



# **WATER-COOLED SCREW CHILLER**

- | 55 R134a Water-cooled Screw Chiller
- | 65 R22 Water-cooled Screw Chiller

# WATER-COOLED SCREW CHILLER R134a

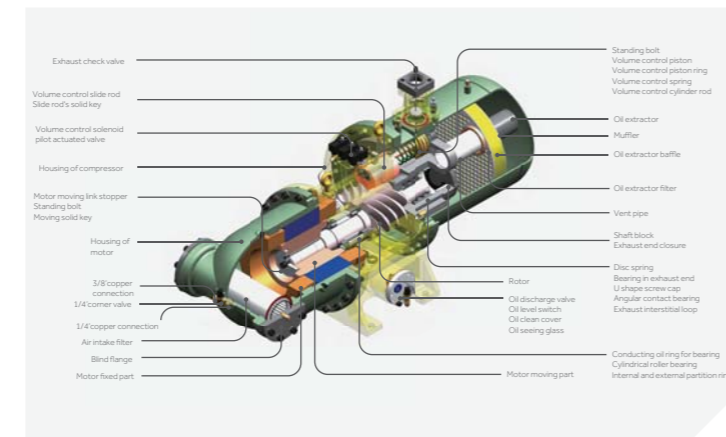
WATER-COOLED SCREW CHILLER



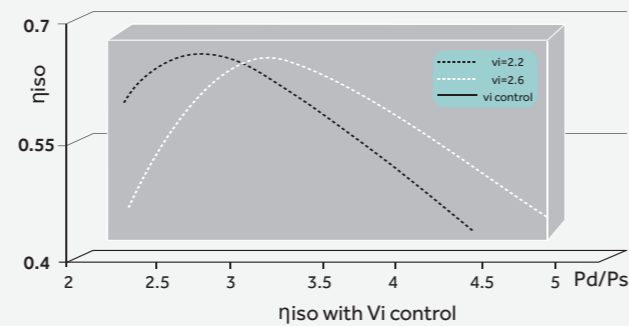
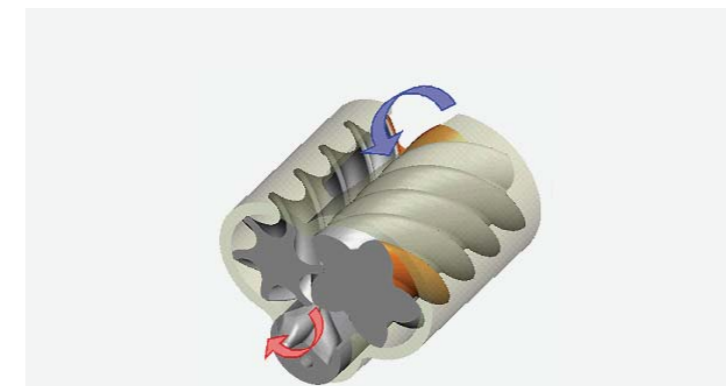
## High Efficiency

### High efficient compressor

- Adopt international famous brand twin-screw compressor.
- 5:6 structure. ■ Slide valve.
- Save 10% energy comparing with common screw compressor.



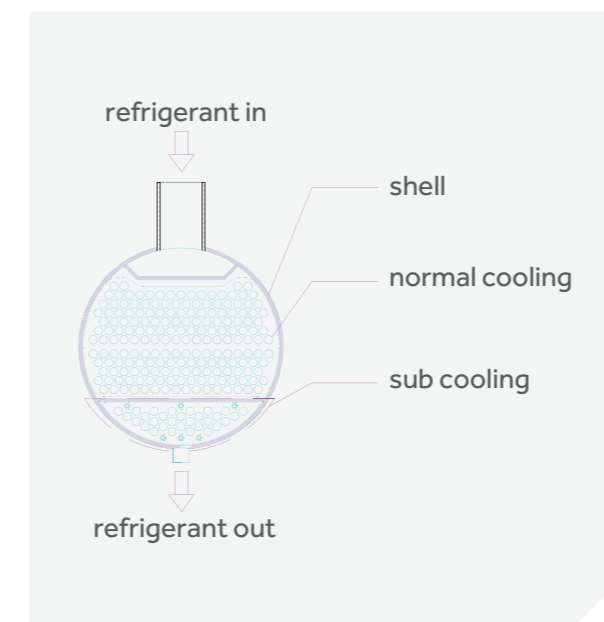
### Compressor cut-view



## High Efficiency

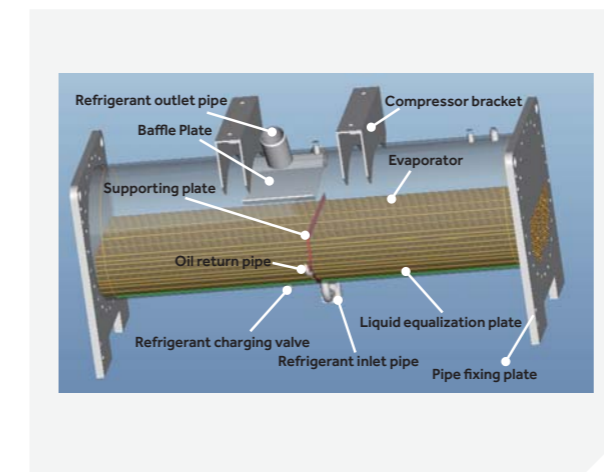
### Sub cooling design

The condenser have the sub cooling design , which makes the refrigerant cooling for another degrees , capacity increase 6 %



## Flooded type heat exchanger

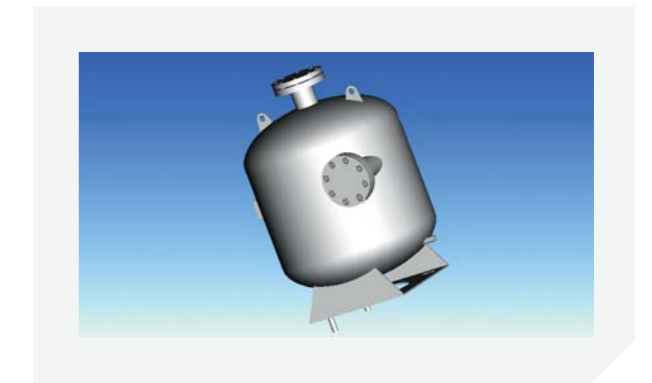
- Flooded type heat exchanger, high efficient heat exchange, easy to clean dirt and the whole seal has no leakage.
- Innovative single path design, reduce water side resistance loss.
- Particular inner circle heat transfer and liquid balanced board design make every tube can transfer heat well.



## High Reliability

### Tornado type oil separator

- Tornado patent design.
- Oil separator efficiency reaches more than 99.9%.
- Reduce refrigerant side thermo resistance effectively.
- Increase heat exchange efficiency.



## Protection device

There are lots of protection device to ensure the equipment to run stably.

Compressor motor protector:  
ensure compressor run normally



Pressure switch:  
keep the products run in the normal range pressure.



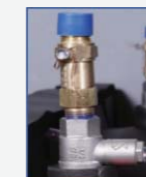
Pressure sensor :  
second protection in pressure control



Water flow switch:  
ensure the water flow to equipment when product turn on



Safety valve:  
In case of fire , stop the equipment from dangerous



OIL-FREE CENTRIFUGAL CHILLER | AIR-COOLED SCREW CHILLER | WATER-COOLED SCREW CHILLER | MODULAR CHILLER | MINI CHILLER | FAN COIL | REFERENCE PROJECTS

# WATER-COOLED SCREW CHILLER

## Easy Installation

### Reserved refrigerant

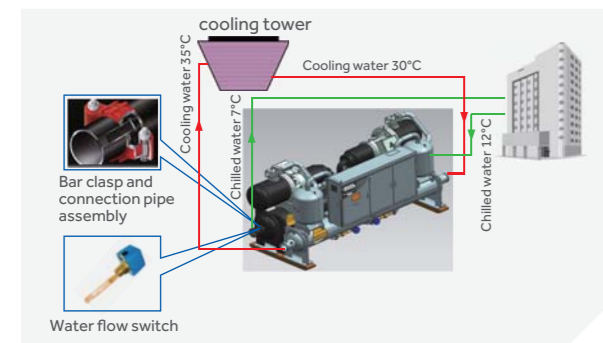
Standard Products is with refrigerant inside, installer just need install the pipe and power supply.

### Standard water flow switch

Water flow switch is standard part, no need to purchase another.

### Standard bar clasp and connection pipe assembly

Bar clasp and connection pipe assembly are standard part, the pipe connection is easier.



## Convenience

### Functional control screen

7 inch colorful touch screen.

**Status:** Water temperature, pressure/current/pump/running curve/history curve

**Timer:** Weekly timer

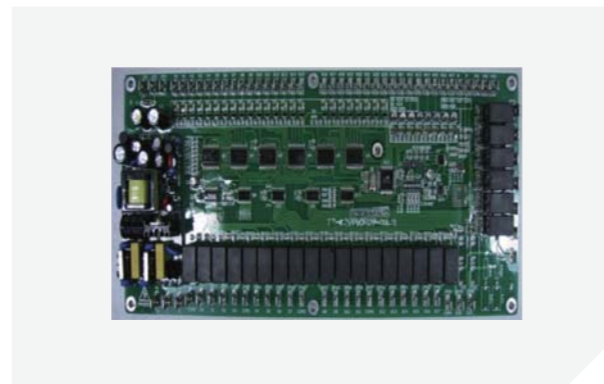
**Error:** Error history check

**User:** Local control/BMS control



### PCB design

The R134a takes industry level micro, highly integration PCB, Reserved pump connection; With RS 485 terminal, MODBUS-RTU protocol for standard products to connect third party control system.



## R134a WATER-COOLED SCREW CHILLER



MODEL		CI0350PWNB	CI0420PWNB	CI0525PWNB	CI0645PWNB	
Cooling capacity	RT	100	119	150	183	
	kW	351	420	528	645	
Power input	kW	72	86	107	125	
EER		4.88	4.88	4.93	5.16	
Starting current	A	450	450	704	704	
Max. running current	A	140	168	204	241	
Safe protection		Overload protection; water-lack delay protection; automatic antifreezing protection, phase lack & sequence protection, low pressure protection; high pressure protection; Exhaust temperature protection; oil pressure difference protection, low oil level protection; pressure relief valve.				
Compressor	Type	Semi-Hermetic screw chiller				
	Quantity	1	1	1	1	
Power supply	Ph/V/Hz	3/380/50				
Refrigerant throttle type		Orifice plate + butterfly valve				
Capacity control		25%, 50%, 75%, 100%				
Controller type		Fully automatic control by Microcomputer controller				
Refrigerant	Type	R134a				
	Charge	kg	125	135	135	195
Evaporator	Type	Flood type				
	Water inlet/outlet temp	°C	12°C/7°C			
	Inlet/outlet pipe	DN(mm)	125	125	125	125
	Rated water flow	m³/h	60	72	91	111
	Water dirt coefficient	m²·°C/kW	0.018			
	Standard pressure	MPa	1.0			
	Water side resistance	KPa	41	44	66	82
Condenser	Type	Shell & Tube heat exchanger				
	Water inlet/outlet temp	°C	30°C/35°C			
	Inlet/outlet pipe	DN(mm)	125	125	125	125
	Rated water flow	m³/h	73	87	109	132
	Water dirt coefficient	m²·°C/kW	0.044			
Standard pressure	MPa	1.0				
Water side resistance	KPa	78	67	69	88	
External dimension	Unit length	mm	2830	2830	2830	3500
	Unit width	mm	1420	1420	1500	1250
	Unit height	mm	1950	2030	2100	2100
Package dimension	Unit length	mm	3030	3030	3030	3700
	Unit width	mm	1520	1520	1600	1350
	Unit height	mm	2150	2230	2300	2300
Weight	Unit weight	kg	2400	2450	2850	3400
	Gross weight	kg	2430	2480	2880	3430
	Operation weight	kg	2570	2630	3050	3640

Note: Due to our policy of innovation some specifications may be changed without notification.

## Temperature Conditions

Nominal cooling				Operating range			
Chilled water		Cooling water		Chilled water		Cooling water	
Inlet water temp. (°C)	Outlet water temp. (°C)	Inlet water temp. (°C)	Outlet water temp. (°C)	Outlet temp. (°C)	Temp. difference between inlet & outlet (°C)	Inlet water temp. (°C)	Temp. difference between inlet & outlet (°C)
12	7	30	35	4-15	2.5-8	23-35	2.5-8

# R134a WATER-COOLED SCREW CHILLER



MODEL		CI0720PWNB	CI0790PWNB	CI0880PWNB	CI1056PWNB	
Cooling capacity	RT	204	225	252	300	
	kW	718	791	886	1056	
Power input	kW	136	154	164	194	
EER		5.28	5.14	5.40	5.44	
Starting current	A	768	768	1010	908	
Max. running current	A	300	300	328	408	
Safe protection		Overload protection; water-lack delay protection; automatic antifreezing protection, phase lack & sequence protection, low pressure protection; high pressure protection; Exhaust temperature protection; oil pressure difference protection, low oil level protection; pressure relief valve.				
Compressor	Type	Semi-Hermetic screw chiller				
	Quantity	1	1	1	2	
Power supply	Ph/V/Hz	3/380/50				
Refrigerant throttle type		Orifice plate + butterfly valve				
Capacity control		25%, 50%, 75%, 100%		12.5%, 25%, 37.5%, 50%, 62.5%, 75%, 87.5%, 100%		
Controller type		Fully automatic control by Microcomputer controller				
Refrigerant	Type	R134a				
	Charge	kg	195	235	245	220
Evaporator	Type	Flood type				
	Water inlet/outlet temp	°C	12°C/7°C			
	Inlet/outlet pipe	DN(mm)	150	150	150	150
	Rated water flow	m³/h	123	136	152	182
	Water dirt coefficient	m².°C/kW	0.018			
	Standard pressure	MPa	1.0			
	Water side resistance	KPa	84	48	55	50
Condenser	Type	Shell & Tube heat exchanger				
	Water inlet/outlet temp	°C	30°C/35°C			
	Inlet/outlet pipe	DN(mm)	150	150	150	150
	Rated water flow	m³/h	147	163	181	215
	Water dirt coefficient	m².°C/kW	0.044			
	Standard pressure	MPa	1.0			
External dimension	Unit length	mm	3580	3580	3600	4800
	Unit width	mm	1380	1450	1480	1500
Package dimension	Unit height	mm	2200	2200	2250	2100
	Unit length	mm	3780	3780	3800	5000
	Unit width	mm	1480	1550	1580	1600
Weight	Unit height	mm	2400	2400	2450	2300
	Unit weight	kg	3430	3650	3780	4950
	Gross weight	kg	3460	3680	3810	4980
Operation weight	kg	3730	4000	4160	5335	

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# R134a WATER-COOLED SCREW CHILLER



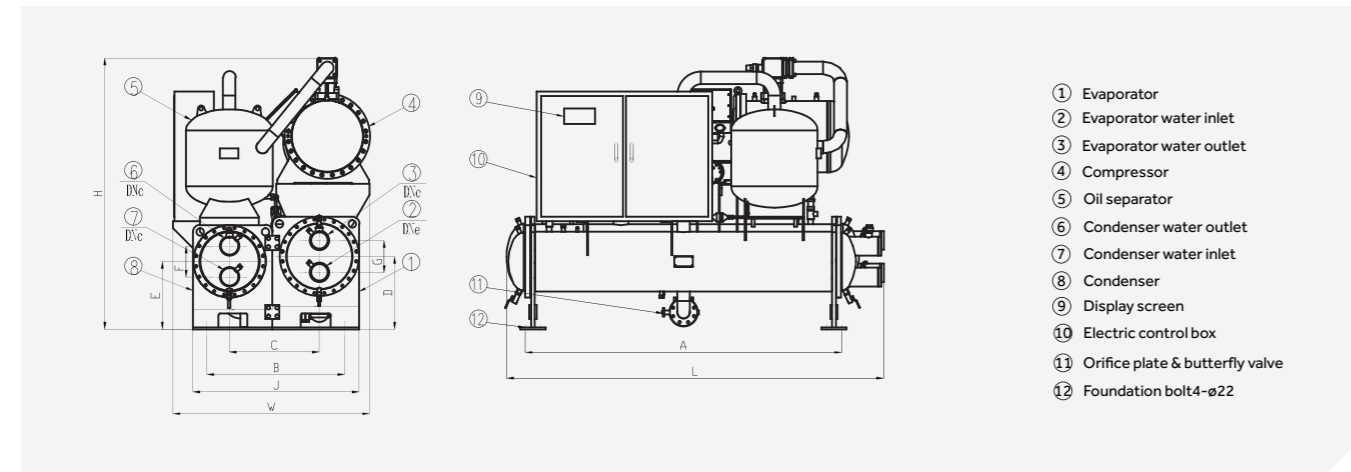
MODEL		CI1250PWNB	CI1400PWNB	CI1520PWNB	CI1700PWNB	CI2110PWNB	
Cooling capacity	RT	356	395	433	485	600	
	kW	1252	1389	1523	1705	2110	
Power input	kW	221	246	270	301	375	
EER		5.67	5.65	5.64	5.66	5.63	
Starting current	A	945	1009	1068	1338	1832	
Max. running current	A	482	542	600	656	800	
Safe protection		Overload protection; water-lack delay protection; automatic antifreezing protection, phase lack & sequence protection, low pressure protection; high pressure protection; Exhaust temperature protection; oil pressure difference protection, low oil level protection; pressure relief valve.					
Compressor	Type	Semi-Hermetic screw chiller					
	Quantity	2	2	2	2	2	
Power supply	Ph/V/Hz	3/380/50					
Refrigerant throttle type		Orifice plate + butterfly valve					
Capacity control		12.5%, 25%, 37.5%, 50%, 62.5%, 75%, 87.5%, 100%					
Controller type		Fully automatic control by Microcomputer controller					
Refrigerant	Type	R134a					
	Charge	kg	240	260	340	350	400
Evaporator	Type	Flood type					
	Water inlet/outlet temp	°C	12°C/7°C				
	Inlet/outlet pipe	DN(mm)	200	200	200	200	200
	Rated water flow	m³/h	215	239	262	293	363
	Water dirt coefficient	m².°C/kW	0.018				
	Standard pressure	MPa	1.0				
	Water side resistance	KPa	60	51	63	62	65
Condenser	Type	Shell & Tube heat exchanger					
	Water inlet/outlet temp	°C	30°C/35°C				
	Inlet/outlet pipe	DN(mm)	200	200	200	200	200
	Rated water flow	m³/h	253	281	308	345	427
	Water dirt coefficient	m².°C/kW	0.044				
	Standard pressure	MPa	1.0				
External dimension	Unit length	mm	4800	4900	5350	5950	6010
	Unit width	mm	1600	1600	1700	1800	2250
Package dimension	Unit height	mm	2100	2200	2200	2250	2650
	Unit length	mm	5000	5100	5550	6150	6210
	Unit width	mm	1700	1700	1800	1900	2350
Weight	Unit height	mm	2300	2400	2400	2450	2850
	Unit weight	kg	5800	6100	6280	6500	8930
	Gross weight	kg	5840	6140	6320	6540	8970
Operation weight	kg	6320	6550	6710	7000	9400	

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# WATER-COOLED SCREW CHILLER

## Unit Dimension Diagram

### • Single compressor unit

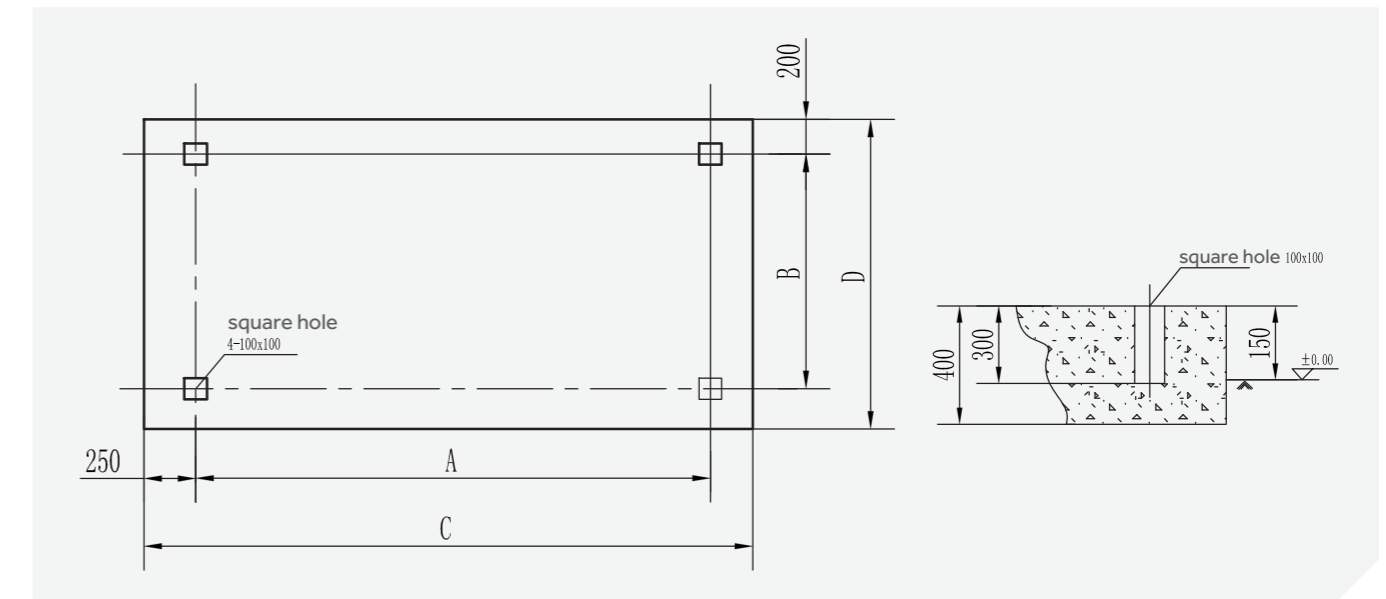


- ① Evaporator
- ② Evaporator water inlet
- ③ Evaporator water outlet
- ④ Compressor
- ⑤ Oil separator
- ⑥ Condenser water outlet
- ⑦ Condenser water inlet
- ⑧ Condenser
- ⑨ Display screen
- ⑩ Electric control box
- ⑪ Orifice plate & butterfly valve
- ⑫ Foundation bolt4-ø22

## Cooling Capacity and Power Input Table

Chilled water outlet temp.(°C)	Condenser water inlet temperature(°C)											
	26		28		30		32		34		35	
	Cooling capacity	Power input	Cooling capacity	Power input	Cooling capacity	Power input	Cooling capacity	Power input	Cooling capacity	Power input	Cooling capacity	Power input
5	0.97	0.92	0.95	0.95	0.92	0.99	0.90	1.03	0.88	1.07	0.87	1.09
6	1.00	0.92	0.98	0.96	0.96	0.99	0.94	1.03	0.92	1.07	0.91	1.09
7	1.04	0.93	1.02	0.96	1.00	1.00	0.98	1.04	0.96	1.08	0.94	1.10
8	1.08	0.93	1.06	0.97	1.03	1.00	1.01	1.04	0.99	1.08	0.97	1.10
9	1.11	0.94	1.09	0.97	1.07	1.01	1.04	1.05	1.02	1.09	1.00	1.11

## The Unit Installation Foundation Drawing



mm

Code Model	Installation dimension			
	A	B	C	D
CI0350PWNB	2270	900	2770	1300
CI0420PWNB	2270	900	2770	1300
CI0525PWNB	2270	900	2770	1300
CI0645PWNB	2980	900	3480	1300
CI0720PWNB	2980	1160	3480	1560
CI0790PWNB	2980	1160	3480	1560

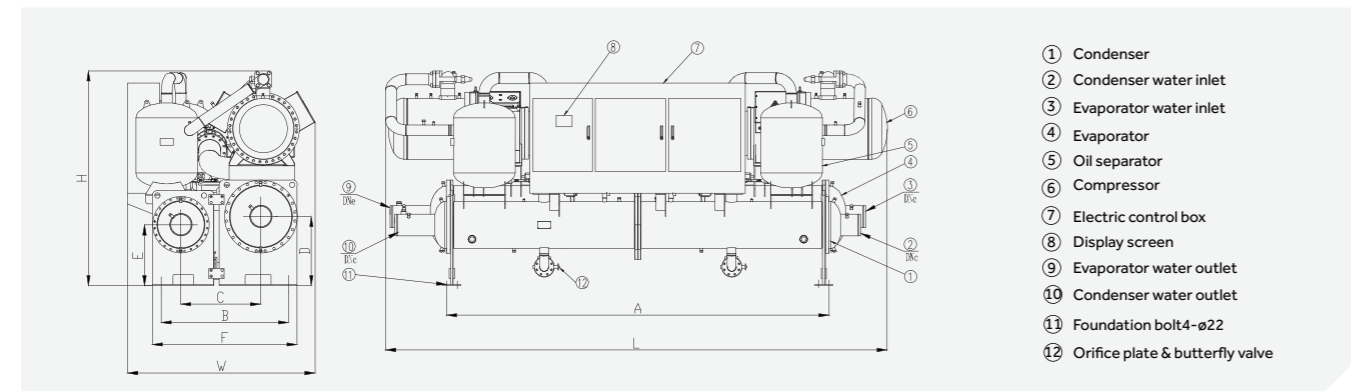
mm

Code Model	Installation dimension			
	A	B	C	D
CI0880PWNB	2980	1160	3480	1560
CI1056PWNB	3835	1035	4330	1435
CI1250PWNB	3835	1035	4335	1435
CI1400PWNB	3835	1035	4335	1435
CI1520PWNB	4435	1035	4935	1435
CI1700PWNB	4435	1035	4935	1435
CI2110PWNB	4435	1290	4935	1690

mm

Code Model	Dimension			Installation dimension		Dimension of pipe							
	L	W	H	A	B	C	D	E	F	G	J	DNe	DNc
CI0350PWNB	2830	1420	1950	2270	900	570	565	515	180	220	1090	DN125	DN125
CI0420PWNB	2830	1420	2030	2270	900	570	565	515	180	220	1090	DN125	DN125
CI0525PWNB	2830	1500	2100	2270	900	570	565	515	180	220	1090	DN125	DN125
CI0645PWNB	3500	1250	2100	2980	900	590	565	540	180	220	1130	DN125	DN125
CI0720PWNB	3580	1380	2200	2980	1160	642	592	564	220	220	1245	DN150	DN150
CI0790PWNB	3580	1450	2200	2980	1160	642	592	564	220	220	1245	DN150	DN150
CI0880PWNB	3600	1480	2250	2980	1160	642	592	564	220	220	1245	DN150	DN150

### • The double compressores unit



- ① Condenser
- ② Condenser water inlet
- ③ Evaporator water inlet
- ④ Evaporator
- ⑤ Oil separator
- ⑥ Compressor
- ⑦ Electric control box
- ⑧ Display screen
- ⑨ Evaporator water outlet
- ⑩ Condenser water outlet
- ⑪ Foundation bolt4-ø22
- ⑫ Orifice plate & butterfly valve

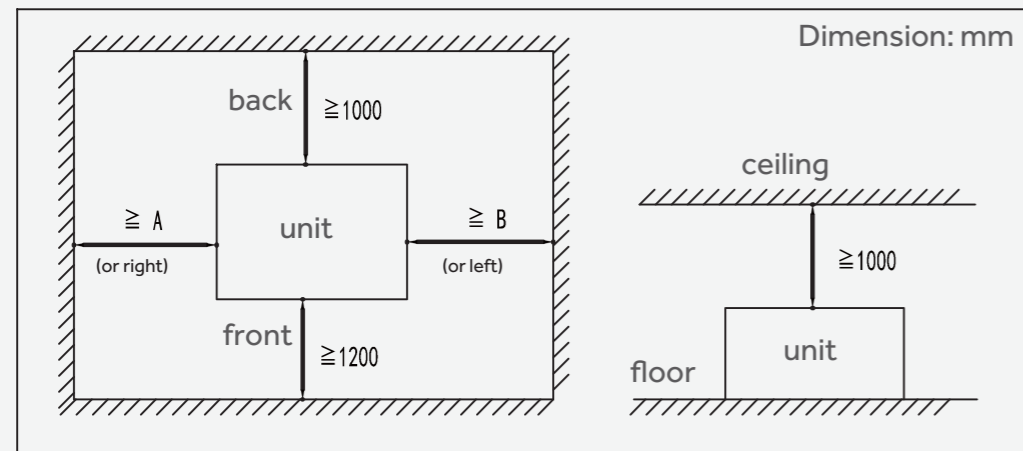
mm

Code Model	Dimension			Installation dimension		Dimension of pipe							
	L	W	H	A	B	C	D	E	F	DNe	DNc		
CI1056PWNB	4800	1500	2100	3835	1035	610	570	535	1155	DN150	DN150		
CI1250PWNB	4850	1600	2100	3835	1035	602	585	560	1175	DN200	DN200		
CI1400PWNB	4900	1600	2200	3835	1035	602	585	560	1175	DN200	DN200		
CI1520PWNB	5350	1700	2200	4435	1035	632	585	565	1230	DN200	DN200		
CI1700PWNB	5950	1800	2250	4435	1035	632	585	565	1230	DN200	DN200		
CI2110PWNB	6010	2250	2650	4435	1290	845	664	589	1550	DN200	DN200		

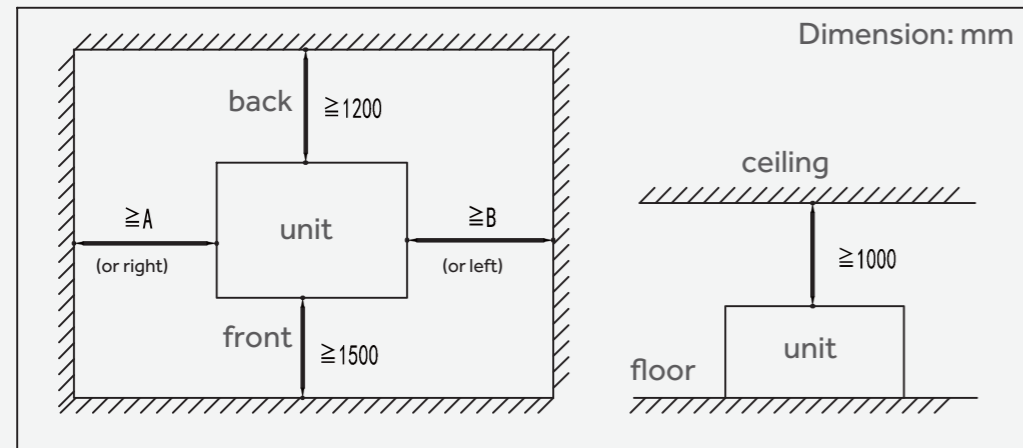
# WATER-COOLED SCREW CHILLER

## Reserved Space Size

### • Single compressor unit



### • Double compressor unit



Model	Reserved space size mm	
	A	B
CI0350PWNB	2300	1200
CI0420PWNB	2300	1200
CI0525PWNB	2300	1200
CI0645PWNB	3000	1200
CI0720PWNB	3000	1200
CI0790PWNB	3000	1200

Model	Reserved space size mm	
	A	B
CI0880PWNB	3000	1200
CI1056PWNB	2000	2000
CI1250PWNB	2000	2000
CI1400PWNB	2000	2000
CI1520PWNB	2300	2300
CI1700PWNB	2300	2300
CI2110PWNB	2300	2300

