



Case study: AgHort
Dairy Farm
Atyrau, Kazakhstan

Quick facts

- Improved animal behaviour
- Improved milk production
- Reduced replacement rate
- Quick payback on investment
- Improved conception rate

Dairy farm in Kazakhstan

Milking cows are very sensitive to heat stress and typically suffer from reduced milk production and conception rates during hot periods.

As Atyrau in Kazakhstan has a hot climate with temperatures up to 45°C during summer, in order to decrease the temperature inside the farm, Munters supplied a complete climate control package, which includes: Euroemme®

MFS52 circulation fans and TU600 chimney fans, providing the most efficient air circulation movement for animal housing in all seasons; a complete Fogging System, decreasing temperature inside the farm up to 10°C; Comfort Curtains, ensuring the animals a comfort climate zone by providing an excellent combination of ventilation control and light requirements; CCU111 and TED 2.0 climate

controllers for fully automated control of climate equipment in the house.

Munters supplied its equipments to "Novaya Industrialisazija" through the Russian subsidiary of the Danish company S.A. Christensen & Co, one of the leading companies in Europe in the production of milking equipment and milking parlours, founded in 1938, and exporting to more than 65 countries around the world.

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 **Munters**



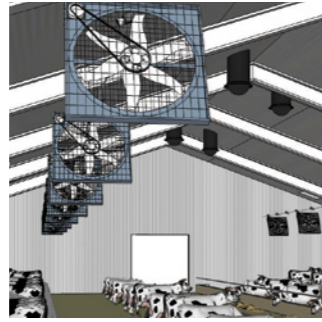
Dairy Farm - Kazakhstan -



Air Circulation



VENTILATION FOR HOT PERIODS



MFS52 3D model.

16 Euroemme® MFS52 circulation fans guarantee a powerful air stream over the animals during hot periods, improving animals wellness and milk production.



Air Extraction

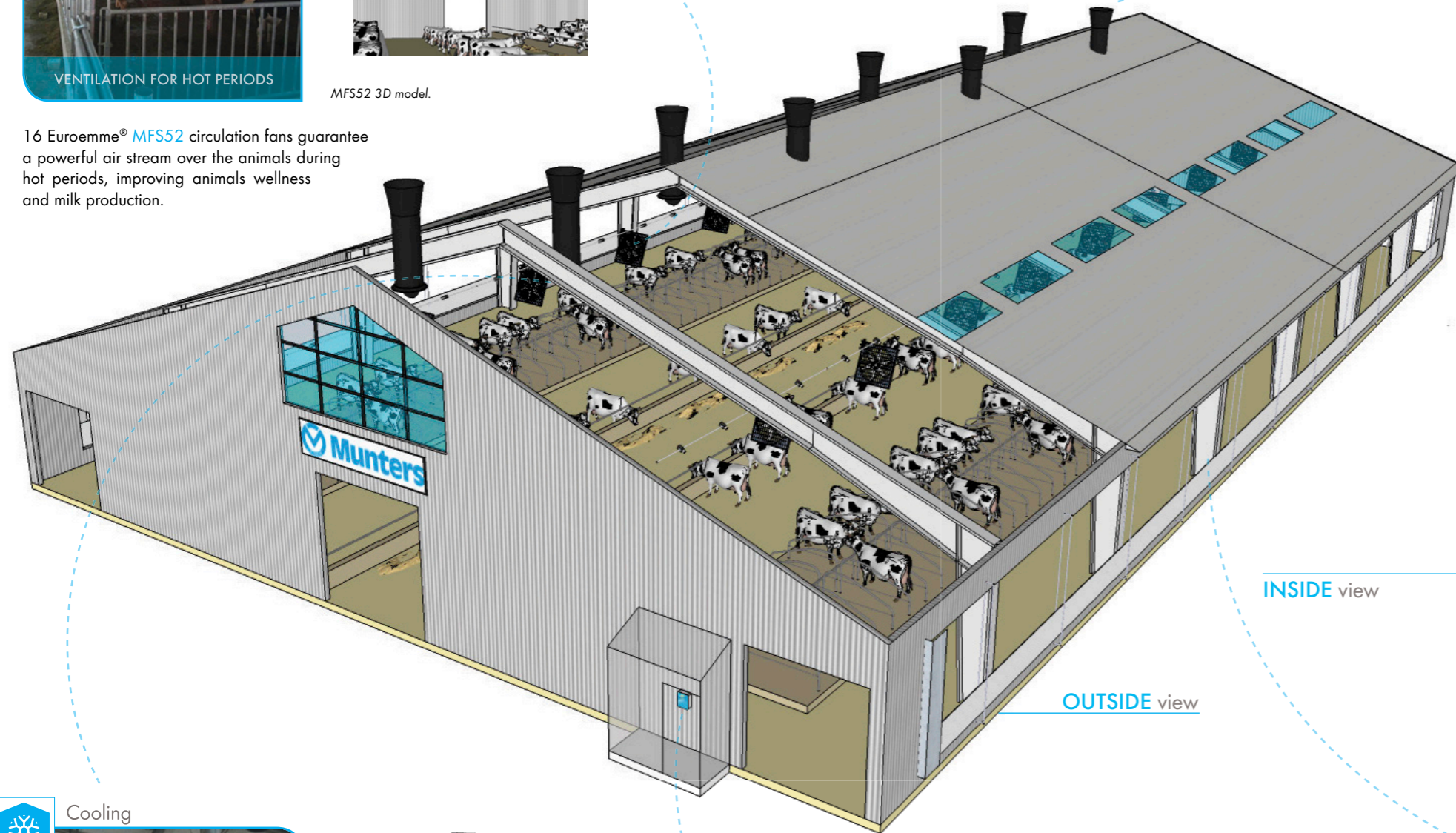


VENTILATION FOR COLD PERIODS



TU600 3D model.

26 TU600 chimney fans guarantee constant oxygen exchanges during cold climate condition, reducing animals stress and sudden variations of environment temperature.



INSIDE view

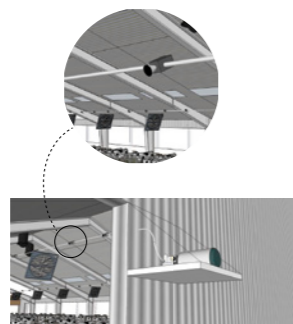
OUTSIDE view



Cooling



COOLING FOR HOT PERIODS



Fogging System 3D model.

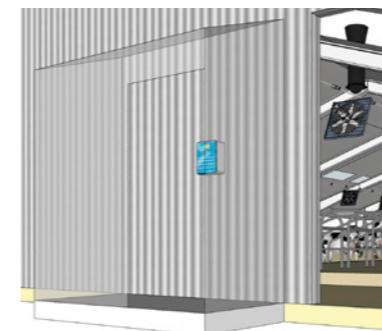
2 Fogging lines are installed near the MFS circulation fans at 3m from the ground and running throughout the entire length of the farm. Each fogging line supplies the misting nozzles with water which is then sprayed in very fine particles at approximately 5m distance in both direction.



Control



ALL SEASON



CCU111 3D model.

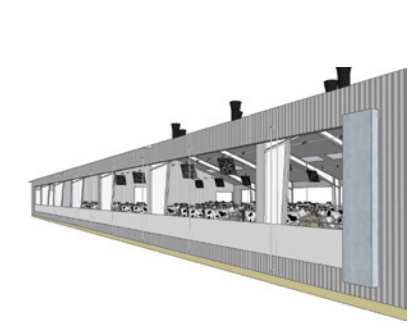
CCU111 is ideally suited to control functions such as step ventilation; heating; cooling or side curtains. Analogue inputs (air temperature and humidity or potentiometer feedbacks) and digital inputs (water consumption or wind speed) can be accommodated. Control outputs are either relays or 0-10V signal. An animal's target temperature curve can be programmed while a large on board memory keeps track of actual readings.



Curtain



ALL SEASON



Comfort Curtain 3D model.

The 430m installed Comfort Curtain allows proper cross ventilation and also ventilation driven by the vertical chimney effect. It serves as climate shield against draft, rain, snow and hail to ensure that the animals are in the comfort climate zone. The curtain has a high versatility without being vulnerable to distribution of bedding materials such as straw and sand.

Munters solutions



Outside view



Inside view

Munters develops and manufactures energy efficient climate control systems for the growth and development of agriculture and horticulture applications. By providing the perfect climate, our solutions enable farms to operate and produce under optimum conditions. The innovative product range includes ventilation, cooling, heating and cutting-edge control systems. Munters always strives to be the premium partner for our customers.

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