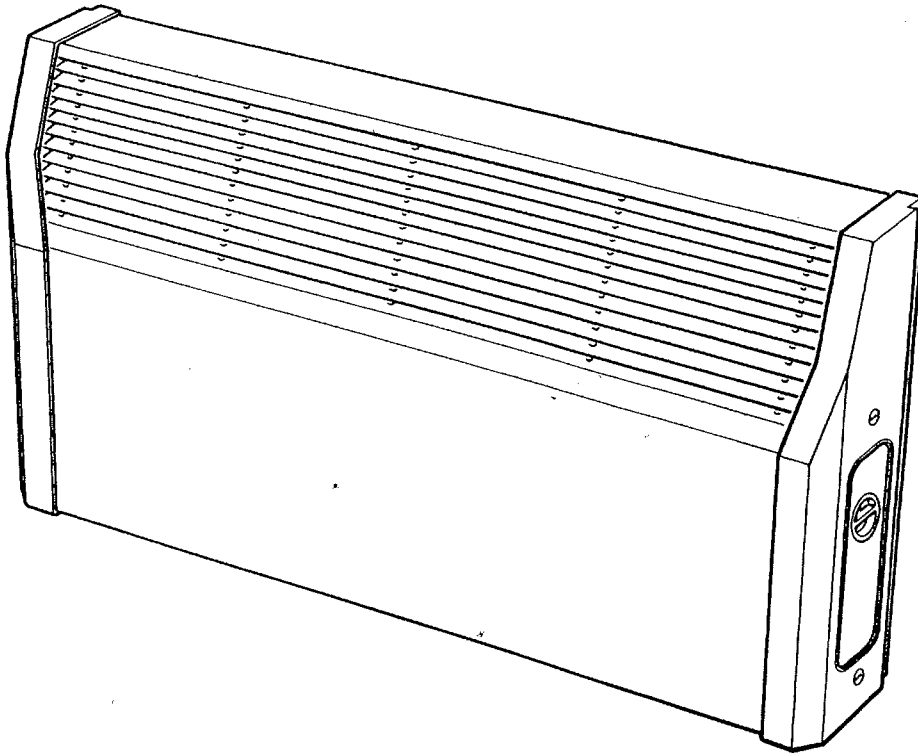


OMYSON
CONVECTORS

LO-LINE HEATER-COOLER FAN CONVECTOR

Models:- 19 - 15, 14 - 10, 9 - 6, 6 - 4



INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS

PLEASE READ THESE INSTRUCTIONS THOROUGHLY BEFORE BEGINNING INSTALLATION
LEAVE THESE INSTRUCTIONS WITH THE USER



Tested to UL and CSA Standards

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1. SPECIFICATION PERFORMANCE DATA

Heating performance data

Model	Motor power (Watts)	Water content (pints)	Fan speed	Maximum heat output (Btu/h) with entering air temperature 65°F, and entering water temperature (°F) as below									
				110°	120°	130°	140°	150°	160°	170°	180°	190°	200°
19 - 15	60	1.16	Boost	8715	10560	12392	14212	16021	17821	19613	21398	23176	24948
			Medium	7026	8513	9989	11454	12912	14361	15805	17242	18674	20101
			Low	5647	6841	8027	9204	10374	11539	12698	13852	15002	16148
14 - 10	60	0.89	Boost	7118	8624	10118	11602	13077	14544	16004	17459	18908	20352
			Medium	5812	7041	8260	9471	10674	11872	13063	14250	15432	16610
			Low	4846	5870	6885	7893	8896	9893	10885	11873	12857	13838
9 - 6	40	0.58	Boost	4637	5617	6589	7554	8513	9468	10417	11363	12305	13244
			Medium	4196	5081	5959	6831	7698	8559	9417	10271	11122	11969
			Low	3642	4410	5173	5930	6682	7431	8175	8917	9656	10392
6 - 4	25	0.44	Boost	2815	3418	4017	4614	5207	5799	6388	6976	7562	8146
			Medium	2382	2885	3383	3878	4370	4859	5345	5830	6313	6793
			Low	2040	2470	2896	3319	3739	4157	4572	4986	5398	5809

Note: Performance figures for heating and cooling based on a flow rate of 3 GPM. For a flow rate of 1 GPM multiply by a factor of 0.87.

Cooling performance data (figures @ 50% RH)

Model	Fan speed	Cooling performance (Btu/h)					
		Air - mean water temperature difference (°F)					
		25°		35°		45°	
		Tot.	Sens.	Tot.	Sens.	Tot.	Sens.
19 - 15	Boost	5498	4478	9092	5353	13236	6117
	Medium	5197	4080	8577	4962	12468	5743
	Low	4672	3703	7686	4413	11147	5031
14 - 10	Boost	4215	3561	6913	4338	10005	5027
	Medium	3448	2948	5631	3532	8122	4044
	Low	2871	2508	4668	3084	6712	3599
9 - 6	Boost	2275	1854	3687	2575	5288	3290
	Medium	1896	1676	3064	1986	4386	2255
	Low	1557	1390	2512	1661	3593	1898
6 - 4	Boost	1547	1247	2497	1732	3571	2214
	Medium	1204	1090	1941	1334	2772	1552
	Low	980	895	1577	1111	2250	1305

Unpacked weight

Model	lb
6 - 4	16.5
9 - 6	21.0
14 - 10	30.0
19 - 15	35.0

Approximate hydraulic resistance through fan convectors

Flow rate (GPM)	Model 6 - 4 (ft wg)	Model 9 - 6 (ft wg)	Model 14 - 10 (ft wg)	Model 19 - 15 (ft wg)
1	0.9	1.1	1.3	1.4
3	5.91	7.05	7.95	8.41

Maximum working pressure: 145 psi
 Water connections: $\frac{5}{8}$ in. compression
 Electrical supply: 110V AC 60Hz

2. APPLICATION

Myson Lo-Line fan convectors are designed to be used on a two pipe system or as a stand alone zone. Inadequate water flow will significantly reduce performance. Check the hydraulic resistance table for pump selection information. On combined heating and cooling systems, provision must be made for isolating one service when the other is in operation.

3. SELECTION

It is recommended that the system designer/installer choose a model with an output that is capable of maintaining the calculated heat loss of the room when operating at the 'Low' fan speed setting. Care should be taken to use the column with the appropriate system water temperature. Sizing based on the 'Low' fan speed setting will enable the 'Boost' speed to be used for increased performance during more extreme weather conditions.

Note: As all Lo-Line units can be thermostatically controlled, oversizing will not lead to uneconomic running.

4. DIMENSIONS

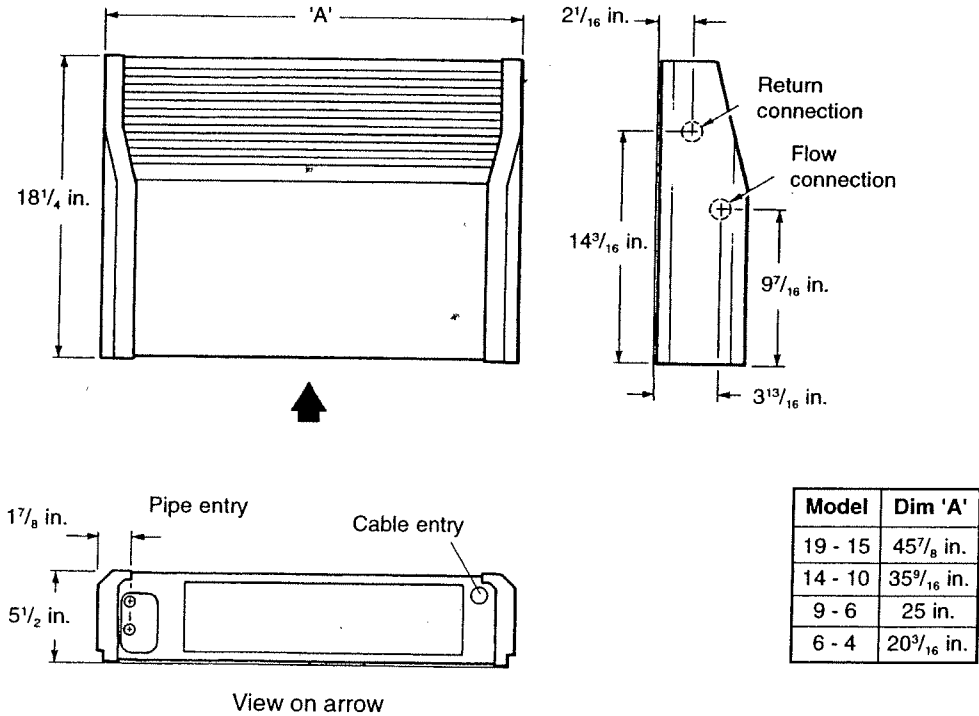


Fig. 1

5. LOCATION

Lo-Line units may be fixed to the most convenient wall. The minimum distance from the underside of the unit to the floor is 6 in. The most effective position is centrally on a long wall, but if a room is excessively long it may be preferable to fit a smaller model at either end rather than one large unit.

For cooling applications, the need for disposal of condensate may influence the position of the unit.

For the quietest fan operation, the wall to which the unit is fixed should be solid and robust. Flimsy partitions will promote vibration.

6. INSTALLATION

Beware of sharp edges when carrying out installation and maintenance procedures.

6.1. Unpack the unit

1. Unpack the unit and lay it carefully on its back, taking care not to damage the flooring. Do not discard or damage the carton.
2. The correct isolating valves are supplied loose with the unit. The valves are of the compression type and will accept $\frac{5}{8}$ in. copper tube.

6.2. Prepare the wall

1. Cut the mounting template from the rear of the cardboard carton (where provided), or refer to Fig. 2 for the position of the mounting holes.
2. Position the template on the wall in the desired position, ensuring there is a clearance of at least 6 in. from the floor to the solid line on the lower edge of the template. Ensure the template is level and mark the hole positions through the template.
3. Remove the template and drill and plug the four holes to accept No.8 x $1\frac{1}{2}$ in. round head woodscrews. Insert the screws (not supplied) and leave approximately $\frac{3}{8}$ in. of the screw projecting from the wall.

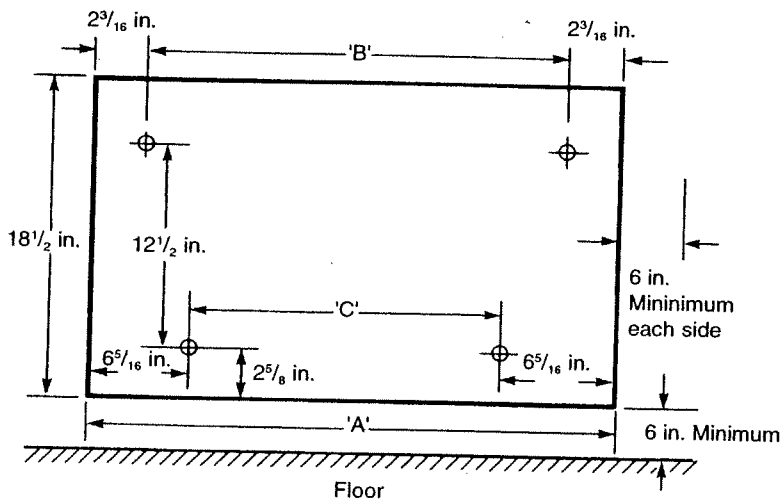


Fig. 2

Model	Dim 'A'	Dim 'B'	Dim 'C'
19 - 15	45 $\frac{7}{8}$ in.	41 $\frac{7}{16}$ in.	33 $\frac{3}{16}$ in.
14 - 10	35 $\frac{9}{16}$ in.	31 $\frac{1}{8}$ in.	22 $\frac{7}{8}$ in.
9 - 6	25 in.	20 $\frac{9}{16}$ in.	12 $\frac{5}{16}$ in.
6 - 4	20 $\frac{3}{16}$ in.	15 $\frac{13}{16}$ in.	7 $\frac{1}{2}$ in.

6.3. Water connections

If the pipes are to be brought up from the floor ensure they are in the correct position, see Fig 1. Note that the dimensions shown are from the wall and **not** the skirting board. It may be necessary to notch exceptionally thick skirting boards. Pipe entry may, if desirable, be made through the back of the chassis panel by passing the flow and return pipes through the wall.

To ensure effective venting of the heat exchanger the flow pipe should be connected to the bottom connection of the heat exchanger, see Fig. 1.

For cooling applications with chilled water, provision must be made for condensate disposal, in accordance with any local Regulations.

A heat exchanger condensate drain is fitted into the bottom of the chassis and should be connected to a $\frac{5}{8}$ in. drain pipe, see Fig. 3.

6.4. Fit the unit to the wall and make water connections

1. Remove the screws from the plastic trim at both ends of the unit. Pull the trim off the ends of the unit then remove the screws securing the cover to the chassis and remove the cover, see Fig. 4.
2. Fit the isolating valves to the heat exchanger using a small amount of sealant, see Fig. 5.
3. Locate the chassis over the four fixing screws. Make the pipe connections and secure the unit to the wall by tightening the four fixing screws. If the mounting wall is uneven, it may be necessary to use some packing.

When mounted on the wall the top of the chassis should be level. It is important that the right hand end is **not** lower than the left hand end.

Note: External pipework carrying chilled water **must** be insulated. Use a suitable sealant as necessary, to ensure that condensate does not spill or leak.

4. Turn on the water supply to the system and fully open both isolating valves on the unit.
5. Vent air from the heat exchanger by unscrewing the air bleed valve positioned in the top angular surface of the chassis. Do not unscrew the valve more than two turns. Close the valve and check for leaks.

Caution: Under no circumstances exert pressure on the fan wheel and heat exchanger as this could cause permanent damage and impair the performance of the unit. Under no circumstances must any electrical components be tampered with.

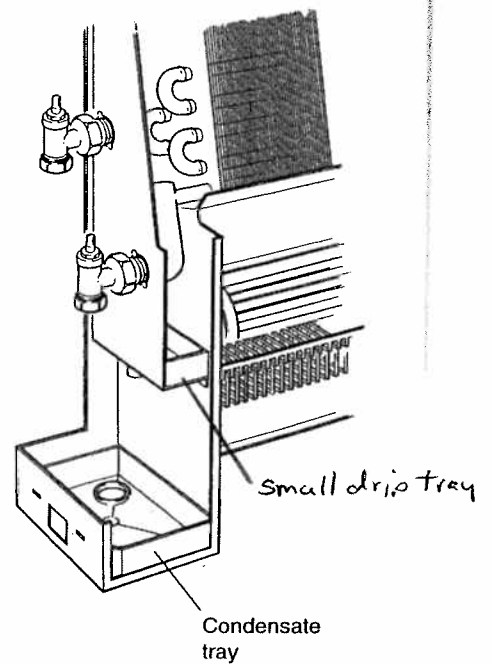


Fig. 3

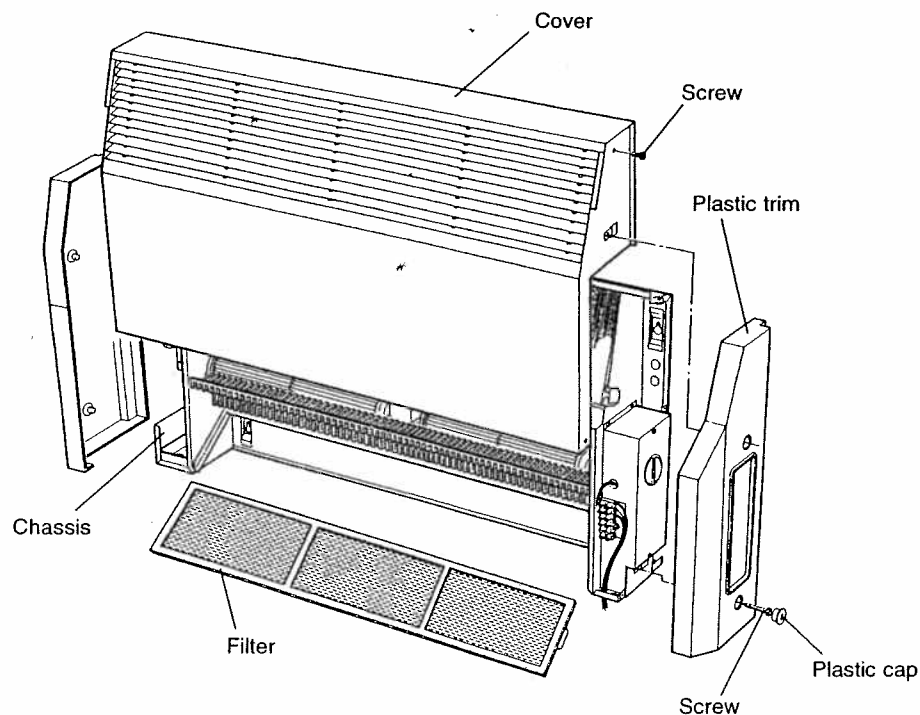


Fig. 4

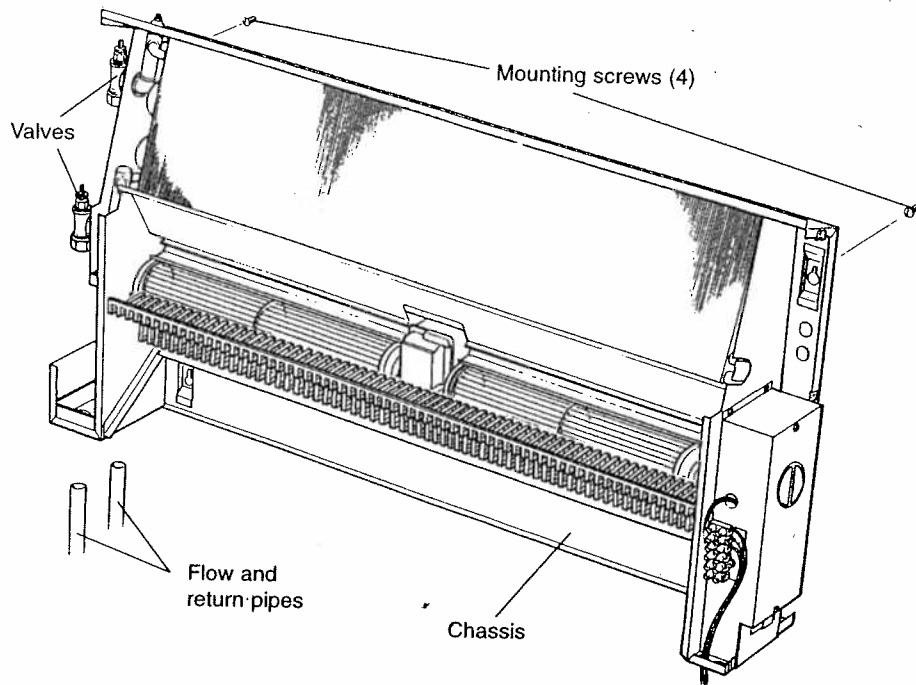


Fig. 5

7. ELECTRICAL CONNECTION

The electrical installation must comply with State or Local codes.

7.1. Power connection

CAUTION: Power supply cables must be 18 AWG minimum.
Power supply cables must be rated at 75°C minimum.

A $\frac{7}{8}$ in. diameter cable entry hole is provided in the base of the unit (see Fig. 1) for a BX or Romex connector, with an alternative entry in the rear of the chassis. A blanking plug is provided which **must** be fitted to whichever cable entry hole is not used.

Connect the supply to the terminal block as follows:-

- Connector marked L - Connect to Hot 110 V AC 60 Hz
- Connector marked N - Connect to Neutral
- Connector marked G - Connect to Ground

See Wiring diagram, page 9.

7.2. Room thermostat

If a room thermostat is required, this should be wired so as to switch the supply to the unit. The thermostat must be of the reverse acting type to operate in both heating and cooling modes.

Room temperature is controlled by the remote thermostat and the fan speed is selected by the three position switch on the fan convector.

As an alternative, a thermostat with three position fan speed selector may be used.

If this type of control is being fitted, remove and discard the yellow, red and blue wires connecting the fan speed switch and the terminal block on the unit.

Connect the remote thermostat and control as follows:-

- Maximum speed - Connect to Blue position
- Medium speed - Connect to Red position
- Low speed - Connect to Yellow position
- Neutral - Connect to N position
- Ground - Connect to G position

The fan speed switch on the unit becomes inoperative.

8. COMPLETION

1. Replace the cover and secure in position using the fixing screws previously removed. Push the plastic end trims into position, securing them using the screws previously removed.

Push the plastic caps (supplied) into the holes in the end trims to cover the screw heads.

2. The filter can now be fitted, see Fig. 6. Slide the filter up into the channel inside the back of the unit (1) then lift the front of the filter against the guides at each end of the chassis and slide the filter forwards to rest against the cover (2). A small handle is moulded into each end of the filter to assist removal/replacement.

To remove the filter, see Fig. 7. Slide it up towards the back of the unit (1) then slide the filter forwards and down out of the unit (2).

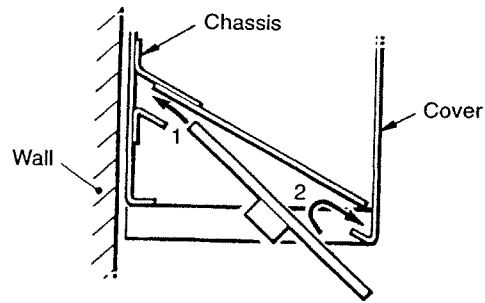


Fig. 6

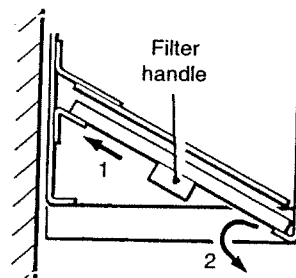


Fig. 7

9. OPERATING INSTRUCTIONS

9.1. Winter use - for heating

1. Close the cooling water system.
2. Open the heating water system
3. Switch on the electricity supply to the unit.
4. If a room thermostat is fitted, set it to a high position. The fan will now run.
5. Set the fan speed control to the required speed, either on the unit or at the thermostat (see section 7.2).
6. Allow the room temperature to reach the required level. Turn the setting of the thermostat down slowly until the fan stops. The unit is now set to maintain this temperature.

Further adjustments can be made as necessary.

If the required room temperature cannot be attained, it could indicate either incorrect water temperature or insufficient water flow. Raise the boiler temperature. If this fails to improve the situation, consult your installer as the system may need to be balanced or otherwise corrected.

9.2. Summer use - for cooling

1. Close the heating system and isolate any other heat emitters.
2. Open the cooling water system.
3. Switch on the electricity supply to the unit and adjust the thermostat and fan speed as described in section 9.1.

9.3. Time switch control

It is normal for a heating or cooling system to be controlled by a programmer or time switch.

It is recommended that the fan convector is wired to respond to the time switch. Under such control the fan will stop when the system is switched off. It will automatically restart, if left in an operating position, when the system is restarted.

10. TAMPER PROOF COVER

The tamper proof cover supplied with the unit is intended for use **after** the unit has been installed and commissioned. When the controls have been set to the desired position, the use of the cover will ensure the controls are not interfered with.

1. Remove the protective packaging from the cover.
2. When the unit is fully assembled and the controls set, fit the tamper proof cover using the screw provided, see Fig. 8.

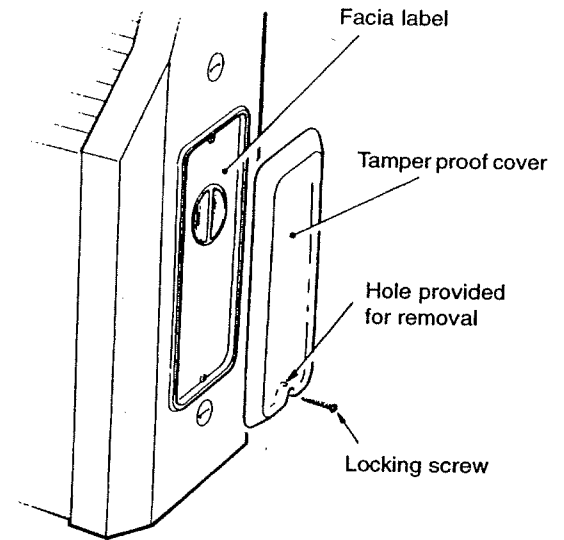


Fig. 8

11. MAINTENANCE

Routine user maintenance is limited to external cleaning of the unit and occasional cleaning of the filter. We do not recommend the user to undertake any further servicing.

11.1. External cleaning

With the electricity supply isolated, the outer case may be wiped over with warm water and mild detergent. Take care to avoid water entering the grilles and control panel. Ensure the case is dry before switching on.

11.2. Filter cleaning

The filter is positioned in the base of the unit and can be removed as follows:-

1. Isolate the electricity supply.
2. To remove the filter, see Fig. 7. Slide it up towards the back of the unit (1) then slide the filter forwards and down out of the unit (2). A small handle is moulded into each end of the filter to assist removal/replacement.
3. Gently tap out any loose dirt, then if required, the filter may be washed in warm water with a mild detergent. Shake gently after washing to remove excess water and allow to dry.
4. To replace the filter, see Fig. 6. Slide the filter up into the channel inside the back of the unit (1) then lift the front of the filter against the guides at each end of the chassis and slide the filter forwards to rest against the cover (2).

The regularity of cleaning the filter will depend on the particular conditions and it may be found that the filter requires more, or less frequent cleaning. This can only be ascertained after a few months of operating the unit.

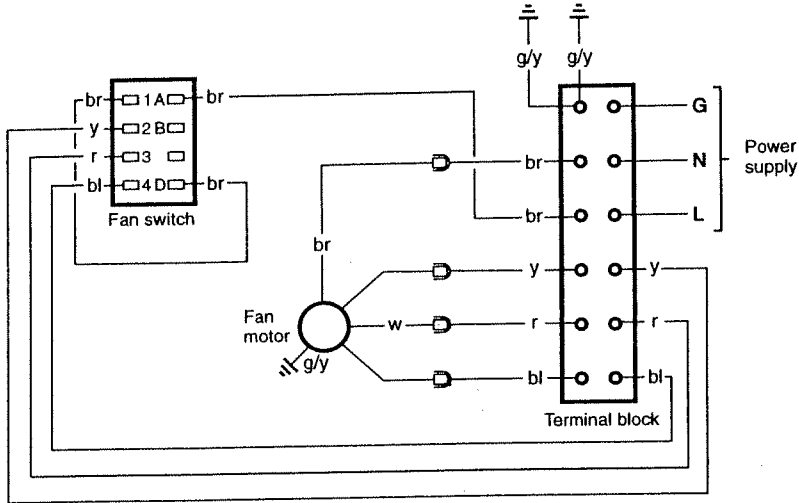
Note: On no account must the filter be allowed to become heavily clogged with lint and dirt as this will impair the efficiency of the unit, and may cause damage to the fan motor.

11.3. Annual service

To obtain maximum efficiency from the unit it is recommended that it be serviced annually. Please contact Myson Inc. at the address given on the back page.

12. WIRING DIAGRAMS

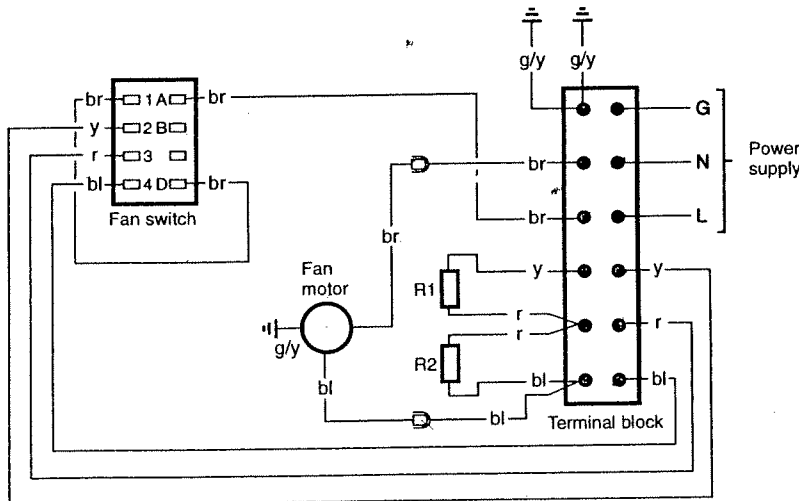
Lo-Line 9 - 6 and 6 - 4 models



Colour code

bl - Blue
 br - Brown
 g/y - Green/Yellow
 y - Yellow
 w - White
 r - Red

Lo-Line 19 - 15 and 14 - 10 models



Model	Resistor R1	Resistor R2
19 - 15	15 Ω	15 Ω
14 - 10	22 Ω	22 Ω