Coating Booth

General catalog







VBW Rear Maintenance Type Venturi Booth with Water Flow Board



Principle of the Collection Mechanism

The large and heavy high-speed paint mist collides with the water flow on the front water flow panel for collection. The remaining paint mist and air flowed into the main body of the spray booth by the suction of the fan, and then subjected to the centrifugal force on the semicircular surface of the swirl chamber, colliding on the water film for collection.

The paint mist that has not collided with the water film will collide on the water droplets generated at the front end of the swirl chamber and be collected. The water droplets will collide on the three-stage separator for collection, and then return to the back of the water tank through the drain tank.



Features

Excellent collection efficiency

The swirl chamber system utilizing centrifugal force provides very high efficiency in collecting paint mist: 97% for melamine paint and 96% of plastic paint and lacquer (efficiency depends on the property of the paint).

Easily select models suitable for site conditions

Five standard models with a front width of 1.5m to 4.0m are available for selection according to specifications.

Easy cleaning, maintenance, and inspection

The swirl chamber and return pipe are provided as separate units. The swirl chamber has been made to be lighter in weight, and it can easily be separated and taken out from the water tank, making it easy to clean, maintain, and inspect the interior of the water tank.

Rear Maintenance Type Venturi Booth VBVV with Water Flow Board

Specifications

Items	Model	VBW-15D	VBW-20D	VBW-25D	VBW-30D	VBW-40D			
	Melamine Paint	97 (reference value)							
Collection	Lacquer Primer Paint	96 (reference value)							
efficiency (%)	Acrylic Urethane Paint			93 (reference value)					
	Polyurethane Paint			95 (reference value)					
Noise level	Front 1.5m	84	84 84		86	88			
dB	Side 1.5m	79	76	78	80	84			
	Туре		Turbo fan (motor direct connection type)						
Exhaust fan	Fan number	#3	#4	#4	#4	#4 1/2			
	Air flow (m ³ /min)	110	145	180	215	290			
	Motor type	Enclosed fan 380v 4P							
	Output (kW)	3	.7	5.	11				
	Туре	In-line pump							
Pump	Motor type		E	Enclosed fan 380v 2P					
	Output (kW)	1	.5	2.	2	3.7			
Cleaning door		2	locations		4 locations				
Body color				N-7.5(Gray)					
Water volume	e (L)	890	1195	1480	1780	2365			
Body mass (kg)		640	740	850	880	1200			
Total mass (kg	g)	1530	1935	2330	3320	3565			

Dimensions

Items	Model	VBW-15D	VBW-20D	VBW-25D	VBW-30D	VBW-40D				
	Front (W)	1500	2000	2500	3000	4000				
Body	Depth (D)			2750						
dimension (mm)	Water tank		2250							
	Ceiling height (h)									
	Overall height (H)	2890	2890	2995	2995	3100				
	Fan center height (H1)	2357	2357	2385	2385	2412				
Exhaust fan	В	390	460	460	460	500				
(mm)	С	437	510	510	510	550				
	E	285	325	325	325	364				
	Inner dimension of companion flange (F×G)	572×386	652×441	652×441	652×441	730×496				







VB Venturi Spray Booth VB Type



Principle of the Collection Mechanism

The air containing paint mist is drawn at high speed into the swirl chamber by exhaust fan. The paint mist is separated from the air flow by the centrifugal force of the swirl chamber and collected as it hits the water film. The eliminator removes water to prevent it from entering the exhaust port. Water and paint mist are returned to the front of the water tank via the return pipe.



Features

Excellent collection efficiency

The swirl chamber system utilizing centrifugal force provides very high efficiency in collecting paint mist: 97% for melamine paint and 96% of plastic paint and lacquer paint (efficiency depends on the property of the paint).

Easy cleaning, maintenance, and inspection

The swirl chamber and return pipe are provided as separate units. The swirl chamber has been made to be lighter in weight, and it can easily be separated and taken out from the water tank, making it easy to clean, maintain, and inspect the interior of the water tank.

The cleaning door on the front panel allows the eliminator to be cleaned with ease.

Reduction in the exhaust duct installation cost

The number of exhaust fans in large models (VB-40D and 50D) has been reduced to one, resulting in a reduction in the exhaust duct installation cost.

Suggestion

- To prevent sludge from becoming non-sticky and to prevent booth rusting, be sure to keep the pH value in the water tank within range of 9-11 with sludge remover. Be careful when using paints with high acidity.
- Remove the sludge in the water tank regularly to prevent accumulation.

Venturi Spray Booth VB Type

Specifications

Items	Model	VB-15D	VB-20D	VB-25D	VB-30D	VB-40D			
	Melamine Paint	97 (reference value)							
Collection	Lacquer Primer Paint	96 (reference value)							
efficiency (%)	Acrylic Urethane Paint	93 (reference value)							
	Polyurethane Paint			95 (reference value)					
Noise level	Front 1.5m	84	84 84		86	88			
dB	Side 1.5m	79	76	78	80	84			
	Туре	Turbo fan (motor direct connection type)							
	Fan number	#3	#4	#4	#4	#4 1/2			
Exhaust fan	Air flow (m3/min)	110	145	180	215	290			
	Motor type	Enclosed fan 380v 4P							
	Output (kW)	3	.7	5.	.5	11			
Cleaning door		2	locations		4 locations				
Body color				N-7.5(Gray)					
Water volume	e (L)	630	840	1050	1260	1680			
Body mass (kg	g)	550	740	825	830	1100			
Total mass (kg	g)	1180	1580	1875	2090	2780			

Dimensions

Items	Model	VB-15D	VB-20D	VB-25D	VB-30D	VB-40D						
	Front (W)	1500	2000	2500	3000	4000						
Body dimension	Depth (D)		2000									
	Water tank	1500										
	Ceiling height (h)	2000										
	Overall height (H)	2890	2890	2995	2995	3100						
	Fan center height (H1)	2357	2357	2385	2385	2412						
Exhaust fan	В	390	460	460	460	500						
(mm)	С	437	510	510	510	550						
. ,	D	285	325	325	325	364						
	Inner dimension of companion flange (F×G)	572×386	652×441	652×441	652×441	730×496						







R

VBM Rear Maintenance Venturi Booth



Principle of the Collection Mechanism

The air containing paint mist is drawn at high speed into the swirl chamber by the exhaust fan. The paint mist is separated from the air flow by the centrifugal force of the swirl chamber and collected as it hits the water film. The eliminator removes water to prevent it from entering the exhaust port. Water and paint mist are returned to the front of the water tank via return pipe.



Features

Maintenance is more convenient

The sludge stays on the back of the water tank. Even if the spraying operation is in progress in the front, the sludge recovery operation can be carried out on the back.

Easily select models suitable for site conditions

Five standard models with a front width of 1.5m to 4.0m are available for selection according to specifications.

Specifications & Dimensions

Items	Model	VBM-15D	VBM-20D	VBM-25D	VBM-30D	VBM-40D				
	Туре		Turbo fan (motor direct connection type)							
F Exhaust fan _A	Fan number	#3	#4	#4	#4	#4 1/2				
	Air flow (m3/min)	110	145	180	215	290				
	Pressure (hPa)			9.8						
	Motor type		E	nclosed fan 380v 4P						
	Output (kW)	3.	.7	5	11					
	Front (W)	1500	2000	2500	3000	4000				
Body	Depth (D)			2750						
dimension	Water tank			2250						
(mm)	Ceiling height (h)			2000						
()	Overall height (H)	2890	2890	2995	2995	3100				
Exhaust fan	Fan center height (H1)	2357	2357	2385	2385	2412				
EXHAUSTIGH	Inner dimension of companion flange (F×G)	572×386	652×441	652×441	652×441	730×496				

Venturi Booth Option



VBL Model with Normal Fluorescent Lights

A standard Venturi booth with normal fluorescent lights attached.

Specifications

Model	Specifications	No. of units
VBL-15D · 20D · 25D		1
VBL-30D · 35D · 40D	200V 40W×2 lights	2
VBL-50D		3

Switch and wiring specifications (for fluorescent lamps)

Switch : Control panel

Wire : Vinyl cab tire cable



VBD Model Safety-Enhanced Explosion-Proof (with Fluorescent Lights)

All the above-mentioned VBL electrical components are of increased safety and explosion-proof specifications. However, the wiring between the VB-40D and 50D star-delta starter cabinet, motor and switch box (the dotted line in the figure below) shall be constructed by the user.

Fluorescent lamp specifications

Motor			Enhanced safety explosion-proof		
Fluorescent lamp		ent lamp	afety-enhanced explosion-proof. No. of units same as VBI		
Wiring			Waterproof Plica tube		
	For	Switch how	Explosion-proof push button (VB-40D)		
Swi	. mo	Switch box	Explosion-proof magnetic switch (VB-15D ~ 30D)		
tch	tor	ថ្មី Control panel Standard Star Delta Starter (VB-4			
For lights		r lights	Explosion-proof tumbler switch		



VBH Model High Ceiling Specification

This model is standard Venturi booth with its hood located 500mm higher. The exhaust fan is of the standard specifications.

Model	Hood effective height (h)		Main unit to	tal height (H)	Fan central height (H ₁)		
Widdei	50Hz	60Hz	60Hz	50Hz	50Hz	60Hz	
VBH-15D			28	90	2357		
VBH-20D		_		2890	2385	2357	
VBH-25D				95	2385		
VBH-30D	25	00	29	2995		2385	
VBH-35D		-		3040	2537	2385	
VBH-40D			3280	3100	2537	2385	
VBH-50D			32	80	2537		



VBC Air Balance Booth

Forced supply of clean air to achieve a more beautiful painting and a more comfortable working environment.



Features

• The chamber filter area is large enough to provide a gentle blow at air flow rates from 1.0 to 1.5 m/s.

- The air supply chamber filter can be replaced from the floor to improve maintainability.
- With the chamber sticking out from the booth main body by 500mm, the booth requires less floor space to install.
- The following are available as optional specifications.
 - Air volume adjustment inverter specifications
 - ${\rm o}$ heating device (electric heating, steam) HEPA filter specifications.

	Supply & exhau		Air supply fan Exhaust fan		Dimension (mm)			No. of air supply filters				
Model	booth		Model	L/M	Model						Secor	ndary
		m³/min		K V V	woder	KVV				Filliary	1000	500
VBC-15D	VB-15D	115	KF4.5	1.5	#3.5	3.7	1500	450	3150	4	1	1
VBC-20D	VB-20D	140	KF5.0	1.5	#4	3.7	2000	450	3150	4	2	-
VBC-25D	VB-25D	180	KF5.0	2.2	#4	5.5	2500	450	3150	4	2	1
VBC-30D	VB-30D	215	KF5.6	2.2	#4	5.5	3000	450	3150	4	3	-
VBC-40D	VB-40D	290	KF6.3	4	#4.5	11	4000	700	3400	4	4	-

BB Baffle Booth

Principle of the Collection Mechanism

The baffle plate acts as a primary filter that collides and collects the paint mist. Baffle plate surface is specially processed to enhance the collection efficiency, and because of the unique combination and arrangement of baffle plate, most of the paint mist will be collected here. Secondary filtration net will then filter and collect small paint mist that didn't stick to the baffle plate.





Suitable for users in the following situations:

- Since it doesn't use water, there is no need to concern about freezing.
- It is suitable for places that are unable to install piping or difficult to do wastewater treatment such as second floor of factory.

Features

Filter cleaning and replacement are more concise

The primary and secondary filters can be easily cleaned and replaced on the front of the spray booth.

Use a filter that will not clog

The plate adopts special processing to improve the collection efficiency, even if the paint adheres, it will not be clogged, and at the same time keep the suction wind speed stable.

Excellent collection efficiency

Adopting the dual filtration method of primary and secondary filters, the collection efficiency of paint waste residues are excellent: 97% for melamine paint, and lacquer paint reaches more than 92% (efficiency depends on the property of the paint).

Dimensions

Items	Model	BBDG-10D (mm)	BBDG-15D (mm)	BBDG-20D (mm)	BBDG-25D (mm)			
	Width (W)	1000	1500	2000	2500			
	Installation width (W)	1000	1500	2000	2500			
Body	Depth (D)	1500						
	Ceiling height (h)	2000						
	Overall height (H)		2525					
B		425						
fan	Companion flange inner diameterφ	611						



% The pressure loss of the exhaust duct should be 0.3hPa $\{3mmH_2O\}$ or less.

Specifications

Items		Model	BBDG-10D	BBDG-15D	BBDG-20D	BBDG-25D	Remarks			
Melamine Paint				96 (Refer	ence value)					
Collection	Lacquer P	aint		92 (Refer	ence value)					
efficiency (%)	Acrylic Ureth	iane Paint		88 (Refer	ence value)		_			
	Polyuretha	ne Paint		90 (Refer	ence value)					
Noiso loval dB(A)	Front	1 Em	80	76	8	32	Depends on the installation environment			
NOISE IEVELUB(A)	Side	1.500	74	69	69 75		and measurement conditions.			
	Туре			Axial fa	inφ600					
Exhaust fan	Air volume m ³ /min		84	122	170	198				
	Motor typ	ре	Enclosed fan 4P							
	Output	kW	1	.5	2	.2				
Baffle plate (pieces)			52	84	108	140	Note that the air volume and speed will change			
Secondary filter (pieces	s)		8	12	16	20	depending on the filter clogging and duct shape			
Operation switch				Moto	r breaker					
Body material			N-7.5	(Gray)						
Mass		kg	295	319	356	380				
Accessories				Instructi	on manual					
Primary power supply (3-ph	ase 200V) witl	h breaker	10)A	1	5A				

Spray Booth Option Model

BBDG Model High Ceiling Specification

The height of the hood has been increased by 500mm, and the exhaust fan is also a standard specification.

Dimensions

Model	Body dimension (mm)						
wouer	Hood height (h)	Overall height (H)					
BBDG-10D							
BBDG-15D	2500	2525					
BBDG-20D	2500	2525					
BBDG-25D							



Precautions

Type of paint that should not be used

Some types of paint may ignite spontaneously when paint mists adhere to and accumulate on the filter, baffle plate, etc.

- $\boldsymbol{\cdot}$ Oil-based paint using boiled oil or linseed oil as solvent.
- Oxidized polymer paint

Paint with a mixture of hardener, promoter, etc.

Fast-drying polyurethane paint

Paint containing styrene to promote the drying process.

 $\boldsymbol{\cdot}$ Other types of paint that may ignite spontaneously

If you remove baffle plates smeared with such them piled up, the paint may ignite spontaneously. Submerge the plates in water immediately, and scrap them as industrial waste.

PLV-505 Automatic Water Supply System

Features

- Saves labor in water level management
- · A constant water level keeps the booth performance good
- · Can be installed in various painting booths
- · No auxiliary water tank is needed, resulting in space savings
- Detect the upper and lower limits of the water level and control the ON/OFF of the water supply valve

Overview of automatic air supply system

Basic principle

When a small amount of air is pushed out as air bubbles from the detection pipe inserted into the water, it needs to be related to the water level (insertion depth) proportional to the pressing force. The system detects this pressure (back pressure) with a high sensitivity sensor and operates an air pressure valve for water supply according to the water level so that the coating booth remain within a certain range.



Installation

Precautions to fresh air inlet

The spray booth discharges a large amount of air, so please be careful about the air supply.

A Supply air volume

Supply the same amount of air supply to the exhaust volume of the spray booth you are using.

B Air supply position

Provide an air supply port on the back of the worker and make the wind direction straight with respect to the spray booth.



Main specifications

Power supply: AC200V
Electric specs: Normal

③Air pressure: 0.4 ~ 1Mpa
④Air consumption: 5L/min or less



Precautions to exhaust duct position

A In order to minimize pressure loss, minimize the number of bends and secure a sufficient duct area.

B Do not bend at a right angle, and install it smoothly with a bend duct to minimize pressure loss.



Caution Primary power source capacity Check the electric capacity and wiring thickness based on the specifications of the spray gun.



Solution of the second QMS : TQ-

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