

UYA 4Y.F Ultra-Microbalances

MYA 4Y.F Microbalances



Excellent precision and accuracy of determining filters absorption capabilities during differential mass measurement



UYA 4Y.F



MYA 4Y.F1

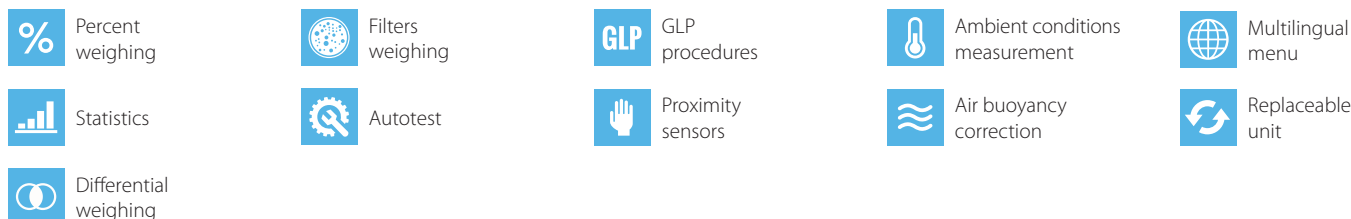


MYA 4Y.F1



Filters mass measurement

Functions



Features

Stainless steel detachable weighing chamber

MYA 4Y.F microbalance features a stainless steel chamber for filter weighing. Innovative disassembly system facilitates chamber cleaning. Its lid is partly made of glass therefore the operator can observe the filter and make sure that it remains in the same position after chamber closing. The chamber is a highly hermetic solution, and the large weighing pan intended for filters allows precise measurement of filters of various sizes.

The Most Precise Control Over Filters Absorption Capabilities

Professional highly hermetic weighing chamber and an open-work weighing pan of the MYA 4Y.F microbalance both enable accurate measurements of filters of various types and dimensions.

Significantly Fast Measurement

Powerful processor offers new possibilities of operation assuring short indication stabilization time and repeatability.

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.

Automatic Level Control

Leveling system facilitates adjustment of device level, it also uninterruptedly controls the level state, and informs about potential level deviations.

Touch-Free Operation

Two programmable proximity sensors can be assigned with any function or application. The given function when assigned is both run and operated touch-free.

Numerous Options of Data Management

Extensive storage capacity enables record of all measurement data in a form of complex reports and statistical graphs.

ALIBI Memory

Data security and protection is provided by ALIBI memory which automatically archives all carried out measurements.

Technical Specifications

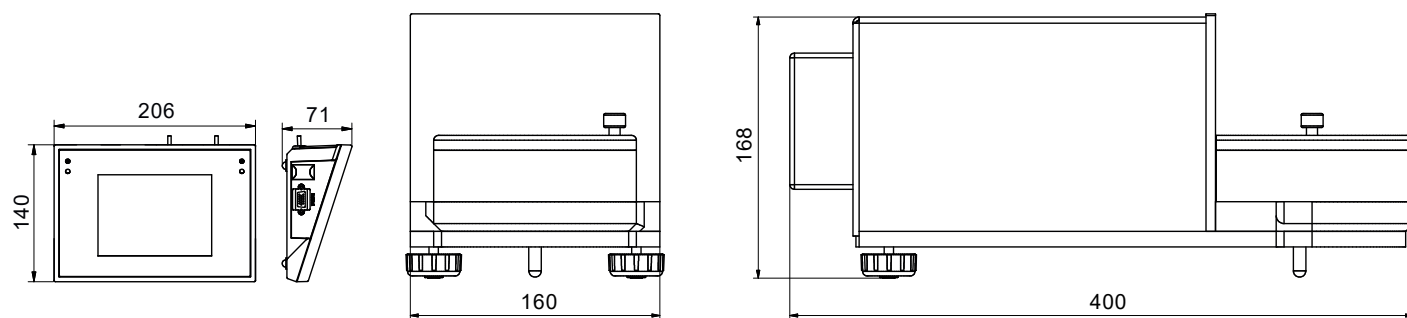
	UYA 2.4Y.F	MYA 5.4Y.F	MYA 5.4Y.F1
Maximum capacity [Max]	2.1 g	5.1 g	5.1 g
Minimum load	10 µg	100 µg	100 µg
Readability [d]	0.1 µg	1 µg	1 µg
Verification scale interval [e]	1 mg	1 mg	1 mg
Tare range	-2.1 g	-5.1 g	-5.1 g
Standard values			
Repeatability(5% Max)*	0,15 µg	0,6 µg	0,6 µg
Repeatability(Max)*	0,35 µg	1,6 µg	1,6 µg
Minimum weight (USP)	0,3 mg	1,2 mg	1,2 mg
Minimum weight (U=1%, k=2)	0,03 mg	0,12 mg	0,12 mg
Permissible values			
Repeatability(5% Max)*	0,35 µg	1,2 µg	1,2 µg
Repeatability(Max)*	0,6 µg	2,4 µg	2,4 µg
Linearity	±1.5 µg	±5 µg	±5 µg
Eccentric load deviation	1.5 µg	5 µg	5 µg
Stabilization time	10 ÷ 20 s	max 8 s	max 8 s
Adjustment	internal	internal	internal
Verification	Yes	Yes	Yes
OIML Class	I	I	I
Indicator fastening	35 cm cable, wireless connection (option)***	35 cm cable, wireless connection (option)***	35 cm cable, wireless connection (option)***
Display	5.7" colour, resistive touch screen	5.7" colour, resistive touch screen	5.7" colour, resistive touch screen
Keypad	8 keys	8 keys	8 keys
Protection class	IP 43	IP 43	IP 43
Databases	19	19	19
Touch-free operation	2 programmable proximity sensors	2 programmable proximity sensors	2 programmable proximity sensors
USB-A	2	2	2
Ethernet	10 / 100 Mbit	10 / 100 Mbit	10 / 100 Mbit
RS 232	2	2	2
Wireless connection	802.11 b/g/n	802.11 b/g/n	802.11 b/g/n
Power supply	13.5 ÷ 16 V DC	13.5 ÷ 16 V DC	13.5 ÷ 16 V DC
Power consumption	10 W	10 W	10 W
Operating temperature	+10 ÷ +40 °C	+10 ÷ +40 °C	+10 ÷ +40 °C
Operating temperature change rate	±0.3°C/1h (±1°C/8h)	±0.3°C/1h (±1°C/8h)	±0.3°C/1h (±1°C/8h)
Atmospheric humidity****	40 ÷ 80%	40 ÷ 80%	40 ÷ 80%
Relative humidity change rate	±1%/h (±4%/8h)	±1%/h (±4%/8h)	±1%/h (±4%/8h)
Transport and storage temperature	-10 ÷ +50 °C	-20 ÷ +50 °C	-20 ÷ +50 °C
Weighing pan dimensions	ø 50 mm	ø 100 mm (for filters), ø 26 mm	ø 160 mm (for filters), ø 26 mm
Weighing chamber dimensions	ø 118 × 35 mm	ø 118 × 35 mm	ø 168 × 35 mm
Weighing device dimensions	400 × 160 × 168 mm	400 × 160 × 168 mm	450 × 180 × 168 mm
Net weight	9.1 kg	9.1 kg	9.1 kg
Gross weight	16.6 kg	16.6 kg	16.6 kg
Packaging dimensions	660 × 660 × 455 mm	660 × 660 × 455 mm	660 × 660 × 455 mm

* repeatability is expressed as a standard deviation from 10 weighing cycles ** parameter determined in the following temperature range: +15 ÷ +35 °C

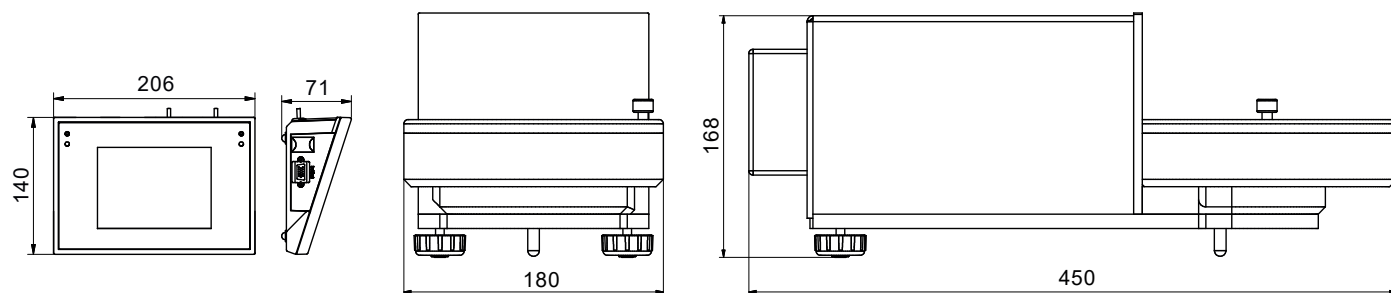
*** optional solution on purchase order **** non-condensing conditions

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Dimensions



F version



F1 version

Accessories

Weighing Tables

- granite antivibration table
- antivibration tables for laboratory balances
- professional weighing table

Ambient Conditions

- DJ-05 anti-static ionizer
- THB-S or THB-P sensor

Peripheral Devices

- Epson dot matrix printer
- barcode scanners
- WD-5/3Y LCD display

Cables, Converters

- P0108: RS 232 cable (balance-computer)
- P0167: RS 232 cable (balance-computer)
- P0151: RS 232 cable (balance - Epson printer)

Electrical Accessories

- ZR-02 power supply with battery

Dedicated Software

R-LAB

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

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

Pipettes

- determining measurement errors of pipettes volume
- accordance with ISO 8655
- calibration of single-channel and multi-channel pipettes
- calibration of fixed-volume and variable-volume pipettes

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

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.

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

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,
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RADWAG Remote Desktop

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

UYA 4Y.F Ultra-Microbalances

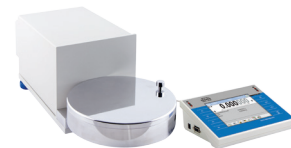
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UYA 4Y.F



MYA 4Y.F1



Filters mass measurement

Functions

Percent weighing	Filters weighing	GLP procedures	Ambient conditions measurement	Multilingual menu
Statistics	Autotest	Proximity sensors	Air buoyancy correction	Replaceable unit
Differential weighing				

Features

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Maximum capacity [Max]	2.1 g	5.1 g	5.1 g
Minimum load	10 µg	100 µg	100 µg
Readability [d]	0.1 µg	1 µg	1 µg
Verification scale interval [e]	1 mg	1 mg	1 mg
Tare range	−2.1 g	−5.1 g	−5.1 g
Repeatability*	0.25 µg (Rt ≤ 0.2 g) 0.4 µg (0.2 g < Rt ≤ 2 g)	1 µg (Rt ≤ 1 g) 1.6 µg (1 g < Rt ≤ 5g)	1 µg (Rt ≤ 1g) 1.6 µg (1g < Rt ≤ 5g)
Linearity	±1.5 µg	±5 µg	±5 µg
Eccentric load deviation	1.5 µg	5 µg	5 µg
Sensitivity temperature drift**	$1 \times 10^{-6} / ^\circ\text{C} \times \text{Rt}$	$1 \times 10^{-6} / ^\circ\text{C} \times \text{Rt}$	$1 \times 10^{-6} / ^\circ\text{C} \times \text{Rt}$
Sensitivity time drift	$1 \times 10^{-6} / \text{Year} \times \text{Rt}$	$1 \times 10^{-6} / \text{Year} \times \text{Rt}$	$1 \times 10^{-6} / \text{Year} \times \text{Rt}$
Minimum weight (U=1%, k=2)	0.05 mg	0.2 mg	0.2 mg
Minimum weight (USP)	0.5 mg	2 mg	2 mg
Stabilization time	10 ÷ 20 s	max 8 s	max 8 s
Adjustment	internal	internal	internal
Verification	Yes	Yes	Yes
OIML Class	I	I	I
Indicator fastening	35 cm cable, wireless connection (option)***	35 cm cable, wireless connection (option)***	35 cm cable, wireless connection (option)***
Display	5.7" colour, resistive touch screen	5.7" colour, resistive touch screen	5.7" colour, resistive touch screen
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USB-A	2	2	2
Ethernet	10 / 100 Mbit	10 / 100 Mbit	10 / 100 Mbit
RS 232	2	2	2
Wireless connection	802.11 b/g/n	802.11 b/g/n	802.11 b/g/n
IN/OUT	4 × IN, 4 × OUT	4 × IN, 4 × OUT	4 × IN, 4 × OUT
Power supply	13.5 ÷ 16 V DC	13.5 ÷ 16 V DC	13.5 ÷ 16 V DC
Power consumption	10 W	10 W	10 W
Operating temperature	+10 ÷ +40 °C	+10 ÷ +40 °C	+10 ÷ +40 °C
Atmospheric humidity****	40 ÷ 80%	40 ÷ 80%	40 ÷ 80%
Transport and storage temperature	−10 ÷ +50 °C	−20 ÷ +50 °C	−20 ÷ +50 °C
Weighing pan dimensions	ø 50 mm	ø 100 mm (for filters), ø 26 mm	ø 160 mm (for filters), ø 26 mm
Weighing chamber dimensions	ø 118 × 35 mm	ø 118 × 35 mm	ø 168 × 35 mm
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Gross weight	16.6 kg	16.6 kg	16.6 kg
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Rt net weight

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

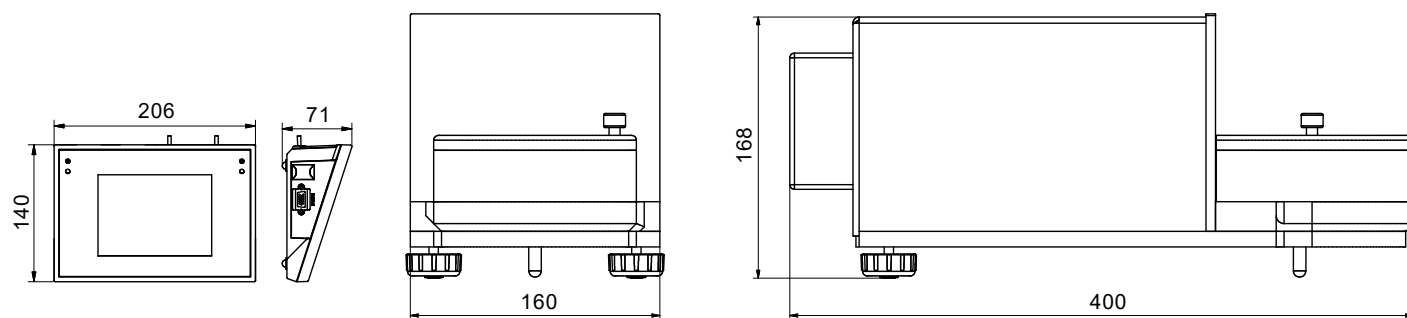
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*** optional solution on purchase order

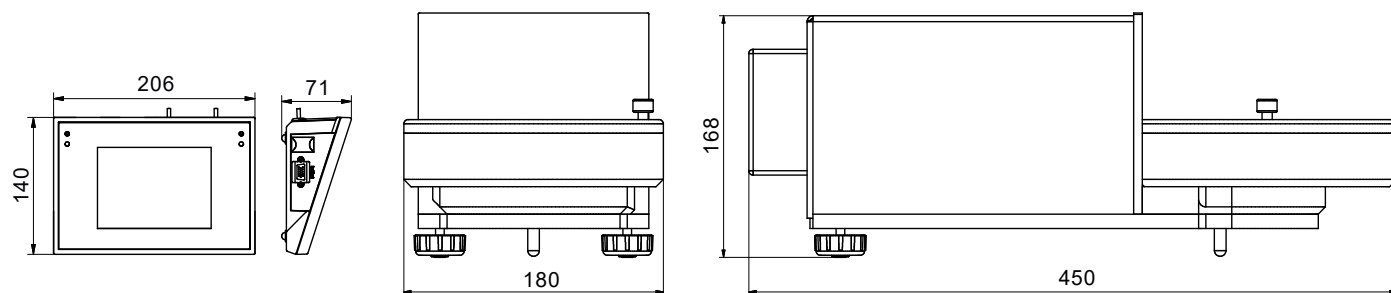
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F1 version

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- professional weighing table

Ambient Conditions

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Electrical Accessories

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Dedicated Software

R-LAB

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

E2R Weighing Records

- complete, automated databases synchronization
- fully supported processes of labelling and parts counting
- record of weighings, weighings archiving
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Label Editor R02

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

Pipettes

- determining measurement errors of pipettes volume
- accordance with ISO 8655
- calibration of single-channel and multi-channel pipettes
- calibration of fixed-volume and variable-volume pipettes

Audit Trail Reader

- support of Audit Trail function available for 3Y, 4Y, HY10, WLY, WPY series weighing instruments
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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

Radwag Development Studio

- presentation of functions (and subfunctions) of communication protocol (Common Communication Protocol)
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- clear list of connected platforms
- record of measurements in the program,
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- remote operation via computer, mobile phone or tablet
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UYA 4Y.F PLUS Ultra-Microbalances

MYA 4Y.F PLUS Microbalances



Excellent precision and accuracy of determining filters absorption capabilities during differential mass measurement



UYA 4Y.F PLUS



MYA 4Y.F1 PLUS



MYA 4Y.F1 PLUS



Filters mass measurement

Functions

Percent weighing	Filters weighing	GLP procedures	Ambient conditions measurement	Multilingual menu
Statistics	Autotest	Proximity sensors	Air buoyancy correction	Replaceable unit
Differential weighing				

Features

Stainless steel detachable weighing chamber

4Y.F PLUS series feature a stainless steel chamber for filter weighing. Innovative disassembly system facilitates chamber cleaning. Its lid is partly made of glass therefore the operator can observe the filter and make sure that it remains in the same position after chamber closing. The chamber is a highly hermetic solution, and the large weighing pan intended for filters allows precise measurement of filters of various sizes.

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

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Numerous Options of Data Management

Extensive storage capacity enables record of all measurement data in a form of complex reports and statistical graphs.

REFLEX LEVEL SYSTEM

New autolevelling system ensures ground tilt test, automatic balance levelling, control of the correct balance level and confirmation of correct balance level on adjustment and weighing reports.

21 CFR Part 11 Compliance Module

4Y.F PLUS series is compliant with 21 CFR part 11 and EU GMP part 4, annex 11. This means that the PLUS series features numerous functions for protecting and monitoring work results of particular operators.

Technical Specifications

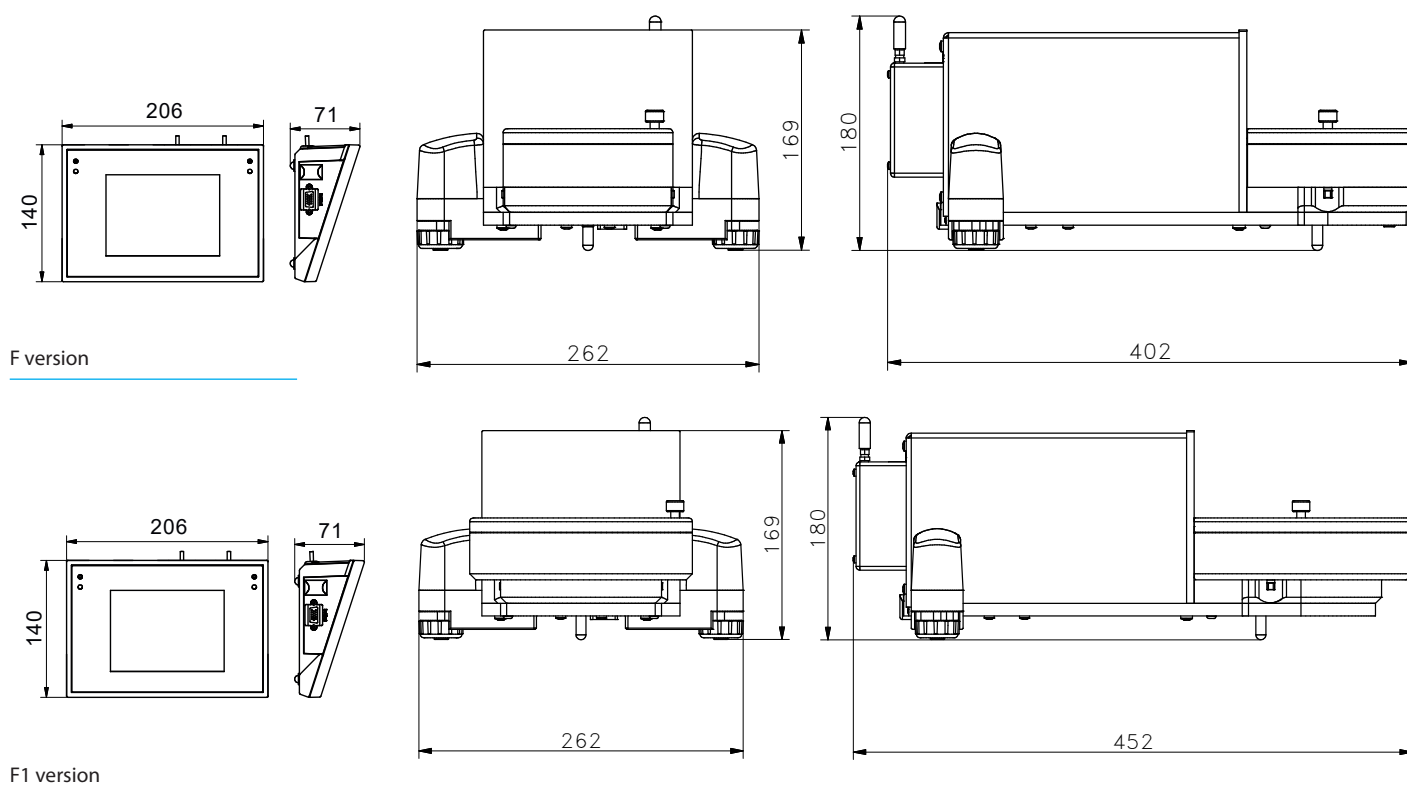
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Verification scale interval [e]	1 mg	1 mg	1 mg
Tare range	-2.1 g	-5.1 g	-5.1 g
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Repeatability(5% Max)*	0.15 µg	0.6 µg	0.6 µg
Repeatability(Max)*	0.35 µg	1.6 µg	1.6 µg
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Minimum weight (U=1%, k=2)	0.03 mg	0.12 mg	0.12 mg
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Power consumption	10 W	10 W	10 W
Operating temperature	+10 ÷ +40 °C	+10 ÷ +40 °C	+10 ÷ +40 °C
Operating temperature change rate	±0.3°C/1h (±1°C/8h)	±0.3°C/1h (±1°C/8h)	±0.3°C/1h (±1°C/8h)
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