

Guide Specification

LOVAC Low Pressure Electromechanical Commercial Refrigerant Recovery System

Model Number: CRL-500

Doc # CRL-500-A-0900

Part 1: General

1.01 SYSTEM DESCRIPTION

- A. A commercial capacity recovery system shall be capable of being transported, wheeled to a chiller, and of providing ARI certified recovery rates of at least 100-lb/min liquid and 0.66-lb/min vapor (R11).
- B. The recovery system shall be designed for use with all low-pressure refrigerants.

1.02 QUALITY ASSURANCE

ETL, CE, CSA, and ARI shall certify the equipment for safety and construction as well as EPA compliant and UL 1963 listed.

1.03 DELIVERY, STORAGE, AND HANDLING

The unit shall be shipped, stored, handled, installed, operated, and maintained in accordance with the manufacturer's instructions.

Part 2: Products

2.01. EQUIPMENT

A. General:

- a. The recovery system shall consist of a 2-hp open drive reciprocating compressor, a high capacity water cooled condenser, a manual valving system, 3/4 inch full port internal valves and piping, impingement-type coalescing oil separator, and electromechanical controls. There shall be system and tank pressure gauges, plus connections for an IMO float cable from the recovery tank.
- b. Power requirements are 110/115V 50/60 Hz 1Ph 20-Amp or 220/230V 50/60 Hz 1Ph 15-Amp for the recovery system and the controls. A 50-ft power cord shall be provided.
- c. The recovery system shall include One 48cu-in filter drier core to remove moisture, acids, and particles before they enter the recovery unit
- d. Two each 3/4" diameter by 10-ft and 1 each 3/4 " diameter 20-ft recovery hose with isolation ball valves and 3/4" flare fittings shall be supplied. Quick connects are optional.

B. Dimension and Weight:

- a. Unit dimension shall be approximately 27" x 23" x 36".
- b. Unit weight shall be 169-lbs
- c. Frame shall be made of aluminum
- d. Unit shall have 4ea. swivel casters

C. Installation:

- a. Installation of the recovery system shall be in accordance with all state and local, mechanical and electrical codes. The recovery system shall be connecting to existing liquid and vapor ports on the cooling system via 3/4-inch recovery hoses with flare connections. Three hoses shall be required to make complete connections from the recovery system to liquid and vapor ports on the cooling system and recovery tank.

D. Compressor:

- a. The recovery system shall use an open drive-reciprocating compressor driven by a 2-hp motor. An impingement-type coalescing oil separator with oil return shall be located on the discharge of the compressor.

E. Condenser:

- a. The recovery system shall have a high capacity water-cooled condenser.

F. Piping and Valving:

- a. For maximum refrigerant throughput, full 3/4 inch piping, valving, and ports shall be used on the recovery system. Internal valves shall be manually actuated. Connections on the recovery system shall be 3/4-inch flare fittings.

G. Control System and Safeties:

- a. The recovery unit shall have an electromechanical control system.
- b. The control system shall incorporate independent pressure switches to monitor conditions in the storage tank and cooling system. Two gauges on the control box shall indicate recovery tank and system liquid pressures.
- c. The control system shall prevent tank overpressure by halting operations should tank pressure reach 20-psi. The recovery system shall also be equipped with an internal safety relief.
- d. The control system shall automatically halt recovery procedures when the desired recovery vacuum preset of 29" is attained in the cooling system. However, should pressure in the chiller rise to 27-in Hg vacuum while the unit is standing idle, it shall reenergize to once again pull a 29-in Hg vacuum.

H. Included Accessories:

- a. 1ea. 48-cu.in filter drier
 - b. 50-ft power cord for recovery unit
 - c. 2ea. 3/4" x 10-ft hoses w/ ball valves
 - d. 1ea. 3/4" x 20-ft hoses w/ ball valves
 - e. 2ea. 3/4"-5/8" reducing fittings
 - f. 2ea. 5/8"-1/2" reducing fittings
 - g. 12-ft 80% tank float switch cable
- I. Options:
- a. 3/4 inch hoses with quick connects
 - b. Recovery tanks up to 5,000-lb capacity
 - c. Replacement filter drier cores (recommended spares)