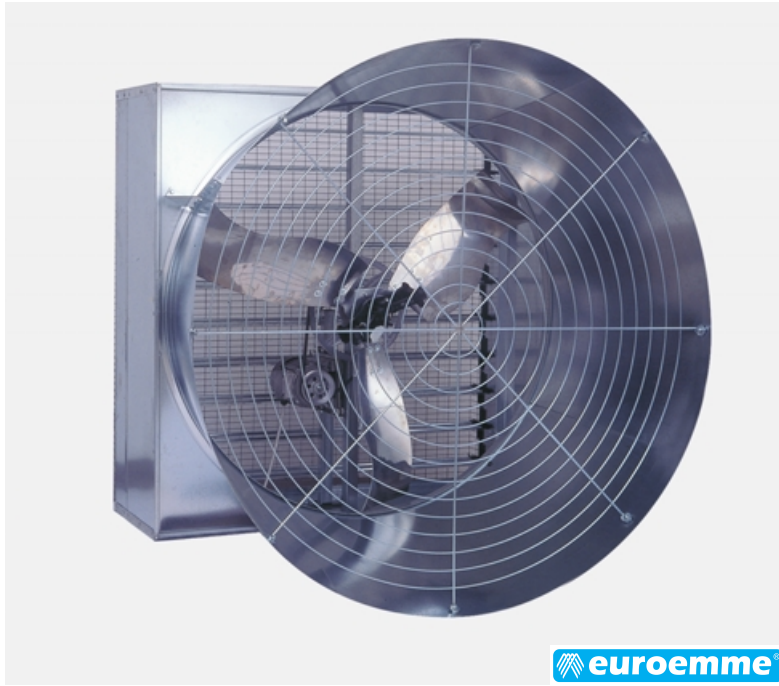


## EQUIPMENT

# EC50

# EC50

## Cone fan



*Photo shows fan EC50, fully equipped except for CE mesh on outlet side.*

EC50 cone fan, a 50" fan equipped with cone discharge, is the ideal fan for high air-flow capacity at high static pressures and low energy consumption.

The unique propeller design is self-cleaning and allows the highest efficiency to be reached, while the discharge cone boosts the airflow dramatically.

The square fan housing, cone discharge and air conveyor (venturi) are made of a strong galvanised sheet-steel.

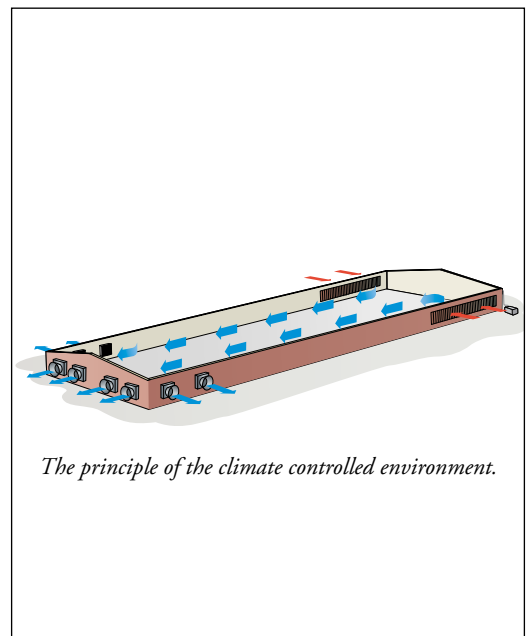
The 3-blade propeller is statically and dynamic balanced for low noise and low vibration. The propeller is available in stainless steel, galvanised steel and pre-coated, galvanised steel.

To improve aerodynamic efficiency and reduce pressure losses the cone fan design has been developed in Munters' R&D lab. The test chamber has been built according to ANSI/AMCA 210-85 Figure 15 specifications. Construction details and airtightness have been verified by personnel of the BESS Lab at the Agricultural Engineering Department, University of Illinois – USA.

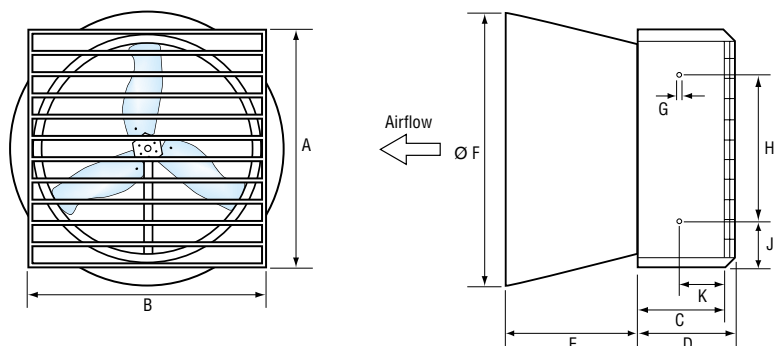
### Propeller, cone discharge and shutter

The propeller is attached to a large v-belt pulley in which is embedded a double ball bearing protected against water. The belt transmission ensures low propeller rpm, which ensures high efficiency, low energy consumption as well as low noise. The cone-discharge is made in 4 separate pieces to assist with knock-down transportation, and all in galvanised steel. The shutter is made of galvanised steel for all models, which is stronger than aluminium and plastic. The fan shutter is tightly closed when the fan is not working preventing any air leakage through the fan. The patented centrifugal system prohibits the shutter from being closed by air pressure, keeping the efficiency of the fan at a peak at all times by keeping the shutter fully and firmly opened. The shutter does not have to be cleaned regularly as dust does not affect its opening and closing movement. All the plastic parts are made of acetalic plastic with UV protection.

- Fan housing, cone and venturi made of strong galvanised sheet-steel
- Shutters are made of pressed galvanised steel in order to assure highest strength
- Each motor is individually tested for 100% quality control
- Central hub and v-belt pulley are made from die-cast aluminium
- Optional belt-tensioner available for increased v-belt lifetime and reduced maintenance
- 3-blade propeller is statically and dynamically balanced
- Shutter bearings are maintenance free
- Patented centrifugal system permits a fully and firm opening of the shutter
- Shutter is opened by rotating weights placed over centrifugal system arms
- Shutter opening is not affected by the weight of dust deposited on shutter blades
- A powerful couple of springs keep the shutters firmly closed when the fan is not operating
- Every fan is individually checked for quality



*The principle of the climate controlled environment.*

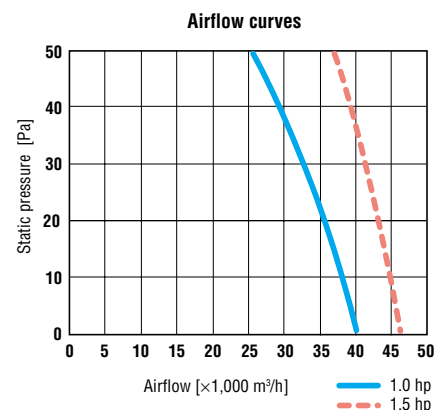


Dimensions [mm]					
Main					
A	B	C	D	E	ØF
1,380	1,380	470	560	640	1,500
For mounting					
G	H	J	K		
M8	830	275	250		

D depth refers to the fan with supplementary CE shutter safety mesh.

## Motor specifications

EC50 Code	Nominal power		Type phases	Speed	Frequency [hz]	Voltage [V]	Current [A]	rpm
	[W]	[hp]						
a	735	1.0	1	single	50	230	5	1,380
b	735	1.0	1	single	60	220-240	5	1,700
c	735	1.0	3	single	50	230/400	3.5/2	1,400
d	735	1.0	3	single	60	230/400	3.5/2	1,700
e	1,100	1.5	1	single	50	230	7.3	1,400
f	1,100	1.5	1	single	60	220-240	7.3	1,700
g	1,100	1.5	3	single	50	230/400	5.2/3	1,360
h	1,100	1.5	3	single	60	230/400	5.2/3	1,700



Curves refer to EC50 3Ph 50 Hz motor.

## Technical specifications

	1.0 hp	1.5 hp
Weight of fully equipped fan <sup>1</sup>	[kg] 106	108
Nominal propeller speed	[rpm] 425	500
Airflow at 0 Pa <sup>2</sup>	[m³/h] [cfm] 39,700 [23,340]	46,100 [27,120]
Airflow at 25 Pa <sup>2</sup>	[m³/h] [cfm] 33,700 [19,840]	41,300 [24,280]
Specific performance at 0 Pa <sup>2</sup>	[m³/Wh] [cfmhw] 39.7 [23.3]	30.4 [17.9]
Propeller diameter	[mm] [inch] 1,270 [50]	
Number of blades	3	
Number of shutter blades	10	
Max operating temperature	[°C] [°F] 50 [122]	
IEC protective class of electric motor	IP55	
Electric motor winding insulation grade	F	

<sup>1</sup> Value referred to fan with tensioner and pyramidal mesh 3 phases 50 Hz motor.

<sup>2</sup> All values refer to 3 phases 50 Hz single speed motor.

N.B. Airflow data are measured at standard condition (20 °C, 1013 hPa).

EC50 is developed and produced by Munters euroemme S.p.A., Italy.

## Order information

EC50-X-X-X-X-X

Code for electric motor according to above table.

Code for the type of propeller blades.

- Galvanised propeller blades.
- Precoated propeller blades.
- Stainless steel propeller blades.

Options codes

- wm Fan delivered with pyramidal shape mesh for CE protection on shutter side.
- nm Fan delivered without pyramidal shape mesh for CE protection on shutter side (standard).
- wCEm Fan delivered with CE mesh on outlet side.
- nCEm Fan delivered without CE mesh on outlet side (standard).
- wt Fan delivered with belt-tensioner.
- nt Fan delivered without belt-tensioner (standard).

e.g., EC50-b-2-wm-wCEm-wt



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Munters reserves the right to make alterations to specifications, quantities, etc., for production or other reasons, subsequent to publication.

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