F07	F10	Full bore	Yes	TF 4103	220	51	13278839
3" [80]	Class 600	Handle	F07	F10	Reduced bore	Yes	TF 4103	220	69	13278828
3" [80]	Class 600	Handle	F07	F10	Reduced bore	Yes	TF 4215	230	69	14228460
4" [100]	Class 300	Handle	F07	F10	Reduced bore	Yes	TF 4215	230	51	14228461
4" [100]	Class 300	Handle	F07	F10	Reduced bore	Yes	TF 4103	220	51	13278829
4" [100]	Class 300	T-wrench	F10		Full bore	No	TF 4215	230	51	14228453
4" [100]	Class 300	T-wrench	F10		Full bore	No	TF 4103	220	51	13278840

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