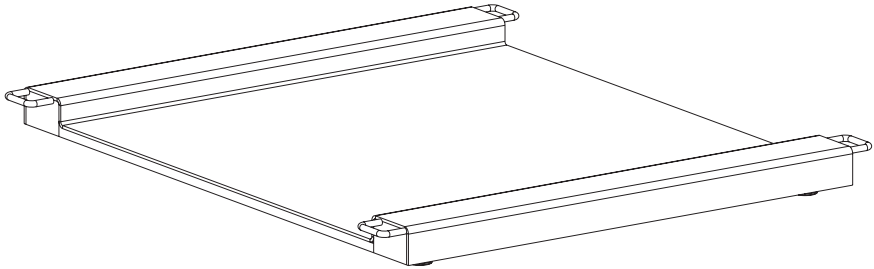


**Operating Instructions
Installation Information**

METTLER TOLEDO

**METTLER TOLEDO MultiRange
Weighing Platforms PUA574 / PUA579(x)**



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1 General information

This operating and installation manual contains all the information on the installation, commissioning and operation of the following weighing platforms.

- PUA574 as a coated design
- PUA579 as a stainless version
approved for use in hazardous areas of Zones 2/22
- PUA579x as a stainless version
approved for use in hazardous areas of Zones 1/21

The weighing platforms are available with an analog scales interface or a digital IDNet scales interface.

Information about the maintenance, troubleshooting and repairs are contained in the Service Manual ME-22014210.

2 Safety instructions

2.1 Safety instructions for PUA574 (coated)

- ▲ Do not use the weighing platform in hazardous areas!

2.2 Safety instructions for PUA579(x) (stainless)



There is an increased risk of injury and damage when the weighing platforms are used in hazardous areas! Special care must be taken when working in such hazardous areas. The rules for behaviour are based on the concept of "Safe Distribution" established by METTLER TOLEDO.

Competence

- ▲ The weighing platforms PUA579(x) may only be installed, maintained and repaired by authorised METTLER TOLEDO service personnel.

Ex approval

- ▲ No modifications may be made to the device and no repair work may be performed on the modules. Any weighing cells or system modules that are used must comply with the specifications contained in the installation instructions. Non-compliant equipment jeopardises the intrinsic safety of the system, cancels the Ex approval and renders any warranty or product liability claims null and void.
- ▲ The safety of the weighing system is only guaranteed when the weighing system is operated, installed and maintained in accordance with the respective instructions.

- ▲ Also comply with the following:
 - the instructions for the system modules and weighing cells
 - the regulations and standards in the respective country
 - the applicable statutory requirements for electrical equipment installed in hazardous atmospheres in the respective country
 - all instructions related to safety issued by the owner
- ▲ The explosion-protected weighing system must be checked to ensure compliance with the requirements for safety before being put into service for the first time, following any service work and every 3 years, at least.

Operation

- ▲ Prevent the build-up of static electricity. Always wear suitable working clothes when operating or performing service work in a hazardous area.
- ▲ Do not use protective coverings for the devices.
- ▲ Avoid damage to the system components.

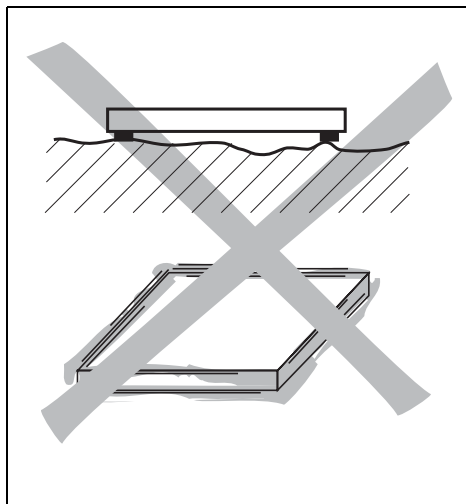
Installation

- ▲ Only install and perform maintenance work on the weighing system in the hazardous areas if the following conditions are fulfilled
 - if the intrinsically safe characteristic values and zone approval of the individual components are in accord with one another
 - the owner has issued a permit ("spark permit" or "fire permit")
 - the area has been rendered safe and the owner's safety co-ordinator has confirmed that there is no danger
 - the necessary tools and any required protective clothing are provided (danger of the build-up of static electricity)
- ▲ The certification papers (certificates, manufacturer's declarations) must be present.
- ▲ Lay cables in such a way that they are protected from damage.
- ▲ Only route cables into the housing of the system modules via the suitable cable coupler and ensure proper seating of the seals.

Additional requirements for Category 3 (Zone 2/22)

- ▲ The explosion-protected weighing platform PUA579 may only be operated in Zone 2 and 22 hazardous areas in conjunction with weighing terminals that have a corresponding approval and interface specification.
- ▲ The connection cable may not be separated from the weighing terminal while it is energised.
- ▲ Tighten the knurled nut of the IDNet connecting cable with 10 Nm.

3 Selecting the installation location



- ▲ The foundation at the installation location must be capable of safely support the weight of the weighing platform at its support points when it carries the maximum load. At the same time it should be so stable that no vibrations arise during weighing work. These requirements also apply when the weighing platform is integrated in conveying systems and the like.
- ▲ Ensure that vibrations from machines near the installation site are kept to a minimum.

Ambient conditions PUA574 (coated)

→ Use the weighing platform only in a dry environment.

Ambient conditions PUA579(x) (stainless)

→ Use the weighing platform in a dry environment or in a humid environment.

4 Equipotential bonding (for categories 2/3)

The equipotential bonding must be installed by a professional electrician when using the weighing platforms PUA579(x) in hazardous areas. METTLER TOLEDO Service only has a monitoring and consulting function here.

The equipotential bonding terminal is positioned at the terminal box of the weighing platform.

→ Connect equipotential bonding (PA) of all devices (weighing platform, service terminal) in accordance with the country-specific regulations and standards. In the process, make sure that all device housings are connected to the same potential via the PA terminals.

5 Ignition protection type PUA579(x)

	Category 3	Category 2
Weighing cells	Weighing cell THC II 2G EEx nA IIC T6 II 2D IP68 T 80 °C	Weighing cell THC II 2G EEx nA IIC T6 II 2D IP68 T 80 °C
Analog scale interface	Analog Ex1 II 2G EEx ia IIC T4 II 2D IP68 T 75 °C BVS 04 ATEX E221	Analog Ex1 II 2G EEx ia IIC T4 II 2D IP68 T 75 °C BVS 04 ATEX E221
Digital scale interface (IDNet)	Point type system solution II 3G Ex nA II T4 $-10\text{ °C} \leq T_a \leq +40\text{ °C}$ II 3D Ex tD A22 IP67 T 75 °C BVS 06 ATEX 098	Point Ex II 2G EEx ia IIC T4 $-20\text{ °C} \leq T_a \leq +60\text{ °C}$ II 2 D IP68 T 75 °C BVS 03 ATEX E 432

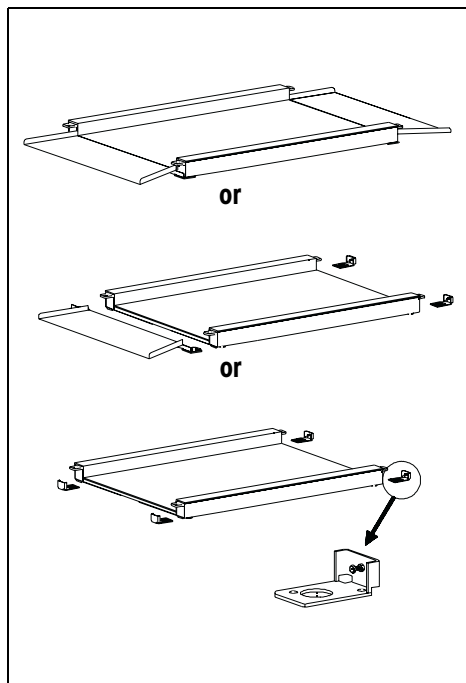
6 Setting up

Note

For a **verifiable application** the weighing platform has to be fastened to the floor as shown with access ramp(s) and/or base plates or with the installation frame.

For a **non-verifiable application** the weighing platform can also be operated without fastening to the floor with access ramp(s) and/or base plates or with the installation frame.

6.1 Above-ground installation with access ramp or base plates



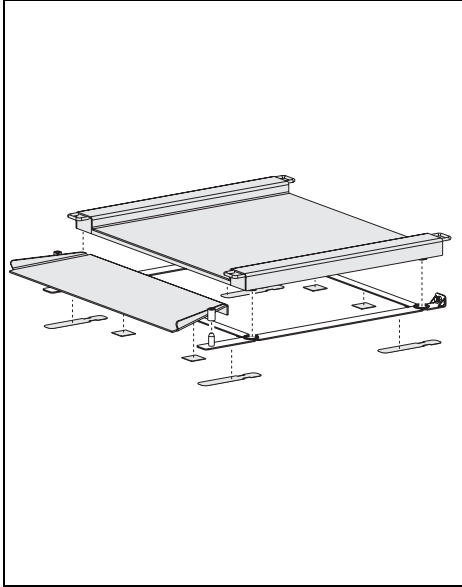
- Place access ramp(s) and/or base plates on the even floor in front of and behind the weighing platform at a suitable location.
- Lift the weighing platform at the handles and place it with the levelling feet into the provided recesses of the ramps or base plates.
- Ensure levelness in the area of the scales bases. If applicable, level using adjustable levelling feet.
- Align the ramps and base plates.
- Mark the position of the ramps and base plates and dowel them into the floor using the supplied dowels (2 dowels each per ramp or base plate).
- Set the screws for vibration limitation at the base plates to 2–3 mm play.

6.2 Above-floor installation with installation frame

In non-verification operation

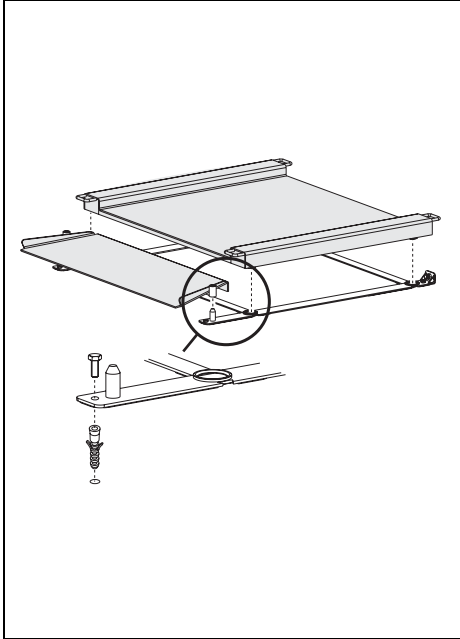
Note

This installation is only suitable for use with hand pallet trucks or roll containers. Other uses may cause the weighing platform to be displaced.



- Apply the anti-slip rubbers to the bottom of the installation frame. Ensure that the ground is clean and free of oil.
- Assemble the installation frame as shown in the enclosed assembly instructions.
- Set up the installation frame at a suitable location with a level ground.
- Insert the weighing platform in the installation frame and level using the adjustable levelling feet.
- If appropriate, place the ramp(s) on.
- If you use a ramp, set the screw for vibration limitation to 2–3 mm play.

In verification operation

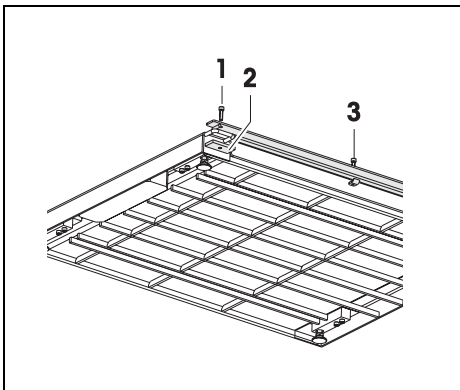


- Assemble the installation frame as shown in the enclosed assembly instructions.
- Set up the installation frame at a suitable location with a level ground. Do not attach the anti-slip rubbers!
- Mark the drill position for the anchor bolt plugs.
- Drill the plug holes and suck off the dirt.
- Fasten the installation frame to the floor using heavy-duty anchor plugs.
- Insert the weighing platform in the installation frame and level using the adjustable levelling feet.
- If appropriate, place the ramp(s) on.
- If you use a ramp, set the screw for vibration limitation to 2–3 mm play.

6.3 Mounting the passage stop

Note

The passage stop cannot be used together with the lifting system!



- Mount the passage stop using the two outer screws (1) and the two lugs (2) to the handles of the weighing platform.
- Screw the centre screw (3) into the thread until it contacts the load plate. This prevents the passage stop from bending when force is applied from above (step protection)

7 Commissioning

Weighing platforms with analog scales interface

Terminal	Standard	Ex
EXC+ (IN+)	grey	grey
SEN+	yellow	yellow
SIG+ (OUT+)	white	white
SIG- (OUT-)	brown	brown
SEN-	green	green
EXC- (IN-)	blue	pink

Weighing platforms with an analog scales interface can be connected to weighing terminals with an integrated A/D converter.

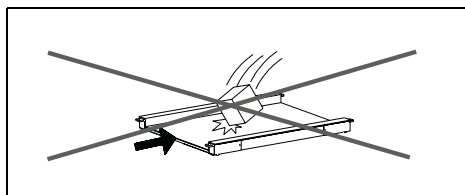
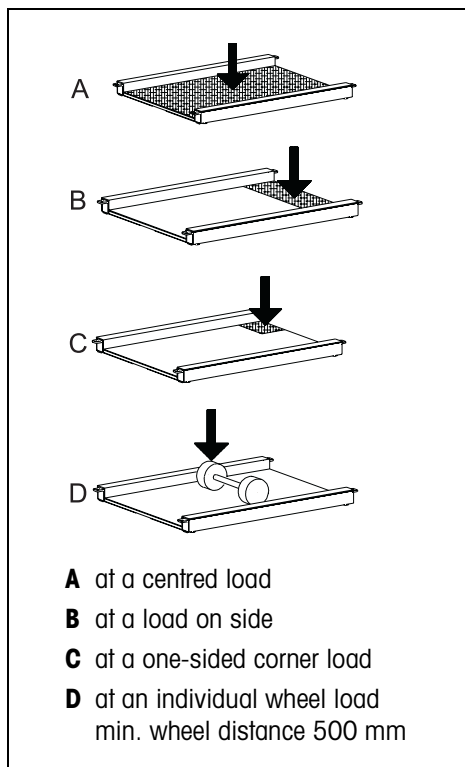
- Connect the weighing platform to the weighing terminal in accordance with the adjacent table.
- Route the connecting cable so that it is protected from damage.

Weighing platforms with IDNet interface

Weighing platforms with an IDNet interface can be connected to all weighing terminals with an IDNet connection.

- Route the connecting cable so that it is protected from damage.

8 Operating limits



Operation with access ramps

- The load plate of the weighing platform is an active weighing component. The access ramps are passive. This means that during the weighing process all the wheels of the transport vehicles have to be on the load plate.
- The air gap between the load plate and the access ramps has to be free. The gap should therefore be inspected regularly and kept free, in particular during the weighing of granular or small-scale material.

The weighing platforms are designed extremely robustly. However, the load limits in the following table should not be exceeded.

Depending on the type of load bearing, the static bearing, i.e. the maximum permissible load, amounts to:

Maximum permissible load

	PUA57..CS PUA57..FL	PUA57..E PUA57..FM	PUA57..FH
A	800 kg	1850 kg	3000 kg
B	400 kg	900 kg	1800 kg
C	300 kg	450 kg	900 kg
D	200 kg	400 kg	800 kg

→ Avoid falling loads, shock loads as well as impacts from the side.

9 Scales configuration

At the factory the scales are configured with a resolution of 1 x 3000 e (standard). The corresponding measuring data sign has to be provided to the ID card.

Possible configurations

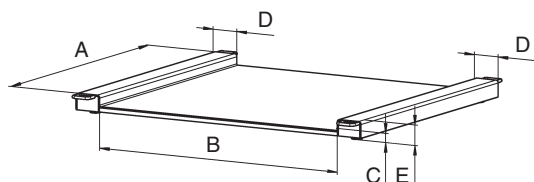
Weighing platform	Maximum load	Standard	Options		
		1 x 3000 e	2 x 3000 e MR/MI *	3 x 3000 e MR *	1 x 6000 e
PUA57..CS/FL	300 kg	0.1 kg	0.05 / 0.1 kg	–	0.05 kg
	600 kg	0.2 kg	0.1 / 0.2 kg	–	0.1 kg
PUA57..E/FM	300 kg	0.1 kg	0.05 / 0.1 kg	–	0.05 kg
	600 kg	0.2 kg	0.1 / 0.2 kg	–	0.1 kg
	1200 kg	–	–	–	0.2 kg
	1500 kg	0.5 kg	0.2 / 0.5 kg	0.1 / 0.2 / 0.5 kg	–
PUA57..FH	1200 kg	–	–	–	0.2 kg
	1500 kg	0.5 kg	0.2 / 0.5 kg	0.1 / 0.2 / 0.5 kg	–

* MR = MultiRange
MI = MultiIntervall

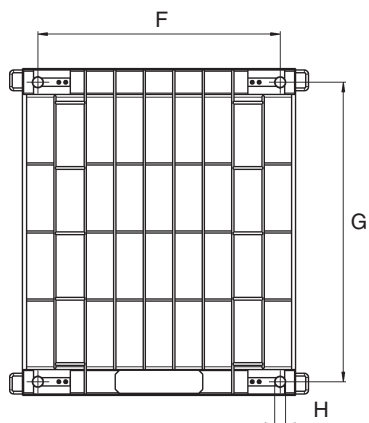
Notes

- If the configuration is changed, the new measuring data sign has to be adhered to the ID card.
- Further variants can be configured at weighing platforms with an IDNet interface in Service mode, see the Service Manual A/D Converter Point 22004255.

10 Dimensions



Dimensions in mm



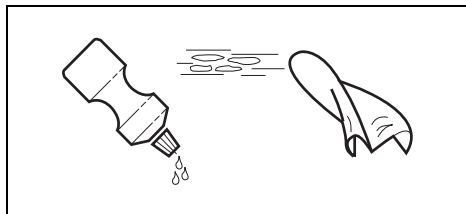
	PUA57..CS	PUA57..E	PUA57..FL	PUA57..FM	PUA57..FH
A	850	1500	750 ... 1250	1000 ... 1500	1500
B	850	1250	400 ... 1000	1000 ... 1250	1250 ... 1500
C	35	35	35	35	45
D	100	100	100	100	100
PUA574-E	72	115	72	115	115
PUA579-E	72	72	72	72	72
F	736	1386	A-114	A-114	1386
G	950	1350	B+100	B+100	B+100
H	40	40	40	40	40

11 Cleaning the weighing platform

Maintenance of the weighing platform is limited to regular cleaning. The procedure depends on the type of surface and on the ambient conditions prevalent at the installation site.

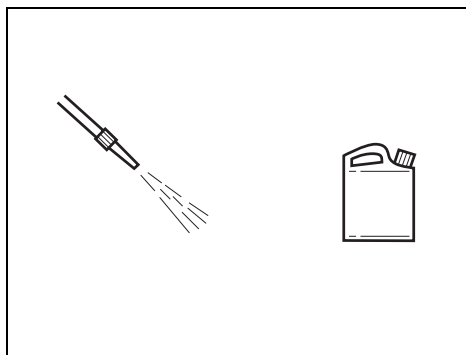
Cleaning agents

→ Only use disinfectants and cleaning agents in accordance with the manufacturer's instructions!



Cleaning in a dry environment

- Wiping with a damp cloth
- Common household cleaning agents



Cleaning in a wet environment

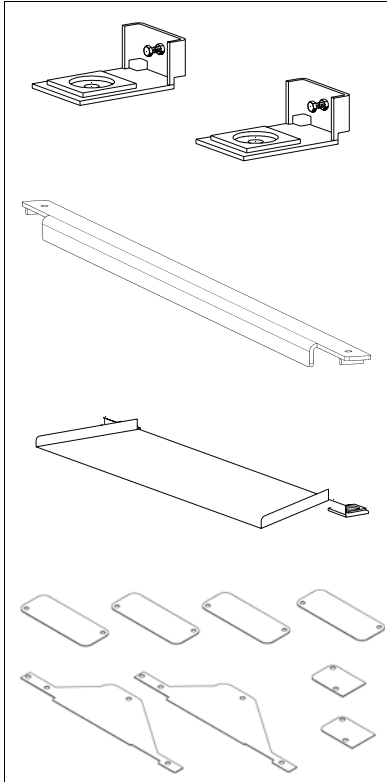
- Water jet up to 60 °C
- Common household cleaning agents

Cleaning in a corrosive environment

- Water jet up to 60 °C
- Ensure that corrosive substances are removed at regular intervals.
- Treat with the enclosed universal oil if necessary.

12 Standard accessories

Mechanical accessories



Foot plate set, with stop

for PUA574 (coated)	22 012 783
for PUA579(x) (stainless)	22 012 778

Passage stop

for PUA574 (coated)	22 014 206
for PUA579(x) (stainless)	22 014 208

Access ramps, coated

for PUA574-CS	22 012 784
for PUA574-E	22 012 785
for PUA574-FL/FM	22 012 786
for PUA574-FH	22 012 787

Sealing set

<p>Rubber plates for sealing on the floor, for 2 x ramps, 1 x foot plate set or 1 x lifting device, incl. special dowels</p>	22 006 354
--	------------

Access ramps, stainless

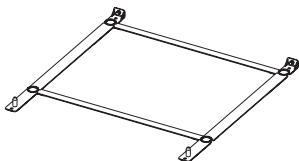
Size	Basic model	Options	
	stainless	V4A/AISI316	ground
for PUA579-CS	22 012 779	00 599 929	00 599 933
for PUA579-E	22 012 780	00 599 930	
for PUA579-FL/FM	22 012 781	00 599 931	
for PUA579-FH	22 012 782	00 599 932	

Order example for access ramps, stainless

Ramp for PUA579-CS / V4A/AISI316 / ground:

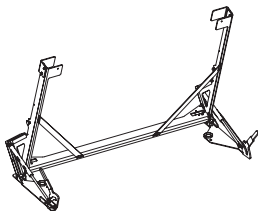
22 012 779 + 00 599 929 + 00 599 933

Installation frame



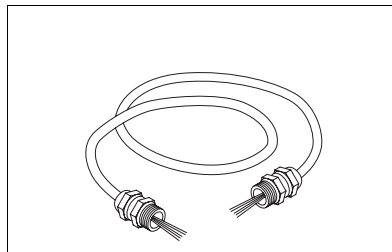
	Basic model, V4A/AISI316		Option
Size	1 ramp	2 ramps	ground
for PUA579-CS	22 017 751	22 017 759	00 599 934
for PUA579-E	22 017 752	22 017 760	
for PUA579-FL/FM/FH	22 017 753	22 017 761	

Lifting device



Lifting device	for PUA579 length x clearance in mm	Basic model	Options	
		V2A/AISI304	V4A/AISI316	ground
850	850 ... 1250 x 850	22 015 715	00 599 936	00 599 935
1000	850 ... 1500 x 1000	22 015 718		
1250	1100 ... 1500 x 1250	22 015 719		

Accessories for analog version



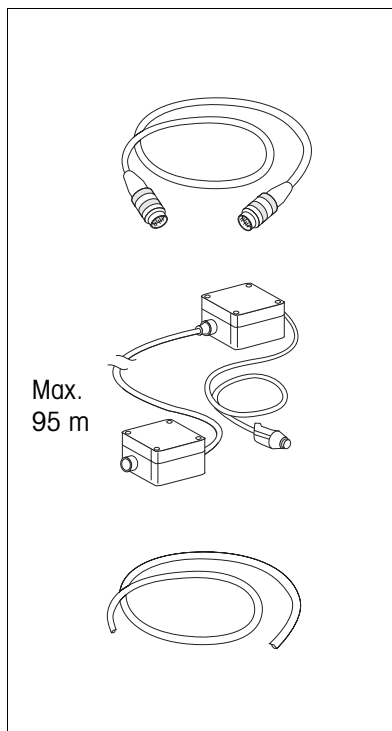
Order No.

Connection cable analog

00 204 555

10 m long, with integral connectors at both cable ends for remote control of the terminal with integrated A/D converter

Accessories for IDNet version



Order No.

Connecting extension cable

00 504 134

10 m long, pluggable on both ends for remote control of the IDNet terminal

Connecting set for IDNet terminals

00 504 133

for progressive extension of the connecting cable to 100 m consisting of two terminal boxes
Box at terminal end with connecting cable 2.5 m long

Max.
95 m

Special cable from the roll

00 504 177

100 m, in connection with the connecting set for progressive extension of the connecting cable for IDNet terminals

13 Disposal



In accordance with the requirements of the European Directive 2002/96 EC about Waste Electrical and Electronic Equipment (WEEE) this equipment may not be disposed of in the household refuse.

This applies correspondingly for countries outside the EC in accordance with the applicable national regulations.

→ Please dispose of this product in accordance with the local regulations in a separate collection for electrical and electronic equipment.

Should you have any questions, please contact the responsible authorities or the dealer from whom you purchased this equipment.

If this equipment is passed on (for example for private or commercial/ industrial further use), this specification has to be passed on correspondingly as well.

Many thanks for your contribution to protecting the environment.

ServiceXXL

Tailored Services

METTLER TOLEDO products stand for highest quality and precision. Careful handling in accordance with these operating instructions as well as regular maintenance and inspection by our professional customer service ensure the long and reliable function and maintenance of value of your measuring instruments. Our experienced service team will be pleased to inform you about corresponding service agreements or calibration services.

Please register your new product under www.mt.com/productregistration, so that we can inform you about improvements, updates and further important information about your METTLER TOLEDO product.

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