

## 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):

Compressor Selected: YSH400C1G-100

#### PERFORMANCE AT SPECIFIED OPERATING POINT

Capacity (KW)	40.35
Power Input (KW)	12.89
COP	3.13
Current (A)	23.66

#### 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)	25.3

#### COMPRESSOR ELECTRICAL DATA

Electricity	380V/50Hz/3P
Standard Conditions	7.2/54.4/11.1/8.3
Normal Power (HP)	13
Normal Capacity (ℓ)	39500
Normal Power input(ℓ)	12540
Normal COP(ℓ/ℓ)	3.15
Normal Current(ℓ)	22
Locked Rotor Current(ℓ)	148.5
Maximum operating current(ℓ)	32.5

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**Capacity(KW)**

Tc\Te	-25	-20	-15	-10	-5	0	5	10	12.5	
25	15.96	20.41	25.23	30.64	36.85	44.08	52.55			
30	14.66	19.04	23.71	28.9	34.81	41.67	49.68			
35	13.45	17.79	22.35	27.34	32.98	39.49	47.08	55.97	60.97	
40	12.23	16.56	21.02	25.84	31.24	37.43	44.62	53.04	57.77	
45		15.22	19.62	24.31	29.48	35.37	42.2	50.16	54.64	
50			18.04	22.6	27.59	33.21	39.69	47.23	51.47	
55				20.63	25.45	30.83	36.98	44.13	48.15	
60					22.94	28.11	33.97	40.75	44.55	
65						24.93	30.53	36.97	40.57	

**Power Input(KW)**

Tc\Te	-25	-20	-15	-10	-5	0	5	10	12.5	
25	6.65	6.62	6.58	6.55	6.54	6.57	6.65			
30	7.64	7.58	7.51	7.44	7.39	7.38	7.42			
35	8.68	8.59	8.49	8.39	8.31	8.26	8.25	8.31	8.37	
40	9.81	9.7	9.57	9.44	9.32	9.24	9.2	9.22	9.25	
45		10.94	10.79	10.63	10.49	10.37	10.3	10.28	10.3	
50			12.19	12.01	11.84	11.7	11.59	11.54	11.54	
55				13.62	13.43	13.26	13.13	13.04	13.03	
60					15.29	15.09	14.94	14.83	14.8	
65						17.25	17.07	16.94	16.9	

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**Current(A)**

Tc\Te	-25	-20	-15	-10	-5	0	5	10	12.5
25	15.58	15.6	15.54	15.45	15.41	15.46	15.69		
30	16.55	16.48	16.3	16.06	15.84	15.69	15.68		
35	17.87	17.79	17.55	17.24	16.91	16.62	16.44	16.44	16.53
40	19.39	19.36	19.14	18.82	18.45	18.09	17.82	17.69	17.7
45		21.03	20.91	20.64	20.3	19.94	19.64	19.46	19.43
50			22.68	22.54	22.3	22.01	21.75	21.58	21.54
55				24.36	24.29	24.14	23.99	23.89	23.89
60					26.1	26.16	26.19	26.24	26.3
65						27.91	28.19	28.46	28.62

**Mass Flow(Kg/h)**

Tc\Te	-25	-20	-15	-10	-5	0	5	10	12.5
25	286.72	369.87	453.24	542.8	644.58	764.55	908.73		
30	269.78	354.11	437.18	525.01	623.6	738.93	877.02		
35	259.52	346.6	430.98	518.67	615.66	727.96	861.55	1022.45	1115.02
40	250.5	341.94	429.23	518.37	615.37	726.21	856.91	1013.46	1103.31
45		334.73	426.52	518.71	617.3	728.29	857.69	1011.48	1099.41
50			417.43	514.26	616.05	728.78	858.47	1011.11	1097.91
55				499.63	606.2	722.28	853.85	1006.92	1093.4
60					582.35	703.36	838.41	993.52	1080.46
65						666.62	806.75	965.49	1053.7