

Invotech Selection Software

REFRIGERANT R404A

Operation Conditions

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

Required Capacity(Kw):

Compressor Selected: YM200E1G-100

PERFORMANCE AT SPECIFIED OPERATING POINT

Capacity (KW)	11.44
Power Input (KW)	7.67
COP	1.49
Current (A)	14.7

COMPRESSOR MECHANICAL AND PHYSICAL DATA

Length/Width/Height (mm)	260/244/508
Weight (kg)	54
Stub Suction (inch)	1 1/8
Stub Discharge (inch)	7/8
Base mounting (hole dia)	190X190(8.5)
Oil type	POE
Initial charge of oil quantity (L)	3.0
Recharge of oil quantity (L)	2.8
High Side PS Max., (MPa)	3.2
Low Side PS Max., (MPa)	2.0
Displacement(m ³ /h)	32.9

COMPRESSOR ELECTRICAL DATA

Electricity	380V/50Hz/3P
Standard Conditions	-6.7/48.9/11.1/0
Normal Power (HP)	12
Normal Capacity (ℓ)	19536
Normal Power input(ℓ)	9671
Normal COP(ℓ/ℓ)	2.02
Normal Current(ℓ)	16.3
Locked Rotor Current(ℓ)	121
Maximum operating current(ℓ)	26.5

Model: YM200E1G-100

Refrigerant: R404A

Suction Superheat: 43.3

Liquid subcooling: 0.0

Capacity(KW)

Tc\Te	-30	-25	-20	-15	-10	-5	0	5	10	
10	14.35	17.46	21.31	25.96	31.51					
15	13.42	16.42	20.09	24.5	29.75					
20	12.61	15.5	18.99	23.17	28.12	33.93				
25	11.89	14.67	17.98	21.92	26.57	32.02	38.36			
30	11.22	13.88	17.02	20.72	25.07	30.16	36.07	42.9	50.74	
35	10.56	13.11	16.07	19.53	23.58	28.31	33.8	40.14	47.43	
40	9.87	12.31	15.09	18.31	22.06	26.43	31.49	37.35	44.09	
45		11.44	14.05	17.04	20.49	24.49	29.13	34.5	40.69	
50			12.92	15.66	18.81	22.45	26.67	31.55	37.19	
55				14.15	17	20.28	24.07	28.47	33.55	
60					15.02	17.93	21.3	25.21	29.75	
65						15.38	18.32	21.75	25.74	

Power Input(KW)

Tc\Te	-30	-25	-20	-15	-10	-5	0	5	10	
10	4.07	4.25	4.47	4.72	5					
15	4.4	4.61	4.84	5.1	5.38					
20	4.77	5	5.25	5.53	5.82	6.12				
25	5.18	5.43	5.71	6	6.31	6.62	6.93			
30	5.62	5.91	6.22	6.53	6.85	7.17	7.49	7.8	8.1	
35	6.12	6.44	6.78	7.12	7.45	7.79	8.11	8.43	8.73	
40	6.66	7.03	7.4	7.76	8.12	8.48	8.81	9.13	9.43	
45		7.67	8.08	8.48	8.87	9.24	9.59	9.92	10.23	
50			8.82	9.26	9.68	10.08	10.45	10.79	11.11	
55				10.12	10.57	11	11.39	11.76	12.08	
60					11.55	12.01	12.43	12.81	13.15	
65						13.1	13.56	13.97	14.33	

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Suction Superheat: 43.3

Liquid subcooling: 0.0

Current(A)

Tc\Te	-30	-25	-20	-15	-10	-5	0	5	10
10	10.61	10.77	10.99	11.25	11.57				
15	10.92	11.12	11.36	11.65	11.98				
20	11.29	11.52	11.8	12.11	12.46	12.83			
25	11.7	11.99	12.31	12.65	13.02	13.41	13.81		
30	12.19	12.53	12.9	13.28	13.68	14.09	14.51	14.92	15.34
35	12.76	13.16	13.57	14	14.44	14.88	15.32	15.75	16.17
40	13.41	13.87	14.35	14.83	15.31	15.78	16.25	16.7	17.13
45		14.7	15.23	15.77	16.3	16.82	17.32	17.79	18.24
50			16.24	16.84	17.42	17.99	18.53	19.04	19.51
55				18.04	18.69	19.31	19.89	20.44	20.95
60					20.1	20.78	21.42	22.01	22.55
65						22.42	23.12	23.76	24.35

Mass Flow(Kg/h)

Tc\Te	-30	-25	-20	-15	-10	-5	0	5	10
10	284.63	355.78	438.39	536.12	652.67				
15	279.16	349.4	431	527.64	643.01				
20	275.15	344.6	425.32	521	635.31	771.94			
25	272.15	340.93	420.9	515.74	629.14	764.76	926.29		
30	269.72	337.96	417.31	511.44	624.04	758.78	919.35	1109.4 1	1332.6 7
35	267.41	335.25	414.1	507.65	619.58	753.57	913.29	1102.4 3	1324.6 7
40	264.79	332.34	410.83	503.93	615.32	748.67	907.68	1096.0 2	1317.3 8
45		328.81	407.05	499.82	610.8	743.66	902.08	1089.7 5	1310.3 5
50			402.33	494.9	605.59	738.08	896.05	1083.1 7	1303.1 3
55				488.72	599.25	731.49	889.13	1075.8 4	1295.3
60					591.33	723.46	880.89	1067.3 1	1286.3 9
65						713.53	870.89	1057.1 4	1275.9 8

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REFRIGERANT R404A

Operation Conditions

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

Required Capacity(Kw):

Compressor Selected: YM200E1G-100

PERFORMANCE AT SPECIFIED OPERATING POINT

Capacity (KW)	22.02
Power Input (KW)	9.02
COP	2.44
Current (A)	16.51

COMPRESSOR MECHANICAL AND PHYSICAL DATA

Length/Width/Height (mm)	260/244/508
Weight (kg)	54
Stub Suction (inch)	1 1/8
Stub Discharge (inch)	7/8
Base mounting (hole dia)	190X190(8.5)
Oil type	POE
Initial charge of oil quantity (L)	3.0
Recharge of oil quantity (L)	2.8
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Liquid subcooling: 0.0

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10	14.35	17.46	21.31	25.96	31.51					
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25	11.89	14.67	17.98	21.92	26.57	32.02	38.36			
30	11.22	13.88	17.02	20.72	25.07	30.16	36.07	42.9	50.74	
35	10.56	13.11	16.07	19.53	23.58	28.31	33.8	40.14	47.43	
40	9.87	12.31	15.09	18.31	22.06	26.43	31.49	37.35	44.09	
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25	5.18	5.43	5.71	6	6.31	6.62	6.93			
30	5.62	5.91	6.22	6.53	6.85	7.17	7.49	7.8	8.1	
35	6.12	6.44	6.78	7.12	7.45	7.79	8.11	8.43	8.73	
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45		7.67	8.08	8.48	8.87	9.24	9.59	9.92	10.23	
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