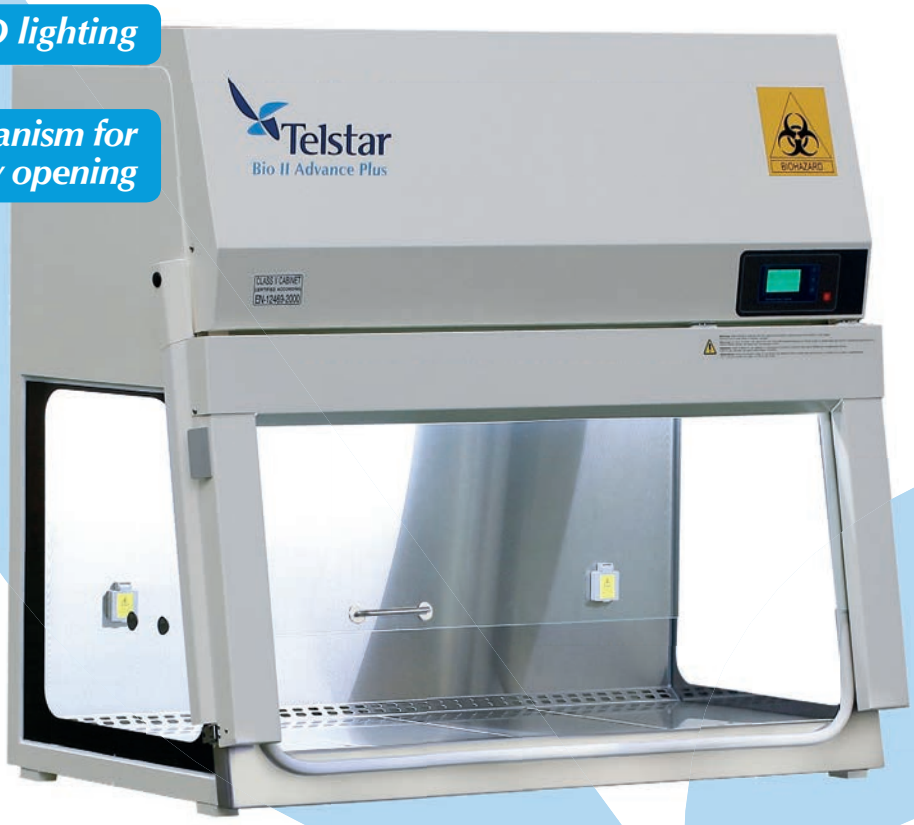
Telstar® Bio II Advance Plus

Class II Biological Safety Cabinet

- Advanced & compact design
- Comfortable and easy to use
- EC fans installed
- LED lighting
- Reinforced mechanism for window opening



Telstar Bio II Advance Plus

Class II Biological Safety Cabinet

The Telstar **Bio II Advance Plus** series is a new evolution of biological safety cabinets providing a compact design for easy installation within the laboratory, without losing valuable working space. It has also been designed to the highest standards of safety, ergonomics, energy efficiency, including EC fans and Led lights, reliability and ease of use in its class.

The **Bio II Advance Plus** series is backed by Telstar's world reputation and commitment to provide the market's most secure safety cabinets for biological products.



Advanced & Compact Design

Laboratory space has to be shared with an ever increasing number of equipment. Also a cabinet is often difficult to install on site. This is not only due to its size, but also because of the difficult access to the laboratory. With this in mind, **Telstar** has redesigned the Biological Safety Cabinet, concentrating all its efforts on minimizing the area of the cabinet where the filters, fans and electronics are situated.

As a result, the **Bio II Advance Plus** provides improvements in Laminar Flow Efficiency which helps shorten the path taken by the air inside the cabinet, thus making the cabinet the most compact model available in the market.

Microprocessor control results into benefits like energy optimization, reduction of heat emission and a significantly increase in use lifetime of the filters.

Certified Safety: EN 12469

The **Bio II Advance Plus 4 & 6** cabinets are independently tested and certified by TÜV Nord, the main certification body in Europe, to guarantee conformity to standard EN 12469 for Class II biological safety cabinets (30% exhaust, 70% recirculation unit). The **Bio II Advance** is specified for working with levels 1, 2 and 3 pathogenic agents. It also conforms to the main requirements NSF/ANSI 49 (Class II A2), JIS K3800, SFDA YY-0569 and AS2252.



Safe ergonomic arm rest

Double integrated and removable arm rest:

- The rounded part is comfortable for the operator during working sessions
- The V-shaped air slits, positioned at the front of the work top, increase safety by preventing accidental obstruction of the openings and therefore blocking the inflow air.

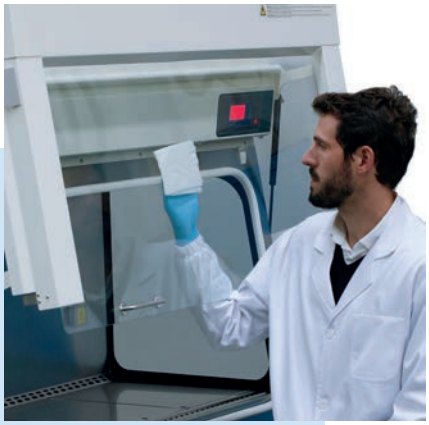
Maximum protection for the operator, product and environment

The most important feature of a Biological Safety Cabinet is its containment capability, together with good contamination prevention and the ability to clean the cabinet. The **Bio II Advance Plus** series is designed to offer maximum safety at all times:

- Laminar flow is monitored by a speed sensor which keeps a constant laminar flow over the whole working surface, thanks to filter clogging compensation technology
- The cabinet is fitted with independent alarm systems which emit a visual and acoustic warning in case of any deviations
- The silicone window gasket seals the working chamber hermetically, providing optimal protection for both operator and product
- In working position, the gasket prevents environmental particles to enter the working chamber, thus reducing possible contamination of samples and keeping the inner side of the glass clean
- The rounded edges of the inside of the cabinet facilitate disinfection and maximise contamination avoidance
- The working surface is divided into sections which allow cleaning and even sterilisation in an autoclave.

Double-safe control panel with an easy-to-read screen

The **Bio II Advance Plus** has a colour screen which enables easy and quick viewing of the safety parameters. The visual display shows the level of filter clogging, which is extremely useful for optimising the service. The display also shows laminar speed flow to control the cabinet's status at all times.



Easy cleaning of the inside window.





Comfortable and ease to use

The **Bio II Advance Plus** series is designed to make work comfortable for the operator by avoiding fatigue and encourage a safe working posture:

- The 10° sloped front window provides the operator a comfortable and ergonomic posture
- The front window allows complete and comfortable access to the working chamber, making cleaning easy and makes it possible to enter large objects and accessories into the working chamber
- The display is slightly turned to the operator to maximize visibility and accessibility
- The transparent glass side windows maximise light entry into the working chamber to increase visibility and provide the operator a strong sense of space
- The front panel is designed in a smooth one-piece material for easy cleaning
- The **Bio II Advance Plus** is very silent, with a sound level of only 58 dB.







Reduced Maintenance

- The filter-loading-self-compensation-technology keeps a constant laminar flow speed within the working chamber, thus optimising the life time of the filter and minimising service & maintenance
- Thought the front of the cabinet, all components are easy to access, which minimises duration of executing technical services. This minimises the interruption for the operator its daily work due to preventive maintenance and requalification work
- Electronic components are accessible from the outside, without having access to contaminated area
- The unique and innovative patented filter change system, 4F System: Fast, Friendly & eFFicient System enables the filters to be exchanged easily through the front cabinet, spending maximum 5 minutes using standard tools.

Double safe, user friendly and easy-to-read control panel

The screen of the display, provide intuitive and practical colour codes which immediately show the cabinet status:

- Green screen: Cabinet in safe condition
- Red screen: Cabinet out of specification
- Yellow screen: Cabinet being decontaminated

The main screen provides a visual display of the laminar flow speed and filter clogging.

The Ecomode function allows the cabinet to run at low speed in one single click, in order to protect the sample while the operator is doing other tasks. This saves energy, reduces sound level and heat emission.

Other features of the display:

- Constant information on the air flow status:
  - Laminar flow speed
  - Extraction rate
  - Inflow speed
- A timer to program the daily activation of fans and UV light
- Two password levels (user and technical service)
- Multi-language: Spanish, English, German and French
- Acoustic and visual alarms with an information message:
  - Excessive or insufficient laminar flow speed
  - Insufficient exhaust rate
  - Glass away from the working position
  - Open front window
  - UV lamp activated (interlocked with the front closed position)



Specifications

- Cabinet depth 759 mm (compatible with most laboratory doors
- Overall height 1260 mm
- 10° sloped front window for a better working position
- 304L stainless steel chamber with rounded angles and hardened security glass sides
- Hermetically closable sealing around the front window
- Security anti-reflective front window with UV protection, with no visual obstacles on the lower edge
- Microprocessor control with filter-loading-self-compensation
- Main screen showing the laminar flow speed and the filter clogging level
- Ecomode function
- Control panel with international colour code to indicate cabinet status
- Manual sliding window with gas springs to facilitate maintenance and internal cleaning of the cabinet and entering large objects and accessories into the working chamber
- UV light and fans with timer to be programmable
- Four predefined languages (Spanish, English, French and German)
- Access to all the maintenance areas via the front side of the cabinet.

TECHNICAL SPECIFICATIONS	units	Bio II Advance Plus 3	Bio II Advance Plus 4	Bio II Advance Plus 6
External dimensions (WxDxH)	mm	1049x759x1260	1354x759x1260	1964x759x1260
Internal dimensions (WxDxH)	mm	954x605x587	1259x605x587	1869x605x587
Shipping dimensions (WxDxH)	mm	1105x840x1450	1450x880x1640	2040x870x1640
Weight	Kg	180	200	280
Shipping weight	Kg	230	250	330
Laminar flow speed / laminar flow rate	m/s m³/h	0.35 / 669	0.35 / 882	0.35 / 1310
Front entry air speed / extraction flow rate	m/s m³/h	0.55 / 295	0.55 / 402	0.55 / 620
Power	Kw	1.2	1.3	1.8
Voltage (others available upon request)	V	230	230	230
Frequency	Hz	50-60	50-60	50-60
Lighting	Lux	≥ 1000	≥ 1000	≥ 1000
Sound	dBA	≤ 58	≤ 58	≤ 58
Vibration	mm RMS	< 0.005	< 0.005	< 0.005
Filters		HEPA H14 filters according to EN 1822: efficiency of 99.995% MPPS and 99.999 % DOP		
Air Quality		ISO 4 in accordance with ISO CD 14644-1: *353 part. ≥ 0.5 µm/m³ ; 10000 part. ≥ 0.1 µm/m³*		

Options and accessories

A full range of options and accessories to customise the Bio II Advance to any requirements:

1. Support tables (available in various options)
2. Non-return valve
3. Additional active carbon filter in the exhaust to capture smells or chemical substances
4. Canopy-type connection for safe directed extraction
5. Single piece work tray

- Programmable ultraviolet light
- Service tap kits (N_2, air, gas, vacuum...)
- Double HEPA filter in the exhaust for extra security when the unit is expelling air into the laboratory (according to standard BS 5726).

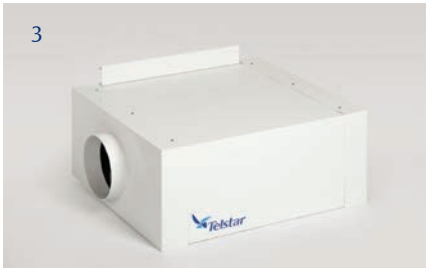
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ISO 9001: Certified Company

BR-BIOIIADVANCE-PLUS-EN-0319
Telstar reserves the right to improvements and specifications changes without notice.

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