

# Refrigerant R-410a Guide

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**Before using this guide, read and understand the unit instructions. Safety dictates that you use a hard hat, safety goggles for the protection of your eyes, and heavy leather gloves to protect your hands and arms. Boiling refrigerant at atmospheric pressure will freeze your eyes and skin if it inadvertently leaks out of the system.**

- R-410a refrigerant (also known as Puron, Prozone, etc.) operates at 50-70 percent higher pressures than R-22. Be sure that servicing equipment and replacement components are designed to operate with R-410a
- R-410a refrigerant cylinders are rose colored.
- Recovery cylinder service pressure rating must be 400 psig, DOT 4BA400 or DOT BW400.
- R-410a systems should be charged with liquid refrigerant. Use a commercial type metering device in the manifold hose when charging into suction line with compressor operating. Do not put liquid into the suction line without first running it through a metering device. Compressor damage may result.
- Manifold sets should be 700 psig high side and 180 psig low side with 550 psig low-side retard. • Use hoses with 700 psig service pressure rating.
- Leak detectors should be designed to detect HFC refrigerant.
- R-410a , as with other HFCs, is only compatible with POE oils.
- Do not use liquid-line filter driers with rated working pressures less than 600 psig.
- Do not leave R-410a suction line filter driers in the line longer than 72 hours.
- Do not install a suction-line filter drier in liquid line.
- POE oils absorb moisture rapidly. Do not expose oil to the atmosphere.
- Vacuum pumps will not remove moisture from oil so don't leave the system open to the atmosphere.
- POE Oils may cause damage to certain plastics and roofing materials. Some plastic condensing unit pads may be vulnerable to POE oils.
- Wrap all filter driers and service valves with wet cloth when brazing. Do not use soft solders.
- A factory approved liquid-line filter drier is required on every unit.

- Do NOT use an R-22 TXV.
- If indoor unit is equipped with an R-22 TXV, it must be changed to a R-410a TXV. • Never open system to atmosphere while it is under a vacuum. Relieve a vacuum with dry nitrogen.
- When system must be opened for service, recover refrigerant, evacuate then break vacuum with dry nitrogen and replace filter driers. Evacuate to 500 microns prior to recharging.
- Do not vent R-410a into the atmosphere.
- Do not use capillary tube coils unless the coil was specifically designed to utilize R-410a.
- Read, understand, and observe all warnings, cautions, and bold text in the manufacturer's instructions.
- According to some major manufacturers, if you have a leak in a R-410a system you can "top off" the charge with liquid. Any fractionation caused by molecules of the different refrigerants leaking at differing rates has been found to be insignificant. Follow the manufacturers instructions for the system you are working on.

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