



Refrigerant Charging Systems - Multiple Refrigerant

VTech's Multiple Refrigerant Charging System supplies two or more refrigerants from a single charging machine. The machine automatically evacuates the product to a vacuum, conducts its unique pressure rise test determining if the component has any leaks or its internals are contaminated, upon passing accurately charges with the selected refrigerant.



VTech's automatic Refrigerant Charging Systems have many bold “state of the art” features:

- * Simple Automatic operation - not operator dependent.
 - * Reliable charging - flow transducer with no bearings, unaffected by electromagnetic noise (electrical interference) and mechanical bearing failure.
 - * Consistent charge - “real time” temperature compensation and continuous adjustment using our algorithms during the charging cycle.
 - * Double charging prevented - pressure and vacuum transducers.
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- * Positive connection in confined space - small charging heads.
 - * Proper evacuation - high and low side evacuation heads ensuring thorough evacuation and charge of the refrigerant circuit.
 - * Reduced human error - advanced production grade touch screen and Programmable Logic Controllers (PLC) programmed for selection of “model in process” ensuring the correct refrigerant and charge, vacuum transducers eliminating tampering or unauthorized changing of test parameters as with mechanical Hasting gauges.
 - * Display total refrigerant consumed - our algorithms have built in capabilities.
 - * Efficient utilization of production space -small rugged compact equipment, approximately 180 pounds or 82 kilos versus others weighing two or even three times greater.
 - * Systems expandable - allow data acquisition, network interfaces, bar coding reading, etc., providing the information or interfaces needed for a smooth running operation.

Technical Specification

Function: evacuate the product to 100 micron pressure; conduct automatic pressure rise test determining if product leaks or internals are contaminated; upon passing, accurately charged with refrigerant.

Evacuation: for each refrigerant one high and one low side re-enforced ½" ID process hose ending with female auto shutoff ¼" NPT quick connection and solenoid activated positive shutoff valve; vacuum manifold of welded stainless steel or aluminum construction with integral vacuum and pressure transducers; electrically operated valves protect manifold and vacuum transducer; design to prevent double charging; no "Hasting" type pressure gauges; heavy duty two stage vacuum pump with 7.0 (optional 11.0) cfm displacement.

Controls: production environment "touch screen" facilitates selection of specific refrigerant and "model in process" with preset evacuation, pressure rise test, refrigerant quantity and charge process; programmable logic controller algorithms, bearing less flow transducer and real time temperature sensing compensate for refrigerant density changes during the charging cycle; communications port for data acquisition (measure total

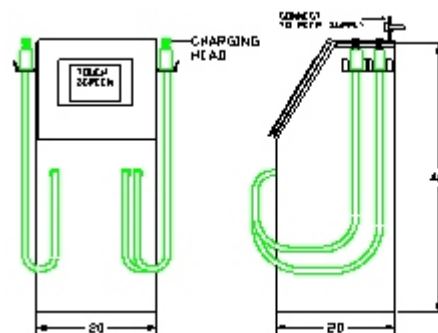
refrigerant consumed), network interfaces, bar coding reading or quality control printouts.

Charging: 2.0 oz. to 100 pounds at approximately 1.5 oz. per second (5.5 pounds per minute) with charging accuracy of ±1% using refrigerant supply system pressure differential; compatible with popular refrigerants; setup for specific refrigerant, capable of being reset in field for a different refrigerant; includes filter dryer; refrigerant compatible, rubber covered charging hose with two solenoid actuated positive shutoff valves ending with female auto shutoff quick connect coupler; charging/evacuation head less than two pounds.

Construction: uni-frame construction; vacuum pump mounted in frame base; 20" x 20" x 8" NEMA 12 enclosure encasing charging/evacuation module with production touch screen; 180 pounds (82 kilos); typical overall dimensions 20" x 20" x 48".

Power requirement: 110v, 1 ϕ , 60hz, 10 amps.

VTech provides complete turn-key Refrigerant Charging Systems for your specific production line requirements. In addition, we can provide conveyors, fixtures, leak test fittings, etc.



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