

# 1WE70: 1000 WOG - Stainless Steel Ball Valve

3-Way • NPT Ends • Stainless Steel • Full Port • Direct Mount Actuation Design

## STANDARD SPECIFICATIONS

General	
Description	3-Way ASME 150 Stainless Steel Ball Valve
Item #	1WE70-LR-SSFT-NOC-XXXX
Figure	7291
Design Parameters	
Mount Type	Direct Mount
Port	Full Port
NACE	Yes
Fire Safe	No
Connection	NPT
Materials of Construction	
Body	Stainless Steel (A351-CF8M)
Ball	316SS
Seat	TFM 1600
Body Gaskets	PTFE



## ORDERING INFORMATION

### Valve Only

Item	Size	Item #
E70 Series Ball Valve (Standard Options)	1/2"	1WE70-LO-SSFT-NOC-0050
	3/4"	1WE70-LO-SSFT-NOC-0075
	1"	1WE70-LO-SSFT-NOC-0100
	1-1/2"	1WE70-LO-SSFT-NOC-0150

## FLOW PATTERNS FOR 3-WAY VALVE

	L-PORT CONFIGURATION	T-PORT CONFIGURATION			
Configurations	<p><b>1WE70-LO-SSFT-NOC-XXXX</b></p> <p>↑</p> <p>Specifies L-Port Configuration</p>	<p><b>1WE70-TO-SSFT-NOC-XXXX</b></p> <p>↑</p> <p>Specifies T-Port Configuration</p>			
	<b>FLOW PLAN L-PORT - 90° TURN</b>	<b>FLOW PLAN T-PORT - 90° TURN</b>			
Flow Plans - Position A	<p>* Flow Plan 10</p> <p>Position A</p>	<p>Flow Plan 1</p> <p>Position A</p>	<p>Flow Plan 2</p> <p>Position A</p>	<p>Flow Plan 3</p> <p>Position A</p>	<p>Flow Plan 4</p> <p>Position A</p>
Flow Plans - Position B	<p>Position B</p>	<p>Position B</p>	<p>Position B</p>	<p>Position B</p>	<p>Position B</p>

\* Designates standard configuration - no cost to change plans

Item	Flow Plan	Item # (Position A → B)	Item # (Position B → A)
Flow Plan Item #s	Flow Plan 10	3WAY-LPLAN-10	3WAY-LPLAN-10R
	Flow Plan 1	3WAY-TPLAN-1	3WAY-TPLAN-1R
	Flow Plan 2	3WAY-TPLAN-2	3WAY-TPLAN-2R
	Flow Plan 3	3WAY-TPLAN-3	3WAY-TPLAN-3R
	Flow Plan 4	3WAY-TPLAN-4	3WAY-TPLAN-4R

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## BASE ASSEMBLIES

PNEUMATIC ASSEMBLIES	E70 + DOUBLE ACTING ACTUATOR			E70 + SPRING RETURN ACTUATOR, FAIL CLOSE			E70 + SPRING RETURN ACTUATOR, FAIL OPEN		
	Item	Size	Item #	Item #	Item #	Item #	Item #	Item #	Item #
PNEUMATIC ASSEMBLIES	60 PSI	1/2"	1WE70-LO-SSFT-NOC-0050+DA02-X-X-XXX	1WE70-LO-SSFT-NOC-0050+S08C08-X-X-XXX	1WE70-LO-SSFT-NOC-0050+S08A08-X-X-XXX	1WE70-LO-SSFT-NOC-0050+S08C08-X-X-XXX	1WE70-LO-SSFT-NOC-0075+S08C08-X-X-XXX	1WE70-LO-SSFT-NOC-0100+S13C10-X-X-XXX	1WE70-LO-SSFT-NOC-0150+S20C10-X-X-XXX
		3/4"	1WE70-LO-SSFT-NOC-0075+DA04-X-X-XXX	1WE70-LO-SSFT-NOC-0075+S04C14-X-X-XXX	1WE70-LO-SSFT-NOC-0075+S04A14-X-X-XXX	1WE70-LO-SSFT-NOC-0100+S08C14-X-X-XXX	1WE70-LO-SSFT-NOC-0100+S08A14-X-X-XXX	1WE70-LO-SSFT-NOC-0150+S13C14-X-X-XXX	1WE70-LO-SSFT-NOC-0150+S13A14-X-X-XXX
		1"	1WE70-LO-SSFT-NOC-0100+DA04-X-X-XXX	1WE70-LO-SSFT-NOC-0100+S08C14-X-X-XXX	1WE70-LO-SSFT-NOC-0100+S08A14-X-X-XXX	1WE70-LO-SSFT-NOC-0100+S08C14-X-X-XXX	1WE70-LO-SSFT-NOC-0100+S08A14-X-X-XXX	1WE70-LO-SSFT-NOC-0150+S13C14-X-X-XXX	1WE70-LO-SSFT-NOC-0150+S13A14-X-X-XXX
		1-1/2"	1WE70-LO-SSFT-NOC-0150+DA08-X-X-XXX	1WE70-LO-SSFT-NOC-0150+S13C14-X-X-XXX	1WE70-LO-SSFT-NOC-0150+S13A14-X-X-XXX	1WE70-LO-SSFT-NOC-0150+S13C14-X-X-XXX	1WE70-LO-SSFT-NOC-0150+S13A14-X-X-XXX	1WE70-LO-SSFT-NOC-0150+S13C14-X-X-XXX	1WE70-LO-SSFT-NOC-0150+S13A14-X-X-XXX
	80 PSI	1/2"	1WE70-LO-SSFT-NOC-0050+DA02-X-X-XXX	1WE70-LO-SSFT-NOC-0050+S04C14-X-X-XXX	1WE70-LO-SSFT-NOC-0050+S04A14-X-X-XXX	1WE70-LO-SSFT-NOC-0075+S04C14-X-X-XXX	1WE70-LO-SSFT-NOC-0075+S04A14-X-X-XXX	1WE70-LO-SSFT-NOC-0100+S08C14-X-X-XXX	1WE70-LO-SSFT-NOC-0100+S08A14-X-X-XXX
		3/4"	1WE70-LO-SSFT-NOC-0075+DA04-X-X-XXX	1WE70-LO-SSFT-NOC-0075+S04C14-X-X-XXX	1WE70-LO-SSFT-NOC-0075+S04A14-X-X-XXX	1WE70-LO-SSFT-NOC-0100+S08C14-X-X-XXX	1WE70-LO-SSFT-NOC-0100+S08A14-X-X-XXX	1WE70-LO-SSFT-NOC-0150+S13C14-X-X-XXX	1WE70-LO-SSFT-NOC-0150+S13A14-X-X-XXX
		1"	1WE70-LO-SSFT-NOC-0100+DA04-X-X-XXX	1WE70-LO-SSFT-NOC-0100+S08C14-X-X-XXX	1WE70-LO-SSFT-NOC-0100+S08A14-X-X-XXX	1WE70-LO-SSFT-NOC-0100+S08C14-X-X-XXX	1WE70-LO-SSFT-NOC-0100+S08A14-X-X-XXX	1WE70-LO-SSFT-NOC-0150+S13C14-X-X-XXX	1WE70-LO-SSFT-NOC-0150+S13A14-X-X-XXX
		1-1/2"	1WE70-LO-SSFT-NOC-0150+DA08-X-X-XXX	1WE70-LO-SSFT-NOC-0150+S13C14-X-X-XXX	1WE70-LO-SSFT-NOC-0150+S13A14-X-X-XXX	1WE70-LO-SSFT-NOC-0150+S13C14-X-X-XXX	1WE70-LO-SSFT-NOC-0150+S13A14-X-X-XXX	1WE70-LO-SSFT-NOC-0150+S13C14-X-X-XXX	1WE70-LO-SSFT-NOC-0150+S13A14-X-X-XXX
	100 PSI	1/2"	1WE70-LO-SSFT-NOC-0050+DA02-X-X-XXX	1WE70-LO-SSFT-NOC-0050+S04C14-X-X-XXX	1WE70-LO-SSFT-NOC-0050+S04A14-X-X-XXX	1WE70-LO-SSFT-NOC-0075+S04C14-X-X-XXX	1WE70-LO-SSFT-NOC-0075+S04A14-X-X-XXX	1WE70-LO-SSFT-NOC-0100+S08C14-X-X-XXX	1WE70-LO-SSFT-NOC-0100+S08A14-X-X-XXX
		3/4"	1WE70-LO-SSFT-NOC-0075+DA04-X-X-XXX	1WE70-LO-SSFT-NOC-0075+S04C14-X-X-XXX	1WE70-LO-SSFT-NOC-0075+S04A14-X-X-XXX	1WE70-LO-SSFT-NOC-0100+S08C14-X-X-XXX	1WE70-LO-SSFT-NOC-0100+S08A14-X-X-XXX	1WE70-LO-SSFT-NOC-0150+S13C14-X-X-XXX	1WE70-LO-SSFT-NOC-0150+S13A14-X-X-XXX
		1"	1WE70-LO-SSFT-NOC-0100+DA04-X-X-XXX	1WE70-LO-SSFT-NOC-0100+S08C14-X-X-XXX	1WE70-LO-SSFT-NOC-0100+S08A14-X-X-XXX	1WE70-LO-SSFT-NOC-0100+S08C14-X-X-XXX	1WE70-LO-SSFT-NOC-0100+S08A14-X-X-XXX	1WE70-LO-SSFT-NOC-0150+S13C14-X-X-XXX	1WE70-LO-SSFT-NOC-0150+S13A14-X-X-XXX
		1-1/2"	1WE70-LO-SSFT-NOC-0150+DA04-X-X-XXX	1WE70-LO-SSFT-NOC-0150+S13C14-X-X-XXX	1WE70-LO-SSFT-NOC-0150+S13A14-X-X-XXX	1WE70-LO-SSFT-NOC-0150+S13C14-X-X-XXX	1WE70-LO-SSFT-NOC-0150+S13A14-X-X-XXX	1WE70-LO-SSFT-NOC-0150+S13C14-X-X-XXX	1WE70-LO-SSFT-NOC-0150+S13A14-X-X-XXX
ELECTRIC ASSEMBLIES	E70 + ELECTRIC ACTUATOR, ON/OFF			E70 + ELECTRIC ACTUATOR, MODULATING					
	24VDC	1/2"	1WE70-LO-SSFT-NOC-0050+E04DS-X-X-XXX	Contact Engineering			Contact Engineering		
		3/4"	1WE70-LO-SSFT-NOC-0075+E04DS-X-X-XXX						
		1"	1WE70-LO-SSFT-NOC-0100+E04DS-X-X-XXX						
		1-1/2"	1WE70-LO-SSFT-NOC-0150+E08DS-X-X-XXX						
	110VAC	1/2"	1WE70-LO-SSFT-NOC-0050+E04AS-X-X-XXX						
		3/4"	1WE70-LO-SSFT-NOC-0075+E04AS-X-X-XXX						
		1"	1WE70-LO-SSFT-NOC-0100+E04AS-X-X-XXX						
1-1/2"		1WE70-LO-SSFT-NOC-0150+E06AS-X-X-XXX							



## EXTENDED ASSEMBLIES

EXTENDED ASSEMBLIES	1WE70-LO-SSFT-NOC-0100+DA04-X-X-XXX											
	Solenoid (1WE70-LO-SSFT-NOC-0100+DA04-X-X-XXX)				Limit Switch (1WE70-LO-SSFT-NOC-0100+DA04-X-X-XXX)				Positioner (1WE70-LO-SSFT-NOC-0100+DA04-X-X-XXX)			
	Matrix	Manuf.	Signal	Rating	Matrix	Manuf.	Contact	Rating	Matrix	Type	Option	Actuator
A	ASCO	24VDC	NEMA 4	V	Econ	(2) SPDT Mechanical	NEMA 4	A	Smart	NEMA 4	DA / SR	
L	ASCO	24VAC	NEMA 4	W	TopWorx	(2) SPDT Mechanical	NEMA 4	B	Smart	NEMA 4	SR	
B	ASCO	110VAC/50HZ	NEMA 4	Y	TopWorx	(2) SPDT Mechanical	NEMA 7	T	Custom Positioner Option			
C	ASCO	24VDC	NEMA 7	T	Custom Limit Switch Option							
M	ASCO	24VDC	NEMA 7									
D	ASCO	110VAC/50HZ	NEMA 7									
T	Custom Solenoid Option											

# How to Order

## Ball Valve & Valve Assembly 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

<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>I</b>	<b>J</b>	<b>K</b>
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/BW/BWE (≤1")
5WE20	3-PC. 1500WOG, Full Port, NPT/SW/BW/BWE (>1")
2WE30	2-PC. 2000WOG, Full Port, NPT (≤1")
5WE30	2-PC. 1500WOG, Full Port, NPT (>1")
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
30E60	3-Way ASME-300, Full Port, L/T Port, Flanged**
1WE70	3-Way 1000WOG, Full Port, L/T Port, NPT

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	Graphite/GRAFOIL
T	PTFE

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

H	NACE
N	NACE
O	NON-NACE

I	Fire Safe
F	Fire Safe
O	NON-Fire Safe

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**

J	Operator
C	Locking Lever/T-Handle
G	Gear

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

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.

\*\*\* PEEK Seats only available for valves sizes 4" and below.

# How to Order

## Ball Valve & 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
S02C06	ESR 0020 FC	S02A06	ESR 0020 FO
S04C14	ESR 0040 FC	S04A14	ESR 0040 FO
S08C14	ESR 0080 FC	S08A14	ESR 0080 FO
S13C14	ESR 0130 FC	S13A14	ESR 0130 FO
S20C14	ESR 0200 FC	S20A14	ESR 0200 FO
S30C14	ESR 0300 FC	S30A14	ESR 0300 FO
S50C14	ESR 0500 FC	S50A14	ESR 0500 FO
S85C14	ESR 0850 FC	S85A14	ESR 0850 FO
S12C14	ESR 1200 FC	S12A14	ESR 1200 FO
S17C14	ESR 1750 FC	S17A14	ESR 1750 FO
S21C14	ESR 2100 FC	S21A14	ESR 2100 FO
S25C14	ESR 2500 FC	S25A14	ESR 2500 FO
S40C14	ESR 4000 FC	S40A14	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	110 V	L	24V
E04AS	ELA 0040 110V	E04DS	ELA 0040 24V
E06AS	ELA 0060 110V	E08DS	ELA 0080 24V
E08AS	ELA 0080 110V		
E10AS	ELA 0100 110V		
E15AS	ELA 0150 110V		
E20AS	ELA 0200 110V		
E30AS	ELA 0300 110V		
E50AS	ELA 0500 110V		
E60AS	ELA 0600 110V		
E80AS	ELA 0800 110V		
E12AS	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

P	Other
X	No other item

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

**Industrial Controls**  
an ERIKS Company

**Rawson**  
an ERIKS company

