

Invotech Selection Software

REFRIGERANT R454C

Operation Conditions

Evaporating Temperature(ℓ): -5,0

Condensing Temperature(ℓ): 45,0

Liquid subcooling: 2,0

Suction Superheat: 5,0

Required Capacity(Kw): 0,01

Compressor Selected: YM115U1G-100

PERFORMANCE AT SPECIFIED OPERATING POINT

Capacity (KW) 11,4

Power Input (KW) 4,28

COP 2,66

Current (A) 8,67

COMPRESSOR MECHANICAL AND PHYSICAL DATA

Length/Width/Height (mm) 239/239/463

Weight (kg) 38

Stub Suction (inch) 7/8

Stub Discharge (inch) 1/2

Base mounting (hole dia) 190X190(8.5)

Oil type POE

Initial charge of oil quantity (L) 1.6

Recharge of oil quantity (L) 1.45

High Side PS Max., (MPa) 3.2

Low Side PS Max., (MPa) 2.0

Displacement(m³/h) 18.8

COMPRESSOR ELECTRICAL DATA

Electricity 380V/50Hz/3P

Standard Conditions -6.7/48.9/11.1/0

Normal Power (HP) 7

Normal Capacity (ℓ) 10220

Normal Power input(ℓ) 4520

Normal COP(ℓ/ℓ) 2.26

Normal Current(ℓ) 8.9

Locked Rotor Current(ℓ) 85

Maximum operating current(ℓ) 11.8

Model: YM115U1G-100

Refrigerant: R454C

Suction Superheat: 5,0

Liquid subcooling: 2,0

Capacity(KW)

Tc\Te	-30	-25	-20	-15	-10	-5	0	5	10	
10	5,63	7,17	8,97	11,1	13,64					
15	5,19	6,65	8,34	10,33	12,69					
20	4,89	6,28	7,87	9,74	11,95	14,57				
25	4,65	6	7,52	9,28	11,35	13,81	16,72			
30	4,45	5,77	7,23	8,9	10,85	13,16	15,9	19,13	22,94	
35	4,22	5,53	6,95	8,55	10,4	12,58	15,15	18,19	21,78	
40	3,92	5,23	6,63	8,17	9,94	12,01	14,44	17,31	20,69	
45	3,49	4,83	6,22	7,73	9,43	11,4	13,71	16,42	19,62	
50	2,89	4,27	5,67	7,16	8,82	10,71	12,9	15,48	18,51	
55			4,93	6,42	8,05	9,88	11,98	14,44	17,31	
60				5,46	7,07	8,86	10,89	13,25	15,99	

Power Input(KW)

Tc\Te	-30	-25	-20	-15	-10	-5	0	5	10	
10	2,1	2,17	2,26	2,38	2,52					
15	2,28	2,35	2,44	2,54	2,66					
20	2,46	2,55	2,63	2,73	2,83	2,95				
25	2,64	2,75	2,85	2,94	3,04	3,15	3,27			
30	2,83	2,96	3,08	3,18	3,28	3,38	3,49	3,61	3,77	
35	3,01	3,18	3,32	3,44	3,55	3,65	3,75	3,86	3,98	
40	3,18	3,39	3,57	3,72	3,84	3,95	4,05	4,15	4,26	
45	3,34	3,61	3,83	4,01	4,16	4,28	4,39	4,49	4,59	
50	3,49	3,82	4,09	4,31	4,5	4,65	4,77	4,88	4,98	
55			4,36	4,63	4,86	5,04	5,19	5,31	5,41	
60				4,96	5,23	5,45	5,64	5,78	5,9	

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Liquid subcooling: 2,0

Current(A)

Tc\Te	-30	-25	-20	-15	-10	-5	0	5	10	
10	6,68	6,74	6,8	6,86	6,93					
15	6,81	6,87	6,94	7,01	7,09					
20	6,94	7,02	7,1	7,18	7,26	7,35				
25	7,08	7,17	7,26	7,36	7,45	7,55	7,65			
30	7,23	7,34	7,44	7,55	7,67	7,78	7,89	8,01	8,13	
35	7,4	7,53	7,65	7,78	7,91	8,04	8,17	8,31	8,44	
40	7,59	7,74	7,88	8,03	8,18	8,33	8,49	8,65	8,8	
45	7,81	7,98	8,15	8,32	8,49	8,67	8,85	9,03	9,21	
50	8,06	8,25	8,45	8,65	8,85	9,05	9,26	9,47	9,68	
55			8,79	9,02	9,25	9,48	9,72	9,96	10,2	
60				9,44	9,7	9,97	10,24	10,51	10,78	

Mass Flow(Kg/h)

Tc\Te	-30	-25	-20	-15	-10	-5	0	5	10	
10	113,49	139,91	171,17	208,68	253,84					
15	112,81	139,2	170,41	207,85	252,91					
20	112,05	138,39	169,52	206,85	251,78	305,72				
25	111,25	137,5	168,52	205,71	250,48	304,22	368,35			
30	110,42	136,55	167,43	204,45	249,03	302,55	366,43	442,07	530,86	
35	109,6	135,58	166,28	203,11	247,45	300,73	364,33	439,66	528,12	
40	108,8	134,6	165,1	201,69	245,78	298,77	362,06	437,06	525,17	
45	108,06	133,65	163,91	200,24	244,04	296,71	359,67	434,3	522,01	
50	107,4	132,75	162,73	198,77	242,25	294,58	357,16	431,39	518,69	
55			161,6	197,31	240,44	292,39	354,57	428,37	515,21	
60				195,89	238,63	290,18	351,92	425,27	511,62	