

CU-5000 COOLING UNIT RACK

CU-5000 COOLING UNIT FOR WAS-5000 WIDE BAND ACOUSTIC TRANSDUCER

Used to provide cooling water, vacuum, and field coil power to the WAS-5000 transducer, the CU-5000 along with the PA-5000 amplifier completes the WAS-5000 system. The CU-5000 can be configured to supply either one or two WAS-5000 transducers from a single rack.

GENERAL CHARACTERISTICS

The CU-5000 has a programmable power supply to provide the field coil with power. A recirculating distilled water system with heat exchanger cools the field coil and driver coils, and a vacuum scavenge system pulls the water back out of the transducer. The power supply, water temperature, flow, and pressure are constantly monitored as system interlocks. Indicator lights and an optional HMI provide visual status of the interlocks. An HMI (Human Machine Interface, or Touch screen) is recommended on one of the CU-5000 racks for manual control and maintenance. A PLC (Programmable Logic Controller) is used to sequence the rack operation and control system interlocks with the CU-5000 Cooling Unit. Communication with the other system components is via Ethernet IP industrial protocol.

FULL SERVICE SUPPORT

NTS can provide turn key acoustic facility development and engineering support. NTS can provide design, build, and construction management for a complete acoustic facility. We are prepared to take single-source responsibility for design, engineering, construction management, instrumentation and control systems, operation maintenance, and personnel training.

NTS also operates several of its own reverberant and progressive wave acoustic test facilities in order to meet short term testing requirements. Since 1949, we have provided specialized testing and simulation services to aerospace, defense and commercial industries.

CU-5000 SPECIFICATIONS

Rack

Input voltage		208 or 480 VAC, 3 ϕ
Input power	1 transducer	5 KVA
	2 transducers	9 KVA
Dimensions		75"H x 24"W x 32"D
Cooling	Rack	Top mounted fan
	Components	Front or back integral fan
	Vacuum	Vents out top

Field Coil Programmable Power Supply

Input voltage	208 or 480 VAC, 3 ϕ
Input power	3.5 KVA
Constant current output	300 amps
Voltage output	5.7 - 6.1 V
Overvoltage protection	
PLC controlled	

Cooling Water System

Water type		Distilled
Flow	1 transducer	0.3 GMP (1.1 LPM)
	2 transducers	0.6 GMP (2.2 LPM)
Pressure		70 psi (4.8 bar)
Temperature		92°F +/-5, 33.3°C 2+/- 2.8
Raw water flow		10 GPM (38 LPM)
Raw water pressure		10 - 50 psi (0.68 - 3.45 bar)

Optional Equipment

- One or two transducers per rack (one amplifier per transducer)
- HMI control interface
- Ling Replacement Interlocks
- External Distilled Water Tank
- Water Flow Display

ABOUT NTS

As one of the largest commercial test laboratory networks in North America, NTS offers test, inspection and certification services for environmental, dynamics, EMC, ballistics and much more. Client partners rely on NTS to bring quality products to market quickly, and so can you.