

## 4SHP20LX — HFC-410A CHARGING PROCEDURE

**IMPORTANT:** Room thermostat must be turned down at least 5°F from set point for cooling or turned up 5°F for heating so charging occurs with system operating at 100% capacity. Seven-segment display on outdoor control will show outdoor unit running capacity.

### MAINTENANCE CHECKS USING THE NORMAL OPERATING PRESSURES

Table 1 may be used to help perform maintenance checks. This table is not a procedure for charging the system and any minor variations in the pressures may be expected due to differences in installations. However, significant deviations could mean that the system is not properly charged or that a problem exists with some component in the system. The values in Table 2 are “most-popular-match-up” pressures; indoor match up, indoor air quantity, and indoor load will cause the pressures to vary. **Charge levels on the unit nameplate are based on installations with 15 feet line sets; be sure to consider any difference in line set length.**

### CHARGE USING THE WEIGH-IN METHOD

If the system is void of refrigerant, locate and repair any leaks and then weigh in the refrigerant charge into the unit. For charge adjustments, be sure to consider line set length differences and adjust for the differences.

- 1 - Recover the refrigerant from the unit.
- 2 - Conduct leak check; evacuate as previously outlined.
- 3 - Weigh in the unit nameplate charge, adjusting for matchup and line set length differences. If weighing facilities are not available use the Subcooling method.

### CHARGE USING THE SUBCOOLING METHOD

**Cooling Mode**—When the outdoor ambient temperature is 60°F and above, use the cooling mode to adjust the charge using the subcooling method. Target subcooling values in table 2 are based on 70 to 80°F indoor return air temperature.

**Heating Mode**—When the outdoor ambient temperature is below 60°F, use the heating mode to adjust the charge using the subcooling charge levels (table 2). Target subcooling values in table 2 are based on 65-75°F indoor return air temperature.

**Table 1 - Normal Operating Pressures (Liquid ±10 and Suction ±5 psig)**

Size	°F	Cooling		Heating		
		Max Speed		Max Speed		
		Suc	Liq	Suc	Liq	
-024	65	143	246	20	57	271
	75	145	280	30	68	286
	85	147	323	40	87	302
	95	150	371	50	105	317
	105	152	423	60	124	334
-036	65	93	266	20	62	332
	75	140	269	30	76	355
	85	142	311	40	90	372
	95	144	357	50	50	400
	105	146	410	60	125	415
-048	65	133	246	20	59	298
	75	135	286	30	67	301
	85	137	328	40	89	338
	95	138	376	50	106	351
	105	140	424	60	124	372
-060	65	235	132	20	62	327
	75	273	134	30	74	350
	85	322	137	40	88	377
	95	369	138	50	106	383
	105	421	140	60	125	403

**Table 2 - Indoor Units Subcooling Charge Levels**

Outdoor Unit	Cooling SC	Heating SC
-024	15	8
-036	10	18
-048	7	51
-060	8	15



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