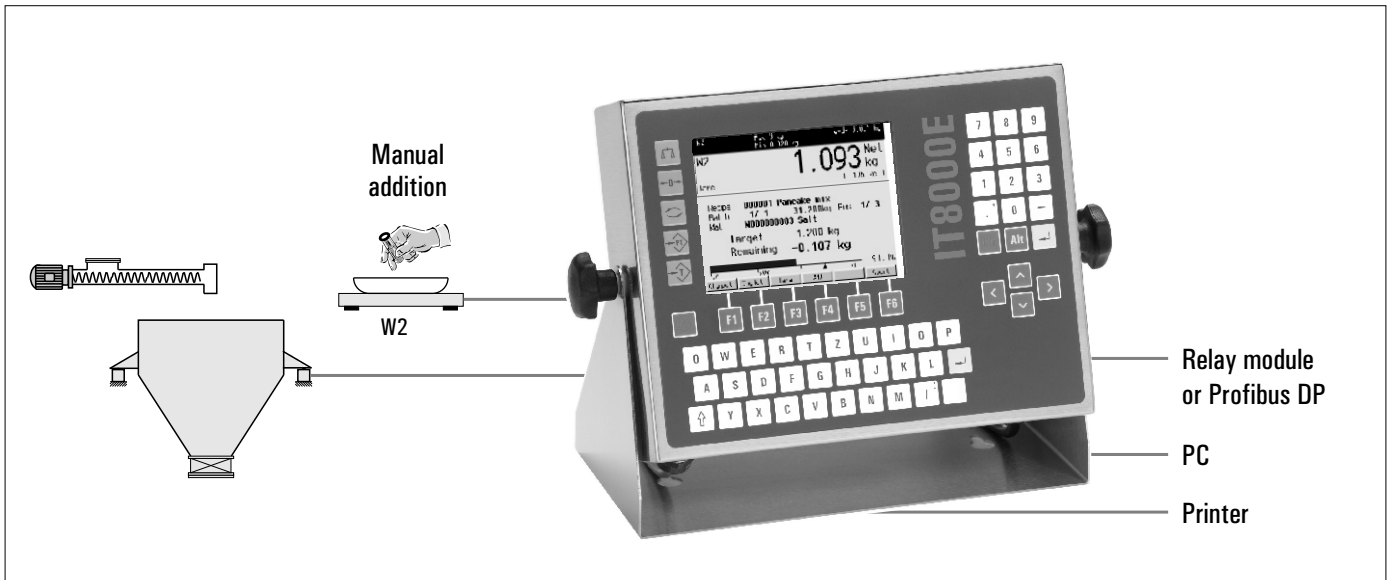


Batchweighing Controller with Onscreen Operation for Automatic and Manual Batching of Solid and Liquid Materials at 1 to 4 scales



IT8000E BATCH is a batchweighing controller for automatic weighing of solid and liquid materials in the **chemical, pharmaceutical, food and other industries**.

The controller connects to loadcells or scales of all types and weight ranges, including Ex-area applications.

IT8000E BATCH is suitable for:

- Automatic multi-ingredient batchweighing in hoppers, mixers or tanks,
- Recipe batchweighing on floor and pit-mounted scales including control of manually added ingredients,
- Subtractive batchweighing (weighout) from hopper scales.

The system controls fast and dribble feed of **valves, screw feeders or similar for up to 31 materials**.

Batching sequences are recipe-controlled. Recipes contain functions for automatic or manual weighing, weight tolerance check, operator inputs and synchronization steps.

Production and processing procedures can also be included into an automatic cycle, simply, safely and fast.

The controller offers functionality to conform with ISO 9001 standards:

- Accurate fill control through fast signal processing, trend-sensing preact adjustment and weight tolerance control.
- **High operational security** through extensive monitoring functions and simple operation via onscreen menus.
- Operator prompting and permanent indication of status with **clearly structured menus on color screen** ensure fast and error-free operation and minimum training requirements.
- **Recording of all data** in a batch log, totals for raw material usage, production quantities and error reports.

The controller is available in two styles:

- **Compact stainless steel enclosure (IP65)** for desk-top or wall mounting, or
- **Panel-mount housing.**

IT8000E BATCH is designed for:

- **Semi-automatic operation**, as stand-alone batchweighing controller with its own recipe and raw material database, or
- **Automatic operation**, linked to a process control system or PLC with database maintenance and overall process control.

Sequence and operation are configurable and can be adapted to the requirements of a specific application.

Typical sequence in semi-automatic operation:

To start a batch, batch size, number of batches and, possibly, application-specific data are keyboard entered. The sequence is started via the keyboard or from an external signal.

A batch log is printed at the end of each batch.

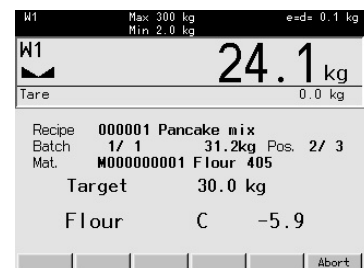
Error messages are displayed in clear text and printed out on a printer (if connected).



Entry of target values



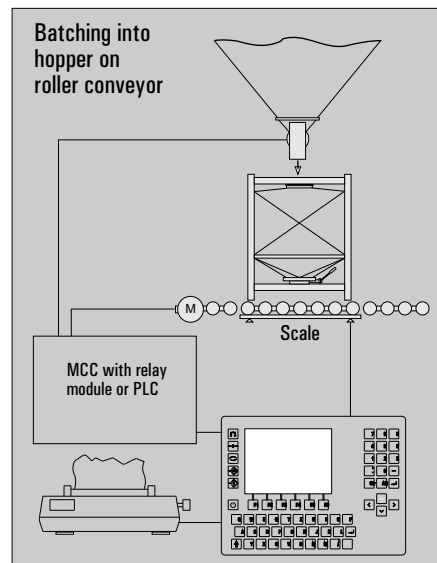
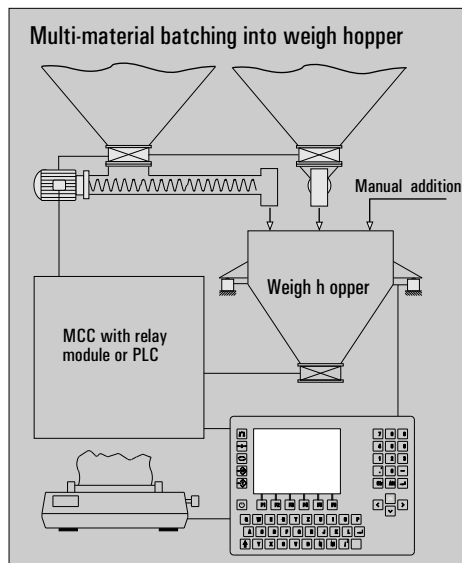
Manual weighing with bargraph display



Automatic batching



Table of raw materials



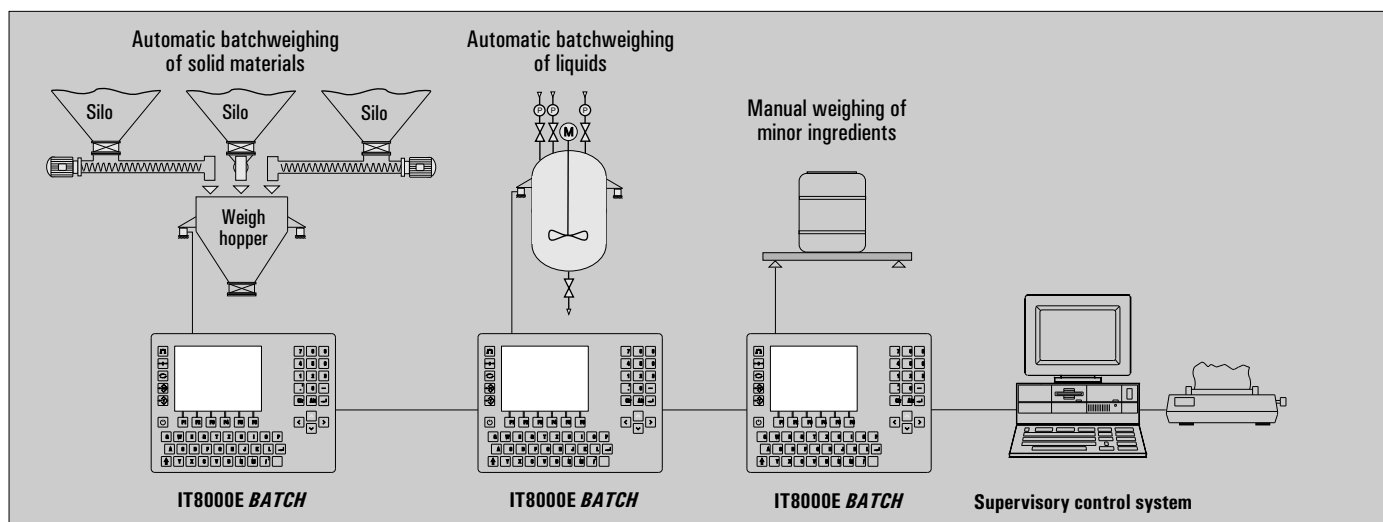
Typical sequence in automatic operation:

To start a batch, recipe-No., batch size, No. of batches and the start command are transferred to the IT8000E BATCH over Ethernet.

During a batching sequence it is possible to continuously output status

information and actual weight over the Ethernet interface. On completion of a batch, batch information is transferred to the host system.

Automatic operation is typically used when a number of batchweighers equipped with IT8000E BATCH controllers are employed.

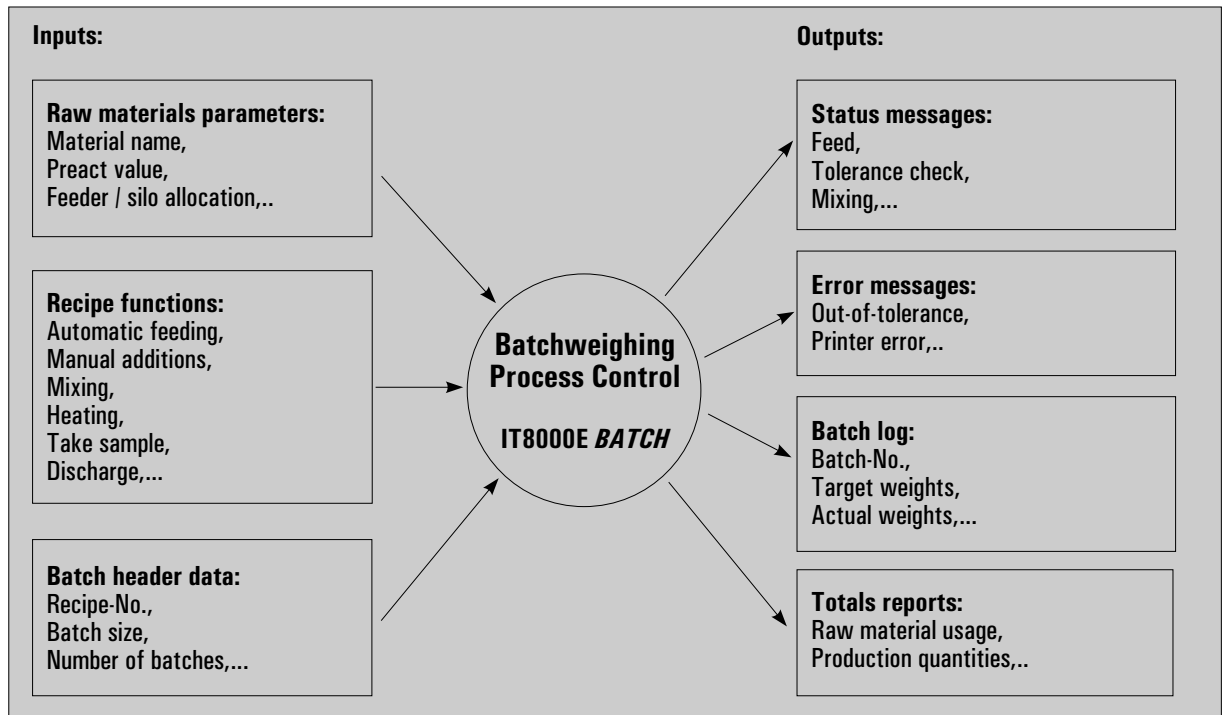


Recipes:

- **Recipe database** with max. 300 recipes and max. 5000 recipe lines
- **Capturing of production quantities** for each recipe.
- **Each recipe line may have one of these functions:**
 - Automatic fill control
 - Manual additions
 - Subtractive weighing
 - Discharging
 - Zero check
 - Tare check
 - Confirm fixed value
 - Read data word
 - Write data word
 - Text prompts with operator acknowledgement
 - Synchronization step
 - Time preset
 - Control of mixer, heater, feeder, etc.

Raw materials:

- **Automatic batching** of up to 31 raw materials.
- **Manual batchweighing** of a further 269 materials.
- **Parameter entry** of material-No., name, preact value, etc. for each raw material.
- **Feeder assignment** (eg to silos) is configurable.
- **Capturing of raw material usage** for each material.



Typical batchweighing sequence for a mixer mounted on loadcells:

- Zero check
- Automatic feeding of major materials with tolerance check and preact adjustment
- Manual addition of minor materials with tolerance check
- Mixing
- Wait for request signal
- Discharging
- Transfer and/or print batch log.

Typical example of a recipe batching sequence for a container on a roller-bed scale:

- Zero check
- Move container onto scale
- Tare control
- Automatic feeding of materials with tolerance check and preact adjustment
- Move container off scale.

Feed control:

- Fast and dribble feed with countdown display and tolerance check.
- Manual feeding with display of remaining target weight and bargraph display, with capturing of batch-Nos.
- Manual filling with change of item and horizontal weighing
- Automatic recalculation of target weights based on desired batch size.
- Automatic trend-sensing preact adjustment (selectable).
- Automatic top-up feed (jog) in the event of minus tolerance (selectable).
- Material flow check with violation alarm (selectable).
- Automatic intermediate discharge when batch size is larger than weighing range (selectable).
- Capturing of operator-No.

Operation:

- Operator prompting on high-contrast TFT color display, data entry via alphanumeric sealed membrane keyboard or optional PC keyboard.
- Sequence and operation can be individually configured. This eliminates unnecessary operator steps.
- Input, printout and transfer of application-specific data, eg order-No. or batch-No.
- Operator prompting in English, French or German, other languages on request.

Reporting:

- Batch log
- Error messages
- Files, totals, parameters
- Logging on printer and/or to file (internal memory or external USB device).

Files:

- Recipe file with 5000 function entries (recipe lines).
- Raw material file with 300 entries.
- Parameter file.
- Personnel file with 100 entries.

Simple integration:

- Stand-alone or remote-controlled operation possible - material parameters, recipes, etc. can be keyboard entered or downloaded.
- Accept, Start, Interrupt functions are possible via external switches.

Weighing electronics:

- Integrated signal amplifier for connection of up to 2 scales with 8 strain gauge loadcells each in 4- or 6- wire mode.
- Two more scales can be connected via external ADCBox.
- Calibration as single or multiple-range and as single or multi-interval scale.
- Fast signal processing (50 - 800 updates / sec).
- Weights and Measures approved resolution of 6,000d with a maximum preload of 80%, 524,000d internal resolution.

Operating temperature:

-10°C to +40°C, max. 95% relative humidity, non-condensing.

Security:

- Data are retained in the event of power loss.
- Power fail recovery, continuation of program possible after power failure
- Password protection for all data
- Battery-backed realtime clock
- Display, printout and transfer of all error messages is possible.

Ethernet interface (Option: WLAN):

Connection to PC network via integrated Ethernet interface with configurable IP address, for data transmission to printer/PC (option), for communication with the host system or remote diagnosis over Internet.

Serial interfaces:

- For printer (option)
- RS232, 20mA CL, RS422, RS485, selectable, protocol/baudrate configurable.

Integrated USB interface (Option):

for connection of PC keyboard, scanner, printer or USB stick.

Parallel interfaces / fieldbus:

- 8 internal opto-isolated inputs / outputs (24V) or
- External relay modules to connect to MCCs / PLC or
- Profibus DP, Profinet or Modbus TCP to connect to MCCs / PLC / host system.

Electrical connections:

115 (-15%) – 240 (+10%) VAC; 50/60 Hz, option: 12–30VDC, power consumption max. 20 VA.

Accessories:

- Support stand for floor mounting
- Relay module with secure separation of inputs and outputs (24V, 3A).

Construction:

Desk/wall version



- Stainless steel housing, IP65
- for desk-top or wall-mount installation or with optional column for floor mounting
- Dimension WxHxD: 330x239x134mm

Panel-mount version



- Stainless steel housing fascia plate protected to IP65
- Panel-mount installation
- Dimension WxHxD: 285x224x69mm
- Cutout in panel: 268x207mm

Display / operation:

Bargraph display

W2	Max 3 kg Min 0.020 kg	e=± 0.001 kg
1.093 kg		
Tare	0.195 kg T	
Recipe	000001 Pancake mix	
Batch	1 / 1 31.200kg Pos. 1 / 3	
Mat.	N00000003 Salt	
Target	1.200 kg	
Remaining	-0.107 kg	
91.1%		
Chg pot	Chg lot	Tara X10 Abort


Manual weighing
with bargraph display

Raw material table

W1	Max 300 kg Min 2.0 kg	e=± 0.1 kg
0.0 kg		
Tare	0.0 kg	
M00000004	Ammonium bicarbonate	AmBiCar
M00000008	Butter	Butter
M00000006	Caramel	Caramel
M00000001	Flour 405	Flour
M00000003	Salt	Salt
M00000011	Sodium bicarbonate	Sodium
M00000005	Vanilla	Vanilla
M00000010	Water	Water
M00000009	Whole milk powder	Whole m
Exit		

Maintenance of
of raw material file

Directives: 2009/23/EC, 2004/108/EC, 2006/95/EC

 EC-approval as non-automatic weighing instrument

 ETL-certified in accordance with UL 60950-1 and CSA C22.2 No. 60950-1

Standards: EN 45501, OIML R76-1, EN 61000-6-2, EN 61000-6-3, NAMUR NE21, EN 60950

 EMI compliance with FCC Part 15