

13ACDN018-230-15 HCFC-22 CHARGING INFORMATION

FOR COMPLETE CHARGING PROCEDURES, REFER TO THE APPLICABLE INSTALLATION OR SERVICE MANUAL

AIRFLOW CHECK - Both airflow and refrigerant charge must be monitored for a proper system set-up. It may be necessary to alternately check and adjust the airflow and the refrigerant charge.

NOTE - Be sure that filters and indoor and outdoor coils are clean before testing.

To determine temperature drop across indoor coil (Delta-T), measure the entering air dry bulb (DB) and wet bulb (WB) temperatures at the indoor coil. Find Delta-T in table 1. Measure coil's leaving air DB and subtract that value from entering air DB. The measured difference should be within $\pm 3^{\circ}\text{F}$ ($\pm 1.8^{\circ}\text{C}$) of table value; if too low, decrease the indoor fan speed (refer to indoor unit for information). If the Delta-T is too high, increase the indoor fan speed. Repeat charging procedure and Delta-T (air flow adjustment) procedure until both are correct.

Example: assume entering air DB - 72, WB - 64, leaving DB - 53. Therefore, Delta-T should be 15 (per table); delta across coil is 72 - 53 or 19 (which is 4°F higher than table value); action necessary: increase fan speed.

Table 1. Evaporator Coil Delta-T

Dry bulb temperature of air entering indoor coil (°F)	80	24	24	24	23	23	22	22	22	20	19	18	17	16	15
	78	23	23	23	22	22	21	21	20	19	18	17	16	15	14
	76	22	22	22	21	21	20	19	19	18	17	16	15	14	13
	74	21	21	21	20	19	19	18	17	16	16	15	14	13	12
	72	20	20	19	18	17	17	16	15	15	14	13	12	11	10
	70	19	19	18	18	17	17	16	15	15	14	13	12	11	10
°F	57	58	59	60	61	62	63	64	65	66	67	68	69	70	

[Wet bulb temperature of air entering indoor coil]



Table 2. Superheat (SH) Value (RFC System)

Suction Line Saturation Temperature Minus Suction Line Temperature at OD Service Valve									
Outdoor Temp (°F)	65	70	75	80	85	90	95	100	105
Superheat (°F)	26	22	19	16	13	10	7	4	2

All measurements are at the service valves and are based on 80db / 67wb indoor temperature.

Table 3. Normal Operating Pressures - Fixed Orifice (RFC)

Liquid Line ± 10 PSIG / Vapor Line ± 5 PSIG		
Outdoor Temp. (°F)	PSIG*	*Pressures at OD Service Valves Typical pressures: indoor evaporator match up, indoor air quality and evaporator load will cause the pressures to vary.
65	140 / 71	
70	151 / 74	
75	163 / 76	
80	176 / 78	
85	190 / 80	
90	205 / 82	
95	220 / 83	
100	236 / 84	
105	252 / 85	
110	269 / 86	
115	288 / 87	

13ACDN018-230-15 HCFC-22 CHARGING INFORMATION

FOR COMPLETE CHARGING PROCEDURES, REFER TO THE APPLICABLE INSTALLATION OR SERVICE MANUAL

AIRFLOW CHECK - Both airflow and refrigerant charge must be monitored for a proper system set-up. It may be necessary to alternately check and adjust the airflow and the refrigerant charge.

NOTE - Be sure that filters and indoor and outdoor coils are clean before testing.

To determine temperature drop across indoor coil (Delta-T), measure the entering air dry bulb (DB) and wet bulb (WB) temperatures at the indoor coil. Find Delta-T in table 1. Measure coil's leaving air DB and subtract that value from entering air DB. The measured difference should be within $\pm 3^{\circ}\text{F}$ ($\pm 1.8^{\circ}\text{C}$) of table value; if too low, decrease the indoor fan speed (refer to indoor unit for information). If the Delta-T is too high, increase the indoor fan speed. Repeat charging procedure and Delta-T (air flow adjustment) procedure until both are correct.

Example: assume entering air DB - 72, WB - 64, leaving DB - 53. Therefore, Delta-T should be 15 (per table); delta across coil is 72 - 53 or 19 (which is 4°F higher than table value); action necessary: increase fan speed.

Table 1. Evaporator Coil Delta-T

Dry bulb temperature of air entering indoor coil (°F)	80	24	24	24	23	23	22	22	22	20	19	18	17	16	15
	78	23	23	23	22	22	21	21	20	19	18	17	16	15	14
	76	22	22	22	21	21	20	19	19	18	17	16	15	14	13
	74	21	21	21	20	19	19	18	17	16	16	15	14	13	12
	72	20	20	19	18	17	17	16	15	15	14	13	12	11	10
	70	19	19	18	18	17	17	16	15	15	14	13	12	11	10
°F	57	58	59	60	61	62	63	64	65	66	67	68	69	70	

[Wet bulb temperature of air entering indoor coil]



Table 2. Superheat (SH) Value (RFC System)

Suction Line Saturation Temperature Minus Suction Line Temperature at OD Service Valve									
Outdoor Temp (°F)	65	70	75	80	85	90	95	100	105
Superheat (°F)	26	22	19	16	13	10	7	4	2

All measurements are at the service valves and are based on 80db / 67wb indoor temperature.

Table 3. Normal Operating Pressures - Fixed Orifice (RFC)

Liquid Line ± 10 PSIG / Vapor Line ± 5 PSIG		
Outdoor Temp. (°F)	PSIG*	*Pressures at OD Service Valves Typical pressures: indoor evaporator match up, indoor air quality and evaporator load will cause the pressures to vary.
65	140 / 71	
70	151 / 74	
75	163 / 76	
80	176 / 78	
85	190 / 80	
90	205 / 82	
95	220 / 83	
100	236 / 84	
105	252 / 85	
110	269 / 86	
115	288 / 87	