百神科技
BAISHEN TECHNOLOGY

Attention: Before operating BSW Series Clean Bench, user must read this operating manual carefully, please! Keeping the manual for reference.

BSW Series Clean Bench

Executing standard: Q/320500BSK 010-2004

OPERATING MANUAL

ISO9001: 2000 CERTIFIED

SUZHOU CLEANING TECH. RESEARCH INSTITUTE
BAISHEN TECHNOLOGY (SUZHOU) CO., LTD.

Welcome to use BSW Series Clean Bench, thank you warmly entering into our company's consumer team!

1. General

Along with science and technology's developing rapidly, air clean technology has already been used extensively in production and scientific research department of electron, nucleon, spaceflight, aviation, precision instrument, apparatus & meter, chemical industry, light industry, biological pharmacy, medicine and foodstuff.

The Clean Workbench is a kind of vertical unidirectional airflow cleaning device.

The Clean Workbench is a kind of vertical unidirectional air flow cleaning device, which equips an operating range with no dust and bacteria. It offers great effects on improving technical conditions and raising the accuracy purity and reality of the products, so this device is widely used in the biological cleaning technology.

2. Operating Environment

2.1 range of temperature :5 ℃~35℃

2.2 relative humidity :45%~75%(RH)

2.3 atmospheric pressure:86KPa -106KPa

2.4 cleanliness of operating environment : ≤ 300000 class

2.5 Uses Power supply: operating voltage 220 ±11V, 50Hz±1Hz

3. Technical Specifications

BSW Series Vertical Flow Bench

Model / parameter		BSW-320V	BSW-500V	BSW-580V	BSW-850V	BSW-880V-1
Cleanliness		100class≥0.5μm(FS-209E)				
Mean falling bacteria		≤0.5/Culture container • hour(φ90mm Culture container)				
Mean flow rate (m/s)		0.3～0.6(adjustable)				
Noise dB(A)		≤65				
Vibration/Half peak (μm)		≤5				
Illumination (LUX)		≥300				
Power supply		220V/50Hz				
Input(VA)		200	200	250	400	400
Weight (kg)		25	30	35	130	150
Dimensions(mm)	W1：(working zone)	320	495	580	850	880
	D1：(working zone)	320	495	580	600	730
	H1：(working zone)	350	400	500	800	520
	W：(outline size)	390	570	650	900	1040
	D：(outline size)	390	570	650	880	730
	H：(outline size)	650	870	970	1820	1630
Size & No. of HEPA(mm)		305×305×①	484×484×①	570×570×①	820×610×①	820×610×①
Daylight lamp / ultraviolet lamp specification and quantity(mm)		6W×① /6W×①	15W×① /15W×①	15W×① /15W×①	20W×① /20W×①	20W×① /20W×①

Model / parameter		BSW-880V	BSW-950V	BSW-1180V	BSW-1360V	BSW-1980V
Cleanliness		100class≥0.5μm(FS-209E)				
Mean falling bacteria		≤0.5/Culture container • hour(φ90mm Culture container)				
Mean flow rate (m/s)		0.3～0.6(adjustable)				
Noise dB(A)		≤65				
Vibration/Half peak (μm)		≤5				
Illumination (LUX)		≥300				
Power supply		220V/50Hz				
Input(VA)		400	250	250	650	800
Weight (kg)		150	80	80	280	350
Dimensions(mm)	W1：(working zone)	880	950	1180	1320	1980
	D1：(working zone)	700	640	640	700	700--∞
	H1：(working zone)	520	600	600	520	650
	W：(outline size)	1040	1025	1246	1480	2140
	D：(outline size)	700	650	650	700	700
	H：(outline size)	1605	1780	1780	1605	1805
Size & No. of HEPA(mm)		820×610×①	950×570×①	1170×570×①	610×610×②	915×610×②
Daylight lamp / ultraviolet lamp specification and quantity(mm)		20W×① /20W×①	30W×① /30W×①	30W×① /30W×①	20W×② /20W×②	30W×②

Note: Thick of falter can be selected 50 or 69mm.

BSW Series Horizontal Flow Bench

Model / parameter		BSW-650H	BSW-820H	BSW-850H
Cleanliness		100class≥0.5μm(FS-209E)		
Mean flow rate (m/s)		0.3～0.6(adjustable)		
Noise dB(A)		≤62		
Vibration/Half peak(μm)		≤5		
Illumination (LUX)		≥300		
Power supply		220V/50Hz		
Input(VA)		400	400	400
Weight (kg)		55	110	160
Dimensions(mm)	W1：(working zone)	615	820	850
	D1：(working zone)	400	480	650
	H1：(working zone)	535	600	600
	W：(outline size)	650	900	1010
	D：(outline size)	680	700	900
	H：(outline size)	625	1450	1450
Size & No. of HEPA(mm)		610×490×①	820×610×①	820×610×①
Daylight lamp / ultraviolet lamp specification and quantity(mm)		12W×①/12W×①	20W×①/20W×①	30W×①/30W×①

Model / parameter		BSW-1100H	BSW-1200H	BSW-1680H
Cleanliness		100class≥0.5μm(FS-209E)		
Mean flow rate (m/s)		0.3～0.6(adjustable)		
Noise dB(A)		≤62		
Vibration/Half peak(μm)		≤5		
Illumination (LUX)		≥300		
Power supply		220V/50Hz		
Input(VA)		400	450	650
Weight (kg)		160	200	200
Dimensions(mm)	W1：(working zone)	1100	1200	1680
	D1：(working zone)	650	650	480
	H1：(working zone)	650	600	600
	W：(outline size)	1260	1360	1760
	D：(outline size)	900	900	700
	H：(outline size)	1450	1450	1450
Size & No. of HEPA(mm)		950×570×①	1170×570×①	820×610×②
Daylight lamp / ultraviolet lamp specification and quantity(mm)		30W×①/30W×①	30W×①/30W×①	40W×①/40W×①

Note: Thick of falter can be selected 50 or 69mm.

4. Operating Principle

4.1 BSW series vertical unidirectional airflow

BSW series Clean Workbench is a kind of air partly cleaning devices of vertical single-direction. After being firstly filtered by the roughing air filter the indoor air is sucked into the static pressure case through variable velocity centrifugal machine. It is secondly filtered by high efficiency particulate air filter (HEPA). The cleaning flow through the outlet of the HEPA with a mean and certain crosscut velocity through the operating range takes the dust particles and biological particles away to make an operating range with no bacteria.

4.2 BSW series horizontal unidirectional air flow

The Clean Workbench is a kind of horizontal unidirectional airflow cleaning device which offers partly needed cleaning operating circles. After being firstly filtered by the roughing air filter the indoor air is sucked into the static pressure case through variable velocity centrifugal machine. It is secondly filtered by high efficiency particulate air filter (HEPA). The cleaning flow through the outlet of the HEPA with a mean and certain crosscut velocity through the operating range takes the dust particles and biological particles away to make an operating range with no bacteria.

5. Structural feature

The cabin of the Clean Workbench is made of first-class cold rolling galvanize steel plate (SECC), after bending, using the rivet joint technology, with the surface lacquer coated. Its table flat is made of stainless steel, which is beautiful and anti-rusting handle to avoid rusting.

Built –in HEPA filter in the sucking chamber.

The motor is a small low-noise variable-velocity centrifugal flow motor. The electronic control system offers reliable properties and facilities for operating.

By regulating the electronic-controlled flow motor to change the flow strength the outlet flow velocity is always within the ideal range to effectively prolong the life of the high-efficient filter which is the main part of this device and save the running cost of the device.

6. Installation

6.1 This device must be installed in the cleaning or sealed air-conditioned buildings.

6.2 The installing place must be far from the sources of dust and vibration.

6.3 The ground terminal of the power socket must be seriously grounded to ensure the safety of workers.

6.4 After installation, the inner and outside of the device should be cleaned with Super vacuum cleaners or other tool (such as shot silk cloth or silk fabric), which cannot make fiber.

6.5 After cleaning the device, the flow-velocity instrument should be used to measure the mean flow velocity in the cleaning operating range.

Turn the button on the operating panel to increase the flow rate of the flow motor while the mean flow rate is 0.30m/s. Otherwise turn the button on the operating panel to decrease the flow rate of the flow motor while the mean flow rate is 0.40 m/s till the mean flow rate keep within the range of 0.4m/s 20%.

7. Usage

7.1 The flow motor and ultraviolet bacteria-killer lamp should be on 50 minutes before operation to kill the microbe on the inner surface of the working cabin. After 30 minutes the bacteria-killer lamp should be off, meanwhile the fluorescent lamp is on.
7.2 Unnecessary things are not allowed to be put on the working table to assure the cleaning flow track in the working range not to be disturbed. In the cleaning operating range any obvious action to disturb the flow track is not allowed.
7.3 The mean flow rate of the operating range should be regularly (generally every two months) measured by the flow rate instrument. If it does not conform with the technical demands the voltage of the power supply of the flow motor should be increased to keep the working cabin under the best operating condition.
7.4 If the working cabin has not been used for a long time, before operating its circle must be cleaned with super vacuum cleaners or other tools, which cannot make fiber. At last, bactericidal agent or ultraviolet rays should be used to kill the bacteria.
6.5 Operating area's usage temperature can not be more than 60 ℃.

8. Maintenance

8.1 According to environmental clean extent, the coarse filter cloth should be regularly (generally every 2-3months) cleaned by removing (Dacron non-woven cloth) or replacing.
8.2 Killing the bacteria job in the surroundings should be regularly (generally a week) done. Meanwhile, in order to keep to clean, ultraviolet lamp surface is wiped with gauze which dips on organic solvent, such as alcohol or acetone to avoid affect disinfecting effect.
8.3 it must be replaced HEPA when the high-speed range of fan could not make working area wind speed reach to 0.30m/s,
8.4 when replacing the HEPA, open the top cover for the super cleaning workbench. (vertical unidirectional air flow); open the back cover for the super cleaning workbench.
8.5 after Replacing HEPA, use the CLJ —03A lasers dust particle counter to check the frame seal condition and regulate the fan voltage, keep the average wind speed in operating area between 0.32m/s~0.48m/s, use CLJ—03A lasers dust particle counter again to check cleanliness.
8.6 when checking and maintenance, please cut off power switch and pull out the power plug.

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