

# Text for tender for Centrifugal EC blower

## Centrifugal EC blower with high power density

Fan sizes 160 to 250

**Directly driven double inlet centrifugal blowers with forward curved centrifugal impellers, based on a GreenTech EC external rotor motor encased in a scroll housing with external control electronics.**

Impeller of galvanized sheet steel, forward curved, fishplated blades; flow-optimized inlet ring made of galvanized sheet steel integrated into the housing;

motor impeller statically and dynamically balanced on two planes to balancing grade G 6.3 in accordance with DIN ISO 1940.

GreenTech EC external rotor motor exceeds efficiency class IE4, the magnets use no rare earths, maintenance-free ball bearing with long-term lubrication, theoretical rated service life of at least 40,000 operating hours, integrated current limitation, voltage input 1~200-277 V, 50/60 Hz, this fan can be used on all standard power supply utility networks with no change to its air performance.

Motor mounted on brackets for one-sided vibration damping.

External control electronics on scroll housing, pre-wired, low-noise commutation logic; speed control; integrated PID controller; active PFC; RS485 MODBUS RTU interface, control input 0-10 VDC / PWM; output 10 VDC, max. 10 mA; need not be installed with shielded cables.

Control electronics, aluminum housing with easily accessible connection area with spring loaded terminals, environmentally stable cable glands.

Industrial design scroll housing; galvanized sheet steel.

Any work required for isolation from structure-borne noise to be performed by the customer.

Fan satisfies the applicable EMC guidelines and requirements; documentation and marking conform to the applicable EU Directives.

Reliable performance data, air performance measurements in intake-side test chamber according to ISO 5801 and DIN 24163, sound measurements in an anechoic test chamber in accordance with DIN EN ISO 3745.

### Integrated protective devices:

- Locked-rotor protection
- Phase failure detection
- Mains undervoltage detection
- Thermal overload protection on electronics and motor
- Motor current limitation
- electronics temperature monitoring
- motor temperature monitoring

### Optional:

- Other and specific requirements on request

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## Technical data:

Fan type		D3G _____ - _____ - _____	
Air flow	$q_v$	= _____	m <sup>3</sup> /h
Actual pressure increase	$p_{fs}$	= _____	Pa
Overall static efficiency	$\eta_{es}$	= _____	%
Operating speed	$n$	= _____	rpm
Motor type		= EC motor	
Type of control		= Closed-loop speed control, 0-100%	
Motor efficiency class		= IE4	
Total power consumption	$P_{ed}$	= _____	kW
Specific fan power	SFP	= _____	kW/(m <sup>3</sup> /s)
Nominal voltage range	$U_N$	= _____	V
Line frequency	$f$	= 50 / 60	Hz
Nominal current	$I_N$	= _____	A
Protection class		= IP54	
Sound power level	$L_W A(A, in)$	= _____ / $L_W A(A, out)$ = _____	dB(A)
Sound pressure level (at 1 m)	$L_p A(A, in)$	= _____ / $L_p A(A, out)$ = _____	dB(A)
Permitted ambient temperature	$T$	= _____ to _____	°C
Weight of fan	$m$	= _____	kg

## Product photo



Centrifugal EC blower 225 D3G

For dimensions and connections, see data sheet