

USER GUIDE



7KW SPLIT AIR CON



WARNINGS

These instructions should be read by:

- The specifying engineer
- The installation engineer
- The user
- The service engineer



- Failure to follow these instructions may result in risk of personal injury or damage to the equipment
- Damage due to a failure to follow these instructions will invalidate the warranty
- The appliance must be serviced by qualified engineers in compliance with local regulations
- The appliance must be switched off and disconnected from the power supply before any work is carried out
- There are no user controls inside the appliance casing
- Do not place anything on top of the appliance
- An air gap of at least 300mm should be allowed at the front and rear of the unit to ensure a clear airflow
- Do not disconnect the appliance from the supply under load.
- For internal use only. Do not use out of doors
- Warning. Exhaust fan liable to start without notice
- Extension cables should be correctly rated for the load, fully unwound and never run through water or over sharp edges
- Always transport and store in an upright position. Maximum operating temperature 35 C
- Minimum operating temperature 15 C

SYSTEM DESCRIPTION

The MCWS250 is a watercooled split portable air conditioning unit. It is connected to a 13 Amp. 230Vac. 50Hz power supply and comes fitted with a fused uk moulded plug.

It is recommended that the supply to the machine should be protected by a 30mA RCD.

The system comprises a main indoor cooling unit, an external heat exchanger and a connecting hose assembly. The indoor cooling unit is fitted with an automatic condensate pump as standard.

The watercooled split system uses water as a medium to remove heat generated during the cooling process to the external heat exchanger and then to the air. It is therefore important that the external heat exchanger is not sited in the same area as the main indoor cooling unit.

The system has a minimum operating temperature of 10 C and a maximum operating temperature of 40 C and comes fitted with a digital thermostat. The watercooled split can run up to a maximum of 35M of connection hose. The external heat exchanger should never be sited more than 5M vertically above the main unit.

Protection for the refrigeration system is provided by automatic high and low pressure safety switches within the machine. The operation of these switches is indicated by lamps on the fascia panel.

The appliance is fitted with an automatic defrost which will periodically stop the fan on the external heat exchanger. This is indicated by the defrost lamp on the fascia panel.

During the normal cooling cycle the cooling lamp on the fascia panel will be illuminated.



INSTALLATION

Site the main cooling unit and external heat exchanger in the desired locations. Ensure the locking castors are engaged on the main unit before operation.

Connect the main cooling unit to the external heat exchanger and connect to the power supply:

The main cooling unit, external heat exchanger and connecting hose assembly are fitted with auto-sealing water connectors to minimise water loss during connection and disconnection. It should be noted that some water loss will occur. The female water connectors have a sliding ring which must be pulled back to make the connection. This will snap back into place once the connection has been made.

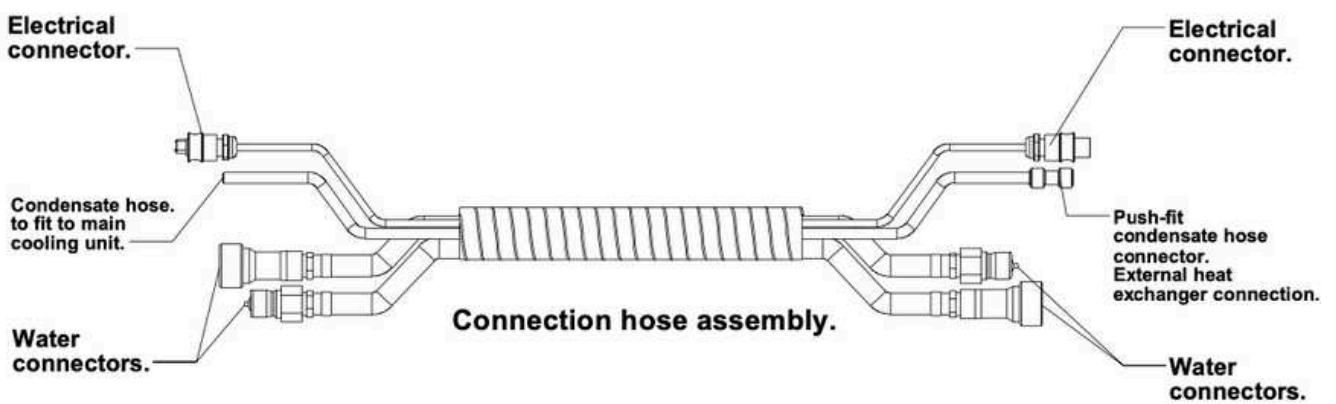
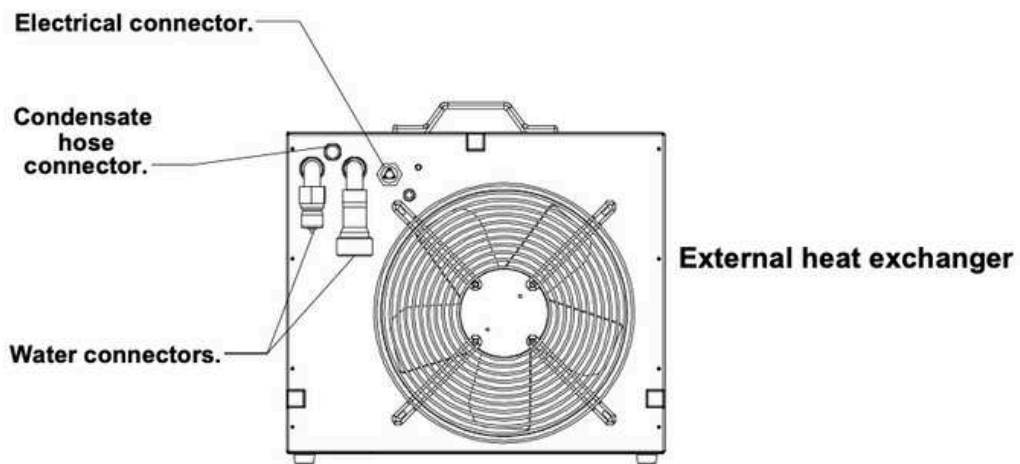
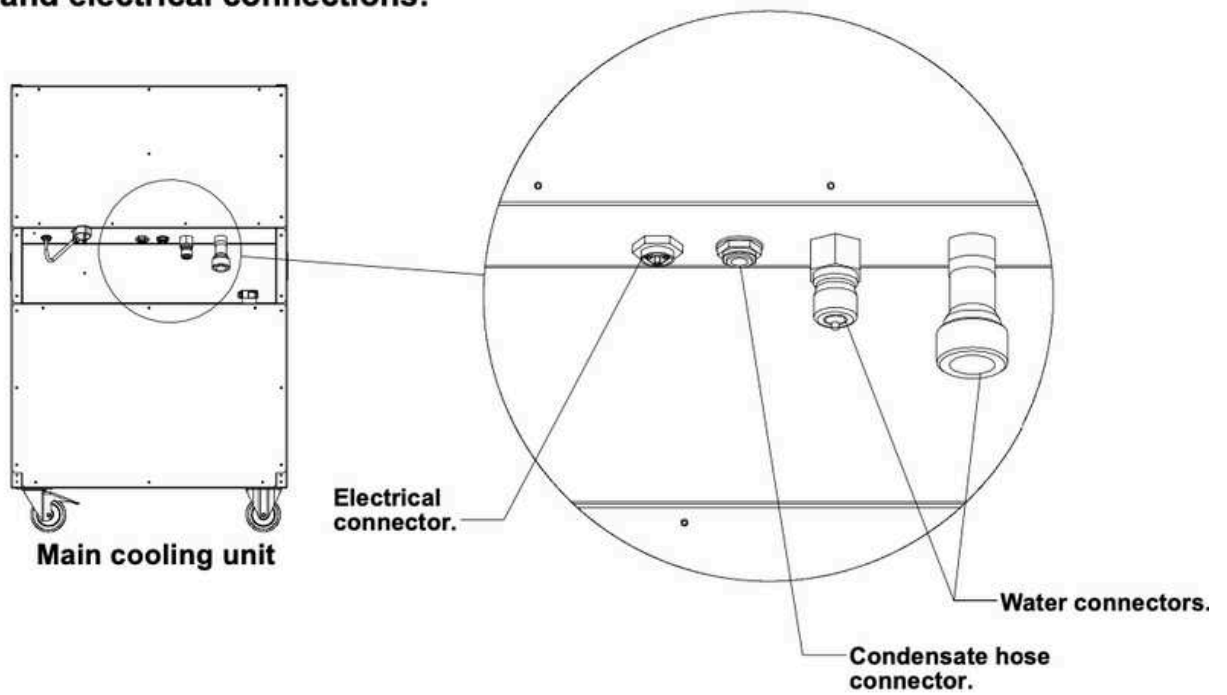
- The water connectors are situated at the rear of the main cooling unit.
- Fit the water connectors to the main unit.
- Fit the electrical connector to the main unit.
- Fit the clear condensate hose into the push-fit connector on the main unit.
- Run the connecting hose assembly to the external heat exchanger in as smooth a run as possible, avoiding kinks and possible restrictions to water flow to a maximum of 35M.
- Fit the water connectors to the external heat exchanger.
- Fit the electrical connector to the external heat exchanger.
- Fit the condensate clear hose to the hose on the external heat exchanger.

NOTE: MULTIPLE CONNECTION HOSE ASSEMBLIES CAN BE RUN IN SERIES SHOULD THIS BE REQUIRED TO A MAXIMUM OF 35M. TO AVOID LEAKS CHECK THAT ALL CONNECTIONS ARE FULLY HOME.

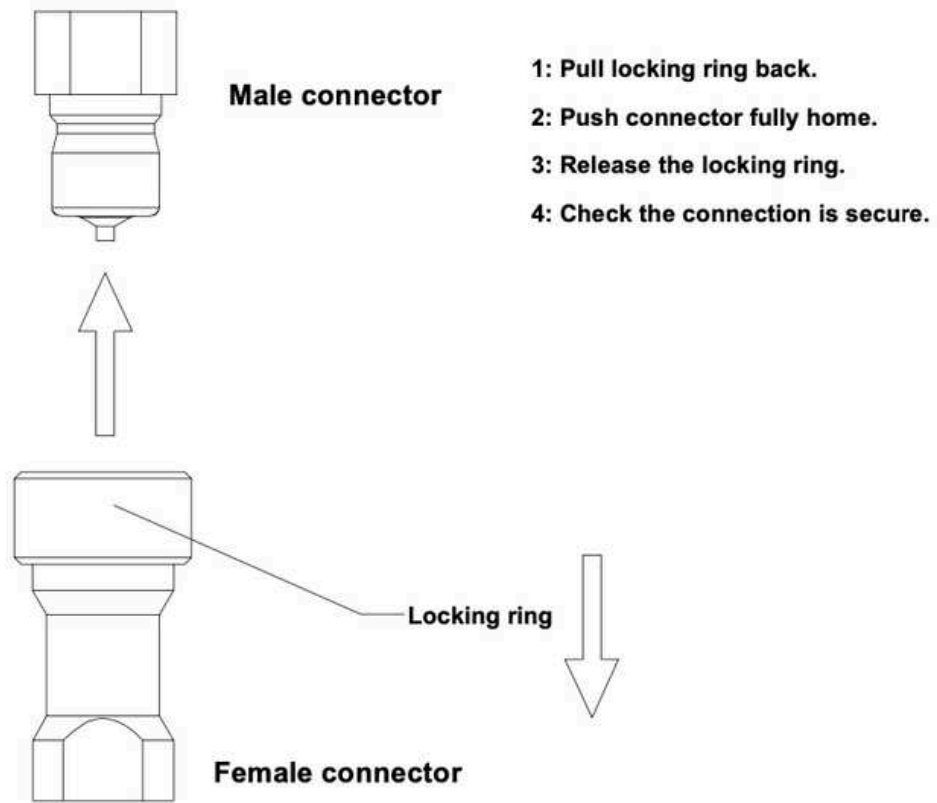
- Connect the mains lead to the power supply and check that the power supply lamp is illuminated.



Water and electrical connections:



Auto-sealing water connectors:



OPERATION

- Turn the fan switch from 0 to 1 to start the fans on the main cooling unit. Set the fans to the desired speed using the 3 position rocker switch.
- Turn the Cooling switch from 0 to 'I' to start the compressor and water pump. It should be noted that the compressor and pump will not start if the fans are not running. The compressor will not start if the ambient temperature is below 10 C. The compressor is fitted with a start delay timer and will not run for 3 minutes from activation of the cooling switch. This device is designed to protect
- The compressor from repeated start/stop cycles. The compressor delay is activated each time power to the compressor is switched off, be that at the wall socket, the rocker switches or the thermostat.
- Set the digital thermostat to the desired temperature (This is the 'set point'). During normal running the digital thermostat read-out shows the ambient temperature of the room.
- The MCWS250 is fitted with adjustable cold air louvres. Adjust these to your preferred angle.
- It should be noted that the appliance will start in defrost mode.

OPERATION

HOW TO SEE THE SET POINT:

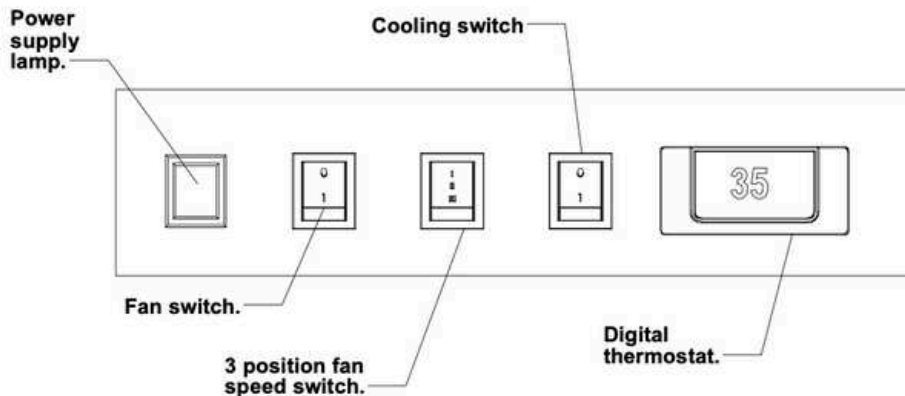
- The set point is the minimum temperature the air-conditioner will operate down to.
- To see the set point push and immediately release the SET key: the display will show the set point value.
- Push and immediately release the SET key or wait for 5 seconds to display the ambient room temperature.



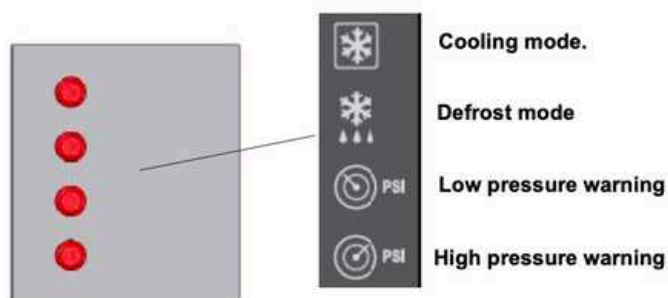
HOW TO CHANGE THE SET POINT:

- The appliance comes factory set at 10 C.
- Push the SET key for more than 2 seconds to change the set point value.
- The value of the set point will be displayed and the " C" LED starts blinking.
- To change the set point value push the up or down arrows within 10 seconds. The minimum set point is 10 C.
- To memorise the new set point value push SET key or wait for 10 seconds.

Control panel:



Lamp fascia panel:



- **Cooling mode:** This lamp will be illuminated during normal cooling when the compressor is running.
- **Defrost mode:** This lamp will be illuminated during a defrost cycle when the external heat exchanger fan will be switched off. The appliance will start in defrost mode before cooling commences.
- **Low pressure warning:** This lamp will be illuminated if there is a loss of refrigerant gas. The machine should not be operated if this lamp activates. This will automatically shut down the compressor.
- **High pressure warning:** This lamp will be illuminated when the refrigeration system pressure is too high. (see fault finding). This will automatically shut down the compressor.

TROUBLESHOOTING GUIDE:

PROBLEM	POSSIBLE CAUSE	SOLUTION
Machine fails to operate	Power Failure	Check power on lamp is illuminated.
		Check unit is connected to the power supply.
Check plug fuse for failure and correct 13A rating.		
Check Building circuit is not overloaded.		
	Condensate pump faulty	Check condensate pump. Replace if necessary.
Poor cooling performance.	Cooling not selected	Switch cooling on
	Thermostat set incorrectly. (Higher than ambient room temperature)	Reset the thermostat. Page6.
	Coils dirty	Clean coils. See Maintenance
	Filters dirty. (where fitted, optional extra)	Clean filters.
	Hose connection assembly over 35M	Reduce the length of the hose assembly.
	Air inlet grills obstructed	Remove obstruction.
	Water flow restricted	Check the connection hose assembly for kinks or blockages. Check all water connections are correctly fitted.
	Water pump failed	Check and replace pump.
	High or low pressure switch activated.	See below.
Water leaking.	Clogged drain hose to condensate pump.	Remove blockage and clean driptray.
	Water connections incorrectly fitted	Check all connections and make good.
	External heat exchanger located poorly	Move the unit to an area where draining condensate will not cause a problem.
	Damaged water hoses	Check all hoses and replace where necessary.
Compressor stops working.	Input voltage too low.	Check line voltage.
	High or low pressure switch activated.	See below.
High pressure warning lamp illuminated.	Water tank empty	Check tank and refill if necessary.
	Ambient room temperature above the maximum of 40°C.	Check temperature read-out on the digital thermostat. Do not run until room cools below 40°C.
	Water flow restricted	Check all water connections and ensure they are correct. Check hoses for signs of restrictions and re-route if necessary.
	Water pump failed	Check pump and replace.
	External heat exchanger fan faulty.	Check electrical connections on the hose connection assembly. Replace the fan if necessary.
Low pressure warning lamp illuminated.	Refrigerant loss.	Contact supplier.

