Invotech Selection Software

REFRIGERANT	R404A

Operation Conditions

Evaporating Temperature(℃):	-25.0
Condensing Temperature(℃):	45.0
Liquid subcooling:	0.0
Suction Superheat:	280.0

Required Capacity(Kw):

Compressor Selected: YSM235E1G-100

PERFORMANCE AT SPECIFIED OPERATING POINT	
Capacity (KW)	26.18
Power Input (KW)	9.41
COP	2.78
Current (A)	18.04

CPMPRESSOR MECHANICAL AND PHYSICAL DATA	
Length/Width/Height (mm)	317.5/309.5/544.9
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)	3.2
Low Side PS Max., (MPa)	2.0
Displacement(m^3/h)	37.7

COMPRESSOR ELECTRICAL DATA	
Electricity	380V/50Hz/3P
Standard Conditions	-6.7/48.9/11.1/0
Normal Power (HP)	13
Normal Capacity (□)	23218
Normal Power input(□)	11900
Normal COP(□/□)	1.95
Normal Current(□)	21.5
Locked Rotor Current(□)	148.5
Maximum operating current(□)	28.9

Model: YSM235E1G-100 Refrigerant: R404A

Suction Superheat: 280.0 Liquid subcooling: 0.0

Capacity(KW)

Tc\Te	-30	-25	-20	-15	-10	-5	0	5	10	
10	32.82	39.95	48.74	59.38	72.07					
15	30.7	37.57	45.95	56.05	68.06					
20	28.85	35.47	43.45	53	64.32	77.62				
25	27.2	33.56	41.14	50.14	60.78	73.25	87.75			
30	25.66	31.76	38.93	47.4	57.35	68.99	82.52	98.14	116.06	
35	24.15	29.98	36.76	44.67	53.94	64.75	77.31	91.82	108.49	
40	22.58	28.15	34.52	41.89	50.47	60.45	72.04	85.44	100.85	
45		26.18	32.15	38.97	46.86	56.01	66.63	78.92	93.07	
50			29.55	35.83	43.03	51.35	61	72.17	85.07	
55				32.38	38.89	46.38	55.06	65.11	76.76	
60					34.36	41.02	48.72	57.67	68.05	
65						35.18	41.91	49.74	58.87	

Power Input(KW)

Tc\Te	-30	-25	-20	-15	-10	-5	0	5	10	
10	4.99	5.21	5.48	5.79	6.13					
15	5.4	5.65	5.94	6.26	6.61					
20	5.85	6.14	6.45	6.78	7.14	7.51				
25	6.35	6.67	7.01	7.37	7.74	8.12	8.5			
30	6.9	7.26	7.63	8.02	8.41	8.8	9.19	9.57	9.94	
35	7.51	7.91	8.32	8.73	9.15	9.56	9.96	10.34	10.71	
40	8.17	8.63	9.08	9.53	9.97	10.4	10.82	11.21	11.58	
45		9.41	9.91	10.4	10.88	11.34	11.77	12.18	12.55	
50			10.83	11.36	11.88	12.37	12.82	13.25	13.63	
55				12.42	12.97	13.5	13.98	14.43	14.83	
60					14.17	14.73	15.25	15.72	16.14	
65						16.08	16.64	17.14	17.58	

Model: YSM235E1G-100 Refrigerant: R404A

Suction Superheat: 280.0 Liquid subcoolling: 0.0

Current(A)

Tc\Te	-30	-25	-20	-15	-10	-5	0	5	10	
10	13.02	13.22	13.48	13.81	14.19					
15	13.41	13.65	13.95	14.3	14.7					
20	13.85	14.14	14.48	14.87	15.29	15.74				
25	14.36	14.71	15.1	15.53	15.98	16.46	16.95			
30	14.96	15.38	15.83	16.3	16.79	17.29	17.8	18.31	18.82	
35	15.66	16.15	16.66	17.18	17.72	18.26	18.8	19.33	19.84	
40	16.46	17.03	17.61	18.2	18.79	19.37	19.94	20.5	21.03	
45		18.04	18.7	19.36	20	20.64	21.25	21.84	22.39	
50			19.93	20.67	21.38	22.08	22.74	23.36	23.95	
55				22.14	22.93	23.69	24.41	25.08	25.7	
60					24.67	25.5	26.29	27.01	27.68	
65						27.52	28.37	29.16	29.88	

Mass Flow(Kg/h)

Tc\Te	-30	-25	-20	-15	-10	-5	0	5	10	
10	334.44	418.05	515.11	629.95	766.89					
15	328.02	410.54	506.42	619.98	755.54					
20	323.3	404.9	499.75	612.17	746.49	907.03				
25	319.78	400.6	494.56	606	739.24	898.59	1088.39			
30	316.92	397.11	490.34	600.95	733.25	891.57	1080.23	1303.56	1565.89	
35	314.21	393.92	486.57	596.49	728.01	885.44	1073.12	1295.36	1556.49	
40	311.13	390.5	482.73	592.11	723	879.69	1066.53	1287.83	1547.92	
45		386.35	478.29	587.29	717.69	873.8	1059.95	1280.46	1539.66	
50			472.74	581.51	711.57	867.24	1052.85	1272.72	1531.18	
55				574.24	704.12	859.51	1044.73	1264.11	1521.97	
60					694.81	850.06	1035.05	1254.09	1511.51	
65						838.4	1023.29	1242.14	1499.27	

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: YSM235E1G-100

PERFORMANCE AT SPECIFIED OPERATING POINT	
Capacity (KW)	25.87
Power Input (KW)	11.06
COP	2.34
Current (A)	20.26

CPMPRESSOR MECHANICAL AND PHYSICAL DATA	
Length/Width/Height (mm)	317.5/309.5/544.9
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)	3.2
Low Side PS Max., (MPa)	2.0
Displacement(m^3/h)	37.7

COMPRESSOR ELECTRICAL DATA	
Electricity	380V/50Hz/3P
Standard Conditions	-6.7/48.9/11.1/0
Normal Power (HP)	13
Normal Capacity (□)	23218
Normal Power input(□)	11900
Normal COP(□/□)	1.95
Normal Current(□)	21.5
Locked Rotor Current(□)	148.5
Maximum operating current(□)	28.9

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Model: YSM235E1G-100 Refrigerant: R404A

Suction Superheat: 26.3 Liquid subcooling: 0.0

Capacity(KW)

Tc\Te	-30	-25	-20	-15	-10	-5	0	5	10	
10	16.86	20.52	25.03	30.5	37.02					
15	15.77	19.3	23.6	28.79	34.96					
20	14.82	18.22	22.32	27.22	33.04	39.87				
25	13.97	17.24	21.13	25.76	31.22	37.63	45.07			
30	13.18	16.31	20	24.35	29.46	35.44	42.39	50.41	59.62	
35	12.41	15.4	18.88	22.95	27.71	33.26	39.71	47.16	55.73	
40	11.6	14.46	17.73	21.52	25.92	31.05	37	43.89	51.8	
45		13.45	16.51	20.02	24.07	28.77	34.23	40.54	47.81	
50			15.18	18.4	22.1	26.38	31.33	37.07	43.7	
55				16.63	19.98	23.82	28.28	33.45	39.43	
60					17.65	21.07	25.03	29.62	34.96	
65						18.07	21.53	25.55	30.24	

Power Input(KW)

Tc\Te	-30	-25	-20	-15	-10	-5	0	5	10	
10	4.99	5.21	5.48	5.79	6.13					
15	5.4	5.65	5.94	6.26	6.61					
20	5.85	6.14	6.45	6.78	7.14	7.51				
25	6.35	6.67	7.01	7.37	7.74	8.12	8.5			
30	6.9	7.26	7.63	8.02	8.41	8.8	9.19	9.57	9.94	
35	7.51	7.91	8.32	8.73	9.15	9.56	9.96	10.34	10.71	
40	8.17	8.63	9.08	9.53	9.97	10.4	10.82	11.21	11.58	
45		9.41	9.91	10.4	10.88	11.34	11.77	12.18	12.55	
50			10.83	11.36	11.88	12.37	12.82	13.25	13.63	
55				12.42	12.97	13.5	13.98	14.43	14.83	
60					14.17	14.73	15.25	15.72	16.14	
65						16.08	16.64	17.14	17.58	

Model: YSM235E1G-100 Refrigerant: R404A

Suction Superheat: 26.3 Liquid subcoolling: 0.0

Current(A)

Tc\Te	-30	-25	-20	-15	-10	-5	0	5	10	
10	13.02	13.22	13.48	13.81	14.19					
15	13.41	13.65	13.95	14.3	14.7					
20	13.85	14.14	14.48	14.87	15.29	15.74				
25	14.36	14.71	15.1	15.53	15.98	16.46	16.95			
30	14.96	15.38	15.83	16.3	16.79	17.29	17.8	18.31	18.82	
35	15.66	16.15	16.66	17.18	17.72	18.26	18.8	19.33	19.84	
40	16.46	17.03	17.61	18.2	18.79	19.37	19.94	20.5	21.03	
45		18.04	18.7	19.36	20	20.64	21.25	21.84	22.39	
50			19.93	20.67	21.38	22.08	22.74	23.36	23.95	
55				22.14	22.93	23.69	24.41	25.08	25.7	
60					24.67	25.5	26.29	27.01	27.68	
65						27.52	28.37	29.16	29.88	

Mass Flow(Kg/h)

Tc\Te	-30	-25	-20	-15	-10	-5	0	5	10	
10	334.44	418.05	515.11	629.95	766.89					
15	328.02	410.54	506.42	619.98	755.54					
20	323.3	404.9	499.75	612.17	746.49	907.03				
25	319.78	400.6	494.56	606	739.24	898.59	1088.39			
30	316.92	397.11	490.34	600.95	733.25	891.57	1080.23	1303.56	1565.89	
35	314.21	393.92	486.57	596.49	728.01	885.44	1073.12	1295.36	1556.49	
40	311.13	390.5	482.73	592.11	723	879.69	1066.53	1287.83	1547.92	
45		386.35	478.29	587.29	717.69	873.8	1059.95	1280.46	1539.66	
50			472.74	581.51	711.57	867.24	1052.85	1272.72	1531.18	
55				574.24	704.12	859.51	1044.73	1264.11	1521.97	
60					694.81	850.06	1035.05	1254.09	1511.51	
65						838.4	1023.29	1242.14	1499.27	