




BIOTECTUM



DESIGN IN ACCORDANCE WITH - DIN 12980, EN 12469:2002 

## LAMINAR FLOW CABINETS

OF CLASS II MICROBIOLOGICAL SAFETY

### comfort and safety

Laminar flow cabinets with vertical airflow. The devices designed to provide a comfortable and safe testing environment for laboratory personnel.



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## BIOTECTUM

As a team, we focus primarily on modern, advanced solutions, so that we can guarantee laboratory workers the highest comfort and safety at work. Persistence, constant testing and willingness to ask tough questions have allowed us to create a new generation of laminar flow cabinets that provide better protection and require significantly less energy resources. But we're not going to stop here. Our goal is to create a laminar cabinet with the best possible parameters.

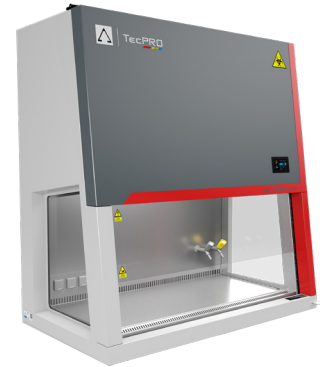
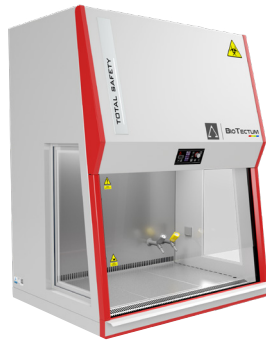
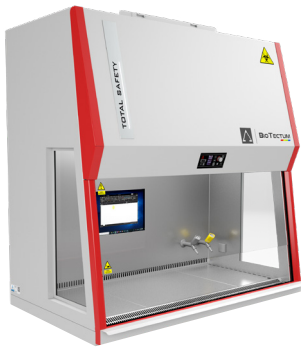
### INNOVATIONS FOR LABORATORIES

We are still looking for ways to improve our products, to extend their service life and improve efficiency and comfort of working with them. Hence dozens of innovative solutions and facilities, such as comprehensive alarm system controlling parameters of laminar flow cabinets or intelligent control of fans, UV-C sterilization and lighting. We provide you with equipment that will not disappoint you. It is for you that we go further and set new standards in the laboratory equipment industry.

# HOW TO CHOOSE THE RIGHT LAMINAR FLOW CABINET

Whether we choose a laminar cabinet from the Classic, Classic Neo or Advanced lines, it will always be a great choice, we can be sure of the reliability and work safety required for this type of equipment.

## Model



### LINE CLASSIC

BioTectum 1.2  
BioTectum 1.5  
BioTectum 1.8

Popular model that has been produced for many years with a refined structure ensuring work safety and reliability. Elements such as three electronically commutated motors, electrically controlled front glass, seamless interior of the working area, dedicated microprocessor control system, the possibility of easy cleaning of the front glass on both sides, low energy consumption and generated noise are the hallmarks of devices from BioTectum Classic line.

### LINE NEO

BioTectum Neo 1.0

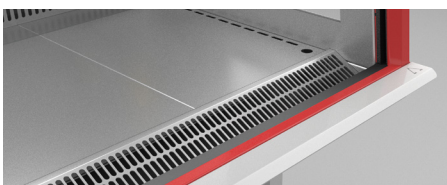
Currently, this line of BioTectum laminar flow cabinets is represented by one model with a working width of  $\approx 950$  mm. The devices in this series, unlike the Classic line, are equipped with two motors, electronically commutated, have a greater height of the working space and interior made of stainless steel and tempered glass, which gives exceptional elegance while maintaining all the required safety features.

### LINE ADVANCED

TecPRO 1.2  
TecPRO 1.5  
TecPRO 1.8

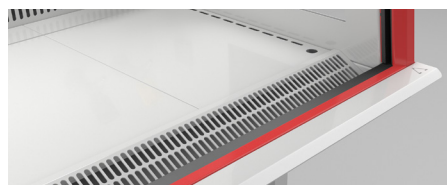
These are the most technologically advanced BioTectum laminar flow cabinets. While maintaining all the key functionalities of the devices from the Classic and Classic Neo lines, we went a step further and created the BioTectum TecPRO laminar flow cabinets. Cabinets from this series can be equipped with additional functions, such as registration systems, fire protection systems with SMS notification, RFID access cards and many others. They are fully gas-tight devices with a changed geometry of the working space, the height of the front window regulated by an encoder and a modern visual form adapted to current trends.

## Device versions depending on the technology of workspace construction



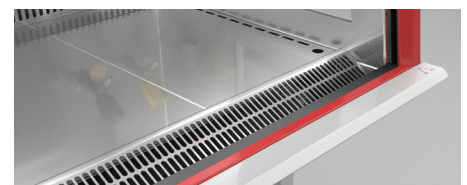
BR DESIGN (STANDARD)

The interior of the work area is made entirely of acid-resistant stainless steel, type 1.4404, AISI/ASTM 316L. Worktop and a V-shaped air inlet made of stainless steel type 1.4404, AISI/ASTM 316L.



GR DESIGN (OPTION)

The interior of the working area is made of steel sheet electrostatically painted with antibacterial and chemically resistant paint (protection coating IGP-DURA®). The worktop is made of acid-resistant stainless steel type 1.4404, AISI/ASTM 316L covered with IGP-DURA® or optionally without IGP-DURA® coating.



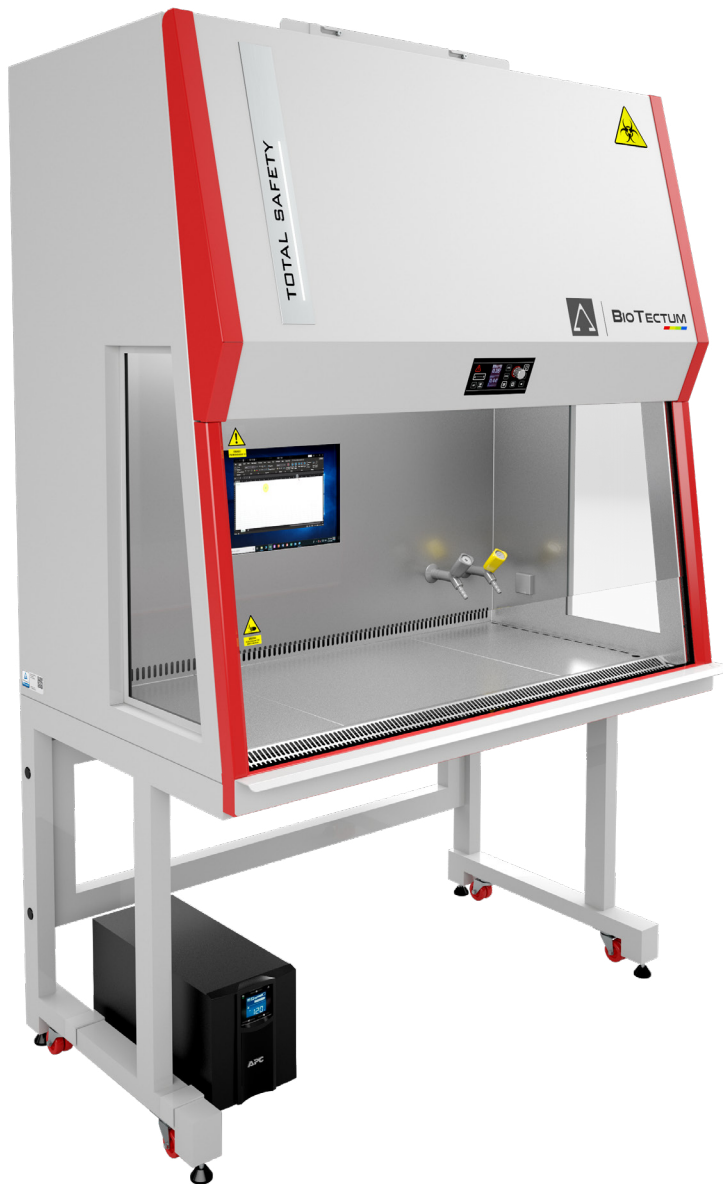
MR DESIGN (OPTION)

The interior of the work area is made entirely of acid-resistant, polished stainless steel - mirror effect, type 1.4301, AISI/ASTM 304. Worktop and V-shaped air inlet made of stainless steel type 1.4404, AISI/ASTM 316L.

# LINE CLASSIC

## Class II microbiological safety

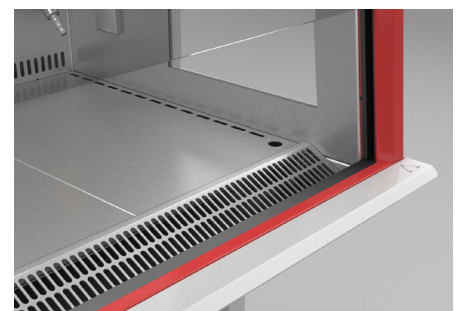
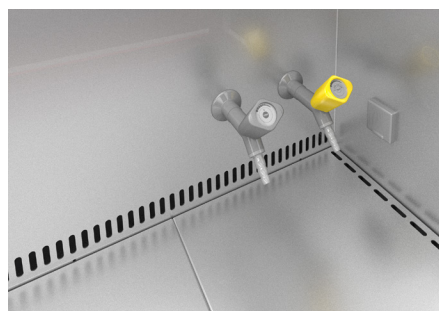
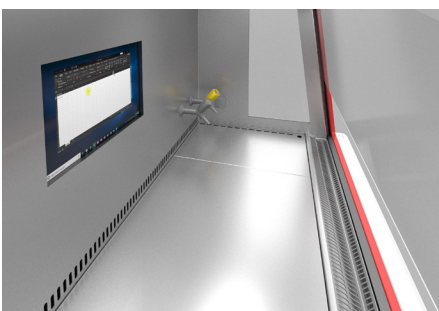
certificate of compliance with EN 12469 : 2002 standard



Cabinets from Classic series provide a high level of user comfort, as well as the safety of the operating personnel, while taking care of the environment. An integral element of the concept, which is at the same time its great asset, is an intelligent management system based on a special control panel. It has built-in solutions to improve the operation of the device.

## FEATURES & BENEFITS

- **TEC FLOW™** automatic digital compensation of air flow rate inside the chamber and at the outlet depending on changing working conditions, e.g. as a result of gradual clogging of filters
- **TEC AUTO CONTROL™** system auto-diagnosis
- **TEC REMOTE CONTROL™** remote diagnostics of cabinet settings
- **TEC SUSPEND™** mode that keeps the cabinet in constant operational readiness while reducing energy consumption
- **TEC DSAM™** automatic surface disinfection by mist (DSAM). Process automation involves the possibility of carrying out the entire process (DSAM) without the presence of human, and thus without posing a threat to the user
- **TEC TURN&TOUCH™** classic control panel with membrane keyboard and selection knob
- Main filter and exhaust filter of at least H14 class with 99,995 % efficiency for particles  $\geq 0,3 \mu\text{m}$
- Digital sensors continuously measure speeds of air flow
- Visual and acoustic alarms immediately notify you of any deviation from the required parameters





## Specification of the laminar flow cabinet

### Basic technical data

Construction type - DIN 12980; EN 12469:2002

Marking - CE

### Specification of used materials

Number of motors - 3 electronically commutated motors

Main filter and exhaust filter class - at least HEPA H14 with an efficiency of 99,995 % for particles  $\geq 0,3 \mu\text{m}$

Material of the working area - acid-resistant stainless steel, grade 1.4404, AISI/ASTM 316L

Worktop and a V-shaped air inlet made of acid-resistant stainless steel, grade 1.4404, AISI/ASTM 316L

Material of the housing - steel sheet covered with powder paint, color RAL 7048

Material of the front window - tempered safety glass impermeable to UV radiation

Stylistic elements color - Vermilion RAL 2002, other color (OPTION)

### Certificates

Certificate of compliance with EN 12469:2002 standard issued by the independent certification body TÜV Rheinland

CE declaration of conformity

### Technical data

Sound pressure level - 37 - 48 dB (depending on the model and operating mode)

Mechanical vibration - EN ISO 5349  $\leq 0,005 \text{ mm}$

Lighting intensity - 800 to 1700 lx (depending on the model and the light source used)

### Electrical data

Power supply - 1N 230 V / 50 Hz

Electrical sockets protection - 10 A

Electric power consumption - average  $\approx 140 \text{ W}$  (SUSPEND mode without lighting 34 W)

### Additional information

The device is delivered with a frame made of closed profiles with height to the worktop 835 mm + 30 mm

Electrically adjustable frame (OPTIONAL)

Frame on wheels blocked with leveling feet (OPTIONAL)

Sectioned worktops (OPTIONAL) for a cabinet with working width of 1800 mm (STANDARD)

## Dimensions of the device

	Width	Depth	Height with the frame	Height to the worktop	Dimensions of the working area
<b>Classic Line 1.2</b>	$\approx 1300 \text{ mm}$	$\approx 800 \text{ mm}$	$\approx 2100 \text{ do } 2170 \text{ mm} + 30 \text{ mm}$	$835 \text{ mm} + 30 \text{ mm}^*$	1200 mm
<b>Classic Line 1.5</b>	$\approx 1650 \text{ mm}$	$\approx 800 \text{ mm}$	$\approx 2100 \text{ do } 2170 \text{ mm} + 30 \text{ mm}$	$835 \text{ mm} + 30 \text{ mm}^*$	1500 mm
<b>Classic Line 1.8</b>	$\approx 1950 \text{ mm}$	$\approx 800 \text{ mm}$	$\approx 2100 \text{ do } 2170 \text{ mm} + 30 \text{ mm}$	$835 \text{ mm} + 30 \text{ mm}^*$	1800 mm

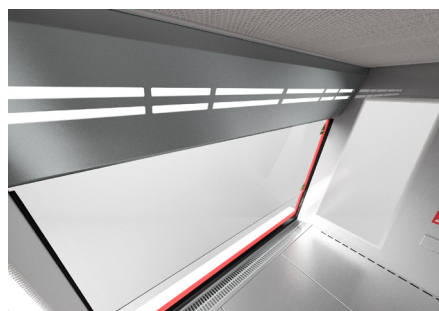
\* other heights OPTIONAL



Focusing on three levels in the design of laminar flow cabinets from the Classic Neo line, we have prepared devices that guarantee comfort and safety of use, and at the same time do not harm the natural environment. The innovative solutions that have been used in this laboratory equipment are noticeable in aspects related to the design assumptions and visual aspects. The equipment is characterized by a simple, minimalist form, with clearly marked color accents and an interior made of tempered glass and stainless steel, which gives it a unique character.

## FEATURES & BENEFITS

- **TEC FLOW™** automatic digital compensation of air flow rate inside the chamber and at the outlet depending on changing working conditions, e.g. as a result of gradual clogging of filters
- **TEC AUTO CONTROL™** system auto-diagnosis
- **TEC REMOTE CONTROL™** remote diagnostics of cabinet settings
- **TEC SUSPEND™** mode that keeps the cabinet in constant operational readiness while reducing energy consumption
- **TEC DSAM™** automatic surface disinfection by mist (DSAM). Process automation involves the possibility of carrying out the entire process (DSAM) without the presence of human, and thus without posing a threat to the user
- **TEC TURN&TOUCH™** classic control panel with membrane keyboard and selection knob
- Main filter and exhaust filter of at least H14 class with 99,995 % efficiency for particles  $\geq 0,3 \mu\text{m}$
- Digital sensors continuously measure speeds of air flow
- Visual and acoustic alarms immediately notify you of any deviation from the required parameters





## Specification of the laminar flow cabinet

### Basic technical data

Construction type - DIN 12980; EN 12469:2002

Marking - CE

### Specification of used materials

Number of motors - 2 electronically commutated motors

Main filter and exhaust filter class - at least HEPA H14 with an efficiency of 99,995 % for particles  $\geq 0,3 \mu\text{m}$

Material of the working area - acid-resistant stainless steel, grade 1.4404, AISI/ASTM 316L and tempered glass

Worktop and a V-shaped air inlet made of acid-resistant stainless steel, grade 1.4404, AISI/ASTM 316L

Material of the housing - steel sheet covered with powder paint

Material of the front window - tempered safety glass impermeable to UV radiation

Stylistic elements color - Vermilion RAL 2002

### Certificates

Certificate of compliance with EN 12469:2002 standard issued by the independent certification body TÜV Rheinland

CE declaration of conformity

### Technical data

Sound pressure level - 37 - 48 dB (depending on the model and operating mode)

Mechanical vibration - EN ISO 5349  $\leq 0,005 \text{ mm}$

Lighting intensity - 800 to 1700 lx (depending on the model and the light source used)

### Electrical data

Power supply - 1N 230 V / 50 Hz

Electrical sockets protection - 10 A

Electric power consumption - average  $\approx 140 \text{ W}$  (SUSPEND mode without lighting 34 W)

### Additional information

The device is delivered with a frame made of closed profiles with height to the worktop 835 mm + 30 mm

Electrically adjustable frame (OPTIONAL)

Frame on wheels blocked with leveling feet (OPTIONAL)

Sectioned worktops (OPTIONAL) for a cabinet with working width of 1800 mm (STANDARD)

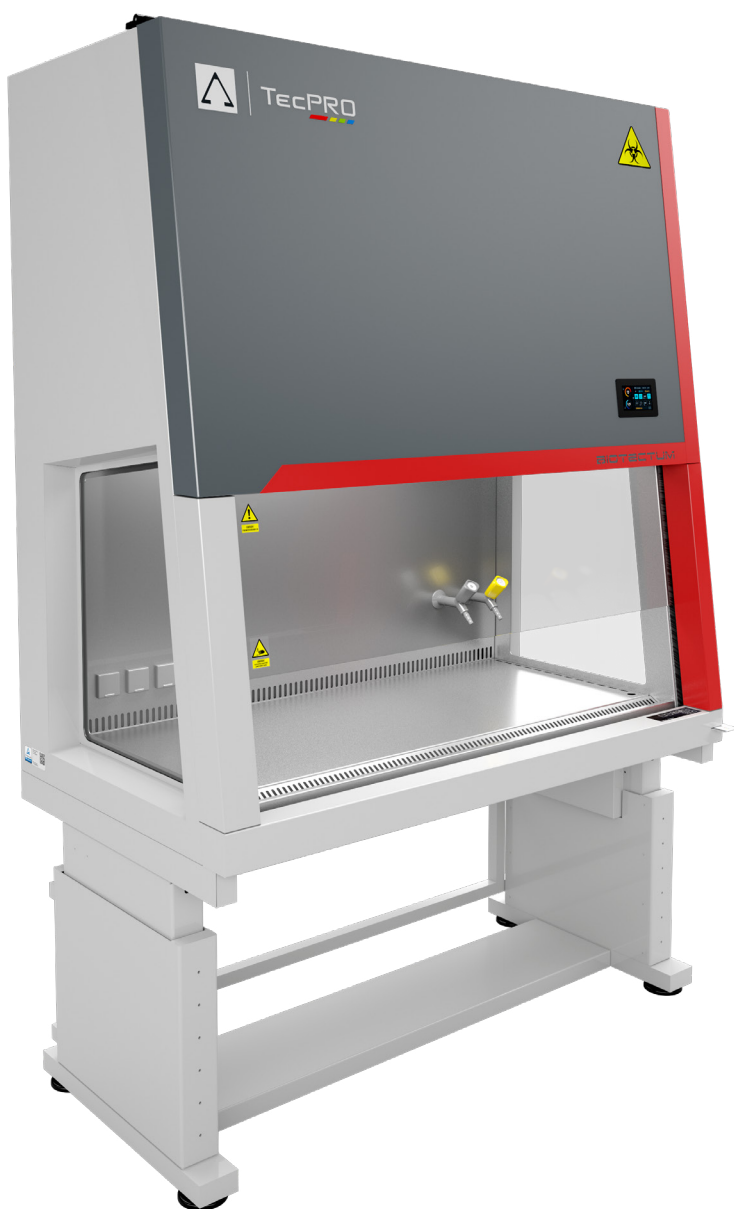
## Dimensions of the device

	Width	Depth	Height with the frame	Height to the worktop	Dimensions of the working area
<b>Classic Line Neo 1.0</b>	$\approx 1050 \text{ mm}$	$\approx 800 \text{ mm}$	$\approx 2100 \text{ do } 2170 \text{ mm} + 30 \text{ mm}$	$\approx 835 \text{ mm} + 30 \text{ mm}$	$\approx 940 \text{ mm}$

# LINE ADVANCED TECPRO

## Class II microbiological safety

certified in accordance with EN 12469: 2002 standard



The design assumptions of the Advanced line of laminar flow cabinets, that include the comfort and safety of the user as well as care for the natural environment, allowed to achieve a spectacular effect in the form of a modern and efficient device. Innovative approach to planning of equipment maintenance has resulted in the creation of an intelligent management system based on a highly functional control panel with a touch screen for assigning individual tasks. Its advantage is the built-in and complex set of information and alarm messages, allowing for the operation of the equipment and interventions in the event of irregularities, which is also supported by the device's auto-diagnostic functions.

## FEATURES & BENEFITS

- **TEC FLOW™** automatic digital compensation of air flow rate inside the chamber and at the outlet depending on changing working conditions, e.g. as a result of gradual clogging of filters
- **TEC BLOCK™** electrically operated mechanical blockade of downward window movement (OPTION)
- **TEC WINDOW REMOTE™** Function to enable individual setting of the height of cabinet opening in the range of 160 - 250 mm from the control panel (OPTION)
- **TEC CARD™** proximity RFID card - access control system using proximity cards (electronic key) with two authorization levels - administrator and user (OPTION)
- **TEC TOUCH™** touch control panel with graphic LCD display with dedicated function keys
- **TEC TURN@TOUCH™** classic control panel with membrane keyboard and selection knob (OPTION)
- **TEC REMOTE CONTROLS™** remote diagnostics of cabinet settings
- **TEC SUSPEND™** economic mode
- **TEC DSAM™** automatic surface disinfection by mist (DSAM), process automation involves the possibility of carrying out the entire process (DSAM) without the presence of human, and thus without posing a threat to the user
- **TEC LOGG™** centralized registration and control system via GSM network (OPTIONAL)
- **TEC LOGG II™** flash memory based recording module -pen drive (OPTION)
- **TEC TIGHT™** aerosol-tight front glass in closed position, electrically operated with the possibility of cleaning its internal surface, placed at an angle to the worktop, automatically set in the operating position
- **TEC ALARM™** fire alarm system with the option of SMS notification (OPTIONAL)
- Main filter and exhaust filter of at least H14 class with 99,995 % efficiency for particles  $\geq 0,3 \mu\text{m}$
- Visual and acoustic alarms immediately notify you of any deviation from the required parameters







## Specification of the laminar flow cabinet

### Basic technical data

Construction type - DIN 12980; EN 12469:2002

Marking - CE

### Specification of used materials

Number of motors - 3 electronically commutated motors

Main filter and exhaust filter class - at least HEPA H14 with an efficiency of 99,995 % for particles  $\geq 0,3 \mu\text{m}$

Material of the working area - acid-resistant stainless steel, grade 1.4404, AISI/ASTM 316L and tempered glass

Worktop and a V-shaped air inlet made of acid-resistant stainless steel, grade 1.4404, AISI/ASTM 316L

Material of the housing - steel sheet covered with powder paint

Material of the front window - tempered safety glass impermeable to UV radiation

Stylistic elements color - Vermilion RAL 2002

### Certificates

Certificate of compliance with EN 12469:2002 standard issued by the independent certification body TÜV Rheinland

CE declaration of conformity

### Technical data

Sound pressure level - 37 - 52 dB (depending on the model and operating mode)

Mechanical vibration - EN ISO 5349  $\leq 0,005 \text{ mm}$

Lighting intensity - 800 to 1700 lx (depending on the model and the light source used)

### Electrical data

Power supply - 1N 230 V / 50 Hz

Electrical sockets protection - 10 A

Electric power consumption - average  $\approx 140 \text{ W}$  (SUSPEND mode without lighting 34 W)

### Additional information

The device is delivered with a frame made of closed profiles with height to the worktop 835 mm + 30 mm

Electrically adjustable frame (OPTIONAL)

Frame on wheels blocked with leveling feet (OPTIONAL)

Sectioned worktops (OPTIONAL) for a cabinet with working width of 1800 mm (STANDARD)

## Dimensions of the device

	Width	Depth	Height with the frame	Height to the worktop	Dimensions of the working area
<b>Advanced Line 1.2</b>	$\approx 1350 \text{ mm}$	$\approx 800 \text{ mm}$	$\approx 2100 \text{ do } 2170 \text{ mm} + 30 \text{ mm}$	835 mm + 30 mm	1200 mm
<b>Advanced Line 1.5</b>	$\approx 1660 \text{ mm}$	$\approx 800 \text{ mm}$	$\approx 2100 \text{ do } 2170 \text{ mm} + 30 \text{ mm}$	835 mm + 30 mm	1500 mm
<b>Advanced Line 1.8</b>	$\approx 1950 \text{ mm}$	$\approx 800 \text{ mm}$	$\approx 2100 \text{ do } 2170 \text{ mm} + 30 \text{ mm}$	835 mm + 30 mm	1800 mm

## KEY FEATURES

### CONSTRUCTION:

- Electronically commutated motors from EBM-PAPST ensure low power consumption and low heat and noise emission
- Electrically actuated front glass placed at an angle to the worktop
- Sides of the cabinet glazed, full (OPTIONAL)
- White light source - fluorescent or LED (800 ÷ 1700) lx depending on the version with adjustable lighting intensity
- Lighting elements located outside the working chamber
- Media connections located at the top of the cabinet to make it possible to move the cabinet closer to the walls and other laboratory equipment
- Front window can be tilted on gas cylinders for easy cleaning of its inner surface
- Additional UV lamp (OPTIONAL)
- Bowl made of acid-resistant stainless steel type 1.4301, AISI/ASTM 304 placed under the worktop
- Worktop and V-shaped air inlet made of acid-resistant stainless steel type 1.4404, AISI/ASTM 316L
- Interior of the working area made of acid-resistant stainless steel type 1.4404, AISI/ASTM 316L in the seamless construction
- Armrest for the arm mounted along the whole length of the working area with an integrated seal for precise closing the front window
- Touch control panel or panel with membrane keypad, selection knob and LCD display

### ADDITIONAL INFORMATION:

- The device is delivered with a frame made of closed profiles with height to the worktop 835 mm + 30 mm
- Electrically adjustable frame (OPTIONAL)
- Frame on wheels blocked with leveling feet (OPTIONAL)
- Sectioned worktops (OPTIONAL) for a cabinet with working width of 1800 mm (STANDARD)

# INTELLIGENT MANAGEMENT SYSTEM

You decide which control panel your laminar flow cabinet should be equipped with. You can choose between the classic panel with a selection knob and the **TEC TURN&TOUCH™** LCD display (standard equipment for Classic and Neo lines) or the **TEC TOUCH™** touch panel (standard equipment for Advanced line).

## TOUCH PANEL **TEC TOUCH™**

**TEC TOUCH™** touch panel, which is installed as standard in laminar flow cabinets from the Advanced line, is equipped with legible color pictograms with clocks, which graphically show the values of air flow, front window position as well as information, alarm or possible error messages with an indication of what they refer to.



## CLASSIC PANEL **TEC TURN&TOUCH™**

**TEC TURN&TOUCH™** panel with dedicated function keys and membrane keyboard is a solid element of laminar flow cabinet operation management. **TURN&TOUCH™** knob enables precise and intuitive navigation through the menu of available functions. Air-flow values are displayed and easy to read from both sitting and standing positions.



- The panels contain sets of information, alarm and self-diagnostic or decontamination messages
- Individual user programs and the cleaning program **TEC CLEAN™**
- Management of access to the cabinet by PIN code, and for Advanced line cabinets equipped with **TEC TOUCH™** panel by RFID card which additionally enables user identification
- Visual and acoustic alarms
- Language selection: Polish, English and German

Working with BioTectum laminar flow cabinets is intuitive and extremely user-friendly.

Advanced laminar flow cabinets are equipped with a second handheld panel with membrane keyboard as standard. It allows you to control the most frequently used functions from an easily accessible level located in the armrest.



# Equipment of CLASSIC and NEO lines

EQUIPMENT ELEMENTS / VERSION	COMFORT	ADVANTAGE	AUTOPROTECT
Full, removable, non-sectioned worktop, acid-resistant stainless steel AISI 316L	● <sup>1</sup>	● <sup>1</sup>	● <sup>1</sup>
Frame for the cabinet made of closed profiles, height 800 mm, to the worktop 835 mm + 30 mm for adjustment	●	●	●
Stylistic elements Vermilion RAL 2002	●	●	●
BR DESIGN version - interior of the work area made entirely of acid-resistant stainless steel type 1.4404, AISI/ASTM 316L in a seamless construction with rounded sides, worktop and a V-shaped air inlet made of stainless steel type 1.4404	● <sup>2</sup>	● <sup>2</sup>	● <sup>2</sup>
Permanently fixed UV lamp	●	●	●
3 electrical sockets (2 on the left, 1 on the right side of the working chamber)	● <sup>3</sup>	● <sup>3</sup>	● <sup>3</sup>
USB connector for software update	●	●	●
Port for HEPA filters DOP test	●	●	●
MODBUS RTU port for cooperation with BMS (Building Management System)	●	●	●
RS-485 communication port, which allows several cabinets to be connected to one bus to collect information about their operation and alarms centrally	●	●	●
TEC TURN@TOUCH™ control panel	● <sup>4</sup>	● <sup>4</sup>	● <sup>4</sup>
TEC AUTO CONTROL™ system auto-diagnosis	●	●	●
TEC REMOTE CONTROLS™ remote diagnostics of cabinet settings	●	●	●
TEC FLOW™ automatic digital airflow speed compensation	●	●	●
Clock / date	●	●	●
Display contrast adjustment	●	●	●
Valve for flammable gases	○	●	●
Valve for technical gases	○	●	●
Temperature sensor in the working chamber Adjustment of lighting intensity of working area	○	●	●
Mode „AUTOPROTECT“	○	●	●
Tryb „AUTOPROTECT“	○	○	●
Worktop removable, sectioned	○ <sup>5</sup>	○ <sup>5</sup>	○ <sup>5</sup>
Frame on wheels for the cabinet made of closed profiles, height 800 mm, to the worktop 835 mm, wheels blocked with leveling feet	○	○	○
Frame for the cabinet made of closed profiles, height 700 mm to the worktop 735 mm	○	○	○
Frame on wheels for the cabinet made of closed profiles, height 750 mm, to the worktop 785 mm, wheels blocked with leveling feet	○	○	○
Electrically adjustable frame for the cabinet E-STAND 200, it is possible to set the height of the worktop in the range of 635 - 835 mm	○	○	○
Electrically adjustable frame for the cabinet E-STAND 400, it is possible to set the height of the worktop in the range of 750 - 1150 mm	○	○	○
Version with increased load capacity up to 50 kg	○	○	○
Built-in computer monitor IPS 19" IP 65 LED, the option includes 2 x USB connectors in the working area and connectors on the rear wall of the device for connecting a PC	○	○	○
Additional armrests, set of 2 pcs.	○	○	○
Valve for flammable gases with solenoid valve (switched on from the control panel)	○	○	○
Valve for technical gases with solenoid valve (switched on from the control panel)	○	○	○
Culverts in the side windows	○	○	○
Additional 230 V electric socket	○	○	○
Sewage connector (eg. drainage of the fluids from the filtration set)	○	○	○
Stainless steel rod mounted on the back wall of the working area for hanging food bags	○	○	○
Module for connecting the cabinet to exhaust ventilation	○	○	○
Under-counter filter model Advanced Under-counter filter model Standard	○	○	○
Filtr podblatowy model Standard	○	○	○
GR DESIGN version - interior of the work area made entirely of acid-resistant stainless steel type 1.4301, AISI/ASTM 304 in a seamless construction with rounded sides, electrostatically painted with antibacterial and chemically resistant paint (protective coating IGP-DURA®). Worktop made of acid-resistant stainless steel type 1.4404, AISI/ASTM 316L with IGP-DURA® coating, optionally without IGP-DURA® coating	○	○	○
MR DESIGN version - interior of the working area made entirely of acid-resistant, polished (mirror effect) stainless steel type 1.4301, AISI/ASTM 304 in a seamless construction with rounded sides, worktop and a V-shaped air inlet made of acid-resistant polished (mirror effect) stainless steel type AISI/ASTM 316L	○	○	○
Control of external exhaust fan	○	○	○
Preparation and execution of DQ, IQ, OQ, PQ procedures	○	○	○
Stylistic elements in a different color 	○	○	○

<sup>1</sup> BioTectum 1.8 worktop sectioned, removable

<sup>2</sup> BioTectum 1.0 Neo - BR DESIGN (standard) - interior of the working area made of acid-resistant stainless steel type 1.4404, AISI/ASTM 316L and tempered glass. Worktop and V-shaped air inlet made of acid-resistant stainless steel type 1.4404, AISI/ASTM 316L

<sup>3</sup> BioTectum 1.0 Neo 2 electrical sockets 1 on the right and 1 on the left side of the chamber

<sup>4</sup> Management system panel **TEC TOUCH™** (OPTION)

<sup>5</sup> BioTectum 1.8 (STANDARD)

● STANDARD ○ OPTION

# Equipment of **ADVANCED** line

EQUIPMENT ELEMENTS / VERSION	STANDARD
Full worktop, removable, non-sectioned, acid-resistant stainless steel AISI 316L	● <sup>1</sup>
Frame for the cabinet made of closed profiles, height 800 mm, to the worktop 835 mm + 30 mm for adjustment	●
Stylistic elements Vermilion RAL 2002	●
BR DESIGN version - interior of the working area made entirely of acid-resistant stainless steel type 1.4404, AISI/ASTM 316L, worktop and V-shaped air inlet made of stainless steel type 1.4404	●
USB connector for software update	●
UV lamp permanently installed	●
3 electrical sockets mounted on the rear wall on the left side	●
Clock / date	●
Additional control panel in the armrest.	●
Port for DOP test of HEPA filters	●
MODBUS RTU port for cooperation with BMS (Building Management System)	●
RS-485 communication port, which allows several cabinets to be connected to one bus to collect information about their operation and alarms centrally	●
<b>TEC TIGHT™</b> aerosol-proof front glass with the possibility of cleaning its inner surface	●
<b>TEC AUTO CONTROL™</b> system auto-diagnosis	●
<b>TEC REMOTE CONTROLS™</b> remote diagnostics of cabinet settings	●
<b>TEC TOUCH™</b> control panel	● <sup>2</sup>
<b>TEC FLOW™</b> automatic digital airflow speed compensation	●
<b>TEC SUSPEND™</b> economy mode	●
<b>TEC WINDOW REMOTE™</b> individual setting of the cabinet opening height in the range of 160 - 250 mm	○
<b>TEC BLOCK™</b> electrically controlled mechanical blocking of window downward movement	○
<b>TEC CARD™</b> access control system using proximity cards	○
<b>TEC DSAM™</b> automatic surface disinfection by mist	○
<b>TEC LOGG™</b> centralized registration and control system via GSM network	○
<b>TEC LOGG II™</b> recording module on flash memory (pendrive)	○
<b>TEC ALARM™</b> fire alarm system with possibility of SMS notification	○
Valve for flammable gases	○
Valve for technical gases	○
Valve for flammable gases with solenoid valve (switched on from the control panel)	○
Valve for technical gases with solenoid valve (switched on from the control panel)	○
Temperature sensor in the working chamber	○
Adjustment of lighting intensity of working area	○
Mode „AUTOPROTECT“	○
Worktop, removable, sectioned	○ <sup>3</sup>
Frame on wheels for the cabinet made of closed profiles, height 800 mm, to the worktop 835 mm, wheels blocked with leveling feet	○
Frame for the cabinet made of closed profiles, height 700 mm, to the worktop 735 mm	○
Frame on wheels for the cabinet made of closed profiles, height 750 mm, to the worktop 785 mm, wheels blocked with leveling feet	○
Electrically adjustable frame for the cabinet E-STAND 200, it is possible to set the height of the worktop in the range of 635 - 835 mm	○
Electrically adjustable frame for the cabinet E-STAND 400, it is possible to set the height of the worktop in the range of 750 - 1150 mm	○
Version with increased load capacity up to 50 kg	○
Built-in computer monitor IPS 19" IP 65 LED, the option includes 2 x USB connectors in the working area and connectors on the rear wall of the device for connecting a PC	○
Additional armrests, set of 2 pcs.	○
Culverts in the side windows	○
Additional 230 V electric socket	○
Sewage connector (eg. drainage of the fluids from the filtration set)	○
Stainless steel rod mounted on the back wall of the working area for hanging food bags	○
Module for connecting the cabinet to exhaust ventilation	○
Under-counter filter model Advanced	○
Under-counter filter model Standard	○
GR DESIGN version - interior of the working area made entirely of acid-resistant stainless steel type 1.4301, AISI/ASTM 304 in a seamless construction with rounded sides, electrostatically painted with antibacterial and chemically resistant paint (protective coating IGP-DURA®). Worktop made of acid-resistant stainless steel type 1.4404, AISI/ASTM 316L with IGP-DURA® coating, optionally without IGP-DURA® coating	○
MR DESIGN version - interior of the working area made entirely of acid-resistant, polished (mirror effect) stainless steel type 1.4301, AISI/ASTM 304 in a seamless construction with rounded sides, worktop and a V-shaped air inlet made of acid-resistant polished (mirror effect) stainless steel type AISI/ASTM 316L	○
Control of external exhaust fan	○
Preparation and execution of DQ, IQ, OQ, PQ procedures	○
Stylistic elements in a different color	○

<sup>1</sup> BioTectum 1.8 TecPRO worktop sectioned, removable

<sup>2</sup> Management system panel **TEC TURN@TOUCH™** (OPTION)

<sup>3</sup> BioTectum 1.8 (STANDARD)

# COLOR VERSIONS



# FRAME TYPES

for laminar flow cabinets  
of class II microbiological safety

## FRAME ON WHEELS



### FRAME DIMENSIONS:

■ Width ≈ 1000 / 1300 / 1650 / 1950 mm

## FRAME ELECTRIC



### FRAME DIMENSIONS:

■ Width ≈ 1000 / 1300 / 1650 / 1950 mm

## FRAME STANDARD



### FRAME DIMENSIONS:

■ Width ≈ 1000 / 1300 / 1650 / 1950 mm

## OPEN CABINET

## Function of washing the inside of the front glass



**TEC CLEAN™** for your safety, the construction of the cabinets has been designed to allow easy both sides cleaning of the front glass closing the working area.

To clean the inner part of the glass:

- Start the CLEAN program on the control panel - which will automatically raise the glass.
- Lift the front cover together with the glass. To facilitate the process of lifting the cover, it is supported by gas cylinders

## PROGRAM AUTOPROTECT

Connecting the cabinet with UPS emergency power supply and use of AutoProtect program allows you to continue working with the cabinet after a power failure and gives the necessary time for proper protection of the test material. In a split second, the power supply to the electrical sockets and solenoid valves is cut while maintaining proper, safe operating conditions of the cabinet.

The program works in two variants:

1. Alerts the operator about power failure (default setting) and leaves the decision to continue operating the cabinet to the operator, including closing the window and shutting down the unit
2. Automatic mode - work according to predefined settings : time of operation on UPS emergency power supply, followed by automatic closing the window and switching off the cabinet, each stage is signaled by an appropriate alarm message





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