

7 initiative



Initiative 7: Installation & System Commissioning

Ensure that onsite installation continues the best practice that has been implemented into the specification process.

Ensure that installation Partners are fully trained and accredited to support policy.

Share intrinsic corporate knowledge with Partners and customers.

Installation and commissioning can be the moments of truth for air conditioning systems. Poor installation practice can lead to a loss of energy efficiency which will affect the system throughout its lifetime of use. If commissioning is not carefully considered, then the end users can be left to operate a system without any clear understanding of the correct procedures or most efficient settings.

Ensure that onsite installation continues the best practice that has been implemented into the specification process.

Mitsubishi Electric LES is committed to training its installer Partners to the highest level, ensuring that their work gives clients a highly effective and efficient cooling system for their building. The Company has established standards for installation and commissioning through its Partner Programme, and Partners can access training in the latest techniques and requirements as they need it.

The Partner Programme documentation contains comprehensive guidelines that installers should use when working with Mitsubishi Electric LES equipment. However, the Company also recommends five key principles that installers of its equipment should adhere to:

1. Keep pipe runs as short as possible

Keeping pipework to its minimum length possible will prevent large pressure drops and maintain duty at the evaporator coils. It also helps to return oil to the compressor.

2. Find the optimum pipe layout

Keep pipes as straight as possible, minimise lift and ensure adequate insulation.

3. Find the best angle

If it is necessary to use bends, then these must be kept to a minimum. Every bend causes a pressure drop and reduces capacity. If machine bends are not available, long radius bends should be used.

4. Ensure good air flow for the condenser

It is vital to avoid air flow restrictions. In cooling mode this can cause the head pressure to rise, resulting in decreased operating efficiency. In heating mode it creates a back pressure drop, and may even cause the condenser to go into premature defrost.

5. Think about operators and maintenance

When siting the condenser, consider any nearby heat source, noise considerations for neighbouring buildings as well as aesthetics. Also make sure that maintenance teams can access the equipment for efficient servicing.

Ensure that installation Partners are fully trained and accredited to support policy

Mitsubishi Electric LES expects its Installation Partners to be fully trained and accredited to support the Mitsubishi Electric LES standards. The accepted qualifications include:

- a. Safe Handling Certificate (C&G or CITB)
- b. Refrigeration/Air Conditioning Qualifications
- c. Refrigerant Audit System
- d. Member of Refrigeration Body
- e. Mitsubishi Electric LES Training

Mitsubishi Electric LES is recommending that its Partners become members of REFCOM. This organisation carries out a qualifications audit, which will help Mitsubishi Electric LES and its Partners identify any training gaps.

Share intrinsic corporate knowledge with Partners and customers

Mitsubishi Electric LES is committed to sharing knowledge with its Partners. The Company runs a series of regular seminars on industry issues, including legislation and technology. These accompany the popular Industry Guides, which are also downloadable free from the Mitsubishi Electric LES website.

Regular email updates and an annual Partner conference also ensure that the Company is spreading its industry knowledge and know-how across all its Partners.