

CMP

ANIMAL WELFARE

Riding the wind of innovation

Follow us on



Our values

CM
ANIMAL

COMPETENCE

From our vision to improve animal welfare, we attract the best talents and professionals of the sector to offer the highest level of consultation for our Customers. CMP consulting is based on solid knowledge, resulting from thousands of projects in Italy and in over 50 countries in the world: **always exceeding the expectations of our Customers.**

CUSTOMER NEEDS

We give our customers a tailor-made plan and proposal based on the data taken from their project to deliver a precise and verifiable solution. This is supported by our wealth of previous studies and intensive research from around the world. We always demonstrate a relentless **commitment** to ensure that our customers receive the **full benefit** of the latest **technologies**.



Throughout our management of all phases of production and logistics we ensure utmost efficiency, restraining the use of plastic and cardboard packaging.

SOCIAL SUSTAINABILITY

CMP has always been the pioneer of producing energy-saving motors for livestock ventilation. The path we have created is often taken for reference. Our products are still unmatched in the ratio of performance and consumption. The first to bet on products with the aim of optimizing water consumption in barns where we have marked the way. **Our focus is on solutions, which guarantee high performance, without the waste of energy.**

MODERNITY

Innovation is imbedded in the DNA of CMP. From our products, that represent the markets benchmark, followed by our constant evolution and always ensuring that no detail escapes being overlooked, to improve our performance and reliability. Resulting in products made to stand the test of time and to exceed our customer's expectations and requirements. Our products appearance is not to be easily mistaken for competitors, as our ZEFIRO range represents the pinnacle of the market technology. **Attention to details is our distinguishing factor.**

Contact us



Via Amerigo Vespucci, 22
Calvisano (BS), Italy



+39 030 968 6428



info@cmp-impianti.com



www.cmp-impianti.com



@CMPAnimalwelfare



@cmp_animalwelfare



@cmp-animal-welfare

**Find out more about our industrial
ventilation division**



www.cmp-ventilation.com

Index

1. Advantages of ventilation	6
2. Application areas	
1. Free housing	8
2. Compost - permanent bedding	10
3. Cooling yard	12
4. Waiting area & milking parlor	14
5. Beef cattle	16
6. Buffalo, equine and ovine	18
7. Swine	20
3. Products and solutions	
1. Ventilation technologies	22
1.1 - Zefiro fans	22
1.2 - VS fans	23
1.3 - Vertigo fans	24
1.4 - VSL Vertigo fans	25
1.5 - VSL fans	26
1.6 - Mistral fans	27
1.7 - Specifications and advantages	28
1.8 - Control units	30
1.9 - Farm remote management	31
1.10 - Traditional cooling systems	32
1.11 - VCU cooling systems	34
2. Lighting technologies	36
3. Hydraulic technologies	38
3.1 - Heater B52 LC	40
4. Why CMP is the best option	
1. International experience	42
2. Qualified service	44

1

Advantages of ventilation

Ventilation is an essential element to guarantee the correct level of **health** in the animals environment and to ensure optimum animal **welfare**, which provides optimum reproductive abilities. The best forced ventilation is the type provided by ceiling fans, which generate a gentle airflow decreasing the temperature perceived during summer months and redistributing warm air to the ground during winter. A good ventilation is necessary to ensure health and animal welfare, specifically to:

- move away dangerous gases produced by metabolic processes and manure fermentation;
- remove dust and microbes;
- remove excessive water vapor;
- provide the necessary oxygen supply;
- dissipate heat reducing the consumption of drinking water.

CMP fans are designed to circulate air effectively, providing the most efficient air recirculation method.



CMP
ANIMAL WELFARE

2

Application areas

1. Free housing





CMP
ANIMAL WELFARE

2

Application areas

2. Compost - permanent bedding





CMP
ANIMAL WELFARE

2

Application areas

3. Cooling yard





CMP
ANIMAL WELFARE

2

Application areas

4. Waiting area & milking parlor





CMP
ANIMAL WELFARE

2

Application areas

5. Beef cattle





CMP
ANIMAL WELFARE

2

Application areas

6. Buffalo, equine and ovine



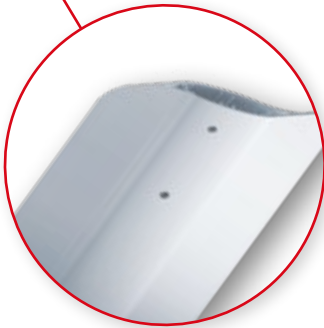


CMP
ANIMAL WELFARE

2

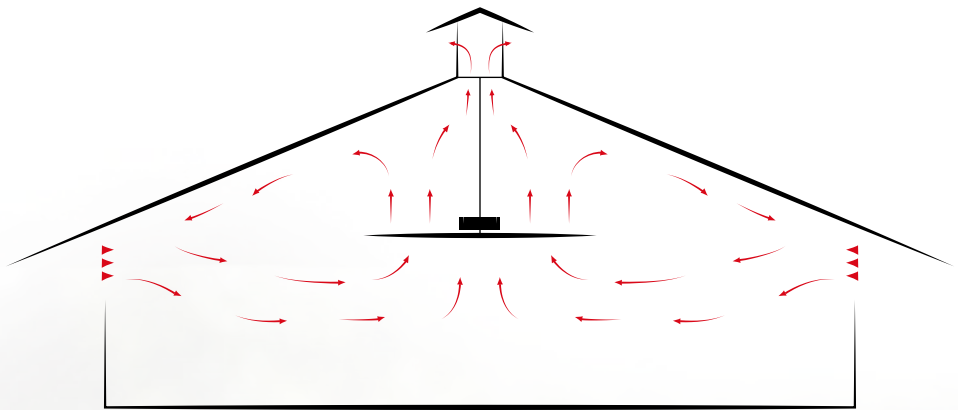
Application areas

7. Swine



Reverso fans by CMP are now available in stainless steel. Stainless steel is the only material able to resist the highly corroding setting, of swine farms, therefore CMP stainless steel fans improve swine welfare where heat stress is an issue.

The example here below clarifies the dynamic of the airflow, which occurs in a swine farm. Without such ventilation and airflow the growth and performance of the animal is negatively affected.

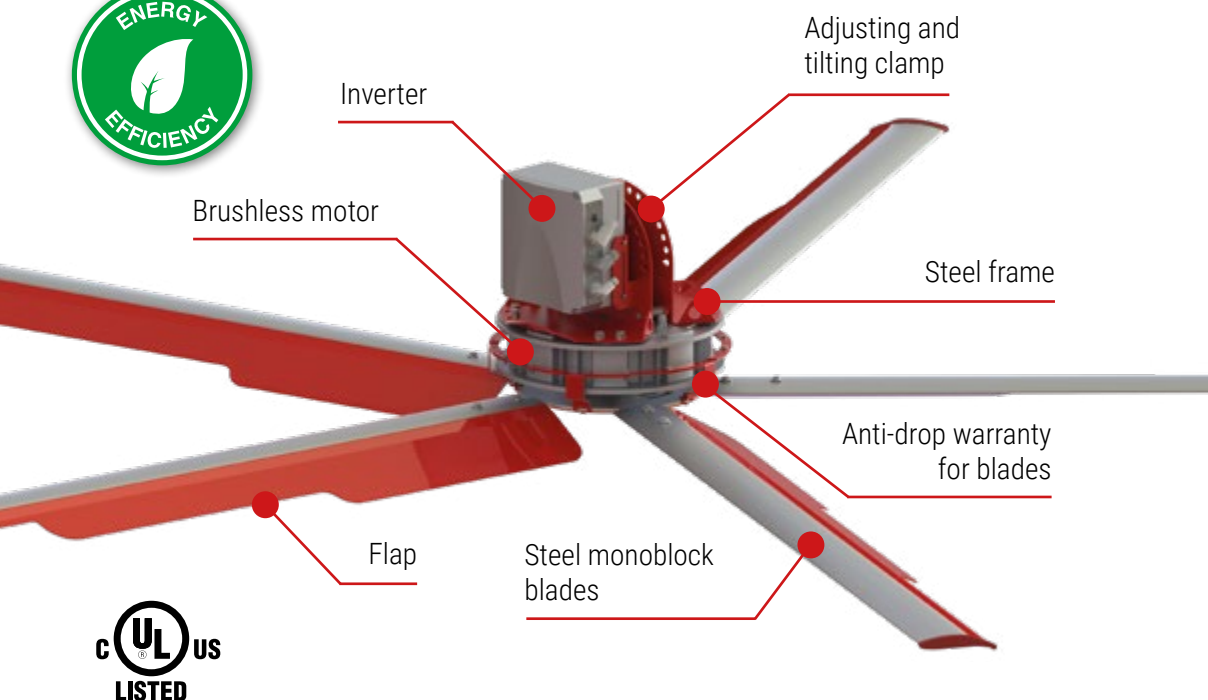


3

Products and solutions

1. Ventilation Technologies

1.1 - Zefiro fans



From Ø 4m to 7m

ZEFIRO fans are the flagship of CMP. The main characteristic of this product is the brushless motor, which employs an on-board mechanism to regulate the speed automatically. This innovation deletes cogs present in the traditional asynchronous motors, reducing the presence of mechanical parts subject to wear. This innovation is reflected in a minor request of maintenance, more efficiency and less energy consumption.



Protection level IP65



Permanent magnets



Plug&Play



High Volume Low Speed

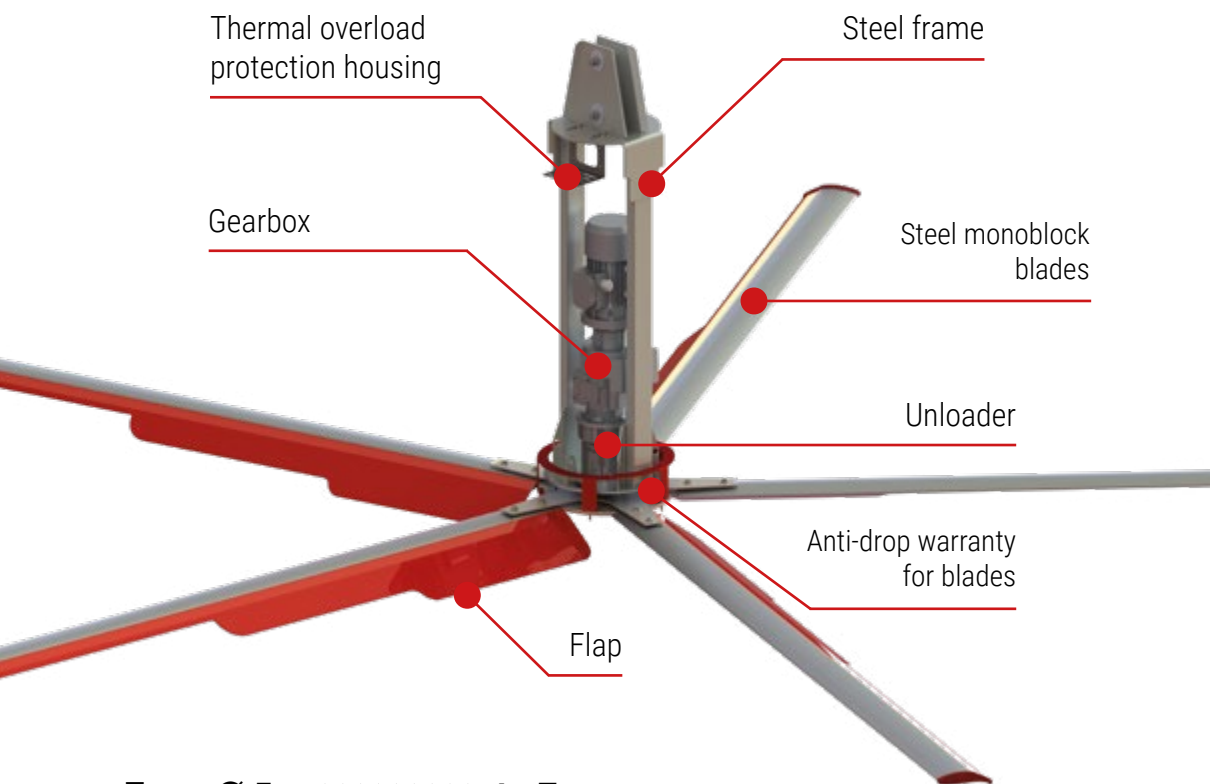


Reverso

Products and solutions

1. Ventilation Technologies

1.2 - VS fans



From Ø 5m to 7m

VS is an axial fan with gearmotor, extraordinarily functional and cost convenient. The particular feature of this series of product is the **axial unloader**, a patented component added to the mechanical part of the fans in order to eliminate the friction generated by the weight of the impeller and blades and to increase their robustness. VS fans are a traditional alternative to the ZEFIRO line and well suited for heavy-duty work situations.



Gearmotor



Axial unloader



Protection
level IP55



Reverso



High Volume
Low Speed

3

Products and solutions

1. Ventilation Technologies

1.3 - Vertigo fans



Steel
monoblock blades

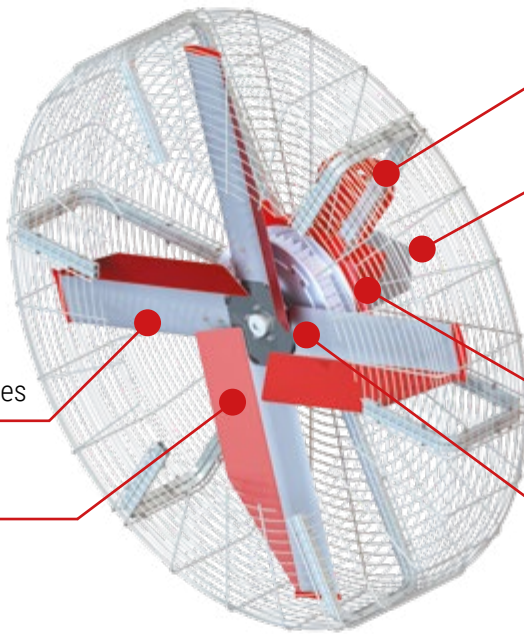
Flap

Steel frame

Inverter

Brushless motor

Anti-drop warranty
for blades



From Ø 0.8m to 3m

VERTIGO is the evolution of the Zefiro line, which brings the benefits of ventilation in all the buildings where, for reasons of reduced height, traditional horizontal fans cannot be installed. Its special shape makes it flexible, allowing it to work horizontally or to be tilted as required, from 0° to 90°. Vertigo is perfect in all situations, but it is in waiting areas that it expresses its utmost potential: since the animals here are concentrated in a tight space, heat and stress reach very high levels, therefore it is essential to provide a suitable solution to ensure the animals welfare.

IP65

Protection
level IP65



Brushless
motor

HVHS

High Volume
High Speed

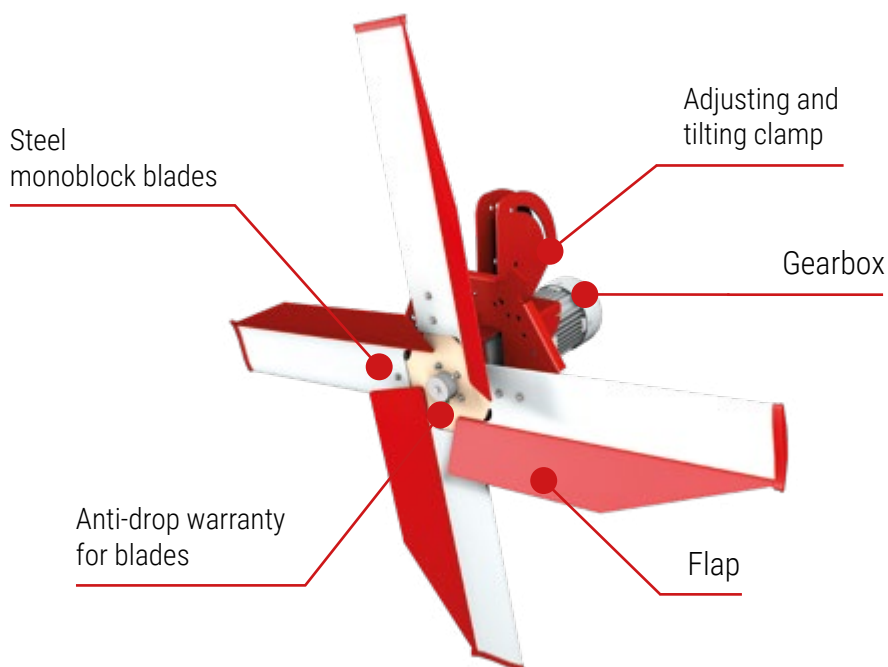


Reverso

Products and solutions

1. Ventilation Technologies

1.4 - VSL Vertigo fans



From Ø 0.8m to 2.5m

VSL VERTIGO is an axial fan with gearmotor, extraordinarily functional and cost convenient; it is an alternative to the traditional Vertigo and it is particularly suitable for hard work conditions. The mounting steel frame with blocking position mechanism provides a 90° rotation: the aim is to optimize the airflow even in the most complicated situations.



Gearbox



Protection
level IP55



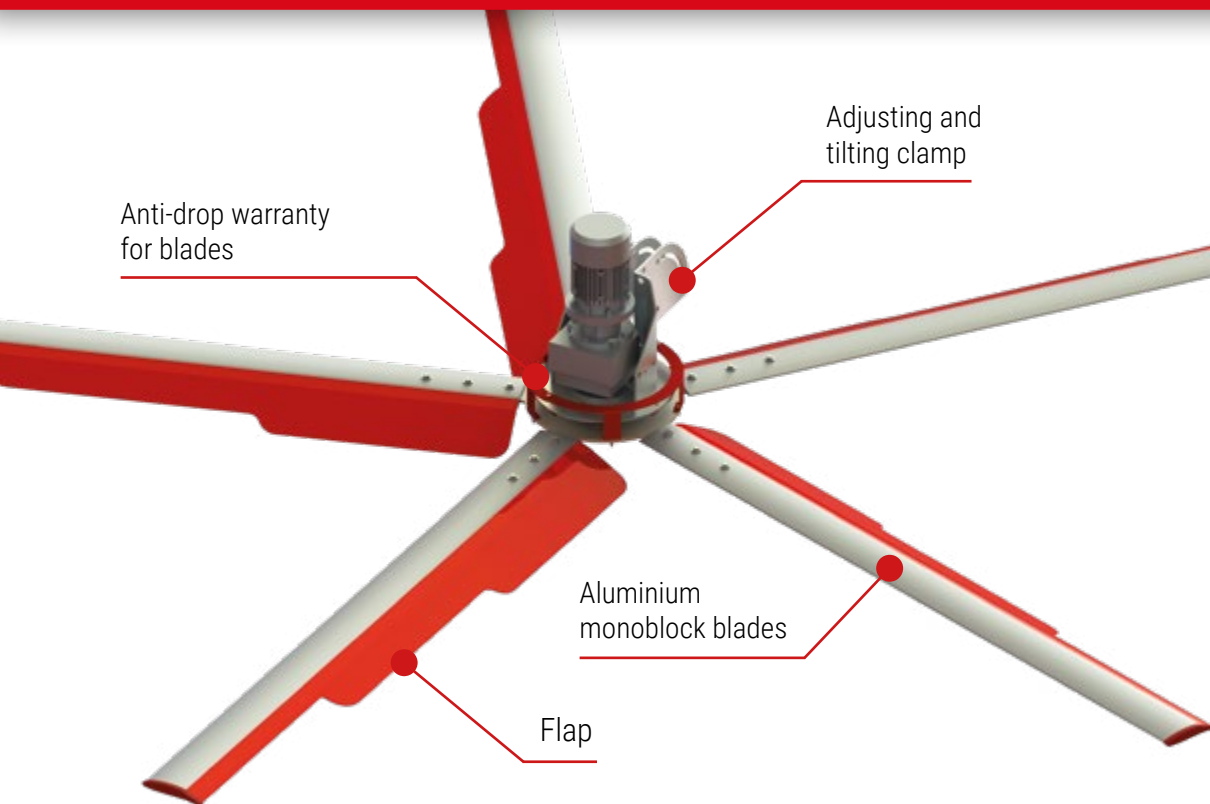
High Volume
High Speed

3

Products and solutions

1. Ventilation Technologies

1.5 - VSL fans



From Ø 3m to 5m

VSL are axial fans with gear motor, extraordinarily functional and at the same time low-cost product. The particular feature of this series of products is the extreme versatility and compactness due to a lightened frame and a compact gear motor. VSL fans are an alternative to Zefiro and are suitable for hard work conditions.



Gearmotor



Protection
level IP55



Reverso

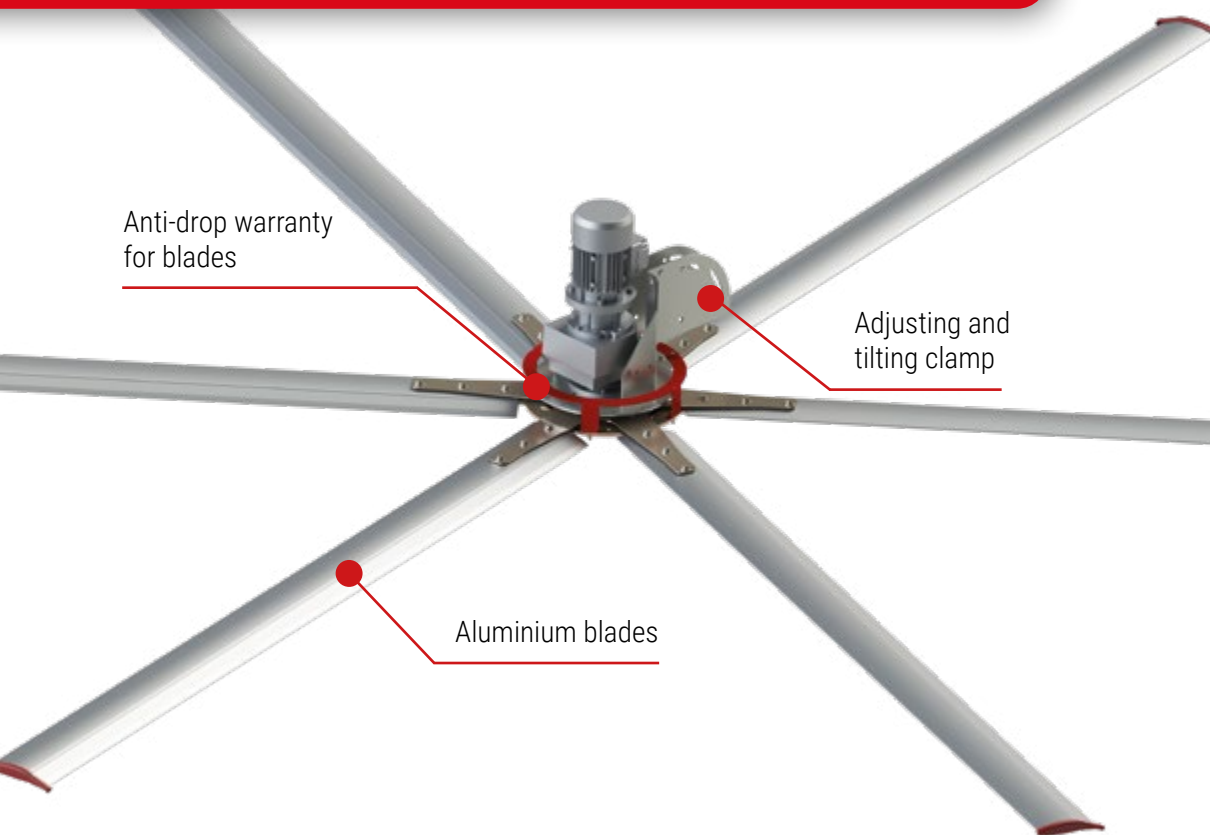


High Volume
Low Speed

Products and solutions

1. Ventilation Technologies

1.6 - Mistral fans



From Ø 3m to 7m

MISTRAL is an axial fan with gearmotor by CMP. Its reliability, together with cost convenience, are the features that make it the easiest option to approach CMP.



Gearmotor



Protection
level IP55



Reverso



High Volume
Low Speed

3

Products and solutions

1. Ventilation Technologies

1.7 - Specifications and advantages



Brushless motor

CMP experience allowed to design and produce the most efficient engine with permanent magnets, which is characterized by excellent performances and consumptions. Brushless motor by CMP is unique and it is built exclusively: it stands out also for its silence and absence of required maintenance.



Aluminum blades with customizable profile

CMP realizes monoblock blades in its own facility, selecting between several airfoils the most suitable option according to the circumstance; the aim is to generate the highest air volume at the maximum velocity.



Inverter on-board

The regulator of the inverter on-board is now more compact and lighter, with entry tension 1/3 phase 50/60 Hz. Connection plug/play guarantees a fast and safe installation.

Main features:

- optical signalling of faults;
- pre-wired whips;
- analog connection;
- vertical heat sink;
- thermal protection;
- short circuit protection;
- high temperature protection.



Compact gearbox

CMP produces coaxial gears with integrated asynchronous engine with high efficiency. CMP ensure low maintenance costs and a long-term service.

3

Products and solutions

1. Ventilation Technologies

1.8 - Control units

In order to manage **ventilation** and **cooling** systems, CMP developed a wide range of control units, managed by intuitive **remote panels**. For a complete system it is also possible to install an anemometer sensor to protect it against wind gusts and a probe, which is able to measure **THI** index, the combined effect of **temperature** and **humidity**.

Potentiometer



MCU



Clima control
2 zones



THI system



Advanced control
for waiting area



Products and solutions

1. Ventilation Technologies

1.9 - Farm remote management



Touch screen panel 10"



Remote control for ventilation systems



Remote control for lighting systems



Management through cloud

Touch screen panel is the most recent control unit developed by CMP, which allows management of the: ventilation systems, cooling systems and lighting systems for a full control of the system. CMP touch screen panel provides the Customer with a customizable and upgradeable software according to necessities; management parameters are configurable according to preferences.

- Management of photoperiod lighting systems with max 16 zones;
- Management of cooling systems with sprinklers combined with ventilation;
- Timed activation.



3

Products and solutions

1. Ventilation Technologies

1.10 - Traditional cooling systems



On the feeding line and waiting area, ventilation must be supported by cooling systems, which improve effects and benefits. **Wetting** combined with **ventilation** maximizes heat dissipation by animals through default cycles alternating one minute of wetting and six minutes of ventilation: there is a requirement to



provide a complete wetting of the cow's mantle until water reaches the skin. The installation of special sensors, designed by CMP, activates the wetting system only when there are animals in the area, facilitating water consumption efficiency.

3

Products and solutions

1. Ventilation Technologies

1.11 - VCU cooling systems



- Modular customizable radar system;
- Optical status indication;
- Portions of 6m;
- Motorized valves;
- Pre-arranged drain;
- Protection with stainless steel casing;
- 90° and 180° nozzles;
- Electrical connections protected from impacts with stainless steel pipes.



CMP
ANIMAL WELFARE



The presence of sensors allows to activate sprinklers only when there are animals, avoiding waste of water.

3

Products and solutions

2. Lighting Technologies



Dimmable lighting

Photoperiod automatic management

- LED fixture with symmetrical optic in painted die-cast aluminum with optical diffuser;
- Designed to maximize efficiency and light distribution;
- Protection level IP65;
- Red night light perceivable by the human eye, but not by the cow;
- Total control system, dimmer with managed light sensor.

What is photoperiod?

It's a sequence of daylight alternating with hours of darkness which, properly balanced, increases milk production and cow comfort. Over its lifespan, the animal is exposed to well-defined cycles of light and darkness. It is necessary to alternate light and darkness correctly, in order to avoid getting the opposite effect.



Running

Photoperiod system works thanks to a continuous calculation of the intensity of natural light: the control unit obtains an average value and, according to it, automatically varies the luminous intensity of the installed lighting fixtures. The floor measurement must return a brightness of 150-200 LUX.

Young animals

Extended periods of lighting increases the onset of puberty and heat;

Dairy cows

Milk yield may reach its highest level when there are light periods of 16 hours a day;

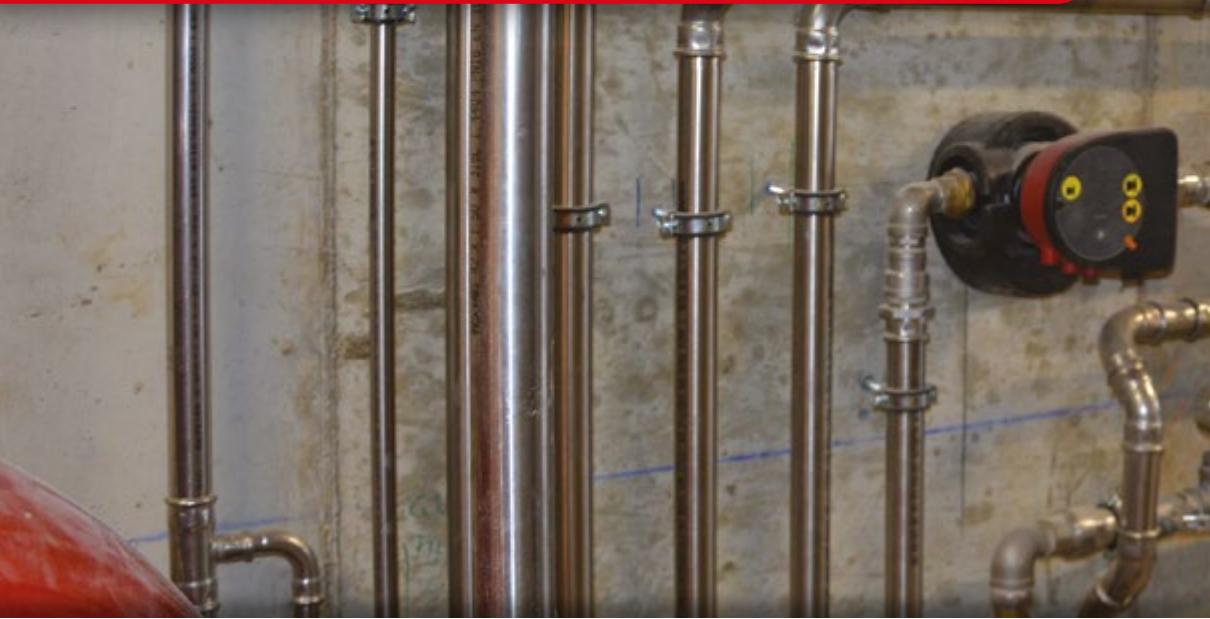
Dry cows

At this stage, photoperiod is not recommended, in order to boost the regeneration of the mammary glands.

3

Products and solutions

3. Hydraulic Technologies



Realization of hydraulic systems for livestock breeding

The system includes:

- general water supply systems;
- animal drinking water system with particular attention to water heating;
- hot water system for the cleaning of the necessary technological equipment (milk fridge, milking parlor, milking robot);
- complete heating station for the various production processes management;
- hygienic and sanitary facilities of the possible additional rooms (changing rooms, bathrooms, offices);



- heating of drinking water in existing farms;
- exploitation of existing energy sources;
- use of heat generated by biogas plants;
- pressurization groups.

CMP makes available to each customer a series of customizations both from the point of view of functionality and aesthetics to satisfy even the most complex needs. Based on specific needs, our technical department will tailor the system in such a way as to ensure the best result on farm.

3

Products and solutions

3. Hydraulic Technologies

3.1 - Heater B52 LC



Water is an important element, equal to the other essential components of the food ration. Milk is composed by 87% of water: this could be enough to understand how much a proper water intake, both from a quality and a quantity point of view, is essential! During summer season the increase of water intake is a natural consequence of warm and humid climate, but what happens during cold periods? As for humans, even animals don't like to drink water at low temperature. However, keeping an adequate supply of water is fundamental to ensure the optimal level of production. **Heater B52 LC** is the final solution to preventing the issue of freezing pipes and drinking troughs, by guaranteeing a constant temperature of 18°C.

Features



High yield



Reduced dimensions



No more pipes freezing



Safety valve



Stop in case of lack of water



Precise control of temperature



Constant temperature

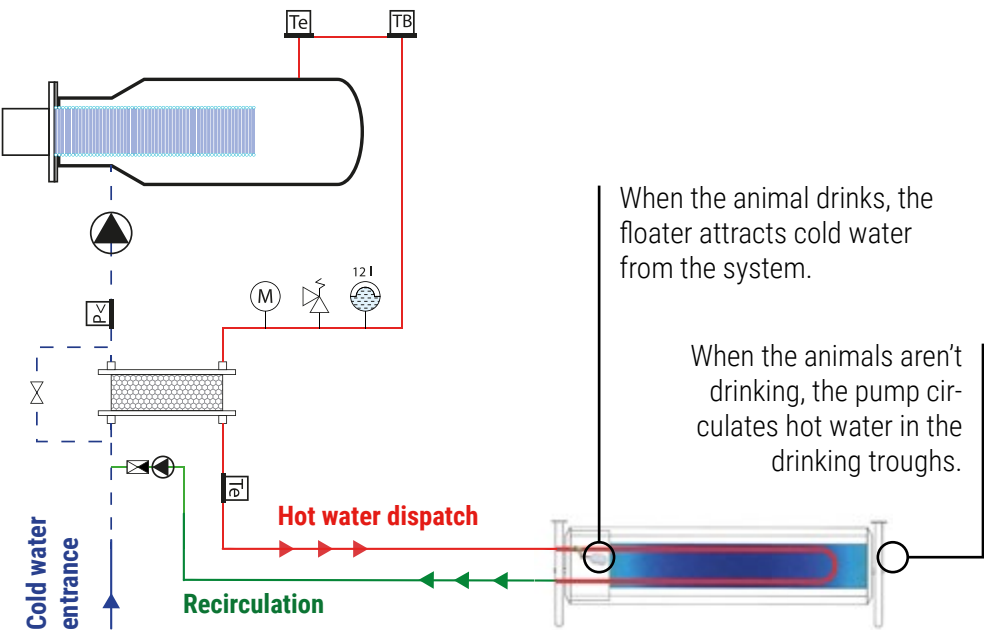


Separation of circuits barn/production

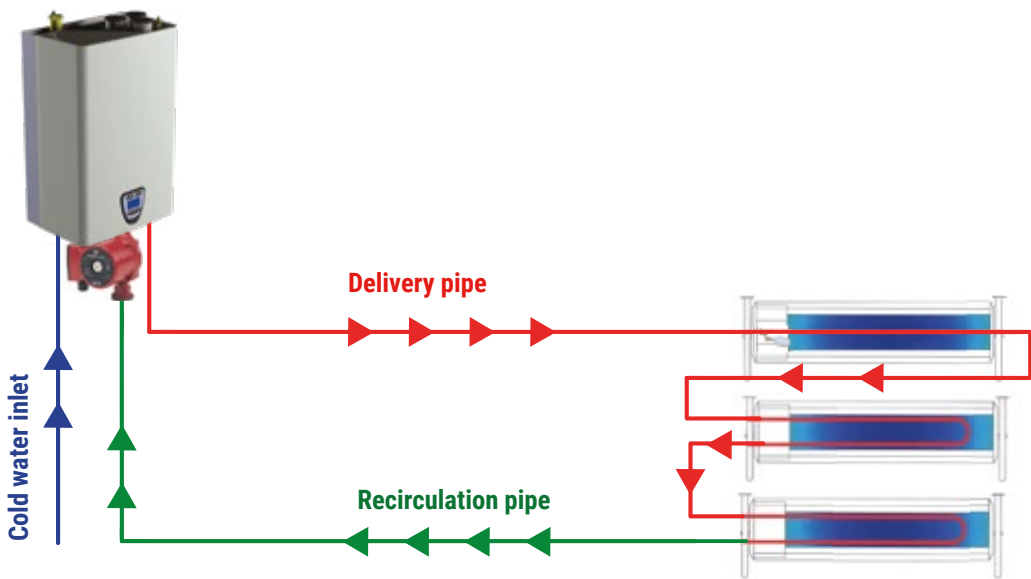


Four versions of power

Hydraulic circuit



Multiple connection



4

Why CMP is the best option

1. International experience

Numbers talk for us.

More than **100.000** fans sold in more than **50 Countries** around the world.

CMP designs and produces systems made to last during the time: the modern breeder knows well, that in this kind of things, there's something more than the price to look at:

CMP.

Our style testifies who we are today and who we want to be in the future.

Europe



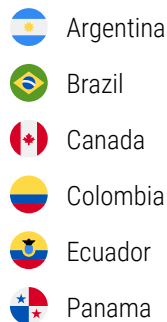
Asia



Africa



America



Oceania



4

Why CMP is the best option

2. Qualified service



CMP owns several means and machineries to satisfy all the requests of breeders, **24/7, 365 days/year.**



We are always on the farmers' side, providing our **professionalism, commitment** and **passion**.

Riding the wind of innovation

For further information visit our website

www.cmp-impianti.com



CMP
ANIMAL WELFARE