

1WE52: 1000 WOG - Stainless Steel Ball Valve

2-Piece • NPT Ends • Stainless Steel • Full Port • Non-Mounting

STANDARD SPECIFICATIONS

General	
Description	2 Piece 1000 WOG NPT Stainless Steel Ball Valve
Item #	1WE52-AO-SSTT-NOC-XXXX
Figure	7752
Design Parameters	
Mount Type	N/A
Port	Full Port
NACE	Yes
Fire Safe	No
Connection	NPT
Materials of Construction	
Body	Stainless Steel (A351-CF8M)
Ball	316SS
Seat	PTFE
Body Gaskets	PTFE



ORDERING INFORMATION

Valve Only

Item	Size	Item #
E52 Series Ball Valve (Standard Options)	1/4"	1WE52-AO-SSTT-NOC-0025
	3/8"	1WE52-AO-SSTT-NOC-0038
	1/2"	1WE52-AO-SSTT-NOC-0050
	3/4"	1WE52-AO-SSTT-NOC-0075
	1"	1WE52-AO-SSTT-NOC-0100
	1-1/2"	1WE52-AO-SSTT-NOC-0150
	2"	1WE52-AO-SSTT-NOC-0200

E52: 1000 WOG

2 Piece, Full Port Ball Valve, NPT Ends
Stainless Steel

Description

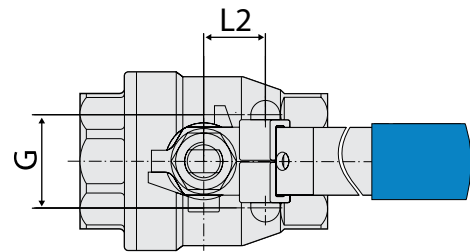
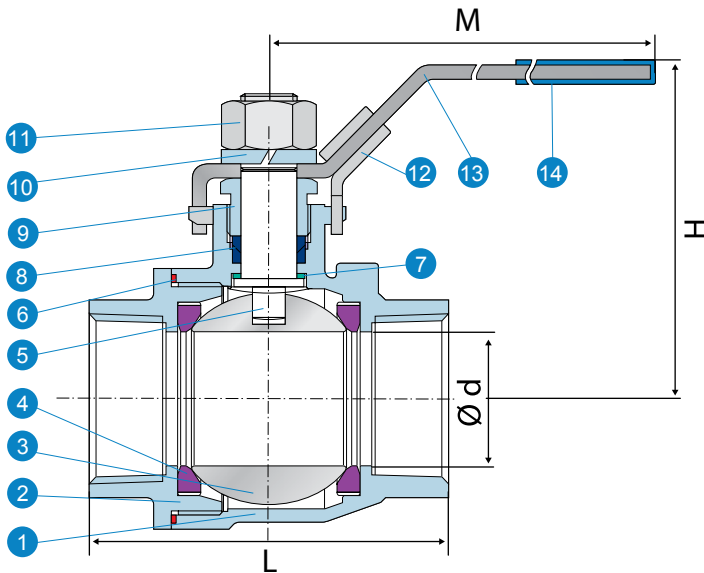
The Econ® E52 Series is a two piece, full port ball valve with NPT ends. The E52 is rated to 1000 WOG and is available in sizes ranging from 1/4" to 2". Valve bodies are made of Stainless Steel (CF8M) with 316SS trim.

Features

- Size Range: 1/4" – 2"
- Stainless Steel (CF8M) Bodies/316SS Trim
- Blow-out Proof Stem
- Pressure Balance Hole in Ball Slot

Standards

- Design: ASME B16.34,
- Pipe Thread: ASME B1.20.1
- Inspection and Testing: MSS SP-110



Materials of Construction

Item	Component	Material
1	Body	Stainless Steel (A351-CF8M)
2	Cap	Stainless Steel (A351-CF8M)
3	Ball	316SS
4	Ball Seat	PTFE
5	Stem	316SS
6	Body Gasket	PTFE
7	Thrust Washer	PTFE
8	V-Ring Packing	PTFE
9	Gland Nut	304SS
10	Stem Washer	304SS
11	Retaining Nut	A194-8
12	Locking Device	304SS
13	Lever	304SS
14	Lever Sleeve	Plastic Vinyl

Dimensions

E52: 1000 WOG - Dimensions in Inches (in)						
SIZE	Ø d	L	H	M	L2	G
1/4"	0.42	2.29	2.29	3.94	0.50	1.12
3/8"	0.47	2.29	2.29	3.94	0.50	1.12
1/2"	0.59	2.44	2.29	3.94	0.50	1.12
3/4"	0.79	2.85	2.52	5.08	0.87	1.37
1"	0.99	3.35	3.03	6.15	0.87	1.37
1-1/4"	1.26	3.70	3.27	6.15	0.93	1.50
1-1/2"	1.50	4.14	3.78	7.19	0.93	1.50
2"	1.97	4.92	4.02	7.19	0.93	1.50

E52: 1000 WOG - Dimensions in Millimeters (mm)						
SIZE	Ø d	L	H	M	L2	G
DN8	10.6	58.0	58.0	100.0	12.7	28.5
DN10	12.0	58.0	58.0	100.0	12.7	28.5
DN15	15.0	62.0	58.0	100.0	12.7	28.5
DN20	20.0	72.4	64.0	129.0	22.0	34.8
DN25	25.0	85.0	77.0	156.0	22.0	34.8
DN32	32.0	94.0	83.0	156.0	23.6	38.1
DN40	38.0	105.0	96.0	182.5	23.6	38.1
DN50	50.0	125.0	102.0	182.5	23.6	38.1

Torque Figures

Close to open Torque at Various Differential Pressure (ΔP)

E52: 1000 WOG with Standard Seats (PTFE) Valve Torque at Differential Pressure (ΔP)											
Size / ΔP		75 psig		150 psig		300 psig		700 psig		1000 psig	
		5 bar		10 bar		20 bar		50 bar		63 bar	
		Nm	in-lb	Nm	in-lb	Nm	in-lb	Nm	in-lb	Nm	in-lb
1/4"	DN8	5	44	5	44	5	44	5	44	5	44
3/8"	DN10	5	44	5	44	5	44	5	44	5	44
1/2"	DN15	5	44	5	44	5	44	5	44	5	44
3/4"	DN20	6	53	6	53	6	53	6	53	6	53
1"	DN25	10	88	10	88	11	97	11	97	11	97
1-1/4"	DN32	13	115	13	115	15	133	17	150	19	168
1-1/2"	DN40	19	168	19	168	22	195	24	212	26	230
2"	DN50	25	221	29	257	32	283	35	310	38	336

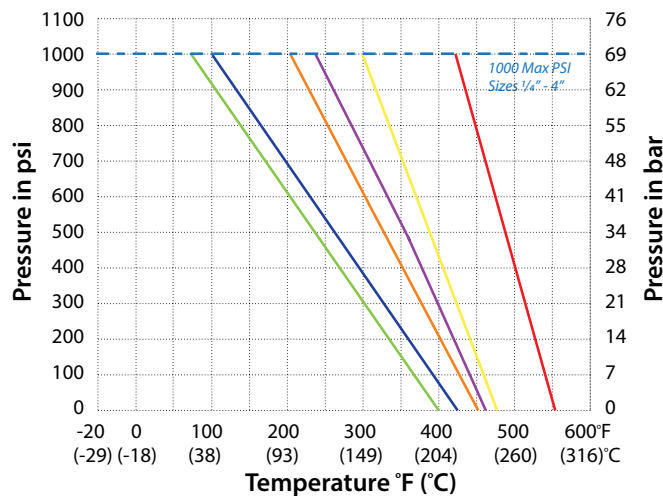
CV Value - Standard Ball

Cv Value of Ball Valve													
Size/Series	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	3"	4"	5"	6"	8"
	DN8	DN10	DN15	DN20	DN25	DN32	DN40	DN50	DN80	DN100	DN125	DN150	DN200
E10	-	-	18	36	48	72	120	190	600	1100	1700	2600	4200
E15	-	-	15	18	36	48	58	120	450	600	-	-	-
E20	-	-	18	36	48	72	120	190	-	-	-	-	-
E30	-	-	18	36	48	72	120	190	-	-	-	-	-
E52	-	-	18	36	48	72	120	190	600	-	-	-	-
E55	-	-	-	-	18	36	48	72	-	-	-	-	-
E60	-	-	18	36	45	58	112	224	410	2	-	-	-
E70	13	-	18	36	-	-	120	-	-	-	-	-	-

Seat Performance Capabilities

Pressure/Temperature Data

Floating Ball Valves, 1000 WOG Full Bore - Sizes 1/4" - 4"



Seat Materials: ■ PTFE ■ RTFE ■ TFM1600 ■ EK+PTFE ■ PEEK ■ TFM4215

PTFE is the standard seat material for E52 & E55 Series. TFM1600 is the standard seat material for E10, E15, E40, E60 & E70 Series. TFM 4215 is the standard seat material for E20 and E30 Series

Body Ratings: Body Ratings of Stainless Steel (SS) - A351-CF8M, Carbon Steel (CS) - A216-WCB or other body materials are referred to ASME B16.34

How to Order

Ball Valve Ordering Matrix

How to Order: Valve Only

Example: A 2", Two Piece ASME Class 150, Full Port Ball Valve with Flanged Ends, Carbon Steel Body, Stainless Steel Trim, TFM1600 Seats, Graphite Packing, NACE Compliant, Fire Safe, Locking Lever Operated is written: 10E10-AR-CSFG-NFC-0200

A	B	C	D	E	F	G	H	I	J	K
X	X	X	X	X	X	X	X	X	X	X

A	Construction Type
10E10	2-PC. ASME-150, Full Port, Flanged
30E10	2-PC. ASME-300, Full Port, Flanged
10E15	1-PC. ASME-150, Reduced Port, Flanged
30E15	1-PC. ASME-300, Reduced Port, Flanged**
2WE20	3-PC. 2000WOG, Full Port, NPT/SW (≤1")
5WE20	3-PC. 1500WOG, Full Port, NPT/SW (>1")
2WE30	2-PC. 2000WOG, Full Port, NPT (≤1")
5WE30	2-PC. 1500WOG, Full Port, NPT (>1")
1WE40	3-PC. 1000WOG, Full Port, NPT/SW
1WE52	2-PC. 1000WOG, Full Port, NPT*
1WE55	1-PC, 1000WOG, Double Red. Port, NPT*
10E60	3-Way ASME-150, Full Port, L/T Port, Flanged
1WE70	3-Way 1000WOG, Full Port, L/T Port, NPT

B	Port Configuration
A	As Defined (Standard Configuration)
T	T-Port
L	L-Port
3	30° V-Notch**
6	60° V-Notch**

C	End Connection
B	BW x BW**
X	BWE x BWE
R	RF Flange
O	FNPT x FNPT
W	SW x SW
U	FNPT x SW
J	RTJ Flange**

D	Body Material
C	Carbon Steel (A216-WCB)
A	Alloy 20**
S	Stainless Steel (A351-CF8M)

E	Trim
C	Carbon Steel
A	Alloy 20**
S	Stainless Steel

F	Seats
E	EK+PTFE**
F	TFM1600
G	TFM4215
H	TFM1600 + 15% Carbon**
P	PEEK***
R	RTFE**
T	PTFE
Z	METAL**
V	50%PTFE +50%SS**

G	Body Gasket
G	316 Spiral Wound + Grafoil
T	PTFE

H	NACE
N	NACE
O	NON-NACE

I	Fire Safe
F	Fire Safe
O	NON-Fire Safe

J	Operator
C	Locking Lever/T-Handle
G	Gear

K	Port Size	
	NPS	DN
0025	1/4"	8
0038	3/8"	10
0050	1/2"	15
0075	3/4"	20
0100	1"	25
0125	1-1/4"	32
0150	1-1/2"	40
0200	2"	50
0250	2-1/2"	65
0300	3"	80
0400	4"	100
0500	5"	125
0600	6"	150
0800	8"	200

Note:

* Manual operation only (A)

** Full factory lead time may be required for valves with these components

How to Order

Valve Assembly Ordering Matrix

How to Order: Valve Assembly

Example: A 2", Two Piece ASME Class 150, Full Port Ball Valve with Flanged Ends, Carbon Steel Body, Stainless Steel Trim, TFM1600 Seats, Graphite Packing, NACE Compliant, Fire Safe with **Spring Return Actuator, Fail Closed, 12 Springs, 24VDC NEMA 7 Solenoid, and NEMA 7 Mechanical Limit Switch** is written: 10E10-AR-CSFG-NFC-0200 + **S04C12-C-C-XXX**



L	Actuator: None
X	NO Actuator

OR

Actuator: Double Acting			
L	Size	L	Size
DA01	EDA 0010	DA50	EDA 0500
DA02	EDA 0020	DA85	EDA 0850
DA04	EDA 0040	DA12	EDA 1200
DA08	EDA 0080	DA17	EDA 1750
DA13	EDA 0130	DA21	EDA 2100
DA20	EDA 0200	DA25	EDA 2500
DA30	EDA 0300		

OR

Actuator: Spring Return			
L	Fail Closed	L	Fail Open
S02C<u>06</u>	ESR 0020 FC	S02A<u>06</u>	ESR 0020 FO
S04C<u>14</u>	ESR 0040 FC	S04A<u>14</u>	ESR 0040 FO
S08C<u>14</u>	ESR 0080 FC	S08A<u>14</u>	ESR 0080 FO
S13C<u>14</u>	ESR 0130 FC	S13A<u>14</u>	ESR 0130 FO
S20C<u>14</u>	ESR 0200 FC	S20A<u>14</u>	ESR 0200 FO
S30C<u>14</u>	ESR 0300 FC	S30A<u>14</u>	ESR 0300 FO
S50C<u>14</u>	ESR 0500 FC	S50A<u>14</u>	ESR 0500 FO
S85C<u>14</u>	ESR 0850 FC	S85A<u>14</u>	ESR 0850 FO
S12C<u>14</u>	ESR 1200 FC	S12A<u>14</u>	ESR 1200 FO
S17C<u>14</u>	ESR 1750 FC	S17A<u>14</u>	ESR 1750 FO
S21C<u>14</u>	ESR 2100 FC	S21A<u>14</u>	ESR 2100 FO
S25C<u>14</u>	ESR 2500 FC	S25A<u>14</u>	ESR 2500 FO
S40C<u>14</u>	ESR 4000 FC	S40A<u>14</u>	ESR 4000 FO

Change the spring quantity by replacing the last 2 characters (underlined) with a new code.

Change Spring Count			
04	4 Springs	10	10 Springs
06	6 Springs	12	12 Springs
08	8 Springs	14	14 Springs

OR

Actuator: Electric (On/Off)			
L	110V	L	24V
E04A<u>S</u>	ELA 0040 110V	E04D<u>S</u>	ELA 0040 24V
E06A<u>S</u>	ELA 0060 110V	E08D<u>S</u>	ELA 0080 24V
E08A<u>S</u>	ELA 0080 110V		
E10A<u>S</u>	ELA 0100 110V		
E15A<u>S</u>	ELA 0150 110V		
E20A<u>S</u>	ELA 0200 110V		
E30A<u>S</u>	ELA 0300 110V		
E50A<u>S</u>	ELA 0500 110V		
E60A<u>S</u>	ELA 0600 110V		
E80A<u>S</u>	ELA 0800 110V		
E12A<u>S</u>	ELA 1200 110V		

If Electric Modulation is needed, change the last character (underlined) from **S** to **M**.

M	Solenoid Valve
X	NO Solenoid
A	Solenoid, NEMA 4 Watertight, 24VDC
L	Solenoid, NEMA 4 Watertight, 24VAC
B	Solenoid, NEMA 4 Watertight, 110VAC
C	Solenoid, NEMA 7 Explosion proof, 24VDC
M	Solenoid, NEMA 7 Explosion proof, 24VAC
D	Solenoid, NEMA 7 Explosion proof, 110VAC
T	Custom Solenoid Option

N	Limit Switch
X	NO Limit Switch
V	Limit Switch, NEMA 4 Mechanical
W	Limit Switch, NEMA 4 Proximity
Y	Limit Switch, NEMA 7 Explosion proof, Mechanical
Z	Limit Switch, NEMA 7 Explosion proof, Proximity
T	Custom Limit Switch Option

O	Positioner
X	NO Positioner
A	Smart Positioner, NEMA 4, Single Acting
B	Smart Positioner, NEMA 4, Double Acting
T	Custom Positioner Option
V	Pneumatic Positioner

P	Other
X	No other item
E	Stem extensions on valves

Q	Linkage Kit
X	NO Linkage Kit
L	Linkage Kit

Note:
Contact sales for additional valve assembly accessory options.

Flanged Valves



- ASME 150 & 300
- Full Port, Reduced Port, V-Port, 3-Way
- Ta-Luft emission compliance
- TFM Seat standard with other options available
- Fire Safe certified and NACE standard
- Flanges are in accordance with ASME B16.5 RF
- ISO 5211 Direct Mount Design

NPT and Welded Valves



- ASME 1000 WOG – 2000 WOG
- Full Port, Reduced Port, V-Port, 3-Way
- Ta-Luft emission compliance
- TFM Seat standard with other options available
- Fire Safe certified and NACE standard
- 100% tight and are tested in accordance with API 598

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
- Other options available

Spring Return 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
- Other options available

Electric Actuator



- Compact
- Wide range of voltage options
- Noiseless
- Self-locking reduction gear
- Emergency hand wheel operator
- Modulating actuator available for V-port Ball Valves
- Other options available

Extended Stem



- Suitable for insulation purposes
- Standard length: 4" length (up to size 4") and 4.7" length (6" and 8")
- Can be equipped with a pneumatic or electric actuator

Smart Positioner



- Linear or Rotary Action
- Single or Double Acting
- Push Button Calibration
- 4 - 20 mA Input Control Signal
- -22°F - 185°F (-30°C - 85°C) Ambient Temperature
- HART Capable
- Linear, Quick Opening, =%, & User Defined Characteristics
- Other options available

Limit Switch



- Mechanical and Proximity applications
- Bolt on visual position indicator
- Dual cable entries
- Includes Namur mounting bracket
- Other options available

Econ Service Centers

- Stocking, assembly, and testing service centers all over the USA
- Able to assemble and ship day of order on request
- Supported by ERIKS Europe who have the largest stocking of valves and actuators in Europe



Econ North American Partners

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