

Guide Specification

AllVAC High & Low Pressure Commercial Refrigerant Recovery System

Model Number: ARH-500

Doc # ARH-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 325-lb/min liquid and 6-lb/min vapor (R22), 100-lb/min liquid and 0.66lb/min vapor (R11)
- B. The recovery system shall be designed for use with all high-pressure & 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 3-hp on single voltage models and 5-hp on dual voltage models, open drive reciprocating compressor, an air cooled condenser, an actuated valving system, 3/4 inch full port internal valves and piping, impingement-type coalescing oil separator, and electromechanical controls.
- b. Power requirements for the recovery system. 120V/1ph for the controls. 50-ft power cords for the recovery system and for the controls shall be provided.

Voltage	Hertz	Phase	Hp	Amps
230	60	3	3	15
220	50	3	3	15
230	60	1	3	20
220	50	1	3	20
460-575	60	3	3	15
415-550	50	3	3	15
230-460	60	1	5	30/20
575	60	3	3	10

- c. The recovery system shall include One 48-cubic inch filter driers 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 by 20-ft recovery hose with isolation ball valves and 3/4" flare fittings shall be supplied. .

B. Dimension and Weight:

- a. Unit dimension shall be approximately 32" x 28-1/4" x 44"
- b. Unit weight shall be 260-lbs (325lbs on Dual Voltage)
- c. Case shall be made of aluminum.
- d. Unit shall have 4 swivel 4" 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. Four 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 3-hp / 5-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 air-cooled condenser. A supplemental water-cooled condenser is optional.

F. Piping and Valving:

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

G. Control System and Safeties:

- a. The recovery unit shall have a electromechanical control system. Once hoses are connected and evacuated, the The control system shall incorporate independent pressure transducers to monitor conditions in the storage tank and cooling system. Recovery tank and system liquid pressures shall be displayed throughout the recovery process.
- b. The control system shall prevent tank overpressure by halting operations should tank pressure reach 350-psi. The recovery system shall also be equipped with an internal safety relief.

- c. The control system shall automatically halt recovery procedures when the desired recovery vacuum preset of 0", 15", or 29" is attained in the cooling system.
- H. Included Accessories:
 - a. Recovery Hoses
 - i. 2ea. 3/4 inch x 10Ft
 - ii. 1ea. 3/4 inch x 20Ft
 - b. 48-cubic inch filter core
 - c. 50-ft power cord for single phase units, 3 phase & dual models have additional 50-ft power cord for controls
 - d. 2ea. 3/4x5/8" & 5/8x1/2" reducing fittings
 - e. 12-Ft tank float switch cable
- I. Options:
 - a. Recovery tanks 250-lb & 1000-lb capacity
 - b. ASME recovery tanks 250-gal & 500-gal capacity
 - c. Water cooled condenser
 - d. Filter Rack
 - e. Spare 48-cubic inch filters