

## 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: YM86U1G-100

### PERFORMANCE AT SPECIFIED OPERATING POINT

Capacity (KW)	8,79
Power Input (KW)	3,34
COP	2,63
Current (A)	7,21

### COMPRESSOR MECHANICAL AND PHYSICAL DATA

Length/Width/Height (mm)	239/239/418
Weight (kg)	31
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)	1.4
Recharge of oil quantity (L)	1.25
High Side PS Max., (MPa)	3.2
Low Side PS Max., (MPa)	2.0
Displacement(m <sup>3</sup> /h)	14.5

### COMPRESSOR ELECTRICAL DATA

Electricity	380V/50Hz/3P
Standard Conditions	-6.7/48.9/11.1/0
Normal Power (HP)	5
Normal Capacity (ℓ)	7880
Normal Power input(ℓ)	3530
Normal COP(ℓ/ℓ)	2.23
Normal Current(ℓ)	7.4
Locked Rotor Current(ℓ)	60
Maximum operating current(ℓ)	9.2

Model: YM86U1G-100

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Liquid subcooling: 2,0

**Capacity(KW)**

Tc\Te	-30	-25	-20	-15	-10	-5	0	5	10	
10	4,34	5,53	6,91	8,56	10,51					
15	4	5,13	6,43	7,96	9,78					
20	3,77	4,84	6,07	7,51	9,21	11,23				
25	3,59	4,63	5,8	7,15	8,75	10,64	12,89			
30	3,43	4,45	5,57	6,86	8,36	10,14	12,25	14,75	17,68	
35	3,25	4,26	5,35	6,59	8,01	9,69	11,68	14,02	16,79	
40	3,02	4,03	5,11	6,3	7,66	9,25	11,13	13,34	15,95	
45	2,69	3,72	4,79	5,96	7,27	8,79	10,56	12,65	15,12	
50	2,22	3,29	4,37	5,52	6,8	8,25	9,95	11,93	14,26	
55			3,8	4,95	6,2	7,61	9,24	11,13	13,34	
60				4,21	5,45	6,83	8,4	10,21	12,32	

**Power Input(KW)**

Tc\Te	-30	-25	-20	-15	-10	-5	0	5	10	
10	1,64	1,7	1,77	1,86	1,97					
15	1,78	1,84	1,9	1,98	2,07					
20	1,92	1,99	2,06	2,13	2,21	2,31				
25	2,06	2,15	2,22	2,3	2,37	2,46	2,56			
30	2,21	2,31	2,4	2,48	2,56	2,64	2,72	2,82	2,94	
35	2,35	2,48	2,59	2,68	2,77	2,85	2,93	3,01	3,11	
40	2,48	2,65	2,79	2,9	3	3,08	3,16	3,24	3,32	
45	2,61	2,82	2,99	3,13	3,25	3,34	3,43	3,51	3,58	
50	2,73	2,98	3,19	3,37	3,51	3,63	3,73	3,81	3,89	
55			3,4	3,62	3,79	3,93	4,05	4,15	4,23	
60				3,87	4,08	4,26	4,4	4,51	4,61	

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**Current(A)**

Tc\Te	-30	-25	-20	-15	-10	-5	0	5	10	
10	5,55	5,6	5,65	5,71	5,76					
15	5,66	5,71	5,77	5,83	5,89					
20	5,77	5,83	5,9	5,97	6,04	6,11				
25	5,89	5,96	6,04	6,11	6,19	6,28	6,36			
30	6,01	6,1	6,19	6,28	6,37	6,47	6,56	6,66	6,76	
35	6,15	6,26	6,36	6,47	6,57	6,68	6,79	6,91	7,02	
40	6,31	6,43	6,55	6,68	6,8	6,93	7,06	7,19	7,32	
45	6,49	6,63	6,77	6,92	7,06	7,21	7,36	7,51	7,66	
50	6,7	6,86	7,02	7,19	7,36	7,53	7,7	7,87	8,04	
55			7,31	7,5	7,69	7,88	8,08	8,28	8,48	
60				7,85	8,07	8,29	8,51	8,74	8,96	

**Mass Flow(Kg/h)**

Tc\Te	-30	-25	-20	-15	-10	-5	0	5	10	
10	87,52	107,9	132,01	160,94	195,76					
15	87	107,35	131,42	160,29	195,05					
20	86,41	106,73	130,73	159,52	194,18	235,77				
25	85,79	106,04	129,96	158,64	193,17	234,62	284,07			
30	85,15	105,31	129,12	157,68	192,05	233,33	282,59	340,92	409,4	
35	84,52	104,56	128,24	156,63	190,84	231,92	280,97	339,07	407,29	
40	83,91	103,81	127,32	155,54	189,55	230,41	279,22	337,06	405,01	
45	83,34	103,07	126,41	154,42	188,2	228,83	277,37	334,93	402,58	
50	82,83	102,37	125,5	153,29	186,82	227,18	275,44	332,69	400,01	
55			124,63	152,17	185,43	225,49	273,44	330,36	397,33	
60				151,07	184,03	223,78	271,4	327,97	394,56	