

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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410A TXV CHARGING CALCULATOR

Based on 15 degrees sub-cooling

Gauge Press.	Line Temp.	Gauge Press.	Line Temp.
221	61	376	97
232	64	391	100
243	67	407	103
255	70	424	106
267	73	441	109
279	76	448	112
291	79	476	115
304	82	495	118
318	85	514	121
332	88	533	124
346	91	553	127
360	94	574	130

Based on 10 degrees sub-cooling

Gauge Press.	Line Temp.	Gauge Press.	Line Temp.
221	66	376	101
232	69	391	105
243	72	407	108
255	75	424	111
267	78	441	114
279	81	448	117
291	84	476	120
304	87	495	123
318	90	514	126
332	93	533	129
346	96	553	132
360	99	574	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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