

# Syntron® | Iris Valves

Control Valves for Bins, Hoppers and Chutes



by: **Lorenz**  
Conveying Products USA Inc.  
[syntronirisvalves.com](http://syntronirisvalves.com)

112 Merle Lane, Suite 104  
Normal, IL, U.S.A. 61761  
USA 1-800-263-7782  
Canada 1-800-263-1942  
Tel. 905-372-2240  
[sales@lorenz.ca](mailto:sales@lorenz.ca)

**The Gold Standard in Iris Valves**

# Syntron® Iris Flow Control Valves

Syntron® Iris Valves are a cost effective alternative to Butterfly Valves and Slide Gates. They are designed to permit free flow of materials without damaging your product.

Reliable, adjustable control and shutoff of powders and granular product from bins, hoppers and chutes.

Rotate the handle through a 180 degree arc to fully open/close the valve. Various diaphragm materials are available to suit your specific application.



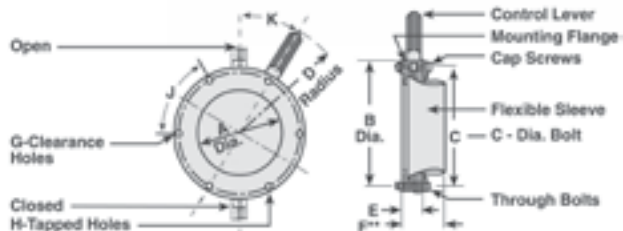
- FV Series - single diaphragm with twist lock handle
- SFV Series - single diaphragm with trigger handle
- DFV Series - double diaphragm with trigger handle

## FV Series

### Operation:

FV Series Control valves operated by rotating the control handle through a 180 degree arc to vary the size of the orifice from closed to fully open.

To lock the valve in a desired position, turn control handle clockwise to tighten.



### FV Features

- Single diaphragm
- Twist lock handle permits locking in unlimited positions

### Standard Construction

- Aluminum housing
- Bronze rotating control ring
- Aluminum handle
- Steel spiralex clamp rings
- Stainless Steel retaining rings
- 4 oz nylon diaphragm
- Also available in all Stainless Steel construction to meet special application requirements
- Optional wear sleeves for handling abrasive fine or dusty product

### FV Series Dimensions

Model		A	B	C	D	E	F**	G	H	J	K
FV-4	in	4	6	5.44	6.75	1.25	2.375	0.27	.25-20	60°	30°
	mm	101.6	152.4	138.1	171.4	31.8	60.3	6.7			
FV-6	in	6	9.125	8.5	8.5	1.375	3.5	0.28	.25-20	60°	30°
	mm	152.4	231.7	215.9	215.9	34.9	88.9	7.1			
FV-8	in	8	11.125	10.5	9.5	*1.375	4.5	0.28	.25-20	60°	30°
	mm	203.2	282.6	266.7	241.3	34.9	114.3	7.1			
FV-10	in	10	13.5	12.75	10.5	1.625	5.75	0.41	.375-16	45°	22.5°
	mm	254	342.9	323.8	271.5	41.3	146	10.3			
FV-12	in	12	16	15.25	11.75	1.75	6.75	0.41	.375-16	45°	22.5°
	mm	304.8	406.4	387.4	298.4	44.4	171.4	10.3			

\*1.5 (38.1) for Stainless Steel \*\* Diaphragm in full open position

### FV Series Weights

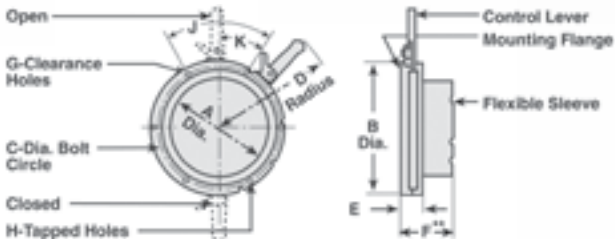
Model	Net Weight		Shipping Weight	
	lb	kg	lb	kg
FV-4	2.5	1.1	5	2.2
FV-6	5.5	2.5	8	3.6
FV-8	6.5	2.9	9	4.0
FV-10	9.5	4.3	12	5.4
FV-12	15.75	7.2	17	7.7

# SFV / DFV Series

## Operation:

SFV/DFV Iris Flow Control Valves operate by rotating the control handle through a 180-degree arc. The trigger-type handle locks in multiple precise orifice settings for rapid and frequent opening/closing. All models (except SFV/DFV-12) include five orifice notch settings.

The SFV/DFV-12 features 19 orifice notch settings.



### SFV Features

- Single diaphragm
- Trigger type handle

### DFV Features

- Double diaphragm especially suited for fine, dusty materials and for leak proof operation
- Trigger type handle

### Standard Construction

- Stainless Steel retaining rings
- 4 oz. nylon diaphragm
- Maximum temperature 82°C (180°F)
- Optional – Wear Sleeves for handling abrasive, fine or dusty product

## SFV / DFV Series Dimensions

Model		A	B	C	D	E	F**	G	H	J	K
SFV-4	in	4	6	5.44	7.75	1.25	2.25	0.28	.25-20	60°	30°
	mm	101.6	152.4	138.1	196.8	31.8	57.2	7.1			
DFV-4	in	4	6	5.44	7.75	1.25	2.5	0.28	.25-20	60°	30°
	mm	101.6	152.4	138.1	196.8	31.8	63.5	7.1			
SFV-8	in	8	11.125	10.5	10.75	1.75	4.5	0.28	.25-20	60°	30°
	mm	203.2	282.6	266.7	273	44.4	114.3	7.1			
DFV-8	in	8	11.125	10.5	10.75	1.75	5	0.28	.25-20	60°	30°
	mm	203.2	282.6	266.7	273	44.4	127	7.1			
SFV-12	in	12	16	15.25	14.187	1.75	6.5	0.41	.375-16	45°	22.5°
	mm	304.8	406.4	387.4	360.4	44.4	165.1	10.3			
DFV-12	in	12	16	15.25	14.187	1.75	7	0.41	.375-16	45°	22.5°
	mm	304.8	406.4	387.4	360.4	44.4	177.8	10.3			

\*\* Diaphragm in full open position

## SFV / DFV Series Weights

Model	Net Weight		Shipping Weight	
	lb	kg	lb	kg
SFV-4	1.5	.6	5	2.2
DFV-4	1.75	.7	5	2.2
SFV-8	6.25	2.8	9	4.0
DFV-8	7	3.1	10	4.5
SFV-12	18	8.1	33	14.9
DFV-12	19	8.6	34	15.4

### Syntron® Iris Flow Valves Offer

- Initial low-cost investment
- Low maintenance
- Easy diaphragm replacement
- Minimum mounting area required
- Durable construction for many years of service



Diaphragm (nylon or other material) with retaining ring at each end.



With the upper end fixed, the lower end is rotated, gradually reducing the orifice.



At 180 degrees of rotation, the orifice is completely closed.

Adjustable material control from full feed to trickle.

Use the following selection chart to choose the proper diaphragm for your application

	4 oz. Nylon	2 oz. Nylon	Fairprene (buna-N "Nitrile" on Nylon)	5 oz. Nomex Nylon	Urethane Coated Nylon (FDA Approved)	8 oz. Teflon
<b>Maximum Temperature</b>	110°C (230°F)	110°C (230°F)	100°C (212°F)	149°C (300°F)	88°C (190°F)	177°C (350°F)
Anti-Static			✓✓			
Dampness	✓	✓	✓✓	✓	✓	
Food Handling	✓	✓	✓	✓	✓✓	
Prevention of Contamination	✓	✓	✓		✓✓	
Slurry ★ ●	✓	✓	✓✓		✓	
Air (Low Pressure & Velocity) ★ ●			✓✓		✓✓	
Abrasive ★	✓✓		✓■	✓✓		✓✓
More than 35lb/cu ft. (561 kg/m³)	✓✓	✓	✓■	✓✓	✓■	✓
Less than 35lb/cu ft. (561 kg/m³)		✓✓	✓■		✓■	
Lumpy Material	✓✓	✓	✓		✓	✓
Fine Powder (1-50 mesh)		✓	✓✓		✓✓	
Alkali Solids (Room Temp.) (Caustic Soda, Soda Ash, etc.)	✓	✓	✓	✓		
Dry Soaps, Synthetic Detergents	✓	✓		✓		

- For use where slight leakage can be tolerated
- Best where fine dusty materials are involved
- ★ Consideration should also be given to wear sleeve
- ✓ Indicates acceptable
- ✓✓ Indicates best choice of diaphragm

Syntron® Valves can be close against a material head load of 2-5 psi (.01 to .03 Mpa) depending upon valve size and material characteristics

SFV and DFV Iris Flow Control Valves should not be used in applications exceeding 82°C (180°F)

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