

### I. Product specification

#### 1. Overview

- SF series is a 3A coated, monolith aluminum wheel
- Recovery /wheel types:  
sorption (total: sensible and latent)  
condensation (non-hygroscopic: sensible-only)
- Airflow range: from 230 – 18 000 SCFM
- Wheel diameters: 21" – 83", with depth of 4"
- Side by side solution up to SF-54

#### 2. Wheel Construction

- Wheel structure: monolith aluminum wheel structure, without any segments to ensure 360° airflow (up to 8% more air flow surface)
- Foil layers: foil layers mechanically bonded together: grooved across to form airflow channels, grooved along to interlock foil layers
- Hub: extruded aluminum, diameter of 6" or 10", depending on wheel diameter. For wheel diameters over 27" reinforced with 20" spokes to reduce torque and eliminate material fatigue
- Bearings: Permanently sealed and lubricated ball bearings, maintenance-free  
Oversized bearings designed for 200 000 hours of duty (20 000L-10 hours of duty, 1000rpm, 6000 lbs)

#### 3. Energy Recovery Solution

- Transfer media: desiccant coated corrugated aluminum
- Coating: 3A molecular sieve for fast absorption of moisture
- Cross-contamination: minimal - high selectivity desiccant absorbs only water molecules of 2.7A (only water molecules fits desiccant pores of 3A; most contaminants, e.g. ammonium >3A)
- AHRI certified performance

#### 4. Casing

- Structure: double wall
- Frame material: 15 to 18ga prime G90 hot-dip galvanized steel(DX51D+Z275), tested for corrosion resistance of 400 hours of salt spray

#### 5. Sealing system

- Twin sealing on both sides of wheel: more air goes through the matrix - up to 2% better performance
- Sealing on wheel peripheries: non-contact sealing type around both diaphragms, reinforced and industrial-grade fabric
- Sealing on middle beams: durable brush seals along both middle beams

#### 6. Motors

- Available AC motors options: 208-230/380/460V/3, 575V/3, 230/400V/3
- VFD compatible and factory-wired with the connector.
- Electrical safety: all motors are UL recognized components.
- UL certified

#### 7. Belt Drive System

- Segmented belt

#### 8. Cleaning, Purge

- Purge section: provided as standard, for applications that require additional elimination transfer of exhaust air into the supply air
- Transfer media: cleanable with high-pressure air or water at 500psi, temp. up to 80°F, at distance over 2 ft) without flooding the motor



**II. SF Series - technical data:**

1. Models: sizes, electrical options and performance at recommended velocity range of 200–1000 fpm (min / max):

MODEL	MEDIA	SbS	Diameter	W x H x D	AIRFLOW min/max	Effectiveness max/min			Press. Loss
						Sensible %	Latent %	Total %	
type			[in]	[in]	CFM				in-wc
SF-21	Monolith	OK	21	24 x 24 x 4.5	230-1200	75-53	82-50	78-53	0,08-0,95
SF-27	Monolith	OK	27	29 x 29 x 4.5	350-1800	75-54	82-51	78-54	0,08-0,95
SF-32	Monolith	OK	32	34 x 34 x 4.5	540-2710	75-55	82-52	78-55	0,08-0,95
SF-37	Monolith	OK	37	40 x 40 x 4.5	760-3800	75-56	82-53	78-56	0,08-0,95
SF-42	Monolith	OK	42	44 x 44 x 4.5	920-4600	75-57	82-54	78-57	0,08-0,95
SF-48	Monolith	OK	48	50 x 50 x 4.5	1200-6310	75-58	82-55	78-58	0,08-0,95
SF-54	Monolith	OK	54	62 x 62 x 4.5	1620-8080	75-59	82-56	78-59	0,08-0,95
SF-60	Monolith	N/A	60	56 x 56 x 4.5	2030-10130	75-60	82-57	78-60	0,08-0,95
SF-66	Monolith	N/A	66	68 x 68 x 4.5	2420-12110	75-61	82-58	78-61	0,08-0,95
SF-70	Monolith	N/A	70	78 x 78 x 4.5	2740-13710	75-62	82-59	78-62	0,08-0,95
SF-76	Monolith	N/A	76	72 x 72 x 4.5	3240-15700	75-63	82-60	78-63	0,08-0,95
SF-83	Monolith	N/A	83	85 x 85 x 4.5	3650-18000	75-64	82-61	78-64	0,08-0,95

*\*data and dimensions may be changed please contact for the individual drawing and data*

2. Casing drawings and dimensions [in]

MODEL	DIAMETER	Motor location	A	B	C	D	E	F	G	H
SF-21	21	1/2/3/4	24	3,3	10,5	4,5	11	5,8	0,3	5,4
SF-27	27	1/2/3/4	29	3,3	12,8	4,5	11	5,1	0,9	6,1
SF-32	32	1/2/3/4	34	3,3	15,3	4,5	11	5,1	1,8	6,9
SF-37	37	1/2/3/4	40	3,3	18,2	4,5	11	5,1	1,9	6,9
SF-42	42	1/2/3/4	44	3,3	20,3	4,5	11	5,1	2,7	7,8
SF-48	48	1/2/3/4	50	3,3	23,3	4,5	11	5,1	2,7	7,8
SF-54	54	1/2/3/4	56	3,3	26,4	4,5	11	7,2	1,9	13,1
SF-60	60	1/2/3/4	62	4,88	28,7	4,5	11	7,2	2,8	13,8
SF-66	66	1/2/3/4	68	4,88	31,5	4,5	11	7,2	2,8	13,8
SF-70	70	1/2/3/4	72	4,88	33,5	4,5	11	7,2	3,1	14,1
SF-76	76	1/2/3/4	78	4,88	36,5	4,5	11	7,2	2,8	13,8
SF-83	83	1/2/3/4	85	4,88	40,1	4,5	11	7,2	3,1	14,2

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