



# Automated Filtration Solutions

A Capability Guide



Microfiltration is playing an increasingly important role in the production of quality, stable beers for the lowest cost of operation. In order to achieve maximum control, efficiency and traceability of these critical processes, automation is an absolute requirement.

Together with Agidens Process Automation, Parker can provide fully automated, integrated and supported microfiltration solutions to control the quality of your beer at the lowest production cost.





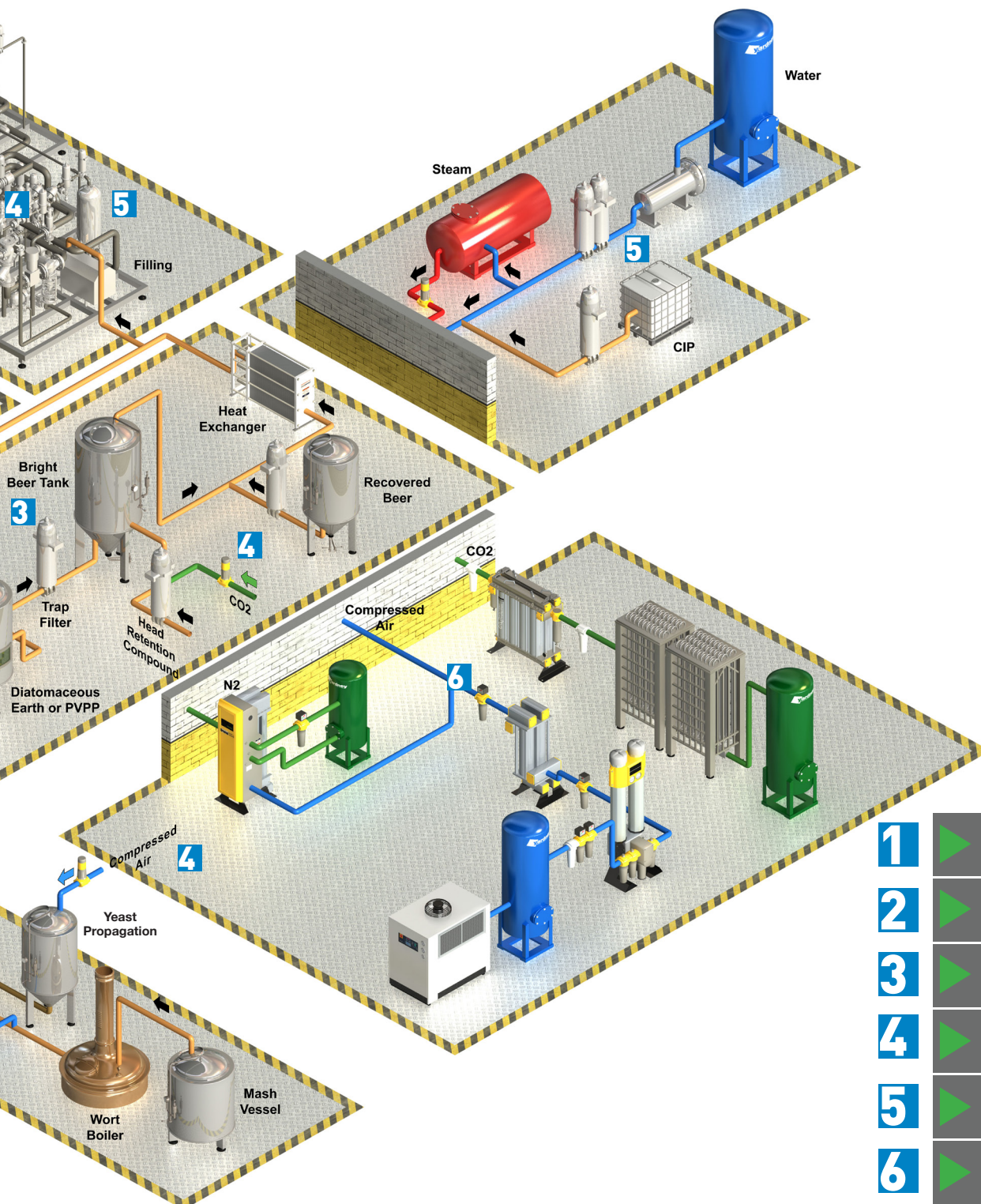
 **Agidens**

# Protecting the quality of your beer at the lowest cost.

Parker specialise in microfiltration solutions for the brewing industry. As a customer of Parker, you have access to leading technologies and specialist support to control contamination hazards and protect the quality of your beer at the lowest cost.



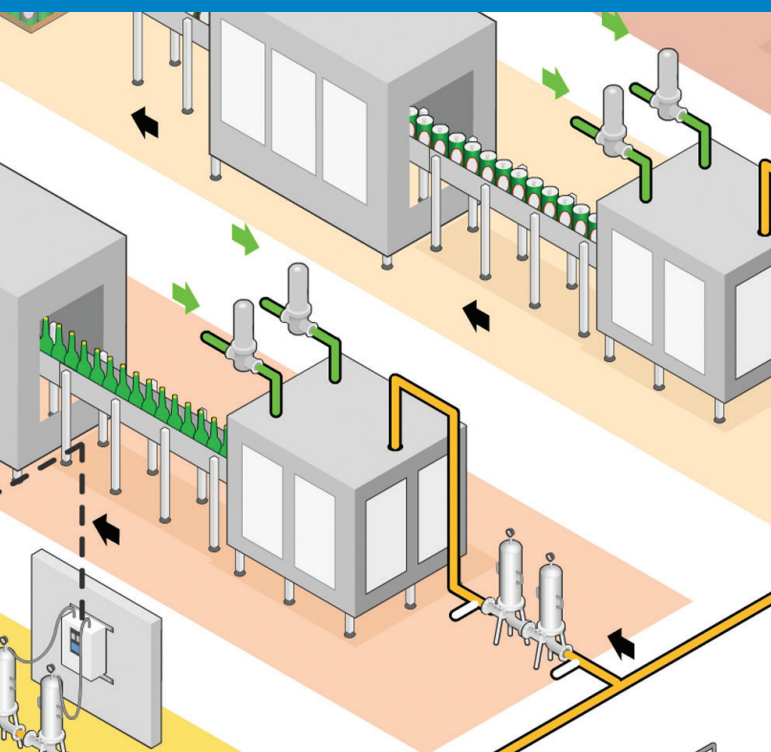
Agidens Process Automation specialise in the design, installation and maintenance of fully flexible, reliable and efficient automated filtration processes, tailored to your needs and expectations. As a customer of Agidens Process Automation, you have access to an extensive engineering team to provide fluent system integration into your plant.



- |          |                         |
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## Cold Stabilisation

Cold stabilisation refers to the microfiltration of beer to remove any spoilage microorganisms before it is packaged.



Cold stabilisation with membrane filtration carries many advantages over classical pasteurisation techniques and is widely recognised as the optimum process to protect beer quality, whilst reducing water consumption, energy usage and beer losses.

[www.parker.com/ColdStabilisation](http://www.parker.com/ColdStabilisation)

## Filter Cartridges



## PREPOR NG BEVPOR BR

The PREPOR NG and BEVPOR BR filter combination from Parker allows brewers to significantly reduce the cost of microbial stabilisation, whilst protecting the sensory appeal of beer.

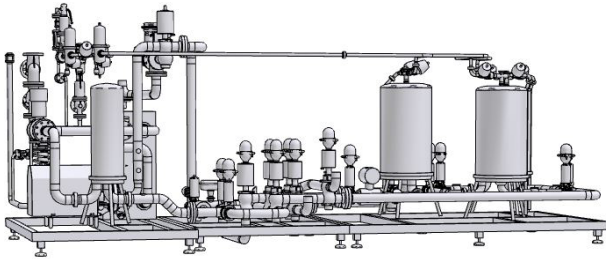
BEVPOR BR filters utilise a unique PES membrane which has been validated to retain key spoilage organisms, whilst offering the longest service life and therefore the most efficient and lowest cost of operation. In addition, the unique construction of the BEVPOR BR filters allows easy integrity testing as the cartridge is entirely hydrophilic and wets out quickly and easily.

- Absolute elimination of beer spoilage organisms.
- Longest service life and lowest cost of operation.
- Guarantee and control of filter performance.
- Certified to European and US food contact requirements.

[www.parker.com/BevporBR](http://www.parker.com/BevporBR)  
[www.parker.com/PreporNG](http://www.parker.com/PreporNG)

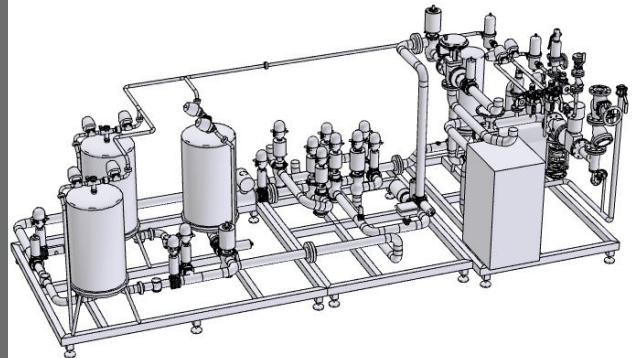
Together with Agidens Process Automation, we can offer a platform of hygienic, fully flexible cold stabilisation modules (CSM) to suit a range of beer flow capacities and specifications.

## CSM11



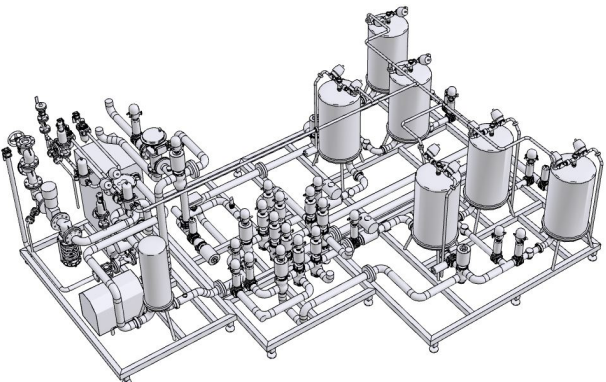
- One prefilter stage, one final filter stage.
- Flow range: 40 – 100h/hr.
- Batch processing.

## CSM12



- One prefilter stage, two final filters (duplex).
- Flow range: 100 – 300h/hr.
- Batch processing.

## CSM24



- Two prefilters (duplex), four final filters (duplex).
- Flow range: 300 – 600h/hr.
- Continuous processing.

### Standard functions for all systems:

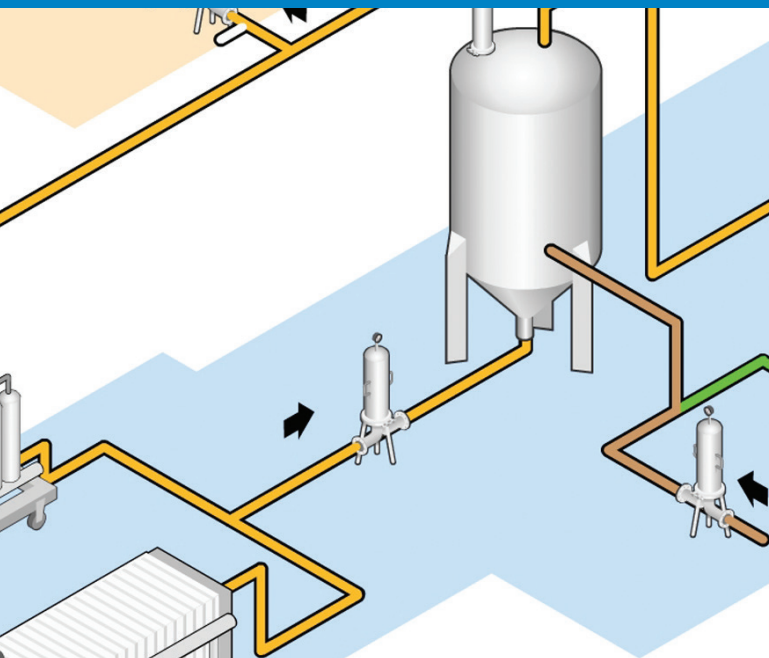
- Automated CIP of each filter stage with two chemicals.
- Automated integrity testing of membrane filters.
- Full process sensing and data management.

### Options available for all systems:

- Integrated buffer tank.
- Separate, mobile CIP unit (ACIP concept).
- Integration with customer specific CIP.
- Auto-sampling of beer in/out.
- Beer phase separation in/out.

# Trap Filtration

Trap filtration refers to the microfiltration of beer after primary clarification and stabilisation processes in order to remove particulate (DE / kiesselguhr, PVPP) and improve haze prior to packaging.



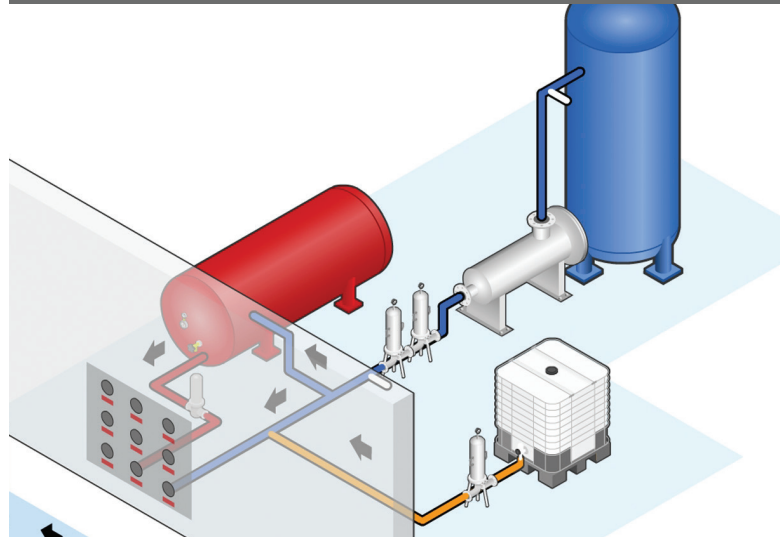
Parker have worked hand in hand with brewers to develop a range of trap filters and processes to control and protect the quality of beer entering the bright beer tank as efficiently as possible.

Automation of this process using duty / standby filter stages allows for continuous beer filtration and filter cartridge regeneration.

- Absolute retention down to sub-micron particulate.
- Full yeast retention and bacterial reduction.
- Reduced change-out with optimised backwash regeneration

[www.parker.com/TrapFiltration](http://www.parker.com/TrapFiltration)

# Water Filtration



Whether used for process water, brewing or high gravity blending, water quality plays an important role in protecting beer quality. However, water quality from typical sources such as bore holes and town water can vary with respect to particulate, ion content and microbiological contamination. As such, care and attention must be paid to eliminate unwanted contamination from the water source to protect beer character and maximise brewhouse and stabilisation operations.

From point-of-entry bulk clarification down to sterilisation, Parker and Agidens Process Automation offer a range of automated filtration processes to allow brewers to control water quality with maximum efficiency.

- Absolute, particle retention down to sub-micron levels.
- Longest service life and lowest cost of operation.
- Automated integrity testing to provide guarantee and control of filter performance.

[www.parker.com/dhWater](http://www.parker.com/dhWater)



Parker and Agidens Process Automation offer high performance filtration solutions tailored to your needs and expectations. Regardless of the plant specifics and software systems used in your brewery, we deliver integrated systems that are flexible and fully compliant with the highest standards.

### High performance filtration

Years of research and development have resulted in the highest performing filtration systems available in the market.

- Validated retention of beer spoilage organisms
- Easily integrity tested
- Complete confidence in performance

### Investment with return

Not only do we aim to make high performing filtration systems, we aim to make them affordable.

- Adapted to expectations of any brewery
- Limited integration costs
- Long filter service life reduces replacement costs

### A to Z integrated solution

A fluent integration into your plant while limiting downtime is critical in our approach.

- Extensive engineering team
- Tailored solution that can be integrated into existing software and control system
- Years of process design and automation experience
- Fast and high quality integration

### Easy to use and maintain

Our shared history in the world of breweries has allowed us to offer solutions fit to the needs of people that use them every day.

- Easy to use and maintain
- Wide range of service level agreements
- Complete operation support

Are you looking to secure an automated filtration system without having to worry about a fluent integration into your plant?

Agidens Process Automation and Parker not only deliver high quality products, we deliver high performance solutions tailored to your needs.

To find out more visit:  
[Solutions.parker.com/ANewPartnership](https://Solutions.parker.com/ANewPartnership)

# Excellence in technical support



Parker have a global network of scientists and engineers available to support the filtration operations in your brewery.

As beer is a sensitive product containing a complex mix of natural components, a high degree of attention over the stabilisation systems is required in order to produce beer to correct specification and to achieve the correct shelf-life.

In order to maximise brewhouse operations and produce fresh tasting, stable beer which preserves its character once packaged, care and attention must be paid not only to the filtration systems, but also the support in operations such as cleaning, disinfecting and integrity testing practices.




From system design, commissioning, operator training and on-going maintenance / support, Parker provide a range of technical support services aimed at maximising brewery efficiency. With expert scientists and engineers and access to leading analytical laboratories, Parker are the perfect partner for filtration support.

- ➔ Expert filtration guidance and support.
- ➔ Rapid response to technical enquiries.
- ➔ On-site deployment for technical analysis.
- ➔ System design and best practice recommendations.
- ➔ System audits and process optimisation.
- ➔ Technical training.
- ➔ Used product analysis.




**Technical Support**  
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Parker specialises in filtration and separation technologies for brewing. Below is a selection of products designed to protect the quality of your beer at the lowest cost.

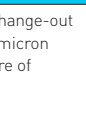


## Cold stabilisation

BEVPOR BR	BEVPOR PH	BEVPOR PS
Polyethersulphone 0.45 micron	Polyethersulphone 0.45, 0.65 micron	Polyethersulphone 0.45, 0.65 micron
<ul style="list-style-type: none"> <li>Validated microbial retention for effective stabilisation</li> <li>Optimised PES membrane structure</li> <li>High filtration area - 0.8m<sup>2</sup> per 10"</li> <li>Integral prefilter layer</li> </ul> 	<ul style="list-style-type: none"> <li>Validated microbial retention for effective stabilisation</li> <li>High filtration area - 0.8m<sup>2</sup> per 10"</li> <li>Integral prefilter layer</li> </ul> 	<ul style="list-style-type: none"> <li>Validated microbial retention for effective stabilisation</li> <li>0.6m<sup>2</sup> filtration area per 10"</li> </ul> 






## Pre-stabilisation, membrane protection and BBT protection

PREPOR PP	PREPOR NG	PEPLYN HA
Polypropylene 0.6 - 1.0 micron	Polypropylene 0.5 - 1.0 micron	Polypropylene 1.0 - 20 micron
<ul style="list-style-type: none"> <li>Yeast and bacterial reduction</li> <li>Haze reduction</li> <li>Strong, pleated polypropylene construction for backwash and chemical CIP</li> </ul> 	<ul style="list-style-type: none"> <li>Validated yeast removal and bacterial reduction</li> <li>Haze reduction</li> <li>Graded density construction for increased retention and throughput</li> <li>Strong, pleated polypropylene construction for backwash and chemical CIP</li> </ul> 	<ul style="list-style-type: none"> <li>Specifically designed for back wash regeneration</li> </ul> 




## Water treatment

PREPOR MAX	PROPLEAT PP	BEVPOR MS
Polypropylene 1.0 - 40 microns	Polypropylene 1.0 - 10 microns	Polyethersulphone 0.2 micron
<ul style="list-style-type: none"> <li>Large diameter for high flow rates and ease of change-out</li> <li>Absolute retention ratings from 1 micron to 50 micron</li> <li>Inside - out flow pattern ensures positive capture of contaminants</li> </ul> 	<ul style="list-style-type: none"> <li>Economical solution for particle removal</li> <li>Strong, robust construction</li> <li>Can be cleaned and sterilised in-situ</li> </ul> 	<ul style="list-style-type: none"> <li>Validated microbial removal against waterborne bacteria</li> <li>Integrity testable</li> </ul> 




## Air / gas filtration

HIGH FLOW BIO-X	HIGH FLOW TETPOR II	OIL-X
PTFE Impregnated glass fibre - 0.01 micron sterilising	Polypropylene expanded PTFE 0.01 - 0.2 micron	High efficiency compressed air filters
<ul style="list-style-type: none"> <li>Fully retentive to aerosol bacteria</li> <li>94% voids volume PTFE impregnated glass fibre</li> <li>Exceptional flow rates with low pressure drops</li> <li>Integrity testable by aerosol challenge</li> </ul> 	<ul style="list-style-type: none"> <li>Assured biosecurity with absolute rated filtration</li> <li>High flow rates with low pressure drops</li> <li>High voids volume PTFE membrane</li> <li>Fully integrity testable</li> </ul> 	<ul style="list-style-type: none"> <li>The most energy efficient filters available</li> <li>High quality ISO8573.1:2001 compressed air</li> <li>Running costs that start low and stay low</li> </ul> 
<b>PC02</b> Carbon dioxide purifier <ul style="list-style-type: none"> <li>Ensures compliance with quality guidelines published by the International Society for Beverage Technologies (ISBT)</li> <li>Protects drinks manufacturing processes from vapour impurities</li> <li>Easy maintenance</li> </ul> 	<b>NITROSOURCE</b> Nitrogen gas generator <ul style="list-style-type: none"> <li>Energy saving technology</li> <li>Lower cost maintenance and extensive working life</li> <li>Unique gas quality control system</li> <li>Remote monitoring</li> </ul> 	

## Housings

PHP Single and Multi	PHB Demi and Single	PHB Multi
Beverage filter housing	Beverage filter housing	Beverage filter housing
<ul style="list-style-type: none"> <li>Available for 1-30 round filters</li> <li>Specifically designed for liquid filtration applications</li> <li>Sanitary crevice free design and mirror polished surfaces</li> </ul> 	<ul style="list-style-type: none"> <li>Specifically designed for gas filtration applications</li> <li>Includes plenum chamber for condensation management</li> <li>Available with 10 and 16 bar design pressure</li> </ul> 	<ul style="list-style-type: none"> <li>Available for 3-12 round filters</li> <li>Specifically designed for gas filtration applications</li> <li>Includes plenum chamber for condensation management</li> </ul> 

## Integrity test equipment

Valairdata 3	BEVCHECK	BEVCHECK PLUS
Gas filter test	Liquid filter test	Liquid filter test
<ul style="list-style-type: none"> <li>Aerosol challenge testing</li> <li>Integrity testing of gas filters</li> </ul> 	<ul style="list-style-type: none"> <li>Pressure decay and diffusional flow testing</li> <li>Hand held portability with rechargeable battery option</li> <li>Flexible: suitable for use with compressed air or nitrogen</li> </ul> 	<ul style="list-style-type: none"> <li>Pressure decay and diffusional flow testing</li> <li>Convenient built-in printer provides printed test report</li> <li>Flexible: suitable for use with compressed air or nitrogen</li> </ul> 

[www.parker.com/bioscience](http://www.parker.com/bioscience)



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