Invotech Selection Software

REFRIGERANT	R404A

Operation Conditions

Evaporating Temperature(℃):	-40.0
Condensing Temperature(℃):	45.0
Liquid subcooling:	0.0
Suction Superheat:	58.3

Required Capacity(Kw):

Compressor Selected: YF13E1G-Q100

PERFORMANCE AT SPECIFIED OPERATING POINT	
Capacity (KW)	0.93
Power Input (KW)	1.21
COP	0.77
Current (A)	2.57

CPMPRESSOR MECHANICAL AND PHYSICAL DATA	
Length/Width/Height (mm)	239/239/418
Weight (kg)	29
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^3/h)	5.8

COMPRESSOR ELECTRICAL DATA	
Electricity	380V/50Hz/3P
Standard Conditions	-31.6/40.6/36/0
Normal Power (HP)	2
Normal Capacity (□)	1386
Normal Power input(□)	1237
Normal COP(□/□)	1.12
Normal Current(□)	2.5
Locked Rotor Current(□)	22
Maximum operating current(□)	3.8

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Model: YF13E1G-Q100 Refrigerant: R404A

Suction Superheat: 58.3 Liquid subcooling: 0.0

Capacity(KW)

Tc\Te	-40	-35	-30	-25	-20	-15	-10	-5	0	
25	1.21	1.51	1.88	2.32	2.84	3.45	4.13	4.91	5.78	
30	1.15	1.44	1.79	2.22	2.71	3.28	3.94	4.67	5.5	
35	1.08	1.36	1.69	2.09	2.56	3.1	3.71	4.41	5.19	
40	1.01	1.26	1.58	1.95	2.39	2.89	3.46	4.11	4.84	
45	0.93	1.17	1.46	1.8	2.2	2.67	3.2	3.8	4.47	
50	0.86	1.07	1.33	1.65	2.01	2.43	2.92	3.47	4.09	
55	0.8	0.99	1.22	1.49	1.82	2.2	2.63	3.13	3.69	
60					1.63	1.96	2.34	2.78	3.29	

Power Input(KW)

Tc\Te	-40	-35	-30	-25	-20	-15	-10	-5	0	
25	0.85	0.9	0.96	1.01	1.07	1.13	1.19	1.25	1.32	
30	0.93	0.99	1.05	1.11	1.17	1.23	1.3	1.37	1.44	
35	1.01	1.07	1.14	1.2	1.27	1.34	1.41	1.48	1.56	
40	1.1	1.17	1.23	1.3	1.37	1.45	1.52	1.6	1.68	
45	1.21	1.28	1.35	1.42	1.49	1.57	1.65	1.73	1.81	
50	1.34	1.41	1.49	1.56	1.64	1.72	1.8	1.88	1.97	
55	1.51	1.58	1.66	1.73	1.81	1.89	1.98	2.06	2.15	
60					2.03	2.11	2.19	2.28	2.36	

Model: YF13E1G-Q100 Refrigerant: R404A

Suction Superheat: 58.3 Liquid subcoolling: 0.0

Current(A)

Tc\Te	-40	-35	-30	-25	-20	-15	-10	-5	0	
25	2.21	2.25	2.31	2.36	2.43	2.49	2.56	2.64	2.72	
30	2.29	2.34	2.41	2.47	2.54	2.62	2.7	2.79	2.88	
35	2.36	2.43	2.5	2.58	2.66	2.75	2.84	2.93	3.03	
40	2.46	2.53	2.61	2.7	2.78	2.88	2.98	3.08	3.19	
45	2.57	2.66	2.74	2.84	2.93	3.03	3.14	3.25	3.37	
50	2.73	2.82	2.92	3.02	3.12	3.23	3.34	3.46	3.58	
55	2.95	3.04	3.14	3.25	3.36	3.47	3.59	3.71	3.84	
60					3.66	3.78	3.9	4.03	4.16	

Mass Flow(Kg/h)

Tc\Te	-40	-35	-30	-25	-20	-15	-10	-5	0	
25	27.72	35.14	43.88	54.24	66.47	80.87	97.72	117.28	139.85	
30	27.81	35.19	43.92	54.27	66.53	80.96	97.85	117.48	140.12	
35	27.69	35	43.67	53.98	66.21	80.64	97.54	117.19	139.87	
40	27.46	34.66	43.24	53.47	65.63	80.01	96.88	116.52	139.2	
45	27.24	34.29	42.73	52.84	64.9	79.19	95.99	115.57	138.21	
50	27.12	33.98	42.24	52.2	64.11	78.28	94.96	114.45	137.02	
55	27.22	33.84	41.89	51.65	63.38	77.38	93.92	113.27	135.71	
60					62.82	76.61	92.95	112.13	134.41	

Invotech Selection Software

REFRIGERANT	R404A

Operation Conditions

Evaporating Temperature(℃):	-25.0
Condensing Temperature(℃):	45.0
Liquid subcooling:	0.0
Suction Superheat:	43.3

Required Capacity(Kw):

Compressor Selected: YF13E1G-Q100

PERFORMANCE AT SPECIFIED OPERATING POINT	
Capacity (KW)	1.8
Power Input (KW)	1.42
COP	1.27
Current (A)	2.84

CPMPRESSOR MECHANICAL AND PHYSICAL DATA	
Length/Width/Height (mm)	239/239/418
Weight (kg)	29
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^3/h)	5.8

COMPRESSOR ELECTRICAL DATA	
Electricity	380V/50Hz/3P
Standard Conditions	-31.6/40.6/36/0
Normal Power (HP)	2
Normal Capacity (□)	1386
Normal Power input(□)	1237
Normal COP(□/□)	1.12
Normal Current(□)	2.5
Locked Rotor Current(□)	22
Maximum operating current(□)	3.8

Model: YF13E1G-Q100 Refrigerant: R404A

Suction Superheat: 43.3 Liquid subcooling: 0.0

Capacity(KW)

Tc\Te	-40	-35	-30	-25	-20	-15	-10	-5	0	
25	1.21	1.51	1.88	2.32	2.84	3.45	4.13	4.91	5.78	
30	1.15	1.44	1.79	2.22	2.71	3.28	3.94	4.67	5.5	
35	1.08	1.36	1.69	2.09	2.56	3.1	3.71	4.41	5.19	
40	1.01	1.26	1.58	1.95	2.39	2.89	3.46	4.11	4.84	
45	0.93	1.17	1.46	1.8	2.2	2.67	3.2	3.8	4.47	
50	0.86	1.07	1.33	1.65	2.01	2.43	2.92	3.47	4.09	
55	0.8	0.99	1.22	1.49	1.82	2.2	2.63	3.13	3.69	
60					1.63	1.96	2.34	2.78	3.29	

Power Input(KW)

Tc\Te	-40	-35	-30	-25	-20	-15	-10	-5	0	
25	0.85	0.9	0.96	1.01	1.07	1.13	1.19	1.25	1.32	
30	0.93	0.99	1.05	1.11	1.17	1.23	1.3	1.37	1.44	
35	1.01	1.07	1.14	1.2	1.27	1.34	1.41	1.48	1.56	
40	1.1	1.17	1.23	1.3	1.37	1.45	1.52	1.6	1.68	
45	1.21	1.28	1.35	1.42	1.49	1.57	1.65	1.73	1.81	
50	1.34	1.41	1.49	1.56	1.64	1.72	1.8	1.88	1.97	
55	1.51	1.58	1.66	1.73	1.81	1.89	1.98	2.06	2.15	
60					2.03	2.11	2.19	2.28	2.36	

Model: YF13E1G-Q100 Refrigerant: R404A

Suction Superheat: 43.3 Liquid subcoolling: 0.0

Current(A)

Tc\Te	-40	-35	-30	-25	-20	-15	-10	-5	0	
25	2.21	2.25	2.31	2.36	2.43	2.49	2.56	2.64	2.72	
30	2.29	2.34	2.41	2.47	2.54	2.62	2.7	2.79	2.88	
35	2.36	2.43	2.5	2.58	2.66	2.75	2.84	2.93	3.03	
40	2.46	2.53	2.61	2.7	2.78	2.88	2.98	3.08	3.19	
45	2.57	2.66	2.74	2.84	2.93	3.03	3.14	3.25	3.37	
50	2.73	2.82	2.92	3.02	3.12	3.23	3.34	3.46	3.58	
55	2.95	3.04	3.14	3.25	3.36	3.47	3.59	3.71	3.84	
60					3.66	3.78	3.9	4.03	4.16	

Mass Flow(Kg/h)

Tc\Te	-40	-35	-30	-25	-20	-15	-10	-5	0	
25	27.72	35.14	43.88	54.24	66.47	80.87	97.72	117.28	139.85	
30	27.81	35.19	43.92	54.27	66.53	80.96	97.85	117.48	140.12	
35	27.69	35	43.67	53.98	66.21	80.64	97.54	117.19	139.87	
40	27.46	34.66	43.24	53.47	65.63	80.01	96.88	116.52	139.2	
45	27.24	34.29	42.73	52.84	64.9	79.19	95.99	115.57	138.21	
50	27.12	33.98	42.24	52.2	64.11	78.28	94.96	114.45	137.02	
55	27.22	33.84	41.89	51.65	63.38	77.38	93.92	113.27	135.71	
60					62.82	76.61	92.95	112.13	134.41	

Invotech Selection Software

REFRIGERANT	R404A

Operation Conditions

Evaporating Temperature(□):	-8.0
Condensing Temperature(□):	45.0
Liquid subcooling:	0.0
Suction Superheat:	26.3

Required Capacity(Kw):

Compressor Selected:	YF13E1G-Q100

PERFORMANCE AT SPECIFIED OPERATING POINT	
Capacity (KW)	3.43
Power Input (KW)	1.68
COP	2.04
Current (A)	3.18

CPMPRESSOR MECHANICAL AND PHYSICAL DATA	
Length/Width/Height (mm)	239/239/418
Weight (kg)	29
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^3/h)	5.8

COMPRESSOR ELECTRICAL DATA	
Electricity	380V/50Hz/3P
Standard Conditions	-31.6/40.6/36/0
Normal Power (HP)	2
Normal Capacity (□)	1386
Normal Power input(□)	1237
Normal COP(□/□)	1.12
Normal Current(□)	2.5
Locked Rotor Current(□)	22
Maximum operating current(□)	3.8

Model: YF13E1G-Q100 Refrigerant: R404A

Suction Superheat: 26.3 Liquid subcooling: 0.0

Capacity(KW)

Tc\Te	-40	-35	-30	-25	-20	-15	-10	-5	0	
25	1.21	1.51	1.88	2.32	2.84	3.45	4.13	4.91	5.78	
30	1.15	1.44	1.79	2.22	2.71	3.28	3.94	4.67	5.5	
35	1.08	1.36	1.69	2.09	2.56	3.1	3.71	4.41	5.19	
40	1.01	1.26	1.58	1.95	2.39	2.89	3.46	4.11	4.84	
45	0.93	1.17	1.46	1.8	2.2	2.67	3.2	3.8	4.47	
50	0.86	1.07	1.33	1.65	2.01	2.43	2.92	3.47	4.09	
55	0.8	0.99	1.22	1.49	1.82	2.2	2.63	3.13	3.69	
60					1.63	1.96	2.34	2.78	3.29	

Power Input(KW)

Tc\Te	-40	-35	-30	-25	-20	-15	-10	-5	0	
25	0.85	0.9	0.96	1.01	1.07	1.13	1.19	1.25	1.32	
30	0.93	0.99	1.05	1.11	1.17	1.23	1.3	1.37	1.44	
35	1.01	1.07	1.14	1.2	1.27	1.34	1.41	1.48	1.56	
40	1.1	1.17	1.23	1.3	1.37	1.45	1.52	1.6	1.68	
45	1.21	1.28	1.35	1.42	1.49	1.57	1.65	1.73	1.81	
50	1.34	1.41	1.49	1.56	1.64	1.72	1.8	1.88	1.97	
55	1.51	1.58	1.66	1.73	1.81	1.89	1.98	2.06	2.15	
60					2.03	2.11	2.19	2.28	2.36	

Model: YF13E1G-Q100 Refrigerant: R404A

Suction Superheat: 26.3 Liquid subcoolling: 0.0

Current(A)

Tc\Te	-40	-35	-30	-25	-20	-15	-10	-5	0	
25	2.21	2.25	2.31	2.36	2.43	2.49	2.56	2.64	2.72	
30	2.29	2.34	2.41	2.47	2.54	2.62	2.7	2.79	2.88	
35	2.36	2.43	2.5	2.58	2.66	2.75	2.84	2.93	3.03	
40	2.46	2.53	2.61	2.7	2.78	2.88	2.98	3.08	3.19	
45	2.57	2.66	2.74	2.84	2.93	3.03	3.14	3.25	3.37	
50	2.73	2.82	2.92	3.02	3.12	3.23	3.34	3.46	3.58	
55	2.95	3.04	3.14	3.25	3.36	3.47	3.59	3.71	3.84	
60					3.66	3.78	3.9	4.03	4.16	

Mass Flow(Kg/h)

Tc\Te	-40	-35	-30	-25	-20	-15	-10	-5	0	
25	27.72	35.14	43.88	54.24	66.47	80.87	97.72	117.28	139.85	
30	27.81	35.19	43.92	54.27	66.53	80.96	97.85	117.48	140.12	
35	27.69	35	43.67	53.98	66.21	80.64	97.54	117.19	139.87	
40	27.46	34.66	43.24	53.47	65.63	80.01	96.88	116.52	139.2	
45	27.24	34.29	42.73	52.84	64.9	79.19	95.99	115.57	138.21	
50	27.12	33.98	42.24	52.2	64.11	78.28	94.96	114.45	137.02	
55	27.22	33.84	41.89	51.65	63.38	77.38	93.92	113.27	135.71	
60					62.82	76.61	92.95	112.13	134.41	