

## MB AUTO-SPS

### SOLVENT PURIFICATION SYSTEM



- Ready to operate, automatic solvent purification system
- Purify up to 800 liters before column replacement
- PLC controlled color touch screen with safety interlocks
- Purify 5 solvents per system
- Connect directly to MBRAUN glovebox or use as a stand alone unit
- Integrated fume hood easily connects to HVAC system
- Flammable liquids cabinet ensures lab safety
- Safe alternative to distilling and eliminates possibility of user error
- Automatic and semi-automatic modes as standard equipment
- Color coded design from reservoirs to dispensing valves
- U.S. Patent pending

# MB AUTO-SPS

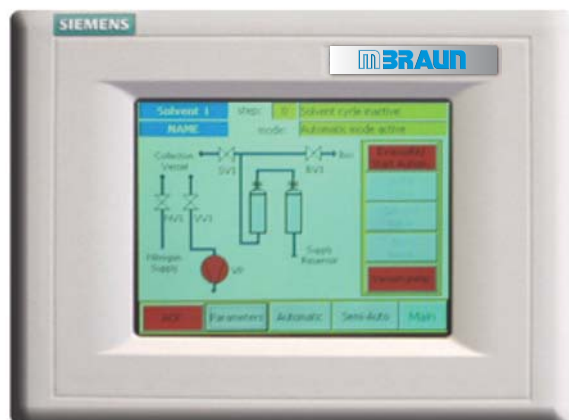
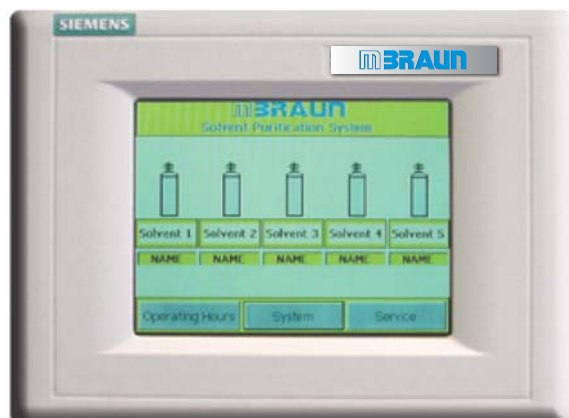
## Technical Data

### General Data

**Product:** Solvent purification system **MB AUTO-SPS**  
**Type:** PLC controlled (5) double solvent column purification system fully encapsulated with removable panels  
**Dimensions:** 800 mm depth x 1450 mm width x 1920 mm height

### System Control

**Control unit:** Programmable logical controller (PLC)  
**Operation:** 5.7" full color touch panel with simulated multi-language operation elements for all solvent purifier components. System showing operation instructions, messages and status of valves  
**Electrical power:** 230 V/50-60 Hz, 10 A or 115 V/ 50-60 Hz, 20 A or 100 V/50-60 Hz, 20 A



## Solvent Purification

### Working Gas

**Inert gas:** Nitrogen, 5 psi working pressure  
**Safety:** Auto-SPS equipped with pressure relief valves

## Solvent Purification

### Attainable Purity

Purity varies upon solvent

### Process

**Solvent Purifier:** Closed loop system

### Solvent filtration

Removal of H<sub>2</sub>O

### Purifier

**Amount / type:** Double column purification system  
**Capacity:** 800 l of purified solvent prior to replacing  
**Material:** Swagelok Stainless Steel vessels

### Activation

Columns are activated before shipment of solvent purification system. New columns can be purchased when old columns purify 800 liters of solvent. Replacement columns will be activated prior to shipment.

### Manifold System

**Material:** Completely automated with no possibility of cross contamination  
**Dispensing:** Outside or inside glovebox or both

### Vacuum Pump

**Type:** Oil free diaphragm vacuum pump (additional pumps available upon request)

### Valves

**Dispensing valves:** Swagelok S.S. pneumatically controlled valves  
**Flow control valves:** Color coded Swagelok S.S. needle valves

## Technical Data

### System

Entire system (pipes, valves, solvent reservoirs) must be purged with Nitrogen after commissioning (removal of ambient air and Moisture)

- solvents newly filled into storage vessels can be degassed by means of Nitrogen purging
- exhausted purifier columns are disposed by customer, activated columns are delivered by **MBRAUN** for replacement
- Solvent storage vessels delivered by solvent provider, including dip tube, (Aldrich, Fisher, JT Baker or others), optional vessels available by **MBRAUN**

Compact system stacked (lower part: solvent storage in fire proof cabinet, upper part: purifier columns, PLC controlled pneumatic valving)



## Technical Data

### System

**Lines:** 5 independent lines for a maximum of 5 different solvents. Individual lines are color coded for safety and ease of use. Can be degassed by means of Nitrogen purging

**Capacity:** Maximum filling capacity of solvent reservoir

**Solvent flow:** 1000 ml/min, fed by Nitrogen over pressure in storage vessel (approx. 300 mbar).

Purified solvent can be dispensed inside/outside glovebox or both. Filling vessels outside the glovebox: evacuation before filling by means of vacuum pump, refilling with Nitrogen after filling with solvent

**Flammable liquids storage:** Cabinet designed in accordance to NFPA code 30 regulation

**Vapor removal:** Integrated fume hood connects to customer supplied HVAC system via 4 inch port located on top of system

**Solvent system enclosure:** Removable panels for easy access and replacement of purifier columns



### Supplies

**Working gas:** Nitrogen 0,3 bar (5 psi) for solvent transport and purging

**Power supply:** (vacuum pump, PLC)

**Air exhaust:** (solvent vapors from safety cabinet)

# MB AUTO SPS

## Filter Columns

### Type

**Material:** 304 Stainless Steel

**Wall thickness:** Min. 3.0 mm

**Column sizes:** 1 Gallon (3.8 Liter)

## Emergency Shut Off Switch

Red switch located on front of system to ensure safety. Button is depressed and all system functions are turned off, valves close and system relieves vessel pressure

## Glovebox Integration



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