

HI-LINE SUPER RC FAN CONVECTOR

MODELS: 25-18, 29-20.

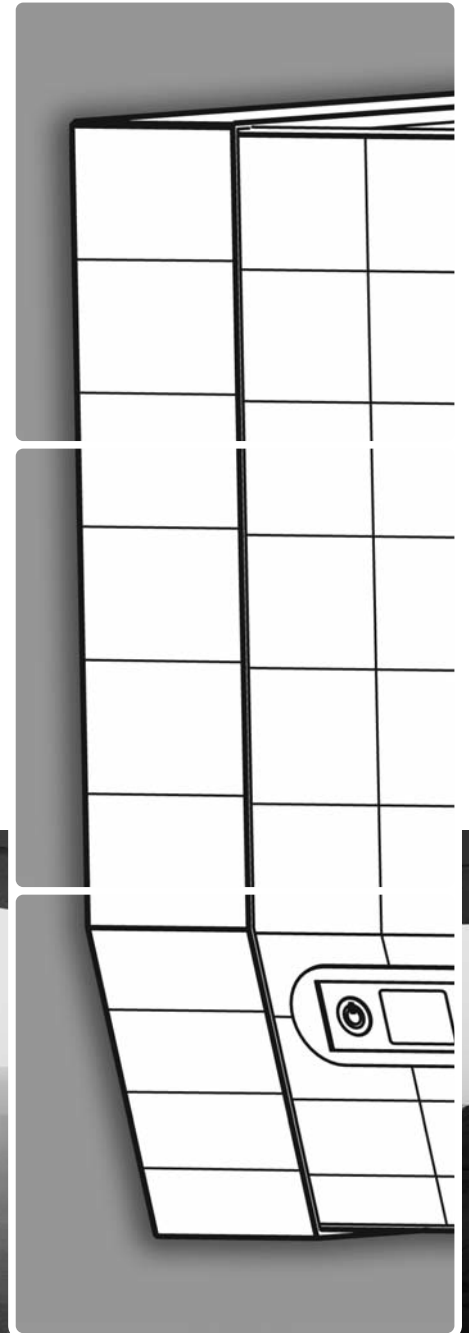
INSTALLATION, OPERATING, MAINTENANCE & AFTER SALES MANUAL

Product Serial Number:

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Please leave this manual with the end user.

Part Number: 1370065



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1.0 General Information

- This MYSON HI-LINE Super RC fan convector is designed for wall-mounted installation with a maximum installation height of 3m to the underside of the unit.
- The minimum installation height is 1.8m to the underside of the unit.
- The minimum clearance between the top of the unit and the ceiling should be 20mm for rear pipe connection or 100mm for connection from above.
- The minimum side clearance is 150mm.
- The HI-LINE Super RC should only be used on closed circulation, two pipe, pump assisted central heating systems.
- Before proceeding with the installation, the heating system design must be considered and the unit correctly sized to meet the heat loss requirements of the room at normal fan speed.
- This unit is supplied with an infra red remote control system and has 3 operating modes:

Automatic – the desired room temperature is programmed in to the unit and the fan speed is automatically adjusted until the desired room temperature is achieved.

Fan only – allows user selection of any of the 3 available fan speeds irrespective of room temperature or water temperature in the coil.

Fan only with water temperature control – allows the user to select any of the available fan speeds, which will operate only if the water temperature in the coil is above 32°C. This enables control of the unit via an externally mounted room thermostat if desired.

- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children should be supervised to ensure they do not play with the appliance.

This unit **MUST NOT** be installed in a bathroom or other similar high humidity area.

2.0 Heating System Design

This fan convector must be fitted on a two pipe, pumped circulation heating system.

For optimum fan convector heating performance the system must be capable of providing sufficient hot water through the heat exchanger. This means that:

1. The minimum pipe size from boiler to fan convector must be at least 22mm.
2. **This unit is not suitable for use on microbore pipework.**
3. Where the unit is fitted on to a system with other emitters a separate circuit for the fan convector should be considered to provide adequate water flow.

4. The system water must be above 32°C for heating mode.
5. For heat pump applications - see Commissioning Procedure.
6. **This unit is NOT suitable for one-pipe systems.**
7. **Optimum performance will require effective balancing of the whole system.**
8. This unit should NOT be used to replace a radiator in an existing system unless an adequate flow of water can be guaranteed.

3.0 Unit Selection/Sizing

Heat output performance is given in the Technical Data section of this manual. Outputs are shown for the 3 fan speeds, however, it is important to size the unit to match the calculated heat loss requirements of the room with the unit operating on

the low fan speed. The higher fan speeds are used in automatic mode when the room temperature is significantly lower than the preset temperature.

4.0 Location

- This HI-LINE Super RC unit may be fitted to any convenient wall at a height from floor level that suits the application, providing an unimpeded flow of warm air into the area to be heated.
- The maximum distance from the underside of the unit to floor level is 3m.
- The minimum distance to the underside of the unit is 1.8m.
- This unit should not be installed in locations with ceiling heights greater than 3.5m.
- The unit should be mounted on a flat wall, and stud or partition walls should be avoided to minimise the possibility of noise transmission.

5.0 Preparation

Before proceeding with the installation, unpack the carton contents and check against the checklist below:

1. HI-LINE Super RC fan convector.
2. 22mm isolating valves (1 pair).
3. Instruction manual.
4. Warranty card.
5. Fixing kit (rubber mounts and cable gland).
6. Remote control handset.

6.0 Fixing

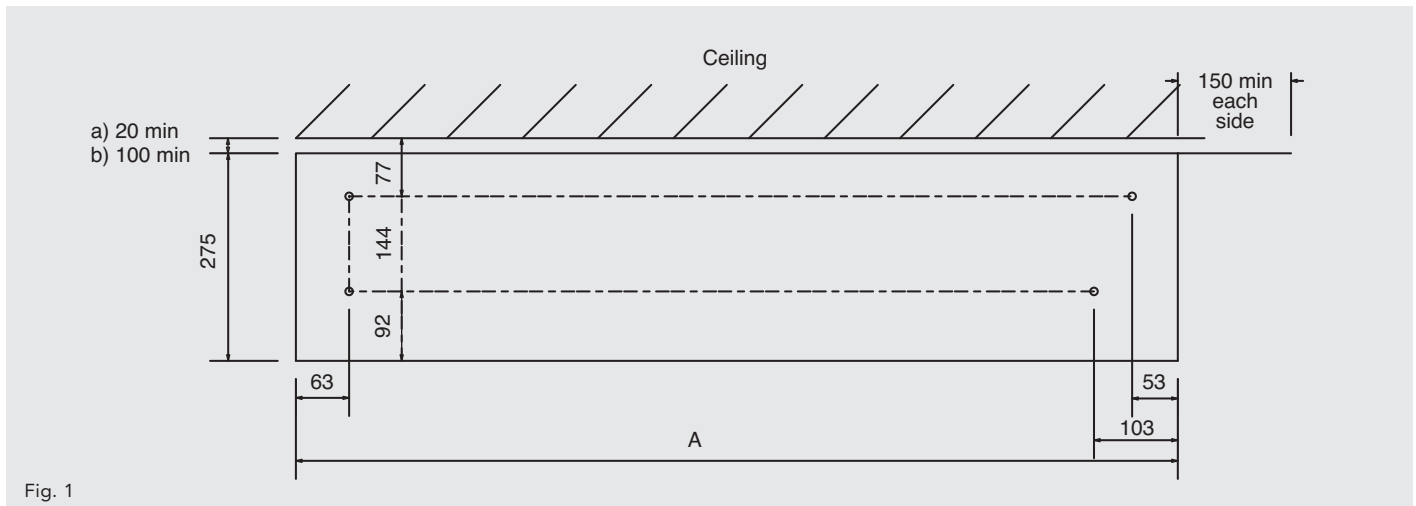
- Using the fixing dimensions below (see fig. 1), mark the fixing hole positions on the wall.
- Drill and plug the wall for No. 8 x 40mm round head wood screws ensuring that the wall plugs are suitable for the wall type.
- Remove the backing from the self-adhesive washers and place on screws with adhesive side towards the point.
- Tighten the screws into the wall leaving about 9mm projecting.
- Press adhesive washers to the wall.

Remove the outer casing as follows:

- Remove the screw securing each side panel (see fig. 2).
- Remove 2 screws at each side securing outer cover.
- Lift off the outer case.
- Fit chassis on to mounting screws and tighten.

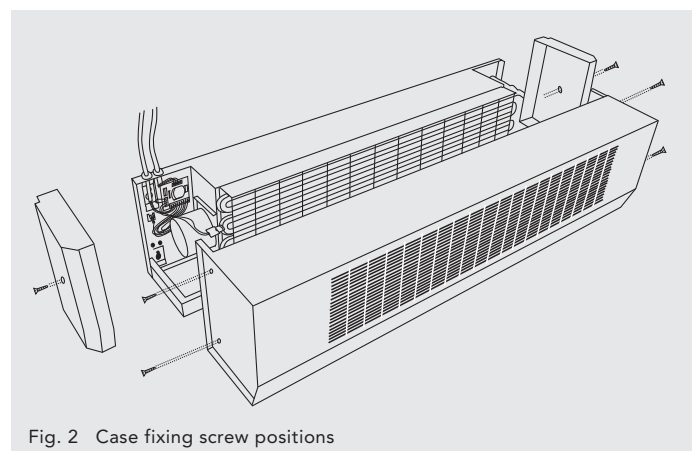
Note: Before proceeding with pipe-work connections check that the unit is level.

When water connections and electrical connections have been completed and the unit has been vented, fit the outer cover and secure with fixing screws.



Dimensions (mm)	
Unit	A
29-20	1360
25-18	1150

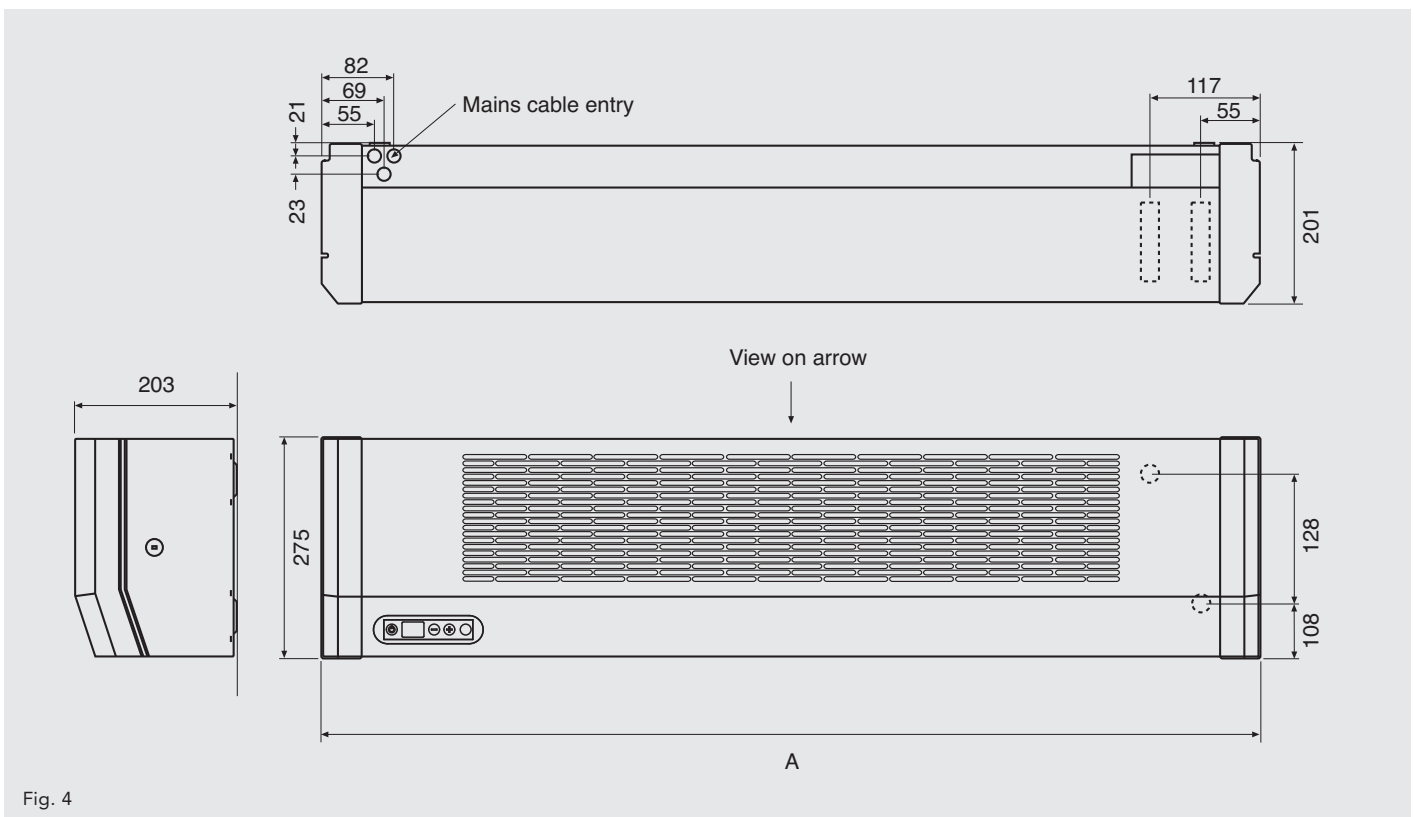
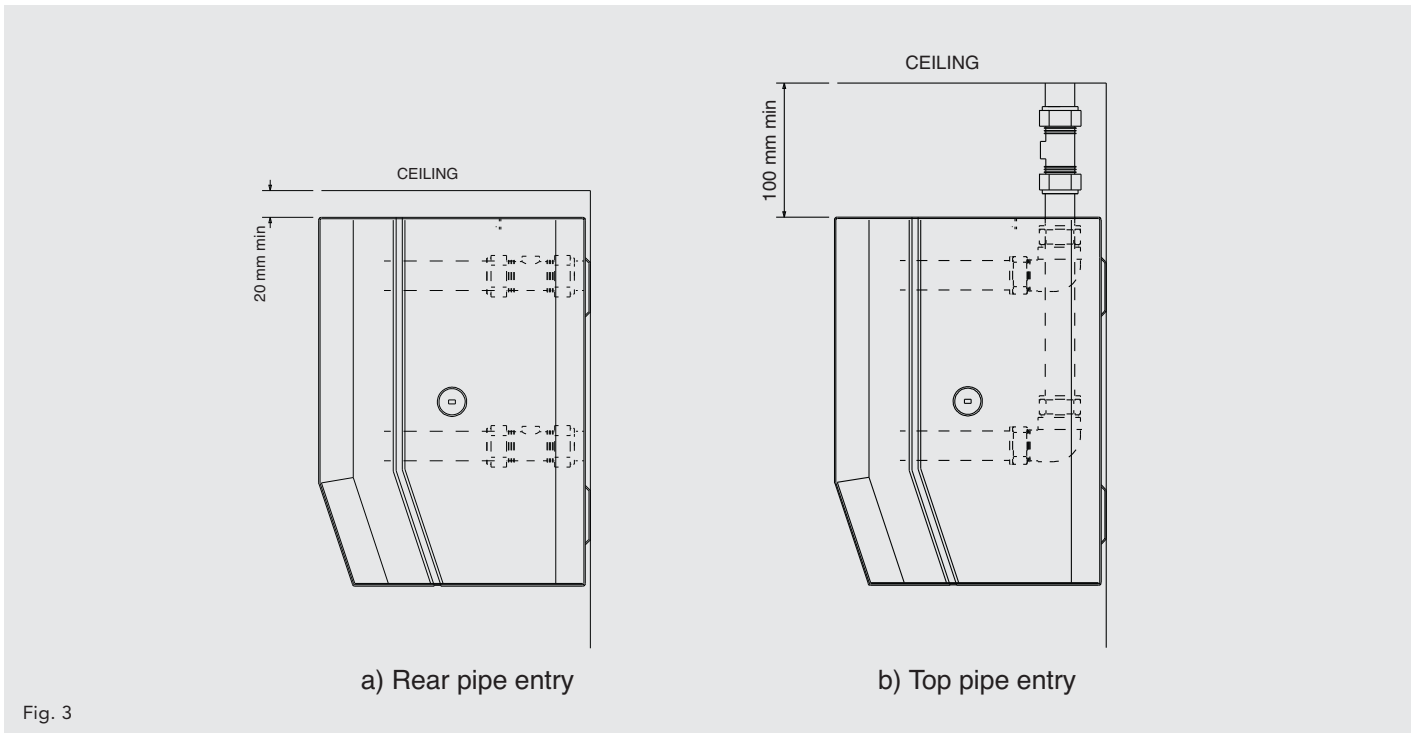
a = rear entry pipework
b = top entry pipework



7.0 Water Connections

- Connect unit to system flow and return pipes using the two 22mm isolating valves (see fig. 3 & 4).
- Ensure system is flushed in accordance with recognised best practice and a suitable inhibitor is added to the system as necessary.
- Open valves fully, check pipe connections for leaks and vent the heat exchanger - see Commissioning Procedure.

	Dimensions (mm)
Unit	A
29-20	1378
25-18	1168

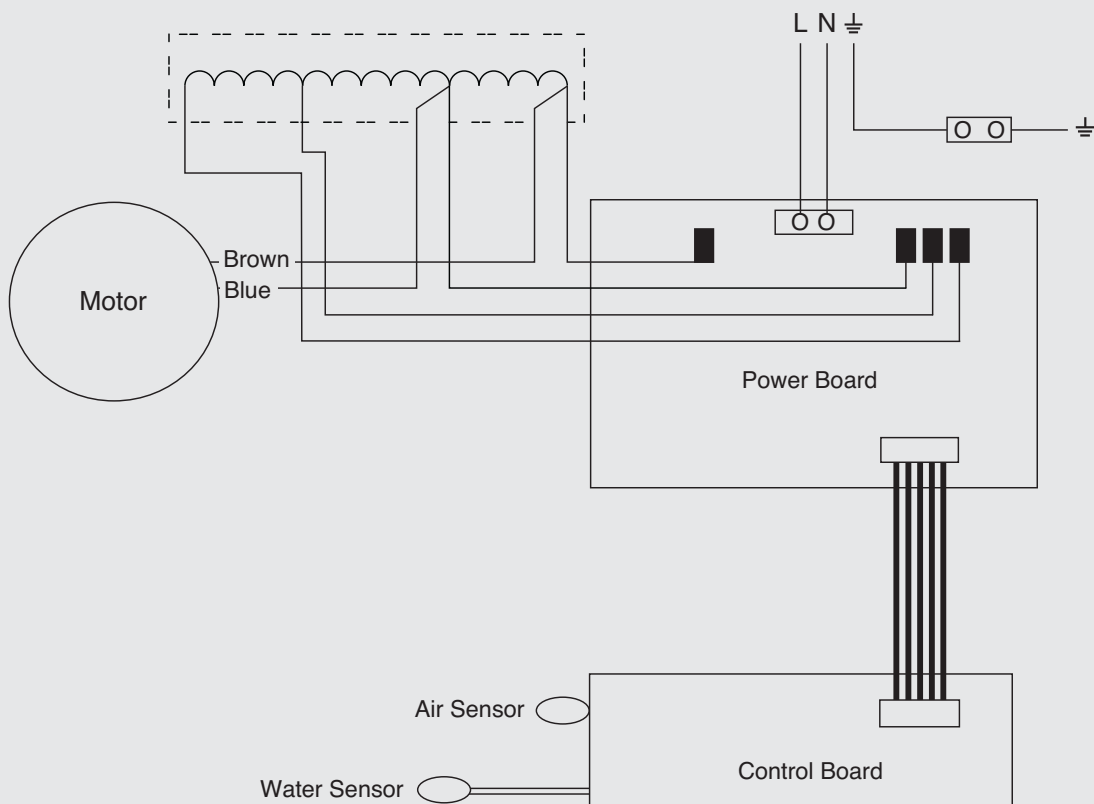


8.0 Electrical Connection

WARNING: This appliance must be earthed. The electrical installation must comply with local or national wiring regulations.

- This unit is supplied with factory fitted test leads. Remove these and discard.
- A fused electrical spur with a maximum 3A fuse and a switch, having 3mm separation on all poles, must be provided in an easily accessible position adjacent to the unit.
- Electrical cable entry to the unit should be made through the hole provided at the top left hand side of the unit, using the cable gland provided.
- Connect live and neutral wires to the power board terminal connections, and the earth wire to the chassis earth terminal (see wiring diagram).

Wiring diagram



9.0 Commissioning Procedure

- Fill and vent the system.
- Open both valves fully and check for leaks at pipe connections.
- Refit the outer case and secure using the 2 fixing screws.
- Switch on electrical supply.

- Check the operation of the unit by following the operating instructions.
- When installation and commissioning are complete, hand over instruction manual to end-user.

Heat Pump and Low Water Temperature Systems

In heating mode, the control system brings the fan on when the water in the coil reaches 32°C. For low water temperature systems, eg heat pump systems, it is possible to switch off the boost speed option in automatic mode so that the unit runs in medium or normal fan speeds depending on demand. This means low outlet air temperatures from the unit are avoided when the room temperature is low in relation to the set temperature.

This facility can be switched on or off by following the instructions below:

- Isolate electrical supply.
- Remove outer cover.
- Change switch 1 position according to requirements (see fig. 5).
- Refit outer cover.
- Switch on electrical supply.

Displayed Temperature Calibration

This function enables calibration of the displayed temperature to the actual room temperature using the following procedure:

- Press the On/Off key and + key simultaneously for 5 seconds. The display will flash, alternating between 'ro' and the calibration temperature.
- Calibrate the displayed temperature by using the + and - keys.
- Press the On/Off key to finish.

Fan Pulse

Fan pulse mode causes room air to be drawn over the air temperature sensor periodically to maintain room temperatures more effectively. In certain circumstances, for example when units are over-sized in relation to the heat loss of the room, it may be necessary to turn off this function. Use dipswitch 3 according to requirements.

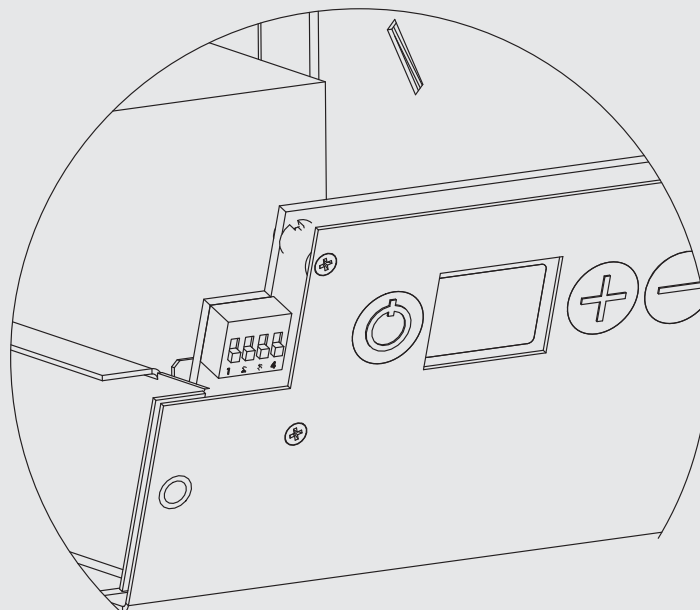


Fig. 5

Switch		Switch Down	Switch Up
1	Auto Fan Speed Selection	2 Speed	3 Speed
2	Heating	N/A	N/A
3	Fan Pulse	Off	On
4	Temperature Display	°F	°C

10.0 Technical Data

Heating Performance Data

Model	Fan Speed	Heat Output (watts)									
		Temperature Difference °C (Δt)									
		20°	25°	30°	35°	40°	45°	50°	55°	60°	65°
29-20	Normal	1858	2360	2870	3385	3906	4432	4962	5496	6033	6573
	Medium	2234	2843	3462	4089	4723	5364	6011	6622	7319	7980
	Boost	2599	3313	4040	4778	5526	6282	7045	7815	8591	9373
25-18	Normal	1709	2136	2563	2990	3417	3843	4270	4697	5123	5550
	Medium	1962	2492	3030	3574	4124	4679	5238	5802	6369	6939
	Boost	2172	2804	3454	4120	4800	5500	6200	6900	7600	8400

Heat outputs tested in accordance with BS 4856 Part 1.

Flow Rate Correction Factors:
 455 ltr/h (100 gal/h) multiply by 1.03.
 227 ltr/h (50 gal/h) multiply by 0.98.
 113 ltr/h (25 gal/h) multiply by 0.85.

Approximate Hydraulic Resistance through Fan Convectors

Litres/h	mm wg		kPa	
	25-18	29-20	25-18	29-20
455	2095	2551	20.5	24.6
340	1282	1530	12.6	15.0
227	620	850	6.1	8.3
113	234	245	2.3	2.4

Air Flow

Model	Air Flow (m ³ /h)			Air Flow (ft ³ /h)		
	Normal	Medium	Boost	Normal	Medium	Boost
29-20	390	470	540	13772	16597	19069
25-18	350	430	500	12360	15185	17657

Weight, Water Content and Motor Power

Model	Motor Power (W)	Water Content (l)	Unpacked Weight (kg)
29-20	80	0.85	21.0
25-18	80	0.63	18.0

Test Pressure 20bar (2MPa)
 Maximum Working Pressure 10bar (1MPa)

11.0 Operating Instructions

Description

This HI-LINE Super unit is fitted with a control system that provides either automatic or manual control of the unit. In automatic mode the desired temperature set point is selected and the unit will adjust the fan speed according to the difference between the actual room temperature and the set point. When the room temperature reaches the set point the fan will switch off and thereafter will continue to cycle on and off to maintain the room temperature. The temperature set point range is 15 - 35°C.

In manual mode the automatic temperature control is overridden and any of the three fan speeds can be operated irrespective of the water temperature in the unit. This means that air circulation can be provided in summer for example, or that heating performance can be controlled manually.

In manual mode, with water temperature control, any of the 3 fan speeds can be selected and the fan will operate when the water temperature in the coil is greater than 32°C. This means that heating performance can be controlled manually, and the unit could be controlled via an external room thermostat.

The unit can be controlled using the infrared remote control handset supplied with the unit (see fig. 6) and also using the control panel on the unit (see fig. 7). If necessary, however, the control panel can be locked electronically to prevent tampering once the controls have been set (see below).



Fig. 6

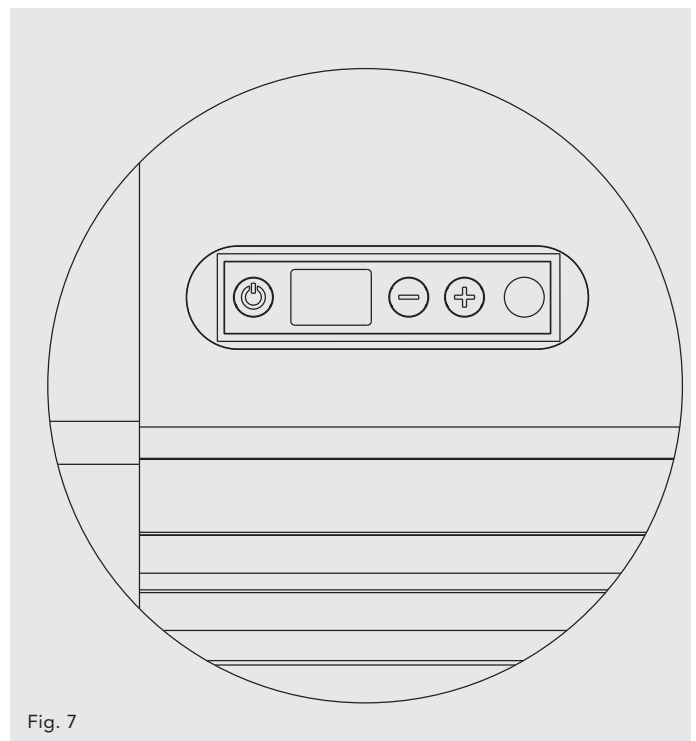


Fig. 7

The remote control hand set takes 2 AAA batteries (not supplied).

Controls

- Power button
- '+/-' button

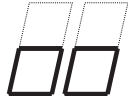
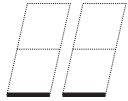





Display

- Switches unit on & off
- Adjust temperature set point from 15 - 35°C
- Scrolls into F1, F2 or F3 manual mode

Heating

Heating will only be provided when the central heating boiler is on, the pump is running and the system water temperature is greater than 32°C. Ensure the boiler is on, and set timer, boiler controls and room thermostats as necessary.

11.0 Operating Instructions (continued...)

Operation	Display
Power off	No Display
Switch on supply to unit (unit off)	 for 30 seconds
	 Supply on / unit off
Switch on unit	 Set point flashes for 5 secs, then
	 Ambient temperature displayed
Use '+/-' to adjust set point	 Set point flashes for 5 secs, then
	 Ambient temperature
The ambient temperature is always displayed unless the water temperature falls below 32°C, or if the set point is being adjusted.	
Water temp <32°C	 Shows both power & unit on

Manual

Manual mode can be used for air circulation without heat or for manual control of the heating function.

Use '+' to scroll beyond 35°C

Or use '-' to scroll below 15°C

Selected fan speed displayed



Scrolling back out of manual using the '+' or '-' button will revert the unit back to last temperature set point.

Locking Unit Controls

The control panel on the main unit can be locked electronically to prevent interference once the controls have been set. After setting the unit to the desired temperature setting and with the unit in running mode, press the On/Off button on the main unit for about 6 seconds until the two middle horizontal bars appear on the display. The horizontal bars will disappear after about 6 seconds and the unit is in key lock mode.

If any of the unit controls are pressed the horizontal bars will reappear to show the key lock mode is activated, however, during this mode the handset controls remain functional.

To unlock the system press the On/Off button for about 6 seconds until the horizontal bars disappear.

12.0 Troubleshooting

Once installed this fan convactor becomes part of a complete heating system that generally will include boiler, pump, other emitters such as radiators and fan convectors, and a number of heating controls, dependent on system complexity. An apparent problem with this unit may be the result of system controls being incorrectly set and can be solved easily without calling out your installer or MYSON Service. Before calling your installer or MYSON Service, please carry out the checks listed opposite.

Note: If you call out MYSON Service to a fault detailed opposite, or to repair a fault caused by incorrect use, a call out charge will be made.

12.0 Troubleshooting (continued...)

Problem	Possible Causes	Remedy
Heating Mode - No Fan	Unit switched off	Turn on
	Temperature set point reached	Increase temperature set point
	Unit not switched on at fused spur	Switch on at spur
	Fuse blown at fused spur	Replace fuse
	Unit isolating valves shut	Open valves
	Water temperature reaching fan convector below 32°C	Check boiler - Programmer ON Boiler ON and set to high with central heating pump running Note: Operation of fan convector can be checked by switching to manual fan setting
Heating Mode - Poor heating performance and/or unit cycles on water sensor	Low water temperature to unit	Turn up boiler thermostat
	Poor water flow	Vent air from heating system

If the fan convector is still faulty after checking the above, call your installer or MYSON Service.

Common Installation Faults

For optimum performance, this unit must be correctly sized to match the heat loss requirements of the space it is required to

heat, and the heating system must be correctly designed to provide adequate flow of hot water to the unit (see Section 2). If the recommendations in Section 2 are not followed, problems may arise as detailed below.

Problem	Possible Causes
Poor heating performance	Unit incorrectly sized for heat loss of room
Heating Mode - Poor heating performance and/or unit cycles on water sensor	Boiler thermostat set too low
	Lack of flow to fan convector
	Pump set on low setting
	Isolating valves not fully open
	System incorrectly balanced with unit starved of hot water flow
	Pipe sizing to unit too small

13.0 Maintenance

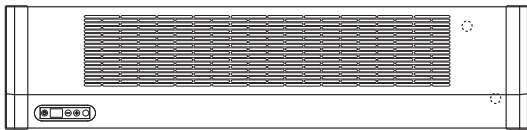
Before undertaking any maintenance activity isolate the electrical supply.

with warm water and mild detergent taking care to avoid water entering the grille areas.

Maintenance should be restricted to occasional removal of dust and lint around the unit. The outer surface may be wiped over



Serial Number Location:



↑
Inner chassis position

After Sales Service:

MYSON Service, Somerden Road, Hull, East Yorkshire HU9 5PE
T: 01482 713927, F: 01482 789056, service.convectors@myson.co.uk

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