



Q.i™

Material Feed Measurement &  
Cut-Off Control System



Simpler Engineering  
+ Consistant Production  
= Efficient Manufacturing

**Collaborative Thinking.  
Sustained Returns.**

METTLER TOLEDO

nefton  
Ζύγιση  
Σήμανση  
Συμμόρφωση

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# Optimize Your Batch, Blending and Filling Control Operations

Success in the increasingly competitive manufacturing business takes more than the latest technology or equipment. It requires a strategy that can increase efficiencies, reduce costs and generate profits — constantly and consistently. For manufacturing facilities that use batch, blending or filling control systems, that strategy for success is Q.i.

Q.i is the METTLER TOLEDO® innovative Material Feed Measurement & Cut-Off Control System. Comprised of hardware, advanced process control technology, Internet-enabled software, and collaborative services, Q.i:

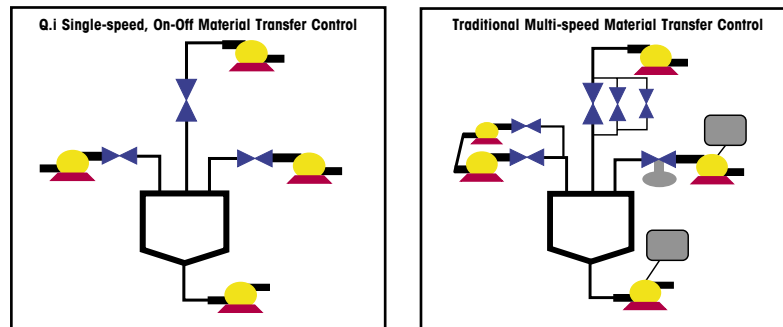
- Enhances batch, blending and filling control systems
- Increases material transfer speed and control
- Improves manufacturing capacity and quality
- Reduces manufacturing waste
- Measures and sustains performance and improvement
- Increases profitability and competitiveness

## Simplify Control. Reduce Costs.

Designed to integrate into new or existing control systems, Q.i works by replacing the traditional multi-speed control used in most batching and filling systems with simple, fast, single-speed, on-off control to achieve the fastest, most repeatable cut-off control available today.

By removing the more complex slow-feed control step inherent in multi-speed control systems, Q.i delivers significantly shorter batch cycle time. Raw material waste is reduced, which in turn lowers raw material costs. Q.i also reduces equipment design engineering, maintenance, and capital costs.

Taking advantage of a distributed control architecture, Q.i moves the time-critical part of the material transfer control from the batching, blending, or filling system's controller to Q.i's own material transfer controller (matroller). This allows control of the material transfer to be closer to the actual process, generating improvements. In real world applications, Q.i has increased manufacturing throughput by up to 30% and material transfer cut-off repeatability by up to 90% over previously deployed systems.\*



**Q.i's single-speed, on-off control requires less equipment and offers faster material delivery and with repeatable cut-off control.**

\*Based on results achieved by US based consumer goods manufacturer.

Quality Increases  
 Quicker Ingredients  
 + Quantifiable Improvement  
 = Quantum Impact

### Markets

- Food
- Beverage
- Chemical
- Specialty Chemical
- Pharmaceuticals
- Others

### Manufacturing Areas

- Batching
- Blending
- Filling

### Measurement Devices

- Weighing Scales
- Flow Meters

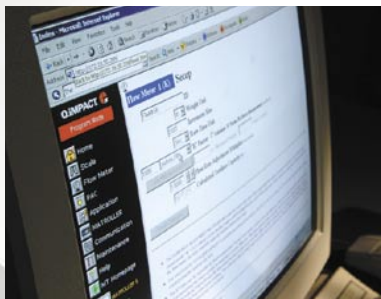
### Raw Materials

- Granules
- Powders
- Liquids
- Slurries



# Q.iIMPACT™

Simpler Engineering  
+ Constant Production  
= Efficient Manufacturing



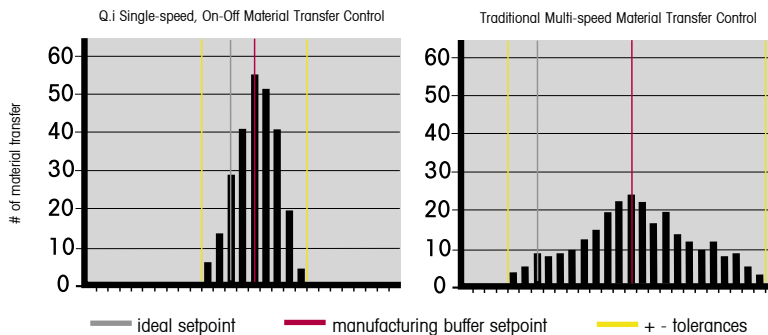
The Q.i IMPACT matroller contains an embedded web server that allows it to be configured using a standard web browser.

## Predict...Adapt...Control.

At the heart of Q.i is a set of patented algorithms exclusively licensed to METTLER TOLEDO®. The PAC (Predictive Adaptive Control) algorithms build a real-time mathematical model of the material transfer process for each material. The algorithms then automatically learn and compensate (auto-tune) for process variations in each active material transfer.

The PAC algorithms are embedded in the METTLER TOLEDO® Q.iIMPACT matroller, which is the hardware component of the Q.i system. There they constantly update and predict the exact adjustment required to yield the most precise material cutoff for every material transfer for its connected measurement devices (scales and/or flow meters).

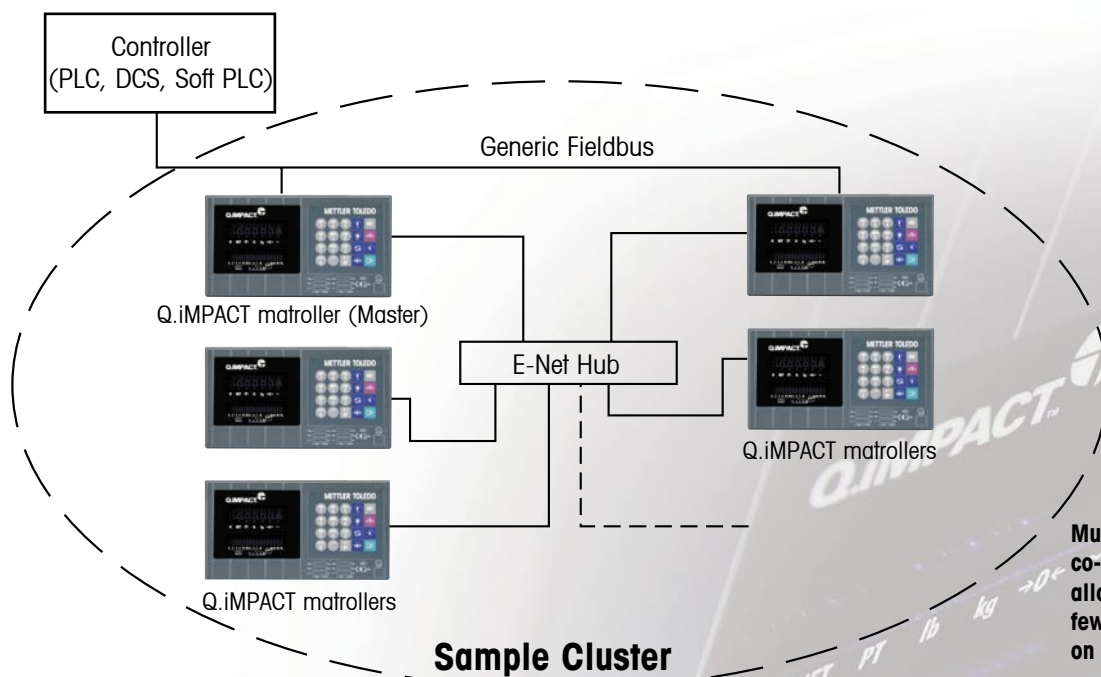
The Q.iIMPACT matroller can easily be integrated with leading PLC, Soft PLC, and DCS systems through one of its control system fieldbus option cards.



Improved control tightens tolerances to previously unattainable levels. Setpoints can be trimmed, reducing previous buffers. Less material used = less waste = reduced costs.



The Q.iIMPACT matroller is available in a harsh or panel-mount environment enclosure.



Multiple Q.iIMPACT matrollers can co-exist on an Ethernet network to allow for configurations of a few or a few hundred scales and flow meters on a single network.





## Q.i365 Sustains Results

The Q.i system also includes Q.i365, a combination of Internet-enabled software, collaborative production management tools, predictive/preventive diagnostics and a team of METTLER TOLEDO® experts.

Ever vigilant, the Q.i365 software watches over the material transfer processes and alerts your operations team and the Q.i365 team when problems are encountered so they can be resolved before disrupting production. It also gathers data for statistical, diagnostic and operational information on the material transfer control system, as well as for asset management, batch server, process control, spreadsheet or database applications, and more.

## Proven Performance

Q.i is built on the exclusively licensed PAC control technology which, in real world applications, has consistently proven its potential for material transfer efficiency enhancement and profit generation. Equally important, Q.i is built on the METTLER TOLEDO® 100 plus years of weighing and measurement expertise, which have made it the global leader for industrial, laboratory, and retail weighing solutions.



The Q.i365 team, available around the clock and around the globe, is ready to work with your production team to keep your material transfer control system running smoothly.

## Collaborative Thinking

METTLER TOLEDO® is dedicated to helping customers be more competitive and profitable by developing innovative technologies and strategies, using experts in their fields, and encouraging mutually beneficial alliances with leading system integrators, control system manufacturers, and customers. By collaborating to bring together the best ideas and the best technology, METTLER TOLEDO® delivers the best solutions.



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