

**Air cooled scroll chiller**

0.5Ton to 60Ton



**Shenzhen Hero-Tech Refrigeration Equipment Co., Ltd.**

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## Application

- ◆ Products cooling
- ◆ Process cooling
- ◆ Ambient cooling
- ◆ Others like ovens, chemical reactors, temperature control of baths, etc.

## Standard features

- ◆ Power: 3PH 380V-415V 50hz
- ◆ Cooling temperature range:5C to 35C
- ◆ R407C environment friendly refrigerant
- ◆ Stainless steel insulated water tank
- ◆ Sanyo/Danfoss scroll type compressor
- ◆ Schneider electrical components
- ◆ Reliable control panel with full English menu, easy for operation
- ◆ High/low pressure protection for gas circuit
- ◆ High/low temperature limit for cold water
- ◆ Water level switch/ flow switch, to remind the shortage of water,
- ◆ Overload protection for all electric motors
- ◆ Adequate aluminum fin type condenser with large air volume fan, with no need of cooling tower
- ◆ Regular pressure pump as standard configuration
- ◆ Multi-protection devices to make sure the chiller and the equipment running safety
- ◆ Optional operation language, menu leading, unit running state easy to adjust.

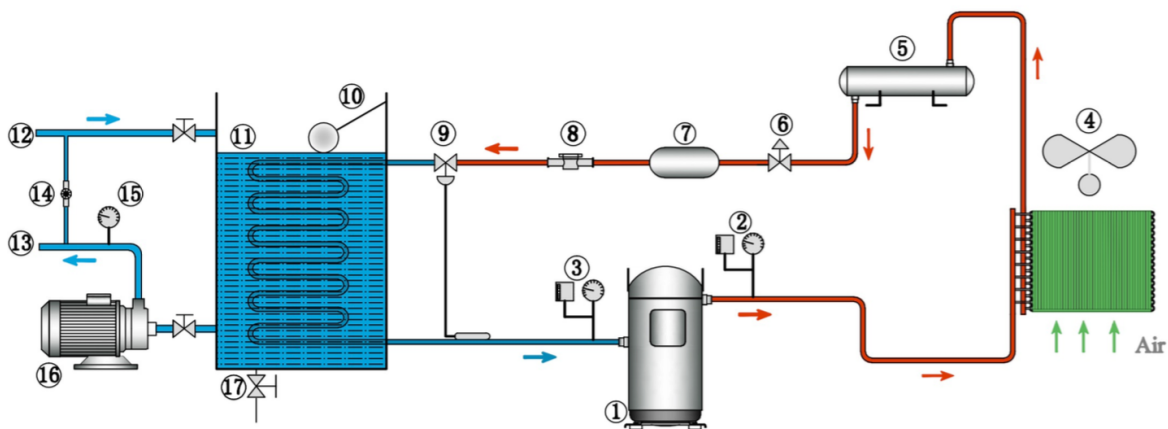
## Optional features

- ◆ High pressure pump
- ◆ All stainless steel water loop, to satisfy high quality water
- ◆ Shell and tube/Plate type evaporator
- ◆ Tank level indicator, to monitor the water level of the tank
- ◆ Water pressure gauge, to check water supply pressure
- ◆ Refrigerant solenoid valve, to further protect the compressor when stop
- ◆ Sight glass for refrigerant, to monitor running condition of the refrigerant circuit
- ◆ Anti-freezing protection
- ◆ Pressure controller, to save the energy when ambient temperature is low in winter

## Other Important Components

- ❖ Pressure Switch, alarms when refrigerant pressure is not in a safety range.
- ❖ Level Switch/Flow Switch, alarms when the water in the tank(or the pipe) is not adequate.
- ❖ Reservoir, avoids refrigerant that does not liquefy from going to the expansion valve, so to make sure the refrigeration performance.
- ❖ Manual Valve, cuts the refrigerant circuit in case of maintenance.
- ❖ Dry Filter, prevents moisture or impurity from running in the system.
- ❖ Low/high Water Temperature Limit, alarms when the water temperature is not within the safety work ing range, protects the cooling object and the chiller unit itself

## Internal schematic diagram and water flow chart



1	Compressor
2	High pressure switch
3	Low pressure switch
4	Condenser
5	Reservoir
6	Solenoid valve
7	Dry filter
8	Sight glass
9	Expansion valve

10	Float switch
11	Evaporator
12	Water inlet
13	Water outlet
14	By-pass
15	Water pressure gauge
16	Water pump
17	Drain

Standard configuration  
 Optional configuration

Air cooled scroll chiller

## Specification details

Model [HTI- **]		1/2A	1A	2A	3A	5A	6A	8AD	10AD	
Nominal cooling capacity@7C	kcal/hr	1226	2043	3971	5556	9692	11816	16942	19384	
	kw	1.43	2.38	4.62	6.46	11.27	13.74	19.7	22.54	
Nominal cooling capacity@12C	kcal/hr	1413	2369	4739	6760	11782	14078	20640	23564	
	kw	1.64	2.76	5.51	7.86	13.7	16.73	24	27.4	
Max Input power	kw	0.895	1.4	2.24	3.15	4.71	5.42	7.15	9.76	
Power supply		1PH 220V 50HZ			3PH 380V~415V 50HZ					
Refrigerant	Type	R407c								
	Control	Capillary								
Compressor	Type	Hermetic-rotary			Hermetic-scroll					
	Power	kw	0.45	0.89	1.73	2.5	4.55	5.25	3.5*2	4.55*2
Condenser	Type	Finned coil + low noise axil fan								
	Air volume	m <sup>3</sup> /hr	750	1000	2000	3000	5000	6000	8000	10000
	Fan power	kw	0.095	0.14	0.18	0.14*2	0.14*2	0.18*2	0.25*2	0.45*2
Evaporator	Type	tank with copper coil /shell and tube								
	Chilled water volume	m <sup>3</sup>	0.245	0.409	0.794	1.11	1.94	2.36	3.39	3.9
	Tank volume	liter	10.6	18.3	27	50	60	110	120	200
	Pipe connection	inch	1/2	1/2	1/2	1	1	1	1-1/2	2
Pump	Power	kw	0.37	0.37	0.37	0.37	0.75	0.75	0.75	1.5
	Max lift	m	15	15	15	15	20	20	18	18
Safety devices		Compressor inner protection, over current protection, high/low pressure protection, over temperature protection, flow rate protection, phase sequence/phase missing protection, low level coolant protection, anti freezing protection, exhaust overheat protection								
Dimension	Length	mm	550	600	650	1030	1030	1170	1350	1550
	Width	mm	350	400	520	560	560	610	680	760
	Height	mm	755	885	1030	1330	1330	1390	1520	1680
Net weight	kg	45	52	85	132	165	183	265	345	

The above specifications are according to the following design conditions:

1. Chilled water supply/return temperature 7°C/12°C
2. Cooling air in/out temperature 35°C/43°C
3. Condensing temperature 50°C, evaporating temperature 2°C
4. Chiller should be used under 40C ambient temperature

We reserve the right to modify the specifications without further notice.

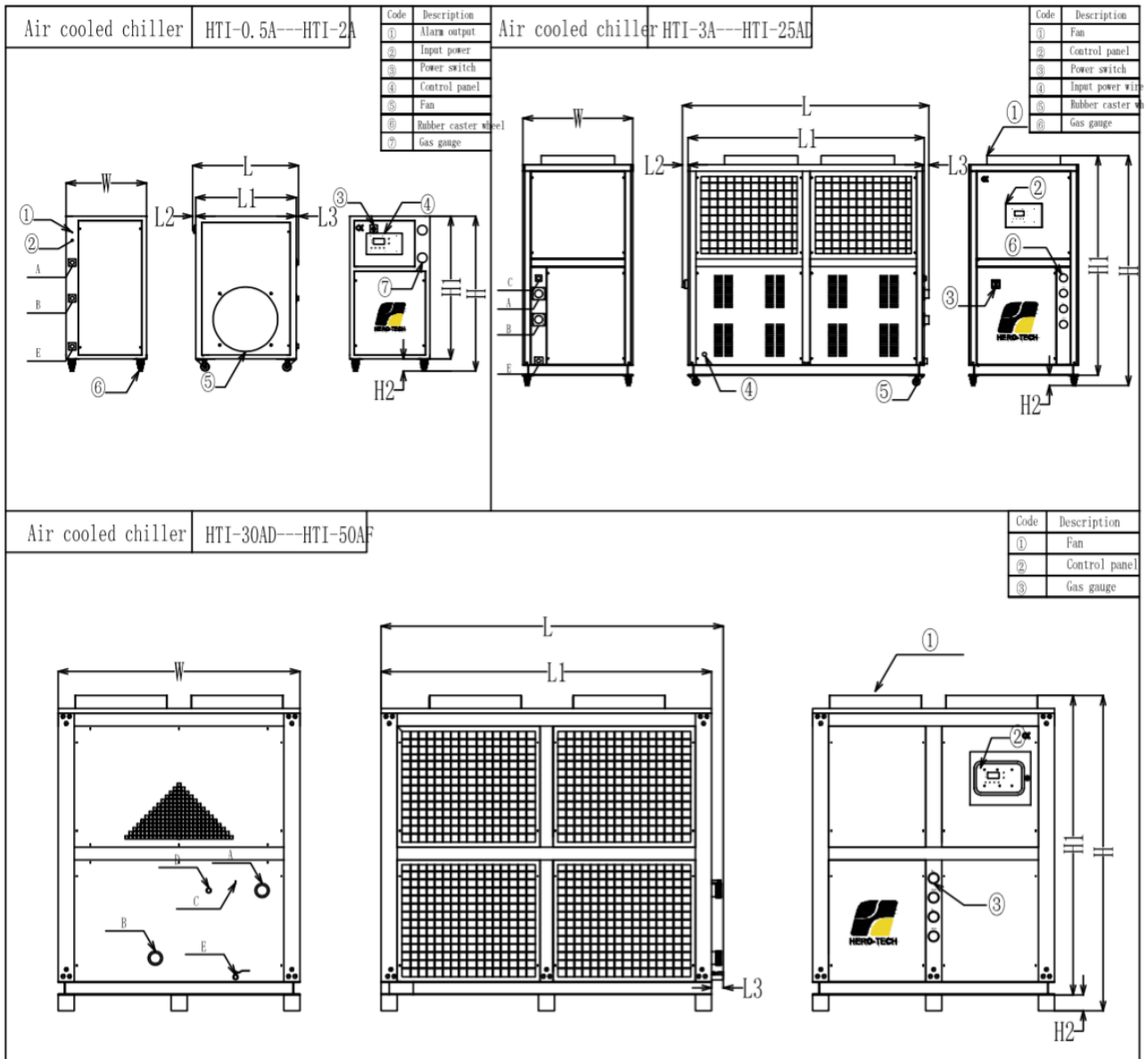
Model [HTI- **]		12AD	15AD	20AD	25AD	30AD	40AF	50AF	
Nominal cooling capacity@7C	kcal/hr	23632	30031	39852	48745	60200	79705	97490	
	kw	27.48	34.92	46.34	56.68	70	92.68	113.36	
Nominal cooling capacity@12C	kcal/hr	28776	35673	48573	59399	73272	97146	117958	
	kw	33.46	41.48	56.48	68.58	85.2	112.96	137.16	
Max Input power		kw	12.9	17.4	20.7	23.6	32.2	41.1	36.9
Power supply		3PH 380V~415V 50HZ							
Refrigerant	Type	R407c							
	Control	Thermostatic expansion valve							
Compressor	Type	Hermetic-scroll							
	Power	kw	5.25*2	7*2	8.45*2	9.9*2	13.05*2	8.45*4	9.9*4
Condenser	Type	Finned coil + low noise axil fan							
	Air volume	m <sup>3</sup> /hr	12000	15000	20000	25000	30000	40000	50000
	Fan power	kw	0.45*2	0.6*2	0.8*2	0.8*2	0.6*4	0.6*6	0.6*6
Evaporator	Type	tank with copper coil /shell and tube							
	Chilled water volume	m <sup>3</sup>	4.73	6	7.97	9.5	12.04	15.94	19.5
	Tank volume	liter	200	270	350	350	420	580	580
	Pipe connection	inch	2	2	2-1/2	2-1/2	2-1/2	3	3
Pump	Power	kw	1.5	2.2	2.2	2.2	3.7	3.7	3.7
	Max lift	m	20	20	20	20	20	20	20
Safety devices		Compressor inner protection, over current protection, high/low pressure protection, over temperature protection, flow rate protection, phase sequence/phase missing protection, low level coolant protection, anti freezing protection, exhaust overheat protection							
Dimension	Length	mm	1550	1830	2010	2010	2050	2180	2350
	Width	mm	760	850	950	950	1500	1800	1800
	Height	mm	1680	1870	1990	1990	2010	2040	2040
Net weight		kg	382	580	650	810	890	1112	1320

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## Design drawing

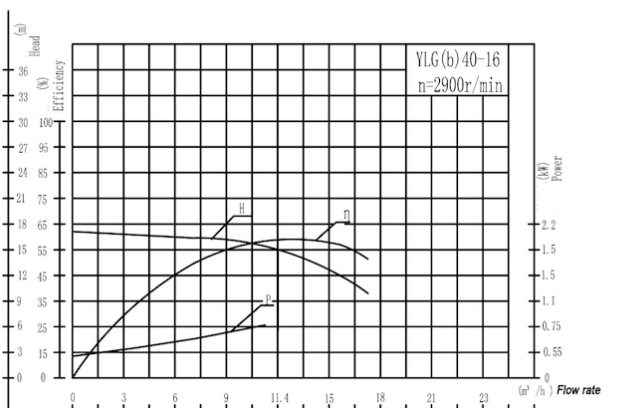


## Pump curve

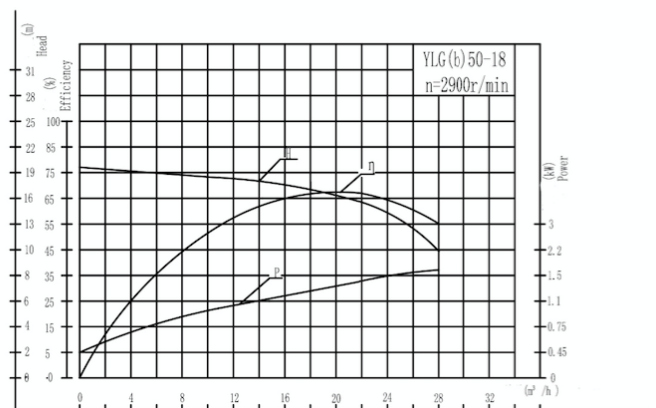
HTI-3/4/5/6A & HTI-3/4/5/6W

Pump Model	Con- nection	Flow rate	Head	RPM	Motor power & power supply	
		Q m <sup>3</sup> /h	H m	n r/min	KW	
CP-128	1"	4.0	10	2850	0.37	3ph 380v /50hz
		2.8	15			
		0.6	18			
CP-158	1"	4.0	20	2850	0.75	3ph 380v /50hz
		3.5	25			
		2.0	30			

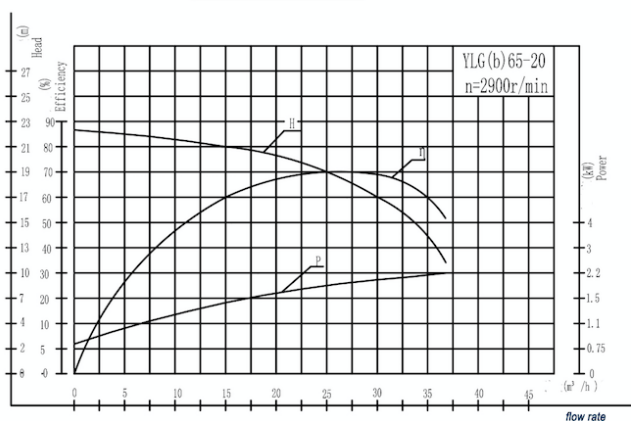
HTI-8AD & HTI-8WD



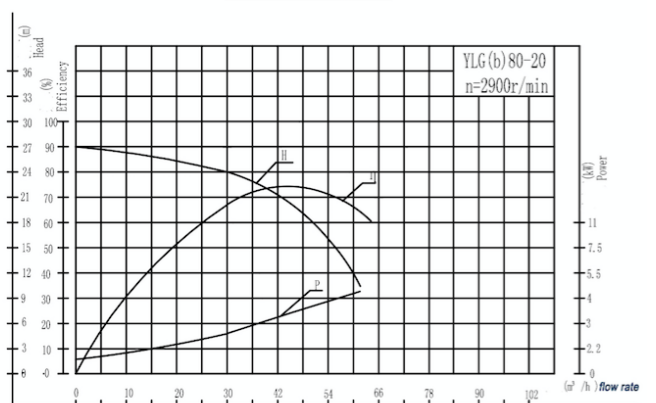
HTI-10/12AD & HTI-10/12WD



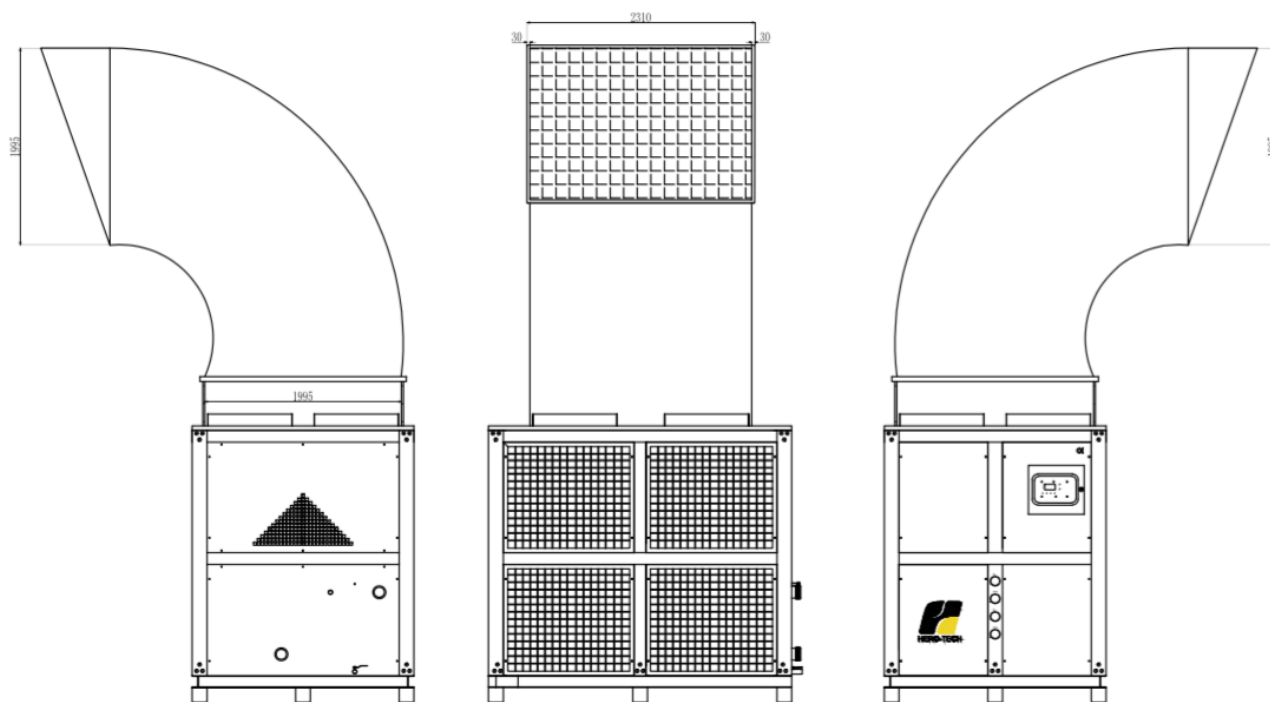
HTI-15/20/25AD & HTI-15/20/25WD



HTI-30AD/40AF/50AF & HTI-30WD/40WF/50WF



## Installation direction sample



**If any special request, please contact our sales engineer in details, we will do our best to fulfill your requirements.**

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