



**100% Swiss**

The highest in Quality & Technology

*Serie 320XR*

## *The Analytical and Semi-Micro Balance Series*

- *The analytical and semi-micro balances of the 320XR series are based on the very latest technologies, meet the highest user requirements, and offer new, increased weighing ranges. The well-styled design of the range, the high-grade silver-coloured metal housing and the increased performance make this an extremely interesting product for the discerning balance user.*
- *The 320XR offers all the latest developments in high resolution weighing technology at a most attractive price.*
- *Precisa systems are market leaders in language-independent user guidance and data quality assurance in sample preparation.*
- *Precisa supports users with its dedicated applications laboratories in the Far East and Europe.*
- *Precisa Instruments are fast becoming one of the world's leading brands in thermo-gravimetric analysis.*

**Precisa**

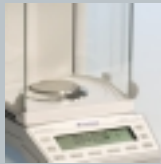
■ The Balance of Quality ■

## *The 320XR Series:*



- This new series of balances marks the arrival of a new generation. High-resolution, compact, all-in-one top-loading analytical and semi-micro balances. Balances which meet the most stringent demands, including automatic self-calibration; which offer a rapid response time and an attractive design.
- We attach great importance to user guidance-simple, language independent and responsive to the slightest touch on the panel. Precisa is a pioneer in this type of user interface.
- The new balances are quick and easy to program to the user's specific requirements. Many user specific settings and procedures can be stored.
- The XR series represents the very latest in analytical and semi-micro balance technology – you will appreciate our dedication to high quality, optimum Precisa precision, the Swiss Made seal of quality and attractive pricing.

## *The world of Precisa.*



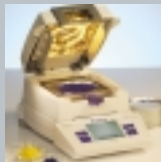
### ***Semi-micro, analytical, precision balances and industrial scales***

Precisa is traditionally strong in weighing technology. We offer a combination of high technology, a variety of important features and an attractive price. Our products are unmatched in terms of their compact design, response speed and innovative features.



### ***Moisture analysis and ashing***

Precisa is the only manufacturer to combine the two areas of moisture analysis and ashing in a touch screen controlled stand-alone unit.



### ***Sample preparation***

Precisa offers a wide selection of products for the complete process of sample preparation. Precisa technologies offer the benefits of user-friendly controls and huge savings in time and cost.

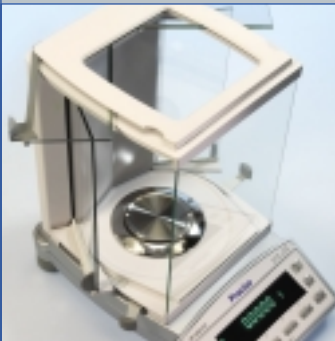
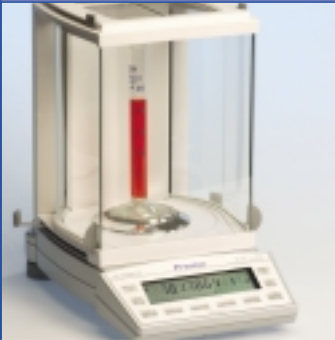


### ***Service and support***

With dedicated laboratories in the Far East and Europe, we can offer our customers the fullest support in applications and method development. Precisa products are distributed throughout 90 countries by our authorised, factory trained service partners.

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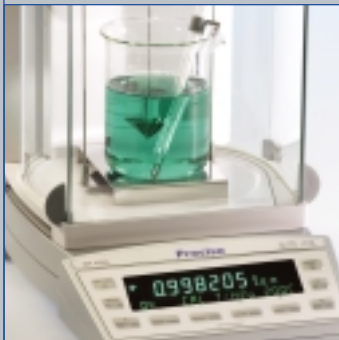
- *The very latest, cutting-edge technologies*
- *Fast response times, quicker results*
- *Programmable, fully automatic, time and temperature-controlled self-calibration system (SCS) which stores previous calibrations*
- *Unique patented draft shield, which can be operated from each side directly or from opposite sides. For example, you can open the right door with your left hand to enable you to complete the weighing procedure easily and accurately. The curved draft shield doors recess into the rear of the housing, rather than extending to the rear, making the balance as space-efficient as possible*
- *Robust die-caste aluminium housing in an elegant silver design*
- *Extensive range of applications integrated as standard (e.g. pipette calibration, density determination, variety of units of measurement, etc.)*
- *Easy to keep clean thanks to the high-grade materials used and highly accessible construction*

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### **New design**

Our new silver-coloured housing combines functionality with style. The newly designed keyboard overlay provides a layout which is clear to read and simple to operate. The robust diecast aluminium design ensures maximum accuracy of weighing results – the metal housing ensures maximum protection against spills and other damage.



### **New weighing cell**

We have optimised the superior design of the Precisa semi-micro and analytical balances with the addition of a new high-resolution weighing cell with state-of-the-art electronics.

### **High-end measurement value processing**

Ensures that readings can be displayed quickly and reliably. Uses the very latest filter technologies.



### **All-in-one concept**

The 320XR Series is a compact design series: the weighing cell and electronics are housed in the same unit, unlike various rival products in which the electronics are separate.

### **High-contrast display**

All the balances in the analytical range are available with both vacuum fluorescent and liquid crystal displays.

### **Retraceable memory of the last 50 calibration values, including date and time**

The last 50 calibration values can be retrieved at any time, ensuring that the user may have maximum confidence in the weighing results.

### **Multi-user memory (MUM)**

Saves the favourite balance settings for different users. Key in a code to call up and activate your personal settings.

### **Pipette calibration**

Gravimetric calibration of pipettes in compliance with ISO, DIN and NCCLS.

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### **Multi-Level Back-Weighing**

With grouping and statistical analysis (for applications such as drying and ashing in the drying chamber and muffle furnace). Results of weight loss or residual weight are expressed in g, %, g/kg, Atro, etc.

### **Dynamic Weighing**

This program enables the weighing of unstable substances or on an unstable base. An average weight is calculated over a programmable period of time.

### **Area Conversion Program (Paper Program)**

The weight can be calculated per m<sup>2</sup>, for example, by means of a reference variable.

### **Dynamic Difference Weighing**

Supports precise measuring on unstable bases, e.g. on board ships.

### **Minimum Sample Weight (MSW)**

QA warning (measurement uncertainty) if loads drop below minimum levels. The balance monitors the minimum weigh-in to ensure that measurement uncertainty lies within the limits defined by the quality management system.

### **Automatic Repeatability Test (ART)**

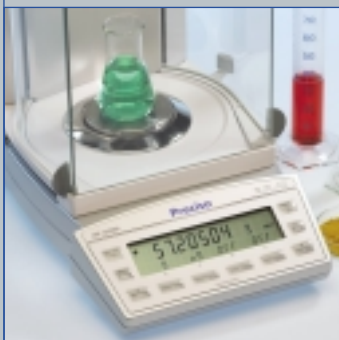
Automatic determination of reproducibility, a core variable of the balance.

### **Buoyancy Error Suppression Technology (BEST)**

Automatic buoyancy correction.

### **IQ/OQ/PQ**

Installation Quality (IQ), Operations Quality (OQ) and Performance Quality (PQ) for continuous quality monitoring and assurance in each area.





### **Technical Data** of the XR Series of Semi-Micro and Analytical Balances

Specification	XR 125SM	XR 125SM-FR	XR 205SM-DR	XR 305A	XR 405A	XR 405A-FR
Weighing range	125g	41g - 125g	92g - 205g	305g	405g	102g / 405g
Readability	0.01mg	0.01mg / 0.1mg	0.01mg / 0.1mg	0.1mg	0.1mg	0.1mg / 1mg
Taring range subtractive	-125g	-125g	-205g	-305g	-405g	-405g
Reproducibility	<= 0.03mg	0.03mg / 0.1mg	0.03mg / 0.1mg	0.15mg	0.15mg	0.15mg / 1mg
Linearity	+/- 0.06mg	0.06mg / 0.15mg	0.06mg / 0.2mg	0.3mg	0.4mg	0.3mg / 1mg
Response time	<= s 10	10 / 3			3	
Display	liquid crystal			liquid crystal / fluorescent optional		
Floating display	s	0.08 / 0.16 / 0.32				
Integration time	optimised automatically					
Stability	adjustable in 3 steps					
Temperature of environment	°C	0...40				
Sensitivity drift (10 ... 30°C)	+/- ppm/°C	1.5				
Line voltage	V	115 / 230				
Tolerance of voltage variations	%	+15 / -20				
Frequency	Hz	50 - 60				
Power consumption	VA	12				
Self calibration system	SCS	built-in				
Size (W / H / D)	mm	210 / 340 / 345				
Balance pan chrome nickel steel	mm	Ø 80				
Wind shield	mm	230				
Net weight	kg	6.6				
Technical modifications reserved.						

### **Accessories** Precisa Balance-Series 320XR

Remote / secondary display freestanding	350-8504	Datacable RJ45 / 0.75m	350-8525
Remote / secondary display mounted to the wall	350-8516	Datacable RJ45 / 1.5m	350-8520
Fluorescent tube for secondary display unit		Datacable RJ45 / 3m	350-8521
Interface 20mA current loop passiv	350-9526	Datacable RJ45 / DB9 Female 1.5m (PC)	350-8557
For data transmitting from balances to PC, Printer,		Datacable RJ45 / DB25 Female 1.5m (PC)	350-8558
Barcode-Printer, Barcode-Reader, Reference-balance		Datacable RJ45 / DB25 Male 1.5m (Printer)	350-8559
Analog output	350-8508	Accupack complete	350-8514
-10V ... +10V (Resolution 10mV)		Density kit	350-8515
Input / Output module	350-8509	Dustcover over display	350-4096
6 TTL Inputs / 8 Relay Outputs		Below the balance weighing feature	350-8527
Multiplexer for up to 7 balances	350-8513		
Serial Interface RS232 for PC-balances, balances-printer			
Technical modifications reserved.			

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*2-year worldwide warranty.*



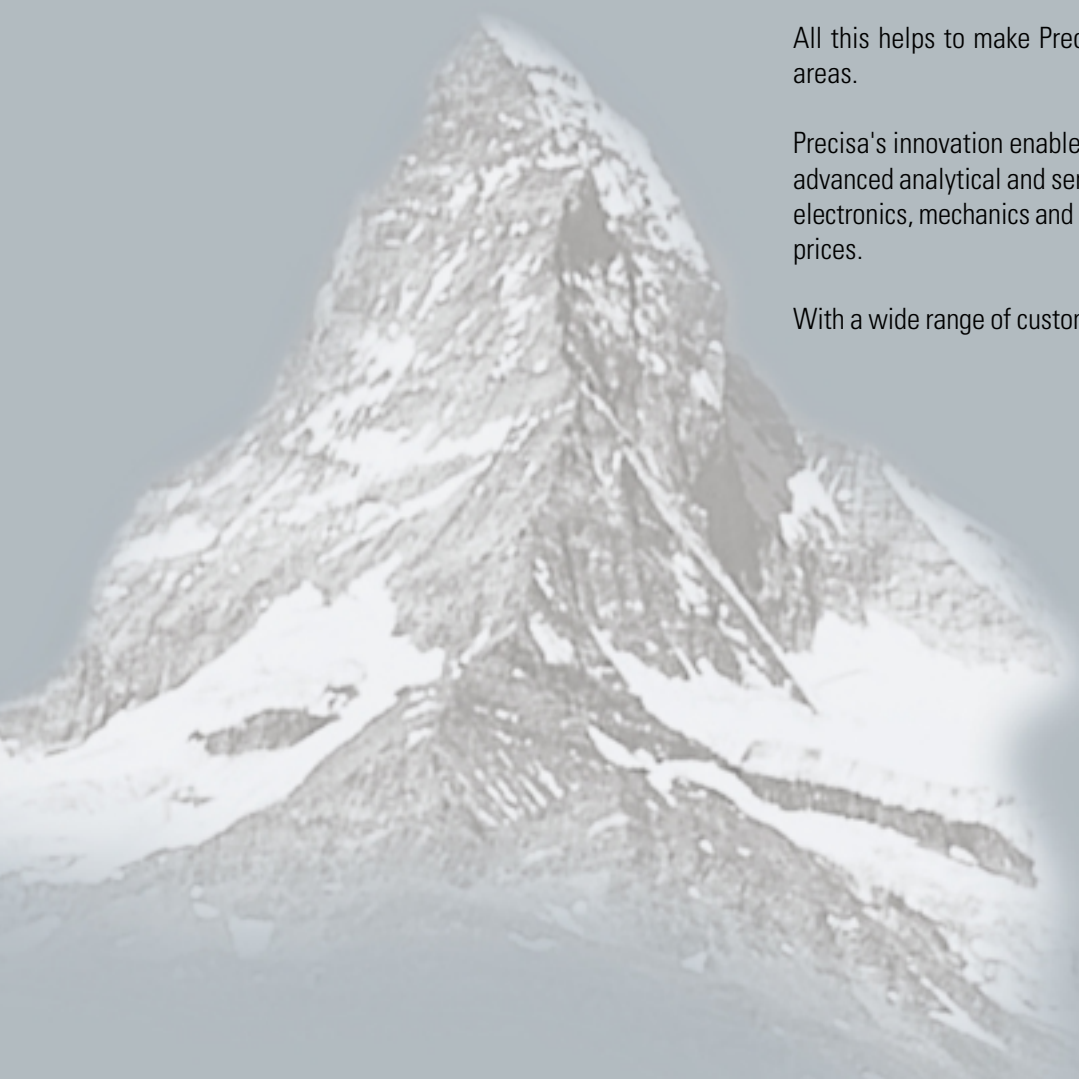
***Precisa:***  
***Swiss Precision, Swiss Quality, Swiss made.***

Precisa Instruments AG are continually investing heavily in the development of new technologies. They fund comprehensive, wide-ranging research by an in-house team of highly skilled engineers and technicians at the Swiss headquarters. In addition, Precisa works closely with national and international universities, technical colleges and colleges of applied science.

All this helps to make Precisa instruments world leaders in many areas.

Precisa's innovation enables the company to offer the very latest in advanced analytical and semi-micro balance technology, in terms of electronics, mechanics and user-friendliness, at extremely attractive prices.

With a wide range of customer benefits. Perfect Swiss Quality.



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