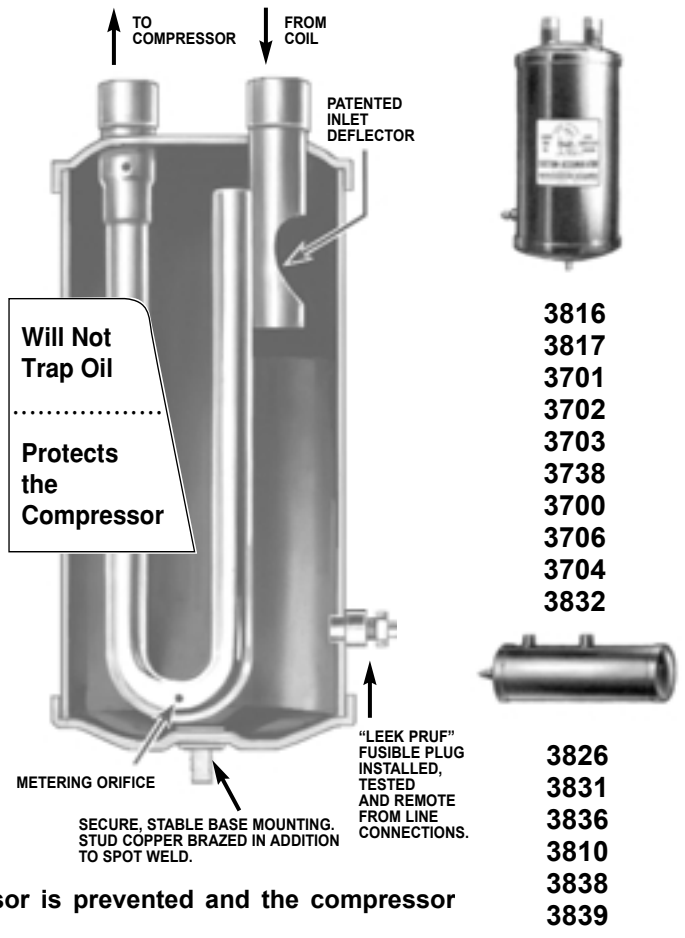


The ORIGINAL, TIME TESTED SUCTION ACCUMULATOR

- - THE COMPLETE LINE - - For Exact Selection

Air conditioning, heat pump, truck refrigeration and many other applications require intermittent operation of the refrigeration compressor. Especially in remote applications, the suction line may trap or hold quantities of liquid which are suddenly dumped into the compressor as it starts up. This is frequently the cause of broken valves, pistons, broken or bent connecting rods, blown gaskets and bearing washout.

Proper installation of the Refrigeration Research suction accumulator in the suction line, just before the compressor, eliminates damage. If correctly sized, relatively large quantities of liquid refrigerant may return through the suction line and the suction accumulator prevents damage to the compressor. Liquid is temporarily held in the suction accumulator and metered back to the compressor along with any oil, at a controlled rate, through the metering orifice. Therefore, damage to the compressor is prevented and the compressor immediately and quietly goes to work.



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THE ORIGINAL, YET IMPROVED, SUCTION ACCUMULATOR BY REFRIGERATION RESEARCH PROVIDES ALL OF THE IMPORTANT FEATURES.

1. Exclusive (patented) inlet deflector for improved performance. Deflector permits tangential entry of fluid.
2. Marking of inlet with a metal plate is an exclusive feature and helps prevent errors in hook up.
3. All Refrigeration Research suction accumulators of 4" through 6" diameter have fusible plugs included and installed to comply with latest UL and cUL requirements.
4. Copper nipples are standard on vertical UL and cUL models.
5. Controlled hydrogen copper brazing process provides the ultimate in cleanliness and uniform strength.
6. All Refrigeration Research suction accumulators are UL and cUL listed or built to ASME code. Suction accumulators by Refrigeration Research have been field proven in hundreds of thousands of installations.

SELECTION OF SUCTION 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 well within the limits of (1) pressure drop and (2) oil return as shown on the following page. Total amount of charge to be held (3) is also important.

The actual refrigerant holding capacity needed for a suction accumulator is governed by the requirements of the particular application. There is a great variation in refrigeration systems and this must be considered. Where possible the capacity selected should be checked by actual test. Normally the accumulator should not be sized for less than 50% of the total system capacity. If in doubt, consult the compressor manufacturer. Steel nipples are available on special order.

PATENTED AND PATENTS APPLIED FOR.

SUCTION ACCUMULATOR APPLICATION DATA

| PART NO. | HORIZONTAL OR VERTICAL | DIA. | # LENGTH | WEIGHT | MAXIMUM REFRIGERANT HOLDING CAPACITY LBS. | | | | UL CODE IDENT | SUCTION INLET OUTLET SIZES | EVAP TEMP | † RECOMMENDED TONS OF REFRIGERATION | | | | | | | | |
|----------|------------------------|--------|----------|--------|---|--------|-------|--------|------------------------|----------------------------|-----------|-------------------------------------|------|--------|------|-------|------|--------|------|------|
| | | | | | R-12 | R-134a | R-22 | R-404a | | | | REFRIGERANT | | | | | | | | |
| | | | | | | | | | | | | R-12 | | R-134a | | R-22 | | R-404a | | |
| 3680 | V | 3 | 8.13 | 2.3 | 1.7 | 1.5 | 1.5 | 1.3 | HN | 1/2 | +40°F | .50 | .11 | .43 | .11 | .90 | .16 | .80 | .13 | |
| 3816 | V | 4 | 3.50 | 3.0 | 2.4 | 2.2 | 2.1 | 1.9 | KN | | +20°F | .35 | .09 | .31 | .09 | .62 | .14 | .58 | .10 | |
| 3817 | V | 4 | 10.50 | 4.6 | 4.6 | 4.2 | 4.2 | 3.7 | KN | 1/2 | 0°F | .22 | .08 | .20 | .08 | .45 | .11 | .40 | .08 | |
| 3815 | H | 3 | 7.88 | 2.1 | 1.7 | 1.5 | 1.5 | 1.4 | KN | | -20°F | .15 | .06 | .13 | .06 | .30 | .09 | .25 | .06 | |
| 3673 | H | 3 | 10.88 | 2.7 | 2.4 | 2.2 | 2.2 | 1.9 | HN | 1/2 | -40°F | .09 | .04 | .08 | .04 | .18 | .07 | .14 | .05 | |
| 3684 | V | 3 | 7.69 | 2.2 | 1.7 | 1.6 | 1.6 | 1.4 | HN | | 5/8 | +40°F | 1.00 | .13 | .90 | .13 | 2.00 | .18 | 1.55 | .15 |
| 3701 | V | 4 | 6.63 | 3.0 | 2.4 | 2.2 | 2.1 | 1.9 | KN | +20°F | | 0.60 | .11 | .54 | .11 | 1.25 | .16 | 1.00 | .12 | |
| 3685 | V | 3 | 12.00 | 3.1 | 3.0 | 2.7 | 2.7 | 2.4 | HN | 0°F | | 0.40 | .10 | .36 | .10 | .85 | .13 | 0.70 | .10 | |
| 3702 | V | 4 | 10.63 | 4.6 | 4.5 | 4.2 | 4.1 | 3.6 | KN | -20°F | | 0.11 | .08 | .22 | .08 | .55 | .11 | 0.45 | .08 | |
| 3820 | H | 3 | 7.88 | 2.4 | 1.0 | 0.9 | 0.9 | 0.8 | HN | -40°F | | 0.15 | .06 | .13 | .06 | .35 | .09 | 0.25 | .07 | |
| 3821 | H | 3 | 11.63 | 3.0 | 2.6 | 2.4 | 2.4 | 2.1 | HN | | | | | | | | | | | |
| | | | | | | | | | | 3/4 | +40°F | 1.80 | .15 | 1.62 | .14 | 3.00 | .22 | 2.80 | .22 | |
| | | | | | | | | | | | +20°F | 1.15 | .12 | 1.03 | .11 | 2.10 | .18 | 2.00 | .18 | |
| 3703 | V | 4 | 10.63 | 5.2 | 4.5 | 4.1 | 4.0 | 3.7 | KN | | 0°F | 0.70 | .11 | .63 | .10 | 1.50 | .16 | 1.40 | .16 | |
| | | | | | | | | | | | -20°F | 0.48 | .09 | .43 | .09 | 1.10 | .13 | 0.80 | .13 | |
| | | | | | | | | | | 7/8 | -40°F | 0.28 | .06 | .25 | .06 | .60 | .10 | 0.50 | .10 | |
| 3670 | V | 4 | 11.00 | 5.2 | 4.4 | 4.0 | 4.0 | 3.5 | KN | | +40°F | 2.50 | .36 | 2.25 | .35 | 4.00 | .53 | 4.00 | .53 | |
| 3738 | V | 5 | 13.00 | 7.7 | 8.6 | 8.0 | 7.9 | 6.9 | DN | | +20°F | 1.80 | .31 | 1.62 | .30 | 3.00 | .45 | 3.00 | .45 | |
| 3827 | V | 6 | 13.00 | 11.3 | 12.2 | 11.3 | 11.1 | 9.8 | MN | | 0°F | 1.00 | .26 | .87 | .25 | 2.30 | .39 | 2.00 | .39 | |
| 3825 | H | 6 | 10.00 | 8.9 | 10.5 | 9.7 | 9.6 | 8.4 | MN | 7/8 | -20°F | 0.70 | .21 | .63 | .20 | 1.50 | .33 | 1.30 | .33 | |
| 3826 | H | 6 | 13.50 | 12.0 | 14.5 | 13.3 | 13.1 | 11.6 | MN | | -40°F | 0.40 | .17 | .36 | .16 | .90 | .27 | 0.70 | .27 | |
| 3832 | V | 6 | 11.00 | 10.0 | 9.3 | 8.6 | 8.5 | 7.5 | MN | 1 1/8 | +40°F | 5.00 | .50 | 4.35 | .48 | 9.00 | .76 | 9.00 | .76 | |
| 3700 | V | 6 | 15.00 | 13.0 | 14.2 | 13.1 | 12.9 | 11.4 | MN | | +20°F | 3.20 | .44 | 2.88 | .43 | 6.20 | .65 | 6.00 | .65 | |
| 3830 | H | 6 | 13.50 | 11.3 | 16.3 | 15.0 | 14.8 | 13.0 | MN | | 0°F | 2.10 | .37 | 1.83 | .36 | 4.30 | .56 | 4.00 | .56 | |
| 3831 | H | 6 | 16.50 | 13.2 | 19.6 | 18.1 | 17.9 | 15.7 | MN | | -20°F | 1.40 | .30 | 1.21 | .29 | 2.80 | .47 | 2.50 | .47 | |
| | | | | | | | | | | 1 1/8 | -40°F | 0.90 | .16 | .78 | .15 | 1.80 | .38 | 1.40 | .38 | |
| 3837 | V | 6 | 13.50 | 11.8 | 11.6 | 10.7 | 10.6 | 9.3 | MN | | 1 3/8 | +40°F | 8.00 | 1.40 | 7.20 | 1.35 | 17.0 | 2.00 | 15.0 | 2.00 |
| 3706 | V | 6 | 20.25 | 17.0 | 19.3 | 17.8 | 17.5 | 15.4 | MN | | | +20°F | 6.00 | 1.20 | 5.40 | 1.16 | 11.0 | 1.90 | 10.0 | 1.90 |
| 3743 | V | 6 | 24.75 | 18.0 | 24.8 | 22.9 | 22.6 | 19.9 | MN | | | 0°F | 3.80 | 1.00 | 3.42 | .97 | 7.70 | 1.60 | 7.00 | 1.60 |
| 3835 | H | 6 | 13.50 | 11.5 | 16.3 | 15.0 | 14.8 | 13.0 | MN | -20°F | | 2.40 | 0.90 | 2.16 | .87 | 5.00 | 1.30 | 4.50 | 1.30 | |
| 3836 | H | 6 | 22.50 | 17.1 | 18.8 | 17.3 | 17.1 | 15.1 | MN | 1 5/8 | -40°F | 1.40 | 0.70 | 1.26 | .68 | 3.00 | 1.10 | 2.50 | 1.10 | |
| 3698 | V | 6 | 17.13 | 14.4 | 15.7 | 14.4 | 14.2 | 12.5 | MN | | +40°F | 13 | 1.40 | 11.7 | 1.35 | 28.0 | 2.00 | 25.0 | 2.00 | |
| 3704 | V | 6 | 24.75 | 20.5 | 24.8 | 22.9 | 22.6 | 19.9 | MN | | +20°F | 9 | 1.20 | 8.10 | 1.16 | 19.0 | 1.90 | 18.0 | 1.90 | |
| 3809 | H | 6 | 18.00 | 15.6 | 14.0 | 12.9 | 12.7 | 11.2 | MN | | 0°F | 6 | 1.00 | 5.40 | .97 | 13.0 | 1.60 | 12.0 | 1.60 | |
| 3810 | H | 6 | 30.00 | 23.1 | 23.5 | 21.6 | 21.3 | 18.8 | MN | 1 5/8 | -20°F | 4 | 0.90 | 3.60 | .87 | 8.00 | 1.30 | 7.00 | 1.30 | |
| | | | | | | | | | | | -40°F | 2 | 0.70 | 1.80 | .68 | 5.00 | 1.10 | 4.00 | 1.10 | |
| | | | | | | | | | | | 2 1/8 | +40°F | 32 | 3.70 | 28.8 | 3.57 | 59.0 | 5.80 | 55.0 | 5.80 |
| 3639 | V | 8-5/8 | 20.00 | 44.0 | 34.0 | 31.3 | 30.9 | 27.2 | * | | | +20°F | 21 | 3.20 | 18.9 | 3.09 | 41.0 | 5.20 | 39.0 | 5.20 |
| 3838 | H | 6 | 36.00 | 28.0 | 34.0 | 31.3 | 30.9 | 27.2 | MN | 0°F | | 14 | 2.60 | 12.6 | 2.51 | 27.0 | 4.30 | 26.0 | 4.30 | |
| 3839 | H | 6 | 48.00 | 35.5 | 45.5 | 41.3 | 41.3 | 36.4 | MN | -20°F | | 8 | 2.10 | 7.20 | 2.03 | 18.0 | 3.70 | 16.0 | 3.70 | |
| | | | | | | | | | | 2 5/8 | -40°F | 5 | 1.70 | 4.50 | 1.64 | 12.0 | 2.70 | 10.0 | 2.70 | |
| | | | | | | | | | | | +40°F | 50 | 5.90 | 45.0 | 5.70 | 90.0 | 9.50 | 85.0 | 9.50 | |
| 3641 | V | 10-3/4 | 20.00 | 57.0 | 55.8 | 51.4 | 50.7 | 44.7 | * | | +20°F | 33 | 5.20 | 29.7 | 5.02 | 62.0 | 8.40 | 60.0 | 8.40 | |
| 3841 | H | 8-5/8 | 24.00 | 48.0 | 49.1 | 45.2 | 44.6 | 39.3 | * | | 0°F | 22 | 4.20 | 19.8 | 4.06 | 42.0 | 7.00 | 40.0 | 7.00 | |
| | | | | | | | | | | 3 1/8 | -20°F | 13 | 3.40 | 11.7 | 3.28 | 28.0 | 6.00 | 25.0 | 6.00 | |
| | | | | | | | | | | | -40°F | 8 | 2.80 | 7.20 | 2.70 | 18.0 | 4.20 | 15.0 | 4.20 | |
| 3640 | V | 10-3/4 | 26.00 | 75.0 | 79.8 | 72.7 | 72.5 | 63.9 | * | | +40°F | 70.0 | 10.0 | 63.0 | 9.66 | 130.0 | 15.0 | 125.0 | 15.0 | |
| 3840 | H | 10-3/4 | 24.00 | 63.0 | 77.5 | 71.3 | 70.4 | 62.0 | * | | +20°F | 54 | 8.70 | 48.6 | 8.40 | 90.0 | 13.0 | 90.0 | 13.0 | |
| 3873 | H | 10-3/4 | 48.00 | 114.0 | 164.6 | 151.5 | 149.5 | 131.7 | * | 3 1/8 | 0°F | 37 | 6.80 | 33.3 | 6.57 | 60.0 | 11.0 | 60.0 | 11.0 | |
| 3874 | H | 10-3/4 | 60.00 | 120.0 | 208.1 | 191.6 | 189.1 | 166.5 | * | | -20°F | 23 | 6.10 | 20.7 | 5.89 | 40.0 | 9.30 | 40.0 | 9.30 | |
| | | | | | | | | | | 3 1/8 | -40°F | 13 | 4.80 | 11.7 | 4.64 | 28.0 | 7.50 | 25.0 | 7.50 | |

Suction Accumulators of 6" diameter or smaller are UL and cUL LISTED File No. SA2400 (Hydrogen copper brazed construction) Suction Accumulators larger than 6" diameter are made to ASME Code. (Shielded arc welded construction) †Maximum recommended tons based on pressure drop thru Suction Accumulators equivalent to 1/2" F. †Minimum recommended tons based on oil return through Suction Accumulators. *ASME #Length includes Nipples.



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Mounting Brackets
RR 7187 (8 5/8" Dia.)
RR 7188 (10 3/4" Dia.)
These brackets can be used to hold horizontal accumulators securely in position.