



CDU (COOLANT DISTRIBUTION UNITS)



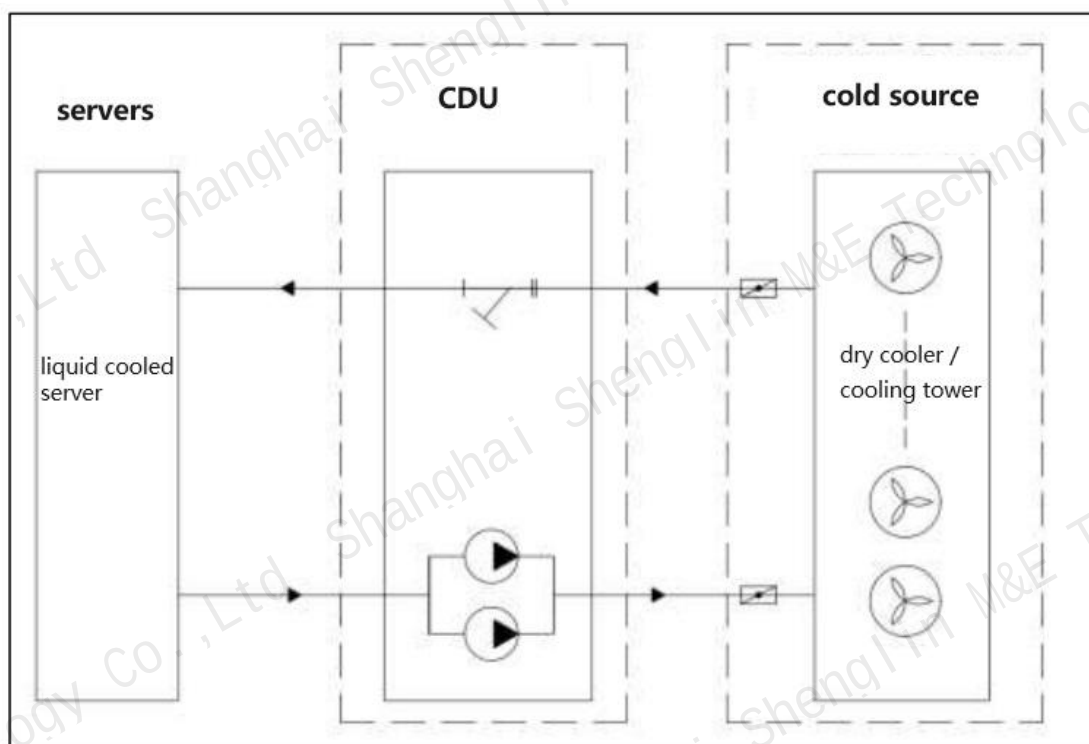
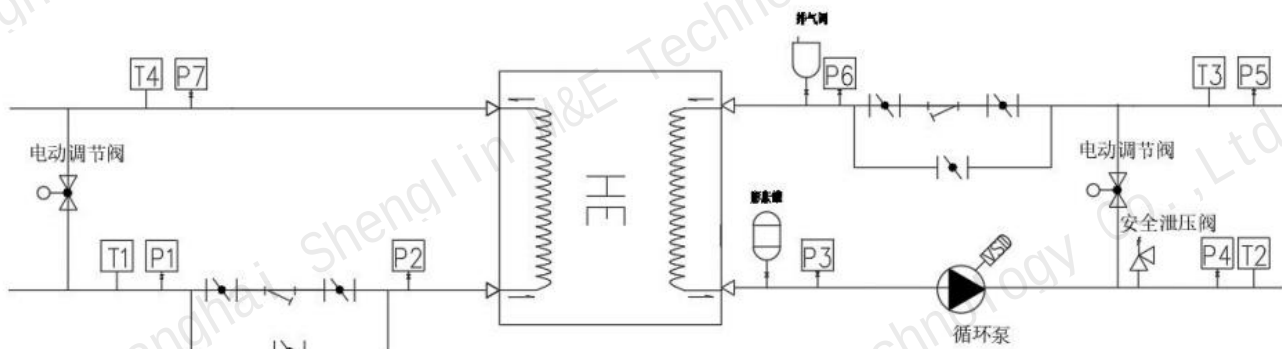
Immersion Cooling / Hydro Cooling

Shanghai Shenglin M&E Technology Co.,Ltd

www.shenglincool.com

Introduction

The CDU, or Coolant Distribution Unit, is the heart of the water cooling system, responsible for efficiently distributing the cooling medium to meet the cooling demands of various applications. It ensures the stable operation of the system by incorporating auxiliary monitoring and support devices. The secondary side heat exchange unit CDU is mainly used for heat exchange control of liquid cooling heat sink systems. The system integrates the secondary side frequency conversion circulating pump, plate heat exchanger, electric control valve, temperature sensor, pressure sensor, filter, expansion tank, flow meter, online liquid replenishment function, etc. The system is pre-installed and debugged at the factory, which reduces the on-site workload. The system diagram is as follows:



Product performance of Cabinet CDU



- Heat transfer range: 20~1500kW
- 10-inch touch screen, multi-level authority control;
- Modular design, can be increased according to the demand;
- (Optional) Double back-up high-efficiency frequency conversion pump automatically adjusts the flow rate according to the loaded condition;
- (Optional) Dual power supply backup;
- Corrosion-resistant 304 stainless steel and above material piping components;
- Standard liquid-cooled data center function control system, temperature monitoring, secondary side temperature control, flow and differential pressure control, anti-condensation protection, conductivity monitoring (optional), water turbidity monitoring (optional), water hardness monitoring (optional), PH value monitoring (optional);
- Ultra-quiet motor, low noise, long service life;
- Standard Modbus TCP communication protocol, rich detection, alarm and protection functions in the system, automatic protection of the setup parameters, power-down will not lose the operating parameters and alarm records;
- Provide standard communication protocol, can be customized according to customer demand for special format monitoring protocol;
- Secondary side filtration precision: 25~100 (μm) ultra-wide design range.

Technical parameter

Model		SLCDU020W	SLCDU030W	SLCDU040W	SLCDU050W	SLCDU060W	SLCDU070W	SLCDU080W
supply power		220V 1Ph 50Hz						
Unit performance parameters								
Primary side temp. 35/42 ℃, Secondary side temp. 40/47℃	cooling capacity-kW	21.1	32.2	41.3	53.2	62.5	70.6	82.1
	Secondary side flow rate-m3/h	2.58	3.94	5.06	6.51	7.65	8.64	10.05
	Secondary side pressure drop-kPa	30.7	44.1	62.9	41.4	50.9	62.0	74.7
	Primary side flow rate-m3/h	2.58	3.94	5.06	6.51	7.65	8.64	10.05
	Primary side pressure drop-kPa	41.2	55.3	74.9	54.5	65.3	78.0	92.5
	Rated power -kW	0.46	0.59	0.73	0.83	0.91	1.00	1.13
	FLA -A	4.26	4.26	4.26	5.97	5.97	5.97	8.81
Primary side medium		Softened water, ethylene glycol solution						
Secondary side medium		Deionized water, ethylene glycol solution, propylene glycol solution						
Primary side pipeline		DN32	DN32	DN32	DN40	DN40	DN40	DN40
Secondary side pipeline		DN32	DN32	DN32	DN40	DN40	DN40	DN40
Interface type		Chuck interface	Chuck interface	Chuck interface	Chuck interface	Chuck interface	Chuck interface	Chuck interface
Width -mm		600	600	600	600	600	600	600
Deep - mm		1200	1200	1200	1200	1200	1200	1200
Height - mm		2000	2000	2000	2000	2000	2000	2000
Weight - kg		200	200	200	220	220	220	220

Technical parameter

Model		SLCDU090W	SLCDU100W	SLCDU120W	SLCDU150W	SLCDU200W	SLCDU260W	SLCDU300W
supply power		380V 3Ph 50Hz						
Unit performance parameters								
Primary side temp. 35/42 ℃ , Secondary side temp. 40/47℃	cooling capacity-kW	91.8	102.2	123.5	150.4	202.4	261.0	305.2
	Secondary side flow rate-m3/h	11.24	12.51	15.12	18.42	24.78	31.96	37.37
	Secondary side pressure drop-kPa	58.9	68.0	37.6	47.6	69.0	47.8	57.0
	Primary side flow rate-m3/h	11.24	12.51	15.12	18.42	24.78	31.96	37.37
	Primary side pressure drop-kPa	68.9	78.0	47.6	57.6	79.0	57.4	66.5
	Rated power -kW	1.25	1.39	1.50	1.87	2.57	3.10	3.32
	FLA-A	2.91	2.91	3.85	3.85	5.35	6.67	6.67
Primary side medium		Softened water, ethylene glycol solution						
Secondary side medium		Deionized water, ethylene glycol solution, propylene glycol solution						
Primary side pipeline		DN50	DN50	DN65	DN65	DN80	DN100	DN100
Secondary side pipeline		DN50	DN50	DN65	DN65	DN80	DN100	DN100
Interface type		Chuck interface	Chuck interface	Flange interface	Flange interface	Flange interface	Flange interface	Flange interface
Width -mm		600	600	600	600	600	600	600
Deep - mm		1200	1200	1200	1200	1200	1200	1200
Height - mm		2000	2000	2000	2000	2000	2000	2000
Weight - kg		260	260	280	280	300	370	370

Technical parameter

Model		SLCDU350 W	SLCDU400 W	SLCDU500 W	SLCDU600 W	SLCDU800 W	SLCDU1000 W	SLCDU1200 W	SLCDU1500 W
supply power		380V 3Ph 50Hz							
Unit performance parameters									
Primary side temp. 35/42 ℃. Secondary side temp. 40/47℃	cooling capacity-kW	352.7	402.3	502.0	606.1	801.6	1002.8	1201.9	1504.2
	Secondary side flow rate-m3/h	43.19	49.26	61.47	74.22	98.16	122.79	147.17	184.19
	Secondary side pressure drop-kPa	50.9	60.4	62.5	67.0	69.0	69.0	69.0	70.0
	Primary side flow rate-m3/h	43.19	49.26	61.47	74.22	98.16	122.79	147.17	184.19
	Primary side pressure drop-kPa	61.2	70.8	72.8	77.0	79.0	79.0	79.0	79.0
	Rated power -kW	4.00	4.16	4.37	5.29	7.42	8.70	10.20	13.54
	FLA-A	8.54	8.54	9.10	10.98	15.11	17.74	20.74	26.92
	Primary side medium		Softened water, ethylene glycol solution						
Secondary side medium		Deionized water, ethylene glycol solution, propylene glycol solution							
Primary side pipeline		DN100	DN100	DN125	DN125	DN150	DN150	DN200	DN200
Secondary side pipeline		DN100	DN100	DN125	DN125	DN150	DN150	DN200	DN200
Interface type		Flange interface	Flange interface	Flange interface	Flange interface	Flange interface	Flange interface	Flange interface	Flange interface
Width -mm		800	800	800	800	1000	1000	1200	1600
Deep - mm		1200	1200	1200	1200	1200	1200	1200	1200
Height - mm		2000	2000	2000	2000	2000	2000	2000	2000
Weight - kg		420	420	480	520	610	630	810	810

Rack mounted liquid-liquid CDU

Introduction

The secondary side heat exchange unit CDU is mainly used for heat exchange control of liquid cooling heat sink systems. The system integrates the secondary side frequency conversion circulating pump, plate heat exchanger, electric control valve, temperature sensor, pressure sensor, filter, pressure stabilizing tank, etc. The system is pre-installed and debugged at the factory, which reduces the on-site workload.



Product performance

- Heat transfer range: 20~80kW
- 7-inch touch screen, multi-level authority control;
- Modular design, can be increased on demand;
- (Optional) Double back-up high-efficiency frequency conversion pump automatically adjusts the flow rate according to the loaded condition;
- (Optional) Dual power supply backup;
- Corrosion-resistant 304 stainless steel and above material piping components;
- Standard liquid-cooled data center intelligent control system, temperature monitoring, anti-condensation control;
- Ultra-quiet motor, low noise, long service life;
- Standard Modbus TCP communication protocol, rich detection, alarm and protection functions in the system, automatic protection of the setup parameters, power-down will not lose the operating parameters and alarm records;
- Provide standard communication protocol, can be customized according to customer demand for special format monitoring protocol;
- Secondary side filtration precision: 25~100 (μm) ultra-wide design range.

Technical parameter

Rack mounted air- liquid CDU

Introduction

Air-liquid heat exchanger directly utilizes air to cool the liquid-cooled system, in which



high-efficiency copper tube and aluminum fin heat exchanger, EC fan composition; the secondary side contains variable frequency circulating pump, temperature sensors, pressure sensors, filters, flow meters (optional). The product adopts factory pre-installation and commissioning, rack mounting and use, external interface for quick release chuck (standard), quick plug connector (optional) and terminal structure, simple and convenient.

Product performance

- Heat transfer range: 8~16kW
- 7-inch touch screen, multi-level authority control;
- (Optional) Double back-up high-efficiency variable-frequency pumps, automatic flow rate adjustment;
- Corrosion-resistant 304 stainless steel and above material piping components;
- Liquid-cooled intelligent control system, temperature monitoring, pressure monitoring, anti-condensation control, safe and reliable;
- Standard RS485 communication interface, rich detection, alarm and protection functions in the system, automatic protection of set parameters, power-down will not lose the operating parameters and alarm records;
- Provide standard communication protocols, can be customized according to customer demand for special format monitoring protocols.

Technical parameter

Model		SLCDU009AC1	SLCDU016AC1
Supply power		220V1Ph 50Hz	220V1Ph 50Hz
Air temp.27℃, medium temp.40/50℃	Cooling capacity-kW	8.7	16.7
	Flow rate-m3/h	0.75	1.43
	Rated power-kW	0.68	1.17
	FLA-A	4.32	6.65
Air temp.28℃, medium temp.40/45℃	Cooling capacity-kW	7.4	14.2
Air temp.28℃, medium temp.40/50℃	Cooling capacity-kW	8.1	15.5
Secondary side medium		Deionized water, ethylene glycol solution, propylene glycol solution	
Installation method		Rack Mount	
Performance parameters of circulating pump			
QTY		1 or 1+1 redundancy	1 or 1+1 redundancy
Rated power of circulating pump-kW		0.22	0.22
Performance parameters of fan			
Air -CMH		2000	000
QTY of fan		2	4
Connecrtion			
Connection specifications		DN15	DN20
Interface type A		Chuck interface	Chuck interface
Interface type B		Quick connect	Quick connect
Size and weight			
Width-mm		440	440
Deep-mm		850	850
Height-mm		220(5U)	440(10U)
Weight-kg		35	50
Recommended circuit breaker and cable specifications			
Recommended circuit breaker specifications - A		16	16
Recommended cable specifications - mm2		3*2.5	3*2.5