Smart technology for individual filling tasks

BRAND

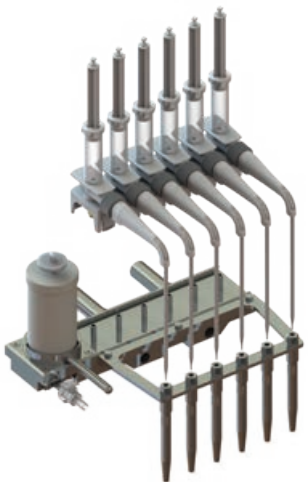
Dosing systems and equipment

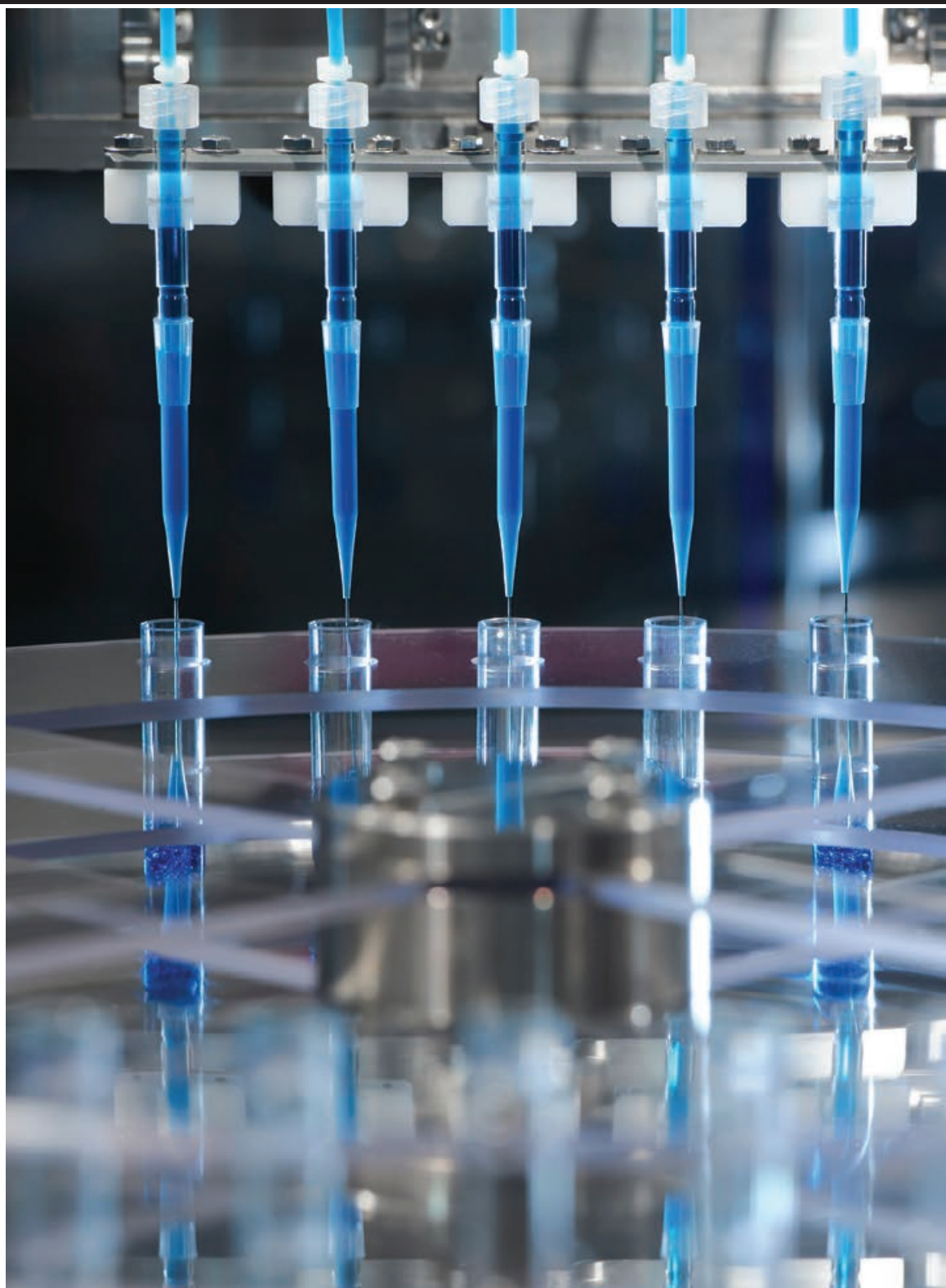
FIRST CLASS · BRAND

BRAND – your expert partner, ready to offer solutions for your dosing requirements.

Individualized design, development, construction, mechanical and electrical installation and commissioning – all from one source!

- High-precision dosing of liquid media
- Sampling and dosing for research and industry laboratories in the fields of chemistry, medicine, biotechnology and food
- Suitable for sensitive applications and also filling under sterile conditions available
- Disposable plastic dosing components – both sterile or non-sterile
- Volume range from 50 µl to 100 ml
- Patented dosing technology





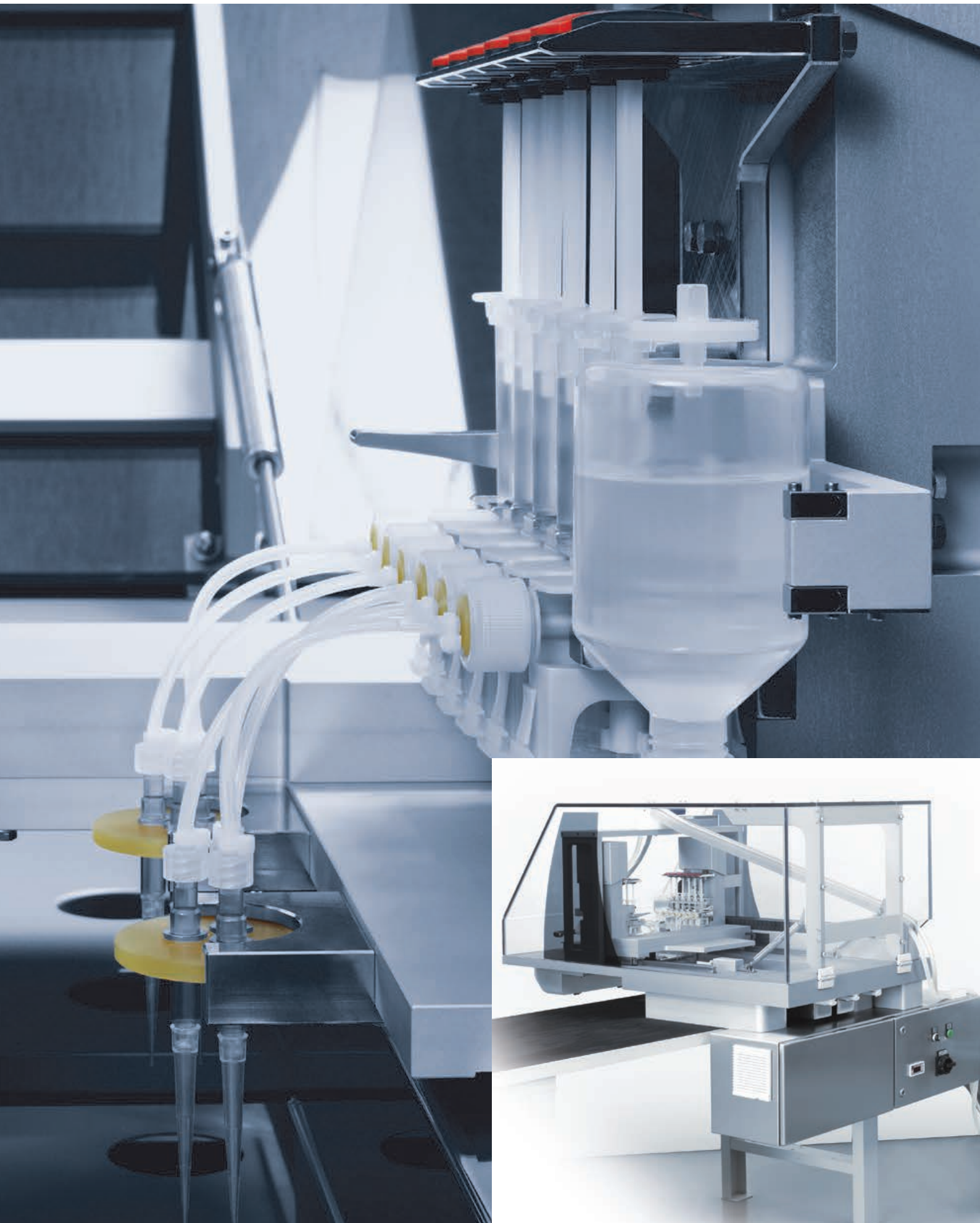
Design and technology

Innovation and experience to offer solutions for your dosing requirements

Our innovative and high-precision dosing technology incorporates advanced system components from our world-renowned Liquid Handling instruments.
They are combined with high-quality, reliable component groups and modules from automation and control technology according to your requirements. BRAND provides single- and multi-channel dosing systems and electronic dosing control systems.

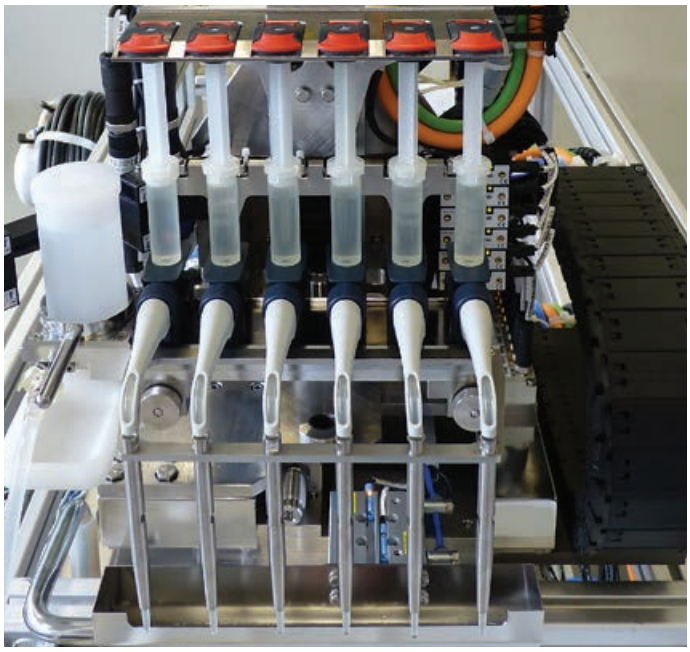
Our project planning takes you from concept definition through design and production, hardware planning and programming, all the way to on-site system commissioning – everything from one source!

BRAND – Your reliable partner with years of experience in mechanical systems including hardware and software design.



The seripettor® dispensing system

A proven concept – the bottle-top dispenser seripettor®



seripettor® components – modified for use in high-performance dosing systems

Operating principle

The operating principle of our dosing systems is based on the advanced bottle-top dispenser seripettor® from BRAND. For years, this instrument has enabled simple and precise dispensing of media directly from the storage bottle, and it has been used successfully in diverse laboratories all over the world.
The piston-cylinder principle is ideally adapted for use in precision dosing systems.

An upward movement of the piston fills the dispensing cartridge with liquid.
A subsequent downward movement of the piston delivers the liquid through the dispensing tube via a valve system.

Versatile

BRAND dosing systems, using the seripettor® technology, can be integrated into complex filling and packaging lines as needed, and can be customized to individual specifications. Thus, they offer a broad range of possible applications, and are well suited for high-throughput filling lines.

The direct displacement principle makes them especially suitable for dosing low-viscosity, aqueous, and many other types of media.

Volume ranges from 50 µl to 25 ml per dosing stroke.

The centerpiece of the system:

The easily replaceable seripettor® dispensing cartridge available in three sizes:
2 ml, 10 ml and 25 ml; the piston (PE) and cylinder (PP) are also available sterile

Typically achievable tolerances, using examples of dosing experiments with an aqueous, low-viscosity medium.
To determine an exact value for your application, dosing tests must be carried out with the original media.

Examples of the accuracy of the seripettor® dispensing system:

Nominal volume: Dispensing cartridge	0.05 ml	0.25 ml	1.0 ml	5 ml	10 ml	25 ml
2 ml seripettor® Dispensing cartridge	± 1 % ± 0.5 µl	± 0.5 % ± 1.25 µl	± 0.5 % ± 5 µl			
10 ml seripettor® Dispensing cartridge		± 4 % ± 10 µl	± 1 % ± 10 µl	± 0.5 % ± 25 µl	± 0.3 % ± 30 µl	
25 ml seripettor® Dispensing cartridge				± 0.5 % ± 25 µl	± 0.3 % ± 30 µl	± 0.3 % ± 75 µl

If your requirements differ from these, please contact us. We will develop a solution for you!

Operating limitations of the seripettor® dispensing technology

Viscosity (max.):
2 ml dispensing cartridge: 300 mm^2/s
10 ml dispensing cartridge: 150 mm^2/s
25 ml dispensing cartridge: 75 mm^2/s

Temperature:
+15 °C to +40 °C, agar nutrient media up to a maximum of 60 °C
Density: maximum 2,2 g/cm^3

Dispenser dosing system

for critical applications

For dosing critical media, we design customized solutions from standard components from the wide selection of BRAND bottle-top dispensers:
Foremost these are used for critical reagents such as acids, alkalis, organic solvents, or high-viscosity media.

In these systems, the dispensing cartridges are made exclusively from durable, long-lasting components with high chemical resistance.
A high priority is developing a maintenance-friendly system design, which reduces cleaning expenditures to a minimum, even with reusable technology.

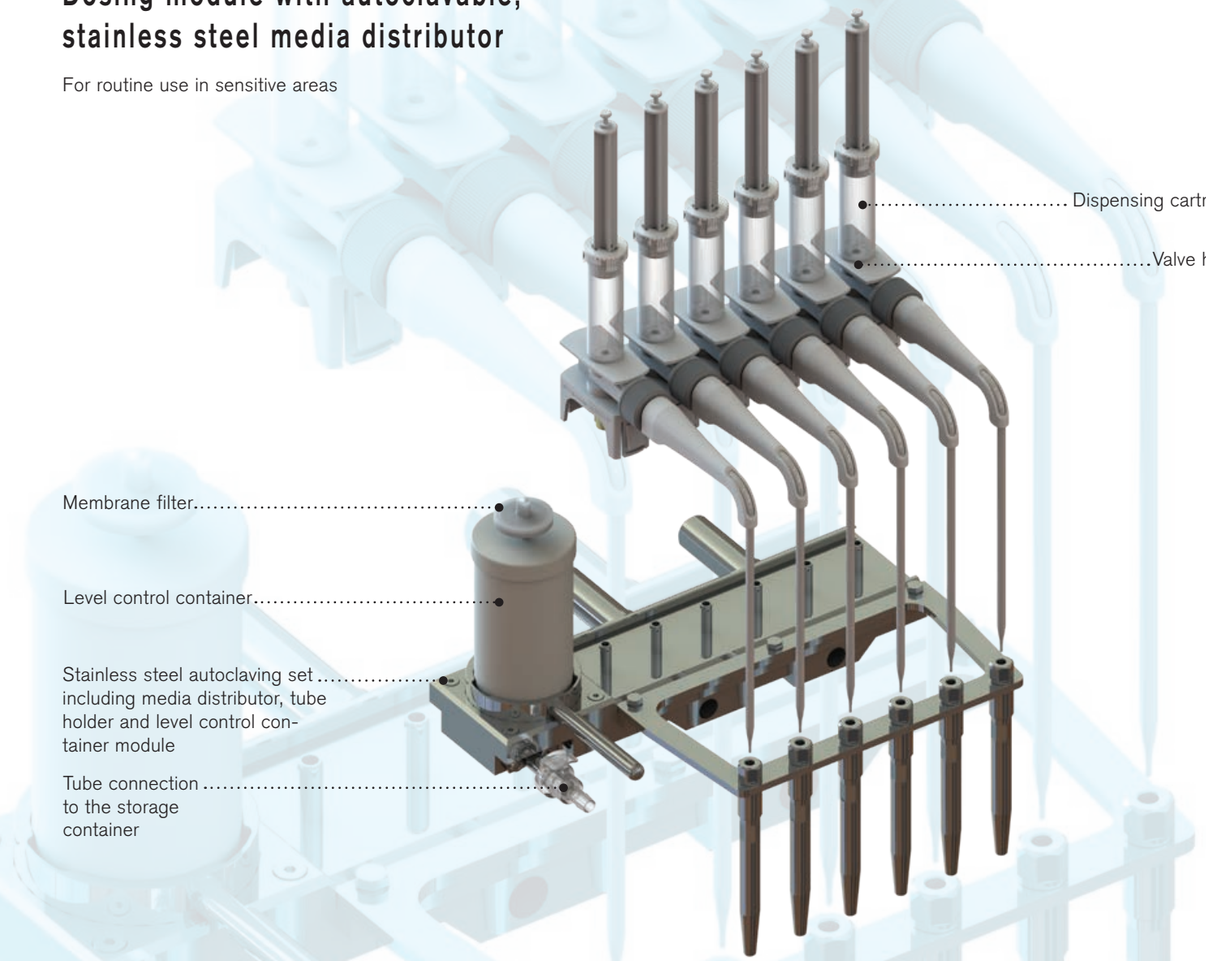
Volume ranges from 0.25 ml to 100 ml per dosing stroke.

Single-channel Dispensing system with x/y/z portal

Two designs – One operating principle!

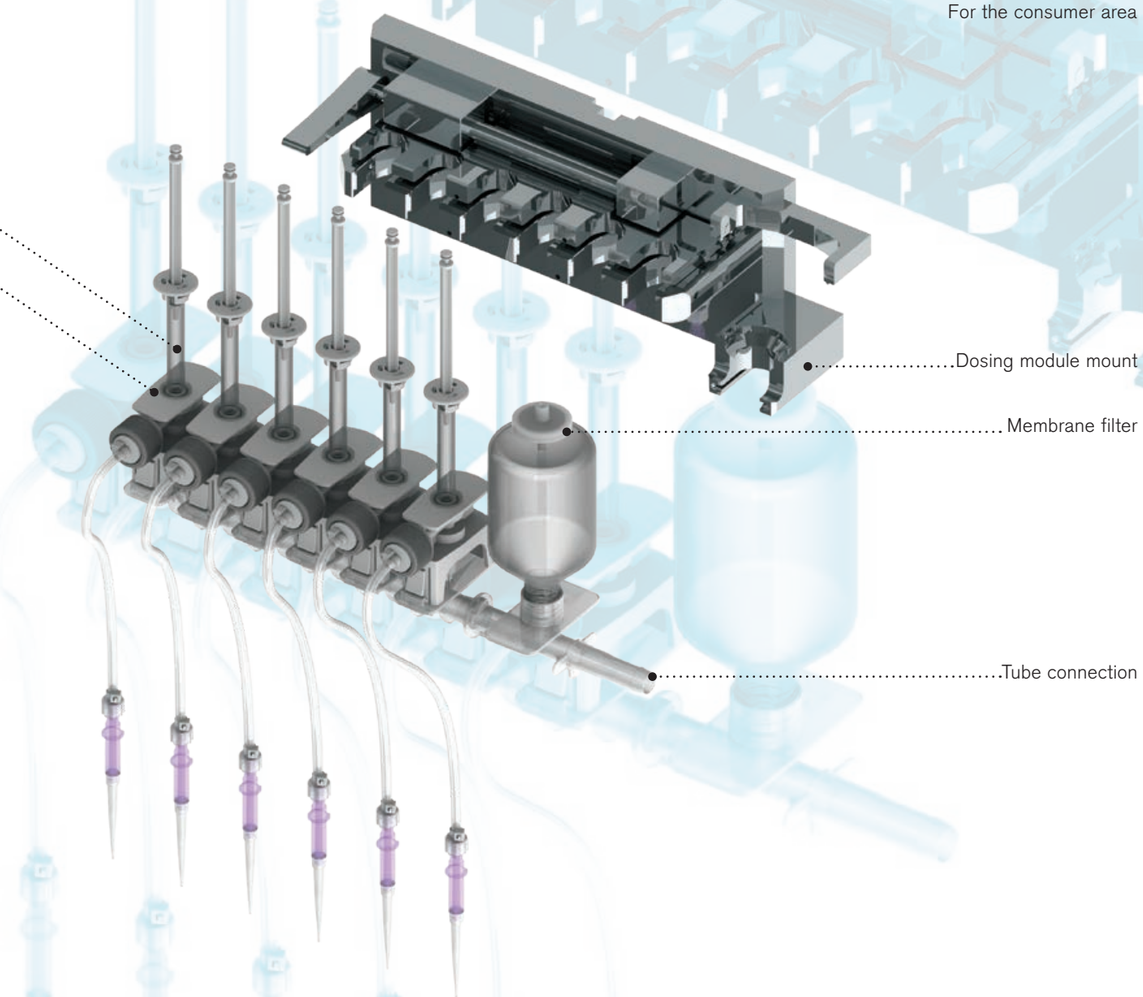
Dosing module with autoclavable, stainless steel media distributor

For routine use in sensitive areas



FD (fully disposable) dosing module

For the consumer area



Functionality of the seripettor® dispensing system

The media is usually supplied for example by using a peristaltic pump through a media feed tube to the level control container. This provides a constant system pressure and serves as an air trap. An upward aspiration stroke fills the dispensing cartridges with media via a media distributor channel. The subsequent downward movement of the piston conveys the medium through the valve system in the valve head and delivers it via the dispensing tube or a flexible dispensing tube.
The piston movements are actuated by one or more axles.

Advantages of the seripettor® dispensing system

- The dispensing cartridges, membrane filter, and pre-mounted valve heads are disposable and easily replaceable without using tools. They can be supplied sterile if needed
- The media distributor and level control container are easy to disassemble, clean and autoclave
- No calibration of the dosing system is necessary after replacing the disposable items
- The low dead-space design for media-carrying channels means minimal loss of media during cleaning or when changing media
- Design provides low maintenance overhead and minimal downtime
- High precision dosing is combined with long-lasting durability

Essential components are patent protected.

Plug´n Play

Based on the seripettor® dispensing technology an entirely novel, completely replaceable, single-use dosing module made of exceptionally high quality plastics has been developed.
The modular design of the segments allows an individual assembly. The system offers the greatest possible flexibility in the dosing module arrangement. At BRAND, manufacturing and assembly can be conducted under validated cleanroom conditions (ISO 14644-1, Class 8).
The simplicity of exchanging the dosing module means that all media-carrying components in the dosing system can be quickly, easily and cleanly changed by a plug´n play process.

Advantages of the FD dosing system

The FD dosing module makes CIP/SIP processes a thing of the past, and eliminates all the associated system technology. This means:

- No additional expenditures for complex cleaning systems
- No more cleaning and sterilization validations necessary
- No residue due to cleaning errors
- No more cleaning required (for huge time savings and productivity gains)
- Minimal downtime in production facilities
- Reduction of process risks
- Cross-contamination is largely eliminated

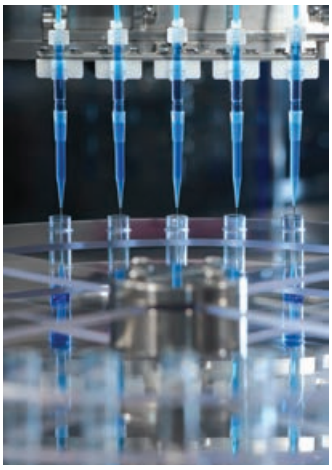
Know-how through experience

For over 60 years.

The name BRAND signifies the highest quality in laboratories all over the world. This is true for our demanding line of liquid handling products as well as for our well-known BLAUBRAND® glass volumetric instruments, and our extensive range of disposable and reusable plastic products.

Quality is our business goal

From the design and selection of the best raw materials to the quality assurance systems in our own company, we strictly control each step along the way to the final product. With our dedicated staff and advanced production technology, we have everything necessary to offer our customers the highest product performance at an attractive price.



Dosing systems and equipment from BRAND

The experience accumulated during the development of our standard laboratory products provides a solid foundation for our dosing systems. This, together with our many years of experience in equipment and system design, makes us your expert partner, ready to offer solutions for your specific dosing requirements.

OEM plastic injection-molded products by BRAND

Our strength lies in our expertise in developing and manufacturing technically demanding plastic products characterized by outstanding optical properties and defined surface consistency. Mainly thermoplastic materials are used in production, under cleanroom conditions of class 8, 7 and 5 (ISO 14644- 1) when required.

An interdisciplinary team of specialists develops custom solutions for specific requirements – from concept to development to the implementation of high-performance products.

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9944 94 · Printed in Germany · 5/0914

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