

HITACHI

TWIN SCREW COMPRESSOR TYPE HITACHI AIR-COOLED WATER CHILLERS

Nominal Cooling Capacity Range

191 kW to 1,146 kW

164,260 kcal/h to 985,560 kcal/h

651,000 Btu/h to 3,910,000 Btu/h



Distributed By:

Hitachi Air Conditioning Systems Co.,Ltd

URL: <http://www.hitachiacs.co.jp>

Specifications in this catalogue are subject to change without notice in order that HITACHI may bring the latest innovations to their customers.

NEW HITACHI AIR-COOLED WATER CHILLER..... THAT'S THE ACHIEVEMENT OF TOTAL HITACHI TECHNOLOGY...

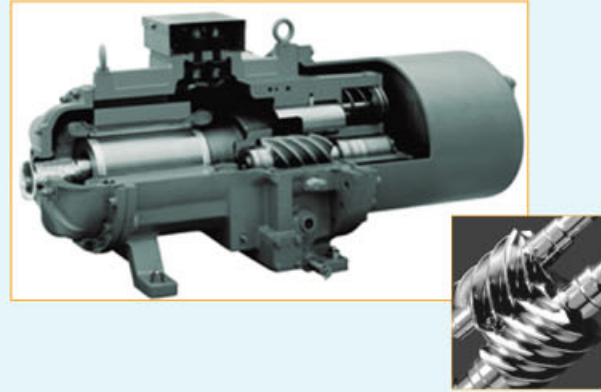
Minimized Size

Due to the compact V-type (air side heat exchanger), the installation, service and maintenance space has been minimized.



Smaller Vibration and Lower Operation Sound

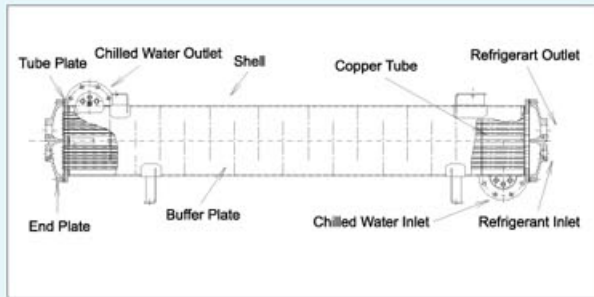
Due to the combination of the HITACHI semi-hermetic screw compressors and smooth-air-flow propeller fans for air side heat exchangers, smaller vibration and lower sound operation has been achieved.



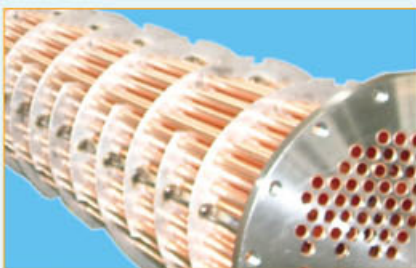
Highly Efficient Operation

The appropriate combination of the air side heat exchangers with high performance SLIN fins, highly-efficient screw compressors and water side heat exchangers has achieved this high efficiency of operation.

Shell-and-Tube Type Water Cooler



- Simple structure and easy maintenance.
- Reduced cost and adapted to satisfy various demands
- Freeze protection thermostat and other safety devices
- Integral and reliable performance



Most Reliable Semi-Hermetic Screw Compressor

The HITACHI screw compressor, which is called, the heart of the unit, has been developed for higher efficiency by introducing new profile screw rotors resulting in reliable and durable operation. Lower operation, service and maintenance cost. Less trouble

Safety Device etc.

With more caution and practice, various safety devices are equipped with the air-cooled chillers providing more careful protection.

- * Suction gas temperature control



- * Discharge gas thermistor

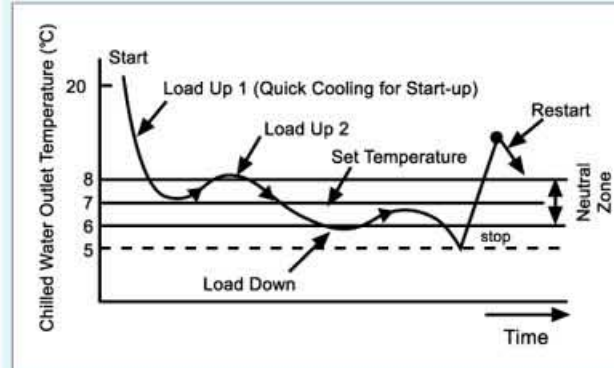


- * High-pressure gauge and low-pressure gauge



Continuous Capacity Control

Chilled water outlet temperature can be controlled precisely within $\pm 1^\circ\text{C}$ of the setting temperature. This control is performed by applying a micro-computer to the continuous capacity control type screw compressor. This precise temperature control is suitable not only for air conditioning, but also for industrial use.



Many Applications

Object Cooling

For precision engineering industry

Air Conditioning for Business

Hotel, marketplace and office building

Building Management System (BMS)

Simply connect chiller and LONWORKS via a GATE WAY (GW)



G/W communication adapter (optional) can be connected to max. 4 units.



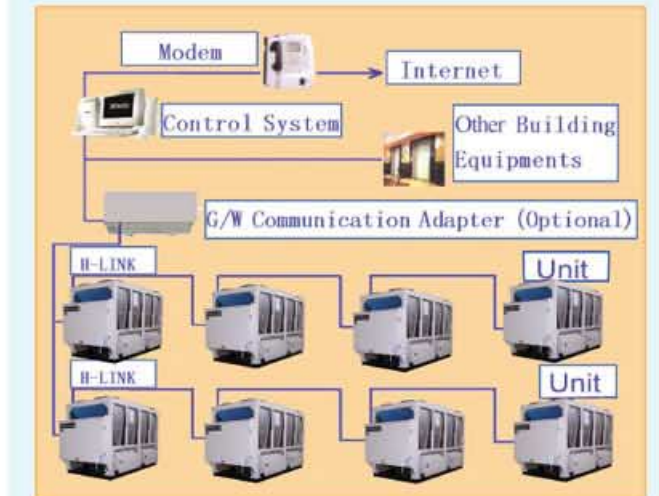
Micro-processor has been applied to the new models for following various functions.

A micro-processor has been applied to the new models for following various functions.

1. Alarm indication for each cycle by 7-Segment
2. Rotating control of compressor starting order
3. Current limitation control
4. Automatic start after instantaneous power failure

Air Conditioning for Production Facilities

Process cooling for
...food processing industry
...medical industry
...ice-storage cooling and ice-manufacture industry



RS485 physics connector (optional) can be connected to max.8 units.

General Data

Model			RCU75AYCZ	RCU100AYCZ	RCU120AYCZ	RCU150AYCZ	RCU180AYCZ
Normal		kW	191	280	346	382	519
Cooling		kcal/h	164,260	240,800	297,560	328,520	446,340
Capacity		Btu/h	651,000	955,000	1,180,000	1,303,000	1,771,000
Capacity Control		-	Continuous Capacity Control				
		%	100-25, 0	100-25, (12.5),0			100-25, (8.3),0
Outer Dimensions	Depth	mm	2,130	3,930	3,930	3,930	5,730
	Width	mm	1,800	1,800	1,800	1,800	1,800
	Height	mm	2,410	2,410	2,410	2,410	2,410
Net Weight		kg	2,140	3,411	3,605	4,304	5,562
Refrigerant	Type	-	R22(Operating Charge)				
	Flow Control	-	Thermal Expansion Valve				
	Number of Circuits	-	1	2			3
Compressor	Type	-	Semi-Hermetic Screw Type				
	Model	-	6005SCC-Z	5005SCC-Z	6005SCC-Z	6005SCC-Z	6005SCC-Z
	Quantity	-	1	2	2	2	3
Heat Exchanger	Condenser	-	Cross Fin Type				
	Condenser Fan	-	Direct Drive Propeller Fan				
	Motor	kW	0.9	0.9	0.9	0.9	0.9
	Quantity		4	8	8	8	12
	Water Cooler	-	Shell-and-Tube, Dry Expansion Type				
Type of Control System			Micro-Processor Control				
Safety Devices		-	Relay for Compressor, Internal Thermostat for Compressor, Reverse Phase Protection Device for Compressor, Thermal Overcurrent Relay for Fan Motor, High Pressure Switch, Low Pressure Control, Suction Gas Temperature Control, Freeze Protection Thermistor control, Oil Heater, Discharge Gas Thermistor, Fusible Plug, Fuse for Control Circuit and Pressure Relief Valve				
Piping Connections for Water Cooler	Inlet	R	With φ 90 Inner Diameter Companion Flange	With φ 142 Inner Diameter Companion Flange			
	Outlet	R					
Shipping Dimension	Height	mm	2,750	2,750	2,750	2,750	2,750
	Width	mm	2,150	2,150	2,150	2,150	2,150
	Depth	mm	2,320	4,120	4,120	4,120	5,920
Shipping Weight		kg	2,470	3,886	4,080	4,779	6,275

Working Range

Item	Standard
Chilled Water Outlet Temperature	5 ~ 15°C
Condenser Air Inlet Temperature	5 ~ 43°C

Notes:

- The nominal cooling capacities are based on the following conditions:
Chilled Water Inlet/Outlet Temperature 12°C/7°C
Condenser Air Inlet Temperature 35°C (DB)
- Applicable power supplies
Main Power Source (3φ) Control Power Supplies (1φ)
380V 50Hz 220V 50Hz
415V 50Hz 240V 50Hz
- The units greater than 240AYCZ including 240AYCZ consist of two modules and are separately shipped. The common chilled water piping (Filed-Supplied) between each water cooler shall be directly connected at site.
- It is required to connect electrical control wires between No.1 and No.2 units for the unit greater than 240AYCZ including 240AYCZ.
- Companion flanges are factory supplied.
- Communication adapter connecting the unit to BMS (Building Management System) is an optional accessory; please get in touch with HITACHI or HITACHI distributor if required. For the details, please refer to Technical Catalog I.
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General Data

Model			RCU200AYCZ	RCU240AYCZ	RCU270AYCZ	RCU300AYCZ
Normal		kW	573	692	728	764
Cooling		kcal/h	492,780	595,120	626,080	657,040
Capacity		Btu/h	1,955,000	2,361,000	2,483,000	2,607,000
Capacity Control		-	Continuous Capacity Control			
		%	100-25, (8.3),0	100-25, (12.5),0		
Outer Dimensions	Depth	mm	5,730	7,960 (min.)	7,960 (min.)	7,960 (min.)
	Width	mm	1,800	1,800	1,800	1,800
	Height	mm	2,410	2,410	2,410	2,410
Net Weight		kg	5,782	2 x 3,605	3,605 + 4,304	2 x 4,304
Refrigerant	Type	-	R22(Operating Charge)			
	Flow Control	-	Thermal Expansion Valve			
	Number of Circuits	-	3	4	4	4
Compressor	Type	-	Semi-Hermetic Screw Type			
	Model	-	6005SCC-Z	6005SCC-Z	6005SCC-Z	6005SCC-Z
	Quantity	-	3	4	4	4
Heat Exchanger	Condenser	-	Cross Fin Type			
	Condenser Fan	-	Direct Drive Propeller Fan			
	Motor	kW	0.9	0.9	0.9	0.9
	Quantity		12	2 x 8	8 + 8	2 x 8
	Water Cooler	-	Shell-and-Tube, Dry Expansion Type			
Type of Control System			Micro-Processor Control			
Safety Devices		-	Relay for Compressor, Internal Thermostat for Compressor, Reverse Phase Protection Device for Compressor, Thermal Overcurrent Relay for Fan Motor, High Pressure Switch, Low Pressure Control, Suction Gas Temperature Control, Freeze Protection Thermistor control, Oil Heater, Discharge Gas Thermistor, Fusible Plug, Fuse for Control Circuit and Pressure Relief Valve			
Piping Connections for Water Cooler	Inlet	R	With φ 142 Inner Diameter Companion Flange	With two φ 142 Inner Diameter Companion Flange		
	Outlet	R		With two φ 142 Inner Diameter Companion Flange		
Shipping Dimension	Height	mm	2,750	2 x 2,750	2 x 2,750	2 x 2,750
	Width	mm	2,150	2 x 2,150	2 x 2,150	2 x 2,150
	Depth	mm	5,920	2 x 4,120	2 x 4,120	2 x 4,120
Shipping Weight		kg	6,495	2 x 4,080	4,080 + 4,779	2 x 4,779

Working Range

Item	Standard
Chilled Water Outlet Temperature	5 ~ 15°C
Condenser Air Inlet Temperature	5 ~ 43°C

Notes:

- The nominal cooling capacities are based on the following conditions:
Chilled Water Inlet/Outlet Temperature 12°C/7°C
Condenser Air Inlet Temperature 35°C (DB)
- Applicable power supplies
Main Power Source (3φ) Control Power Supplies (1φ)
380V 50Hz 220V 50Hz
415V 50Hz 240V 50Hz
- The units greater than 240AYCZ including 240AYCZ consist of two modules and are separately shipped. The common chilled water piping (Filed-Supplied) between each water cooler shall be directly connected at site.
- It is required to connect electrical control wires between No.1 and No.2 units for the unit greater than 240AYCZ including 240AYCZ.
- Companion flanges are factory supplied.
- Communication adapter connecting the unit to BMS (Building Management System) is an optional accessory; please get in touch with HITACHI or HITACHI distributor if required. For the details, please refer to Technical Catalog I.
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General Data

Model			RCU330AYCZ	RCU350AYCZ	RCU360AYCZ	RCU380AYCZ	RCU400AYCZ
Normal		kW	901	955	1,038	1,092	1,146
Cooling		kcal/h	774,860	821,300	892,680	939,120	985,560
Capacity		Btu/h	3,074,000	3,258,000	3,542,000	3,726,000	3,910,000
Capacity Control		-	Continuous Capacity Control				
		%	100-25, (10),0		100-25, (12.5),0		
Outer Dimensions	Depth	mm	9,760 (min.)	9,760 (min.)	11,560 (min.)	11,560 (min.)	11,560 (min.)
	Width	mm	1,800	1,800	1,800	1,800	1,800
	Height	mm	2,410	2,410	2,410	2,410	2,410
Net Weight		kg	4,304 + 5,562	4,304 + 5,782	2 x 5,562	5,562 + 5,782	2 x 5,782
Refrigerant	Type	-	R22(Operating Charge)				
	Flow Control	-	Thermal Expansion Valve				
	Number of Circuits	-	5	5	6	6	6
Compressor	Type	-	Semi-Hermetic Screw Type				
	Model	-	6005SCC-Z	6005SCC-Z	6005SCC-Z	6005SCC-Z	6005SCC-Z
	Quantity	-	5	5	6	6	6
Heat Exchanger	Condenser	-	Cross Fin Type				
	Condenser Fan	-	Direct Drive Propeller Fan				
	Motor	kW	0.9	0.9	0.9	0.9	0.9
	Quantity		8 + 12	8 + 12	2 x 12	12 + 12	2 x 12
	Water Cooler	-	Shell-and-Tube, Dry Expansion Type				
Type of Control System			Micro-Processor Control				
Safety Devices		-	Relay for Compressor, Internal Thermostat for Compressor, Reverse Phase Protection Device for Compressor, Thermal Overcurrent Relay for Fan Motor, High Pressure Switch, Low Pressure Control, Suction Gas Temperature Control, Freeze Protection Thermistor control, Oil Heater, Discharge Gas Thermistor, Fusible Plug, Fuse for Control Circuit and Pressure Relief Valve				
Piping Connections for Water Cooler	Inlet	R	With two φ 142 Inner Diameter Companion Flange				
	Outlet	R	With two φ 142 Inner Diameter Companion Flange				
Shipping Dimension	Height	mm	2 x 2,750	2 x 2,750	2 x 2,750	2 x 2,750	2 x 2,750
	Width	mm	2 x 2,150	2 x 2,150	2 x 2,150	2 x 2,150	2 x 2,150
	Depth	mm	4,120 + 5,920	4,120 + 5,920	2 x 5,920	5,920 + 5,920	2 x 5,920
Shipping Weight		kg	4,779 + 6,275	4,779 + 6,495	2 x 6,275	6,275 + 6,495	2 x 6,495

Working Range

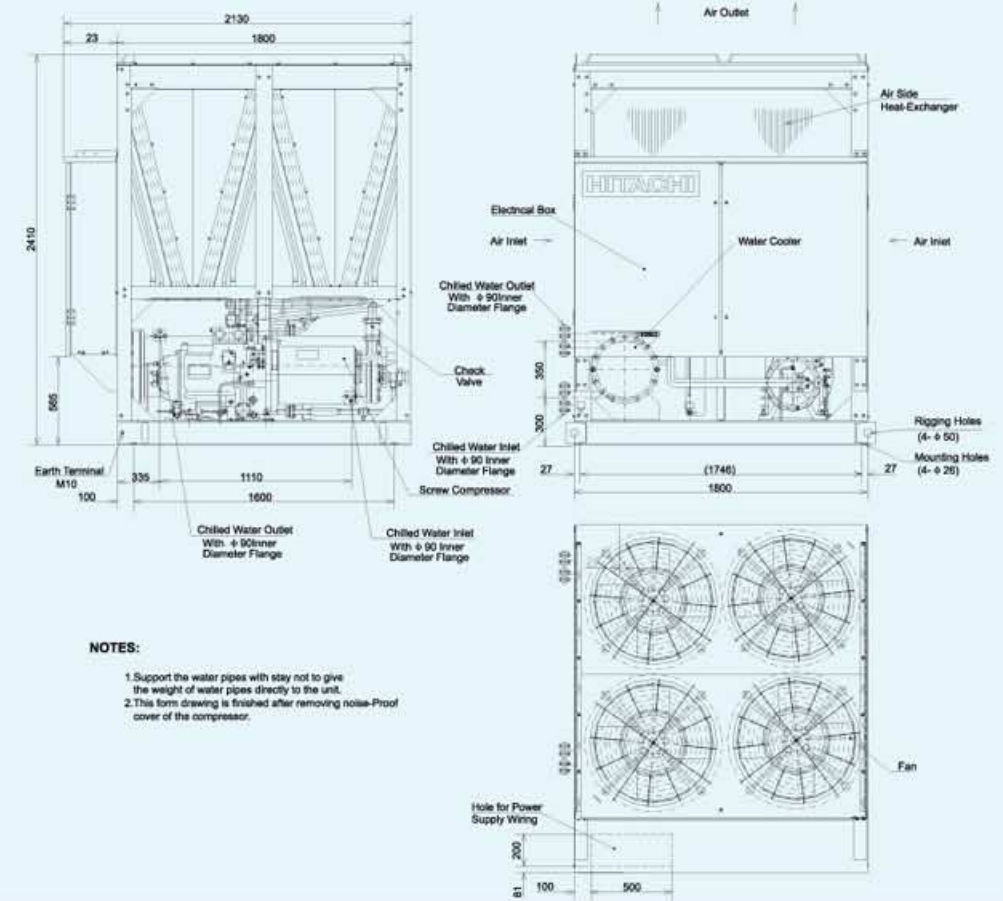
Item	Standard
Chilled Water Outlet Temperature	5 ~ 15°C
Condenser Air Inlet Temperature	5 ~ 43°C

Notes:

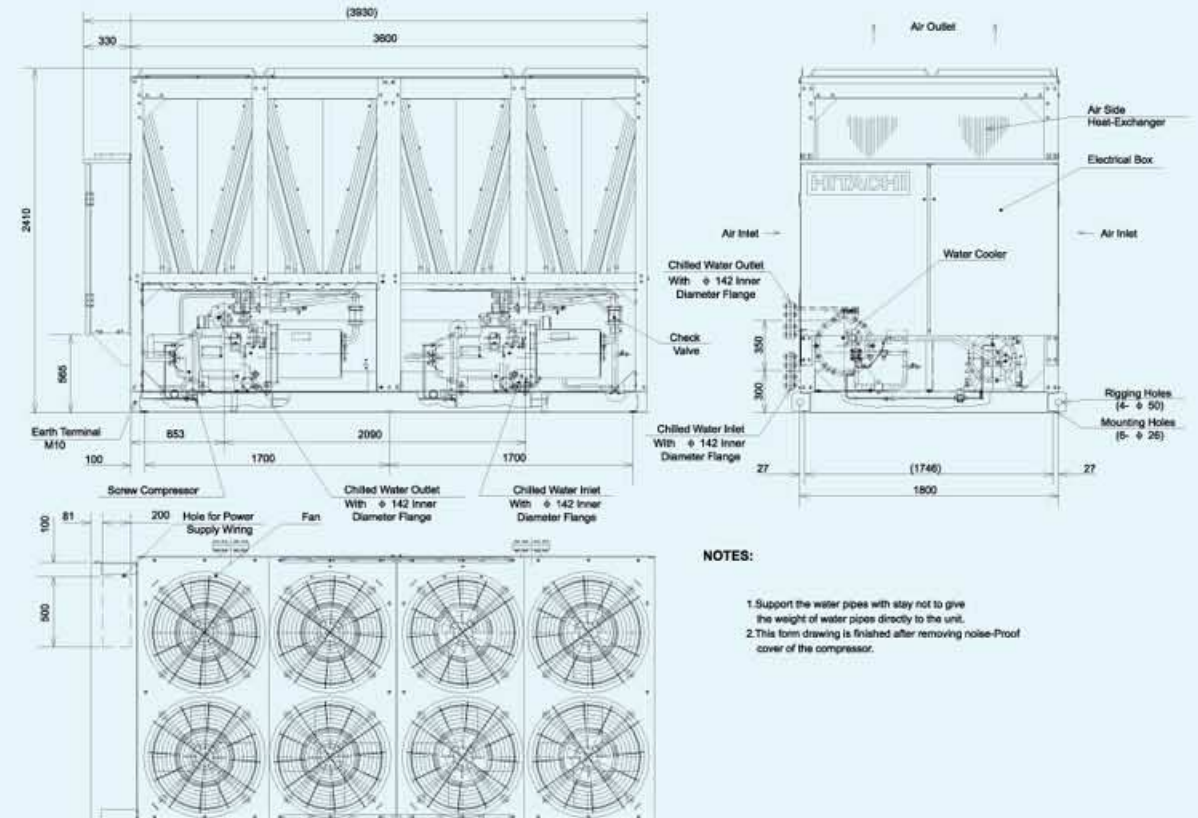
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Condenser Air Inlet Temperature 35°C (DB)
- Applicable power supplies
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415V 50Hz 240V 50Hz
- The units greater than 240AYCZ including 240AYCZ consist of two modules and are separately shipped. The common chilled water piping (Filed-Supplied) between each water cooler shall be directly connected at site.
- It is required to connect electrical control wires between No.1 and No.2 units for the unit greater than 240AYCZ including 240AYCZ.
- Companion flanges are factory supplied.
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Unit Dimensions

For Model: RCU75AYCZ

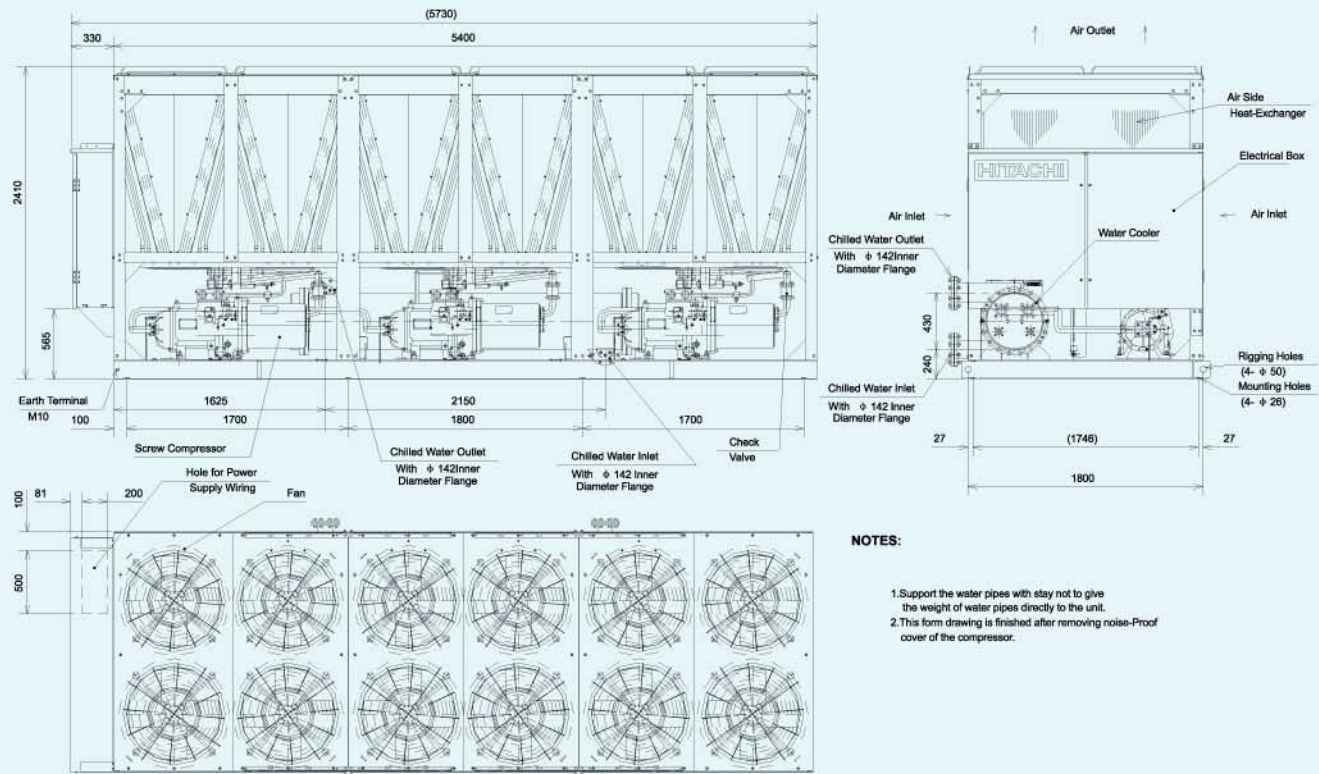


For Model: RCU100, 120, 150AYCZ



Unit Dimensions

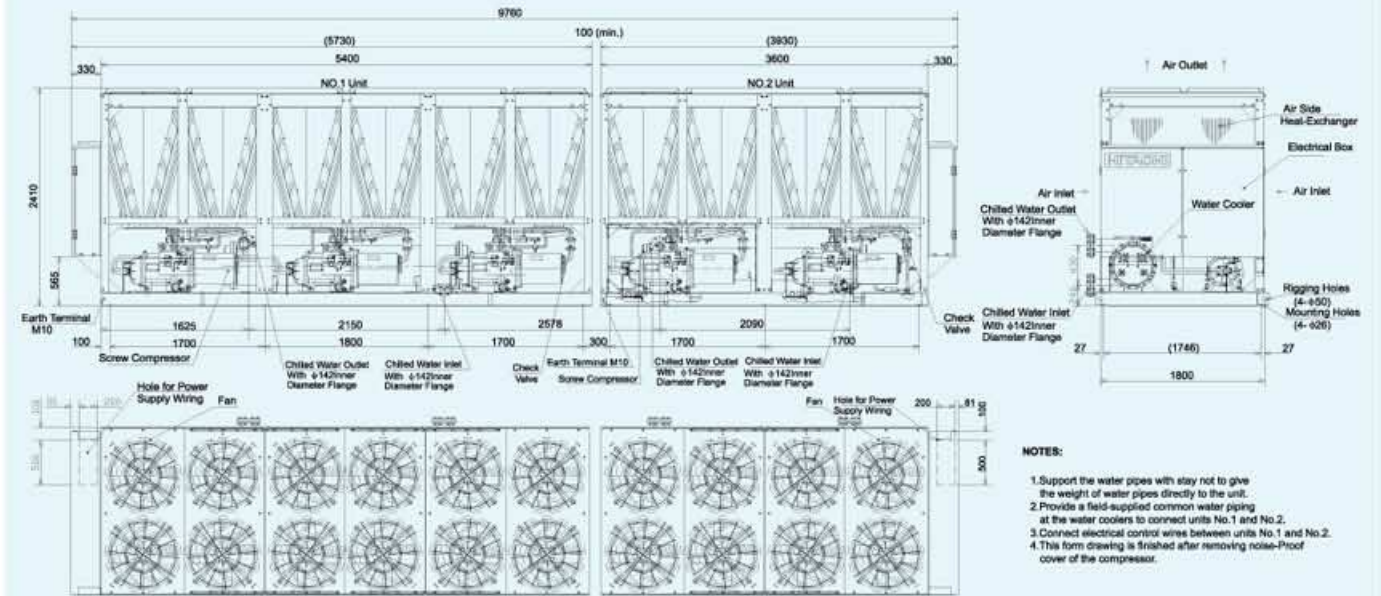
For Model: RCU180, 200AYCZ



- NOTES:**
1. Support the water pipes with stay not to give the weight of water pipes directly to the unit.
 2. This form drawing is finished after removing noise-Proof cover of the compressor.

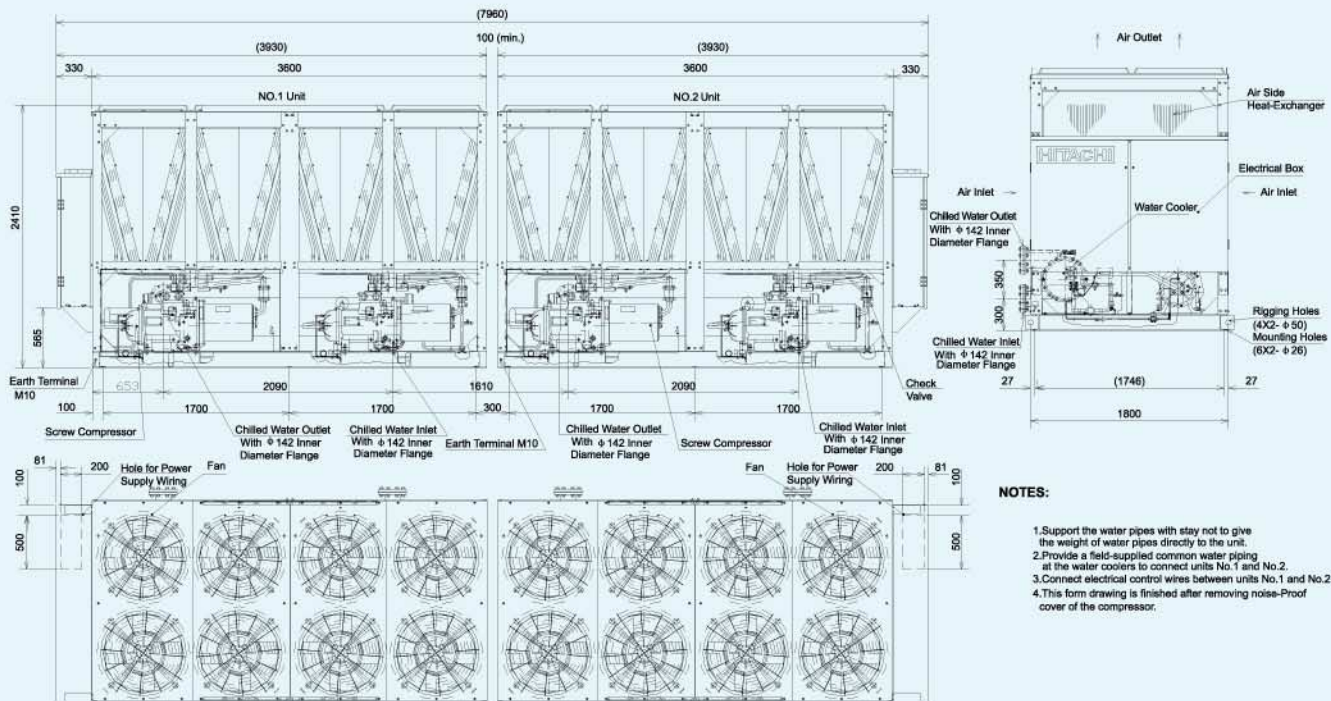
Unit Dimensions

For Model: RCU330, 350AYCZ



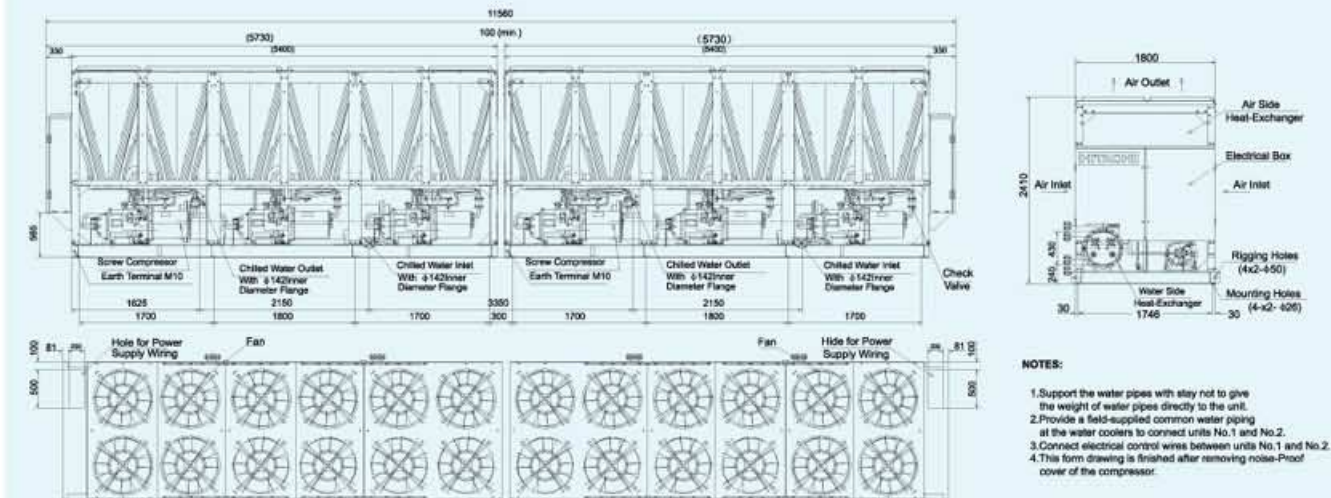
- NOTES:**
1. Support the water pipes with stay not to give the weight of water pipes directly to the unit.
 2. Provide a field-supplied common water piping at the water coolers to connect units No.1 and No.2.
 3. Connect electrical control wires between units No.1 and No.2.
 4. This form drawing is finished after removing noise-Proof cover of the compressor.

For Model: RCU240, 270, 300AYCZ



- NOTES:**
1. Support the water pipes with stay not to give the weight of water pipes directly to the unit.
 2. Provide a field-supplied common water piping at the water coolers to connect units No.1 and No.2.
 3. Connect electrical control wires between units No.1 and No.2.
 4. This form drawing is finished after removing noise-Proof cover of the compressor.

For Model: RCU360, 380, 400AYCZ



- NOTES:**
1. Support the water pipes with stay not to give the weight of water pipes directly to the unit.
 2. Provide a field-supplied common water piping at the water coolers to connect units No.1 and No.2.
 3. Connect electrical control wires between units No.1 and No.2.
 4. This form drawing is finished after removing noise-Proof cover of the compressor.