

HITACHI

AZ(P)Y1 SERIES

AIR COOLED SCREW TYPE-WATER CHILLERS

R134a



Specification/Parameter

AZY1 series

Model		RCUF45AZY1	RCUF50AZY1	RCUF60AZY1	RCUF90AZY1	RCUF100AZY1	RCUF120AZY1
Power Source		Main (AC3φ) 380,415V/50Hz, Control (AC1φ) 220,240V/50Hz					
Nominal cooling capacity	kW	158	175	215	316	351	440
	USRT	45	50	61	90	100	125
	kcal/h	135,880	150,500	184,900	271,760	301,860	378,400
Power input	kW	49.7	55.0	67.6	99.4	110.4	138.4
Capacity control	—	Continuous capacity control					
	%	100~25,0					
Outer dimensions	Length	2,390			4,490		
	Width	2,060			2,060		
	Height	2,120			2,160		
Net weight	kg	1,550	1,600	1,710	2,900	3,000	3,220
Refrigerant	Type	R134a (charged)					
	Flow control	Electronic expansive valve					
	Number of circuits	1			2		
Compressor	Type	Semi-Hermetic Screw Type(R134a only)					
	Model	ASCCW50ZG	ASCCW50ZG	ASCCW60ZG	ASCCW50ZG	ASCCW50ZG	ASCCW60ZG
	Quantity	1			2		
Condenser	—	Cross fin type					
Fan motor	Condenser fan	Direct drive propeller fan					
	Power Input	1.1	1.1	1.1	1.1	1.1	1.1
	Quantity	4	4	4	8	8	8
Evaporator	—	Shell-and-Tube type					
Piping connections for water side heat exchanger	Inlet	DN80			DN125		
	Outlet	DN80			DN125		
Safety devices	—	Three-Phase Over current Relay, High-Pressure Switch, High and Low-Pressure Control, Oil Heater, Internal Thermostat for Compressor Motor, Freeze Protection Control, Reverse Phase Protection Control, Discharge Gas Overheat Protection, Compressor frequent ON/OFF control and Pressure Relief Valve.					
Shipping Dimensions	Length	2,410			4,510		
	Width	2,080			2,080		
	Height	2,150			2,190		
Shipping weight	kg	1,590	1,640	1,750	2,940	3,040	3,260

Model		RCUF150AZY1	RCUF180AZY1	RCUF200AZY1	RCUF220AZY1	RCUF240AZY1	RCUF270AZY1
Power Source		Main (AC3φ) 380,415V/50Hz, Control (AC1φ) 220,240V/50Hz					
Nominal cooling capacity	kW	530	645	702	791	880	970
	USRT	151	183	200	225	250	276
	kcal/h	455,800	554,700	603,720	680,260	756,800	834,200
Power input	kW	166.7	202.8	220.8	248.8	276.8	305.1
Capacity control	—	Continuous capacity control					
	%	100~25,0					
Outer dimensions	Length	6,590			9,080		
	Width	2,060			2,060		
	Height	2,200			2,160		
Net weight	kg	4,650	4,880	3,000×2	3,220+3,000	3,220×2	4,650+3,220
Refrigerant	Type	R134a (charged)					
	Flow control	Electronic expansive valve					
	Number of circuits	3	3	4	4	4	5
Compressor	Type	Semi-Hermetic Screw Type(R134a only)					
	Model	ASCCW50ZG	ASCCW60ZG	ASCCW50ZG	ASCCW50ZG / ASCCW60ZG	ASCCW60ZG	ASCCW50ZG / ASCCW60ZG
	Quantity	3	3	4	2/2	4	3/2
Condenser	—	Cross fin type					
Fan motor	Condenser fan	Direct drive propeller fan					
	Power Input	1.1	1.1	1.1	1.1	1.1	1.1
	Quantity	12	12	16	16	16	20
Evaporator	—	Shell-and-Tube type					
Piping connections for water side heat exchanger	Inlet	DN125					
	Outlet	DN125					
Safety devices	—	Three-Phase Over current Relay, High-Pressure Switch, High and Low-Pressure Control, Oil Heater, Internal Thermostat for Compressor Motor, Freeze Protection Control, Reverse Phase Protection Control, Discharge Gas Overheat Protection, Compressor frequent ON/OFF control and Pressure Relief Valve.					
Shipping Dimensions	Length	6,610			4,510×2		
	Width	2,080			2,080		
	Height	2,230			2,190		
Shipping weight	kg	4,690	4,920	3,040×2	3,260+3,040	3,260×2	4,690+3,260

Specification/Parameter

AZY1 series

Model		RCUF300AZY1	RCUF330AZY1	RCUF360AZY1	RCUF400AZY1	RCUF420AZY1	RCUF450AZY1	
Power Source		Main (AC3φ) 380,415V/50Hz, Control (AC1φ) 220,240V/50Hz						
Nominal cooling capacity	kW	1,060	1,175	1,290	1,411	1,500	1,590	
	USRT	301	334	367	401	426	452	
	kcal/h	911,600	1,010,500	1,109,400	1,213,460	1,290,000	1,367,400	
Power input	kW	333.4	369.5	405.6	443.8	471.8	500.1	
Capacity control		Continuous capacity control						
		100~25,0						
Outer dimensions	Length	13,280			18,670		20,770	
	Width	2,060			2,060		2,060	
	Height	2,200			2,200		2,200	
Net weight	kg	4,650×2	4,880+4,650	4,880×2	4,650×2+3,000	4,650×2+3,220	4,650×3	
Refrigerant	Type	R134a (charged)						
	Flow control	Electronic expansive valve						
	Number of circuits	6	6	6	8	8	9	
Compressor	Type	Semi-Hermetic Screw Type(R134a only)						
	Model	ASCCW50ZG	ASCCW50ZG / ASCCW60ZG	ASCCW60ZG	ASCCW50ZG	ASCCW50ZG / ASCCW60ZG	ASCCW50ZG	
	Quantity	Set	6	3/3	6	8	6/2	9
Condenser	Cross fin type							
Fan motor	Condenser fan	Direct drive propeller fan						
	Power Input	KW	1.1	1.1	1.1	1.1	1.1	1.1
	Quantity	—	24	24	24	32	32	36
Evaporator	Shell-and-Tube type							
Piping connections for water side heat exchanger	Inlet	DN125						
	Outlet	DN125						
Safety devices	Three-Phase Over current Relay, High-Pressure Switch, High and Low-Pressure Control, Oil Heater, Internal Thermostat for Compressor Motor, Freeze Protection Control, Reverse Phase Protection Control, Discharge Gas Overheat Protection, Compressor frequent ON/OFF control and Pressure Relief Valve.							
Shipping Dimensions	Length	6,610×2			6,610×2+4,510		6,610×3	
	Width	2,080			2,080		2,080	
	Height	2,230			2,230		2,230	
Shipping weight	kg	4,690×2	4,920+4,690	4,920×2	4,690×2+3,040	4,690×2+3,260	4,690×3	

Notes:

- The nominal cooling capacities are based on GB/T 18430.1-2015(*1)
Chilled Water Outlet Temperature /Nominal water flow: 7 °C / 0.172 m³ / (h·kW)
Condenser Air Inlet Temperature:35 °C (DB)
- The units greater than 200AZY1 including 200AZY1 consist of two or three modules and are separately shipped.
- The common chilled water piping (Filed-Supplied) between each water cooler shall be directly connected at site.
- Water Flow
1) RCUF200,240,300,360,450AZY1
It is necessary to control the common water flow volume to each cooler.
2) RCUF220,270,330,400,420AZY1
Because the chilled water flow rate is different between No.1 No.2 and No.3 units,it is necessary to control the water flow volume of each unit with adjusting valves (Filed-Supplied).
- It is required to connect electrical control wires between No.1, No.2 and No.3 units for the unit greater than 200AZY1 including 200AZY1.

Working Range

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

AZPY1 series

Model		RCUF45AZPY1	RCUF50AZPY1	RCUF60AZPY1	RCUF90AZPY1	RCUF100AZPY1	RCUF120AZPY1	
Power Source		Main (AC3φ) 380,415V/50Hz, Control (AC1φ) 220,240V/50Hz						
Nominal cooling capacity	kW	160	178	215	320	356	430	
	USRT	45	51	61	91	101	122	
	kcal/h	137,600	153,080	184,900	275,200	306,160	369,800	
Power input	kW	47.3	52.7	63.6	94.7	105.3	127.2	
Capacity control		Continuous capacity control						
		100~25,0						
Outer dimensions	Length	2,390		3,300	4,490		6,310	
	Width	2,060		2,060	2,060		2,060	
	Height	2,120		2,120	2,160		2,200	
Net weight	kg	1,600	1,700	2,000	2,950	3,150	3,750	
Refrigerant	Type	R134a (charged)						
	Flow control	Electronic expansive valve						
	Number of circuits	1			2			
Compressor	Type	Semi-Hermetic Screw Type(R134a only)						
	Model	ASCCW50ZG	ASCCW50ZG	ASCCW60ZG	ASCCW50ZG	ASCCW50ZG	ASCCW60ZG	
	Quantity	1			2			
Condenser		Cross fin type						
Fan motor	Condenser fan	Direct drive propeller fan						
	Power Input	1.1	1.1	1.1	1.1	1.1	1.1	
	Quantity	4	4	6	8	8	12	
Evaporator		Shell-and-Tube type						
Piping connections for water side heat exchanger	Inlet	DN80			DN125			
	Outlet	DN80			DN125			
Safety devices		Three-Phase Over current Relay, High-Pressure Switch, High and Low-Pressure Control, Oil Heater, Internal Thermostat for Compressor Motor, Freeze Protection Control, Reverse Phase Protection Control, Discharge Gas Overheat Protection, Compressor frequent ON/OFF control and Pressure Relief Valve.						
Shipping Dimensions	Length	2,410		3,320	4,510		6,330	
	Width	2,080		2,080	2,080		2,080	
	Height	2,150		2,150	2,190		2,230	
Shipping weight	kg	1,640	1,740	2,040	2,990	3,190	3,790	

Model		RCUF135AZPY1	RCUF150AZPY1	RCUF180AZPY1	RCUF200AZPY1	RCUF240AZPY1	RCUF270AZPY1
Power Source		Main (AC3φ) 380,415V/50Hz, Control (AC1φ) 220,240V/50Hz					
Nominal cooling capacity	kW	480	534	640	712	860	960
	USRT	136	152	182	202	245	273
	kcal/h	412,800	459,240	550,400	612,320	739,600	825,600
Power input	kW	142.0	158.0	189.4	210.6	254.4	284.0
Capacity control		Continuous capacity control					
		100~25,0					
Outer dimensions	Length	6,590		9,080		12,720	13,280
	Width	2,060		2,060		2,060	2,060
	Height	2,200		2,160		2,200	2,200
Net weight	kg	4,500	4,700	2,950×2	3,150×2	3,750×2	4,500×2
Refrigerant	Type	R134a (charged)					
	Flow control	Electronic expansive valve					
	Number of circuits	3	3	4	4	4	6
Compressor	Type	Semi-Hermetic Screw Type(R134a only)					
	Model	ASCCW50ZG	ASCCW50ZG	ASCCW50ZG	ASCCW50ZG	ASCCW60ZG	ASCCW50ZG
	Quantity	3	3	4	4	4	6
Condenser		Cross fin type					
Fan motor	Condenser fan	Direct drive propeller fan					
	Power Input	1.1	1.1	1.1	1.1	1.1	1.1
	Quantity	12	12	16	16	24	24
Evaporator		Shell-and-Tube type					
Piping connections for water side heat exchanger	Inlet	DN125					
	Outlet	DN125					
Safety devices		Three-Phase Over current Relay, High-Pressure Switch, High and Low-Pressure Control, Oil Heater, Internal Thermostat for Compressor Motor, Freeze Protection Control, Reverse Phase Protection Control, Discharge Gas Overheat Protection, Compressor frequent ON/OFF control and Pressure Relief Valve.					
Shipping Dimensions	Length	6,610		4,510×2		6,330×2	6,610×2
	Width	2,080		2,080		2,080	2,080
	Height	2,230		2,190		2,230	2,230
Shipping weight	kg	4,540	4,740	2,990×2	3,190×2	3,790×2	4,540×2

Specification/Parameter

AZPY1 series

Model		RCUF300AZPY1	RCUF320AZPY1	RCUF360AZPY1	RCUF405AZPY1	RCUF420AZPY1	RCUF450AZPY1	
Power Source		Main (AC3φ) 380,415V/50Hz, Control (AC1φ) 220,240V/50Hz						
Nominal cooling capacity	kW	1,068	1,142	1,290	1,440	1,494	1,602	
	USRT	304	325	367	409	425	456	
	kcal/h	918,480	982,120	1,109,400	1,238,400	1,284,840	1,377,720	
Power input	kW	316.0	337.8	381.6	426.0	442.0	474.0	
Capacity control	—	Continuous capacity control						
	%	100~25.0						
Outer dimensions	Length	mm	13,280	16,290	19,930	20,770		
	Width	mm	2,060	2,060	2,060	2,060		
	Height	mm	2,200	2,200	2,200	2,200		
Net weight	kg	4,700×2	3,150×2+3,750	3,750×3	4,500×3	4,700+4,500×2	4,700×3	
Refrigerant	Type	—	R134a (charged)					
	Flow control	—	Electronic expansive valve					
	Number of circuits	—	6	6	6	9	9	9
Compressor	Type	—	Semi-Hermetic Screw Type(R134a only)					
	Model	—	ASCCW50ZG	ASCCW50ZG / ASCCW60ZG	ASCCW60ZG	ASCCW50ZG	ASCCW50ZG	ASCCW50ZG
	Quantity	Set	6	4/2	6	9	9	9
Condenser	—	Cross fin type						
Fan motor	Condenser fan	—	Direct drive propeller fan					
	Power Input	KW	1.1	1.1	1.1	1.1	1.1	1.1
	Quantity	—	24	28	36	36	36	36
Evaporator	—	Shell-and-Tube type						
Piping connections for water side heat exchanger	Inlet	—	DN125					
	Outlet	—	DN125					
Safety devices	—	Three-Phase Over current Relay, High-Pressure Switch, High and Low-Pressure Control, Oil Heater, Internal Thermostat for Compressor Motor, Freeze Protection Control, Reverse Phase Protection Control, Discharge Gas Overheat Protection, Compressor frequent ON/OFF control and Pressure Relief Valve.						
Shipping Dimensions	Length	mm	6,610×2	4,510×2+6,330	6,330×3	6,610×3		
	Width	mm	2,080	2,080	2,080	2,080		
	Height	mm	2,230	2,230	2,230	2,230		
Shipping weight	kg	4,740×2	3,190×2+3,790	3,790×3	4,540×3	4,740+4,540×2	4,740×3	

Notes:

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Chilled Water Outlet Temperature /Nominal water flow: 7 °C / 0.172 m³ / (h·kW)
Condenser Air Inlet Temperature: 35 °C (DB)
- The units greater than 180AZPY1 including 180AZPY1 consist of two or three modules and are separately shipped.
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It is necessary to control the common water flow volume to each cooler.
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