

# Refrigeration Industrial Chillers

## CHT Series



Max Series: 10 to 100 TR



Mini Series: 0.75 to 7.5 TR



# PRODUCT FEATURES

## UNIQUE CO-EX HEAT EXCHANGERS (Mini series)

The Heat Exchanger is of COAXIAL type, the design maximizes exchanger efficiency by using Copper tubes in a coiled TUBE-IN-TUBE arrangement. Tube sizes are carefully chosen so that fluid velocities are maintained through the tubes. This promotes turbulence break up boundary and maximizes the heat transfer rate with minimum pressure drop.

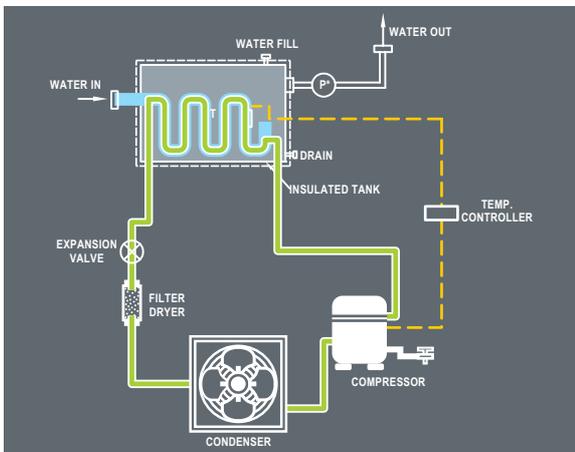
To further increase heat transfer efficiency, a Counter Flow pattern is used that achieves the maximum temperature difference.

### SPECIAL FEATURE OF CO-EX

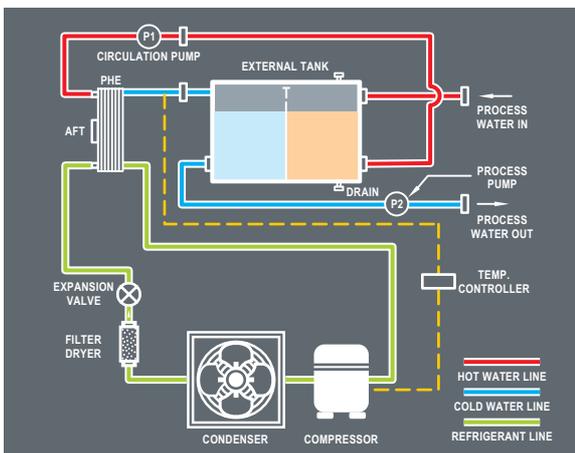
- Full copper corrosion free heat exchanger
- Non-fouling exchanger
- Co-Axial arrangement, tends to minimize space requirement
- Minimises power consumption
- No leakage
- Low pressure drop
- High efficiency
- Corrosion free light weight FRP tank

- » Compact - occupies minimum space
- » Built in closed tank for thermal mass operation
- » High pressure pump for reliable operation for specific application
- » Microprocessor control
- » Reduced Maintenance
- » More heat transfer area
- » Energy efficient fans
- » Environment friendly R407C refrigerant used
- » Electronic expansion valve (optional)
- » Remote and water cooled condenser (optional)

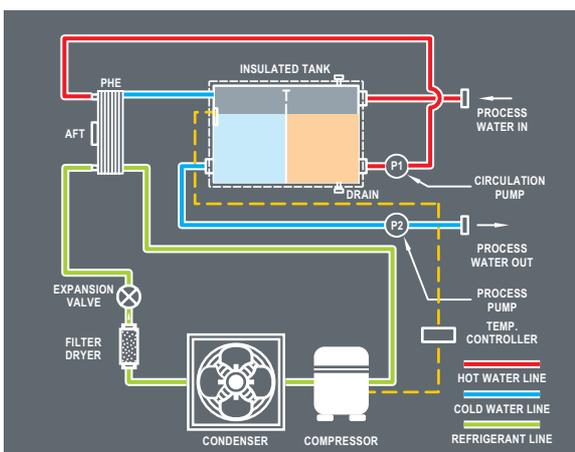
### Mini Chiller Series



### Max Chiller Series With External Tank



### Max Chiller Series With Internal Tank



## BRAZED PLATE TYPE HEAT EXCHANGER (Max series)

The brazed plate heat exchanger is variation of the traditional gasketed plate type heat exchanger. It is designed to have lower pressure drop. It consists of stainless steel (AISI 316) plates and two end plates. The plates are brazed (99% copper) together in a vacuum oven to form a compact pressure-resistant unit. This compact design can easily be mounted directly in piping without brackets and foundations.

**PUMP:** High pressure, high volume pump with mechanical seal for long life and no leakage. The pump is capable of working 24 hours a day throughout the year. No need of stand-by pump. Pump motor has an overload protection.

**TANK:** Stainless steel well insulated tank to save power due to no heat transfer from closed tank.

**FRAME:** Rigid steel frame construction covered with easy removable steel covering, free accessible maintenance of all internal components, weather resistant power coating finish.

**CONTROL PANEL:** PLC based control panel is totally enclosed, dust proof, complete with all necessary switching, control and safety devices in accordance with applicable codes.

Compressors are protected with overloads and safety trips.

**GAUGES & SWITCHES:** Standard high pressure and low pressure refrigeration gauges.

Adjustable low pressure and fan pressure switches for flexibility in operation.

Unit is self contained of **environmental and energy saving design**. All equipment are factory tested prior to delivery.

**OPERATION:** Adjacent plates form flow channels carrying alternately hot and cold media throughout the plate pack.

All port connections are located in the fixed frame plate proving a low maintenance installation.

Provided the number of passes is the same for both media nearly 100% counter-flow will be achieved

### ADVANTAGES:

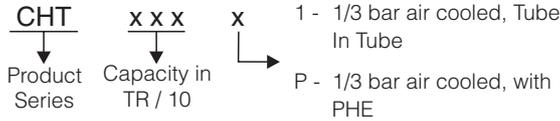
- Efficient heat transfer between refrigerant and water.
- Low weight
- Flexibility & easy by adding or removing plates

**EASE OF INSTALLATION:** All chillers are shipped pre-piped and wired, ready to install and operate, installation is made easy with conveniently located Water and Drain connections.

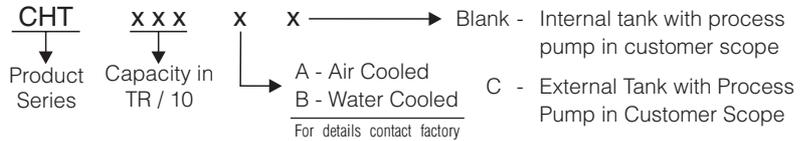
**SERVICE:** GEM CHILLERS are designed to require minimum maintenance. Should service be necessary, a team of trained technicians is available to answer your questions about installation, operation and maintenance or repair. A complete inventory of spare parts is maintained at the factory and channel partners & local service providers located all over India.

Base Model	Model Variance			Capacity	Heat Load		Refrigeration Compressor			Water Pump		Cooling Fan			Water Tank		I/O Water	
				TR	kcal/h	kW	Qty	Type	Absorbed Power kW	Flow rate lpm	Absorbed Power kW	Qty	Size mm	Power W	Supply	Material	Capacity litres	BSP
<b>Mini Series</b>																		
	1	P																
CHT 007	✓	✓		0.75	2300	2.7	1	Recip	0.9	8	0.325	1	300	110	230 / 50 / 1	FRP	35	¾"
CHT 010	✓	✓		1	3230	3.7	1	Recip	1.44	11	0.375	1	300	110	230 / 50 / 1	FRP	35	¾"
CHT 020	✓	✓		2	6300	7.3	1	Recip	2.35	21	0.525	1	450	240	230 / 50 / 1	FRP	50	1"
CHT 030	✓	✓		3	8850	10.3	1	Recip	3.3	30	0.65	1	450	240	415 / 50 / 3	FRP	50	1"
CHT 050	✓	✓		5	15120	17.5	1	Recip	6.1	50	1.1	2	450	240	415 / 50 / 3	FRP	150	1½"
CHT 075	✓	✓		7.5	22500	19.7	1	Recip	7	75	1.25	3	450	240	415 / 50 / 3	FRP	300	1½"
<b>Max Series</b>																		
	A	B																
CHT 100	✓	✓		10	30000	34.8	1	Scroll	9.93	100	1.4	4	450	240	415 / 50 / 3	SS 304	400	2"
CHT 150	✓	✓		15	45000	52.3	1	Scroll	14.01	150	1.5	6	450	240	415 / 50 / 3	SS 304	600	2"
CHT 200	✓	✓		20	60000	69.6	2	Scroll	19.26	200	1.65	8	450	240	415 / 50 / 3	SS 304	900	2"
CHT 300	✓	✓		30	90000	104.5	2	Scroll	28.02	300	2	2	1000	2237	415 / 50 / 3	SS 304	900	2"
CHT400	✓	✓		40	120000	139.5	2	Scroll	38.214	400	4	2	1000	2237	415 / 50 / 3	SS 304	External Tank (1000 Litres)	2"
CHT500	✓	✓		50	150000	174.42	2	Scroll	50.406	500	5.5	4	1000	2237	415 / 50 / 3	SS 304		2"
CHT600*	✓	✓		60	180000	209.3	4	Scroll	56.04	600	6.5	4	1000	2237	415 / 50 / 3	SS 304		2"
CHT800*	✓	✓		80	240000	279.06	4	Scroll	79.44	800	7.5	4	1000	2237	415 / 50 / 3	SS 304		2"
CHT1000*	✓	✓		100	300000	348.8	4	Scroll	100.812	1000	11	4	1000	2237	415 / 50 / 3	SS 304		2"

**Model Nomenclature (Mini series):**



**Model Nomenclature (Max series):**



**SIZING CONVERSION FACTORS:**

**Operating condition**

	Ideal	Maximum
Water Outlet Temperature	15° C	
Ambient Temperature	40° C	
Water Thermal Difference	5° C	
Refrigerant Used	R22	
Water Inlet Pressure	1 bar g	2-3 bar g

**Ambient Temperature : (C1)**

Ambient Temperature, °C	30	35	40	45	50
Conversion Factor	1.2	1.1	1	0.9	0.8

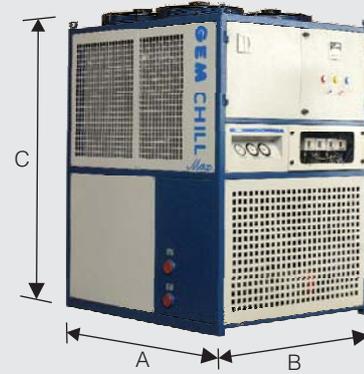
**Water Outlet temperature: (C2)**

Water Outlet Temperature, °C	5	10	15	20	25
Conversion Factor	0.6	0.75	1	1.16	1.3

\* For these models, kindly contact factory.

## SHIPPING DATA

Base Model	Machine Dimensions, mm			Net Weight, kg
	Length A	Width B	Height C	
CHT 007	650	490	840	150
CHT 010	650	490	840	175
CHT 020	900	600	980	200
CHT 030	900	600	980	250
CHT 050	1100	800	1160	370
CHT 075	1650	800	1160	500
CHT 100	1400	1200	1680	600
CHT 150	1800	1200	1910	900
CHT 200	2600	1200	1910	1200
CHT 300	2600	1200	1910	2500
CHT400	2600	1200	1910	1750
CHT500	5000	1200	2040	3000
CHT600	5000	1200	2040	3500
CHT800	5000	1200	2040	4000
CHT1000	5000	1200	2040	4250



## TYPICAL APPLICATION

Chemical Industry  
Food & Beverage Industry  
Glass Industry  
Pharmaceutical Industry  
Plastic Industry

Distilleries / Breweries  
Health Care / Hospitals  
Metal Spraying  
Oil Cooler  
Oncology Machine  
Printing Process  
PET - Stretch Blow Moulding  
Process Chilling  
Textile Processing  
Welding Machine  
and many more

## SALES & CUSTOMER CARE



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