

The logo consists of the letters 'MM' in white, bold, sans-serif font, centered within a blue square.

MMM Group



Vakulab PL

All-rounder for laboratory and research

Long life time
and short cycle times

Space saving
and ergonomical

Model diversity
and tailored to specific application

MMM.
Protecting
human
health.

Vakulab PL

All-rounder for laboratory and research



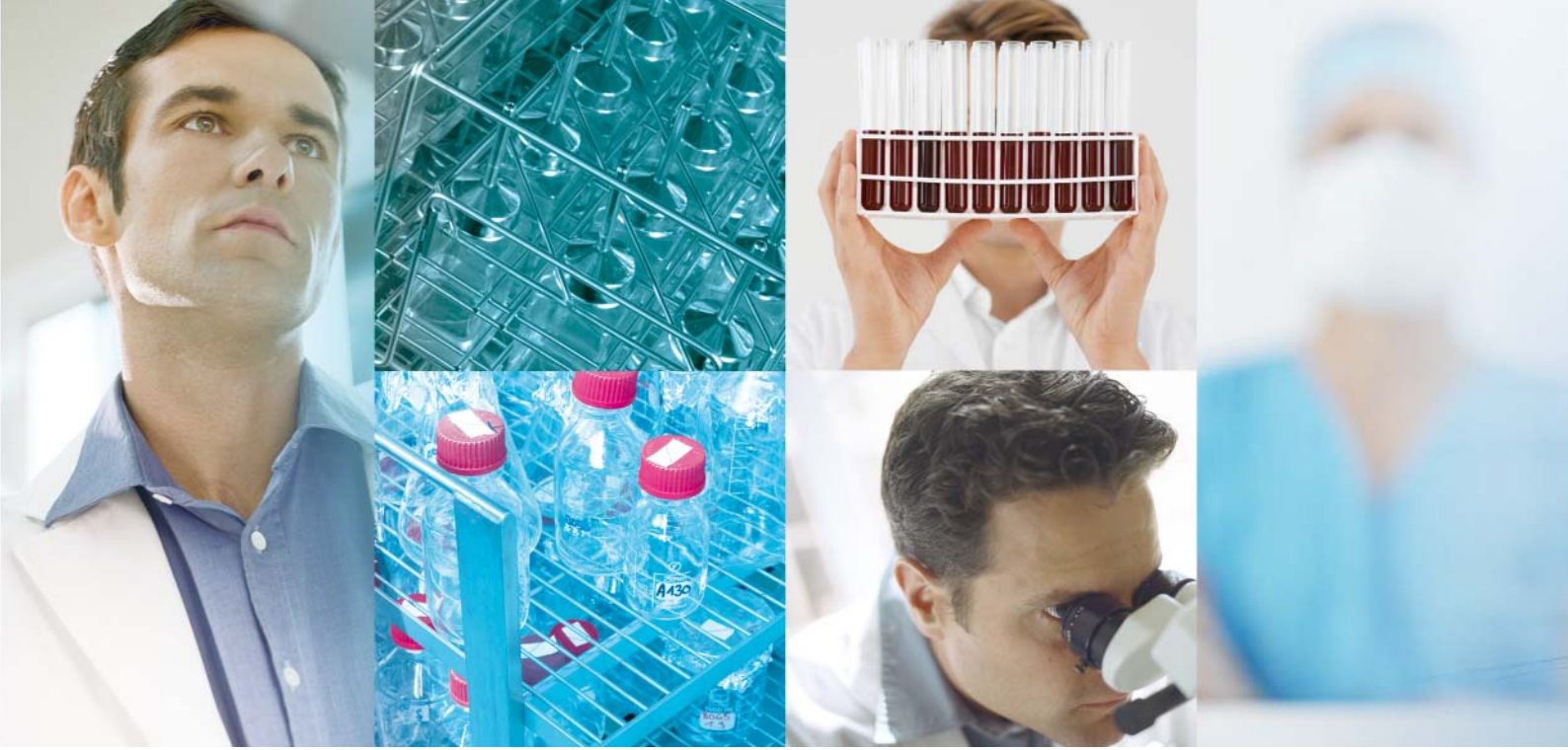
MMM offers customized autoclaves to suit every demand of the great universe of micro-organisms. In research and industry, micro-organisms bear a great potential for both life and death. That is why our customers need a highly versatile sterilizer for their specific tasks.

In laboratories and animal houses, pharmaceutical institutes and hospital pharmacies, people deal with highly sensitive laboratory goods that require extremely responsible handling. Safety, reliability, promptitude and comfort are essential criteria for the daily deployment of sterilizers and disinfectors.

Vakulab PL, the specialized MMM laboratory steam sterilizer, is the answer to your sterilization tasks in the universe of laboratory application.

The requirements of the various items to be sterilized ranges from growing medium, liquids in open or closed receptacles, high pathogenic samples, solid or porous items, goods sensitive to pressure variation, contaminated material, filter, animal cages, fodder, food and many other items. Vakulab PL sterilizes fast, perfectly, economically and reliably no matter what kind of material.

Vakulab PL: Versatility and modularity for more freedom in your laboratory. All-rounder all the way.



Space saving and ergonomical

Vakulab PL shows its all-round talents on the most confined space. Its width can be as small as e.g. 1600 mm which fits even problematic situations. Excellently space saving machine components have made the new sterilizer series smaller, assuring easy access for service and maintenance at the same time.

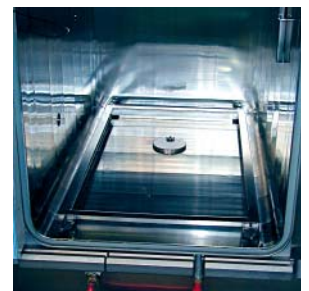
Loading heights of either 625 mm or 390 mm, or floor level loading, offer favourable logistical and ergonomical conditions for more work efficiency and a careful treatment of human resources and material.

Great model diversity for versatile applications

Vakulab PL is available in many different versions to suit the many individual requirements. Modules designed for industrial or animal house applications, for special functions in foodware and biotechnology, different loading heights, fan, sound insulation, sealing off and many other features make the Vakulab PL a truly customized sterilizer.

Vakulab PL		1	
P21 Solutions	134	Batch number	4
		Service	797
P22 Solutions	121	Vacuum test	21.04.2006
		B&D test	21.04.2006
		Pressure	953 mbar
P23 Solutions hot	121	Temperature	27.5 °C
		Jacket pressure	1246 mbar
P24 Petri dishes	121	Cooling water	19.8 °C
		Air deflector	
P25 Bottles	118		
P26 Bottles	121		
Sterilization program with subsequent cooling to less than 50°C. For cold solutions in open or loosely closed receptacles.			
Ready for operation			

User-friendly touch screen operation





Perfect sterilization for material preparation and discard

Thanks to the powerful fan (option), Vakulab PL reaches safe sterilization and unloading conditions very fast. After a short re-cooling phase (e.g. from 121 °C to 80°C in only 40 min.!), the sterilizer is ready for the next cycle. This provides a high throughput performance and a gentle treatment of heat sensitive items. A special steam-air-mixture process even allows to sterilize liquids in firmly closed receptacles.

Fast, gentle, safe

A special discard program - a steam-air-mixture process - has been designed for killing highly pathogenic material (even safety class S4), avoiding any discharge of air and condensate before the end of the sterilization stage. For increased security, condensate is also sterilized and the outgoing air is led through a validated sterile filter.

Vakulab PL meets the most demanding safety requirements and improves the efficiency of the sterilizer at the same time.

Hi-tech minimizes the risks

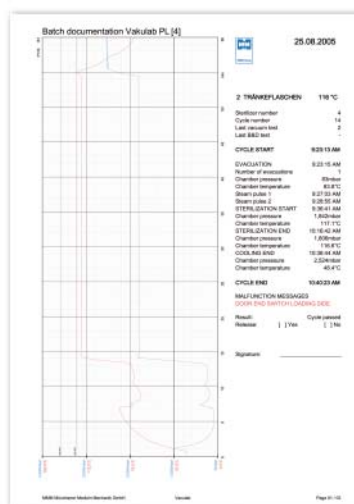
The fan (option) of the Vakulab PL autoclave is driven by a magnetic clutch placed outside the chamber. This excludes any safety deficits such as leakages, malfunctions or the escaping of germs, as the interior chamber is fully sealed off and works without a shaft feedthrough that would be sensitive to failure.

User-friendly touch screen operation

Batch documentation, process engineering and cycle run have been optimized with regards to user-friendliness. A menu guided touch screen operation offers many possibilities for program setting and monitoring, ensuring a cycle run perfectly matching the requirements of laboratory goods. Parameters such as temperature, pressure and time can be set accordingly.

Independent steam supply

Vakulab PL can be supplied with steam from an independent steam source. MMM offers electric steam generators of the Unotherm series or steam-to-steam generators of the Duotherm series.



DIN A4 - batch protocol



Process variability

- Vacuum process (for solid goods and liquids in open receptacles)
- Steam-air-mixture process for liquids in closed receptacles (with fan)
- Hot water sprinkling process for liquids in closed receptacles

Add-ons

- Mirror polished chamber
- Airtight sealing off (stainless steel option)
- Steam manager

Advantages

- Short cycle times
- High sterilization safety
- Space saving
- Chamber and frame made of stainless steel
- User-friendly touch screen operation
- High cost-effectiveness thanks to low water and energy consumption
- Interface for external documentation systems
- Remaining cycle time display
- Auto start and stand-by function
- Powerful low-noise vacuum pump
- Validated software
- German engineering and brand quality



MMM Group

As one of the world's leading suppliers of sterile processing systems, MMM has been working actively to promote good health since 1954. With a full range of sterilization and disinfection products and services – that can be found in every branch of health-care from hospitals and scientific institutes, to laboratories and the pharmaceutical industry – MMM, has over the years, consolidated its position as a pioneer of quality and innovation both in the German and international market. In our two production facilities based in Stadlern, Germany, and Brno, in the Czech Republic,

we manufacture products that meet the highest demands of our customers world wide. The depth and precision of production standards at both plants ensure that we accomplish the rigorous quality requirements of medical engineering.

900 competent employees work together as a committed and enthusiastic team, dedicated to achieving the mission of the MMM Group.

Protecting human health.



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