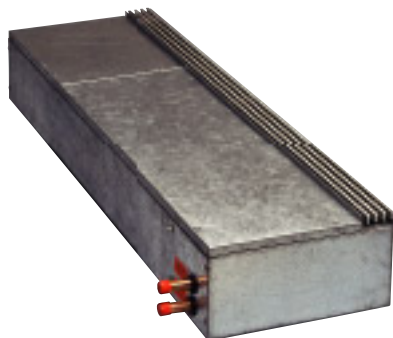


## Longline Fan Convectector / Trench Heater



Features: **Electric or LPHW versions available.**

**Can be rotated through any orientation.**

**Wide range of grille colours and control options and accessories**

**Utilises the smallest grille for a trench heater minimising lost floor area**

**Easy to install and commission**

### DESCRIPTION AND FEATURES

The Longline unit has a unique air supply and discharge arrangement. Return air is drawn into the fan chamber and discharged via the heating plenum through separate sections of the same continuous 50mm wide grille. By utilising a common grille, it has been possible to produce a perimeter heater, which maximises usable floor area. This particular feature gives the Longline unit a significant economic advantage over more conventional underfloor trench heaters.

Available in three lengths and three outputs, the Longline is extremely compact: 293mm wide, with a depth of only 140mm requiring minimal installation space. To accommodate long runs, the units are simply mounted in tandem. Longline heaters are supplied in both LPHW and electric versions and are fitted with a robust and compact highly efficient, single inlet, single width external rotor centrifugal fan with power factors  $>0.95$  (+/-2%). This ensures a rapid warm-up whilst maintaining low sound levels. A two-speed fan controller gives maximum operating flexibility. The unit can also be mounted in any orientation, allowing it to be used as a general purpose narrow profile fan convectector, for applications such as trench heating, kick space heating, schools, desks/furniture retail, hotels, churches, hospitals & airports.

### GENERAL (ALL UNITS)

Units shall be manufactured from 1.2mm (minimum) hot dipped galvanised steel. The overall size of the unit will be as detailed on the drawing and wiring diagram (available on request). All bearings and moving surfaces in contact will operate without requiring further lubrication. The unit shall be constructed with bolts and captive fastenings no self-tapping screws will be used. All foam gasket and acoustic materials used within the unit shall be Class "O" fire rated and CFC and HCFC friendly. Each unit will be manufactured in accordance with ISO 9001 procedures and functionally tested before leaving the factory, to ensure that it will perform with the minimum of maintenance throughout its life. All electrical components will be tested to ensure that each unit and its associated wiring comply with the 16th edition of IEE (BS7671) regulations. All key components will be fitted to allow easy access for removal and maintenance. Each model is CE approved.

### FAN AND MOTOR ASSEMBLY

Each fan and motor assembly shall be fitted with a high output permanent split phase capacitor, continuously rated external rotor motor to IP44, with built in thermal overload protection complying with EN60730, BS5000 and DIN IEC38. The motor shall be fitted with maintenance free sealed for life bearings. Motors shall be insulated to IEC 85 class B. The fan scrolls shall be single inlet single width centrifugal with steel impellers. All fan and motor assemblies shall be statically balanced to prevent the transmission of vibration. Each unit shall be set to operate at 2 speeds, low and medium. The speed control shall be achieved by variation of the voltage onto the fan motor, via a multi-tapped transformer.

### HEAT EXCHANGERS

All coils shall be manufactured from 9mm solid drawn copper tubes, mechanically expanded into accurately pre-formed collars in rippled aluminium fins. To ensure long life, the coil tube thickness shall not be less than 0.35mm and aluminium fins not less than 0.12mm. The coil shall have single circuits, with headers. Each coil shall be fitted with air vents and drain points. All coils shall be tested after manufacture to 20 Bar and shall be suitable for an operating pressure of up to 12 bar static head. They shall be fitted with 15mm plain copper connections.

### ELECTRIC ELEMENTS

Stainless steel sheathed elements, encased in stainless steel spiral wound fins, for complete safety.

### ELECTRIC ELEMENTS

Stainless steel sheathed elements, encased in stainless steel spiral wound fins, complete with manual reset high temperature safety cutout. Elements are always designed to operate at black heat temperatures.

### TEMPERATURE CONTROLS

The temperature controls shall operate at 230V. The units can be supplied with a 230v room mounted thermostat. The LPHW Longline can be supplied with a 2-port control valve, suitable for remote mounting. The electric Longline is supplied with a manually reset high temperature cut out switch. Each Longline will be supplied with an integral 2 speed motor control switch. Low water temperature and summer/winter switches are available on the LPHW version.

### AIR FILTER (NOT ELECTRIC HEAT UNITS)

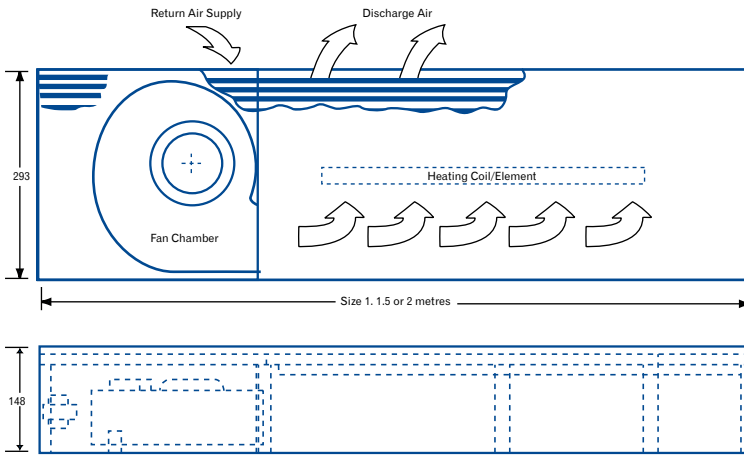
The filter shall be manufactured from a fine woven mesh of galvanised steel, welded to a rigid galvanised steel frame after manufacture. It shall be cleaned by vacuuming in situ or removed for washing, if necessary. Lifting out the linear bar grille and then taking the filter out of the slot on the intake unit easily remove the filter. Electric heating units do not require an air filter.

# PERFORMANCE LONGLINE - CONTROL

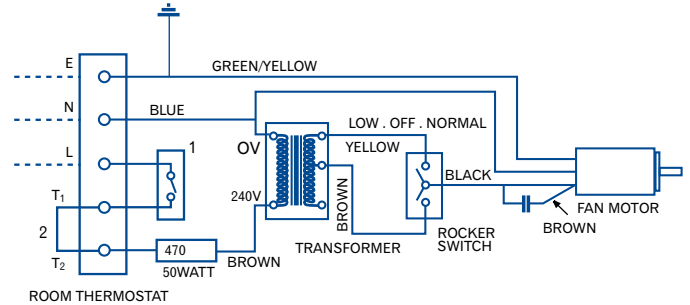
MODEL	LPHW Range			Electric Range		
	1000	1500	2000	1000	1500	2000
Heating Duty kW	1.01/0.89	1.49/1.30	1.98/1.71	1	1.5	2.0
Air Volume l/s	40/34	55/47	72/61	40/34	55/47	72/61
Water Flow l/s	0.02	0.03	0.04	-	-	-
Water Pressure Drop kPa	0.06	1.9	4.4	-	-	-
NR guide	35/30	35/30	35/30	35/30	35/30	35/30
Starting Current Amps*	0.60	0.63	0.65	4.7	6.75	8.9
Running Currents*	0.20/0.18	0.23/0.21	0.23/0.24	4.5	6.55	8.6
Electrical Supply	220-230V/1ph/50Hz			220-230V/1ph/50Hz		

\*The above starting & running currents shown are for 230V.  
The above performances are based on an entering water temperature of 82°C and an entering air temperature of 20°C.

## DIMENSIONS

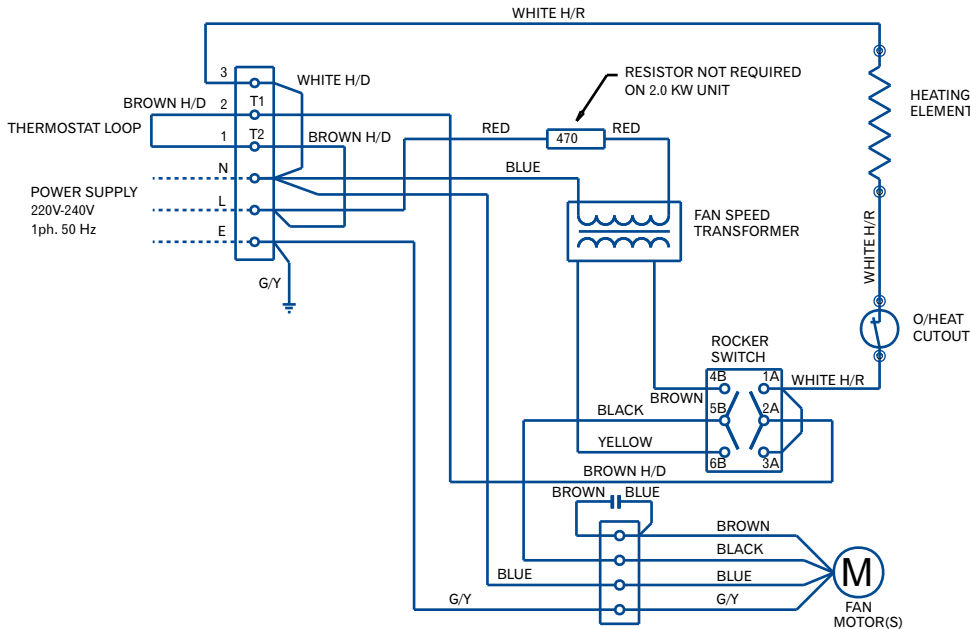


## WIRING DIAGRAM



Optional Controls	
1	Low Water Temperature Cut Out
2	Remote Thermostat

## ELECTRICAL DIAGRAM



\*The Guide NR level predictions are based upon extensive tests conducted by independent acoustic consultants within a calibrated test chamber. We would like to highlight that these figures are only indications, we recommend that the advice of an independent acoustic consultant is sought on individual projects to obtain accurate NR levels. For full sound power levels please refer to Diffusions fan coil sales department.

Diffusion Environmental Systems have a policy of continuous development.  
We therefore reserve the right to alter information contained in this leaflet, without prior notice.

CE

# DIFFUSION®

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