EnviroSep
FLUID & HEAT RECOVERY SYSTEMS
A DIVISION OF TMT, INC.

Industrial Electric Condensate Duplex Pump Package

(Low NPSH)

Model Series ECPL-D

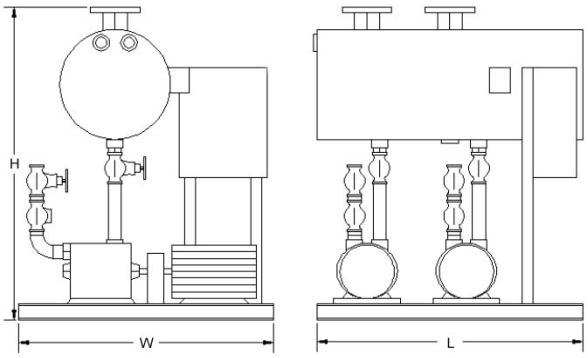
The Model Series **ECPL-D**, Electric Condensate Duplex Pump Package is a condensate pumping unit manufactured as a ready-to-install system featuring a Stainless Steel Condensate Receiver and **Low NPSH** Regenerative Turbine Pumps. Sized to meet specific system needs, the **ECPL-D** Series features non-cavitating pumps, allowing efficient pumping even under adverse inlet conditions. Utilizing the efficient design of Inducer-type Regenerative Turbine Pumps, the **ECPL-D** Series is capable of operating at **2 ft NPSHA**. The **ECPL-D** Series includes pump suction isolation valves for each pump. A Stainless Steel Condensate Receiver is utilized to prolong the life of systems subject to corrosive condensate. A mechanical alternator is standard for automatic alternation of the Lead Pump. A NEMA 12, UL-Listed Industrial Control Panel with single-point power connection is furnished pre-wired to all electrical sources. The complete package is UL-Listed.

c UL us
Listed
Industrial Control Panels

c UL us
Listed
Packaged Pumping Systems

CONDITIONS OF OPERATION

Max. Allowable Pressure / Temperature:	230 psig / 240 °F
Discharge rate per pump:	2 to150 gpm - nominal
Motor size per pump:	½ to 50 Hp, 3 ph., 60 Hz



Legend:

A. Condensate Inlet
B. Vent
C. Condensate Discharge (2)
D. Auxiliary Connection A
E. Auxiliary Connection B
F. Receiver Tank
G. Drain

STANDARD CONSTRUCTION

- Fabricated Structural Channel Frame
- Stainless Steel Condensate Receiver
- Suction Isolation Valves
- Pump Discharge Flow Throttling Valve & Check Valve
- Low NPSH Regenerative Turbine Pumps
- UL-Listed Industrial Control Panel
- Hydrostatically Tested
- High Temperature Enamel Coating on base

PACKAGE OPTIONS

- Additional / Oversized Condensate Inlet connection(s)
- Gauge Glass on Receiver
- Oversized Condensate Receiver
- Oversized Atmospheric Vent(s)
- Pump Discharge Pressure Gauges
- Overflow Pipe to 6” height above base
- Forged Steel Gate Valves
- Pump Run-time Meter
- Low-profile design for height restricted applications
- All Welded piping
- Fabricated Square Tubing Frame

Regardless of system size, temperature, pressure, fluid medium, or available floor space, ***EnviroSep*** can service all specialized needs.

EnviroSep *• Fluid & Heat Recovery Systems*
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PO Box 857 • Georgetown, SC 29442
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Model ECPL-D
Packaged Pumping System Order Form

Form 00-ECPL-D

Specify the following parameters:

I. System Condensate Load = _____ lb/hr

II. System Discharge
Pressure Required = _____ psig

III. Condensate Return Temperature = _____ ^{o}F

SYSTEM OPTIONS

Additional / Oversized Condensate Inlet Connections

Oversized Condensate Receiver

Oversized Atmospheric Vent

Pump Construction
- Bronze fitted
- All Iron
- All Bronze
- 316 SS

Stand-by Pump

Pump Discharge Pressure Gauges

Pump Suction Strainers

Auto standby pump start on lead pump failure

Auto Electric Pump Alternation

Mechanical Alternator

Float Switches

Remote start connection

Receiver Drain Valve

Gauge Glass on Receiver

Receiver Thermometer

High Level Alarm

Low Level Alarm

Panel-mounted Differential Pressure Gauges

Pump Run-time Hour Meter

Outdoor-use Rating

Condensate Inlet Isolation Valves

Regardless of system size, temperature, pressure, fluid medium, or space requirements, **EnviroSep** can provide solutions to all specialized needs.

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Typical Specifications for ECPL-D

Furnish and install one **EnviroSep** Model ECPL- [A] - [B] - [C] - [D] Electric Condensate Pump Package with the system capacity to pump _____ lb/hr at a discharge pressure of _____ psig from the pump(s).

KEY:
[A] = Model # (Nominal Flow from each pump- GPM)
[B] = # of pumps (1 = S, 2 = D, 3 = T, 4 = Q)
[C] = Parallel (P) or Stand-by (S) pump designation
[D] = Mechanical (M) or Electric (E) alternation for multiple pumps

GENERAL - This package shall be factory assembled with pump(s), condensate receiver, pump suction isolation valves, fabricated steel frame, mechanical alternator (where applicable) interconnection piping (welded per ASME Section IX certified welders), (optional) UL-listed Industrial Control Panel factory wired for single-point field connection per NEC, and the complete package shall be UL-Listed as a Packaged Pumping System.

PUMPS-Pump(s) shall be low NPSH inducer style regenerative turbine with a centrifugal Francis vane design impeller and a multi-vane diffuser for balancing radial loads with a capacity of _____ GPM @ _____ psig discharge head. The maximum speed of the pump shall not exceed 1750 RPM. Pump shall be of the vertically split case design wit removable bearing housings and shall be furnished with mechanical seals. The suction connection shall be in the top vertical position and the discharge connection shall be in the top horizontal position. The impeller(s) shall be located on a stainless steel shaft between sealed grease lubricated ball bearings. The pump shall be mounted on a rigid, single base plate and by flexible with guard to the motor. Seal shall be rated for continuous duty at 240^{o}F, motor shall be open drip proof, NEMA MG-1 with 1.15 service factor

CONDENSATE RECEIVER – Condensate Receiver shall be constructed of polished, 304L Stainless Steel and shall be GTAW welded per ASME Section IX certified welders. The receiver shall have the capacity of __ gallons and shall be of the horizontal-mounted design. The mounting height of the receiver shall be of adequate height to permit a minimum of 2 ft. NPSH available to the system pumps when the condensate temperature is 212°F. The receiver shall be supported by rigid structural steel supports to adequately support the receiver when completely full of water. Connections shall be provided for Atmospheric Vent, Condensate Inlet, Pump Suction Connections, Receiver Drain connection, two (2) auxiliary connections, and connection for internally-mounted mechanical alternator.

MECHANICAL ALTERNATOR - System shall include, on the receiver, a combination float switch, mechanical alternator which shall be horizontally mounted in the receiver. The alternator shall be NEMA I, Square D Series 9038, (with) (without) auxiliary standby float switch. The alternator shall automatically alternate the lead pump of the system and shall automatically start all system pumps as the system demand requires.

CONTROL PANEL - System shall include one (1) UL - Listed, NEMA 12, Industrial Control Panel with single-point power connection, pre-wired to all electrical components. Panel shall have thru-the-door fused disconnect; magnetic circuit breaker supplementary motor protector with fast-closing contacts, non-reversing 3-pole contactor, and variable setting, bi-metallic overload relay for each motor; 30 mm Foundry-duty switches; 30 mm Corrosion Resistant pilot lights; control transformer; Automatic Alternator (if required). Operation of each pump shall be Hand-Off-Auto with external connection to terminal blocks. When standby pump(s) are used, the standby pump(s) shall manually/automatically(customer specified) start on primary pump failure. All internal wiring shall be placed in conduit.

MANUFACTURER - Shall assume system liability, and performance guarantee and warranty all equipment on system for 12 months after initial start-up.

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