



Spec 17-1069
8/16/17

UP 7028 Automated Lift System Specifications

GENERAL:

This is a high performance automated ultrasonic cleaning system designed and manufactured by UPC in Freeport, Illinois. This system consists of an advanced Sonic Touch II® model UP 7028 ultrasonic wash system with a companion lift system. The lift system utilizes a stainless steel racking system controlled by a vertical linear actuator and supported by a rugged 80/20 modular frame (cage) attached to the top of the console. The frame is surrounded by clear panels and includes front access doors that are interlock switch monitored for safety. Parts are loaded on racking system which automatically lowers them into the tank and then raises them at the completion of the cycle. System is controlled by Sonic Touch®II a highly advanced HMI system developed by Ultrasonic Power Corporation.

This system is engineered to use off-the-shelf technology. It is based on our standard UPC console system making it easy to maintain.

System Feature Summary:

Tank dimensions: 70" left to right, 28" front to back, 24" deep (21" working depth)
System dimensions: Approximately 83" left to right, 33" front to back, 70" high (not including actuator arm)
Process: Ultrasonic wash
Chemistry: Water
Automation: Linear actuators controlled by Sonic Touch®II
Facilities: - Clean tap water (RO preferred) at or near process temperature for fill
 - Unrestricted floor drain
Power Requirements: 480V/3 phase/
Access doors with safety switches monitored by Sonic Touch®II
Auto drain controlled by Sonic Touch®II
Auto fill controlled by Sonic Touch®II
Water level control (Sonic Touch®II)
Temperature control (Sonic Touch®II)
Sonic Touch®II mounted in a convenient mobile stand

System Detail:

AUTOMATION PACKAGE

Single Axis Servo Solution
Capacity:
- 200 pounds
Travel Speed:

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- Vertical – 2.5 in/sec

Positioning Accuracy:

- Vertical: +/- .002"

Vertical:

- Ball screw driven actuator
- Position via optical encoders
- Provides safety and high lift capacity
- Over travel protection via travel limit sensors

Lift Arm:

- Overhead arm connects directly to rack system

Base:

- Horizontal beam mounts directly to the 80/20 system base with bracket kit

Automation Control:

- Sonic Touch®II- B&R Automation C70 7" HMI & PLC
- Sonic Touch®II mounted in convenient heavy duty movable stand
- Maintenance-free, real time clock with 1,000 hour buffer gold foil capacitor
- Analog resistive touch screen for use with gloves in industrial environments
- IP65 Front Screen Protection with multipoint sealing solution provides long lasting protection
- High resolution (800 x 480px), TFT screen, 262,000 colors with LED backlight
- CE, UL & cUL certified
- USB ports -allow upgrades, program changes, recording and downloading data
- Ultrasonic Power function On/Off control
- Pump and filter system On/Off control
- Countdown Timer for Ultrasonic operation
- 7-day programmable Timer for Pump and filter system
- Switching between Celsius and Fahrenheit
- Ultrasonic intensity display slider and indicator
- Sweep Control for the Generator
- Clock and Date Indicator
- Elapsed Time Meter for ultrasonic Power monitoring
- Elapsed Time Meter for pump and filter system monitoring
- Patented LCS (Liquid Condition Sensor) display- monitors cavitation activity levels for validation functions
- Frequency Display- displays frequency output for individual generators
- Power Output Display- displays accumulative output relative to number of generators
- System Setting Monitor- Auto saves system settings every 5 minutes*
- Heating system temperature offset adjustment
- Ultrasonic generator power output indicator alarm
- Ultrasonic generator power output indicator alarm log
- Data Recorder- continuous recording of system status in real time. Records while machine is on. Data can be stored on flash drives.
- Email/ SMS functions- can provide email or text notices for maintenance schedules or alerts selected by supervisor

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- System Diagnostics
- VNC Control Technology- Android/iOS capability using a VNC app for full system monitoring and control
- Password protected control for Level of User (Operator/Supervisor)
- Preventative Maintenance Timer/Schedule function
- SOVI ® (Sonic Output Validation Indicator) diagnostic system- validates operating condition of the system. Error code indicates fault.

Automation PLC will control:

Lower fixture into tank and raise it back to original position (option for agitation)

Wash time

Wash agitation option

Heater Temperature

Auto fill and drain (programmable for every cycle or multiple thereof)

Multiple programmable recipes

Manual Controls-

- Main Power
- E-stop (emergency stop)- E-stop stops automation functions

GENERAL CONSTRUCTION

Tank Material: 316L stainless steel with a #4 finish

Skirt Material: 304 stainless steel

Base: 80/20 aluminum extrusion

Plumbing:

- Fill connection located on right end of system
- Overflow connections located on right end of system
- Drain connection located on right end of system
- Overflow connections located on right end of system

Electrical Box: Single point electrical connection located on left end of system

INSTRUCTION MANUAL:

The equipment is furnished with an operator's manual containing a description of the ultrasonic generator and the transducers, general care, safety precautions and a list and description of the operation system controls and indicators along with an electric schematic.

TEST:

The machine is given a full operational test prior to shipping. If the customer wants to witness this test he must advise Ultrasonic Power Corporation in writing of any specific criteria he will want to test in addition to the normal operational test. This notification of witnessing of the test must accompany the purchase order.

GUARANTEE:

The equipment is warranted in accordance with the standard Ultrasonic Power Corporation warranty certificate.

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