

Invotech Selection Software

REFRIGERANT R134a

Operation Conditions

Evaporating Temperature(ℓ):	5,0
Condensing Temperature(ℓ):	50,0
Liquid subcooling:	0,0
Suction Superheat:	10,0

Required Capacity(Kw):

Compressor Selected: YW390J1-100

PERFORMANCE AT SPECIFIED OPERATING POINT

Capacity (KW)	46,43
Power Input (KW)	10,98
COP	4,23
Current (A)	24,78

COMPRESSOR MECHANICAL AND PHYSICAL DATA

Length/Width/Height (mm)	356.3/326.2/671.2
Weight (kg)	104
Stub Suction (inch)	1 5/8
Stub Discharge (inch)	1 1/8
Base mounting (hole dia)	232X232(11)
Oil type	POE
Initial charge of oil quantity (L)	5.5
Recharge of oil quantity (L)	5.3
High Side PS Max., (MPa)	3.0
Low Side PS Max., (MPa)	2.0
Displacement(m ³ /h)	57.9

COMPRESSOR ELECTRICAL DATA

Electricity	380V/50Hz/3P
Standard Conditions	5/55/11.1/8.3
Normal Power (HP)	20
Normal Capacity (ℓ)	49357
Normal Power input(ℓ)	16340
Normal COP(ℓ/ℓ)	3.02
Normal Current(ℓ)	29
Locked Rotor Current(ℓ)	266
Maximum operating current(ℓ)	47

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Liquid subcooling: 0,0

Capacity(KW)

Tc\Te	-15	-10	-5	0	5	10	15	20	25	30
30	26,32	29,99	36,01	44,29	54,75	67,31				
35	26,43	29,55	34,91	42,45	52,08	63,73				
40	26,71	29,32	34,11	40,98	49,87	60,67	73,33			
45	27,07	29,27	33,53	39,81	48	58,04	69,82	83,3		
50	27,46	29,28	33,11	38,85	46,43	55,76	66,77	79,36	93,46	
55	27,77	29,32	32,78	38,05	45,08	53,78	64,06	75,84	89,06	103,62
60	27,97	29,3	32,45	37,33	43,88	52,01	61,64	72,68	85,07	98,71
65	27,97	29,14	32,05	36,62	42,75	50,39	59,42	69,8	81,42	94,22
70	27,71	28,79	31,53	35,84	41,63	48,83	57,35	67,12	78,06	90,09
75			30,8	34,92	40,44	47,27	55,35	64,59	74,9	86,22
80				33,79	39,11	45,65	53,35	62,13	71,88	82,56
85					37,55	43,88	51,27	59,64	68,92	79,03

Power Input(KW)

Tc\Te	-15	-10	-5	0	5	10	15	20	25	30
30	6,64	7,09	7,5	7,88	8,23	8,57				
35	7,27	7,71	8,1	8,47	8,81	9,15				
40	7,96	8,38	8,77	9,12	9,47	9,81	10,16			
45	8,71	9,12	9,49	9,85	10,19	10,54	10,89	11,28		
50	9,52	9,91	10,28	10,63	10,98	11,33	11,71	12,11	12,55	
55	10,38	10,77	11,14	11,49	11,84	12,21	12,6	13,02	13,49	14,02
60	11,31	11,69	12,06	12,42	12,78	13,16	13,57	14,01	14,51	15,07
65	12,3	12,68	13,05	13,42	13,79	14,19	14,61	15,09	15,61	16,21
70	13,36	13,74	14,11	14,49	14,88	15,29	15,74	16,24	16,8	17,44
75			15,24	15,63	16,04	16,47	16,95	17,49	18,08	18,76
80				16,85	17,28	17,74	18,25	18,82	19,45	20,17
85					18,59	19,08	19,63	20,23	20,91	21,68

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Liquid subcooling: 0,0

Current(A)

Tc\Te	-15	-10	-5	0	5	10	15	20	25	30
30	20,13	20,58	20,84	20,88	20,65	20,12				
35	20,57	21,19	21,66	21,94	22,01	21,83				
40	20,9	21,63	22,27	22,76	23,08	23,2	23,07			
45	21,21	22,02	22,78	23,44	23,97	24,34	24,51	24,45		
50	21,63	22,47	23,3	24,08	24,78	25,37	25,8	26,04	26,06	
55	22,25	23,08	23,95	24,81	25,63	26,38	27,02	27,53	27,85	27,96
60	23,19	23,97	24,82	25,72	26,62	27,49	28,31	29,02	29,61	30,02
65	24,55	25,23	26,03	26,92	27,86	28,81	29,75	30,64	31,44	32,12
70	26,44	26,98	27,68	28,52	29,45	30,45	31,47	32,48	33,45	34,35
75			29,89	30,63	31,51	32,5	33,56	34,66	35,76	36,83
80				33,36	34,15	35,08	36,14	37,28	38,47	39,66
85					37,46	38,31	39,32	40,45	41,68	42,96

Mass Flow(Kg/h)

Tc\Te	-15	-10	-5	0	5	10	15	20	25	30
30	400,75	496,77	603,84	725,4	864,87	1025,68				
35	399,21	496,48	604,8	727,6	868,32	1030,38				
40	395,06	493,09	602,17	725,73	867,2	1030,01	1217,6			
45	389,19	487,49	596,83	720,66	862,39	1025,46	1213,31	1429,36		
50	382,5	480,57	589,69	713,28	854,79	1017,63	1205,24	1421,06	1668,51	
55	375,87	473,23	581,62	704,5	845,28	1007,4	1194,28	1409,38	1656,1	1937,89
60	370,2	466,34	573,53	695,19	834,75	995,65	1181,32	1395,2	1640,7	1921,27
65	366,36	460,8	566,28	686,24	824,1	983,29	1167,25	1379,41	1623,2	1902,06
70	365,25	457,5	560,78	678,54	814,2	971,19	1152,95	1362,91	1604,5	1881,15
75			557,92	672,99	805,95	960,26	1139,32	1346,58	1585,47	1859,42
80				670,46	800,25	951,36	1127,24	1331,32	1567,02	1837,78
85					797,97	945,41	1117,61	1318	1550,02	1817,09