

te

Air rotation heaters – 2 year parts and labour guarantee.
20 year heat exchanger guarantee



The te range of gas and oil-fired air rotation heaters are specifically designed for the efficient heating of large areas and are especially suitable for open plan warehousing and manufacturing facilities. In utilising high efficiency axial fans to move large volumes of air, these heaters achieve a uniformity in the distribution of heated air that cannot be matched by conventional units that treat low volumes of air at high temperature.



- **Cost efficient large area heating** reduces number of heaters, eliminates the use of destratification fans and reduces installation costs.
- **Even distribution of heated air.** High efficiency axial fans moving large volumes of heated air reduce the effects of stratification.
- **Guarantee.** The T304 stainless steel heat exchanger/combustion chamber is guaranteed for 5 years and further warranted for 15 years on a pro-rata basis. All other parts are covered for 2 years from the date of commissioning.
- **Sizing and scheme design by powrmatic.** Our own in-house design team of engineers will design and size each system to suit individual applications.
- **Weather-proofed unit.** Range extended to include fully weather-proofed versions for external applications.
- **De-stratification units.** Air only circulation units for improved distribution when used in conjunction with heating units.
- **Acoustically lined units.** Units can be acoustically lined to reduce noise levels.



Model te31

Construction

te heaters are built up from a number of modules and will usually comprise one each of a fan module, heat exchanger module and outlet module. Additional extension modules can be used as required to suit individual building heights.

All modules are strongly constructed using powrmatic's proven 'formex' framework fitted with 1.6mm panels and are finished in a hard-wearing epoxy powder coat paint finish.

To reduce start current loads and start-up noise all units are fitted with electrical soft-start modules as standard. An electrically interlocked access door is provided to allow access to fans and motors for servicing purposes.

Extension sections are fitted as required above the heat exchanger module. These extension sections are generally used when the units are installed in racked warehouse type applications.

Heaters are fully assembled and factory tested in modular form prior to despatch, ready for final on-site assembly by powrmatic's team of trained engineers.

Operation

The system of air rotation moves large volumes of air at low velocity and low temperature. The cooler low level air is constantly passed through the heater and discharged at high level, which effectively de-stratifies the building and, in turn, lowers the temperature gradient within the heated area, thus giving an even temperature wall to wall and floor to roof.

The air rotation system is best applied in a continuous 24 hour 7 day operation. During periods when the building is not in use a night set back thermostat can be set to a recommended 8–10°C below the normal day set point. This will maintain the air circulation throughout the building and provide background temperature. When required the building will quickly return to the design temperature.

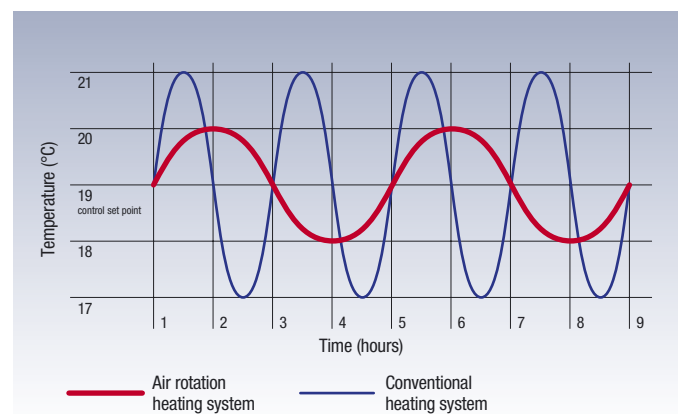
Because the system is in continuous use, no allowances need be supplied for intermittent use and steady state heat losses can be applied for heater sizing.

Significant lower energy usage is achieved by this system despite 24 hour 7 day usage. Savings be enhanced by the use of either modulating or hi-low burners.

Space temperature control

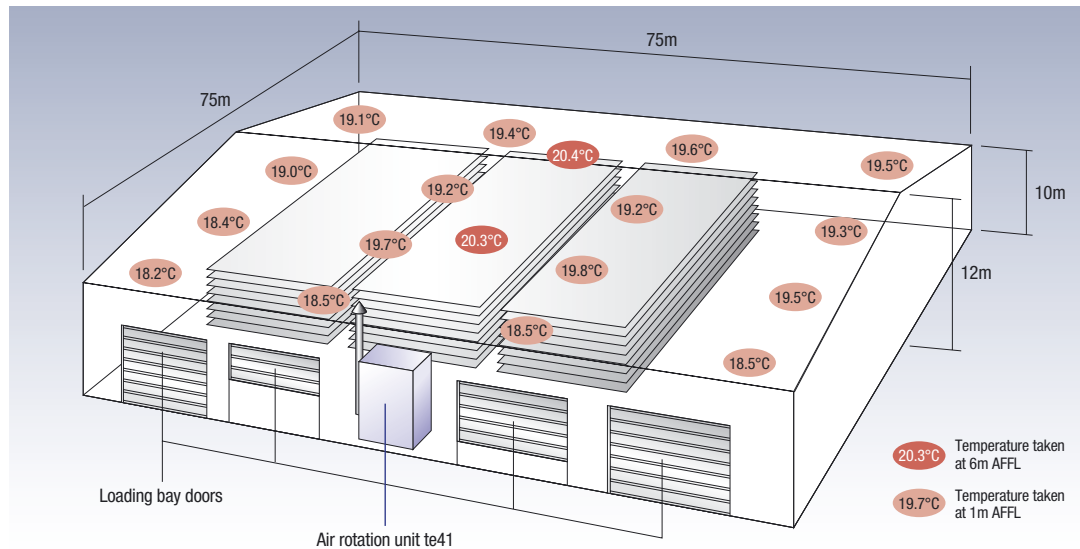
Air rotation, because of its low velocity, high air volume operation, provides for excellent heat distribution and tight control of space temperature.

The diagram below shows the temperature control air rotation offers compared with a conventional system. A reduction in temperature 'peaks' and 'troughs' offers accurate temperature control and reduced energy usage.



te air rotation heaters

Heat distribution



The diagram shows the temperature readings taken from an actual air rotation installation with no other forms of heating or destratification fan units being used. The readings were taken on a normal working day with loading bay doors in use.

This clearly indicates the excellent heat distribution and temperature control that an 'air rotation' system offers.

Notes

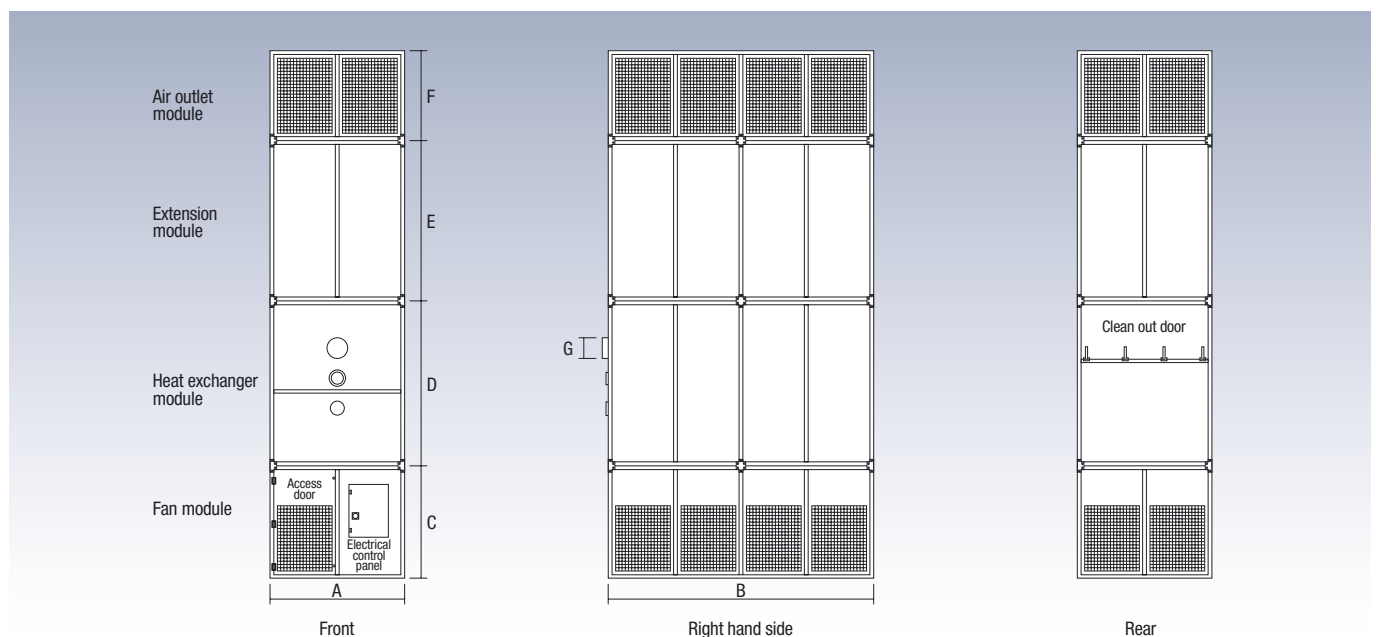
1. Temperature readings taken from actual installation of te unit 'J&L Industrial Supply'.
2. Outside temperature = 7.5°C, set point of control unit = 19°C.

Dimensional data in mm

model	te21	te31	te41	te61
A	1010	1162	1518	2026
B	1568	2025	2991	4058
C	1873	1213	1213	1721
D	–	1574	1975	2534
E	1873	1778	1899	2432
F	1416	660	959	1365
G	150	200	300	350

Performance data

model unit	Output kW	Volume m ³ /s	Fan motor size (each) kW
te21	88	4.5	1.1
te31	234 – 100	12.6 – 5.5	3.0 – 1.1
te41	440 – 220	25.9 – 14.2	3.0 – 2.2
te61	806 – 513	47.2 – 30.7	4.0 – 3.3



Notes

1. Models te31, te41 and te61 are range rated appliances and sized to suit individual applications.
2. The heat exchanger and fan module on the te21 is manufactured as one section – see dimension 'C'.

Whatever your heating and ventilation requirements, powrmatic can provide a total solution from a single source.

Our experienced sales engineers provide expert advice on all aspects of design and application, with after sales service and spares availability guaranteed by our network of regional service engineers and spares stockists strategically located throughout the UK.

powrmatic offers customers the most comprehensive range of heating and ventilation solutions available in Europe. Whatever your requirements, powrmatic has the capability to provide a total solution from a single source with products proven in some of the world's most prestigious and demanding applications.

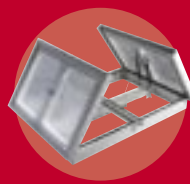
pgv

Glass louvred ventilator. Both functional and attractive. Specifically designed for modern building requirements.



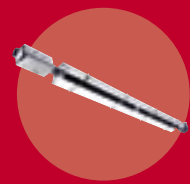
tfv

Twin flap natural ventilator. Suitable for smoke venting & featuring very low air leakage when closed.



prt

Direct heat and warmth for localised heating in a range of applications.



Cabinet heaters

Indirect gas or oil fired floor standing air heaters for multiple use.



pv

Powered roof extract. Heavy duty high performance unit.



bsl

Fixed solar shading system, providing attractive yet low cost solutions to reducing heat gains.



Gas unit heaters

A quality range of suspended gas fired unit heaters.



Flue & chimney

Flue systems for domestic, commercial and industrial applications.



cec

Heat-recovering thermal economiser providing excellent heat distribution for high-roofed buildings.



Contact us for information and advice about our expert service

Hort Bridge, Ilminster, Somerset, TA19 9PS United Kingdom

Tel: +44 (0)1460 53535 Fax: +44 (0)1460 52341

Email: info@powrmatic.co.uk

www.powrmatic.co.uk

The information contained in this brochure was accurate at the date of publishing. However the company reserves the right to introduce at any time modifications and changes of details as may be necessary. To avoid any misunderstanding, interested parties should contact the company to confirm whether any material alterations have been made since the date of this brochure.

Designed and produced by **Lionheart** www.lionheart.co.uk

