

PRODUCT NOTE

Features & Benefits

- Designed to reduce chemical and water usage and effluent costs
- Proprietary nozzle for conformal etch
- Separate HF and nitric acid tanks for blending
- Pre-mix reservoir, including DI water mix
- Recirculated blend of acids for extended life
- Concentration monitoring available for spiking

Acid Cleaning System for Quartz Tubes



MTS-VTW 1036 Vertical Tube Wash

MicroTech's VTW 1036 Vertical Tube Wash is an acid cleaning system for quartz tubes. Acid is sprayed from an onboard reservoir. The system incorporates two holding tanks, one for HF and one for nitric, or alternative chemistries may be used depending upon the contaminants. One or both chemicals can be metered in to a pre-mix reservoir incorporating a DI water mix. This blend is mixed and pumped to a spray manifold and recirculated through a filter for extended life.

A concentration monitoring system measures the chemistries and allows for spiking of the reservoir with one or both chemistries. The VTW 1036 can be programmed to allow a mixture of chemistries, and it incorporates a three-step process of light etch, rinse and dry. The Vertical Tube Wash is designed to reduce chemical use, water use and effluent costs.

System operation is controlled through an ergonomically located color touch-screen



The tube washing chamber contains a proprietary nozzle for conformal etch.

with a user-friendly graphical user interface (GUI) and the latest PLC control system. Software features incorporate data logging and trending as well as multiple recipes, security levels and the ability to name your own recipes and chemicals – providing the ultimate cleaning flexibility.

The VTW 1036 incorporates a proprietary nozzle configuration that ensures a conformal etch. The unique hardware and recipe-driven software accommodate multiple form factors of tubes up to 36" and enable the user to quickly change the system configuration. The VTW 1036 accommodates flanged tubes, open liners, closed end, single wall, and double wall tubes.

MTS-VTW FM-Compliant PVC-C Construction

Quartz Cleaning Chamber

PVDF construction
Acid and DI rinse spray system
Acid spray delivered through pump
Dry cycle
Tube carousel
Drain to AWN or recovery reservoir
Divider with internal door to contain spray

HF Acid Reservoir

PVDF construction
Pump for acid dispense
Manual fill through cup sink or autofill from chemical dispense system

Nitric Acid Reservoir

PVDF construction
Pump for acid dispense
Manual fill through cup sink or autofill from chemical dispense system

Acid Re-Circulation/Recovery Reservoir

PVDF construction
Level sensor
Pump with filter chamber
Recirculation loop: recirculate acid and water
pH monitor
Drain rinse water to acid waste or to DI reclaim

PLC Control System

HMI through 10" color touch-screen
Graphical user interface
Graphics display real-time tank levels, drain conditions and pump status
Recipe-based user-friendly software
Historical data logging, alarms and recipes

Concentration Monitoring System

MicroTech has a unique concentration monitoring system which allows closed-loop control of the chemistries. When depletion occurs to a preset concentration level, the system is able to automatically spike to the appropriate level. The system is designed to support one or multiple chemistries.

Facilities Requirements

DI water inlet: 1" FNPT, 12 gpm @ 60 psi

DI water return: 1/2" FNPT

DI water reclaim: 1" FNPT

Nitrogen: 3/4" FNPT, 18 cfm @ 60-80 psi

Chem 1 supply (optional): 1/2" FNPT, 25-30 psi

Chem 2 supply (optional): 1/2" FNPT, 25-30 psi

HF/HNO₃ waste: 3/4" FNPT

Acid drain: 1" FNPT

Exhaust: 6" collar, 400 cfm

Electrical: 208 V, 25 amp, 1 phase



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