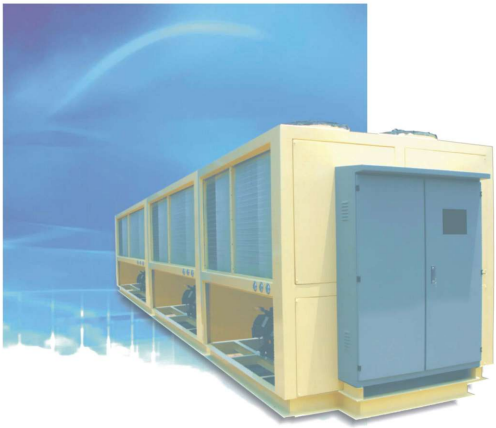
Air Cooled Reciprocating Chiller

Capacity : 26 ~ 590 kw



Feature :

- High cooling capacity, low power consumption
- Low starting torque
- Silent and low vibration
- High efficiency , durable and easy maintenance
- Intelligent electronics protector for motor compressor

Low power consumption and Easy maintenance

thermo Q presents the complete line of Air cooled packaged type reciprocating Water Chiller . Ranging from 3.5 RT to 168 RT Capacity.

Economical , easy installation and operation in a complete packaged design. Ideal for modern cooling applications in hi rise building , commercial and office building , shopping mall , hotel , and industrial plant . All units are compact , completely factory assembled , shape and modular system to be installed as outdoor and weather proof . its can reach on site easy to handling on transportation .

The unit is pressure tested , evacuated and fully charge with Refrigerant 22 and includes an initial oil charge .

Main Components

▪ Durable Reciprocating Compressor

New generation reciprocating semi hermetic compressor from ***Copeland - USA***. the word's largest manufacture of semi hermetic compressor . Compact, low noise , high efficiency , durable and easy maintenance .

Capable of operating with HCFC Refrigerant .

Each Compressor complete with ***Intelligent electronic*** for protection

Fully motor protection against by thermal motor temperature control , motor overload , phase failure, low / hi voltage and phase sequence control , low oil pressure protection

▪ Low Noise Condenser with Axial Fan

The highly efficient and compact Cross finned coil type are designed with corrugated surface aluminum fins and extended surface in inner tube.

Outdoor fan with best quality fan made convenience with low noise level , saving energy and high ambient resistance temperature use until 60 °C .

Axial type with external rotor motor , IP 54 motor protector and Class F insulation (DIN EN 60 034-1)

The fan motor totally encloses weather proof type .

▪ High efficiency Evaporator

Dry expansion Shell and Tube type Evaporator, compact and height efficiency heat transfer.

All evaporator equipped with Anti freeze to protect the cooling tube from being damage due to chilled water freeze up and chilled water temperature sensor to reduce precision chilled water temperature .

A drain plug is provided in the evaporator inlet pipe to extract chilled water .

Manufacture standard TEMA , ASTM .

Protection and safety control equip.

Dual pressure switch , to protects hight discharge pressure caused by incorrect installation and low refrigerant suction pressure by refrigerant leak .

Freezing protection thermostat , protects against chilled water freezing due to no flow or other causes during chilled water pipe installation .

Oil pressure safety switch , protects compressor against loss of oil pressure .

Sight glass , a moisture indicating sight glass is installed in the liquid line. Easy to read color indicator shows moisture content directly on the spot . This provides mean for easy checking of the system refrigerant charge and condition .

Filter drier , Refrigerant circuits are kept free from harmful moisture , sludge , acids and oil contaminating particles . A filter drier witch a large effective are allowing for very low pressure drop is provided on each mode.

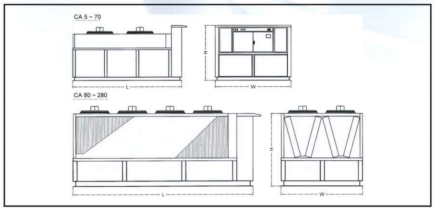
Thermostat control , Automatically maintains the leaving chilled water temperature at desired level.

GENERAL DATA
SPECIFICATION DATA

AIR COOLED PACKAGED CHILLER

MODEL CA Series			10 AS	15 AS	20 AS	30 AS	40 AS	50 AS	60 AS	70 AS	80 AS.2	100 AS.2	120 AS.2	140 AS.2	180 AS.3	210 AS.3	240 AS.4	280 AS.4
COOLING CAPACITY *		(kW)	26.29	36.1	43.7	63.5	95.4	109.9	131.5	147.9	190.9	219.9	263.0	295.9	394.5	443.9	526.0	591.8
COMPRESSOR		Type	Semi Hermetic															
		Model	Piston (Reciprocating)															
		HP	10	15	20	30	40	50	60	70	2 x 40	2 x 50	2 x 60	2 x 70	3 x 60	3 x 70	4 x 60	4 x 70
		V/Ph/Hz	380 / 3 / 50															
		RLA (A)	25.1	31.4	32.7	48	70.5	92	112	130	2 x 70.5	2 x 92	2 x 112	2 x 130	3 x 112	3 x 130	4 x 112	4 x 130
		LRA (A)	96	129	160	218	374	444	544	600	2 x 374	2 x 444	2 x 544	2 x 600	3 x 544	3 x 600	4 x 544	4 x 600
		Qty./Unit	1								2				3		4	
CONDENSER	C.C	Type	*Corrugated Fin*															
		Material	Aluminium Fin & Inner Groove Copper Tube															
		Fin Pitch (FPI)	12															
	F.	Type	*Propeller Fan ; Vertical Discharge ; Direct Drive*															
		Q'ty /Dia (mm)	1 / 600	1 / 760	1 / 900	2 / 600	2 / 900	2 / 760	3 / 760	3 / 900	4 / 900				6 / 900		8 / 900	
		V/Ph/Hz	380 / 3 / 50															
		RLA	1.43	1.75	2.28	2.86	4.56	3.5	5.26	6.84	9.12				13.68		18.24	
REFRIGERANT Type			R – 22															
EVAPORATOR Type			Shell & Tube															
No. of Circuit			1								2				3		4	
Chilled Water Flow Rate		(m³/h)	4.10	6.53	7.51	10.90	16.39	18.89	22.59	25.42	32.70	37.78	45.18	50.83	67.77	76.25	90.36	101.66
Chilled Water Temp.In/Out		(°C)	12 / 7															
Chilled Water Pressure Drop		(bar)	0.42	0.32	0.44	0.4	0.41	0.44	0.36	0.4	0.45	0.53	0.57	0.71	0.89	0.47	0.5	0.52
Water Connection In/Out		(Inch)	DN 40			DN 50	DN 80			DN 100	DN 125			DN 150			DN 200	
WEIGHT		(Kg)	333	378	406	482	576	746	790	812	1160	1375	1665	1650	2435	2414	3215	3240

* Cooling Capacity Based Ambient 35 °C, 55% R.H. Refrigerant R - 22, CW. In 12 °C, Out 7 °C



DIMENTION :

TYPE	L	W	H
CA 10 AS	2.400	900	1.500
CA 15 AS	2.600	1.200	1.500
CA 20 AS	2.600	1.200	1.500
CA 30 AS	2.600	1.200	1.500
CA 40 AS	3.200	1.650	1.500
CA 50 AS	3.200	1.650	1.500
CA 60 AS	3.400	1.650	1.500
CA 70 AS	3.400	1.650	1.500

TYPE	L	W	H
CA 80 AS.2	3.900	2.400	2.455
CA 100 AS.2	3.900	2.400	2.455
CA 120 AS.2	3.900	2.400	2.455
CA 140 AS.2	3.900	2.400	2.455
CA 180 AS.3	5.400	2.400	2.455
CA 210 AS.3	5.400	2.400	2.455
CA 240 AS.4	7.200	2.400	2.455
CA 280 AS.4	7.200	2.400	2.455

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**

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

Fabrikator :

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Heat Transfer Equipment Engineering

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