

Energy
efficient
motors & fans

EC Selection Brochure



2007 Edition

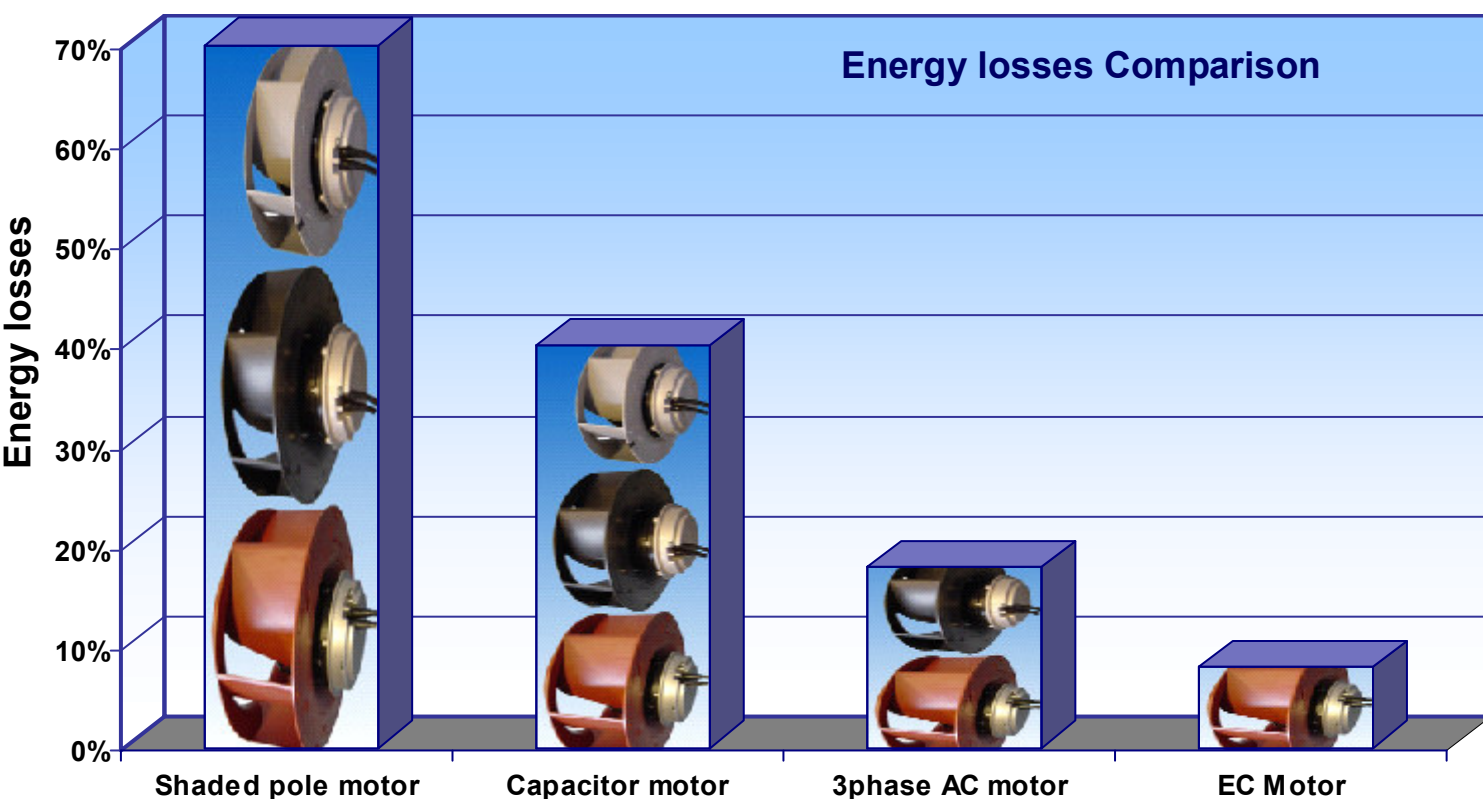
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What is EC Technology ?

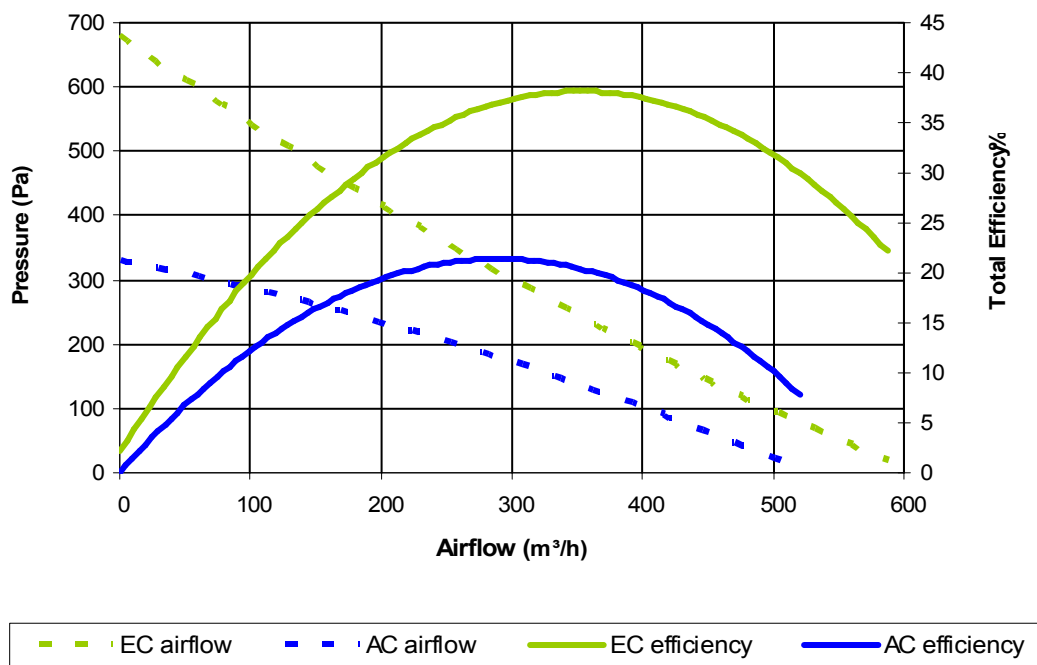
EC stands for Electronically Commutated, and it combines AC and DC voltages bringing the best of both worlds. The motor runs on a DC voltage, but with a single phase 230VAC or three phase 400VAC supply. The motor incorporates voltage transformation within the motor. The non-rotating part of the motor (stator) is extended to make room for an electronic PCB board which includes power transformation AC to DC, as well as the controls.

Benefits

- **Energy savings** : Minimum power consumption & better efficiency than AC equivalent
- **Control** : 100% speed controllable, not frequency dependant. Can be set up for constant airflow or pressure applications, 0-10VDC or PWM control signal.
- **Low motor temperature** : For longer lifetime than AC equivalent
- **Simplicity** : Electronic & power transformation are completely integrated within the motor

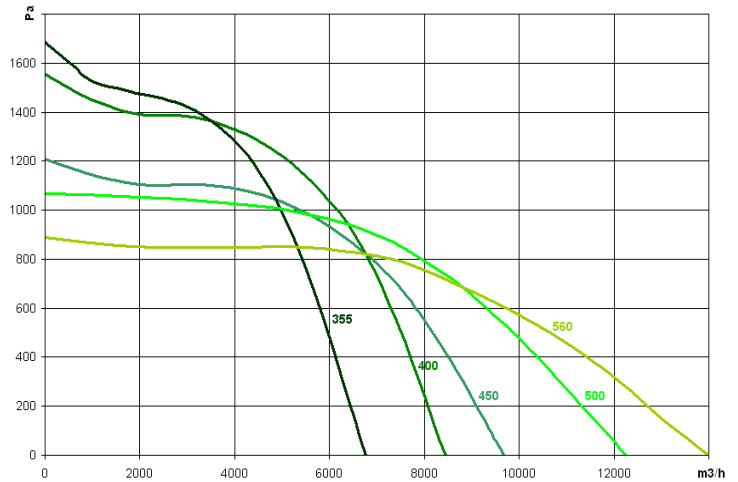
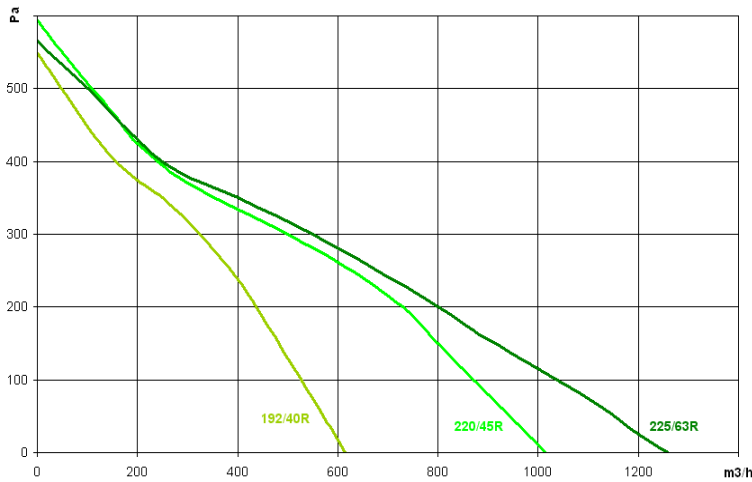


Efficiency comparison - Typical Backward curved Motorised impeller

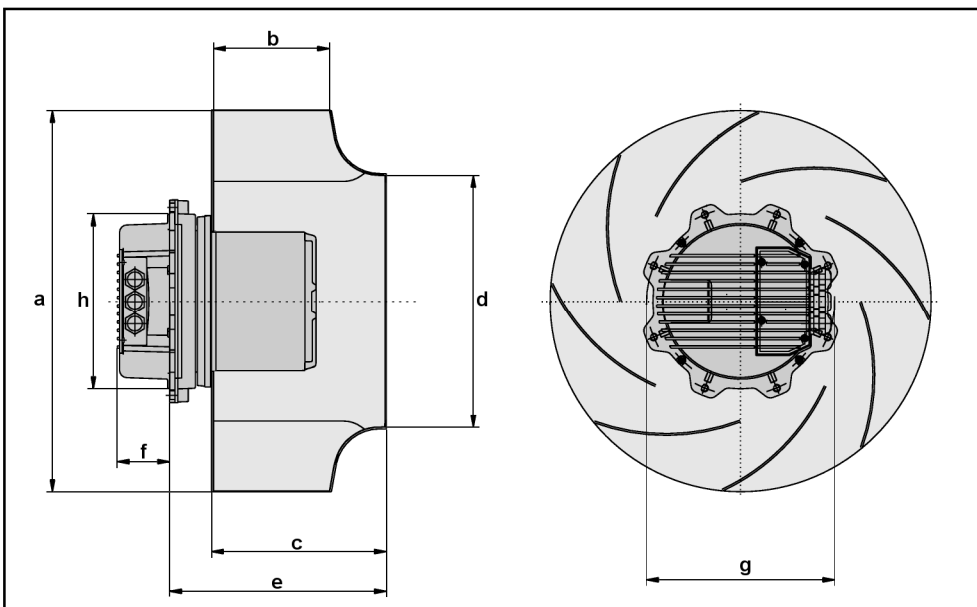


Backward curved motorised impeller selection

Make	Model	Voltage (Volts)	Frequency (Hz)	Power (Kw)	Maximum Current (A)	Maximum Air-flow (m ³ /h)	Speed (RPM)	Maximum Temperature (°C)
ECOFIT	RRED7 192x40R	230	50/60	0.07	0.50	615	3175	+50
ECOFIT	RRED7 220x45R	230	50/60	0.09	0.67	1015	2800	+50
ECOFIT	RRED7 225x63R	230	50/60	0.11	0.84	1260	2380	+50
ROSENBERG	GKHR 400-CIW.123	400	50	3.40	5.30	8450	2600	+40
ROSENBERG	GKHR 450-CIW.138	400	50/60	3.10	4.90	9680	2050	+40
ROSENBERG	GKHR 500-CIW.155	400	50/60	3.50	5.40	12200	1750	+40
ROSENBERG	GKHR 560-CIW.174	400	50/60 </tr					



Make	Model	a	b	c	d	e	f	g	h
ECOFIT	RRED7 192x40R	Ø192	40	60	Ø132	70	17	Ø107.5 (4xM4)	Ø115
ECOFIT	RRED7 220x45R	Ø220	45	63	Ø159	71	17	Ø107.5 (4xM4)	Ø115
ECOFIT	RRED7 225x63R	Ø225	63	90	Ø159	99	17	Ø107.5 (4xM4)	Ø115
ROSENBERG	GKHR 400-CIW.123	Ø404	123	182	Ø267	240	70	Ø252 (8xM10)	Ø235
ROSENBERG	GKHR 450-CIW.138	Ø454	138	209	Ø300	265	70	Ø252 (8xM10)	Ø235
ROSENBERG	GKHR 500-CIW.155	Ø510	155	234	Ø337	290	70	Ø252 (8xM10)	Ø235
ROSENBERG	GKHR 560-CIW.174	Ø570	174	261	Ø377	317	70	Ø252 (8xM10)	Ø235



Some dimensions may vary - Please contact us for latest datasheets.

Inlet rings are available at extra cost

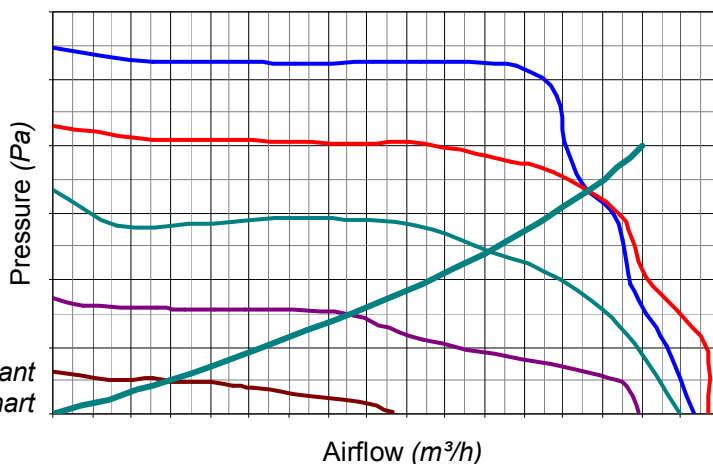
Examples of control & options



0-10 VDC : The fan sends its own 0-10Volts signal which can be read by simple standard 10kOhm potentiometers.

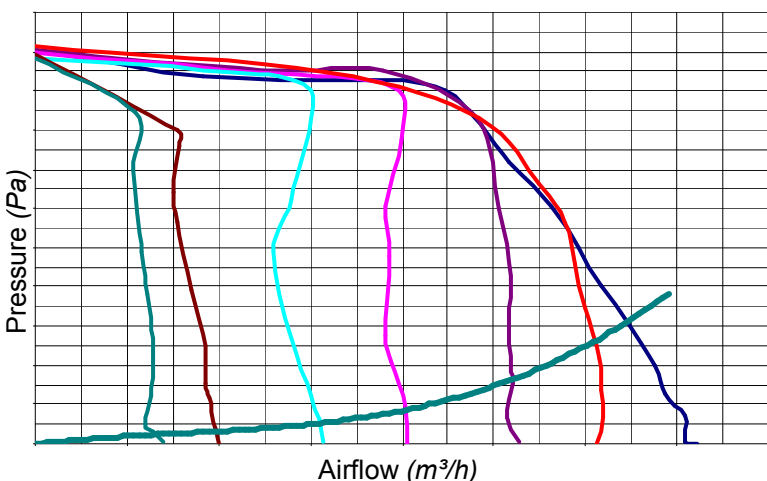
Constant pressure : Used in conjunction with a pressure sensor, the fan maintains the same pressure at varying airflow (ideal for ducted applications). Works with forward curved motorised impeller without pressure sensor and with backward curved motorised impeller with pressure sensor.

Existing product : GDRD7 146/188R



Typical constant pressure chart

Airflow (m^3/h)



Airflow (m^3/h)

Constant airflow : The fan maintains the same airflow at varying pressure (ideal for filtered applications) (*Backward curved motorised impeller only*)



Master / slave applications : (Rosenberg models only) : Ideal when several fans are used in a single application : 1 fan (Master) is pressure controlled (pressure sensor available as extra), and other fans (slaves) will adjust their speed accordingly.

Other options & types of controls available on request : Control via Networking (RS485 interface), PWM, etc...

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