

# INCREASE YOUR LAB EFFICIENCY

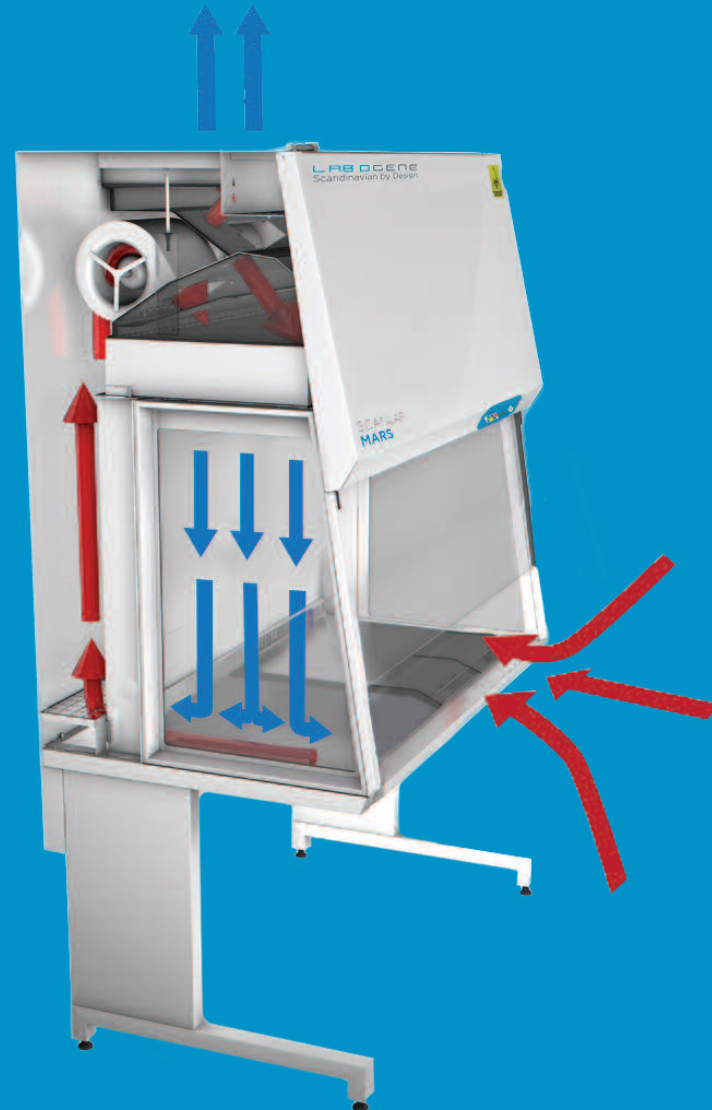
Mars Class 2  
Dual Filters  
Microbiological Safety Cabinets

Scandinavian by Design



LABOGENE

The Mars Class 2 cabinet is the ideal choice for your laboratory whenever operator, environmental and product protection is required. Designed for all biological, microbiological, tissue culture materials, whether for research or for routine applications



## MARS

The Mars is a series of dual filter Class 2 cabinets which incorporates the latest in laminator technology, energy- saving designs and HEPA-filtration, with options that give the best protection for you, your products and your laboratory.

### Principle of operation:

The air flow enters the work chamber of the cabinet via the front aperture and continues under the worktop and up the back plenum, where 70% is recirculated through the main HEPA filter, to provide the down flow protection and 30 % exits out through the HEPA filter to exhaust.

The Mars unique design incorporating laminator technology with down flow fans and a single exhaust fan, digitally controlled, ensures true laminar flow and turbulent-free air distribution throughout the work chamber. This advancement results in lower noise levels, a vibration free work

area, a longer filter lifetime and lower energy consumption. The vertical laminar flow recirculation provides operator protection by means of the inflow, product protection by means of the down flow and environmental protection by means of the filtered exhaust.

Mars Class 2 is the cabinet of choice when working with microbiological samples, tissue culture, viral work, non-pathogenic manipulations, research and sampling procedures.

### Available in four different working width sizes

- 900 mm, 1200 mm, 1500 mm or 1800 mm.

The Mars cabinets are being manufactured & tested in compliance with EN 12469. All models are available with a wide range of high-quality customized options to suit your individual needs or requirements.

# MARS'

## FEATURES & BENEFITS

New features of the Mars cabinets!  
**Lowest noise level & Lowest energy consumption.**  
 Up to a 6 dB(A) noise reduction at factory settings and up to a 50 % reduction of the energy consumption.\*

All service functions are performed from the front of the cabinet

Latest energy-efficient EC fans

Compactly constructed with an overall depth of less than 800 mm

Eye level control panel

Electrical operated front window with fully open/ closed positions

Angled front window that gives a correct ergonomic working position when either seated or standing

Wide range of support stands

Sectional work tops for easy removal, cleaning and decontamination



### Optimal operator comfort

- New features of the range include: New innovative EC fans and optimized air flow, contributing up to a 6 dB(A) reduction in the noise level. (Compared to previous models).

For a Mars 1200 that equates to a 47 dB(A) noise level at factory settings and 37 dB(A) in Eco-save mode.\*\*

- V-shaped angled inflow grills allowing a comfortable working position whilst preventing restriction of the airflow.
- Panoramic front & side windows for ultimate supervision and glare-free lighting, giving a comfortable stress-free working environment.
- Diffused laminator allows shadow-free, variable light distribution within the chamber.
- The integrated control panel with LCD display is conveniently positioned for ease of viewing and operation, ensuring optimal performance and safety characteristics at all times.

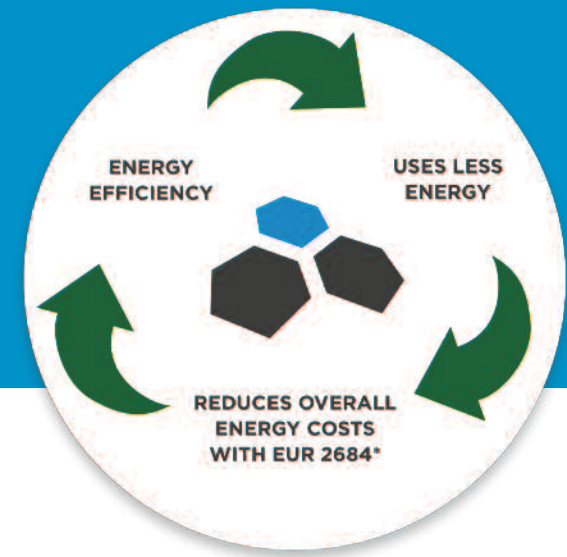
\* Compared to previous Mars models.

\*\* According to EN 11201.



# MARS'

## FEATURES & BENEFITS



### Ultra clean environment - Safety first

- 110 mm HEPA filters with efficiency at 99,999 % against 0,3 µm particles, ensuring a clean sterile work chamber environment.
- Unique laminator/diffuser technology giving turbulent-free air flow, protecting your samples against particle contamination.
- Down flow & exhaust fans are constantly monitored via the flow sensors to ensure safe operating conditions are maintained.
- Alarms, both acoustic and visual for unsafe airflow conditions or any interruption.
- Angled pre-filter for easy inspection and filter exchange.
- Sectional 300 mm work tops allowing loads up to 50 kg. per 300 mm, easy removal for cleaning and decontamination of all surfaces.
- Easy to maintain as all service functions are performed from the front of the cabinet, including changing of the HEPA filters, pcb's and sensors, and adjustments/monitoring of alarms and fan speed.

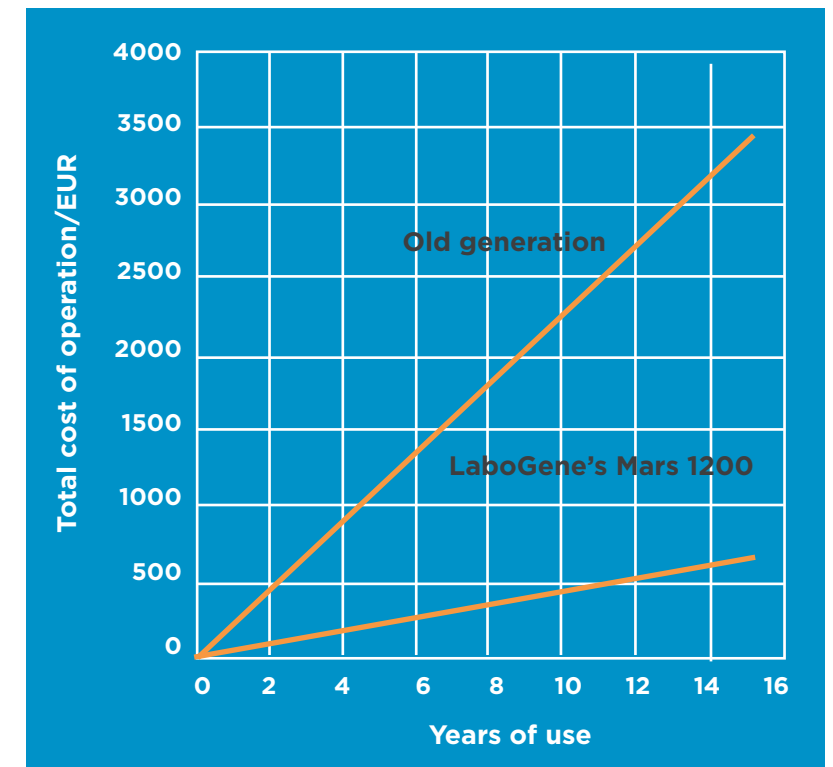
### Energy saving benefits

- New Features of the range: Now available with the new innovative EC fan motors and optimized air flow.

For a Mars 1200 this equates to an energy consumption of 92\* Watts at factory settings and 30 Watts in ECO mode. This incremental innovation makes the Mars cabinet range some of the lowest energy consuming cabinets on the market!

The innovation of using several low energy EC fans in the cabinet allows for a less restricted construction and a reduction of annual operating costs, whilst at the same time allowing for the use of the 110 mm HEPA filter, equating to a 50 % longer filter life.

- Low energy consumption result in less heat transmission to the work chamber and to the laboratory contributing significantly to a reduction of overall energy costs.



### Annual energy savings when comparing Mars 1200 to old equivalent cabinets in the industry

	Power consumption/W	Energy consumption/kWh**	Costs in EUR/year***	Costs/15 years****
Old generation	420	739	229	3.437
Mars 1200	92	162	50	753
<b>Reduction of overall energy costs</b>			78 % saving EUR 2.684	

\* When equipped with LED light

\*\* When in use 8 hours per day, 220 days of year.

\*\*\* Based on the Danish average kWh price of EUR 0,31 / kWh. Source: <http://www.vivaenergi.dk>.

\*\*\*\* Comparison based on 15 years' life as it is the standard average lifetime for BSC.

# LET US PUT NUMBERS ON IT!

According to the Danish National Institute of Occupational Health, noise effects efficiency by reducing concentration levels and increasing absenteeism. Extraneous noise in laboratories is much higher than in the average working environment. To help counteract this, we at LaboGene work hard in developing low-noise, highly efficient biosafety cabinets, where we take full advantage of the latest innovative energy-efficient fans and optimized air flows.

## Do you have an old biological safety cabinet, which maybe needs to be replaced?

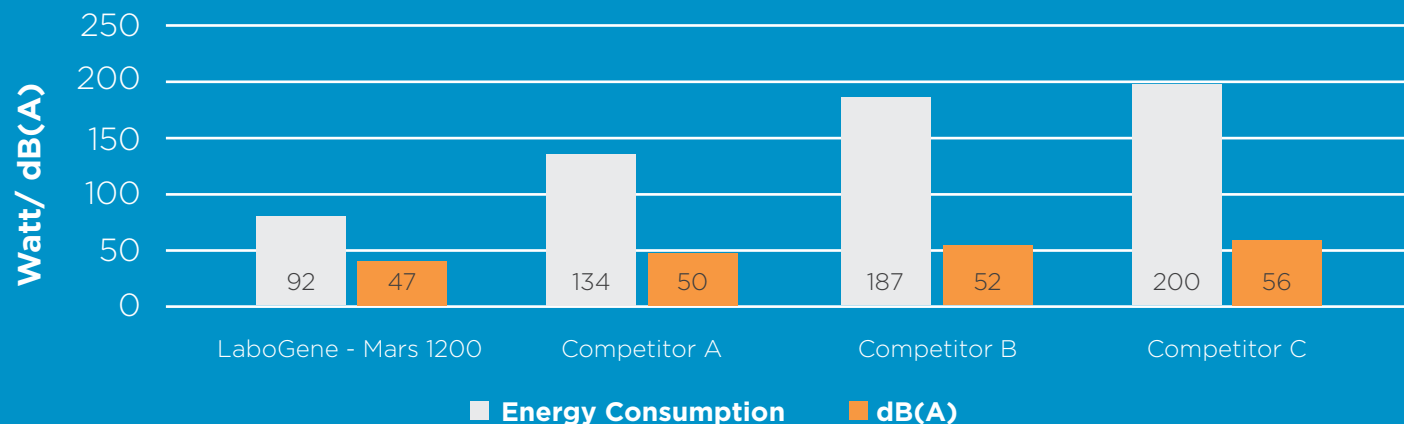
The new generation reduces the operating costs up to 78 % compared to equivalent old cabinets in the industry (see the table on the previous page).

## Do you need a new biological safety cabinet but are in doubt of which to choose?

Save up to 54 % in operating costs when comparing LaboGene's new Mars 1200 to the new biological safety cabinets from competitor A, B and C.

### Power consumption & noise level at factory settings according to EN 12469 / EN 11201

Power consumption and noise levels for various equivalent cabinets compared to the LaboGene Class 2 Mars Cabinet 1200 mm.



### At LaboGene we focus on four benefits that are built-in as standard features of the Mars family of Class2 Safety Cabinets:

- Operator & Environment Safety.
- Ergonomic Design.
- Energy Efficiency.
- Noise Reduction.

By concentrating on all these aspects, we have created optimal solutions for customers that strive to create the best working environment for their employees, whilst increasing efficiency, improving safety and leaving a "greener- footprint".



## APPLICATIONS

The Mars Class 2 cabinet's versatility of design, construction and options allows for adaptability and use as the ideal choice for many application and procedures, whilst ensuring ultimate product-, environment- and operator protection.

### Examples include:

- Working with prions e.g. Creutzfeldt-Jakob disease & Mad Cow disease etc.
- Hazardous powders & fibres e.g. asbestos, glass fibres etc.
- Weighting applications with an anti-vibration plate inserted into the tabletop (a balance weighing up to 6 decimals can be used.)

- Stem Cell work where a dual down flow filter is required.
- For Category 3 labs where a Class III cabinet is not required.

Other applications for the Mars Class 2 cabinet include many microbiology applications e.g. working with viruses, pathogens, research & sampling procedures, tissue cultures etc.

If you are in doubt with regards to the Mars Class 2 cabinets use for your specific application, then please contact the distributor in your specific country.

To find your local distributor visit [www.labogene.com](http://www.labogene.com)





# Meeting your **SPECIFIC NEEDS**

## Looking for something else?

Numerous other options are available, ranging from different valve types, sinks, the interior in AISI 316 instead of AISI 304, heat plate zone system, PIR sensor, Bunsen burner, LED light, mounting of microscope etc.

**Make your own  
configuration...**

Try the online configurator!

Check it at  
[www.LaboGene.com](http://www.LaboGene.com)

## **MARS** RANGE OF OPTIONS

We offer a range of options to tailor the Mars cabinet to your specific requirements!

- A wide range of different support stands can be supplied including an electrical operated elevation stand. With an overall height of just above 2 meters the cabinets offer full operational performance in rooms with low ceilings, even when fitted with the electrical elevation support stand.

### Connection of your Mars cabinet to external ducting system

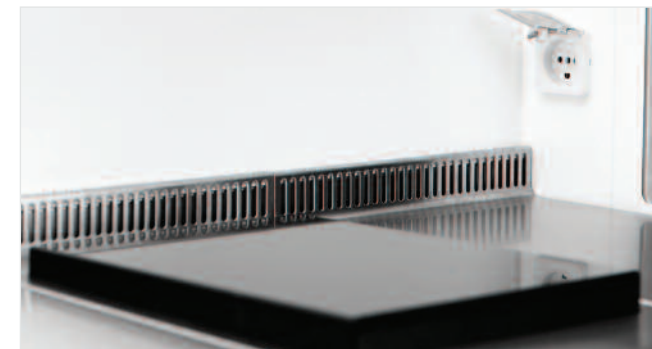
- HEPA filters do not trap gases and toxic chemicals that may be used as an adjunct to microbiological studies. In these applications it is important to select an exhaust ducting route to lead the exhausted air safely out of the laboratory to an external ventilation system.
- It is possible to connect the cabinet to an external ducting system via an anti-blow back valve. The extract connection can be either referred to as a hard duct or a thimble duct, where the latter is also extracting air from the laboratory.
- The compact construction of the Mars Class 2 cabinet makes it possible for it to be used - ducted either way - with a working height of up to 1000 mm in a laboratory with a ceiling height of 2,5 meters.



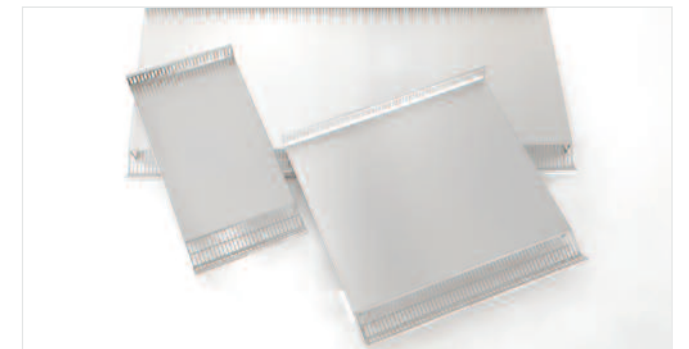
- Built-in LAF-LCD screen mounted on the rear wall or alternatively magnetically mounted for easy removal or positioning to suit the operator's convenience and comfort.



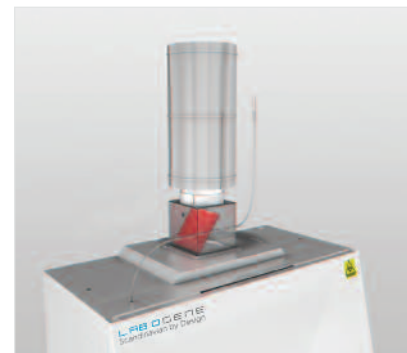
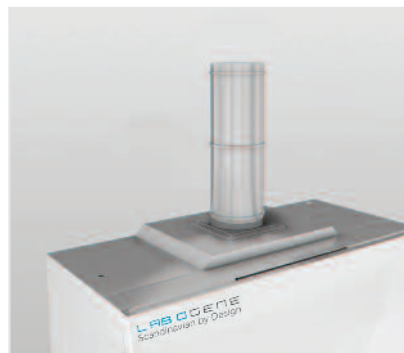
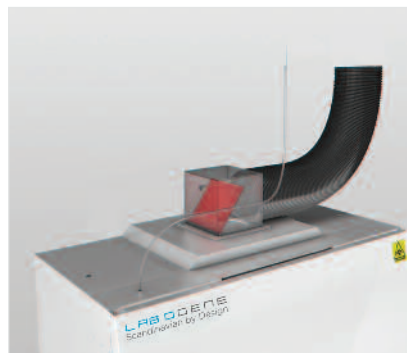
- An UV light for decontamination of the work surfaces or for deactivating DNA, can be fitted in the interior of the work chamber.



- A marble stone can be inserted to the work top section for weighing application to 6 decimals.



- Sectional work tops can be provided in different sizes from 300 mm to 1800 mm and also in AISI 316 to enable the Mars to be configured suit to your exact practical requirements.



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## YEARS OF EXPERIENCE

LaboGene are experts in the fields of Clean Air & Laminar Flow, Centrifugation, Vacuum & Cooling. We provide both standard and perfectly customised solutions. Designing, developing, manufacturing and marketing in laboratory and industrial equipment is our speciality.

**Leading supplier in:**

- Microbiological safety cabinets
- Freeze dryers
- Freezers
- Centrifuges

Learn more at [www.labogene.com](http://www.labogene.com)



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