ECON® Ball valve Type: 7742 Stainless steel Socket weld B16.11 Class 300/600

Characteristics

Type: 7742
Norm: ASME
Construction type: 2-way
Housing construction: 3-part
Housing material: Stainless steel
Material quality: ASTM A351 CF8M
Connection: Socket weld
Standard welding connection: B16.11
Top flange standard: ISO 5211 Direct Mount
Material ball: ASTM A351 CF8M
Seat material: TF 4103
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 A351 CF3M
Actuator material: 1.4301
Minimum medium temperature (continuous): -40 °C
Maximum medium temperature (continuous): 220 °C

Application

- Industrial and maritime applications.
- Liquid and gaseous media.
- Recommended in: Chemical, Food & Beverages

Technical Information

- Connection according to ASME B16.11, size 1/4" to 2" full bore also meet the EN 12760 standard.
- 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.
- All components intended to come into contact with food comply with EC 1935.
- 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: -40°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.
- Declaration of conformity according to EC 1935/2004.

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 or for cold applications (up to -50°C).
- With connection for earthing.
- With 30°, 60° or 90° V-shaped ball bore for modulating applications.
- Connections with BSPP thread according to ISO 228-1, NPT thread according to ASME B1.20.1, socket weld according to EN 12760 and butt weld according to ASME B16.25 S40 or EN 12627 or ISO 1127 S1 or SMS 3008 (EN 10357 series D) or DIN 11850 series 1 and 2 (EN 10357 series B and A).

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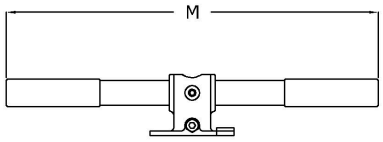
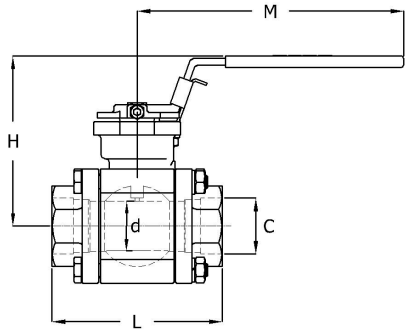
ERIKS NV | Tel: +32 3 829 28 20 | E-mail: valves@eriks.be



DN4"



Size table:

DN	Full bore	d	L	H	M	C	Weight
		mm	mm	mm	mm	mm	kg
1/4" [8]	Yes	15	71	83	140	14.4	0.9
3/8" [10]	Yes	15	71	83	140	17.8	0.9
1/2" [15]	Yes	15	72	83	140	21.9	1
3/4" [20]	No	15	72	83	140	27.4	1
3/4" [20]	Yes	20	97	88	140	27.4	1.5
1" [25]	No	20	97	88	140	34.1	1.5
1" [25]	Yes	25	109	97	165	34.1	2
1.1/4" [32]	No	25	109	97	165	42.9	2
1.1/4" [32]	Yes	31.8	118	103	165	42.9	3
1.1/2" [40]	No	31.8	118	103	165	49	3
1.1/2" [40]	Yes	38	129	130	202	49	4.5
2" [50]	No	38	129	130	202	61.5	4.5
2" [50]	Yes	50	145	139	202	61.5	6.5
2.1/2" [65]	No	50	145	139	202	74	6.5
2.1/2" [65]	Yes	65	185	178	257	74	12.5
3" [80]	Yes	76	205	188	257	90	16.5
3" [80]	No	65	185	178	257	90	12.5
4" [100]	No	76	205	188	257	115.5	16.5
4" [100]	Yes	100	240	207.5	405	115.5	26

Pressure and temperature range									
Seat material + DN full bore	-40	50	100	150	175	200	250	300	[°C]
TF4103 & TFM1600 1/4" - 1"	99.3	96.2	72	48	25	0	-	-	[bar]
TF4215 1/4" - 1"	99.3	96.2	84.4	65	45	23	0	-	[bar]
PEEK 1/4" - 1"	99.3	96.2	84.4	77	58	37	13	0	[bar]
TF4103 & TFM1600 1.1/4" - 1.1/2"	80	80	60	40	20	0	-	-	[bar]
TF4215 1.1/4" - 1.1/2"	80	80	80	61	42	21	0	-	[bar]
PEEK 1.1/4" - 1.1/2"	80	80	80	77	57	36	13	0	[bar]
TF4103 & TFM1600 2"	76	76	56	38	20	0	-	-	[bar]
TF4215 2"	76	76	76	58	39	20	0	-	[bar]
PEEK 2"	76	76	76	76	56	35	12	0	[bar]
TF4103 & TFM1600 2.1/2"	69	69	52	35	18	0	-	-	[bar]
TF4215 2.1/2"	69	69	69	53	37	19	0	-	[bar]

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Pressure and temperature range									
PEEK 2.1/2"	69	69	69	69	50	31	10	0	[bar]
TF4103 & TFM1600 3" - 4"	49.6	48.1	37	25	12	0	-	-	[bar]
TF4215 3" - 4"	49.6	48.1	42.2	38.5	37	18	0	-	[bar]
PEEK 3" - 4"	49.6	48.1	42.2	38.5	37	35.7	13	0	[bar]

Nominal inner diameter	External tube diameter of connection mm	Pressure rating	Face to Face norm	Manual operation	Mounting flange	Mounting flange 2	Bore	With locking device	Maximum operating pressure bar	Article
1/4" [8]	14.4	Class 600	Manufacturer standard	Handle	F03	F04	Full bore	Yes	99	13279041
3/8" [10]	17.8	Class 600	Manufacturer standard	Handle	F03	F04	Full bore	Yes	99	13279043
1/2" [15]	21.9	Class 600	Manufacturer standard	Handle	F03	F04	Full bore	Yes	99	13279040
3/4" [20]	27.4	Class 600	Manufacturer standard	Handle	F03	F04	Reduced bore	Yes	99	13279053
3/4" [20]	27.4	Class 600	Manufacturer standard	Handle	F03	F04	Full bore	Yes	99	13279042
1" [25]	34.1	Class 600	Manufacturer standard	Handle	F03	F04	Reduced bore	Yes	99	13279048
1" [25]	34.1	Class 600	Manufacturer standard	Handle	F04	F05	Full bore	Yes	99	13279037
1.1/4" [32]	42.9	Class 600	Manufacturer standard	Handle	F04	F05	Reduced bore	Yes	99	13279055
1.1/4" [32]	42.9	Class 600	Manufacturer standard	Handle	F04	F05	Full bore	Yes	80	13279045
1.1/2" [40]	49	Class 600	Manufacturer standard	Handle	F04	F05	Reduced bore	Yes	80	13279054
1.1/2" [40]	49	Class 600	Manufacturer standard	Handle	F07		Full bore	Yes	80	13279044
2" [50]	61.5	Class 600	Manufacturer standard	Handle	F07		Reduced bore	Yes	80	13279049
2" [50]	61.5	Class 600	Manufacturer standard	Handle	F07		Full bore	Yes	76	13279038
2.1/2" [65]	74	Class 600	Manufacturer standard	Handle	F07		Reduced bore	Yes	76	13279056
2.1/2" [65]	74	Class 600	Manufacturer standard	Handle	F07	F10	Full bore	Yes	69	13279046
3" [80]	90	Class 300	Manufacturer standard	Handle	F07	F10	Full bore	Yes	49	13279039
3" [80]	90	Class 600	Manufacturer standard	Handle	F07	F10	Reduced bore	Yes	69	13279050
4" [100]	115.5	Class 300	Manufacturer standard	Handle	F07	F10	Reduced bore	Yes	49	13279051
4" [100]	115.5	Class 300	Manufacturer standard	T-wrench	F10		Full bore	No	49	13279047

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