



Compressor Selection: Semi-hermetic Reciprocating Compressors

Input Values

Compressor model	(4EC-4.2Y)	Suction gas temperature	20,00 °C
Mode	Refrigeration and Air conditioning	Operating mode	Auto
Refrigerant	R404A	Power supply	400V-3-50Hz
Reference temperature	Dew point temp.	Capacity Control	100%
Liq. subc. (in condenser)	0 K	Useful superheat	100%

Result

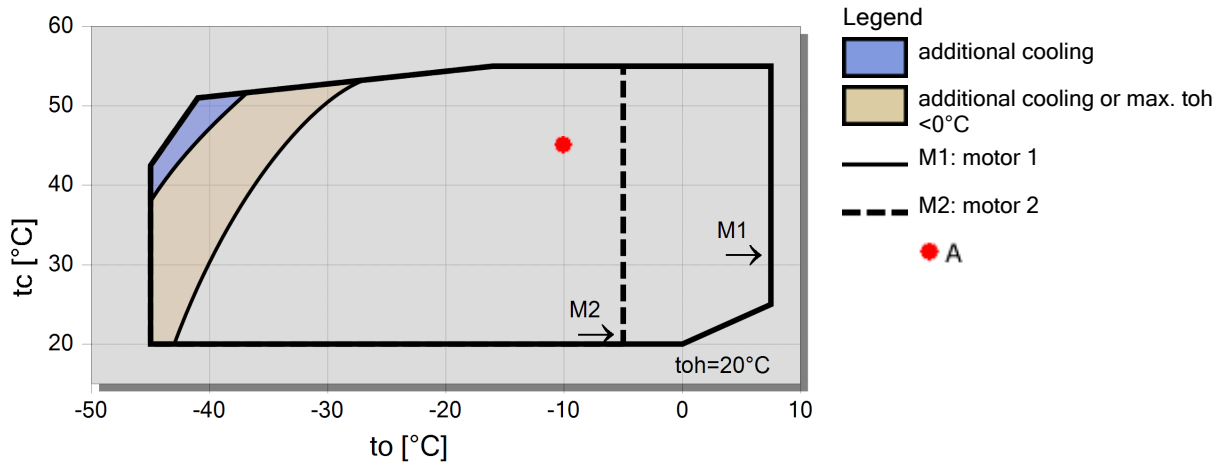
Q [W]	Cooling capacity	COP [-]	COP/EER
Qu* [W]	Evaporator capacity	m [kg/h]	Mass flow
P [kW]	Power input	Op.	Operating mode
I [A]	Current	th [°C]	Discharge gas temp. w/o cooling
Qc [W]	Condenser Capacity		

tc	to	-5°C	-10°C	-15°C	-20°C	-25°C	-30°C	-35°C	-40°C
30°C	Q [W]	17327	14291	11663	9398	7454	5796	4390	3206
	Qu* [W]	17327	14291	11663	9398	7454	5796	4390	3206
	P [kW]	4,61	4,39	4,12	3,81	3,45	3,06	2,65	2,22
	I [A]	7,90	7,58	7,19	6,73	6,23	5,69	5,15	4,63
	Qc [W]	21935	18684	15787	13204	10903	8856	7036	5423
	COP [-]	3,76	3,25	2,83	2,47	2,16	1,89	1,66	1,45
	m [kg/h]	435	355	288	230	181,5	140,4	105,9	77,1
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	70,5	77,7	85,3	93,6	102,5	112,5	123,5	136,3
	40°C	Q [W]	14438	11872	9645	7721	6067	4652	3451
Qu* [W]		14438	11872	9645	7721	6067	4652	3451	2439
P [kW]		5,28	4,93	4,53	4,10	3,64	3,15	2,65	2,14
I [A]		8,89	8,37	7,79	7,16	6,49	5,81	5,15	4,54
Qc [W]		19714	16799	14178	11821	9703	7802	6099	4578
COP [-]		2,74	2,41	2,13	1,88	1,67	1,48	1,30	1,14
m [kg/h]		409	332	267	212	165,8	126,4	93,4	65,7
Op.		Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
th [°C]		82,5	89,8	97,7	106,1	115,3	125,6	137,1	0
50°C		Q [W]	11653	9551	7721	6134	4765	3591	2592
	Qu* [W]	11653	9551	7721	6134	4765	3591	2592	1748
	P [kW]	5,86	5,39	4,87	4,33	3,77	3,19	2,60	2,02
	I [A]	9,76	9,05	8,29	7,49	6,68	5,86	5,09	4,41
	Qc [W]	17515	14937	12593	10464	8531	6779	5195	3766
	COP [-]	1,99	1,77	1,58	1,42	1,27	1,13	1,00	0,87
	m [kg/h]	382	309	247	194,7	150,1	112,4	80,7	54,2
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	94,9	102,4	110,5	119,3	128,9	139,7	0	0

-- No calculation possible (see message in single point selection)

*According to EN12900 (20°C suction gas temp., 0K liquid subcooling)

Application Limits 100% Octagon





Compressor Selection: Semi-hermetic Reciprocating Compressors

Input Values

Compressor model Mode	(2DC-2.2Y) Refrigeration and Air conditioning	Suction gas temperature Operating mode	20,00 °C Auto
Refrigerant Reference temperature Liq. subc. (in condenser)	R404A Dew point temp. 0 K	Power supply Capacity Control Useful superheat	400V-3-50Hz 100% 100%

Result

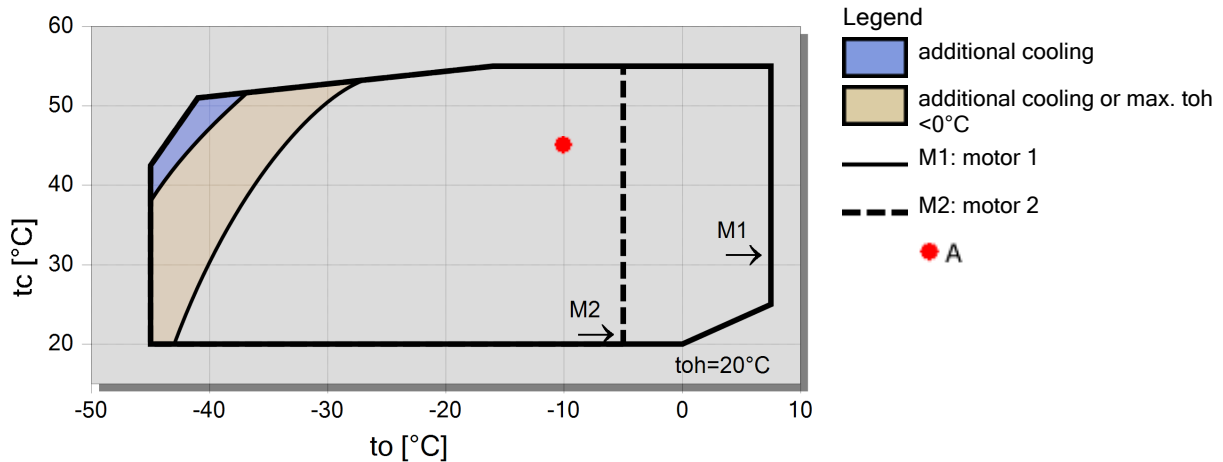
Q [W] Qu* [W] P [kW] I [A] Qc [W]	Cooling capacity Evaporator capacity Power input Current Condenser Capacity	COP [-] m [kg/h] Op. th [°C]	COP/EER Mass flow Operating mode Discharge gas temp. w/o cooling
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tc	to	-5°C	-10°C	-15°C	-20°C	-25°C	-30°C	-35°C	-40°C
30°C	Q [W]	10113	8345	6814	5493	4360	3392	2571	1879
	Qu* [W]	10113	8345	6814	5493	4360	3392	2571	1879
	P [kW]	2,72	2,59	2,43	2,25	2,05	1,83	1,59	1,35
	I [A]	4,86	4,69	4,48	4,25	3,99	3,73	3,46	3,21
	Qc [W]	12833	10936	9248	7746	6409	5220	4164	3227
	COP [-]	3,72	3,22	2,80	2,44	2,13	1,86	1,61	1,40
	m [kg/h]	254	208	168,1	134,6	106,2	82,2	62,0	45,2
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	70,9	78,1	85,8	94,2	103,6	114,0	125,8	139,7
	40°C	Q [W]	8488	6977	5666	4532	3557	2724	2016
Qu* [W]		8488	6977	5666	4532	3557	2724	2016	1419
P [kW]		3,15	2,94	2,70	2,44	2,17	1,88	1,58	1,28
I [A]		5,46	5,16	4,84	4,49	4,14	3,79	3,45	3,15
Qc [W]		11640	9915	8366	6974	5724	4603	3599	2700
COP [-]		2,69	2,37	2,10	1,86	1,64	1,45	1,27	1,11
m [kg/h]		240	195,3	157,1	124,7	97,2	74,0	54,5	38,2
Op.		Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
th [°C]		83,2	90,5	98,4	107,0	116,5	127,1	139,2	0
50°C		Q [W]	6900	5641	4545	3596	2779	2080	1487
	Qu* [W]	6900	5641	4545	3596	2779	2080	1487	987
	P [kW]	3,55	3,25	2,93	2,59	2,25	1,90	1,54	1,19
	I [A]	6,03	5,60	5,15	4,70	4,25	3,81	3,41	3,06
	Qc [W]	10446	8888	7474	6191	5029	3978	3030	2176
	COP [-]	1,95	1,74	1,55	1,39	1,24	1,10	0,96	0,83
	m [kg/h]	226	182,6	145,6	114,1	87,5	65,1	46,3	30,6
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	95,9	103,6	111,8	120,8	130,8	0	0	0

-- No calculation possible (see message in single point selection)

*According to EN12900 (20°C suction gas temp., 0K liquid subcooling)

Application Limits 100% Octagon



Legend

- additional cooling
- additional cooling or max. toh < 0°C
- M1: motor 1
- M2: motor 2
- A