



# Big Dutchman®



## **Rain Maker**

the ideal cooling system for poultry houses  
in regions with hot and dry summers

# Rain Maker – simple and highly effective cooling system

**RainMaker** is a pad cooling system, developed by Big Dutchman, which features an innovative frame system. RainMaker is characterised by its minimum installation requirements and is designed for simple supervision and maintenance.

The cooling system works on the basis of evaporation and is therefore mainly used in climate regions with hot and dry summers. The higher the temperatures

and the lower the relative humidity, the higher the resulting cooling effect.

The pads that are used consist of a special cellulose material with a large specific surface to ensure a high cooling performance. A chemical impregnation protects the pads from atmospheric influence. Alternatively, there are also plastic pads available which are built for a longer service life.



RainMaker with plastic pads



Double RainMaker for high cage houses

## The innovative frame system with top profile and pad retainer

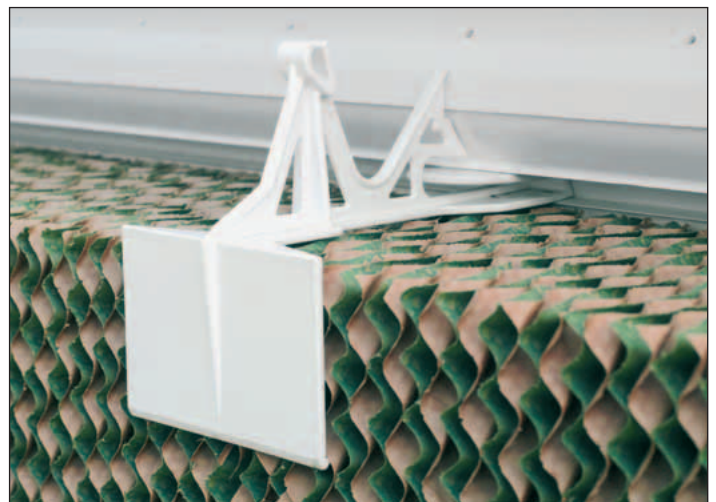
Core part of the new frame system is the top profile. The top profile is the complete upper part of the frame, made from one piece.

- designed as an open system, that means the water supply is always visible, there is no closed space available to serve as nesting place for rodents or other species;
- the perforated pipe which is integrated into the top profile distributes water down the pads and is visible to the operator so that any dirt and obstructions in the holes can immediately be recognized;

- a special deflector ensures that water is evenly spread along the pads to ensure an ideal wetting of the pads;
- the deflector is connected to the top profile by means of a plastic hinge which can easily be folded up for maintenance purposes with no tools or any parts to remove;
- the top profile is simply snapped into the pre-mounted wall brackets to allow for a simple assembly;
- the pads can be released without much effort, thus they can easily be replaced.



Top profile with perforated pipe and deflector for an even distribution of water along the pads



Practical snap-retainers allow for a simple and quick replacement of the pads

## Water reservoir, centrifugal pump and supply unit with float valve

Excess water is collected at the bottom part of the frame – the so called water reservoir – and is then returned to the cycle. The special profile is designed to provide more stability. The reservoir is designed large enough so that no additional water tank is needed. The covering, which supports the pads, is simply mounted onto the water reservoir and can easily be removed for maintenance purposes. The special perforation ensures a back flow of excess water and, at the same time, prevents an invasion of rodents.

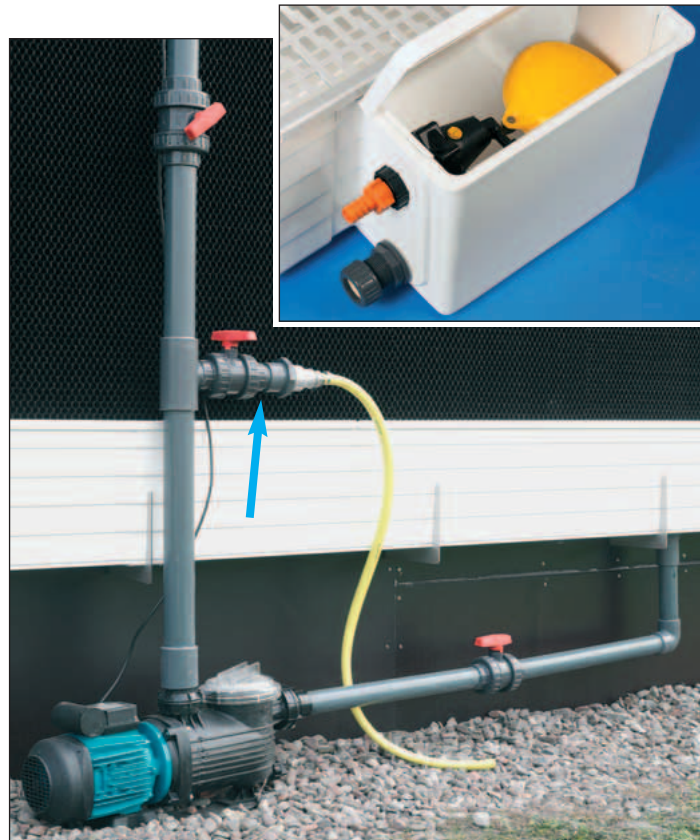
When RainMaker is in operation, some water evaporates thus the mineral content in the circulating water increa-

ses. In order to prevent deposits on the pads, a part of the water has to be permanently drained over a bleed off. The amount of drain water depends on the water quality and on the amount of evaporated water. As a rule of thumb: 10 % of the water throughput (in case of good quality).

As an optional feature we offer an extended centre coupler. It facilitates maintenance as it provides easier access to the float valve.



Water reservoir for up to 48 litres per running metre water capacity

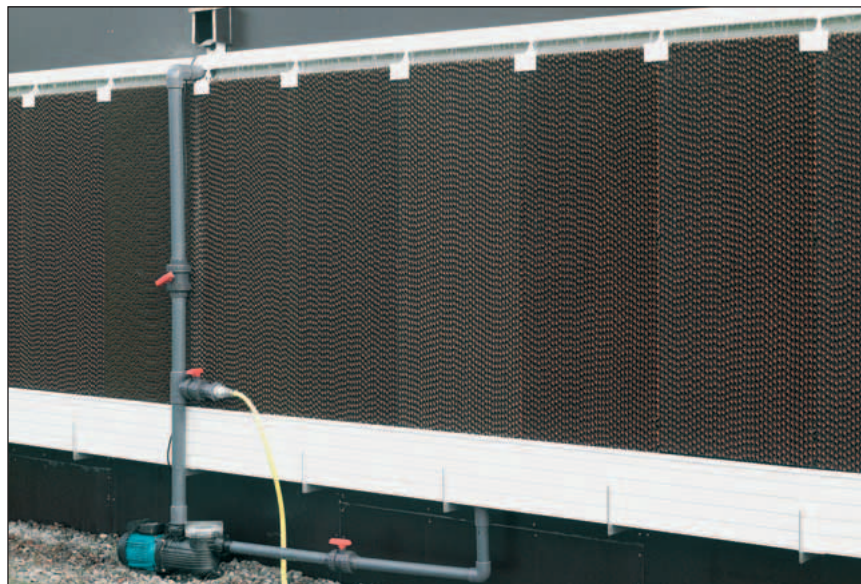


Centrifugal pump incl. filter and bleed-off

## Mode of operation

The pads – made of cellulose or plastic – are soaked from above. Thanks to negative pressure ventilation inside the house, the warm outside air is sucked into the house through the moist pads. This way the air takes up humidity and cools down. Excess water is collected in the water reservoir and returned to the cycle. Together with a certain amount of fresh water it is pumped up by means of the centrifugal pump in order to wet the pads again.

Combined with tunnel ventilation, it is possible to achieve a very efficient cooling effect, especially in large house compartments.



## Corridor for higher air entrance speed

If **RainMaker** is to be used on hot summer days only, or a second ventilation system is available for the cold season (Combi-Tunnel-Ventilation), we recommend extending the building with a corridor or "dog-house". This way it is possible to keep the air inlets in the wall of the building much smaller. This has the following advantages:

- the required air speed can be precisely adjusted which leads to a better distribution of air in the house;

- cheaper insulation for the winter time;
- the house can be sealed airtight by means of a roller curtain in the dog-house where it is protected from dust and other environmental influences;
- altogether providing good protection against wind, light and rain;
- service and maintenance works may be carried out regardless of whether the house is occupied or not, no water enters the house.



Corridor for more precise air supply



Tunnel inlet with roller curtain

## Technical specifications

- the frame system is well-suited for pads with a thickness of 10 cm (4 ") and 15 cm (6 ")
- the two-piece side parts are made of stainless steel and can be steplessly adjusted for pad heights of 1.20 to 2.0 m
- the water reservoir is available in two sizes: 3 m or 10 feet
- there are 2 circular pumps incl. filter available:
  - for pads of up to 12 m length (code no. 62-00-3522)
  - for pads of 12 to max. 30 m length (code no. 62-00-3523)



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