

# icountBS

## Bottle Sampler



## In the lab or in the field monitoring

Parker Filtration's icountBS is a unique and complete solution providing customers with laboratory fluid bottle sampling using proven on-board, laser based technology. icountBS is a next generation product from Parker's fluid particle analysis and monitoring programme and provides an effective alternative to external laboratory services.



## Contact Information:

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[www.parkerhfde.com](http://www.parkerhfde.com)

## Product Features:

- Quick sample bottle analysis with variable test time options from 15 seconds and volume capacities from 10ml.
- Repeatable and re-producible result performance to ISO4406:1999 and NAS1638 particle count distributions.
- On-board compressor and 'shop' air capability.
- Environmentally controlled front-loading bottle chamber.
- Design concept allowing for portability. DC and rechargeable battery pack power option built in.
- 6 fixed channel size analysis.
- Fluid resistant touch type screen panel.
- On-board thermal printer.
- 500 test memory (fully downloadable).

# The complete solution - industrial design combined with state of the art technology

**The icountBS - Bottle Sampler from Parker with its innovative industrial design has been developed for customers looking for state of the art technology, attention to detail and the compactness of a permanent laboratory particle analysis model.**

Combine this with on-board, laser based, leading edge technology to bring to all industries a truly revolutionary Particle Counter.

The icountBS is a product from the next generation of Parker's fluid particle analysis and monitoring innovations.

The IBS features an easy to use interactive touch screen, environmentally controlled pressurized bottle chamber for air bubble suppression via an internal compressor pump, with automated door locking mechanism, sample tube cleaning sleeve minimizing contamination cross over, and an internal thermal printer.

The icountBS benefits from Parkers knowledge and experience of providing bottle analysis equipment to the market over the last 20 years.

This experience comes from selling market leading innovative solutions and by having front line condition monitoring products for all sectors of fluid analysis opportunities. The unit was at every stage developed with the customers voice in mind.





## icountBS - Bottle Sampler Features & Benefits

- Quick sample bottle analysis with variable test time options from 15 seconds and volume capacities from 10ml.
- Repeatable and re-producible result performance to ISO4406:1999 and NAS1638 particle count distributions. For other calibration standards consult Parker CMC.
- On-board compressor and 'shop' air capability.
- Design concept allowing for portability. DC and rechargeable battery pack power options built in.
- Cost-effective and economical alternative solution to external laboratory services.
- 6 fixed channel size analysis.
- Fluid resistant touch type screen panel.
- Sample tube self cleaning sleeve minimizing contamination cross over.
- Internal thermal printer.

# Analysing the test results

## I have my results what do I do next?

Solid contaminants in fluid power systems vary in size, shape, form and quantity. The most harmful contaminants are normally between 6 microns and 14 microns. The ISO code is the preferred method of reporting quantity of contaminants.

The ISO code number corresponds to contamination levels relating to three sizes.

The first scale number represents the number of particles larger than

4µm(c) per 100 milliliters of fluid, the second number for particles larger than 6 µm(c) per 100 milliliters of fluid and the third number for particles larger than 14 µm(c) per 100 milliliters of fluid.

For example: An ISO code 20/18/14 indicates that there are between 500,000 and 1,000,000 particles larger than 4µm(c), and between 130,000 and 250,000 particles larger than 6 µm(c), and between 4,000 and 8,000 particles larger than 14µm(c).

## icountBS reporting and data

In addition to the 'raw data' printout of ISO compliant data from the icountBS's on-board printer, icount Mini-lab offers the user the advantage of a 2-page report providing hard copy data on ISO/NAS individual counts and average contamination results.



**FACT \*Did you know the best human eye can only see particles above 40µ(c)?**

## Component Cleanliness Guide

Suggested acceptable contamination levels for typical hydraulic systems

Target contamination class to ISO 4406: 1999			Suggested maximum particle level			Sensitivity	Type of system	Typical components
4 µm(c)	6 µm(c)	14 µm(c)	4 µm(c)	6 µm(c)	14 µm(c)			
15	13	9	16,000	4,000	250	Super critical	Silt-sensitive control systems with very high reliability. Laboratory or aerospace	High performance servo valves
17	15	11	64,000	16,000	1,000	Critical	High performance servo and high pressure long life systems, e.g. aircraft, machine tools etc.	Industrial servo valves
18	16	13	130,000	32,000	4,000	Very important	High quality reliable systems. General machine requirements	Piston pumps, proportional valves, compensated flow controls
20	18	14	500,000	130,000	8,000	Important	General machinery and mobile systems. Medium pressure, medium capacity	Vane pumps, spool valves
21	19	15	1,000,000	250,000	16,000	Average	Low pressure heavy industrial systems, or applications where long life is not critical	Gear pumps, manual and poppet valves, cylinders
23	21	17	4,000,000	1,000,000	64,000	Main protection	Low pressure systems with large clearances	Ram pumps

### Notes:

Tables have been generated by organisations in various industries.

Some of the tables are defined in cumulative counts, e.g. '>6µm' and others are represented as differential counts e.g. '6-14µm'.

All µm(c) refer to MTD distributions. All µm references will refer to ACFTD distributions.

All standards are in counts per 100ml and provide easy methods for converting particle counts into limits that are simple to interpret. By noting the requirements of the standard, particle counts can be accurately converted to contamination levels.



# icountBS Product Specification

<b>Principle of Operation</b>	Laser based light obscuration
<b>Calibration Dust</b>	MTD or ACFTD
<b>Dimensions</b>	H=530 x W=190 (210 Door clearance) x D=410 (mm) H=20.9in x W=7.5in x 16.9in
<b>Weight</b>	18Kg
<b>Mechanical Composition</b>	Stainless steel 316, plated mild steel and aluminium
<b>Plastics Composition</b>	Precision polyurethane RIM mouldings and ABS plastic
<b>Environmental Operating Temperature (Fully Tested)</b>	+5°C to + 60°C (41°F to 140°F)
<b>Operating % RH range</b>	20 – 85% (Tested at 30°C, no condensation)
<b>Storage Temperature</b>	-40°C to + 90°C (-40°F to 194°F)
<b>Storage RH range</b>	10 – 90% (Tested at 30°C (86°F), no condensation)
<b>Channel Sizes</b>	MTD - $\geq 4\mu(c)$ , $\geq 6\mu(c)$ , $\geq 14\mu(c)$ , $\geq 21\mu(c)$ , $\geq 38\mu(c)$ , $\geq 70\mu(c)$ ACFTD - $\geq 2\mu$ , $\geq 5\mu$ , $\geq 15\mu$ , $\geq 25\mu$ , $\geq 50\mu$ , $\geq 100\mu$
<b>Analysis Range</b>	ISO 7 to 21, NAS 0 to 12
<b>Contamination Standards</b>	MTD - ISO 4406:1999 & NAS 1638 ACFTD - ISO 4406:1987, ISO 4406:1991 & NAS 1638 For further contamination standards consult Parker CMC
<b>Calibration Standard</b>	ISO MTD and ACFTD calibration to traceable ISO Standards. (Contact Parker CMC for further details).
<b>Fluid Management</b>	Maximum single sample = 100ml Minimum single sample = 10ml
<b>Possible Test Configurations</b>	User selectable from single test up to 5 tests per run (eg. 1x100ml up to 5 x50ml per run)
<b>Pre-Test Flush Volume</b>	Minimum = 10ml, Maximum = 100ml
<b>Viscosity Range</b>	1-400 cSt
<b>Fluid Compatibility</b>	Mineral oils, petroleum and hydrocarbon based fluids (consult manufacturer) and some esters (consult manufacturer).
<b>Sample Bottle Size</b>	Non specific. Max size = Ø75 (2.95in) x (H) 150 mm (5.9in). Max Volume = 250ml
<b>Memory Storage</b>	500 Tests (capacity warning after 450 tests)
<b>Output Display</b>	Backlight 256 Colour STN Transmissive
<b>Output Display Resolution</b>	320 x 3(R.G.B)(H) x 240(W) dots
<b>Display Active Area</b>	115(H) x 86(W) mm 4.5in (H) x 3.4 in (W)
<b>Data Input</b>	Via icon driven oil resistive touch screen
<b>Printer</b>	Thermal dot-line printing
<b>Printer Paper</b>	Ø50mm – (57mm x 25mm) Ø 1.97in – (2.24in x 0.98in)
<b>Test Certification</b>	Fully traceable Calibration & Certificate of Conformity
<b>Power Supply</b>	12Vdc@ 6.60Amps, 80 watts max.
<b>Battery Power</b>	2 Hours (recommended to be fully charged every 3 months)
<b>Battery Stand-By Time</b>	1 month (then 1 hour of operation)
<b>Battery Fuse</b>	6.3 Amps (anti-surge)
<b>Air pressure Source</b>	3.5 bar (51 PSI) internal Mini-compressor or 7 Bar (101 PSI) shop air



# icountBS – Bottle Sampler Ordering Information

Key	Fluid Type		Calibration		Future Option		Future Option	Future Option	Future Option	Future Option	Power Supply Region	
IBS	1	Mineral	1	ACFTD	0	Lab Unit	0	0	1	0	0	UK
			2	MTD	1	Mini-lab Package					1	USA
											2	Europe

Key	Fluid Type		Calibration		Future Option		Future Option	Future Option	Future Option	Future Option	Power Supply Region	
IBS	1		2		0		0	0	1	0	0	
IBS	1		2		0		0	0	1	0	1	
IBS	1		2		0		0	0	1	0	2	

Part Number	Accessories
ACC6NW001	2 x 250ml sample bottle pack
ACC6NW002	100 x 250ml sample bottles (50 packs of 2)
ACC6NW003	Vapour / Waste bottle
ACC6NW005	Printer paper reel (x1)
ACC6NW006	UK power supply
ACC6NW007	USA power supply
ACC6NW008	European power supply
ACC6NW009	1 meter waste tube (Clear)
ACC6NW010	1 meter vapour hose (Blue)
ACC6NW011	USB memory stick
ACC6NW012	IBS CD manual
ACC6NW020	IBS transit case
SERMISCO49	Verification fluid

## New icountABS coming soon

A new aviation fuel bottle sampler based on the icountBS with a method of operation which complies with IP564 methodology will be available soon.

Consult Parker for more details.



# Introducing the icount 'Mini-lab' – The effective way of utilising your icountBS

## How clean is your hydraulic system?

Contamination Control is only an oil sample away with our easy, 3-Step fluid analysis service.

### Step 1

Obtain your sample of hydraulic oil.

### Step 2

Take the 2 minute off-line oil sample test.

### Step 3

View your results and run a report immediately.



Kit comprises: icountBS. Flat-pack trolley. 30 sample bottles. Optional Laptop/software/printer and cables