

DOSINGDIADÉ
Software for the multi-component manual weighing and dosing

COMMERCIAL MANUAL



QUICK GUIDE

APPLICATIONS

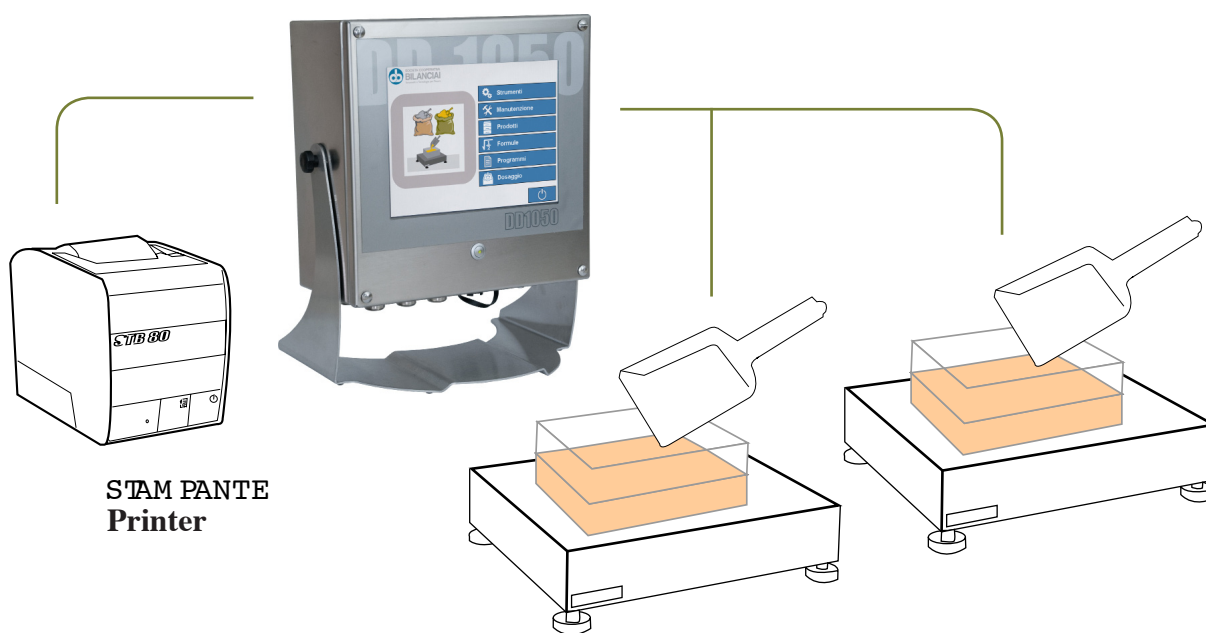
The **MANUAL DOSING** can be applied to all packaging and processing of more components sectors: meats, powders, spices, ...
The Diade series terminal can be placed in complex production lines or individual processing tables.

COMPATIBLE TERMINALS

- DD1050i and DD1050

CONFIGURATIONS

- Possibility of connecting one or more weighing platforms, printers, remote LCD, PC and mechanical equipment



STAM PANTE
Printer

POTENTIAL CUSTOMERS

- **Components processing and packaging industries**

OPERATOR FUNCTIONS

- **Weighing**
- **Dosing**
- **Formula modification**
- **Product batch modification**
- **Product manual change**
- **Processing cycle stop**
- **Partial scale unloads**
- **Print**

ADMINISTRATOR FUNCTIONS

- **Programs, recipes, formula, products log management**
- **Parameters log management**
- **Product cataloguing**
- **Formula cataloguing**
- **Dosing programs cataloguing**
- **System parameters setting**

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INTRODUCTION

The MANUAL DOSING software on DIADE series terminal allows dosing multi-components, guiding the operator throughout the various operations, based on pre-set recipes or sent by PC through ethernet network.

Dosing can happen on one or two scales for greater precision of certain ingredients.

The dosing data is sent to a printer that records all dosing cycles or are memorised on a file that can be read by PC.

OPERATOR FUNCTIONS

• Weighing

Once the instrument has been configured, it is possible to carry out the weighing operations. The methods can vary depending on the machine configuration.

The screenshot shows the 'DOSAGGIO' (Dosing) interface. At the top, there are three buttons: 'Imposta progr. di prod.' (with a magnifying glass icon), 'Imposta formula' (with a magnifying glass icon), and 'Reset dosaggio' (with a sunburst icon). Below these are several input fields: 'Programma' (two empty boxes), 'Formula' (one empty box), 'Richiesto di prod.' (one empty box followed by 'kg'), 'Numero cicli' (two empty boxes separated by a slash), and 'Lotto' (one empty box). At the bottom left, there is a checkbox labeled 'Stampa formula ricalcolata'. At the bottom center, there are two large buttons: a blue button with a white checkmark and a blue button with a white 'X'.

From this screen the operator can select processing through a program or a formula.

With weighing cycle started, the operator interface guides the user during weighing indicating which product must be weighed and, through a double chart indication, the instantaneous weight of the loaded ingredient and how far it is from the requested value.

The operator will be able to:

- if authorised, modify the recalled formula
- modify the product batch
- manually change product during the processing phase
- stop the processing cycle or definitively interrupt it
- partially unload the scale to process quantities over the scale capacity

Upon reaching of the requested weight, the weighing terminal will inform the operator of the successive ingredient to be weighed. The sequence is repeated until completion of the processing formula or of a program.

The screenshot shows a weighing terminal interface with the following elements:

- Top Bar:** A navigation icon, a 'B' button with a scale icon, a 'MIN' button, a large display showing '0,0 kg', an information icon, another 'B' button, and a date/time display '01/07/2011 09.30'.
- Main Table:**

Programma	[1] MATTINA	1 / 1	
Formula	[1] SALAME	1 / 1	
Lotto	L1		
Prodotto	[1] MAGRO (1/2)	20,0	kg
Richiesto	19,0	21,0	kg
Stato	-20,0	0,0	kg
- Control Buttons:** A row of five buttons: 'CambLP' (pencil icon), 'Scarica' (downward arrow), 'CambPr' (play icon), 'Stop' (square icon), and 'Abort' (X icon).
- Status Bar:** A field labeled 'Dosaggio' at the bottom left.

ADMINISTRATOR FUNCTIONS

Before enabling to use the terminal for weighing operations, execute correct programming as the same logic of the weighing cycle depends on the entering of data.

Access to data entering inside the terminal database is regulated by an access level system settable with password. This allows avoiding unwanted accesses to machine programming that risk altering the weighing cycles. The system administrator has the task of configuring:

1. products log meaning all materials that can be weighed by the weighing system
2. formula log meaning the recipes that must be executed during the weighing cycle. A formula or recipe is an aggregation of products.
3. programs log meaning the possibility of aggregating a set of formula
4. technological log meaning series of data associated to each formula that can be consulted through remote controls from an external device, like PLC
5. parameters log meaning a collection of 20 fields that can be customised for the text part associated to field and for the data part. The logging of parameters is consulted from an external device like PLC, through remote controls.

The administrator can also, if enabled, consult the totals by batch, by product and by formula, as well as have an overall view of the processed through the weigh log. All total and log of weighs can be consulted through terminal interface and exported in csv format for their further processing by PC through programs like Excel.

The logs can be inserted directly on DD1050 or imported from another DIADE series terminal or from a PC. In the latter case, a specific software is required; CB supplies a simple application (DB-TOOL) that makes this function possible.

The programming versatility of the Diade series terminal allows setting:

- products log: allows coding the individual products. The log is made of an alphanumerical identification code, a description and a batch. It is possible to display the total processed for each product.
- formula log: allows coding the individual formula. Each formula is made of an alphanumerical identification code and a description. It is possible to display the total processed for each formula. For each product/ingredient added to the formula, it is possible to define the requested amount, a tolerance and the scale to be used (in case of duplex terminal it is possible to define which scale according to the wanted precision). Once formula is completed, it is possible to define which order the operator must follow during use of the formula.
- batches log: allows consulting the memorised weights subdivided by formula (recipes).
- technological log: allows setting a series of data that can be consulted from the outside through a profibus interface and used by external devices, like PLC.
- parameters log: allows coding 20 numerical fields, customisable for the text part, that can be consulted from the outside through a profibus interface and used by external devices, like PLC.

Here, in detail, the logs present.

Product Cataloguing

From main menu, press the PRODUCTS key. The list of products catalogued in the system opens.

Codice	Descrizione	Lotto	Tot.(kg)
1	MAGRO	L1	0
4	MORTADELLA	L4	0
3	PEPE	L3	0
122112	RRGTYUTFFG	HGFFH	0
2	SALE	AAAA	0

Codice: 1

Descrizione: MAGRO

Lotto: L1

Tot.(kg): 0

The product log is made of a 25 character alphanumeric key, called code. Associated to each code is a 100 character alphanumeric description, a 50 character batch and a displayable field reporting at every moment, the quantity of processed product.

It is possible to execute maintenance of the log through the touch screen interface, by entering or deleting products or modifying their values.

Formula Cataloguing

From main menu, press the FORMULA key. The list of products catalogued in the system opens.

Codice	Descrizione	Tot.(kg)
2	PROSCIUTTO	0
3	PROSCIUTTO	0
1	SALAME	0
4	SALAME	0
5	SALAME	0

Codice: 1

Descrizione: SALAME

Tot.(kg): 0

The formula log is made of a 25 character alphanumerical key, called code. Associated to each code is a 100 character alphanumerical description and a displayable field reporting at every moment, the quantity of processed product.

It is possible to execute maintenance of the log through the touch screen interface, by entering or deleting formula, modifying their values and adding for each formula the products that must be processed, meaning weighed.

INGREDIENTI DI FORMULA

Formula: SALAME

Passo	Cod.Pr.	Prodotto	Quant.(k)	Toll.(kg)	Bil.
0	1	MAGRO	20	1	B
1	2	SALE	2	1	A

Reported for each ingredient:

- processing order index
- product code
- product description
- requested quantity
- admitted tolerance
- scale to be used

The processing order index (Pitch) identifies the product weighing sequence as requested during the processing phase.

Dosing Programs Cataloguing

A dosing program is the set of a series of dosing cycles to be executed in sequence. For each dosing cycle specify the formula to be used, the quantity to be produced, the number of repetitions of the formula and the batch code to be associated to each cycle.

From main menu, press the PROGRAMS key. The list of programs catalogued in the system opens.

Codice	Descrizione	Pross.passo	P
1	MATTINA	1	
2	POME	1	

Codice: 1

Descrizione: MATTINA

Pross.passo: 1

Pross.ciclo: 1

The product log is made of a 25 character alphanumerical key, called code. A 100 character alphanumerical description is associated to each code.

It is possible to execute maintenance of the log through the touch screen interface, by entering or deleting programs, modifying their values and adding for each program the formula that must be processed.

Programma [1] MATTINA

Passo	Cod.For	Formula	Quant.	N.Cicli	Lotto
0	1	SALAME	100	1	L1

A program cycle foresees the entering of

- processing order index
- a formula to be used in dosing
- the quantity of the product request
- the batch number to be assigned to production cycle
- the number of times dosing must be executed with the selected formula

The processing order index (Pitch) identifies the formula weighing sequence as requested during the processing phase.

The formula can be selected by directly entering the code value if known or by selecting its value by accessing the formula displaying page through this interface.

Upon selecting of a formula, the quantity to be produced for said formula is automatically set, based on the "Production request" parameter, or:

- If the system is configured for managing the production request as "overall request of formula", the overall amount of the various products requests composing the formula is proposed
- If the system is set for managing the production request as "overall request of mix", the amount of 100 kg is proposed.

System parameters

IMPOSTAZIONI			
Bilancia		Param.sistema	
Nome	Valore	Nome	Valore
VARIABILE1	12.44		
VARIABILE2	12		

This page shows a set of parameters relating to the system functioning and that vary from installation to installation.

Dosing Log

Through the DOSING LOG key, access is gained to the following window listing all dosing operations carried out by the device, subdivided by batch code.

ARCHIVIO DOSAGGI

FORMULA Dalla data alla data

Data	Formula	Q.Nom.(kg)	Q.Eff.(kg)	Lotto
01/07/2011	SALAME	100	21,01	L1
01/07/2011	SALAME	100	22,07	L1

Navigation icons: Home, Previous, Next, End, Minus, Delete, Close

The batch code, the processed formula, the nominal requested quantity and the effectively dosed quantity are reported for each dosing.

The key  grants access to the detail list of the dosing selected from the grid:

DETTAGLI ARCHIVIO DOSAGGI

Formula **PROSCIUTTO**

Cod.Pr.	Prodotto	Lotto Pr.	Q.(kg)	Tol
4	MORTADELLA	L4	50	
2	SALE	AAAAA	5	
1	MAGRO	L1	50	

Form fields:

Cod.Pr.

Prodotto

Lotto Pr.

Q. (kg) Toll. (kg)

Peso (kg) Non pesato

Navigation icons: Home, Previous, Next, End, Close

The product data, the nominal requested quantity and the effectively dosed quantity are reported for each formula components, as well as indication that the product has been weighed or has been catalogues as not to be weighed.

Connectable optional devices

- Printers

DOSINGDIADA can be configured for managing the following printers:

- STB/80, thermal printer, 20 mm wide with automatic cut



- Boosters

- Additional displays RD52HL, RD100HL and RD125T



- DIADE and DIALOGIC series weighing terminals



- Wireless, Wi-Fi, GSM devices



- In-put/out-put devices

Input

ENABLE DOSING

The contact must be active at time of DOSING START REQUEST or of DOSING RE-START AFTER A STOP, and it must be kept active throughout the ejection phase.

START/STOP

It is equivalent to "START" and "STOP" keys on the terminal keyboard. If activated with dosing not active, it is equivalent to START key; if activated with dosing active, it is equivalent to STOP key.

PRODUCT CHANGE

It is equivalent to "CAMBPR" key on the terminal keyboard.

CYCLE PRINT EXCLUSION

If the contact is active when the terminal starts printing phase, the dosing data is not printed but only the totalisation and decrease of the number of cycles are executed. The presence of this input eliminates the possibility of modifying the status of the cycle print exclusion from the terminal keyboard.

SCALE RESET

It is equivalent to "Scale reset" metrological key; it always refers to the selected scale.

ACQUIRE TARE

It is equivalent to metrological key allowing the tare acquisition; it always refers to the selected scale.

DELETE TARE

It is equivalent to metrological key allowing to delete tare; it always refers to the selected scale.

UNLOAD

It is equivalent to the terminal UNLOAD key; it always refers to the selected scale.

START/STOP

It is equivalent to "START" and "STOP" keys on the terminal keyboard. If activated with dosing not active, it is equivalent to START key; if activated with dosing active, it is equivalent to STOP key.

Output

WEIGHT BELOW TOLERANCE

The contact is only managed with dosing active and in ejection phase.

It is active when the net weight present on the selected scale is below the lower limit of the tolerance interval.

Remember that the lower tolerance limit is the result of the request-tolerance difference, rounded-off upon weight dividing of the scale in use; the request and tolerance data is that set for the product being extracted or, in the event the production request of the formula is different from its original request, is that calculated after re-parameterisation.

WEIGHT IN TOLERANCE

The contact is only managed with dosing active and in ejection phase.

It is active when the net weight present on the selected scale is the same or above the lower limit of the tolerance interval and is equal or below the upper limit of said interval.

It is active when the net weight present on the selected scale is the same or above the lower limit of the tolerance interval and is equal or below the upper limit of said interval.

WEIGHT ABOVE TOLERANCE

The contact is only managed with dosing active and in ejection phase.
It is active when the net weight present on the selected scale is above the upper limit of the tolerance interval.

Remember that the upper tolerance limit is the result of the request+tolerance sum, rounded-off upon weight dividing of the scale in use; the request and tolerance data is that set for the product being extracted or, in the event the production request of the formula is different from its original request, is that calculated after re-parameterisation.

DOSING END

The contact is only managed with dosing active and in print, unload and unload additional time phase.

It is activated when changing to print phase and is deactivated when, upon completion of the unload additional time, it goes back to start phase.

SCALE "A" ZERO

The contact is continuously managed.

It is active when the gross weight of scale "A" is within zero tolerance set for the scale itself.

SCALE "B" ZERO (only for duplex terminals)

The contact is continuously managed.

It is active when the gross weight of scale "B" is within zero tolerance set for the scale itself.

SCALE "A" SELECTED

The contact is continuously managed.

It is active when scale "A" is selected.

SCALE "B" SELECTED (only for duplex terminals)

The contact is continuously managed.

It is active when scale "B" is selected.

NOTES:

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