

That's right!



Weighing on air for greater efficiency!

- SmartGrid, the grid weighing pan for faster, more stable results
- ErgoClips, the accessory for tailored weighing solutions
- Ingenious left/right hand operation of the draft shield for higher productivity

Lateral thinking, lateral fastening.

Every development reaches a limit when its basic principle has been fully exploited. After that, only fundamentally new solutions bring further progress — this also applies to analytical balances.

Inspired by customers' need for greater efficiency, METTLER TOLEDO has given a refreshingly new interpretation to weighing with the XS analytical balance. The result: a weighing pan which - thanks to being supported, uniquely, at the rear of the weighing chamber - "floats" in space. Technically a breakthrough, with a clear customer benefit: weighing becomes more efficient than ever before.

Less air resistance, more speed.

Another sensation is SmartGrid, the new grid weighing pan. By comparison with traditional weighing pans, it has only a minimal area in the weighing chamber for turbulence to act upon – with maximum

effect. Stabilization time is shortened noticeably; the result is available faster.

Grid as basis, system as result.

Weighing substances into special containers such as round-bottom flasks or test tubes, is this part of your daily work? Then there's one advantage of the grid weighing pan you'll especially like: the facility to radically simplify such operations with ErgoClips. In combination with the weighing kit, available separately, the SmartGrid grid weighing pan becomes an ergonomic weighing system which can be precisely adapted to specific tasks and help to increase productivity.

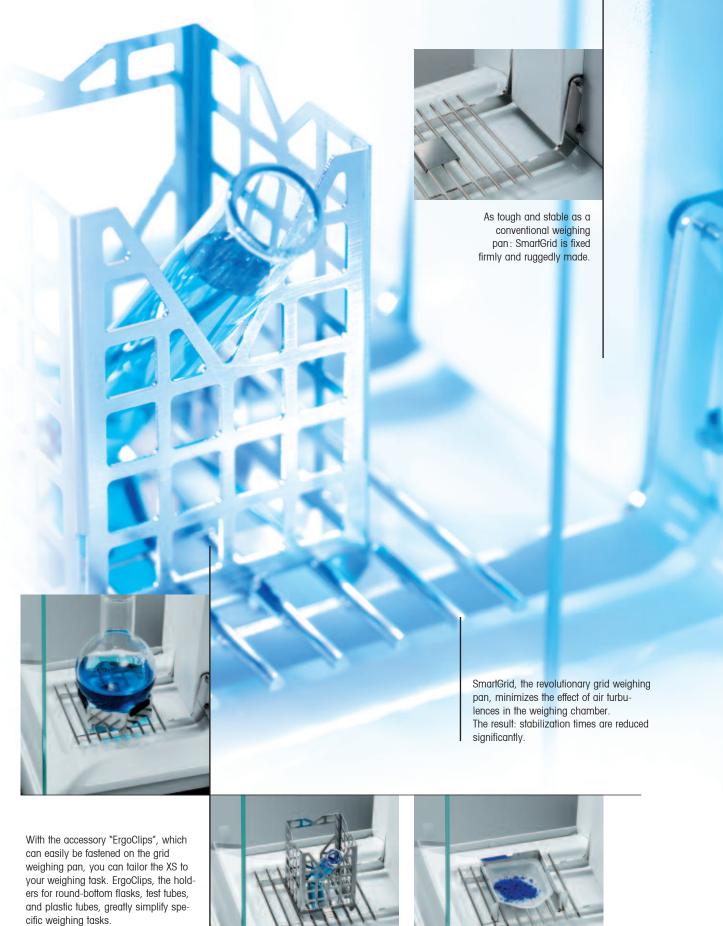


If you want a solid supporting surface, you place a disposable aluminum pan on the SmartGrid.

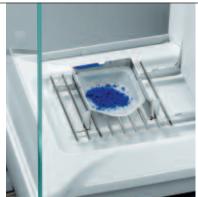
If you work with toxic substances, you dispose of the aluminum tray after every weighing operation.



Operate here, open and close there: You can push at the left – and the draft shield opens to the right. Or vice versa. So you always have one hand free for weighing.



and plastic tubes, greatly simplify specific weighing tasks.



Customize your weighing with ErgoClips.

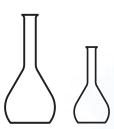
- ErgoClips, for secure placement of all tare containers
- One-step dispensing directly into tare containers

■ More stable weighing results by eliminating static electricity effects



ErgoClip Flask:

Specialized for one-step weighing of small sample amounts directly into a graduated flask. Due to the ErgoClip's reduced surface area, weighing results are extremely fast and precise. Placement angles are freely adjustable.



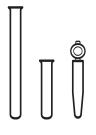
MinWeigh Door:

A draft shield with an adjustable opening. Perfect in combination with ErgoClip Flask, for shorter stabilization times and smallest minimum sample weights.



ErgoClip Tube:

This ErgoClip is a set with two tube holders, suitable for several different standard reaction tubes. Placement angles are freely adjustable.

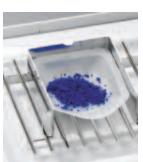








Various types of ErgoClips are available for your specific weighing tasks. Using ErgoClips will enhance the productivity and security of your weighings.



ErgoClip Weighing Boat:

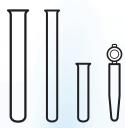
Perfect for plastic weighing boats.





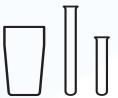
ErgoClip Basket Small:

Designed for various test tubes of different sizes.

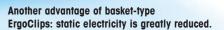




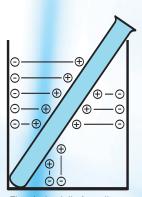
This ErgoClip is ideal for titration beakers or other large vessels.







Distortion of the weight value due to statically charged samples or tare vessels made of plastic or glass is reduced by the **Faraday-shield effect** of the grid basket.



The electrostatic force lines are screened by the basket.



ErgoClip Round-Bottom Flask:

Suitable for various sizes of round-bottomed flasks, to guarantee secure placement.



Hassle-free cleaning? Look no further.

- Draft shield can be completely dismantled
- Easy cleaning thanks to the inner base plate
- Contamination of the weighing cell and adjustment weights is prevented
- Dishwasher-safe glass and plastic

If there's nothing there, nothing can get in the way of cleaning.

Thanks to the SmartGrid grid weighing pan, cleaning is completed quickly. Because the weighing pan is fastened to the back wall, there are no openings or gaps where powders or liquids can enter — only an inner base plate which you can remove easily and clean quickly. And you save time, which you can use productively for other work.

What machines can do, let machines do.

The chemical and acid-resistant draft shield of the Excellence XS analytical balance can be completely dismantled. That's done very quickly and easily — then it's the machine's turn- because all parts of the draft shield and weighing pan are dishwasher-safe.





If a substance being dispensed falls outside the container, it no longer distorts the weighing result. Thanks to the grid weighing pan, the substance simply falls into the tray beneath.

Dismantling the draft shield is as easy as this. Neither can anything go wrong when you reassemble it.



Efficiency included.

- Touch-screen display for easy operation
- Clear, graphical user guidance
- Moveable, adjustable operating terminal
- Documentation according to GLP and other quality systems
- Built-in applications as standard
- Design, functionality and aesthetics combined



Not a line too many, not a line too few.

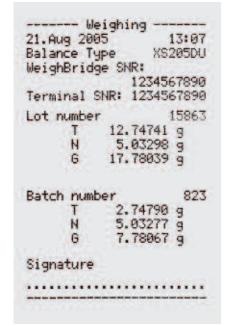
So you can verify your research results at any time, everything can be recorded completely and traceably. There is an increasing demand for complete documentation according to GLP.

Efficiency as key motivation.

Technology for its own sake means nothing to METTLER TOLEDO. With all our ideas, we always ask one decisive question: what can it do in practice? Only ideas which demonstrate increased efficiency have a chance of being implemented as prototypes, and if they prove themselves, being integrated into new products.

At work everywhere.

The Excellence XS analytical balance impresses with innovations which systematically pursue one goal: to make your work simpler, safer, and therefore more efficient. For all conceivable applications, in every industry: pharmaceuticals, chemicals, food, or cosmetics. Wherever weighing is indispensable, weighing instruments from METTLER TOLEDO are also indispensable: in research and development, quality control, or routine tasks.



The XS analytical balance allows you to configure the report however you like.



Facts from figures: The individually configurable statistics program makes evaluations amazingly simple.

One after the other: The XS guides you safely and reliably through formula weighings. At the end, it records the weights of the individual components and the total weight.

Thanks to alphanumeric input, you can identify your sample easily and securely.

Short of space? You can also place the operating terminal next to the balance or behind it. Poor light conditions? The angle of the terminal is adjustable.



Bluetooth

Allows wireless communication between balance and printer up to a distance of 10m. So you can place the printer wherever you want it — with no cable to worry about.



Second interface

As well as an RS232 interface fitted as standard, the XS has an optional, easily insertable second interface allowing seven different connection possibilities. Select from Bluetooth, Ethernet, PS/2 or USB: the Excellence XS connects to them all.



Operation is made easy by means of a touchscreen display and clearly structured menus. For plain-text dialog you can choose between English, French, German, Spanish, or Italian.

A solution to get immersed in.

- Fully integrated solution for density determination
- Touch-screen display for easy operation
- Clear, graphical user guidance which is easy to follow

Where required, the thermometer and glass sinker are available in certified versions.

Full integration.

The Excellence XS analytical balance is also practical and efficient for special applications. The fully integrated solution for determining the density of solids, liquids, and pasty substances impressively demonstrates this. For example, the balance software already contains density tables for water and ethanol.

Utmost accuracy.

This accessory for density determination — and the other accessories — is perfectly matched to the Excellence XS analytical balance. For example, a thermometer ensures utmost measuring accuracy and traceability. What's more: where required, certified versions of the thermometer and the glass sinker are available from METTLER TOLEDO.

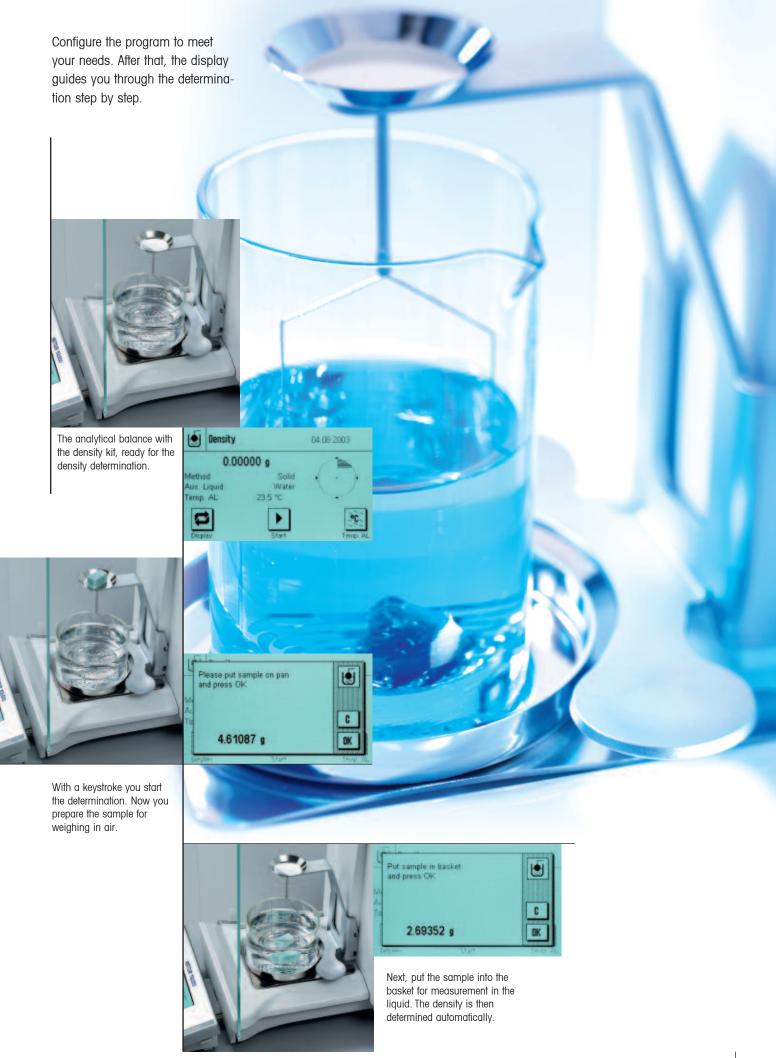


21.Aug 2005 Balance Type	sity -	13:16 32050U
Method Liquid		Solid
Temperature	.99744 23.5	°C 2
Wgt. in Liqu		
Vol. Sample	.00450 5.013	9 cm3
Density =	1.996	g/cm3
21.Aug 2005 Method		13:17 Solid
With Compens	ation	7
X	1.9957 0.0015 1.994 1.997	

If you would like to know the volume of the sample, this is calculated automatically.

The result can be displayed in various units and different resolutions, depending on the desired accuracy.

If you wish to find the density of the sample using multiple determinations, you have a statistics module available for each method.



Outstanding technology for precise results.



Perfection where no one sees it. For weighing below the working surface, the balance is fitted with a special hanger.

150

73 x 78

Conspicuous innovation. The concept of transferring the mass forces outsideways will characterize the coming generation of analytical balances.



XS analytical balance

Standard equipment

- Backlit graphics display with touch-screen operation
- FACT fully automatic temperature-controlled internal adjustment
- Stainless steel weighing pan
- Weighing adapter for optimal adaptation to the environment
- RS232 interface built in; plug-in module for optional second interface available
- Glass draft shield with flexible configuration
- Protective cover for the terminal, replaceable
- Feedthrough for weighing below the balance
- AC/DC adapter for power supply connection: primary 100-240V, -15%/+10%, 50/60 Hz, 0.8 A, secondary: 12 VDC ±5%, 2.25 A (electronic overload protection)
- Country-specific power supply cable
- · Weighing adapter optimum adaptation to the weighing environment

All models can / offer

- Download software via the Internet
- Show various different weighing units
- Be tared over the entire weighing range
- Be adapted to the environment
- Be adapted to the type of weighing
- Determine the densities of solid, liquid, and pasty substances
- Formula-weigh and totalizing
- Piece counting
- % Weighing
- Display statistics with ±, %
- Calculate coefficients
- Alphanumeric sample ID
- Communicate in different languages:
 - e, f, g, i, sp, russ, jp

Technical data - Limit values	XS105DU	XS205DU	XS64	XS104	XS204	XS204DR
Maximum capacity	120 g	220 g	61 g	120 g	220 g	220 g
Readability	0.1 mg	0.1 mg	0.1 mg	0.1 mg	0.1 mg	1 mg
Maximum capacity, fine range	41 g	81 g	-	-	-	81 g
Readability, fine range	0.01 mg	0.01 mg	-	-	-	0.1 mg
Repeatability - at nominal load (measured at)	0.1 mg (100g)	0.1 mg (200g)	0.1 mg (60g)	0.1 mg (100g)	0.1 mg (200g)	0.7 mg (200g)
- at low load (measured at)	0.05 mg (10g)	0.05 mg (10g)	0.07 mg (10g)	0.07 mg (10g)	0.07 mg (10g)	0.5 mg (10g)
- at low load (measured at), fine range	e 0.02 mg (10g)	0.02 mg (10g)	-	-	-	0.1 mg (10g)
Linearity	0.2 mg	0.2 mg	0.2 mg	0.2 mg	0.2 mg	0.5 mg
Eccentric load deviation (test load)1)	0.3 mg (50g)	0.3 mg (100g)	0.15 mg (20g)	0.3 mg (50g)	0.3 mg (100g)	0.3 mg (100g)
Sensitivity offset	8x10 ⁻⁹ 1071	4x10 ⁻⁹ 127	1.5x10 ⁻⁵ ®	1x10 ⁻⁵ 12 1 1	5x10 ⁻⁹ 12 7	5x10 ⁻⁹ 2 7
Sensitivity temperature drift ²⁾	1.5x10 ⁻⁶ /°ORat	1.5x10 ⁻⁶ /°0 R at	1.5x10 ⁻⁶ /°ORat	1.5x10 ⁻⁶ /°ORat	1.5x10 ⁻⁶ /°OR71t	1.5x10 ⁻⁶ /°ORat
Sensitivity stability ³⁾	2x10 ⁻⁶ /d Ω dt	2x10 ⁻⁶ /d R dt	2x10 ⁻⁶ /d 2 dt	2x10 ⁻⁶ /d Ω dt	2x10 ⁻⁶ /d R dt	2x10 ⁻⁶ /d ? at
Interface update rate	23 /s	23 /s	23 /s	23 /s	23 /s	23 /s

Technical data - Typical values 4)

Repeatability (sd)	0.04mg+2x10 ⁻ 1िक्व	0.04mg+2x10 ⁻ 限	0.04mg+1.5x10 ⁻⁷ 復	0.04mg+2x10 ⁻ 很如	0.04mg+1.5x10 ⁻ 確	0.4mg+5x10 ⁻ 16π
Repeatability (sd), fine range	0.01mg+4x10 ⁻ 確	0.01mg+3x10- 和	-	-	-	0.04mg+2x10-祝妇
Differential linearity deviation (sd)	√4x10 ⁻¹¹ ₫	√2x10 ⁻¹¹ ₫	√4x10 ⁻¹¹ ₫	√4x10 ⁻¹¹ ₫	√2x10 ⁻¹¹ ₫	√1.2x10 ⁻¹⁰ ∮Ω1
Differential eccentric load deviation (sd)	1.5x10-9921	8x10-76±1	1.5x10-9921	1.5x10-9921	8x10-7£±1	8x10-761
Sensitivity offset (sd) ²⁾	2x10-¶⊞	1.5x10-92	1x10-1101	3x10-991	2x10-900	2x10-900
Minimum weight* (according to USP)	120mg+6x10 ⁻¹ 17g	120mg+6x10-110g	120mg+4.5x10-48g	120mg+6x10-110gr	120mg+4.5x10-4	1200mg+1.5x10-% 📆
Minimum weight* (according to USP), fine range	30mg+1.2x10-10 ∰g	30mg+9x10-110g	-	-	-	120mg+6x10-117g
Minimum weight* (@ U=1%, 2 sd)	2mg+8x10-¶@	2mg+6x10-¶@	8mg+3x10-¶ g i	8mg+4x10-¶@	8mg+3x10-¶gd	8mg+4x10 ^{-¶} ¶g
Minimum weight* (@ U=1%, 2 sd), fine range	2mg+8x10-¶@	2mg+6x10-¶@	-	-	-	8mg+4x10-¶@
Stabilization time	1.5s	1.5s	1.5s	1.5s	1.5s	1.5s
Stabilization time, fine range	3s	3s	-	-	-	1.5s
Weighing time ⁵⁾	4s	4s	4s	4s	4s	3.5s
Weighing time ⁵⁾ , fine range	6s	6s	-	-	-	4s

¹⁾According to OIML R76 ²⁾In the temperature range 10...30°C ³⁾Stability of sensitivity as from first installation with FACT ⁴⁾To be used for estimation of uncertainty ⁵⁾Including sample handling and stabilization time sd: standard deviation Rgr: gross weight Rnt: net weight (sample weight) a: year(annum)

^{*}The minimum weight can be improved and affected by the following measures: - choice of suitable weighing parameters, - moving to better location, - using smaller tare containers

Accessories – for even greater efficiency.



Weight for tests and adjustments. Guaranteed traceability – www.mt.com/weights

Description		Part numbe
C adapter protection cover	IP54 AC adapter protection cover	11132550
inti-static kits	Universal Anti-static kits complete (U-kit)	11107767
	Optional U-electrode for univesal Anti-static kits	11107764
Inti-theft device	Steel cord	11600361
Auxiliary displays	BT-BLD Bluetooth aux. display for benchtop mounting. Wireless connection. Backlit LCD display.	11132555
	RS/LC-BLDS auxiliary display for benchtop mounting or on balance. Backlit LCD display.	11132630
	LC-AD auxiliary display on benchtop stand with fluorescent display	229140
	LC-ADS auxiliary display on high benchtop stand with fluorescent display	229150
	LC/RS-BLD auxiliary display on benchtop stand with backlit LCD display	224200
Barcode scanners	RS232C barcode scanner	21900879
	AC adapter for barcode scanner 230V EUR	21900882
	AC adapter for barcode scanner 115V USA	21900883
Density kits	Density kit	11106706
onon, kino	Certified Thermometer for Density Determination	11132685
	Sinker 10 ml: for density determination of liquids	210260
	Sinker 10 ml, certified model	210200
irgoClips	ErgoClip "Basket Small"	11106747
.igoonps	ErgoClip "Titration Basket"	11106883
	ErgoClip "Weighing Boat"	11106748
		11106746
	ErgoClip "Round Bottom Flask"	11106746
	ErgoClip "Flask"	
	MinWeighDoor (ideal for use with "ErgoClip Flask")	11106749
	ErgoClip "Tube"	11106784
	Single-use aluminum weighing pan (10 units)	11106711
	Weighing Kit - Set of ErgoClips (Included: ErgoClips "Test Tube", "Weighing Boat"	
	and "Round Bottom Flask"; 20 weighing boat; 10 single-use aluminum pans)	11106707
Evaporation trap	Evaporation trap, PC-Volume Option 2	21901263
Filling-process control	LV11 Draff shield door	11106715
	LV11 small-item transporter for automatic loading of small items on the balance	21900608
.C-Footswitch	Auxiliary footswitch with selectable function for the balance	11106741
	LC-footswitch with selectable function	229060
	Switchbox; connect up to three balances with LocalCan interface to a printer	229220
Optional interfaces	BT option: interface Bluetooth, multipoint connection for up to 6 Bluetooth devices	11132530
	BTS option: interface Bluetooth, point-to-point connection	11132535
	Ethernet option:interface Ethernet for connection to Ethernet network	11132515
	PS/2 option: interface for connecting commercial keyboards and barcode readers	11132520
	RS232C option: interface for connection of a printer (RS-P42), computer or titrator	11132500
	LocalCAN option: interface for connection of up to five LC (LocalCAN) instruments	11132505
	MiniMettler option:interface MiniMettler, for connection to older (legacy) systems	11132510
	E-link IP65 EB01: Ethernet connection to the e-link network with IP65 protection	11120003
Printers	BT-P42 printer with wireless Bluetooth connection to balance	11132540
	RS-P42: printer with RS232C connection to balance	229265
Production certificate	Pro Production Certificate for XS balances	11106895
Protective Covers	Protective cover (terminal only)	11106870
Sensors	ErgoSens, optical sensor for hands-free operation	11132601
Software	PC-Volume Kit complete, option3	21901264
Soliwule	LabX Pro balance	11120301
	LabX Light balance	11120317
	LabX Direct balance	11120317
Stands and wall mountings	Stand for terminal and printer	11120340
oranas ana wan mounnings	·	
Terminal cable	Terminal wall mounting	11132665
recollant codie	Terminal extension cable, 4.5m	11600517

ServiceXXL

Because you want results, not promises.

ServiceXXL assures the daily operating certainty and constant performance of your balance for years. Our global service network employs 1200 highly trained and experienced service technicians to provide cost-effective service solutions. Our goal is to ensure the availability of your balances and guarantee full traceability of your results and processes.

In the area of **Equipment Qualification (EQ)** we offer the following services that guarantee full regulatory compliance:

DQ

make the right choice

- Define requirements
- Qualify supplier



The importance of the Design Qualification is often underestimated. Because we know the potential negative consequences, we have developed decision aids that make it easier for you to choose the right balance. Contact your sales representative and let yourself be guided through the DQ process.

IQ/QQ/PQ

ensure qualified installation

- Immediate start-up
- Assure operation according to requirements



With the IPac you ensure professional installation and Initial Qualification of your balance. IPacs are especially suitable for subsequent integration of your balance into an existing quality management system. In addition, activation of MinWeigh ensures that you always stay within defined limits.

MQ

protect your investment

- Optimize up-time
- Ensure accuracy and traceability



Regular servicing by a METTLER TOLEDO service technician guarantees high availability of your balance and seamless traceability of your measurement results. It also ensures that your balance documentation is regularly updated and that you benefit from effective control of costs.

Mettler-Toledo GmbH, Laboratory & Weighing Technologies CH-8606 Greifensee, Switzerland Phone +41-44-944 22 11 Fax +41-44-944 30 60

Australia Austria Mettler-Toledo Ltd., Port Melbourne, Victoria 3207 Tel. (03) 9644 57 00, Fax (03) 9645 39 35 Mettler-Toledo GmbH., A-1100 Wien Tel. (01) 604 19 80, Fax (01) 604 28 80

Belgium

Mettler-Toledo s.a., B-1932 Zaventem
Tel. (02) 334 02 11, Fax (02) 334 03 34
Mettler-Toledo Ltda., 06455-000 Barueri/São Paulo

Brazil Canada Mettler-Toledo Ltda., 06455-000 Barueri/São Paulo Tel. (11) 7295 1692, Fax (11) 421 3459 Mettler-Toledo Inc., Ontario, Canada Tel (800) 638-8537, Fax (905) 681-8036

China

Mettler-Toledo (Shanghai) Ltd., Shanghai 200233 Tel. (21) 6485 04 35, Fax (21) 6485 33 51 **Mettler-Toledo, d.o.o.,** HR-10000 Zagreb

Croatia
Czech Republic

Tel. 01 29 58 130, Fax 01 29 58 140

Mettler-Toledo, spol, s.r.o., CZ-100 00 Praha 10

Denmark

Tel. 272 123 150, Fax 272 123 170

Mettler-Toledo A/S, DK-2600 Glostrup
Tel. (43) 270 800, Fax (43) 270 828

France

Mettler-Toledo s.a., F-78222 Viroflay
Tel. (01) 3097 17 17, Fax (01) 3097 16 16
Mettler Toledo CmbH, D 35353 Ciscopa

Germany

Mettler-Toledo GmbH, D-35353 Giessen
Tel. (0641) 50 70, Fax (0641) 507 128
Mettler-Toledo (HK) Ltd., Kowloon

HongKong

Tel. (852) 2744 1221, Fax (852) 2744 6878

Hungary

Mettler-Toledo, KFT, H-1173 Budapest Tel. (01) 288 40 40, Fax (01) 288 40 50

India

Mettler-Toledo India Pvt Ltd, Mumbai 400 072 Tel. (22) 2857 08 08, Fax (22) 2857 50 71

Italy

Mettler-Toledo S.p.A., I-20026 Novate Milanese Tel. (02) 333 321, Fax (02) 356 29 73

Japan Korea Mettler-Toledo K.K., Tokyo 143
Tel. (3) 5762 0606, Fax (3) 5762 0756
Mettler-Toledo (Korea) Ltd., Seoul 137-130
Tel. 23 2408 2500, Fax 23 2408 2555

Kazakhstan

Tel. 82-2-3498-3500, Fax 82-2-3498-3555

Mettler-Toledo Central Asia, 480009 Almaty
Tel. (07) 3272 980 834, Fax (07) 3272 980 835

Mettler-Toledo (M) Sdn. Bhd., 40150 Selangor

Malaysia

Tel. (603) 784 55 773, Fax (603) 784 58 773 Mettler-Toledo S.A. de C.V., México C.P. 06430

Mexico

Tel. (55) 5547 5700, Fax (55) 5547 2128 **Mettler-Toledo B.V.,** NL-4004 JK Tiel

Netherlands

Tel. (0344) 638 363, Fax (0344) 638 390

Mettler-Toledo A/S. N-1008 Oslo

Norway

Tel. 22 30 44 90, Fax 22 32 70 02 Mettler-Toledo, Sp. z o.o., PL-02-822 Warszawa

Poland Russia

Tel. (22) 545 06 80, Fax (22) 545 06 88

Mettler-Toledo C.I.S. AG, 10 1000 Moskau

Tel. (205) 201 20 11 574 (205) 201 70 00

Singapore

Tel. (095) 921 92 11, Fax (095) 921 78 68 Mettler-Toledo (\$) Pte. Ltd., Singapore 139959

Slovakia

Tel. 65-6890 0011, Fax 65-6890 0012

Mettler-Toledo, SK-82104 Bratislava

Tel. (02) 434 27 496, Fax (02) 433 37 190

Slovenia

Mettler-Toledo, d.o.o., SI-1236 Trzin Tel. (01) 530 8050, Fax (01) 562 1789

Spain

Mettler-Toledo S.A.E., E-08908 Barcelona Tel. (93) 223 76 00, Fax (93) 223 76 01

Sweden Switzerland Mettler-Toledo AB, S-12008 Stockholm
Tel. (08) 702 50 00, Fax (08) 642 45 62
Mettler-Toledo (Schweiz) AG, CH-8606 Greifensee
Tel. (044) 944 45 45, Fax (044) 944 45 10

Thailand

Mettler-Toledo (Thailand) Ltd., Bangkok 10320 Tel. 66-2-723 0300, Fax 66-2-719 6479 Mettler-Toledo Pac Rim AG. Taipei

Taiwan

United Kingdom

United States

Tel. (2) 2657 8898, Fax (2) 2657 0776

Mettler-Toledo Ltd., Leicester, LE4 1AW

Tel. (0116) 235 70 70, Fax (0116) 236 5500

Mettler-Toledo, Inc., Columbus, OH 43240

Tel. 800-METTLER, Fax (614) 438 4900

For all other countries Mettler-Toledo GmbH

PO Box VI-400, CH-8606 Greifensee Tel. +41-44-944 22 11, Fax +41-44-944 31 70

Subject to technical changes © 01/2006 Mettler-Toledo GmbH Printed in Switzerland 11795378

www.mt.com/XS-Analytical

More information



Quality certificates

Development, production and testing under ISO 9001.



Environment management system under ISO 14001.



"Communauté Européenne".

With this mark we declare that our products comply with all applicable directives.