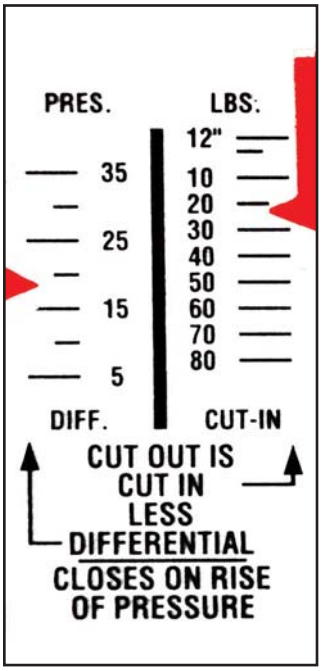
Remote High Side Condensing Unit
Start & Adjust “Quick Step Guide”

The following is a “quick step guide” to expedite critical adjustments of your new Howe condensing unit. When done properly, these adjustments will insure proper operation of this equipment and minimize costly callbacks and or warranty claims.



LOW PRESSURE CONTROL ADJUSTMENT

All Howe condensing units are supplied with a separate Low pressure control for continuous pump down. The settings on this low pressure gauge are divided into two columns. The right side, measures LBS. for CUT-IN (compressor on) and the left side measures PRESSURE for DIFFERENTIAL (compressor off).
The following table shows the approximate correct pressure settings, depending on the required refrigerant. Settings will vary slightly depending on the sensitivity of the switch. It is recommended that pressure switch settings are verified with refrigeration service gauges.

R-404A		R-22	
Diff. / Pres.	Cut-In / LBS	Diff. / Pres.	Cut-In / LBS
18 PSIG	**23 PSIG**	**11 PSIG**	**16 PSIG**

APPROXIMATE REFRIGERANT CHARGE

MODEL	SYSTEM[1]			lbs / 100 linear ft.of liquid line[3]	
	R-404A	R-22		R-404A	R-22
1000	9	10		3.4	3.9
2000	14	20		6.4	7.4
3000	20	33		6.4	7.4
4000	28	33		6.4	7.4
6000	67	78		10.3	11.8
10,000	81	93		21.2	24.4
15,000	123	142		21.2	24.4
20,000	188	216		36.1	41.6
40,000 [2]	269 x 2	309 x 2		36.1 x 2	41.6 x 2

[1] System charge is approximate for ice flaker & condensing unit(s) only. Add additional charge required for liquid line length.
[2] 40,000 pound ice flaker uses Two (2) separate condensing units.
[3] Table above gives approximate additional refrigeration charge for each 100 linear. ft. of liquid line.

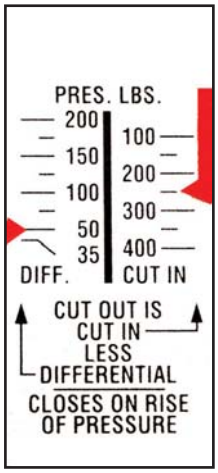
INSTALL CONDENSING UNIT OUTDOORS WITH ADEQUATE AIR FLOW AROUND, ABOVE AND AWAY FROM PREVAILING WIND. SO AS NOT TO RESTRICT CONDENSER OPERATION.

FAN CYCLING CONTROL ADJUSTMENT

On dual fan condensing units, (1000, 2000, & 6000 series ice flakers), the lead fan, (closest to the header or compressor), is running whenever the compressor is running. the additional fan, is controled by an ambient switch, to be set at 50F.
On single fan units,(3000 & 4000) the condenser fan is running whenver the compressor is running.
On large capacity (5-20 ton models) multiple fan condensing units, the fan(s) closest to the header (compressor) is controlled by ambient switch, to be set 50 F. The additional fan(s) is operated on a pressure switch. The pressure switch should be set to cut in @ 250 PSI, differential set to 50 PSI.
Howe 10 ton & 20 ton ice flaker condensing units, the fans are cycled in banks.

Fan Ambient Control

Fan Pressure Control



R-404A		R-22	
Diff. / Pres.	Cut-In / LBS	Diff. / Pres.	Cut-In / LBS
50 PSIG	**250 PSIG**	**50 PSIG**	**250 PSIG**

Condenser Fan Controls					
Model	# Fans	Lead Fan	Second Fan	Lead Bank of Fans(2)	Second Bank of Fans (2)
1000	2	Always on	Ambient		
2000	2	Always on	Ambient		
3000	1	Always on	N/A		
4000	1	Always on	N/A		
6000	2	Always on	Ambient		
10,000	2	Ambient	Pressure		
15,000	2	Ambient	Pressure		
20,000	4			Ambient	Pressure
40,000	4			Ambient	Pressure