

INTRODUCTION TO YOUR CREST ULTRASONICS CLEANING SYSTEM

This Crest Ultrasonics cleaning system has been designed and manufactured for **Concurrent Technologies** under the specifications of Crest project #02-017694. It is appropriate for use with a variety of aqueous cleaning detergents in accordance with the safety information on pages 5-6 and elsewhere throughout this manual.

Electrical Specifications

Clean/Rinse/Dry Console: 480 Volts, 60 Hz, 3-phase, 152 Amps.

Q.C. Table: 220 Volts and 110 Volts, 1-phase. 80 Amps (max.).

Functional Description

CLEANING CONSOLE:

Load/Unload

A conveyor delivers the parts carrier to a sensed load position.

A conveyor moves the parts carrier from a sensed unload position to Q.C. table.

Console Tank #1

Heated ultrasonic detergent wash with oscillating lift. Served by oil separation decanter which is heated and auto-filled.

Heat: 24kW (two 12 kW immersibles)
Ultrasonics: 3.5 kW, base frequency 40 kHz.
Recirculation: through a basket strainer, 3/4 hp pump, 50 micron bag filter and (2) 10 micron cartridge filters (20").
Exhaust: via lip vent.

Functional Description (continued)

- Console Tank #2* Heated ultrasonic overflow cascade rinse (stage 1) with oscillating lift.
- Water is fed from tank #3 and drains to a pumpout station.
- Heat: 24kW (two 12 kW immersibles)
Ultrasonics: 3.5 kW, base frequency 40 kHz.
Recirculation: through a Y strainer, 3/4 hp pump, and (2) 10 micron cartridge filters (20").
Exhaust: via lip vent.
- Console Tank #3* Heated overflow cascade rinse (stage 2), fed by factory deionized water source, overflowing to tank #2. There is a D.I. flowmeter and monitor on trickle infeed to tank #3.
- Heat: 24kW (two 12 kW immersibles)
Recirculation: through a Y strainer, 3/4 hp pump, and (2) 10 micron cartridge filters (20").
Exhaust: via lip vent.
- Console Tank #4* High efficiency recirculated hot air dryer with air-actuated sliding door.
- Heat: 20 kW duct-type.
Blower: 3000 CFM, 2 hp.
- Console Tank #5 (future)* Space has been provided in the console frame for the future addition of a vacuum dryer.

Functional Description (continued)

Transport and Control System

The CTS-1500-AB Panelview Rigibot materials transport and control system utilizes an Allen-Bradley SLC-500 controller for user-friendly, walk-through programming of process requirements, times and distances. (See Section 2.3 for complete instructions.)

Function: The vertical axis module rises horizontally on two parallel, hardened ground shafts. The horizontal motion of the system is provided by a gear rack and pinion, driven by a DC permanent magnet gear motor assembly. Position control is via optical encoder.

Handles parts from in conveyor through deposit on exit conveyor.

Capacity: 150 lbs., including basket.

Oil Coalescing System

(1) oil coalescing reservoir with 1 gallon oil collector remotely located at the load end of the console, to serve tank #1. See description in Section 3.3.

Reservoir Pump-out System

Remotely located behind the console. See description on Section 3.3.

Q.C. Table

Fitted with a sink, cold water faucet, D.I. spray hose, 100-lb. scale, and utility connections for air and gas. There is a 30-gallon reservoir under the sink.

DIMENSIONS

Please see dwg.# C-17694-A01(B), which follows, for system dimensions.

UTILITIES REQUIREMENTS

Electrical: See page 1 of introduction.

Water: Deionized water or process water supplied to the console at 30 psi minimum.

Clean Dry

Compressed

Air: 120 scfm at 80 psi min. for 10 seconds each cycle (dryer chamber).

Nitrogen: 125 PSI max. (dryer chamber).

Additional facility supply to Q.C. table, as indicated on Dwg. #C-17694-A01(B), which follows.