APPLICATIONS NOTICE

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Form NS 006

TO: AUTHORISED DEALERS/DISTRIBUTORS
N.Z. APPROVED INSTALLERS
H.O., REG'L & AUST. MANAGERS
APPLIC. NOTICE GENERAL LIST

ISSUE NO. : 12/17

DATE : 1 December 2017
FROM : M Harris

SUBJECT: APPROVED INSTALLER REQUIREMENTS

UNITS: SPLIT SYSTEM RANGE

NOTE : This notice supersedes the now obsolete issue 01/04.
Applicable to new applications and existing Approved Installers from 1 January 2018.

To become accredited as a **temperzone Approved Installer** in New Zealand the company must have staff and equipment to meet the following criteria.

Qualifications

1. Recognised Trade Certificate or Apprenticeship in Refrigeration.

2. Limited electrical registration applicable to the air conditioning or refrigeration trade.

   Copies of certificates will be requested from at least one staff member to support the above and will be kept on file.

   In certain cases consideration may be given to the above requirement and a full company or personal CV may be requested.

3. Installers must have a good understanding of the equipment and ensure that the equipment being installed suits the application.

Equipment

4. Installers must have a well equipped workshop and/or mobile workshop.

5. Installers must have Gauge Manifold Sets with Gauges and Hoses suitable for R410A and R22.

6. Installer must have and use a good quality electronic leak detector and/or ultrasonic leak detector and/or ultrasonic leak detector, and proprietary soap solution for bubble tests

   The electronic leak detector may be one of the following types :

Caroma Suppression	5g/year to 100g/year
Heated Diode	"
Surface Reactor	"
Infra Red	1g/year or more
Mass Spectroscopy	"

   The leak detector must be of a type to detect HFC refrigerants including R134A, R404A, R407C and R410A. Halide Torch is no longer accepted as an alternative. It can of course still be used for existing R22 systems.

7. Installers must have and use a 2 stage vacuum pump with minimum 1.85 l/s (4 CFM) flow and capable of 100 microns held. This vacuum pump must have a back flow check valve.

8. Installers must have and use an electronic or analogue vacuum gauge for accurate measurements. Compound refrigerant gauges are not an acceptable alternative.

9. Installer must have electronic weighing scales for accurate measurement of a (liquid) charge. Charging cylinders are no longer an acceptable alternative though they can still be used on small R22 systems.

10. Installer must have and use a digital thermometer for accurate measurement of superheat and coil air on/off temperatures (a twin sensor type is recommended).

11. Installer must have and use Nitrogen (cylinders) flowing through pipework during brazing of pipe joints to prevent scale formation and to maintain cleanliness of system.

12. Installer must have and use, refrigerant recovery unit on system.

13. Installer must have clutch type flaring tool.

14. Installer must have and use recognised refrigeration pipe cutters and keep piping sealed after their use.

15. Installer must have and use electrical multi test device for measurement of voltage, amps and ohms.

Site Installation Inspection

16. General tidiness, neatness and cleanliness of pipework, wiring and installation if required.

17. Pipework to be adequately supported.

18. Drain lines to be 20 mm minimum diameter and have trap and vent fitted.

19. Suction lines must be insulated. Temperzone recommends that liquid lines also be insulated and on many models this is essential; refer Installation & Maintenance instructions specific to each model.

20. Sight glasses should not be fitted except for use as moisture indicators.

21. Indoor and Outdoor units to be suitably mounted taking into account vibration, noise, transmission, drainage, etc.

22. Line lengths, pipe sizing, traps, and other requirements to be as per split system piping requirements guide.

23. Ducting, supply and return air grilles to be of correct size to ensure sufficient air flow and throw and suitably placed. Ensure high percentage of return air.

Specific Installation Requirements

Installers are expected to carry out installation work in a tradesmanlike manner and specifically to adhere to the following requirements :

24. Items previously mentioned in clauses 14 to 22.

25. Brazing of pipe joints must be done with nitrogen flowing through pipes to ensure cleanliness of system and prevent scale formation.

26. The installer must read, understand and follow the installation instructions provided with the unit.

27. Systems with more than 20% fresh air introduction must have some form of protection for the unit when it operates on cooling cycle in low ambients i.e. head pressure control. Systems with more than 50% fresh air introduction must have protection and additional equipment as recommended by temperzone Engineering.

28. No warranty is applicable on split system installations if the line lengths exceed those allowed in the Split System Piping Requirements Guide or if any special requirements have not been followed. Problems associated with excessive line lengths can cause :

    a. Dramatic loss of performance
    b. Exceeding the pumping capacity of the compressor
    c. Poor oil return and loss of oil in compressor
    d. Exceed critical charge of compressor.

    These problems are more pronounced on the smaller single phase compressors.

29. Vertical suction risers to be fitted with swan neck traps at 5 metre intervals and must not exceed the differential heights stated in the Installation and Maintenance Instructions or Split System Installation Guide.

    Vertical suction risers should be the same size or one size smaller than the horizontal suction line size to maintain refrigerant velocity. Traps at top and bottom of suction risers are essential.