Just Add Gas

BWB Technologies

BWB Flash Flame Photometer

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Flame photometers that push the boundaries of low temperature flame analysis.

Analysis with a low temperature propane, LPG, or butane flame has been redefined by BWB Technologies.

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Our Mission

To redefine the boundaries of Flame Emission Spectroscopy (FES) by supplying unique, cost effective, reliable and accurate flame photometers (and related products) and to build strong, lasting relationships with our customers by providing the best customer service in the industry.

About BWB Technologies

BWB Technologies is a UK company focused on the design, manufacture and sales of award winning flame photometers. Drawing on a team of leading industry specialists, we strive to create high quality, cost effective products that redefine what is achievable with a low temperature flame. From our manufacturing plant in Newbury, England, BWB Technologies have introduced a series of flame photometer products and accessories which exceed existing expectations in terms of specification, usability, accuracy, reporting, build quality and value for money.

International support network

BWB Technologies are the only flame photometer manufacturer to have dedicated sales and technical support offices in Europe, The America's and the Middle East. We offer an unsurpassed level of customer support with real people answering customer calls.

Pushing the boundaries of flame photometry

What can be achieved with a flame photometer has been redefined by BWB Technologies. With unrivalled accuracy, low cost and ease of use the BWB flame photometer range is not only the best flame photometer available but is the first real alternative to AAS (atomic absorption spectrometry) and ICP (Inductively Coupled Plasma) for measuring Lithium (Li), Sodium (Na), Potassium (K), Calcium (Ca), Caesium (Cs) and Barium (Ba). The recent introduction of industry specific products for Biological samples, Sugar, Nuclear and others further defines BWB Technologies as the leader in "next generation" flame photometers.

Best customer service in the industry

- International telephone service available, with local access numbers in Europe, the USA and the Middle East
- An international distributor network servicing the needs of customers in over 100 countries.
- Fast delivery of spare parts and consumables backed by extensive inventory in multiple strategic locations.
- Pre-sales application specific product selection assistance
- 100's of hours of video training available in a wide choice of languages
- Technically competent customer service staff
- ISO9001 Certified
- Excellent Globally acclaimed after-sale support and service by Value Added Distributors and Internet based assistance from GMT and PST and EEST time zones.

Contact Information

BWB Technologies UK Ltd Unit 7, The Galloway Centre, Hambridge Lane, Newbury, RG14 5TL UK

T Europe + 44 (0)1787 273 451 United States 1 (800) 608-9870 Middle East +357 22 666080

E Orders orders@bwbtech.com Admin admin@bwbtech.com Technical technicalsupport@bwbtech.com Sales sales@bwbtech.com

www.bwbtech.com 12 months warranty

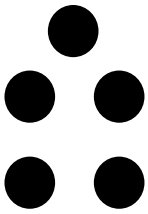
BWB Technologies Ltd. Warrants, subject to the conditions itemised within this document, through either BWB personnel or personnel of its authorised distributors, to repair or replace free of all charges, including labour, any part of this product which fails within the warranty time specified above, appertaining to this particular product. Such failure must have occurred because of a defect in material or workmanship and not have occurred as a result of operation of the product other than in accordance with procedures described in the instructions furnished with this product.

Common Features

Our flash model range are built around the same innovative product design and world leading technologies, sharing the same core features across the range.

Just add gas!

BWB have revolutionised the flame photometry market by offering an instrument with all accessories supplied as standard. This means that the process of ordering a BWB flame photometer is incredibly simple. There are no complex product codes, accessory lists or ordering requirements. When you order a BWB flame photometer it will arrive with all the accessories you need.



Up to 4 Channels of simultaneous detection and display

The ability to measure and calibrate up to 5 different ions at the same time offer huge advantages over more traditional instrumentation. As the BWB is the first and only flame photometer to offer simultaneous detection and display, our customers do not need to waste valuable time changing filters and re-calibrating when a different measurement is required.

Built-in air compressor

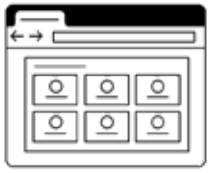
Greatly reduces noise and laboratory footprint while increasing instrument stability, accuracy and reproducibility.

Advanced calibration system

The ability to store calibration data and perform multi-mode calibrations reduces analysis time significantly and increases accuracy.

Interfaces

Connect to your PC using USB.



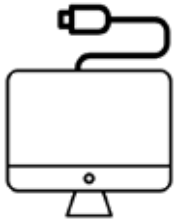
New modern technology offers increased accuracy and reliability

BWB has provided the most up-to-date technology in instruments for the past 15 years, and the flash is no exception. It has a brand-new, elegant appearance with a 5" touch display and yet provides the highest levels of accuracy and usability. It complements and laboratory thanks to its contemporary appearance.

Common Features

Computer connectivity as standard!

The FP-PC software package, included with every purchase, has been written with GLP compliance in mind and facilitates the creation of data and reports in .pdf and .csv formats.



Ease of use

An exceptionally user-friendly 5" capacitive touchscreen with clear menu options leads users through analysis. Anyone who needs to use the instrument will find it simple to use because the touchscreen can be used while wearing the majority of disposable lab gloves.

As modern businesses may experience a large turnover of staff, laboratory managers will appreciate the comprehensive training video supplied with every BWB flame photometer. Our training videos are also available online in over 10 languages at www.bwbtech.com and on BWB's YouTube Channel http://www.youtube.com/user/BWBTechnologiesUKLtd

Long term savings

Excellent value for money and very low total cost of ownership.

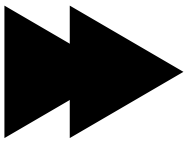
Selective analysis Flame photometry excludes most elements which means very little interference.

Reliable & simple

Manipulation of the flame is the only adjustment available to the operator during operation ensuring reliable and accurate measurements every time.

Fast!

Once the instrument has stabilized it takes just a matter of seconds to obtain results.



BWB Technologies

Green Credentials

We take our green responsibilities very seriously.
We constantly evaluate our processes and procedures in order to minimise the impact to the environment.

This is how we do it.

Using LED lighting with efficient heating systems across out manufacturing facility

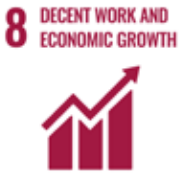
Utilising only 'green' energy suppliers out electricity is supplied from 100% renewable sources and our natural gas consumption is 100% carbon neutral

Environmentally friendly packaging created from pre-recycled content or utilising materials that can be easily recycled across the globe

The use of paper based packaging tape to reduce our plastic consumption and allow our cardboard boxes to be easily recycled.

Product design considerations such as re-cyclability and life cycle assessments are taken into account at the development phase of our new products

Striving to meet as many of the United Nations 17 sustainability development goals is a key priority for us in our commitment to protect the environment.
We have adapted out processes and products to meet the following goals:



BWB Technologies

Green Credentials

Tree planting promise

We have our own in house recycling scheme for factory generated waste to ensure that our employees and the company are doing all we can to help protect and preserve the environment

2025

In addition we have an ultimate goal to plant 1000 tree for every company employee by 2025

We're proud to be the first Flame Photometer manufacturer to plant trees for every instrument sold. We're committed to planting at least 50 trees for every model of Flame Photometer we've sold from 01 May 2021

Making our blue
more green

BWB Technologies

BWB Technologies

Li 3 Na 11 K 19 Ca 20

The **BWB Flash**

The newest feature to Flame Photometry

Finally, a Flame Photometer specific to your needs. The first simultaneous Flame Photometer with built in compressor and configurable element analysis to your requirements.

The BWB Flash is the first and only fully configurable up to four channel flame photometer that detects and displays all calibrated ions at the same time.

The BWB Flash was created by combining the award-winning features of our XP model with new, innovative, and cutting-edge technology to provide unrivalled levels of accuracy, usability, and reliability while significantly reducing analysis time. When a different measurement is required, our customers do not need to waste valuable time changing filters and re-calibrating, as is a common requirement in all other Flame Photometer designs from 1951 to the present.

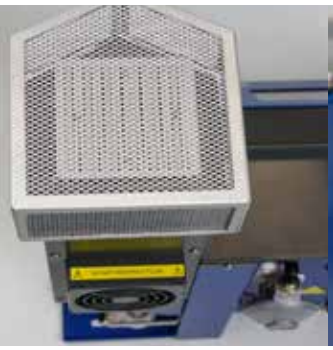
The Flash looks exceptionally modern, with clean lines and contemporary bright colour schemes that will fit into any laboratory. The instrument has a large 5" touch screen display that can be easily viewed from any angle and operated with most laboratory disposable gloves.

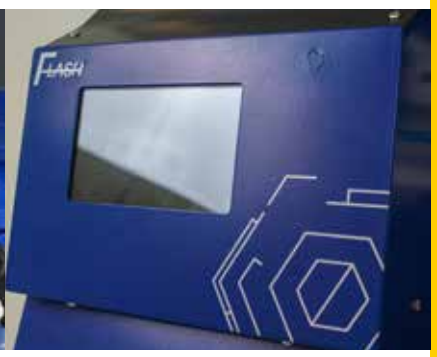
Our metal casework creates a sturdy portable instrument with nearly limitless future recycling possibilities. Of course, ROHS-compliant components and materials are used throughout.

The BWB Carbon Footprint is exceptionally low, in keeping with the company's goals of being a responsible manufacturer, and we've succeeded in lowering the gas consumption rate by 13% while also lowering the electricity consumption (kWh) by 26% compared to previous model generations.

Unlike other manufacturers who charge extra for essential accessories, BWB includes everything needed to use the product right away. Simply add Gas!! (Propane, LPG, or butane) We also include data sharing via USB from the BWB Flash to your PC as standard. This connects the BWB Flame Emission Spectrometer (FES) output to the Internet or your company intranet systems, allowing for Distributed Control, which is critical for multinational corporations, universities, and government agencies.

BWB continues to improve our Flame Photometric systems in order to provide the market with unrivalled quality!





+ FEATURES

- LARGE 5" TOUCH SCREEN DISPLAY COMPATIBLE WITH THE MAJORITY OF DISPOSABLE LABORATORY GLOVES
- TRUE EASE OF USE WITH LARGE BUTTONS AND SIMPLE TO UNDERSTAND TEXT AND SYMBOLS
- BUILT-IN AIR COMPRESSOR AND GAS REGULATOR
- CALIBRATION STANDARDS SUPPLIED AS STANDARD IN 10,000PPM CONCENTRATIONS
- AUTO-READ TECHNOLOGY ENABLES OPERATOR INDEPENDENT DETERMINATION OF RESULTS
- USER SELECTABLE DECIMAL PLACES
- IQ, OQ, PQ WEB-BASED CERTIFICATION AVAILABLE: IQ OQ PQ is completely unique in the analytical instrumentation arena. Available in English, Russian, German, Mandarin, French and Spanish. More languages in development.
- COMPLETE SET OF BASIC LABWARE INCLUDED TO GET YOU STARTED

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Li 3 Na 11 K 19 Ca 20

Technical Data

Just Add Gas

Sample rate
2.5 - 4ml/min

Tubing materials
Silicone and Tygon®

Required desk space for instrument
101cm* (H) x 45cm (W) x 35cm (D)
*For Safety reasons the Flame photometer requires 50cm of unobstructed space above to allow dissipation of heat from the chimney.

Instrument size
Flash Flame Photometer
51cm (H) x 33cm (W) x 35cm (D)
(20in x 13in x 14in)

Shipping
65cm (H) x 49cm (W) x 43cm (D)
(25in x 19in x 17in)

Weight
BWB Flash - 10kg (22.1lbs)

Shipping - 18kg (39.7 lbs)*
*subject to vary based on accessories included

Optimal range
Single point calibration
Na 0.1 - 60ppm
K 0.05 - 100ppm
Li 0.05 - 50ppm
Ca 1.0 - 100ppm

Multi Point Calibration (with dilution)
Na 0.1 - 1000ppm
K 0.05 - 1000ppm
Li 0.05 - 1000ppm
Ca 1.0 - 1000ppm

Reproducibility
<1% Coefficient of variability for 20 consecutive samples over ten minutes at concentrations of 100ppm or less. (After instrument stabilisation).

Specificity
Na/K/Li = <1% to each other when equal in concentration at <100ppm

Limit of detection (LOD) and limit of quantification (LOQ)

LOD	LOQ
Na - 0.03ppm	Na - 0.1ppm
K - 0.02ppm	K - 0.05ppm
Li - 0.02ppm	Li - 0.05ppm
Ca - 0.3ppm	Ca - 1ppm

Time to stability
Less than 15 seconds after sample is introduced into the flame

Ions measured
Simultaneous measurement of model specific elements

Interfaces
USB connectivity for supplied PC software
.csv and .pdf generated reports and files via FP-PC software

Recommended minimum warm up time based on ambient temperature
21ºC - 25 minutes

Power requirements
100V - 250V AC at 50 or 60Hz automatically selecting

Fuel requirement*
Propane, Butane or Natural Gas regulated to 19Bar. Flow rate of 0.4l/min
*we recommend either Propane or Butane for optimum results

Readout
5" colour capacitive touch screen display

+ WHAT'S IN THE BOX

- Power lead to suit region
- Gas hose
- Aspiration kit
- Manuals covering all aspects of the Flash FP
- Quick start guides
- Warranty registration form
- Certificates of analysis for all provided fluids
- Material safety data sheets for all provided fluids
- The FP-PC software installation USB
- 150ml of BWB recommended cleaning solution
- 150ml calibration fluids for all relevant elements at 10,000ppm
- 100ml conical flask with screw lid
- 100 disposable sample cups
- 1L of de-Ionised water
- 2m of waste tube
- 10 x 10ml pipettes
- 10 x 1ml pipettes

Proudly Engineered and Manufactured in England

www.bwbtech.com

Manufactured in Newbury, County of Berkshire, England.
Registered office: BWB Technologies Ltd Unit 7, The Galloway Centre, Hambridge Lane, Newbury, RG14 5TL UK

Specifications and contents are subject to change without notice.

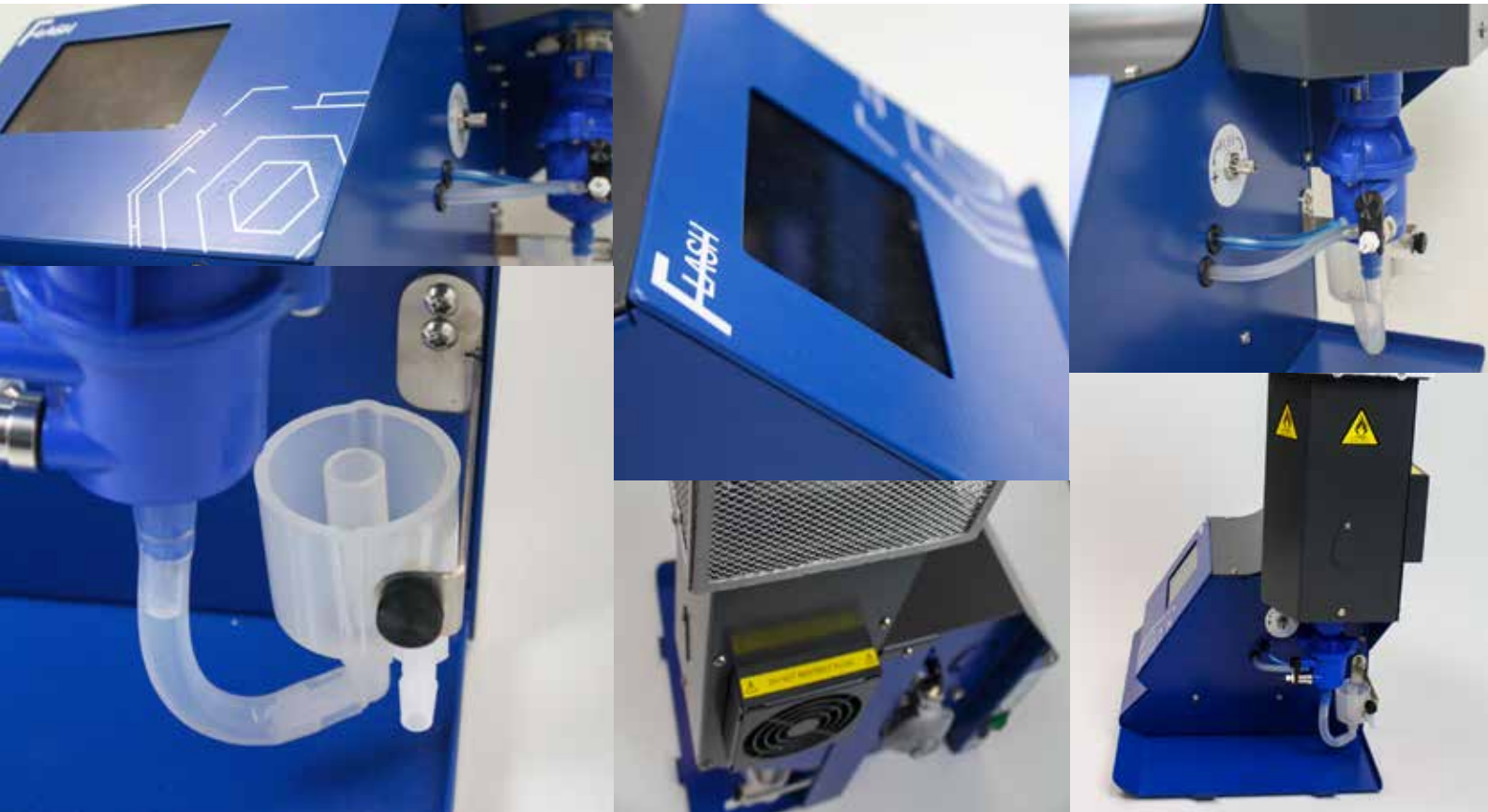
BWB Technologies

Flash Models

The BWB Flash is the first touchscreen Flame Photometer available in 7 models to suit a wide range of applications and budgets, only pay for the elements you're interested in.

Common features include:

- 10 Point calibration curve
- Internal results storage
- Internal compressor and regulator
- .PDF and .CSV report generation
- IQ OQ PQ possible



BWB Technologies

Flash Models

FL-2 Includes analysis of Sodium and Potassium

FL-3 Includes analysis of Sodium, Potassium and Lithium

FL-4 Includes analysis of Sodium, Potassium, Lithium and Calcium

FL-C Includes analysis of Calcium

FL-K Includes analysis of Potassium

FL-L Includes analysis of Lithium

FL-N Includes analysis of Sodium

FP-PC and BWB Drive

FP-PC app

The BWB flame photometer has been configured to easily satisfy the most sophisticated IT requirements. The FP-PC app provides a useful interface to the BWB Flame Photometer (FP) facilitating the following operations:

- Normal calibration Report production
- Logging of streaming data for continuous on-line applications. (A 4-20 mA signal can also be output proportional to a calibrated channel on the FP).
- Extraction of data from the flame photometer when operated in automatic or semi-automatic mode

Calibration manipulation including:
1. Upload from / download to the FP
2. Storage / retrieval of calibrations using the PC or system hard drive

The FP-PC app, included with every purchase, has been written with GLP compliance in mind and facilitates the creation of data and reports in PDF format.

BWB drive

Continuing to building on modern technologies, BWB have created an industry leading USB flash drive packed full of features and resources designed to aide your daily analysis and BWB experience. Exclusively for BWB customers, this self-contained resource includes:

- Tutorial videos in 10 languages
- PC and Mac compatibility
- FP-PC app installation package (PC only)
- Links to BWB's growing online video library (internet connection required)
- Manuals, guides, warranty information and registration PDF
- A list of international support and distributor contact details
- 13 GB of free space for you to use as you please!

www.bwbcustomerportal.com

The BWB Customer Portal is open to join free of charge, BWB Flame Photometer's documentation is all available in one location and is now simpler to access than ever. Keep data under control, access, read, and download the newest documents safely. By staying connected, you can never miss a crucial system update or updates to configuration, standard operating procedures, or simple yet helpful hints and advice, here is a little snippet of what can be found on the Customer Portal:

- Certificate of analysis
- Information and help sheets
- MSDS
- Packing Lists
- Software Installation
- User manuals
- Service manuals
- Certification

IQ OQ PQ Certification

IQ OQ PQ is a unique validation and certification program from BWB.

The programme has been specially created to ensure the end user has the technical knowledge required to install and initialise their BWB Flame Photometer and the technical know-how and confidence to operate any of our 2015 and onwards range of flame photometers correctly and efficiently on a daily basis.

IQ - Installation Qualification

The installation qualification covers in detail the key steps required to correctly set up the BWB range of photometers. IQ stages include: maintenance and service plans, the installation environment and health and safety requirements.

OQ - Operation Qualification

The operation qualification covers the steps required to ensure that the BWB flame photometer is operating correctly.

The user will undertake a series of hardware checks and test readings, providing the results to BWB for analysis.

PQ - Performance Qualification

The performance qualification has been designed to ensure that the instruments perform to the original factory specifications.

Once the IQ and OQ sections have been completed, the user runs a sample manually with the solutions, prints out the results and sends to BWB for analysis.

After completion of the qualification and confirmation from BWB, a signed certificate will be issued to the user.

IQ OQ PQ is a unique and effective program built to ensure technical ability, confidence and peace of mind for all users of the BWB 2015 and onwards Series of Flame Photometer.

To find more about IQ OQ PQ get in touch at info@bwbtech.com

BWB Technologies

Testimonials

Alvaro Apéstegui, Ph.D., Laboratorios Labiclin, Costa Rica **BWB BIO**

"I have been working with ion selective instruments for a while, but after numerous errors with the lipemic samples, and the high running and maintenance costs associated with the instrument I started looking for a new flame photometer. I needed an instrument that gave me good precision, repeatability and an instrument that is viewed as the gold standard for ions such as sodium, potassium and lithium.

I have analysed many instruments but they always had something that was not adequate for my needs. I decided to go for a BWB BIO because it had very good construction and offered up to five different ions with calibration curves of up to fifteen points.

I have had the instrument for almost a year and must say that it is here to stay because of its sturdy construction, really fantastic electronics and most importantly, it will not allow you to make mistakes. Being able to actually see the stability of the readings and having calibrations that are very stable is comforting.

The communication with the people from BWB Technologies is fluent and professional. I have never had a question unanswered and responses normally come in less that 12 hour which says a lot since I am in Costa Rica and they are in England!.

I strongly recommend this instrument, and now that it can have automated sampling, makes it even easier and equals the automatic capabilities of the ion selective instruments."

Gregory Bathfield, Electrical & Control Specialists Ltd, Mauritius **BWB SUGAR**

"For the sugar industry, the flame photometer is used to measure Potassium which is directly related to sugar. The flame photometer is thus used to detect sugar in condensate return to the boiler. The BWB photometer is more user friendly and easier to use than others we came across. It is really good value for money."

Wolfgang Glock, THG-Glock Instruments, Germany **BWB XP**

"My experience I have made with the BWB-XP Flame Photometer is, that it is easy to install, easy to handle, gives accurate measurements and with the software the operator has a better summary of the work he has done in the Lab. The excellent service of BWB- Technologies and the excellent performance of the instrument makes the BWB- XP Flame Photometer the "best Flame Photometer which is on the market". At the moment no competitor can beat this instrument in performance and price."

Richard Griffiths, Fujifilm Imaging Colorants Ltd, England **BWB XP**

"We are very happy so far with the purchase of our BWB-XP flame photometer. We are using the unit for a colours application and had upgraded from a older Sherwood model. I carry out 5 point calibrations on each ion and these calibrations appear to hold from first thing in the morning until the end of the day. The BWB-XP produces accurate values and the ability to measure 5 elements simultaneously is less time consuming than the older instrument and has, on occasion, flagged up the presence of ions which we were not expecting to see and may not have been looking for on the older instrument."

DELIGHTED WITH YOUR BWB FLAME EMISSION SPECTROMETER? EMAIL US YOUR TESTIMONIAL AND WE WILL HAPPILY RESPOND WITH 5 BWB USB FLASH DRIVES! A GREAT KEY RING HOLDER, STORAGE SPACE AND TORCH FOR THE ENTIRE FAMILY!

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BWB Technologies

Distributors

We have a global network of first class distributors.
Visit our website, www.bwbtech.com for full details.

BWB Technologies

BWB Technologies Ltd Unit 7, The Galloway Centre, Hambridge Lane, Newbury, RG14 5TL UK

T Europe + 44 (0)1787 273 451 United States 1 (800) 608-9870 Middle East +357 22 666080
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www.bwbtech.com

BWB Technologies Ltd. warrants, subject to the conditions itemised within this document, through either BWB personnel or personnel of its authorised distributors, to repair or replace free of all charges, including labour, any part of this product which fails within the warranty time specified above, appertaining to this particular product. Such failure must have occurred because of a defect in material or workmanship and not have occurred as a result of operation of the product other than in accordance with procedures described in the instructions furnished with this product.

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Registered office: BWB Technologies Ltd, Unit 7 Galloway Centre, Newbury, Berkshire, RG14 5TL, UK.

Proudly Engineered and Manufactured in England