

HEAT PUMP CHARGING PROCEDURE

FOR COMPLETE CHARGING DETAILS, REFER TO UNIT INSTALLATION INSTRUCTION.

Normal Operating Pressures Maintenance Checks

Table 1 may be used to assist in performing 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-matchup" pressures. Note that indoor air handler / coil matchups, indoor air quantity, and indoor load will cause variances in operating pressures.

Air Handler / Coil Matchups, Charge Levels and Line Set Lengths

Table 2 lists all OEM recommended air handler / coil matchups along with the charge levels for the various heat pump unit sizes. Factory charge value listed on the unit nameplate is based on 15' (4.6m) line set length. Always consider any differences in line set length (see Installation Instructions for more details).

Weigh-In Charging Method

- If the system is void of refrigerant, locate and repair any leaks and evacuate using the procedure provided in the unit installation instruction.
- Weigh in using unit nameplate charge listed and adjust for matchup and line set length differences. For charge adjustments, consider line set length differences and use Table 2 to adjust for matchup difference.

If weighing facilities are not available use the following subcooling charging method.

Subcooling Charging Method

Cooling Mode—When the outdoor ambient temperature is 60°F (15°C) 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 (21-27°C) indoor return air temperature.

Heating Mode—When the outdoor ambient temperature is below 60°F (15°C), use the heating mode to adjust the charge using the subcooling charge levels. Target subcooling values in table 2 are based on 65-75°F (18-24°C) indoor return air temperature.

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

*Outdoor ambient air temperature at heat pump.	*F (°C)*	Liquid Line Pressure / Vapor Line Pressure
Cooling — First Stage (Low Capacity)	65 (18)	230 / 148
	75 (24)	267 / 150
	85 (29)	309 / 153
	95 (35)	355 / 155
	105 (41)	404 / 157
Cooling — Second Stage (High Capacity)	115 (49)	460 / 159
	65 (18)	236 / 144
	75 (24)	275 / 145
	85 (29)	318 / 148
	95 (35)	365 / 150
Heating — First Stage (Low Capacity)	105 (41)	416 / 153
	115 (49)	473 / 155
	50 (10)	317 / 114
Heating — Second Stage (High Capacity)	40 (4.4)	301 / 95
	50 (10)	328 / 87
	40 (4.5)	313 / 89
	30 (-1)	298 / 75
	20 (-7)	280 / 57

Table 2 - Air Handler / Coil Matchups, Target Subcooling and Charge Levels

XPG20-036 (3-TON)				XPG20-036 (3-TON) (Continued)				XPG20-048 (4-TON) (Continued)						
AIR HANDLER / COIL	Target Subcooling		**Add charge		AIR HANDLER / COIL	Target Subcooling		**Add charge		AIR HANDLER / COIL	Target Subcooling		**Add charge	
	Heating (±5°F)	Cooling (±1°F)	lb	oz		Heating (±5°F)	Cooling (±1°F)	lb	oz		Heating (±5°F)	Cooling (±1°F)	lb	oz
C33-38 SN# before 6007K	31	7	0	0	CR33-48	30	5	0	0	CH33-50/60C	20	7	0	5
C33-38 SN#6007K and after	10	8	0	0	CR33-50/60, -60	15	4	1	5	CH33-62D	13	5	0	5
C33-44, -48	14	6	0	7	CX34-48 SN# before 6007K	31	7	0	0	CR33-50/60, -60	20	4	0	5
C33-49	6	6	1	5	CX34-48 SN#6007K and after	10	8	0	0	CX34-49	13	5	0	5
C33-50/60C	12	5	0	13	CX34-44/48	19	4	0	10	CX34-60D	20	4	0	0
C33-60D	8	5	0	15	CX34-49	6	6	1	5	CX34-62C, -62D	12	5	0	8
C33-62D	6	6	1	5	CX34-50/60C	12	5	0	13	XPG20-060 (5-TON)				
CH23-51	14	6	0	5	CX34-60D	8	5	0	15	C33-49	16	5	1	0
CH23-65	12	5	0	13	CX34-62D	6	6	1	5	C33-60D	24	5	0	0
CBX27UH-036-230	14	6	0	7	XPG20-048 (4-TON)				C33-62C, -62D	13	5	0	11	
CBX27UH-042-230	6	6	1	5	C33-49	13	5	0	5	CBX27UH-060-230	16	5	1	0
CB29M-51	6	6	1	5	C33-60D	20	4	0	0	CB30M-51, -65	16	5	1	0
CB30M-41, -46	14	6	0	7	C33-62C, -62D	12	5	0	8	CB30U-41, -65	16	5	1	0
CB30M-51	6	6	1	5	CBX27UH-048-230	13	5	0	5	CB31MV-51, -65	16	5	1	0
CB30U-51	6	6	1	5	CBX27UH-060-230	13	5	0	5	CBX32M-048-230	16	5	1	0
CB31MV-41	14	6	0	7	CB30M-51, -65	13	5	0	5	CBX32M-060-230	16	5	1	0
CB31MV-51	6	6	1	5	CB30U-51, -65	13	5	0	5	CBX32MV-048-230	16	5	1	0
CBX32M-036-230	14	6	0	7	CB31MV-51, -65	13	5	0	5	CBX32MV-060-230	16	6	1	0
CBX32M-042-230	14	6	0	7	CBX32M-048-230	13	5	0	5	CBX32MV-068-230	14	4	1	0
CBX32M-048-230	6	6	1	5	CBX32M-060-230	13	5	0	5	CBX40UHV-048	16	5	1	0
CBX32MV-036-230	14	6	0	5	CBX32MV-048-230	13	5	0	5	CBX40UHV-060	16	6	1	0
CBX32MV-048-230	6	6	1	5	CBX32MV-060-230	13	6	0	5	CH23-68	14	4	1	0
CBX40UHV-036	14	6	0	5	CBX32MV-068-230	10	6	0	13	CH33-62D	18	4	1	0
CBX40UHV-042, -048	6	6	1	5	CBX40UHV-048	13	5	0	5	CR33-50/60, -60	24	5	0	0
CH33-44/48B	12	5	0	13	CBX40UHV-060	13	6	0	5	CX34-49	16	5	1	0
CH33-48	12	5	0	13	CH23-68	12	7	0	13	CX34-60D	24	5	0	0
										CX34-62C, -62D	13	5	0	11

