



Cooling



Humidity Control



Ventilation



Heating



**PEPCO PAKISTAN**  
Climate Control For All Seasons



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**PEPCO Pakistan** is very glade to introduce themselves in the field of environment control. PEPCO Pakistan is engaged in business of

- Evaporative cooling
- Humidity control systems
- Ventilation
- Heating

since 1989, in industrial, commercial, domestic sectors and also agricultural & poultry sectors. As you know that in our country, the weather problems is the main factor for industrial units.

- Dry Hot
- Humid Hot
- Cold
- Humid Cold

weather disturbs the ratio of production in industrial sector, and also disturbs our daily routine life at offices and at homes. To control these weather conditions we have introduced four kinds of very advanced technologies.

- Evaporative Cooling System
- Humidity Control System
- Ventilation System
- Heating System.

By using the latest technology, you can increase not only your production but also the labour efficiency and you can also reduce the expenses of general wear / tear and maintenance of your costly machinery. If you are interested for installation of these systems in your factory, home, office or in any kind of unit like:

- Agricultural
- Dairy
- Industry
- Stitching
- Domestic
- Dyeing
- Spinning
- Weaving
- Printing
- Poultry
- Commercial Sectors

You may contact us for any information We shall be pleased to serve you.



## High Efficiency



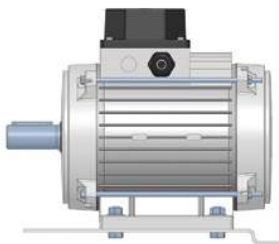
In the high end of Munters Agriculture products there is more and more interest for high efficiency products: the European community has introduced a regulation which determines the minimum acceptable efficiency rate for exhaust fans, moreover customers are more sensitive to running cost of the fans and to the quantity of energy necessary for moving a certain amount of air. Munters response to this demand of high efficiency products is represented by the new line of EDHE fans, designed for being fully compliant with European Ecodesign directives, by the cone fans EC50 and EC52, offering an improvement in the range of 10 - 15% of the performances thanks to introduction of discharge cone. Recently Munters has designed and patented a unique EC motor, designed for working in conjunction with cone fan, able to offer an unbelievable level of efficiency and airflow.

## Munters Protect



In agriculture, corrosion is usually caused by a combination of many factors such as pH, high humidity levels, frequent contact with water, aggressive chemicals as found in manure or disinfectants, bacterial growth; and the list goes on. The industry is also continuously evolving and that might have surprising side effects: new agricultural chemicals or feed additives might do wonders for animal or plant health, but also enhance corrosion on metal products. For offering a consistent remedy to corrosion troubles Munters switched to a new material, called Munters Protect, which offers extremely high protection against corrosion. It consists of a coating made of Zinc, Aluminum and Magnesium and it delivers the best corrosion resistance performance, up to 10 times better than galvanized steel.

## Motors



Munters is able to offer a wide range of motor power, depending on the application and the fan size. The smallest fan Munters produces, the 18" air recirculator EDC18 is equipped by a 0.33 Hp motor. The minimum ventilation fans and air recirculators can be equipped by a 0.5 or 0.75 Hp motor. The exhaust fan used for tunnel ventilation can be equipped by 1.0 or 1.5 Hp motor. For the recent production of big diameter fans, like EM52 and EC52, Munters has fitted them with a powerful 2.0 Hp motor. This huge flexibility in the offering has been developed for being able to cover any demand in terms of airflow which might rise from our customers.

## Eco Friendly



Energy conservation refers to the reducing of energy consumption through using less of an energy service. Energy conservation differs from efficient energy use, which refers to using less energy for a constant service. PEPCO is providing through many ways & means the less energy consuming equipments.

# Ventilation & Cooling Concept

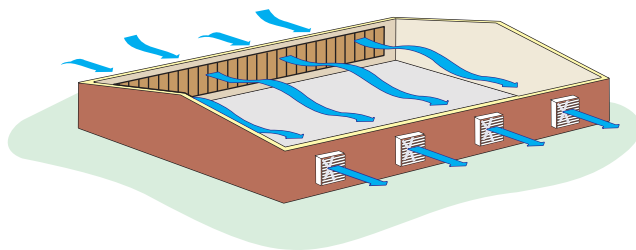
Ventilation is one of PEPCO Pakistan core businesses with far ranging experience from ventilating plants, office complexes, restaurants and other recreational areas, livestock structures, greenhouses, poultry & agricultural sectors.

Ventilation is the process of replacing air to provide maximum indoor air quality to control temperature, remove odours, replenish oxygen, remove moisture, smoke, heat, dust, carbon dioxide and airborne bacteria from the indoor space.

Ventilation can be made use of to prevent stagnation of the interior air and to keep circulating interior building air. Therefore ventilation in offices, residences, or any other interior spaces is a must for healthy environment and comfort of the inhabitants.

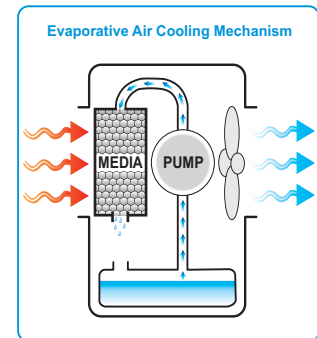
There are two purposes of ventilation in occupied spaces. First purpose is to provide an acceptable indoor air quality (IAQ), which is predominantly based on the supply of fresh air and the dilution or removal of indoor pollution concentration. The second purpose is to provide thermal comfort by providing a heat transfer mechanism through the building.

A ventilation system helps circulate air. It brings fresh air and takes out old air. In its simplest form is a fan or a pair of fans (one brings air in , one takes air out).



Energy Efficient  
No Compressor

SAVE UP TO  
**80%**  
ON ENERGY COSTS\*  
COMPARED TO AIR CONDITIONERS



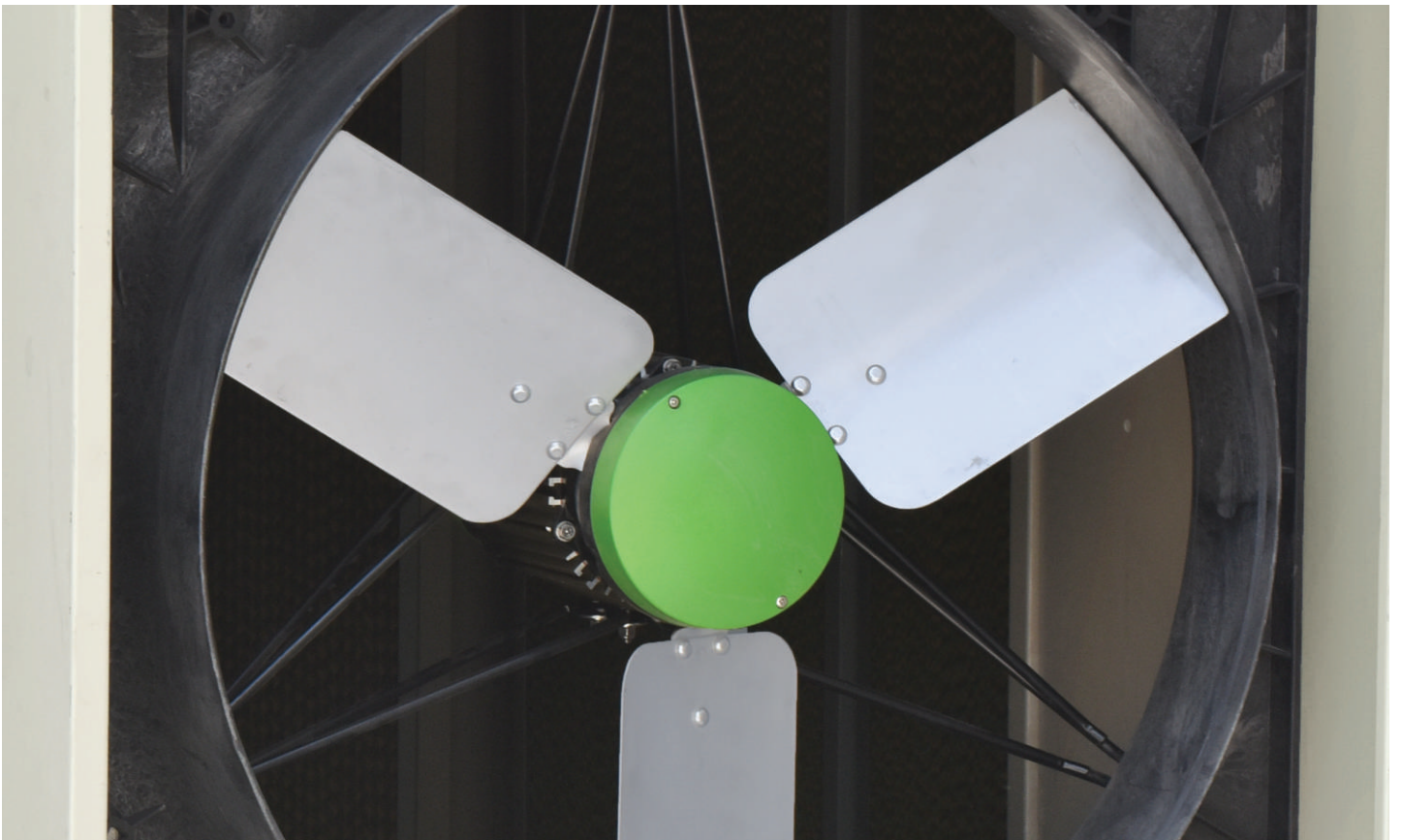
An evaporative air cooler cools the air by means of the evaporation of water. When water evaporates into the air, the result is a mixture of air and water molecules. This chemical change requires heat, thus energy or latent heat is taken from the air molecules - dropping the actual temperature of the air.

The recommended maximum humidity level is 60% or less, to allow a noticeable temperature decrease and helps people to feel more comfortable. The temperature decrease because as lower the humidity, so more evaporation occurs.

## Temperature & Humidity Chart

OUT DOOR DRY BULB  AMBIENT TEMPERATURE	OUT DOOR RELATIVE HUMIDITY IN AIR										
	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%
	TEMPERATURE OF AIR AFTER THE CBE COOLING UNIT										
30°C	16½°C	17½°C	19°C	20°C	20½°C	21°C	22°C	23°C	24°C	24½°C	25°C
35°C	20°C	21°C	22°C	23½°C	24°C	25°C	26°C	27°C	28°C	29°C	29½°C
40°C	23°C	24½°C	25½°C	27°C	28°C	29°C	30½°C	31°C	32½°C	33°C	34°C
45°C	26°C	28°C	29°C	30½°C	32°C	33½°C	35°C	36°C	37°C	37½°C	38½°C
50°C	29°C	31°C	33°C	34½°C	36°C	37°C	39°C	40°C	41°C	42°C	43°C

## Evaporative Cooling Units



## PC-5000 Side / PC-5000 Top



- ★ Pre-coated galvanised steel body
- ★ Electrical motor with IP55 protection grade
- ★ CELdek® 5090-10 evaporative cooling pads
- ★ Water Tank Capacity 200 liter
- ★ Circulation water unit is CE approved
- ★ Complete plumbing kit incorporated
- ★ Electrical enclosure with safety and control switchgear
- ★ Single-phase

### STANDARD DIMENSIONS

Model		PC-5000 S	PC-5000 T
Length	mm	1555	915
Height	mm	1372	1738
Width	mm	644	915

### PERFORMANCES

Airflow at 0 Pa	m3/h [cfm]	8450 [5000]	
Unit power*	kW [hp]	0.63 [0.5 fan + 0.35 pump]	
Cooling efficiency	%	91 %	

## PC-7500 Side



- ★ Pre-coated galvanised steel body
- ★ Electrical motor with IP55 protection grade
- ★ CELdek® 5090-10 evaporative cooling pads
- ★ Circulation water unit is CE approved
- ★ Complete plumbing kit incorporated
- ★ Electrical enclosure with safety and control switchgear
- ★ Single-phase

### STANDARD DIMENSIONS

Model		PC-7500 S
Length	mm	1555
Height	mm	1342
Width	mm	1555

### PERFORMANCES

Airflow at 0 Pa	m3/h [cfm]	12675 [7500]
Motor power*	kW [hp]	0.78 [0.65 fan + 0.35 pump]
Cooling efficiency	%	91 %

# DCP-30 / 30 Top 4

## Special Model



- ★ Pre-coated galvanised steel housing
- ★ Tank manufactured in thermoplastic material
- ★ Electrical motor with IP55 protection grade
- ★ CELdek® 7090-15 evaporative cooling pads
- ★ Circulation water unit is CE approved
- ★ Complete plumbing kit incorporated
- ★ Electrical enclosure with safety and control switchgear
- ★ Single-phase as option

### STANDARD DIMENSIONS

Model		DCP30	TOP4
Length	mm	1,640	1,360
Height	mm	1,000	1,000
Width	mm	1,520	2,500

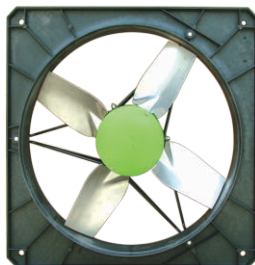
### PERFORMANCES

Airflow at 0 Pa	m3/h [cfm]	16,000 [9,415]	
Motor power*	kW [hp]	1.1 [1.5]	
Cooling efficiency	%	83 - 85	

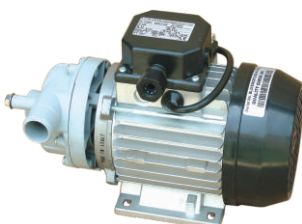


The control panels which are used with PC-5000 / PC-7500 cooling units are the top quality products made by the world renowned companies. You can also attach these accessories with

- Temperature Control
- Humidity Control
- Fan Speed Control



The air expelling fans are made of Vostermans EMI Holland, Model Pc 5000 WL V4/5000 and PC 7500 WL V6/710 which are the best supply due to latest technology.



The water lifting pump used in the cooling unit is imported from LGB Italy. Aforesaid pumps are the state of art for water lifting and distribution due to its quality and performance.



## Exhaust Fans



## Euroemme® EC52



- ★ Family member of the time proven Euroemme® fan range
- ★ High airflow and high efficiency
- ★ Compact transportation (discharge cone made of 4 cone sectors)
- ★ Special cone design for optimal use of installation space
- ★ Patent pending shutter opening device
- ★ Four blade propeller for reduced vibrations
- ★ Optional belt tensioner
- ★ Optional 4 shaped cone sectors



### PERFORMANCES

Motor		1.0Hp	2.0Hp
Airflow at 0 Pa	m <sup>3</sup> /h [cfm]	42,200 [24,900]	49,500 [29,100]
Airflow at 25 Pa	m <sup>3</sup> /h [cfm]	35,100 [20,700]	44,700 [26,300]
Airflow at 50 Pa	m <sup>3</sup> /h [cfm]	26,200 [15,400]	36,400 [21,400]
Specific performance at 0 Pa	m <sup>3</sup> /h/W [cfm/W]	43.7 [25.7]	32.7 [19.2]

\* All values refer to 3 phases 50Hz single speed motors.  
Note: airflow data are measured at standard conditions (20°C, 1,013hPa)

## Euroemme® EM50



- ★ Family member of the time proven Euroemme® fan range
- ★ Propeller is statically and dynamically balanced
- ★ Patented centrifugal system permits an energy efficient solution
- ★ Powerful springs keep shutters firmly closed when fan is not operating
- ★ Every fan is individually checked for quality
- ★ Fan housing and Venturi made of strong Munters Protect coated sheet-steel
- ★ Shutters are made of pressed Munters Protect coated steel in order to ensure highest strength
- ★ Central hub and v-belt pulley are made from die-cast aluminium, with reinforced ribs for prolonged lifetime



### PERFORMANCES

Motor		1.0/1.2Hp	1.5Hp
Airflow at 0 Pa	m <sup>3</sup> /h [cfm]	37,000 [21,800]	42,400 [25,000]
Airflow at 25 Pa	m <sup>3</sup> /h [cfm]	32,500 [19,200]	38,400 [22,600]
Airflow at 50 Pa	m <sup>3</sup> /h [cfm]	26,200 [15,400]	33,800 [19,900]
Specific performance at 0 Pa	m <sup>3</sup> /h/W [cfm/W]	33.9 [20.0]	27.0 [15.9]

\* All values refer to 3 phases 50Hz single speed motors.  
Note: airflow data are measured at standard conditions (20°C, 1,013hPa)

## Euroemme® EM36



- ★ Family member of the time proven Euroemme® fan range
- ★ Propeller is statically and dynamically balanced
- ★ Patented centrifugal system permits an energy efficient solution
- ★ Powerful springs keep shutters firmly closed when fan is not operating
- ★ Every fan is individually checked for quality
- ★ Fan housing and Venturi made of strong Munters Protect coated sheet-steel
- ★ Shutters are made of pressed Munters Protect coated steel in order to ensure highest strength
- ★ Central hub and v-belt pulley are made from die-cast aluminium, with reinforced ribs for prolonged lifetime



### PERFORMANCES

Motor		0.5Hp	0.75Hp	1.0Hp
Airflow at 0 Pa	m <sup>3</sup> /h [cfm]	18,800 [11,070]	20,500 [12,080]	23,400 [13,760]
Airflow at 25 Pa	m <sup>3</sup> /h [cfm]	16,000 [9,420]	18,100 [10,630]	21,400 [12,610]
Specific performance at 0 Pa	m <sup>3</sup> /h/W [cfm/W]	32.6 [19.2]	27.2 [16.0]	22.6 [13.3]

\* All values refer to 3 phases 50Hz single speed motors.  
Note: airflow data are measured at standard conditions (20°C, 1,013hPa)

## Euroemme® EM30



- ★ Family member of the time proven Euroemme® fan range
- ★ Propeller is statically and dynamically balanced
- ★ Patented centrifugal system permits an energy efficient solution
- ★ Powerful springs keep shutters firmly closed when fan is not operating
- ★ Every fan is individually checked for quality
- ★ Fan housing and Venturi made of strong Munters Protect coated sheet-steel
- ★ Shutters are made of pressed Munters Protect coated steel in order to ensure highest strength
- ★ Central hub and v-belt pulley are made from die-cast aluminium, with reinforced ribs for prolonged lifetime



### PERFORMANCES

Motor		0.5Hp	0.75Hp
Airflow at 0 Pa	m <sup>3</sup> /h [cfm]	14,100 [8,300]	15,300 [9,020]
Airflow at 25 Pa	m <sup>3</sup> /h [cfm]	12,100 [7,120]	13,600 [8,030]
Specific performance at 0 Pa	m <sup>3</sup> /h/W [cfm/W]	24.4 [14.4]	22.1 [13.0]

\* All values refer to 3 phases 50Hz single speed motors.  
Note: airflow data are measured at standard conditions (20°C, 1,013hPa)

## Euroemme® ED24



- ★ Family members of the time proven Euroemme® fan range
- ★ High airflow capacity with excellent energy efficiency
- ★ Low power consumption
- ★ Direct drive system
- ★ Patented shutter-opening device



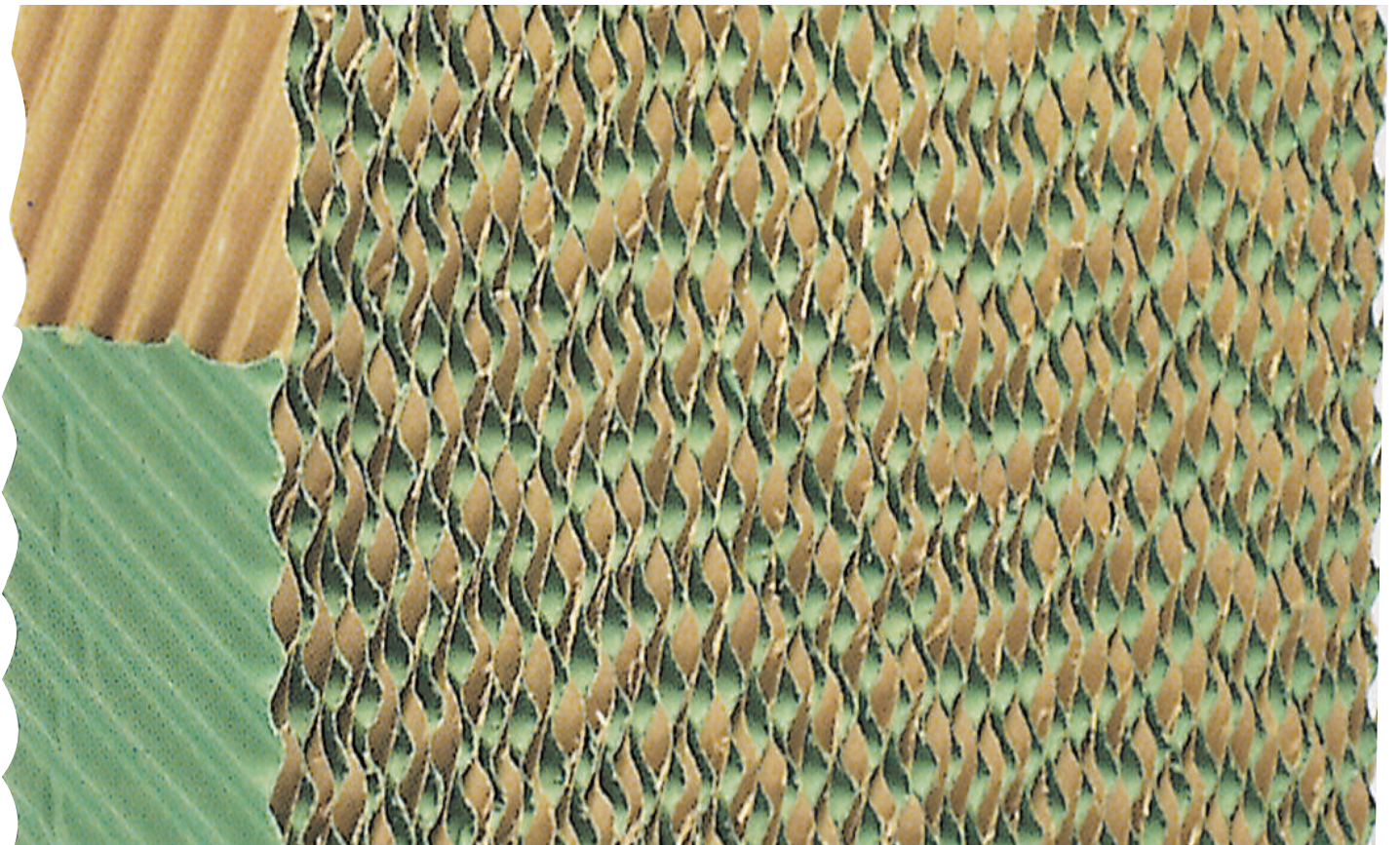
### PERFORMANCES

Motor		0.5Hp	0.5Hp	0.75Hp
Airflow at 0 Pa	m <sup>3</sup> /h [cfm]	9,100 [5,360]	14,400 [8,460]	19,100 [11,300]
Airflow at 12 Pa	m <sup>3</sup> /h [cfm]	8,800 [5,180]	13,700 [8,080]	18,200 [10,700]
Airflow at 25 Pa	m <sup>3</sup> /h [cfm]	8,400 [4,960]	12,900 [7,620]	17,200 [10,100]
Specific performance at 0 Pa	m <sup>3</sup> /h/W [cfm/W]	17.3 [10.2]	22.1 [13.0]	30.3 [17.8]

\* All values refer to 3 phases 50Hz single speed motors.  
Note: airflow data are measured at standard conditions (20°C, 1,013hPa)

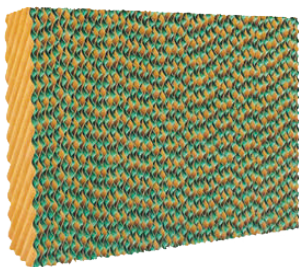


## Evaporative Cooling Pads





## Celdek® 7090-15

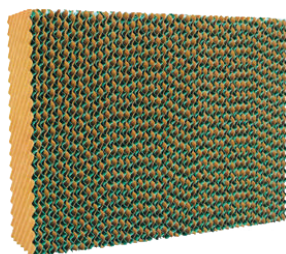


- ★ High evaporation efficiency and superb wetting properties
- ★ Low pressure drop when wet, leading to lower operating costs
- ★ No water carry-over
- ★ Low scaling and self cleaning
- ★ Strong and self supporting
- ★ Long life time and low running costs
- ★ Quick and easy to install
- ★ Environmentally friendly
- ★ Consistent high quality

### STANDARD DIMENSIONS

Length	mm	600			
Height	mm	1000	1500	1800	2000
Width	mm	100/150			

## Celdek® 7060-15

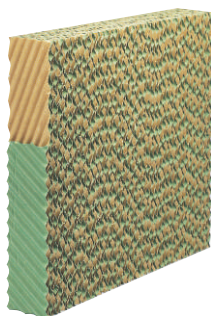


- ★ High evaporation efficiency and superb wetting properties
- ★ Low pressure drop when wet, leading to lower operating costs
- ★ No water carry-over
- ★ Low scaling and self cleaning
- ★ Strong and self supporting
- ★ Long life time and low running costs
- ★ Quick and easy to install
- ★ Environmentally friendly
- ★ Consistent high quality

### STANDARD DIMENSIONS

Length	mm	600			
Height	mm	1000	1500	1800	2000
Width	mm	100/150			

## Celdek® 5090-15



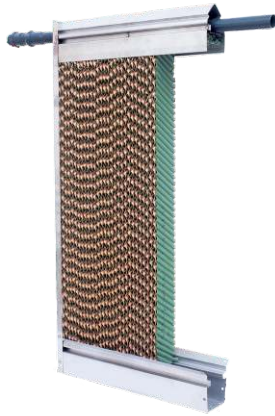
- ★ High evaporation efficiency and superb wetting properties
- ★ Low pressure drop when wet, leading to lower operating costs
- ★ No water carry-over
- ★ Low scaling and self cleaning
- ★ Strong and self supporting
- ★ Long life time and low running costs
- ★ Quick and easy to install
- ★ Environmentally friendly
- ★ Consistent high quality

### STANDARD DIMENSIONS

Length	mm	600			
Height	mm	1000	1500	1800	2000
Width	mm	100/150			

# WDP

## New Model

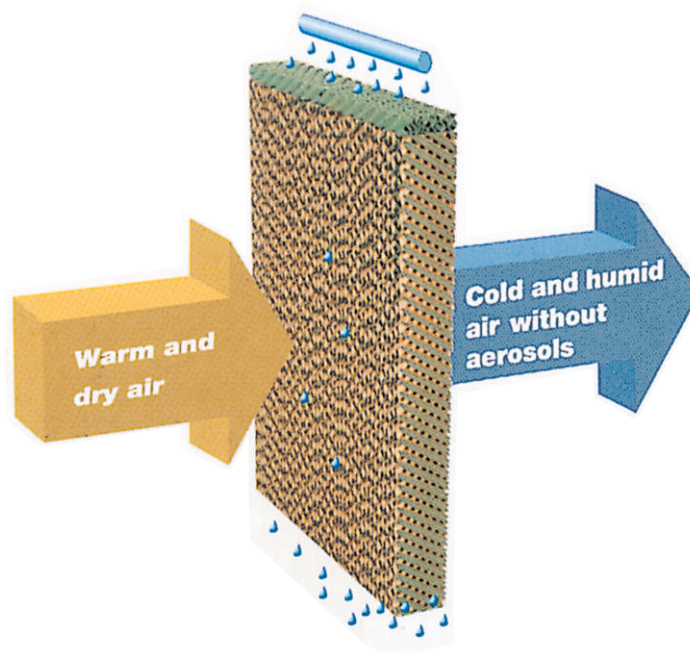


- ★ Quick and easy installation
- ★ Easy maintenance and cleaning
- ★ Flexible positioning of the water supply and discharge
- ★ Resistant to corrosion (stainless steel 304, epoxy pre-coated galvanised steel)
- ★ Designed to ensure an even wetting of the entire pad wall
- ★ Stabilisation of the pad wall
- ★ Fits any size of pad in height and width
- ★ Available as complete system with all fitting parts
- ★ Water filtration available upon request

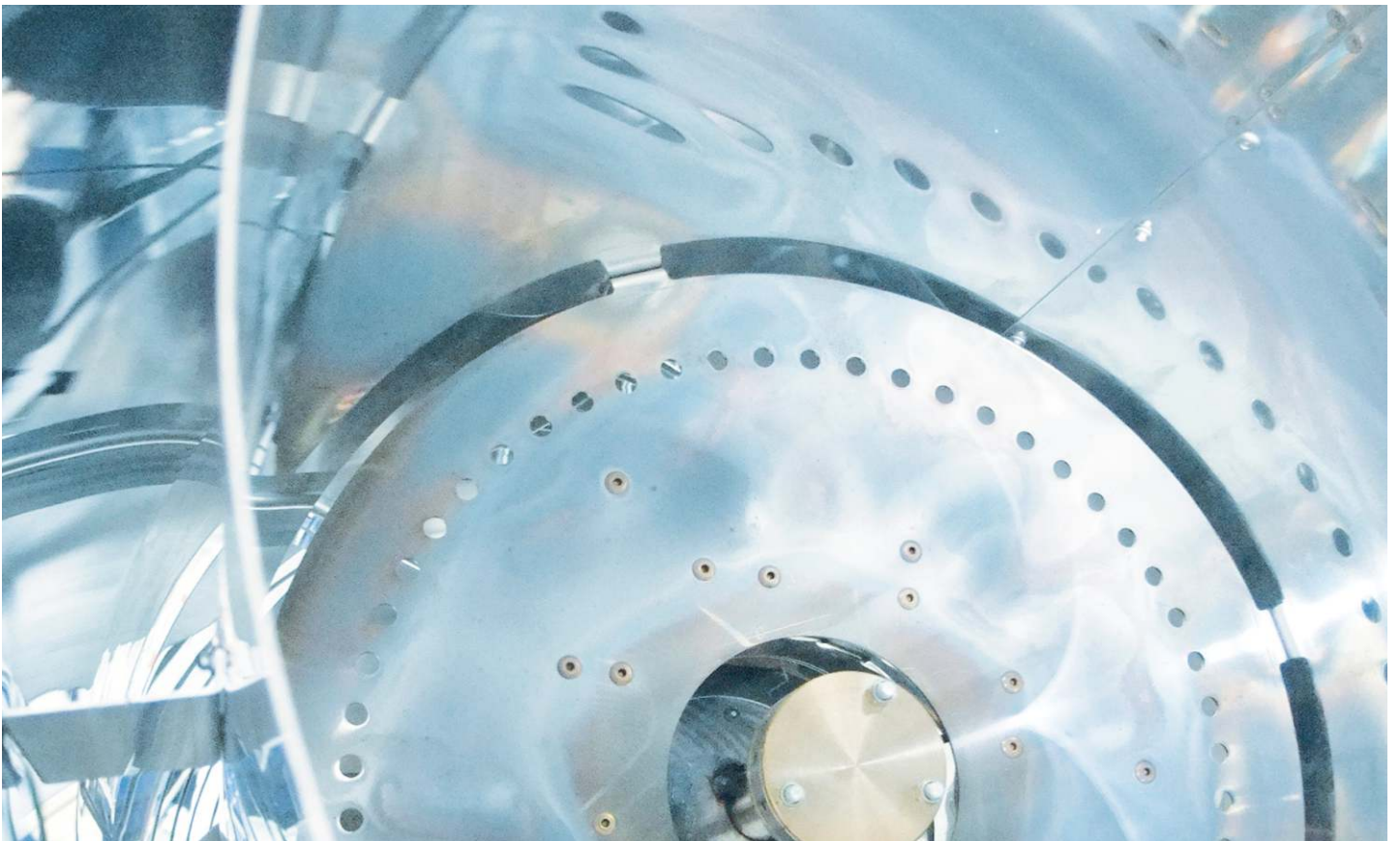
### STANDARD DIMENSIONS

		multiple of 600			
Length	mm				
Height	mm	1205	1705	2005	2205
Width	mm	100/150			

## Evaporative Cooling Pad



## Air Heaters



## Heating

During cold periods it is essential to heat the inside air of the structures to keep animals healthy and producing optimally.

### GPmp100 - GPmp130



- ★ High efficiency. Protected against corrosion (housing is made from pre-coated galvanized steel, combustion chamber and heat exchanger are made from stainless steel).
- ★ Ready to install.
- ★ Prevention of faulty operation (dual switching safety thermostat controls the fan motor and the burner).
- ★ Easy to inspect the burning process.
- ★ Easy to operate.
- ★ Different air diffusers are available on request.
- ★ Suitable for diesel, natural gas, LPG or propane (paraffin upon request).

#### PERFORMANCES

Model		GPmp100	GPmp130
Maximum heating power	kW [kcal/h]	102.4 [88,043]	129 [110,871]
Working heating power	kW [kcal/h]	93 [79,943]	116.5 [100,120]
Gas consumption natural gas	[m <sup>3</sup> /h]	9.53	12.39
Gas consumption propane gas*	[kg/h]	3.76	4.89
Diesel oil consumption l/h	[gal/h]	9.5 [2.5]	12.0 [3.16]
IP class**		IP54	IP54

### GFn85



- ★ Dedicated for Munters Agriculture applications
- ★ Unique frame design for convenient handling, transportation and installation
- ★ Ergonomic design for comfortable maintenance and full accessibility
- ★ IP55 enclosure of critical components e.g. electrical control box, electric motor
- ★ Predisposed 5 poles plug socket for farm controller or room thermostat connection
- ★ Corrosion resistant as housing components are made in Munters Protect or stainless steel AISI 430 and combustion chamber made in stainless steel AISI 430
- ★ Safe design with photoelectric flame monitoring and overheating thermostat (airflow switch not needed)
- ★ Suitable for a wide variety of fuels i.e diesel oil (not bio-diesel) and winter diesel

#### PERFORMANCES

Model		Gfn85
Maximum heating power	kW [kcal/h]	80.6 [69.303]
Working heating power	kW [kcal/h]	69.3 [59,587]
Diesel oil consumption l/h	[gal/h]	7.5 [1.98]
IP class**		IP55

\*\* Electric box IP grade.



## Our Prestigious Clients



## Industrial Projects





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