



Star
Product Catalogue

Hightech and Innovation at Sartorius Hamburg

Sartorius Hamburg is one of the leading suppliers of industrial weighing components and systems worldwide. More than 50 years of experience solely dedicated to industrial process weighing applications have lead to unrivalled levels of sophistication in design and manufacturing of professional components. Our products and services have always been regarded as the best in the industry. Today they are a perfect synthesis of application experience, manufacturing know-how and give you the power of performance.

In virtually all industrial products and services from Sartorius have become an integral part of our customers processes: in cosmetics, pharmaceuticals, food & beverage but also in the glass and building materials industry as well as the petrochemical, paints, inks and adhesives. Whenever reliability and accuracy are of concern Sartorius and the strong partners in the Sartorius Group form a global alliance for even more process reliability.

For many years our specialists have been at the very forefront of technology and have defined today's standards in industrial weighing. Countless innovations like our unique "sputter" technology, several inventions and international patents in special hightech processes, materials and alloys are the sound basis of our expertise and every product you buy from Sartorius.

In a unique combination of mechanics and electronics with our decades of application know how in industrial weighing and automation projects our products are designed to seamlessly blend into your process and give you direct access to it's qualities and benefits. This is why Sartorius products and services are already used for decades in many industries and processes.

Many years of continuous research and development in different fields go hand in hand: physics, electronics, informatics and mechanics. All combined in a unique alliance with only one goal: the design and manufacturing of the very best load cells and weighing electronics in the world.

Sophisticated weighing technology from Sartorius provides highest process reliability, maximum yield and unrivalled performance for your production and processes. Mechanics and electronics work in perfect harmony for perfect results every day, every year – even under harsh industrial conditions.



Latest production technology and total process control for the highest quality and durability

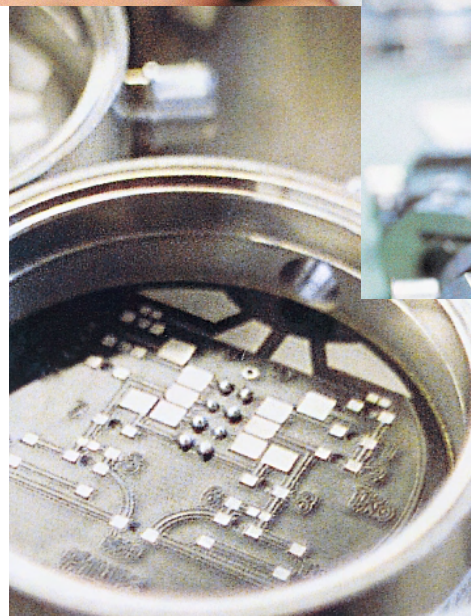
At the very beginning of the design phase the inherent properties and quality of a load cell are already determined. It all starts with the very careful selection of special alloys, its specific treatment and the careful basic design of the measuring element. Decades of experience are required to gain the specific experience and know-how to build high quality load cells reliably by combining the specific properties of the used materials and processes with a particular design. Our in-house CNC precision machining unites highest degrees of automation with maximum care in handling.

Sartorius Hamburg is one of the pioneers in strain gauge technology. As one of the few manufacturers worldwide we develop, design and manufacture our own strain gauges using unique high-tech materials derived from aerospace and military applications. This not only gives us the widest possible influence on our products but has also led to a degree of perfection, reliability and control unknown from any other supplier.

We help and assist in any way possible even a long time after your initial purchase. With a wide range of spare parts, repair and quick exchange services accompanied by extensive offerings in calibration and preventative maintenance.

Your individual solution is at the very heart of all our efforts at Sartorius. Our experts in sales and service are there to help with all their application and process know-how for your benefit.

We at Sartorius provide more than just products. We are at your disposal in providing consultancy during specification and planning right through start-up, commissioning and the day-to-day operation of your plant.



Load Cells



Typ	Application	Accuracy	Capacity Range	Operating Temp.	Ingress Protect.	Ex
Compression-Load Cell	Tank and Hopper Scales, Batching Systems	L, D1, C3 OIML, NTEP	500 kg...300 t	-30°C...+95°C optional 120°C/ 150°C	IP68 NEMA 6	*, Ex, Factory Mutual System



Compression-Load Cell	Tank and Hopper Scales, Simple Batching Systems	D1 OIML	30 kg...300 kg 500 kg... 10 t	-30°C...+95°C optional 180°C	IP68 NEMA 6	*, Ex, Factory Mutual System
-----------------------	---	------------	-------------------------------------	---------------------------------	----------------	---------------------------------------



Compression-Load Cell	Tank and Hopper Scales, Precision Batching Systems	D1, C3, C6 OIML, NTEP	100 kg... 5 t	-30°C...+95°C	IP68 NEMA 6	*, Ex, Factory Mutual System
-----------------------	--	--------------------------	------------------	---------------	----------------	---------------------------------------



Level Sensor	„Level-by-weight“	L	500 kg...16 t	-30°C...+95°C	IP68 NEMA 6	*, Ex, Factory Mutual System
--------------	-------------------	---	---------------	---------------	----------------	---------------------------------------



Tension Load Cell	Tank and Hopper Scales, Precision Batching Systems, Hybrid Scales	D1, C3, C6 OIML, NTEP	100 kg...3 t	-30°C...+95°C	IP68 NEMA 6	*, Ex, Factory Mutual System
-------------------	---	--------------------------	--------------	---------------	----------------	---------------------------------------



Truck Scale Load Cell	Truck Scales	C3, C4, C5 OIML	20 t...75 t	-10°C...+55°C	IP68, IP69K NEMA 6	*, Ex
-----------------------	--------------	--------------------	-------------	---------------	-----------------------	-------



Bending Beam Load Cell	Tank and Hopper Scales, Precision Batching Systems, Hybrid Scales	C3, OIML	10 kg...200 kg	-30°C...+70°C	IP67	*
------------------------	---	-------------	----------------	---------------	------	---

Mounting Kits

Remarks

also available
with analogue
output 4...20 mA

PR 6001



- Easy to mount
- Complete solution for all installation problems
- Standard dimensions for different versions
- Full stainless steel version available
- High permissible side forces for continuous operation
- Special swivel bearings (maintenance free)

PR 6011



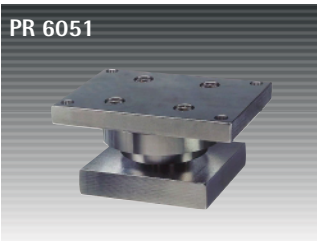
- Easy and fast installation
- Proven mounting kits for vessels
- Prepared for the installation of a lift-off-protection
- Full stainless steel version available
- Completely maintenance free, incl. con-strainer
- Compact design

PR 6043



- Easy and fast installation due to dummy included
- Proven mounting kits for vessels and platforms
- Prepared for the installation of a lift-off-protection
- Full stainless steel version available
- Completely maintenance free, incl. con-strainer
- Compact design

PR 6051



- Easy and fast installation
- Extreme low profile
- Ideal for retrofitting
- To be used in connection with pirots

also available
with analogue
output 4...20 mA

PR 6046



- Easy and fast installation
- Maintenance free bearings for best performance
- High capacity and safety
- Completely maintenance free

PR 6021/01N



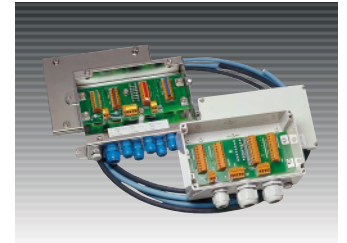
- Easy and fast installation
- Easy to adjust
- Fixed top load disc
- High resistance against wear and tear

PR 6007



- Easy and fast installation
- Ideally suited for small vessels
- Mechanically protected bellow
- Integrated overload protection

Accessories



PR 6130/08
Cable Junction Box for
Industrial Applications

PR 6130/60N
Cable Junction Box for
Industrial, Ex and W&M
Applications

PR 6130/60S
Cable Junction Box for
Industrial, Ex and W&M
Applications –
Stainless Steel

PR 6130/64S
Cable Junction Box
Stainless Steel
ATEX Zone 1, 2, 20, 21, 22
IP68, IP69K
Industrial, Ex and W&M
Applications

PR 6135
Extension Cable for Load Cells

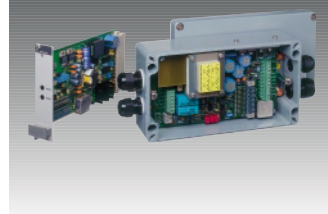
PR 6136
Extension Cable for Load Cells
in Hazardous Areas

* Certificate of Conformity
for use in Zone 2 available.

**Test conditions for
IP 68 protection at Sartorius:**
1.5 m water, 10,000 hrs.

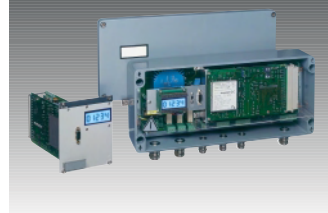
Transmitter

PR 1590/PR 1591



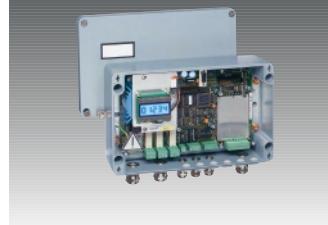
Type	Application	Approvals	Housing
Analogue Transmitter 0,1% (0,05%)	Tank and Hopper Scales	CENELEC	Euroformat 19", Fieldhousing IP 65, Aluminium
In-/Outputs	Interfaces	Fieldbus	Remarks
Digital - / 2 Analogue - / 1 (0/4-20 mA, 0/2-10V)	-	-	Intrinsically Safe Load Cell Interface, Ex (option), theoretical calibration

PR 1710/PR 1711



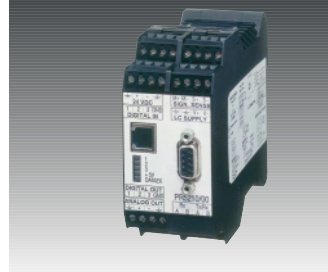
Type	Application	Approvals	Housing
Digital Transmitter	High Accuracy Tank and Hopper Scales	W&M approval for 3000e, class III, ATEX Zone 2	Euroformat 19", Fieldhousing IP 65, Aluminium
In-/Outputs	Interfaces	Fieldbus	Remarks
Digital 3 / 3 Analogue - / 1 (0/4-20 mA)	RS232/422/485	-	Intrinsically Safe Load Cell Interface, Ex (option), SmartCalibration

PR 1720



Type	Application	Approvals	Housing
Fieldbus Transmitter	Integrated Scales for Process Control Systems	W&M approval for 3000e, class III, ATEX Zone 2/22	Fieldhousing IP65 Aluminium/stainless steel
In-/Outputs	Interfaces	Fieldbus	Remarks
Digital 3 / 3 Analogue - / 1 (0/4-20 mA)	RS232/422/485	Profibus-DP, Interbus-S, DeviceNet	SmartCalibration

PR 5210



Type	Application	Approvals	Housing
Process Transmitter	Integrated Scales for Process Control Systems	W&M approval for 6000e, class III	Rail mounting, IP 20
In-/Outputs	Interfaces	Fieldbus	Remarks
Digital 3 / 3 Analogue - / 1 (0/4-20 mA)	RS232 for Config. RS422/485	Profibus-DP	SmartCalibration

Indicators/Controllers

PR 1612



Type	Application	Approvals	Housing
Compact Weighing Indicator	Platform Scales, Truck Scales, Tank and Hopper Scales	W&M approval for 3000e, class III	Front Panel Housing, Aluminium, Front IP65
In-/Outputs	Interfaces	Fieldbus	Remarks
Digital - / 2 Analogue - / 1	RS232/422/485/TTY	Profibus-DP	-

X4



Type	Application	Approvals	Housing
Process Controller	PRO, IBC, FILL, BATCH, FLOW, PHASE etc.	W&M approval for 6000e, class III	Front Panel Housing, Aluminium, Front IP65
In-/Outputs	Interfaces	Fieldbus	Remarks
Digital 12 / 24 internal Digital 256 external Analogue 4 / 2	RS232/422/485 Ethernet DDE- / OPC Server	Profibus-DP, Interbus-S, DeviceNet, CC-Link	SmartCalibration, programmable, various application-software

X5/PR 1713



Type	Application	Approvals	Housing
System Controller	PRO, IBC, FILL, BATCH, FLOW, PHASE, TRUCK, LOG, BULK etc.	W&M approval for 5000e, class III, ATEX Zone 2/22	Desk, Wall and Front Panel Housing, Stainless Steel, IP 65
In-/Outputs	Interfaces	Fieldbus	Remarks
Digital 18 / 24 internal Digital 256 external Analogue 4 / 2	RS232/422/485 Ethernet DDE- / OPC Server	Profibus-DP, Interbus-S, DeviceNet	SmartCalibration, programmable, various application-software

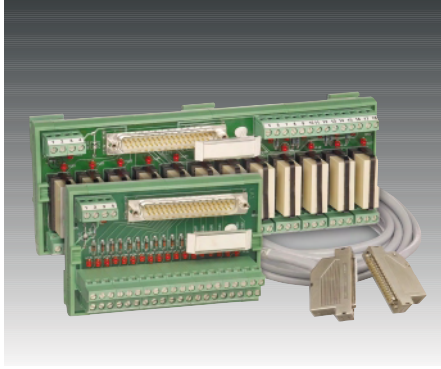
X6



Type	Application	Approvals	Housing
System Weighing Controller	PRO, IBC, FILL, BATCH, FLOW, PHASE, TRUCK, LOG, BULK etc.	W&M approval for 5000e, class III	19" Housing, Front IP65
In-/Outputs	Interfaces	Fieldbus	Remarks
Digital 12 / 24 internal Digital 256 external Analogue 4 / 2 application-software	RS232/422/485 Ethernet DDE- / OPC Server	Profibus-DP, Interbus-S,	SmartCalibration, programmable, various DeviceNet

Accessories

PR 1623



- **Easy process integration for**
 - X4 Process Controller with digital I/O-modul PR 5510/12
 - X6 System Weighing Controller with digital I/O-modul PR 5710/12
 - PR 1613 Weighing Indicator
- Direct switching of actuators with powerful relays
- Status indication with LED's

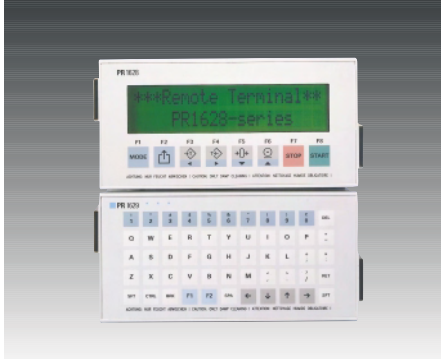
PR 1625/PR 1626



- **Load cell interface PR 1626/60:**
 - Intrinsically safe interface for connection of load cells in hazardous areas
 - Max. 8 load cells of 650 Ω
- Approved for W&M applications (OIML R76, class III), 3000e
- **Data interface PR 1625/60:**
 - Intrinsically safe interface for connection of remote displays in hazardous areas
 - Bidirectional serial interface to and 2 digital inputs from the hazardous area

- **Power supply 24 VDC PR 1624/00:**
 - 24 VDC output
 - Supply: 110/230 VAC
 - LED operating signal

Ex-Terminals



- W&M approved remote display (slave) for indication and control
- ATEX approval (/60 versions) for operation inside hazardous area
- Robust metal housing with IP65 front panel protection class

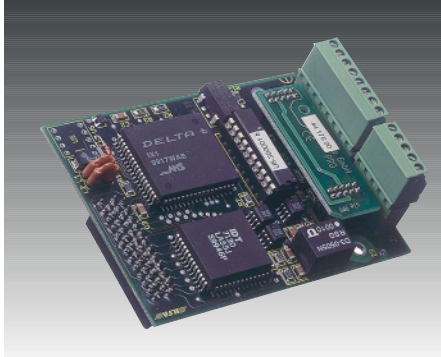
- **PR 1628**
 - display/operator language configurable
 - Additional signal inputs for process integration
 - 2-lines LCD
 - 8 function keys
 - max. 2 serial interfaces
 - printer connectable

- **PR 1629/60**
 - passive keyboard, 55 keys

- **PR 5610/05**

- Ex-Terminal for indication and control of the controllers of the X-Family

Options

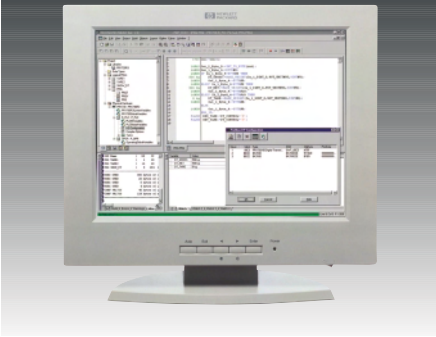


For many products from Sartorius Hamburg a wide range of options is available. If the requirements or the process changes this allows an easy extension or modification at a later stage.

- Various field bus options (Profibus-DP, DeviceNet, Interbus-S, CC-Link, ...)
- Ethernet TCP/IP
- Serial interfaces (RS 232, RS 422, 485, TTY...)
- Analogue Interfaces (0 und 4-20mA, 0-10V)
- Digital I/O Extension (Relais, opto-coupler)

Software

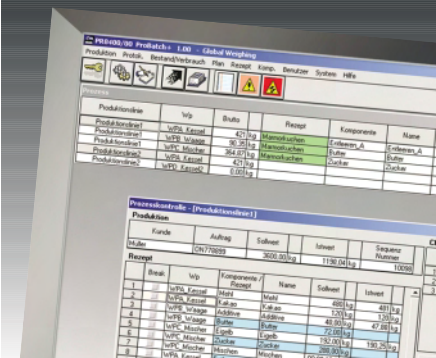
PR 1750



- Program development tool for the controllers of the X-Family
- Realization of plant specific solutions
- Simple operation with menu technique of Windows
- Programmability according to IEC-61131/3
- PR 1750/NT runs on Windows 2000/XP and Windows 98
- Support of Profibus, Interbus, DeviceNet and Ethernet TCP/IP links
- Flexible customizing of PR 1713 / PR 1730

- Easy to handle project documentation tool
- Powerful debug function
- Handling of several configurations and resources (of one controller) within a project possible.

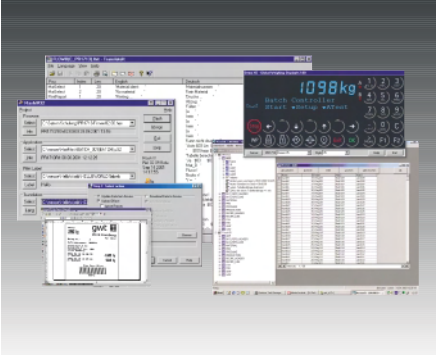
ProBatch+



- Open batch system for X-Family and other PLC controllers, such as Siemens S7
- Simple, user-friendly operation with clear process information
- Material management with stock monitoring and tracking
- Integrated script language for customer specific process requirements

- Connection of controllers in accordance with Batch Standard ANSI/ISA S88.01 via OPC
- Production and batch reports in addition to consumption quantity lists

Power Tools



The complete package of programs the System controllers of the X-Family

- **FlashIt** permits software updating at any time: the process functionality is always state-of-the-art
- **LayoutIt** supports Sartorius "Nice Label Express" for easy creation of reports and labels
- **DisplayIt** offers the possibility of displaying the system weighing controller on any Windows PC

- **TranslatIt** allows the easy translation of the operation language
- **RecoverIt** is a smart tool to backup and restore all data and parameters from the instrument
- **AccessIt** is a tool to upload, edit all tables in the controller and download them back into the controller

Our Services for best performance

Dear Customer,

for your benefit we have re-defined our Service products. Naturally this still includes the classical after sales activities normally part of a Service organisation. To supplement this, we have analysed a wide range of production environments and customer requirements. The result was the identification of additional service products, which we have now included in our portfolio. Through the possibility to select the products individually or in any combination, we can offer various Service packages tailored to meet your specific requirements.

Our Service to you does not only start after the sales phase, it is also focused on qualified support in the phase of customer decision-making. This is achieved by close co-operation with the sales organisation at the appropriate point in time.

During the commissioning phase and subsequently throughout the operational life time of the system, qualified consultancy on often complex issues is a fundamental component of our concept. This allows the recognition of potential problems at an early stage or ideally, totally avoid the occurrence of these problems.

This continuous consultancy ensures peace of mind during all the phases of operation. Already during commissioning, the benefits of the thorough preparation become evident. This begins with the right selection of equipment and ultimately ensures the achievement of the planned time schedule.

Our Service spectrum is wide: calibration, repair, training and service contracts are only a few examples. For instance, preventive maintenance will increase the efficiency and lifetime of your equipment and systems – always with the goal of optimizing the plant efficiency and total costs in line with your requirements.

As part of a global company – the Sartorius Group – our flexible and competent international service organisation is always at your disposal.

Please contact us! We will be happy to help you.

Your Service Team



We're ready to help you wherever you need us

Under the umbrella of the Sartorius Group, the business area Process Weighing & Control is represented in a global network – for sales and distribution, technical service and research.

Each location combines the expert knowledge in process weighing, quality assurance and metal detection into one organisation under the Sartorius brand.

This combination makes us an even more capable partner in optimising your processes.

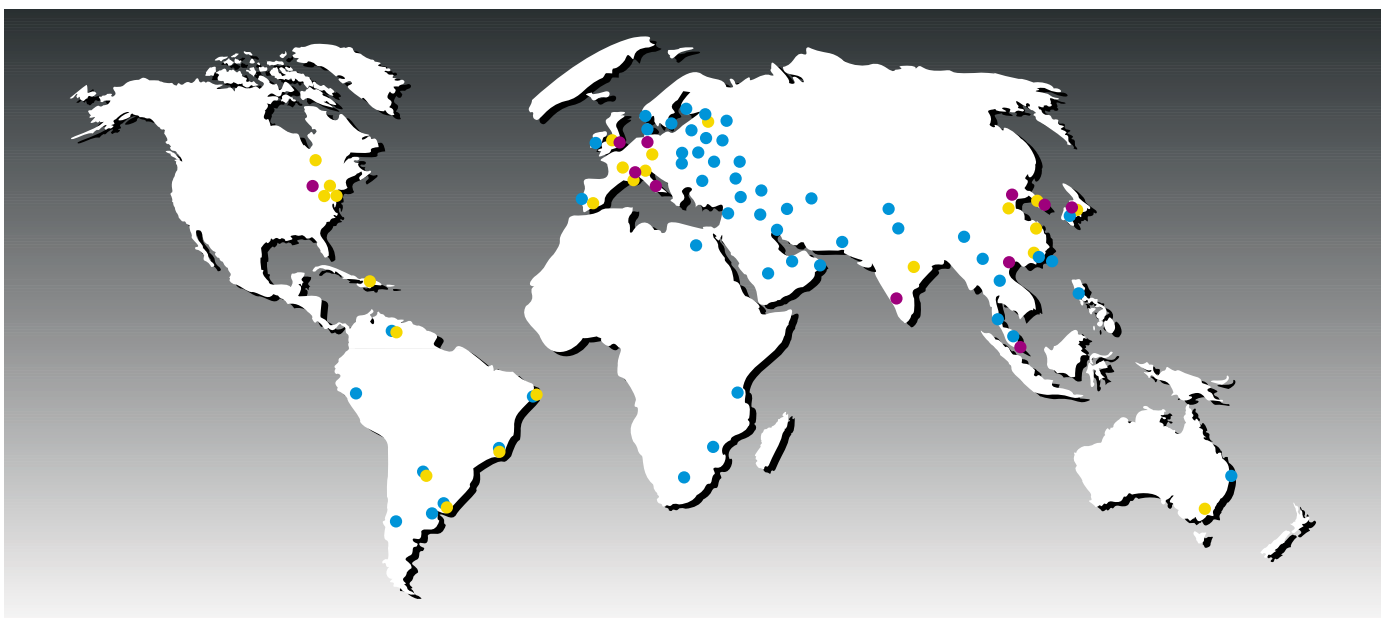
Our goal is to offer you not only tailored products, but also increasingly process- and value-added consultation services and solutions. Whether IFS, ATEX or GAMP, we have expert knowledge of the latest standards and can offer you high-quality products and service packages that meet the legal regulations applicable to your systems – from weighing platforms and food scales to controllers and software solutions.

Summarized: we combine our expertise as process specialists, going by the motto: "Weigh | Detect | Control".

Worldwide service from a single source

To us, service means:

- Providing you with expert advice right from the start concerning applications in weighing and process engineering
- GLP/GMP-compliant equipment qualification – IQ/OQ/PQ
- Logging the weighing results and certifying your weighing equipment
- Accrediting your equipment concerning its uncertainty of measurement according to the German Calibration Service (DKD); this service extends from microbalances all the way to 3-t platform scales
- Offering first-rate repair, exchange and spare parts services
- Providing online services
- Conducting product training courses
- Preparing your weighing equipment for initial and subsequent verification for use in legal metrology
- Offering service and maintenance agreements



Sartorius Hamburg GmbH
Meiendorfer Straße 205
22145 Hamburg, Germany

Telefon +49.40.67960.303
Fax +49.40.67960.383

www.sartorius.com