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Looking 100years and more into the future

HYUNDAI
AUTO CHILLER

High-performance automatic chiller with new technology

(株)現代이엔지
HYUNDAI ENG CO., LTD.

HYUNDAI AUTO CHILLER

HYUNDAI ENG Co., Ltd., based on the abundant experience and unceasing technical development accumulated during the past 30 years, always endeavors to realize customers' satisfaction by focusing on production of the high-functional, flawless automatic chiller integrated with new technologies.

Presenting Saving Energy Solution and Aiming Economical life

HYUNDAI AUTOMATIC Chiller's Special Advantages.

1. Inverter Chiller (High performance energy saving chiller)

- Innovative solution for energy savings of more than 30% compared to constant chiller.
- Application of BLDC Inverter Compressor, Condenser Fan Motor and Electronic expansion valve.
- Optimal control of the amount of refrigerant and compression in response to cooling maximum / minimum load.

2. Produced the evaporator by ourself with Utility Model Patent No. 121300

3. Type of evaporator (Heat exchanger)

- For penetrating into water (Installing the evaporator in the water tank)
- Shell & Tube Type

※ Appropriate type can be selected according to the company's facility, and water tank is to be selected in proportion to the rate of water flow.

4. Cooled & Heat Water Possibility Combination Chiller Series

- Designed in centralized multi-functional discharge method, both low and high temperature are available with one chiller.

Operating temperature range –60℃ ~ 300℃

5. Oil Cooled Type Chiller Series

- High performance and efficiency are proved by new oil cooling method.
- Immersion Chiller Series for Oil and Emulsion.
- Immersion Chiller Series for Coolant.

6. Applied the waterproof type enabling external installation

HYUNDAI Automatic Chillers Applicable Categories

1. Laser Machinery
   - CO_2 Laser Equipment
   - YAG Laser Equipment
2. Semi-conductor Machinery
   - Etching/Washing Equipment
   - CO_2 Liquefier
3. Molding Machinery
   - Injection, Extrude Molding Machine
   - Vacuum/Rubber Molding Machine
   - Roller / Mixer
   - Wire Coating Equipment
4. Chemical Reaction Machinery
   - V.O.C
   - Organic Solvent Recovery System
5. Food Manufacturing Machinery
   - Soup/Tofu/Vegetable Cooling
   - Liquor Brewage
6. Processing Machinery
   - High Frequency and Supersonic Wave Equipment
   - Plating Equipment and Grinder
   - Wire Cutting Discharge Processor
   - Robot/Spot/Plasma Welding Equipment
   - Electronic Microscope
7. Medical Instruments
   - MRI, X-ray
   - Analysis Instrument
   - Laser Scalpel
   - Electronic Microscope
8. Printer and Camera
   - Off-Set Printer
   - Automatic Developing Machine
   - UV Equipment
   - Proof Press
9. Agriculture Related Products
   - Hydroponics/Underground Cooling
   - Cooling Equipment

INVERTER CHILLER SERIES

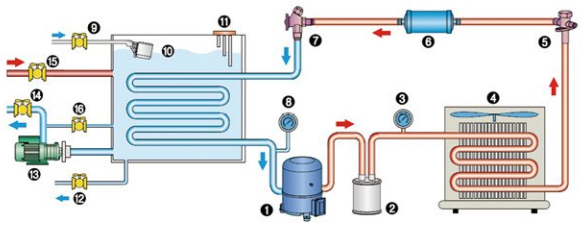
HYUNDAI AUTO CHILLER

Control Panel : *Optional Purpose

FEATURES

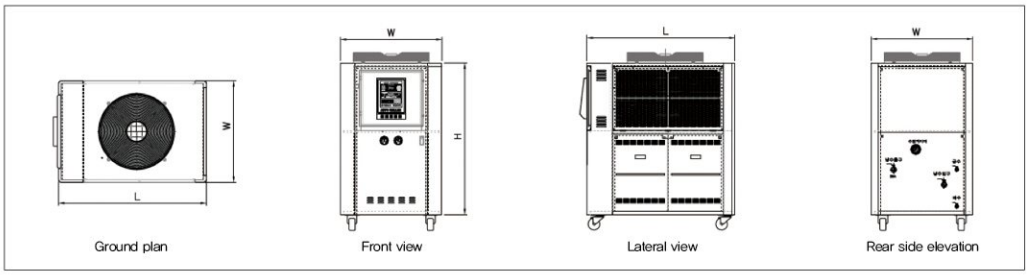
- Hyundai Auto Inverter Chiller can maintain ±0.1℃ at stable load with the applied intelligent controller and PID control.
- It is an innovative solution for energy reduction as a BLDC inverter compressor, a condenser fan motor and electronic expansion valve.
- It maximizes energy efficiency with the optimum refrigerant amount and compression amount control by immediately responding to the maximum and minimum load of cooling.
- It improves energy efficiency and surrounding environments by maintaining the fixed condensing pressure and stabilizing the cycle by applying a high efficient, BLDC fan motor.
- Hyundai Auto Inverter Chiller can have an effect of over 30% of energy reduction compared to constant speed type chillers by controlling variable frequency.

FLOW DIAGRAM



① BLDC Compressor
② Oil Separator
③ High-Pressure Gauge
④ Condenser
⑤ Shut Off Valve
⑥ Filter Dryer
⑦ Electronic Expansion Valve
⑧ Low-Pressure Gauge
⑨ City Water Supply
⑩ Evaporator & Tank
⑪ Level Sensor
⑫ Drain Valve
⑬ Circulation Pump
⑭ Cooled Water Supply
⑮ Cooled Water Return
⑯ By-Pass Valve

EXTERNAL VIEW OF INTEGRATED TYPE



STANDARD SPECIFICATIONS

Classification \ Model		HDI-02A	HDI-03A	HDI-05A	HDI-07A	HDI-013A
Compressor Capacity	kW(HP)	0.75(1.0)	1.5(2.0)	2.2(3.0)	3.37(4.5)	5.25(7.0)
Circulating Pump Capacity	kW(HP)	0.69(0.92)	0.69(0.92)	0.69(0.92)	1.25(1.67)	1.58(2.2)
Maximum Circulation Rate	ℓ /min	20~24	30~36	50~60	70~80	150~160
Tank Capacity	ℓ	39	52	100	130	240
Cooling Capacity	kcal/hr	0 ~ 6,000	0 ~ 10,400	0 ~ 13,600	0 ~ 20,300	0 ~ 42,700
Power	PH x V	1PH 220V Single Phase, 220V		3PH 380V, 440V, 460V/50Hz, 60Hz, 380V, 440V, 460V		
Compressor Rotating Number	rps	15 ~ 110 (95)	15 ~ 110 (95)	15 ~ 110 (95)	15 ~110 (90)	20 ~160 (130)
Dimensions	L (㎜) W (㎜) H (㎜)	800 700 1000	900 750 1150	1000 800 1200	1270 870 1300	1800 950 1595

• This product can be changed without notice according to technology development.
• Based on the cold water entrance and exit temperature difference (△T) 5℃ and condensing temperature under 50℃.

AIR COOLED TYPE CHILLER SERIES

HYUNDAI AUTO CHILLER

Control Panel : *Optional Purpose **General Purpose

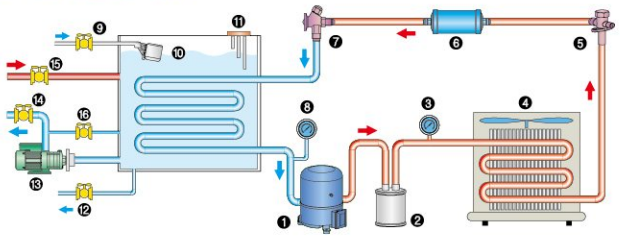
FEATURES OF INTEGRATED TYPE

- Usable in small spaces and convenient for moving by caster
- Green lamp is on for checking the operation status easily and, in case of abnormality, green lamp is changed into red lamp and buzzer operates.
- By applying a precise temperature control device, the operating temperature can be adjusted.
- Compact type with minimized temperature deviation

FEATURES OF SEPARATE TYPE

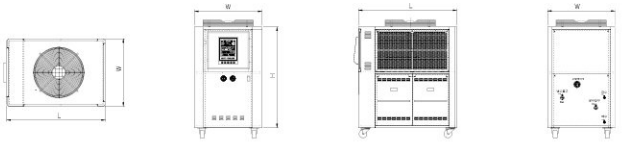
- Outstanding cooling system that completely solves uncomfortable working conditions caused by high internal temperature during the summer.
- Easy to use when indoor working conditions are not good due to unreasonable on site condition.
- With compact internal structure, it can be installed under any field conditions.
- With the centralized method of cold water supply, the maximum cooling effect is realized, leading to the increase of productivity.

FLOW DIAGRAM



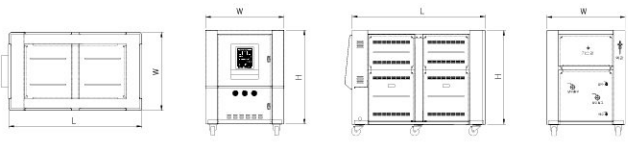
① Compressor
② Oil Separator
③ High-Pressure Gauge
④ Condenser
⑤ Shut Off Valve
⑥ Filter Dryer
⑦ Expansion Valve
⑧ Low-Pressure Gauge
⑨ City Water Supply
⑩ Evaporator & Tank
⑪ Level Sensor
⑫ Drain Valve
⑬ Circulation Pump
⑭ Cooled Water Supply
⑮ Cooled Water Return
⑯ By-Pass Valve

EXTERANAL VIEW OF INTEGRATED TYPE



Ground plan | Front view | Lateral view | Rear side elevation

EXTERNAL VIEW OF SEPARATE TYPE



Ground plan | Front view | Lateral view | Rear side elevation

STANDARD SPECIFICATIONS

Classification \ Model		HD-00.5A	HD-01A	HD-02A	HD-03A	HD-05A	HD-07.5A	HD-010A	HD-015A	HD-020A	HD-030A	HD-040A	HD-050A
Compressor Capacity	kW(HP)	0.375(1/2)	0.75(1)	1.5(2)	2.2(3)	3.75(5)	5.5(7.5)	7.5(10)	11.25(15)	15(20)	22.5(30)	30(40)	37.5(50)
Circulation Pump Capacity	kW(HP)	0.09(0.12)	0.35(0.45)	0.69(0.92)	0.69(0.92)	0.69(0.92)	1.25(1.67)	1.25(1.67)	1.58(2.12)	1.9(2.5)	3(4.02)	4(5.4)	5.5(7.5)
Max. Circulation Rate	ℓ/min	5~6	10~13	20~24	30~36	50~60	70~80	100~120	150~160	200~220	300~380	400~440	500~600
Tank Volume	ℓ	12.5	20	39	52	100	130	150	240	300	470	600	750
Cooling Capacity	kcal/hr	1400 ~ 1500	2800 ~ 3000	5600 ~ 6000	8400 ~ 9000	14000 ~ 15000	21000 ~ 22500	28000 ~ 30000	42000 ~ 45000	56000 ~ 60000	84000 ~ 90000	112000 ~ 120000	140000 ~ 150000
Power Supply	V	AC 1PH 220V Single Phase		AC 3PH 220V, 380V, 440V, 460V/50Hz, 60Hz									
Total Electric Power	kW/h	0.525	1.18	2.33	3.04	4.72	7.32	9.3	13.98	18.38	27.22	36.25	46
Dimensions	L (㎜) W (㎜) H (㎜)	550 450 700	734 500 900	800 700 1000	900 750 1150	1000 800 1200	1270 870 1300	1430 850 1400	1800 950 1595	2200 1050 1780	2300 1050 1780	2580 1200 1860	3200 1200 1960

- These products may change without notice depending on technology development.
- Besides the products described above, both special specifications production and customized production up to 400HP are available.
- Standard temperature difference between cold water input and output is △T5℃
- Special chiller with temperature deviation of ±0.1℃ is also manufactured.
- With single-phase electric specifications, small-size chiller (0.5HP~3HP) can be manufactured.
- Above cooling capacity is based on 60Hz, but about 80% of Indicating With single-phase electric specifications, small-size chiller (0.5HP~3HP) can be manufactured. on 50Hz.

WATER COOLED TYPE CHILLER SERIES

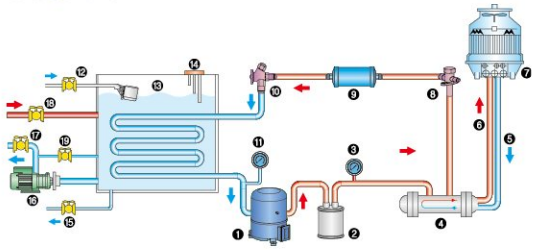
HYUNDAI AUTO CHILLER

Control Panel : *Optional Purpose **General Purpose

FEATURES

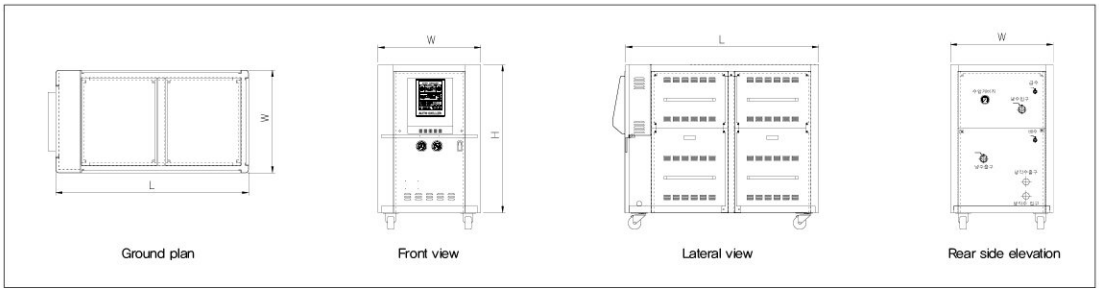
- Precisely designed for customers' convenience by supplementing the defect of water-cooled system
- Reduced noise helps obtain the maximum productivity in the comfortable environment.
- Excellent cooling efficiency displays the cooling effect improved by 10% vis-a-vis air-cooled system (in case the cooling water is good)
- A full preparation was made for safe operation by detecting freeze and pressure overheating automatically in advance with various protection and safety devices in accordance with water-cooled type.
- Designed for simple maintenance and manufactured for easy check of operating conditions

FLOW DIAGRAM



① Compressor
② Oil Separator
③ High-Pressure Gauge
④ Condenser(Shell & Tube)
⑤ Cooling Water Return
⑥ Cooling Water Supply
⑦ Cooling Tower
⑧ Shut Off Valve
⑨ Filter Dryer
⑩ Expansion Valve
⑪ Low-Pressure Gauge
⑫ City Water Supply
⑬ Evaporator & Tank
⑭ Level Sensor
⑮ Drain Valve
⑯ Circulation Pump
⑰ Cooled Water Supply
⑱ Cooled Water Return
⑲ By-Pass Valve

EXTERNAL VIEW



STANDARD SPECIFICATIONS

Classification \ Model		HD-00.5W	HD-01W	HD-02W	HD-03W	HD-05W	HD-07.5W	HD-010W	HD-015W	HD-020W	HD-030W	HD-040W	HD-050W
Compressor Capacity	kW(HP)	0.375(1/2)	0.75(1)	1.5(2)	2.2(3)	3.75(5)	5.5(7.5)	7.5(10)	11.25(15)	15(20)	22.5(30)	30(40)	37.5(50)
Circulation Pump Capacity	kW(HP)	0.09(0.12)	0.35(0.45)	0.69(0.92)	0.69(0.92)	0.69(0.92)	1.25(1.67)	1.25(1.67)	1.58(2.12)	1.9(2.5)	3(4.0)	4(5.36)	5.5(7.5)
Max. Circulation Rate	ℓ/min	5~6	10~13	20~24	30~36	50~60	70~80	100~120	150~180	200~220	300~380	400~440	500~600
Tank Volume	ℓ	12.5	20	39	52	100	130	150	240	300	470	600	750
Cooling Capacity	kcal/hr	1400 ~ 1500	2800 ~ 3000	5600 ~ 6000	8400 ~ 9000	14000 ~ 15000	21000 ~ 22500	28000 ~ 30000	42000 ~ 45000	56000 ~ 60000	84000 ~ 90000	112000 ~ 120000	140000 ~ 150000
Cooling Water Flow Rate	ℓ/min	8	13	26	40	70	100	130	190	250	380	510	650
Power Supply	V	AC 1PH 220V Single Phase		AC 3PH 220V, 380V, 440V, 460V/50Hz, 60Hz									
Total Electric Power	kW/h	0.465	1.1	2.19	2.89	4.44	6.75	8.75	12.83	16.9	25.5	34	43
Dimensions	L (㎜) W (㎜) H (㎜)	450 550 700	715 500 900	850 550 1070	850 550 1070	1080 800 1150	1080 800 1150	1500 800 1150	1500 800 1150	1700 1000 1350	2400 1200 1500	2400 1200 1500	2400 1200 1600

- These products may change without notice depending on technology development.
- Besides the products described above, both special specifications production and customized production up to 400HP are available.
- Special chiller with temperature deviation of ±0.1℃ is also manufactured.
- Above cooling-capacity is based on 60Hz, but about, 80% of indicated cooling-capacity is based on 50Hz.

LASER TYPE CHILLER SERIES

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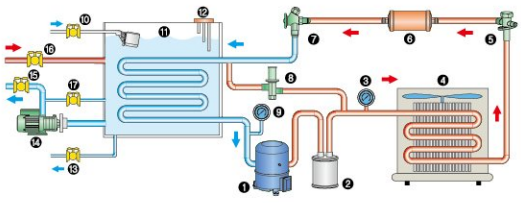
HYUNDAI AUTO CHILLER

Control Panel : *Optional Purpose **General Purpose

FEATURES

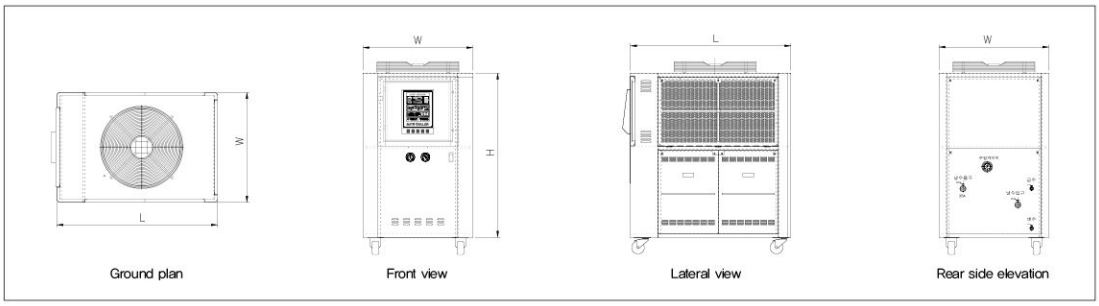
- Adopted ultra-precision temperature control system (possible to control △T±0.3℃~1℃). *0.1℃ is optional.
- Installed high-pressure power pump(3㎏/㎠-7㎏/㎠).
- Acquired Utility Model patent(No. 121300/ No. 105768)for the first time in South Korea
- Evaporator was manufactured with SUS#304, preventing the scale completely.
- The products with the utility model patent provide the maximum satisfaction in cooling effect.
- Scale can be prevented by plumbing the inlet and outlet of cold water with SUS(SUS@304)
- While at work, alarm lamp and buzzer functional device are operated by self-prognosis.

FLOW DIAGRAM



① Compressor
② Oil Separator
③ High-Pressure Gauge
④ Condenser
⑤ Shut-Off Valve
⑥ Filter Dryer
⑦ Expansion Valve
⑧ Hot Gas By-Pass Valve
⑨ Low-Pressure Gauge
⑩ City Water Supply
⑪ Evaporator & Tank
⑫ Level Sensor
⑬ Drain Valve
⑭ Circulation Pump
⑮ Cooled Water Supply
⑯ Cooled Water Return
⑰ By-Pass Valve

EXTERNAL VIEW



STANDARD SPECIFICATIONS

Classification \ Model		HDL-00.5A	HDL-01A	HDL-02A	HDL-03A	HDL-05A	HDL-07.5A	HDL-010A	HDL-015A	HDL-020A	HDL-030A	HDL-040A
Compressor Capacity	kW(HP)	0.375(1/2)	0.75(1)	1.5(2)	2.2(3)	3.75(5)	5.5(7.5)	7.5(10)	11.25(15)	15(20)	22.5(30)	30(40)
Circulation Pump Capacity	kW(HP)	0.35(0.47)	0.35(0.47)	0.75(1)	0.75(1)	0.75(1)	1.58(2.1)	2.05(2.7)	2.3(3)	4(5.5)	4(5.5)	5.5(7.5)
Circulation Rate	ℓ/min	5	10	15	20	30	50	60	100	150	200	270
Max. Pressure	kg/㎠	5	4	5	4.5	4	4	5	6	6	6	7
Cooling Capacity	kcal/hr	1400 ~ 1500	2800 ~ 3000	5600 ~ 6000	8400 ~ 9000	14000 ~ 15000	21000 ~ 22500	28000 ~ 30000	42000 ~ 45000	56000 ~ 60000	84000 ~ 90000	112000 ~ 120000
Tank Volume	ℓ	12.5	20	39	52	100	130	150	240	300	470	600
Power Supply	V	AC 1PH 220V Single Phase		AC 3PH 220V, 380V, 440V, 460V/50Hz, 60Hz								
Dimension	L (㎜) W (㎜) H (㎜)	550 450 700	734 500 900	800 700 1000	900 750 1150	1000 800 1200	1270 870 1300	1430 850 1400	1800 950 1595	2200 1050 1780	2300 1050 1780	2580 2000 1860

- These products may change without notice depending on technology development.
- Besides the products described above, products by special specifications are custom-made.
- With single-phase electric specifications, small-size chiller (0.5HP~3HP) can be manufactured
- Above cooling-capacity is based on 60Hz, but about. 80% of Indicating indicated cooling-capacity is based on 50Hz.

COOLED & HEAT WATER POSSIBILITY COMBINATION CHILLER SERIES

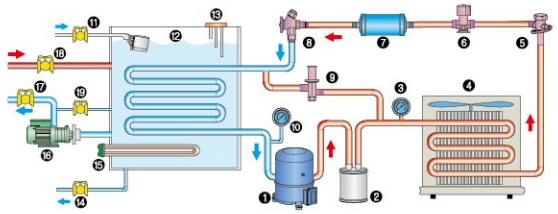
HYUNDAI AUTO CHILLER

Control Panel : *Optional Purpose **General Purpose

FEATURES

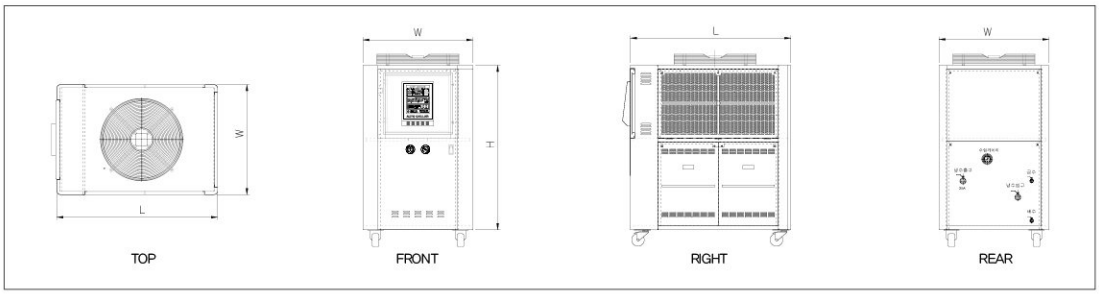
- Essential to the field requiring high-precision chiller, such as laboratory et al
- Adopted One-Touch digital system for controlling both high and low temperature conveniently.
- Buzzer function installed on the alarm lamps operated by self-prognosis in case of abnormality
- We minimized the installation space using a simplified circuit method, and this type of chiller has a molding effect by mobile use of cold and hot water.
- Designed in centralized multi-functional discharge method, both low and high temperature can be used with one chiller.

FLOW DIAGRAM



① Compressor
② Oil Separator
③ High-Pressure Gauge
④ Condenser
⑤ Shut-Off Valve
⑥ Solenoid Valve
⑦ Filter Dryer
⑧ Expansion Valve
⑨ Hot Gas By-Pass Valve
⑩ Low-Pressure Gauge
⑪ City Water Supply
⑫ Evaporator & Tank
⑬ Level Sensor
⑭ Drain Valve
⑮ Heater
⑯ Circulation Pump
⑰ Cooled & Heat Water Supply
⑱ Cooled & Heat Water Return
⑲ By-Pass Valve

EXTERNAL VIEW



STANDARD SPECIFICATIONS

Classification \ Model		HDA-01HC	HDA-02HC	HDA-03HC	HDA-05HC	HDA-07.5HC	HDA-010HC	HDA-015HC	HDA-020HC	HDA-030HC	HDA-040HC
Compressor Capacity	kW(HP)	0.75(1)	1.5(2)	2.2(3)	3.75(5)	5.5(7.5)	7.5(10)	11.25(15)	15(20)	22.5(30)	30(40)
Circulation Pump Capacity	kW(HP)	0.35(0.45)	0.69(0.92)	0.69(0.92)	0.69(0.92)	1.25(1.67)	1.25(1.67)	1.58(2.12)	1.9(2.5)	3(4)	4(5.36)
Heater Capacity	kW	2	3	4	6	8	10	15	20	30	40
Tank Volume	ℓ	20	39	52	100	130	150	240	300	470	600
Operating Temp. Range	℃	+5℃ ~ +90℃									
Cooling Capacity	kcal/hr	2800 ~ 3000	5600 ~ 6000	8400 ~ 9000	14000 ~ 15000	21000 ~ 22500	28000 ~ 30000	42000 ~ 45000	56000 ~ 60000	84000 ~ 90000	112000 ~120000
Power Supply	V	AC 1PH 220V Single Phase	AC 3PH 220V, 380V, 440V, 460V/50Hz, 60Hz								
Dimensions	L (㎜) W (㎜) H (㎜)	734 500 900	800 700 1000	900 750 1150	1000 800 1200	1270 870 1300	1430 850 1400	1800 950 1595	2200 1050 1780	2300 1050 1780	2500 1200 1860

- These products may change without notice depending on technology development.
- Besides the products described above, products by special specifications are custom-made.
- Low temperature (-40℃) ~ High temperature(300℃) is optional.
- Above Cooling-capacity is based on 60Hz, but about 80% of indicated cooling-capacity is based on 50Hz.

AIR TYPE CHILLER SERIES

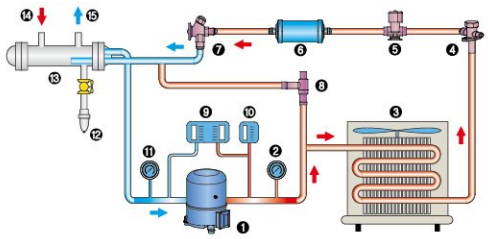
HYUNDAI AUTO CHILLER

Control Panel : *Optional Purpose **General Purpose

FEATURES

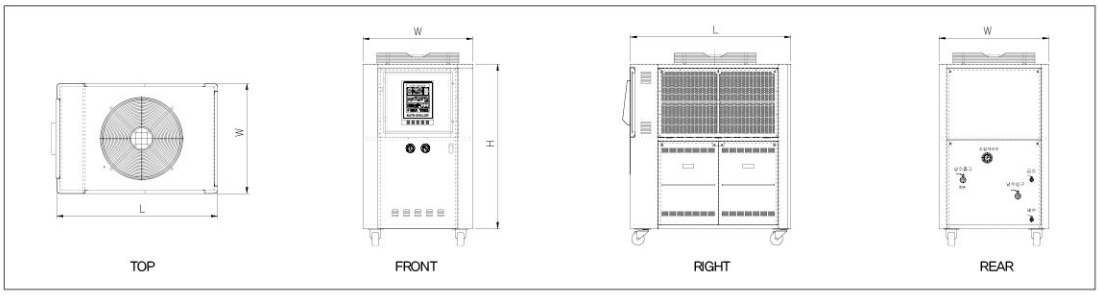
- Air temperature can be freely controlled from 4℃~90℃ and continuous operation is possible.
- Consumables are not needed and operating cost is low.
- Condensed liquid is automatically discharged through auto-drain.
- Precise temperature control(△T±0.2℃~0.5℃ for compressed air).
- Applicable machines : Extruding sheet machine, Inflation film machine, Precision machine, Food machine, Various air compressors, Medical instrument

FLOW DIAGRAM



① Compressor
② High-Pressure Gauge
③ Condenser
④ Shut-Off Valve
⑤ Solenoid Valve
⑥ Filter Dryer
⑦ Expansion Valve
⑧ Hot Gas By-Pass Valve
⑨ D.P.S.
⑩ H.P.S.
⑪ Low-Pressure Gauge
⑫ Auto Drain
⑬ Evaporator
⑭ Air Return
⑮ Air Supply

EXTERNAL VIEW



STANDARD SPECIFICATIONS

Classification \ Model		HDA-01AC	HDA-02AC	HDA-03AC	HDA-05AC	HDA-07.5AC	HDA-010AC	HDA-015AC	HDA-020AC	HDA-030AC	HDA-040AC
Compressor Capacity	kW(HP)	0.75(1)	1.5(2)	2.2(3)	3.75(5)	5.5(7.5)	7.5(10)	11.25(15)	15(20)	22.5(30)	30(40)
Amount of Air Processed	㎥/min	6	12	18	30	45	62	93	122	183	244
Max. Operating Processed	kg/㎠	9									
Ambient Temperature Range	℃	+5℃ ~ +35℃									
Operating Temp. Range	℃	+5℃ ~ +90℃									
Cooling Capacity	kcal/hr	2000 ~ 2350	4000 ~ 4700	6000 ~ 7050	10000 ~ 11750	15000 ~ 17625	20000 ~ 23500	30000 ~ 35250	40000 ~ 47000	60000 ~ 70500	80000 ~ 94000
Power Supply	V	AC 1PH 220V Single Phase	AC 3PH 220V, 380V, 440V, 460V/50Hz, 60Hz								
Dimensions	L (㎜) W (㎜) H (㎜)	734 500 900	800 700 1000	900 750 1150	1000 800 1200	1270 870 1300	1430 850 1400	1800 950 1595	2200 1050 1780	2300 1050 1780	2580 1200 1860

- These products may change without notice depending on technology development.
- Besides the products described above, products by special specifications are custom-made.
- Above Cooling-capacity is based on 60Hz, but about 80% of indicated cooling-capacity is based on 50Hz.

OIL COOLED TYPE CHILLER SERIES

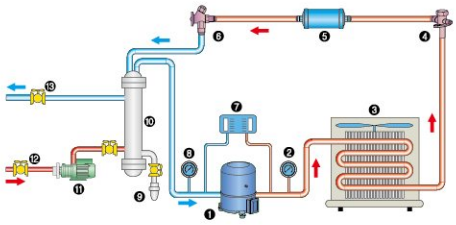
HYUNDAI AUTO CHILLER

Control Panel : *Optional Purpose **General Purpose

FEATURES

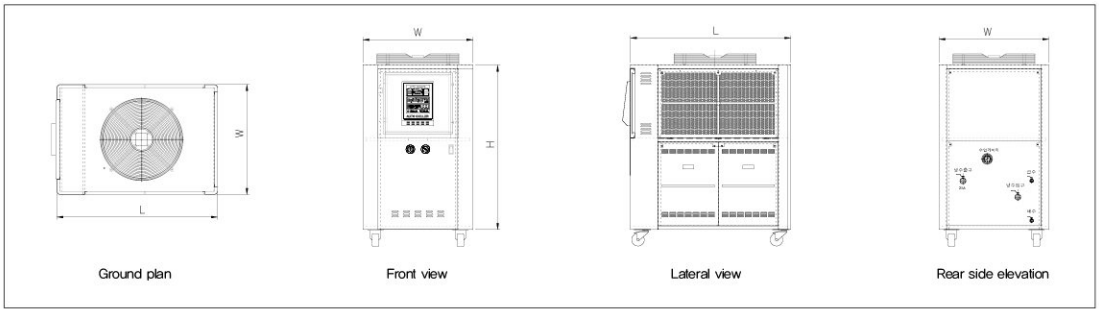
- Various lamps of controller check irregularities easily.
- Depending on the temperature of the control target, adjustment of temperature can be controlled using automatic switch method.
- New oil-cooled method guarantees high efficiency.
- Convenient system and mobile compact design afford the users satisfaction.

FLOW DIAGRAM



① Compressor
② High-Pressure Gauge
③ Condenser
④ Shut-Off Valve
⑤ Filter Dryer
⑥ Expansion Valve
⑦ D.P.S.
⑧ Low-Pressure Gauge
⑨ Drain Valve
⑩ Heat Exchanger
⑪ Circulation Pump
⑫ Oil Return
⑬ Oil Supply

EXTERNAL VIEW



STANDARD SPECIFICATIONS

Classification \ Model		HDA-00.5-OC	HDA-01-OC	HDA-02-OC	HDA-03-OC	HDA-05-OC
Compressor Capacity	kW(HP)	0.4(0.5)	0.75(1)	1.5(2)	2.2(3)	3.75(5)
Cooling Capacity	kcal/hr)	1400 ~ 1500	2800 ~ 3000	5600 ~ 6000	8400 ~ 9000	14000 ~ 15000
Circulation Pump Capacity	kW	0.25	0.4	0.75	0.75	1.1
Circulation Rate	ℓ /min	10 ~ 15	20 ~ 28	30 ~ 38	40 ~ 46	50 ~ 56
Connection pipe Diameten (Supply X Return)	m/m	15A×15A	20A×20A	25A×25A	25A×25A	25A×25A
Power Supply	V	AC 1PH 220V/60Hz		AC 3PH 220V, 380V, 440V, 460V/50Hz, 60Hz		
Total Electric Power	kW/h	0.71	1.23	2.38	3.09	5.12
Dimensions	L (㎜) W (㎜) H (㎜)	550 450 700	734 500 900	800 700 1000	900 750 1150	1000 800 1200

• These products may change without notice depending on technology development.
• Besides the products described above, products by special specifications are custom-made.
• Above Cooling-capacity is based on 60Hz, but about 80% of indicated cooling-capacity is based on 50Hz.

IMMERSION CHILLER SERIES
FOR OIL AND EMULSION

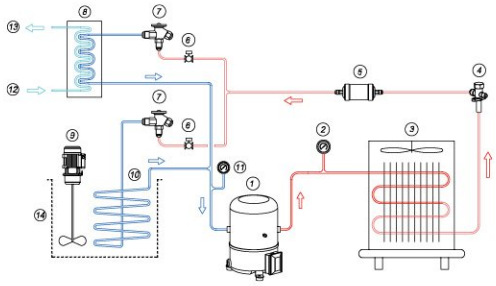
HYUNDAI AUTO CHILLER

컨트롤 판넬 : *주문자 선택사항

FEATURES

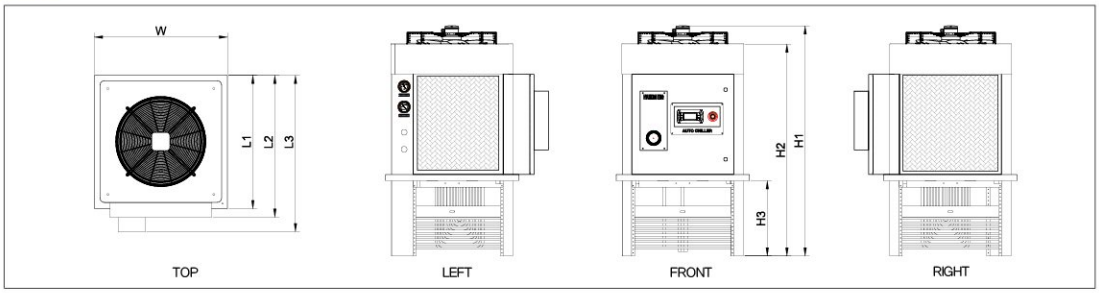
– It is not necessary to install the chiller separately, because of cooling the oil and coolant simultaneously.
– An agitator is used to increase the heat transfer efficiency of coolant and SUS304 is applied to the evaporator coil and frame.
– The control panel is protected by IP54, and the control panel cooler with small power consumption is applied to protect the electronic parts.
– Intelligent controller, injection kit, micro high efficiency condenser coil and EC fan maximize system stability and efficiency.
– Condenser circulating air passage has a grease filter to minimize oil dust and foreign matter inflow.

FLOW DIAGRAM



① Compressor
② High-Pressure Gauge
③ Condenser
④ Shut Off Valve
⑤ Filter Dryer
⑥ Solenoid Valve
⑦ Expansion Valve
⑧ Evaporator Plate-type
⑨ Agitator
⑩ Evaporator Coil-type
⑪ Low pressure Gauge
⑫ Oil Input 25A
⑬ Oil Input 25A
⑭ Coolant Tank (Option)

OVER VIEW



STANDARD SPECIFICATIONS

Classification \ Model			HD-03A-OCE	HD-04A-OCE	HD-05A-OCE
Compressor Capacity	kW(HP)		2.20 (3.0)	3.0 (4.0)	3.75 (5.0)
Agitator Capacity	kW(HP)		0.12 (0.16)	0.12 (0.16)	0.12 (0.16)
Cooling Capacity Kcal/h, 60hz	15℃ coolant	20℃ oil	4,800 / 3,200 (3,940 / 2,620)	6,380 / 4,250 (5,368 / 3,570)	7,990 / 5,320 (6,690 / 4,460)
	20℃ coolant	25℃ oil	5,230 / 3,490 (4,290 / 2,860)	6,960 / 4,640 (5,850 / 3,900)	8,720 / 5,810 (7,300 / 4,860)
Coolant minimum hight	㎜		200		
Coolant perforation dimensions	㎜		730(740) x 730(740)		
Power Source	PH x V x Hz		3상, 380V, 440V, 460V, 50/60Hz		
Dimension	(L1,2,3 x W x H1,2,3) ㎜		787, 838, 923 x 787 x 1360, 1250, 445		

• This product is subject to change without prior notice due to technical development.
• Oil viscosity ISO VG32, ambient operation temperature 5 to 45°C, oil service temperature 5 to 50°C

IMMERSION CHILLER SERIES FOR COOLANT

*

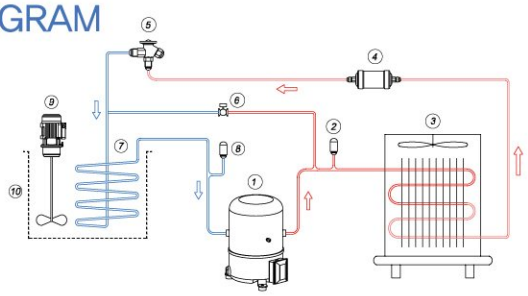
HYUNDAI AUTO CHILLER

컨트롤 판넬 : *주문자 선택사항

FEATURES

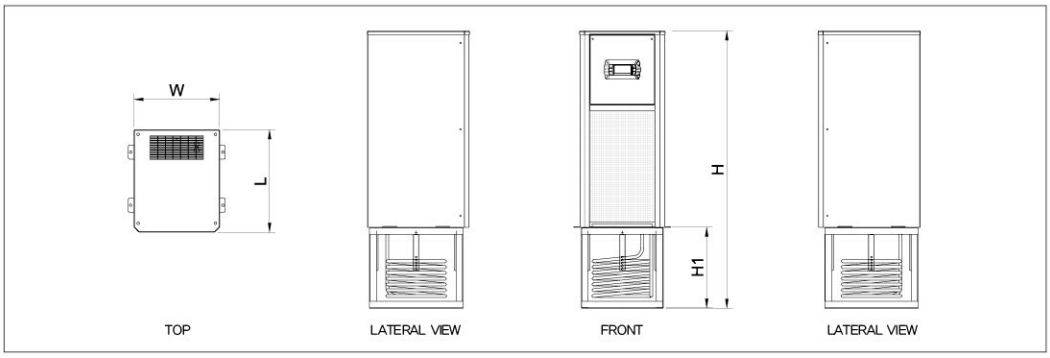
- The compact design minimizes the installation space and the agitator is applied to increase the heat transfer efficiency of coolant.
- The closing part of the evaporator coil and coolant is made of SUS304.
- Intelligent controller, micro high efficiency condenser coil and EC fan maximize system stability and efficiency.
- Condenser circulating air passage has a filter to minimize dust and foreign matter inflow.

FLOW DIAGRAM



① Compressor
② High Pressure Transducer
③ Condenser
④ Filter Dryer
⑤ Expansion Valve
⑥ Solenoid Valve
⑦ Evaporator Coil type
⑧ Coolant Tank(option)
⑨ Agitator
⑩ Coolant Tank(option)

OVER VIEW



STANDARD SPECIFICATIONS

Classification \ Model		HD-00.5A-CE	HD-01A-CE	HD-01.5A-CE	HD-02A-CE	HD-03A-CE
Compressor Capacity	kW(HP)	0.37 (0.5)	0.75 (1.0)	1.12 (1.5)	1.5 (2.0)	2.25 (3.0)
Agitator Capacity	kW(HP)	0.12 (0.16)				
Cooling Capacity	Kcal/h, 60/50Hz	1,510 / 1,250	2,990 / 2,490	3,200 / 3,840	5,100 / 4,380	7,490 / 6,240
Coolant minimum hight	㎜	200				
Coolant perforation dimensions	㎜	410 x 360	410 x 360	470 x 430	520 x 480	570 x 530
Power Source	PH x V x Hz	1상220V, 3상, 380V, 440V, 460V, 50/60Hz				
Dimension	L (㎜) W (㎜) H (㎜)	443 x 370 x 1027	443 x 370 x 1200	500 x 450 x 1323	550 x 510 x 1375	605 x 590 x 1530

• This product is subject to change without prior notice due to technical development.
• Ambient operating temperature is 5 to 45°C,temperature control range is 5 to 45°C

ORGANIC SOLVENT RECOVERY SYSTEM

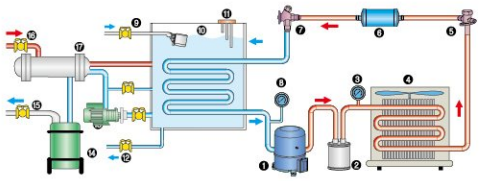
HYUNDAI AUTO CHILLER

Control Panel : *Optional Purpose **General Purpose

FEATURES

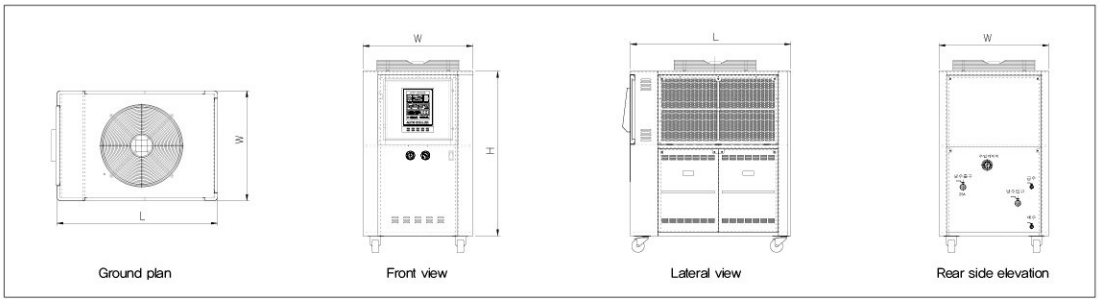
– With the shell & tube–typed heat exchanger contacting the evaporator directly, the cooling efficiency has been maximized.
– As all components are made of acid–proof and alkali–proof materials, it is very effective to capture the corrosive substances.

FLOW DIAGRAM



① Compressor
② Oil Separator
③ High–Pressure Gauge
④ Condenser
⑤ Shut–Off Valve
⑥ Filter Dryer
⑦ Expansion Valve
⑧ Low–Pressure Gauge
⑨ City Water Supply
⑩ Evaporator & Tank
⑪ Level Sensor
⑫ Drain Valve
⑬ Circulation Pump
⑭ Receiver Tank
⑮ Organic Solvent Supply
⑯ Organic Solvent Return
⑰ Heat Exchanger

EXTERNAL VIEW



STANDARD SPECIFICATIONS

Classification \ Model		HDO–01A	HDO–02A	HDO–03A	HDO–05A	HDO–07.5A	HDO–010A	HDO–015A	HDO–020A
Compressor Capacity	kW(HP)	0.75(1)	1.5(2)	2.2(3)	3.75(5)	5.5(7.5)	7.5(10)	11.25(15)	15(20)
Circulation Pump Capacity	kW(HP)	0.35(0.45)	0.69(0.92)	0.69(0.92)	0.69(0.92)	1.25(1.67)	1.25(1.67)	1.58(2.12)	1.9(2.5)
Cooling Capacity	kcal/hr	900	1800	2700	4500	6750	9000	13500	18000
Tank Volume	ℓ	20	39	52	100	130	150	240	300
Power Supply	V	AC 1PH 220V	AC 3PH 220V, 380V, 440V, 460V/50Hz, 60Hz						
Total Electric Power	kW/h	1.18	2.33	3.04	4.72	7.32	9.3	13.98	18.38
Dimensions	L (㎜) W (㎜) H (㎜)	734 500 900	800 700 1000	900 750 1150	1000 800 1200	1270 870 1300	1430 850 1400	1800 950 1595	2200 1050 1780

• When cooling capacity is based on −20°C.
• These products may change without notice depending on technology development.
• Besides the products described above, products by special specifications are custom–made.
• Above Cooling–capacity is based on 60Hz, but about 80% of indicated cooling–capacity is based on 50Hz.

HEATING WATER TEMPERATURE CONTROLLER

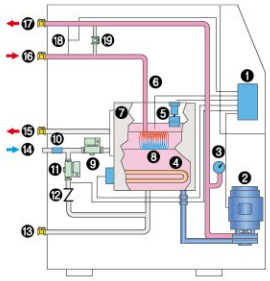
HYUNDAI AUTO CHILLER

Control Panel : *Optional Purpose **General Purpose

FEATURES

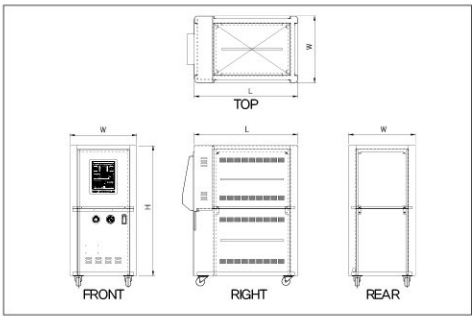
- Accurate temperature control system of the proportional control method (P.I.D) by function.
- Indicating function of irregularities and alarm system
- Maximum discharge volume and maximum discharge pressure by the minimum power pump
- High-precision temperature control(Deviation △T±0.5℃~0.8℃)

FLOW DIAGRAM



① Temperature Indicator
② Pump
③ Pressure Gauge
④ Heater
⑤ Water Supply Regulator
⑥ Overheating Check Sensor
⑦ Tank
⑧ Heat Exchanger
⑨ Entrance of Cooling Water
⑩ Filter Strainer
⑪ Water Supply S/V
⑫ Check Valve
⑬ Drain Valve
⑭ Cooling Water Supply
⑮ Cooling Water Return
⑯ Return(Water)
⑰ Supply(Water)
⑱ Temperature Sensor
⑲ By-Pass Valve

EXTERNAL VIEW



HEATING WATER STANDARD SPECIFICFATIONS (90°C)

Classification \ Model			HD-20LW	HD-40LW	HD-60LW	HD-80LW	HD-100LW
Medium			Water				
PUMP 60/50Hz	Motor Capacity	kW(HP)	0.37(1/2)	0.55(0.75)	0.75(1)	1.25(1.67)	1.25(1.67)
	Max. Pump Head	m	30				
	Max. Flow Rate	ℓ/min	20	40	60	80	100
Temperature Control Method			PID Function				
Heater Capacity		kW	3	5	8	10	13
Cooling Method			Indirect Cooling Method				
Pipe Size	Medium Pipe Size		20A	25A	25A	32A	32A
	Cooling Water Pipe Size		15A	15A	15A	15A	15A
Power Supply			AC 3PH 220V, 380V ±10%×60Hz/50Hz				
Alarm			Overheating, Lack Medium, Pump Overload, Heater Trip, Phase-Reverse				
Dimension(L x W x H)		㎜	750×420×650	750×420×650	920×430×800	920×550×1130	1000×550×1130
Total Electric Power		kW	3.37	5.55	8.75	11.25	14.25

HEATING WATER STANDARD SPECIFICFATIONS (140°C)

Classification \ Model			HD-20LWH	HD-40LWH	HD-60LWH	HD-80LWH	HD-100LWH
Medium			Water				
PUMP 60/50Hz	Motor Capacity	kW(HP)	0.33(0.45)	0.75(1)	1.1(1.5)	1.5(2)	1.5(2)
	Max. Pump Head	m	30				
	Max. Flow Rate	ℓ/min	20	40	60	80	100
Temperature Control Method			PID Function				
Heater Capacity		kW	4	8	12	16	20
Cooling Method			Indirect Cooling Method				
Pipe Size	Medium Pipe Size		20A	25A	25A	32A	32A
	Cooling Water Pipe Size		15A	15A	15A	15A	15A
Power Supply			AC 3PH 220V, 380V ±10%×60Hz/50Hz				
Alarm			Over Heating, Lack Medium, Pump Overload, Heater Trip, Phase-Reverse				
Dimensions(L x W x H)		㎜	940×430×850	940×430×850	940×500×850	940×500×850	1400×800×1600
Total Electric Power		kW	4.33	8.75	13.1	17.5	21.5

- These products may change without notice depending on technology development.
- Besides the products described above, products by special specifications are custom-made.
- Above Cooling-capacity is based on 60Hz, but about 80% of indicated cooling-capacity is based on 50Hz.

HEATING OIL TEMPERATURE CONTROLLER

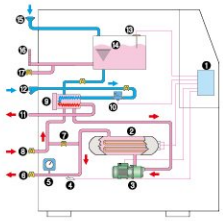
HYUNDAI AUTO CHILLER

Control Panel : *Optional Purpose **General Purpose

FEATURES

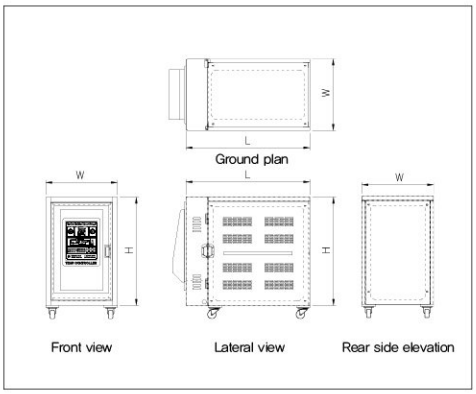
- Accurate temperature control system of the proportional control method (P.I.D) by function
- Indicating function of irregularities and alarm system

FLOW DIAGRAM



① Temperature Indicator
② Heater Chamber
③ Pump
④ Temperature Sensor
⑤ Pressure Gauge
⑥ Supply(Oil)
⑦ By-Pass Valve
⑧ Return(Oil)
⑨ Heat Exchanger
⑩ Electronic Valve(S/V)
⑪ Cooling Water Supply
⑫ Cooling Water Return
⑬ Tank Oil Level
⑭ Expansion Tank
⑮ Oil Supply Gate
⑯ Oil Level Gauge
⑰ Drain Valve

EXTERNAL VIEW



HEATING OIL STANDARD SPECIFICATIONS (140°C)

Classification \ Model			HD-20LO	HD-40LO	HD-60LO	HD-80LO	HD-100LO
Medium			Oil				
PUMP 60/50Hz	Motor Capacity	kW(HP)	0.33(0.45)	0.75(1)	1.1(1.5)	1.5(2)	1.5(2)
	Max. Pump Head	m	30				
	Max. Flow Rate	ℓ/min	20	40	60	80	100
Temperature Control Method			PID Function				
Heater Capacity		kW	4	8	12	16	20
Cooling Method			Indirect Cooling Method				
Pipe Size	Medium Pipe Size		20A	25A	25A	32A	32A
	Cooling Water Pipe Size		15A	15A	15A	15A	15A
Power Supply			AC 3PH 220V, 380V ±10%×60Hz/50Hz				
Alarm			Over Heating, Lack Medium, Pump Overload, Heater Trip, Phase-Reverse				
Dimensions(L x W x H)		mm	940×430×850	940×430×850	940×500×850	940×500×850	1400×800×1600
Total Electric Power		kW	4.33	8.75	13.1	17.5	21.5

HEATING OIL STANDARD SPECIFICATIONS (200°C)

Classification \ Model			HDO-20LH	HDO-40LH	HDO-60LH	HDO-80LH	HDO-100LH
Medium			(K-2120#) Heating Medium Oil				
PUMP 60/50Hz	Motor Capacity	kW(HP)	0.33(0.45)	0.75(1)	1.1(1.5)	1.5(2)	1.5(2)
	Max. Pump Head	m	30				
	Max. Flow Rate	ℓ/min	20	40	60	80	100
Temperature Control Method			PID Function				
Heater Capacity		kW	4	12	17	22	28
Cooling Method			Indirect Cooling Method				
Pipe Size	Medium Pipe Size		20A	25A	25A	32A	32A
	Cooling Water Pipe Size		15A	15A	15A	15A	15A
Power Supply			AC 3PH 220V, 380V ±10%×60Hz/50Hz				
Alarm			Over Heating, Lack Medium, Pump Overload, Heater Trip, Phase-Reverse				
Dimensions(L x W x H)		mm	940×430×800	940×430×800	940×500×850	940×500×850	1400×800×1600
Total Electric Power		kW	4.33	12.75	18.1	23.5	29.5

HEATING OIL STANDARD SPECIFICATIONS (300°C)

Classification \ Model			HDO-30LHH	HDO-60LHH	HDO-100LHH	HDO-150LHH
Medium			(K-2120#) Heating Medium Oil			
PUMP 60/50Hz	Motor Capacity	kW(HP)	1.1(1.5)	2.2(3)	3(4)	4(5)
	Max. Pump Head	m	30			
	Max. Flow Rate	ℓ/min	30	60	100	150
Temperature Control Method			PID Function			
Heater Capacity		kW	13	25	42	63
Cooling Method			Indirect Cooling Method			
Pipe Size	Medium Pipe Size		20A	25A	32A	32A
	Cooling Water Pipe Size		15A	15A	15A	15A
Power Supply			AC 3PH 220V, 380V, 440V ±10%×60Hz/50Hz			
Alarm			Over Heating, Lack Medium, Pump Overload, Heater Trip, Phase-Reverse			
Dimensions(L x W x H)		mm	930×430×850	930×430×850	1400×800×1600	1470×800×1600
Total Electric Power		kW	14.1	27.2	45	67

- These products may change without notice depending on technology development.
- Besides the products described above, products by special specifications are custom-made.
- Above Cooling-capacity is based on 60Hz, but about 80% of indicated cooling-capacity is based on 50Hz.

GLOBAL CERTIFICATIONS

We are looking at Hyundai ENG having gained recognition of its technological prowess.

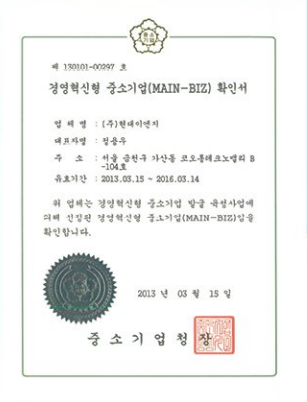
Hyundai ENG is leading the future through quality and technological prowess.

QUALITY CONTROL

The chillers produced by HYUNDAI ENG Co., Ltd. go through strict quality control and only genuine components are used in them with obstinacy.
The chillers manufactured with the patent technology accumulated for more than 30 years, including the utility model patent, registration of design et al, and the system engineering display the cooling capacity of maximum efficiency.
With obtaining ISO 9001 and ISO 14001 Certificate of Quality/Environment Management System respectively, we are pursuing the perfect quality from production down to delivery, and guarantee faultless quality of our excellent products.
Furthermore, in a bid for globalization, so as to verify we install various functions for enhancing safety by country and region and the high-tech function, we have obtained various certificates, such as CE for Europe, NRTL for American continent et al and, as a result, secured users' convenience as well as achieved recognition of the high quality of our products.

CE Certificate

ISO 9001 Certificate



Business Renovation, Main-Biz

CE Certificate

CE Certificate

CE Certificate

NRTL(Nationally Recongnized Testing Laboratories)

ISO 14001 Certificate

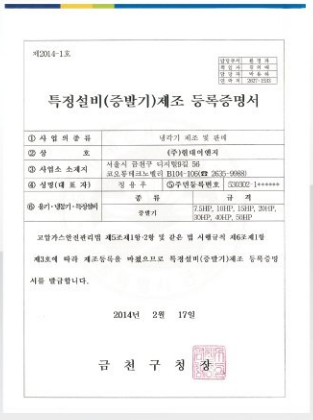
A design of practical utility patent 121300

A design of practical utility patent 105768

Certificate of registration of design

Technical Innovation, Inno-Biz

Laboratory affiliated with the company



Special Equipment (evaporator) Manufacturing certificate

GLOBAL LEADER

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HYUNDAI ENG CO., LTD.

Global leader recognized as its
advanced technology which by providing a total energy
efficiency solution to customers all over the world.

MEMO

Product Lines

Inverter Chiller
Air Cooled Chiller
Water Cooled Chiller
Laser Chiller
Water Cooled & Heated Chiller
Air Chiller
Oil Cooled Chiller
Injection Molding Chiller : Hot water type – Heating Water 90℃ / 140℃
: Oil type – Heating Oil 140℃ / 300℃
Immersion Chiller Series for Oil and Emulsion
Immersion Chiller Series for Coolant
Organic Solvent Recovery System
Food Chiller
Experiment Chiller
Semi Conductor Chiller
Chemical Reaction Chiller

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