

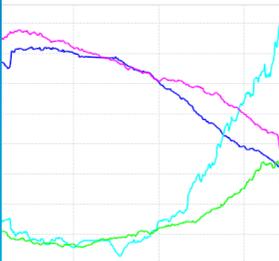
Measure Particle Distribution In-Process

Ensure Targeted Granule Size in Real Time



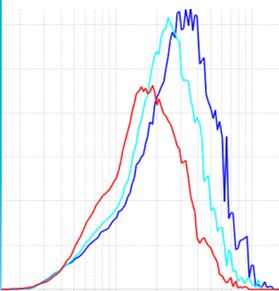
Understand Your Granulation

The new METTLER TOLEDO FBRM® C35 enables formulators and engineers to monitor real-time changes in particle count and dimension during cohesive wet or dry particle processing. *In situ* measurements enable Quality by Design (QbD) throughout granulation development, scale-up, and manufacturing.



Control Batch to Batch Repeatability

FBRM® trends enable formulators and engineers to troubleshoot unexpected process changes. Therefore, FBRM® can be used to minimize batch failures, improve yield, and troubleshoot scale-up or technology transfer.



Identify Batch Endpoint

FBRM® allows formulators or engineers to identify a distribution corresponding to the ideal batch endpoint in real-time. The FBRM® real-time distributions can then be tracked relative to this target distribution to ensure consistent downstream particle flow, tableting and dissolution.



Ensure Consistent Measurements

The innovative FBRM® C35 addresses applications where window fouling is a potential issue. A patented scraper keeps the FBRM® probe window clean allowing the system to track particle agglomeration, compaction, and breakage even in the most cohesive particle conditions.



FBRM® C35 Technology

FBRM® C35 enables formulation scientists and engineers to quickly associate particle system dynamics to processing conditions running fewer experiments than using traditional methods. This allows for faster understanding and optimization of a formulation with no sampling required.

METTLER TOLEDO FBRM® (Focused Beam Reflection Measurement) is the world leader in Process Analytical Technology for *in situ* particle characterization across the pharmaceutical and chemical industries.

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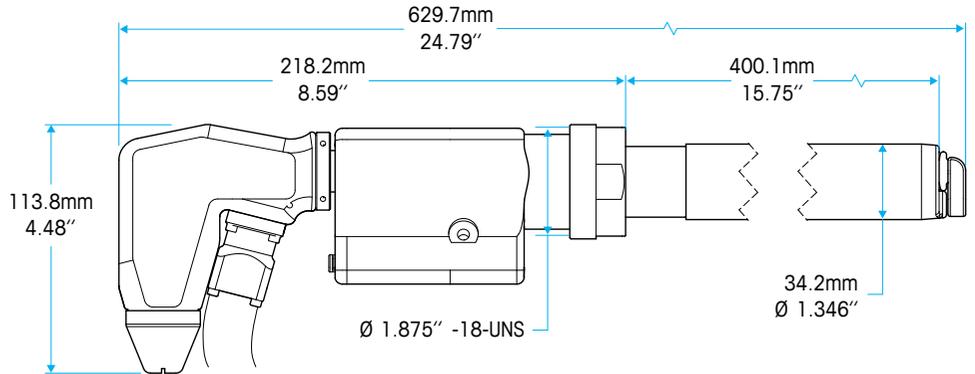
Reduce Development Time

Particle dimension is a critical parameter in high shear wet granulation. Formulators and engineers can reduce development time with FBRM® while designing process conditions which provide uniform flow properties and tablet dissolution profiles.

Optimize Scale-Up

FBRM® inline particle characterization can optimize and control batch to batch repeatability upon scale-up from the lab to manufacturing.

METTLER TOLEDO is the world leader with process analytical technology to track real-time changes to particle size and shape.



Material: Stainless steel

Probe window: Sapphire

Probe orings: Kalrez

Probe outer diameter: 34.2mm*
(*designed to fit in an 1.5" triclamp fitting)

Probe length: 400.1mm

Scanning optics drive: Pneumatic

Mechanical scraper drive: Pneumatic

Detection range: 3µm - 3000µm

Field unit: NEMA 4X Dust tight field unit

Temperature range: -20 to 120°C
(standard)

Pressure: 2.5 bar (standard)

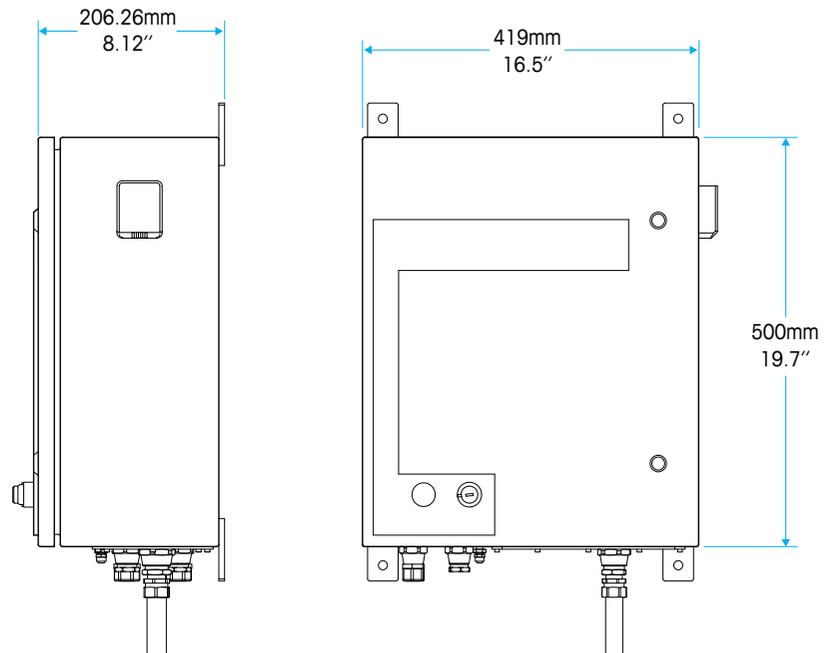
Blade: Replaceable

Conduit length : 5m

Mounting: 1.5" triclamp fitting (optional)

Certification: CE, Class 1 laser

Measurement Environment: Wet/Dry
Particles dispersed in a gas phase



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