SERIES

321

ANALYTICAL BALANCES
PRECISION BALANCES

Precisa
THE BALANCE OF QUALITY

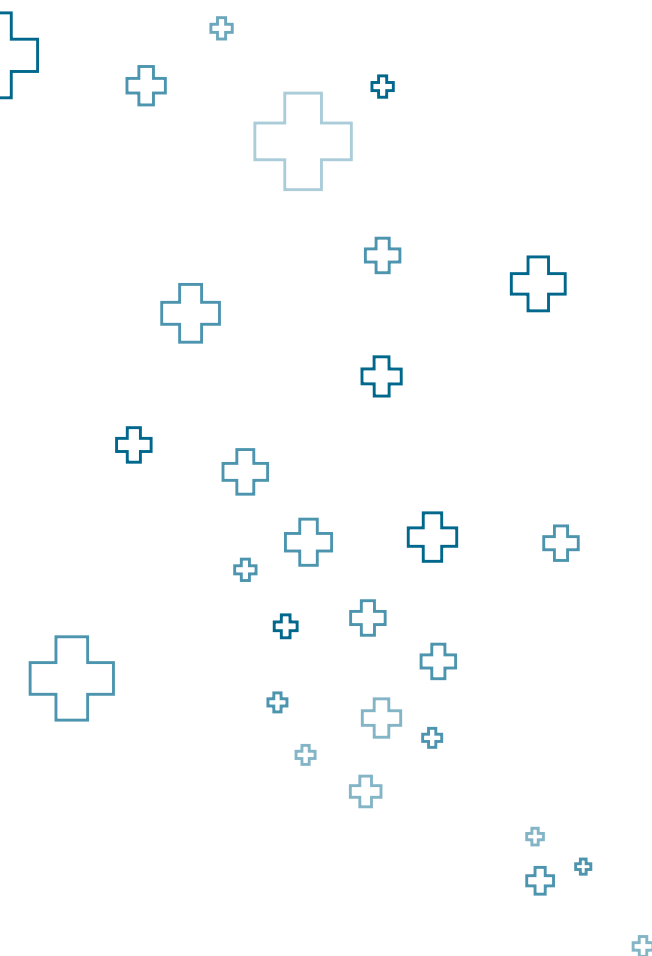## PRECISA DNA:
ZERO TOLERANCE.

Discerning technicians in the laboratory and analysis segments are well aware of the critical importance of the results they deliver. That is why they are simply not prepared to compromise on their working environment. And exactly why leading specialists around the world count on Precisa, and have done for decades.
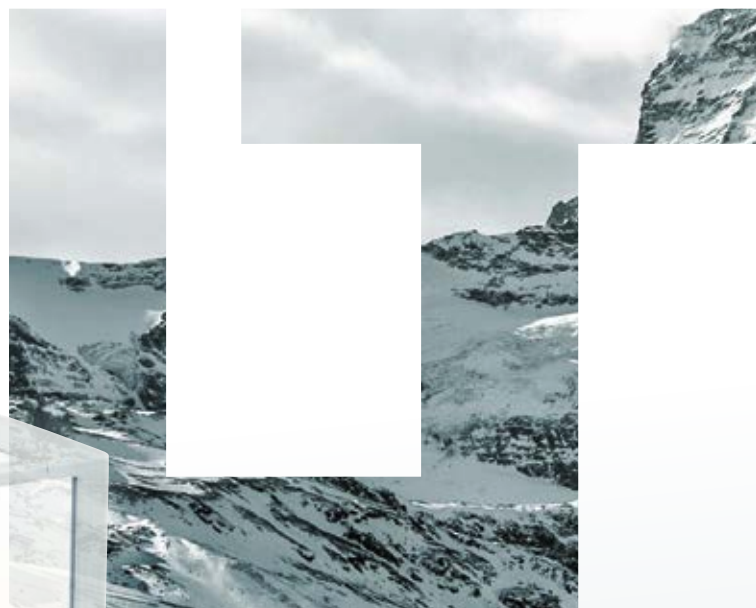
PRECISA DNA:
SWISS PRECISION.

Precisa products are prime examples of Swiss perfection and reliability. They are tried and tested in discerning laboratory environments and in the industrial segment, and are subject to rigorous quality controls throughout the entire manufacturing process. Precisa continuously invests in new technologies and employs a highly qualified team of engineers and researchers. The result is a state-of-the-art range of precision instruments fit for the strictest demands.

PRECISA DNA:
SERIES 321.

Series 321 by Precisa demonstrates the consistent development of former series. This model range reflects the decades of experience in developing and manufacturing high-quality precision balances. By concentrating on the essentials, Precisa's engineers have developed a product range that is yet to meet its match with regard to price-performance ratio and design, all neatly packed in a rugged metal housing. No matter what application you require, Series 321 has the right solution. Various interfaces and a versatile range of accessories make these scales a professional partner for laboratory and industrial use.

321 LT

The model 321 LT features
a 10-key operating pad and
guarantees outstanding user
friendliness. Pre-programmed
keys make applications such
as "counting" and statistics
especially easy. You can also
easily program the keys to suit
your specific requirements.
To meet the highest standards
in laboratories and industry,
the 321 LT models are also
equipped with a self-calibration
system (SCS) as standard.

321 LX

The well-designed user
interface of the 321 LX model
range is based on innovative
softTOUCH technology. Keys
that light up when functions
are activated guide the user
and guarantee fast and error-
free operation. blueLINE, the
extremely contrast-rich blue
VFD display, provides outstan-
ding legibility at a previously
unattained level. Anyone with
an eye for design will find the
321 LX unignorable.

321 LS

The models of the new 321 LS series combine precision with outstanding ease of use and an attractive design. The integrated weighing technology is tried and tested, extremely robust and long-lasting. That is why users rely on this model even in harsh ambient conditions. The contrast-rich display offers perfect legibility in any environment. Additional advantages, especially for industrial applications, include metal housing and a washable keypad.

UNIVERSAL USE

Models of the 321 series are extremely reliable and durable thanks to the proverbial Precisa technology. They fulfil and exceed all major international standards. User-defined settings make the balances easy and intuitive to use. A wide range of applications render the 321 series real all-rounders.

SIMPLE OPERATION

The wind shield on the analytical balances is designed for easy and convenient use. A direct view of the sample plate makes the weighing process so much easier. Cleaning is also straightforward and quick.

The operating keys structure the many application options in a very user-friendly manner and significantly enhance the use of the instrument.

VACUUM FLU-ORESCENT DISPLAY

A strikingly brilliant display and intuitive input prompts guarantee simple navigation through every one of the many applications.

LIFE-LONG RELIABILITY

The force-compensating measuring cell developed by Precisa is characterised by outstanding precision and durability. The cell is manufactured by hand to meet the strict demands that automated cell production cannot fulfil. In the event of a failure, Precisa's technicians can repair the balances on site at the customer's premises - a significant advantage. All the more so as it guarantees protection of the investment.

SmartBox® applications	LT/LX/LS
SmartBox® piece counting with stored values and article numbers	350-8511-011
SmartBox® packing control, FPVO	350-8511-012
CCE barcode reader BCS5040 with push button and plug, connects to the SmartBox® (Connector RJ45)	350-8531

Options	LT/LX/LS
IP65 protection: protects against dust and splash water, not available for every model	350-8688
IP65 protection including cable for an RS232 interface with DB9 female 1.5 m (PC): protects against dust and splash water, factory fitted, not available for every model	350-8693
Preparation for calibration in accordance with EC / OIML, no calibration! Only for balances with EC / OIML type approval	350-8684
Manufacturer's factory calibration in accordance with EC / OIML Only for balances with EC / OIML type approval and SCS	350-8685
Integrated, fully automated self-calibrating system SCS including clock. Automatic calibration for temperature changes and time programmable	Available
ACW: automatic calibration warning system for temperature changes	Standard
Clock	Standard

Accessories	LT/LX/LS
Wind shield 320 XB, height 180 mm, requires an adapter for 1 mg, 0.01 g, 0.1 g and 1 g balances*	350-8518
*Adapter for 1 mg, 0.01 g, 0.1 g and 1 g balances	350-7402
Glass wind shield for balances with 1 mg readability including cover	320-8504
Hook for below-balance weighing port	350-8527
Density determination set for 0.01 mg and 0.1 mg balances. Container size Ø = 75 mm, height = 100 mm	350-8636
Density determination set for solids (excluding glass receptacle and hook) for 0.01 mg and 0.1 mg balances. Container size Ø = 75 mm, height = 100 mm	350-8637
Glass receptacle 10 ccm for determining the density of liquids	350-7054
Restrainer for samples with a density of < 1 g / cm3	350-7194
Animal weighing pan complete for 0.01 g, 0.1 g and 1 g balances	350-8551
Dust protection for the entire balance, set of 20 pieces	350-8686
Cable for using the balance as reference balance	350-8661
External USP battery pack for an uninterruptible power supply	350-8662
Power supply adapter with Euro plug for IP65-protected balances (80 V – 240 V)	350-8372

BUS accessories	LT/LX/LS
Free-standing second display with 1.5 m cable	350-8504
Wall-mounted second display with 3 m cable	350-8516
20 mA current loop passive interface	350-8526
RS232 interface for data transmission: - for PC, printer or barcode printer - from barcode reader (350-8856) or reference balance	350-8506
Analogue output -10V... +10V (resolution 10 mV)	350-8508
Ethernet interface, wired	350-8573
Ethernet interface, wireless	350-8588
Signal lamp, display with three lamps: green / yellow / red	350-8510
Horn for signal lamp	350-8533
Input / output module 6 TTL inputs / 8 relay outputs	350-8509
CCE barcode reader BCS5040 with push button and plug, connects to RS232 350-8506 interface (Connector DB25)	350-8856

Features and applications

Swiss Made	Support for IQ/OQ/PQ
VFD Fluorescent display	Mechanical and electronic theft protection
USB USB device connection	% Percentage weighing
SCS Integrated, fully automated self-calibration system SCS (optional)	Clock (printouts pursuant to GLF/GMP, auto-calibration, etc.)
232 Interface RS232 for PC/printer	g/ozt ct/lb... Various units of weight measurement: g, mg, ct, ozt, lb, tael, bath
Below-balance weighing port	Piece counting
ACW Calibration warning system	ART Automatic reproducibility test (ART)
Animal Weighing	Density determination
+/- Check weighing plus/minus	Net total application Add-up summation Dosage program
Free conversion Area conversion (paper program)	Statistics
Recorder	DDW Dynamic Difference Weighing

SELF-CALIBRATING SYSTEM SCS

The self-calibrating system developed by Precisa and often copied by others enables automated balance calibration. The function features a programmable temperature and/or timer so that the user always has a calibrated instrument precisely when it is needed. An option that is frequently used in regulated environments (GLP).

IP65

IP65 protects against dust particles and splash water: we can deliver your balances equipped with this additional protection on request.

DATA MANAGEMENT

Data is transferred very easily to superordinate systems via a USB or serial interface (LIMS). Precisa provides the corresponding software (BALINT) as a free, web-based download. It couldn't be easier!

SmartBox® AND Precisa BUS

Connecting a SmartBox® transforms your scales into a central control instrument for finished packaging inspection or for your parts warehouse; it also provides support for parts and goods packaging processes. Complete with alphanumeric input and barcode support function.

A simple bus system makes it possible to connect and use various accessories simultaneously even without a SmartBox® connection:
- Signal lamp with an optional acoustic signal
- Barcode scanner
- Second display
- SmartBox® for application programmes with alphanumeric input
- Input/output box with 8 relays and 4 input contacts
- Additional interfaces such as RS232, ETHERNET, WLAN
- Analogue data output

SERIES 321 LT

Model	Capacity	Readability	Repeatability	Linearity	Pan Size (mm)	Class / „e"	Item No.
LT 120A	120 g	0.1 mg	0.1 mg	0.2 mg	Ø 90	Class I / 1 mg	321-9252-001
LT 220A	220 g	0.1 mg	0.1 mg	0.2 mg	Ø 90	Class I / 1 mg	321-9253-001
LT 320A	320 g	0.1 mg	0.1 mg	0.2 mg	Ø 90	Class I / 1 mg	321-9254-001

SERIES 321 LX

Model	Capacity	Readability	Repeatability	Linearity	Pan Size (mm)	Class / „e"	Item No.
LX 120A	120 g	0.1 mg	0.1 mg	0.2 mg	Ø 90	Class I / 1 mg*	321-9246-002
LX 220A	220 g	0.1 mg	0.1 mg	0.2 mg	Ø 90	Class I / 1 mg*	321-9247-002
LX 320A	320 g	0.1 mg	0.1 mg	0.2 mg	Ø 90	Class I / 1 mg*	321-9248-002

*models available with EC/OIML type approval, requires SCS (-001)

SERIES 321 LS

Model	Capacity	Readability	Repeatability	Linearity	Pan Size (mm)	Class / „e"	Item No.
LS 120A	120 g	0.1 mg	0.1 mg	0.2 mg	Ø 90	Class I / 1 mg*	321-9249-002
LS 220A	220 g	0.1 mg	0.1 mg	0.2 mg	Ø 90	Class I / 1 mg*	321-9250-002
LS 320A	320 g	0.1 mg	0.1 mg	0.2 mg	Ø 90	Class I / 1 mg*	321-9251-002

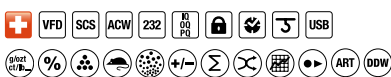*models available with EC/OIML type approval, requires SCS (-001)

SERIES 321 LT

Model	Capacity	Readability	Repeatability	Linearity	Pan Size (mm)	Class / „e"	Item No.
LT 320C	320 g	0.01 g	0.005 g	10 mg	200 x 200	Class II / 0.01 g	321-9470-001
LT 620C	620 g	0.01 g	0.005 g	10 mg	200 x 200	Class II / 0.1 g	321-9471-001
LT 1200C	1 200 g	0.01 g	0.01 g	10 mg	200 x 200	Class II / 0.1 g	321-9472-001
LT 2200C	2 200 g	0.01 g	0.01 g	15 mg	200 x 200	Class II / 0.1 g	321-9473-001
LT 3200C	3 200 g	0.01 g	0.01 g	15 mg	200 x 200	Class II / 0.1 g	321-9474-001
LT 4200C	4 200 g	0.01 g	0.01 g	15 mg	200 x 200	Class II / 0.1 g	321-9475-001
LT 6200C	6 200 g	0.01 g	0.01 g	15 mg	200 x 200	Class II / 0.1 g	321-9476-001

SERIES 321 LX

Model	Capacity	Readability	Repeatability	Linearity	Pan Size (mm)	Class / „e"	Item No.
LX 620C	620 g	0.01 g	0.005 g	10 mg	200 x 200	Class II / 0.1 g*	321-9452-002
LX 1200C	1 200 g	0.01 g	0.01 g	10 mg	200 x 200	Class II / 0.1 g*	321-9453-002
LX 2200C	2 200 g	0.01 g	0.01 g	15 mg	200 x 200	Class II / 0.1 g*	321-9454-002
LX 4200C	4 200 g	0.01 g	0.01 g	15 mg	200 x 200	Class II / 0.1 g*	321-9456-002
LX 6200C	6 200 g	0.01 g	0.01 g	15 mg	200 x 200	Class II / 0.1 g*	321-9457-002

*Modelle mit EC/OIML Bauartzulassung erhältlich, SCS (-001) erforderlich

SERIES 321 LS

Model	Capacity	Readability	Repeatability	Linearity	Pan Size (mm)	Class / „e"	Item No.
LS 320C	320 g	0.01 g	0.005 g	10 mg	200 x 200	Class II / 0.01 g*	321-9466-002
LS 620C	620 g	0.01 g	0.005 g	10 mg	200 x 200	Class II / 0.1 g*	321-9459-002
LS 1200C	1 200 g	0.01 g	0.01 g	10 mg	200 x 200	Class II / 0.1 g*	321-9460-002
LS 2200C	2 200 g	0.01 g	0.01 g	15 mg	200 x 200	Class II / 0.1 g*	321-9461-002
LS 3200C	3 200 g	0.01 g	0.01 g	15 mg	200 x 200	Class II / 0.1 g*	321-9462-002
LS 4200C	4 200 g	0.01 g	0.01 g	15 mg	200 x 200	Class II / 0.1 g*	321-9463-002
LS 6200C	6 200 g	0.01 g	0.01 g	15 mg	200 x 200	Class II / 0.1 g*	321-9464-002

*models available with EC/OIML type approval, requires SCS (-001)

SERIES 321 LT

Model	Capacity	Readability	Repeatability	Linearity	Pan Size (mm)	Class / „e"	Item No.
LT 160M	160 g	1 mg	1 mg	1.5 mg	135 x 135	Class II / 10 mg	321-9373-001
LT 320M	320 g	1 mg	1 mg	1.5 mg	135 x 135	Class II / 10 mg	321-9374-001
LT 620M	620 g	1 mg	1 mg	1.5 mg	135 x 135	Class II / 10 mg	321-9375-001
LT 920M	920 g	1 mg	1 mg	1.5 mg	135 x 135	Class I / 10 mg	321-9376-001
LT 1220M	1 220 g	1 mg	1 mg	2 mg	135 x 135	Class I / 10 mg	321-9377-001

SERIES 321 LX

Model	Capacity	Readability	Repeatability	Linearity	Pan Size (mm)	Class / „e"	Item No.
LX 320M	320 g	1 mg	1 mg	1.5 mg	135 x 135	Class II / 10 mg*	321-9361-002
LX 620M	620 g	1 mg	1 mg	1.5 mg	135 x 135	Class II / 10 mg*	321-9362-002
LX 920M	920 g	1 mg	1 mg	1.5 mg	135 x 135	Class I / 10 mg*	321-9363-002
LX 1220M	1 220 g	1 mg	1 mg	2 mg	135 x 135	Class I / 10 mg*	321-9364-002

*models available with EC/OIML type approval, requires SCS (-001)
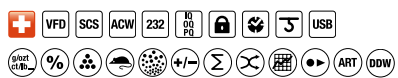
SERIES 321 LS

Model	Capacity	Readability	Repeatability	Linearity	Pan Size (mm)	Class / „e"	Item No.
LS 160M	160 g	1 mg	1 mg	1.5 mg	135 x 135	Class II / 10 mg*	321-9365-002
LS 320M	320 g	1 mg	1 mg	1.5 mg	135 x 135	Class II / 10 mg*	321-9366-002
LS 620M	620 g	1 mg	1 mg	1.5 mg	135 x 135	Class II / 10 mg*	321-9367-002
LS 920M	920 g	1 mg	1 mg	1.5 mg	135 x 135	Class I / 10 mg*	321-9368-002
LS 1220M	1 220 g	1 mg	1 mg	2 mg	135 x 135	Class I / 10 mg*	321-9369-002

SERIES 321 LT

Model	Capacity	Readability	Repeatability	Linearity	Pan Size (mm)	Class / „e"	Item No.
LT 3200D	3 200 g	0.1 g	0.05 g	0.1 g	200 x 200	Class II / 0.1 g	321-9555-001
LT 6200D	6 200 g	0.1 g	0.05 g	0.1 g	200 x 200	Class II / 1 g	321-9556-001
LT 10200D	10 200 g	0.1 g	0.1 g	0.15 g	200 x 200	Class II / 1 g	321-9557-001
LT 10200G	10 200 g	1 g	0.5 g	0.5 g	200 x 200	Class II / 1 g	321-9617-001

SERIES 321 LX

Model	Capacity	Readability	Repeatability	Linearity	Pan Size (mm)	Class / „e"	Item No.
LX 3200D	3 200 g	0.1 g	0.05 g	0.1 g	200 x 200	Class II / 0.1 g*	321-9547-002
LX 6200D	6 200 g	0.1 g	0.05 g	0.1 g	200 x 200	Class II / 1 g*	321-9548-002
LX 10200D	10 200 g	0.1 g	0.1 g	0.15 g	200 x 200	Class II / 1 g*	321-9549-002
LX 10200G	10 200 g	1 g	0.5 g	0.5 g	200 x 200	Class II / 1 g*	321-9615-002

*models available with EC/OIML type approval, requires SCS (-001)

SERIES 321 LS

Model	Capacity	Readability	Repeatability	Linearity	Pan Size (mm)	Class / „e"	Item No.
LS 3200D	3 200 g	0.1 g	0.05 g	0.1 g	200 x 200	Class II / 0.1 g*	321-9550-002
LS 6200D	6 200 g	0.1 g	0.05 g	0.1 g	200 x 200	Class II / 1 g*	321-9551-002
LS 10200D	10 200 g	0.1 g	0.1 g	0.15 g	200 x 200	Class II / 1 g*	321-9552-002
LS 10200G	10 200 g	1 g	0.5 g	0.5 g	200 x 200	Class II / 1 g*	321-9616-002

*models available with EC/OIML type approval, requires SCS (-001)

THE TECHCOMP GROUP

The following companies belong with Precisa to the internationally active Techcomp Group:

Froilabo

Froilabo is a specialist for heating and refrigeration cabinets and offers various specialised systems for forced ventilation and shock freezing as well as incubating machines and centrifuges and a wide range of refrigeration cabinets that work at -85°C. The products of the Lyon-based French manufacturer are sold throughout the world. Thanks to continuous improvement, these brand products enjoy an outstanding reputation and convince every user through their reliability and performance.

Dynamica

The range of bio-scientific instruments manufactured by Dynamica includes spectrophotometers, GCs, plate readers/washers and centrifuges. Dynamica laboratory instruments are used the fields of life sciences, chemistry, pharmaceuticals and training. A team of experts based in Milton Keynes in Great Britain provides efficient user support.

EDINBURGH INSTRUMENTS

EI specialises in the design and production of fluorescence spectrophotometers for research laboratories. Furthermore, EI produces a wide range of gas sensors with NIR technology for a broad variety of industrial applications.

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