

## Invotech Selection Software

REFRIGERANT R410A

### Operation Conditions

Evaporating Temperature(ℓ): 7,2  
 Condensing Temperature(ℓ): 54,4  
 Liquid subcooling: 8,3  
 Suction Superheat: 11,1

**Required Capacity(Kw): 0,01**

Compressor Selected: YSH450C1G-100

### PERFORMANCE AT SPECIFIED OPERATING POINT

Capacity (KW)	44,89
Power Input (KW)	14,26
COP	3,15
Current (A)	26,32

### COMPRESSOR MECHANICAL AND PHYSICAL DATA

Length/Width/Height (mm)	317.85/309.5/544.9
Weight (kg)	90
Stub Suction (inch)	1 3/8
Stub Discharge (inch)	7/8
Base mounting (hole dia)	190X190(8.5)
Oil type	POE
Initial charge of oil quantity (L)	3.2
Recharge of oil quantity (L)	3
High Side PS Max., (MPa)	4.3
Low Side PS Max., (MPa)	2.0
Displacement(m <sup>3</sup> /h)	29.1

### COMPRESSOR ELECTRICAL DATA

Electricity	380V/50Hz/3P
Standard Conditions	7.2/54.4/11.1/8.3
Normal Power (HP)	15
Normal Capacity (ℓ)	44500
Normal Power input(ℓ)	14127
Normal COP(ℓ/ℓ)	3.15
Normal Current(ℓ)	24.5
Locked Rotor Current(ℓ)	148.5
Maximum operating current(ℓ)	36

Model: YSH450C1G-100

Refrigerant: R410A

Suction Superheat: 11,1

Liquid subcooling: 8,3

**Capacity(KW)**

Tc\Te	-25	-20	-15	-10	-5	0	5	10	12,5	
25	17,76	22,71	28,07	34,08	40,99	49,04	58,46	69,5	75,7	
30	16,3	21,18	26,38	32,15	38,73	46,35	55,27	65,72	71,6	
35	14,96	19,79	24,86	30,41	36,69	43,93	52,37	62,27	67,83	
40	13,61	18,42	23,39	28,75	34,76	41,64	49,64	59	64,27	
45		16,94	21,83	27,04	32,8	39,35	46,94	55,81	60,79	
50			20,07	25,15	30,69	36,95	44,15	52,55	57,26	
55				22,95	28,31	34,3	41,15	49,1	53,56	
60					25,52	31,27	37,79	45,34	49,56	
65						27,74	33,97	41,13	45,14	

**Power Input(KW)**

Tc\Te	-25	-20	-15	-10	-5	0	5	10	12,5	
25	7,38	7,35	7,31	7,28	7,27	7,3	7,39	7,56	7,67	
30	8,48	8,41	8,33	8,26	8,21	8,2	8,24	8,35	8,44	
35	9,63	9,53	9,42	9,31	9,22	9,16	9,16	9,22	9,29	
40	10,88	10,75	10,61	10,47	10,34	10,25	10,2	10,22	10,26	
45		12,12	11,95	11,78	11,62	11,49	11,41	11,39	11,41	
50			13,49	13,3	13,11	12,95	12,83	12,78	12,78	
55				15,06	14,85	14,66	14,52	14,43	14,41	
60					16,89	16,68	16,51	16,39	16,36	
65						19,05	18,85	18,71	18,66	

Model: YSH450C1G-100

Refrigerant: R410A

Suction Superheat: 11,1

Liquid subcooling: 8,3

**Current(A)**

Tc\Te	-25	-20	-15	-10	-5	0	5	10	12,5
25	17,33	17,36	17,29	17,19	17,14	17,2	17,46	17,97	18,35
30	18,41	18,34	18,13	17,87	17,62	17,46	17,45	17,66	17,88
35	19,88	19,79	19,53	19,18	18,81	18,49	18,29	18,29	18,39
40	21,58	21,54	21,3	20,94	20,52	20,13	19,82	19,68	19,69
45		23,4	23,26	22,96	22,58	22,19	21,85	21,64	21,61
50			25,23	25,08	24,81	24,49	24,2	24	23,97
55				27,1	27,02	26,85	26,69	26,58	26,57
60					29,03	29,1	29,13	29,19	29,26
65						31,05	31,36	31,66	31,84

**Mass Flow(Kg/h)**

Tc\Te	-25	-20	-15	-10	-5	0	5	10	12,5
25	318,97	411,49	504,23	603,87	717,09	850,56	1010,96	1204,97	1316,66
30	300,13	393,94	486,36	584,08	693,75	822,06	975,69	1161,3	1268,19
35	288,71	385,59	479,47	577,02	684,93	809,85	958,48	1137,48	1240,46
40	278,69	380,41	477,52	576,69	684,6	807,91	953,32	1127,48	1227,43
45		372,38	474,5	577,06	686,75	810,23	954,18	1125,28	1223,09
50			464,39	572,12	685,35	810,77	955,05	1124,86	1221,42
55				555,83	674,4	803,53	949,91	1120,2	1216,4
60					647,86	782,49	932,74	1105,29	1202,02
65						741,61	897,51	1074,1	1172,24