

FOR REFRIGERATING & AIR CONDITIONING

Air Cooled Water Chillers

Cooling Capacity 14,9 KW - 80 KW

Models: HAC 5 to HAC 30 - SD



Quality is Our First Criteria

Casing

The unit is assembled and mounted on rigid steel base which in turn is mounted on rubber-type vibration isolator to prevent the transmission of vibration.

The casing is constructed of heavy-gauge galvanized steel sheets coated with weather proof baked enamel paint-Rubber.

Compressor

Low noise 3x380V - 50Hz / Scroll-type hermetic compressor and reciprocating hermetic compressor depending on the model chosen with low starting current (LRA) Compressor is refrigerant cooled and is complete with following:

- Internal thermal protection.
- Rubber vibration insulators.

Evaporator

Shell & tube heat exchanger and coaxial heat exchanger are used in these chillers according to their capacities.

Condenser Fans

Statically and dynamically balanced axial fans complete with protection grilles and directly driven by a 3x380 V, 50 Hz, 6 pole motor.

Motor protection type IP54 is conformity with DIN VDE 0470 part1 (EN60 529) category 2.

Motor insulation class (F) is conformity with DIN EN60034-1.

Motor ball bearings are greased with a high temperature grease for temperature class F.

Air Cooled Condenser

The condenser is made of copper pipes expanded into corrugated aluminum fins to increase heat exchange surface.

The condenser is designed with dimensions suitable enough to allow the device to operate properly in high ambient temperatures up to 48 c.

In addition, the condenser is complete with a sub cooling circuit which allows for increase its cooling capacity without an increase in power consumption.

Refrigerant Circuit

Consists of the following:

- Thermostatic expansions valve.
- Liquid line solenoid valve.
- Filter dryer to absorb moisture & acidity from the circuit.
- High and low side pressure controls.
- Sight glass.

Option:

Flow switch installed on the leaving water tube.

Electrical Panel

Consists of the following:

- Main Circuit Breaker.
 - Protection relay for each compressor.
 - Microprocessor for monitoring and controlling water inlet/outlet temperatures and managing the operation of the unit.
- and displaying the following alarms:
- Compressor shutdown alarm.
 - Fan /OFF/ alarm.
 - High pressure alarm.
 - Low pressure alarm.
 - Anti Freeze alarm.
 - Flow Switch alarm.

Model*		HAC 5	HAC 6	HAC 8	HAC 8-S	HAC 10	HAC 10-S	HAC 12	HAC 12-S	HAC 13	HAC 13-S
Specification											
Cooling Cap- acity in KW Ambient temperature Δ t = 15	35C	14.90	16.00	21.80	21.60	27.10	26.20	31.90	30.50	34.30	34.50
	40C	13.20	14.90	14.90	20.43	24.88	24.70	28.80	28.70	31.50	32.50
	46C	12.10	13.60	13.60	18.90	22.10	22.70	25.60	26.50	28.00	29.70
Compressor input Power KW	35C	5.50	6.20	6.20	6.60	10.40	8.86	11.90	10.80	13.40	11.90
	40C	5.60	6.50	6.50	7.20	10.90	9.85	12.60	11.90	14.10	13.00
	46C	6.00	7.00	7.00	8.15	11.50	11.20	13.30	13.40	14.90	14.50
#No. of Compressor	-	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Type of Compressor	-	Reciprocating	Reciprocating	Reciprocating	scroll	Reciprocating	scroll	Reciprocating	scroll	Reciprocating	scroll
Possible Steps	-	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Compressor C.O.P	C.O.P	2.71	2.60	2.83	3.30	2.62	2.96	2.70	2.82	2.60	2.90
Max Current	AMP	18	18.5	25	22	31	29	35	333	40	37
Air Flow Across Condensor.	m3/h	6120	7020	8820	8820	9288	9288	12960	12960	13000	13000
Type of Evaporator	-				B.P.H.E						
Nominal Water Flow	L/H	2556	2736	3744	3708	4680	4500	5436	5256	5904	5940
Pressure Drop Δ P i	m	2.60	2.90	3.20	3.00	3.20	3.00	3.10	2.90	2.80	2.80
Power Supply	V-Hz	380-50									

Model*		HAC 15-S	HAC 16D	HAC 16-SD	HAC 20D	HAC 20-SD	HAC 24D	HAC 24-SD	HAC 26D	HAC 26-SD	HAC 30-SD
Specification											
Cooling Cap- acity in KW Ambient temperature Δ t = 15	35C	40.00	43.6	43.2	54.2	52.4	63.8	61	68.6	69	80
	40C	37.70	29.8	40.86	29.76	29.4	57.6	57.4	63	65	75.4
	46C	34.90	27.2	37.80	44.20	45.4	51.2	53	56	59.4	69.8
Compressor input Power KW	35C	13.50	12.4	13.2	20.80	17.72	23.8	21.6	26.8	23.8	27
	40C	14.10	13	14.40	21.80	19.7	25.2	23.8	28.2	26	28.2
	46C	14.90	14	16.30	23	22.4	26.6	26.8	29.8	29	29.8
#No. of Compressor	-	1.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Type of Compressor	-	scroll	Reciprocating	scroll	Reciprocating	scroll	Reciprocating	scroll	Reciprocating	scroll	scroll
Possible Steps	-	1.00	2.00	2.00	2.00	2.00	2.11	2.00	2.00	2.11	2.00
Compressor C.O.P	C.O.P	3.00	5.66	6.60	5.24	5.92	5.40	5.64	5.2	5.8	6.00
Max Current	AMP	41	50	44	62	58	70	66	80	74	82
Air Flow Across Condensor.	m3/h	12600	17640	17640	18576	18576	25.920	25920	26000	26000	25200
Type of Evaporator	-			B.P.H.E							
Nominal Water Flow	L/H	6984	7488	7416	9360	9000	10872	10512	11808	5880	13968
Pressure Drop Δ P i	m	4.00	6.40	6.00	6.40	6.00	6.20	5.80	5.6	5.6	8.00
Power Supply	V-Hz	380-50									

* Chilled water temprature 7°c/12°c condensing tempreture 45°c...



Al-Hafez group for A/C & Refrigerating Branches..

Egypt - Cairo

Tel: +20-114-9837154
Tel: +20-101-1977770/4/5
Fax: +20-225-882989
E-mail:
 info.alhafez@gmail.com

Jordan - Amman

Tel: +962-647-50061
Tel: +962-796-389901
Fax: +962-647-50068
E-mail:
 alaska.jordan2005@gmail.com

Lebanon - Beirut

Tel: +961-16-55537
Tel: +961-33-32450
Fax: +961-16-55537
P.O.Box: 155529
E-mail:
 modern.refcom@gmail.com

Damascus - Baramkeh

Tel: +963-11-2129466
Tel: +963-11-2129468
Fax: +963-11-2129467
P.O.Box: 6218

Aleppo - New Shahba

Tel: 9964
Tel: +963-21-2668491
Fax: +963-11-2672079
P.O.Box: 257

Homs - Alsham Road

Tel: +963-31-4136240
Tel: +963-99-1444537
Fax: +963-31-2168241
P.O.Box: 824

Lattakia - Jumhuria St.

Tel: +963-991-444587
Tel: +963-41-412346
Fax: +963-41-412346

E-mail: info.alhafez@gmail.com / www.alhafez-egypt.com