

CELdek® 5090-15 Evaporative Cooling Pad

5090-15



CELdek® 5090-15 evaporative cooling pad is used in systems where high efficiency cooling is required. It can be used for many different cooling purposes but is particularly suitable for evaporative coolers for commercial and domestic use.

The Green stripe pad consists of specially impregnated and corrugated cellulose paper sheets with different flute angles, one steep (60 deg) and one flat (30 deg) that have been bonded together. This unique design yields a cooling pad with a high evaporation efficiency while still operating with a very low pressure drop. In addition scaling is kept to a minimum and no water carry-over occurs due to the fact that the water is directed to the air inlet side of the pad. This is where most of the evaporation takes place.

The impregnation procedure for the cellulose paper ensures a strong self supporting product, with high absorbance, which is protected against decomposition and rotting and therefore increasing longevity.

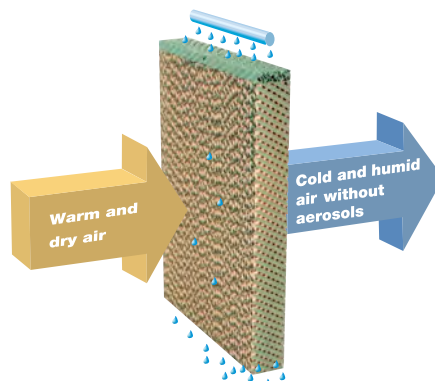
The distribution pad constitutes a vital part of a complete system and should always be ordered in combination with CELdek evaporative cooling pads. Placed on top of the cooling pad it ensures a uniform supply of the water to the cooling pad and minimises the risk of dry spots.

The evaporative cooling technology

Water is circulated through a pump station and supplied to the top of the cooling pad via a distribution manifold. A distribution pad on the top of the cooling pad ensures an even water distribution. The water flows down the corrugated surface of the CELdek evaporative cooling pad. Part of the water is evaporated by the warm and dry air that passes through the pad. The rest of the water assists in washing the pad, and is drained back to the pump station through a gutter system.

The heat that is needed for the evaporation is taken from the air itself.

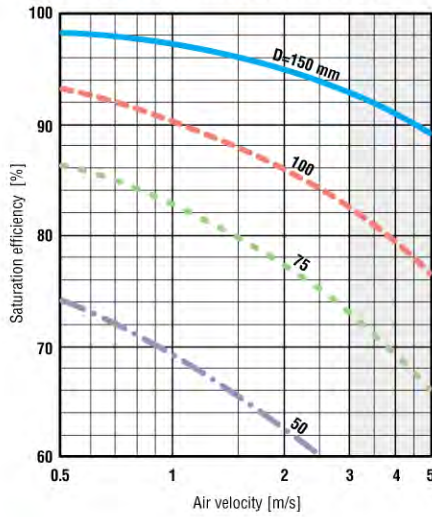
The air that leaves the pad is therefore cooled and humidified simultaneously without any external energy supply for the evaporation process. This is nature's own cooling process.



Equipment

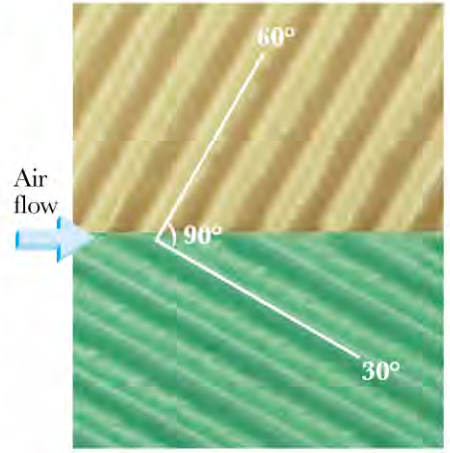
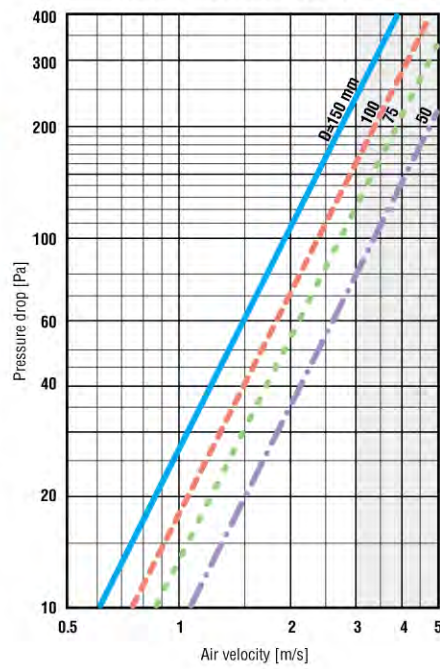
- High evaporation efficiency
- Superb wetting properties
- Low pressure drop when wet, leading to lower operating costs
- No water carry-over
- Low scaling
- Self cleaning
- Strong and self supporting
- Long life time
- Low running costs
- Quick and easy to install
- Environmentally friendly
- Consistent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

Saturation efficiency CELdek 5090-15



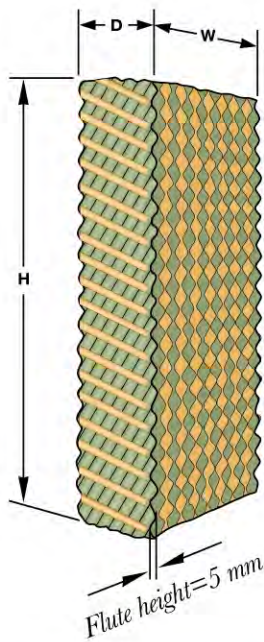
— D=150 mm ··· D=75 mm Risk of droplet (grey field)
 - - - D=100 mm - · - D=50 mm

Pressure drop CELdek 5090-15



Performance curves

The pressure drop diagram shows the pressure-drop over the pad in the wet condition. With the pad in a dry condition the pressure-drop is <10% less. Therefore there is minimal loss of air-flow when the pad is wet compared to when it is dry.



**Order information
Evaporative cooling pads**

CELdek 5090-15-X-X-X

Height, mm _____
 Width, mm _____
 Depth, mm _____

e.g., CELdek 5090-15-1800-600-100

Standard heights,
 H = 1000, 1500, 1800 and 2000 mm
 Standard width,
 W = 600 mm
 Standard depths,
 D = 50, 75, 100 and 150 mm

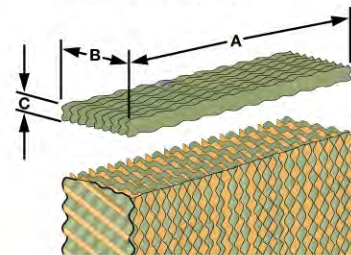
**Order information
Water distribution pads**

CELdek 70120-0-X-X-X

Width, mm _____
 Depth, mm _____
 Thickness, mm _____

e.g., CELdek 70120-0-600-100-30

Standard width,
 A = 600 mm
 Standard depths,
 B = 50, 75, 100 and 150 mm
 Standard thickness,
 C = 30 and 50 mm



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