



## ISV Series BF1EU & BF2EU

### **Forged Construction** **High Pressure Floating Ball Valve** **ASME Class 600, 900 & 1500**

*For Oil & Gas Production, Refining, Chemical, Power & Industrial processing applications*



**1/2" through 2"  
sizes**

**ASME B16.34  
Code Compliant**

#### **End Connection options:**

**Flanged Ends**  
**Butt-Weld Ends**  
**Male & Female  
Threaded Ends**  
**Socket Weld Ends**

#### **DESIGN FEATURES**

*3 piece bolted body design- Replaceable body section*  
*Double Stem Sealing:  
Adjustable live loaded packing plus o-ring stem seal*  
*Integral extended end connection configurations*  
*PEEK seats for higher pressure performance*  
*A105N, LF2, F316 & alloy material options*  
*Locking Lever is standard*  
*Pressure tested to API 598 / API 6D*  
*Fire safe tested to API 607, Meets NACE*  
*ISO drilled actuator mounting pad*

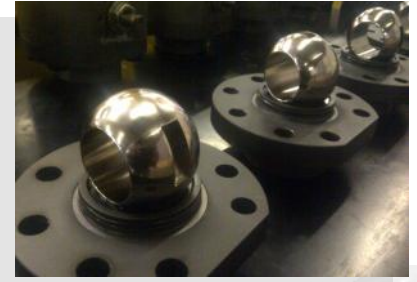
**The valves described in this brochure are  
designed, assembled and tested in Stafford, Texas USA.**  
Contains domestic and/or internationally produced components.

QUALITY MANAGEMENT SYSTEM  
CERTIFIED BY DNV  
**ISO 9001:2008**



## ISV - Stafford, Texas - Overview

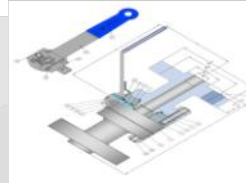
ISV is committed to providing high value products to our customers by producing the highest of quality products and the finest service in the industry at a competitive cost of ownership. Activities are conducted from our 40,000 square foot facility in Stafford, Texas.



### Engineering & Design

ISV valves are designed utilizing the latest engineering technologies enabling fast precise solutions to demanding valve applications. Product engineering/design packages are prepared in-house.

**ISV can provide a wide range of product configurations to meet with customer special design and feature requirements.**



### Final Assembly & Testing

All ISV ball valves are manufactured in strict accordance with industry standards and ISV Product Design Specifications whether produced domestically or internationally. Final assembly & testing of selected ISV products is performed in-house by well trained qualified personnel in a safe & ecologically responsible environment.

Year 2012 USA production capacity exceeded 1700 pieces per month.

**The result is consistently high product quality & reliability.**



### Quality Control

ISV's Quality Management System is maintained at all levels of production in accordance with ISO 9001 and API Q1.

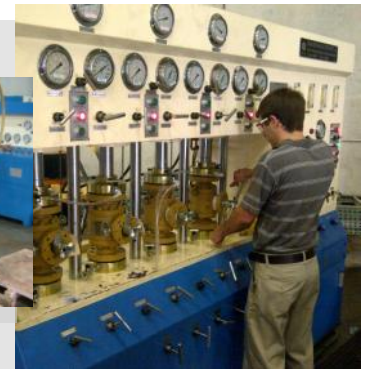
Each valve is serialized.

Material test reports including chemical and mechanical material characteristics and pressure test results are available with each valve.

Each ISV valve undergoes pressure testing to applicable standards.

Each valve carries full ISV warranty and warranty services.

**The result is high product quality & lower total cost of ownership.**



### Accurate Inventory & Documentation

All ISV products, component parts, material certifications, material verifications, serialization, performance tests, order entry, shipping & receiving is managed through computerized ERP system. Products are bar code labeled for improved accuracy.

**The result is fast, accurate, reliable service and documentation.**



### Customer Service

ISV customer service & material handling staff are fully trained and ready to help with your technical and logistical requirements.

**Most quotations and order shipments are performed on the same day of request.**

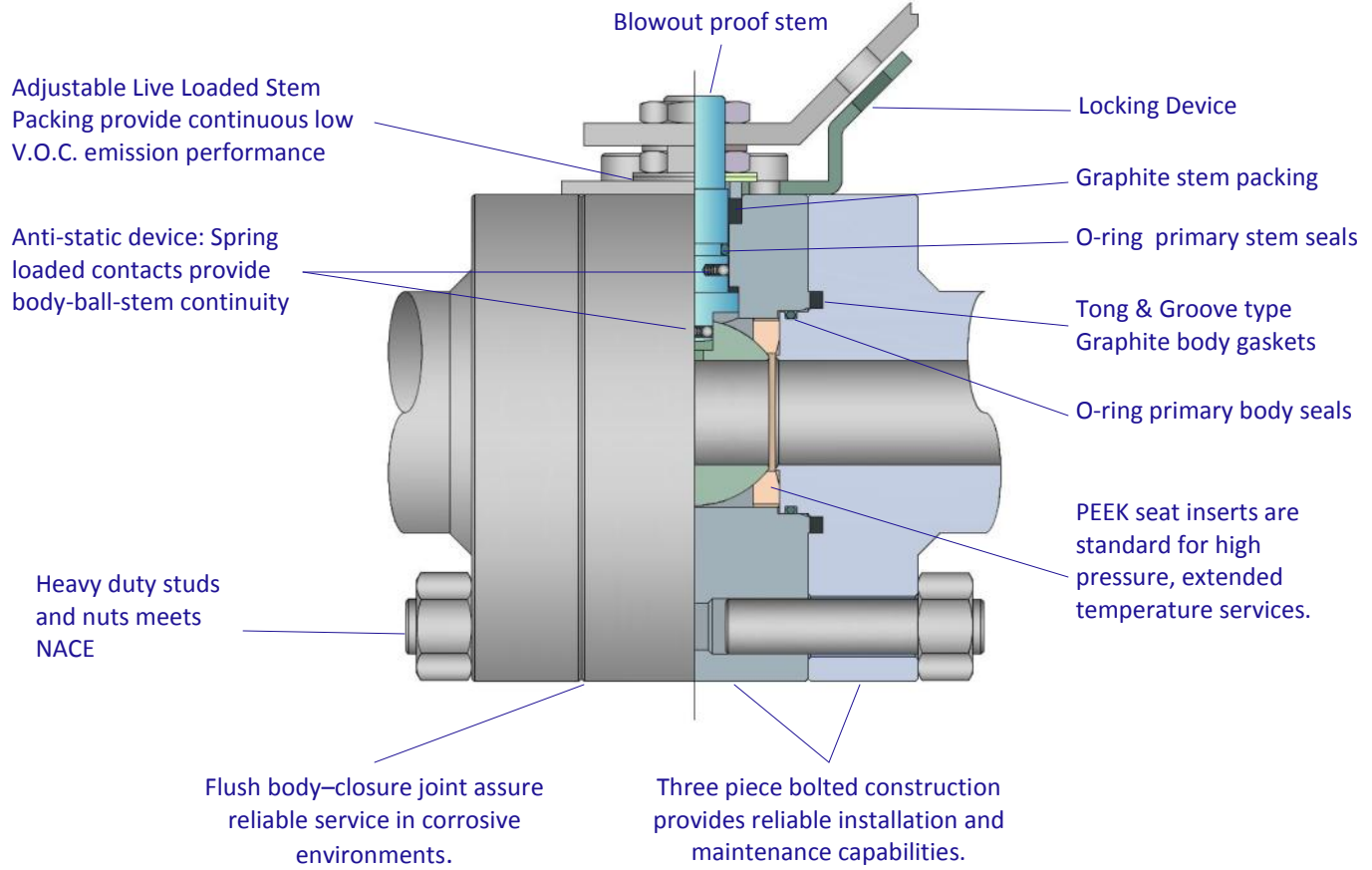


All photographic images in this brochure are taken at International Standard Valve's facility in Texas.



# ISV Series BF1EU & BF2EU - Standard Design Features

DESIGN STANDARDS		
Basic Design		ASME B16.34, API 608, API 6D
Pressure test		API 598 or API 6D
Ends	Threaded	ASME B16.11, B1.20.1
	Socket-weld	ASME B16.11
	Flanged	ASME B16.5
	Butt-weld	ASME B16.25



## CERTIFICATIONS

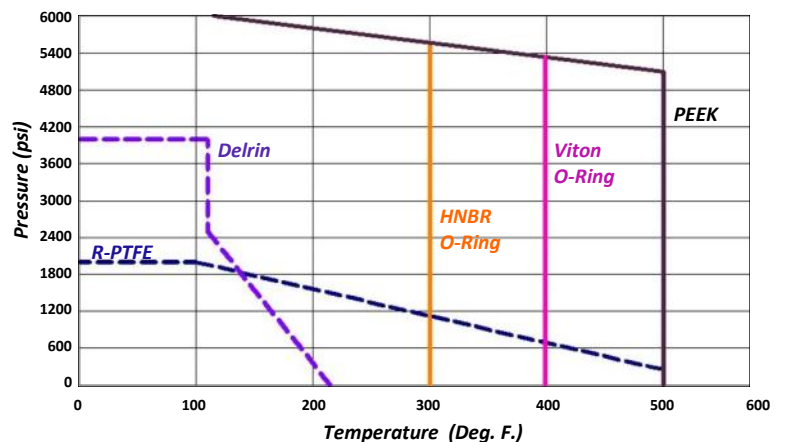


ISO 9001

API 6D

CRN

## Seat & Seal Material Pressure—Temperature Chart

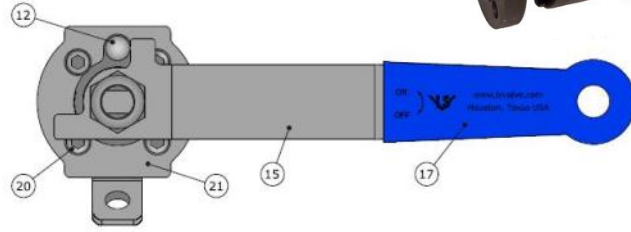




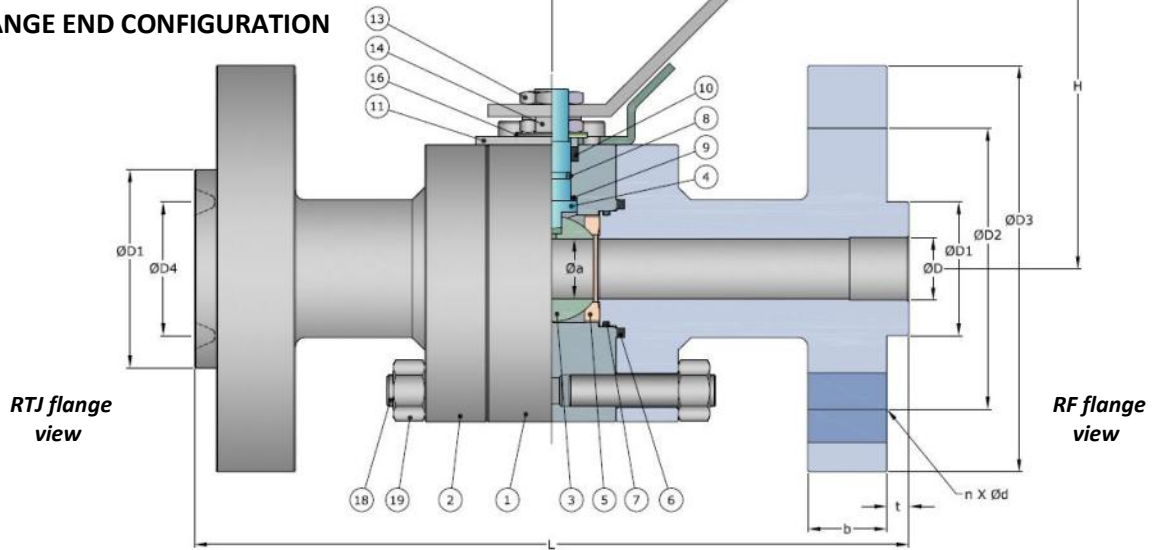
# ISV Series BF1EU - Standard Design Options

DESIGN STANDARDS	
Basic Design	ASME B16.34, API 6D & (API 608 class 600)
Pressure Rating	ASME Class 600, ASME Class 1500 (Class 900 same as class 1500)
Pressure Test	API 598, API 6D
End Connection	ASME B16.5
End to End (FLG)	ASME B16.10
End to End (BWE)	MSS SP-43, API 602

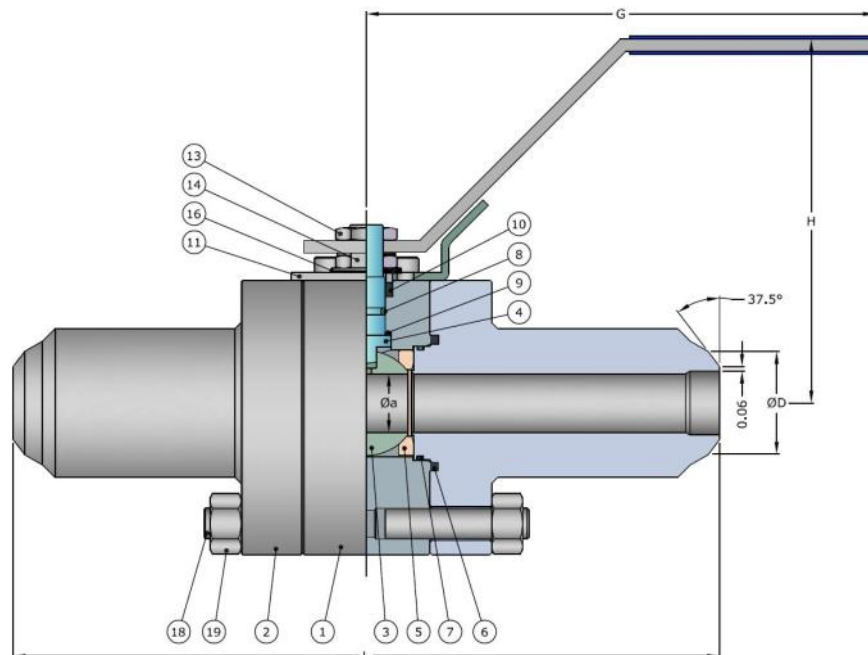
## ASME Class 600, 900 & 1500 Floating Ball Valve Flanged & Butt Weld Ends



### FLANGE END CONFIGURATION



### BUTT WELD END CONFIGURATION Class 1500 (900)





# ISV Series BF1EU - Dimensions & Materials

## STANDARD MATERIALS OF CONSTRUCTION



No.	PART NAME	MATERIAL		
		-20 DEG. F. SERVICE	-50 DEG. F. SERVICE	CORROSIVE SERVICE
1	BODY	A105N	LF2	316SS
2	END CAP	A105N	LF2	316SS
3	BALL	CF8M		
4	STEM	F51SS		
5	SEAT	PEEK + 15% G.F.		
6	BODY - CAP GASKET	GRAPHITE		
7	BODY - CAP - O-RING	VITON—AED		
8	STEM O-RING	VITON—AED		
9	THRUST WASHER	PEEK		
10	STEM PACKING	GRAPHITE		
11	GLAND RING	304SS		
12	STOP SCREW	304SS		
13	STEM NUT	304SS		
14	LOCK WASHER	304SS		
15	LEVER	304SS		
16	BELLEVILLE SPRING WASHER	301SS		
17	PLASTIC SLEEVE	VINYL		
18	STUD	B7M	L7M	B8
19	NUT	2HM	7M	8
20	TOP PLATE CAP SCREW	304SS		
21	LOCKING PLATE	304SS		

Other materials available on request

## DIMENSIONAL DATA

### Series BF1E Class 600 Flanged End Valve (Inches)

NPS	Øa	ØD	ØD2	ØD3	H	G	n X Ød	RF ONLY				RTJ ONLY				
								ØD1	L	t	b	ØD1	ØD4	L	t	b
1/2"	0.57	0.59	2.63	3.74	4.57	7.48	4 X .63	1.37	6.50	0.28	0.56	2.01	1.34	6.50	0.22	0.563
3/4"	0.75	0.79	3.25	4.53	4.92	7.87	4 X .75	1.69	7.48	0.28	0.63	2.50	1.69	7.48	0.25	0.652
1"	1.00	1.00	3.50	4.92	5.47	9.84	4 X .75	2.00	8.50	0.28	0.69	2.76	2.00	8.50	0.25	0.715
1-1/4"	1.26	1.26	3.87	5.31	5.47	9.84	4 X .75	2.50	9.02	0.28	0.81	3.13	2.38	9.02	0.25	0.841
1-1/2"	1.50	1.57	4.50	6.10	6.10	9.84	4 X .88	2.87	9.49	0.28	0.88	3.56	2.69	9.49	0.25	0.904
2" X 1-1/2"	1.50	2.00	5.00	6.50	6.10	9.84	8 X .75	3.63	11.50	0.28	1.00	4.25	3.25	11.61		

### Series BF1E Class 1500 (900) Flanged End Valve (Inches)

NPS	Øa	ØD	ØD2	ØD3	H	G	n X Ød	RF ONLY				RTJ ONLY				
								ØD1	L	t	b	ØD1	ØD4	L	t	b
1/2"	0.57	0.59	3.25	4.72	4.57	7.48	4 X .88	1.37	8.50	0.28	0.88	2.38	1.56	8.50	0.25	0.904
3/4"	0.75	0.79	3.50	5.12	4.92	7.87	4 X .88	1.69	9.02	0.28	1.00	2.62	1.75	9.02	0.25	1.03
1"	1.00	1.00	4.00	5.91	5.47	9.84	4 X 1.00	2.00	10.00	0.28	1.13	2.82	2.00	10.00	0.25	1.15
1-1/4"	1.26	1.26	4.37	6.30	5.47	9.84	4 X 1.00	2.50	10.89	0.28	1.13	3.19	2.38	10.89	0.25	1.15
1-1/2"	1.50	1.57	4.87	7.09	6.10	9.84	4 X 1.13	2.87	12.01	0.28	1.25	3.62	2.69	12.01	0.25	1.28
2" X 1-1/2"	1.50	2.00	6.50	8.46	6.10	9.84	4 X 1.00	3.63	14.49	0.28	1.50	4.88	3.75	14.61	0.312	1.5

### Series BF1E Class 1500 (900) Butt-Weld End Valve (Inches)

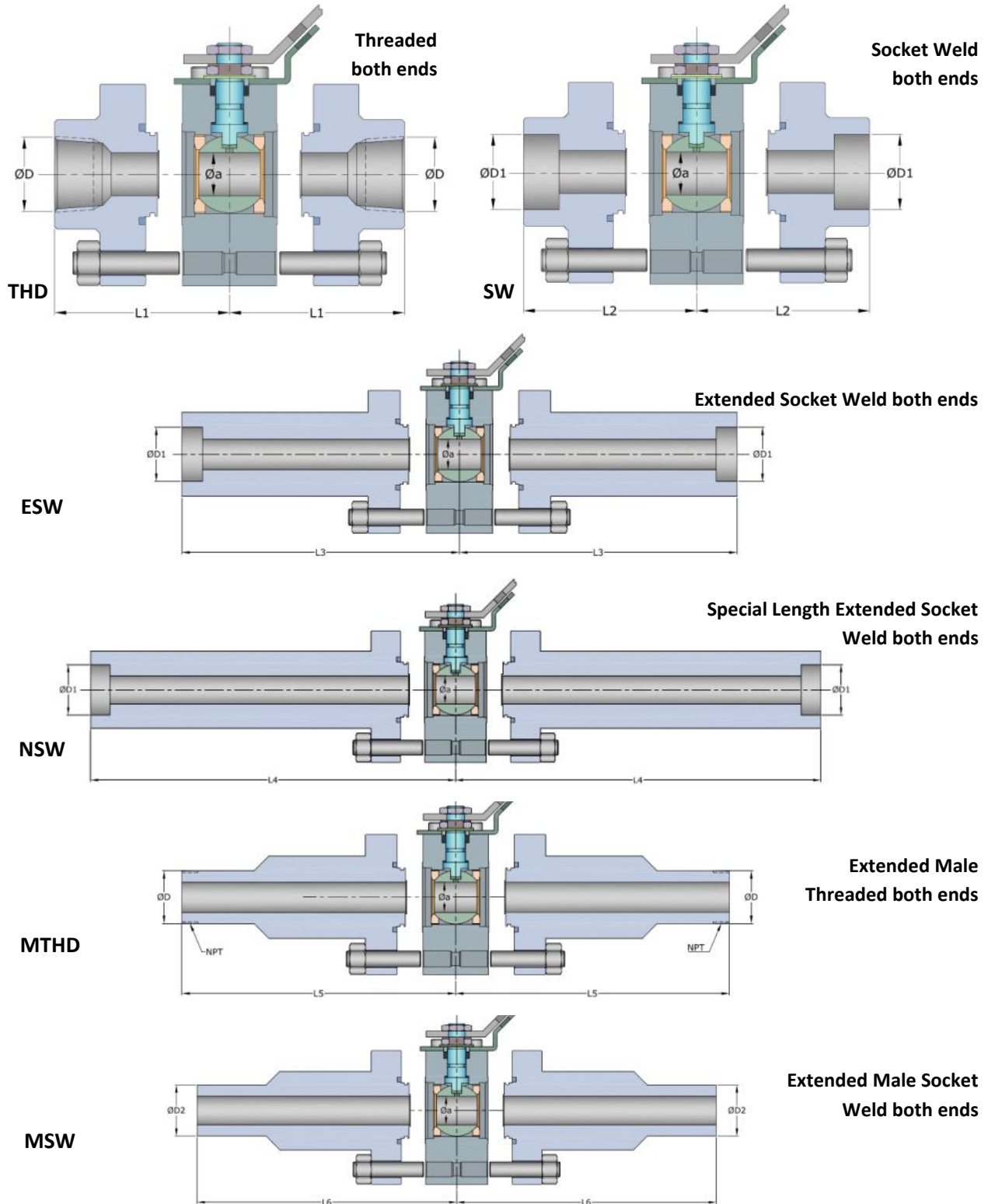
NPS	L	Øa	ØD	H	G
1/2"	8.50	0.57	0.84	4.57	7.48
3/4" X 1/2"	9.02	0.57	1.05	4.57	7.48
1" X 3/4"	10.00	0.75	1.315	4.92	7.87
1-1/2" X 1"	12.01	1.00	1.90	5.47	9.84
2" X 1-1/2"	14.49	1.50	2.375	6.10	9.84



# ISV Series BF2EU - Standard Design Options

DESIGN STANDARDS	
Basic Design	ASME B16.34
Pressure Rating—C.S.	3705 psi @ 100 deg F.
Pressure Rating—S.S.	3600 psi @ 100 deg F.
Pressure Test	API 598
Ends	ASME B16.11, B1.20.1

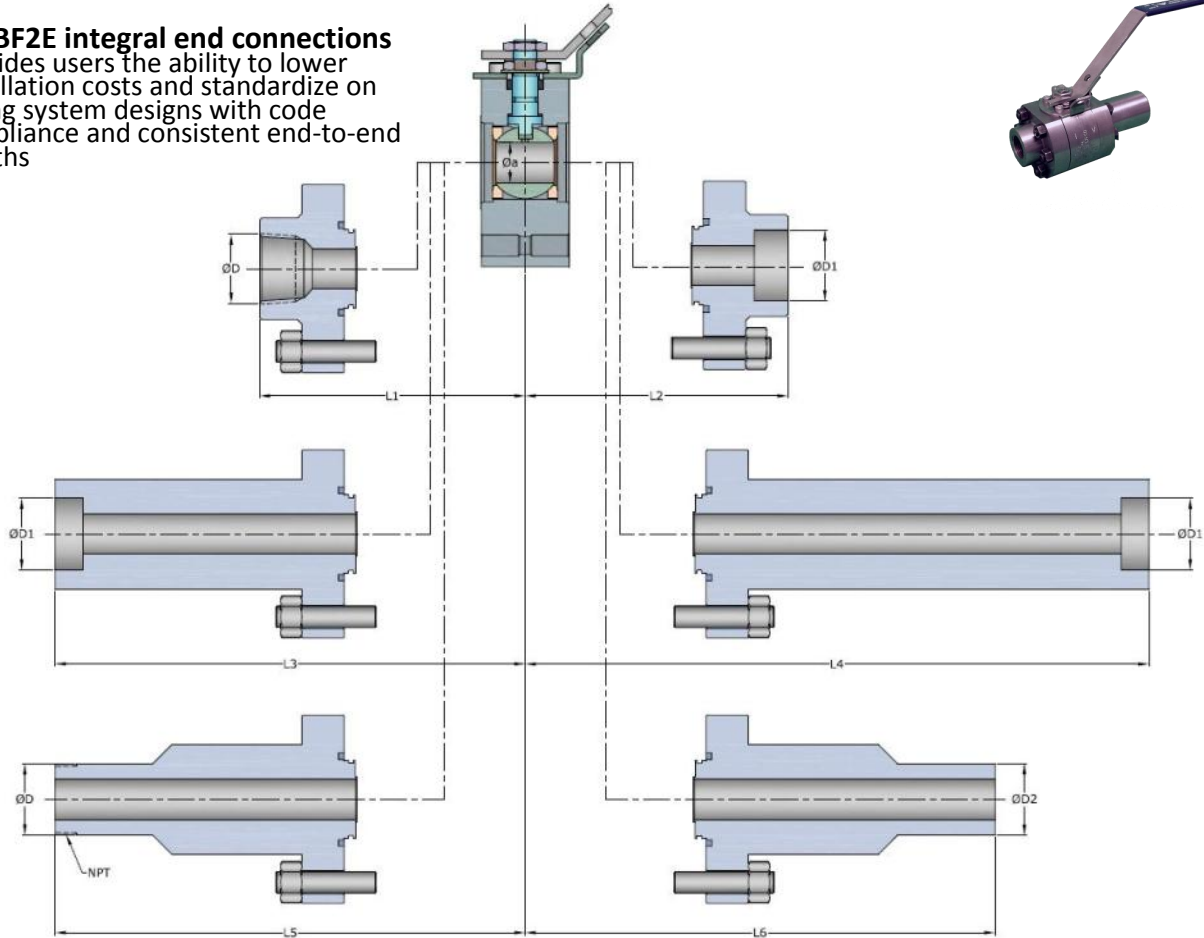
## ASME Class 1500 Floating Type Ball Valve Threaded & Socket weld Ends



All end configurations are integral components—no welding is used.

# ISV Series BF2EU - End Connection Options & Dimensions

ISV BF2E integral end connections provides users the ability to lower installation costs and standardize on piping system designs with code compliance and consistent end-to-end lengths



## DIMENSIONS

Series BF2E Class 1500 Threaded & Socket Weld End Valve dimensions (Units in Inches)										
Valve Size NPS	Female Threaded	Female Socket Weld	Extended Female Socket Weld	Special Extended Female SW	Male Threaded	Male Socket Weld	Diameters			
	THD	SW	ESW	NSW	MTHD	MSW	Port	THD	SW	MSW
	L1	L2	L3	L4	L5	L6	Øa	ØD	ØD1	ØD2
1/2"	2.165	2.165	3.839	6.398	3.346	3.346	0.575	1/2" NPT	0.865	0.840
3/4"	2.165	2.165	4.035	6.398	3.346	3.346	0.575	3/4" NPT	1.075	1.050
1"	2.461	2.461	4.449	6.398	3.937	3.937	0.748	1" NPT	1.340	1.315
1-1/2"	2.756	2.756	5.315	6.398	4.724	4.724	1.000	1-1/2" NPT	1.925	1.900
2"	3.150	3.150	6.398	6.398 *	5.709	5.709	1.500	2" NPT	2.416	2.375

\* Use ESW Series

All "L" dimensions are from centerline of valve. Combine two "L" dimensions to determine the overall valve end-to-end length.

### Example:

To Calculate the overall valve length of a 3/4" Female THD End X Female Extended SW End, **add L1 + L3 = overall length.**  
 3/4" size : 2.165" (L1) + 4.035" (L3) = 6.20" (overall length).

See "Specifying ISV Series BF2E" on page 8 to identify and specify the configuration options with the valve figure number.

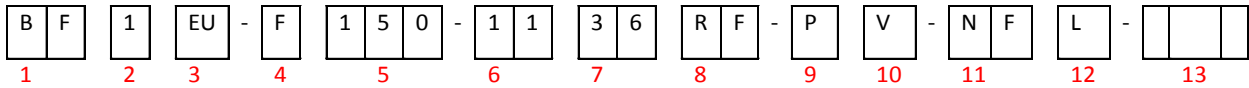
International Standard Valve, Inc.



# Specifying ISV Series No. BF1EU & BF2EU - USA Production

## Specifying ISV Three Piece Floating Ball Valves *Example: ISV figure number BF1EU-F150-1136RF-PV-NFL*

Describes an ASME class 1500, 3 piece bolted body design, full port, floating ball valve, raised face flange ends, A105N body (associated valve materials for -20 degrees F. service), Stainless Steel trim, PEEK seat inserts, Viton seals, meets NACE, is fire safe tested, lever operated. Assembled & tested in the USA.



1 Valve Type		2 Service / Design style		3 Body Design		4 Bore		5 Pressure Rating		6 Body Material		7 Trim Material	
Code	Type	Code	Design style	Code	Body style	Code	Port	Code	Rating	Code	Material	Code	Material
BF	Ball Valve Floating	1	Adjustable Stem Packing	BU	2 pc Split Bolted Body	R	Red.	015	Class 150	11	A105N (-20 Deg.F. Service)	10	C.S. + ENP
		2	Adjustable Stem Packing: SWE, THD Ends	EU	3 pc Bolted Body	F	Full	030	Class 300	21	A105N/LF2 (-20 Deg.F. Service)	30	* Stainless Steel
		4	Metal Seated	G	3 pc Welded Body			060	Class 600	22	LF2 (-50 Deg.F. Service)	34	* 304SS / CF8M
		7	Cryogenic Service	KU	Tandem			090	Class 900	30	Stainless Steel	36	* 316SS / CF8M
				LU	Double Ball			150	Class 1500	36	316SS	51	F51 / 318
								250	Class 2500	36L	316L	60	Inconel 625
										51	F51 / 318	61	410SS
								60	Inconel	71	Monel		
												19	A185 Gr. XM19
				*	U indicates USA production								

8 End Connections		9 Seat Material		10 Body Seal Material		11 Features		12 Operator		13 Modifier Code	
Code	Ends	Code	Material	Code	Material	Code	Description	Code	Description	Code	Description
RF	Flg-RF	N	Nylon	V	Viton—AED	NF	NACE Compliant, Fire Safe	L	Locking Lever	XXX	Special Configurations such as exotic materials, specific seat or sealing compounds. Consult ISV representative for modifier code identification.
RJ	Flg-RJ	T	PTFE	H	HNBR	NW	NACE Compliant, Non Fire Safe Tested	B	Bare Stem		
WW	WE X WE	D	Devlon	L	Low Temp. (-50 F) Viton O-Rings			S	Spring Return Lever		
WF	WE X RF	R	R-PTFE	K	PCTFE	WF	Without NACE, Fire Safe	G	Manual Gear		
WJ	WE X RTJ	C	TFM 4215	G	Graphite			H	Non Locking Lever		
TH	Fem. Threaded	K	PCTFE	T	PTFE	WW	Without NACE, Non Fire Safe Tested	C	Chain Wheel		
SW	Female SocketWeld	P	PEEK	M	TFM			O	Oval Hand Wheel		
ST	F.Thrd x F. SW	1	Tung. Carbide	E	EPDM	A	Actuated				
ES	Extend. F. SW			8	PEEK - Lip Seal						
NS	Special F. SW	2	Cr. Carbide	9	PTFE - Lip Seal						
MT	Male Threaded										
MS	Male SW										
E1	F.Thrd x Ext SWE										
N1	F.Thrd x Spl Ext SW										
M2	F.Thrd x M.Thrd										
M3	F.Thrd x M.SW										

**Distributed by:**

*\* Ball and/or stem may be furnished as F51 stainless steel for improved hardness and durability.*

**The valves described in this brochure are designed, assembled and tested in Stafford, Texas USA. Contains domestic and/or international components.**



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