P. LEMMENS
AIR MOVEMENT
Company

NATURE CREATES AIR,
WE MAKE THE BEST USE OF IT.

series
AE

Also available with TACtech™

CENTRIFUGAL water unit heaters

“EXCEPTIONAL AIR THROW,

The Centrifugal unit heater is a superior technology: more comfort and indeed much more economical in use.

Forget about air mixing rate: with AE, high induction is “natural”!

What you aim for when designing a heating system is to obtain a desired constant temperature everywhere in the room with a maximum of comfort. With classical “propeller” heaters the way to achieve this is by specifying a high mixing rate, installing many units, and adding expensive “high induction” grilles. All this is not necessary with a centrifugal Unit Heater. You only need to make your selection on required capacity.

The result is a globally cheaper and technically superior solution, much quieter and provisding more comfort. The centrifugal fan, by construction, is designed to create “long” air throws, much longer than commonly used axial fans. As a consequence the amount of air ‘moved’ by one AE is 25 times its nominal air volume.

The centrifugal UH are characterized by their low noise level and low airflow/capacity ratio. This is the reason why the noise level of the centrifugal UH is clearly lower than the traditional propeller UH at equivalent heating capacity.
To obtain the quietest operation PLC advises to oversize the heating capacity of the unit and to reduce the airflow with a speed controller, thus reducing rotation speed (< 600 rpm). Use the PLC AE software to simulate your situation.

The biggest European Porsche show-room has chosen the AE.

Application

The AEs are specifically designed for ‘big surface’ applications where more comfort is appreciated. Its exceptional air throw allows installation cost savings considering the shape of the surface covered by one unit. It is often the case that units only have to be installed on one side of the room. This results in substantial savings in piping, connection and installation costs. AEs are particularly well designed for **sports halls, factories, car garages, show rooms, department stores, hobby stores, and have even been successfully installed in offices.**

The AE can be installed with ducting since it has an available pressure of + 100 Pa, and is available in a standard “2 rows” version, or in a “4 rows” low water temperature version.

The advantages of the TAC technology can also be applied to AE’s and is particularly interesting when many units are installed, since they can be PC monitored and generate substantial energy savings.

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EXCEPTIONAL AIR MIX”

Applied well, it is incomparably quiet.
Neat finish, sober design.
TAC Technology available.

High end construction

The structure is made out of omega shaped anodized aluminum profiles connected by reinforced polypropylene corner pieces. The panels are double skin steel plates insulated with fireproofed treated EPS. The outside panels are pre-painted gray RAL 9002 color covered with a plastic protection (to be removed after installation). The side panels are removable to enable easy access to the components for maintenance.

The standard units are equipped with double deflection outlet grilles to allow control of the airflow orientation and maximal air throw, with an inlet grille and M8 suspension nuts. The heat exchangers are aluminum finned and copper tube manufactured using state of the art technology and standards. All the standard AE’s are equipped with 900 RPM direct drive PLC centrifugal fans.

DP

Options available

The AEs can be delivered equipped with the following options:

- A **4-way plenum (PL4)**: designed for vertical installation the 4-way plenum is placed at the head of the unit in vertical position allowing air diffusion in the 4 directions.
- A **2-way mixing box (MK2)** This device will allow to mix fresh air with recycled air in desired proportion using the synchronized dampers. A servomotor (SMO) can be mounted if desired.
- A **fan speed control (ES)**: to optimize your installation we advise to design it from the start with a speed control. Indeed this option allows to control capacity and noise level parameters “at the tip your finger” and this for a very low price.
- A **suspension kit (ST)**: this support system is designed to “carry” the AE as opposed to the DP, which suspends the unit.
- A **filter kit (G3)**: a G3 class filter is inserted in a perforated steel frame of the same RAL9002 color as the unit.
- TAC technology fans can be applied allowing the numerous advantages of this technology.

PL4

MK2

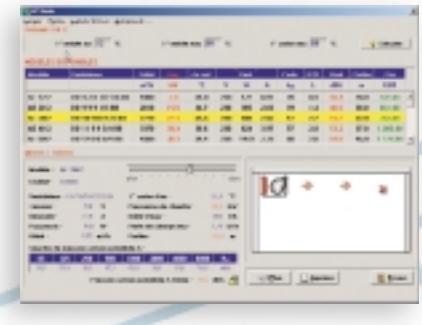
ES

TAC technology

Company

Selection program

We have written specific software to allow the simulation of each AE in the application's actual conditions and to make quotations. This software runs under Windows ®, and calculates thermal capacities, airflows using speed controls, resulting air throws and noise levels, and prints a fully detailed technical data sheet of the selection with drawing and dimensions and options available.
Do not hesitate to ask your local distributor to establish a selection sheet of a unit as applied in the actual working conditions. This software is free of charge and can be downloaded from our website www.lemmens.com.



AS series

The AS series unit heaters is designed for industrial heating applications. Its noise level is even lower than the AE's because it is constructed with an inlet and outlet plenum. The other technical performances are similar to the AE's.

Nominal technical information

Model	Airflow	Capacity	Fan data (2)				Weight	H_2O	Sound level	Throw
	m^3/h	KW (1)	V	W	A	ES	Kg	l (3)	dBA (4)	m (5)
AE 2 rows										
AE 12-2	1000	9,4	230	172	0,9	ESB3	28	0,9	43,4	28
AE 20-2	2010	18,7	230	365	2,0	ESB3	39	1,4	46,5	30
AE 30-2	2770	26,6	230	509	2,5	ESB3	47	2,2	51,2	32
AE 40-2	3370	36,3	230	824	3,9	ESB5	57	2,8	53,2	37
AE 60-2	4990	45,5	230	1479	7,7	ESB10	68	2,8	64,8	45
AE 80-2	6430	66,9	230	1504	7,5	ESB10	110	4,3	61,4	38
AE 100-2	9220	82,2	230	2735	14,5	ESB20	135	4,3	65,7	46
AE 4 rows: low water temperature applications										
AE 12-4	870	9,3	230	156	0,8	ESB3	30	1,7	41,8	26
AE 20-4	1770	18,6	230	339	1,8	ESB3	41	2,8	47,0	27
AE 30-4	2530	27,9	230	480	2,4	ESB3	49	3,8	47,2	28
AE 40-4	3240	38,1	230	765	3,6	ESB5	60	5,1	48,8	35
AE 60-4	4630	48,4	230	1353	7,1	ESB5	71	5,1	63,6	42
AE 80-4	6100	71,3	230	1442	7,2	ESB10	114	8,0	61,0	36
AE 100-4	8460	88,6	230	2636	14,1	ESB20	139	8,0	63,9	43

Never exceed 60°C as outlet air temperature.
(1): Calorific capacity obtained with 90/70°C water and 12°C air temperature for 2 row AEs, and 70/50°C water and 12°C air temperature for 4 rows AEs.
(2): Nominal values at 230V/50Hz, a speed control will alter this data
(3): Water contents in liters
(4): Sound pressure level obtained at 5 m from the microphone in anechoic environment as ISO2204
(5): Air throws are established for a residual air speed of 0,3m/s.

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