

Kambic Laboratory & Process Equipment















DISCOVER

Withnell Sensors

Temperature & Humidity Specialists

Withnell Sensors offers expert support and product solutions for your temperature and humidity measurement requirements. With over 40 years combined experience in our field, we continue to be sought out as experts in the services that we offer.

Withnell Sensors has been established for over 10 years.

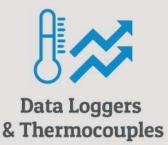
Philip de Freitas, our Managing Director, has worked in the industry for over 30 years predominantly specialising in equipment by the well-known validation brand Kaye. Leaving the manufacturer in 2006 and setting up his own company, Philip has since grown the team and the business into the multi-faceted, international organisation it is today. We are pleased to offer the following:

- Sale of temperature and relative humidity data loggers and monitoring systems.
- Service and calibration for a range of equipment including UKAS accredited calibration of the Kaye IRTD, Kaye Validator & Sims. Currently we are the only service provider in Europe able to offer an accredited calibration of the Kaye Validator.
- Exclusive distribution of Kambic Metrology equipment in the UK including climatic chambers, plant growth chambers and calibration baths
- Rental of temperature and humidity validation equipment.
- Supply and manufacture of thermocouples and other accessories used for validation of autoclaves, ovens, freeze dryers, freezers, fridges, incubators, stability chambers and more.

We are proud to work with many market leading pharmaceutical manufacturers, food manufacturers and medical research facilities.



Experienced engineers providing service on-site or at our facility in Lancashire. Offering a range of UKAS accredited calibrations.



A range of equipment to suit all requirements. Expert independent advice is available.



Laboratory & Process Equipment

An exclusive range of specialist, high performance equipment from Kambic Metrology.



Thermal Validation Rental Equipment

Validation equipment for unexpected demands, shut down periods and new plant commissioning

ABOUT

Kambic



We are proud to partner with Kambic Metrology, to offer an exclusive range of complex laboratory and process equipment for customers in the UK and Ireland.

Kambic are a family company based in Slovenia, with over 30 years specialist experience in laboratory, metrology and process equipment.

They aim to be the preferred partner to deliver the ideal balance between optimised solutions, quality and investment costs.

Laboratory Equipment:

- Climatic Chambers
- Calibration Baths
- Air Baths
- Tailored Metrology Equipment
- Plant Growth Chambers

Engineering

- Tailored Process Equipment
- ✓ Walk-in Climatic Chambers
- ✓ Tailored Temperature Equipment
- XXL Climatic Chambers



Temperature Control



Relative Humidity



Environment Simulation

Climatic Chambers:

Simulate different climates and environments with ease and precision to understand the impact on the safety or quality of your products. Alternatively, these high performance chambers can be used for quick and efficient calibration of a range of sensors. Customised sizes, right through to walk-in chambers are also available.

✓ Volumes from 50L - 1000L

Innovative air circulation system

Custom, Walk-in sizes available

Impressive stability and uniformity



Standard Temperature Range: +5°C to +180°C

	KK-50 CH	KK-105 CH	KK-190 CH	KK-340 CH	KK-500 CH	KK-1000 CH
Volume	50L	105L	190L	340L	500L	1000L
Temperature Range	+5°C to +180°C	+5°C to +180°C	+5°C to +180°C	+5°C to +180°C	+5°C to +180°C	+5°C to +180°C
Relative Humidity Range	10% to 98%	10% to 98%	10% to 98%	10% to 98%	10% to 98%	10% to 98%
External Dimensions (WxHxD)	570 x 1035 x 645mm	725 x 1560 x 845mm	834 x 1675 x 930mm	835 x 1895 x 1115mm	1035 x 1810 x 1270mm	1235 x 1930 x 1495mm
Internal Dimensions (WxHxD)	400 x 375 x 350mm	490 x 498 x 430mm	600 x 610 x 510mm	600 x 830 x 685mm	800 x 800 x 800mm	1000 x 1000 x 1000mm
Maximum Capacity	30 kg	60 kg	80 kg	100 kg	150 kg	200 kg

Low Temperature Range: -40°C to +180°C

	KK-50 CHLT	KK-105 CHLT	KK-190 CHLT	KK-340 CHLT	KK-500 CHLT	KK-1000 CHLT
Volume	50L	105L	190L	340L	500L	1000L
Temperature Range	-40°C to +180°C	-40°C to +180°C	-40°C to +180°C	-40°C to +180°C	-40°C to +180°C	-40°C to +180°C
Relative Humidity Range	10% to 98%	10% to 98%	10% to 98%	10% to 98%	10% to 98%	10% to 98%
External Dimensions (WxHxD)	570 x 1035 x 645mm	725 x 1560 x 845mm	834 x 1675 x 930mm	835 x 1895 x 1115mm	1035 x 1810 x 1270mm	1235 x 1930 x 1495mm
Internal Dimensions (WxHxD)	400 x 375 x 350mm	490 x 498 x 430mm	600 x 610 x 510mm	600 x 830 x 685mm	800 x 800 x 800mm	1000 x 1000 x 1000mm
Maximum Capacity	30 kg	60 kg	80 kg	100 kg	150 kg	200 kg

Ultra-Low Temperature Range: -75°C to +180°C

	KK-105 CHULT	KK-190 CHULT	KK-340 CHULT	KK-500 CHULT	KK-1000 CHULT
Volume	105L	190L	340L	500L	1000L
Temperature Range	-75°C to +180°C	-75°C to +180°C	-75°C to +180°C	-75°C to +180°C	-75°C to +180°C
Relative Humidity Range	10% to 98%	10% to 98%	10% to 98%	10% to 98%	10% to 98%
External Dimensions (WxHxD)	850 x 1715 x 1100mm	940 x 1830 x 1125mm	940 x 2052 x 1310mm	1165 x 1985 x 1640mm	1375 x 2070 x 1900mm
Internal Dimensions (WxHxD)	530 x 500 x 460mm	620 x 590 x 515mm	620 x 810 x 690mm	870 x 800 x 800mm	1070 x 1000 x 1000mm
Maximum Capacity	60 kg	80 kg	100 kg	150 kg	200 kg

Carbon Neutral Climatic Chambers:

Precision climate chambers using an ozone-friendly refrigerant R600a. R600a has no ODP (ozone depletion potential) extremely low GWP (global warming potential) and excellent thermodynamic characteristics for maximum energy efficiency.

Environmentally friendly

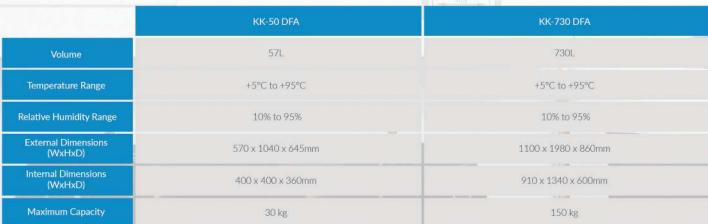
Innovative controls
Superior stability



Temperature Only: +5°C to +95°C

	TK-50 CKA	TK-730 CKA
Volume	57L	730L
Temperature Range	+5°C to +95°C	+5°C to +95°C
External Dimensions (WxHxD)	570 x 1040 x 645mm	1100 x 1980 x 860mm
Internal Dimensions (WxHxD)	400 x 400 x 360mm	910 x 1340 x 600mm
Maximum Capacity	30 kg	150 kg

Temperature & Humidity Range: +5°C to +95°C





Peltier Chambers:

The chambers are for environmental simulation, material testing and stability testing. The Peltier system means they are quiet, space-saving, environmentally friendly and also economical. The quiet chambers are manufactured in two standard chamber sizes with maximum operating temperature of 55°C.

- Cascade PID control
- Superior temperature & Rh stability
- Small product stability testing
- Stable, silent, vibration free climatic conditions



Available models:

	PKK-50	РКК-125	
Volume	57L	125L	
Temperature Range	+8°C to +55°C	+10°C to +50°C	
Relative Humidity Range	10% to 98%	10% to 98%	
External Dimensions (WxHxD)	570 x 800 x 660mm	670 x 1135 x 755mm	
Internal Dimensions (WxHxD)	400 x 400 x 360mm	500 x 500 x 500mm	
Temperature Stability	±0.06 @ 15 °C, 75%Rh ±0.04 @ 20 °C, 60%Rh ±0.03 @ 30 °C, 65%Rh ±0.06 @ 50 °C, 75%Rh ±0.12 @ 50 °C, 15%Rh	±0.08 @ 15 °C, 75%Rh ±0.05 @ 20 °C, 60%Rh ±0.05 @ 30 °C, 65%Rh ±0.10 @ 50 °C, 75%Rh ±0.10 @ 50 °C, 15%Rh	

Stability Chambers:

The high-quality units are the perfect tool for environmental simulation, material testing and stability testing in pharmaceutical and other various industries. The chambers come in five standard chamber sizes and have a maximum operating temperature of 80°C.

- Following ICH guidelines
- GMP Qualification package available
- Calibrated at all ICH points
- Number of different volumes available



	STKK-190 DF	STKK-340 DF	STKK-500 DF	STKK-1000 DF	STKK-1700 DF
Volume	190L	340L	500L	1000L	1700L
Temperature Range	+5°C to +80°C	+5°C to +80°C	+5°C to +80°C	+5°C to +80°C	+5°C to +80°C
Relative Humidity Range	10% to 90%	10% to 90%	10% to 90%	10% to 90%	10% to 90%
External Dimensions (WxHxD)	834 x 1675 x 930mm	835 x 1895 x 1115mm	1035 x 1810 x 1270mm	1235 x 1930 x 1495mm	1535 x 2220 x 1470mm
Internal Dimensions (WxHxD)	600 x 610 x 510mm	600 x 830 x 685mm	800 x 800 x 800mm	1000 x 1000 x 1000mm	1300 x 1335x 1000mm
Wattage	2600w	2600w	3000w	3200w	3200w

Temperature Chambers:

Offering a broad temperature range to suit various applications, alternate between set points with ease and efficiency. These high performance chambers can also be used for quick and easy calibration of a range of sensors. Customised sizes, right through to walk-in chambers are also available.

Volumes from 50L - 1000L

Innovative air circulation system

Custom, Walk-in sizes available

Impressive stability and uniformity



Standard Temperature Range: +5°C to +180°C

	TK-50 CK	TK-105 CK	TK-190 CK	TK-340 CK	TK-500 CK	TK-1000 CK
Volume	50L	105L	190L	340L	500L	1000L
Temperature Range	+5°C to +180°C	+5°C to +180°C	+5°C to +180°C	+5°C to +180°C	+5°C to +180°C	+5°C to +180°C
External Dimensions (WxHxD)	570 x 1035 x 645mm	725 x 1560 x 845mm	834 x 1675 x 930mm	835 x 1895 x 1115mm	1035 x 1810 x 1270mm	1235 x 1930 x 1495mm
Internal Dimensions (WxHxD)	400 x 375 x 350mm	490 x 498 x 430mm	600 x 610 x 510mm	600 x 830 x 685mm	800 x 800 x 800mm	1000 x 1000 x 1000mm
Maximum Capacity	30 kg	60 kg	80 kg	100 kg	150 kg	200 kg

Low Temperature Range: -40°C to +180°C

	TK-50 CKLT	TK-105 CKLT	TK-190 CKLT	TK-340 CKLT	TK-500 CKLT	TK-1000 CKLT
Volume	50L	105L	190L	340L	500L	1000L
Temperature Range	-40°C to +180°C	-40°C to +180°C	-40°C to +180°C	-40°C to +180°C	-40°C to +180°C	-40°C to +180°C
External Dimensions (WxHxD)	570 x 1035 x 645mm	725 x 1560 x 845mm	834 x 1675 x 930mm	835 x 1895 x 1115mm	1035 x 1810 x 1270mm	1235 x 1930 x 1495mm
Internal Dimensions (WxHxD)	400 x 375 x 350mm	490 x 498 x 430mm	600 x 610 x 510mm	600 x 830 x 685mm	800 x 800 x 800mm	1000 x 1000 x 1000mm
Maximum Capacity	30 kg	60 kg	80 kg	100 kg	150 kg	200 kg

Ultra-Low Temperature Range: -75°C to +180°C

	TK-105 CKULT	TK-190 CKULT	TK-340 CKULT	TK-500 CKULT	TK-1000 CKULT
Volume	105L	190L	340L	500L	1000L
Temperature Range	-75°C to +180°C	-75°C to +180°C	-75°C to +180°C	-75°C to +180°C	-75°C to +180°C
External Dimensions (WxHxD)	850 x 1715 x 1100mm	940 x 1830 x 1125mm	940 x 2052 x 1310mm	1165 x 1985 x 1640mm	1375 x 2070 x 1900mm
Internal Dimensions (WxHxD)	530 x 500 x 460mm	620 x 590 x 515mm	620 x 810 x 690mm	870 x 800 x 800mm	1070 x 1000 x 1000mm
Maximum Capacity	60 kg	80 kg	100 kg	150 kg	200 kg

Plant Growth Chambers:

Select from 3 different chamber sizes, control the relative humidity, temperature, CO2 and daylight simulation. The ideal solution for botanical and agricultural applications, plant pathology, plant tissue culture studies, seed germination studies and plant genetic research.

Three different sizes

Relative humidity control

Daylight simulation control

Temperature control

Optional CO₂ control



Available models:

	RK-340 CH	RK-500 CH	RK-1000 CH
Volume	340L	500L	1000L
Temperature Range	+5°C to +60°C	+5°C to +60°C	+5°C ta +60°C
Relative Humidity Range	10% - 95%	10% - 95%	10% - 95%
External Dimensions (WxHxD)	834x 1895 x 1135mm	1600 x 1980 x 700mm	2040 x 1983 x 886mm
Internal Dimensions (WxHxD)	600 x 830 x 685mm	680 x 1400 x 520mm	1045 x 1400 x 700mm
Day Light Simulation	FLUORA lights (LED option)	FLUORA lights (LED option)	FLUORA lights (LED option)
Illumination Intensity	1/3, 2/3, 3/3	1/3, 2/3, 3/3	1/3, 2/3, 3/3

Black Body Calibration Baths:

Exceptional precision is achieved through a sophisticated 2-cylinder system with a uniform vertical flow throughout the utilised portion of the tank, combined with a finely balanced high-performance microprocessor control loop. Various shaped cavities are available and fluid ensures exceptional heat transfer.

Two temperature ranges

Solution for IR thermometers

Range of cavities available

Stability and uniformity in mK range



	OB-15/2 BB	OB-15/2 BB
Volume	15L	15L
Temperature Range	+40°C to +250°C	-20°C to +130°C
External Dimensions (WxHxD)	530 x 1090 x 470mm	530 x 1090 x 470mm
Internal Dimensions (cross x immersion depth)	225 x 270mm	225 x 500mm

Calibration Baths:

Calibration baths are ideal for calibrating temperature sensors, transmitters or even complete temperature systems. Not only do they allow calibration of multiple systems at the same time, but also offer the added advantage of accommodating sensors of all shapes and sizes. Finally, there is an assurance that sensor and reference are always subjected to a uniform stable temperature.

✓ Volumes from 7L - 50L

Unique vertical flow design

Up to 500mm immersion depth

Stability and uniformity in mK range



Standard Temperature Range: +40°C to +250°C

	OB-7/2	OB-22/2	OB-50/2
Volume	7L	22L	50L
Temperature Range	+40°C to +250°C	+40°C to +250°C	+40°C to +250°C
External Dimensions (WxHxD)	480 x 525 x 470mm	600 x 1240 x 550mm	745 x 1240 x 495mm
Internal Dimensions (cross x immersion depth)	100 x 270mm	147 x 500mm	320 x 500mm

Low Temperature Range: -40°C to +130°C

	OB-7/2 LT	OB-22/2 LT	OB-50/2 LT
Volume	7L	22L	50L
Temperature Range	-40°C to +130°C	-40°C to +130°C	-40°C to +130°C
External Dimensions (WxHxD)	480 x 1080 x 470mm	600 x 1240 x 550mm	745 x 1240 x 495mm
Internal Dimensions (cross x immersion depth)	100 x 270mm	147 x 500mm	320 x 500mm

Ultra-Low Temperature Range: -90°C to +130°C

	OB-7/2 ULT	OB-22/2 ULT	OB-50/2 ULT
Volume	7L	22L	50L
Temperature Range	-90°C to +130°C	-90°C to +130°C	-90°C to +130°C
External Dimensions (WxHxD)	480 x 1100 x 470mm	600 x 1260 x 550mm	900 x 1240 x 690mm
Internal Dimensions (cross x immersion depth)	100 x 270mm	147 x 500mm	320 x 500mm

Micro Calibration Baths:

The exceptional precision is achieved through a sophisticated vertical flow throughout the utilised portion of the tank, combined with a finely balanced high-performance microprocessor control loop.

Two temperature ranges

Unique vertical flow design

Portable for calibrations on the go Stability and uniformity in mK range



Available models:

	STANDARD TEMPERATURE +35°C to +220°C - OBM	
Volume	11.	
Temperature Range	+35°C to +220°C	
External Dimensions (WxHxD)	203 x 489 x 311mm	
Internal Dimensions (cross x immersion depth)	56 x 200mm	
Weight	13 kg	

	LOW TEMPERATURE -40°C to +130°C - OBM - LT
Volume	1L
Temperature Range	-40°C to +130°C
External Dimensions (WxHxD)	203 x 609 x 311mm
Internal Dimensions (cross x immersion depth)	56 x 200mm
Weight	18 kg

Air Baths:

Exceptional units with highly praised performance and intuitive, yet flexible operation.

- Two different sizes
- Dry, clean, stable and silent Temp within 10 mK over days
- Convenient front access
 Peltier driven technology



	TK-105 US	TK-190 US
Volume	105L	190L
Temperature Range	+15°C to +50°C	+15°C to +50°C
External Dimensions (WxHxD)	705 x 1130 x 700mm	875 x 1300 x 700mm
Internal Dimensions (WxHxD)	400 x 640 x 410mm	570 x 810 x 410mm

High Temperature Ovens:

The precision ovens are manufactured in four standard chamber sizes with maximum operating temperature of 600°C.

- Heat treatment for stress release
- High temperature drying
- Heat treatment for sintering
- Molds preheating and fills curing



Available models:

	SP-60 C	SP-190 C	SP-420 C	SP-875 C
Volume	64L	190L	400L	875L
Temperature Range	+10°C to +600°C	+10°C to +600°C	+10°C to +600°C	+10°C to +600°C
Heat Up Rate	10°C/min	10°C/min	7°C/min	5°C/min
External Dimensions (WxHxD)	712 x 673 x 655mm	942 x 883 x 836mm	1062 x 973 x 1030mm	1461 x 1768 x 1066mm
Internal Dimensions (WxHxD)	400 × 400 × 400mm	600 x 600 x 543mm	750 x 700 x 755mm	998 x 1250 x 700mm
Maximum Capacity	50 kg	100 kg	300 kg	400 kg

Composite Ovens:

The high temperature curing ovens are manufactured in six standard chamber sizes with maximum operating temperature of 300°C. The ovens are ideally suited for the curing of composite materials.

- Hot air sterilization
- Material and tool preheating
- Curing of composites
- Pilot & research hot air drying and drying after washing



	SP-55 C	SP-105 C	SP-190 C	SP-440 C	SP-910 C	SP-1300 C
Volume	55L	107L	190L	440L	949L	1288L
Temperature Range	+5°C to +300°C	+5°C to +300°C	+5°C to +300°C	+5°C to +300°C	+5°C to +300°C	+5°C to +300°C
Heat Up Rate	5.8°C/min	5.6°C/min	4.6°C/min	4.7°C/min	4.3°C/min	5.8°C/min
External Dimensions (WxHxD)	510 x 535 x 575mm	725 x 725 x 715mm	835 x 840 x 790mm	1235 x 1025 x 835mm	1280 x 1975 x 870mm	1340 x 1205 x 990mm
Internal Dimensions (WxHxD)	400 x 400 x 345mm	490 x 500 x 440mm	600 x 615 x 515mm	1000 x 800 x 550mm	100 x 1300 x 730mm	1060 x 1430 x 850mm
Maximum Capacity	40 kg	55 kg	80 kg	90 kg	130 kg	130 kg

Vacuum Ovens:

The vacuum ovens/ vacuum dryers are manufactured in three standard chamber sizes with maximum operating temperature of 200°C and have significantly increased drying rate.

Low temperature evaporation

Dry mass determination

Drying curves determination

Pilot vacuum drying



Available models:

	VS-25 SC	VS-50 SC	VS-130 SC
Volume	25L	50L	130L
Temperature Range	+5°C to +200°C	+5°C to +200°C	+5°C to +200°C
Wattage	2000w	2500w	2500w
External Dimensions (WxHxD)	480 x 602 x 430mm	730 x 510 x 495mm	670 x 856 x 725mm
Internal Dimensions (WxHxD)	300 x 275 x 307mm	405 x 340 x 370mm	495 x 495 x 530mm
Temperature Stability	0.1	0.1	0.1

Freeze Dryers:

Freeze dryers are a refined solution for meeting research and development phase freeze drying requirements in the increasingly demanding R&D centres in industry and academia. The Kambic freeze dryers come in 2 sizes.

-55°C for water solutions

-100°C for low freezing point solvents

Condenser capacity 5 kg

Refined solution for laboratory and R&D freeze drying



	LIO-5 P	LIO-5 PLT
Condenser Volume	7.2L	7.2L
Temperature Range	-120°C to +100°C	-120°C to +100°C
Wattage	350w	800w
External Dimensions (WxHxD)	470 x 353 x 622mm	470 x 650 x 613mm

Pass Boxes:

For controlling the ingress of particulate contamination into clean rooms and other controlled environments. The avoidance of contamination is paramount in order to maintain the integrity of products and processes, various models and sizes available.

Power Supply Free

Installation parts included as standard

Innovative mechanical interlock

Single-handed operation



Available models:

	PB 4/4/4	PB 5/5/5	PB 6/6/6	PB 8/8/8	PB 6/6/6 UV
Internal Dimensions (WxHxD)	400 x 400 x 400mm	500 x 500 x 500mm	600 x 600 x 600mm	800 x 800 x 800mm	600 x 600 x 600mm
External Dimensions (WxHxD)	500 x 500 x 450mm	600 x 600 x 550mm	700 x 700 x 650mm	900 x 900 x 850mm	700 x 850 x 750mm
Equipment	N/A	N/A	N/A	N/A	UV-C surface sterilisation

	PB 6/6/6 HUV	PB 6/6/6 AIR	PB 6/6/6 EL	PB 8/10/8 LUX	PB 6/6/6 90°C
Internal Dimensions (WxHxD)	600 x 600 x 600mm	600 x 600 x 600mm	600 x 600 x 600mm	800 × 800 × 800mm	600 x 600 x 600mm
External Dimensions (WxHxD)	750 x 970 x 750mm	700 x 700 x 750mm	700 x 750 x 750mm	1000 x 1150 x 950mm	*×*×*
Equipment	Internal air circulation through HEPA filter sterilisation	Air shower with supply from HVAC system	Electrical interlock	Floor installation	Corner installation

*All other dimensions available on demand



Peace of mind for your Business investment:

At Withnell Sensors we understand that purchasing equipment from our Kambic range is a capital investment for any business. With this in mind we welcome customers to come and view a sample of Kambic products at our high specification, UKAS accredited facility in Lancashire.

We use a selection of climatic chambers and calibration baths in our calibration laboratory to allow us to offer the most respectable measurement uncertainties. We have conducted extensive testing on our calibration equipment including thermal mapping using high accuracy sensors to ascertain stability and uniformity profiles allowing us to select the best equipment for our needs .

Our engineers will be on hand to demonstrate some of the key functions of our Kambic equipment and answer any questions you may have.



Our Technical Manager, Paul Pillay summarises his experience of introducing the Kambic range:



"I have been really impressed with the performance and technical results achieved with our Kambic equipment. We pride ourselves on using high specification equipment in our laboratory in order to maintain our low uncertainties and deliver accurate and efficient calibrations. We began by investing in one calibration bath and based on the performance and repeatability we have continued to invest and expand our range. Now Kambic equipment is used alongside other leading brands and has exceeded our expectations while offering good commercial return on investment.

Kambic offers premium quality without compromising the budget. It means we can continue to offer our customers the best possible calibration options"

Paul Pillay
TECHNICAL MANAGER

77



Independent Technical Sales

Our sales team are always on hand to offer expert advice and technical support. Our engineers have experience working with a range of clients on various projects. We can help you to select the right equipment to suit your application. We aim to deliver quotations for standard products within 1 business day.

Many of the Kambic products can be adapted to suit bespoke requirements. Our team are happy to discuss the available options and will ensure a quotation is tailored to your technical specification.



After Sales Care

Customer service is important to us, it is a fundamental part of our ethos and has acted as the driving force behind many of our commercial decisions. Servicing an array of customers from small businesses through to multi-national organisations, we always endeavour to offer consistently high levels of service.

Our Service department is available to offer first class after sales care. Our engineers are trained and supported by the manufacturer to provide help and assistance where required. We can discuss training and service options to suit your business needs and requirements.



Exceptional Standards

Our background is within the pharmaceutical and Biotechnology sectors where we are practised to the high standards expected from world leaders in this field. We have adopted the same high standards across our business. Our in-house laboratory is accredited to the internationally recognised ISO/IEC 17025:2005. Our accreditation is a representation of our ability to offer complete quality assurance.













