

Frequently Asked Questions

WHAT IS THE INTENDED APPLICATION FOR RCS FITTINGS?

RCS Mechanically attached fittings are high-pressure flame-less type fittings intended for use on refrigeration piping systems with all refrigerants and refrigerant oils except Ammonia (R717) and Methyl Chloride (R40). Do not use for Refrigerants R717 or R40.

CAN THE RCS FITTINGS BE USED ON FLUIDS OTHER THAN REFRIGERANTS, SUCH AS WATER, MEDICAL GAS, OR COMPRESSED AIR?

No, the fittings should only be used on clean, dehydrated closed refrigerant piping systems.

WHAT IS THE PRESSURE RATING FOR RCS FITTINGS?

RCS fittings are ETL listed for a maximum working pressure of 1,167 psi. The fittings are tested and rated in accordance to UL-207 Standard for use in the USA and Canada.

DO YOU NEED TO DERATE THE WORKING PRESSURE OF THE INSTALLED TUBING?

No, the copper tube working pressure does not need to be de-rated to the annealed copper working pressure (required for brazed copper piping systems). The working pressure of the installed system is equal to the working pressure rating of the tubing (based on size, wall thickness, and temper) up to a maximum working pressure of 1,167 psi.

WHAT PIPING MATERIAL IS COMPATIBLE WITH RCS FITTINGS?

RCS Mechanically Attached Fittings are compatible with copper tube and pipe. For refrigerant use, the pipe/tube should be C12200 phosphorus-deoxidized, high residual phosphor (DHP) tube.

CAN RCS FITTINGS BE USED IN HAZARDOUS ENVIRONMENT?

No. RCS fittings are intended for use on refrigeration piping system and therefore required to be insulated to prevent from moisture intrusion. All RCS fittings installed outdoors or in humid environments require the installation of a protective heat shrink, cold shrink, or other impervious covering material.

DO YOU NEED NITROGEN PURGE WHEN ASSEMBLING REFRIGERATION PIPING WITH RCS FITTINGS?

No. RCS fittings allow for the installation of refrigerant piping without the need for heat. Therefore, the tubing does not need nitrogen purge (prevents copper oxide formation during brazing).

WHAT PIPING SIZES ARE ACCOMMODATED BY RCS FITTINGS?

RCS fittings are available for standard copper tube sizes for 1/4" through 1-5/8" outside diameter with ACR Type L copper wall thickness per ASTM B280.

CAN RCS FITTINGS BE USED ON "SOFT" COPPER TUBING?

Yes, RCS fittings are suitable for use on annealed (O60), light drawn (H55), and general purpose drawn (H58) copper tubing. RCS fittings must utilize a tube support insert sized properly for the tube OD and wall thicknesses. Alternative tube support inserts must be used when RCS fittings are installed on annealed copper coil or pre-insulated line sets with tube wall thickness less than specified by ASTM B280. Do not use on annealed copper sizes larger than 5/8" O.D.

HOW DO YOU ATTACH FLARE CONNECTIONS WITH RCS FITTINGS?

If using annealed (O60) or "annealed" copper tube, the tubing can be field flared in the normal manner. When using light drawn (H55) or general purpose drawn (H58) copper tube, use an RCS "Flare Kit". This is a factory flared copper tube and RCS coupling, that requires the installer to use the flare nut furnished with the original equipment. The flare nut is NOT furnished as part of the RCS flare kit.

HOW DO YOU MAKE CHANGES OF DIRECTION (ELLS, OFFSET, ETC.)?

If the refrigerant piping is done using annealed (O60) or light drawn (H55) copper tube, the tubing can be field bent to any desired angle and connections made with RCS couplings. Do NOT bend general purpose drawn (H58) "hard" copper. Note: Use ONLY copper tube benders sized to precisely bend imperial size OD dimensions. Do NOT use conduit benders. For light drawn (H55) copper tube, do NOT use "Press Bending" or "T-Bender" style benders. Refer to RCS detailed installation instructions for additional information.

CAN YOU REMOVE AND REUSE RCS FITTINGS?

No. Once the fitting is pressed onto the tubing, the fitting is non-removable. If the fitting is deemed not visually acceptable prior to, during, or after the installation, the fitting must be cut out from the piping system and a new one correctly reinstalled.

CAN YOU PERFORM A BRAZE NEAR A FITTING?

Keep the temperature of the RCS fitting less than 250F (121C) by directing the flame away from the fitting, using a heat conductive paste and wrapping the fitting in a clean wet rag.