



## Flanged End Floating Ball Valves

*Ideal Design for Process and Petrochemical Applications*



### FULL-FLO SERIES

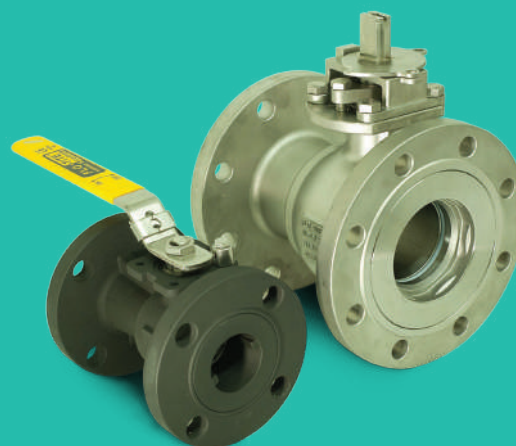
#### Models

F150 Class 150 / F300 Class 300

Full Port: 1/2" - 12"

Standard Steam Working Pressure:

150 SWP, optional 300 psig



### UNI-FLO SERIES

#### Models

SF150 Class 150 / SF300 Class 300

Reduced Port: 1" - 12"

Standard Steam Working Pressure:

150 SWP, optional 300 psig

#### Full Flo Series

##### STANDARD PRODUCT NUMBER

F150-SS-FFG-L (150# SS - Standard FFG)  
 F150-SS-FGG-L (150# SS - Fire Safe FGG)  
 F150-SS-FFGN-L (150# SS - Standard FFGN Viton Free)  
 F150-SS-FGGN-L (150# SS - Fire Safe FGGN Viton Free)  
 F150-CS-FFG-L (150# CS - Standard FFG)  
 F150-CS-FGG-L (150# CS - Fire Safe FGG)  
 F150-CS-FFGN-L (150# CS - Standard FFGN Viton Free)  
 F150-CS-FGGN-L (150# CS - Fire Safe FGGN Viton Free) \*C/  
 F price may vary on viton free items according to stock\*  
 F150-SS-RRG-L (150# SS - Standard RRG)  
 F150-CS-RRG-L (150# CS - Standard RRG)

F300-SS-FFG-L (300# SS - Standard FFG)  
 F300-SS-FGG-L (300# SS - Fire Safe FGG)  
 F300-SS-FFGN-L (300# SS - Standard FFGN Viton Free)  
 F300-SS-FGGN-L (300# SS - Fire Safe FGGN Viton Free)  
 F300-CS-FFG-L (300# CS - Standard FFG)  
 F300-CS-FGG-L (300# CS - Fire Safe FGG)  
 F300-CS-FFGN-L (300# CS - Standard FFGN Viton Free)  
 F300-CS-FGGN-L (300# CS - Fire Safe FGGN Viton Free)



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### Design Features

- Floating Ball Design
- Protected Seat Design
- O-Ring Backed Seat
- Fire Safe Designed to API 607-5
- Spiral Wound Body Gasket with Secondary Metal to Metal Seal
- Open and Close Locking Device for Position Safety Lockout
- O-Ring Reinforced Stem Packing
- Cryogenic Design • Option



- I-SO-Mount, Actuator  
Mounting Pad Standard
- Super-Tek Seating
- Live Loaded Stem Design
- Anti-Static Grounding Device
- Secondary Containment Option
- Flatted Shaft - Positive Flow Indication
- Ball Cavity Relief
- V-Ball Control • Option
- **Metal Seats Option, Class V & VI**

Valves for other flanged standards, such as DIN, JIS, BS, NFE and GB are also available.

Consult Factory for CE valve designs.

[www.flotite.com](http://www.flotite.com)

## Design Specifications

### Standards of Compliance

Travel stop incorporates Locking Device, can also be used as actuator lock out device

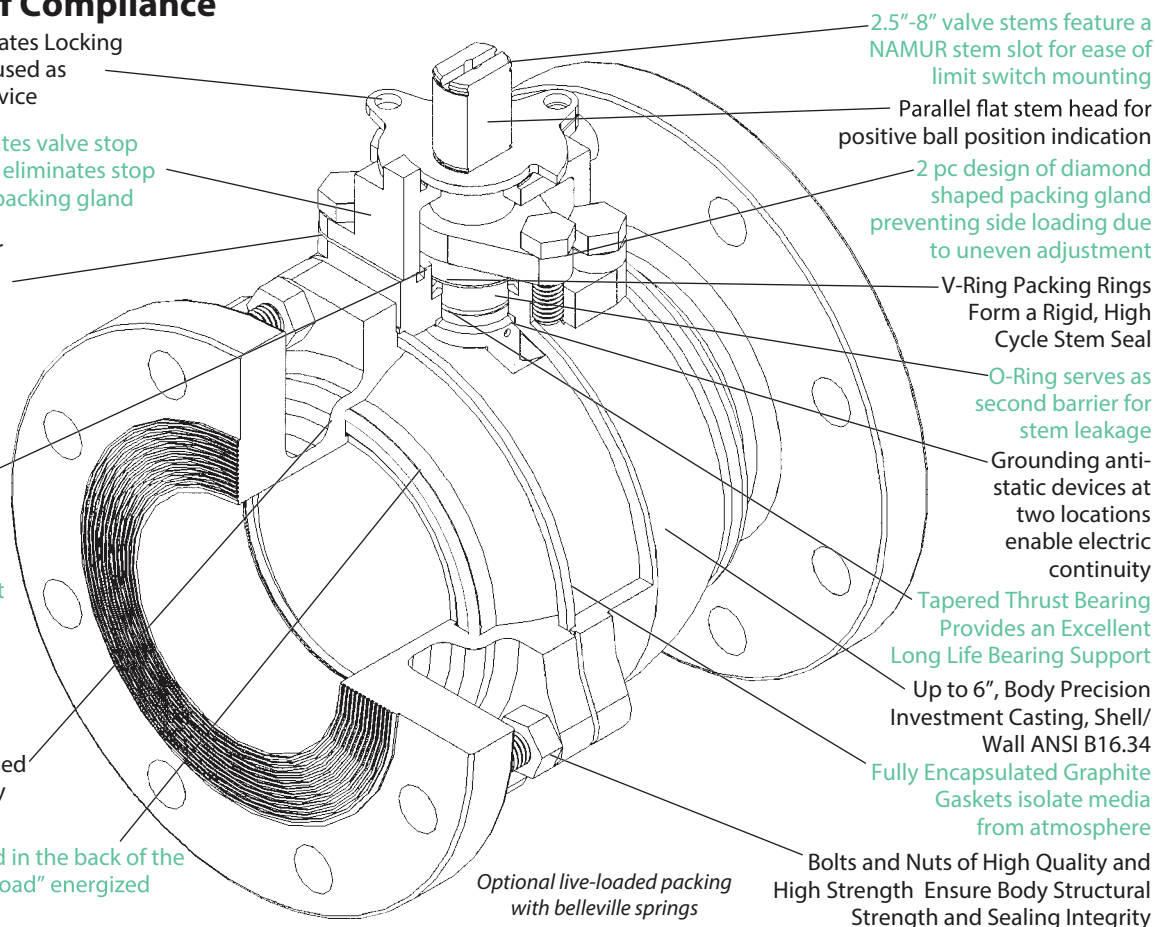
Stop housing separates valve stop from packing gland, eliminates stop plate impacting on packing gland

I-SO Mount Actuator Mounting, 4 bolt design eliminates torsional stress, actuator can be removed while valve is under full pressure

Recessed groove enables top flange to be adapted with a secondary containment bonnet for fugitive emission, cryogenic service and other critical applications

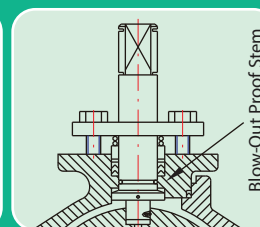
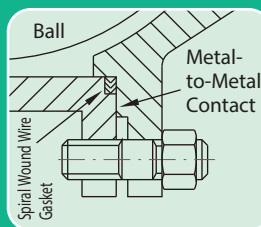
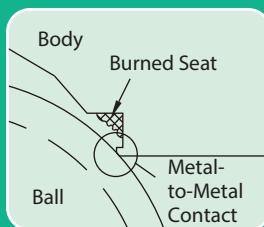
Pocketed and recessed seats with secondary metal backup seal.

O-Ring encapsulated in the back of the seat, a unique "flex-load" energized seat design



Flo-Tite's Flanged series valves with graphite stem packing meet the highest fire safety standards under extreme conditions. In the event of a fire, after heat destroys the primary resilient seat, the ball makes contact with the secondary metal seat, forming a secure seal. The body seal, composed of stainless steel and graphite wound into a spiral, prevents external leakage. The graphite stem rings prevent stem leakage.

### Fire Safe: API607-4 & 5 Certified



### Standards and Specifications

Valves covered in this bulletin are available to conform to the following industry standards and specifications

**All valves are manufactured to ISO 9001 quality standards.**

<b>WW-V-35C</b>	Federal Specification: Valve, Ball
<b>ANSI/ASME B16.10</b>	Face-to-Face / End-to-End Dimensions of Ferrous Valves
<b>ANSI/ASME B16.5</b>	Steel Pipe Flanges and Flange Fittings
<b>ANSI/ASME B16.34</b>	Steel Valves - Flanged and Buttwelded End
<b>ANSI/ASME B31.1</b>	Power Piping
<b>ANSI/ASME B31.3</b>	Chemical Plant & Petroleum Refinery Piping
<b>ANSI/FCI 70-2-1976</b>	For Control Valve Leakage
<b>BS 6755, Part 2</b>	Testing of Valves - Specification for Fire Type Testing
<b>ISO 5752:1982</b>	Metal Valves for use in Flanged Piping Systems
<b>ISA 75.02</b>	Valve Sizing Coefficient Cv, Piping Geometry Factor Fp and Pressure Drop Limitation XT
<b>ISA 575.19</b>	Hydrostatic Testing of Control Valves
<b>ISO 5211</b>	Dimensions for Attachment of Actuators/Gear Boxes to Valves (ISO Mounting)
<b>MSS-SP-25</b>	Standard Marking Systems for Valves
<b>MSS SP-55</b>	Quality Standards for Steel Castings

<b>MSS-SP-6</b>	Standard Finishes for Contact Faces of Pipe Flanges and Connecting-End Flanges of Valves and Fittings
<b>MSS-SP-44</b>	Steel Pipe Line Flanges
<b>MSS-SP-61</b>	Pressure Testing of Steel Valves
<b>MSS-SP-72</b>	Flanged or Butt and Weld End Ball Valves Having Full or Reduced Bores for General Liquid and Gas Service
<b>MSS-SP-96</b>	Terminology for Valves and Fittings
<b>SIL 11/ABS</b>	<b>Consult Factory for these models</b> <b>Available as Standard in Certain Models Please Specify</b>
<b>NACE MR01-75</b>	Sulfide Stress Cracking Resistant Materials for Oilfield Equipment. Available as standard in certain models. Please specify.
<b>API 608</b>	Metal Ball valves Used in On-Off Service that have Buttwelded or Flanged Ends for Size 1/2" NPS - 12" NPS
<b>API 6D</b>	Specifications for Pipeline Valves
<b>API 598</b>	Valve Inspection and Testing
<b>MSS-SP-53</b>	Quality Standard for Steel Casting and Forging for Valves, Flanges and Fittings and Other Piping Components-Magnetic Particle Examination Method
<b>ISO 15848-1</b>	Industrial valves - Measurement, test and qualification procedures for fugitive emissions

**API 641 standard specifies the requirements and acceptance criteria for fugitive emission type testing of quarter-turn valves.**

## Bill of Materials / Full Port Valves

No.	Name	Stainless Steel	Carbon Steel
1	Body	ASTM A351 CF8M	ASTM A216 WCB
2	Cap	ASTM A351 CF8M	ASTM A216 WCB
3	Stem*	SS316	SS316 / SS304
4	Packing Follower	SS304	SS304
5	Belleville Washer	SS301	SS301
6	Lock Washer	SS304	SS304
7	Ball	SS316	SS316 / SS304
8	Seat	TFM	TFM
9	Gasket	RPTFE / Graphite	RPTFE / Graphite
10	Stem Packing	TFM / Graphite	TFM / Graphite
11	Packing Protector	50%PTFE+SS316	50%PTFE+SS316
12	Thrust Washer	25%Carbon+TFM	25%Carbon+TFM
13	Anti-Static	SS304	SS304
14	Valve Stop	SS304	SS304
15	Handle	SS304	SS304
16	Locking Device	SS304	SS304
17	Handle Sleeve	Plastic	Plastic
18	Thin Nut	SS304	SS304
19	Body Stud	ASTM A193 B8	ASTM A193 B7
20	Body Nut	ASTM A194 Gr.8	ASTM A194 2H
21	Bolt	SS304	SS304
22	O-Ring	Viton	Viton
* 23	Seat O-Ring	Viton	Viton

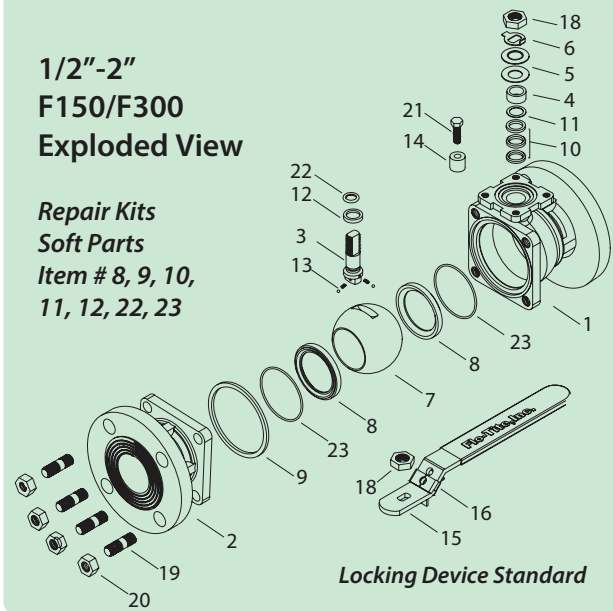
## Bill of Materials

No.	Name	Stainless Steel	Carbon Steel
1	Body	ASTM A351 CF8M	ASTM A216 WCB
2	Cap	ASTM A351 CF8M	ASTM A216 WCB
* 3	Stem	SS316	SS316 / SS304
4	Packing Gland	ASTM A351 CF8	ASTM A351 CF8
5	Packing Follower	SS304	SS304
6	Ball	SS316	SS316 / SS304
7	Seat	TFM	TFM
8	Stem Packing	TFM / Graphite	TFM / Graphite
9	Packing Protector	50%PTFE+SS316	50%PTFE+SS316
10	Gasket	RPTFE / Graphite	RPTFE / Graphite
11	Thrust Washer	25%Carbon+TFM	25%Carbon+TFM
12	O-Ring	Viton	Viton
13	Anti-Static	SS304	SS304
14	Travel Stopper	SS304	Steel
15	Snap Ring	Plated Steel	Plated Steel
16	Handle	Ductile Iron	Ductile Iron
17	Gland Bolt	SS304	Steel
18	Stop Housing	SS304	SS304
19	Housing Bolt	SS304	SS304
20	Body Stud	ASTM A193 B8	ASTM A193 B7
21	Body Nut	ASTM A194 Gr.8	ASTM A194 2H
* 22	Seat O-Ring	Viton	Viton
23	Set Screw	Steel	Steel

\* Stem Optional Material 17-4PH \*\*22 optional. Standard only in our API 6D monogram F150/F300 **Optional live-loaded packing with bellville springs**

### 1/2"-2" F150/F300 Exploded View

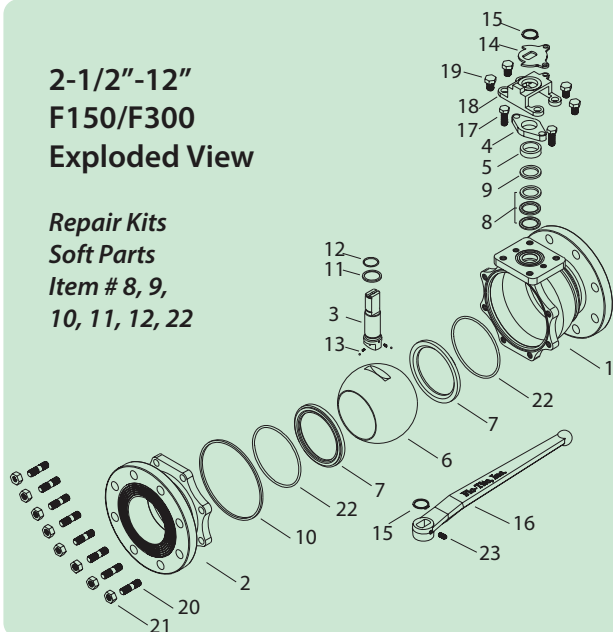
**Repair Kits  
Soft Parts  
Item # 8, 9, 10,  
11, 12, 22, 23**



\* #23 optional. Standard only in our API 6D monogram F150.

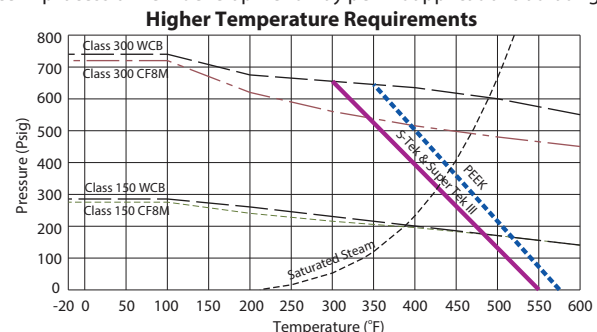
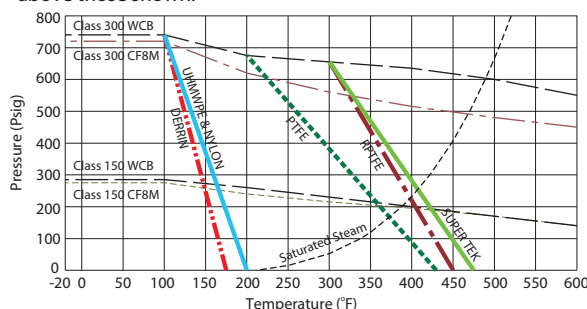
### 2-1/2"-12" F150/F300 Exploded View

**Repair Kits  
Soft Parts  
Item # 8, 9,  
10, 11, 12, 22**



## Pressure Temperature Rating

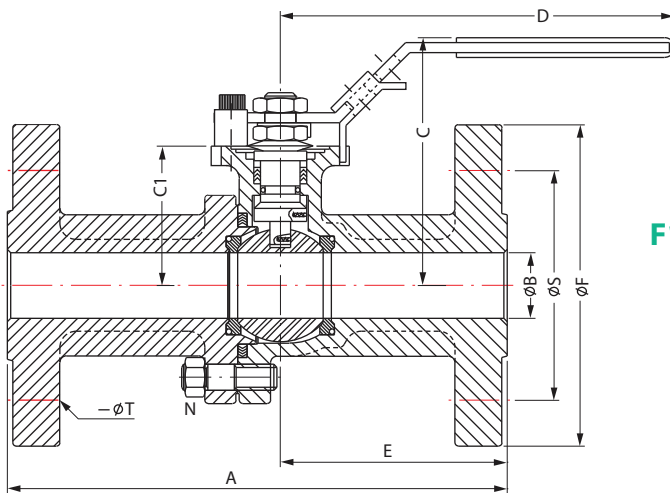
These ratings are conservative guide for general service. Previous experience in process or new development may permit applications at ratings above those shown.



Saturated steam services above 150 psi use either Super Tek III or S-Tek. Saturated steam services above 250 psig use metal seats. Metal Seated Ball Valve will take full ANSI body metal material ratings.

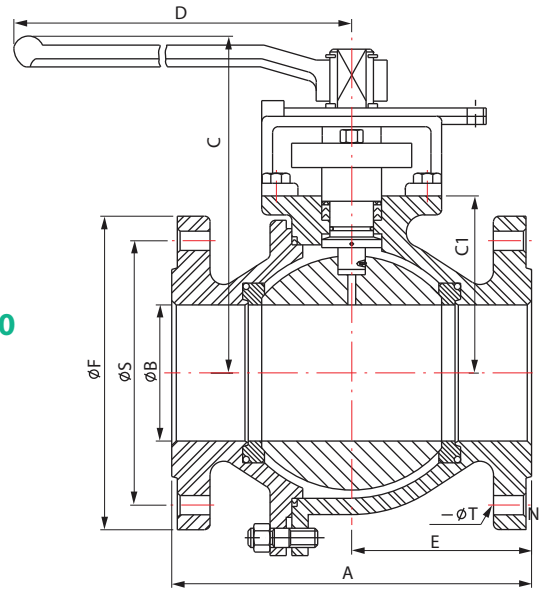
# Dimensions - Full Bore

## Technical Submittal



Size 1/2"-2"

### F150/F300 SERIES



Size 2 1/2"- 12"

#### Model F150 - ANSI Class 150

Size	A	B	C	C1	D	E	F	N	S	T	Cv	Torque in-lb	Est. Weight Lbs
1/2"	4.25	0.59	2.60	1.54	6.50	1.79	3.50	4	2.38	0.62	17	<b>62</b>	4
3/4"	4.62	0.79	2.91	1.70	6.50	2.01	3.88	4	2.75	0.62	43	<b>90</b>	5
1"	5.00	0.98	3.43	2.06	7.87	2.05	4.25	4	3.12	0.62	74	<b>100</b>	7.5
1 1/4"	5.50	1.26	3.62	2.35	7.87	2.45	4.62	4	3.50	0.62	192	<b>240</b>	13.5
1 1/2"	6.50	1.50	4.13	2.65	9.84	2.76	5.00	4	3.88	0.62	290	<b>270</b>	14.5
2"	7.00	1.97	4.53	2.90	10.4	3.07	6.00	4	4.75	0.62	410	<b>360</b>	21
2 1/2"	7.50	2.56	6.22	3.39	15.4	3.08	7.00	4	5.50	0.75	780	<b>620</b>	33.5
3"	8.00	3.00	6.54	3.67	15.4	3.74	7.50	4	6.00	0.75	1120	<b>800</b>	42.5
4"	9.00	4.00	7.20	4.40	15.4	4.47	9.00	8	7.50	0.75	1825	<b>1700</b>	62
5"	14	4.92	9.04	5.63	20.87	5.88	10	8	8.50	0.87	3212	<b>3176</b>	C/F
6"	15.5	5.98	11.2	7.20	25.6	7.62	11.0	8	9.50	0.88	4700	<b>4600</b>	165
8"	18.0	7.87	11.6	7.60	37.4	8.35	13.5	8	11.75	0.88	10100	<b>9900</b>	262
10"	21.0	9.84	14.4	9.88	38.0	10.5	16.0	12	14.25	1.00	17500	<b>17000</b>	468
12"	24.0	11.8	16.1	11.5	38.0	12.0	19.0	12	17.0	1.00	22400	<b>23000</b>	714

Large sizes available in our trunnion series

#### Model F300 - ANSI Class 300

Size	A	B	C	C1	D	E	F	N	S	T	Cv	Torque in-lb	Est. Weight Lbs
1/2"	5.5	0.59	2.60	1.54	6.50	1.79	3.75	4	2.62	0.62	17	<b>65</b>	5
3/4"	6.00	0.79	2.91	1.70	6.50	2.01	4.62	4	3.25	0.75	43	<b>95</b>	7
1"	6.50	0.98	3.43	2.06	7.87	2.13	4.88	4	3.50	0.75	74	<b>105</b>	10
1 1/4"	7.00	1.26	3.62	2.35	7.87	2.45	5.25	4	3.88	0.75	192	<b>252</b>	C/F
1 1/2"	7.50	1.50	4.13	2.65	9.84	2.76	6.12	4	4.50	0.88	290	<b>284</b>	19
2"	8.50	1.97	4.53	2.90	10.4	3.07	6.50	8	5.00	0.75	410	<b>378</b>	25
2 1/2"	9.50	2.56	6.22	3.39	15.4	3.08	7.50	8	5.88	0.88	780	<b>651</b>	42
3"	11.12	3.00	6.54	3.67	15.4	3.74	8.25	8	6.62	0.88	1120	<b>840</b>	60
4"	12.0	4.00	7.20	4.40	15.4	4.47	10.0	8	7.88	0.88	1825	<b>1785</b>	93
5"	15	4.92	9.04	5.63	20.87	C/F	11	8	9.52	0.87	3212	<b>C/F</b>	C/F
6"	15.88	5.98	11.2	7.20	25.6	7.62	12.5	12	10.62	0.88	4700	<b>4830</b>	221
8"	19.75	7.87	11.6	7.60	37.4	8.35	15.0	12	13.0	1.00	10100	<b>10395</b>	371
10"	22.38	9.84	14.4	9.88	38.0	10.5	17.5	16	15.25	1.12	17500	<b>17850</b>	576
12"	25.50	11.8	16.1	11.5	38.0	12.0	20.5	16	17.75	1.25	22400	<b>24150</b>	C/F

All Valves are hydrostatically Pressure Tested (Shell) & Air Pressure Tested (seat) to the following:

Class 150:

Shell Test:

450 psi for CS

425 psi for SS

Seat Test: 80 psi

Class 300:

Shell Test:

1125 psi for CS

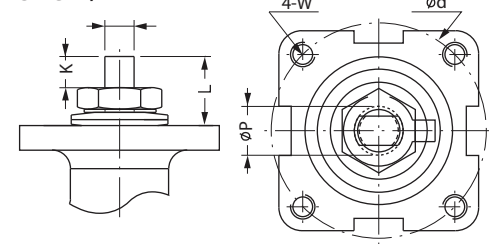
1100 psi for SS

Seat Test: 80 psi

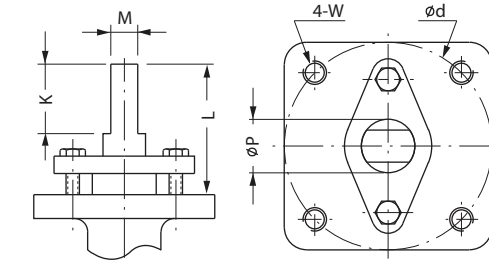
#### Mounting Dimensions (F150/F300)

Size	d	K	L	M	P	W	ISO
1/2"~3/4"	1.65	0.31	0.55	0.250	0.37	#10-24UNC	F04
1"~1 1/4"	1.97	0.43	0.75	0.315	0.43	1/4-20UNC	F05
1 1/2"~2"	2.76	0.55	0.97	0.374	0.62	5/16-18UNC	F07
2 1/2"~4"	4.02	1.75	3.07	0.669	1.10	1/2-13UNC	F10

#### Size 1/2"-2"



#### Size 2 1/2"- 4"



\*Verify mounting dimensions before manufacturing mounting hardware

\*For 6" and larger size mounting dimensions, consult factory



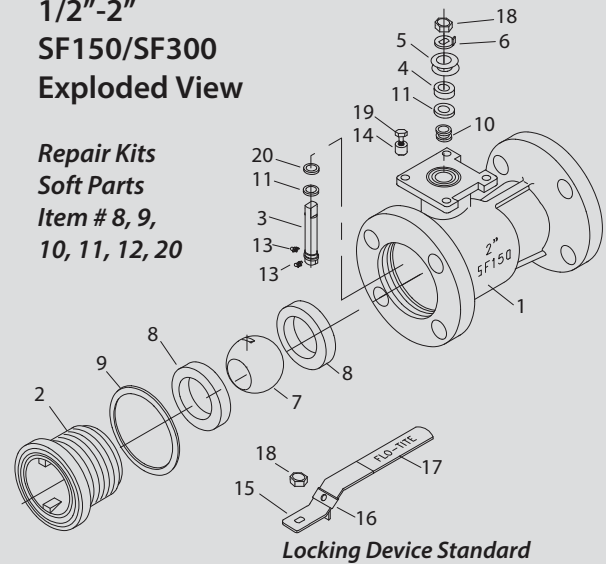
Due to continuous development & improvement of our product range, we reserve the right to alter the dimensions & technical data included in this brochure.



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2	Cap	ASTM A351 CF8M	ASTM A216 WCB
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4	Packing Follower	SS304	SS304
5	Belleville Washer	SS301	SS301
6	Lock Washer	SS304	SS304
7	Ball	SS316	SS316 / SS304
8	Seat	TFM	TFM
9	Gasket	RPTFE / Graphite	RPTFE / Graphite
10	Stem Packing	TFM / Graphite	TFM / Graphite
11	Packing Protector	50%PTFE+SS316	50%PTFE+SS316
12	Thrust Washer	25%Carbon+TFM	25%Carbon+TFM
13	Anti-Static	SS304	SS304
14	Valve Stop	SS304	SS304
15	Handle	SS304	SS304
16	Locking Device	SS304	SS304
17	Handle Sleeve	Plastic	Plastic
18	Thin Nut	SS304	SS304
19	Bolt	SS304	Carbon Steel
20	O-Ring	Viton	Viton

## 1/2"-2" SF150/SF300 Exploded View

**Repair Kits  
Soft Parts  
Item # 8, 9,  
10, 11, 12, 20**



**New 2PC body design also  
available Consult factory. Models  
RF15/RF30**

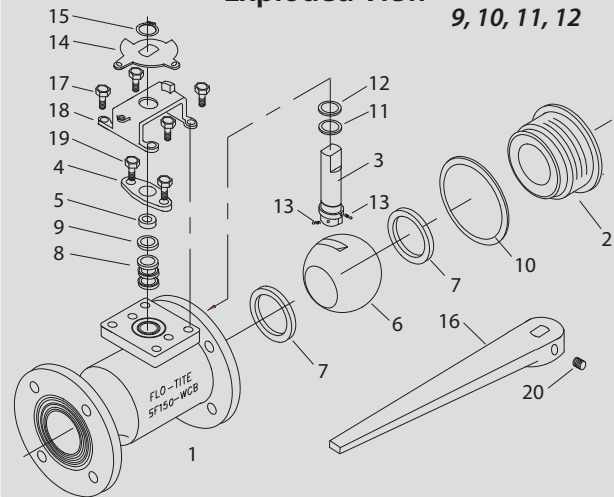
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4	Packing Gland	ASTM A351 CF8	ASTM A351 CF8
5	Belleville Follower	SS304	SS304
6	Ball	SS316	SS316 / SS304
7	Seat	TFM	TFM
8	Stem Packing	TFM / Graphite	TFM / Graphite
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10	Gasket	RPTFE / Graphite	RPTFE / Graphite
11	Thrust Washer	25%Carbon+TFM	25%Carbon+TFM
12	O-Ring	Viton	Viton
13	Anti-Static	SS304	SS304
14	Travel Stopper	SS304	Steel
15	Snap Ring	Plated Steel	Plated Steel
16	Handle	Ductile Iron	Ductile Iron
17	Gland Bolt	SS304	Steel
18	Stop Housing	SS304	SS304
19	Housing Bolt	SS304	SS304
20	Set Screw	Steel	Steel

\* Stem Optional Material 17-4PH

## 3"-12" SF150/SF300 Exploded View

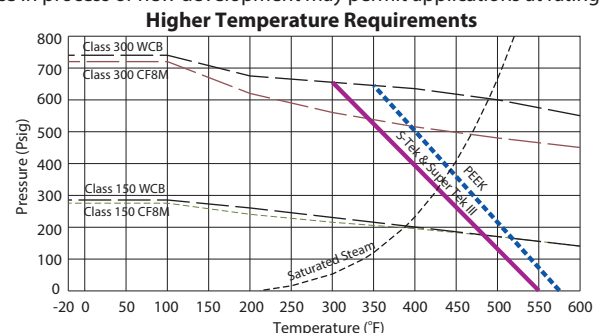
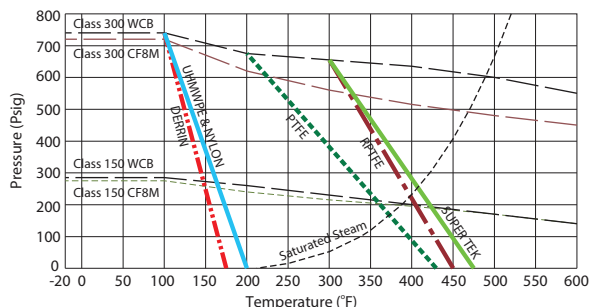
**Repair Kits  
Soft Parts  
Item # 7, 8,  
9, 10, 11, 12**



*Optional live-loaded packing with belleville springs*

## Pressure Temperature Rating

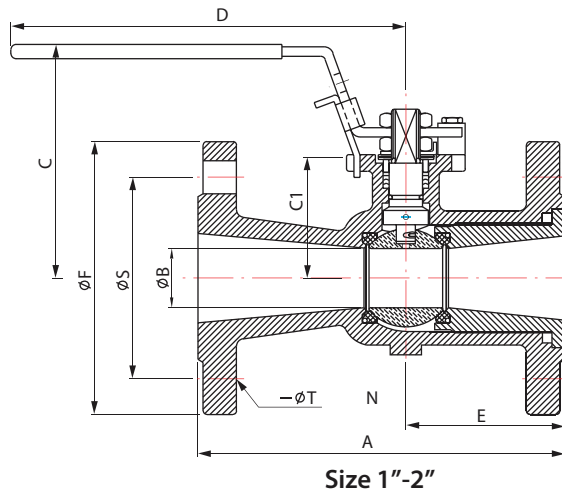
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Saturated steam services above 150 psi use either Super Tek III or S-Tek. Saturated steam services above 250 psig use metal seats. Metal Seated Ball Valve will take full ANSI body metal material ratings.

# Dimensions - Reduced Bore

## Technical Submittal



### Uni-Flo Series

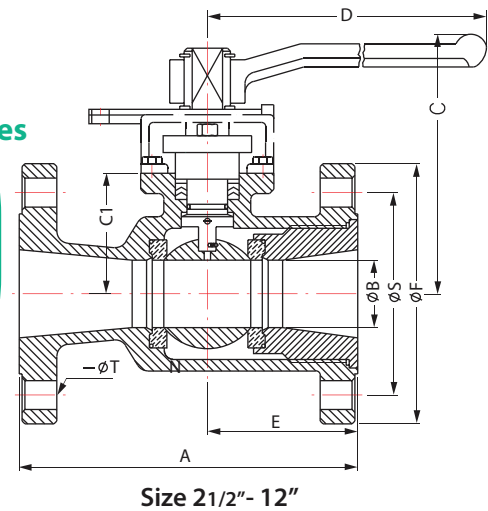
1 pc body

### SF150/SF300 Series

New 2 pc body design  
RF15/30 EZ Series  
Consult Factory

New 2 pc body design -  
RF15/RF30 EZ Series  
Consult Factory

Size 1"-2"



Size 2 1/2"- 12"

### Model SF150 - ANSI Class 150

Size	A	B	C	C1	D	E	F	N	S	T	Cv	Torque in-lb	Est. Weight Lbs
1"	5.00	0.79	2.91	1.67	6.50	2.0	4.25	4	3.13	0.63	33	<b>95</b>	7
1 1/2"	6.50	1.26	3.62	2.20	7.87	2.17	5.00	4	3.88	0.63	85	<b>252</b>	12
2"	7.00	1.50	4.20	2.61	10.4	2.56	6.00	4	4.75	0.75	160	<b>284</b>	17
3"	8.00	2.56	6.22	3.78	15.4	3.0	7.50	4	6.00	0.75	340	<b>651</b>	38
4"	9.00	3.00	6.38	4.69	15.4	3.35	9.00	8	7.50	0.75	800	<b>840</b>	55
6"	10.5	4.00	.52	4.33	15.4	4.61	11.0	8	9.50	0.87	1090	<b>1785</b>	80
8"	11.5	5.98	10.1	6.85	25.6	5.85	13.5	8	11.75	0.87	2300	<b>4830</b>	191
10"	13.0	7.87	11.6	7.62	37.4	6.85	16.0	12	14.25	1.00	4000	<b>10395</b>	315
12"	14.0	9.84	12.8	8.92	38.0	7.00	19.0	12	17.0	1.00	7700	<b>17850</b>	518

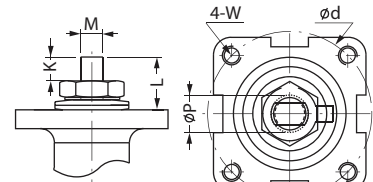
### Model SF300 - ANSI Class 300

Size	A	B	C	C1	D	E	F	N	S	T	Cv	Torque in-lb	Est. Weight Lbs
1"	6.50	0.79	2.91	1.67	6.50	2.18	4.88	4	3.50	0.75	33	<b>100</b>	9
1 1/2"	7.50	1.26	3.62	2.20	7.87	2.60	6.14	4	4.50	0.87	85	<b>265</b>	18
2"	8.50	1.50	4.13	2.61	10.4	2.92	6.50	8	5.00	0.75	160	<b>298</b>	25
3"	11.14	2.24	6.77	3.78	15.4	3.75	8.27	8	6.62	0.87	340	<b>684</b>	56
4"	12.0	3.15	7.68	4.69	15.4	3.86	10.0	8	7.87	0.87	800	<b>882</b>	75
6"	15.87	3.94	7.52	4.33	15.4	4.61	12.5	12	10.63	0.87	1090	<b>1874</b>	133
8"	16.5	5.91	10.1	6.85	25.6	5.85	15.0	12	13.0	1.00	2300	<b>5072</b>	303
10"	18.0	7.87	11.6	7.62	37.4	6.85	17.5	16	15.25	1.14	4000	<b>10915</b>	464
12"	19.75	9.53	13.7	8.92	38.0	7.00	20.5	16	17.75	1.25	7700	<b>18743</b>	818

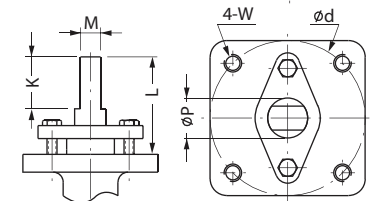
### Mounting Dimensions (SF150/SF300)

Size	d	K	L	M	P	W	ISO
1"	1.65	0.43	0.59	0.250	0.37	#10-24UNC	F04
1 1/2"	1.97	0.43	0.75	0.315	0.43	1/4-20UNC	F05
2"	2.76	0.55	0.91	0.374	0.62	5/16-18UNC	F07
3"	4.02	1.31	2.59	0.669	1.10	1/2-13UNC	F10
4",6"	4.02	1.75	3.07	0.669	1.10	1/2-13UNC	F10
8",10"	4.92	1.65	3.58	1.024	1.71	1/2-13UNC	F12
12"	5.51	2.13	3.86	1.378	1.97	5/8-11UNC	F14

Size  
1"-2"



Size  
2 1/2"- 12"

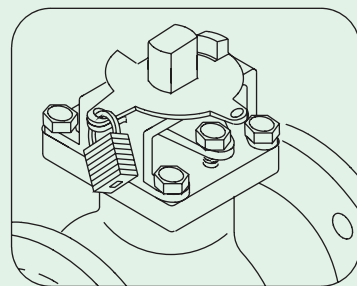


\*Verify mounting dimensions before  
manufacturing mounting hardware



## Unique Design Feature

### Tamper Proof Locking Device Standard



Valve topworks incorporates a tamper proof locking device, locks in open or closed positions. When valve stop housing is removed, four bolts remain to mount actuator bracket. Size: 2 1/2"-12"

### Pressure Relieving & Equalizing Seat Design

Specially designed seats allow equalization of pressure in the ball cavity which reduces operating torque and increases seat life.



### Ball Design Added Safety Feature

All balls are provided with a 1/8" hole drilled into the stem slot of each ball to prevent excessive pressure build up in the cavity from trapped liquid when the valve is in the open position.



Due to continuous development & improvement of our product range, we reserve the right to alter the dimensions & technical data included in this brochure.

**Flo-Tite's Van Guard Stem Sealing System**, designed to minimize fugitive emissions. Increases safety and provide an immediate ball valve solution to the newer EPA performance requirements, for valves meeting with a leak rate of 500ppm.

**Flo-Tite's Van Guard Seal**, state of the art stem sealing system. Incorporating a triple set of valve stem seals. This unique system eliminates the possibility of valve stem leaks in most all media applications.

## STAGE I - FRONT LINE

Stage I provides a front line defense against leakage. The blow-out proof stem shoulder has a 45 degree bell shaped slope. The bell shaped design offers more sealing surface, effectively blocking all leak paths during rotation. The wedging action of the portion of the stem is far superior to the common small flat stem shoulder design.

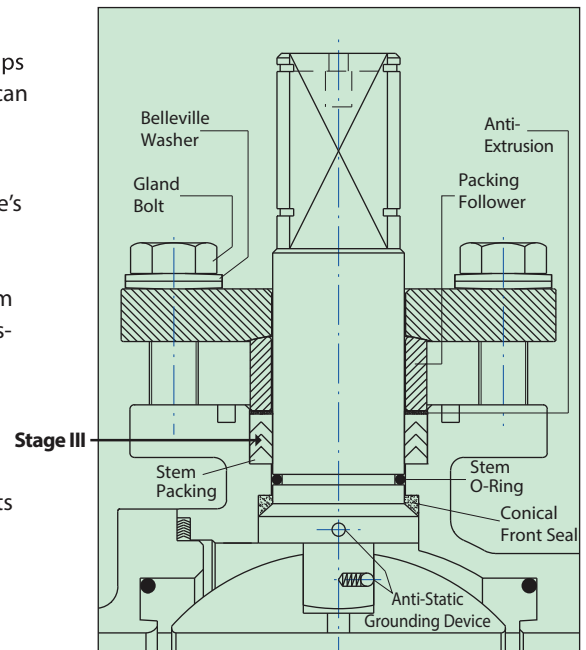
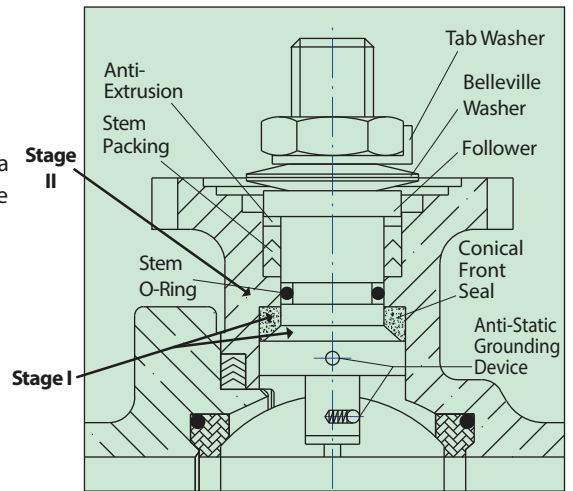
## STAGE II - GUIDE-SEAL

The O-ring originated early in valve design and has been a proven performer in high cycle applications. Its basic function reduces the potential of machining imperfections and provides a low torque flexible seal. This center guide also helps to maintain a perfect stem alignment, by eliminating side loading stress which can cause stem leaks.

## STAGE III - LIVE-LOADED SEAL

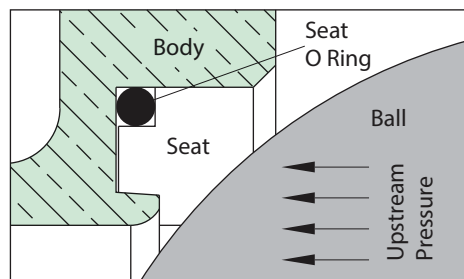
Live-seal is considered the intellectual component and the workhorse of Flo-Tite's Van Guard stem sealing system. Working in unison with stages I and II, stage III calls upon the use of V-Ring packing sets which expand sideways as they are compressed and pressurized blocking all air pockets. The Van-Guard stem system is energized by disk or coil springs which continuously adjusts packing compression to compensate for wear, pressure or temperature changes.

Whether your service involves volatile organic compounds, volatile hazardous chemicals, or air pollutants, Flo-Tite's ball valves are by design dependable, long lasting and fully maintainable. Flo-Tite has various valve solutions and designs that provide end-users freedom of choice for the toughest requirements imposed by the industry and by international standards.



# Flex-Load Energized Seat Design

**Flo-Tite's unique Flex-Loaded Design is standard in our API 6D valves.**



Viton O Rings are inserted behind valve seats. The O Ring exerts only a minimum amount of pressure on the seats that in turn helps seal on both upstream and downstream sides of the ball. Also, helps provide additional seat memory.

Ideal for high cycle, very low pressure & vacuum service applications.

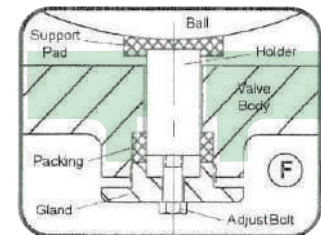
\* Standard offered with Viton material, consult factory if other material is required.

## Vacuum Service Suitable to 20 Micron

Specially cleaned and lubricated valves can handle services of  $10^{-3}$  mm of Hg (1 micron)

# Ball Support

## Trunnion Style Ball Support



Flo-Tite's ball support is a valuable design feature found on our larger sized valves. It maintains a constant ball seat profile which dramatically improves valve performance resulting in smooth, more efficient valve operation with lower operating torques, less seat damage, reduced seat wear, and longer service. Features in Model F150 /F300 6", 8", 10" and 12", and our standard Port Models SF150 sizes 10" - 12".

# Product Identification Code for Complete Valve Model Numbers

Model	Body Material		Valve - Soft Parts							Operator		Size		
			Seat		Stem Seals		Body Seal		O - Rings			inch	mm	
Flanged End Full Bore F150 F300 F600	316SS	SS	TFM	F	TFM	F	TFM	F	VITON	V	Lever Locking	L	1/2	15
	WCB	CS	CTFM	Y	CTFM	Y	CTFM	Y	EPDM	E	Oval Locking	O	3/4	20
	Alloy 20	A2	PTFE	T	RTFM	X	PTFE	T	PTFE	T	Gear	G	1	25
	Duplex	DP	RPTFE	R	PTFE	T	RPTFE	R	BUNA	B	Deadman	S	1 1/4	32
Flanged End Standard Bore RF15 SF150 RF300 SF300 SF600			50/50	S	RPTFE	R	50/50	S	NONE	N	Actuator	A	1 1/2	40
			UHMWPE	U	50/50	S	UHMWPE	U			Bare Stem	N	2	50
			PEEK	P	UHMWPE	U	PEEK	P			Special	X	2/12	65
			Cavity Filled	C	PEEK	P	Graphite	G					3	80
			Metal	M	Graphite	G	Kel-F	K					4	100
			Kel-F	K									5	125
													6	150
													8	200
													10	250
													12	300

\*Standard O Ring is Viton in 6D valve design.

## Ordering Information

when placing an order or requesting a quotation, please provide as many details on the application as possible such as media type, temperature, pressure, pipe size and etc.

## Material Identification

Flo-Tite's marking system follows MSS SP-25-1998 guidelines. In addition to the cast body information, we have decided to add metal name plates that identify all valve soft parts.

Valve users worldwide will be able to contact Flo-Tite quickly for any installation or service requirements as the company website address will be on all valves.

Example:

Model # F150				
TRIM	F	F	G	V
Special				
www.flotite.com		CE d48 +200°C -90°C		

## Ordering Examples by Part Numbers

Flanged Full	316SS	TFM	Graphite	TFM	Viton	LEVER	2"	3/8" GAUGE Taps
Model	Body Material	Seat	Stem Seal	O-rings	Body Seal	Operator	Size	Special Feature
F150	SS	- F	G	G	V	- L	- 50	- G1

## Flanged Valves with Media Containment Caps

The I-SO-MOUNT platform is ideal for the addition of our secondary containment units. Flo-Tite's media containment cap offers in-line maintenance for stem repair, protection for high temperature service, fugitive emission monitoring for early leak detection, positive displacement. It also can be used as a high-tech stem extension. See Tech Bulletin Page 140.

## Optional - Special Design Valves

### Flanged Valve with Cryogenic Extension



Flo-tite offers Cryogenic Flanged valves.  
See Tech Bulletin 138

**Stem Extensions**  
Flanged Valve with  
Cast stem extensions or  
Media Containment Units  
available from 1/2" - 12"

6" stem extension



### Flanged Valves in Control Valve Service

Flo-Tite offers modulating V-port control valves. The V-ball is characterized to meet all custom flow requirements. See Tech Bulletin page 120.

**Stocking V Ball Sizes 1/2" - 12"**



V-ports 15, 30, 60, 90 deg V & slotted balls.

**Flo-Tite Ball Valves, serving multi-national end users in a wide range of applications in many industries including:**

- Chemical & petrochemical
- Power generation plants
- Ship building industries
- Fiber industries
- Food industries
- LNG, HRSG industries
- Oil refinery industries
- Desalination industries
- Steel & iron industries
- Pulp & paper plants
- Coal & mining industries
- Higher Pressure HVAC Applications

Specific descriptions, dimensions and construction details illustrated may vary slightly from this bulletin. They are for general use only. We reserve the right to revise or modify product design without prior notice.



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