HITACHI
Inspire the Next

TWIN SCREW COMPRESSOR TYPE HITACHI AIR-COOLED CHILLERS

H Series

R407C

RCUG-AHYZ1 General Data

Model			RCUG40AHYZ1	RCUG50AHYZ1	RCUG60AHYZ1	RCUG75AHYZ1
Power Source			Main (AC 3φ) 380, 415V / 50Hz, Control (AC 1φ) 220, 240V / 50Hz			
Nominal Cooling Capacity*1		kW	110	136	170	181
		USRT	31	39	48	51
		kcal/h	94,600	116,960	146,200	155,660
Capacity Control			Continuous Capacity Control			
		%	100~15, 0			
Outer Dimensions	Height	mm	2,170	2,170	2,170	2,170
	Width	mm	2,057	2,057	2,057	2,057
	Depth	mm	2,390	2,390	2,390	2,390
Net Weight		kg	1,790	1,830	1,870	1,890
Refrigerant	Type		R407C			
	Flow Control		Thermal Expansion Valve			
	Number of Circuits		1			
Compressor	Type		Semi-Hermetic Screw Type			
	Model		ASCCW-40Z	ASCCW-50Z	ASCCW-60Z	ASCCW-60Z
	Quantity		1			
Heat Exchanger	Condenser		Cross Fin Type			
	Condenser Fan		Direct Drive Propeller Fan			
	Fan Motor Power Intput	kW	1.1	1.1	1.1	1.1
	Fan Motor Quantity		4	4	4	4
	Evaporator		Shell-and-Tube Type			
Safety Devices			Overcurrent 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			
Shipping Dimensions	Height	mm	2,510	2,510	2,510	2,510
	Width	mm	2,190	2,190	2,190	2,190
	Depth	mm	2,600	2,600	2,600	2,600
Shipping Weight		kg	2,000	2,040	2,080	2,100
Piping Connections for Water Side Heat Exchanger	Inlet / Outlet		With DN80 Flange			
Connection Hole	Main Power (square orifice)	mm	233 x 140			
	Circuit	mm	3 x φ48; 2 x φ75			

Model			RCUG270AHYZ1	RCUG300AHYZ1	RCUG330AHYZ1	RCUG350AHYZ1
Power Source			Main (AC 3φ) 380, 415V / 50Hz, Control (AC 1φ) 220, 240V / 50Hz			
Nominal Cooling Capacity*1		kW	703	726	873	907
		USRT	200	206	248	258
		kcal/h	604,580	624,360	750,780	780,020
Capacity Control			Continuous Capacity Control			
		%	100~15(7.5)*2, 0		100~15(6)*2, 0	
Outer Dimensions	Height	mm	2,170	2,170	2,170	2,170
	Width	mm	2,057	2,057	2,057	2,057
	Depth	mm	9,080(min.)	9,080(min.)	11,180(min.)	11,180(min.)
Net Weight		kg	3,320 + 3,280	2 x 3,320	4,865 + 3,320	4,900 + 3,320
Refrigerant	Type		R407C			
	Flow Control		Thermal Expansion Valve			
	Number of Circuits		4		5	
Compressor	Type		Semi-Hermetic Screw Type			
	Model		ASCCW-60Z	ASCCW-60Z	ASCCW-60Z	ASCCW-60Z
	Quantity		4		5	
Heat Exchanger	Condenser		Cross Fin Type			
	Condenser Fan		Direct Drive Propeller Fan			
	Fan Motor Power Intput	kW	1.1	1.1	1.1	1.1
	Fan Motor Quantity		8 + 8	2 x 8	12 + 8	12 + 8
	Evaporator		Shell-and-Tube Type			
Safety Devices			Overcurrent 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			
Shipping Dimensions	Height	mm	2,510	2,510	2,510	2,510
	Width	mm	2,190	2,190	2,190	2,190
	Depth	mm	2 x 4,700	2 x 4,700	6,800 + 4,700	6,800 + 4,700
Shipping Weight		kg	3,720 + 3,680	2 x 3,720	5,500 + 3,720	5,535 + 3,720
Piping Connections for Water Side Heat Exchanger	Inlet / Outlet		With DN125 Flange			
Connection Hole	Main Power (square orifice)	mm	2 x 233 x 140			
	Circuit	mm	6 x φ48; 2 x φ64; 2 x φ52; 4 x φ75			

RCUG100AHYZ1	RCUG120AHYZ1	RCUG150AHYZ1	RCUG180AHYZ1	RCUG200AHYZ1	RCUG240AHYZ1
Main (AC 3 ϕ) 380, 415V / 50Hz, Control (AC 1 ϕ) 220, 240V / 50Hz					
272	340	363	510	544	680
77	97	103	145	155	193
233,920	292,400	312,180	438,600	467,840	584,800
Continuous Capacity Control					
100~15(7.5)^{*2}, 0			100~15(5)^{*2}, 0		100~15(7.5)^{*2}, 0
2,170	2,170	2,170	2,170	2,170	2,170
2,057	2,057	2,057	2,057	2,057	2,057
4,490	4,490	4,490	6,590	6,590	9,080(min.)
3,210	3,280	3,320	4,865	4,900	2 x 3,280
R407C					
Thermal Expansion Valve					
2			3		4
Semi-Hermetic Screw Type					
ASCCW-50Z	ASCCW-60Z	ASCCW-60Z	ASCCW-60Z	ASCCW-60Z	ASCCW-60Z
2			3		4
Cross Fin Type					
Direct Drive Propeller Fan					
1.1	1.1	1.1	1.1	1.1	1.1
8	8	8	12	12	2 x 8
Shell-and-Tube Type					
Overcurrent 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					
2,510	2,510	2,510	2,510	2,510	2,510
2,190	2,190	2,190	2,190	2,190	2,190
4,700	4,700	4,700	6,800	6,800	2 x 4,700
3,610	3,680	3,720	5,500	5,535	2 x 3,680
With DN125 Flange					
233 x 140					2 x 233 x 140
3 x ϕ48; ϕ64; ϕ52; 2 x ϕ75					6xϕ48; 2xϕ64; 2xϕ52; 4xϕ75

RCUG360AHYZ1	RCUG380AHYZ1	RCUG400AHYZ1
Main (AC 3 ϕ) 380, 415V / 50Hz, Control (AC 1 ϕ) 220, 240V / 50Hz		
1,020	1,055	1,089
290	300	310
877,200	907,300	936,540
Continuous Capacity Control		
100~15(7.5)^{*2}, 0		
2,170	2,170	2,170
2,057	2,057	2,057
13,280(min.)	13,280(min.)	13,280(min.)
2 x 4,865	4,900 + 4,865	2 x 4,900
R407C		
Thermal Expansion Valve		
6		
Semi-Hermetic Screw Type		
ASCCW-60Z	ASCCW-60Z	ASCCW-60Z
6		
Cross Fin Type		
Direct Drive Propeller Fan		
1.1	1.1	1.1
2 x 12	12 + 12	2 x 12
Shell-and-Tube Type		
Overcurrent 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		
2,510	2,510	2,510
2,190	2,190	2,190
2 x 6,800	2 x 6,800	2 x 6,800
2 x 5,500	5,535 + 5,500	2 x 5,535
With DN125 Flange		
2 x 233 x 140		
6 x ϕ48; 2 x ϕ64; 2 x ϕ52; 4 x ϕ75		

NOTES:

1. The nominal cooling capacities are based on the following conditions. (*1)
   Chilled Water Inlet / Outlet Temperature: 12˚C / 7˚C
   Condenser Air Inlet Temperature: 35˚C(DB)

2. The units greater than 240AHYZ1 including 240AHYZ1 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.

3. Water Flow
   1) RCUG240, 300, 360, 400AHYZ1
      It is necessary to control the common water flow volume to each cooler.
   2) RCUG270, 330, 350, 380AHYZ1
      The chilled water flow rate is different between No.1 & No.2 units. It is necessary to control the water flow volume of each unit with adjusting valves (Filed-Supplied).

4. It is required to connect electrical control wires between No.1 & No.2 units for the unit greater than 240AHYZ1 including 240AHYZ1.

5. ( ) marked with *2 is available by selection switch.

Working Range

Item	Standard
Chilled Water Outlet Temperature	5~15˚C
Condenser Air Inlet Temperature (DB)	5~43˚C

RCUG-ATHYZ1 General Data

Model			RCUG40ATHYZ1	RCUG50ATHYZ1	RCUG60ATHYZ1	RCUG75ATHYZ1	RCUG100ATHYZ1
Power Source			Main (AC 3 ϕ) 380, 415V / 50Hz, Control (AC 1 ϕ) 220, 240V / 50Hz				
Nominal Cooling Capacity*1		kW	110	136	170	181	272
		USRT	31	39	48	51	77
		kcal/h	94,600	116,960	146,200	155,660	233,920
Nominal Cooling Capacity*2		kW	98	119	150	160	239
		USRT	28	34	43	45	68
		kcal/h	84,280	102,340	129,000	137,600	205,540
Capacity Control			Continuous Capacity Control				
		%	100~15, 0				100~15(7.5)*3, 0
Outer Dimensions	Height	mm	2,170	2,170	2,170	2,170	2,170
	Width	mm	2,057	2,057	2,057	2,057	2,057
	Depth	mm	2,390	2,390	2,390	2,390	4,490
Net Weight		kg	1,790	1,830	1,870	1,890	3,210
Refrigerant	Type		R407C				
	Flow Control		Thermal Expansion Valve				
	Number of Circuits		1				2
Compressor	Type		Semi-Hermetic Screw Type				
	Model		ASCCW-40Z	ASCCW-50Z	ASCCW-60Z	ASCCW-60Z	ASCCW-50Z
	Quantity		1				2
Heat Exchanger	Condenser		Cross Fin Type				
	Condenser Fan		Direct Drive Propeller Fan				
	Fan Motor Power Input	kW	1.1	1.1	1.1	1.1	1.1
	Fan Motor Quantity		4	4	4	4	8
	Evaporator		Shell-and-Tube Type				
Safety Devices			Overcurrent 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				
Shipping Dimensions	Height	mm	2,510	2,510	2,510	2,510	2,510
	Width	mm	2,190	2,190	2,190	2,190	2,190
	Depth	mm	2,600	2,600	2,600	2,600	4,700
Shipping Weight*4		kg	2,000	2,040	2,080	2,100	3,610
Piping Connections for Water Side Heat Exchanger	Inlet / Outlet		With DN80 Flange				With DN125 Flange
Connection Hole	Main Power (square orifice)	mm	500 x 160				
	Circuit	mm	ϕ48; ϕ64.5; ϕ102; ϕ52				2 x ϕ48; ϕ64.5; ϕ102; ϕ52

Model			RCUG270ATHYZ1	RCUG300ATHYZ1	RCUG330ATHYZ1	RCUG350ATHYZ1	RCUG360ATHYZ1
Power Source			Main (AC 3 ϕ) 380, 415V / 50Hz, Control (AC 1 ϕ) 220, 240V / 50Hz				
Nominal Cooling Capacity*1		kW	703	726	873	907	1,020
		USRT	200	206	248	258	290
		kcal/h	604,580	624,360	750,780	780,020	877,200
Nominal Cooling Capacity*2		kW	618	638	768	798	897
		USRT	176	181	218	227	255
		kcal/h	531,480	548,680	660,480	686,280	771,420
Capacity Control			Continuous Capacity Control				
		%	100~15(7.5)*3, 0		100~15(6)*3, 0		100~15(7.5)*3, 0
Outer Dimensions	Height	mm	2,170	2,170	2,170	2,170	2,170
	Width	mm	2,057	2,057	2,057	2,057	2,057
	Depth	mm	9,080(min.)	9,080(min.)	11,180(min.)	11,180(min.)	13,280(min.)
Net Weight		kg	3,320 + 3,280	2 x 3,320	4,865 + 3,320	4,900 + 3,320	2 x 4,865
Refrigerant	Type		R407C				
	Flow Control		Thermal Expansion Valve				
	Number of Circuits		4		5		6
Compressor	Type		Semi-Hermetic Screw Type				
	Model		ASCCW-60Z	ASCCW-60Z	ASCCW-60Z	ASCCW-60Z	ASCCW-60Z
	Quantity		4		5		6
Heat Exchanger	Condenser		Cross Fin Type				
	Condenser Fan		Direct Drive Propeller Fan				
	Fan Motor Power Input	kW	1.1	1.1	1.1	1.1	1.1
	Fan Motor Quantity		8 + 8	2 x 8	12 + 8	12 + 8	2 x 12
	Evaporator		Shell-and-Tube Type				
Safety Devices			Overcurrent 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				
Shipping Dimensions	Height	mm	2,510	2,510	2,510	2,510	2,510
	Width	mm	2,190	2,190	2,190	2,190	2,190
	Depth	mm	2 x 4,700	2 x 4,700	6,800 + 4,700	6,800 + 4,700	2 x 6,800
Shipping Weight*4		kg	3,720 + 3,680	2 x 3,720	5,500 + 3,720	5,535 + 3,720	2 x 5,500
Piping Connections for Water Side Heat Exchanger	Inlet / Outlet		With DN125 Flange				
Connection Hole	Main Power (square orifice)	mm	2 x 500 x 160				
	Circuit	mm	4 x ϕ48; 2 x ϕ64.5; 2 x ϕ102; 2 x ϕ52		5 x ϕ48; 2 x ϕ64.5; 2 x ϕ102; 3 x ϕ52		6xϕ48; 2xϕ64.5; 2xϕ102; 4xϕ52

RCUG120ATHYZ1	RCUG150ATHYZ1	RCUG160ATHYZ1	RCUG180ATHYZ1	RCUG200ATHYZ1	RCUG240ATHYZ1
Main (AC 3 ϕ) 380, 415V / 50Hz, Control (AC 1 ϕ) 220, 240V / 50Hz					
340	363	408	510	544	680
97	103	116	145	155	193
292,400	312,180	350,880	438,600	467,840	584,800
299	319	358	449	479	598
85	91	102	128	136	170
257,140	274,340	307,880	386,140	411,940	514,280
Continuous Capacity Control					
100~15(7.5)*3, 0		100~15(5)*3, 0			100~15(7.5)*3, 0
2,170	2,170	2,170	2,170	2,170	2,170
2,057	2,057	2,057	2,057	2,057	2,057
4,490	4,490	6,590	6,590	6,590	9,080(min.)
3,280	3,320	4,745	4,865	4,900	2 x 3,280
R407C					
Thermal Expansion Valve					
2		3			4
Semi-Hermetic Screw Type					
ASCCW-60Z	ASCCW-60Z	ASCCW-50Z	ASCCW-60Z	ASCCW-60Z	ASCCW-60Z
2		3			4
Cross Fin Type					
Direct Drive Propeller Fan					
1.1	1.1	1.1	1.1	1.1	1.1
8	8	12	12	12	2 x 8
Shell-and-Tube Type					
Overcurrent 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					
2,510	2,510	2,510	2,510	2,510	2,510
2,190	2,190	2,190	2,190	2,190	2,190
4,700	4,700	6,800	6,800	6,800	2 x 4,700
3,680	3,720	5,380	5,500	5,535	2 x 3,680
With DN125 Flange					
500 x 160					2 x 500 x 160
2 x ϕ48; ϕ64.5; ϕ102; ϕ52		3 x ϕ48; ϕ64.5; ϕ102; 2 x ϕ52			4xϕ48; 2xϕ64.5; 2xϕ102; 2xϕ52

RCUG380ATHYZ1	RCUG400ATHYZ1
Main (AC 3 ϕ) 380, 415V / 50Hz, Control (AC 1 ϕ) 220, 240V / 50Hz	
1,055	1,089
300	310
907,300	936,540
927	957
264	272
797,220	823,020
Continuous Capacity Control	
100~15(7.5)*3, 0	
2,170	2,170
2,057	2,057
13,280(min.)	13,280(min.)
4,900 + 4,865	2 x 4,900
R407C	
Thermal Expansion Valve	
6	
Semi-Hermetic Screw Type	
ASCCW-60Z	ASCCW-60Z
6	
Cross Fin Type	
Direct Drive Propeller Fan	
1.1	1.1
12 + 12	2 x 12
Shell-and-Tube Type	
Overcurrent 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	
2,510	2,510
2,190	2,190
2 x 6,800	2 x 6,800
5,535 + 5,500	2 x 5,535
With DN125 Flange	
2 x 500 x 160	
6 x ϕ48; 2 x ϕ64.5; 2 x ϕ102; 4 x ϕ52	

NOTES:

1. The nominal cooling capacities are based on the following conditions:
   *1 Chilled Water Inlet/Outlet Temperature 12˚C/7˚C
   Condenser Air Inlet Temperature 35˚C (DB)
   *2 Chilled Water Inlet/Outlet Temperature 12˚C/7˚C
   Condenser Air Inlet Temperature 46˚C (DB)

2. The units greater than 240ATHYZ1 including 240ATHYZ1 consist of two modules and are separately shipped.(*4). The common chilled water piping (Filed-Supplied) between each water cooler shall be directly connected at site.

3. Water Flow
   1) RCUG240,300,360,400ATHYZ1
   It is necessary to control the common water flow volume to each cooler.
   2) RCUG270,330,350,380ATHYZ1
   The chilled water flow rate is different between No.1 & No.2 units.
   It is necessary to control the water flow volume of each unit with adjusting valves (Filed-Supplied) .

4. It is required to connect electrical control wires between No.1&No.2 units for the unit greater than 240ATHYZ1 including 240ATHYZ1.

5. ( )marked with *3 is available by selection switch.

6. Companion flanges are factory supplied.

7. Communication adapter connecting the unit to BMS (Building Management System) is an optional accessory, please contact with HITACHI or HITACHI distributor if required. For the details, please refer to Technical Catalog Ⅰ.

Working Range

Item	Standard
Chilled Water Outlet Temperature	5~10˚C
Condenser Air Inlet Temperature (DB)	5~50˚C

Options

- Heat Recovery System
- Separate LCD Control Panel