

SF Series 100 mm MONOLITH 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 320 – 40 000 m³/h
- Wheel diameters: 500 – 2400 mm, with depth of 100 mm.

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 150 mm or 250 mm, depending on wheel diameter. For wheel diameters over 1200 mm, reinforced with 500 mm 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, 3000 kg).

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)
- Eurovent certified performance

4. Casing.

- Structure: double wall.
- Frame material: 1 mm to 1,5 mm 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 + 80 mm, 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.

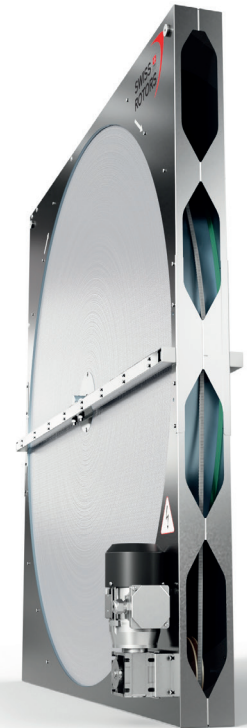
- AC 3 phase motor (230/400V 3 Ph 50Hz) as standard, reliable and UL-recognized
- EC 1 phase motor (230V 1Ph 50Hz) as option - high efficiency (IE4+) with integrated controls for variable speed
- Controls: 0-10V analog signal or ModBus digital connection.

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 20bar, temp. up to 30°C, at distance over 60cm), without flooding the motor.



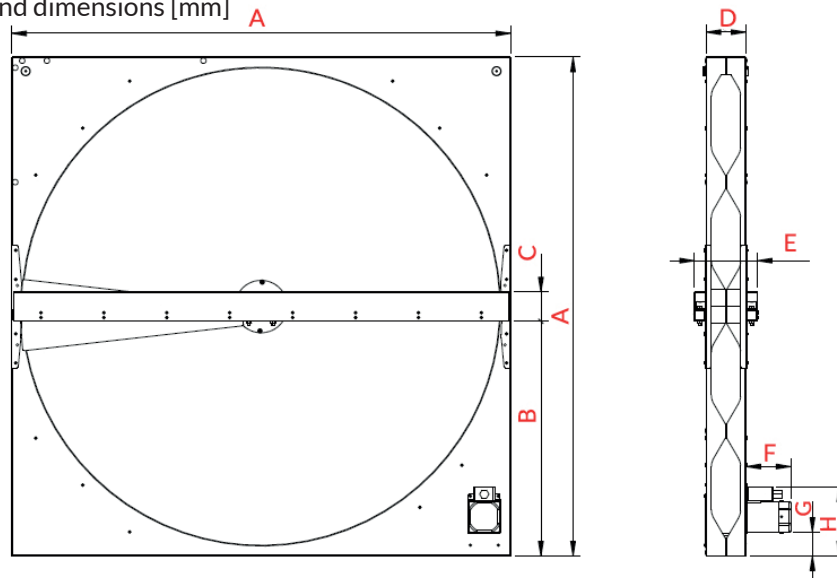
SF Series
100mm MONOLITH ENTHALPY WHEELS

II. SF Series - technical data:

1. Models: sizes, electrical options and performance at recommended velocity range of 1-5 m/s (min / max):

Model	Media	diameter	W x H x D	Airflow min/max	Effectiveness min/max			Pressure loss min/max
					Sensible %	Latent %	Total %	
Type		mm	mm	m³/h				Pa
SF-500	Monolith	500	580x580x110	320-1620	75%-53%	82%-50%	78%-53%	20-238
SF-600	Monolith	600	680x680x110	460-2400	75%-53%	82%-50%	78%-53%	20-238
SF-700	Monolith	700	780x780x110	640-3260	75%-53%	82%-50%	78%-53%	20-238
SF-800	Monolith	800	880x880x110	920-4300	75%-53%	82%-50%	78%-53%	20-238
SF-900	Monolith	900	980x980x110	1120-5600	75%-53%	82%-50%	78%-53%	20-238
SF-1000	Monolith	1000	1080x1080x110	1350-6860	75%-53%	82%-50%	78%-53%	20-238
SF-1100	Monolith	1100	1180x1180x110	1760-8400	75%-53%	82%-50%	78%-53%	20-238
SF-1200	Monolith	1200	1280x1280x110	1940-9950	75%-53%	82%-50%	78%-53%	20-238
SF-1300	Monolith	1300	1380x1380x110	2300-11600	75%-53%	82%-50%	78%-53%	20-238
SF-1400	Monolith	1400	1480x1480x110	2820-13600	75%-53%	82%-50%	78%-53%	20-238
SF-1500	Monolith	1500	1580x1580x110	3380-15600	75%-53%	82%-50%	78%-53%	20-238
SF-1600	Monolith	1600	1680x1680x110	3800-15600	75%-53%	82%-50%	78%-53%	20-238
SF-1700	Monolith	1700	1780x1780x110	4200-20000	75%-53%	82%-50%	78%-53%	20-238
SF-1800	Monolith	1800	1880x1880x110	4700-22420	75%-53%	82%-50%	78%-53%	20-238
SF-1900	Monolith	1900	1980x1980x110	5100-24800	75%-53%	82%-50%	78%-53%	20-238
SF-2000	Monolith	2000	2080x2080x110	5800-27550	75%-53%	82%-50%	78%-53%	20-238
SF-2200	Monolith	2200	2280x2280x110	6600-33500	75%-53%	82%-50%	78%-53%	20-238
SF-2400	Monolith	2400	2480x2480x110	7800-40000	75%-53%	82%-50%	78%-53%	20-238

2. Casing drawings and dimensions [mm]



Model	diameter Ø [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]
SF-500	500	580	247,5	85	115	180	149	7	135
SF-600	600	680	297,5	85	115	180	132	10	147
SF-700	700	780	347,5	85	115	180	132	10	147
SF-800	800	880	397,5	85	115	180	129	46	175
SF-900	900	980	447,5	85	115	180	129	46	175
SF-1000	1000	1080	497,5	85	115	180	129	46	175
SF-1100	1100	1180	547,5	85	115	180	183	50	385
SF-1200	1200	1280	597,5	85	115	180	183	50	385
SF-1300	1300	1380	647,5	85	115	180	183	50	385
SF-1400	1400	1480	697,5	85	115	180	183	50	385
SF-1500	1500	1580	747,5	85	115	180	183	50	385
SF-1600	1600	1680	797,5	85	115	180	183	50	385
SF-1700	1700	1780	847,5	85	115	180	183	50	385
SF-1800	1800	1880	897,5	85	115	180	183	50	385
SF-1900	1900	1980	947,5	85	115	180	183	50	385
SF-2000	2000	2080	997,5	85	115	180	183	50	385
SF-2200	2200	2280	1097,5	85	115	180	183	50	385
SF-2400	2400	2480	1197,5	85	115	180	183	50	385