

# RECIRCULATING CHILLERS WATER COOLED



# RECIRCULATING CHILLERS WATER COOLED

Recirculating Chillers Water Cooled also called chilled water systems are the type of refrigeration system that uses water as a secondary refrigerant. It consists of two main loops which are the refrigeration loop and the chilled water loop. The refrigeration loop is a system where the thermodynamic processes occur that provide cooling, while the chilled water loop is a distribution system where the cold water is supplied to significant parts and it involves heat transfer process in the system. They are used for larger, more complex, heating, air conditioning, and refrigeration Also known as Laboratory Water Chiller.

## LTCHI9 RECIRCULATING CHILLER WATER COOLED

The well-known product spleen compressor, high-efficiency shell and tube condenser, evaporator combination, super refrigeration, power saving PID microcomputer full-function control, easy to operate, can accurately control the water temperature within 3°C~35°C.

Unique new design stainless steel opening Type thermal insulation water tank, easy to clean and repair, reasonable internal pipeline layout, effectively reducing energy consumption.

Copper pipes are welded with Smick L30345% silver electrode, with high density and long life.

With current overload protection, high and low voltage switch, delay protection, over temperature protection, antifreeze, abnormal indication system.



### SPECIFICATIONS

Model	LTCHI9-1	LTCHI9-2	LTCHI9-3	LTCHI9-4
Freezing capacity				
kw	8.7 kw	14.5 kw	23.2 kw	29 kw
kcal/h	7482 kcal/h	12470 kcal/h	19952 kcal/h	-
btu/h	29684.4 btu/h	49474 btu/h	79158.4 btu/h	-
Compressor				
Output power	2.2 kw	3.7 kw	6 kw	-
hp	3 hp	5 hp	4x2 hp	-
Weight	1.5 kg	2.5 kg	3.8 kg	-
Power	-	-	-	5hpx2
Refrigerant				
Control mode	Thermal expansion valve			-
Type	R22 ( R407C optional )			-
Evaporator(Type)	Tube-in-shell			-
Condensor(Water Chiller)				
Type	Tube-in-shell			Tube-in-shell Condensor
Cooling water flow	35	60	95	-
In/out pipe	1 inch	1 v 2 inch		-
Water tank capacity	60 L		120 L	
Pump				
Type	Stainless steel centrifugal pump			-

Power kw	0.37 kw		0.75 kw	1 hp
Flow rate	88 l/min		115 l/min	
Working pressure	2 bar			-
Chilled wateroutlet	1 inchx1 1 " x1	1 inch x1	1 v 2 inchx1	-
Pipe coupling				
Chilled water inlet	1 inchx1		1 v 2 inchx1	-
Water tank drainage port	1/2 inch			-
Dimension(LXWXH) mm	1080x570x940 mm		1180x800x1030 mm	
Weight	180 kg	210 kg	300 kg	370 kg
Power	3 ph-380 V/50 Hz (220 V/400 V/415 V/440 V 50 Hz/60 Hz)			-
Temperature	5-35 °C			-
Tolerance	± 0.5 °C (± 1 °C at low load)			-
Safety protections	High and low pressure controller/anti-freezing switch/overload of pump and compressor protection/overheat protection/delayed protection			-

Model	LTCHI9-5	LTCHI9-6	LTCHI9-7	LTCHI9-8
Freezing capacity				
kw	29 kw	-	33.3 kw	44 kw
kcal/h	24940 kcal/h	-	28638 kcal/h	-
btu/h	98948 btu/h	-	113619.6 btu/h	-
Compressor				
Output power	7.5 kw	-	9 kw	-
hp	5x2 hp	-	6x2 hp	-
Weight	5 kg	-	7 kg	-
Power	-	6hpx2	-	5hpx3
Refrigerant				
Control mode	Thermal expansion valve	-	Thermal expansion valve	-
Type	R22 ( R407C optional )	-	R22 ( R407C optional )	-
Evaporator(Type)	Tube-in-shell	-	Tube-in-shell	-
Condensor(Water Chiller)				
Type	Tube-in-shell	Tube-in-shell Condensor	Tube-in-shell	Tube-in-shell Condensor
Cooling water flow	119	-	130	-
In/out pipe	2 inch	-	2 inch	-
Water tank capacity	120 L	-	160 L	200 L
Pump				
Type	Stainless steel centrifugal pump	-	Stainless steel centrifugal pump	-
Power kw	0.75 kw	1 hp	0.75 kw	2 hp
Flow rate	115 l/min			-
Working pressure	2 bar	-	2 bar	-
Chilled wateroutlet	1 v 2 inchx1	-	2 inch x1	-
Pipe coupling				
Chilled water inlet	1 v 2 inch x1	-	2 inch x1	-
Water tank drainage port	1/2 inch	-	1/2 inch	-
Dimension(LXWXH) mm	1180x800x1030 mm	-	1360x850x1220 mm	-
Weight	330 kg	-	430 kg	700 kg
Power	3 ph-380 V/50 Hz (220 V/400 V/415 V/440 V 50 Hz/60 Hz)	-	3 ph-380 V/50 Hz (220 V/400 V/415 V/440 V 50 Hz/60 Hz)	-

Temperature	5-35 °C	-	5-35 °C	-
Tolerance	± 0.5 °C (± 1 °C at low load)	-	± 0.5 °C (± 1 °C at low load)	-
Safety protections	High and low pressure controller/anti-freezing switch/overload of pump and compressor protection/overheat protection/delayed protection	-	High and low pressure controller/anti-freezing switch/overload of pump and compressor protection/overheat protection/delayed protection	-

Model	LTCHI9-9	LTCHI9-10	LTCHI9-11	LTCHI9-12
Freezing capacity				
kw	44 kw	57.5 kw	69.8 kw	90 kw
kcal/h	-	-	-	-
btu/h	-	-	-	-
Compressor				
Output power	-	-	-	-
hp	-	-	-	-
Weight	-	-	-	-
Power	7.5hpx2	10hpx2	12.5hpx2	10hpx3
Refrigerant				
Control mode	-	-	-	-
Type	-	-	-	-
Evaporator(Type)	-	-	-	-
Condensor(Water Chiller)				
Type	Tube-in-shell Condensor			
Cooling water flow	-	-	-	-
In/out pipe	-	-	-	-
Water tank capacity	200 L	250 L		265 L
Pump				
Type	-	-	-	-
Power kw	2 hp	3 hp		
Flow rate	-	-	-	-
Working pressure	-	-	-	-
Chilled wateroutlet	-	-	-	-
Pipe coupling				
Chilled water inlet	-	-	-	-
Water tank drainage port	-	-	-	-
Dimension(LXWXH) mm	-	-	-	-
Weight	700 kg	750 kg	800 kg	950 kg
Power	-	-	-	-
Temperature	-	-	-	-
Tolerance	-	-	-	-
Safety protections	-	-	-	-

Model	LTCHI9-13	LTCHI9-14	LTCHI9-15	LTCHI9-16
Freezing capacity				
kw	90 kw	117.5 kw		142 kw
kcal/h	77400 kcal/h	-	101050 kcal/h	122120 kcal/h
btu/h	307080 btu/h	-	400910 btu/h	484504 btu/h
Compressor				

Output power	22 kw	-	30 kw	37.5 kw
hp	10x3 hp	-	20x2 hp	25x2 hp
Weight	17 kg	-	20 kg	34 kg
Power	-	10hpx4	-	-
Refrigerant				
Control mode	Thermostatic expansion valve	-	Thermostatic expansion valve	
Type	R22 ( R407C optional )	-	R22 ( R407C optional )	
Evaporator(Type)	Tube-in-shell	-	Tube-in-shell	
Condensor(Water Chiller)				
Type	Tube-in-shell	Tube-in-shell Condensor	Tube-in-shell	
Cooling water flow	350	-	500	600
In/out pipe	3 inch	-	3 inch	
Water tank capacity	265 L	330 L		350 L
Pump				
Type	Stainless steel centrifugal pump	-	Stainless steel centrifugal pump	
Power kw	2.2 kw	5 hp	3.75 kw	
Flow rate	315 l/min	-	367 l/min	400 l/min
Working pressure	2.2 bar	-	3 bar	
Chilled wateroutlet	2 v 2 inch x1	-	3 inch	
Pipe coupling				
Chilled water inlet	2 v 2 inch x1	-	3 inch	
Water tank drainage port	1 inch	-	1 inch	
Dimension(LXWXH) mm	1980x970x1430 mm	-	2870x1055x1740 mm	3260x1055x1740 mm
Weight	700 kg	1200 kg	1160 kg	1500 kg
Power	3 ph-380 V/50 Hz (220 V/400 V/415 V/440 V 50 Hz/60 Hz)	-	3 ph-380 V/50 Hz (220 V/400 V/415 V/440 V 50 Hz/60 Hz)	
Temperature	5-35 °C	-	5-35 °C	
Tolerance	± 0.5 °C (± 1 °C at low load)	-	± 0.5 °C (± 1 °C at low load)	
Safety protections	High and low pressure controller/anti-freezing switch/overload of pump and compressor protection/overheat protection/delayed protection	-	High and low pressure controller/anti-freezing switch/overload of pump and compressor protection/overheat protection/delayed protection	



LTCHI9-1



LTCHI9-2



LTCHI9-3



LTCHI9-4



LTCHI9-5



LTCHI9-6



LTCHI9-7



LTCHI9-8



LTCHI9-9



LTCHI9-10



LTCHI9-11



LTCHI9-12



LTCHI9-13



LTCHI9-14



LTCHI9-15



LTCHI9-16

## LTCHI10 RECIRCULATING CHILLER WATER COOLED

P.I.D temperature controller provides accurate and reliable temperature control

Large LCD display screen and interface provides for user-friendly operation

Preset On/Off function

Independent circulating pump switch for easy starting/stopping the cycle

Easy to set Adjustable Timer. (1 minute to 5,999 minutes)

Maintenance-free operation with easy to clean surface

Both heater and bath chamber are made of corrosion-resistant stainless steel

No angle in bath chamber, easy to clean



### SPECIFICATIONS

Model	LTCHI10-1	LTCHI10-2	LTCHI10-3	LTCHI10-4
Storage tank maximum capacity	3 L			5 L
Temperature range	-20-20°C	-30-20°C	-40-20°C	-20-20°C
Ambient temperature range	+5-30°C			
Temperature accuracy	±0.5°C			

Cooling capacity at 20°C	1.5 Kw	1.95 Kw
Cooling capacity at 0°C	1.05 Kw	1.2 Kw
Cooling capacity at -20°C	0.45 Kw	0.65 Kw
Refrigerant	R404A	
Security features	Delay, leakage, overcurrent, overvoltage	
Total power	1000 W	1300 W
Power requirements	AC220 V ± 10% / 50 HZ	
Pump flow max.	8 L/min	
Maximum head	1.5 m	
Inlet/Outlet pipe diameter	Φ16	
Noise level	≤45	
Liquid tank opening / depth	Φ180x120 mm	Φ220x180 mm
Dimensions	250Wx480Dx585H mm	315Wx540Dx625H mm

Model	LTCHI10-5	LTCHI10-6	LTCHI10-7	LTCHI10-8
Storage tank maximum capacity	5 L		10 L	
Temperature range	-30-20°C	-40-20°C	-20-20°C	-30-20°C
Ambient temperature range	+5-30°C			
Temperature accuracy	±0.5°C		±2°C	
Cooling capacity at 20°C	1.95 Kw		2.2 Kw	
Cooling capacity at 0°C	1.2 Kw		1.76 Kw	
Cooling capacity at -20°C	0.65 Kw		1 Kw	
Refrigerant	R404A			
Security features	Delay, leakage, overcurrent, overvoltage			
Total power	1350 W	1500 W	2400 W	
Power requirements	AC220 V ± 10% / 50 HZ			
Pump flow max.	8 L/min		17 L/min	
Maximum head	1.5 m		2.5 m	
Inlet/Outlet pipe diameter	Φ16		Φ20	
Noise level	≤45		≤55	
Liquid tank opening / depth	Φ220x180 mm		Φ250x250 mm	
Dimensions	315Wx540Dx625H mm		400Wx590Dx790H mm	

Model	LTCHI10-9	LTCHI10-10	LTCHI10-11	LTCHI10-12
Storage tank maximum capacity	10 L	20 L		
Temperature range	-40-20°C	-20-20°C	-30-20°C	-40-20°C
Ambient temperature range	+5-30°C			
Temperature accuracy	±2°C			
Cooling capacity at 20°C	2.2 Kw	3.52 Kw		
Cooling capacity at 0°C	1.76 Kw	2.96 Kw		
Cooling capacity at -20°C	1 Kw	1.3 Kw		
Refrigerant	R404A			
Security features	Delay, leakage, overcurrent, overvoltage			
Total power	2600 W	3300 W		3500 W
Power requirements	AC220 V ± 10% / 50 HZ			
Pump flow max.	17 L/min			
Maximum head	2.5 m			
Inlet/Outlet pipe diameter	Φ20			

Noise level	≤55	
Liquid tank opening / depth	Φ250x250 mm	Φ300x300 mm
Dimensions	400Wx590Dx790H mm	430Wx600Dx840H mm



LTCHI10-1



LTCHI10-2



LTCHI10-3



LTCHI10-4



LTCHI10-5



LTCHI10-6



LTCHI10-7



LTCHI10-8



LTCHI10-9



LTCHI10-10



LTCHI10-11



LTCHI10-12

## LTCHI11 RECIRCULATING CHILLER WATER COOLED

P.I.D temperature controller provides accurate and reliable temperature control

Large LCD display screen and interface provides for user-friendly operation

Preset On/Off function

Independent circulating pump switch for easy starting/stopping the cycle

Easy to set Adjustable Timer. (1 minute to 5,999 minutes)

Maintenance-free operation with easy to clean surface

Both heater and bath chamber are made of corrosion-resistant stainless steel

No angle in bath chamber, easy to clean

Uniquely designed heating method can up to 80 °C





## SPECIFICATIONS

Model	LTCHI11-1	LTCHI11-2	LTCHI11-3	LTCHI11-4
Storage tank maximum capacity	3 L			5 L
Temperature range	-20-40°C	-30-40°C	-40-40°C	-20-40°C
Ambient temperature range	+5-30°C			
Temperature accuracy	±3°C			
Cooling capacity at 20°C	1.5 Kw			1.95 Kw
Cooling capacity at 0°C	1.05 Kw			1.2 Kw
Cooling capacity at -20°C	0.45 Kw			0.65 Kw
Refrigerant	R404A			
Security features	Delay, leakage, overcurrent, overvoltage			
Total power	1500 W		1800 W	1600 W
Heating power	550 W			750 W
Power requirements	AC 220 V ± 10% /50 HZ			
Pump flow max.	8 L/min			
Maximum head	1.5 m			
Inlet/Outlet pipe diameter	Φ16			
Noise level	≤45			
Liquid tank opening / depth	Φ180x120 mm			Φ220x180 mm
Dimensions	250Wx480Dx585H mm			315Wx540Dx625H mm

Model	LTCHI11-5	LTCHI11-6	LTCHI11-7	LTCHI11-8
Storage tank maximum capacity	5 L		10 L	
Temperature range	-30-40°C	-40-40°C	-20-40°C	-30-40°C
Ambient temperature range	+5-30°C			
Temperature accuracy	±3°C			
Cooling capacity at 20°C	1.95 Kw		2.2 Kw	
Cooling capacity at 0°C	1.2 Kw		1.76 Kw	
Cooling capacity at -20°C	0.65 Kw		1 Kw	
Refrigerant	R404A			
Security features	Delay, leakage, overcurrent, overvoltage			
Total power	1600 W	1750 W	2900 W	
Heating power	750 W		1400 W	
Power requirements	AC 220 V ± 10% /50 HZ			
Pump flow max.	8 L/min		17 L/min	
Maximum head	1.5 m		2.5 m	
Inlet/Outlet pipe diameter	Φ16		Φ20	
Noise level	≤45		≤55	
Liquid tank opening / depth	Φ220x180 mm		Φ250x250 mm	
Dimensions	315Wx540Dx625H mm		400Wx590Dx790H mm	

Model	LTCHI11-9	LTCHI11-10	LTCHI11-11	LTCHI11-12
Storage tank maximum capacity	10 L	20 L		
Temperature range	-40-40°C	-20-40°C	-30-40°C	-40-40°C
Ambient temperature range	+5-30°C			
Temperature accuracy	±3°C			

Cooling capacity at 20°C	2.2 Kw	3.52 Kw	
Cooling capacity at 0°C	1.76 Kw	2.96 Kw	
Cooling capacity at -20°C	1 Kw	1.3 Kw	
Refrigerant	R404A		
Security features	Delay, leakage, overcurrent, overvoltage		
Total power	3100 W	3800 W	4000 W
Heating power	1400 W	2000 W	
Power requirements	AC 220 V ± 10% /50 HZ		
Pump flow max.	17 L/min		
Maximum head	2.5 m		
Inlet/Outlet pipe diameter	Φ20		
Noise level	≤55		
Liquid tank opening / depth	Φ250x250 mm	Φ300x300 mm	
Dimensions	400Wx590Dx790H mm	430Wx600Dx840H mm	





**Labtare Analytical Instruments**

Email: [info@labtare.com](mailto:info@labtare.com) | Website: [labtare.com](http://labtare.com)