

HI-LINE.

Heat from above.

The **HI-LINE** range offers creative use of wall space whilst keeping the heat source safely out of reach. All models are designed for ease of fitting and can be positioned above doorways for effective heating. The units are easy to install, control and maintain, therefore providing a simple yet effective method of heating. All RC models have a fan only option for cool air circulation.



HI-LINE RC.



Remote control supplied

The **HI-LINE RC** unit is the only remote control version of this kind that is currently available for hot water products. A range of models are available giving effective heating for various room sizes and are ideal for use with heat pumps.

HI-LINE Super RC.

For larger and often commercial applications such as bars, restaurants, retail outlets and offices, the **HI-LINE Super RC** delivers higher outputs from 5kW up to 8.5kW. Suitable for use in areas with a maximum ceiling height of 3 meters.

The **HI-LINE Super RC** also comes with the benefit of remote control.



Remote control supplied



Available as a low voltage model for use in bathrooms



HI-LINE LV.

The **HI-LINE LV** is a low-voltage unit designed specifically for a variety of applications where safety matters most, for example, installation in bathrooms. The innovative engineering of the 12V unit ensures that effective and efficient outputs are not compromised.

HI-LINE RC Performance Data

The unit must be sized to match the calculated heat loss requirement of the room with the unit operating at normal fan speed. The higher fan speeds will be used automatically when the room temperature is significantly lower than the preset temperature.

When establishing the temperature difference, i.e. mean water to room temperature, allowance should be made for temperature drop in the system. It is the temperature at the convactor which dictates the output.

Heating Performance Data

Model	Fan Speed	Temperature Difference (°C)									
		Heat Output (Watts)					Heat Output (Btu/h)				
		20°	30°	40°	50°	60°	20°	30°	40°	50°	60°
20-14	Normal	1313	2018	2737	3468	4207	4479	6884	9339	11831	14354
	Medium	1658	2548	3457	4380	5314	5657	8695	11796	14944	18130
	Boost	1882	2889	3917	4959	6014	6421	9858	13364	16921	20519
15-10	Normal	931	1431	1941	2459	2984	3176	4881	6622	8390	10180
	Medium	1054	1620	2197	2783	3376	3596	5526	7496	9496	11519
	Boost	1397	2147	2913	3690	4477	4767	7327	9939	12590	15274
10-6	Normal	610	937	1271	1610	1953	2081	3197	4337	5493	6664
	Medium	742	1140	1546	1959	2376	2530	3889	5276	6683	8108
	Boost	954	1467	1990	2521	3059	3256	5005	6790	8602	10437
7-4	Normal	352	541	734	930	1128	1200	1845	2504	3172	3849
	Medium	489	752	1020	1292	1568	1669	2565	3480	4410	5350
	Boost	645	991	1344	1702	2065	2199	3380	4585	5808	7046

Heat outputs tested in accordance with BS 4856 Part 1.

Flow Rate: 340 ltr/h (75 gal/h).

Flow Rate Correction Factors:

455 ltr/h (100 gal/h) multiply output by 1.06.

227 ltr/h (50 gal/h) multiply output by 0.96.

113 ltr/h (25 gal/h) multiply output by 0.85.

For combined heating and cooling applications, a suitable chilled water source and associated controls must be provided and installed, in accordance with the recommendations of the chiller manufacturer.

Provision must be made for condensate disposal, in accordance with any local regulations. A condensate collection tray is fitted

and a suitable drain pipe should be connected to the spigot (15mm) at the base of the condensate tray.

All pipework must be wrapped with anti-condensate insulation material.

Approximate Hydraulic Resistance

Litres/h	mm wg				kPa			
	7-4	10-6	15-10	20-14	7-4	10-6	15-10	20-14
455	1084	1240	1500	1774	9.4	12.12	14.7	17.42
340	798	657	905	1140	7.7	6.42	8.9	11.2
227	350	327	450	565	3.5	3.25	4.37	5.5
113	134	105	157	221	1.4	1.1	1.57	2.1

HI-LINE RC Performance Data (continued)

Weight, Water Content and Motor Power

Model	Motor Power (W)	Water Content (l)	Unpacked Weight (kg)
20-14	80	0.77	14.7
15-10	62	0.56	11.3
10-6	35	0.32	8.9
7-4	35	0.30	7.4

Sound Levels

Model	Sound Pressures at 2.5m (dBA)		
	Normal	Medium	Boost
20-14	33.3	38.7	45.4
15-10	28.8	35.4	45.6
10-6	23.5	30.8	37.2
7-4	23.4	32.5	43.3

Sound levels tested in accordance with EN 23741.

Air Flow

Model	Air Flow (m³/h)			Air Flow (ft³/h)		
	Normal	Medium	Boost	Normal	Medium	Boost
20-14	285	371	431	10061	13096	15214
15-10	207	276	333	7307	9743	11755
10-6	143	171	220	5048	6036	7766
7-4	81	105	133	2859	3707	4695

HI-LINE LV Performance Data

This model should only be selected if the normal fan speed output is capable of maintaining the calculated heat losses of the room at the chosen operating conditions. This will enable the boost fan speed and the higher temperature differences to be used to greater advantage for rapid warming of the room from cold in excessive conditions.

When establishing the temperature difference, i.e. mean water to room temperature, allowance should be made for temperature drop in the system. It is the temperature at the convector which dictates the output.

Heating Performance Data

Model	Fan Speed	Temperature Difference (°C)									
		Heat Output (Watts)					Heat Output (Btu/h)				
		20°	30°	40°	50°	60°	20°	30°	40°	50°	60°
7-4	Normal	352	541	734	930	1128	1201	1846	2504	3173	3849
	Boost	645	991	1344	1702	2065	2201	3381	4586	5807	7046

Heat outputs tested in accordance with BS 4856 Part 1.

Flow Rate: 340 ltr/h (75 gal/h).

Flow Rate Correction Factors:

455 ltr/h (100 gal/h) multiply by 1.06.

227 ltr/h (50 gal/h) multiply by 0.96.

113 ltr/h (25 gal/h) multiply by 0.85.

Approximate Hydraulic Resistance

Litres/h	mm wg	kPa
455	1084	9.4
341	798	7.7
227	350	3.5
113	134	1.4

Sound Levels

Fan Speed	Sound Pressures at 2.5m (dBA)
Normal	16.6
Boost	32.5

Sound levels tested in accordance with EN 23741.

Weight, Water Content and Motor Power

Motor Power (W)	Water Content (l)	Unpacked Weight (kg)
30	0.3	7.4

Air Flow

Fan Speed	Air Flow (m³/h)	Air Flow (ft³/h)
Normal	81	2859
Boost	133	4695

HI-LINE Super RC Performance Data

The unit must be sized to match the calculated heat loss requirement of the room with the unit operating at normal fan speed. The higher fan speeds will be used automatically when the room temperature is significantly lower than the preset temperature.

When establishing the temperature difference, i.e. mean water to room temperature, allowance should be made for temperature drop in the system. It is the temperature at the convector which dictates the output.

Heating Performance Data

Model	Fan Speed	Temperature Difference (°C)									
		Heat Output (Watts)					Heat Output (Btu/h)				
		20°	30°	40°	50°	60°	20°	30°	40°	50°	60°
29-20	Normal	1858	2870	3906	4962	6033	6339	9791	13328	16930	20584
	Medium	2234	3462	4723	6011	7319	7622	11811	16116	20508	24972
	Boost	2599	4040	5526	7045	8591	8867	13785	18854	24037	29313
25-18	Normal	1709	2563	3417	4270	5123	5833	8746	11658	14569	17481
	Medium	1962	3030	4124	5238	6369	6695	10339	14072	17873	21730
	Boost	2172	3454	4800	6200	7600	7411	11785	16378	21154	25931

Heat outputs tested in accordance with BS 4856 Part 1.

Flow Rate Correction Factors:

455 ltr/h (100 gal/h) multiply output by 1.03.

227 ltr/h (50 gal/h) multiply output by 0.98.

113 ltr/h (25 gal/h) multiply output by 0.85.

Approximate Hydraulic Resistance

ltr/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

HI-LINE Controls

HI-LINE RC & HI-LINE Super RC

Units are supplied with an electronic infra-red remote control system with the following features:

- Automatic room temperature control.
- Fan only option for ambient air circulation.
- Three fan speeds.
- Unit mounted controls and display.
- Unit control panel electronic tamper proof lock.
- Displayed temperature calibration system.

HI-LINE LV

Units are fitted with a switch offering high and low fan speed and off selection. A low limit thermostat is fitted to the unit to ensure that the fan stops after the heating system is switched off and the water flow stops.

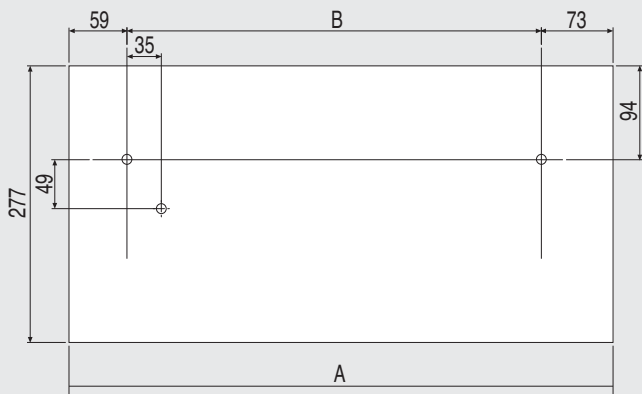
HI-LINE Water Connections

Water connections (15mm compression) are on the right-hand side and the system pipework may be brought in from above or the rear. Supplied with isolating valves.

HI-LINE Electrical Data

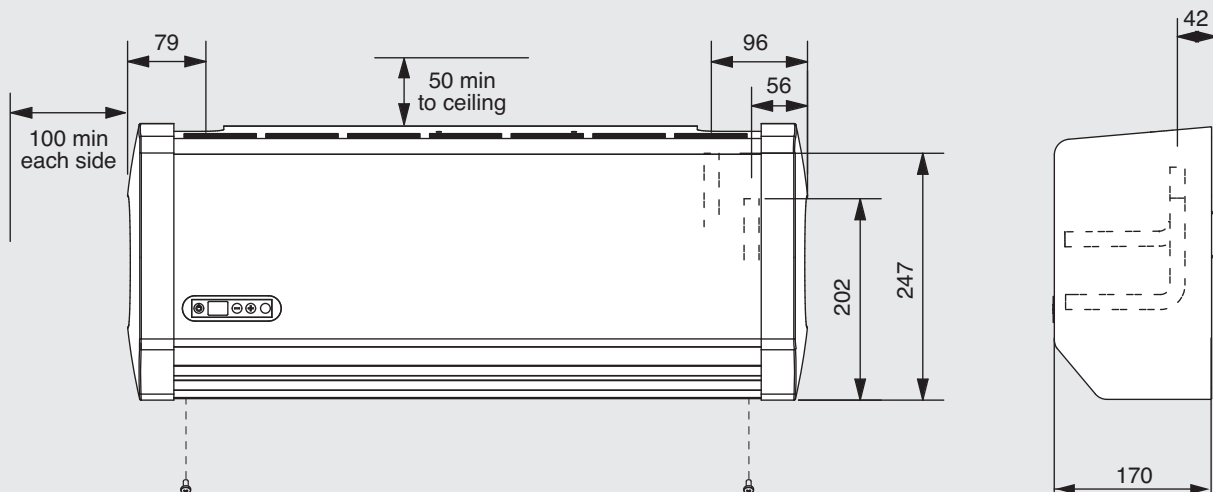
All HI-LINE models require an electrical supply of 220-240V – 50Hz fused at 3A.

HI-LINE RC Dimensions and Fixings



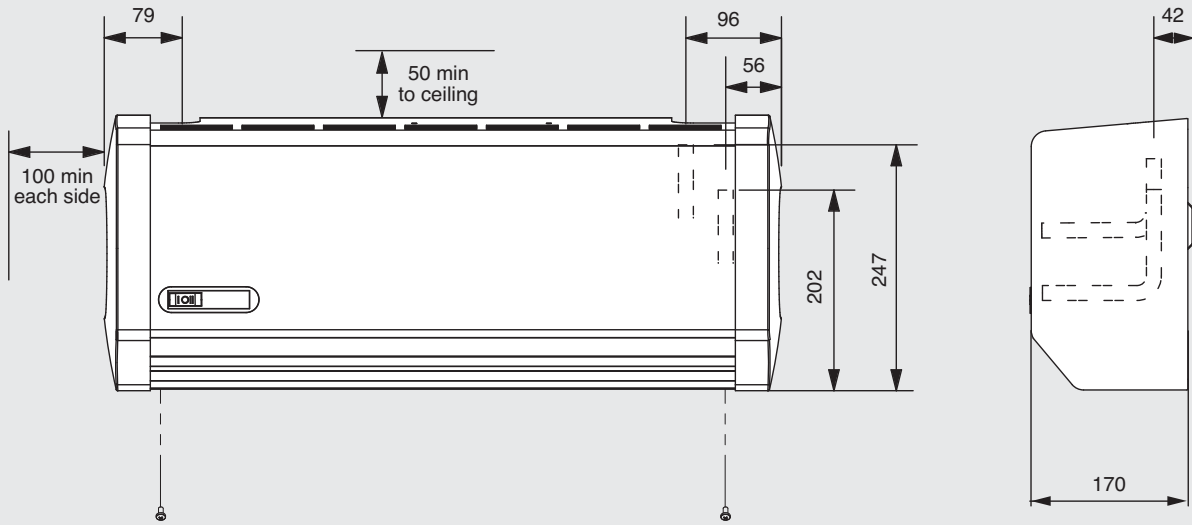
Model	Dimensions (mm)	
	A	B
20-14	1171	1039
15-10	886	754
10-6	682	550
7-4	554	422

- Maximum installation height is 2.13m to the underside of the unit.
- Minimum installation height is 1.8m to the underside of the unit.
- Maximum ceiling height is 3m.
- Minimum clearance each side is 100mm.
- Minimum top clearance is 50mm.

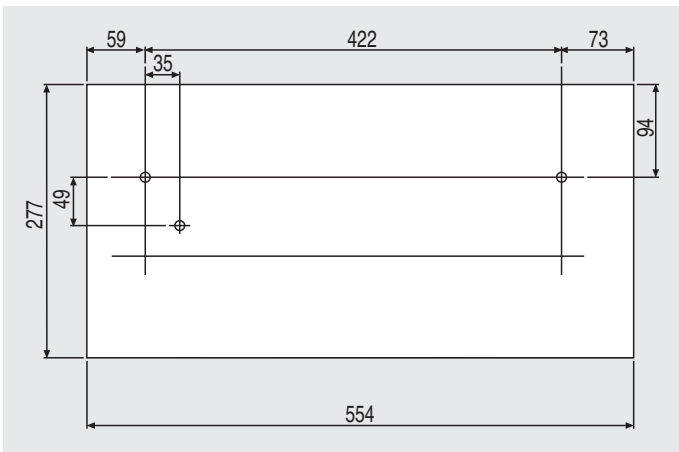


Case fixing screw positions and water connections

HI-LINE LV Dimensions and Fixings



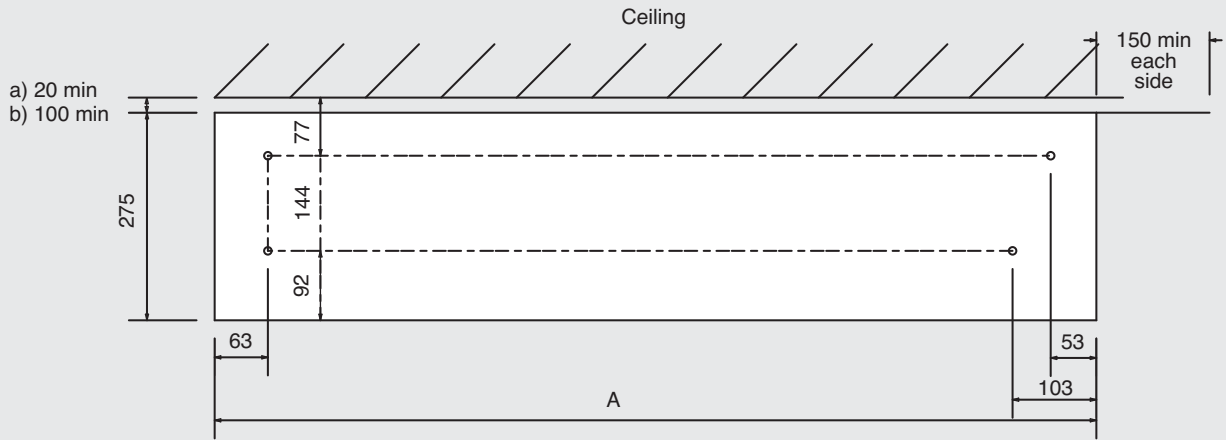
Case fixing screw positions and water connections



Dimensions (mm)		
Height	Width	Depth
277	554	170

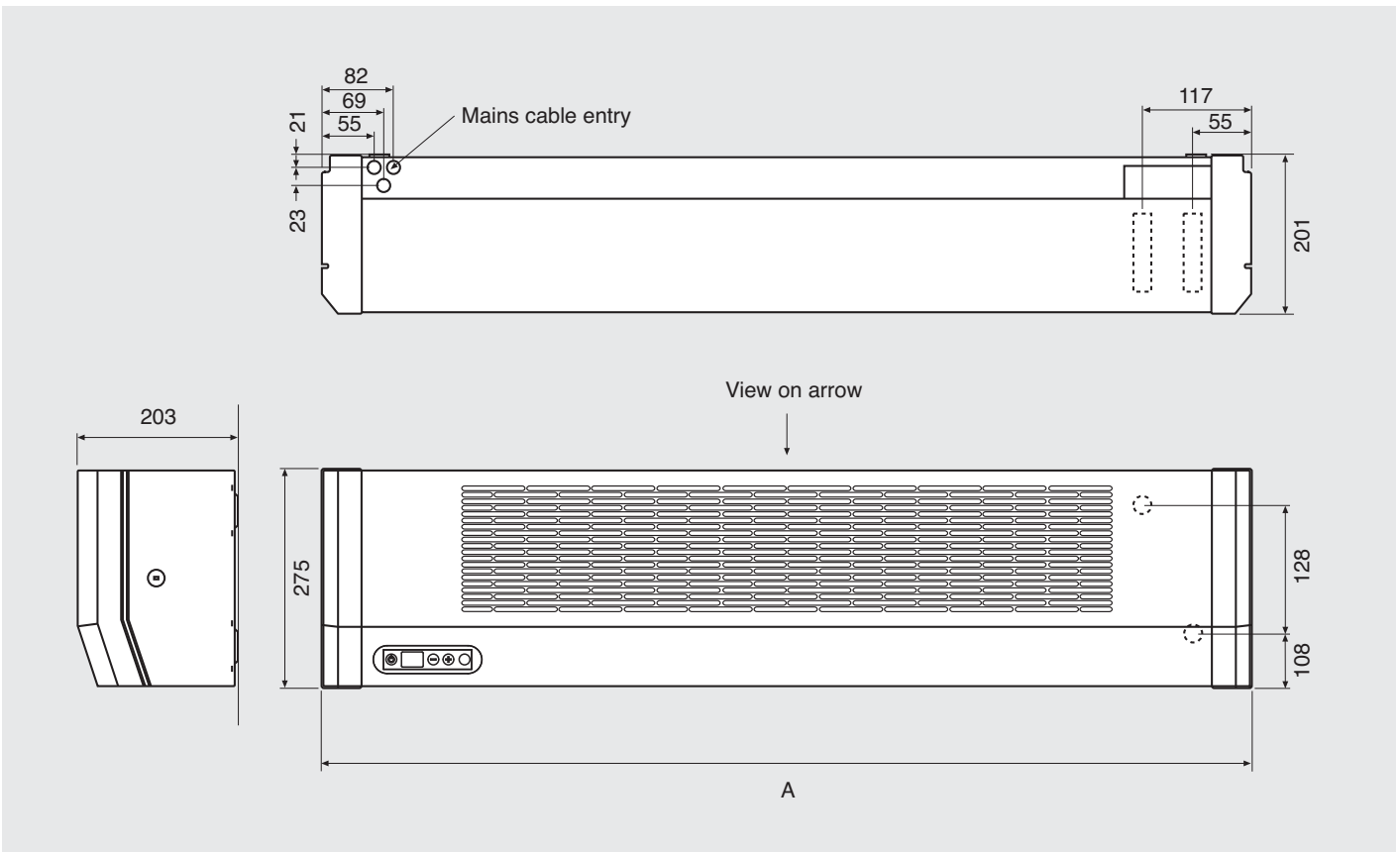
- Maximum installation height is 2.13m to the underside of the unit.
- Minimum installation height is 1.8m to the underside of the unit.
- Maximum ceiling height is 3m.
- Minimum clearance each side is 100mm.
- Minimum top clearance is 50mm.
- Please note the transformer can be mounted internally or external to the unit.

HI-LINE Super RC Dimensions and Fixings



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

a = rear entry pipework
b = top entry pipework



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

- Maximum installation height is 3m to the underside of the unit.
- Minimum installation height is 1.8m to the underside of the unit.
- Maximum ceiling height is 3.5m.
- Minimum side clearance is 150mm.