



HydroThrift

CLOSED-LOOP DRY-TYPE (CD) COOLING SYSTEM

A cost-efficient way to maintain consistent equipment cooling temperatures and prevent corrosion. Any heat-producing industrial process or equipment will benefit from the installation of this system.



The HydroThrift system removes heat from machines and processes continuously, cleanly and with little or no maintenance.

Completely Automatic Operation and Control of Flow, Temperature, and Pressure

HydroThrift CD cooling systems are two-component systems utilizing a compact pump package and a remote, air-cooled heat exchanger. The system is filled with a low-cost, water/glycol coolant mixture which is continually circulated under pressure through the process or machine. Operation is so simple, no assigned operator is needed. Pumps, heat exchanger and control package regulate temperature, flow rates and heat exchange using a fixed amount of coolant indefinitely. And because it is a self-contained system, you won't need to add or change water or glycol.

Saves Water, Reduces Cooling Costs

The HydroThrift system is designed to provide years of trouble-free, low-cost service, even in tough environments. Because the water/glycol mixture is recirculated, economical and efficient cooling is possible. At specified glycol/water mixtures, wintertime freeze-ups don't occur and there is no need for make-up water because there is no evaporation. Operator avoids water use regulations and sewer charges related to the discharge of water.

Non-Contaminating Systems Extend Equipment Service Life

As a closed-loop system, the HydroThrift CD unit operates cleanly. That saves you downtime and money. No entrained air, contaminants, airborne dirt or chemicals from water treatment as in an open type or "once-through" water system. Service life of production equipment can be greatly increased because scaling, liming and corrosion on the heat load is prevented.

Continuous, High Efficiency Operation Cuts Maintenance

The elimination of scale and dirt build-up on heat exchanger and water jacket surfaces results in high-efficiency operation. It also saves the cost of heat exchanger repair and maintenance and the downtime associated with it. Another reason for the efficient service is that flow, temperature and pressure in operation are controlled constantly, minimizing the costly inconsistencies found in external "once-through" water cooling.

Compact, Simple to Install

The pump and control unit is delivered to you skid-mounted - prepiped and prewired with built-in temperature controls. On-site, simply mount the main heat exchanger where it will have an adequate supply of clean ambient air and locate the pumps anywhere between the heat load and the heat exchanger. Connect the piping and wiring and add the coolant. The surge tank provides easy access for filling the system.

The bottom line is that HydroThrift cooling systems provide continuous, high-efficiency heat transfer. And deliver it at less initial cost and with better payback than other cooling systems.

Advanced Control Panel (Optional)



- Rugged low ambient touch screen HMI with continuous data logged, data export capabilities and maintenance reminders in lieu of switches.
- Industrial PLC with LCD display, 4-20 mA output signal for cold fluid temperature and volumetric flow rate monitoring, and pump remote start capability to allow the pump to be controlled in auto with a dry contact closure, by others.
- Turbine flow meter.
- High and low flow alarm and warning, RTD failure warning, low tank liquid level alarm, high temperature alarm, and motor failure warning.

Air-cooled Heat Exchanger

Our heat exchanger features copper headers and corrugated aluminum fins mechanically bonded to copper tubes. The oversize draw-through fans permit low speed, quiet operation and uniform air distribution across the heat exchanger surfaces. Fan sections are baffled to prevent air bypass for greater efficiency. Units are constructed of reinforced heavy-gauge galvanized steel, bolted and riveted. They are easily mounted at grade level or on the roof of your building.

Vent and Surge Tank

To minimize oxidation of heat transfer surfaces, the ASME code welded vent and surge tank de-aerates the coolant, and includes gauge glass, fill port, drain and vent valves.

Electrical System Control

A certified UL508a control panel includes a single point service entrance for ease of installation; pre-wired, self-protected combination motor controllers for pump operation; over current and short circuit protection of fan motors; adjustable, thermostatic operation of the heat exchanger; and a UL environmental rated enclosure. The system controls will be powered by a 24 VDC control circuit.

Packaged Pump and Control Skid

Pumps, electrical enclosure, vent and surge tank, piping, valving, gauges, wiring and thermostatic fan control are all completely factory assembled on a full-deck fabricated steel base.

Other Optional Equipment

Custom engineering allows a wide-range of options including dual stand-by pumps with automatic switchover, flow switch/alarm circuits, service valves, motor indicating lights, disconnect switches, trim coolers and advanced control panel.

