Waldner Global Customer Service

Modernising laboratories in a smart way

Retrofit and modernisation solutions for laboratory fume hoods and air control systems.

HUMAN MOMENTUM. SINCE 1908.

WALDNER

Waldner Retrofit: The best for existing laboratories

Your laboratory stays the same – the technology moves on.

Greater efficiency, safety and sustainability.

Complete flexibility

With customisable retrofit solutions for fume hoods and ventilation systems, you retain full control over your infrastructure – while also gaining access to state-of-the-art technology.

Suitable for any system

Whether individual modifications or complete modernisation: our retrofit solutions are scalable and compatible – for Waldner systems and third-party products.

Automatically smarter

Our intelligent control solutions regulate air volumes precisely according to demand and in an energy-efficient manner – for safe and economical operation around the clock.

Content

Get a consultation now:

service.lab@waldner.de
+49 7522 986–7888

Modernisation pays off: efficient, safe and sustainable.

Less effort, more availability – and real savings in energy and operating costs

Our retrofit and modernisation services not only reliably reduce the rising maintenance costs associated with an advanced life cycle, but also increase plant availability. In addition, they help to identify and exploit additional efficiency and energy saving potential.

Reduced costs

Modernising laboratory fume hoods and ventilation systems is usually the most economical solution for extending the service life of your entire laboratory facility.

Step-by-step digitisation

Modernization provides you with a comprehensive upgrade to the latest technology standards with remote service, communication, lab control center, and diagnostic analyses.

Minimised unplanned downtime

Upgrading an existing product or system to the latest technology and current security standards ensures smooth and reliable operation.

Promoting sustainability

Laboratories consume on average 10 times more energy than office spaces. A single laboratory fume hood = energy consumption of a single-family home. This makes modernisation a key measure for sustainability and efficiency.

Night-time reduction as an efficiency lever

An example: By reducing the air exchange rate during unused periods (e.g. at night or on weekends), operating costs can be reduced by up to 44 % – see table.

The Technical Rules for Hazardous Substances (TRGS) provide scope for flexibility: if the risk assessment shows that reduced air exchange rates are sufficient, these may also be used permanently during daytime operation – another plus for sustainability.

Example of operating cost optimisation through night-time reduction (reduced operation between 6 p.m. and 8 a.m. and all day at weekends)

	standard	**Optimised with night-time reduction (3-fold LW)**		
Operating condition	daytime operation	daytime operation (working day)	night shift (working day)	night shift (weekend)
Operating time (day)	24 h	10 h	14 h	24 h
Operating time (year)	365 days	260 days	260 days	105 days
operating expenses	87.600 €	26.000 €	13.650 €	9.450 €
Total operating costs	**87.600 €**		**49.100 €**	
Potential savings per year	**–**		**38.500 € / 44 %**	

Modernising laboratories sustainably with a systematic approach and vision

Modern laboratories require comprehensive and sustainable solutions to save energy and reduce operating costs.

Modifications & Software Updates

Night-time reduction control:
At night, the room air exchange rate is set to a minimum value.

+ Reduction to 100 m³/h during night-time operation
+ Maximum energy savings
+ Integration into building management systems
+ Opening a window element reactivates the laboratory fume hood or the entire room for daytime operation.

Monitoring of side sliders:
If these remain open when the user leaves the fume hood, the fume hood monitoring system triggers an alarm so that all sliders are closed for optimum safety and energy optimisation.

+ Highest safety standards
+ Maximum energy savings

Reduction of automatic operation:
The laboratory fume hood is regulated to a minimum value over a predefined time interval.

+ Reduction to 100 m³/h during night-time operation
+ Maximum energy savings
+ Can also be implemented without building management technology
+ Opening a window element reactivates the laboratory fume hood for daytime operation.

Retrofit for laboratory fume hood monitoring and control

If the mechanical components of a laboratory fume hood are still in good condition, but the fume hood monitoring or control technology is no longer up to date, a retrofit is often much more economical than purchasing a new laboratory fume hood.

+ Reduction in energy consumption
+ Highest safety standard for fume hood operation
+ Retrofits for Waldner and third-party products
+ Consumption monitoring

Up to **44 %** savings in operating costs

100 m³/h less exhaust air volume per extractor

75 % reduction in energy consumption possible

Retrofit for automatic Sash

A motion detector monitors the front slide of the extractor hood. If no movement is detected in front of the extractor hood within a specified period of time, the front slide closes automatically via the drive.

+ Best possible safety standard in the laboratory thanks to closed front sliders
+ In conjunction with VAV exhaust system (airflow controller) for maximum energy savings
+ High ease of use thanks to simple opening and closing processes by tapping or using a foot switch

Retrofit for complex projects ranging from the modernisation of individual laboratory rooms to entire buildings

The master module records the individual exhaust air volumes of all extracted units in the laboratory and calculates the total air volume. A distinction is made between different operating states (e.g. daytime operation, night-time reduction), for which a respective minimum room air exchange rate is maintained.

On this basis, the air volumes of the individual consumers can be controlled according to demand. Thanks to consistently optimal (minimum) ventilation, the total amount of air required can be reduced. This achieves the best possible energy efficiency.

+ Maximum safety through compliance with air exchange rates
+ Extreme comfort thanks to a pleasant indoor climate without draughts
+ Optimal energy efficiency through state-of-the-art room control
+ Control units can remain installed in the ventilation system

Customer satisfaction is our top priority

Like many satisfied customers before you, you too can benefit from advanced technologies that improve safety, increase performance and reliability, and enhance sustainability.

Personal contact person

Individual consultation

Many years of service experience

Tried and tested: solutions that deliver results

Tailor-made, efficient and future-proof – our reference examples demonstrate how modernisation can be successfully implemented in laboratories with a wide range of requirements.

Standardisation of exhaust air volume flow controllers

Customer
Research laboratory with 42 fume hoods

Requirement
+ Replacement of obsolete volume flow controllers
+ Integration into the GLT system

Solution
+ Retrofitting with AC4 system (Modbus interface)
+ Night mode with automatic volume flow reduction

Result
+ Receipt of the type examination certificate
+ Prevention of operating errors through a uniform user interface
+ Sustainable solution: existing deductions remain in place

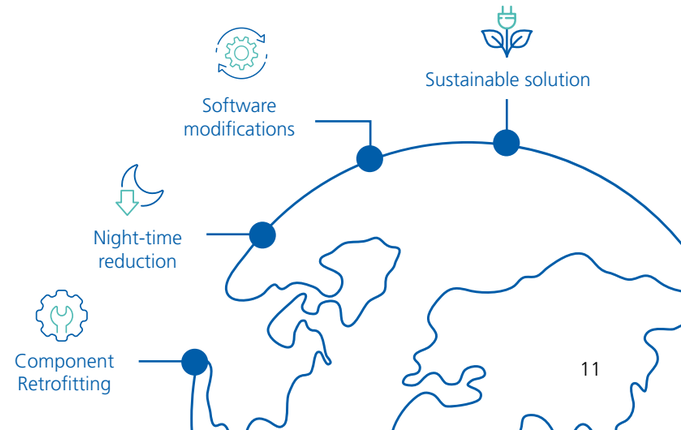
Energy optimisation without building management systems

Customer
Research institute with 105 prints

Requirement
+ Reduce exhaust air volume during periods of non-use
+ No existing building management system (BMS)

Solution
+ GCS software solution with automatic 2-hour interval control
+ Night-time reduction to 100 m³/h per extractor fan

Result
+ Significantly reduced operating costs
+ Maximum safety standard thanks to return to daytime operation via window contact
+ Intelligent system ignores reduction for previous trial registration



Modernisation of laboratory room control

Customer
Research facility with 31 rooms on 3 floors

Requirement
+ More efficient air exchange control
+ Remote diagnosis and remote support

Solution
+ Complete renovation with AC4 system
+ BACnet interface for GLT connection

Result
+ Improved working comfort thanks to a constant indoor climate
+ High energy efficiency thanks to night-time temperature reduction
+ Fully compatible with existing deductions

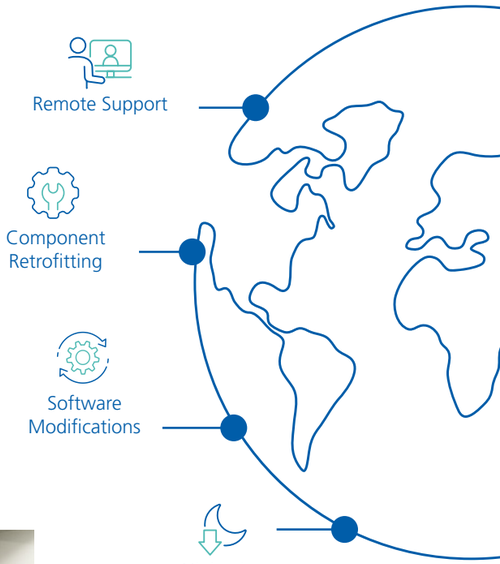
Safety and comfort when working with chemicals

Customer
Chemical laboratory

Requirement
+ Optimisation of occupational safety when handling containers
+ Reduction of air volume during daytime operation

Solution
+ Retrofitting an automatic front slide drive with delay

Result
+ Hands remain free thanks to foot switch
+ Automatically closed slide valve increases safety
+ Supplemented by variable volume flow control for maximum energy savings



Personal. Reliable. There for you.

Whether you have initial questions, specific project ideas or need quick help, our experts are here to support you with their specialist knowledge and dedication.
Get in touch!

Sascha Günther
Head of Field Service

M: +49 151 46766183
sascha.guenther@waldner.de

Jörg Meier
Area Field Service Manager
North Germany

M: +49 151 14791917
joerg.meier@waldner.de

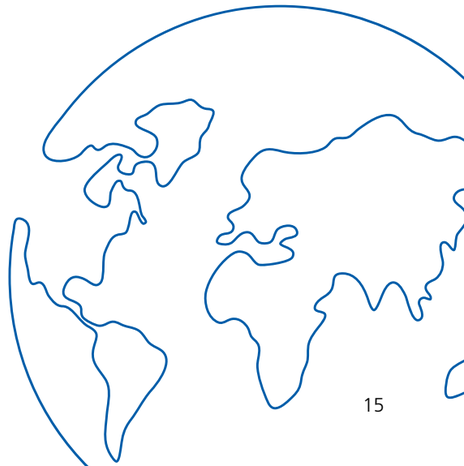
Marcel Glase
Area Field Service Manager
Middle Germany

M: +49 170 7613984
marcel.glase@waldner.de

Markus Noack
Area Field Service Manager
South Germany

M: +49 171 8652867
markus.noack@waldner.de

Feel free to contact us!



We are your strong partner.

Professional laboratory modernisation creates maximum working comfort and guarantees occupational safety and legal compliance in your daily work processes. Modernised laboratory components are also more intelligent and much more energy efficient. Our Global Customer Service will be happy to provide you with an operating cost calculation during the planning phase.

We will be happy to advise you on your specific requirements and find the right solution for you. Please contact us.

We look forward to seeing you!

waldner-gcs.com/en

WALDNER
Laboreinrichtungen SE & Co. KG
Haidösch 1
88239 Wangen im Allgäu
Germany
Service Center
Phone: +49 7522 986–7888
E-mail: service.lab@waldner.de

More information:
waldner-gcs.com/en

1836.0126