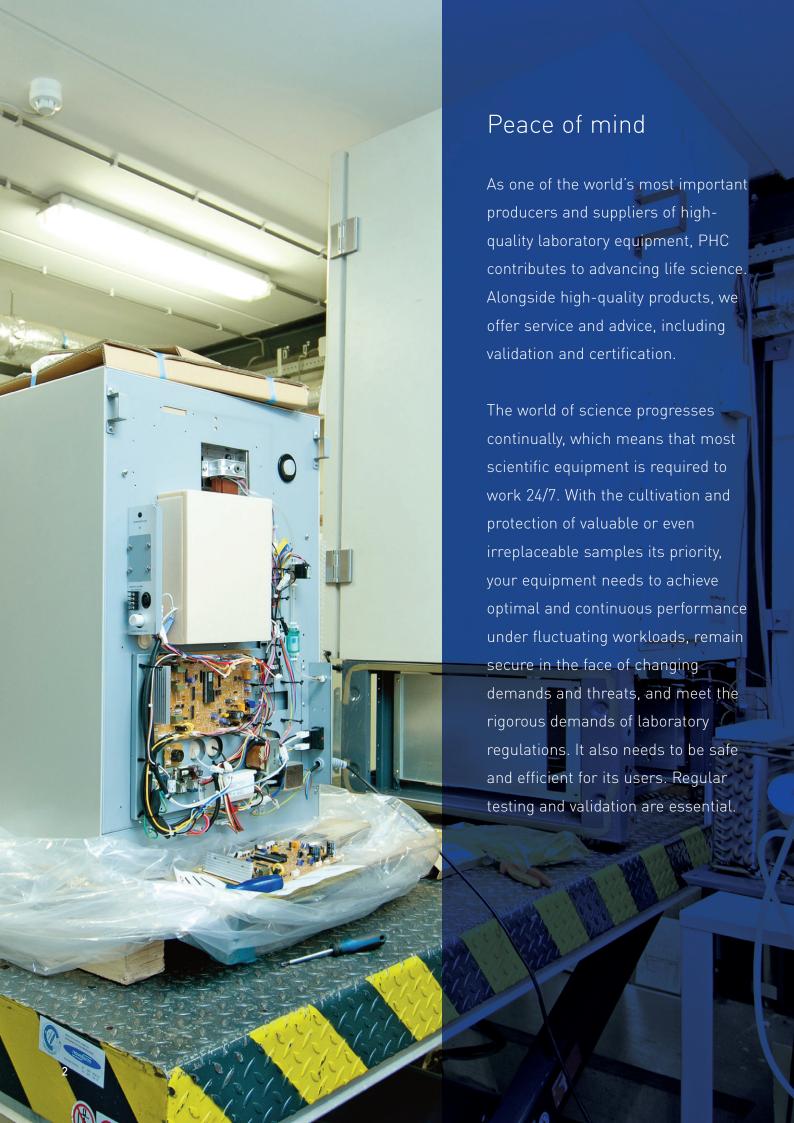


A Comprehensive Support Solution designed to protect valuable work



Innovative partner for Service and Validation

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Committed to Quality

We at PHC Europe B.V. are committed to providing our customers with first class biomedical and pharmacy automation products and supporting services. Our goal is to maintain our market-leading reputation for excellent standards and for consistently living up to our customers' expectations.

We are very proud that PHC Europe B.V's quality management system is certified (by TÜV Nederland) to ISO9001:2015

We hold the certification that covers the sales, distribution, service and validation of biomedical and pharmacy-automation equipment covering our sites in Etten-Leur (Netherlands), Avon (France) and Loughborough (UK).

PHC Service and Validation

Our service network can ensure that you can test and validate your hardware and software on a regular basis, with minimal disruption to your existing systems and daily operations. Our engineers can certify your product for use through instrument hardware validation. And we also offer preventative maintenance services. We can work with you to identify and resolve issues and risks quickly and efficiently. Our service network is always close-at-hand. We have developed a service package that includes testing to the highest regulatory standards and includes:

• Planned maintenance

Regular scheduled maintenance extends the lifetime of your equipment, maximizes uptime and performance, and reduces the risks of issues developing. With our expertise we offer a pro-active maintenance service that brings added peace of mind.

Upgrades

Improving product performance is a continuous process. We provide performance enhancing upgrades where possible.

Spot-on calibration

Accuracy is crucial in experimental parameters and storage of samples. We carry out calibration adjustment during preventative maintenance visits for all our heated products and unloaded cooled products to ensure that your equipment provides the right conditions for your applications.

Personal support

Our first line of support can provide you with direct access to engineering and application experts, who can help you via phone, email, virtual remote assistance, or onsite visit to guide you through the issue and/or find the optimum solution. Our service engineers know your site and its equipment, as well as you, your team, and its needs.

Compliance

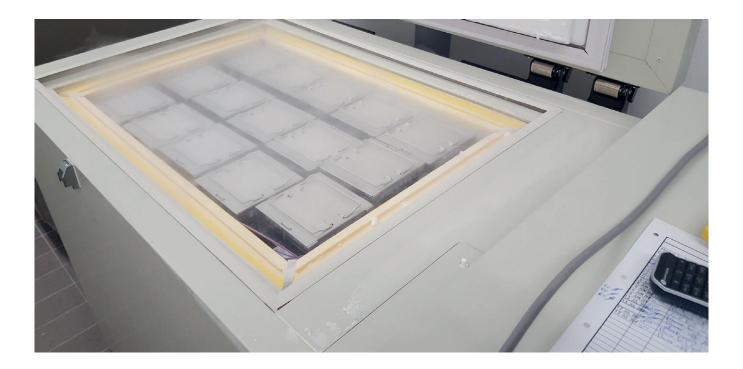
To assist you in meeting GPL, ISO 9001, FDA, and other regulatory compliance guidelines, We offer a comprehensive certification service (IQ/OQ), including all necessary documentation.

• Certified parts

We use authentic original PHCBi parts in any maintenance and repair.

Training

You can also train with us to ensure that you understand the techniques involved in maintaining, troubleshooting, or repairing our products.



Crucial

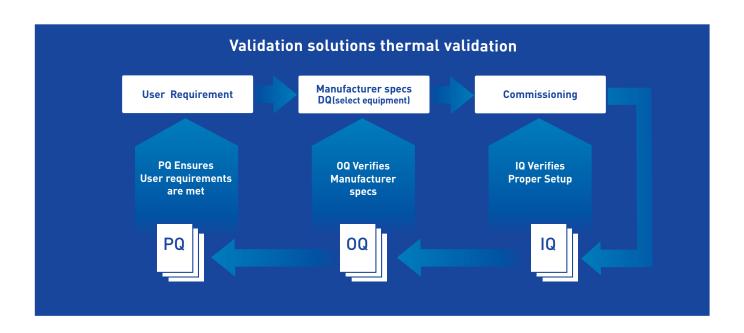
At a time when it has become even more important than ever to provide the right environment for scientists to progress their research without any delays, PHC Europe's validation service has become an essential in lab management today.

We help you to protect your results!

Regular maintenance and inspection is important for properly functioning technical installations. You have already decided to use PHCbi equipment, which is characterized by the highest quality and reliability. However, when it comes to the technical support of this equipment, our service, dedication and customer-

friendliness are just as high.

- PHC Europe has more than 90 employees at your service
- PHC Europe's service department has 25 dedicated experts to support all equipment in the market and is specialized in maintenance, qualification and validation.



Fast response

When you need advice and assistance, getting hold of knowledgeable people quickly is critical. Our service teams comprise of dedicated full-time specialists, who are on-hand and ready to help with tailored support for your PHCbi products.

Our certified engineers and service partners know all about your site and its equipment in-depth, and they know you, your team, and its needs. Support includes direct access to engineers and application experts, who can help you via phone, email, virtual remote assistance, or onsite visit.

We have high standards in response times: during working hours, we respond to your email or telephone call within four hours.

Essential components

Continued and optimal performance of your equipment is essential. We use authentic original PHCbi parts in any maintenance and repair. Should any repair or adjustment be required, we have an extensive and protected supply of quality approved PHCbi parts available, along with highly qualified service engineers, who can identify

exactly what is required and are trained in how to install it.

Should issues arise with your PHCbi products, every day counts in optimizing its performance. We offer fast delivery times for spare parts to avoid downtime, as far as possible. We ship out 85% of spare parts

within 24 hours after we received the request.

Having an international network of authorized dealers means that the help you require is never far away. And in some locations and scenarios, we can provide back-up products for support.

Trained to the highest standards

Certified engineers have the knowledge and technical expertise required to assess, adjust, and repair our products.

They develop their skills with us through training courses that combine theoretical and hands-on elements of keeping our products at peak performance. This tailored training is organised by our own technical experts and held at our well-equipped training centre in The Netherlands. Here they have all the equipment, information, and access to our training experts that they need to optimize their learning and interact with our products.

To ensure that their knowledge matches our innovation, their training in each product must be repeated and validated every two years. And when a new product is launched, they must undertake a new training to extend their knowledge.

Certified engineers can advise you on every feature of your system.



PHC VALIDATION SERVICES

*Included in IOQA and IOQE. Optional for TQ and PMAQ.

The fallaction services				
Installation and Operational Qualification - Advanced (IOQA)	Installation and Operational Qualification - Essential (10QE)	Temeprature Qualification (TQ)	Preventative Maintenenace and Annual Qualification (PMAQ)	
VALI-1	VALI-2	VALI-3	VALI-4	
V	V			

PHC Validation Services

			Part Number	VALI-1	VALI-2	VALI-3	VALI-4
			Installation Qualification	V	V		
			Operational Qualification - Critical Features	V	V		
			Operational Qualification - Detailed	V			
			System Calibration/Optimisation*	V	~		
Included			Individual Refrigeration System perfromance tests (VX models only)	V			
l cf			24hr unloaded temperature mapping (standard 9 point plus 1 ambient)	V	V	V	V
-			24hr unloaded single point $\mathrm{CO_2}$, $\mathrm{O_2}$ and %RH mapping (incubators only)	V	V	V	V
			Data Integrity and Compliance to CFR21 Part11	V	V	V	V
			Instruments used calibrated to international standards	V	V	V	V
			Preventative Maintenance and inspection				V
		VALI-5	Additional 24 hour temperature mapping loaded/unloaded/additional set point	V	V	V	V
		VALI-6	Unloaded door open test	V	V	V	V
		VALI-7	Unloaded power fail test	V	V	V	V
)er	VALI-8	Loaded door open test	V	V	V	V
Optional	Part Number	VALI-9	Loaded power fail test	V	V	V	V
pti	Z	VALI-10	H ₂ O ₂ decontamination cycle validation	V	V		
0	Par	VALI-11	Heat sterilisation decontamination cycle validation	V	~		
		VALI-13	Adjustment of standard document/procedure	~	V	V	V
		VALI-14	System Calibration/Optimisation*			~	V
		VALI-15	LCO ₂ /LN ₂ backup system performance test	~	~	~	V

PHC Europe B.V. provides on-site validation of equipment supplied by PHCBi via documented installation and operational qualification, **IOQ**.

Installation qualification (IQ) verifies and documents whether the installation of the equipment meets the requirements and specifications of the manufacturer.

Operational qualification (OQ) verifies and documents the complete functional operation of the installed equipment (as indicated by PHC or other OEM supplied equipment). Performance mapping data will be compared with the specifications provided by the manufacturer. Product specific parameters such as CO_2/O_2 ,%

RH etc. are included in the relevant equipment IOQ protocols.

Process qualification (PQ) is usually performed by customer / end user if the equipment is in the environment where specific user conditions apply and the actual product is loaded, stored and accessible. In particular the actual production or product processing environment.

The PQ will probably refer to the client specific standard documents for the method (SOPs). Example: product identification and specific storage requirements; method of storage etc. so making the PQ is a unique and customer-oriented document. However, PHC Europe B.V. can offer

assistance to customers where necessary in preparing or assisting in the execution of the process qualification.

PHC Europe B.V. is also able to provide a "temperature registration (mapping)" for customers who want to verify installed equipment on actual performance. This service is also for all non-PHCbi equipment.

PHC SERVICE CONTRACTS	PHC Service Contracts				
 * available after 10 years subject to spare parts availability ** extends equipment warranty up to 5 years from date of purchase. 	Warranty Plus	Extended Warranty**	Essential	Advanced	Complete*
Contract Length	Warranty Period	1 year	1, 3 or 5 years	1, 3 or 5 years	1, 3 or 5 years
Annual preventative maintenance and inspection	V		V	~	~
Calibration check	V		V	~	~
Calibration adjustment	V			~	~
Technical Support	V	V	V	~	~
Travel (outside of planned PM visit)	V	V			~
Labour (ouside of planned PM visit)	100% discount	100% discount	15% discount	20% discount	100% discount
PHCBi Parts	100% discount	100% discount	15% discount	20% discount	100% discount
Annual Electrical Inspection	V		V	V	V
Equipment service consumables	100% discount		15% discount	100% discount	100% discount

All

PHC Service Contracts are available for a duration of 1, 3 or 5 years, (does not include warranty plus), offering you a flexible, turnkey solution for your maintenance and qualification requirements.

Without Qualification

Warranty Plus

PHC's Warranty Plus Service contract is available with the initial purchase of your equipment. The service agreement covers the length of the warranty period granting additional benefits and reassurance. Included is a planned preventative maintenance, (PM), visit at the end of each year with equipment and electrical inspection, and calibration check with adjustment, (where required). Service consumables are included and replaced during the PM visit according to the manufacturers recommendation.

Essential

An Essential Service Contract offers you a cost effective preventative maintenance, (PM), solution. You will benefit from a planned annual PM visit which includes equipment temperature/CO₂/O₂ check, (as applicable) and equipment and

electrical inspection. Additionally you will receive a 15% discount on spare parts and labour.

Advanced

The Advanced Service contract provides the same great benefits as our Essential Service Contract, but offers additional value and reassurance. In addition to temperature/CO2/O2 check, (as applicable), equipment and electrical inspection as part of the planned preventative maintenance, you will also benefit from; calibration adjustment, (where required), service consumables included and replaced during the preventative maintenance visit according to the manufacturers recommendation, and a 20% discount on spare parts and labour.

Complete

For ultimate reassurance our Complete Service Contract provides you with peace of mind. Benefit from; a planned annual preventative maintenance, (PM) visit which includes equipment temperature/CO₂/O₂ check, (as applicable), equipment and electrical inspection, calibration adjustment, (where required) and service consumables included and replaced during the PM visit according to the manufacturers recommendation. In the event corrective maintenance is needed,

be reassured that corrective maintenance labour, travel and parts (unless beyond economical repair), is included.

With Qualification

Warranty Plus +IOQ Advanced / +IOQ Essential

Available with the initial purchase of your equipment, the Warranty Plus +IOQ Advanced/+IOQ Essential contract offers you a turnkey solution for qualification and routine preventative maintenance. Your new equipment will be installed by one of our certified Validation Engineers. Choose between IOQ Advanced and IOQ Essential products to best meet your requirements. The service agreement covers the length of the warranty period and includes a planned annual preventative maintenance, (PM), visit at the end of each year. Electrical inspection and calibration check with adjustment, (where required) is included during the PM visit. Service consumables are included and replaced during the PM according to the manufacturers recommendation. During the PM visit, you will receive a Preventative Maintenance and Annual Qualification, (PMAQ), a combined and documented PM visit with temperature mapping to evaluate the ongoing performance of your equipment.

PHC SERVICE CONTRACTS	PHC Service Contracts with Qualification				
* with initial purchase of equipment ** available after 10 years subject to spare parts availability	Warranty Plus-Q		Essential-Q	Advanced-Q	Complete-Q**
Contract Length	Warranty Period	Warranty Period	1, 3 or 5 years	1, 3 or 5 years	1, 3 or 5 years
IOQ Essential	x1*				
IOQ Advanced		x1*			
Temperature Qualification (TQ)	V	V	V	V	V
Annual preventative maintenance and inspection	V	V	V	V	V
Technical Support	V	V	V	V	~
Travel (outside of planned PM visit)	V	V			V
Labour (ouside of planned PM visit)	100% discount	100% discount	15% discount	20% discount	100% discount
PHCBi Parts	100% discount	100% discount	15% discount	20% discount	100% discount
Annual Electrical Inspection	V	~	✓	~	V
Equipment service consumables	100% discount	100% discount	15% discount	100% discount	100% discount

Essential-Q

An Essential-Q contract offers you a cost effective preventative maintenance, (PM), solution with your requirement for routine temperature mapping and performance evaluation. PHC will conduct one Preventative Maintenance and Annual Qualification, (PMAQ), visit per year. The PMAQ is a combined routine preventative maintenance and annual temperature mapping. Additionally you will receive a 15% discount on spare parts and labour.

Advanced-Q

PHC's Advanced-Q contract combines the benefits of our Advanced Service contract with your requirement for routine temperature mapping and performance evaluation. A PHC certified validation engineer will conduct one Preventative Maintenance and Annual Qualification, (PMAQ), visit per year. This combined routine preventative maintenance and annual temperature mapping will give you documented performance data to evidence your equipment meets predetermined acceptance limits continually, overtime. The Advanced-Q contract includes service consumables which will be replaced

during the preventative maintenance visit according to the manufacturers recommendation. In the event corrective maintenance is needed, you will also receive a 20% discount on spare parts and labour.

Complete-Q

A Complete-Q contract provides you a turnkey solution offering the highest level of reassurance and performance evaluation. Benefit from one of our certified Validation Engineers conducting planned Preventative Maintenance and Annual Qualification, (PMAQ), You will receive documented performance data, used to ensure your equipment continues to meet predetermined acceptance limits continually overtime. Equipment and electrical inspection is included within the preventative maintenance visit along with service consumables which will be replaced according to the manufacturers recommendation. In the event corrective maintenance is needed. be reassured that corrective maintenance labour, travel and parts (unless beyond economical repair), is included.

PHC Service Contract Part Numbers					
Contract	Contract Length	Part Number			
Warranty Plus-Q (with IOQA)	Warranty Period	WARR-1			
Warranty Plus-Q (with IOQE)	Warranty Period	WARR-2			
Essential-Q	1 Year	CONT-1			
	3 Years	CONT-2			
	5 Years	CONT-3			
Advanced-Q	1 Year	CONT-4			
	3 Years	CONT-5			
	5 Years	CONT-6			
Complete-Q	1 Year	CONT-7			
	3 Years	CONT-8			
	5 Years	CONT-9			
Warranty Plus	Warranty Period	WARR-3			
Extended Warranty	1 Year	WARR_EXT			
Essential	1 Year	CONT-10			
	3 Years	CONT-11			
	5 Years	CONT-12			
Advanced	1 Year	CONT-13			
	3 Years	CONT-14			
	5 Years	CONT-15			
Complete	1 Year	CONT-16			
	3 Years	CONT-17			
	5 Years	CONT-18			

RoHS Legislation

On 1 July 2006 the RoHS directive came into force in the European Union. (EU Directive 2002/95 / EU). This law serves to combat environmental pollution and to force manufacturers to manufacture products in an environmentally friendly way.

RoHS means Restriction on Hazardous Substances and prohibits manufacturers from processing certain materials such as cadmium, lead, mercury, chromium 6+, PBB and PBDE in their equipment.

We can proudly say that all products and parts of PHC Europe B.V. are RoHS compliant.

The WEEE legislation.

The WEEE* Waste Electrical and Electronic Equipment en Restriction of the use of certain Hazardous Substances legislation came into effect in the EU on 13 August 2005.

PHC Europe B.V. participates in the program of the RTA foundation (www.stichtingrta.nl). This foundation ensures that all equipment is disposed of correctly.

This means the following for you and for us:

 You will find a sticker on all our equipment, delivered after August 13, 2005. The symbol on the sticker means that, when the electrical and electronic components are destroyed, this happens separately from the normal household waste.

 Since 13 August 2005, the supplier must take old, discarded equipment with him. The WEEE directive obliges the supplier to charge a disposal fee when supplying the equipment. For disposal of old, discarded equipment from before August 13, 2005, this contribution will be passed on to the customer.

The table shows schematically the different categories for the disposal contributions:

WEIGHT CATEGORY BY NET WEIGHT (without packaging, without batteries)						
				Standard	> 80% > 80% Metals *	% Stainless Steel *
G1	0 kg	-	< 0,1 kg	€ 0,04	€ 0,02	€ 0,00
G2	0,1 kg	-	< 1 kg	€ 0,11	€ 0,04	€ 0,00
G3	1 kg	-	< 5 kg	€ 0,35	€ 0,11	€ 0,00
G4	5 kg	-	< 10 kg	€ 1,24	€ 0,37	€ 0,00
G5	10 kg	-	< 50 kg	€ 4,36	€ 1,30	€ 0,00
G6	50 kg	-	< 150 kg	€ 14,52	€ 4,36	€ 0,00
G7	150 kg	-	< 500 kg	€ 45,62	€ 13,69	€ 0,00
G8		-	> 500 kg	€ 138,23	€ 41,47	€ 0,00



Compact Immuno Analyzer

This compact immunoanalyzer with superior assay performance combines the accuracy of a full-scale lab analyzer with the flexibility of a mobile solution.

Ultra Low Temperature Freezers

Our -86°C freezers have a fieldproven history of reliability and uniformity. All PHCbi brand ultralow freezers are designed to meet or exceed the requirements necessary for reliable, long-term storage of samples.

Cryogenic Freezers

The most uniform storage temperatures for cryo-preservation solutions.

Biomedical Freezers

The Biomedical Freezers are specially made for the medical and biotechnology field. They can be used for storage of fresh and frozen blood supplies and vaccines, but also for storage of enzymes forresearch.

Pharmaceutical Refrigerators

Uniform storage temperature for the most demanding applications.

PHC Europe B.V. in short

As part of the PHC Group we are one of the world's most important producers and suppliers of high-quality laboratory equipment, we contribute to advancing life science.

With two business fields within our division – biomedical and diagnostics – we serve a broad and growing spectrum of life science facilities. Our products are used by researchers and other professionals in pharmaceutical, biotechnology and healthcare fields. They are also important in industrial and transport markets.

Our products are constructed from advanced materials, feature the most innovative technology, and offer exceptional performance. They are well-known for high-quality, precision, reliability and stability. All of our products are rigorously tested. Many of our innovations have set new industry standards. Alongside high-quality products, we offer service and advice. Our engineers can certify your product to comply to validation in accordance with all current GMPs, GLPs, GCPs, 21 CFR Part 11, PAT, ISO and specific

customised requirements and applications. And we also offer preventative maintenance services. Our service network is always close at hand. We are able to find innovative solutions for real, practical needs, because we continually listen to our customers. Through collaboration within our international team of experts, we translate these ideas into product improvements. Continuous progress in scientific research means that we constantly move forward.

Our products and services are delivered through well-established and dynamic global, regional, national and local networks of highly skilled staff and custom-built facilities. With more than 30 years of expertise and experience, PHC Europe is synonymous with quality in

- Ultra-low temperature freezers
- Cryogenic freezers
- Refrigerators
- Incubators
- Environmental chambers
- 3D cell culture plates

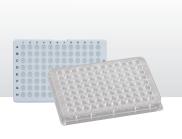
Next to being experts in maintenance, qualification, and validation for our own brands, we can provide the same services to other brands in the market.













Bloodbank Refrigerators

Robust design for safest storage of whole blood.

CO₂ Incubators and Multigas Incubators

IncuSafe CO_2 Incubators are well known throughout the world for their high-quality. Creating successful cell cultures requires an incubator that has a high level of precision and security and is also easy to use.

Cooled and Heated Incubators

The MIR Cooled Incubators offer the stable environments needed for research, environmental studies and testing.

Climatic Test Chambers

Versatile Climate Chambers, suitable for a wide range of applications, including plant growth and insect studies.

Ultra Low Attachment 3D Cell Culture Plates

PHC provides superior quality threedimensional cell culture platforms with a variety of well shapes to enable spheroid culturing of your specific cell type.

Laboratory Autoclaves

The top-loading autoclave provides a safe and reliable high pressure steam sterilizing environment within a self-contained unit that is particularly easy to use.













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