

HEATING CHECK CHART

Split System Heat Pump

NXH6 - 16 SEER

Safety Labeling and Signal Words

DANGER, WARNING, CAUTION, and NOTE

The signal words **DANGER**, **WARNING**, **CAUTION**, and **NOTE** are used to identify levels of hazard seriousness. The signal word **DANGER** is only used on product labels to signify an immediate hazard. The signal words **WARNING**, **CAUTION**, and **NOTE** will be used on product labels and throughout this manual and other manuals that may apply to the product.

DANGER - Immediate hazards which **will** result in severe personal injury or death.

WARNING - Hazards or unsafe practices which **could** result in severe personal injury or death.

CAUTION - Hazards or unsafe practices which **may** result in minor personal injury or product or property damage.

NOTE - Used to highlight suggestions which **will** result in enhanced installation, reliability, or operation.

Signal Words in Manuals

The signal word **WARNING** is used throughout this manual in the following manner:



The signal word **CAUTION** is used throughout this manual in the following manner:



Signal Words on Product Labeling

Signal words are used in combination with colors and/or pictures on product labels.

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MODELS

Heating Check Chart	
208/230- 1- 60, 208/230- 3- 60	
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NXH6	343955- 101

WARNING

DEATH, PERSONAL INJURY, AND/OR PROPERTY DAMAGE HAZARD

Failure to carefully read and follow this warning could result in equipment malfunction, property damage, personal injury and/or death.

Installation or repairs made by unqualified persons could result in equipment malfunction, property damage, personal injury and/or death.

The information contained in this manual is intended for use by a qualified service technician familiar with safety procedures and equipped with the proper tools and test instruments.

Installation must conform with local building codes and with the National Electrical Code NFPA70 current edition or Canadian Electrical Code Part 1 CSA C.22.1.

343063-101 (Heating Check Chart) 1-phase

HEAT PUMP CHARGING INSTRUCTIONS

For use with units using R-410A refrigerant

FIELD OPERATING PRESSURE CHARGING TABLE (HIGH PRESSURE @ VAPOR VALVE, SUCTION PRESSURE @ SUCTION SERVICE PORT)									
UNIT	INDOOR DRY BULB, °F	OUTDOOR TEMP. °F DRY BULB/WET BULB							
		60/57	50/47	40/38	30/28	20/28	10/9	0/-1	
018	60°	HIGH	363	338	313	297	281	259	238
		SUCT	136	116	97	79	62	49	37
	70°	HIGH	410	381	353	338	323	293	263
		SUCT	139	119	98	80	63	50	38
	80°	HIGH	454	430	406	388	371	347	323
		SUCT	141	120	98	82	65	51	38
024	60°	HIGH	342	322	302	285	267	250	232
		SUCT	137	118	99	83	66	54	42
	70°	HIGH	386	362	338	322	306	287	268
		SUCT	138	119	99	83	66	54	42
	80°	HIGH	434	414	394	370	346	328	310
		SUCT	140	120	100	84	67	55	43
030	60°	HIGH	343	328	312	290	267	249	230
		SUCT	133	115	96	78	60	49	37
	70°	HIGH	386	373	360	332	304	281	258
		SUCT	134	116	97	80	62	50	38
	80°	HIGH	440	415	390	368	346	327	308
		SUCT	136	116	96	80	63	50	37
036/ 037	60°	HIGH	363	333	304	272	240	226	212
		SUCT	121	106	92	75	58	48	37
	70°	HIGH	409	375	340	308	276	260	245
		SUCT	125	110	94	78	62	50	38
	80°	HIGH	451	415	379	345	312	295	278
		SUCT	129	112	96	79	63	50	38
042	60°	HIGH	351	327	303	280	257	238	220
		SUCT	116	103	89	75	62	50	37
	70°	HIGH	401	372	344	317	289	271	254
		SUCT	121	107	92	77	62	50	38
	80°	HIGH	448	417	387	358	328	310	292
		SUCT	125	110	94	79	63	51	39
048	60°	HIGH	339	320	300	282	264	249	234
		SUCT	129	110	92	75	59	46	34
	70°	HIGH	384	361	338	320	302	287	272
		SUCT	131	111	91	75	59	47	35
	80°	HIGH	434	411	388	367	346	330	313
		SUCT	133	113	92	76	60	48	36
060	60°	HIGH	365	339	313	291	268	248	227
		SUCT	108	97	86	74	62	51	39
	70°	HIGH	417	387	356	330	304	285	265
		SUCT	113	101	88	76	63	52	40
	80°	HIGH	466	434	402	373	343	325	306
		SUCT	117	104	91	78	65	53	41

* If PressureGuard™ kit is installed, it will not allow pressures to stabilize at these conditions. To check the charge at these ambients operate in cooling or lower the indoor dry bulb temperature.

CAUTION

1. Compressor damage may occur if system is over-charged.
2. Carefully recover refrigerant from this unit before final disposal or when servicing.
3. Never vent refrigerant to atmosphere. Use approved recovery equipment.

OPERATION

To check system operation during Heating or Cooling cycle use the appropriate table. Table indicates whether a correct relationship exists between system operating pressure and air temperature entering indoor and outdoor units. If pressure and temperature do not match on chart, system refrigerant charge may not be correct or other system abnormalities may exist. Do not use table to adjust refrigerant charge. When charging is necessary during heating season, weigh in total charge as indicated on unit rating plate. Rating plate charge is for systems with 15 ft. of line-set. Adjust charge 0.6 oz of refrigerant per foot of 3/8" liquid connecting tubing. Remove any refrigerant remaining in system before recharging if the system has lost complete charge, evacuate and recharge by weight.

REQUIRED LIQUID LINE TEMPERATURE

Liquid Pressure at Service Valve (PSIG)	Required Subcooling Temperature (°F)					
	6	8	10	12	14	16
251	78	76	74	72	70	68
259	80	78	76	74	72	70
266	82	80	78	76	74	72
274	84	82	80	78	76	74
283	86	84	82	80	78	76
291	88	86	84	82	80	78
299	90	88	86	84	82	80
308	92	90	88	86	84	82
317	94	92	90	88	86	84
326	96	94	92	90	88	86
335	98	96	94	92	90	88
345	100	98	96	94	92	90
354	102	100	98	96	94	92
364	104	102	100	98	96	94
374	106	104	102	100	98	96
384	108	106	104	102	100	98
395	110	108	106	104	102	100
406	112	110	108	106	104	102
416	114	112	110	108	106	104
427	116	114	112	110	108	106
439	118	116	114	112	110	108
450	120	118	116	114	112	110
462	122	120	118	116	114	112
474	124	122	120	118	116	114

COOLING ONLY CHARGING PROCEDURE

1. Only use subcooling charging method when OD ambient is greater than 70°F and less than 100°F, indoor temp is greater than 70°F and less than 80°F, and line set is less than 80 ft.
2. Operate unit a minimum of 15 minutes before checking the charge.
3. Measure liquid service valve pressure by attaching an accurate gauge to the service port.
4. Measure the liquid line temperature by attaching an accurate thermistor type or electronic thermometer to the liquid line near the outdoor coil.
5. Refer to unit rating plate for required subcooling temperature.
6. Find the point where the required subcooling temperature intersects the measured liquid service valve pressure.
7. To obtain the required subcooling temperature at specific liquid line pressure, add refrigerant if liquid line temperature is higher than indicated. When adding refrigerant, charge in liquid form using a flow restricting device into suction service port. Recover refrigerant if temperature is lower. Allow a tolerance of +/- 3°F.



343063-101 REV.B

343955-101 (Heating Check Chart) 3-phase

HEAT PUMP CHARGING INSTRUCTIONS

For use with units using R-410A refrigerant

FIELD OPERATING PRESSURE CHARGING TABLE (HIGH PRESSURE @ VAPOR VALVE, SUCTION PRESSURE @ SUCTION SERVICE PORT)										REQUIRED LIQUID LINE TEMPERATURE						
UNIT	INDOOR DRY BULB, °F	OUTDOOR TEMP. °F DRY BULB/WET BULB								Liquid Pressure at Service Valve (PSIG)	Required Subcooling Temperature (°F)					
			60/57	50/47	40/38	30/28	20/18	10/9	0/-1		6	8	10	12	14	16
036	60°	HIGH	348	318	288	265	242	228	214	251 259 266 274	78	76	74	72	70	68
		SUCT	122	107	91	78	65	54	43		80	78	76	74	72	70
	70°	HIGH	395	362	329	303	277	262	247		82	80	78	76	74	72
		SUCT	127	111	95	81	67	56	44		88	86	84	82	80	78
	80°	HIGH	439	405	370	342	314	298	282		92	90	88	86	84	82
		SUCT	133	116	98	83	67	56	45		98	96	94	92	90	88
048	60°	HIGH	328	309	289	273	256	242	228	283 291 299 308	86	84	82	80	78	76
		SUCT	130	111	91	77	63	53	43		88	86	84	82	80	78
	70°	HIGH	370	351	331	313	294	279	263		90	88	86	84	82	80
		SUCT	131	112	93	79	64	54	44		92	90	88	86	84	82
	80°	HIGH	417	394	371	354	336	282	228		94	92	90	88	86	84
		SUCT	133	114	94	80	65	55	45		96	94	92	90	88	86
060	60°	HIGH	358	336	314	290	265	247	229	317 326 335 345	94	92	90	88	86	84
		SUCT	106	96	86	73	59	48	37		96	94	92	90	88	86
	70°	HIGH	406	382	358	332	305	285	264		98	96	94	92	90	88
		SUCT	111	101	90	76	61	49	37		100	98	96	94	92	90
	80°	HIGH	458	432	405	376	346	325	303		102	100	98	96	94	92
		SUCT	115	104	92	77	62	50	38		104	102	100	98	96	94
<p>* If PressureGuard™ kit is installed, it will not allow pressures to stabilize at these conditions. To check the charge at these ambients operate in cooling or lower the indoor dry bulb temperature.</p>										<p>COOLING ONLY CHARGING PROCEDURE</p> <ol style="list-style-type: none"> 1. Only use subcooling charging method when OD ambient is greater than 70°F and less than 100°F, indoor temp is greater than 70°F and less than 80°F, and line set is less than 80 ft. 2. Operate unit a minimum of 15 minutes before checking the charge. 3. Measure liquid service valve pressure by attaching an accurate gauge to the service port. 4. Measure the liquid line temperature by attaching an accurate thermistor type or electronic thermometer to the liquid line near the outdoor coil. 5. Refer to unit rating plate for required subcooling temperature. 6. Find the point where the required subcooling temperature intersects the measured liquid service valve pressure. 7. To obtain the required subcooling temperature at specific liquid line pressure, add refrigerant if liquid line temperature is higher than indicated. When adding refrigerant, charge in liquid form using a flow restricting device into suction service port. Recover refrigerant if temperature is lower. Allow a tolerance of +/- 3°F. 						

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343955-101 REV.A

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