PAD-COOLING

THE MOST FAVOURABLE COOLING SYSTEM FOR YOUR PIG FARM

COOLING DOWN PIG FARMS IS NECESSARY

In both fattening pig farms and sow farms, it is necessary that the temperature in the departments does not become too high during the summer period. This applies in particular to heavier fattening pigs, sows in group housing, lactating sows and sows in the mating shed. Research has shown that the optimal house temperature for (medium) heavy fattening pigs is lower than 19 degrees Celsius, the temperature should in any case not exceed 24 degrees. If the temperature in the department rises in the summer to, for example, 30 degrees Celsius, an average fattening pig consumes 0.4 kg less food per day, which reduces growth ny approx. 150 grams per day. The optimal temperature for a lactating sow is below 21 degrees Celsius. A higher temperature can have negative consequences for the next litter. Cooling the mating shed is also very important. Without proper cooling, pregnancy rates drop visibly after the summer. According to EU guidelines, the prevention of heat stress is therefore mandatory when building a new farm.

There are various techniques for cooling down a farm. One of these techniques is the evaporation of water in the incoming air. On the next pages you are able to learn more about this technique.

GENUGTEN AGRI

GENUGTEN AGRI IS A SPECIALIZED COMPANY THAT DELIVERS SEVERAL VERSIONS OF OUR PAD-COOLING SYSTEM

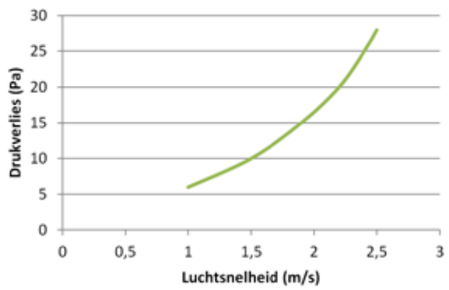
PAD-COOLING

Genugten Agri Projects B.V. supplies completely plastic Coolpads, which have a very long lifespan and are easy to clean. The cool pads are available in various seizes with widths of 3, 6, 12, 18, 21 en 24 meter and in heights of 100, 150 or 200 cm. The capacity varies from 16,200 to 259,200 m3/hour with a low air resistance of 10 Pa. The water is pumped from a float tank above the cool pads via an integrated energy-efficient pump. Because the air is sucked through the cool-pads, the water evaporates and the air is cooled. The evaporated water is automatically replenished by the float tank. An extra advantage of the pad-cooling is that air is being decelarated in which case weather influences are limited. The investment costs of a pad-cooling system are limited.

A price indication for such a system without the installation costs costs is ca. € 1,50 for each fattening pig in a farm with a minimum of 3.000 fattening pigs or € 4,50 per sow place in a sow farm of 600 sows.

COOLING CAPACITY AND NEGATIVE PRESSURE

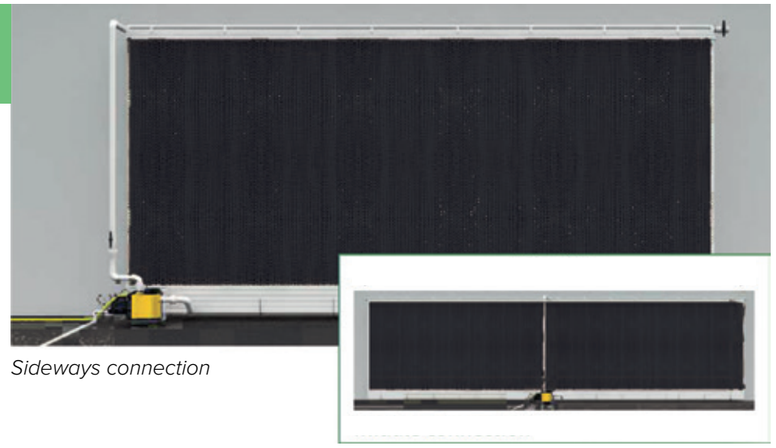
Negative pressure



Relative air humidity

Temperatuur			30%		40%		50%		60%	
30 °C	°C	ΔT	21,4	8,8	23,2	7,3	24,4	5,9	25,4	4,6
	%	ΔΦ	71,3	40,2	76,6	35,7	79,6	30,4	86,4	26,2
35 °C	°C	ΔT	25,8	9,2	27,5	7,6	28,8	6,1	30,2	4,8
	%	ΔΦ	67,4	36,8	73,1	33	78,8	28,5	85,2	24,9
40 °C	°C	ΔT	29	11,1	31	9,7	32,7	7,2	34,4	5,6
	%	ΔΦ	70,1	40,3	76,1	37,6	82,4	31,9	86,8	26,5
50 °C	°C	ΔT	36,9	13,1	39,5	10,7	41,6	8,5	43,3	6,6
	%	ΔΦ	70,9	40,6	76,3	36,5	81,6	32,1	85,3	27,1

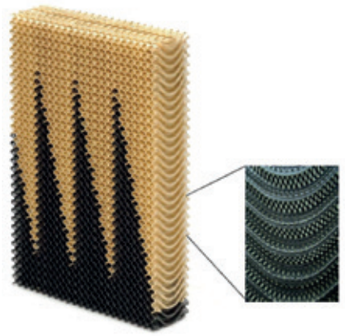
The cooling effect of this system is based on the evaporation of water. Because the water evaporates, the air humidity in the stable increases. The cooling effect of the Pad-cooling system is less effective when the weather is humid.



Sideways connection

PAD MATERIAL

Standard measurements:	Height: 200cm, 150cm, 100cm Width: 60cm Thickness: 60cm
Material (UV stabilized):	Polypropylene
Colour:	Black
Weight:	11 kg/m^2
Temperature range:	-20 °C to + 80 °C
Surface area:	270 m^2 / m^3



Saves up to 30% on energy costs of fans.

PRICES

Below you can find the prices for the Pad-Cooling systeem. These prices only represent the cost of the materials of a complete system. Installation costs are not included.

Ventilation capacity and prices of the Pad-Cooling with a negative pressure of 10 Pa

Height of the cool pad (cm)	100		150		200	
Total height of the system (cm)	138		188		238	
Width (cm)	**m^3/u**	**Price**	**m^3/u**	**Price**	**m^3/u**	**Price**
300	16.200	€ 1.287,50	24.300	€ 1.395,65	32.400	€ 1.503,80
600	32.400	€ 1.503,80	48.600	€ 1.720,10	64.800	€ 1.936,40
900	48.600	€ 1.903,44	72.900	€ 2.227,89	97.200	€ 2.552,34
1200	64.800	€ 2.307,20	98.200	€ 2.739,80	129.600	€ 3.172,40
1500	81.000	€ 2.706,84	121.500	€ 3.247,59	162.000	€ 3.788,34
1800	97.200	€ 3.100,30	145.800	€ 3.749,20	194.400	€ 4.398,10
2100	113.400	€ 3.499,94	170.100	€ 4.256,99	226.800	€ 5.014,04
2400	129.600	€ 3.893,40	194.400	€ 4.758,60	259.200	€ 5.623,80

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GENUGTEN AGRI PROJECTS BV Jane Addamsstraat 4 • 5491 DE,
Sint-Oedenrode • The Netherlands **T** 0413 483 100

WWW.GENUGTEN-AGRI.COM