

Condenser=40°C, Evaporator=-5°C, Subcool amount=8K, Total Superheat= 6K

		R404A	R407F	R407A	R448A (N40)	R449A (XP40)
Safety Group		A1	A1	A1	A1	A1
GWP of Refrigerant	CO ₂ eq	3922	1825	2107	1387	1397
Refrigerant Charge	kg	100.00	107.11	109.81	104.97	105.10
Refrigerant Charge GWP	TCO ₂ eq	392.20	195.47	231.37	145.59	146.83
Evaporating Temperature	°C	-5.00	-5.01	-5.01	-5.02	-5.02
Evaporating Pressure	bar.g	4.13	3.73	3.50	3.73	3.64
Evaporator Super Heat	K	6.00	6.00	6.00	6.00	6.00
Suction Line Superheat	K	0.00	0.00	0.00	0.00	0.00
Compressor Suction Temperature	°C	1.21	3.27	3.20	3.22	3.16
Compressor Discharge Temperature	°C	59.72	76.73	71.74	72.06	71.34
Condensing Temperature	°C	40.00	40.00	40.00	40.01	40.01
Condensing Pressure	bar.g	17.21	17.19	16.40	16.90	16.59
Condenser Sub Cooling	K	8.00	8.00	8.00	8.00	8.00
Liquid Line Subcooling	K	0.00	0.00	0.00	0.00	0.00
Liquid Line Temperature	°C	31.83	29.79	29.81	29.68	29.69
Compressor Displacement	m ³ /h	123.04	123.04	123.04	123.04	123.04
Volumetric Efficiency	%	0.95	0.95	0.95	0.95	0.95
Isentropic Efficiency	%	0.70	0.70	0.70	0.70	0.70
Mass Flow	kg/s	0.82	0.61	0.64	0.65	0.64
Evaporator Cooling Capacity	kW	100.00	106.54	100.39	103.49	101.69
Compressor Power	kW	30.26	31.07	29.33	30.30	29.74
C.O.P.		3.30	3.43	3.42	3.42	3.42
Evaporator Glide	K	0.42	4.55	4.41	4.47	4.36
Condenser Glide	K	0.34	4.43	4.39	4.66	4.63
Volumetric Capacity	kJm ³	3079.90	3281.30	3091.84	3187.45	3131.81
Evaporator Inlet Temperature	°C	-5.21	-7.28	-7.22	-7.25	-7.20
Condenser Capacity	kW	130.26	137.61	129.72	133.80	131.42
Compressor Power Usage to maintain Original Duty	Est %		0.96	0.97	0.97	0.97
Estimated power cost P/A	£	£17,893.08	£17,241.65	£17,275.84	£17,314.32	£17,292.75

Red - worse than 5% against original refrigerant

Green - better than 5% against original refrigerant