jaga
CLIMATE DESIGNERS

Jaga AVS® unit heater with EC motor

Heat exchanger
The heat exchanger consists of fins of pure aluminium pressed on mechanically extended pure red copper pipes. These pipes are connected to two steel collectors for left same end connection (1" for type 000, 100 and 200 / 11/2" for type 300 and 400).
Air vent 1/8" and drain plug 1/2" are included.
Unit heater is deliverable in five sizes of heat exchangers: with two or three rows of pipes.
Pressure test: 25 bar
Working pressure: 11 bar with a maximum temperature of 130°C
The heat exchanger is not suitable for the use of steam as a heat conductor.

Ventilator motor
The EC motor is an EBM-Papst external motor integrated in one piece with a 1-10 VDC motor and a reduced noise level synthetic HyBlade® ventilator in one piece. Internal thermal contacts are provided to protect the motor: for type 000 and 100 an internal automatic safeguard, for type 200, 300 and 400 an external safeguard should be provided. These contacts can be connected to a Jaga safety switch fixed on the side of the casing. These thermal contacts can also be connected to a speed regulator.
EC motor:
230 V single-phase, 1-10 VDC
Insulation Class B
Degree of protection: IP 54

Casing
The casing is made of 1.25 mm thick galvanised steel plate, installed in such a way that screws and rivets are concealed.
The casing is lacquered in the colour sandblast grey 001. Other colours on demand.
The coating is a lightly structured and scratch resistant epoxy-polyester powder, sprayed electrostatically and baked at a temperature of 200 °C, thickness of +/- 125 µ. UV resistant due to ASTM G53.

Exhaust grille
The horizontally built-in air exhaust grille is made of satin-black coated, slightly coved, aluminium slats.
The unit heater is supplied with exhaust louvres set in Air Venturi position.
With the shape and positioning of the louvres, the adjustable Air Venturi System (AVS®) ensures the direct mixture of the heated air with the ambient air. As a result the space is heated quicker and the warm air is forced downwards instead of remaining at the high level. The modular AVS® version (optional) ensures an improved dispersal of the heated air by continuously moving the exhaust louvres. The louvres are in this case coupled to each other in pairs and operated by a servo motor.
The angle of movement can be set from 0 to 90° in a cycle of approx. 150 seconds

Manufacturer: Jaga
Type: Unit heater

Output in Watts, measured in accordance with EN 442.

Application
The unit heater is used for heating of conference facilities, supermarkets, greenhouses, conservatories, sports halls, factories and warehouses…
With a water system of 75/65/20°C AVS® unit heaters can guarantee a capacity of 8.0 to 78.6 kW. For smaller spaces, offices or shops there is a Mini version of the unit heater with a heating capacity of 4.5 to 9.6 kW.
The unit heater can be used for assembly against a wall, against the ceiling or on a metal truss by using strong brackets.
The unit heater can be used with 100% ambient air, with 100% outside air or with mixed air.

Accessories
- thermostat
- clock thermostat
- control for multiple rooms
- power supply for wall mounting or DIN rail speed regulators: single-phase with 5 speeds, for regulation of one or more unit heaters
- servo motor "on/off" or "modulating"
- switch boxes for servo motors
- thermostat for frost protection
- set of brackets A for mounting, without or with one air inlet option, against a wall / ceiling
- set of brackets B for mounting, with two air inlet options, against a wall / ceiling
- set of brackets for fixing on metal construction
- fixing set A for mounting of 1 air inlet option, to use together with set of brackets A
- fixing set B for mounting of 2 air inlet options, to use together with set of brackets B
- 4-sided AVS® air diffuser for low ceilings: for larger hot air carrying.
  Mounting with quick-acting connections.
- exhaust cone for assembly at a height of over 6 metres.
  Mounting with quick-acting connections.
- exhaust mouth piece to prevent the entry of cold air at outer elements.
  Mounting with quick-acting connections.
- double deflection front grille. Prevents too high temperatures on the opposite wall.
  Mounting with quick-acting connections.
- grille for protection against balls (sports halls).
  Mounting with quick-acting connections.
- filter box for protection against dust, etc. Filter element:
- self-extinguishing according to DIN
  53438-1. Heat resistant to 100°C, (Ashrae 90%), complies the classification G4 according to DIN EN 779.
- mixing and shutter boxes 90° and 180° open/ medium/ clossed, controlled by servo motor 230 V or 24 V
- corner boxes, wall channel boxes, connection boxes and other air inlet options.

How to install
The building services engineer should choose the unit heater(s) taking account of:
- fitting height according to the dimension tables of the unit heater
- a heat output calculation according to the relevant standard
- tables of heat output and dimensions of the unit heater according to EN 442.
- the unit heater will be connected to a two pipe system, with a same end connection. The flow valve always has to be fitted to the top connection.