

ZH 092S Refrigerant Charge and Check

WARNING-Do not exceed nameplate charge under any condition.

This unit is factory charged and should require no further adjustment. If the system requires additional refrigerant, reclaim the charge, evacuate the system, and add re-quired nameplate charge.

NOTE - System charging is not recommended below 60°F (15°C). In temperatures below 60°F (15°C), the charge **must be weighed into the system.**

If weighing facilities are not available, or to check the charge, use the following procedure:

IMPORTANT - Charge unit in standard cooling mode.

- 1- Make sure outdoor coil is clean. Attach gauge manifolds and operate unit at full CFM in cooling mode with economizer disabled until system stabilizes (approximately five minutes). Make sure all outdoor air dampers are closed.
- 2- Check each system separately with all stages operating. Compare the normal operating pressures to the pressures obtained from the gauges. Check unit components if there are significant differences.
- 3- Measure the outdoor ambient temperature and the suction pressure. Refer to the appropriate circuit charging curve to determine a target liquid temperature.

Note - Pressures are listed for sea level applications.

- 4- Use the same thermometer to accurately measure the liquid temperature (in the outdoor section).
 - If measured liquid temperature is higher than the target liquid temperature, add refrigerant to the system.
 - If measured liquid temperature is lower than the target liquid temperature, recover some refrigerant from the system.
- 5- Add or remove charge in increments. Allow the system to stabilize each time refrigerant is added or removed.
- 6- Continue the process until measured liquid temperature agrees with the target liquid temperature. Do not go below the target liquid temperature when adjusting charge. Note that suction pressure can change as charge is adjusted.
- 7- Example Circuit 1: At 95°F outdoor ambient and a measured suction pressure of 130psig, the target liquid temperature is 103°F. For a measured liquid temperature of 106°F, add charge in increments until measured liquid temperature agrees with the target liquid temperature.

Normal Operating Pressures

		Outdoor Coil Entering Air Temperature											
		65 °F		75 °F		85 °F		95 °F		105 °F		115 °F	
		Suct (psig)	Disc (psig)	Suct (psig)	Disc (psig)	Suct (psig)	Disc (psig)	Suct (psig)	Disc (psig)	Suct (psig)	Disc (psig)	Suct (psig)	Disc (psig)
Circuit 1		95	244	98	285	100	325	104	372	108	424	113	485
		105	251	108	289	112	337	115	385	118	436	121	492
		110	253	118	297	126	346	128	398	136	450	135	505
		113	260	122	302	130	351	137	404	144	458	143	515
Circuit 2		119	240	124	281	128	322	131	368	135	419	138	473
		124	244	127	281	131	325	134	371	139	422	144	477
		133	241	142	293	149	338	152	387	158	436	159	488
		136	253	144	291	154	336	162	386	169	436	174	492

Charging Curves

