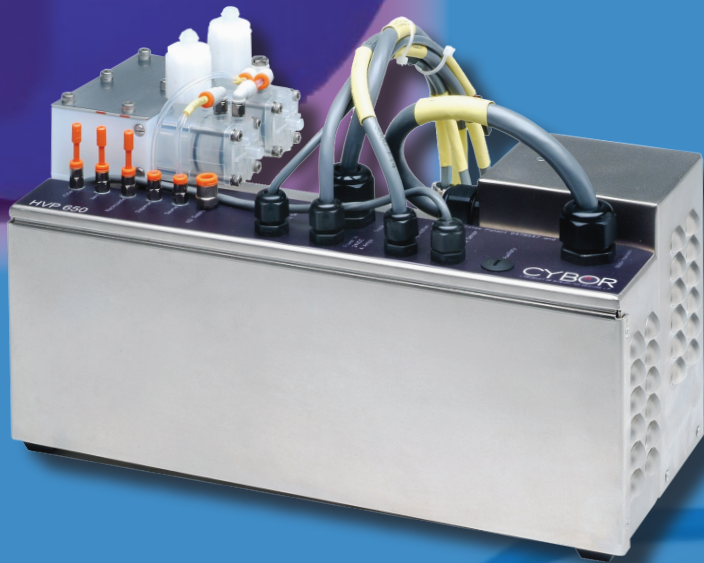


IDI - CYBOR

Model 650 High Viscosity Pump



The Intelligent Pump for High Viscosity Dispense

Enhanced performance in a smaller footprint... The M650 now has a 17% smaller footprint with enhanced operational and programming capability. The M650 is designed to dispense high viscosity semiconductor processing chemicals from resist to polyimides to BCB's as high as 50,000 cP. The CYBOR M650 HVP combines stepper motor technology with state of the art hardware and software control technology to deliver a superior, repeatable high viscosity pump solution.

The CYBOR M650 uses patented software control technology to monitor and control the dispense operation. Enhancements in software allow for quick process tool interface selection. With a simple icon selection the M650 pump auto configures the Trigger, Dispense/EOD, Ready, Error, and Warning signals. The M650 has expanded the on board recipe library. Now up to 8 recipes can be user selected thru discreet wiring or the RS232/485 communications.

What the M650 HVP can do that no other high viscosity pumps can do:

- Dramatic reduction in time to prime and purge
- Automatic setup with minimal operator intervention
- Software feedback provides real time diagnostic information of the pump's operation
- SSED - Software Source Empty Detection
- Significant reduction in waste during fluid change overs and PMs

Dual trigger capability allows for pre-dispense and process dispense volumes. Each can be individually programmed.

The patented advanced statistical algorithms can literally anticipate out of control conditions before they occur. After dispense volumes are "programmed" in the pump will automatically compensate for any changes in the pump's mechanical operation, assuring a consistent, repeatable volume.

In addition, you'll find the benefits of dependable, trouble-free operation. CYBOR's modular design of the M650 allows for the quick and easy separation of the entire pump chamber assembly from the mechanical portion of the pump. Efficient maintenance can be performed without breaking into the fluid path of the pump, thus eliminating the risk of introducing air into the lines.

Using the Model 650 HVP ensures that you'll be using the most well designed and technologically advanced high viscosity dispense unit in the industry.

CYBOR

INTEGRATED DESIGNS, L.P.

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CARROLLTON, TEXAS 75007
(972) 466-2626

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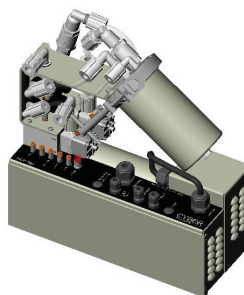
Introducing a Breakthrough in High Viscosity Chemical Dispense

The CYBOR Model 650 HVP

Features:

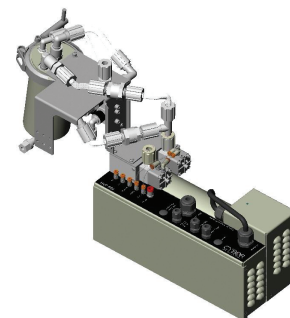
- Variable Rate Dispense
- Teflon enclosed seamless diaphragm pump chamber eliminates the need for hydraulic fluid and O-rings, reducing the possibility of contamination due to wear of moving parts
- Patent pending technology
- QuickPurge & QuickPrime features
- Straightforward design with a minimal number of fittings
- All Teflon fluid path
- Built-in leak detection
- CE certified
- Multiple recipe select capability
- Pre configured Interface Modes
 - IDI Mode
 - SVG 8X
 - SVG 9X
 - TEL ACT 12 & 8
 - FSI
- Eight recipes selection capability
 - Discreet Wire Selection
 - RS232 /485 Selection
- 3 valves configurations:
 - 3/8" output x 1/2" Input
 - 3/8" output x 3/8" input
 - 1/2" output x 1/2" input
- Programmable suckback

- SSED - Software Source Empty Detection
- Optional filtration system
- Software feedback of real time diagnostic information
- Automatic setup
- On-board controller
- RS232/RS485 communications to host computer
- Windows/Windows NT software
- Programmable auto vent



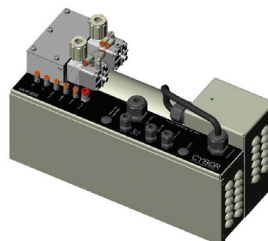
STANDARD FILTERED PUMP

Dimensions: 5.29" W x 13.36" L x 12.99" H
(134.5 mm x 339.2mm x 330.0mm)



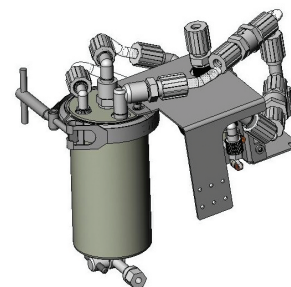
OUTBORAD FILTERED PUMP

Dimensions: 7.09" W x 20.26" L x 12.62" H
(179.9mm x 514.7mm x 320.5mm)



NON FILTERED PUMP

Dimensions: 5.29" W x 13.36" L x 7.50" H
(134.5mm x 339.2mm x 190.4mm)



REMOTE FILTER

Dimensions: 7.0" W x 11.5" L x 8.9" H
(177.8 mm x 292.1 mm x 226.1mm)

Model 650 HVP DATA SHEET

Dispense Volume Range	0.1-20 ml
Dispense Volume Repeatability	<0.1 ml (at 3
Dispense Rate	0.01-10 ml/sec*
Viscosity Range	50,000cP (500P)
Dispense Pressure Range	Up to 190 psi
Re-circulation	Programmable (<= 20 ml)
Dispense Mode	Constant or variable rate
Suckback Volume	0.1-10 ml
Purge Volume	60 ml
Purge Time (average)*	< 2 hrs
MTBF	>1,000,000 dispense
MTTR	< 2 hrs
Certification	CE
Input Voltage	24 VDC, 5A Maximum
Inlet Gas Type	Nitrogen or CDA
Exhaust	0.75 cfm
Fluid Path	All Teflon
Chemical Compatibility	Polyimides, Solvents, Resists
Size: 0.5" version	15.25"L x 5.46"W x 8.56"H
0.375" version	15.25"L x 5.46"W x 7.5"H
Filter Option	Pall or Millipore (5"/40 stack)

* Dependent on one or more of the following variables: output line length and diameter, chemical viscosity, dispense pressure and time.

US Patent 6478547, Taiwan Patent, 146865; Other Patents Pending
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*The Easy Choice...
For Chemical Management Solutions*



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by

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