

XP20 HFC-410A CHARGING INFORMATION – FOR COMPLETE CHARGING PROCEDURES, REFER TO THE APPLICABLE INSTALLATION AND SERVICE MANUAL

Maintenance checks using the Normal Operating Pressures table

Table 1 may be used to help perform maintenance checks. This table is not a procedure for charging the system. Minor variations in the pressures can 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.

Matched System Components/Charge Levels/Line Set Length/Liquid Line Sizing

Table 2 lists all the Lennox recommended indoor unit matches along with the charge levels for the various sizes of outdoor units. Charge levels on the unit nameplate are based on installations with 15' (4.6m) line sets; consider line set length and liquid line sizing differences when calculating charge adjustments. For each additional foot of 3/8" liquid line set, add 0.6 ounces or for 1/2" liquid lines, add 1.0 ounce of additional charge.

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, referring to table 2, adjust for the matchup difference.

- 1 - Recover the refrigerant from the unit.
- 2 - Conduct leak check; evacuate the system.
- 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 (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 (table). 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)

XP20 Model	-024	-036	-048	-060
°F	Liquid Line Pressure / Vapor Line Pressure			
Heating Operation – Max Speed				
20	270 / 55	330 / 62	340 / 61	355 / 60
30	285 / 68	357 / 75	370 / 76	370 / 76
40	305 / 87	375 / 90	400 / 92	390 / 90
50	320 / 105	395 / 105	415 / 110	410 / 105
Cooling Operation – Max Speed				
65	245 / 140	240 / 135	245 / 130	235 / 132
70	260 / 142	250 / 138	265 / 131	255 / 133
75	280 / 145	270 / 140	285 / 132	275 / 134
80	300 / 145	290 / 141	305 / 134	295 / 135
85	325 / 147	310 / 142	330 / 135	315 / 136
90	345 / 148	335 / 143	355 / 137	340 / 137
95	370 / 150	360 / 143	380 / 138	365 / 138
100	395 / 150	385 / 145	405 / 139	390 / 140
105	423 / 152	410 / 146	430 / 140	415 / 141
110	450 / 153	440 / 148	460 / 142	445 / 142
115	480 / 155	465 / 149	485 / 142	475 / 144

Table 2 - Indoor Unit Matchups and Subcooling Charge Levels

INDOOR MATCHUP	HEAT PUMP	Target Subcooling		*Add charge		INDOOR MATCHUP	HEAT PUMP	Target Subcooling		*Add charge	
		Heating (+5°F)	Cooling (+1°F)	lb	oz			Heating (+5°F)	Cooling (+1°F)	lb	oz
-024											
				lb	oz	CBX32MV-060		32	15	3	2
CBX32MV-024 / -030		14	13	1	1	CBX40UHV-060		32	15	3	2
CBX32MV-018 / -024		12	11	0	0	CH33-49C		23	11	2	5
CR33-48B		13	11	1	3	CH33-50 / 60C		23	12	2	5
C33 / CX34-31		12	16	1	7	CH33-62D		22	11	3	3
C33 / CX34-38		13	17	2	0	CR33-50 / 60C		38	10	1	3
CH35-30B		14	13	0	15	CR33-60D		38	10	1	3
-036											
				lb	oz	C33 / CX34-49		28	13	2	7
CBX32MV-036		28	10	1	12	C33 / CX34-62C		23	13	3	1
CBX40UHV-036		28	10	1	12	C33 / CX34-62D		23	12	2	4
CH33-44 / 48B		23	10	1	0	CH35-60D		30	12	2	1
CH33-48C		19	10	0	0	-060				lb	oz
CR33-50 / 60C		14	11	3	4	CBX32MV-060		17	8	0	15
C33 / CX34-38		23	10	0	5	CBX40UHV-060		17	8	0	15
C33 / CX34-43		25	9	2	1	CH33-49C		25	10	1	1
CX34-44 / 48 C33-48		34	10	1	4	CH33-50 / 60C		25	10	1	1
CH35-48B		20	11	1	3	CH33-62D		25	10	2	6
C33 / CX34-50 / 60		25	9	2	1	CR33-60D		18	7	0	0
CH35-48C		18	7	5	1	C33 / CX34-49		16	8	0	8
-048											
				lb	oz	C33 / CX34-62C		22	11	2	1
CBX32MV-048		30	11	0	0	C33 / CX34-62D		18	10	1	8
CBX40UHV-048		30	11	0	0	CH35-60D		30	9	0	3
*Amount of charge required in addition to charge shown on unit nameplate. (Remember to consider line set length.)											

NOTE - When charging a system with a C33 coil (cased or uncased) with a TXV installed, use the CX34 charge information.



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