### GENERAL UNIT DATA

Model				RCU-801WVS	RCU-F1001WVS	RCU-F1201WVS	RCU-F801WVD	RCU-F1001WVD	RCU-F1201WVD	RCU-F1501WVD		
Capacity		Kc	cal/h	241,920	302,400	362,880	253,700	302,400	362,880	468,720		
		ŀ	kW	281.3	351.6	422.0	295.0	351.6	422.0	545.0		
СОР			-	5.02	5.23	4.92	4.97	5.02	5.02	5.01		
IPLV			-	7.71	7.94	7.39	6.46	6.70	7.11	6.70		
Dimension	Width		mm	2,985	3,098	3,101	3,333	3,352	3,370	3,641		
	220V Depth 380V		mm	1,372	1,457	-	1,735	1,768	1,865	2,020		
			mm	1,227	1,284	1,337	1,675	1,662	1,783	1,831		
	Туре		-	Semi-hermetic Screw								
Compressor	Quantity		-	1 2								
	Crankcase Heater		w	200 300 200x2								
Condensor Type			-	Shell and Tube								
Chiller Type			-	Shell and Tube (Flooded)								
Expansion Valve Control		trol	-	Electronic Expansion Valve								
Refrigerant	Туре		-			R1:	R134a					
Jordine	Quantity		kg	70	100	120		40x2		80x2		
Oil	Type –		-	BSE 170L								
0.1	Quantity		1	15	22	19		10x2 15x2		15x2		
:	Starting Method		-		VFD Direct Star	t	VFD Direct Start + Partial Winding Start					
Absorber			-	Vibration Damper for Compressor								
Protection Device			-	High Pressure Switch/ Low Pressure Switch/ Reverse Phase Protection Relay/ Anti-Freeze Switch/ Overload Protect/ Discharge Temperature Protector/ Fuses for Control Circuit/ Relief Valve/ Oil level Protector								
	Monitoring Device –		-	Human Machine Interface/ Programmable Logic Controller (PLC)								
Operation Device	Monitoring Item –		-	Voltage/Current/Temperature/Pressure/Expansion Valve Position/Current Limit Setting/ Setting Running Day/Inspection and Replacement Interval Reminder								
	Pilot Lamp		-	Green-Normal/ Red-Abnormal/ White-Power Supply								
	Currier Frequency		Hz	30~50	20~60	30~50	30-60 + 60(non-inverter)					
Chiller	Connections		-	I.D 116mm	n (4") with Flange	I.D 142mm (5")	with Flange	I.D 116mm (4") with Flange	e I.D 142mm (5") with Flange			
	Standard Flow		3 n/h	48.0	60.0	72.0	50.3	60.0	72.0	93.0		
	Pressure Dr		nAq	5.7	5.3	4.4	6.8	4.5	3.8	4.7		
Conderser	Standard F		3 n/h	60.0	75.0	90.0	62.9	75.0	90.0	116.3		
	Pressure Drop		nAq	4.8	5.1	4.0	4.4	4.8	4.8	4.4		
Power Supply			-	AC 3 Ø 60	OHz, 220v/380V		AC 3Ø 60Hz, 220V/380V					
Electrical Data	Power Input		kW	56.0	67.2	85.7	59.3	70.0	84.1	108.7		
	Running 220	0V	А	156	188	-	166	198	235	307		
	Current 380	ov	Α	91	109	139	96	114	136	178		
	Starting 220	ov	А	183	221	-	581	599	722	980		
	Current 380	ov	А	128	140	186	396	400	453	620		
Net We	ight 220	0V	kg	1,943	2,563	-	2,296	2,471	3,092	3,758		
	380	0V I	kg	1,908	2,580	2,806	2,313	2,465	3,093	3,723		
Operation Weight 220V 380V		0V	kg	2,053	2,703	-	2,406	2,631	3,282	3,968		
		0V	kg	2,018	2,720	2,966	2,423	2,625	3,283	3,933		
Inverter(Optional)			-	v-80	v-100	v-150	v-50	v-50	v-60	v-80		

- Note: 1. The above data is based on with inverter V 100 (Optional) •
  2. Cooling capacities and electrical properties are based on CNS12575 (water chilling packages using the vapor compression cycle) •
  3. IPLV is based on AHRI 551/591 •
  4. Fouling factor: 0.000044m2°C/W •
  5. Operating range: Chilled Water Outlet Maximum 15°C/Minimum 5°C; Cooling Water Outlet Maximum 38°C/Minimum 21°C
  6. The values of chiller and condenser pipe diameter in parentheses are imperia units.

### GENERAL UNIT DATA

Model				RCU-F1801WVD	RCU-F2001WVD	RCU-F2401WVD	RCU-F3001WVD	RCU-F3601WVD	RCU-F4001WVD	RCUF4801WVD	
Capacity		Kcal/h	571,900	618,340	779,160	907,200	1,088,640	1,209,600	1,451,520		
		kW	665.0	719.0	906.0	1,054.8	1,265.8	1,406.4	1,687.8		
СОР		-	5.00	5.00	5.14	5.07	5.24	5.04	5.14		
IPLV		-	7.60	7.60	6.94	6.90	7.33	7.06	7.20		
Dimension	Width		mm	3,885	3,885	3,863	4,630	4,635	4,644	4,854	
	220V		mm	2,103	2,103	-	-	-	-	-	
	Depth	380V	mm	1,958	1,958	2,097	2,240	2,240	2,246	2,530	
Compressor	Туре		-	Semi-hermetic Screw							
	Quantity		-	2							
	Crankcase Heater		w	300x2							
Condensor Type		-	Shell and Tube								
Chiller Type		-	Shell and Tube (Flooded)								
Expansion Valve Control		-	Electronic Expansion Valve								
Dofrigorant	Туре		-	R134a							
Refrigerant	Quantity		kg	8	1x2	112x2	154x2	200x2	190x2	240x2	
Oil	Туре		-				BSE 170L				
Oil	Quantity		1	22x2 19x2 30x2 35x						35x2	
Starting Method		-	VFD D	irect Start + Par	tial Winding Start	VFD Direct Start + Y-∆ Start					
Absorber			-	Vibration Damper for Compressor							
Protection Device			-	High Pressure Switch/ Low Pressure Switch/ Reverse Phase Protection Relay/ Anti-Freeze Switch/ Overload Protect/ Discharge Temperature Protector/ Fuses for Control Circuit/ Relief Valve/ Oil level Protector							
	Monitoring Device		-	Human Machine Interface/ Programmable Logic Controller (PLC)							
Operation Device	Monitoring Item		-	Voltage/Current/Temperature/Pressure/Expansion Valve Position/Current Limit Setting/ Setting Running Day/Inspection and Replacement Interval Reminder							
Device	Pilot Lamp -		-	Green-Normal/ Red-Abnormal/ White-Power Supply							
	Currier Frequency		Hz	30-60 + 60(non-inverter)							
	Connections		-	I.D 142mm (5	5") with Flange	I.D 167mm (6") with Flange	I.D	I.D 269mm (10") with Flange			
Chiller	Standard Flow		m/h	113.5	122.6	154.6	180.0	216.0	240.0	288.0	
	Pressure Drop		mAq	6.6	7.4	6.6	9.6	7.7	9.5	6.9	
Conderser	Standard Flow		3 m/h	141.9	153.4	193.3	225.0	270.0	300.0	360.0	
	Pressure Drop		mAq	6.0	6.4	7.1	7.2	7.1	7.8	7.3	
	Power Supply		-	AC 3Ø 60Hz, 220V/380V AC 3Ø 60Hz, 220V/380V							
Electrical Data	Power Input		kW	133.0	143.8	176.2	208.1	241.7	278.8	328.3	
	Running	220V	А	371	401	-	-	-	-	-	
	Current	380V	А	215	233	285	337	391	451	531	
	Starting	220V	А	1,068	1,124	-	-	-	-	-	
	Current	380V	А	695	714	866	998	1,056	1,154	1,311	
	220V		kg	4,308	4,398	-	-	-	-	-	
Net Weight		380V	kg	4,273	4,363	4,516	7,256	8,159	8,255	9,025	
	\\\-:-\-	220V	kg	4,518	4,598	-	-	-	-	-	
Operation Weight		380V	kg	4,483	4,563	4,746	7,926	8,999	9,095	9,855	
Inverter(Optional)			_	v-100	v-100	v150	v150	v-180	v-200	v-240	

- Note: 1. The above data is based on with inverter V 100 (Optional).

  2. Cooling capacities and electrical properties are based on CNS12575 (water chilling packages using the vapor compression cycle).

  3. IPLV is based on AHRI 551/591.

  4. Fouling factor: 0.000044m2°C/W.

  5. Operating range: Chilled Water Outlet Maximum 15°C/Minimum 5°C; Cooling Water Outlet Maximum 38°C/Minimum 21°C

  6. The values of chiller and condenser pipe diameter in parentheses are imperia units.

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HITACHI INVERTER FLOODED WATER CHILLER

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# ENVIRONMENTALLY FRIENDLY REFRIGERANT SAVES ENERGY WHILE PROTECTING NATURE

Hitachi Inverter Flooded Water Chillers use environmentally friendly refrigerant R134a in place of traditional Chlorofluorocarbons (CFCs). R134a is a highly stable, low-toxicity, and non-flammable refrigerant without chlorine. So it does not pose harm to the environment.

# ENERGY- EFFICIENT COOLING ADVANTAGE The IPLV of Hitachi Inverter Flooded Water Chiller is 7.94. The inverter can adjust compressor speed depending on varying load demands, so it becomes more energy-efficient even under low loading conditions. Therefore, you get more savings on your electricity bill!

#### **FULL LOADING COP PERFORMANCE**

The full loading COP of Hitachi Inverter Flooded Water Chiller is 5.23. Thus, it saves energy as it reduces power consumption even during long-term operation.

# ADAPTABLE HIGH-PERFORMANCE INVERTER, FREQUENCY CONTROL 20 ~ 60HZ

- 1. Excellent motor drive function
- 2. Environmental resistance
- 3. Safety The inverter used comes with overload, overvoltage, overcurrent, overheat, stall prevention and other protective features to ensure the safety of the body's operating environment.
- 4. Long-life design The unit has long-life parts that include cooling fan, capacitors, relays, and IGBT to extend the life of the inverter.



### HIGH EFFICIENCY SHELL & TUBE TYPE

The strategically designed tubes greatly increase the unit's efficiency. It uses inverter control and compressor speed changes to accurately trace the loading changes. When used in conjunction with the water outlet temperature control technology, the chiller water outlet temperature becomes more stable. Overall, these features work in harmony to ensure long-lasting cooling comfort characterized by precise temperatures suitable for specific preferences and needs.

# ESPECIALLY DESIGNED OUTSTANDING FEATURES





- convenience of use.
  The RS485 communication interface can be used as a central control to facilitate central management.
- The Programmable Logical Controller (PLC) is used for precise logical control, maintaining a highly efficient, safe and stable operation of the main machine. The conditions of operation can be completely recorded, facilitating management by a system manager.
- Through a current measuring device, operation current can be restricted, so it saves energy and improves safety.
- The machine can be set to turn on/off automatically on a weekly basis, which further improves system management.

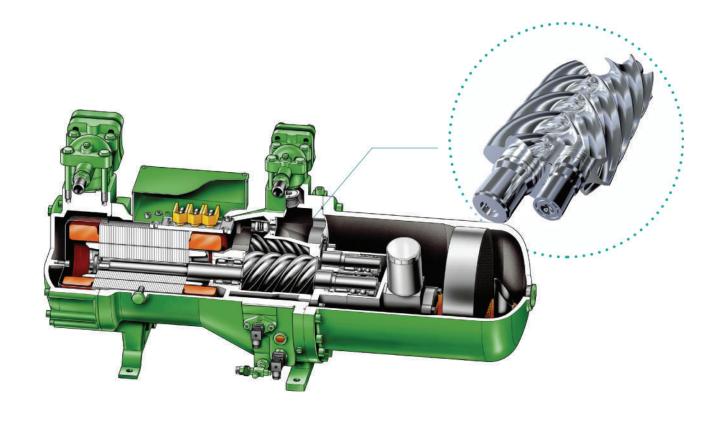
## SELF-DIAGNOSE & INTELLIGENT OPERATION INSPECTION 0 ~ 60HZ

- It is equipped with voltage, current, temperature and pressure protective functions.
- Timely adjustment of the main machine's operation conditions prevent failures.
- In the rare event of a failure, the machine immediately displays and records the cause for easy facilitation of service and inspection.

### ADVANCED SCREW COMPRESSOR

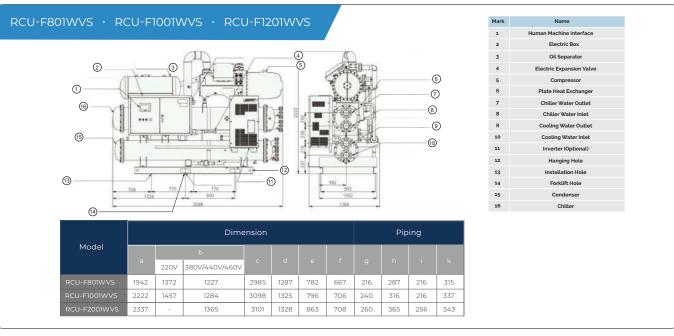
Hitachi Inverter Flooded Water Chillers use screw compressors imported from Germany. The motor and the rotor of a screw compressor use rotary motion for compression, whereas a reciprocating compressor needs to convert rotary motion to linear motion. This feature makes screw compressors simple in structure, hence they do not require unnecessary motions.

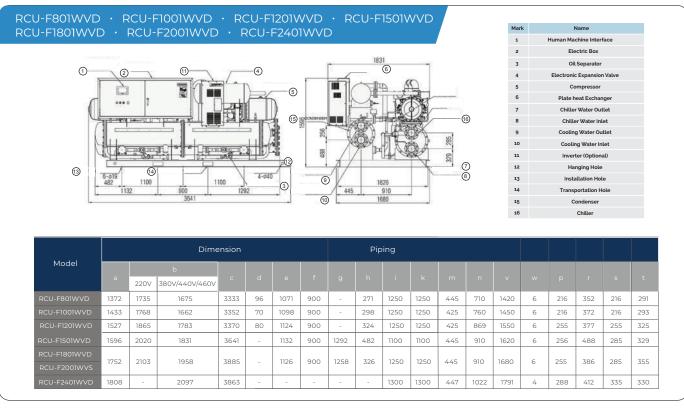
# Why Does a **SEMI-HERMETIC SCREW**Work Better?

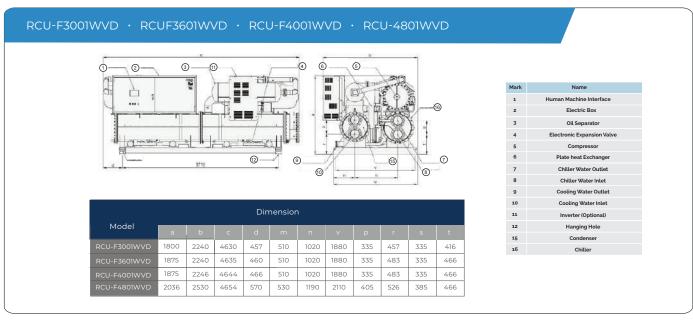


- Because the motor is encased in the compressor, the machine works quietly.
- It automatically cools the air it takes in, which further increases efficiency, so it does not require frequent maintenance service.
- No oil pumps needed. Lubricant oil is fed into the machine using the difference between the high and low pressure regions of the compressor.
- Reliable operation is guaranteed because the device uses state-of-the-art components such as pump and motors, couplers for transmission and oil-pressure regulating valves.

- It has a shaft seal device that prevents leakages
- The high-efficiency filter in the compressor, which is less adhesive, effectively reduces oil loss while filtering it.
- It is built with an advanced PTC temperature protector that protects motor coil and discharge temperatures. Furthermore, this component comprehensively monitors phase failure and reverse.
- It has an opto-electronical oil level switch that regulates the amount of oil in the compressor to ensure its continuous function.







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