

# design data sheet

High Shear Mixers

## Ross HSM-100LCI-T Laboratory Mixer

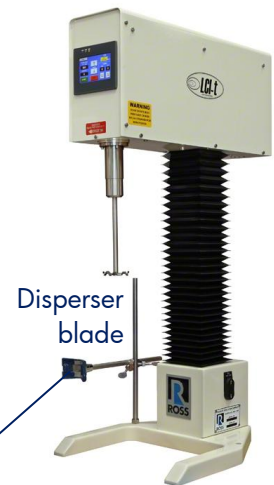
Color touch screen controls and display for speed, percent of load, batch timer and temperature.

Electronic variable speed control from 500 to 10,000 rpm (+/- 1% accuracy). Constant torque operation.

Dust- and fluid spray-resistant enclosure

Type 316 stainless steel wetted parts polished to 150-grit finish. Option: Hastelloy.

1 HP Variable Frequency Drive, 115 volt, 50/60 Hz, single phase, 20 amp, IP 55/NEMA 12 motor. Optional voltages are available.



Disperser blade

Tower cage assembly for the Batch High Shear Mixer (HSM) Attachment.

All non-stainless steel external surfaces are coated with white two-part epoxy paint.

Clamp assembly with chain for securing vessel/beaker in the mixing position (option).

Four-blade rotor and stator head

Optional temperature probe

Data acquisition/PC control option: Mixer can connect to and be controlled from a computer via USB, Ethernet or wireless hub. Data may be downloaded as a CSV file and viewed in Excel or Access format.

Sturdy frame for bench mounting.

Cord and plug included.

Up/down controls for electronic lift (15" of travel). Maximum clearance under mixing attachment: 16"



Mixer can be used with different size beakers and vessels. Atmospheric and vacuum-rated stainless steel vessels are offered as options.

12" between feet (base)



---

# INTERCHANGEABLE MIXING ATTACHMENTS

## Batch Attachments

Recommended batch size range: 0.3 to 4 gallons (1 to 15 liters)



### High Shear Mixer (HSM)

Includes one rotor, three stators\* and choice of Teflon, bronze or glass-filled Teflon bushing.



### High Speed Dispenser (HSD)

Includes one 2" saw-tooth disc blade and two four-blade propellers (1-1/2" and 2-1/4"). Other blade designs and sizes are available.

## Inline Attachments

Recommended mixing volume: 1 to 20 gallons (3.8 to 76 liters)



### Inline High Shear Mixer (Inline HSM)

Includes one rotor, three stators\* and single mechanical seal



### Quad High Shear Mixer (Quad HSM)

Includes one four-stage rotor/stator set and single mechanical seal

\*Interchangeable stators supplied with Batch and Inline HSM attachments:



Slotted

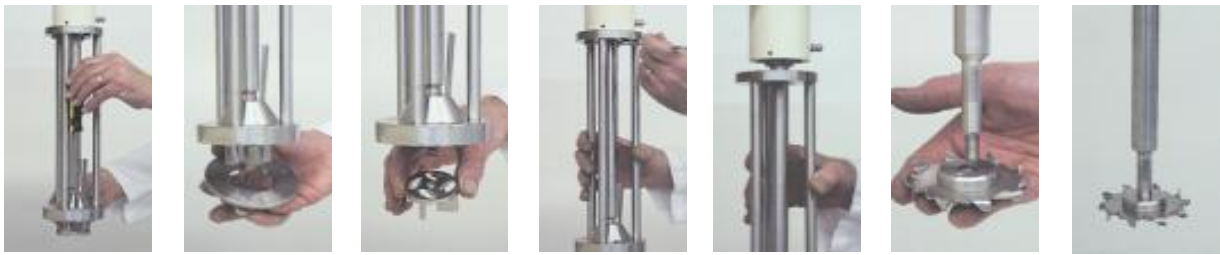


Round Hole Disintegrating



Fine Screen

The HSM-100LCI-T is designed for fast changeover between agitators. Swapping from a rotor/stator to a disperser attachment takes less than five minutes and requires two simple hand tools (a wrench and a drift pin).



### Micro High Shear Mixer Attachment (Micro HSM)

For small batch sizes (50 to 500 ml)



Includes one rotor, slotted stator and Teflon bushing.

Mixer weight: approx. 62 lbs (28 kg)  
(plus weight of attachments)

Maximum raised height: 39 3/8" (1000mm)

Overall width: 15" (381mm)

Overall length: 22 5/8" (575mm)

### SAMPLE APPLICATIONS

- Biodiesel blends
- Carbon dispersions
- Ceramic slurries
- Conductive inks
- Cosmetic creams and lotions
- Dyestuffs
- Electronic pastes
- Flavor emulsions
- Glass and paper coatings
- Greases and lubricants
- Gum dispersions
- Hair and nail coloring products
- Latex dispersions
- Low-viscosity adhesives
- Ophthalmic solutions
- Oral suspensions
- Paints
- Pharmaceutical emulsions
- Pigment and resin dispersions
- Printing inks
- Salad dressings, sauces and spreads
- Soaps and cleaning solutions
- Specialty chemicals
- Synthetic fuels
- Syrups and beverage emulsions