



3900 Dr. Greaves Rd. • Kansas City, MO 64030 • (816) 761-7476 • FAX (816) 765-8955

**INDUSTRIAL SWARTWOUT FIBERGLASS SERIES  
MODEL 851FG  
FIBERGLASS INLET VANE DAMPER**

**STANDARD CONSTRUCTION**

**FRAME**

Vinyl Ester fiberglass (see table below for dimensions).

**BLADE**

Vinyl Ester fiberglass.

**BEARINGS**

Molded graphite impregnated PTFE, flanged sleeve.

**AXLES**

3/4" (19) diameter Vinyl Ester fiberglass rod.

**LINKAGE**

1/4" (6) thick 316 stn. stl. arm w/3/8" (10) dia. shoulder bolt 1 1/4" (31) x 1/4" (6) 316 stn. stl. operator ring thru 40" dia. 1 1/2" (38) x 1/4" (6) 316 stn. stl. operator ring above 40" dia.

**HUB**

Open.

**OPERATING LEVER**

Crank lever (CL) for motor operation. Hand quadrant (HQ) for manual operation.

**SIZES**

12", 14", 16", 18", 20", 22", 24", 26", 28", 30", 32", 34", 36", 42", 48", 54", 60", 66", 68" and 72" (305, 356, 406, 457, 508, 559, 610, 660, 711, 762, 813, 864, 914, 1067, 1219, 1372, 1524, 1677, 1727, 1829).

**MAXIMUM TEMPERATURE**

200°F (94°C).

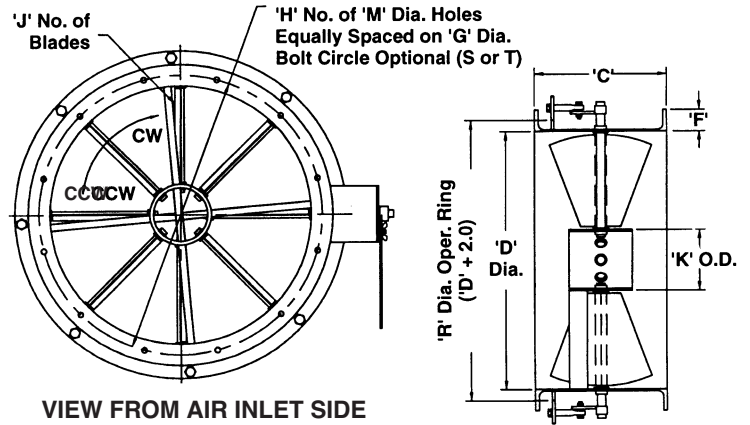
**BOLT HOLE ORIENTATION**

S = holes straddle axle centerline (illustrated).  
T = holes parallel with axle centerline (not illustrated).

**NOTES**

1. Crank lever & hand quadrant construction to be stainless steel
2. Ruskin standard bolt hole pattern for 851FG conforms to PS15-69 table 2.
3. Fraction of an inch sizes are not available.

Dimensions in parenthesis ( ) indicate millimeters.



**VIEW FROM AIR INLET SIDE**

Inlet Air Rotation (CW or CCW)  
Determined from Air Inlet Side of Fan

**VARIATIONS**

Variations to standard construction are available at additional charge and include:

- Bolt holes in flanges
- Flat capped (FC) hub
- Electric or pneumatic actuators
- Bullet-nosed (BN) hub

'D' INSIDE DIA.	FRAME	
	SIZES	F-FLANGE
12-14" (305-356)	.375 x 2.187 (10 x 56)	.125 x 12 (3 x 305)
16-20" (406-508)	.50 x 2.187 (13 x 56)	.125 x 12 (3 x 305)
22-24" (559-610)	.50 x 2.187 (13 x 56)	.187 x 12 (5 x 305)
26-36" (660-914)	.50 x 2.187 (13 x 56)	.187 x 12 (5 x 305)
42" dia. (1067)	.625 x 2.187 (16 x 56)	.25 x 12 (6 x 305)
48" dia. (1219)	.625 x 3.187 (16 x 81)	.25 x 12 (6 x 305)
54-72" (1372-1829)	.625 x 3.187 (16 x 81)	.25 x 14 (6 x 356)

FRAME		BLADES		BEARINGS		AXLES		ACCESSORIES (Opt.)	
Fiberglass Channel	See construction table	Fiberglass		Molded PTFE		Fiberglass Rod		Bolt Holes One Flange	
								Bolt Holes Both Flanges	
								Bullet Nose Hub Cap	
								Flat Hub Cap	
								Manual CL	
								Actuator HQ	
								Electric Actuator	
								Pneumatic Actuator	

QTY.	FRAME				ROTATION (Viewed from air inlet side)		BOLT HOLE ORIENTATION		TAG
	D-DIA.	G BOLT CIRCLE DIA.	H NO. HOLES	M HOLE DIA.	CLOCKWISE CW	COUNTER CLOCKWISE CCW	S STRADDLE	T PARALLEL	

**PROJECT:**  
**ARCH/ENGR:**  
**REPRESENTATIVE:**

**LOCATION:**  
**CONTRACTOR:**  
**DATE:**

## 851FG SUGGESTED SPECIFICATION

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Furnish and install at locations shown on plans or in accordance with schedules, multi-blade fiberglass modulating inlet damper. Damper frame shall be an open contact molded part with flanges and web to be integral. There shall not be any type of separation line evident caused by secondary bonding of flanges to damper body. Flange flatness shall be held so as not to require back spot-facing of the unit. Frame corrosion liner will be minimum of 100 mils thick. Liner surface shall be free of porosity or imperfections so as not to allow contamination of the structure during wash down. Blades shall be supplied with surfacing veil both sides; not less than 100 mils thick. Blade resins shall match that of the frame. All components shall carry a Class I flame spread as standard. Blades shall have a molded axle saddle fitted for the desired axle drive outside dimension. Axles saddle shall be located on center. All blades

shall be secondary bonded to the power axles using chopped strand mat and surfacing veil utilizing Ruskin Swartwout AB style plate for fixturing. Multi-blade inlet damper hub shall be helical wound using compatible resins as frame and blades. Hub shall be on center and held in place using struts which will also act as blades stops on both the air entering and air leaving sides. Prior to any bonding of the hub and struts, two-part epoxy shall be applied providing a smooth radius area ready for lamination. Blades shall be secured on a fiberglass reinforced axle and pivot on a machined PTFE bearing secured in the frame and hub. External linkage shall be made of 316 grade stainless steel and rotate smoothly around the exterior of the damper frame. Each axle will operate independently. Damper shall be Ruskin Swartwout Series model 851FG.



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