**SUCCESSION ACCUMULATOR**

**Cannot Trap Oil**

**PURPOSE** - To prevent compressor damage due to the sudden return of liquid through the suction line.

Compressors on many an air-conditioning, truck, heat pump and other refrigeration systems are often subjected to sudden liquid return, resulting in broken valves, pistons, connecting rods, crank-shafts, blown-gaskets and freezing failures.

Compressors on low superheat applications such as liquid chillers, low temperature display cases and truck refrigeration are especially susceptible to damage from liquid refrigerant.

**THE SUCCESSION ACCUMULATOR,** by Refrigeration Research will protect the compressor. Although several pounds of refrigerant may suddenly return through the suction line it does not flood into the compressor. The liquid refrigerant is temporarily held in the suction accumulator and returned back to the compressor at a controlled rate, through the metering orifice.

**ACTS AS A SUCTION MUFFLER** - In most cases it will be found that the suction accumulator also reduces transmission of noise to the line since it tends to act as a suction muffler.

**LOCATION** - The suction accumulator should be installed in the suction line as close to the compressor as possible. In reverse-cycle systems, it must be installed in the suction line between the compressor and receiver tank.

**MOUNTING POSITION** - "Vertical" Accumulators must be installed vertically. "Horizontal" Accumulators must be installed horizontally.

**INSTALLATION** - It is MOST IMPORTANT that the INLET and OUTLET of the suction accumulator be correctly connected. The "IN" stamped at the top must be attached to the suction line from the coil and the "OUT" must be attached to the suction line leading to the compressor. Otherwise, oil and refrigerant will be trapped. The connections are made correctly the suction accumulator cannot trap oil or gas.

**MAKING CONNECTIONS** - A good quality of silver solder should be used for making connections. Silver solder No. 45 or No. 35 may be used. Good practice dictates that the suction line should propely fit the accumulator nipples and a good joint should be made without brushing flux and silver solder to run into the accumulator. A good joint can easily be made if a flame of correct size and intensity is used. Under no circumstances should connections be made with so-called "soft solder" such as 50-50, 95-5 etc. which does not have sufficient strength to withstand vibration of the suction line at the compressor. All connections not in local model accumulators with copper nipples can be made with a bimetal or equivalent tool.

**PROTECTING JOINTS** - After solder joints have been carefully leak tested, nipples should be painted with "Heat-Resistant" or equivalent to prevent rust.

**SELECTION OF SUCCESSION ACCUMULATOR** - The suction accumulator should not necessarily be selected to have the same size inlet and outlet as the compressor suction line. It is more important to select the suction accumulator size to be within the limits of (1) pressure drop and (2) oil return. Total amount of charge to be held (G) is also important.

The actual refrigerant holding capacity needed for a suction accumulator is governed by the requiremens of the particular application. There is a great variation in refrigeration systems and this must be considered and where possible the capacity selected checked by actual test. Normally the accumulaor should not be used for less than 25% of the total system capacity. If in doubt, consult the compressor manufacturer.

**CONSTRUCTION** - The suction accumulator is constructed entirely of steel. Hydrogen cyanide brazing insures the ultimate in seamlessness, strength, and durability under vibration. Vertical and horizontal models are manufactured with copper nipples.

**SUCCESSION ACCUMULATOR PROVIDE LOW COST INSURANCE** - They are easily and quickly installed and when properly applied will provide years of trouble free service. When the possibility exists of compressor damage through sudden liquid return, the low initial cost of the suction accumulator may be saved many times over by increased compressor life.

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**PHOTOGRAPH 1**

*Photographs depict various types of Accumulators.*

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**PHOTOGRAPH 2**

*Shows different models and their applications.*

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**PHOTOGRAPH 3**

*Detailed view of an Accumulator with various parts highlighted.*

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**PHOTOGRAPH 4**

*Close-up of construction details and materials.*

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**PHOTOGRAPH 5**

*Installation process described with step-by-step instructions.*

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**PHOTOGRAPH 6**

*Comparison with other models for size and installation.*

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**PHOTOGRAPH 7**

*Manufacturer's logo and additional product information.*

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**PHOTOGRAPH 8**

*Customer feedback and success stories.*

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**PHOTOGRAPH 9**

*Technical specifications and product details.*

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**PHOTOGRAPH 10**

*Case studies and real-world applications.*

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**PHOTOGRAPH 11**

*Additional images and visual aids for better understanding.*