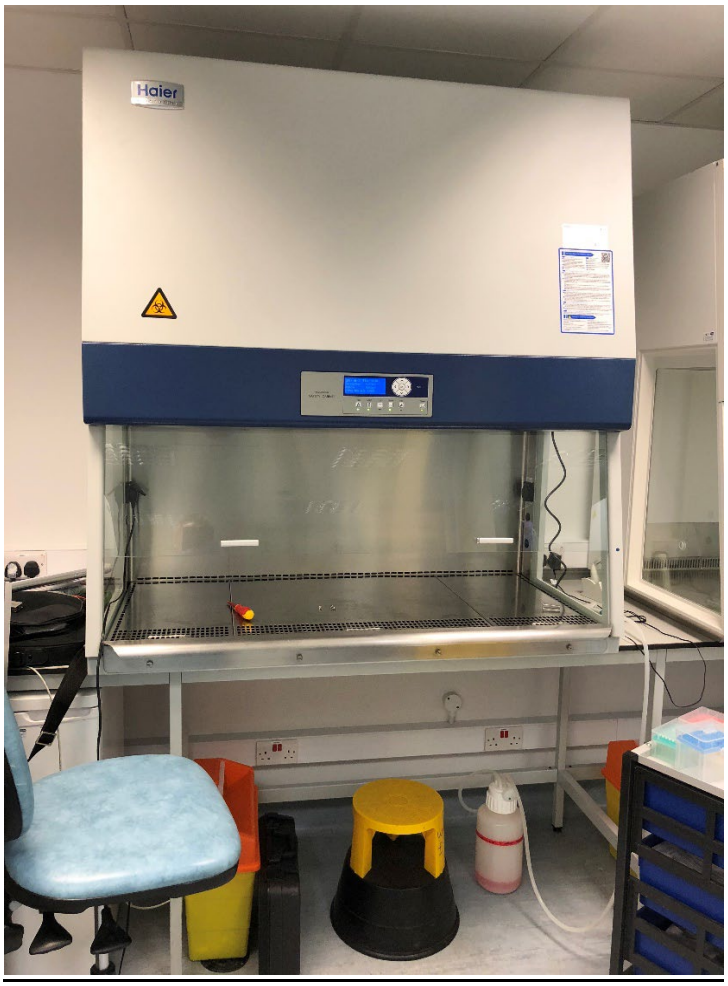
Set up of a Haier Class II MBSC V2.0
Product model: HR1200-IIA2-D and HR1200-IIA2



Testing notes

1. **This cabinet is being imported from China.**
2. **Single exhaust filter model HR900/1200/1500 – example HR1200 IIA2 (see label on fascia). Usually has solid sides.**
3. **Double exhaust filter model HR1200 IIA2-D (only one size)**
4. **Front doesn't seal for fumigation, it could be taped up but that would be tricky.**
5. **Scanning of the first hepa filter clean face looks not to be possible. The filters are tested by connecting to pipes under the work surface so an average scan is the only possibility.**

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Switching on/off

If the cabinet if fully powered off the led under the power button will be red. To turn on press the power button for 5 seconds, the led should then turn green. Raise the sash to the level of the blue dot on the right side of the sash. The cabinet then goes through a warm up sequence for 3 mins. The flows should then be displayed on the home screen.

The cabinet flows stop when the sash is lowered into the closed position.

Setting the airflow in standard or smart

The cabinet can be set up to run auto flow mode (smart mode) or fixed flow mode (standard). We have found the airflows to be unstable if the cabinet is set in smart mode which is automatic flow control. If the cabinet is set in standard mode the flows are fixed and stable. An easy check to see if the cabinet is in smart mode is to look for outline of a head in the top right corner of the run screen.

Method of changing mode

Set the cabinet running

Press Spanner, OK and Right arrow together for 5 secs

Enter the pass code 2012 using the arrow and ok keys

This is now in administrator mode

Scroll down using the down arrow until ‘user settings’ is located and press ‘ok’

Scroll down until “Mode” and press ‘ok’

Move using the left/right arrows till over SMART/STD then using arrows set to ‘STD’

Scroll down until you get to return and press ‘ok’

This is now back in administrator mode. <u>If the cabinet keeps defaulting to smart mode reset the power on the cabinet.</u>

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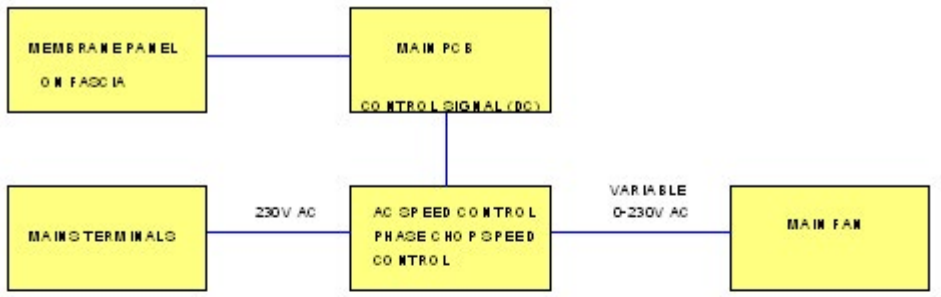
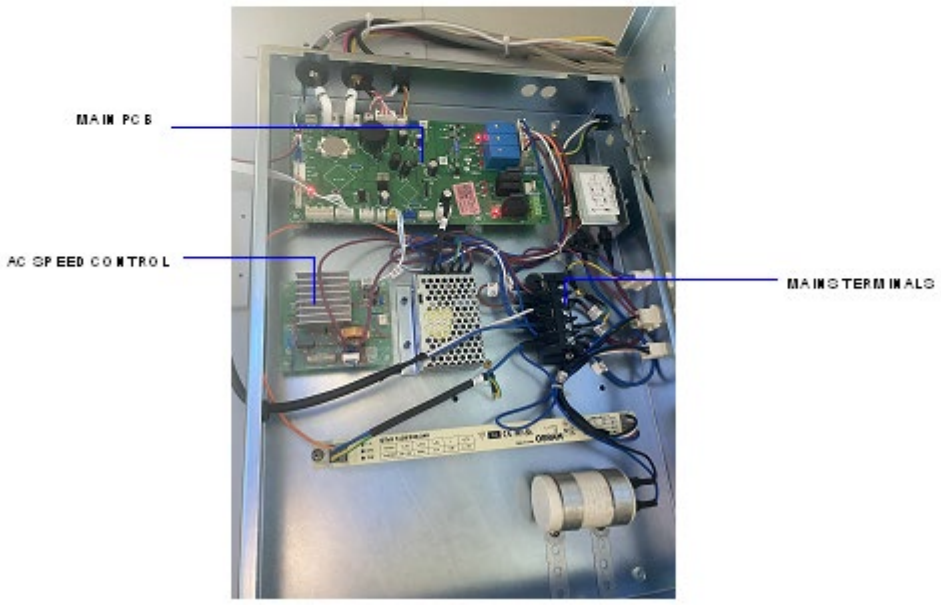
Setting Fan speed single filter model

This type of cabinet only has one fan, the airflow between exhaust and downflow is balanced via slider on the top of the cabinet.





In administrator mode scroll down to ‘fan setup’ and press ‘ok’

In that same menu scroll down to AC INT FAN GEAR and this value can also be 0-125 and this represents the exhaust fan speed. The lower the number = higher fan speed (it works backwards)

Using the arrows and ok make any adjustments as required.

Scroll down to exit and press ‘ok’

Safe to exit ‘YES’ and ‘Ok’

This is now back to the HOME screen

ONLY WHEN YOU HAVE PRESS EXIT WILL THE CHANGES TAKE EFFECT

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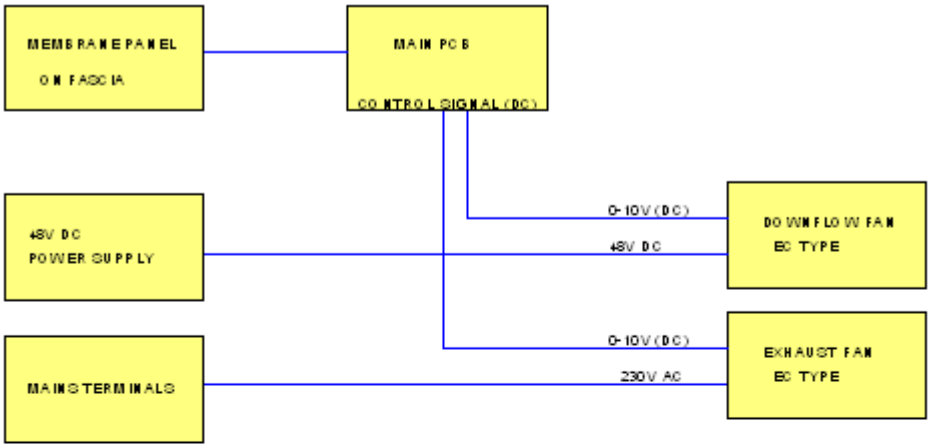
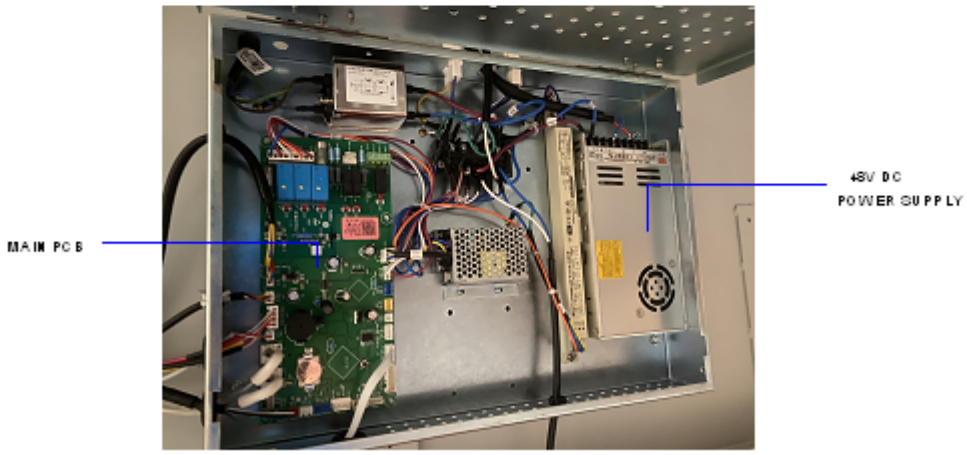
Setting Fan speed double filter model





In administrator mode scroll down to ‘fan setup’ and press ‘ok’

Scroll down to DC INT FAN PWM and the value can be 0-207. That represents the downflow fan speed.

A typical fan speed is **114**

Use the arrows and ok buttons to make the adjustments if required.

In that same menu scroll down to DC EXT FAN PWM and this value can also be 0-207 and this represents the exhaust fan speed

A typical value is **133**

Using the arrows and ok make any adjustments as required.

Scroll down to exit and press ‘ok’

Safe to exit ‘YES’ and ‘Ok’

This is now back to the HOME screen

ONLY WHEN YOU HAVE PRESS EXIT WILL THE CHANGES TAKE EFFECT

Setting up the alarm setpoints

Down flow setting of BIAS setpoint

Exit out of the administrator screen to the home screen, we need to measure the downflow and calculate the average

To enter the administrator screen again

Press Spanner OK and Right arrow together for 5 secs

Enter the pass code 2012 using the arrow and ok keys

You are now back in the administrator screen

Scroll down to ‘sensor value bias’ and press ok

Scroll down to ‘downflow bias’ and press ok. Adjust the value to the value as per example below.

Press ‘ok’

An example of how to do this is seen below:-

Measured df average = 0.40m/s

Screen reading = 0.36m/s

Current value in downflow bias = -0.05m/s

The screen reading needs to increase by 0.04m/s so the downflow bias value needs changing to -0.01m/s

Press ‘Ok’ and return to the Home screen to observe if screen reading is now displaying the actual reading .

Inflow setting of BIAS setpoint

To enter the administrator screen again

Press Spanner OK and Right arrow together for 5 secs

Enter the pass code 2012 using the arrow and ‘ok’ keys

You are now back in the administrator screen

Scroll down to ‘sensor value bias’ and press ‘ok’

Scroll down to **Inflow bias** and press ‘ok’. Adjust the value to the value as per example below.

Press ‘ok’

An example of how to do this is seen below:-

Measured Inflow average = 0.55m/s

Screen reading = 0.51m/s

Current value in Inflow bias = -0.08m/s

The screen reading needs to increase by 0.04m/s so the inflow bias needs changing to -0.04m/s

Return to the home screen and observe that the inflow screen reading is as per actual reading.

Downflow alarm setpoint is set 0.25-0.5 m/s

Inflow alarm setpoint 0.4 and 1.0 m/s

Setting up the filter life %

When setting up a new cabinet it is important to make sure the filter life percentage reads 100%. As the filter becomes dirty then the percentage will fall towards 0%. We have had instances where the user has called us back because this reading is not at or near to 100%. **Only set up the filter life % once the cabinet has had its airflows completely set up**. Note if you make changes to the filter life % reading then any changes move very slowly, the % reading can take a few minutes to settle so be patient. If you are returning to a cabinet with a fault be sure to read point 6 of the known faults.

The percentage is calculated by using the pressure reading +P which should be around +130Pa to +150Pa. This value is seen on the cabinet display when the right arrow key is pressed when on the normal running home screen. Make a note of this value.

Enter the administrator screen again

Press Spanner OK and Right arrow together for 5 secs

Enter the pass code 2012 using the arrow and ok keys

You are now back in the administrator screen

Scroll down to ‘Filter parameter setup’ and press ok

You will now see

Int res P0=125Pa (This is the pressure that represents 100% of +P seen when the right arrow is pressed in the home screen)

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Fin res P1=250Pa (This is the pressure that represents 0% of +P seen when the right arrow is pressed in the home screen).

This means that Haier believe the cabinet is capable of handling an additional 125Pa of dirty filter loading before the filter requires changing.

For ease of use though we will change this to 100Pa because the cabinet will be too noisy if we let it run at +125Pa.

When commissioning a new cabinet this would mean that if +P was at +148Pa with new filters then you would set the values as follows

Int res P0=148Pa

Fin res P1=248Pa (148+100)

The table below shows how the % is worked out if P0=125Pa and P1=225Pa

Intial	Final	Value +P	% reading
125	225	125	100
125	225	130	95
125	225	135	90
125	225	140	85
125	225	145	80
125	225	150	75
125	225	155	70
125	225	160	65
125	225	165	60
125	225	170	55
125	225	175	50
125	225	180	45
125	225	185	40
125	225	190	35
125	225	195	30
125	225	200	25
125	225	205	20
125	225	210	15
125	225	215	10
125	225	220	5
125	225	225	0

By using this method it is easy to select a pressure setting that can be tuned to give a desired reading when the filters are already several years old.

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IF YOU MAKE ANY CHANGES TO THE VALUES OF THE FILTER LIFE THEN THE DISPLAYED % ON THE HOME SCREEN DOES NOT CHANGE IMMEDIATELY AND CAN TAKE 10 MINUTES FOR THE READING TO CATCH UP.

Known faults

1. The cabinet switches into smart mode on its own – Fix by powering down the cabinet and then power it back up and put it into standard mode.
2. The display becomes difficult to view from certain angles and appears to have vertical lines through the text- Fix by pulling the insert cable to the display (to control board) and reassemble the mounting screws on the display board screws (note that the screws are not set too tight). If this does not work, you need to replace the display board itself.
3. The arm rests on the double filtered models are spot welded two piece and they can come apart – Fix by either drilling and bolting together using M4 fixings (supplied via our office) OR replace with new from Haier.
4. The stands can wobble – This problem mainly applies to the stands with a single piece back plate made out of folded steel. If they do wobble they need replacing.
5. Stand fixing bolts binding – The stands are bolted together and the threaded part is a welded insert. It is common to find that the weld has distorted the threads on the insert. This fixed by re-tapping the threads and replacing the fixings. If this happens on site it is best to try and raise or lower the stand by one step.
6. If it is difficult to set the filter life percentage or the filter life percentage value has suddenly changed, check the airtubes behind the fascia are not bent and also check the small silicon elbow that is fitted to the pressure sensors on the main PCB inside the control panel. The silicon elbows are known to split.