

Invotech Selection Software

REFRIGERANT R449A

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: YM115E1G-100

PERFORMANCE AT SPECIFIED OPERATING POINT

Capacity (KW)	12,72
Power Input (KW)	5,18
COP	2,46
Current (A)	9,31

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(m ³ /h)	18.8

COMPRESSOR ELECTRICAL DATA

Electricity	380V/50Hz/3P
Standard Conditions	-6.7/48.9/11.1/0
Normal Power (HP)	6.5
Normal Capacity (ℓ)	12021
Normal Power input(ℓ)	5464
Normal COP(ℓ/ℓ)	2.2
Normal Current(ℓ)	10.1
Locked Rotor Current(ℓ)	85
Maximum operating current(ℓ)	15.8

Model: YM115E1G-100

Refrigerant: R449A

Suction Superheat: 5,0

Liquid subcooling: 2,0

Capacity(KW)

Tc\Te	-30	-25	-20	-15	-10	-5	0	5	10	
10	5,95	7,53	9,44	11,73	14,47					
15	5,85	7,37	9,19	11,36	13,95					
20	5,72	7,19	8,93	10,98	13,43	16,32				
25	5,56	6,99	8,65	10,6	12,91	15,64	18,85			
30	5,34	6,73	8,33	10,19	12,38	14,96	17,98	21,52	25,63	
35	5,06	6,42	7,97	9,74	11,82	14,25	17,1	20,44	24,31	
40	4,69	6,04	7,54	9,24	11,21	13,51	16,19	19,33	22,99	
45	4,22	5,57	7,03	8,67	10,54	12,72	15,25	18,2	21,64	
50		5	6,44	8,02	9,81	11,86	14,25	17,03	20,26	
55			5,74	7,27	8,98	10,94	13,19	15,8	18,83	
60				6,42	8,06	9,92	12,04	14,5	17,35	
65					7,02	8,79	10,8	13,11	15,78	

Power Input(KW)

Tc\Te	-30	-25	-20	-15	-10	-5	0	5	10	
10	1,9	1,98	2,07	2,18	2,29					
15	2,26	2,36	2,48	2,6	2,74					
20	2,55	2,68	2,82	2,97	3,13	3,29				
25	2,81	2,96	3,13	3,3	3,48	3,66	3,83			
30	3,06	3,23	3,42	3,61	3,81	4,01	4,21	4,39	4,56	
35	3,31	3,5	3,71	3,93	4,15	4,37	4,59	4,79	4,98	
40	3,59	3,8	4,03	4,27	4,51	4,75	4,99	5,21	5,42	
45	3,92	4,15	4,4	4,65	4,92	5,18	5,43	5,68	5,9	
50		4,57	4,83	5,11	5,39	5,67	5,94	6,21	6,45	
55			5,36	5,65	5,95	6,25	6,54	6,82	7,08	
60				6,3	6,62	6,93	7,24	7,54	7,82	
65					7,42	7,75	8,08	8,39	8,68	

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Liquid subcooling: 2,0

Current(A)

Tc\Te	-30	-25	-20	-15	-10	-5	0	5	10	
10	6,52	6,5	6,49	6,5	6,52					
15	6,69	6,67	6,66	6,67	6,69					
20	6,94	6,9	6,88	6,88	6,9	6,94				
25	7,29	7,23	7,19	7,17	7,17	7,2	7,25			
30	7,76	7,67	7,6	7,56	7,53	7,54	7,56	7,61	7,69	
35	8,39	8,26	8,15	8,07	8,01	7,98	7,98	8	8,05	
40	9,2	9,02	8,87	8,74	8,64	8,57	8,52	8,51	8,52	
45	10,21	9,98	9,77	9,59	9,43	9,31	9,22	9,15	9,12	
50		11,16	10,88	10,64	10,43	10,25	10,09	9,97	9,89	
55			12,24	11,93	11,65	11,4	11,18	10,99	10,84	
60				13,48	13,12	12,79	12,49	12,23	12,01	
65					14,86	14,45	14,07	13,73	13,42	

Mass Flow(Kg/h)

Tc\Te	-30	-25	-20	-15	-10	-5	0	5	10	
10	128,32	148,36	174,71	209,28	253,95					
15	125,17	145,95	172,97	208,12	253,29					
20	122,62	144,05	171,64	207,28	252,86	310,28				
25	120,26	142,25	170,33	206,37	252,27	309,93	381,22			
30	117,7	140,16	168,62	204,97	251,11	308,91	380,27	467,09	571,24	
35	114,51	137,35	166,11	202,69	248,96	306,82	378,16	464,87	568,84	
40	110,3	133,43	162,4	199,1	245,42	303,25	374,48	461	564,69	
45	104,65	127,98	157,06	193,8	240,08	297,79	368,82	455,05	558,38	
50		120,59	149,71	186,39	232,54	290,03	360,77	446,63	549,51	
55			139,92	176,46	222,38	279,57	349,92	435,32	537,65	
60				163,6	209,21	266	335,87	420,71	522,41	
65					192,6	248,91	318,21	402,41	503,38	