

APRIL SHOWERS ENVIRONMENTAL CONTROL SYSTEM Model 3222



Product description

The “April Showers” Environmental Control system (ECS) chiller provides a constant supply of regulated temperature fluid to a helicopter-borne pod.

The ECS provides up to 6.0 kW of cooling capacity in a package that is 19.0 inches in diameter, 18.0 inches in length and weighs less than 135 lbs.

The ECS is designed to maintain and control precise fluid temperatures over the entire helicopter harsh environments and specifically designed to withstand severe salt-water operational environment. The ECS consists of a high efficiency vapor cycle refrigeration cooling circuit and coolant (PAO) re-circulation loop supplying 2.0 GPM of temperature controlled coolant to the pod electronics cold plates. A 2.0 kW heater is provided to warm-up coolant during low ambient operation. An analog controller provides for ECS control and health/status monitoring. An access panel provided in the ECS cover provides for easy maintenance and servicing.

Key features and benefits

- High cooling capacity chiller
- High performance, reliable and field proven refrigerant compressor
- Accessible structural design for ground servicing and diagnostics
- Coolant service ports to “plug in” GSE cooling carts for in-hanger servicing/operation
- Ground mode operation capability
- High performance ‘wet motor’ positive displacement pump design for maximum reliability
- Controller interface to “cockpit” provides for ECS status monitoring

Applications

- Helicopter-borne pods



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Specifications	
Cooling capacity	6.0 kW
Refrigerant	R-134a
Cooling media	PAO (Poly Alpha Olefin), 2.0 GPM, minimum
PAO operational pressure	45 psid
PAO delivery temperature	85° F at 120° F ambient temperature
Electrical power	7500 watts with 115Vac, 3ph, and 400Hz
ECS weight	135 lbs
ECS envelope	19.0 in diameter, 18.0 in length



Note: Due to continuous process improvement, specifications are subject to change without notice. TCO Review # 129