

Rata

Hydro SERIES Data Sheet

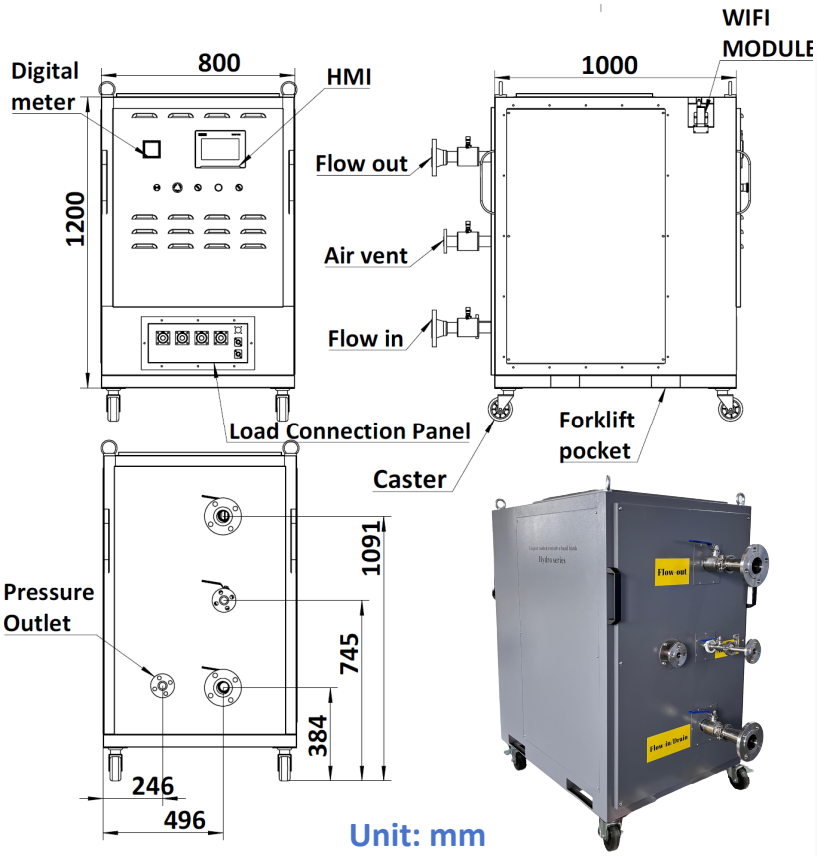
Hydro-100L

The 100 kW AC Liquid Cooled load bank(Hydro-100L) employs a liquid cooling system, making it primarily suitable for data center testing to ensure stable full-power operation and reduce thermal noise. It is also suitable for continuous and step testing of equipment such as generators and UPS systems, especially in indoor locations where air cooling is not feasible.

Core Electrical Parameters	
Model	Hydro-100L
Power	100 kW
Voltage	400Vac, 3-P 4-Wire
Frequency	50/60 Hz
Load Connector	IP 67 Power-fit Quick Connector, 400A, with a maximum cable size of 120mm²
Auxiliary Power Supply	230Vac 50/60 Hz, Single-Phase, or powered from the load circuit itself.

- 1 kW stepping resolution and ±2% accuracy for precise load simulation.
- Built-in ΔT control mode to test cooling systems at a set temperature difference.
- Local touchscreen and remote PC software control with Modbus TCP for integration.(WIFI/RJ45)
- Integrated design with casters and forklift pockets for easy indoor mobility.
- Flow meters on both inlet and outlet for reliable real-time monitoring.
- Built-in leak detection for enhanced operational safety.

Pressure Rating: Maximum operating pressure of 4.8 bar, with a pressure test rating of 8 bar.
Flow range: 35.1 L/min - 227.3 L/min
Protection: Liquid level, Low/High flow overpressure protection, overtemperature (medium temperature < 80° C).
Liquid connections: DN50 flange for inlet/outlet, DN15 flange for vent, DN15 flange for pressure relief valve (all customizable).



Mechanical Parameters	
Enclosure material	Powder-coated cold-rolled steel (RAL 7012)
Resistor can material	304 stainless steel
Air vent	Flange connection, DN 15(1/2 inch)
Mobility	4 braking casters, 2 standard fork pockets.
Enclosure protection class	IP34
W × D × H (mm)	1000 × 800 × 1200
Weight	Approx. 280 kg (empty tank), Approx. 330.5 kg (full with liquid).
Operating temperature	50℃ max
Maximum operating altitude	≤ 2000 m

Main Configuration

Resistors:
100 KW total, corrosion and acid/alkali resistant tubes.

Flow Meters:
Turbine type at inlet and outlet.

Liquid Level Gauge:
Buoyancy-driven, with display/communication readout.

Sensors:
Pressure & temperature at inlet/outlet; temperature inside tank. All data readable via touch screen or communication interface.

Safety:
Tank leak detector; fused power circuit; main breaker on auxiliary power; emergency stop button on panel.

Valves:
Ball valves are equipped at the water inlet, outlet, and air vent.

Contactors and Circuit Breakers:
All are from Schneider Electric.

PLC: From Siemens

Spare Parts

Includes fuses, relays, push buttons and audible/visual indicators, main power quick connector, auxiliary power quick connector with 3m cable, and pressure sensor.

Two-Year Warranty

24-Hour Remote Technical Support.

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