



Air Cooled Srew Chiller

for Heavy Duty use

Capacity : 105 ~ 1200 KW

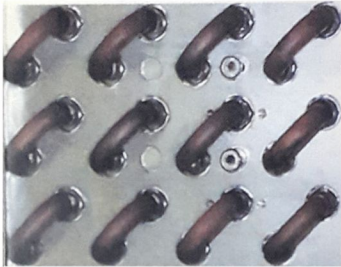


Unequaled Reliability :

- ❑ High cooling capacity , low power consumption
- ❑ Silent and low vibration
- ❑ High – efficiency profile Compressor , durable and easy maintenance
- ❑ Long life bearing with pressure unloading and Optimized oil management
- ❑ Intelligent electrics protection
- ❑ Suitable for R 22 ; R 134a , R 407C

thermo Q presents the complete line of Air cooled packaged type Screw Water Chiller . Ranging from 40 RT to 400 RT Economical , easy installation and operation in a complete packaged design. Ideal for modern cooling applications in high rise building , commercial building , shopping mall , hotel , hospital , and industrial plant.

All units are compact , completely factory assembled , shape and modular system to be installed. its can reach on site easy to handling on transportation . The unit is pressure tested , evacuated and fully oil charge . Charge with Refrigerant 134a ; R 404A , R 407A or other Ozone Friendly refrigerant Type .



▪ **Unique Floating Coil and Low Noise Condenser Fan**

Floating coil concept prevents the refrigerant carrying tubes from coming into contact with the tube sheets. This concept allows for thermal expansion and contraction of the tubes without the risk of tube damage at the tube sheets, thereby reducing the chances of refrigerant leaks. The highly efficient and compact Cross finned coil type are designed with Outdoor fan with best quality fan made convenience with low noise level , saving energy and high ambient resistance temperature use until 60 °C .

Man Component

○ **Durable Screw Compressor**

New 5 to 6 rotor profile with multi-nations' patents (Taiwan, US,UK, Japan, China...) that has not only with the high volume efficiency profile designed dedicatedly as refrigerants' characteristics, but also with high precise CNC machining centers, CNC rotor milling machines, ZEISS 3D coordinate measuring machines etc those high precision machining machines, inspection equipments and strict process control to render RC compressors with low vibration, low noise and high efficiency for all the customers of Hanbell worldwide

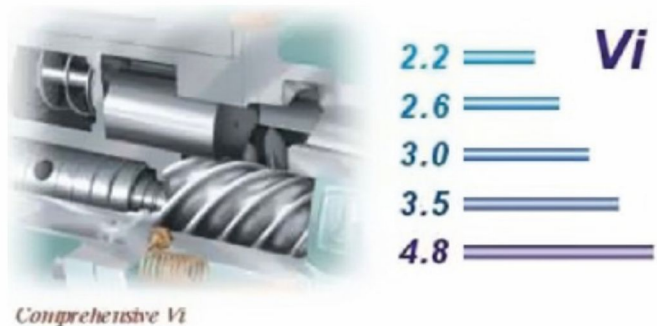


High Efficiency Motor

Premium-grade low-loss core steel with the special slot design for RC motors, and avail of an overall inner & outer guide design to pilot the suction gas flow with an equal distribution to pass the motor and gain the highest efficiency no matter what running capacity the compressor will be at.

Overall Range of Volume Ratio (Vi)

For different working conditions as water-cooled, air-cooled, refrigeration, cold room. Thermal storage...etc and different refrigerants like R22, R134a, R404A, R407C...etc, there are lots of various built-in volume ratio (Vi=2.2, 2.6, 3.0, 3.5, 4.8) offered for customers' applications. It is very economical for the customers to save the running cost due to the avoidance of compressor' over-compression or less-compression.



Evaporator

Shell and tube type Evaporator, compact and height efficiency heat transfer. All evaporator complete with anti freeze protection and chilled water temperature sensor to reduce precision chilled water temperature . Manufacture standard TEMA , ASTM .



SPECIFICATION DATA

MODEL	CA	30 A.SC	40 A.SC	55 A.SC	65 A.SC	85 A.SC	105 A.SC	120 A.SC
Cooling Capacity	[KW]	76.9	102.5	148.6	180.8	233.9	295.4	318.8
	[USRT]	21.85	29.13	42.23	51.38	66.47	83.94	90.59
Power Input	[KW]	26.2	34.4	48.1	58.1	71.0	90.7	99.3
C.O.P	[%]	2.94	2.98	3.09	3.11	3.29	3.16	3.21
Power Source		380 V / 3 Ph / 50 Hz						
Controller		Microprocessor Controller						
Compressor	Type	Semi Hermatic Screw						
	Model RC2	100B	140B	200B	230B	300B	370B	410B
	Qty	1						
	Step Capacity [%]	33.66,100	33.66,100	25.50,75,100	35.50,75,100	25.50,75,100	35.50,75,100	25.50,75,100
	Stepless Cap. [%]	33-100	33-100	25-100	35,100	25-100	35,100	25-100
Starting Type		Star Delta						
Refrigerant		R 407C						
Oil		HBR-A01 / Emkarate RL 170H						
Oil Charge		7.0	7.0	8.0	14.0	16.0	16.0	15.0
Condenser	Type	Plate Fin Coil						
	Model	CG.65.C/2	CG.65B/2	CG.65A/3	CG.65C/3	CG.65B/4	CG.90D/2	CG.90A/3
	Material	Cooper Tube – Aluminium Fin						
Evaporator	Type	Shell and Tube						
	Model	DX 30	DX 40	DX 55	DX 65	DX 85	DX 105	DX 120
	Material	Cooper Tube – CS Sheel						
	Press. Drop [Bar]	0.2	0.22	0.26	0.25	0.22	0.26	0.23
Chilled Water Flow - min [ltr/min]		220	300	430	520	670	840	910
Chiller Water Connection		DN 50	DN 60	DN 75	DN 75	DN 75	DN 100	DN 100
Chiller Water Temp. – IN/OUT [°C]		12 °C / 7 °C						

MODEL	CA	150 A.SC	175 A.SC	175.A2.SC2	200.A2.SC2	225.A3.SC3	265.A3.S3C	280.A3.SC3
Cooling Capacity	[KW]	398.3	469.6	467.8	543.13	592.5	701.7	763.5
	[USRT]	113.18	133.44	132.93	154.13	168.37	199.0	216.96
Power Input	[KW]	121.6	143.3	142.0	174.3	191.4	213.0	234.3
C.O.P	[%]	3.28	3.28	3.29	3.11	3.1	3.29	3.26
Power Source		380 V / 3 Ph / 50 Hz						
Controller		Microprocessor Controller						
Compressor	Type	Semi Hermatic Screw						
	Model RC2	510B	580B	300B	230B	260B	300B	320B
	Qty	1		2	3			
	Step Capacity [%]	35.50,75,100	35.50,75,100	25.50,75,100	35.50,75,100	25.50,75,100	25.50,75,100	25.50,75,100
	Stepless Cap. [%]	35-100	35-100	25-100	35,100	25-100	25-100	25-100
Starting Type		Star Delta						
Refrigerant		R 407C						
Oil		HBR-A01 / Emkarate RL 170H						
Oil Charge		20	28	16.0 x 2	14.0 X 3	14.0 X 3	16.0 X 3	16.0 x 3
Condenser	Type	Plate Fin Coil						
	Model	CG.90C/3	CG.90A/4	CG.90.2A/4	CG.65.1C/3	CG.65B/4	CG.65B/4	CG.90B/2
	Material	Cooper Tube – Aluminium Fin						
Evaporator	Type	Shell and Tube						
	Model	DX 150	DX 175	DX 90 x 2	DX 70 x 3	DX 75 x 3	DX 90 x 3	DX 95 x 3
	Material	Cooper Tube – CS Sheel						
	Press. Drop [Bar]	0.21	0.31	0.26	0.28	0.22	0.32	0.23
Chilled Water Flow - min [ltr/min]		1150	1340	1.350	1550	1700	2000	2200
Chiller Water Connection		DN 100	DN 100	DN 100	DN 125	DN 125	DN 125	DN 125
No. Of Circuit		1		2	3			
Chiller Water Temp. – IN/OUT [°C]		12 °C / 7 °C						

Optional features :

- ◆ **Ozone friendly refrigerant use**
- ◆ **Epoxy coating fins or marine type copper fins**
- ◆ **Heat recovery from refrigerant hot gas to reduce hot water**
- ◆ **Brine chiller type with brine temperature from 2 ° C to -40 ° C**

Programable Electronic Controller

A high performance 16-bit microprocessor guarantees high program running speed and efficient management of the interfaces and the expansion boards, including control of faster transients.



The parameters can be protected by various password levels (manufacturer, user).

All of components in this system can be connected to pLAN local networks without requiring additional cards, for the exchanger of data and information. Consequently, distributed control networks can be created simply and reliability for optimized management of the installation.

Refrigerant Waste Heat Recovery :

The Heat Recovery Unit captures waste heat discharged from the refrigerant cycle in an Water Chiller or Air Conditioning system, and transfers that heat into a Hot water tank, thereby creating low cost hot water for Hotel, Laundry, Feed water Boiler or Industrial use. Not only does the Heat Recovery Unit substantially reduce the amount of energy required to provide domestic hot water, but it also improves the cooling efficiency of the Chiller or Air Conditioner it is operating.



Heat recovery from refrigerant hot gas to water.
Temperature of water can be reach until 70 ° C



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