Tender specifications for
EC centrifugal fans – RadiCal in scroll housing

EC centrifugal fans – RadiCal in scroll housing
sizes 133 to 225

Direct-drive, single inlet centrifugal fans with backward-curved one-piece impellers made of high-tech composite material, based on a GreenTech EC external rotor motor with integrated control electronics, installed into a scroll housing.

One-piece, jointless impeller, sizes 133 to 225 mm, with 7 blades made of high-tech composite material. This permits high circumferential speeds and thus a high power density suitable for a wide range of applications.
Motor impeller statically and dynamically balanced on two planes to balancing grade G 6.3 in accordance with DIN ISO 21940.
GreenTech EC external rotor motor surpasses efficiency class IE4, magnets with no rare earths, maintenance-free ball bearings with long-term lubrication, theoretical nominal service life of at least 40,000 hours of operation.
Soft start, integrated power limiter, extended voltage input 1~200-240 V, 50/60 Hz. The fan can be used with all standard power supply networks with unaltered air performance.
Integrated control electronics, low-noise commutation logic; 100 % open-loop speed control via 0-10V/PWM or RS485/MODBUS-RTU interface for standard fans or RS485/MODBUS-RTU interface for versions with constant volume control (0-10V/PWM optionally possible), shielded lines are not necessary for the connections.

Version with housing construction:

Sizes 133 to 225, designed as ready-to-install housing construction. Construction is made of high-tech composite material, fastening options for installation available. Flexible installation position (please note protection class).
The fan satisfies the applicable EMC guidelines and requirements with regard to harmonic effects (see applicable data sheet for specific figures).
Documentation and marking in accordance with the applicable EU directives.
Reliable performance data, air performance measurements taken on an intake-side chamber test rig in accordance with ISO 5801 and DIN 24163. Sound measurements taken in a hemi-anechoic room in accordance with DIN EN ISO 3745.

Integrated protective devices:

- Power limiter
- Motor current limitation
- Soft start
- Overvoltage detection
- Thermal overload protection for electronics/motor
- Undervoltage detection

Optional:

- Other and specific requirements on request
- for versions with constant volume control, in addition:
  Constant volume can be regulated
  Integrated RH/T sensor
  Connection options for external sensors

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- FlowGrid air inlet grill

  FlowGrid air inlet grill tailor-made for the fan, to reduce assembly and system-related noise. Grill made of high-grade composite material in one piece, available ready for installation and also suitable for retrofitting. Ideal solution for confined intake conditions at the fan and/or if upstream turbulence-inducing fittings are unavoidable. The FlowGrid breaks up the turbulence fields and straightens the flow, resulting in distinct noise reduction.

Technical data:

Fan type		G___-_____ - _____ - _____	
Air flow	q_V	= _____	m³/h / cfm
Fan static pressure	p_{fs}	= _____	Pa / in. wg
Stat. overall efficiency	η_{es}	= _____	%
Operating speed	n	= _____	rpm
Motor type		= EC motor	
Type of control		= 0-100% speed control	
Motor efficiency class		= IE4 equivalent or better	
Electrical power consumption	P_{ed}	= _____	kW
Specific fan power	SFP	= _____	kW/(m³/s)
Nominal voltage	U_N	= _____	V
Mains frequency	f	= 50 / 60	Hz
Nominal current	I_N	= _____	A
Ingress protection		= IP54 for standard fans Motor IP54/electronics IP20, dependent on installation and position for versions with constant volume control	
Sound power level	L_W A(A, in)	= _____ / L_WA(A, out) = _____	dB(A)
Sound pressure level (at 1 m)	L_pA(A, in)	= _____ / L_pA(A, out) = _____	dB(A)
Ambient temperature range	T	= _____ to _____	°C
Fan mass	m	= _____	kg

Product photo

EC centrifugal fans – RadiCal
Housing construction
Sizes 133 – 225

See data sheet for dimensions and connections

Subject to change / Version 2019/12/18