The right formula every time.

Accurate automation with IND690batch ensures reproducibility.

Article No.

Job No.
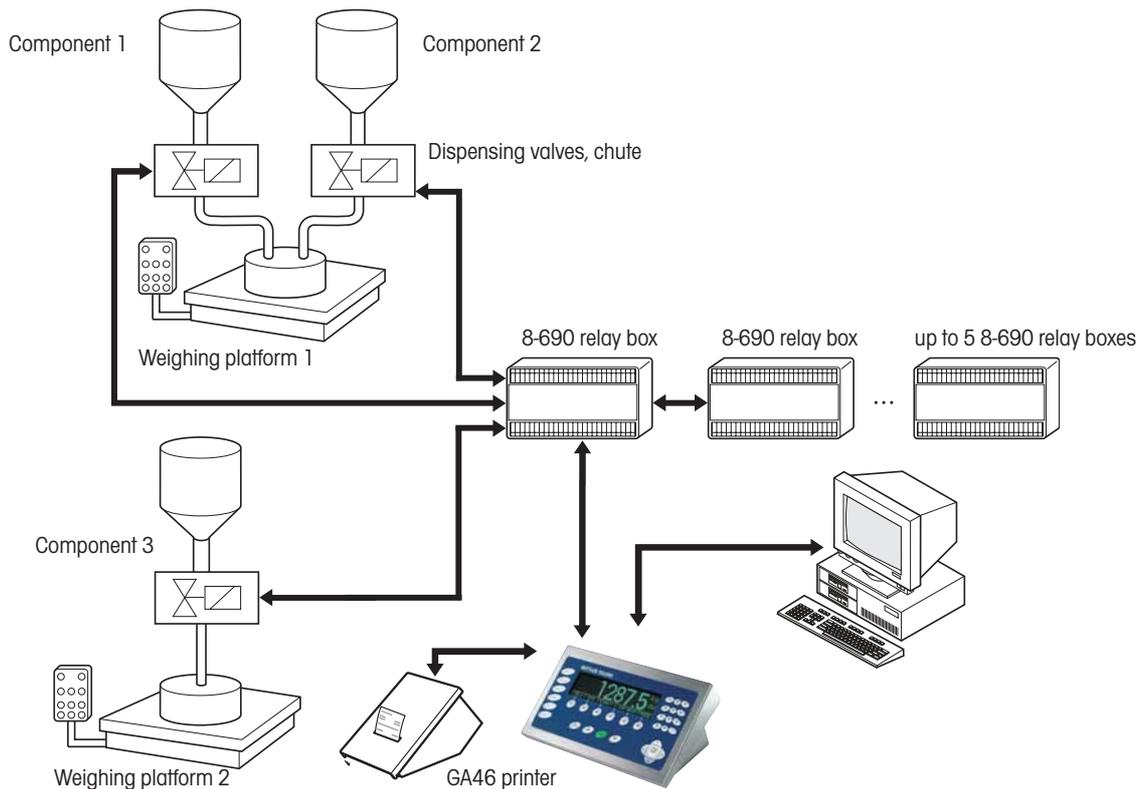
Ident C

Ident D

Ident E

Ident F

- Rugged, sealed housing provides IP69K protection
- BIG WEIGHT® display – easy to read even from a distance
- Smooth membrane keypad for long life and ease of cleaning
- Compatible with 4 different scales for extremely accurate dispensing
- Codes A–F for clear identification of the formula data
- Interfaces allow easy connection of external systems

■ **Fast and accurate formula processing**
The combination of fast data transmission, adaptable filters for tough conditions and separate weighing and evaluation allows you to meter your formulas very quickly without sacrificing accuracy.

■ **Learn mode**
All you have left to do is enter the component weight proportions and batch weight. The cut-off points for each component are then determined automatically by the IND690batch. Getting the formula exactly right from the start avoids wasting time and materials.

Component 1   Component 2

Dispensing valves, chute

Weighing platform 1

8-690 relay box   8-690 relay box   up to 5 8-690 relay boxes

Component 3

Weighing platform 2   GA46 printer

Instant accuracy with IND690batch

Avoids the labour and cost of materials trials.

■ Fully automatic formula weighing
Upgrade from manual to fully automatic weighing with IND690batch. Just connect coarse and fine feed valves for the individual components to the two relay boxes, and you're in business.

■ Safety
The IND690batch continuously controls material flow by monitoring dispensing. If the 8-690 relay box is ever cut off from the IND690, the relay box closes all outlets automatically within milliseconds. A multiplicity of other functions such as refill correction, correction threshold, acknowledgement, etc. ensure that an IND690batch monitored dispensing system is safe and reliable.

■ Customisation
These optionally added functions might cover your special requirements: multi-scale operation, display messages, remnant and filling checks, material equalisation or manual corrections, etc.

■ User-friendly
The ergonomically designed keypad, together with a display that is easy to read in all situations, help you save time and avoid complaints. Whether it's the oversized weight display, status display or DeltaTrac bar graphs – you choose what you want to see!

■ Data printout
Print the data on control slips, labels, forms or cards using a strip or form printer. In clear text or barcodes for fast, accurate processing.

■ Recording and processing data
Optional interfaces can be fitted to integrate the IND690batch into your client-server architecture. Full remote operation is possible, if required. Or you can easily increase the number of formulas with a PC.

■ Extremely simple materials handling
Weighing platforms come in an extremely wide variety of types and sizes, with different measuring ranges. Mountings for roller tracks and conveyor systems ensure ease of incorporation into the production line.

■ Consistently reliable
The rugged balances have generous overload protection. And the terminals can be replaced quickly in case of incident without upsetting calibration. Stainless steel industrial housings provide IP69K protection.

BIG WEIGHT ® is a registered trademark of Mettler-Toledo (Albstadt) GmbH.
German Patent 197 32 659. European Patent 0 895 071.


```
          FORMULA CALLED

FORMULA NO.  : 05
NAME : SPECIAL-MIXTURE

COMPONENT NO.: 01

NAME :                    PORRIDGE
TARG :                    50.00 kg
LIM1 :                    45.00 kg
LIM2 :                    49.74 kg
TOL :                      0.40 kg
END TIMER:                   000 S
VALVE:                          01
OUTPUT 2 :                     OFF

COMPONENT NO.: 02

                            WHEAT
                         30.000 kg

COMPONENT NO.: 03

NAME :                     RAISIN
TARG :                   20.000 kg
LIM1 :                   18.200 kg
LIM2 :                   19.950 kg
TOL :                     0.160 kg
END TIMER:                   000 S
VALVE:                          03
OUTPUT 2 :                     OFF
PHASE:                    CONTINUE
```

```
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
          MILLSTREAM Ltd.
            your health !
-----------------------------------------------
DATE                          09.05.05
TIME                          20.20.30
-----------------------------------------------
Article No.
                         558965 SZ
Order No.
                              1258
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
PORRIDGE
TARGET                        50.00 kg
Actual v.                     49.95 kg
                              -0.05 kg

Actual v.
Tgt - Actual                       -0

-----------------------------------------------
DATE                          09.05.05
TIME                          20.21.49
-----------------------------------------------
XLOT              99.90 kg
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

Typical printout shown actual size 1:1

Function keys

N	Enter item counter start and end values
TOTAL	Output/print total and statistics
MANUAL	Manual redispensing
FORMULA	Load and process formulas
STOP	Interrupt or discontinue dispensing
START	Start or continue dispensing

IND690batch functions

Formula weighing	Automatic weighing of batch of any weight, with up to 32 different components chosen from a maximum total of 999. Formulas may be divided into up to 32 phases. Up to 4 weighing platforms in use may be controlled directly; the platform number can be entered for each component. The flow of liquid, viscous or loose materials may be controlled with coarse and fine feed. Tolerance checking with automatic redispensing and control of the point at which fine feeding is switched off.
Formulas	Entering/printing/deleting with the keypad in response to prompts, retrieval from 50 formula memories, or loading/retrieval via the serial interface or network. Formula memories contain: the formula ID number, name of the formula and components, dosing parameters of all components (per component: name of component, display message, target value, limit 1 and 2, tolerance, end timer, output 2 and tare range for component 1), the phase allocation, the number of the target scale, if multi-scale operation is activated. Access to the formula entry function can be protected by a password.
Tare function	Up to 200 messages may be memorised and allocated to each component.
Valve operation	Up to 32 components may be switched on directly (4 Relay Box 8-690) or binary coded (outputs 1°©6 of 2nd Relay Box 8-690).
Dispensing display	Clear text dispensing status display with status number; can be toggled between DeltaTrac analog weighing-in guide, BIG WEIGHT® display with 35mm tall digits, and clear text.
Tarafunktion	Automatic taring at the start of dispensing of the first component. Monitoring of container within defined tare range.
Learn mode	Automatic determination and optimisation of the points at which the valves are switched off for each component. Automatic determination of the weighing tolerances in accordance with national calibration regulations.
Refill correction	Optimizes the point at which the fine feeding of each component is switched off (limit 2).

Remote operation / Operating modes

Remote operation	IND690batch can be partially or fully remote controlled and monitored via serial interface or network.
Operating mode	Manual or automatic dispensing OIML R51/OIML R76.
Memory for characteristic data	For entering up to four items of job-related data (20 alphanumeric characters).

Auxiliary functions

Totalisation	Total (net) of all or only the good formulas. Gross weight, item counter, standard deviation and mean, minimum and maximum value can be output to the GA46 printer or retrieved via the data interface.
Item counter	Start and end value are adjustable up to a max. of 9999, for manual or automatic formulating of a certain lot size.
Pac start key, access protection	Interlocking of various keys prevents unauthorised operating steps.
Manual correction	Facility for bringing incorrectly dispensed individual components to target weight manually.
Material leveling[1]	Switches a device for leveling or mixing the material dispensed. Can be controlled on weight and/or time basis.
Residue[1]	Switches discharge device and residue control.
Filling process[1]	Controls a top-up container when dispensing out.
Dispensing, monitoring	If the rate of mass flow falls below a preset minimum value, or a preset maximum rate of mass flow is exceeded, dispensing is interrupted.
Coarse and fine	Option of using coarse feed signal to also control fine feed valve.
Start timer, end timer[1]	Universal timer functions before/after dispensing of each component.
Pre-dispensing	For reducing coarse feed opening pressure with fine feed, depending on time.
Single-dispensing mode	Single-stage filling with fine feed below a variable weight limit.
Output 7	Sets output 7 as a function of up to 30 programmable dispensing statuses.

General functions

Information functions	Allows easy retrieval of tare, current and stored dispensing parameters of the individual components, net total, item counter and characteristic data A to F. (Not during an ongoing dispensing process).
Control signals	Via one RS485/422-690 and 2 to 6 8-690 relay boxes (accessories).

[1] = configurable per component.

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