

## Multi-way dosing system of liquids or loose materials of diversified density

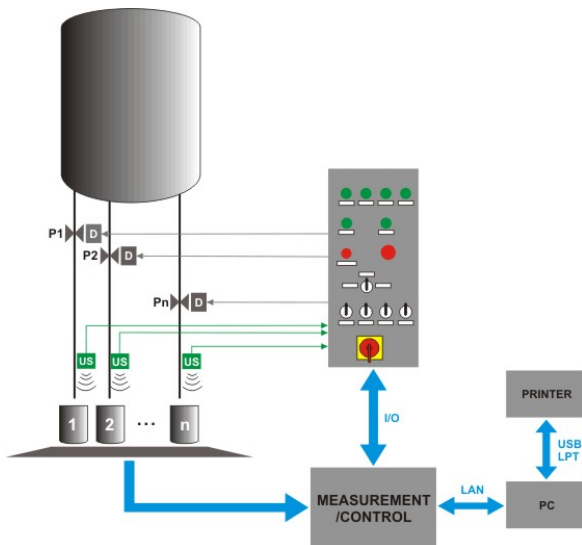
**RADWAG presents a new dosing gravimetric system for food industry. It can work as a single-way or multi-way dosing system of liquids and loose materials. Applying a complex method of dosing products allows to batch required portions very precisely considering different flows and changing density of products.**



### System construction

The presented system consists of following elements

- Terminal **PUE C41H** with dedicated software,
- Personal computer supervising the system,
- Valves and level sensors,
- Container for food concentrate,
- Weighing platform,
- Control desk.



### Technical parameters

Operation temperature	-10°C ÷ +40°C
Ingress protection rating	IP 66/67
Power supply	85-265VAC, 50/60Hz
Maximum capacity	600/1500kg
Dosing precision	0.5kg - 600kg capacity
Platform size	1050 x 1500mm

### Operation modes

This solution involves a complex method of supervising the dosing process in order to have dosed precise amount of concentrate. Traditional mass measurement has been accompanied by flow measurement. The whole process can be performed in various modes.



### Sequential dosing

The operation mode is manually selected. It consist in dosing to selected containers in the established sequence. Dosing to a particular container is performed in two stages. First bulk dosing is performed with fully open valves. When a set threshold is reached precise dosing is performed until the required amount is reached with given tolerance. The advantage of this method is that a dosing error of a previous container can be compensated in the next.

### Parallel dosing

The operation mode is manually selected. It consist in dosing to selected containers at the same time. First bulk dosing is performed with fully open valves. When a set threshold is reached precise dosing is performed until the required amount is reached with given tolerance.

Pouring food concentrates of high density often results in non-uniform filling of containers. In such cases level sensors are necessary to stop dosing to containers that are full earlier than the others.



#### Dosing of leftovers

This operation mode is switched on automatically when slow flows are detected (the threshold detected in parameters), when the rest of concentrate leaks out. Then only traditional mass dosing procedures operate and assure enough accuracy.

#### Manual dosing

This system allows also the manual mode of operation. It can be activated in following cases:

- Constant cycle controlled manually,
- Operation after holding any automatic mode by pressing a STOP + SAVE button,
- Emergency stop,
- System maintenance.



#### **Software operation**

The assortment database is situated in a computer. Terminal **PUE C41H** can be used to browse the database and performing external production orders. Apart from choosing a product

an operator decides about the operation mode (sequential or multi-way dosing).

The computer sends only one dosing order at a time i.e. dosing all containers or one container depending on which operation mode has been chosen. After the order is completed the result is saved for further use and possibly next order generated.

The dosing system is based on computer software **RADWAG SYSTEM**, using additional module **DOSING**. The computer is connected with **PUE C41H** via Ethernet.

The program **RADWAG SYSTEM** includes databases of operators, assortment, contractors, and warehouses.

It has a panel for defining production orders that are sent to be performed by the weighings terminal. The expanded system of data analysis from weighing terminals allows constant control of performed production orders from any computer connected to an internal LAN system.

Additionally, the **DOSING** module allows defining nominal mass and thresholds for dosing for each product. These settings are passed automatically to the terminal just after selecting a product on a weighings terminal. An operator after logging in and selecting a production order can start dosing process which is totally supervised by the internal terminal software on the basis of settings form a production order.



26-600 Radom 28 Bracka Street  
Tel. (0-48 48) 38 48 800, fax (0-48 48) 385 00 10  
Sales department (0-48 48) 366 80 06  
[www.radwag.com](http://www.radwag.com)