

# WLY Precision Balances

Maximum functionality and unlimited possibilities in professional mass measurement processes



WLY D2



WLY F1/R  
direct indicator-platform connection



WLY F1/K  
1 m cable connection



WLY C2/R  
direct indicator-platform connection



WLY C2/K  
2.5 m cable connection

## Functions

-  Parts counting
-  Percent weighing
-  Density determination
-  Labelling
-  Proximity sensors
-  Dosing
-  Statistics
-  Peak hold
-  Totalizing
-  Replaceable unit
-  Checkweighing
-  Animal weighing
-  Differential weighing
-  Under hook weighing
-  Multilingual menu
-  Formulations

## Features

### Reliable Results and High Measurement Precision

Excellent measurement parameters and performance enable applying WLY balances in laboratories and numerous industry areas.

### Multifunctional Software and Unlimited Capabilities

Broad range of functions and applications for weighing and cooperation with peripheral equipment (barcode scanners, printers, etc.) make WLY balance a powerful weighing instrument.

### Labelling System

Special software and cooperation with labellers enable printing out labels for currently measured samples and products (e.g. in the packaging process).

### Intuitive Operation and Touch Screen

5.7" colour touch screen enables intuitive operation and easy access to numerous applications and functions of the weighing instrument.

### Numerous Variants of Weighing Pan Dimensions

Numerous variants of weighing pan dimensions enable selecting the best weighing instrument suiting specific requirements and needs of a particular user.

### Wide Capacity Range for Different Applications

Due to an exceptionally wide range of capacities it is possible to work with samples of different weight, from few grams to even over one hundred kilograms.

## Technical Specifications

|  | WLY 1/D2                            | WLY 2/D2                            | WLY 6/D2                            | WLY 10/D2                           | WLY 20/D2                           |
|--|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| <b>Maximum capacity [Max]</b>            | 1 kg                                | 2 kg                                | 6 kg                                | 10 kg                               | 20 kg                               |
| <b>Minimum load</b>                      | —                                   | —                                   | 5 g                                 | —                                   | —                                   |
| <b>Readability [d]</b>                   | 0.01 g                              | 0.01 g                              | 0.1 g                               | 0.1 g                               | 0.1 g                               |
| <b>Verification scale interval [e]</b>   | —                                   | —                                   | 1 g                                 | —                                   | —                                   |
| <b>Tare range</b>                        | -1 kg                               | -2 kg                               | 6 kg                                | -10 kg                              | -20 kg                              |
| <b>Repeatability*</b>                    | 0.03 g                              | 0.03 g                              | 0.1 g                               | 0.3 g                               | 0.3 g                               |
| <b>Linearity</b>                         | ± 0.03 g                            | ± 0.03 g                            | ± 0.1 g                             | ± 0.3 g                             | ± 0.3 g                             |
| <b>Stabilization time</b>                | 3 s                                 | 3 s                                 | 3 s                                 | 3 s                                 | 3 s                                 |
| <b>Adjustment</b>                        | external                            | external                            | —                                   | external                            | external                            |
| <b>Verification</b>                      | —                                   | —                                   | Yes                                 | —                                   | —                                   |
| <b>OIML Class</b>                        | —                                   | —                                   | II                                  | —                                   | —                                   |
| <b>Indicator fastening</b>               | 35 cm cable                         | 35 cm cable                         | 35 cm cable                         | 35 cm cable                         | 35 cm cable                         |
| <b>Display</b>                           | 5.7" colour, resistive touch screen | 5.7" colour, resistive touch screen | 5.7" colour, resistive touch screen | 5.7" colour, resistive touch screen | 5.7" colour, resistive touch screen |
| <b>Keypad</b>                            | 8 keys                              | 8 keys                              | 8 keys                              | 8 keys                              | 8 keys                              |
| <b>Protection class</b>                  | IP 43                               | IP 43                               | IP 43                               | IP 43                               | IP 43                               |
| <b>Databases</b>                         | 14                                  | 14                                  | 14                                  | 14                                  | 14                                  |
| <b>Touch-free operation</b>              | 2 programmable proximity sensors    | 2 programmable proximity sensors    | 2 programmable proximity sensors    | 2 programmable proximity sensors    | 2 programmable proximity sensors    |
| <b>USB-A</b>                             | 2                                   | 2                                   | 2                                   | 2                                   | 2                                   |
| <b>RS 232</b>                            | 2                                   | 2                                   | 2                                   | 2                                   | 2                                   |
| <b>Wireless connection</b>               | 802.11 b/g/n                        | 802.11 b/g/n                        | 802.11 b/g/n                        | 802.11 b/g/n                        | 802.11 b/g/n                        |
| <b>Ethernet</b>                          | 10 / 100 Mbit                       | 10 / 100 Mbit                       | 10 / 100 Mbit                       | 10 / 100 Mbit                       | 10 / 100 Mbit                       |
| <b>IN/OUT</b>                            | 4 × IN, 4 × OUT                     | 4 × IN, 4 × OUT                     | 4 × IN, 4 × OUT                     | 4 × IN, 4 × OUT                     | 4 × IN, 4 × OUT                     |
| <b>Power supply</b>                      | 13.5 ÷ 16 V DC                      | 13.5 ÷ 16 V DC                      | 13.5 ÷ 16 V DC                      | 13.5 ÷ 16 V DC                      | 13.5 ÷ 16 V DC                      |
| <b>Power consumption</b>                 | 12 W                                | 12 W                                | 12 W                                | 12 W                                | 12 W                                |
| <b>Operating temperature</b>             | +15 ÷ +30 °C                        | +15 ÷ +30 °C                        | +15 ÷ +30 °C                        | +15 ÷ +30 °C                        | +15 ÷ +30 °C                        |
| <b>Atmospheric humidity****</b>          | 10 ÷ 85% RH                         | 10 ÷ 85% RH                         | 10 ÷ 85% RH                         | 10 ÷ 85% RH                         | 10 ÷ 85% RH                         |
| <b>Transport and storage temperature</b> | -25 ÷ +70 °C                        | -25 ÷ +70 °C                        | -25 ÷ +70 °C                        | -25 ÷ +70 °C                        | -25 ÷ +70 °C                        |
| <b>Weighing pan dimensions</b>           | 195 × 195 mm                        | 195 × 195 mm                        | 195 × 195 mm                        | 195 × 195 mm                        | 195 × 195 mm                        |
| <b>Weighing device dimensions</b>        | 403 × 216 × 82 mm                   | 403 × 216 × 82 mm                   | 403 × 216 × 82 mm                   | 403 × 216 × 82 mm                   | 403 × 216 × 82 mm                   |
| <b>Net weight</b>                        | 2,7 kg                              | 2,7 kg                              | 2,7 kg                              | 2,7 kg                              | 2,7 kg                              |
| <b>Gross weight</b>                      | 3,6 kg                              | 3,6 kg                              | 3,6 kg                              | 3,6 kg                              | 3,6 kg                              |
| <b>Packaging dimensions</b>              | 490 × 300 × 150 mm                  | 490 × 300 × 150 mm                  | 490 × 300 × 150 mm                  | 490 × 300 × 150mm                   | 490 × 300 × 150mm                   |

\* repeatability is expressed as a standard deviation from 10 weighing cycles

\*\* non-condensing conditions

In accordance with type approval, the balance parameters are maintained in temperature range: +15 ÷ +35 °C.

|  | WLY 6/F1/R<br>WLY 6/F1/K                              | WLY 12/F1/R<br>WLY 12/F1/K                            | WLY 30/F1/R<br>WLY 30/F1/K                            | WLY 60/C2/R<br>WLY 60/C2/K                             | WLY 120/C2/R<br>WLY 120/C2/K                           |
|--|---|---|---|--|--|
| <b>Maximum capacity [Max]</b>                | 6 kg  | 12 kg   | 30 kg   | 60 kg  | 120 kg   |
| <b>Minimum load</b>                          | 5 g   | —   | —   | 50 g   | —  |
| <b>Readability [d]</b>                       | 0.1 g   | 0.2 g   | 0.5 g   | 1 g  | 2 g  |
| <b>Verification scale interval [e]</b>       | 1 g   | —   | —   | 10 g   | —  |
| <b>Tare range</b>                            | -6 kg   | -12 kg  | -30 kg  | -60 kg   | -120 kg  |
| <b>Repeatability*</b>                        | 0.1 g   | 0.6 g   | 1.5 g   | 1 g  | 2 g  |
| <b>Linearity</b>                             | ±0.1 g  | ±0.6 g  | ±1.5 g  | ±1 g   | ±2 g   |
| <b>Stabilization time</b>                    | 3 s   | 3 s   | 3 s   | 3 s  | 3 s  |
| <b>Adjustment</b>                            | —   | external  | external  | —  | external   |
| <b>Verification</b>                          | Yes   | —   | —   | Yes  | —  |
| <b>OIML Class</b>                            | II  | —   | —   | II   | —  |
| <b>Indicator fastening</b>                   | direct connection (R),<br>1 m cable<br>connection (K) | direct connection (R),<br>1 m cable<br>connection (K) | direct connection (R),<br>1 m cable<br>connection (K) | direct connection (R)<br>2.5 m cable<br>connection (K) | direct connection (R)<br>2.5 m cable<br>connection (K) |
| <b>Display</b>                               | 5.7" colour, resistive<br>touch screen                | 5.7" colour, resistive<br>touch screen                | 5.7" colour, resistive<br>touch screen                | 5.7" colour, resistive<br>touch screen                 | 5.7" colour, resistive<br>touch screen                 |
| <b>Keypad</b>                                | 8 keys  | 8 keys  | 8 keys  | 8 keys   | 8 keys   |
| <b>Protection class</b>                      | IP 43   | IP 43   | IP 43   | IP 43  | IP 43  |
| <b>Databases</b>                             | 14  | 14  | 14  | 14   | 14   |
| <b>Touch-free operation</b>                  | 2 programmable<br>proximity sensors                   | 2 programmable<br>proximity sensors                   | 2 programmable<br>proximity sensors                   | 2 programmable<br>proximity sensors                    | 2 programmable<br>proximity sensors                    |
| <b>USB-A</b>                                 | 2   | 2   | 2   | 2  | 2  |
| <b>RS 232</b>                                | 2   | 2   | 2   | 2  | 2  |
| <b>Wireless connection</b>                   | 802.11 b/g/n  | 802.11 b/g/n  | 802.11 b/g/n  | 802.11 b/g/n   | 802.11 b/g/n   |
| <b>Ethernet</b>                              | 10 / 100 Mbit   | 10 / 100 Mbit   | 10 / 100 Mbit   | 10 / 100 Mbit  | 10 / 100 Mbit  |
| <b>IN/OUT</b>                                | 4 × IN, 4 × OUT                                       | 4 × IN, 4 × OUT                                       | 4 × IN, 4 × OUT                                       | 4 × IN, 4 × OUT  | 4 × IN, 4 × OUT  |
| <b>Power supply</b>                          | 13.5 ÷ 16 V DC  | 13.5 ÷ 16 V DC  | 13.5 ÷ 16 V DC  | 13.5 ÷ 16 V DC   | 13.5 ÷ 16 V DC   |
| <b>Power consumption</b>                     | 12 W  | 12 W  | 12 W  | 12 W   | 12 W   |
| <b>Operating temperature</b>                 | +15 ÷ +30 °C  | +15 ÷ +30 °C  | +15 ÷ +30 °C  | +15 ÷ +30 °C   | +15 ÷ +30 °C   |
| <b>Atmospheric humidity****</b>              | 10 ÷ 85% RH   | 10 ÷ 85% RH   | 10 ÷ 85% RH   | 10 ÷ 85% RH  | 10 ÷ 85% RH  |
| <b>Transport and storage<br/>temperature</b> | -25 ÷ +70 °C  | -25 ÷ +70 °C  | -25 ÷ +70 °C  | -25 ÷ +70 °C   | -25 ÷ +70 °C   |
| <b>Weighing pan dimensions</b>               | 300 × 300 mm  | 300 × 300 mm  | 300 × 300 mm  | 500 × 400 mm   | 500 × 400 mm   |
| <b>Weighing device dimensions</b>            | 465 × 300 × 70 mm                                     | 465 × 300 × 70 mm                                     | 465 × 300 × 70 mm                                     | 567 × 502 × 105 mm                                     | 567 × 502 × 105 mm                                     |
| <b>Net weight</b>                            | 5,2 kg  | 5,2 kg  | 5,2 kg  | 12,5 kg  | 12,5 kg  |
| <b>Gross weight</b>                          | 6 kg  | 6 kg  | 6 kg  | 15 kg  | 15 kg  |
| <b>Packaging dimensions</b>                  | 570 × 390 × 170 mm                                    | 570 × 390 × 170 mm                                    | 570 × 390 × 170 mm                                    | 720 × 580 × 220 mm                                     | 720 × 580 × 220 mm                                     |

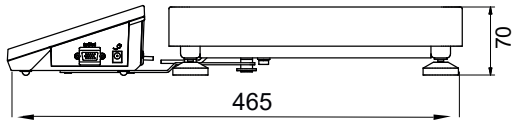
\* repeatability is expressed as a standard deviation from 10 weighing cycles

\*\* non-condensing conditions

In accordance with type approval, the balance parameters are maintained in temperature range: +15 ÷ +35 °C.

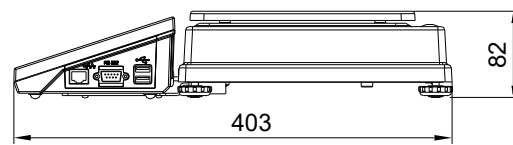
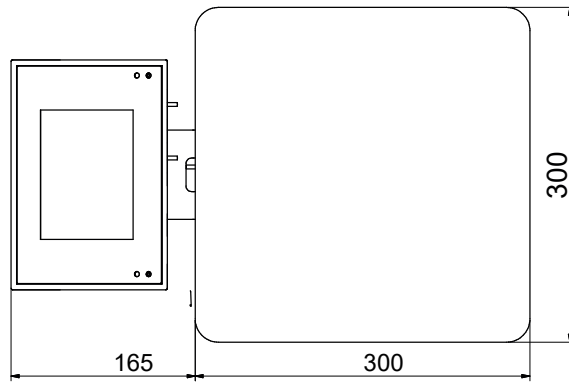
# Dimensions

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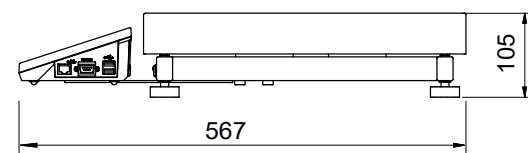
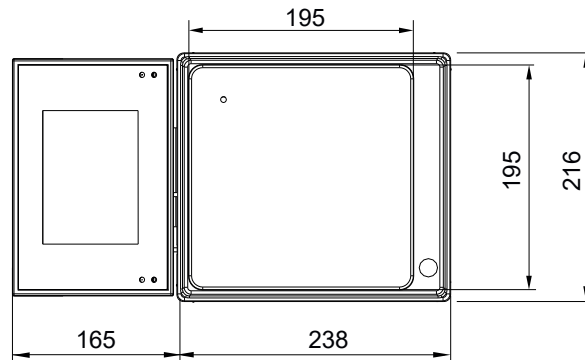
F1 version

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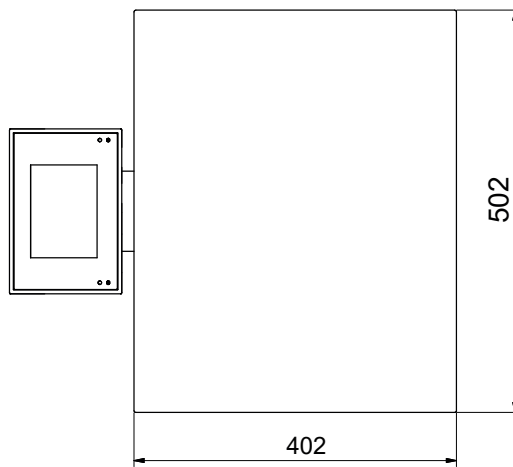
D2 version

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C2 version

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## Accessories

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### Weighing Tables

- granite antivibration table

### Peripheral Devices

- Epson dot matrix printer
- barcode scanners
- WD-4/1 LCD display

### Cables, Converters

- P0108: RS 232 cable (balance-computer)
- P0167: RS 232 cable (balance-computer)
- P0151: RS 232 cable (balance - Epson printer)
- PT0128 cable
- AP2-1 power loop output

## Dedicated Software

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### R-LAB

- collecting measurements
- carrying out statistical analysis of measurements
- customized graphs and reports

### E2R PGC

- synchronization of databases, operators, products schedules
- record of measurements and PGC controls carried out on weighing instruments linked in ETHERNET network
- quality assessment of pre- packaged goods based on acquired data

### E2R Weighing Records

- complete, automated databases synchronization
- fully supported processes of labelling and parts counting
- record of weighings, weighings archiving
- basic and advanced (with graphs) reports

### Label Editor R02

- designing label templates
- sending graphics and fonts to label printers
- printing label templates using connected printers

### Audit Trail Reader

- support of Audit Trail function available for 3Y, 4Y, HY10, WLY, WPY series weighing instruments
- record of operator's activity from the moment of logging in

### RAD KEY

- Establishing cooperation between a weighing instrument and a computer

### R. Barcode

- The basic function software is presentation of the data sent by barcode scanners connected to PC via USB or RS232

### 3Y Database Editor

- databases readout
- databases editing
- databases saving - from computer software to connected weighing instrument
- connection with 3Y balances via Ethernet and RS232

### Radwag Development Studio

- presentation of functions (and subfunctions) of communication protocol (Common Communication Protocol)
- possibility of connection with weighing equipment on which each function is carried out,
- library with mass control, contained within the development environment
- complete documentation of the communication protocol
- set of user manuals for different solutions addressed for programmers employed in companies using RADWAG-manufactured weighing equipment

### LabView Driver

- operation of RADWAG balances in LabView environment

### RADWAG Connect

- establishing communication with all balances, scales and weighing modules using Common Communication Protocol
- communication via local network,
- support of basic functions
- auto searching for devices
- connecting with few devices simultaneously, swapping between them
- clear list of connected platforms
- record of measurements in the program,
- export of carried out measurements to CSV file,
- work performed using freely selected device with Windows 10 operating system

### RADWAG Remote Desktop

- remote operation via computer, mobile phone or tablet
- sending text messages
- version for Windows 10 and Android systems

### Parameters Editor

- remote change of parameters
- remote on-line preview of the display
- displaying current mass indication
- software update
- file loading, editing and saving parameters to a file
- import and export of parameters
- interfaces: RS232, Ethernet and Wireless Connection.
- quick and easy edition of balance parameters using computer.

### E2R Formulations

- carrying out simple formulations
- support of an advanced formulations orders function
- warehouse management
- optional automatic dispensing and constant correction of the dispensing process
- control of an ingredient using the barcode scanner

### E2R Weighings

- record of measurements carried out using the weighing indicators
- online monitoring of the production lines
- weighing thresholds control
- employees working time reporting