



# Water Cooled Screw Chiller

**ISO  
9001:2015**



## **Reliability :**

- Cooling capacity from 112 ~1.100 KW**
- High cooling capacity , low power consumption**
- Intelligent electronics protection for motor compressor**
- Silent and Low Vibration**
- Semi Hermatic Screw Compressor with step control capacity**
- Durable and Easy maintenace**

**thermo Q** presents the complete line of Water cooled packaged type reciprocating Water Chiller . ranging from 32 to 310 Ton Capacity 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 or other Ozone Friendly refrigerant Type .

## Man Component

- o 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

### Multi-national Patens



High Efficiency Motor

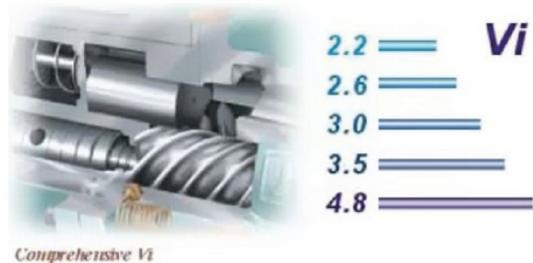
### High Efficiency Motor

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 ( $V_i=2.2, 2.6, 3.0, 3.5, 4.8$ ) 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.

### Unloading hydraulic scheme



Comprehensive Vi

Vi tech with 4 step Capacity Control



## Condenser

Shell and tube type Condenser , compact and height efficiency heat transfer with low fin tube.

Copper tube material or Copper Nickel for marine use .

All condenser complete with slight glass indicator and stop valve for

## 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 .

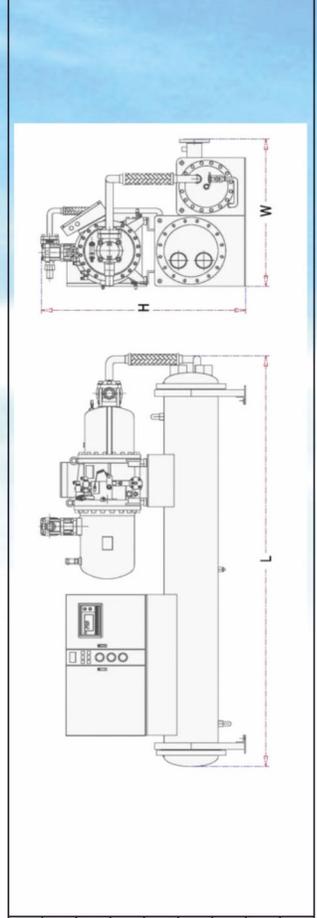


# WATER COOLED SCREW CHILLER

## SPESIFICATION DATA

Model	CW Series	30 ASC	40 ASC	55 ASC	65 ASC	75 ASC	85 ASC	115 A2SC2	130 A2SC2	150 A2SC2	180 A2SC2	200 A2SC2	240 A2SC2	280 A2SC2
Cooling Capacity	[KW]	83.9	111.9	162.3	197.5	215.7	255.4	289.2	324.6	431.4	539.8	590.4	696.2	823.8
	[TR]	23.84	31.8	46.04	56.12	61.29	72.58	82.18	92.24	122.59	153.39	167.77	197.84	234.1
Power Input	[KW]	23.5	30.8	43.1	52.1	57.2	63.7	76.4	86.2	114.4	134.0	148.6	178.0	206.4
Current Ampere	[Amp]	40.5	53.4	74.6	91.0	98.9	109.8	134.8	149.2	197.8	230.0	255.6	301.0	349.0
Power Source		380 V / 3 Ph / 50 Hz												
Refrigerant		R 407 C												
Type		SEMI HERMATIC SCREW												
Model		100 B	140 B	200 B	230 B	260 B	300 B	180 B	200 B	260 B	310 B	340 B	410 B	470 B
Qty		1	1	1	1	1	1	2	2	2	2	2	2	2
Capacity Control [%]		33-66-100	33-66-100	25-50-75-100	35-50-75-100	25-50-75-100	25-50-75-100	33-66-100	25-50-75-100	25-50-75-100	35-50-75-100	33-66-100	35-50-75-100	25-50-75-100
Type		SHELL AND TUBE												
Model		CD 30	CD 40	CD 55	CD 65	CD 75	CD 85	CD 60.2	CD 65.2	CD 75.2	CD 90.2	CD 100.2	CD 120.2	CD 140.2
Press Drop [Bar]		0.16	0.21	0.3	0.24	0.21	0.15	0.18	0.22	0.2	0.21	0.19	0.18	0.19
Material		Cooper Tube ; Carbon Steel Shell												
Cond. Water Flow - min [Ltr/min]		340	450	645	780	850	1000	1150	1280	1700	2100	2300	2750	3250
Condenser Water Connection		DN 80	DN 80	DN 100	DN 100	DN 100	DN 100	DN 100	DN 125	DN 125	DN 125	DN 150	DN 150	DN 150
Type		SHELL AND TUBE												
Model		DX 30	DX 40	DX 55	DX 65	DX 75	DX 85	DX 60 X 2	DX 65 X 2	DX 75 X 2	DX 90 X 2	DX 200 X 2	DX 120 X 2	DX 140 X 2
Press. Drop. [Bar]		0.30	0.28	0.27	0.29	0.31	0.34	0.27	0.29	0.31	0.31	0.34	0.35	0.37
Material		Cooper Tube ; Carbon Steel Shell												
Chilled Water Flow - min. [Ltr/min]		265	350	510	620	675	800	900	1050	1350	1700	1850	2200	2570
Chilled Water Connection		DN 65	DN 80	DN 80	DN 80	DN 100	DN 100	DN 100	DN 100	DN 150	DN 150	DN 150	DN 150	DN 150
No of Circuit		1	1	1	1	1	1	2	2	2	2	2	2	2
Chilled Water Temp. - IN/OUT [°C]		12.0 / 7.0												

Model	Dimension			Model	Dimension		
	L	W	H		L	W	H
30 ASC	1800	800	1400	110 A2SC2	2200	1100	1600
40 ASC	1800	800	1400	130 A2SC2	2200	1100	1600
55 ASC	2200	900	1400	150 A2SC2	2200	1200	1700
65 ASC	2200	900	1400	180 A2SC2	2300	1600	1700
75 ASC	2200	1000	1400	200 A2SC2	2300	1600	1700
85 ASC	2200	1000	1400	240 A2SC2	2300	1600	1700
				280 A2SC2	2300	1600	1700



## 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.

### Optional features :

- ◆ **Ozone friendly refrigerant use**
- ◆ **Copper Nikcle tube for marine type**
- ◆ **Heat recovery from refrigerant hot gas to reduce hot water**
- ◆ **Brine chiller type with brine temperature from 2 OC to - 40 O C**

### *Refrigerant Hot Gas Heat Recovery (Optional )*

#### ~ Refrigerant Hot Gas Heat Recovery

The refrigeration cycle of an air conditioner or chiller provides an opportunity to recover heat for water heating. Compressors concentrate heat by compressing gaseous refrigerant. The resultant superheated gas is normally pumped to condenser for heat rejection. How ever, a hot gas to water heat exchanger my beplaced into the refrigerant line between the compressor and condenser coil to capture a portion of the rejected heat.



Heat recovery from refrigerant hot gas to water .

Max. temperature of water can be reach = 70 °C

### Manufacturing :



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