

NON-TXV CHARGING CALCULATOR

For capillary tube and fixed orifice flow control

Indoor temp	70	75	80	85	90	95
	REQUIRED SUPERHEAT					
Outdoor temp.						
55	21	25	29	33	38	42
60	17	22	27	31	36	40
65	14	19	24	29	34	39
70	10	16	22	27	32	37
75	6	13	19	25	31	36
80	5	11	17	23	29	34
85	5	8	15	20	27	33
90	5	5	12	18	25	31
95	5	5	10	16	23	29
100	5	5	7	14	22	28
105	5	5	5	12	20	26
110	5	5	5	9	18	24
115	5	5	5	7	16	23

- 1) Connect gauges to system & connect temp clamp to suction (larger) line.
- 2) High-side GAUGE temperature should be 20-35 degrees above outdoor.
- 3) Determine low-side GAUGE temperature.
- 4) Measure actual temperature at suction (larger) line.
- 5) Low-side GAUGE temperature + superheat = actual line temperature.
- 6) If more than 5 degrees over, add charge to decrease line temperature.
- 7) If more than 5 degrees under, remove charge to increase line temperature.

General Guide

Outdoor Temp	High side gauge temp	Low side gauge temp
80	100-135	32-35
100	120-135	40
110	130-145	50
120	140-155	60

If the suction-line temperature is too cold, the evaporator coil is not absorbing heat as it should. The cause could be a dirty coil, dirty filter, or poor air flow.

Very high high-side pressure and very low low-side pressure indicates a restriction in the metering device.

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R22 TXV CHARGING CALCULATOR

Based on 15 degrees sub-cooling

Gauge Press.	Line Temp.	Gauge Press.	Line Temp.
134	61	233	97
141	64	243	100
148	67	253	103
156	70	264	106
163	73	274	109
171	76	285	112
179	79	297	115
187	82	309	118
196	85	321	121
205	88	331	124
214	91	346	127
223	94	359	130

Based on 10 degrees sub-cooling

Gauge Press.	Line Temp.	Gauge Press.	Line Temp.
134	66	233	101
141	69	243	105
148	72	253	108
156	75	264	111
163	78	274	114
171	81	285	117
179	84	297	120
187	87	309	123
196	90	321	126
205	93	331	129
214	96	346	132
223	99	359	135

- 1) Connect gauges to system & connect temp clamp to liquid (smaller) line.
- 2) Determine high-side gauge PRESSURE.
- 3) Measure actual temperature at liquid (smaller) line.
- 4) Actual line temperature should = chart temperature above.
- 5) If more than 5 degrees over, add charge to decrease line temperature.
- 6) If more than 5 degrees under, remove charge to increase line temperature.

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