



BC Box Modification with Port Isolation

Installation Manual

Instructions for :-

BC Box Modification with Port Isolation

Models : KS8-CMB-P-V-G1 / KS8-CMB-P-V-GB1 / KS8-CMB-P-V-GA1 /
KS8-CMB-P-V-HA1 / KS8-CMB-P-V-HB1

For safe and correct use please read this installation manual and use in conjunction with the BC Box installation manual supplied by Mitsubishi Electric.

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The Mitsubishi Electric BC box should be installed in accordance with the installation instructions supplied with the unit.

Care should be taken, when installing the BC box with port isolation, to protect the fitted ball valves from damage.

DO NOT use the ball valves as handles for lifting or as mechanical support for the BC box.

BC box with port isolation



Safety Precautions

The below is a risk assessment taken out for installation of the BC Box Modification with Port Isolation:

Who might be affected?

Office Employees <input type="checkbox"/>	Contractors - Site Engineer <input checked="" type="checkbox"/>	Delivery Driver <input checked="" type="checkbox"/>	Public <input type="checkbox"/>
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Hazard	Action taken
Mitsubishi BC Box	Advisory - Wear gloves
Valve Bracket	Advisory - Wear gloves
Splinter from Wood	Advisory - Wear gloves
Manual Handling	Do not lift without assistance, use fork lift / pallet truck to transport to site location
Installation of BC Box	Lift with hoist into ceiling, follow guidelines in Mitsi City Multi Manual, wearing site PPE
Cut Tube	Advisory - Wear gloves
Brazing Pipes	Wear gloves, glasses, use wet cloth around brazing area
Brazing Alloy	Wear gloves, glasses, use wet cloth around brazing area
Pressure Test	Wear glasses, follow guidelines in Mitsi City Multi Manual
Cold / Hot Pipes	Recommendation of 1" 1/2 foam lagging around pipe/valve

Risk Assessment Conclusion

Acceptable - No further action, but ensure controls are maintaining

The above safety precautions need to be taken into consideration when installing the BC Box Modification with Port Isolation. Site PPE is to be worn as advised along with the recommendations set out above. Also take into consideration the Mitsubishi Electric BC Box City Multi Manual installation guide for further instructions.

BC Box with Port Isolation - Installation Instructions

When installing ball valves it is very important to note that when applying heat it should only be for a matter of seconds, not minutes.

For soft soldering - Use oxygen-acetylene or equivalent type heating torches.

For Silver Brazing - ONLY use an oxygen-acetylene heating torch capable of raising the temperature of the tube socket to the required brazing temperature within a time period of approximately one minute.

New Installation

IMPORTANT : Before installing the valve in the line, remove the schrader valve and turn the stem to the open position.

Recommended procedure for silver brazing to copper tubing

- Cut tube ends square. Remove burrs.
- Remove all grease and oil from joint area and clean the outside of the tube with emery cloth.
- Insert tube to full depth of connection socket to ensure proper fit. Withdraw tube half way out of the socket, apply brazing flux evenly over the tube and outside of the socket and reinsert tube.
- Wrap a wet cloth around the valve body and bonnet, but away from the socket to be brazed. With the torch adjusted to a reducing flame apply heat to the entire circumference of the tube over a distance of approximately 15mm to 50mm from the valve socket to expand the tube and carry the heat down inside the socket.
- Continue heating until the flux on the tube becomes liquid at which time the flame should be directed on the valve socket as well as the tube but pointed away from the valve body.
- When the flux has become very fluid and watery in appearance apply the brazing alloy against the heated tube starting at the bottom of the junction of the tube and valve socket. If the joint is at the proper temperature the brazing alloy will flow quickly around the tube and into the socket. If the alloy does not flow readily continue heating until the proper temperature is reached.
- Remove the flame as soon as the liquid brazing alloy has covered the entire joint and penetrated down to the socket. After a few seconds when the alloy has set, apply a water soaked cloth to the joint and to the entire valve to carry away excess heat as quickly as possible and remove residual flux.
- When the temperature has been lowered remove all excess flux using a wire brush if necessary.
- Fully open valves, ensure caps are refitted to Schrader valves and valve shaft.

Existing Operational System / Pipework

- If additional fan coils are to be fitted or other work carried out after the initial installation before making alterations ensure that both the relevant ball valves on the circuit to be worked on are fully closed.
- Connect gauge lines to the relevant Schrader valves and recover all refrigerant to F-Gas guidelines.
- Once works are carried out pressure test and fully evacuate the pipe lines to F-Gas guidelines.
- If additional pipework has been added to the liquid line additional refrigerant will need to be added at the outdoor unit. Please refer to the PURY City Multi service manual to calculate the additional quantity required.

BC Box with Port Isolation - Installation Instructions

Connecting to unused isolation valves on an existing system

- If additional fan coils are to be fitted or other work carried out after the initial installation before making alterations ensure that both the relevant ball valves on the circuit to be worked on are fully closed.
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- Remove all grease and oil from joint area and clean the outside of the tube with emery cloth.
- Insert tube to full depth of connection socket to ensure proper fit. Withdraw tube half way out of the socket, apply brazing flux evenly over the tube and outside of the socket and reinsert tube.
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- Once works are carried out pressure test and fully evacuate the pipe lines to F-Gas guidelines.
- Fully open valves, ensure caps are refitted to Schrader valves and valve shaft.
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BC Box with Port Isolation - Installation Instructions

Ball Valve Insulation

Ensure the Ball valves (High pressure liquid and Suction off the B/C box are insulated. We recommend 1" 1/2 Lagging to ensure coverage. As part of standard practice please insulate all exposed pipework, flares and valves. Please see example below:

Fig 1



Fig 2



Disclaimer

Warranty:

All products manufactured on behalf of Mitsubishi Electric UK are warranted against defective materials for a period of three years from the date of delivery to the original purchaser.

**Warning:**

Mitsubishi Electric UK assumes no liability for damages consequent to the user of this product. We reserve the right to change this manual at any time without notice. The information furnished by us is believed to be accurate and reliable. However, no responsibility is assumed by us for its use, nor for any infringements of patents or other rights of third parties resulting from its use.

Please be sure to put the contact address/telephone number
on this manual before handing it to the customer.



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