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.
Technical Data

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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.

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**Material:** Stainless steel
**Probe window:** Sapphire
**Probe o-rings:** 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:** 1 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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Subject to technical changes 6-4-004B
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