

SUPERSEDED BY 38GR-051 4/77

Accessory Tubing Packages

Table 1 — Tubing Package Usage

TUBING PACKAGE	CONDENSING UNIT					
	38BQ	38GS		38GR	38SE	07KA
38GC900031	002	001,002	014,018,024	002	—	002
38GC900041	002	001,002	014,018,024	002	—	002
38GC900051	002	—	014,018,024	002	—	002
38GC900061	002	001,002	014,018,024	002	—	002
38GC900071	003,004	003,004, 045,005	030,036, 042,048	003,004, 045,005	003,004	004
38GC900081	003,004	003,004, 045,005	030,036, 042,048	003,004, 045,005	003,004	004
38GC900221	—	001,002	014,018,024	—	—	—
38GC900091	004	003,004, 045,005	030,036, 042,048	003,004, 045,005	003,004	004
38GC900101	004	003,004, 045,005	030,036, 042,048	003,004, 045,005	003,004	004
38GC900111	004	003,004, 045,005	030,036, 042,048	003,004, 045,005	003,004	004
38GC900181	002	—	—	—	—	002
38GC900191	—	001,002	014,018,024	002	—	—

→ These tubing packages are for use with Carrier Compatible Fittings on 38GS units from serial no. B-341283 (38GS014,018,024,030,036,042,048 Models), and all 38GR,SE,BQ,07KA units. They are also for use with Carrier Compression fittings on 38GS units before serial no. B-341283 (38GS001, 002,003,004,045,005 Models). Tubing may be mechanically connected or sweat connected to fittings. Tubing Package Usage table lists packages to be used with each condensing unit.

Each tubing package contains a liquid line and an insulated suction line. Each is a soft copper line containing a refrigerant vapor charge and sealed at both ends with plugs. Tube sizes are shown in Table 2.

INSTALLATION

Inspect the tubing for damage. Do not use damaged tubing if it appears that the damage will cause a leak or restriction.

Tubing runs between evaporator; condenser sections may be either concealed or exposed. Care must be taken to prevent nails or metal lath from puncturing or damaging the tubing. Isolate bare tubing from studs or joists by wrapping insulation around the tubing at the point of contact. Isolate exposed tubing runs by hangers similar to those shown in Fig. 1.

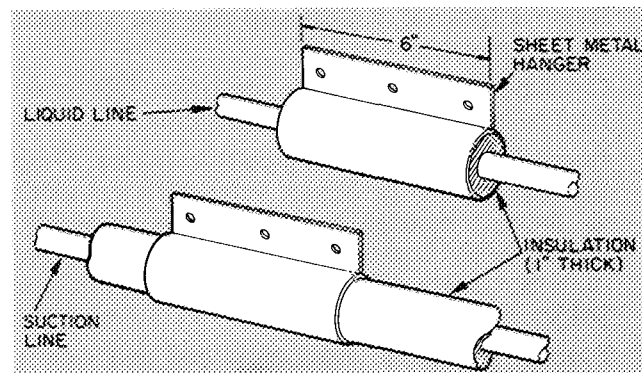
Table 2 — Dimensions

TUBING PACKAGE	TUBING					
	Lgth (ft)	Liquid		Suction		
		OD (in.)	Tube End OD (in.)	OD (in.)	Tube End OD (in.)	
38GC900031	10	3/8	3/8	5/8	3/4 *	5/8
38GC900041	18					
38GS900221	25					
38GC900051	25	5/16	3/8	3/4	3/4	3/4
38GC900061	35					
38GC900071	10	3/8	3/8	3/4	3/4	3/4
38GC900081	18					
38GC900091	25					
38GC900101	35					
38GC900111	50					
38GC900181	50	5/16	3/8	5/8	3/4 *	5/8
38GC900191	50	1/4	3/8	5/8	3/4 *	5/8

*For 5/8-in. evap connection, remove 3/4-in. sized tube end with tube cutter

NOTES

1. Evap end on all suction tubes has 90 degree bend
2. Do not cut 3/8-in. OD liquid line to a length shorter than 10 feet. Do not cut 5/16-in. or 1/4-in. liquid line


Fig. 1 — Refrigerant Line Hangers

If the insulated suction line is run thru an area of high humidity, additional insulation may be required to prevent condensation on the outside surface of the insulation.

CONNECTIONS

Connections at evaporator and condenser may be either mechanical (quick connect) or sweat. Do not cut 3/8-in. OD liquid line to a length shorter than 10 feet. Both ends of 5/16-in. OD and 1/4-in. OD liquid lines are swaged to fit unit liquid line fittings and must not be cut. If necessary, excess tubing may be coiled. *When accessory tubing package or evaporator section has been open for more than 15 seconds per connection, evacuate or purge the evaporator coil and tubing system.* (See Evacuate and Purge.)

- **Compatible Fitting** — Accessory Tubing Connection Procedure for 38GS014,018,024,030,036,042,048 and all 38GR,SE,BQ,07KA units.

MECHANICAL CONNECTION (Mate one set of connections at a time.)

1. Loosen locknut on compatible fitting one turn. Do not remove.
2. Remove plug and be sure seal ring is in the groove inside the compatible fitting.
3. Cut tubing (except 5/16-in. or 1/4-in. OD liquid line) to length at the unit.
- 4. Mark tube end for correct insertion depth (1-1/4 in. for 5/8-in. and 3/4-in. OD tubing; 3/4 in. for 5/16-in. and 3/8-in. OD tubing). Insert tube end into compatible fitting until it bottoms. Tube should be inserted at least as far as mark on tubing. Tube end must be inserted to correct depth for seal ring to seal. Keep tube bottomed while tightening locknut (Step 5).
5. Tighten locknut until it bottoms on back coupling flange.
6. If tubing or evaporator coil has been open for more than 15 seconds per connection, evacuate or purge the evaporator coil and tubing system. (See Evacuate and Purge.)

SWEAT CONNECTION

1. Remove locknut, rubber seal ring and Schrader core from valve.
2. Cut tubing (except 5/16-in. or 1/4-in. OD liquid line) to length at the condensing unit.
3. Insert tube end into compatible fitting. Wrap top and bottom of service valve with wet cloth to prevent damage to upper valve assembly. Solder with low-temperature (450 F) solder such as Allstate 430 or Stay Brite Silver Bearing Solder.
4. Evacuate or purge evaporator coil and tubing system.

- **Compression Fitting** — Accessory Tubing Connection Procedure for 38GS001,002,003,004,045,005 units.

MECHANICAL CONNECTION (Mate one set of connections at a time.)

1. Cut tubing to correct length, deburr, clean and reseat.
2. Remove plug, locking nut and ferrule from compression fitting.
3. Lubricate ferrule and nut with refrigerant oil.
4. Slide nut on tubing. Slide oiled ferrule on tubing with taper toward valve.
5. Use gage on tag attached to service valve to mark tube end for correct insertion depth. Insert tube into compression fitting until it bottoms (tube should be inserted at least as far as mark on tubing).
6. Fingertighten nut on fitting, then tighten an additional 1-1/2 to 2 turns with wrench.

SWEAT CONNECTION

1. Cut tubing to correct length deburr, clean and reseat.
2. Remove plug, locking nut, ferrule and Schrader core from valve.
3. Insert tubing into fitting until it bottoms. Wrap service valve in a wet cloth to prevent damage by heat. Solder with low-temperature (450 F) silver alloy solder.
4. Replace Schrader core then evacuate or purge system with *field-supplied* refrigerant.

Evacuate the evaporator coil and tubing system thru ports on the condensing unit service valves. Valves must be frontseated. Break vacuum with R-22 from *service drum*. Do not use condensing unit charge for this purpose. Cap service valve ports and backseat the valves.

CAUTION: Condensing unit service valves are frontseated at factory. Valves require a minimum amount of force to frontseat or backseat. Do not exceed 10 ft-lb torque.

Purge the evaporator coil and tubing system with R-22 thru the condensing unit liquid line service valve port and out the condensing unit suction line service valve port. Service valves must be frontseated during purging. Use R-22 from service drum. Do not use condensing unit charge for purging. After purging, cap service valve ports and backseat valves.

SERVICE

- **Compatible Fitting** — Accessory Tubing Connections on 38GS014,018,024,030,036,042,048 units and all 38GR,SE,BQ,07KA units may be repaired as follows.

LEAKING MECHANICAL CONNECTION — Frontseat condensing unit service valves and relieve refrigerant pressure in tubing. Back locknut off compatible fitting onto tube. Cut fitting between threads and seal ring head as shown in Fig. 2. Remove tubing section remaining in threaded portion of fitting. Discard locknut.

Clean, flux, and insert new tube end into remaining portion of compatible fitting. Wrap top and bottom of service valve with wet cloth to prevent damage to upper valve assembly. Heat and apply low-temperature (450 F) solder.

Evacuate or purge evaporator coil and tubing system.

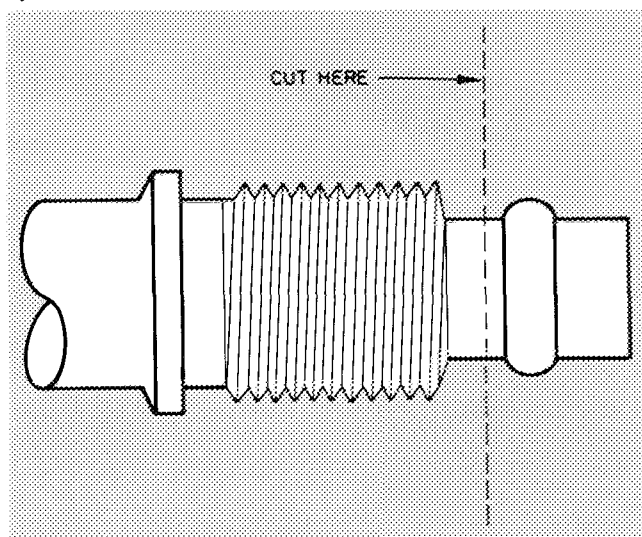


Fig. 2 — Repair of Mechanical Connection

LEAKING SWEAT CONNECTION — Frontseat service valves and relieve refrigerant pressure in tubing. Clean and flux area around leak and apply low-temperature solder.

Evacuate or purge evaporator coil and tubing system.

- **38GS Compression Fittings** (on 38GS001,002,003,004,045,005 units) may be reconnected after disconnection (from accessory tubing) for servicing by replacing and oiling the ferrule and retightening locking nut. See Connection Procedure.

LEAKING MECHANICAL CONNECTION — Tighten locking nut an additional 1/4 turn. If leaking persists, 2 methods of repair may be used.

Repair Method A

1. Frontseat liquid and suction service valves and relieve refrigerant pressure in tubing.
2. Remove locking nut and tubing from compression fitting.
3. Relubricate ferrule and nut with refrigerant oil.
4. Insert tube into fitting until it bottoms.
5. Fingertighten locking nut of fitting, then tighten an additional 1-1/2 to 2 turns with wrench.

Repair Method B

1. Frontseat liquid and suction service valves and relieve refrigerant pressure in tubing.
2. Remove Schrader core, locking nut and tubing from valve.
3. Cut tubing behind the ferrule.
4. Clean, flux and insert tubing into fitting until it bottoms. Wrap service valve in wet cloth. Solder with low-temperature (450 F) silver alloy solder. Replace Schrader core.
5. Evacuate or purge evaporator coil and tubing system with field-supplied refrigerant. Add refrigerant charge to system. See Evacuate and Purge.

LEAKING SWEAT CONNECTION — Frontseat service valves and relieve refrigerant pressure in tubing. Clean and flux area around leak and apply low-temperature solder.

Evacuate or purge evaporator coil and tubing systems.

For replacement items use Carrier Specified Parts.

Manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice and without incurring obligations.

CARRIER AIR CONDITIONING COMPANY • SYRACUSE, NEW YORK