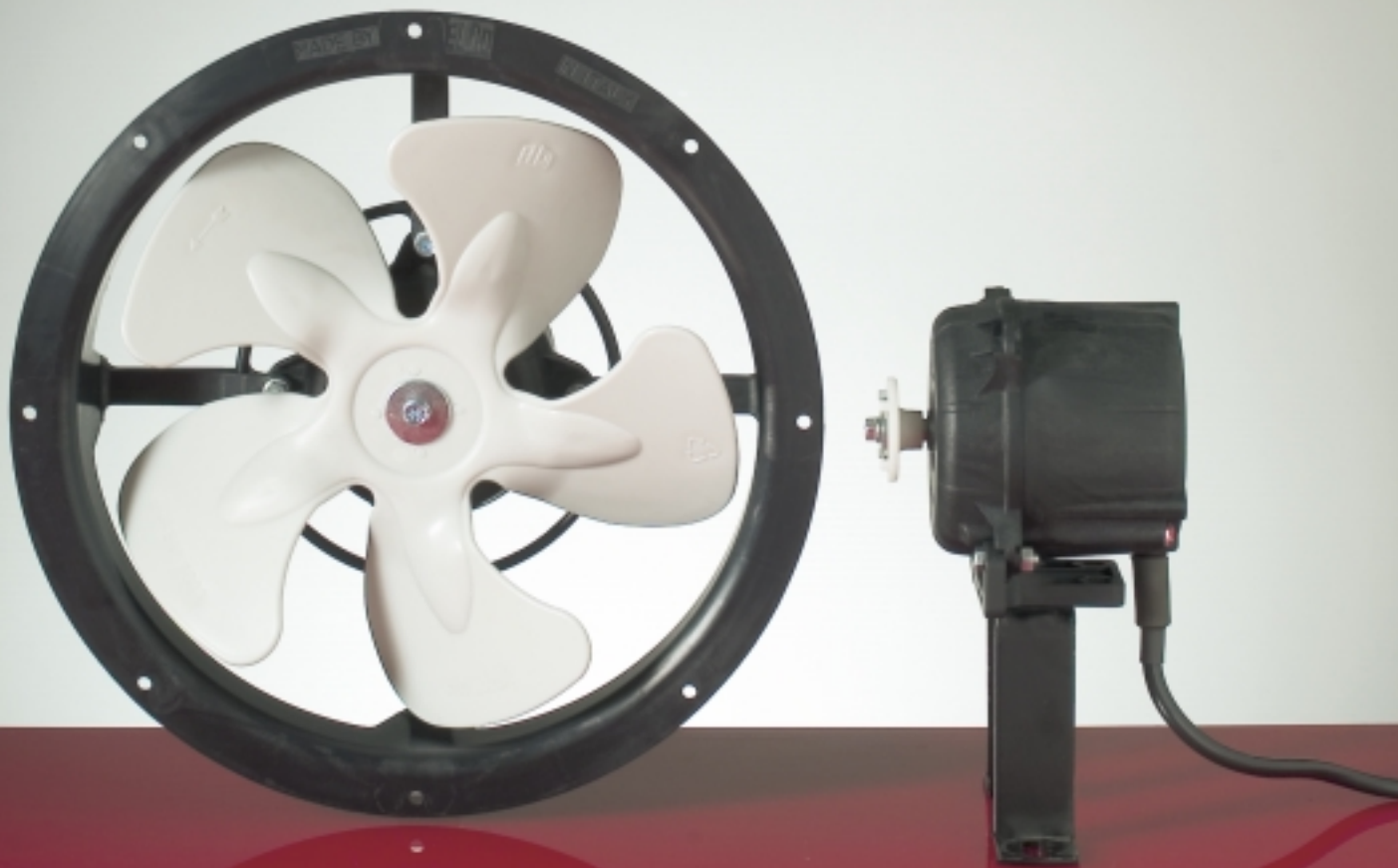


ELCO®

ENERGY SAVING MOTORS
MCE Series



.... saving energy is smart!

General features

During the last 5 years, ELCO SpA developed and patented the MCE series, a new generation of high efficiency electronically commuted FHP motors (up to 1/30HP - 25Wout). This new motor generation, designed to satisfy the growing market demand for “energy-saving” solutions, grants top level performances in terms of efficiency, low noise and expected life.

Thermoplastic motor housing reduces heat transfer to the environment resulting in a “cool” motor when operating, allowing additional energy saving.

Thanks to a peculiar service-free lubricating system and based on the positive results of extensive lab tests, the average MCE motor series life expectancy is estimated in 30,000 hours.

The MCE series is available in two single speed basic models, COMPACT and STANDARD to be selected according to required performances. Both models have similar performances when powered at 50 Hz or 60 Hz.

Applications

The MCE motor series can be used in numerous applications, but has been particularly designed for the refrigeration and ventilation industry, such as display cases, refrigerated walk-in, cool drink dispensers and small condensing units, for use with fan blade diameter up to 12” - 300mm.

Nominal power supply 115/127V or 230/240V @50/60 Hz, working temperature range -30 +50°C* (-22 +122°F*), protection class is certified IP44

and the on board electronic control is moisture protected. The electronic board also provides locked rotor protection against overheating.

* up to +65°C (+149°F) on custom built models.

Energy saving

The high efficiency MCE series motor is driven by an intelligent integrated electronic board allowing efficiency rates up to 70%, compared to 15% of the traditional shaded pole motors. Almost 85% of the input energy of a traditional motor is wasted and inevitably transferred as heat to the environment. This heat will then have to be removed by the refrigerating or the air conditioning systems, causing additional energy usage.

Pay-back

ELCO’s “energy-saving” motors give a real save in energy costs, therefore granting a very short-term pay-back time, according to the kWh cost and to the number of installed fans.

Replacement

The MCE motor has been designed referring to the ELCO shaded pole motor (N series) standard design.

Therefore, the MCE motor series is a drop in of the N series, and use the same set of accessories, such as brackets, fan blades, rings (shrouds) and guard grids, with no additional modifications required for a problem-free and time & cost saving replacing operation.

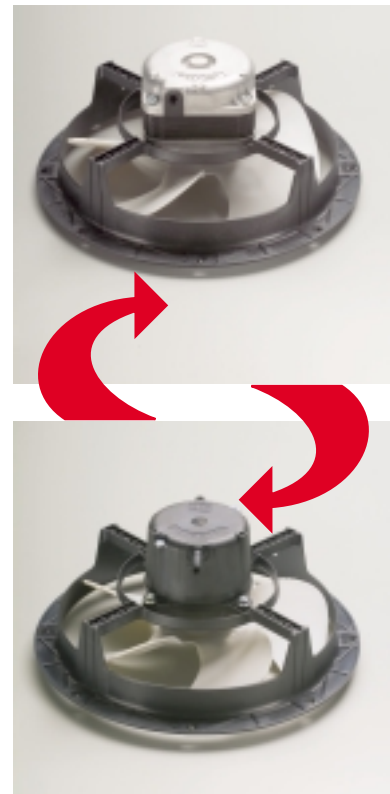
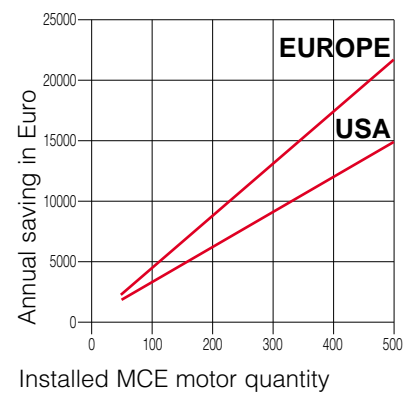
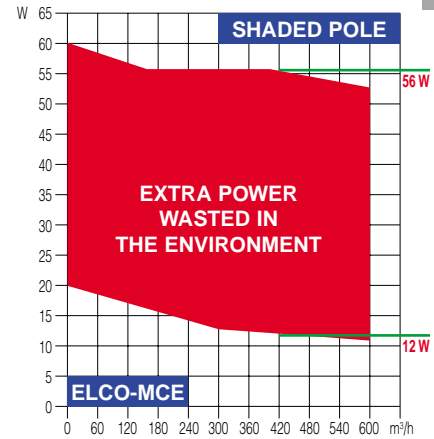
Certifications

These motors are developed, designed and manufactured in accordance to the European directive CENELEC EN 60335-1, to the electromagnetic compatibility EN 61000-3-2 + A1/A2, EN 55014-1 and CE approved.

All components are UL listed.



UL listed COMPACT model is also available.





Mounting features



MCE series motors have two different mounting features:

front radial holes [4@90°] for ring (shroud) fitting, or back holes [3@120°] for rear fitting.

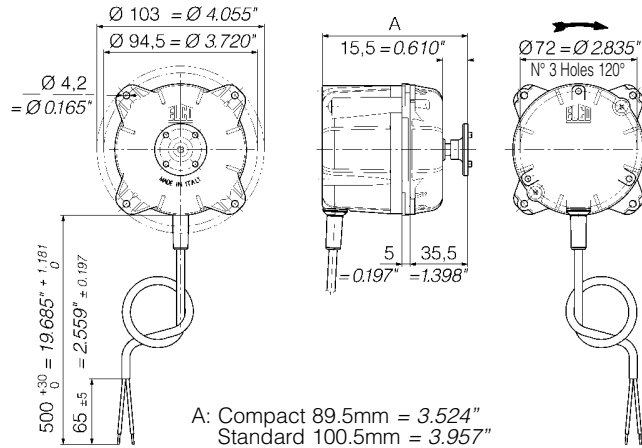
Motor can be also mounted on commercial brackets using the #10721044 adapter (supplied separately).

Standard lead length is 20" - 500mm.

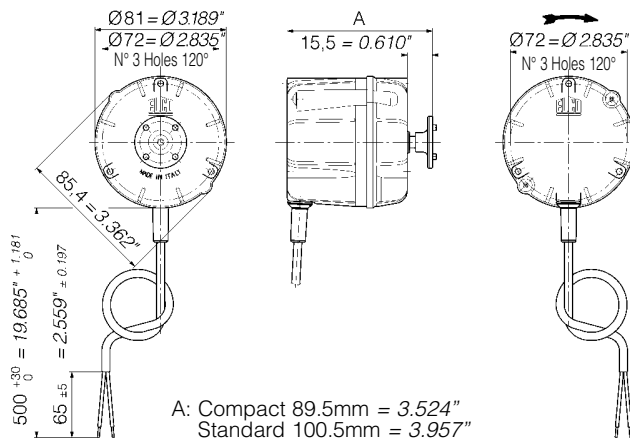
Custom lead lengths may be supplied on request.

ELCO SPA reserves the right to change any specifications or data without notice.

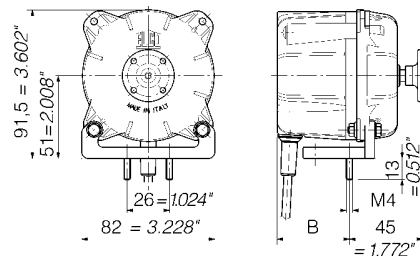
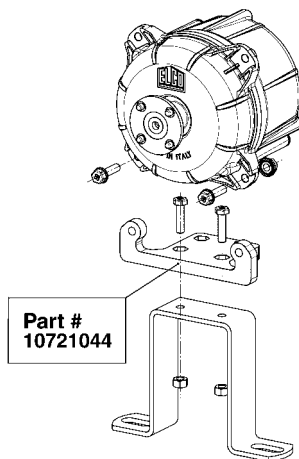
Radial mounting ([4] Ø.165" - 4.2mm holes @90° on dia.3.720" - 94.5mm)



Rear mounting ([4] holes @120° on dia.2.835" - 72mm)



Bracket mounting (with part# 10721044 plastic adapter)



B: Compact 44.5mm = 1.752"
Standard 55.5mm = 2.185"

Recommended motor/fan blade combinations table

		Fan blade pitch α					
		19°	22°	25°	28°	31°	34°
Fan blade diameter	154mm (6.062")	C	C	C	C	C	C
	172mm (6.772")	C	C	C	C	C	C
	200mm (7.874")	C	C	C	C	C	C
	230mm (9.055")	C	C	C	C	S	S
	254mm (10.000")	C	S	S	S	S	
	275mm (10.827")	S	S	S			
	300mm (11.811")	S	S				

C - Compact S - Standard - Ø 222x31° (8^{3/4}) blade also available

Motor part# (1400 RPM)

	V	Hz	COMPACT model	STANDARD model
Rear mounting	230/240	50-60	ECA12NN001	ESA20NN004
	115	50-60	ECA12NN301	ESA20NN301
Radial mounting	230/240	50-60	ECB12NN002	ESB20NN004
	115	50-60	ECB12NN301	ESB20NN302

Motor part# (1600 RPM★)

	V	Hz	COMPACT model	STANDARD model
Rear mounting	230/240	50-60		ESA20NN008
Radial mounting	230/240	50-60		ESB20NN007

★Max applicable fan blade: Ø 230mm (9.055"), 34° pitch

Motor part# (1800 RPM▲)

	V	Hz	COMPACT model	STANDARD model
Rear mounting	115	50-60		ESA15NN301
Radial mounting	115	50-60		ESB15NN301

▲Max applicable fan blade: Ø 200mm (7.874"), 34° pitch



ELCO S.p.A.

Via Marconi, 1
I-20065 INZAGO (MI) Italia
Telefono +39 0295319.1
Fax +39 0295310138
www.elco-spa.com
e-mail: info@elco-spa.com

