

# WOLF LABORATORIES

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## CLASS II MICROBIOLOGICAL SAFETY CABINET

### WOLF BSC-EN

#### MICROPROCESSOR CONTROLLED WITH SINGLE OR DOUBLE FAN

##### π FOREWORD

BSC-EN safety cabinets belong to the latest generation of laminar airflow systems, combining rigid safety requirements with high quality construction.

BSC-EN has been designed as a Class II Biohazard cabinet according to EN 12469. Therefore it provides vertical laminar airflow with 70% of the air recirculated via the main HEPA filter whilst the remaining 30% is discharged through an exhaust HEPA filter. This cabinet is suitable for handling CDC 1-3, DPAG C-B1-B2 etiologic agents, providing operator, product and environmental protection



##### π APPLICATIONS

BSC-EN cabinets can be used in a wide range of disciplines, as defined in appropriate standards.

Especially suitable for applications such as:

- Microbiology
- Virology
- Haematology
- Cell culture
- Recombinant DNA
- Handling of hazardous agents to human beings or animals as defined in the appropriate international standards.

##### π BENEFITS

Sophisticated microprocessor based monitoring system

Sophisticated microprocessor based system of audible and visual alarms alerts the operator if the cabinet does not operate in complete safety.

Self-adjusting system to ensure a constant laminar airflow speed even in the presence of a progressive clogging of the filters.

The negative pressure plenum "bio-dynamic sealing" ensures that all contaminated particles are kept inside the system and are automatically drawn to the pressure chamber to be captured and by the main and exhaust filters.

The fan system assures that no part of the cabinet is under positive contaminated pressure to the laboratory, thus preserving environment and personnel from biocontamination risks.

Access from the front panel for ease of maintenance service.

Available in one motor (BSC-EN 1) as well as two motors (BSC-EN 2) versions for flexible performance selection in line with the cabinet's use.

## SPECIFICATIONS

**Construction:** Epoxy powder painted steel for improved strength and resistance to corrosion and atmospheric agents.

**Work Surface :** AISI-316 stainless steel completely perforated to ensure flow laminarity and air recycling at the work surface level. Frontal slots in the access area provide air barrier protection preventing any exchange of air between the inside of the cabinet and the environment.

On request the following work surfaces are available:

3 AISI-316 stainless steel perforated work surface in 3, 4, or 6 pieces

3 AISI-316 stainless steel solid work surface in 3, 4, or 6 pieces

**Work Chamber:** in AISI-304 stainless steel sheet.

**Absolute Filters :** HEPA filters, tested with D.O.P. aerosol. Their efficiency, higher than 99,995% MPPS - 0.005% penetration - ensures a performance exceeding the requirements of EN 1822, U.S. Federal Standard 209 e, British Standard 5295, VDI-2083 and AS 1386-1976.

The filtration system is designed to provide a barrier of air with minimum average speed over 0.4m/sec. according to EN-12469.

**Motor-blower/s: One centrifugal fan (BSCEN I) and two centrifugal fans (BSC-EN II),** direct driven motors, with protection factor IP-55, controlled by two automatic speed regulators and microprocessor system showing laminar flow and protection barrier work conditions.

**Microprocessor based monitoring system** new generation system for controlling the cabinet in a full digital way performs high level control and data processing.

The handy and practical keyboard and the rearlit LCD display keep the user constantly informed of the cabinet conditions and operation, in particular:

display of laminar airflow velocity and frontal air barrier velocity

display of inside and outside temperature

display of residual lifetime of HEPA filters, U.V. Lamp and charcoal filter (if installed)

display of total time of cabinet operation

display of power rating factor of the main and exhaust (if installed) motor-blowers.

### **Alarms for:**

out of range laminar airflow velocity and front air barrier velocity

front window opened.

HEPA filters clogging

UV lamp worn-out (if installed)

charcoal filter (if installed) saturated

blackout

signal of other possible malfunctions and relevant remedies.

**Power Supply :** 230 V, 50Hz, single phase.

**Lighting:** fluorescent tubes in built-in housing, placed outside the contaminated area.

**Front window :** stratified safety glass, to give ease of access for large items.

It is provided with gas spring to keep it open during maintenance or sanitization operations.

### **Additional Features:**

two vacuum or gas connections in the working area are provided, one with manual tap, the other with solenoid valve (on the righthand side).

A stainless steel spillage tray beneath the work surface collects spilt liquids.

A stainless steel front closure panel ensures the sealing of the cabinet for sterilization/fumigation .

An inlet allows the DOP test of the absolute HEPA filters.

Electrical socket with protection IP-44 (on the right-hand side)

Maintenance: access to filters, motorblower/s and control panel by lifting the front panel.

### **As option**

UV lamp for sterilization of the work chamber installed on the front closure panel, controlled by two timers, one with 0÷3 hours scale (1 minute steps), the other 3 fixed hours.

## Technical characteristics “BSC-EN 1/2”

Code	Model	Useful Dimensions mm			Overall Dimensions mm		
		W	H	D	W	H	D
O74 600110	BSC-EN 1-3	885	660	580	1090	1470	780
O74 600120	BSC-EN 1-4	1190	660	580	1395	1470	780
O74 600130	BSC-EN 1-5	1495	660	580	1700	1470	780
O74 600140	BSC-EN 1-6	1800	660	580	2005	1470	780
O74 600210	BSC-EN 2-3	885	660	580	1090	1470	780
O74 600220	BSC-EN 2-4	1190	660	580	1395	1470	780
O74 600230	BSC-EN 1-5	1495	660	580	1700	1470	780
O74 600240	BSC-EN 2-6	1800	660	580	2005	1470	780

Working aperture mm	Exhaust duct $\text{Æ}$	Temperature rise	Volts Hz	Noise dBA	Lighting lux	Vibration mm rms
200	200mm	<4° C	230/50	<65	>750	<0.005

## ACCESSORIES:

Code	Description
O74 704185	Epoxy powder painted modular stand for BSC-EN-3
O74 704195	Epoxy powder painted modular stand for BSC-EN-4
O74 704205	Epoxy powder painted modular stand for BSC-EN-6
O74 600500	UV Lamp for BSC-EN
O74 702020	Exhaust charcoal filter with housing for BSC-EN
O74 799521	Additional exhaust HEPA filter with housing for BSC-EN
O74 799510	Anti-blowback valve
O74 702050	Additional service connection for electrical power
O74 799790	Additional service connection for gas/vacuum (manual tap)