

# Mixed4Sure<sup>™</sup> Bottom Mount Pro – M4SB Pro



Mixed4Sure™ Bottom Mount Pro is an aseptic, closed-system mixing platform that offers low shear and vigorous mixing. Available in several volumes and custom configurations, enabling it to be used in a variety of mixing steps. The M4SB Pro integrates a Heating/Cooling Finger and pH and conductivity sensors.

- · Performance extensively verified
- · Detailed E&L according to BPSA guidelines
- · Cap2V8® closure integrated
- · Single-use sensor integration
- · Heating/cooling capability

Features	Benefits
4-Blade Bottom-Mounted Impeller	<ul> <li>Extremely low minimum mixing volume: 2–10% (depending on bottle volume)</li> <li>Able to efficiently mix viscous solutions: ≤500 cps</li> <li>Excellent performance in liquid and powder mixing scenarios: &lt;42 sec for 20 mg/ml NaCl</li> <li>Powerful mixing: for powder-liquid and viscous solutions</li> <li>Low shear mixing: protein degradation minimized</li> </ul>
Cap2V8® Integration	· One-piece molded cap design with continuous flow path · Last Drop™rigid dip tube ensuring >99.9% product recovery (worst case)
<b>Temperature Control</b>	Heating/Cooling Finger can be added to allow heating and cooling of your process solution
Sensor Integration	High-accuracy sensors for temperature, pH, and conductivity
PharmaTainer™	<ul> <li>Available in PC or PET depending on application needs</li> <li>Cubical geometry enhances product turnover, further optimizing mixing kinetics</li> <li>Suitable for freeze and thaw processes (–52 °C)</li> </ul>

## **Computational Fluid Dynamics (CFD)**

CFD is a technique that enables simulation of fluid motion in a system. SaniSure® has used this method to provide an indication of mixing performance of the Mixed4Sure® Bottom Mount. In one experiment this analysis demonstrated that the shear stresses created in M4SB did not exceed  $10^3$  s<sup>-1</sup> and are significantly below the threshold required for protein degradation ( $10^7$ – $10^8$  s<sup>-1</sup>).





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### **Materials**

- · PharmaTainer™: Polycarbonate (PC) or Polyethylene Tetraphthalate (PET)
- · Cap2V8®: Polypropylene (PP)
- · Last Drop™ dip tube: Polypropylene (PP)
- · Impeller: PEEK & Polyphenylsulfone (PPSU)
- · Powder Funnel Port: Polycarbonate (PC)
- · pH sensor: Glass, VMQ (Si elastomer)
- · Conductivity sensor: platinum, glass/ceramic, Polypropylene (HDPE)
- · Heating/Cooling Finger: Passivated 316L stainless steel (15ra)

## **Packaging**

· Double-bagged and labelled in an ISO Class 7 cleanroom

### **Sterilization**

- · Gamma irradiated
- · Sterility assurance level 10-6

# **Applications**

- · Buffer & media preparation
- · Ultrafiltration/diafiltration
- · Resuspension/homogenization
- ·Compounding

## **Ordering**

# Product Code Pro Configuration [CONFIG C] \$564003\$ MIXED4SURE M4SB 5L PC HCF PH COND \$564038\$ MIXED4SURE M4SB 5L PET HCF PH COND \$564008\$ MIXED4SURE M4SB 10L PC HCF PH COND \$564043\$ MIXED4SURE M4SB 10L PET HCF PH COND \$564013\$ MIXED4SURE M4SB 20L PET HCF PH COND \$564048\$

Pro Configuration with Powder Funnel Port [CONFIG D]		
SS64002S	MIXED4SURE M4SB 5L PC FP HCF PH COND	
SS64037S	MIXED4SURE M4SB 5L PET FP HCF PH COND	
SS64007S	MIXED4SURE M4SB 10L PC FP HCF PH COND	
SS64042S	MIXED4SURE M4SB 10L PET FP HCF PH COND	
SS64012S	MIXED4SURE M4SB 20L PC FP HCF PH COND	
SS64047S	MIXED4SURE M4SB 20L PET FP HCF PH COND	

## 1. Inlet

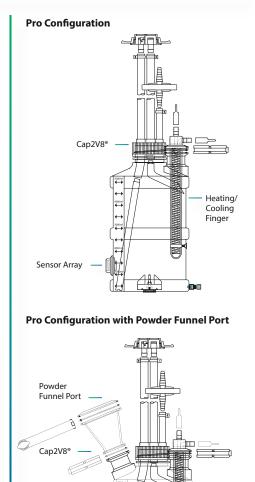
- Aseptiquik S (PC)
- CellGyn® 3/8" × 5/8" (TPE) 18"
- PP Rigid DipTube (PP)

## 2. Outlet

- Aseptiquik S (PC)
- CellGyn® 3/8" × 5/8" (TPE) 18"
- PP Rigid DipTube (PP)

# 3. Vent

- Vent filter (PP)CellGyn® 1/4" × 1/2"
- (TPE) 11"



# Americas

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## **Europe & Asia**

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Sensor Array

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Heating/ Cooling Finger