

**econ**<sup>®</sup>

# 2-piece Ball Valves

 **Servitec**

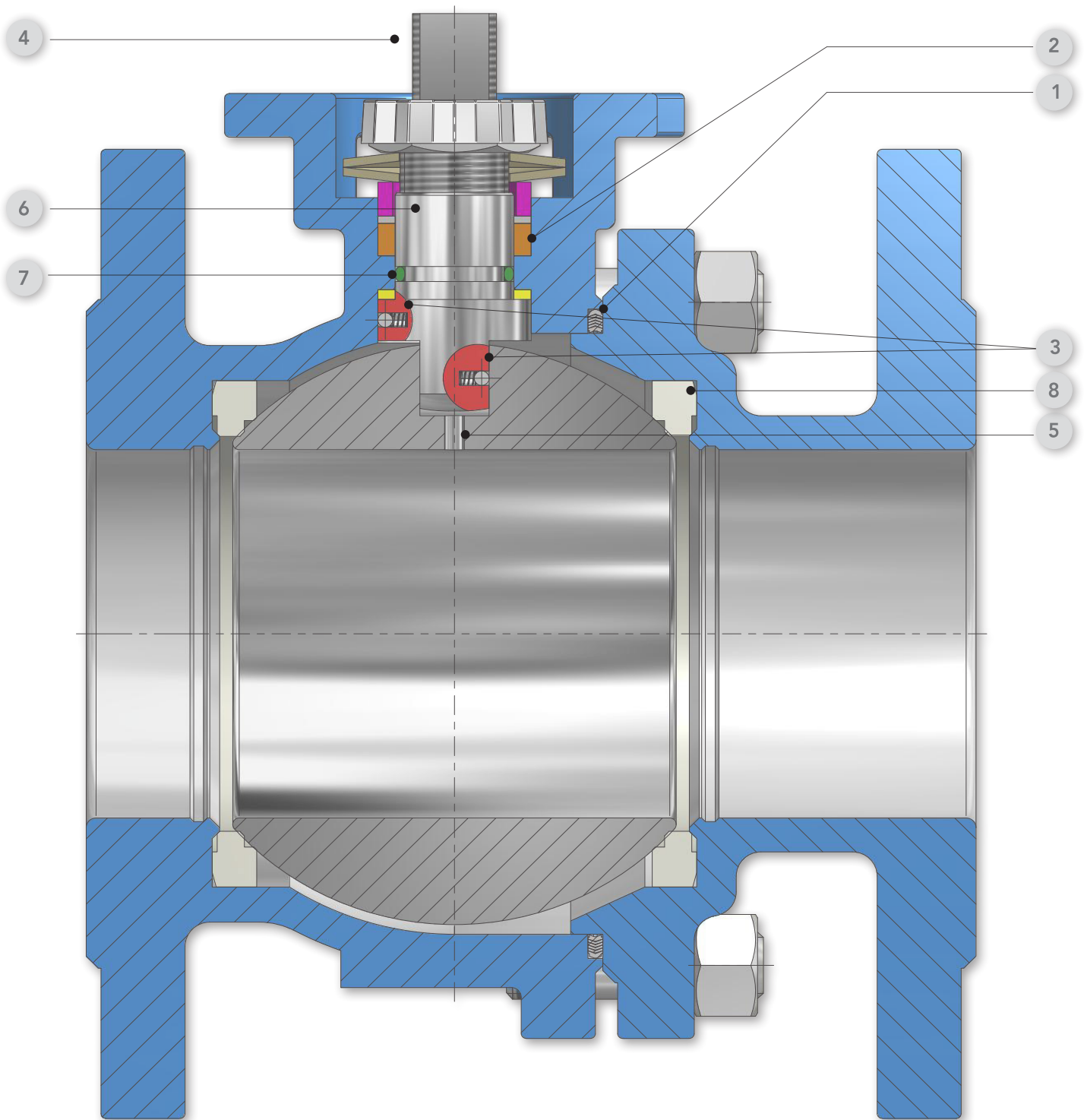


**ERIKS**

**econosto**

# econ<sup>®</sup> 2-piece Ball Valves

Ball Valves take a leading role in the valve industry. The scope of applications is enormous, because of the quarter turn construction they are easy to operate and require almost no maintenance. Moreover full bore Ball Valves are ideal for conditions which require maximum flow capacity with minimum pressure drop.



Besides these advantages, all Econ® two-piece flanged full bore Ball Valves are fire-safe and TA-Luft certified. The standard ISO Direct Mount feature enables an easy installation of any actuator, even after initial start-up in a manual configuration. Finally, the Econ® brand ensures reliability and an excellent price quality ratio.

## Construction

The Ball Valves are of a two piece construction and have a solid full bore ball. Relevant design standards are EN ISO 17292, EN 12516, ASME B16.34 and API 608.

## Materials

Carbon steel (1.0619/ASTM A216 WCB) and stainless steel (1.4408/ASTM A351 CF8M) are the materials which form the standard supply. Other materials can be supplied upon request.

## Fire-Safe 1 2

The Ball Valves are fire-safe certified according to API 607 6th Edition and ISO 10497. In the event of fire, a secondary metallic seat prevents leakage through the valve port. A graphoil stem seal and a Leader® graphite spiral wound body gasket with PTFE inner layer ensures tightness through the stem packing and body joints.

## Gland Packing 2

Two Belleville spring washers ensure optimal sealing performance, also compensating for changing process conditions. Advantages of this feature are an increased operational safety and less maintenance. In accordance with fire-safe requirements, the packing material is made of Graphoil. In order to comply with the very strict emission requirements for TA-Luft certification, a Viton® O-ring has been placed.

## Anti-static & ATEX 3

The ball-stem connection and the stem-body connection have an anti-static feature, which ensures electrical continuity between those parts. As a result the Ball Valves comply with ATEX guidance 94/9/EC (Ex II 2 G-D Ec-c II) for potentially explosive environments.

## Direct Mount 4

A Direct Mount top-flange according to ISO 5211 is standard for these Ball Valves. This feature makes it possible to mount an actuator without the need of a mounting bracket and drive adapter. This gives a considerable cost reduction, compact automated unit and a higher level of safety for operators.

## Ball 5

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 tight shutoff and long service life.

## Stem 6

The valve stem assembly has a blow-out proof construction and a square top connection. A PTFE thrust washer seal helps to achieve a low operating torque.

## TA-Luft 7

Because of the double stem seal construction utilising an O-ring and a spring loaded gland packing the flanged Ball Valves comply with very strict emission requirements. In this respect they are certified by TA-Luft (VDI 2440, Section 3.3.1.3).

## Seats 8

A flexible seat design provides tight shut-off at high and low pressures. The special seat construction limits wear to a minimum and ensures low torque values under all operating conditions. Standard seat material is a high grade PTFE TFM1600. Besides the proven mechanical and chemical properties of PTFE, this chemical reinforced version offers suitability for a wider range of applications in respect to pressure and temperature.

## Testing

The Ball Valves are 100% tight and are tested in accordance with API 598 (ASME) or EN 12266 (DIN).

## SIL

SIL is an international standard (IEC 61508) and is short for "Safety Integrity Level". Econ® ball valves are suitable for SIL 2 applications.

## Face to face length

The DIN Ball Valves are supplied with a face to face dimension in accordance with EN 558, 27 and ASME Valves in accordance with B16.10 long pattern.

## Flanges

The flanges are in accordance with EN 1092-1 (DIN version) or ASME B16.5 RF (ASME version). Flange facings have a surface finish of Ra 3.2 - 6.3.

## Nace

All stainless steel Econ® Ball Valves comply with NACE MR0175 as a standard. On request also the steel version can be supplied according to NACE specifications.

## Finish

Castings have a high quality finish (minimum MSS SP112, level 2). Carbon steel Ball Valves have a primer and blue top coat (RAL 5015). Total paint thickness is 60-80 µm.

## Operation

The Ball Valves as standard are supplied with a SS304 handlever (DN15 - DN80) or a T-bar (DN100 - DN150). For DN200 a gearbox can be supplied. All handlevers are lockable in open and closed position. Where extra security is required a padlock should be fitted to lock the valve in the open or closed position. As an option a heavy duty lever can be supplied for the DN15-DN80 valves.

## Options

- TFM4215 seats (also other materials available)
- Heavy duty lever DN15-DN80
- Gearbox for all sizes
- Extended stem to allow pipe insulation
- Extended stem for low temperature applications
- Spring return lever
- Limit switches for remote open/close notification
- Pneumatic actuator
- Electric actuator
- Hydraulic actuator
- Electro-hydraulic actuator

## Material and test certificates

All Econ® flanged Ball Valves can be supplied with a EN 10204-3.1 test- and material certificate.



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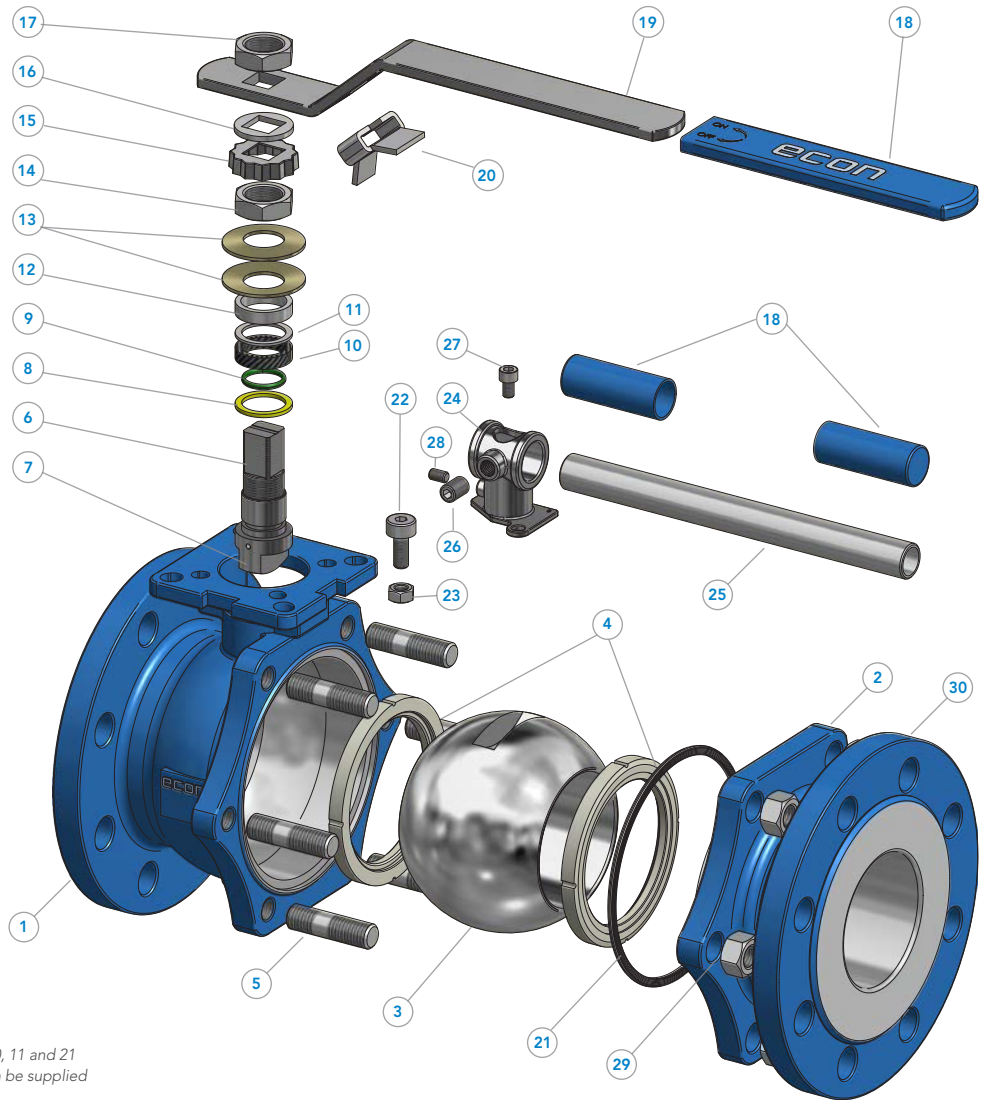
# econ® 2-piece Ball Valves

Fig. 7249  
Fig. 7289

DIN PN16/40 | DN15-200



- Econ® 2-piece full bore Ball Valves
- Carbon steel (Fig. 7249) and Stainless steel (Fig. 7289)
- Flange connections EN 1092-1
- Pressure rating DIN PN16/40
- DN15-200
- Design EN ISO 17292, EN 12516
- Face to face length EN 558, 27 (short)
- ISO 5211 Direct Mount
- API 607 6th Edition and ISO 10497 Fire-Safe certified
- TA-Luft (VDI 2440, Sec. 3.3.1.3) certified
- Anti-static I ATEX 94/9/EC (Ex II 2 G-D EX-c II)
- IEC 61508, SIL 2 capable



**Remarks:**

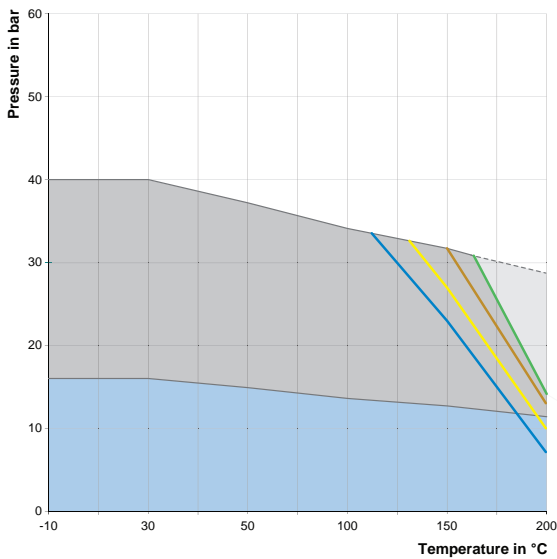
- DN 15 - 80 with hand lever
- DN 100 - 150 with T-bar
- Standard spare part kit consists of pos. No.: 4, 8, 9, 10, 11 and 21
- DN 200 is without operator. On request a gearbox can be supplied

Pos	Name	Material (Carbon steel)	Material (Stainless steel)	Pos	Name	Material (Carbon steel)	Material (Stainless steel)
1	Body	1.0619	1.4408	16	Ring	1.4301	1.4301
2	Body end	1.0619	1.4408	17	Nut	1.4301 (A194-8)	1.4301 (A 194-8)
3	Ball	1.4308 <sup>1)</sup>	1.4408	18	Sleeve	Plastic	Plastic
4	Seat ring	PTFE (TFM1600)	PTFE (TFM1600)	19	Hand lever	1.4301	1.4301
5	Stud	1.7225 (A 193-B7)	1.4301 (A 193-B8)	20	Locking device	1.4301	1.4301
6	Stem	1.4301 <sup>1)</sup>	1.4401	21	Body gasket	1.4404+Graphite+PTFE <sup>3)</sup>	1.4404+Graphite+PTFE <sup>3)</sup>
7	Anti-static device	1.4301	1.4401	22	Socket head screw	1.4301 (A193-B8)	1.4301 (A 193-B8)
8	Thrust washer seal	PTFE	PTFE	23	Nut	1.4301 (A194-8)	1.4301 (A 194-8)
9	O-ring	FKM (Viton®) <sup>2)</sup>	FKM (Viton®) <sup>2)</sup>	24	T-bar support	1.4308	1.4308
10	Glandpacking	GRAFOIL	GRAFOIL	25	T-bar <sup>4)</sup>	St. A53 <sup>5)</sup>	St. A53 <sup>5)</sup>
11	Bushing	1.4301	1.4301	26	Allen set screw	1.4301 (A193-B8)	1.4301 (A 193-B8)
12	Gland	1.4401	1.4401	27	Socket head screw	1.4301 (A193-B8)	1.4301 (A 193-B8)
13	Belleville washer	1.4310	1.4310	28	Allen set screw	1.4301 (A193-B8)	1.4301 (A 193-B8)
14	Nut	1.4301 (A 194-8)	1.4301 (A 194-8)	29	Nut	1.0503 (A 194-2H)	1.4301 (A 194-8)
15	Locking cap	1.4301	1.4301	30	Name plate	1.4301	1.4301

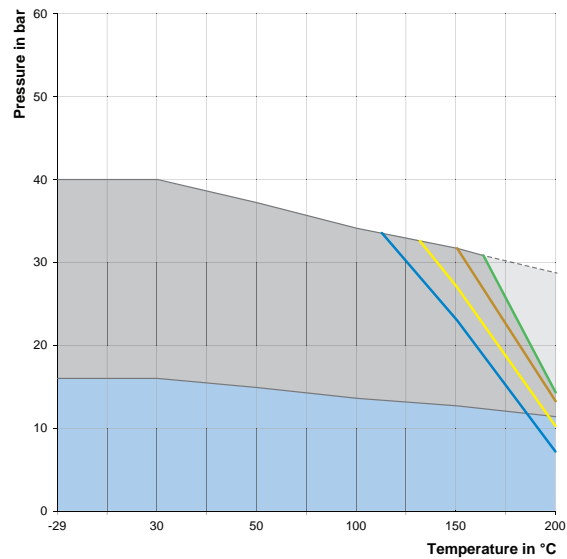
1) Upon request also available with 1.4408 ball and 1.4401 stem    2) DN125 and bigger: 2x O-ring    3) Spiral wound    4) DN100- 150    5) Zinc plated

## Pressure/temperature rating

### Carbon Steel



### Stainless steel



Seat rating-TFM1600

DN 15 - 25

DN 32 - 65

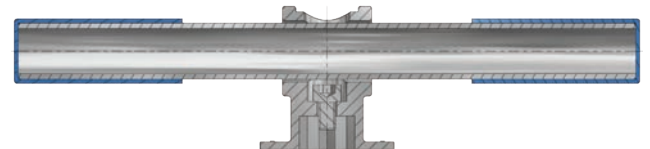
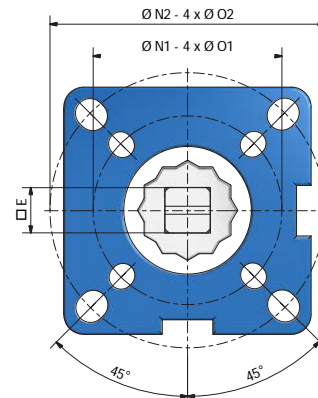
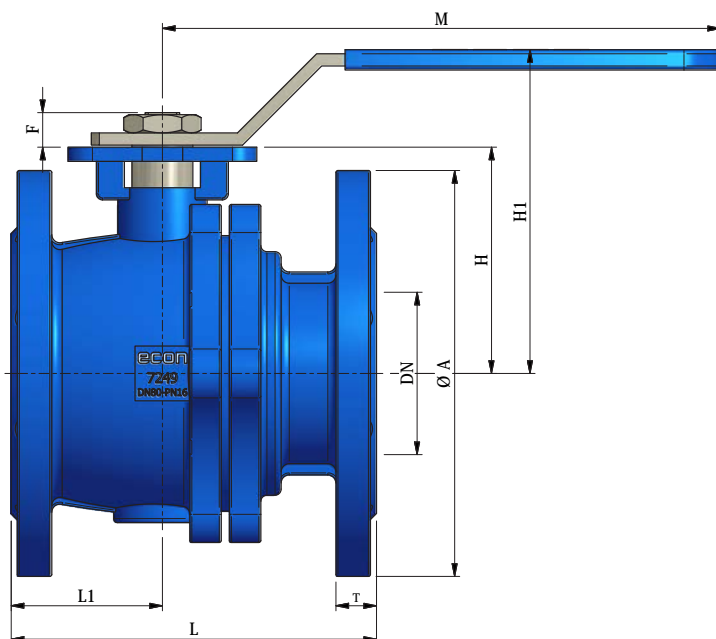
DN 80 - 100

DN 125 - 200

Body rating

PN 40

PN 16



DN 100-150 | with T-bar

DN	ød	øA		□E	F	H		H1		L	L1		M	øN1 x øO1		øN2 x øO2		T	T		m[kg]	m[kg]
		PN16	PN40			PN16	PN40	PN16	PN40		PN16	PN40		PN16	PN40	PN16	PN40		PN16	PN40		
15	15	95	95	9	9	48	48	78	78	115	50	50	145	36x6	42x6	16	16	2,4	2,4			
20	20	105	105	9	9	53	53	84	84	120	54	54	145	36x6	42x6	18	18	3,2	3,2			
25	25	115	115	11	11	59	59	90	90	125	56	56	175	42x6	50x7	18	18	4,2	4,2			
32	32	140	140	11	11	71	71	102	102	130	58	58	175	42x6	50x7	18	18	5,5	5,5			
40	38	150	150	14	14	76	76	110	110	140	58	58	190	50x7	70x9	18	18	6,9	6,9			
50	50	165	165	14	14	85	85	118	118	150	63	63	190	50x7	70x9	20	20	9,5	9,5			
65	63	185	185	17	17	102	107	150	155	170	69	64	265	70x9	102x11	18	22	13,8	13,8			
80	76	200	200	17	17	112	117	176	181	180	75	70	300	70x9	102x11	20	24	17,7	17,8			
100	100	220	235	22	22	140	140	210	210	190	83	78	400	-	102x11	20	24	25,2	30,5			
125	125	250	270	27	27	183	183	263	263	325	153	160	600	-	125x14	22	26	60,0	62,5			
150	150	285	300	27	27	204	204	284	284	350	162	176	800	-	125x14	22	28	71,8	73,8			
200	200	340	375	27	27	253	253	-	-	400	191	221	-	-	125x14	24	34	127,0	152,0			

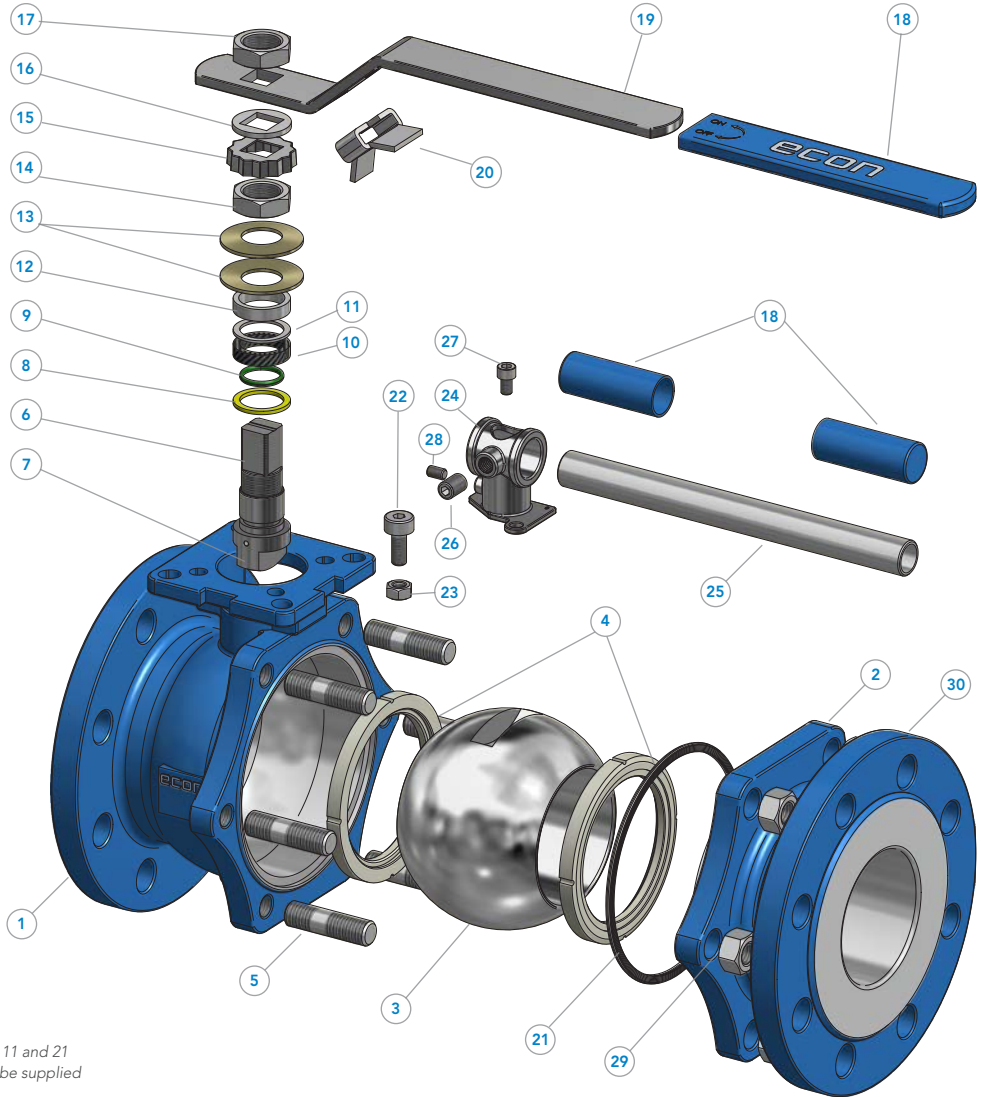
# econ® 2-piece Ball Valves

Fig. 7245  
Fig. 7285

ASME class 150 | 1/2" - 8"



- Econ® 2-piece full bore Ball Valves
- Carbon steel (Fig. 7245) and Stainless steel (Fig. 7285)
- Flange connections ASME B16.5 RF
- Pressure rating ASME class 150
- DN 1/2" - 8"
- Design ASME B16.34, API 608
- Face to face length ASME B16.10 long pattern
- ISO 5211 Direct Mount
- API 607 6th Edition Fire-Safe certified
- TA-Luft (VDI 2440, Sec. 3.3.1.3) certified
- Anti-static I ATEX 94/9/EC (Ex II 2 G-D EX-c II)
- IEC 61508, SIL 2 capable



**Remarks:**

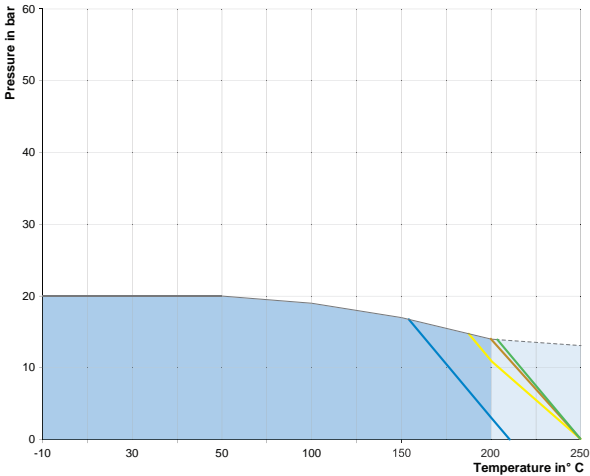
- Sizes 1/2" - 3" with hand lever
- Sizes 4" - 6" with T-bar
- Standard spare part kit consists of pas. No.: 4, 8, 9, 10, 11 and 21
- Size 8" is without operator. On request a gearbox can be supplied

Pos	Name	Material (Carbon steel)	Material (Stainless steel)	Pos	Name	Material (Carbon steel)	Material (Stainless steel)
1	Body	A216-WCB	A351-CF8M	16	Ring	AISI 304	AISI 304
2	Body end	A216-WCB	A351-CF8M	17	Nut	A194-8	A194-8
3	Ball	A351-CF8M <sup>1)</sup>	A351-CF8M	18	Sleeve	Plastic	Plastic
4	Seat ring	PTFE (TFM1600)	PTFE (TFM1600)	19	Hand lever	AISI 304	AISI 304
5	Stud	A193-B7	A193-B8	20	Locking device	AISI 304	AISI 304
6	Stem	A276-316 <sup>1)</sup>	A276-316	21	Body gasket	AISI 316L+Graphite+PTFE <sup>3)</sup>	AISI 316L+Graphite+PTFE <sup>3)</sup>
7	Anti-static device	AISI 304	AISI 316	22	Socket head screw	A193-B8	A193-B8
8	Thrust washer	PTFE	PTFE	23	Nut	A194-8	A194-8
9	O-ring	FKM (Viton®) <sup>2)</sup>	FKM (Viton®) <sup>2)</sup>	24	T-bar support	A351-CF8	A351-CF8
10	Glandpacking	GRAFOIL	GRAFOIL	25	T-bar <sup>4)</sup>	St. A53 <sup>5)</sup>	St. A53 <sup>5)</sup>
11	Bushing	AISI 304	AISI 304	26	Allen set screw	1.4301 (A193-B8)	1.4301 (A 193-B8)
12	Gland	AISI 316	AISI 316	27	Socket head screw	1.4301 (A193-B8)	1.4301 (A 193-B8)
13	Belleville washer	AISI 301	AISI 301	28	Allen set screw	1.4301 (A193-B8)	1.4301 (A 193-B8)
14	Nut	A194-8	A194-8	29	Nut	A 194-2H	A194-8
15	Locking cap	AISI 304	AISI 304	30	Name plate	AISI 304	AISI 304

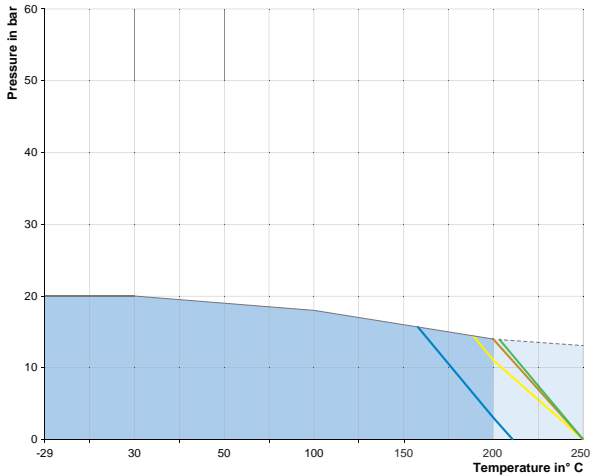
1) Upon request also available with A351-CF8 ball and A276-304 stem    2) 5" and larger: 2x O-ring    3) Spiral wound    4) 4" - 6"    5) Zinc plated

## Pressure/temperature rating

Carbon Steel



Stainless steel

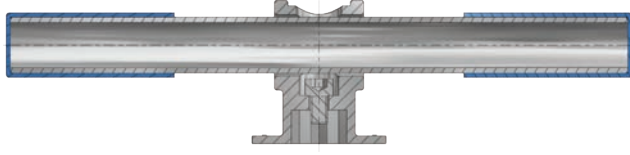
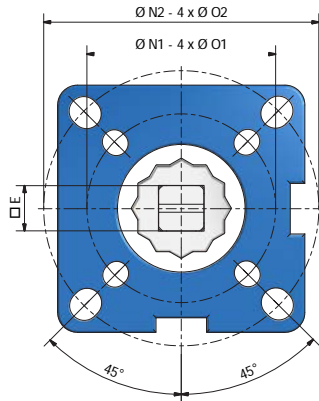
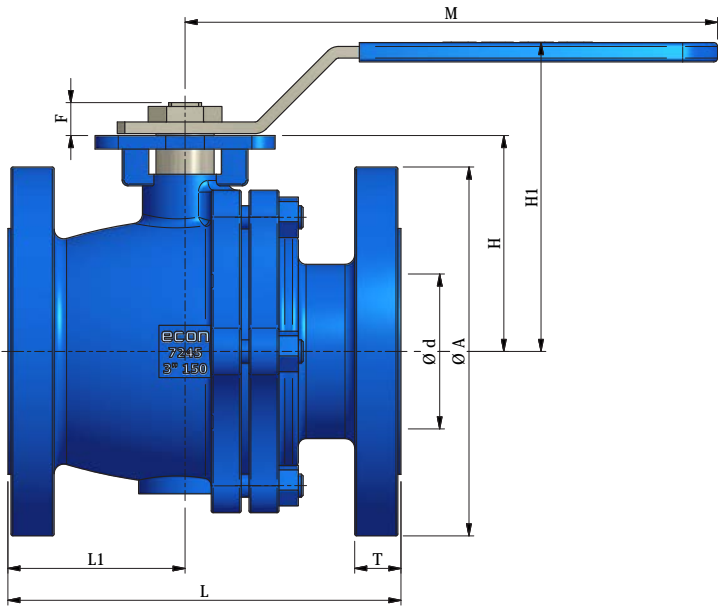


Seat rating-TFM1600

- 1/2" - 1"
- 1 1/4" - 2 1/2"
- 3" - 4"
- 5" - 8"

Body rating

#150



4" - 6" | with T-bar

DN	Ød	ØA	□E	F	H	H1	L	L1	M	ØN1 ØO1	ØN2 ØO2	T	m[kg]
1/2"	15	90	9	9	49	79	108	46	145	36x6	42x6	8,0	1,7
3/4"	20	100	9	11	53	84	117	50	145	36x6	50x7	8,9	2,2
1"	25	110	11	11	58	90	127	54	175	42x6	50x7	9,6	2,9
1 1/2"	38	130	14	14	76	110	165	64	190	50x7	70x9	12,7	5,9
2"	50	150	14	17	82	115	178	78	190	50x7	70x9	14,3	8,4
3"	76	190	17	22	112	160	203	92	265	70x9	102x11	17,5	17,8
4"	100	230	22	27	140	211	229	108	400	-	102x11	22,3	30,5
6"	150	280	27	27	204	284	394	162	800	-	125x14	23,9	72,0
8"	200	345	27	27	253	-	457	191	-	-	125x14	27,0	131,4

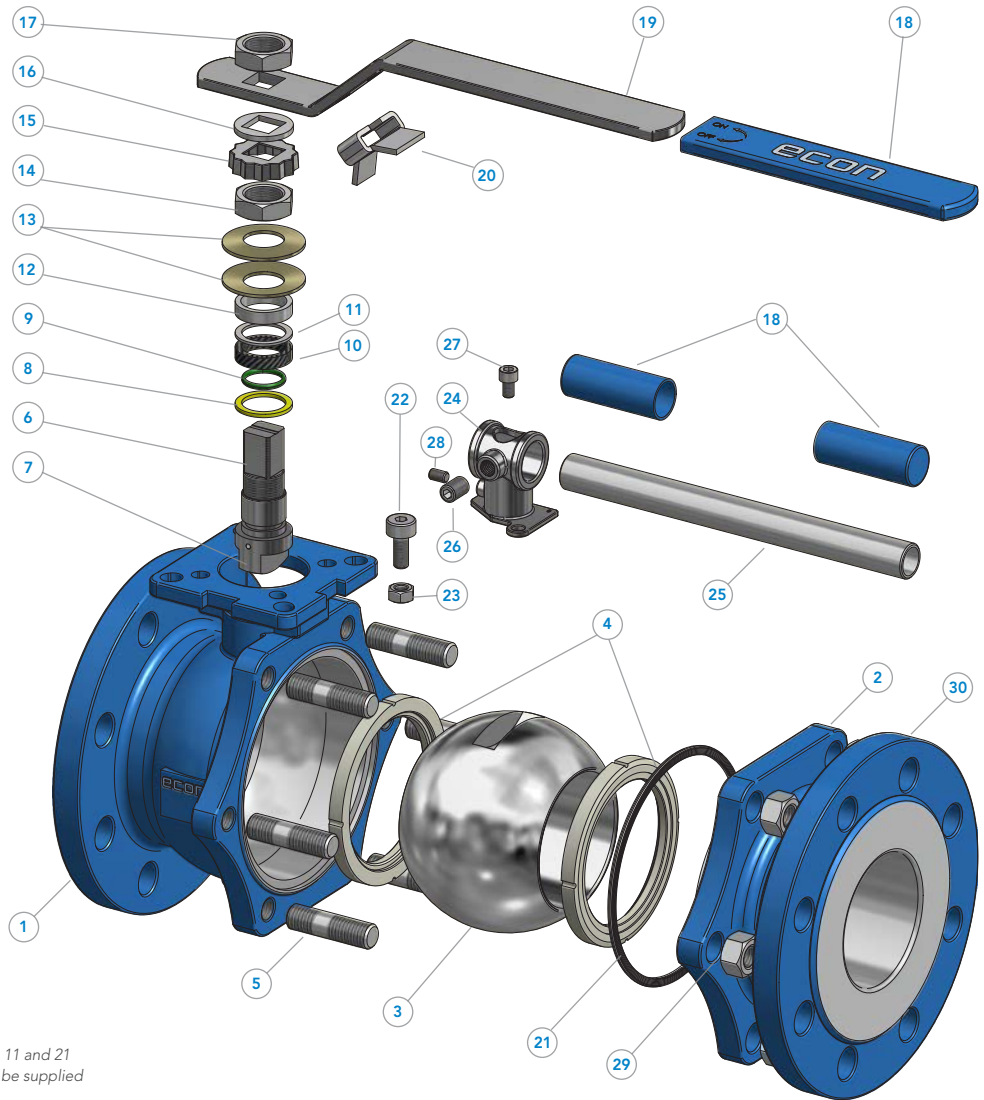
# econ® 2-piece Ball Valves

Fig. 7257  
Fig. 7297

ASME class 300 | 1/2" - 8"



- Econ® 2-piece full bore Ball Valves
- Carbon steel (Fig. 7257) and Stainless steel (Fig. 7297)
- Flange connections ASME B16.5 RF
- Pressure rating ASME class 300
- DN 1/2" - 8"
- Design ASME B16.34, API 608
- Face to face length ASME B16.10 long pattern
- ISO 5211 Top-flange (1/2"- 4") - Direct mount (5"- 8")
- API 607 6th Edition Fire-Safe certified
- TA-Luft (VDI 2440, Sec. 3.3.1.3) certified
- Anti-static I ATEX 94/9/EC (Ex II 2 G-D EX-c II)
- IEC 61508, SIL 2 capable



**Remarks:**

- Sizes 1/2" - 3" with hand lever
- Sizes 4" - 6" with T-bar
- Standard spare part kit consists of pas. No.: 4, 8, 9, 10, 11 and 21
- Size 8" is without operator. On request a gearbox can be supplied

Pos	Name	Material (Carbon steel)	Material (Stainless steel)	Pos	Name	Material (Carbon steel)	Material (Stainless steel)
1	Body	A216-WCB	A351-CF8M	16	Ring	AISI 304	AISI 304
2	Body end	A216-WCB	A351-CF8M	17	Nut	A194-8	A194-8
3	Ball	A351-CF8M <sup>1)</sup>	A351-CF8M	18	Sleeve	Plastic	Plastic
4	Seat ring	PTFE (TFM1600)	PTFE (TFM1600)	19	Hand lever	AISI 304	AISI 304
5	Stud	A193-B7	A193-B8	20	Locking device	AISI 304	AISI 304
6	Stem	A276-316 <sup>1)</sup>	A276-316	21	Body gasket	AISI 316L+Graphite+PTFE <sup>3)</sup>	AISI 316L+Graphite+PTFE <sup>3)</sup>
7	Anti-static device	AISI 304	AISI 316	22	Socket head screw	A193-B8	A193-B8
8	Thrust washer seal	PTFE	PTFE	23	Nut	A194-8	A194-8
9	O-ring	FKM (Viton®) <sup>2)</sup>	FKM (Viton®) <sup>2)</sup>	24	T-bar support	A351-CF8	A351-CF8
10	Glandpacking	GRAFOIL	GRAFOIL	25	T-bar <sup>4)</sup>	St. A53 <sup>5)</sup>	St. A53 <sup>5)</sup>
11	Bushing	AISI 304	AISI 304	26	Allen set screw	1.4301 (A193-B8)	1.4301 (A 193-B8)
12	Gland	AISI 316	AISI 316	27	Socket head screw	1.4301 (A193-B8)	1.4301 (A 193-B8)
13	Belleville washer	AISI 301	AISI 301	28	Allen set screw	1.4301 (A193-B8)	1.4301 (A 193-B8)
14	Nut	A194-8	A194-8	29	Nut	A 194-2H	A194-8
15	Locking cap	AISI 304	AISI 304	30	Name plate	AISI 304	AISI 304

1) Upon request also available with A351-CF8 ball and A276-304 stem

2) 5" and larger: 2x O-ring

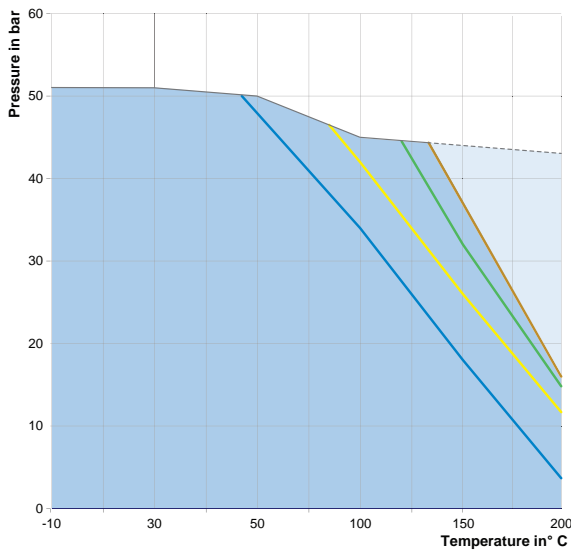
3) Spiral wound

4) 4" - 6"

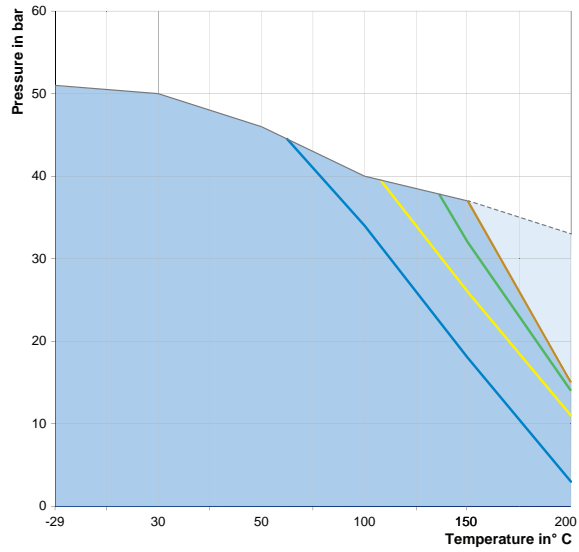
5) Zinc plated

## Pressure/temperature rating

### Carbon Steel



### Stainless steel

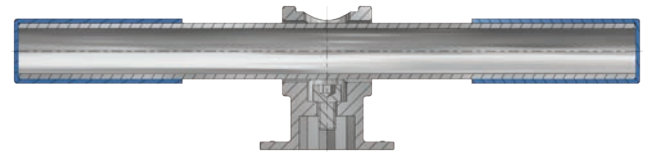
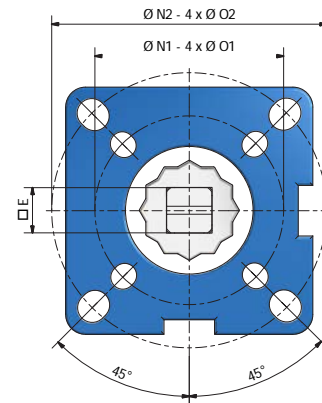
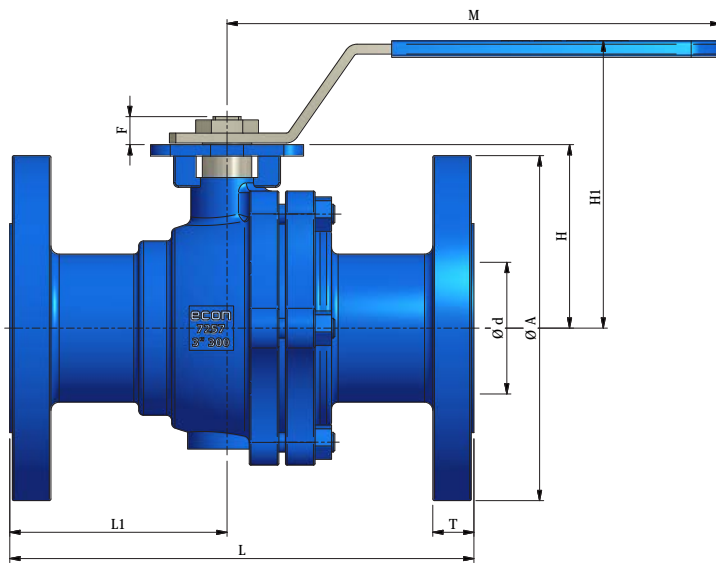


Seat rating-TFM1600

- 1/2" - 1"
- 1 1/4" - 2 1/2"
- 3" - 4"
- 5" - 8"

Body rating

#300



4" - 6" | met T-sleutel

DN	Ød	ØA	□E	F	H	H1	L	L1	M	ØN1 ØO1	ØN2 ØO2	T	m[kg]
1/2"	15	95	9	9	48,8	79,0	140	62	145	36x6	42x6	14,7	2,4
3/4"	20	115	9	9	58,5	89,0	152	68	145	36x6	42x6	16,3	3,2
1"	25	125	11	11	63,5	94,5	165	73	175	42x6	50x7	17,9	4,2
1 1/2"	38	155	14	14	79,5	110,0	190	77	190	50x7	70x9	21,1	6,9
2"	50	165	14	14	84,5	115,0	216	97	190	50x7	70x9	22,7	9,5
3"	76	210	17	17	111,5	176,0	282	132	300	70x9	102x11	29,0	18,5
4"	100	225	22	22	140,0	204,0	305	146	400	-	102x11	32,2	35,0
6"	150	320	27	27	203,0	275,0	403	174	800	-	125x14	37,0	74,0
8"	200	381	27	27	252,5	328,0	502	218	800	-	125x14	41,7	171,0

## Torque values

Size		ΔP (bar)			
		16	40	20 (class 150)	51(class 300)
DN8	1/4"	4,5	4,5	4,5	4,5
DN10	3/8"	4,5	4,5	4,5	4,5
DN15	1/2"	5	5	5	5
DN20	3/4"	6	6	6	6
DN25	1"	10	11	10,5	11
DN32	1.1/4"	14	17	15	17
DN40	1.1/2"	21	23	22	24
DN50	2"	30	34	32	35
DN65	2.1/2"	47	53	49	54
DN80	3"	77	87	81	90
DN100	4"	117	131	122	135
DN125	5"	230	272	245	285
DN150	6"	380	550	450	550
DN200	8"	500	750	550	750

## Basic principles

- Break to open (BTO) torques of Econ<sup>®</sup> ball valves with TFM1600 seat rings.
- For standard applications, like lubricating fluids, a safety factor of 1.3 must be applied for the selection of an actuator.
- For a gas or non-lubricating medium a safety factor of at least 1.5 must be applied.
- If a TFM4215 seat (Carbon filled PTFE) is used, the torque values from the table must be increased by 20 to 30%.  
Additionally, an appropriate safety factor must be applied for the selection of an actuator.

Consult your distributor for specific applications.

## Kv and Cv values

DN	Kv	Inch	Cv	DN	Kv	Inch	Cv
15	15	1/2	18	65	386	2 1/2	440
20	31	3/4	36	80	514	3	600
25	41	1	48	100	943	4	1100
32	62	1 1/4	72	125	1458	5	1700
40	103	1 1/2	120	150	2228	6	2600
50	163	2	190	200	3599	8	4200

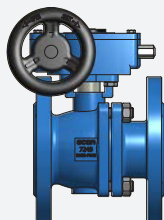
### Remarks

- Kv is the capacity in m<sup>3</sup>/h for water 20°C at a differential pressure of 1 bar.
- Cv is the capacity in US gallon per minute for water 60°F at a differential pressure of 1 psi.
- The Kv and Cv values are valid for a fully opened position only.

## Options

### Gearbox

- Visual open/close indicator
- Mechanical end stops open/close
- ISO 5211 mounting flange



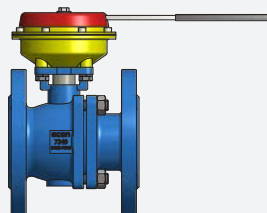
### Extended stem

- Suitable for insulation purposes
- Standard length: 100 mm (up to size DN100/4") and 120mm (size DN150/6" and DN200/8")
- Can be equipped with a pneumatic, electric or hydraulic actuator



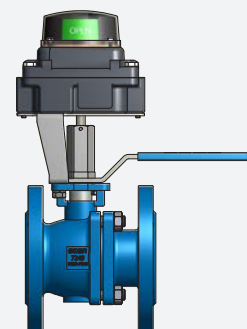
### Spring return lever

- For 'fail safe' situations



### Manual operated with position feedback

- Suitable for switch boxes or Pepperl & Fuchs F31 dual sensors

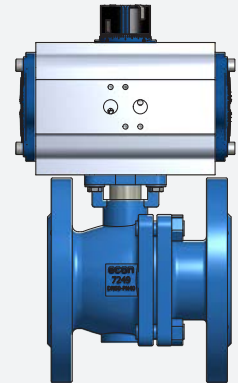


## Valve automation

Ball Valves mostly are being used for open/close purposes. For modulating purposes an Econ® V-port ball valve is available. Due to the quarter turn construction Ball Valves are perfectly suitable for automated processes. A great advantage of the Econ® two-piece flanged Ball Valves is the standard Direct Mount top-flange according to ISO 5211, which enables direct mounting of an actuator - without mounting bracket and drive adapter - on top of the valve. This results in a considerable cost saving, a compact automated unit and a higher level of safety for operators. If required, the use of a mounting bracket is still possible.

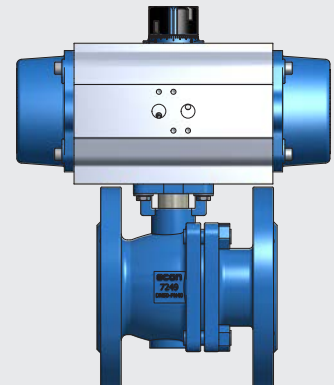
### Double acting pneumatic actuator

- Compact
- Suitable for high duty cycles
- Fast opening and closing times
- Few moving parts: increases operational safety
- Modular design for easy mounting of accessories, like limit switches, (NAMUR) solenoid valves and bus communication systems
- Can be combined with emergency operation (manual gearbox)
- ISO 5211 mounting flange



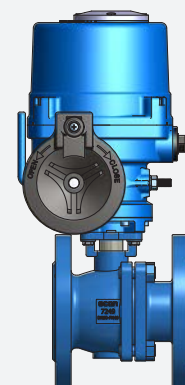
### Single acting pneumatic actuator

- Compact
- Fail-safe function can easily be realized in spring closing or spring opening configuration
- Suitable for high duty cycles
- Fast opening and closing times
- Few moving parts: increases operational safety
- Modular design for easy mounting of accessories, like limit switches, (NAMUR) solenoid valves and bus communication systems
- Can be combined with emergency operation (manual gearbox)
- ISO 5211 mounting flange



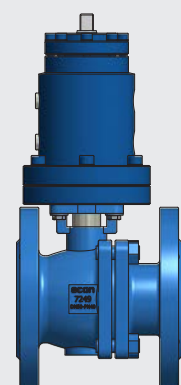
### Electric actuator

- Compact
- Wide range of voltage options
- Slow opening and closing times prevent water hammering
- Noiseless
- Self-locking reduction gear
- Integrated limit switches for feedback signals
- Emergency handwheel operator
- ISO 5211 mounting flange
- Modulating actuator available for V-port Ball Valves
- IP68 version as an option
- EExd version as an option
- CAN-open fieldbus as an option
- Profibus fieldbus as an option



### Hydraulic actuator

- Extremely compact
- Heavy duty
- High operational safety
- Modular design for easy mounting of accessories, like limit switches or visual open/close indication
- IP68 version as an option
- ISO 5211 mounting flange
- Electro-hydraulic version as an option
- CAN-open fieldbus as an option for the electric-hydraulic actuators

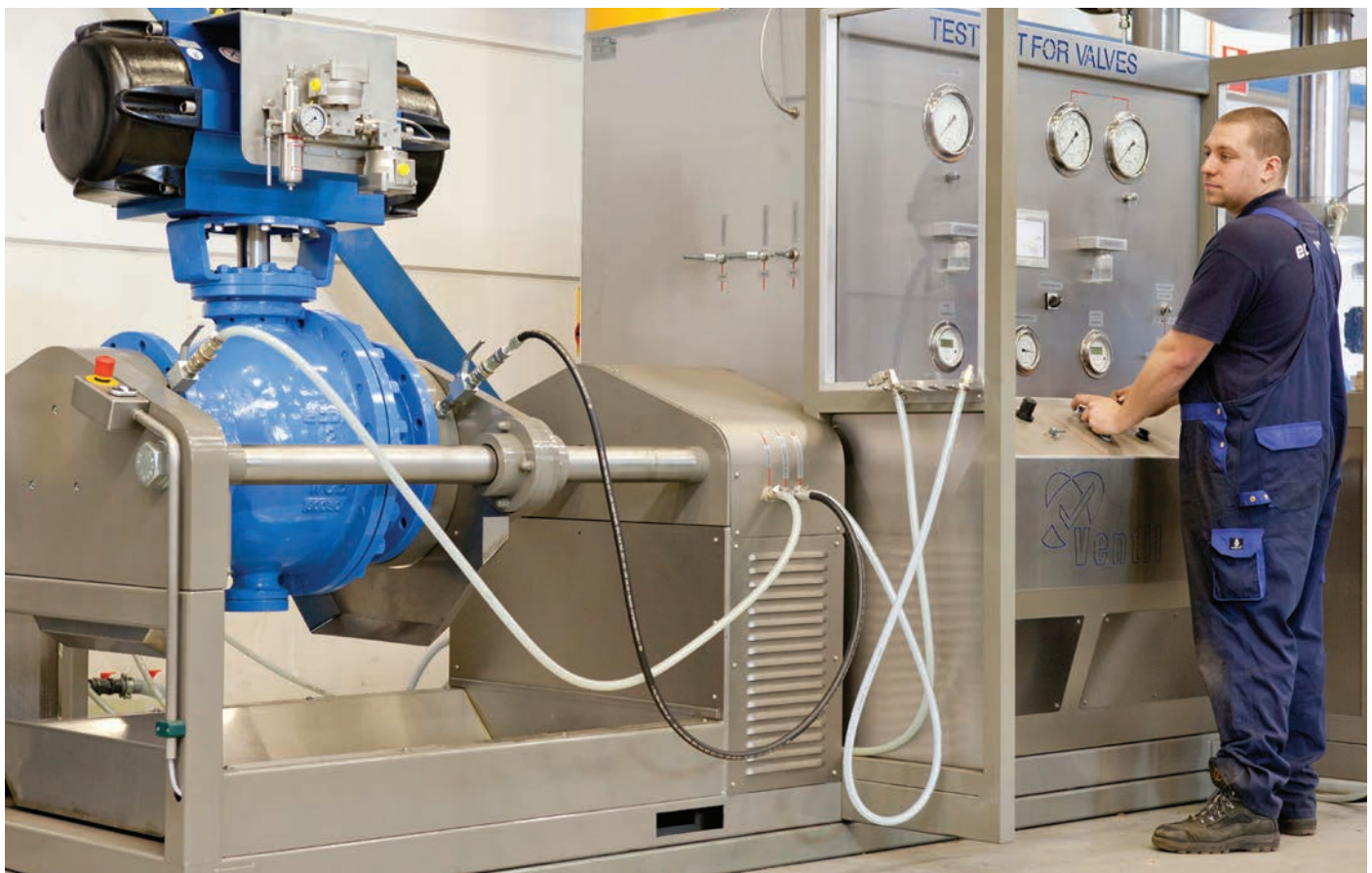


## Econ<sup>®</sup> trunnion mounted ball valves

Trunnion Mounted ball valves complete the Econ<sup>®</sup> flanged ball valve range. These valves are being characterized by the supported (trunnion) ball and spring supported seats. This construction makes it possible to manufacture ball valves in large diameters that are suitable for both low and high pressure applications.

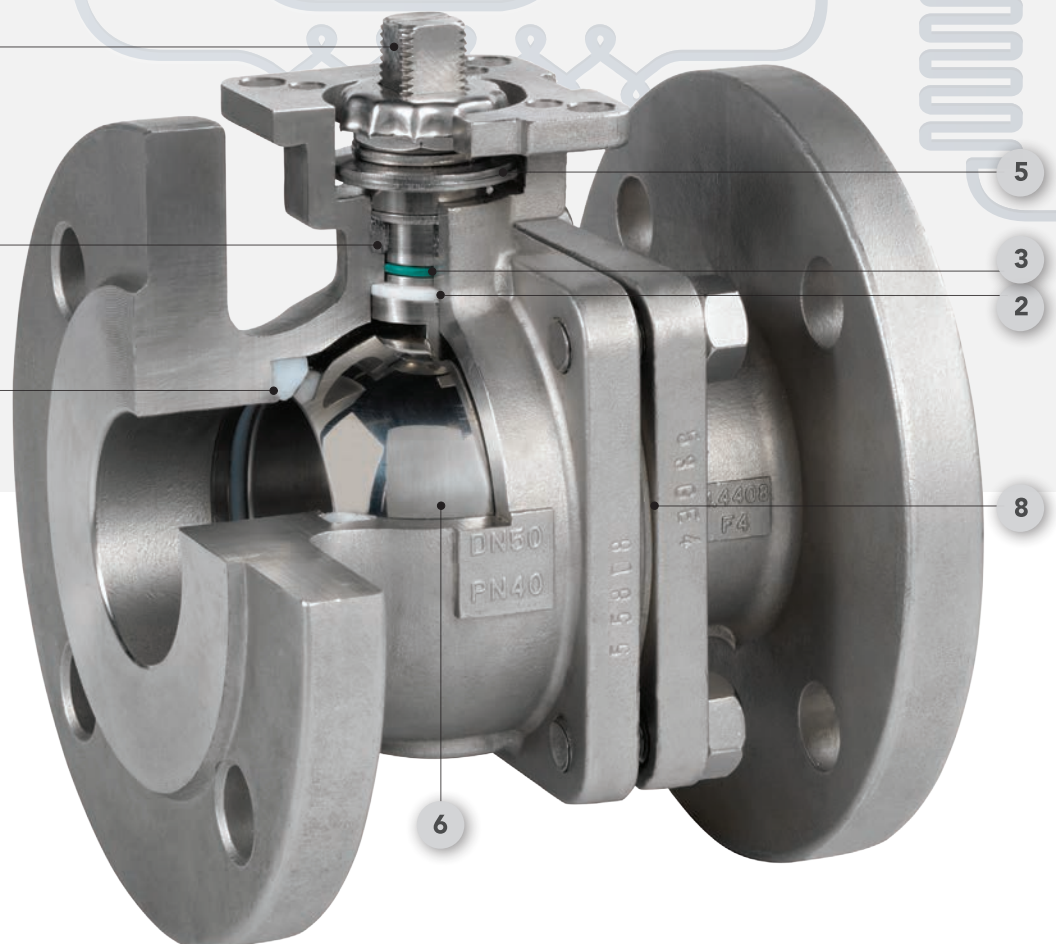
### Econ<sup>®</sup> trunnion ball valve features:

- Available in steel, stainless steel and other steel alloys
- Sizes DN150 (6") up to DN600 (24")
- ANSI Class 150 and 300, DIN PN16 and PN40 and JIS 10K and 20K
- Full bore
- Fully bi-directional
- Provided with an anti-blow out stem
- Provided with an anti-static device
- The spring supported seats provide the valves with a reliable low pressure seal. They also provide a 100% seal on both sides of the ball, allowing the valves to be applied as a "Double Block and Bleed" valve.
- Fitted with an ISO 5211 Direct Mount Flange. (A mounting kit is therefore not required for mounting the actuator)
- Adjustable multi-sealing stem seal for a long life span
- Supplied with an EN 10204-3.1 certificate and optionally with a 3.2 certificate
- Optionally also available with injection points for injecting a sealant on the stem seal and seats, which allows temporary repair of a damaged seat or stem in a quick and effective manner
- Can optionally be supplied according to NACE MR0175
- The valves can optionally be tested in according to API 6D



## Econ<sup>®</sup>-CR (Chemical Resistant) Ball Valve

The Econ<sup>®</sup> Ball Valve program has been extended with a special ball valve for chemical applications. In many of these applications, graphite gasket particles are not allowed to end up in the medium. The Econ<sup>®</sup> Chemical Resistant Ball Valve therefor has been equipped with a Leader<sup>®</sup> two layer PTFE/graphite spiral wound body gasket, which still makes the valve fire safe approved. This valve is also equipped with a Kalrez<sup>®</sup> 6375 O-ring on the stem, which keeps the stem construction TA-luft approved, even for chemical applications like Amines and Ketones. Finally, this valve will be supplied with a heavy duty molded hand lever up to size DN80/3", larger sizes will have a robust T-bar lever.



- 1 Stainless steel 1.4401 stem
- 2 Primary PTFE stem seal/thrust washer
- 3 Secondary Kalrez<sup>®</sup> 6375 TA-Luft O-ring
- 4 Tertiary Fire Safe graphoil gland packing
- 5 Belleville spring washers for a reliable self adjustable stem seal
- 6 Stainless steel 1.4408 solid ball
- 7 TFM1600 seats
- 8 Spiral wound PTFE/Graphite body gasket

Kalrez<sup>®</sup> and Viton<sup>®</sup> are registered trademarks of DuPont™



## Econ® 1-piece reduced bore ball valve

Fig. 7744, Fig. 7744NPT

Econ® 1-piece reduced bore ball valves have a BSP or NPT threaded connection. These ball valves have an extremely compact design and do have competitive prices.

- Pressure rating 1000 WOG (68 bar)
- Reduced bore
- Stainless steel 316 body, ball and stem
- PTFE seats and seals
- Sizes ¼" - 2"



## Econ® 2-piece full bore ball valve

Fig. 7752, Fig. 7752NPT, Fig. 7752ISO, Fig. 7752ISO-NPT

These competitive priced Econ® 2-piece full bore ball valves have a BSP or NPT threaded connection and lockable lever.

- Pressure rating 1000 WOG (68 bar)
- Full bore
- Stainless steel 316 body, ball and stem
- PTFE seats and seals
- Sizes ¼" - 3"
- ISO 5211 "Direct Mount" top flange (Fig. 7752ISO and 7752ISO-NPT only)



## Econ® 3-piece full bore ball valve

Fig. 7446 (BSP), Fig. 7546 (NPT), Fig. 7646 (BW or SW)

This economy type Econ® 3-piece full bore ball valve is available with BSP, NPT, Butt Weld or Socket Weld connections and has a lockable lever.

- Pressure rating 1000 WOG (68 bar)
- Full bore
- Stainless steel 316 body, ball and stem
- PTFE seats and seals
- Sizes ¼" - 3"



## Econ® 3-piece full bore ball valve with ISO "Direct Mount" top flange

Fig. 7444, Fig. 7544 (NPT), Fig. 7644 (BW-SW)

This type Econ® 3-piece full bore ball valve is equipped with a "Direct Mount" top flange according to ISO 5211 and a lockable lever. The valve can be supplied with BSP, NPT, Butt Weld or Socket Weld connections.

- Pressure rating 1000 WOG (68 bar)
- Full bore
- Stainless steel 316 body, ball and stem
- PTFE seats and seals
- ISO 5211 "Direct Mount" top flange
- Sizes ¼" - 4"



## Econ® 3-piece full bore ball valve for steam and condensate applications

Fig. 74441, Fig. 74442

This Econ® 3-piece full bore ball valve with BSP threaded connections is specially designed for steam and condensate applications up to 14 bar and is equipped with a "Direct Mount" top flange according to ISO 5211 and a lockable lever.

- Pressure rating 1000 WOG (68 bar)
- Full bore
- Stainless steel 316 or cast steel body
- PTFE (TFM4215) seats and PTFE seals
- ISO 5211 "Direct Mount" top flange
- Sizes ¼" - 2"

## Econ® Quick-Weld full bore ball valve with ISO "Direct Mount" top flange

Fig. 7611, Fig. 7645, Fig. 7654

The Econ® Quick-Weld full bore ball valve has rotatable weld connections, which saves installation time up to 30%! The valve is also equipped with a "Direct Mount" top flange according to ISO 5211 and a lockable lever. The valve can be supplied with butt weld connections and orbital weld connections for DIN 11850 pipe sizes.

- Pressure rating 1000 WOG (68 bar)
- Full bore
- Stainless steel 316 body, ball and stem
- PTFE (TFM1600) and RPTFE (Fig. 7645) seats and seals
- ISO 5211 "Direct Mount" top flange
- Sizes ¼" - 3"



## Econ® Premium 3-piece full or reduced bore ball valve with ISO top flange

Fig. 7422 (CS BSP), Fig. 7522 (CS NPT), Fig. 7622BW (CS), Fig. 7622SW (CS),

Fig. 7442 (SS BSP), Fig. 7542 (SS NPT), Fig. 7642BW (SS), Fig. 7642SW (SS)

The Econ® Premium ball valve is a heavy duty 3-piece ball valve with BSP, NPT, Butt Weld or Socket Weld connections and can be supplied in stainless steel or cast steel. The valve is equipped with a spring loaded lockable lever.

- Pressure rating Class 600 (102 bar)
- Full or reduced bore
- Stainless steel 316 or cast steel body
- RPTFE seats and seals
- ISO 5211 top flange
- Sizes ¼" - 4"



## Econ® wafer type full bore ball valve with ISO "Direct Mount" top flange

Fig. 7343 (CS) and Fig. 7383 (SS)

The Econ® wafer type ball valve with DIN flange connections can be supplied in stainless steel 316 or cast steel. These valves have a "Direct Mount" top flange according to ISO 5211 and a lockable lever.

- Pressure rating PN16 and PN40
- Full bore
- Stainless steel 316 or cast steel body
- PTFE (TFM1600) seats and seals
- ISO 5211 "Direct Mount" top flange
- Sizes DN15 / ½" - DN200/8"



## Econ® 2-piece full bore ball valve with flange connections and ISO "Direct Mount" top flange

Fig. 7249 (DIN CS), Fig. 7289 (DIN SS), Fig. 7245 (ANSI 150 CS), Fig. 7285 (ANSI 150 SS),  
Fig. 7257 (ANSI 300 CS), Fig. 7297 (ANSI 300 SS)

The Econ® 2-piece ball valve with DIN or ASME flanges can be supplied in stainless steel 316 or cast steel. These valves have a "Direct Mount" top flange according to ISO 5211 and a lockable lever up to size DN150/6".

- Pressure rating PN16, PN40, Class 150 and Class 300
- Full bore
- Stainless steel 316 or cast steel body
- PTFE (TFM1600) seats and seals
- ISO 5211 "Direct Mount" top flange
- Sizes DN15 / ½" - DN200/8"



## Econ® 3-way ball valve with ISO "Direct Mount" top flange

Fig. 7281 (CS flanged), Fig. 7291 (SS flanged), Fig. 7760L-BSP, fig. 7760L-NPT, Fig 7760T-BSP, Fig. 7760T-NPT

The 3-way Econ® ball valves have a "Direct Mount" top flange according to ISO 5211 and a lockable lever. The "Direct Mount" top flange makes it easy to automate the valves at a very competitive price. These valves can be supplied with a L- or T-bore and with flanged, BSP or NPT threaded connections.

### Flanged valves

- Pressure rating PN16, PN40 and Class 150
- PTFE (TFM1600) seats and seals
- Full bore
- ISO 5211 "Direct Mount" top flange
- Stainless steel 316 or cast steel body
- Sizes DN15 / ½" - DN100/4"

### Threaded valves

- Pressure rating 1000 WOG (68 bar)
- RPTFE seats and seals
- Reduced bore
- ISO 5211 "Direct Mount" top flange
- Stainless steel 316 body, ball and stem
- Sizes ¼" - 2"



## Valve Automation Centre

The Valve Automation Centre has a state of the art workshop in which well trained technicians mount pneumatic, hydraulic and electric actuators on valves. Valves and actuators can be modified according to customer specifications and be equipped with options such as valve positioners, limit switches, pilot valves and more. Five pressure test benches allow testing of valves up to DN1200/48". The applicable standards are API 598 and EN 12266 and any other customer specified protocols can additionally be performed.

### Engineering

- Working out customer-specific requirements.
- Product development support.
- Providing 2D and 3D assembly drawings.
- Supplying 3D CAD models.

### Workshops

- Modern workshops of more than 5000 m<sup>2</sup>.
- Facilitating of large and complex projects.
- Automating and modifying of valves.
- Mounting, adjusting and modifying according to customer-specific requirements.

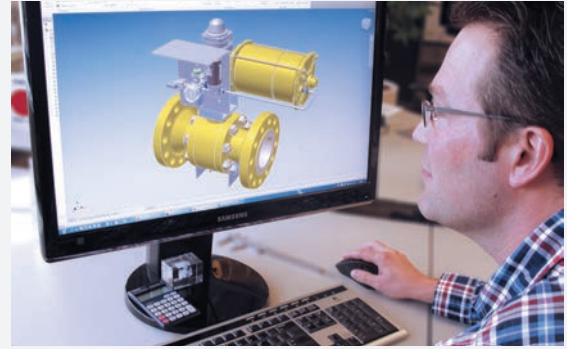
### Logistics

- More than 2 million products from stock
- Automated delivery of products
- International presence in 24 countries

### Testing

- Large test facilities.
- Pressure testing of valves up to DN1200/48".
- Maximum test pressure 1200 bar.

*Largest stockist of valves and actuators in Europe.*



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