

CT

Heating Unit



Features:

- ▶ Unit is only 198mm deep
- ▶ Designed to flush mount into 600mm x 600mm ceiling grids.
- ▶ Modern Attractive appearance.
- ▶ Grilles and facias can be supplied in a large range of colours and finishes.
- ▶ Available in water & electrical versions.
- ▶ Easy to Install.
- ▶ Easy maintenance from within the room via removable core of grille.

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Application

The Diffusion CT heating unit is an ideal choice for space or spot heating in such applications as offices, shops, banks, restaurants, schools, hospitals and hotels. The flexibility of water or electric heating together with flush ceiling grid, wall mounting or cased surface mounting enables it to be applied to new buildings or refurbishments. As the unit only requires minimal depth (198mm) it is ideal for buildings with restricted ceiling voids.

Description

The Diffusion CT heating unit has been designed to be integrated within standard 600mm x 600mm ceiling grid systems. The unit flush mounts within the grid thus giving a smooth clean appearance beneath the ceiling. The unit works on a total recirculation principle as standard, with a dampered fresh air inlet available as an option. Where no suspended ceiling system exists, the unit can be supplied within a white casing suitable for surface mounting.

Chassis

The unit chassis shall be manufactured from 1.2mm thick galvanised mild steel. The chassis shall have suitable integral hanging brackets allowing the unit to be supported/hung from the slab via 6mm drop rods.



Fan Assembly

Each fan and motor assembly shall be fitted with a motor, continuously rated and complete with a built in thermal overload protector to DIN IEC38. The external rotor motor shall be rated to IP44 and fitted with sealed for life ball bearings and with insulation rated to class B. The fans shall be double inlet, double width centrifugal type and dynamically balanced in two planes according to DIN standards ISO 1940.

Heat Exchanger (LPHW Version)

The coil shall be manufactured from solid drawn copper tubes, mechanically expanded into accurately pre-formed collars in rippled plate type aluminium fins. Each coil shall be complete with air vents and drain connections. The coil shall be pressure

- tested to 40 bar and be suitable for operation with static head of up to 30 metres. Coil tails are 15mm plain copper.

Electric Element

- Each element shall be manufactured from 8mm fully sheathed stainless steel rods, fitted with individually separated 5mm stainless steel fins. A manual re-set high temperature cut-out shall be fitted in accordance with standard safety requirements.

Grille

- The grille shall be an aluminium linear type with removable core and shall be finished as standard in a white powder coat RAL9010.

Filter

- A filter shall be supplied with the LPHW versions only. The filter shall be a foam semi-washable EU2 grade.

Function Tests

- Each unit shall be function tested at our factory to ensure correct operation. All electrical components shall be tested to ensure each unit and its associated wiring complies with the 16th edition of IEE. The unit shall be manufactured in accordance with BS EN ISO 9001:2000 quality standards.

Controls

- **LPHW version** - The unit shall be supplied complete with an on/off and 3 speed switches that will be mounted within the unit and can be accessed via the removable core.
- **Electric version** - The 1.5 kW unit shall be supplied complete with on/off and 3 speed switches. The 3kW unit shall have on/off and 2 speed switches that will be mounted within the unit and can be accessed via the removable core within the grille.

Optional Extras

- **Thermostats:** For remote mounting and can be supplied adjustable or tamperproof.
- **Summer/Winter switch (manual):** Can be used in conjunction with the room thermostat (LPHW version) and/or low water temperature cut out. This will allow the fan to run.
- **Low Water Temperature Cut Out:** Provides automatic shutdown of the fan/motor when boilers have been switched off.
- **Valve & Actuator:** 2-port On/Off control, 230VAC supply.
- **Room case:** When unit is required to be surface mounted. The case is available in a wide range of colours and finishes.
- **Fresh air spigot:** 100mm diameter complete with manual locking quadrant damper.
- **BMS Relay:** On/Off connection relay to enable unit to be integrated into main BMS system.

Performance Details

CT Water

Model	Speed	Duty	Air Vol	Air On °C	Air Off °C	Water On °C	Water Pr Drop	Flow Rate	Elec. Supply	S.C	F.L.C	Weight	Guide NR	dBA	Pipe Conns	Water Content Litres
CTW	LOW	3.0 kW	55 L/s	20	64	82	4.13 kpa	0.089 L/s	230-1-50	0.87 A	0.32 A	17 kg	NR 30	36 dBA	15mm O.D	0.41
	MED	3.4 kW	70 L/s	20	61	82	4.13 kpa	0.089 L/s					NR 35	38 dBA		
	HIGH	4.0 kW	90 L/s	20	57	82	4.13 kpa	0.089 L/s					NR 40	46 dBA		

CT Electric 1.5

Model	Speed	Duty	Air Vol	Air On °C	Air Off °C	Water On °C	Water Pr Drop	Flow Rate	Elec. Supply	S.C	F.L.C	Weight	Guide NR	dBA	Pipe Conns
CTE 1.5	LOW	1.5 kW	55 L/s	20	43	N/A	N/A	N/A	230-1-50	7.37 A	6.84 A	18 kg	NR 30	36 dBA	N/A
	MED	1.5 kW	70 L/s	20	38	N/A	N/A	N/A					NR 35	38 dBA	N/A
	HIGH	1.5 kW	90 L/s	20	34	N/A	N/A	N/A					NR 40	46 dBA	N/A

CT Electric 3.0

Model	Speed	Duty	Air Vol	Air On °C	Air Off °C	Water On °C	Water Pr Drop	Flow Rate	Elec. Supply	S.C	F.L.C	Weight	Guide NR	dBA	Pipe Conns
CTE 3.0	MED	3.0 kW	70 L/s	20	57	N/A	N/A	N/A	230-1-50	13.87 A	13.32 A	19 kg	NR 35	38 dBA	N/A
	HIGH	3.0 kW	90 L/s	20	48	N/A	N/A	N/A					NR 40	46 dBA	N/A

Notes Guide NR values given are based on 1 off unit mounted within the false ceiling of a typical furnished office and measured at 2.0m from the unit discharge grille.
dBA figures given are calculated from sound pressure levels measured in a calibrated reverberant chamber 2.0m horizontally from the unit discharge grille.

Established in 1960,
Diffusion has over 50 years
experience in producing
environmental solutions
via the manufacture of heating,
air conditioning and
ventilating products.



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