

External Open Circulation Type Circulator, Cool Line  
**CLS302**



Operating Temp. Range
-10deg.C to Room Temp.
Temp. Adjustment Accuracy
±1.5 to 2.0deg.C

- Circulation Pump flow rate is freely controllable by flow adjustment valve for various tank size.
- Flow sensor can detect the flow decreasing with alarm lamp and stop operation.

■ Specifications

Model	CLS302
<b>Performance</b>	
Circulation Type	Opened system circulation by pump
Operating Temperature Range	-10deg.C to Room temp.
Tem. Adjustment Accuracy	±1.5 to ±2.0deg.C
Tem. Indication Unit	1deg.C
Cooling Capacity	Approx. 450W (387Kcal) at Liquid temp. 15deg.C
<b>Components</b>	
Temp. Control System	Refrigeration On/Off control
Temp. Sensor	T-thermocouple
Temp. Setting • Display	Digital
Refrigerator • Coolant	Air cooling 250W R404A
Circulation Pump	Magnet pump
Pump Max. Flow Rate	10/11L/min. (50/60Hz)
Pump Max. Lift	4.9/6.9m (50/60Hz)
Circulation Nozzle	External dimension 13mm
Surrounding Operation Temp. Range	5 to 30 deg.C
<b>Safety Device</b>	
Safety Countermeasures	Self diagnosis functions, Electric leakage breaker with over current protection, Refrigerator over load relay, Refrigerator protection-delay timer function, Refrigerator high pressure switch, Flow sensor, Circulation pump protection by-pass
Other Function	Flow rate adjustment valve, Drain cock, Dust prevention filter, Temp. output terminal, Compressor pressure indicator, Calibration off set function, Key lock function, Breakout protection function
Accessories	Circulation insulation hose 1m x 2pcs. (1pc. with manual pump), Hose band 4pcs.
<b>Standard</b>	
Internal Dimension	I.D. 120 x H200 mm
Inner Tank Capacity	1.5L
External Dimension	W410 x D460 x H550 mm
Power Source	AC100V 50/60Hz 3.5A
Weight	Approx. 40kg

■ Control Panel



Flow amount monitor, Compressor monitor, Compressor operation

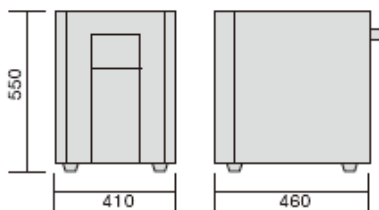
■ Operation Example



■ Back Side



■ Size (mm)



■ Optional Items

Description	Model No.	Product Code
Straight circulation nozzle 10.5m dia Rc3/8	CLS302	221394
Straight circulation nozzle 16.0m dia Rc3/8	CLS302	221395
Straight circulation nozzle 13.0m dia Rc3/8	CLS302	221399
L shape circulation nozzle 10.5m dia Rc3/8	CLS302	221396
L shape circulation nozzle 13.0m dia Rc3/8	CLS302	221397
L shape circulation nozzle 16.0m dia Rc3/8	CLS302	221398
External communication adapter RS485-RS232C changeable	CLS302	281388
Open type support tank 2L	CLS302	221588
Testing bath CTB-3A, capacity : 3L	CLS302	221801
Testing bath CTB-6A, capacity : 6L	CLS302	221802
Testing bath CTB-12A, capacity : 12L	CLS302	221803
Testing bath CTB-12S, capacity : 12L	CLS302	221805
Testing bath CTB-24A, capacity : 24L	CLS302	221804
Caster stopper, 4pcs	CLS302	281440