

Product catalogue

Solutions for the Swine segment



OVERVIEW A

COLD CLIMATE VENTILATION B

Introduction	B.1
Multiple room – range of products	B.2
Single room – range of products	B.3

MODERATE AND HOT CLIMATE VENTILATION C

Introduction	C.1
Combi tunnel – range of products	C.2
Tunnel – range of products	C.3

TROPICAL CLIMATE CLIMATE VENTILATION D

Introduction	D.1
Tunnel – range of products	D.2

AIR EXTRACTION 1-7

FAN INSULATION 8-9

AIR HEATING 10-14

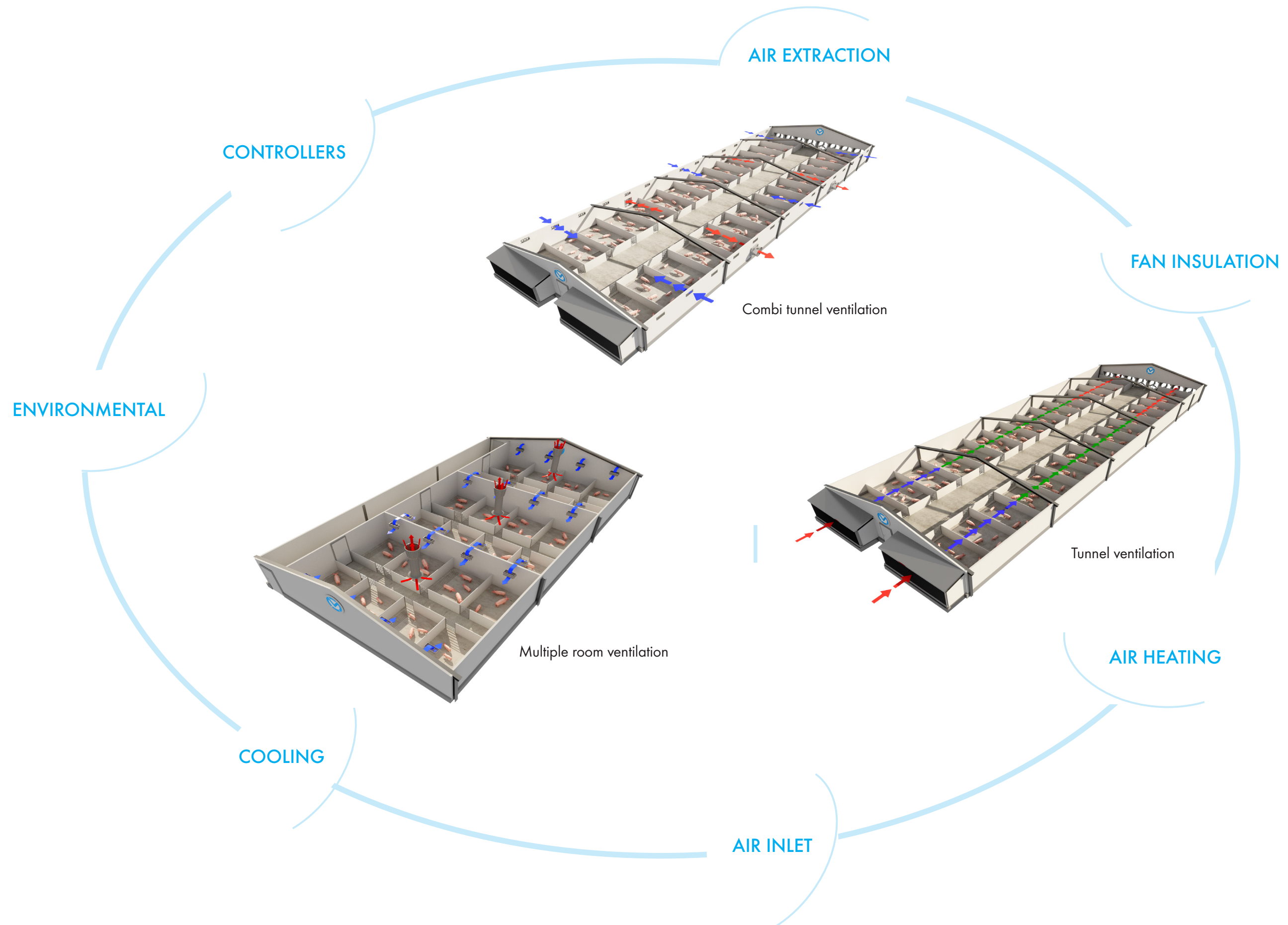
AIR INLET 15-23

COOLING 24-30

ENVIRONMENTAL SOLUTIONS 31-33

CONNECTED FARM SOLUTIONS 34-39

FEATURES 40-41





Cold climate ventilation

As a rule of thumb, cold climate defined as environment where ambient temperature is below or within the animals comfort zone. In this climate, climate control provide heat if needed to secure comfort temperature in the animal zone. It also remove gasses and humidity (mainly produced by the animals) from the animal zone. For additional cooling in periods with higher temperatures, it also create air movement amongst the animals often added with fogging or sprinkler systems.

Main principles for air movement used in this climate are wall/ceiling air inlets or diffuse ceiling, together with exhaust chimney fans. Heating solution is defined based on the source of energy available at the site. Water based pipes or floor heating or oil/gas heaters are often used. Sprinklers and fogging systems are often a part of climate control in cold climate areas with a shorter period of warm days during summer.

Munters has a full product list for these applications from air intake, air outlet, heating systems; sprinkler/fogging systems to controllers connecting into one system with remote alarm and access. Munters is normally recognized as a leading supplier of products for extreme cold climate.



COLD CLIMATE VENTILATION - MULTIPLE ROOM

Multiple room – range of products

Buildings with multiple rooms are often ventilated through ceiling inlets and chimney exhaust fans. If ceiling inlets is not possible, an alternative is wall inlets or tunnel doors from the main corridor. In very cold climates ventilation through corridors make it possible to preheat incoming air in the corridor.

CONTROLLERS

OUTLETS

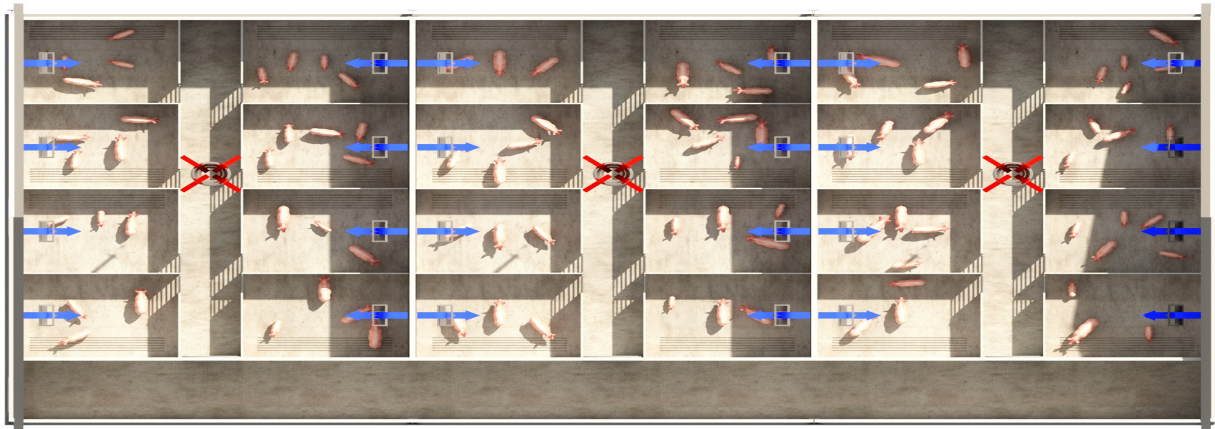
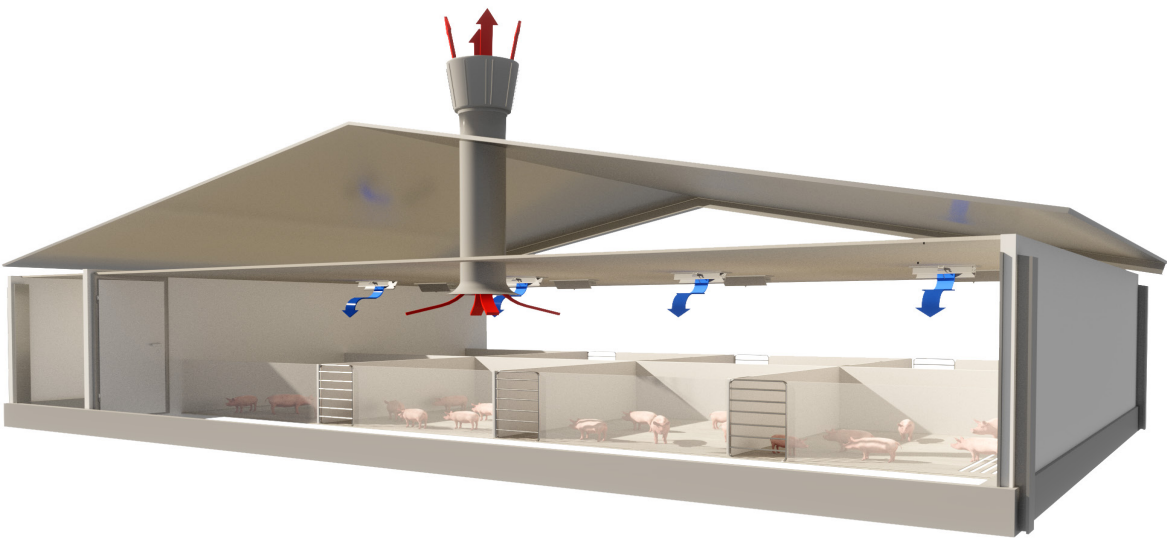
Chimneys
Wall fans
Pit fans

INLETS

Wall
Ceiling
Diffuse ceilings

HEATING

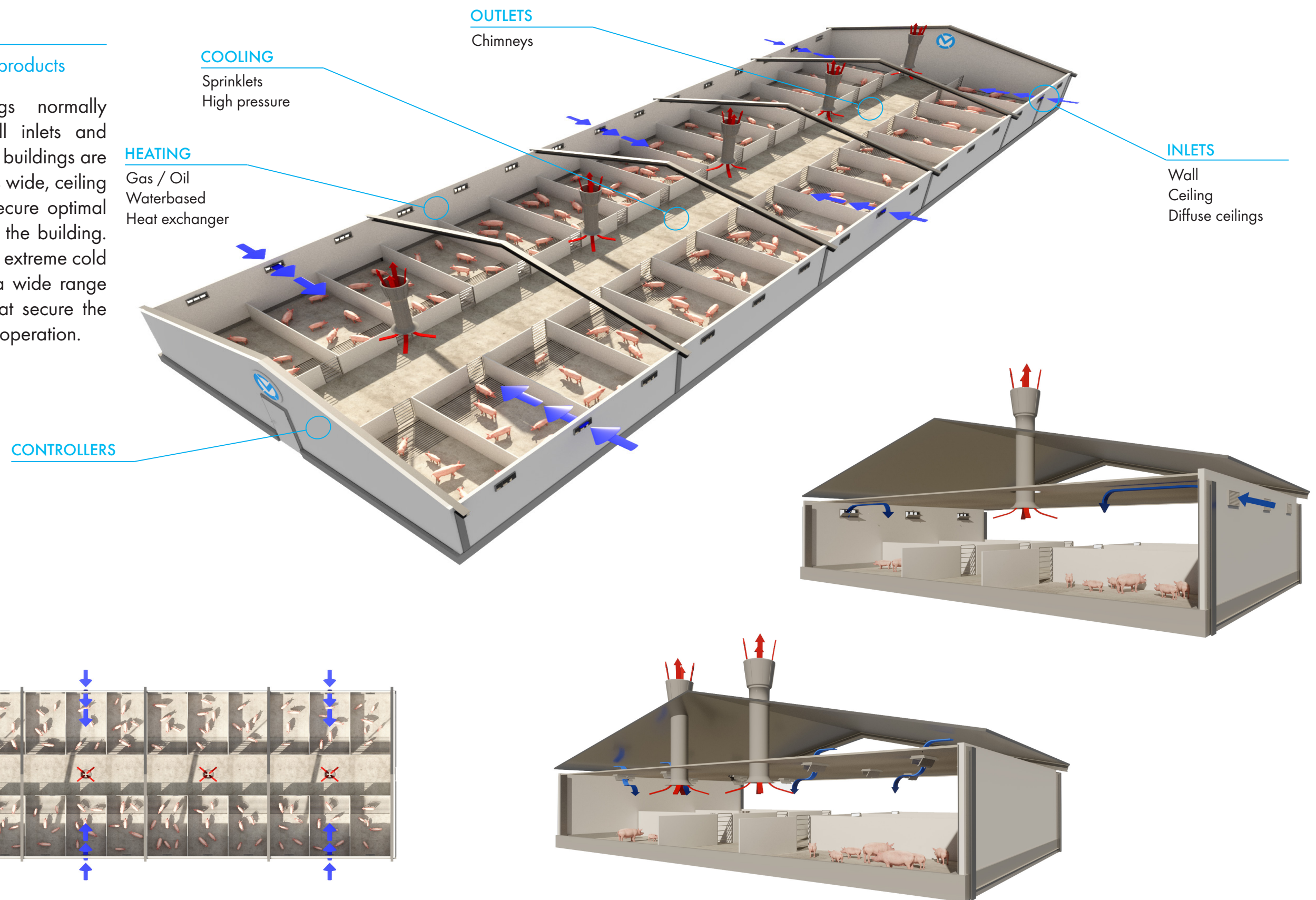
Gas / Oil
Waterbased
Heat exchanger



COLD CLIMATE VENTILATION - SINGLE ROOM

Single room - range of products

Single room buildings normally ventilated through wall inlets and chimney exhaust fans. If buildings are more than 24-28 meters wide, ceiling inlets is necessary to secure optimal climate in the centre of the building. Single room buildings in extreme cold climates benefits from a wide range of Munters products that secure the perfect climate an easy operation.





INTRODUCTION MODERATE AND HOT CLIMATE

Moderate and hot climate ventilation

As a rule of thumb, moderate and hot climate defined as environment where ambient temperature is within or above the animals comfort zone. In this climate, climate control remove excess heat, gasses and humidity from the animal zone. For additional cooling in periods with higher temperature, it also create air velocity amongst the animals, in most cases added with evaporative pad wall for cooling incoming air. In hot zones where ambient temperature never reaches below animals comfort zone, minimum ventilation using inlets or diffuse ceiling may only be nice to have but not necessarily need to have.

Main principles for air movement used in moderate and hot climate conditions are wall/ceiling air inlets for minimum ventilation, for maximum/tunnel ventilation tunnel doors and evaporative cooling pads are used. Air exhaust normally done using gable fans in combination with smaller wall- or chimney fans for minimum ventilation.

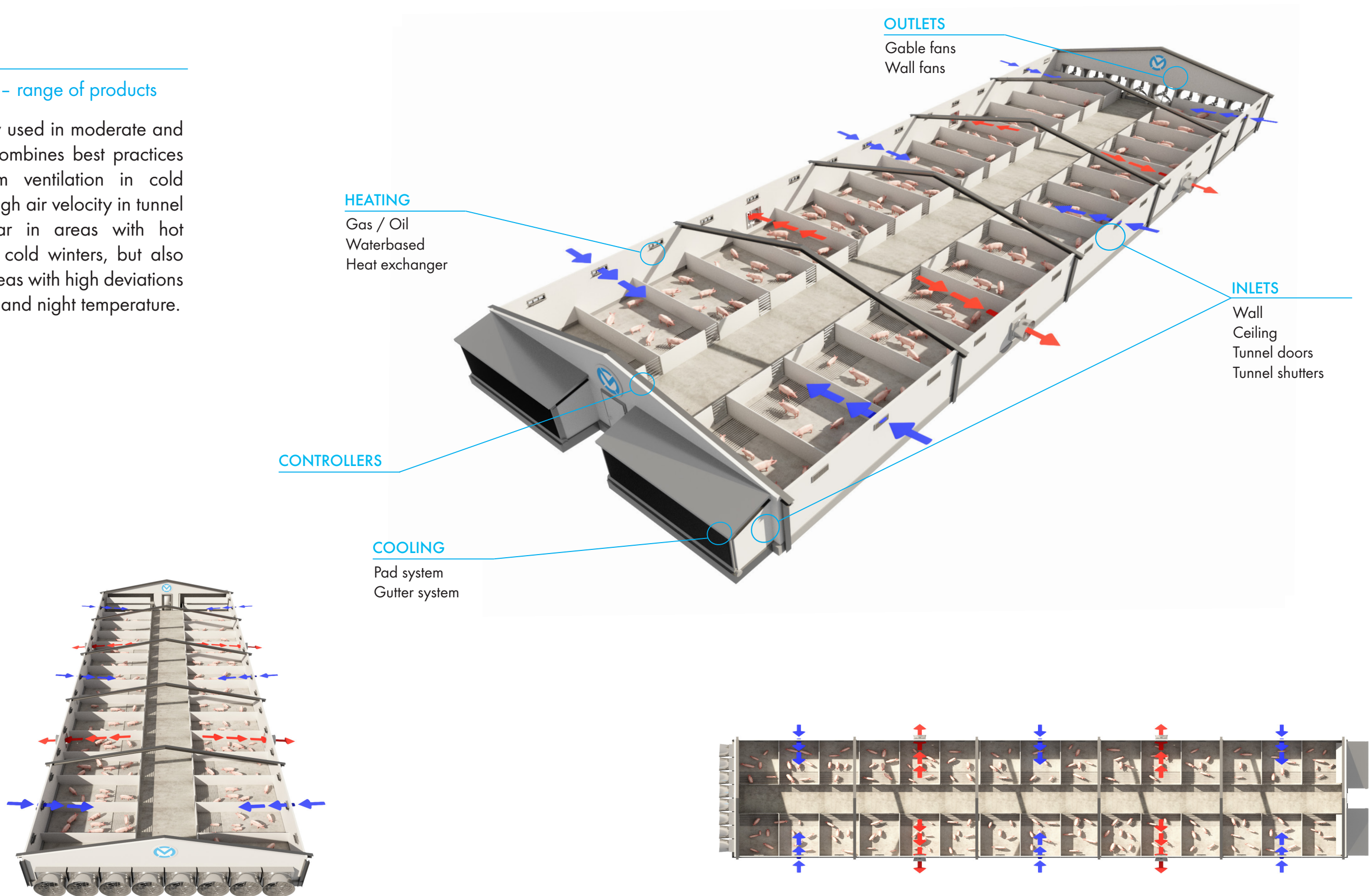
Munters has a full product list for these applications from air intake, air outlet, and complete cooling systems to controllers connecting into one system with remote alarm and access.



MODERATE AND HOT CLIMATE VENTILATION

Combi tunnel – range of products

System mainly used in moderate and hot climate, combines best practices from minimum ventilation in cold climate with high air velocity in tunnel mode. Popular in areas with hot summers and cold winters, but also suitable for areas with high deviations between day- and night temperature.





INTRODUCTION TROPICAL CLIMATE

Tropical ventilation

As a rule of thumb, tropical climate defined as environment where ambient temperature is above the animals comfort zone. In this climate, climate control remove excess heat, gasses and humidity from the animal zone. For additional cooling in periods with higher temperature, it also create air velocity amongst the animals, in most cases added with evaporative pad wall for cooling incoming air.

Main principles for air movement used in tropical climate conditions are wall/ceiling air inlets for minimum ventilation, for maximum/tunnel ventilation tunnel doors and evaporative cooling pads are used. Air exhaust normally done using gable fans.

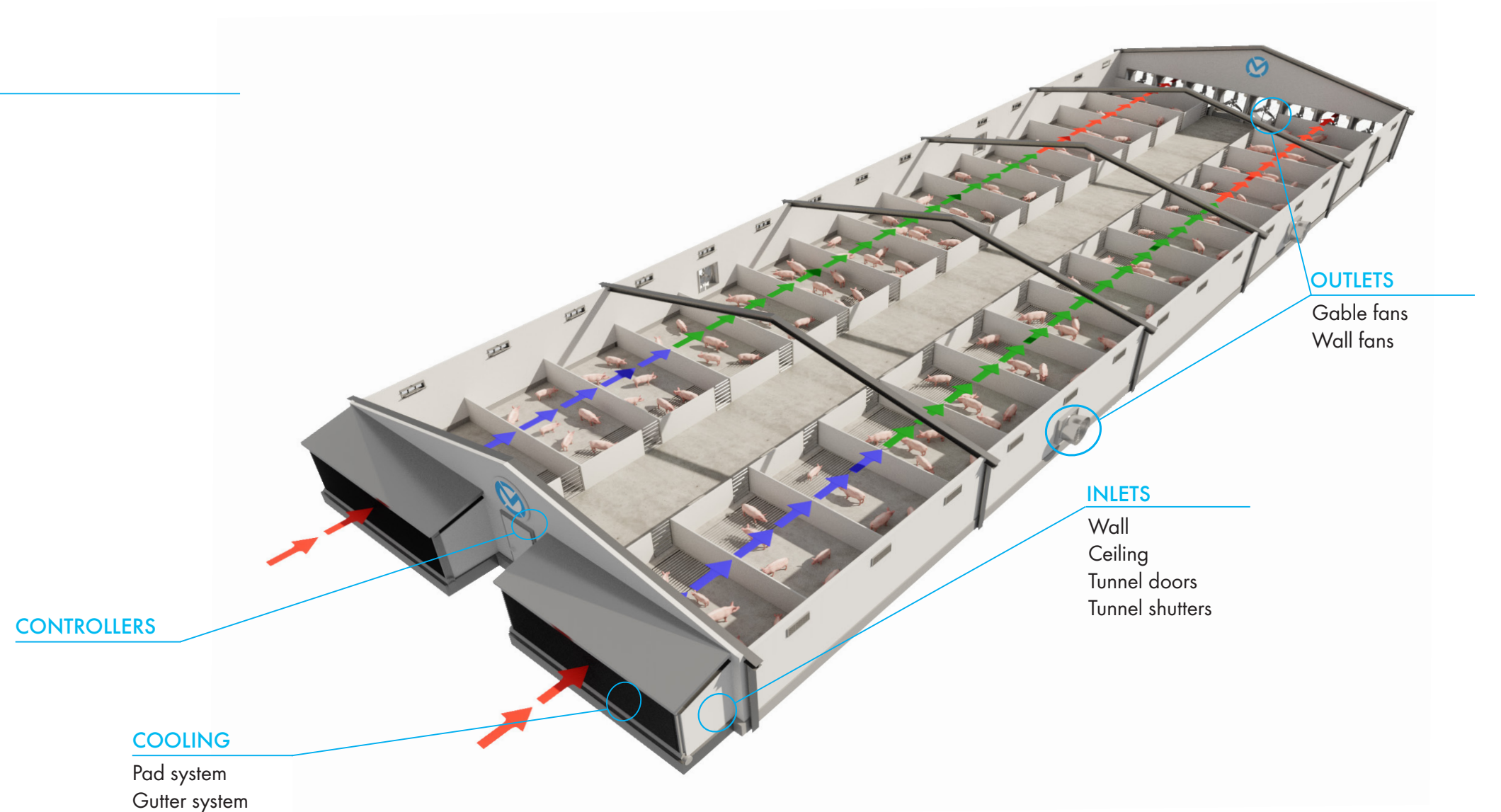
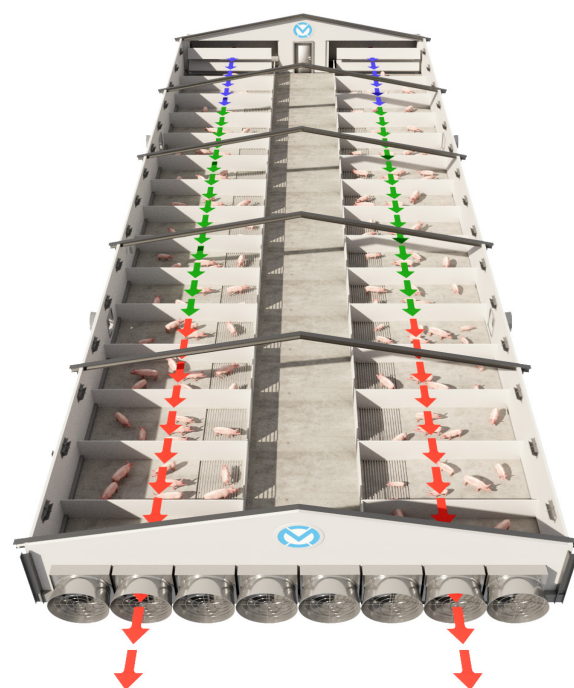
Munters has a full product list for these applications from air intake, air outlet, and complete cooling systems to controllers connecting into one system with remote alarm and access.



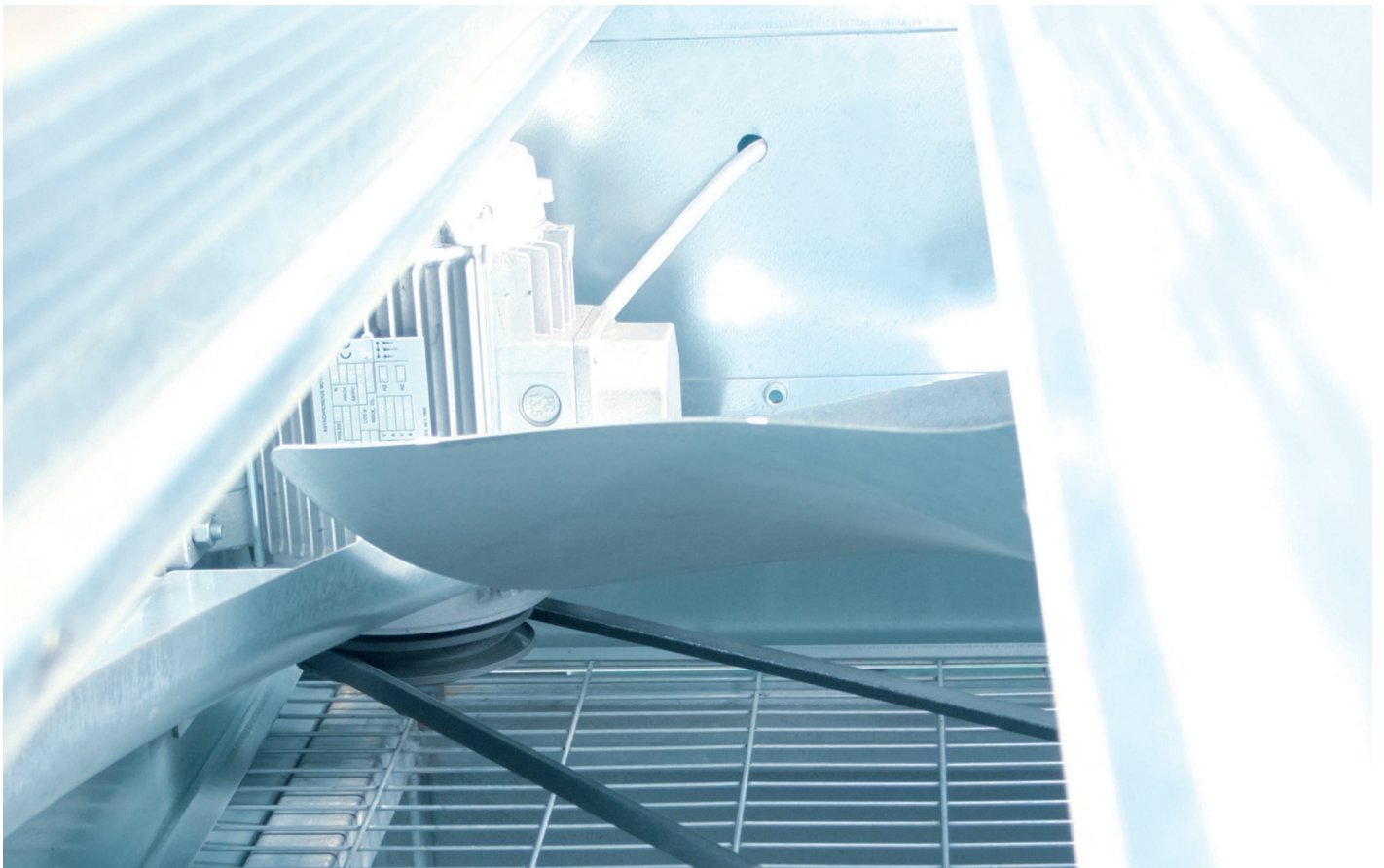
TROPICAL CLIMATE VENTILATION

Tunnel - range of products

System mainly used in hot climate where main objective is to cool down animals in all seasons. It is important that ambient temperature be above animals comfort temperature at all times. Focus on air velocity in combination with best available cooling practices.



AIR EXTRACTION



EUROEMME® EMX50 WALL FAN



- Family member of the time proven Euroemme® fan range
- Housing, shutter blades and components made in Stainless Steel 304
- Venturi made of plastic
- Propeller is statically and dynamically balanced
- Patented centrifugal system permits an energy efficient solution
- 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 ³ /h [cfm]	37,000 [21,800]	42,400 [25,000]
Airflow at 25 Pa	m ³ /h [cfm]	32,500 [19,200]	38,400 [22,600]
Airflow at 50 Pa	m ³ /h [cfm]	26,200 [15,400]	33,800 [19,900]
Specific performance at 0 Pa	m ³ /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)

LOADING VOLUMES			
		ASSEMBLED	DISASSEMBLED
Container 20 ft	pcs.	29	170
Container 40 ft	pcs.	58	250
Container 40 ft HC	pcs.	58	250
Trailer 13.60x2.40x2.60 m	pcs.	65	300

EUROEMME® EM50 MPX WALL FAN



- Family member of the time proven Euroemme® fan range
- Patented centrifugal system permits an energy efficient solution
- All housing components designed for improved corrosion resistance
- All meshes, bolts and nuts in stainless steel for improved corrosion resistance



PERFORMANCES			
Motor		1.0/1.2Hp	1.5Hp
Airflow at 0 Pa	m ³ /h [cfm]	37,000 [21,800]	42,400 [25,000]
Airflow at 25 Pa	m ³ /h [cfm]	32,500 [19,200]	38,400 [22,600]
Airflow at 50 Pa	m ³ /h [cfm]	26,200 [15,400]	33,800 [19,900]
Specific performance at 0 Pa	m ³ /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)

LOADING VOLUMES			
		ASSEMBLED	DISASSEMBLED
Container 20 ft	pcs.	29	170
Container 40 ft	pcs.	58	250
Container 40 ft HC	pcs.	58	250
Trailer 13.60x2.40x2.60 m	pcs.	65	300

EUROEMME® EDX30HE - EDX36HE WALL FAN



- Family member of the time proven Euroemme® fan range
- High airflow capacity with excellent energy efficiency
- Housing, shutter blades and components made in Stainless Steel 304
- Venturi in steel, protected with epoxy coated paint
- Low power consumption
- Direct drive system



PERFORMANCES					
Model		EDX30HE		EDX36HE	
Motor		0.5Hp		0.75Hp	
Airflow at 0 Pa	m ³ /h [cfm]	14,400 [8,460]		19,100 [11,300]	
Airflow at 12 Pa	m ³ /h [cfm]	13,700 [8,080]		18,200 [10,700]	
Airflow at 25 Pa	m ³ /h [cfm]	12,900 [7,620]		17,200 [10,100]	
Specific performance at 0 Pa	m ³ /h/W [cfm/W]	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)

LOADING VOLUMES					
		ASSEMBLED		DISASSEMBLED	
Model		EDX30HE	EDX36HE	EDX30HE	EDX36HE
Container 20 ft	pcs.	72	54	180	160
Container 40 ft	pcs.	144	108	400	320
Container 40 ft HC	pcs.	144	108	400	320
Trailer 13.60x2.40x2.60 m	pcs.	168	120	400	360

EUROEMME® ED24HE MPX - ED30HE MPX - ED36HE MPX WALL FAN



- Family member of the time proven Euroemme® fan range
- High airflow capacity with excellent energy efficiency
- Direct drive system
- All housing components designed for improved corrosion resistance
- All bolts and nuts in stainless steel, the mesh powder coated for improved corrosion resistance



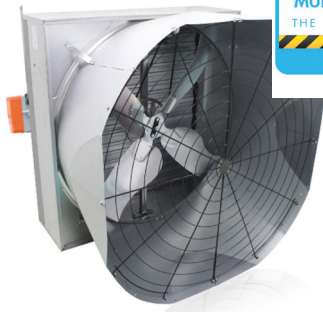
PERFORMANCES				
Model		ED24HE MPX	ED30HE MPX	ED36HE MPX
Motor		0.5Hp	0.5Hp	0.75Hp
Airflow at 0 Pa	m ³ /h [cfm]	9,100 [5,360]	14,400 [8,460]	19,100 [11,300]
Airflow at 12 Pa	m ³ /h [cfm]	8,800 [5,180]	13,700 [8,080]	18,200 [10,700]
Airflow at 25 Pa	m ³ /h [cfm]	8,400 [4,960]	12,900 [7,620]	17,200 [10,100]
Specific performance at 0 Pa	m ³ /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)

Note: airflow data are measured at standard conditions (20 °C, 1,013 mbar)

LOADING VOLUMES					
		ASSEMBLED		DISASSEMBLED	
Model		ED30HE MPX	ED36HE MPX	ED30HE MPX	ED36HE MPX
Container 20 ft	pcs.	72	54	180	160
Container 40 ft	pcs.	144	108	400	320
Container 40 ft HC	pcs.	144	108	400	320
Trailer 13.60x2.40x2.60 m	pcs.	168	120	400	360

EC52 MUNTERS DRIVE MPX WALL FAN



MUNTERS PROTECT
THE BARRIER AGAINST
CORROSION

- Patented EC motor for excellent energy reduction over standard AC motors
- Maintenance free: no belts to tension or replace
- Soft start for eliminating energy spikes
- Variable speed for providing a wide range of air flow with excellent efficiency values
- Strong and efficient steel propeller, discharge cone for best achievements in performances and strength
- Shutter operated by gear motor: opening not linked to air flow or propeller spin
- Ideal fan for minimum ventilation applications



PERFORMANCES

		260 rpm	370 rpm	495 rpm
Number of blades		4		
Propeller diameter	mm [inch]	1,335 [52]		
Weight of fully equipped fan ¹	[kg]	120		
Efficiency grade		45.5		
Airflow at 0 Pa ²	m ³ /h [cfm]	28,500 [16,800]	40,700 [24,000]	53,200 [31,300]
Airflow at 12 Pa ²	m ³ /h [cfm]	24,300 [14,300]	37,700 [22,200]	51,400 [30,200]
Airflow at 25 Pa ²	m ³ /h [cfm]	15,200 [8,900]	34,600 [20,400]	49,400 [29,100]
Specific performance at 12 Pa ²	m ³ /h /W [cfm /W]	81.2 [47.8]	49.9 [29.4]	30.6 [18.0]
Specific performance at 25 Pa ²	m ³ /h /W [cfm /W]	48.0 [28.3]	43.8 [25.8]	28.4 [16.7]
Max. operating temperature	°C [°F]	40 [104]		
Max. operating pressure	Pa	50		
Electric motor winding insulation grade		B		

WM54F MUNTERS DRIVE WALL FAN



- Rigid and durable fiberglass housing
- Insulated and sealed damper door to reduce condensation, light and air leaks
- Polymer engineered UV protected cone and damper door
- Inlet guard mounts flush with inside of building framing, without needing an additional housing
- Variable speed, for minimum ventilation



PERFORMANCES

Model		Speed max Efficiency	MD max speed 600rpm	MD Max Efficiency speed
Number of blades			3	
Propeller diameter	mm [inch]		1,377 [54]	
Weight of fully equipped fan ¹	[kg]		165	165
Airflow at 0 Pa ²	m ³ /h [cfm]	225	57.100 [48.992]	22.160 [13.043]
Airflow at 25 Pa ²	m ³ /h [cfm]	375	51.303 [44.018]	25.020 [14.726]
Airflow at 50 Pa ²	m ³ /h [cfm]	550	44.680 [38.335]	37.230 [21.913]
Specific performance at 0 Pa ²	m ³ /h /W [cfm /W]		45,6 [26.84]	208,8 [123,0]
Max. operating temperature	°C [°F]		50 - derating	
Nominal propeller speed	[rpm]		60	600
IEC protective class of electric motor			IP55	
Electric motor winding insulation grade			F	

¹ INCLUDES SAFETY KIT FOR INSTALLATION BELOW 2.7M ABOVE THE FLOOR.

² ALL DECLARED VALUES ARE MEASURED AND CERTIFIED BY BESS LAB (TEST #15631 AND #15632). AIRFLOW DATA ARE MEASURED AT STANDARD CONDITIONS (20 °C, 1,013 HPA).

VX36 - VX51 WALL FAN



- Cast aluminum airfoil propeller
- UV resistant fiberglass housing
- Stainless steel hardware and fasteners
- High strength extruded aluminum struts
- High quality, Made in USA, pillow block greasable bearings
- Poly cone standard
- Greasable automotive style belt tensioner
- Three phase models compatible with variable frequency drives
- Optional premium efficiency motor
- Optional belled inlet shutter for added airflow



PERFORMANCES			
Model		VX36	VX51
Motor		0.75Hp	1.5Hp
Airflow at 0 Pa	m ³ /h [cfm]	21,300 [12,540]	46,800 [27,600]
Airflow at 25 Pa	m ³ /h [cfm]	18,500 [10,860]	41,000 [24,100]
Airflow at 50 Pa	m ³ /h [cfm]	14,500 [8,520]	32,500 [119,100]
Specific performance at 0 Pa	m ³ /h/W [cfm/W]	25.4 [15.5]	34.1 [20.1]

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

LOADING VOLUMES			
		DISASSEMBLED	
Model		VX36	VX51
Container 20 ft	pcs.	40	20
Container 40 ft	pcs.	80	42
Container 40 ft HC	pcs.	86	48
Trailer 13.60x2.40x2.60 m	pcs.	94	54

VX18 - VX24 WALL FAN



- Extremely rugged and corrosion resistant fiberglass housing that maintains its shape and colour
- High impact resistant, flared discharge cone that is rotationally moulded and enhanced with patented technology
- Cast aluminium turbine blades featuring a stall-limiting design which prevents motor overload and increases airflow and efficiency
- Enhanced optional plastic belled inlet shutter
- Direct drive with high efficiency, variable speed motor



PERFORMANCES			
Model		VX18	VX24
Motor		0.33Hp	0.33Hp
Airflow at 0 Pa	m ³ /h [cfm]	7,600 [4,490]	10,600 [6,230]
Airflow at 25 Pa	m ³ /h [cfm]	6,900 [4,080]	9,700 [5,650]
Airflow at 50 Pa	m ³ /h [cfm]	5,800 [3,430]	8,600 [5,040]
Specific performance at 0 Pa	m ³ /h/W [cfm/W]	18.9 [11.1]	28.7 [16.9]

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

LOADING VOLUMES			
		DISASSEMBLED	
Model		VX36	VX51
Container 20 ft	pcs.	120	100
Container 40 ft	pcs.	250	200
Container 40 ft HC	pcs.	250	200
Trailer 13.60x2.40x2.60 m	pcs.	280	230

WX51-WX55 MUNTERS DRIVE WALL FAN



- Reduce fan energy costs up to 40%
- Maintenance FREE
 - No bearing maintenance
 - No belts to replace
- Reduce your carbon footprint
- Optional modes HE, HR, HO providing increased ventilation and savings
- Qualifies for energy rebates
- Patent Pending



PERFORMANCES				
Model		WX51		WX55
Motor		Munters Drive		
Airflow at 0 Pa	m ³ /h [cfm]	48,100 [28,300]		56,000 [33,000]
Airflow at 25 Pa	m ³ /h [cfm]	42,000 [24,700]		49,100 [28,900]
Airflow at 50 Pa	m ³ /h [cfm]	33,800 [19,900]		39,100 [23,000]
Specific performance at 0 Pa	m ³ /h/W [cfm/W]	51.7 [30.4]		46.3 [27.2]

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

TU600 - TU800 CHIMNEY FAN



- Bell mouth inlet and cone outlet ensure very high energy efficiency
- Designed to withstand climatic extremes and solar radiation
- All components made of highly corrosion resistant materials
- Insulated butterfly damper for tight seal when fan is not in use
- Aerodynamic design ensures a low noise level
- Patented 'click system' allows for compact transport volumes and quick on-site assembly
- High efficiency Munters Drive motor version available on request



PERFORMANCES							
Model		TU600		TU800			
Motor type		STD	MUNTERS DRIVE	STD			MUNTERS DRIVE
Motor size	[W]	250	660	370	430	550	660
Voltage	[V]	1 x 230	1 x 230	1 x 230	3 x 400	1 x 230	1 x 230
Airflow at 0 Pa	m ³ /h [cfm]	11,720 [6,898]	12,729 [7,492]	18,650 [10,977]	19,820 [11,666]	19,875 [11,698]	20,653 [12,156]
Airflow at 20 Pa	m ³ /h [cfm]	10,740 [6,321]	12,090 [7,116]	17,230 [10,141]	18,290 [10,765]	18,329 [10,788]	19,364 [11,397]
Airflow at 40 Pa	m ³ /h [cfm]	9,560 [5,627]	11,414 [6,718]	15,460 [9,099]	16,730 [9,847]	16,728 [9,846]	18,244 [10,738]
Specific performance at 0 Pa	m ³ /h/W [cfm/W]	27.5 [16.2]	28.4 [16.7]	31.7 [18.6]	33.0 [19.4]	25.0 [14.7]	34.0 [20.0]
Specific performance at 20 Pa	m ³ /h/W [cfm/W]	24.0 [14.1]	24.9 [14.7]	27.0 [15.9]	27.0 [15.9]	22.0 [12.9]	27.8 [16.4]
Specific performance at 40 Pa	m ³ /h/W [cfm/W]	20.1 [11.8]	22.0 [13.0]	23.0 [13.5]	22.4 [13.2]	19.1 [11.3]	24.0 [14.1]

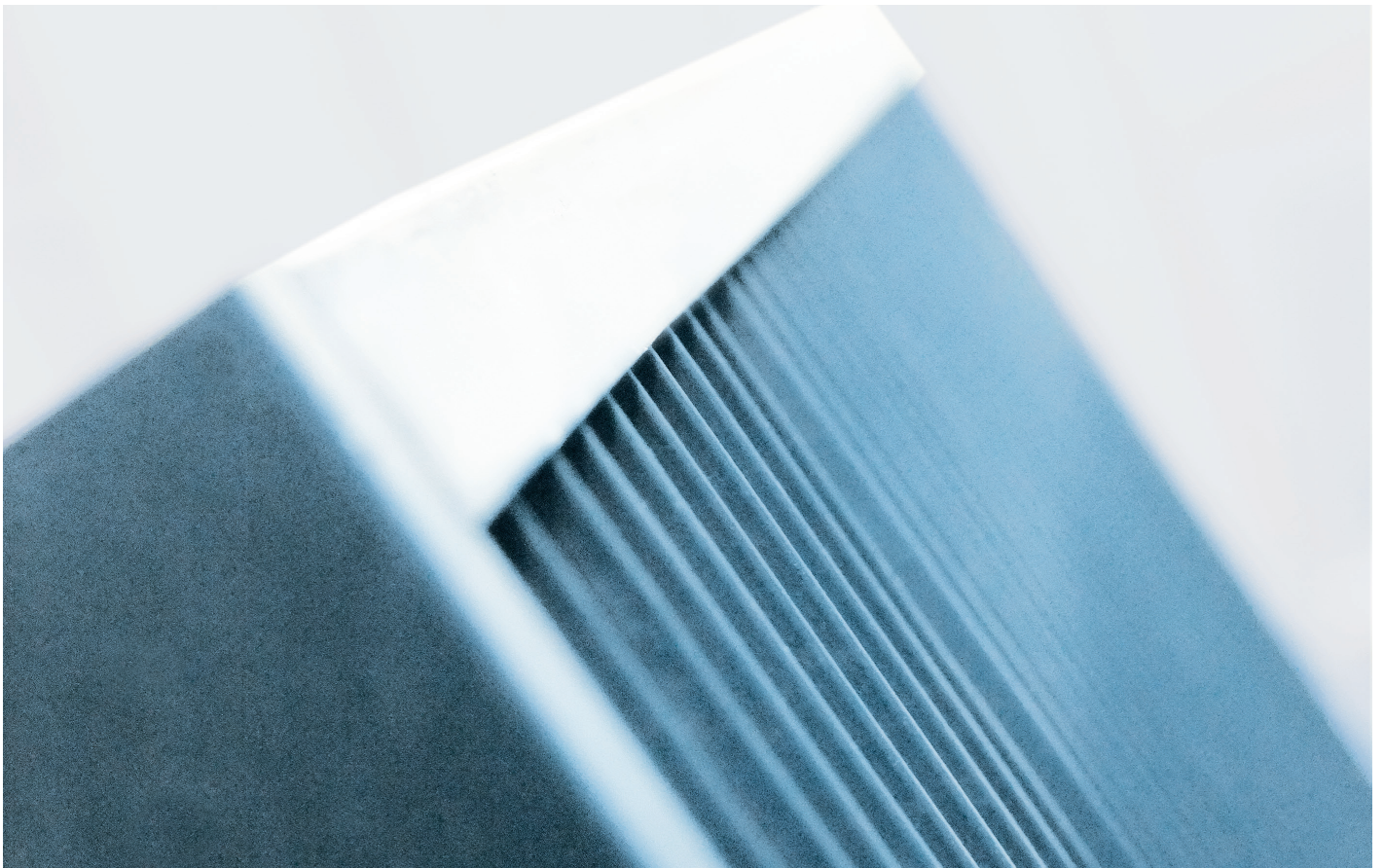


- Large selection of duct diameters from 370 to 1,270 mm
- Air capacity from 5,000 up to 52,000 m³/h (0 Pa)
- Sound reduction up to 5 dB(A), with the REVENTA® duct silencer up to 12
- Perfect insulation of 0.022W/mK to avoid condensation
- Covering layers made from reinforced polyester, chemical resistant and easy to clean
- Multiple dimensions, versions and accessoires



PERFORMANCES								
Model		M630			M910			
Motor type		E630-FF-W6	E630-FF-D6	EC630-FF-W10	E910-FF-W6	E910-FF-D6	E910-FN-D6	EC910-FF-W10
Motor size	[W]	520	540	920	940	920	1950	960
Voltage	[V]	1 x 230	3 x 400	1 x 230	1 x 230	3 x 400	3 x 400	1 x 230
Airflow at 0 Pa	m ³ /h	13.900	14.200	16.000	25.300	26.100	28.400	27.900
	[cfm]	8.181	8.358	9.417	14.891	15.362	16.716	16.421
Airflow at 30 Pa	m ³ /h	12.400	12.500	14.800	22.000	23.100	26.300	25.200
	[cfm]	7.298	7.357	8.711	12.949	13.596	15.480	14.832
Airflow at 50 Pa	m ³ /h	10.500	10.600	13.700	18.600	20.700	24.700	23.300
	[cfm]	6.180	6.239	8.064	10.948	12.184	14.538	13.714
Specific performance at 0 Pa	m ³ /h/W	27,9	28,7	20,5	29,9	32,5	27,1	34,4
	[cfm/W]	16,4	16,9	12,1	17,6	19,1	16,0	20,2
Specific performance at 30 Pa	m ³ /h/W	24,3	24,9	17,8	24,4	26,5	22,2	28,1
	[cfm/W]	14,3	14,6	10,5	14,4	15,6	13,1	16,5
Specific performance at 50 Pa	m ³ /h/W	22,1	22,7	16,3	21,1	22,9	19,2	24,3
	[cfm/W]	13,0	13,3	9,6	12,4	13,5	11,3	14,3

FAN INSULATION



FI36 - FI50 - FI52 INSULATION PANEL



- Reduced heat loss through fans during winter by up to 7 times
- Cost saving by reducing heating cost
- Quick and easy to install and mount
- Fits all Euroemme® extraction fans snugly
- Can be installed on air inlet or exhaust sides of fans
- Installation kits include all accessories required for installation
- Can be fitted onto other brands of exhaust fans with similar dimensions

DIMENSIONS				
Model		FI36	FI50	FI52
Length	[mm]	1,092	1,382	1,430
Height	[mm]	1,092	1,382	1,430
Width	[mm]	35	35	40

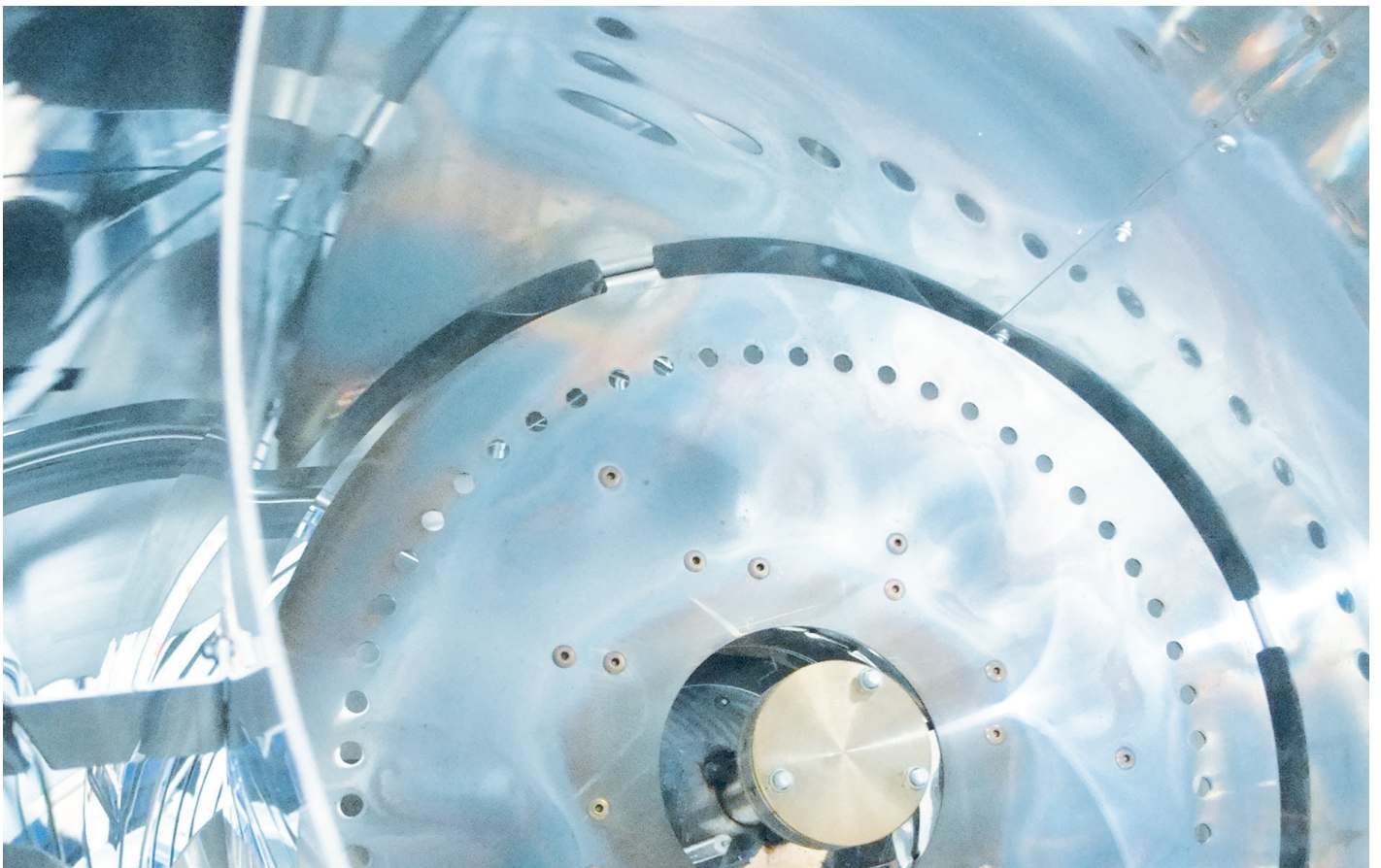
ISOPANEL FOR WALL FANS INSULATION PANEL



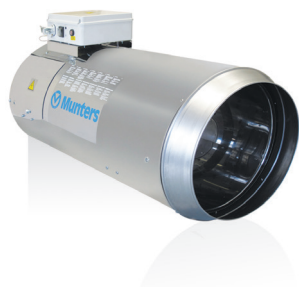
- PUR part seals completely tight
- Good cleaning properties due to smooth surface
- Ease of handling due to practical carry handle
- Can be used in conjunction with a light filter
- Thermal conductivity 0.045 W/mK
- Can be fitted onto any 50" exhaust fan

DIMENSIONS	SUITABLE FOR
1,380 x 1,380 x 40	50"-box fans

AIR HEATING



GA30 - GA95T AIR HEATER



- Direct fired - open combustion chamber
- Lean technology, versatile and easy to use
- Efficiency 100%, no losses in the system
- Functions on LPG at medium pressure (Bar)
- Fan heater entirely made of stainless steel
- Room thermostat or On/Off dry contact through an ILME plug socket (3P+G)
- Error proof design e.g. safety thermostat, ionization probe, double solenoid valves
- CE marked

PERFORMANCES			
Model		GA30	GA95T
Heating power	kW [kcal/h]	25.0 to 36.0 [21,500 to 30,960]	97.0 [83,400]
Gas consumption propane gas*	[kg/h]	1.75 to 2.51	6.90
Fuel Gas Pressure	[Bar]	0.7	2.0
IP class**		IP54	IP54
Electrical line		230V; 4.5A; 700W	

* Density values refer to the standard ambient conditions.
** Electric box IP grade.

LOADING VOLUMES			
Model		GA30	GA95T
Container 20 ft	pcs.	66	38
Container 40 ft	pcs.	138	80
Container 40 ft HC	pcs.	138	119
Trailer 13.60x2.40x2.60 m	pcs.	156	150

GFn85 AIR HEATER



- Indirect fire air heater
- 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
- CE marked

PERFORMANCES			
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]	
Electric Power	W	750	

LOADING VOLUMES			
Container 20 ft	pcs.	48	
Container 40 ft	pcs.	108	
Container 40 ft HC	pcs.	108	
Trailer 13.60x2.40x2.60 m	pcs.	120	

»HEAT-X« TYPE H HEAT EXCHANGER

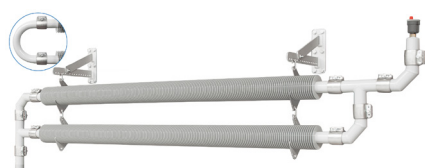


- Water-Air Heat Exchanger
- Resistant lamella – easy to clean
- Stainless steel pipe system
- Universal applicability: Horizontal and vertical air guidance Fan AAAAA
- Frame system and piping of stainless steel, lamellas of high resistant aluminium composition
- Very low power consumption (in comparison to competitors)
- Easy cleaning at end of the cycle due to optimum lamella spacing
- High pressure resistant fins
- Durable and energy efficient Fan

PERFORMANCES

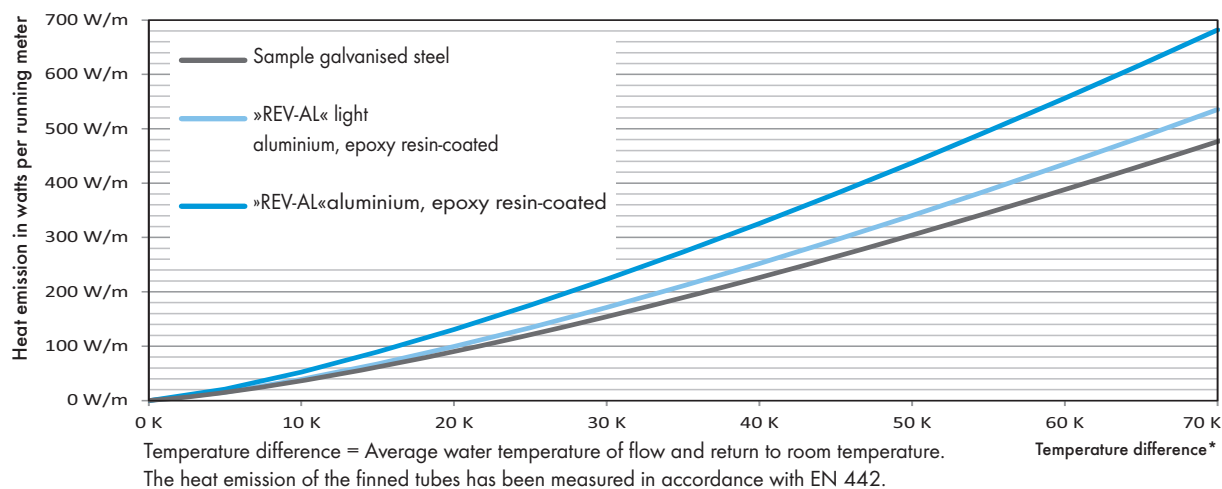
Type H	Type 2 H	Type 3 H	Type 4 H
Fan performance	3,000 m ³ /h	5,000 m ³ /h	7,500 m ³ /h
Fan connected load	400V; 0,75A; 350W	400V; 1,1A; 530W	400V; 1,25A; 630W
Heating medium supply / return temperature	80/60 °C	80/60 °C	80/60 °C
Duct thread connection	3/4"	3/4"	1"
Total weight incl. water	approx. 56 kg	approx. 74 kg	approx. 118 kg
Built-in fan type / ø	E450-ST-D4 / 450	E500-ST-D4 / 500	E630-FN-D6 / 630
Throwing ranges*	approx. 30 m	approx. 45 m	approx. 55 m
Art. no. »blowing« / »sucking« 20°C	281130 / 281100	281230 / 281200	– / 281300
Air intake / capacity	20°C / ≈ 30 kW	20°C / ≈ 50 kW	20°C / ≈ 95 kW
Dimensions H x W x D in mm	700 x 760 x 596	800 x 964 x 711	1,025** x 1,197 x 823
Water pressure drop	0.34 bar	0.49 bar	0.36 bar
Water flow	1.34 m ³ /h	2.15 m ³ /h	4.11 m ³ /h
Art. no. »blowing« / »sucking« 30°C	281130 / 281100	281230 / 281200	– / 281300
Air intake / capacity	30°C / ≈ 25 kW	30°C / ≈ 40 kW	30°C / ≈ 75 kW
Dimensions H x W x D in mm	700 x 760 x 766	800 x 964 x 996	1,025** x 1,197 x 1,095
Water pressure drop	0.24 bar	0.34 bar	0.25 bar
Water flow	1.10 m ³ /h	1.76 m ³ /h	3.36 m ³ /h

REV-AL AND REV-AL LIGHT FINNED TUBES HEAT EXCHANGER



- 30% performance increase
- up to 85% weight reduction (when comparing steel with aluminium)
- 100% easy installation by means of connection clamps
- High radiated power due to epoxy-coated surface
- Energy-saving, made of aluminium with high heat conduction
- Higher resistance against ammonia
- Optimised surface more watts per running metre

Heat emission of finned tubes



HEAT-X COMPACT HEAT EXCHANGER



- Water-Air Heat Exchanger
- Optimal preheating of the air in small rooms
- easy to handle and compact
- simple cleaning and maintenance operation
- stainless steel water piping
- plug-in couplings available as option

PERFORMANCES			
Type 1 H/C	Air intake / capacity 20 °C	Fan performance m ³ /h	Heating medium supply/ return temperature
	≈ 15 kW	1,500	80/65 °C

HEAT-X ROTATE HEAT RECOVERY SYSTEM

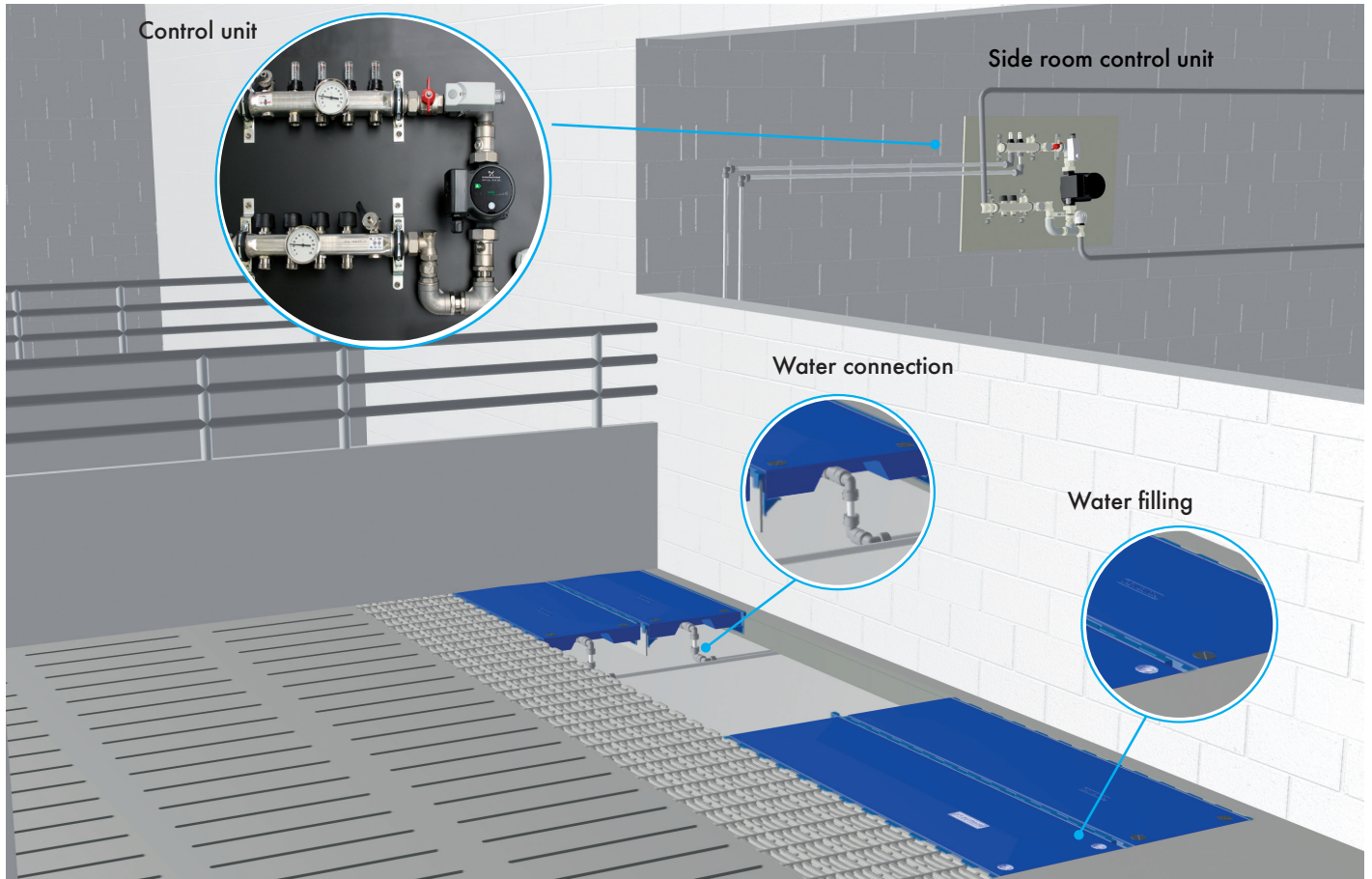


- Air Heat Exchanger
- No dust filtration required
- Low pressure loss in comparison to other heat exchangers in the poultry sector
- Fully automatic rotor cleaning
- Compact container construction, suitable for common lorry transports
- Almost no freezing issues
- Very high heat recovery Performance figures
- Storage mass with plastic coating to satisfy the highest corrosion protection requirements
- Adjustable recovery performance by modification of the speed
- EUROVENT-certified output DIN EN 13053

PERFORMANCES			
Type		10,000	20,000
Dimension Exchanger package	mm (inch)	1,900 x 1,900 x 360 (74,8 x 74,8 x 14,2)	2,500 x 2,500 x 390 (98,4 x 98,4 x 15,4)
Air flow	m ³ /h (cfm)	10,000 5,900	20,000 11,800
Efficiency	%	65-85 %	65-85%

THERMOPLUS PIGLET NEST HEATING

- Easy to install and clean
- High laying comfort for piglets
- High heat storage capacity
- Available in 2 versions, electrical and water based heat source
- Low heat loss from backside
- Designed for high hygiene level
- Even heat distribution
- Complete additional water distribution system available



AIR INLET



SMT24 - SMT30 - SMT36 - SMT50 MPX INLET SHUTTER



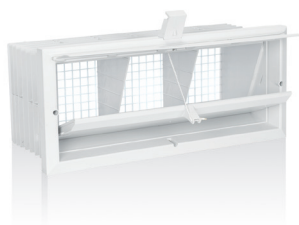
MUNTERS PROTECT
THE BARRIER AGAINST
CORROSION

- Enhanced protection against corrosion
- Compact design and easy installation
- Actuators for individual control or controlling in groups
- Self cleaning shutter blade profile prevents the build-up of dust
- Tight sealing and durable shutter blades
- Optional guard mesh to prevent entry of wild animals or birds
- Munters Protect coated steel frame and shutter blades
- Maintenance free and UV resistant bearings for shutter blades

PERFORMANCES					
Model		SMT24 MPX	SMT30 MPX	SMT36 MPX	SMT50 MPX
Airflow at 0 Pa	m ³ /h	0	0	0	0
Airflow at 20 Pa	m ³ /h	6,754	11,642	14,331	27,090
Airflow at 40 Pa	m ³ /h	9,396	16,210	20,110	38,261
Airflow at 60 Pa	m ³ /h	11,463	19,656	244,91	46,346

Note: airflow data are measured at standard conditions (20°C, 1,013hPa)

IW150 - IW250 WALL AIR INLET



- Easy installation
- Manufactured in durable white UV stabilized polystyrene
- Main door moulded in two pieces preventing deformation
- Main door has an insulated core, preventing condensation on inside
- Integrated aluminium profiles in main door preventing warping
- Adjustable flap allowing fine adjustment of air flow patterns
- Rainstop preventing rain from entering the structure
- Integrated mesh in corrosion resistant polystyrene preventing wild animal entry
- Withstands cleaning with a high pressure cleaner and integrated pulley for support of cabling

PERFORMANCES				
Model		IW150		IW250
Airflow at 10Pa	m ³ /h	1,320		1,440
Airflow at 20Pa	m ³ /h	1,870		2,015

Note: airflow data are measured at standard conditions (20°C, 1,013hPa)

IL100 - IL200 - IL300 CEILING AIR INLET



- Easy installation
- Manufactured in durable white UV stabilized polystyrene
- Different models with heights ranging from 100 to 200mm
- Main door moulded in 2 pieces preventing deformation
- Main door has an insulated core, preventing condensation on inside
- Integrated aluminium profiles prevent main door warping
- Main door has rubber seal on the sides for tight sealing
- Integrated eyelet for supporting of cabling
- Withstands cleaning with a high pressure cleaner

PERFORMANCES				
Model		IL100	IL200	IL300
Airflow at 10 Pa	m ³ /h	1,320	1,440	1,415
Airflow at 20 Pa	m ³ /h	1,870	2,015	2,000

Note: airflow data are measured at standard conditions (20°C, 1,013hPa)

MWI WALL AIR INLET

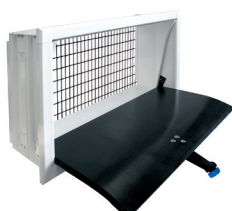


- Optimal flow of fresh air in the house, avoiding drafts and cold air drop on livestock
- Modular design featuring a perfect match between the size of inlet, house design and farmer needs
- Recessed curved door in the wall, properly channels the air jet along the ceiling and avoids air escape out the sides
- Packaging - unassembled 6pcs. per box, optimizes shipping volume and lowers freight cost
- Quick user-friendly assembly due to distinctive design, without added parts
- Hygienic-friendly due to the smart design and smooth surface finish
- Top quality durable PVC and PP materials, UV stabilized
- Air sealing gaskets at the top and sides to avoid air leakage in closed position
- Suitable for quick high pressure washing

PERFORMANCES

Model	MWI 4413 W	MWI 4408 W	MWI 4113 W	MWI 4108 W	MWI 3413 W	MWI 3408 W
W x H Inlet size* (cm)	112 x 33	112 x 21	104 x 33	104 x 21	86 x 33	86 x 21
Airflow at 10 Pa	3597	2277	3316	2175	2742	1770
Airflow at 20 Pa	5026	3158	4716	3084	3830	2491
Airflow at 30 Pa	6155	3867	5721	3724	4671	3082

SAFE-LET® WALL AIR INLET



- 15% greater volumetric flow due to integrated intake nozzle
- All round sealing for optimum closure
- Minimal thermal losses and avoidance of condensate due to integrated flap
- Suitable frame extension for every wall thickness (125, 250, 375, 500 mm / 4.9, 9.8, 14.7 , 19.7 inch)
- Optimum height for the double layer thickness of agrarian bricks

PERFORMANCES

Model	SAFE LET® 600 a.o.	SAFE LET® 800 a.o.	SAFE LET® 1000 a.o.	SAFE LET® 1200 a.o.	SAFE LET® 600 a.c.	SAFE LET® 800 a.c.	SAFE LET® 1000 a.c.	SAFE LET® 1200 a.c.
Airflow at 10Pa	2,900	3,800	4,700	5,500	2,900	3,800	4,700	5,500
Airflow at 20Pa	4,200	5,500	6,700	7,900	4,200	5,500	6,700	7,900
Airflow at 30Pa	5,200	6,800	8,300	9,700	5,200	6,800	8,300	9,700
Load (N)	35	40	45	50	85	80	75	70
Stroke way (mm)	630	630	630	630	280	280	280	280

Note: airflow data are measured at standard conditions (20°C, 1,013hPa)

The inlet is suitable for electric motors: V5, V7

a.o. = automatic opening; a.c. automatic closing; N = pulling force (already includes a deflector)

ZEW PROFESSIONAL WALL AIR INLET



- Significantly reduces the formation of ice even at extreme external temperatures
- Reduces energy costs massively by forgoing forced ventilation
- Spreads the temperature uniformly inside the stable, as the minimum air rate can be geared solely to the requirements of the animals
- The air conduction sheet can be adjusted in every position due to a special latching guide
- Transport and installation safeguard for the shutters integrated into the air conduction sheet
- Winter and summer position easy to set due to corresponding symbols on the inlet
- To avoid condensation/icing, two sealing lips are mounted on the shutter base

PERFORMANCES				
Model		ZEW Prof. 1300	ZEW Prof. 2100	ZEW Prof. 2900
Airflow at 10 Pa	(m ³ /h)	1,300	2,100	2,800
Airflow at 20 Pa	(m ³ /h)	1,900	3,000	4,000
Airflow at 30 Pa	(m ³ /h)	2,400	3,800	5,000
Load (N)	a.o	35	35	25
	a.c	55	55	60
Stroke way (mm)	a.o	390	535	635
	a.c	460	480	480

Note: a.o automatic opening
a.c automatically closing

ZEW WALL AIR INLET



- Fine dosing and an almost wastefree supply of fresh air
- Good mechanical characteristics
- Circumferential bearing surface for
 - optimal closing of the fresh air inlet
- Robust design
- High insulation value
- Practical rope fastener
- ZEW-M:
 - With differentiated,
 - two-part air guidance

PERFORMANCES				
Model		ZEW 1500-M*	ZEW 2500	ZEW 5000
Airflow at 10 Pa	(m ³ /h)	1.500	2.500	3.900
Airflow at 20 Pa	(m ³ /h)	2.100	3.500	5.400
Airflow at 30 Pa	(m ³ /h)	2.600	4.300	6.600
Load (N)		20	30	35
Stroke way (mm)		520	450	400

* with differentiated, two-part air flow are for integration into walls

AIRSTEP® 5000 MULTI WALL AIR INLET



- Optimal solution for tunnel ventilation
- High insulation value due to integrated insulation
- Optimum closing and good sealing
- Prevention of thermal losses
- Optional inflow of large air flows
- Reduction of condensation
- Robust, easy to clean design

PERFORMANCES

Model	AIRSTEP® 5000/2 a.o.	AIRSTEP® 5000/3 a.o.	AIRSTEP® 5000/4 a.o.	AIRSTEP® 5000/5 a.o.	AIRSTEP® 5000/2 a.c.	AIRSTEP® 5000/3 a.c.	AIRSTEP® 5000/4 a.c.	AIRSTEP® 5000/5 a.c.
Airflow at 10Pa (m³/h)	6,800	10,100	13,400	17,000	6,800	10,100	13,400	17,000
Airflow at 20Pa (m³/h)	9,100	13,900	18,800	23,800	9,100	13,900	18,800	23,800
Airflow at 30Pa (m³/h)	11,200	17,100	23,000	29,000	11,200	17,100	23,000	29,000
Load (N)	80	120	160	200	60	90	120	150
Stroke way (mm)	400	400	400	400	400	400	400	400

Note: airflow data are measured at standard conditions (20°C, 1,013hPa)

ZED 1800/1800 DOUBLE FRESH AIR CEILING INLET

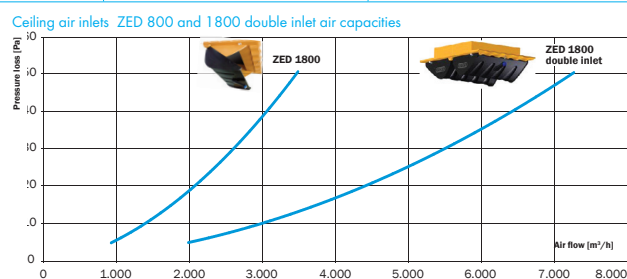


- Optimised flap contour with new lateral screening
- Highly output air velocity
- Good mechanical characteristics
- High insulation value

PERFORMANCES

Model		ZED 1800 a.o.	ZED 1800 a.c.	ZED 1800 a.o. Double inlet	ZED 1800 a.c. double inlet
Airflow at 10Pa	(m³/h)	1,400	1,400	3,000	3,000
Airflow at 20Pa	(m³/h)	2,100	2,100	4,000	4,000
Airflow at 30Pa	(m³/h)	2,700	2,700	5,500	5,500
Load	(N)	25	65	2 X 25	2 X 25
Stroke way	(mm)	330	330	330	330

Note: airflow data are measured at standard conditions (20°C, 1,013hPa)



ZED 5000 FRESH AIR CEILING INLET

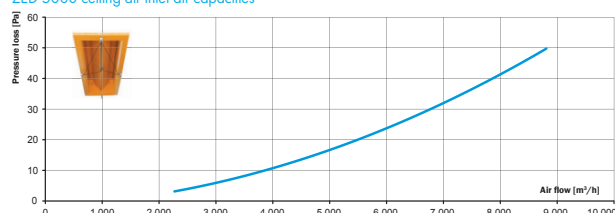


- High insulation value
- Optimum closing and good seal
- Easy to clean

PERFORMANCES					
Model		ZED 5000 a.o.		ZED 5000 a.c.	
Airflow at 10Pa	(m ³ /h)	3,800		3,800	
Airflow at 20Pa	(m ³ /h)	5,500		5,500	
Airflow at 30Pa	(m ³ /h)	6,800		6,800	
Load	(N)	40		80	
Stroke way	(mm)	140		140	

Note: airflow data are measured at standard conditions (20°C, 1,013hPa)

ZED 5000 ceiling air inlet air capacities



IS600 - IS800 CEILING/ROOF AIR INLET

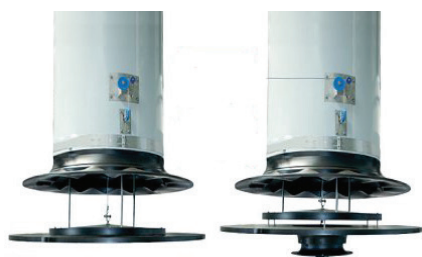


- Reduced shipping volumes and easy installation
- Different models for adaptation to most buildings. Multiflex roof flashing for fitting to any slope between 12 and 25 degrees.
- Two available diameters, 600mm and 800mm and option for use without the top section to draw air from the loft space
- Integral wire mesh preventing wild animal entry
- Solid top cover and slots at the bottom of the cone ensure rainwater protection
- Patented 'Star diffuser' system ensures correct quantity and direction of incoming air
- Air circulator to be placed under the diffuser available as accessory
- Manufactured in durable white or black smooth and anti-soiling polyethylene
- Withstands cleaning with high pressure cleaner

PERFORMANCES					
Model		IS600	IS800	IS600	IS800
		WITH CAP		WITHOUT CAP	
Airflow at -10 Pa	m ³ /h	3,357	5,843	3,647	6,946
Airflow at -20 Pa	m ³ /h	4,720	8,414	5,142	9,789
Airflow at -30 Pa	m ³ /h	5,770	10,285	6,500	12,150

Note: airflow data are measured at standard conditions (20°C, 1,013hPa) No light and less than 5% ventilation reduction for IS Air Inlet.

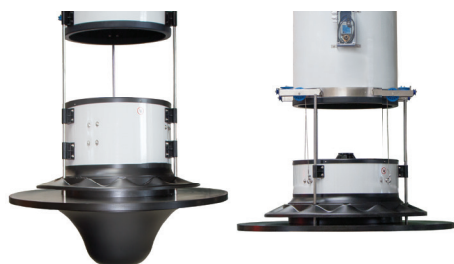
ZLV NEO CEILING/ROOF AIR INLET



- Flexible system for every type of stable and livestock quantities in diameters of Ø 650, 730, 820, 920 mm
- Ultra-fine fresh air distribution over a large distribution radius, also with minimal air flow rates
- Optimisation of the horizontal dispersion behaviour (greater throwing ranges)
- Danger of icing at outside temperatures down to -20°C considerably reduced
- All components made from thermally-insulated polyurethane

PERFORMANCES					
Internal diameter Ø	(mm)	650	730	820	920
Airflow at 10Pa	(m³/h)	4,900	6,100	7,500	9,200
Airflow at 20Pa	(m³/h)	6,900	8,800	10,900	13,500
Airflow at 30Pa	(m³/h)	8,500	10,900	13,500	16,900
Airflow at 40Pa	(m³/h)	10,000	12,700	15,600	19,500
Load	(N)	240	260	270	300
Stroke way	(mm)	400	400	400	400
Air flow Equal pressure ventilation	(m³/h)	10,500	15,300	20,300	20,800

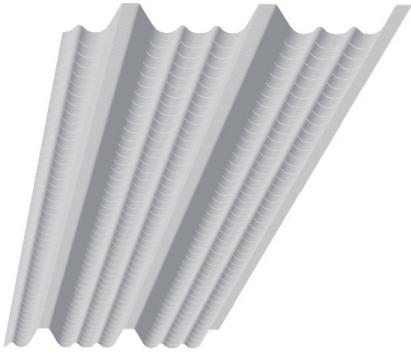
ZLV VARIO CEILING/ROOF AIR INLET



- Flexible system for every type of stable and number of animals in diameters of Ø 650, 730, 820, 920 mm
- Ultra-fine fresh air distribution across a large distribution radius, also with minimal air flow rates
- Danger of icing also at extreme outside temperatures down to -50°C considerably reduced
- Winter, transitional and summer operation switch automatically (can be set centralised or decentralised)
- Complete closing of the recirculation gap, thereby increasing maximum fresh air capacity
- All components made from thermally-insulated polyurethane

PERFORMANCES					
Internal diameter Ø	(mm)	650	730	820	920
Load	(N)	300	360	410	460
Stroke way	(mm)	350	350	350	350
Air flow Equal pressure ventilation	(m³/h)	10,500	15,300	20,300	20,800

GRP OR ALUMINIUM TRAPEZE CEILINGS

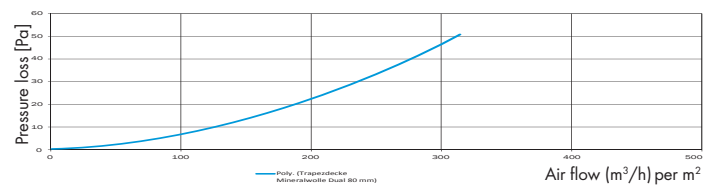


GRP trapeze ventilation ceiling with approx. 3 mm wide slots

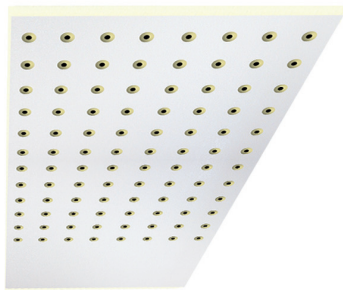
- The risk of draughts is minimised
- Individual perforation, depending on the number of animals
- Preassembled side sections for ease of assembly



Air capacity of trapeze ventilation ceiling with insulation

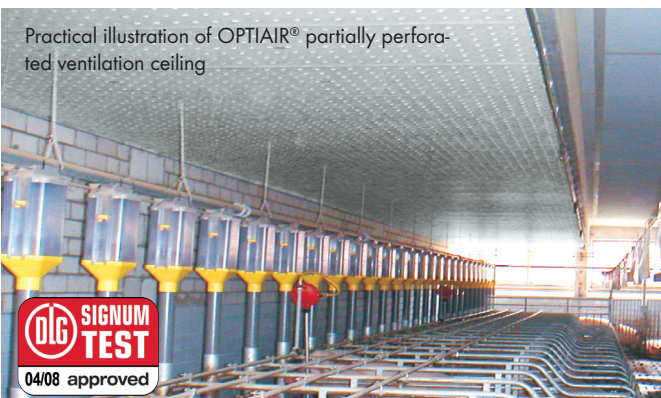


OPTIAIR DUCT BUILDING PANELS VENTILATION CEILINGS

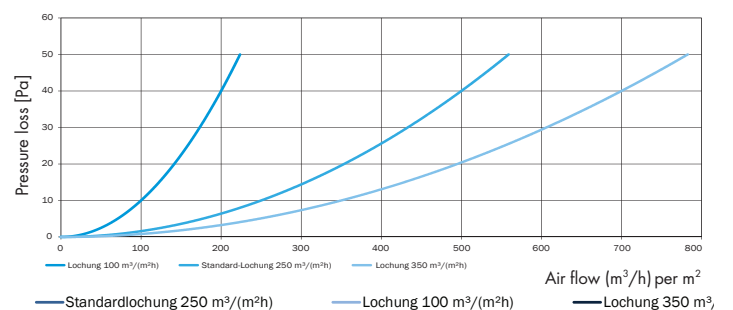


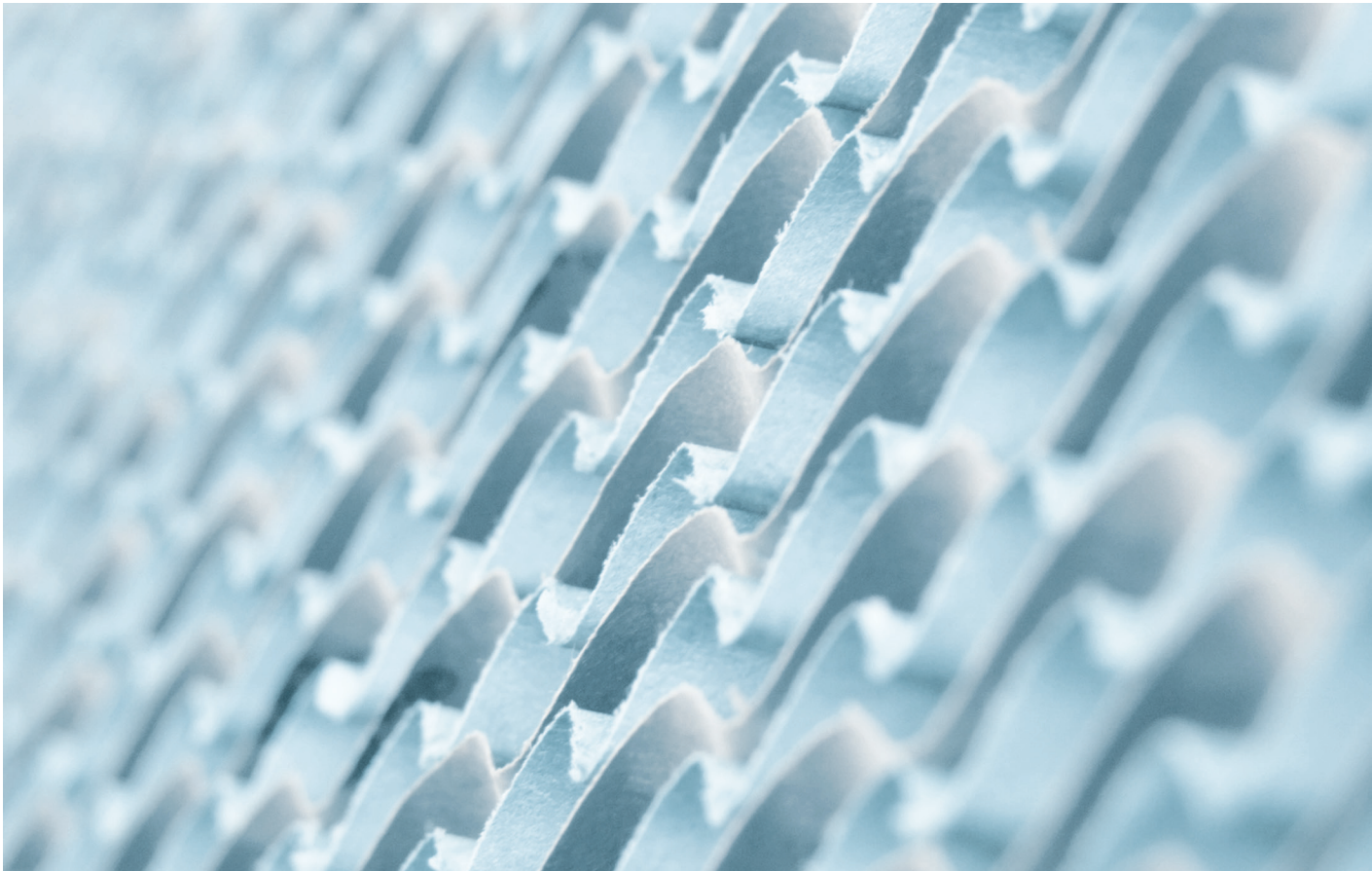
OPTIAIR® partially perforated ventilation ceiling

- Very low air velocity without draughts
- Easy to clean due to the smooth surface
- Easy to assemble
- Fresh air is preheated in winter
- Various thicknesses for different span widths, special lengths on inquiry
- DLG-tested system (DLG test report 5345)

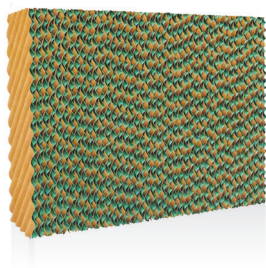


OPTIAIR® air capacities





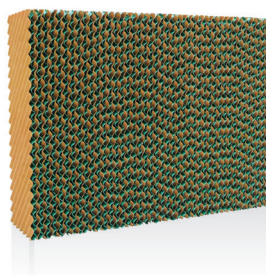
CELdek® 7090-15 COOLING PAD



- Since 1950s, the original cooling pad
- Environmentally friendly with consistent high quality worldwide
- Ideal for short to medium length installations. Due to low pressure drop the air goes through the pad without significant resistance and operating costs (CELdek 7090-100mm at 1.5m/s and 20Pa Press.Drop)
- Ideal for applications located in low humidity areas
- Excellent cooling efficiency due to the unique design, manufacturing methods and materials used (CELdek 7090-100mm at 1.5m/s and 73% sat.eff.)
- High face velocity allows the air to travel through the pad without water droplet carryover
- Self-cleaning design due to steeper angle of unequal flute design, flushing dirt and debris from the surface of the pad
- Easy maintenance as it can be performed while system is still operating

STANDARD DIMENSIONS						
Length	mm	600				
Height	mm	1,000	1,200	1,500	1,800	2,000
Width	mm	100/150/200				
DISTRIBUTION PAD CELdek® 70120						
Length	mm	600				
Height	mm	30				
Width	mm	100/150/200				

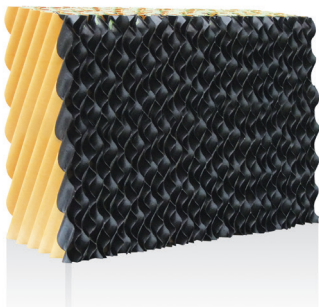
CELdek® 7060-15 COOLING PAD



- Since 1950s, the original cooling pad
- Environmentally friendly with consistent high quality worldwide
- Ideal for long installations. Due to low pressure drop that allows high air speed across the pad without significant resistance and operating costs (CELdek 7060-150mm at 2m/s and 23Pa Press.Drop)
- Ideal for applications located in high humidity areas
- Ideal for applications with low pressure drops
- Excellent cooling efficiency due to the unique design, manufacturing methods and materials used (CELdek 7060-150mm at 2m/s and 73% sat.eff.)
- High face velocity allows the air to travel through the pad without water droplet carryover
- Self-cleaning design due to steeper angle of unequal flute design, flushing dirt from the surface of the pad
- Easy maintenance as it can be performed while system is still operating

STANDARD DIMENSIONS						
Length	mm	600				
Height	mm	1,000	1,200	1,500	1,800	2,000
Width	mm	100/150/200				
DISTRIBUTION PAD CELdek® 70120						
Length	mm	600				
Height	mm	30				
Width	mm	100/150/200				

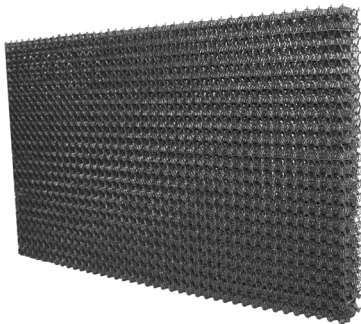
CELdek® WITH MI-T-edg® COATING COOLING PAD



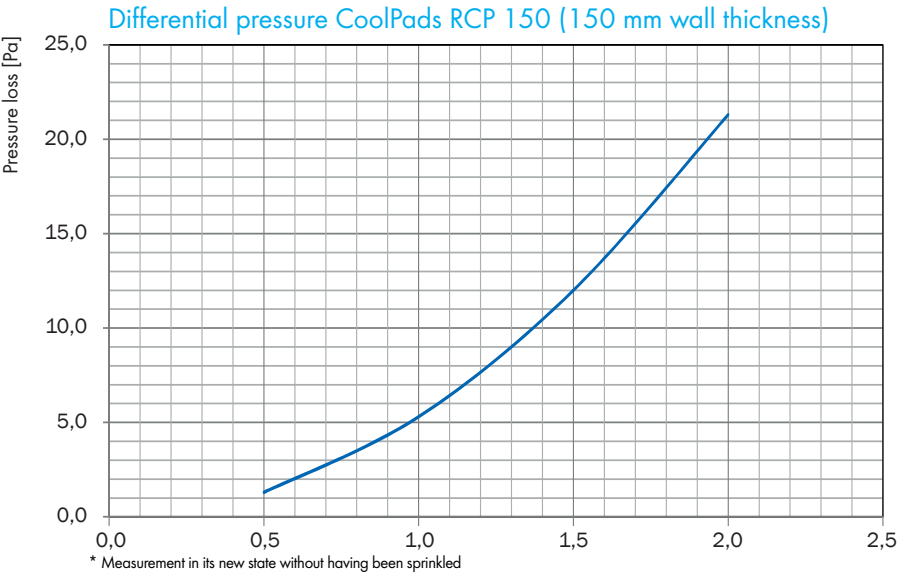
- Since 1990s, the original coating of CELdek cooling pads
- Increased lifetime and durability of the pad
- Enhanced UV protection of the pad exposed to sunlight
- Protection against algae growth due to better drying
- Creates a ridged surface offering protection when using soft brush to clean the pad to avoid scale build-up
- Increased robustness, preventing or decreasing bowing effect of the pads
- Environmentally friendly with consistent high quality worldwide

STANDARD DIMENSIONS						
Length	mm	600				
Height	mm	1,000	1,200	1,500	1,800	2,000
Width	mm	100/150/200				
DISTRIBUTION PAD CELdek® 70120						
Length	mm	600				
Height	mm	30				
Width	mm	100/150/200				

RCP 150 COOLING PAD



- CoolPads RCP consist of polypropylene and are therefore easy to clean and highly robust.
- Available in standard dimensions 1,500 / 1,800/ 2,000 x 600 mm, can replace standard paper pads without any problem
- Long service life
- Height max. 2 m
- Quick and easy assembly
- High cooling performance



WDP WATER DISTRIBUTOR SYSTEM



- Quick and easy installation
- Easy maintenance and cleaning
- Flexible positioning of the water supply and discharge
- Resistant to corrosion (stainless steel 304)
- 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					
Length	mm	multiple of 600			
Height	mm	1,205	1,705	2,005	2,205
Width	mm	100/150			

PVC PAD FRAME SYSTEM COOLING SYSTEM



- No rusting. All components of the frame system consist of UVresistant PVC, clips and screws produced from stainless steel
- No external water tank necessary
- Long service life
- Length is flexible (up to 24 m/1 pump).
- Quick and easy assembly

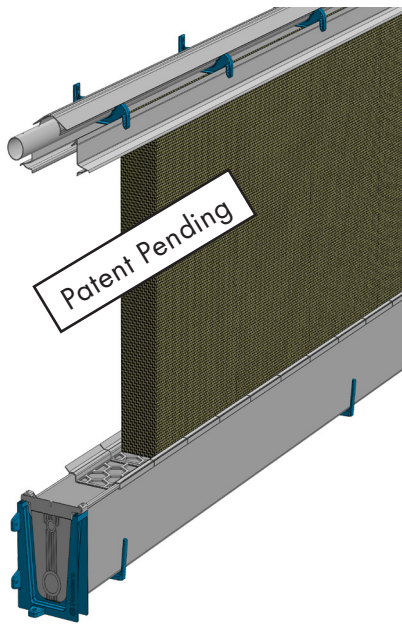
PVC pad frame system dimensions

Length (m)	Pad depth (mm)	Pump (W)
3	150	350
6	150	660
9	150	660
12	150	660
15	150	660
18	150	660
21	150	1,300
24	150	1,300

Pad height max. 2.5 m (*custom heights available on request)



MPG - MUNTERS PLASTIC GUTTER COOLING SYSTEM



- Your advantages as end-user (Farmer, Service)
 - No water leakage caused by the glue and adhesives
 - No water leakage caused by the thermal expansion and contraction
 - Semi-open header for visual inspection and check-up
 - Easy access for cleaning clogged water distribution pipe due to clip-function
 - Easy removal of pads for cleaning and disinfection due to clip-function
 - No clogging of the pad support and consequently no overflow
 - Easy flushing of the entire system due to frontal orifice
 - Excellent durability and long service life
 - Long maintenance intervals ensured by filtration and water bleed-off
- Your advantages as customer (Project Integrator, Installer, Contractors)
 - Less risk factors, eliminate glues and adhesives
 - Avoid laborious and complicated glue application
 - Avoid re-work and repairs caused by wrong glue applications
 - Avoid downtime, commissioning and start-up same day, no drying time
 - Save time and energy, no need to dig the hole for extra water tank

The MPG system is available in the following sets*:

Length (m)	Pad depth (mm)
3	150
6	150
9	150
12	150
15	150
18	150
21	150
24	150

Pad height max. 2.5 m (*custom heights available on request)

HIGH PRESSURE COOLING SYSTEM



- Flexibility due to nozzles that can be positioned as required
- Efficient, easy to assemble and low maintenance requirements
- Temperature reductions of up to 7 Kelvin are possible
- Drop size approx. 10-20 micrometers = excellent efficiency
- Cooling without formation of wetness due to high water pressure
- Effective dust binding
- Special anti-drain valves prevent water from dripping



High pressure cooling nozzle

Max. number of nozzles depending on the flow rate and operating pressure of the 3 pump types

High pressure pump type	Colour of nozzle head		Flow rate per nozzle at operating pressure (l/h)		Number of nozzles (unit)			
			70 bar	50 bar	70 bar		50 bar	
					min.	max.	min.	max.
Pump 6.0 l/min (360l/h)	Red	0.3 mm	6.5	5.5	11	55	13	65
	Black	0.4 mm	10.0	8.0	7	36	9	45
Pump 13.3 l/min (798l/h)	Red	0.3 mm	6.5	5.5	24	122	29	145
	Black	0.4 mm	10.0	8.0	16	79	20	99
Pump 20.0 l/min (1,200l/h)	Red	0.3 mm	6.5	5.5	36	184	43	218
	Black	0.4 mm	10.0	8.0	24	120	30	150

LOW PRESSURE COOLING SYSTEM



Low pressure cooling nozzle

- Cost-effective alternative to high or medium pressure cooling
- Efficient, easy to install and low maintenance
- Operating pressure ca. 4 bar
- Spray pattern 65 microns = good efficiency
- Water flow rate per nozzle 5,5 l/h (at 4 bar)
- Special anti-drip valves prevent water from dripping



The centrifugal pump incl. pressure switch and boiler are supplied pre-assembled and are contained in the start set.

DCP30 - DCP30 TOP4 COOLING UNIT



- 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	m ³ /h [cfm]	16,000 [9,415]	
Motor power*	kW [hp]	1.1 [1.5]	
Cooling efficiency	%	83 - 85	
Cooling effect @ 50% RH	°C [°F]	DCP30 - TOP4	
		OUTSIDE TEMPERATURE	INSIDE TEMPERATURE
		34 [93]	27 [81]
		30 [86]	23 [73]
		26 [79]	20 [68]

* Three-phase electric motor as standard, single phase as options.

Notes: the DCP is intended to be installed outside the animal housing. The cooling effect mentioned above are estimates and can vary based on local conditions.

ENVIRONMENTAL SOLUTIONS



MAC AIR CLEANER



- Ammonia reduced by 89% on average
- Maximum ammonia reduction from start-up
- Dust reduction
- Non-clogging filters
- Efficient droplet separators
- Droplet separators can be drawn out and washed from the outside
- Easy maintenance
- User friendly
- Easy to install
- Corrosion resistant material

PERFORMANCES		
Ammonia reduction	VERA test - Average during a year	89%
Airflow	Maximum	25,000 m ³ /hour at 40 Pa
Power	Maximum including fan, circulation pump, dosing pump and bilge	4.2 kW
	Average	Depends on house and management. In a layer house with 13,000 animals and one air cleaner is measured 3.4 kW on average. This also includes electricity to ventilate the first 25,000 m ³ /hour.
Electricity	Voltage Frequency Current IP Class	3x400 Volt 50 Hz 16 A IP 55
Weight	Air cleaner without liquid Air cleaner with liquid	825 kg 2,325 kg
Water	Average water supply	300 liter/day
Waste water	Drainage volume	Depends on installation and type of house and management. In a layer house was drained maximum 150 liter/dag
Acid consumption	Sulphuric acid 96%	3 kg sulphuric acid per kg removed ammonia. In practice it has been less, as the water itself captures part of the ammonia.



LAVAMATIC® drum module

The LAVAMATIC® drum washer facilitates the exhaust air treatment of poultry and pig stables for example, and is supplied as a complete, prefabricated module. The LAVAMATIC® system can simply be placed on the gable wall or long side of the stable. The drum washer with an air flow of 25,000 or 50,000 m³/h consists of a unique patent-registered drum washer without the use of cost-intensive circulation pumps. Furthermore, an optional biological stage is available for odour reduction.

The drum washer is characterised by its very low electricity consumption due to its ability to operate without pump equipment.

Ammonia drum washer for ammonia reduction

The exhaust air is now guided over the unique, patent-registered drum washer. The continual rotation of the washer drum takes the wash water, which is acidified to pH3, out of the water basin and the filling material in the wash drum is moistened. Additionally, the filling material is constantly cleansed when the wash drum is immersed in the water basin.

A wiper mounted at the top of the wash drum ensures that the coarser particles are removed from the drum's exterior. Simultaneously, the wiper is used for sealing the drum.

The LAVAMATIC® does not require separate washing water treatment, and this constitutes a further advantage of the technology. Elutriation takes place directly from the water basin into a separate elutriation tank.

- Uniquely rotating drum washer that cleans itself fully automatically, no pump technology needed
- Effective odor reduction thanks to the bio filter
- Operationally reliable
- No raw gas in the clean gas
- Savings of > 7,000 Euro/year (40,000 FP) in comparison to other washers in poultry farming
- Energy savings of up to 90 %.
- Low blow-down rates due to conductance at 200 mS/cm
- Available in 25.000 and 50.000 m³/h



Image shows practical application in Dubai with 2 LAVAMATIC® drum washers installed

CONNECTED FARM SOLUTIONS



PLATINUM PRO CONTROLLER



Rotem's Platinum Pro Controllers is a modular farm management and control system enables farmers to administer large operations from a single controller. The Platinum Pro manages all aspects of a poultry, swine, or dairy farm (climate control, lighting, feed and water, weighing, and ventilation). Platinum Pro's unique hardware capabilities combined with the HUB greatly extends this control in a low cost manner.

Benefits

- Modular architecture enables a high level of flexibility in system design
- Improved software capabilities support an unlimited number of devices and scales
- Simple software upgrade reduces maintenance time

Programing accessories from the Platinum Pro simplifies accessory configuration

Features

- Access via the Web or Cloud
- Real time alarms via smartphone or Web
- Supports a large number of input/outputs both and analog digital
- A single controller supports up to 200 2HP heavy duty relays (including Expansion units)
- Smart On/Off/Auto override switches
- 16 independent heat zones
- Precision fogger and evaporative cooling system
- Failsafe emergency relay
- SD card and ARM CPU
- Mullanguage support
- Supports Munters Drive

PLATINUM TOUCH 30 CONTROLLER



The Platinum Touch, Rotem's most advanced climate control unit, provides swine farmers with vastly expanded capabilities. Featuring all the functionality of the Platinum Pro Controllers, the controller's new screen provides an intuitive, easy-to-use interface that brings all the advantages of touch screens to your farm.

Benefits

- User friendly large screen is easy to use & simplifies configuration, control, & monitoring your farm
- Modular architecture enables a high level of flexibility in system design
- Improved software capabilities support an unlimited number of devices and scales
- Programing accessories from the Platinum Touch simplifies accessory configuration

Features

- All functions are fully accessible from the touch screen
- Access via the Web or Cloud
- Real time alarms via smartphone or Web
- Supports a large number of devices via analog inputs and outputs, and digital inputs
- A single controller supports up to 200 2HP heavy duty relays (including Expansion units)
- Smart On/Off/Auto override switches
- 16 independent heat zones
- Precision fogger and evaporative cooling system
- Failsafe emergency relay
- SD card and ARM CPU
- Multilanguage support
- Supports Munters Drive

SUPER GUARD & PIGUARD PLUS CONTROLLER SYSTEM



- Easy to use and simplifies configuration, control, & monitoring your farm
- Compatible with Farm Premium family legacy software programs
- Modular architecture enables a high level of flexibility in system design
- Expansion boxes support input/output devices reducing the need for central controllers.
- Improved software capabilities support an unlimited number of devices, including scales, meters, digital thermostats & more.
- Extended longevity of hardware components
- Minimal internal heat improves durability in hot climates
- Reduced electrical noise levels improve signal quality
- SD cards enable simple saving & loading of settings

AC 2000 3G CONTROLLER



AC-2000 3G, Rotem's latest addition to its lines of industry leading environmental controllers, provides a feature-rich yet cost-effective control solution for swine farmers. Featuring an advanced hardware and software package, the AC-2000 3G en

Benefits

- LCD graphic display enables simplified navigation between menu items
- Fuel saving features reduce operating costs
- Precision Ventilation maintains optimal environmental conditions
- All-in-one controller maximizes profits by managing and coordinating all devices and functions
- Real-time alarms inform the grower if anything goes wrong
- Remote control enables long distance management
- Extensive memory and SD card enable storing huge volumes of detailed data and log histories and simple controller upgrades.

Features

- Graphic display
- Convenient user controls
- High performance measurement and control processes
- SD card enabling simplified software updates and profiles
- Support for:
 - CO2 control
 - various ventilation modes
 - multiple exhaust, tunnel, stir, and other fans
 - multiple heating methods
 - various types of curtains/inlets/dampers
 - extended lighting, feeding and watering functionalities
 - scale functions
 - extended cooling and fogging functionalities
 - flexible sensor assignment
 - 20 relays (28 when used in conjunction with an REB-8)
 - extended data collection capabilities
 - multiple languages

SMART SERIES CONTROLLER



Rotem's SMART Controllers provide the Swine industries with a cost-effective climate control solution that is easy to install, simple to program, and built to work in the rigorous conditions found in swine stables.

Benefits

- Cost effective technology provides high ROI
- Automatic shift from minimum ventilation to tunnel ventilation ensures high air quality at any temperature
- User friendly software and flexible settings enable adjusting the SMART to specific local conditions
- Supported by Rotem PC communication software, enabling remote access and ability to supervise 24/7
- SMART models vary in their number of relays and options, enabling you to find the model that meets your specific requirements

Features

- Automatic control of ventilation, cooling, and heating
- Support for:
 - Temperature and humidity sensors
 - Water and feed meters
 - Potentiometer feedback
 - Wind speed and direction sensor for natural ventilation
 - Digital inputs
 - Analog 0-10 VDC outputs
 - TRIAC for variable speed fans
 - History data on PC
 - Data plug for easy transfer of settings
 - Multiple language packages

ROTEMNET WEB COMMUNICATION SOFTWARE



- Complete control over your farm via a mobile phone, tablet, or PC
- Consistent look & feel with other Munters applications, including the PC & Tablet View & Platinum Touch
- Single user can control multiple farms
- Overview of your farms' activities
- User customized dashboard
- Easy comparison of the houses' main performance parameters

COMMUNICATOR 2.0



- Enables complete web access to controllers from any device with access to the Cloud
- Multiple communication pathways: Built-in internet and telephone connectivity, optional cellular connectivity
- Programmable alarms
- Alarm Messages via SMS, line & internet push notification.
- Battery backup

COMM-BOX



- Enables complete web access to controllers from any device with access to the Cloud
- Multiple communication pathways: Built-in internet and telephone connectivity, optional cellular connectivity
- Can be installed as an add-on to the Communicator

COMMUNICATOR



- An alarm and communication center used by farmers to monitor and control their Munters controllers and accessories
- Alarms and data in real time enable optimal management of your controllers, 24/7
- Remote controller configuration enables centralized management of all farms from one computer
- Text messages ringtones ensure that you don't miss an alarm
- Status reports provide critical information on house functions and animal statistics
- Battery backup

RLINK ONE WIRELESS COMMUNICATION



- Provides wireless communication between a controller network and a communication system
- Supports loopback signal transmission, enabling you to test antennas and locations before installing controllers or other communication units
- Adjustable power levels minimize signal interference from adjoining networks
- Improved user interface and multiple LEDs simplify troubleshooting in every aspect of signal transmission
- Multiple communication pathways: Built-in internet and telephone connectivity along with optional cellular connectivity
- Provides an effective alternative for situations a communication cable infrastructure is not feasible
- Multiple new features ensure RF signal quality, enable long distance transmission, and greatly simplify installation and setup

RSW-2 SILO FEED WEIGHING SYSTEM



- A silo weighing control system that enables farmers to accurately control feed deliveries and feed inventory
- Programs for breeders, broilers, pullets, and pigs
- Automatic activation of delivery augers, feeders, lights, and alarms reduces your work load
- Automatic registration of feed deliveries, including quantity, date, and time
- Up to 10 feeding cycles and 10 lighting cycles per day
- Separate programs for male and female breeders and skip-a-day function
- Control of up to 2 feeding augers, 16 feeding lines, 12 load cells, and measurement of feed and water consumption
- LCD display, multiple operating modes and PC communication for Windows

SILO LOAD CELLS FEED WEIGHING ACCESSORIES



- Used to weigh silo cells
- Used in conjunction with the Farm Silo Weight or Farm Premium Controllers
- Complete and accurate data regarding feed contained within the silo
- Farm Silo Load Cells high quality ensures that it provides accurate data even under rigorous field conditions, such as high heat or humidity
- Rust-proof, even in wet environments

RDT-5 DIGITAL THERMOSTAT



- A cost effective backup controller that operates during a primary controller failure or during extreme temperatures
- Ensures animal survival in cases of extreme temperatures or power disruptions.
- No software required to run the Farm Back Up, ensuring service even in the event of a controller failure
- Monitors and controls important data while operating heaters or fans in the event of a failure

RBU-27 SE BACK UP SYSTEM



- 27 heavy duty relays
- Up to five backup stages
- Four times delays
- Five backup stages (each powered by its own circuit breaker):
- Two heating stages
- Three cooling stages
- Front panel LED indicators
- Ensures animal survival in cases of extreme temperatures or power disruptions.
- No software required to run the RBU-27, ensuring service even in the event of a controller failure.
- Unique design provides a greater control in choosing the ventilation method, testing equipment, and emergency climate control.

RPS-5 STATIC PRESSURE SYSTEM



- Microprocessor based controller
- State of the art pressure sensor
- Static pressure measured in inch/column water, Pascal or mbar
- Outside temperature and Winter/Summer pressure setting
- Manual over-rides
- High & low static pressure alarm
- Inerasable memory
- Time delay to avoid over reaction on windy days
- Adjustable inlets opening / closing step times
- Easy installation and operation
- Interlock for fans and curtains



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.

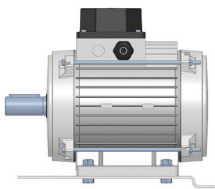
Recently Munters has designed and patented a unique EC motor, designed for working in conjunction with cone fan, able to offer an unbelievable level of efficiency and airflow.

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 galvanised 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. Most of the models of fans allows speed control obtained either by inverter (VFD) or autotransformer. 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.

MUNTERS DRIVE



Ventilation inefficiencies are mainly related to 3 major causes: the types of motors used as the design of AC motor has physical limitations; the belt drive systems as the friction on the transmission components energy causes an energy loss and a high level of maintenance; the fixed single revolution speed and consequent fixed capacity, which prevents energy savings when ventilation demand is low. Munters Drive avoids these limitations through 3 innovations: a new motor architecture which shows a more efficient performance; the direct drive which makes the motor turning at the same revolution speed as the optimum propeller speed, eliminating friction losses and the need of maintenance; and the variable speed which reduces the motor speed and fan capacity when ventilation demand is low, generating significant energy savings. By combining the energy efficiency benefits that a Munters Drive offers over a conventional fan, users have been able to reduce annual ventilation costs by up to 40% and additionally saved a similar amount in maintenance cost reduction.

LOADING VOLUMES



Munters has developed an optimized loading displacement for combined loads on 20ft, 40ft and 40ft high cube containers and standard trailers*, which allows to balance volume and weight for delivery of complete system of fans, pad, accessories and heaters. Fans can be delivered assembled, in partially assembled form and fully disassembled depending on the number of products involved. The cooling pad and other accessories can be stored as well inside the container/trailer in order to completely fill the empty space fore and optimize the transport costs. Therefore, all the loading volumes shown in the catalogue are just a few of the many loading options available. Assembly manuals are provided for easy mounting of the received products.

* 13.60x2.40x2.60m

DEALER PORTAL

www.aghorttools.com



Munters Dealer Portal is the exclusive resource of information and documentation dedicated to our Dealers. On this new spot you will find product information, manuals and other technical documents, case studies, marketing material, training presentations and soon a calculation tool and price catalogues.



For more information: info.aghort@munters.com



www.munters.com

[Australia](#) Phone + 61 2 8843 1594, agh.info@munters.com.au, [Brazil](#) Phone +55 41 3317 5050, contato@munters.com, [Canada](#) Phone +1 517 676 7070, aghort.info@munters.com, [China](#) Phone +86 10 8048 3493, marketing@munters.cn, [Denmark](#) Phone +45 98 623 311, aghort@munters.dk, [Germany](#) Phone +49 2558 9392-0, info.reventa@munters.de, [Israel](#) Phone +97 2 39206200, info@munters.co.il, [Italy](#) Phone +39 183 5211, info@munters.it, [Japan](#) Phone +81 3 5970 0021, mkk@munters.jp, [Korea](#) Phone +82 2 7618 701, munters@munters.co.kr, [Mexico](#) Phone +52 818 2625 400, dhinfo@munters.com, [South Africa and Sub-Sahara Countries](#) Phone +27 11 997 2000, info@munters.co.za, [Spain](#) Phone +39 0183 5211 info@munters.it, [Sweden](#) Phone +45 98 623 311, aghort@munters.dk, [Thailand](#) Phone +66 2 6422 670, info@munters.co.th, [Turkey](#) +90 216 594 18 65 info@muntersform.com, [USA](#) Phone +1 517 676 7070, aghort.info@munters.com