



Refrigeration Research, Inc.

For More Than One Half Century



Innovation



Quality



Service

HEAT PUMP SUCTION ACCUMULATORS

Having pioneered the suction accumulator as a protective component, and having made them continuously over a period of 45 years, Refrigeration Research has acquired considerable experience. However, it has always been our recommendation that tests be made by the system manufacturer to check pressure drop, size of orifice and holding capacity of the accumulator for a particular application.

As a result of tests made by our customers as well as by Refrigeration Research, modifications have been made in many cases for heat pump applications. Our inlet deflector tube baffle, smaller metering orifices and protective screens have proven to be a value. In addition, accumulators for heat pumps may usually be designed for less pressure drop.

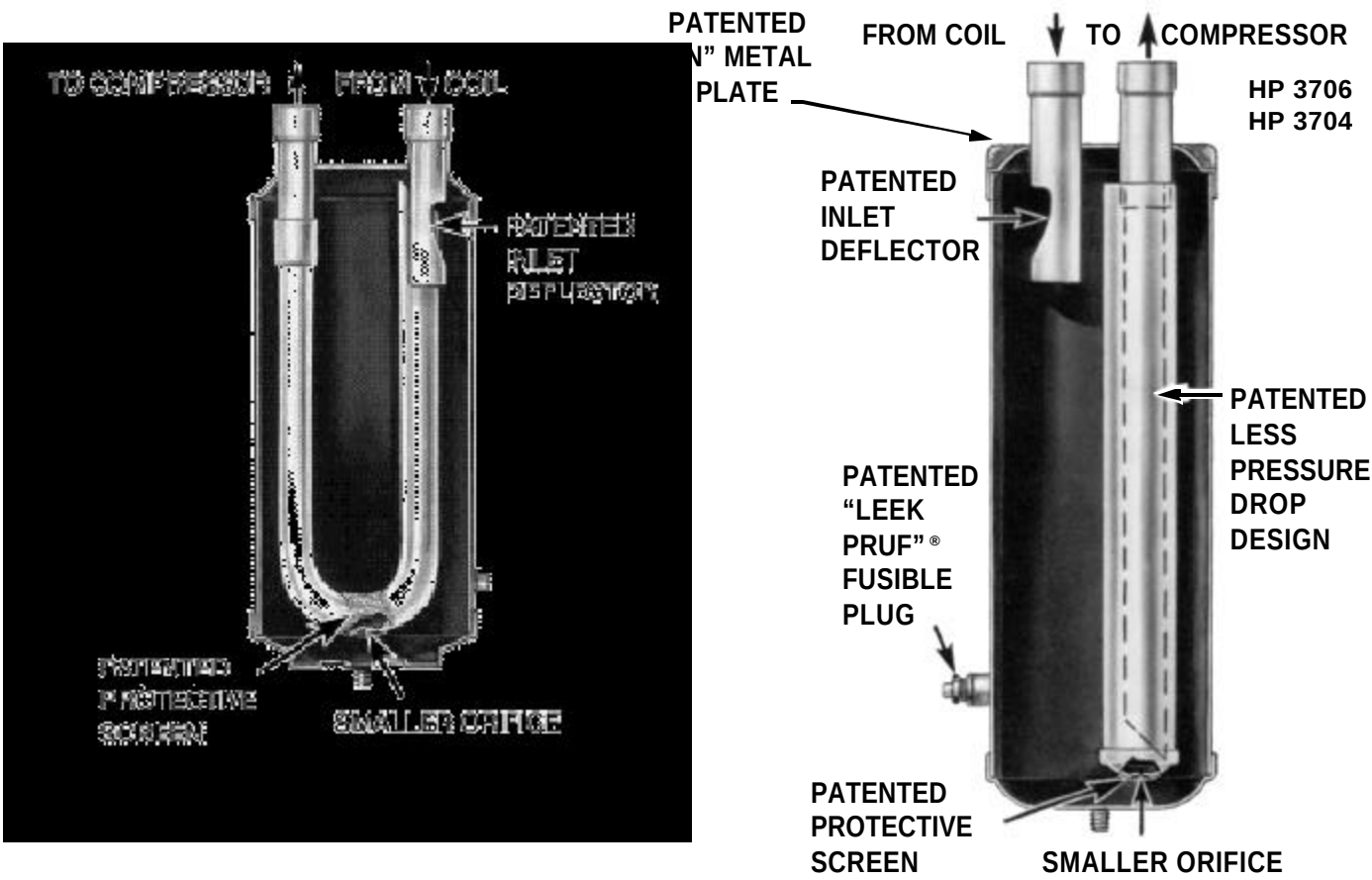
Many hundreds of thousands of suction accumulators having inlet deflectors, smaller orifices, and protective strainers have been built by Refrigeration Research and are on systems operating successfully in the field.

Seven models of these field proven heat pump type accumulators are offered as catalog items instead of specials.

All accumulators are complete with a fusible plug to comply with  and  requirements. CE documentation also available upon request.

In the heat pump system, the suction accumulator must be installed between the compressor and the reversing valve.

Copper nipples are standard on all  and  models.
Steel nipples are available on special order.



MADE UNDER ONE OR MORE OF THE FOLLOWING PATENTS: NOS.: 3,084,523; 3,212,289; 3,344,506; 3,420,071; 3,432,910; 3,443,367; 3,589,395; 3,643,465; 3,837,177; 3,872,689; 5,076,313; 5,075,967; AND PATENTS APPLIED FOR.

PHOTOS FOR ILLUSTRATIVE PURPOSE ONLY - DO NOT USE AS A GUIDE FOR INSTALLATION.

APPLICATION DATA FOR HEAT PUMP SUCTION ACCUMULATORS

PART NO.	HORIZONTAL OR VERTICAL	DIA.	# L E N G T H	W E I G H T	MAXIMUM REFRIGERANT HOLDING CAPACITY LBS.				 CODE IDENT	SUCTION LINE I.D.	EVAP TEMP	RECOMMENDED TONS OF REFRIGERATION							
					REFRIGERANT														
					R-12		R-134a					R-22		R-404a					
					MAX	MIN	MAX	MIN				MAX	MIN	MAX	MIN				
					R-12	R-134a	R-22	R-404			+60°F	1.39	.15	1.15	.15	2.56	.20	2.2	.19
HP3701	V	4	6-5/8	3	2.4	2.2	2.1	1.9	KN	5/8	+50F	1.25	.14	1.11	.14	2.30	.19	1.9	.17
									+40F		1.00	.13	.90	.13	2.00	.18	1.55	.15	
HP3702	V	4	10-5/8	5.1	4.5	4.2	4.1	3.6	KN		+20F	0.60	.11	.54	.11	1.25	.16	1.00	.12
											0F	0.40	.10	.36	.10	0.85	.13	0.70	0.10
											+60°F	2.39	.17	2.2	.16	3.78	.25	3.6	.25
HP3703	V	4	10-5/8	5.2	4.4	4.1	4	3.7	KN	3/4	+50F	2.15	.16	2.0	.15	3.4	.24	3.2	.24
											+40F	1.80	.15	1.62	.14	3.0	.22	2.8	.22
											+20F	1.15	.12	1.03	.11	2.1	.18	2.0	.18
											0F	0.70	.11	.63	.10	1.5	.16	1.4	.16
											+60°F	3.11	.40	2.7	.39	5.0	.60	4.9	.60
HP3738	V	5	13	8	8.6	8.0	7.9	6.9	DN	7/8	+50F	2.8	.38	2.5	.37	4.5	.57	4.4	.57
											+40F	2.5	.36	2.25	.35	4.0	.53	4.00	.53
											+20F	1.8	.31	1.62	.30	3.0	.45	3.00	.45
											0F	1.0	.26	.87	.25	2.3	.39	2.00	.39
											+60°F	6.39	.58	5.5	.56	11.9	.84	11.5	.84
HP3700	V	6	15	13.1	14.2	13.1	12.9	11.4	MN	1 1/8	+50F	5.75	.55	5.0	.53	10.75	.80	10.5	.80
											+40F	5.0	.50	4.35	.48	9.0	.76	9.00	.76
											+20F	3.2	.44	2.88	.43	6.2	.65	6.00	.65
											0F	2.1	.37	1.83	.36	4.3	.56	4.00	.56
											+60°F	10.0	1.7	9.0	1.6	21.1	2.2	19.0	2.2
HP3706	V	6	20-1/4	17.5	19.3	17.8	17.5	15.4	MN	1 3/8	+50F	9.0	1.6	8.0	1.5	19.0	2.1	17.0	2.1
											+40F	8.0	1.4	7.20	1.35	17.0	2.0	15.0	2.0
											+20F	6.0	1.2	5.40	1.16	11.0	1.9	10.0	1.9
											0F	3.8	1.0	3.42	.97	7.7	1.6	7.0	1.6
											+60°F	16.7	1.6	14.5	1.5	35.6	2.1	32.0	2.1
HP3704	V	6	24-3/4	21.0	24.8	22.9	22.6	19.9	MN	1 5/8	+50F	15.0	1.5	13.0	1.4	32.0	2.0	29.0	2.0
											+40F	13.0	1.4	11.7	1.35	28.0	2.0	25.0	2.0
											+20F	9.0	1.2	8.1	1.16	19.0	1.9	18.0	1.9
											0F	6.0	1.0	5.4	.97	13.0	1.6	12.0	1.6



FILE NO. SA 2400

Maximum recommended tons based on pressure drop thru Suction Accumulator equivalent to 1/2°F.
Minimum recommended tons based on oil return thru Suction Accumulator.
#Length includes Nipples.

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.



Will Not Trap Oil

Protects the Compressor

METERING ORIFICE

SECURE, STABLE BASE MOUNTING. CRUD/OIL/FOAM EXPOSED IN ADDITION TO SPOT WELD

2" FLARE

PATENTED INLET DEFLECTOR

"LOCK WELD" FUSIBLE PLUG INSTALLED, TESTED AND REMOVED FROM LINE ON COMMISSIONING



3680	3816	3670
3684	3817	3732
3685	3701	3734
3689	3702	3827
3690	3703	3732
3691	3738	3736
3731	3700	3837
3733	3706	3737
3698	3704	3743
3707	3832	3708



3826
3831
3836
3810
3838
3839

ASME code models below

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  and  requirements.
4. Copper nipples are standard on vertical  and  models.
5. Controlled hydrogen copper brazing process provides the ultimate in cleanliness and uniform strength.
6. All Refrigeration Research suction accumulators are  and  listed or built to ASME code, CE documentation also available. 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 NO. 5,076,313 AND PATENTS APPLIED FOR.



3639
3641
3640



3841 3873
3840 3874

Mounting Bracket:
RR 7187 (8.58" Dia.)
RR 7188 (10.34" Dia.)
These brackets can be
used to hold horizontal
accumulators securely
in position.

SUCTION ACCUMULATOR APPLICATION DATA

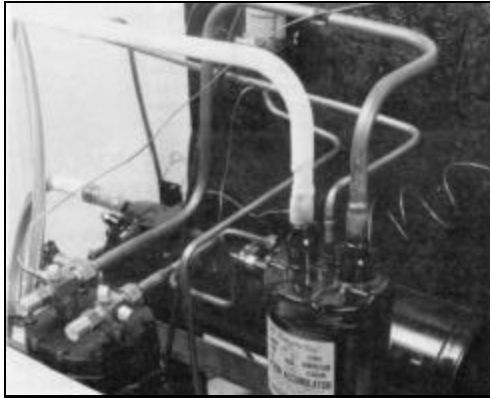
PART NO.	HORIZONTAL OR VERTICAL	DIA.	# LENGTH	WEIGHT	MAXIMUM REFRIGERANT HOLDING CAPACITY LBS.				 CODE IDENT	SUCTION INLET OUTLET I.D. SIZE	EVAP TEMP	RECOMMENDED TONS OF REFRIGERATION							
												REFRIGERANT							
												R-12		R-134a		R-22		R-404a	
												MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
3680	V	3	8.13	2.3	1.7	1.5	1.5	1.3	HN	1/2	+40°F	.50	.11	.45	.11	.90	.16	.80	.13
3816	V	4	6.50	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		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	HN		-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		-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									
3701	V	4	6.63	3.0	2.4	2.2	2.1	1.9	KN		+40°F	1.00	.13	.90	.13	2.00	.18	1.55	.15
3689	V	3	10.75	2.8	2.4	2.2	2.2	1.9	HN		+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
3690	V	3	15.125	3.9	3.7	3.3	3.3	3	HN		-20°F	0.11	.08	.22	.08	.55	.11	0.45	.08
3702	V	4	10.63	4.6	4.5	4.2	4.1	3.6	KN		-40°F	0.15	.06	.13	.06	.35	.09	0.25	.07
3820	H	3	7.88	2.4	1.7	1.5	1.5	1.4	HN										
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
3691	V	3	15.125	3.9	3.7	3.3	3.3	3	HN		+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
3731	V	5	10	6	6.6	6.2	6.1	5.3	DN		-20°F	0.48	.09	.43	.09	1.10	.13	0.80	.13
3733	V	5	13	7.7	8.6	8.0	7.9	6.9	DN		-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	7/8									
3732	V	5	10	6	6.6	6.2	6.1	5.3	DN		+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
3734	V	5	14.75	8.7	9.7	9.0	8.9	7.8	DN		0°F	1.00	.26	.87	.25	2.30	.39	2.00	.39
3710	V	5	18	11.0	11	10.2	10.1	8.8	DN		-20°F	0.70	.21	.63	.20	1.50	.33	1.30	.33
3827	V	6	13.00	11.3	12.2	11.3	11.1	9.8	MN		-40°F	0.40	.17	.36	.16	.90	.27	0.70	.27
3825	H	6	10.00	8.9	10.5	9.7	9.6	8.4	MN										
3826	H	6	13.50	12.0	14.5	13.3	13.1	11.6	MN										
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
3735	V	5	14.75	8.7	9.7	9.0	8.9	7.8	DN		+20°F	3.20	.44	2.88	.43	6.20	.65	6.00	.65
3736	V	5	18.5	10.5	12.2	11.3	11.1	9.8	DN		0°F	2.10	.37	1.83	.36	4.30	.56	4.00	.56
3700	V	6	15.00	13.0	14.2	13.1	12.9	11.4	MN		-20°F	1.40	.30	1.21	.29	2.80	.47	2.50	.47
3707	V	6	18	14.5	17.7	16.3	16.1	14.2	MN		-40°F	0.90	.16	.78	.15	1.80	.38	1.40	.38
3830	H	6	13.50	11.3	16.3	15.0	14.8	13.0	MN										
3831	H	6	16.50	13.2	19.6	18.1	17.9	15.7	MN										
3837	V	6	13.50	11.8	11.6	10.7	10.6	9.3	MN	1 3/8									
3737	V	5	18.5	10.5	12.2	11.3	11.7	9.8	DN		+40°F	8.00	1.40	7.20	1.35	17.0	2.00	15.0	2.00
3708	V	6	15	13	14.2	13.1	12.9	11.4	MN		+20°F	6.00	1.20	5.40	1.16	11.0	1.90	10.0	1.90
3706	V	6	20.25	17.0	19.3	17.8	17.5	15.4	MN		0°F	3.80	1.00	3.42	.97	7.7	1.60	7.0	1.60
3743	V	6	24.75	18.0	24.8	22.9	22.6	19.9	MN		-20°F	2.40	0.90	2.16	.87	5.0	1.30	4.5	1.30
3835	H	6	13.50	11.5	16.3	15.0	14.8	13.0	MN		-40°F	1.40	0.70	1.26	.68	3.0	1.10	2.5	1.10
3836	H	6	22.50	17.1	18.8	17.3	17.1	15.1	MN										
3698	V	6	17.13	14.4	15.7	14.4	14.2	12.5	MN	1 5/8	+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	8.1	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	5.4	.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		-20°F	4	0.90	3.6	.87	8.0	1.30	7.0	1.30
											-40°F	2	0.70	1.8	.68	5.0	1.10	4.0	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	44.00	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	7.2	2.03	18.0	3.70	16.0	3.70
											-40°F	5	1.70	4.5	1.64	12.0	2.70	10.0	2.70
										2 5/8	+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
											-20°F	13	3.40	11.7	3.28	28.0	6.00	25.0	6.00
											-40°F	8	2.80	7.2	2.70	18.0	4.20	15.0	4.20
										3 1/8	+40°F	70	10.0	63.0	9.66	130.0	15.0	125.0	15.0
3640	V	10-3/4	26.00	75.0	79.8	72.7	72.5	63.9	*		+20°F	54	8.7	48.6	8.40	90.0	13.0	90.0	13.0
3840	H	10-3/4	24.00	63.0	77.5	71.3	70.4	62.0	*		0°F	37	6.8	33.3	6.57	60.0	11.0	60.0	11.0
3873	H	10-3/4	48.00	114.0	164.6	151.5	149.5	131.7	*		-20°F	23	6.1	20.7	5.89	40.0	9.3	40.0	9.3
3874	H	10-3/4	60.00	120.0	208.1	191.6	189.1	166.5	*		-40°F	13	4.8	11.7	4.64	28.0	7.5	25.0	4.5

Suction Accumulators of 6" diameter or smaller are  and  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 in inches includes Nipples.

No Sweat-No Frost Suction Accumulator

by **REFRIGERATION RESEARCH, INC.**

The "No Sweat" – "No Frost" Heat Exchanger Suction Accumulator **PREVENTS** frost and condensation and **PROTECTS** from corrosion and water damage. With innovative system design it can also serve as a receiver as well as a heat exchanger, thereby saving additional space.



These heat exchanger – suction accumulators benefit a system in four ways: 1) Protects the compressor from refrigerant flood-back 2) Subcools the liquid refrigerant for greater system efficiency 3) Stops condensation and frost from forming through unique design 4) Saves space by combining the suction accumulator, heat exchanger and (for some applications) the receiver all in one component to provide a more compact design.

Accumulator does not sweat or frost. Therefore cost of insulating accumulator is eliminated. Greater heat exchange surface improves efficiency.

PART NO.	HORIZONTAL OR VERTICAL	DIA.	# LENGTH	WEIGHT	MAXIMUM REFRIGERANT HOLDING CAPACITY LBS.				 CODE IDENT	SUCTION LINE I.D.	LIQUID LINE I.D.	EVAP TEMP	RECOMMENDED TONS OF REFRIGERATION											
					REFRIGERANT																			
					R-12		R-134a						R-22		R-404		R-12		R-134a		R-22		R-404a	
					MAX	MIN	MAX	MIN					MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN		
HXM3701	V	5	11	11	2.3	2.2	2.1	1.9	KN	5/8	3/8	+40°F	1.00	.13	.90	.13	2.00	.18	1.55	.15				
									+20F			0.60	.11	.54	.11	1.25	.16	1.00	.12					
HXM3702	V	5	15-1/8	12	4.4	4.1	4	3.7	KN			0°F	0.40	.10	.36	.10	.85	.13	0.70	.10				
									-20°F			0.11	.08	.22	.08	.55	.11	0.45	.08					
									-40°F			0.15	.06	.13	.06	.35	0.9	0.25	.07					
										3/4	3/8	+40°F	1.80	.15	1.62	.14	3.00	.22	2.80	.22				
									+20F			1.15	.12	1.03	.11	2.10	.18	2.00	.18					
HXM3703	V	5	15-1/8	12	4.4	4.1	4	3.7	KN			0°F	0.70	.11	.63	.10	1.50	.16	1.40	.15				
									-20°F			0.48	.09	.43	.09	1.10	.13	0.80	.13					
									-40°F			0.28	.06	.25	.06	.60	.10	0.50	.10					
HXM3738	V	5	13	10.0	6.75	6.3	6.2	5.5	DN	7/8	1/2	+40°F	2.50	.36	2.25	.35	4.00	.53	4.00	.53				
									+20°F			1.80	.31	1.62	.30	3.00	.45	3.00	.45					
									0°F			1.00	.26	.87	.25	2.00	.39	2.00	.39					
									-20°F			0.70	.21	.63	.20	1.50	.33	1.30	.33					
									-40°F			0.40	.17	.36	.16	.90	.27	0.70	.27					
HXM3700	V	6	15	17.0	11.2	10.3	10.1	9.0	MN	1 1/8	5/8	+40°F	5.00	.50	4.35	.48	9.00	.76	9.00	.76				
									+20°F			3.20	.44	2.88	.43	6.20	.65	6.00	.65					
									0°F			2.10	.37	1.83	.36	4.30	.56	4.00	.56					
									-20°F			1.40	.30	1.21	.29	2.80	.47	2.50	.47					
									-40°F			0.90	.16	.78	.15	1.80	.38	1.40	.38					
HXM3706	V	6	20-1/4	22.5	15.1	13.9	13.7	12	MN	1 3/8	5/8	+40°F	8.00	1.40	7.20	1.35	17.0	2.00	15.0	2.00				
									+20°F			6.00	1.20	5.40	1.16	11.0	1.90	10.0	1.90					
									0°F			3.80	1.00	3.42	.97	7.70	1.60	7.00	1.60					
									-20°F			2.40	0.90	2.16	.87	5.00	1.30	4.50	1.30					
									-40°F			1.40	0.70	1.26	.68	3.00	1.10	2.50	1.10					
HXM3704	V	6	24-3/4	29.5	18.4	17.0	16.8	14.7	MN	1 5/8	3/4	+40°F	13	1.40	11.7	1.35	28.0	2.00	25.0	2.00				
									+20°F			9	1.20	8.10	1.16	19.0	1.90	18.0	1.90					
									0°F			6	1.00	5.40	.97	13.0	1.60	12.0	1.60					
									-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					

MADE UNDER ONE OR MORE OF THE FOLLOWING PATENTS: NOS.: 5,479,790; 5,722,146; 6,253,572; AND PATENTS APPLIED FOR.

SUCTION ACCUMULATORS

WITH ELECTRIC FLOAT

These accumulators have a built in electric float switch to provide a warning, or shut down the compressor in case of a major flood back exceeding the holding capacity of the accumulator.

Float switch contacts may be easily replaced externally without disturbing the refrigerant charge.

PART NO.	VERTICAL	DIA.	LENGTH	WEIGHT	MAXIMUM REFRIGERANT HOLDING CAPACITY LBS.			UL CODE IDENT	INLET OUTLET I.D. LINE SIZE	EVAP. TEMP.	† RECOMMENDED TONS OF REFRIGERATION								
											REFRIGERANT								
					R-22		R-134a				R-502		R-22		R-134a		R-502		
					MAX	MIN	MAX				MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
3700 - F	V	6	15	14.5	11.4	11.7	12.1	MN	1 1/8	+40°F	9.0	.75	4.35	.48	9.0	.76			
										+20°F	6.2	.65	2.88	.43	6.0	.65			
										0°F	4.3	.56	1.83	.36	4.0	.56			
										-20°F	2.8	.47	1.21	.29	2.5	.47			
										-40°F	1.8	.38	.78	.15	1.4	.38			
3706 - F	V	6	20-1/4	21.1	16.0	16.4	16.6	MN	1 3/8	+40°F	17.0	2.0	7.2	1.35	15.0	2.0			
										+20°F	11.0	1.9	5.4	1.16	10.0	1.9			
										0°F	7.7	1.6	3.42	.97	7.0	1.6			
										-20°F	5.0	1.3	2.16	.87	4.5	1.3			
										-40°F	3.0	1.1	1.26	.68	2.5	1.1			

MADE UNDER ONE OR MORE OF THE FOLLOWING PATENTS: NOS.: 5,167,128; 5,076,066; AND PATENTS APPLIED FOR.

Designed to do the Complete Job!

HEAT EXCHANGER-SUCTION ACCUMULATOR

Makes practical new design possibilities in refrigeration systems.

Development of the Heat Exchanger-Suction Accumulator as a refrigeration component by Refrigeration Research has resulted in new and practical designs and design possibilities in refrigeration systems.

As the result of the rapidly growing need, Refrigeration Research provides a Cataloged Heat Exchanger-Suction Accumulator to correspond to each of our most popular suction accumulators. The Heat Exchanger-Suction Accumulator combinations bear the same part number as the corresponding suction accumulators except that the letters HX have been added to indicate the presence of the heat exchanger coil. Other models are available on special order.

All Heat Exchanger-Suction Accumulators are complete with fusible plugs installed complying with latest  and  requirements, except those built to ASME code. CE documentation available upon request.

Copper nipples are standard on vertical  and  models. Steel nipples are standard on accumulators built to ASME code.

Steel nipples are available on vertical  and  models on special order.

Application data is shown on the next page.



HX3701
HX3702
HX3703
HX3738



HX3836
HX3810
HX3839

ASME CODE MODELS



HX3639
HX3641
HX3640



ASME CODE MODELS

HX3841
HX3840

MADE UNDER ONE OR MORE OF THE FOLLOWING PATENTS;
NOS. 3,084,523; 3,212,289; 3,344,506; 3,420,071; 3,432,910; 3,443,367; 5,076,313; 5,075,967; 4,488,413; AND PATENTS APPLIED FOR.

(SUCTION ACCUMULATORS ESPECIALLY DESIGNED FOR HEAT PUMPS ARE SHOWN ON PAGES 10 AND 11).
PHOTOS FOR ILLUSTRATIVE PURPOSE ONLY - DO NOT USE AS A GUIDE FOR INSTALLATION.

APPLICATION DATA FOR HEAT EXCHANGER-SUCTION ACCUMULATOR COMBINATIONS

Suction Accumulators on this page are exactly the same as the corresponding numbers on page 7 except that HX designates a Heat Exchanger Coil added.

PART NO.	HORIZONTAL OR VERTICAL	DIA.	#LENGTH	WEIGHT	MAXIMUM REFRIGERANT HOLDING CAPACITY LBS.				 CODE IDENT	SUCTION LINE I.D.	LIQUID LINE I.D.	EVAP TEMP	RECOMMENDED TONS OF REFRIGERATION											
					REFRIGERANT																			
					R-12		R-134a						R-22		R-404		R-12		R-134a		R-22		R-404a	
					MAX	MIN	MAX	MIN					MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN		
										5/8	3/8	+40°F	1.00	.13	.90	.13	2.00	.18	1.55	.15				
HX3701	V	4	6-5/8	3.0	2.4	2.2	2.1	1.9	KN			+20°F	0.60	.11	.54	.11	1.25	.16	1.00	.12				
												0°F	0.40	.10	.36	.10	.85	.13	0.70	.10				
HX3702	V	4	10-5/8	5.5	4.4	4.2	4	3.6	KN			-20°F	0.11	.08	.22	.08	.55	.11	0.45	.08				
												-40°F	0.15	.06	.13	.06	.35	0.9	0.25	.07				
										3/4	3/8	+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				
HX3703	V	4	10-5/8	5.6	4.4	4.1	4	3.7	KN			0°F	0.70	.11	.63	.10	1.50	.16	1.40	.15				
												-20°F	0.48	.09	.43	.09	1.10	.13	0.80	.13				
												-40°F	0.28	.06	.25	.06	.60	.10	0.50	.10				
										7/8	1/2	+40°F	2.50	.36	2.25	.35	4.00	.53	4.00	.53				
HX3738	V	5	13	9	8.6	8.0	7.9	6.9	DN			+20°F	1.80	.31	1.62	.30	3.00	.45	3.00	.45				
												0°F	1.00	.26	.87	.25	2.00	.39	2.00	.39				
												-20°F	0.70	.21	.63	.20	1.50	.33	1.30	.33				
												-40°F	0.40	.17	.36	.16	.90	.27	0.70	.27				
										1 1/8	5/8	+40°F	5.00	.50	4.35	.48	9.00	.76	9.00	.76				
HX3700	V	6	15	15.0	14.2	13.1	12.9	11.4	MN			+20°F	3.20	.44	2.88	.43	6.20	.65	6.00	.65				
												0°F	2.10	.37	1.83	.36	4.30	.56	4.00	.56				
												-20°F	1.40	.30	1.21	.29	2.80	.47	2.50	.47				
												-40°F	0.90	.16	.78	.15	1.80	.38	1.40	.38				
										1 3/8	5/8	+40°F	8.00	1.40	7.20	1.35	17.0	2.00	15.0	2.00				
HX3706	V	6	20-1/4	20.5	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				
												0°F	3.80	1.00	3.42	.97	7.70	1.60	7.00	1.60				
HX3836	H	6	22-1/2	20.0	18.8	17.3	17.1	15.1	MN			-20°F	2.40	0.90	2.16	.87	5.00	1.30	4.50	1.30				
												-40°F	1.40	0.70	1.26	.68	3.00	1.10	2.50	1.10				
										1 5/8	3/4	+40°F	13	1.40	11.7	1.35	28.0	2.00	25.0	2.00				
HX3704	V	6	24-3/4	27.0	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				
												0°F	6	1.00	5.40	.97	13.0	1.60	12.0	1.60				
HX3810	H	6	30	26.3	23.5	21.6	21.3	18.8	MN			-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	7/8	+40°F	32	3.70	28.8	3.57	59.0	5.80	55.0	5.80				
HX3639	V	8-5/8	20	50	34	31.3	30.9	27.2	*			+20°F	21	3.20	18.9	3.09	41.0	5.20	39.0	5.20				
												0°F	14	2.60	12.6	2.51	27.0	4.30	26.0	4.30				
HX3839	H	6	48	40	45.3	41.3	41.3	36.4	MN			-20°F	8	2.10	7.20	2.03	18.0	3.70	16.0	3.70				
												-40°F	5	1.70	4.50	1.64	12.0	2.70	10.0	2.70				
										2 5/8	1 3/8	+40°F	50	5.90	45.0	5.70	90.0	9.50	85.0	9.50				
												+20°F	33	5.20	29.7	5.02	62.0	8.40	60.0	8.40				
HX3641	V	10-3/4	20	65	55.8	51.4	50.7	44.7	*			0°F	22	4.20	19.8	4.06	42.0	7.00	40.0	7.00				
HX3841	H	8-5/8	24	63	49.1	45.2	44.6	39.3	*			-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				
										3 1/8	1 3/8	+40°F	70.0	10.0	63.0	9.66	130.0	15.0	125.0	15.0				
												+20°F	54	8.70	48.6	8.40	90.0	13.0	90.0	13.0				
HX3640	V	10-3/4	26	55	79	72.7	72.5	63.9	*			0°F	37	6.80	33.3	6.57	60.0	11.0	60.0	11.0				
HX3840	H	10-3/4	24	59	71.5	71.3	70.4	62.0	*			-20°F	23	6.10	20.7	5.89	40.0	9.30	40.0	9.30				
												-40°F	13	4.80	11.7	4.64	28.0	7.50	25.0	4.50				

Suction Accumulators of 6" diameter or smaller are  and  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 Accumulator equivalent to 1/2°F.

Minimum recommended tons based on oil return thru Suction Accumulator.

*ASME #Length includes Nipples.

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