

5.0 Toolkit

It is essential that heat pump installation is carried out by a trained installer using the correct array of tools and equipment. The following lists the essential tools and equipment that are needed to successfully carry out the installation work.

Equipment/materials

- Copper pipe:
 - hard/soft-drawn (using hard-drawn is considered best practice because it is less likely to deflect or sag over time when compared to soft-drawn)
 - twin-insulated dehydrated
- Pipe insulation
- Brazing equipment
- Set of standard hand tools
- Pipe benders for each size of pipe being used
- Electrical cable
- De-burring tool
- Swaging set
- Flaring tools – correct tool for pipe diameter and wall thickness is required
- Oil (for flared joints – must be compatible with refrigerant)
- Wrenches
- Torque wrenches
- 120 x 25 x 0.5 mm galvanised mild steel (gms) straps
- 65 mm gms diameter pipe brackets
- 30 mm gms nails
- Condensate drainage pipe:
 - smooth, hard, PVC (best practice option)
 - flexible, ribbed
- Vinyl tape
- Electrical conduit
- Pipe cutters
- Electronic scales
- Digital thermometer
- Nitrogen gas cylinder with pressure gauge and manifold valve and flexible clear hose
- Leak testing solution
- Electronic leak tester (as back-up to leak testing solution)
- Vacuum pump with backflow prevention device
- Manifold set
- Hose adaptors
- Auto ignition gas torch
- Specific vacuum gauge
- Valve-core removal tool (8 mm (5/16") UNC for R-410A refrigerant)
- Tape measure
- Gas cylinder with refrigerant
- Charge hose and connector
- Charge valve (prevents gas from coming out of charge hose and unit when hose is removed)
- Compression or locked-ring jointing tool
- Recovery cylinder
- Safety glasses and ear protection