

SF Series 4" MONOLITH ENTHALPY WHEELS

I. Product specification

1. Overview.

- SF series is a 3A coated, monolith aluminum wheel.
- Recovery type: total energy recovery (both sensible and latent).
- Airflow range: from 230 – 18 000 SCFM
- Wheel diameters: 21" – 83", with depth of 4".
- Performance certification: 1060 AHRI Certified with ultra-low-pressure loss
- Manufactured in the USA

2. Wheel Construction.

- Wheel structure: monolith aluminum wheel structure, without any segments to ensure 360o 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 70", 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 and antimicrobial properties.
- 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 and UL-900 tested and certified for smoke generation and combustibility.

4. Casing.

- Structure: double wall.
- Frame material: 15 to 18ga prime G90 hot-dip galvanized steel, tested for corrosion resistance of 400 hours of salt spray.
- Sizes: industry standard casing – direct replacement for most polymer and aluminum wheels.
- Dimensions: wheel diameter + 2", since rigid structure allows to use bigger wheel diameters.

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: 208-230V/1, 208-230/380/460V/3, 575V/3
- VFD compatible and factory-wired with the connector.
- Electrical safety: all motors are UL recognized components.
- Overall assembly tested and certified for UL:1995.

7. Belt Drive System.

- Segmented belt or durable polyurethane composite, dust free.

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 2ft), without flooding the motor.



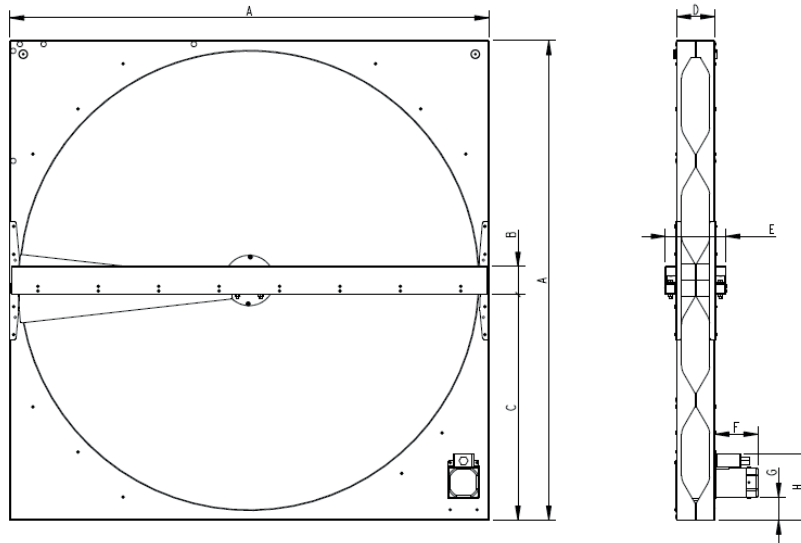
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II. SF Series - technical data:

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

SF-series	Media	New bigger diameter	UWC/ERC Wheel diameters	W x H x D	Total weight	Airflow min/max	Effectiveness min/max			Pressure loss min/max	Electrical configuration		
							Sensible %	Latent %	Total %		208-230V 1 Phase	208-230V/460V 3 Phase	575V 3 Phase
4" wheels	Type	in	in	in	lbs	SCFM				iwg			
SF-21	Monolith	21	21	24x24x4,5	49	230-1200	75%-53%	82%-50%	78%-53%	0,08-0,95	X		
SF-27	Monolith	27	25	29x29x4,5	55	350-1800	75%-53%	82%-50%	78%-53%	0,08-0,95	X		
SF-32	Monolith	32	30	34x34x4,5	75	540-2710	75%-53%	82%-50%	78%-53%	0,08-0,95	X	X	X
SF-37	Monolith	37	36	40x40x4,5	98	760-3800	75%-53%	82%-50%	78%-53%	0,08-0,95	X	X	X
SF-42	Monolith	42	41	44x44x4,5	117	920-4600	75%-53%	82%-50%	78%-53%	0,08-0,95	X	X	X
SF-48	Monolith	48	46	50x50x4,5	147	1200-6310	75%-53%	82%-50%	78%-53%	0,08-0,95	X	X	X
SF-54	Monolith	54	52	56x56x4,5	182	1620-8080	75%-53%	82%-50%	78%-53%	0,08-0,95		X	X
SF-60	Monolith	60	58	62x62x4,5	221	2030-10130	75%-53%	82%-50%	78%-53%	0,08-0,95		X	X
SF-66	Monolith	66	64	68x68x4,5	260	2420-12110	75%-53%	82%-50%	78%-53%	0,08-0,95		X	X
SF-70	Monolith	70	68	72x72x4,5	290	2740-13710	75%-53%	82%-50%	78%-53%	0,08-0,95		X	X
SF-76	Monolith	76	74	78x78x4,5	338	3240-15700	75%-53%	82%-50%	78%-53%	0,08-0,95		X	X
SF-83	Monolith	83	81	85x85x4,5	346	3650-18000	75%-53%	82%-50%	78%-53%	0,08-0,95		X	X

2. Casing drawings and dimensions [in]



Model	wheel Ø [in]	A [in]	B [in]	C [in]	D [in]	E [in]	F [in]	G [in]	H [in]
SF-21	21	24	3,3	10,47	4,49	7,08	5,22	0,32	5,4
SF-27	26	29	3,3	12,8	4,49	7,08	5,22	0,99	6,06
SF-32	32	34	3,3	15,35	4,49	7,08	5,06	1,85	6,93
SF-37	37	40	3,3	18,23	4,49	7,08	5,06	1,89	6,97
SF-42	42	44	3,3	20,33	4,49	7,08	5,06	2,68	7,76
SF-48	48	50	3,3	23,35	4,49	7,08	5,06	2,68	7,76
SF-54	54	56	3,3	26,44	4,49	7,08	4,79	1,87	13,05
SF-60	60	62	4,88	28,77	4,49	7,08	4,79	2,76	13,84
SF-66	66	68	4,88	31,56	4,49	7,08	5,00	2,76	13,84
SF-70	70	72	4,88	33,54	4,49	7,08	5,08	3,15	14,12
SF-76	76	78	4,88	36,56	4,49	7,08	5,08	2,76	13,84
SF-83	83	85	4,88	40,06	4,49	7,08	5,08	3,15	14,23