

Desktop Duster Box ZVB Series



How to Order

ZVB **20** - **B** **S** **A** - **□**

① ② ③ ④ ⑤

① Size

20
40

② Additional air blow

B	With additional air blow
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③ Photoelectric sensor

Nil	None <small>Note 1)</small>
S	With photoelectric sensor <small>Note 2)</small>

Note 1) It is necessary to connect an external switch to the external input terminal on the back side of the product.

Note 2) This is a regression reflection type photoelectric sensor. Completely transparent workpieces detection is not available.

④ AC adaptor

Nil	None (exclusive DC plug attached)
A	With AC adaptor <small>Note 3)</small>

Note 3) The AC power supply cable attached to the product has the configuration applicable to socket of 100 VAC. The cap needs to be changed when the cable is connected to a socket of voltage other than 100 VAC.

⑤ Option Note 4)

Nil	None
D	With 3 m exhaust duct hose (hose band attached)
P	With dust collecting bag (hose band attached)
S	With additional air blow adjustment needle valve

Note 4) When two or more options are specified, indicate them alphabetically.

Options (* The number of sets provided when selected in ⑤ differs by the size.)

① 3 m exhaust duct hose

Model: ZVB-D3A

* ZVB20...1 set
ZVB40...2 sets



② Dust collecting bag

Model: ZVB-P1A

* ZVB20...1 set
ZVB40...2 sets



③ AC adaptor

Model: ZVB-AC1



④ Emitter

Model: IZN10-NT-X325



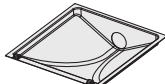
⑤ Additional air blow nozzle

Model: ZVB-N10A



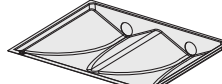
⑥ Suction slope (For ZVB20)

Model: ZVB-V20A



⑦ Suction slope (For ZVB40)

Model: ZVB-V40A



Specifications

Component	Item	Model	ZVB20	ZVB40
Ionizer	Type		Nozzle type	
	Number of mounted units		1	2
	Ion generation method		Corona discharge type	
	Method of applying voltage		High frequency AC type	
	Discharge time		0.3 s (1000 V→100 V)	
	Offset voltage		Within ±10 V (Static neutralization distance: 100 mm from the nozzle)	
Dust collector	Type		Pneumatic type, Vacuum flow	
	Number of mounted units		1	2
	Supply pressure range		0.1 to 0.7 MPa	
	Exhaust flow rate		410 to 1580 L/min (ANR)	820 to 3160 L/min (ANR)
Body	Fluid		Air (Dry air)	
	Operating pressure range		0.2 to 0.8 MPa	
	Power supply voltage		85 to 264 VAC 50/60 Hz (when using the exclusive AC adaptor)	
	Operating time setting		Continuous/Timer [2/5/10 s]	
	Additional air blow setting		Continuous blow/Pulse blow [50/100 ms intervals]	
	Operating temperature range		0 to 55°C <small>Note 1)</small>	
	Air consumption <small>Note 2)</small>		420 L/min (ANR)	800 L/min (ANR)
	Weight <small>Note 3)</small>		5.1 kg	9.9 kg

Note 1) No freezing

Note 2) When supply pressure to the dust collector is set to 0.3 MPa (ZVB20)/0.4 MPa (ZVB40) and additional air blow supply pressure to 0.2 MPa. Based on SMC's measuring conditions.

Note 3) Overall weight excluding optional parts

IZS

IZN

IZF

ZVB

IZD

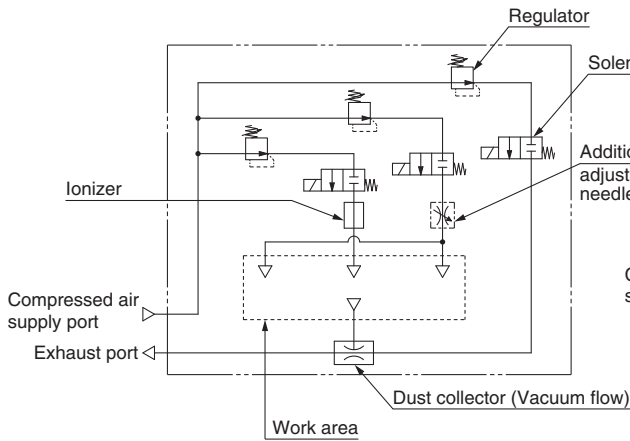
IZE

IZH

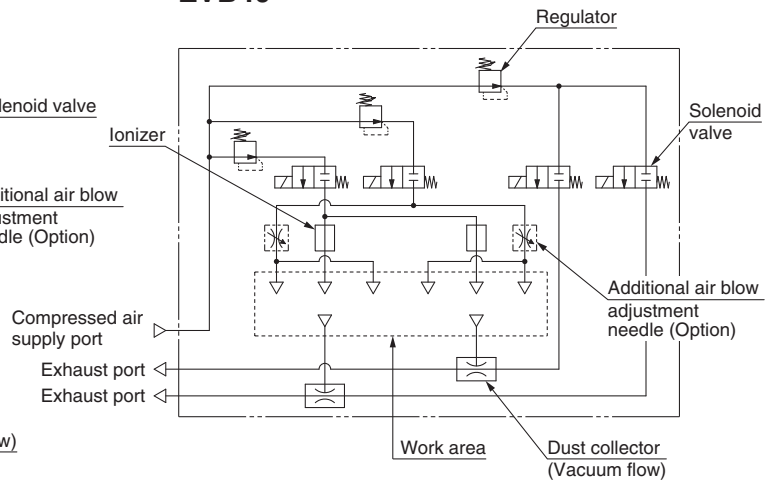
ZVB Series

Air Circuit Diagram

ZVB20

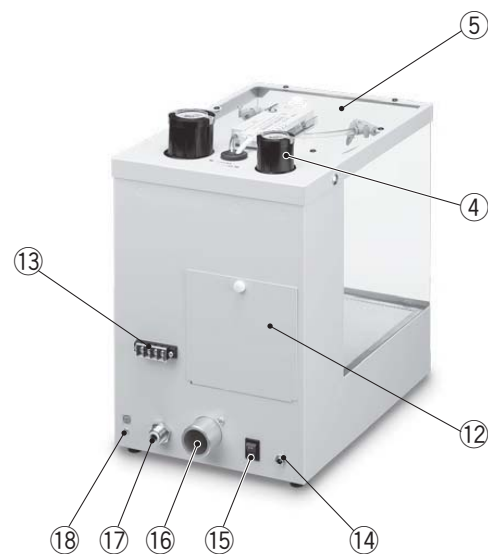
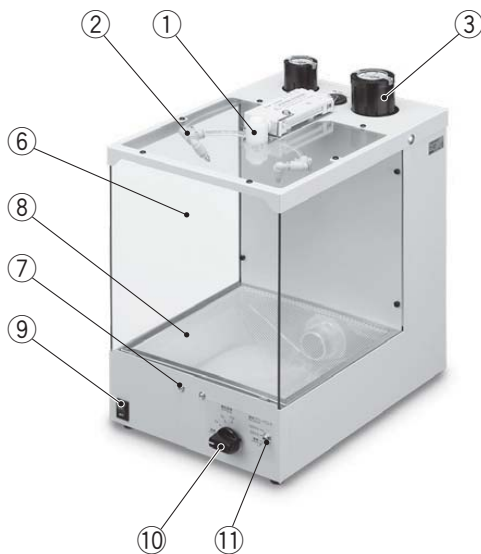


ZVB40



Construction

(Photo shows the ZVB20.)



Component Parts*

No.	Description	Note
1	Ionizer	ZVB20: 1 unit, ZVB40: 2 units, With diffusion nozzle
2	Additional air blow nozzle	ZVB20: 2 pcs., ZVB40: 4 pcs., Nozzle diameter: $\phi 1.0$
3	Regulator for adjusting supply pressure to the dust collector	With pressure gauge
4	Regulator for adjusting supply pressure for additional air blow	With pressure gauge
5	Top cover assembly	Static electricity restriction grade (PET)
6	Side cover	Static electricity restriction grade (PET)
7	Photoelectric sensor	ZVB20: 1 pc., ZVB40: 2 pcs., Reflection type (built into the body)
8	Mesh	Detachable
9	Power supply switch	
10	Operation time set switch	Continuous/2 s/5 s/10 s

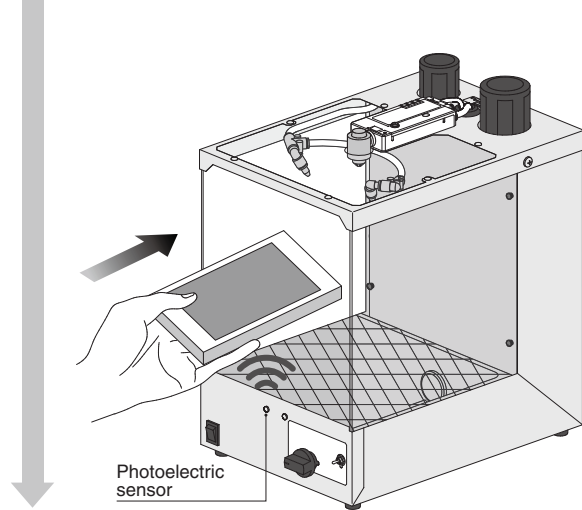
No.	Description	Note
11	Additional air blow pulse operation time set switch	Continuous (no pulse)/50 ms/100 ms
12	Cover for valve maintenance	Used when replacing the built-in valve
13	Terminal block	Signal output/External input/COM+/COM-
14	AC adapter (DC plug) entry	
15	ON/OFF switch for dust collector	
16	Exhaust port of the dust collector	ZVB20: 1 port, ZVB40: 2 ports, Exhaust duct hose connection port(O.D.: $\phi 32$)
17	Compressed air supply port	ZVB20: $\phi 8$, ZVB40: $\phi 10$
18	Grounding screw	

* Although the components are common to the ZVB20 and ZVB40, the number of attached parts differs. (Refer to the note column.)

Operation Flow

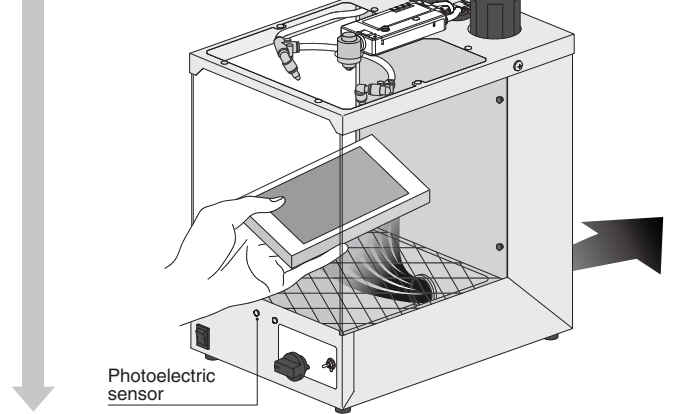
The following shows the operating sequence during continuous operation and timer operation with the photoelectric sensor.

- 1 Main unit operation**
The photoelectric sensor detects the workpiece.



- 4 Stop of static neutralization and dust removal**

The operation of the ionizer (static neutralization) and the additional air blow (dust removal) stops by the progression of the set time (2/5/10 seconds), or the OFF detection of the photoelectric sensor after a workpiece is removed. (However, the dust collector continues to operate for 0.5 seconds.)



IZS

IZN

IZF

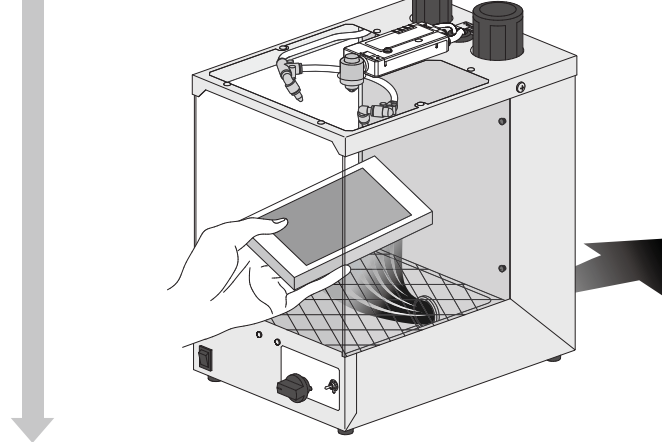
ZVB

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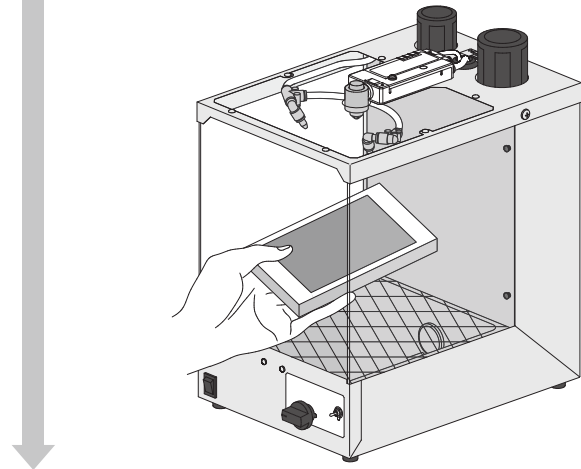
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- 2 Start of dust collection**
The dust collector (vacuum flow) is activated, and starts the dust collection.

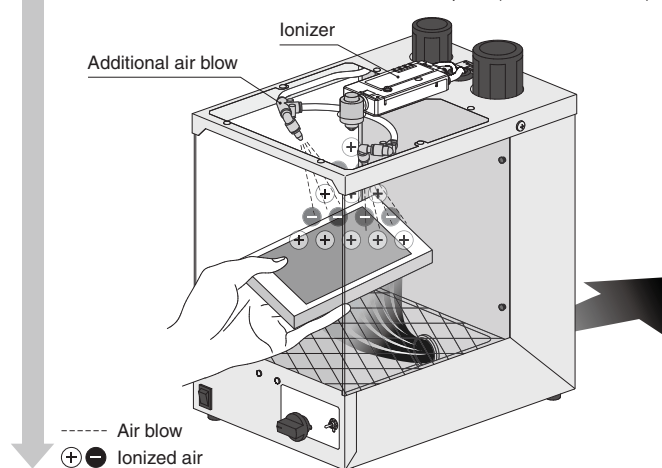


- 5 Stop of dust collection**
Stops the operation of the dust collector (vacuum flow).

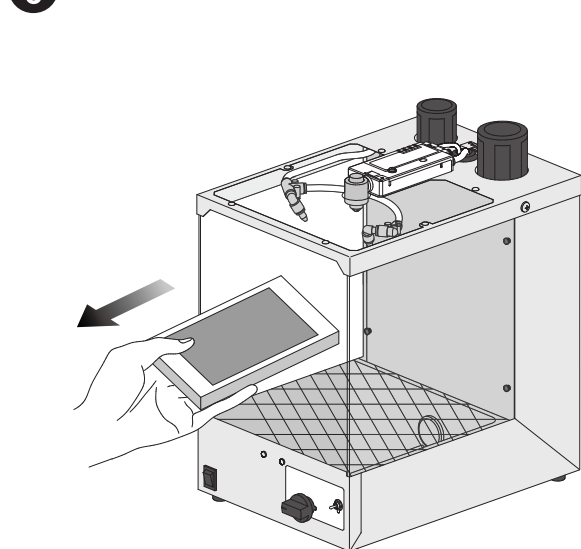


- 3 Start of static neutralization and dust removal**

The dust collector (vacuum flow) is activated, and starts the ionizer (static neutralization) and the additional air blow (dust removal) after 0.5 seconds.
* The additional air blow can be set to continuous or pulse (50/100 ms intervals).



- 6 Remove the workpiece.**

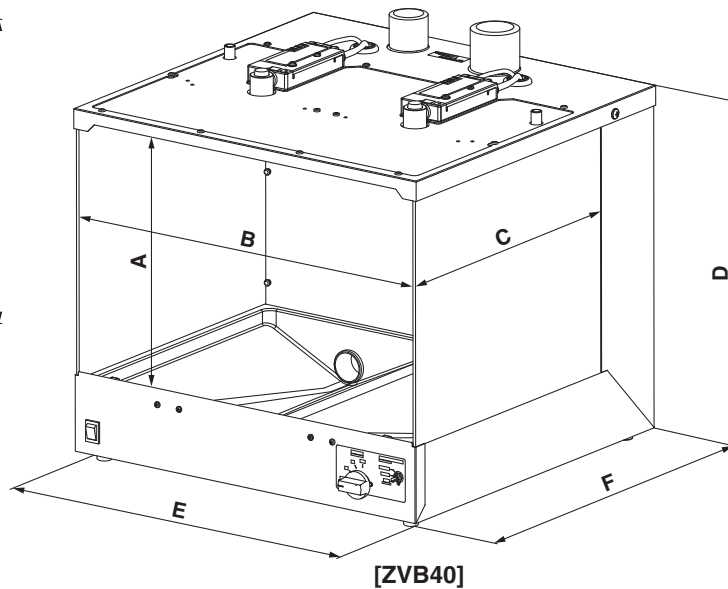
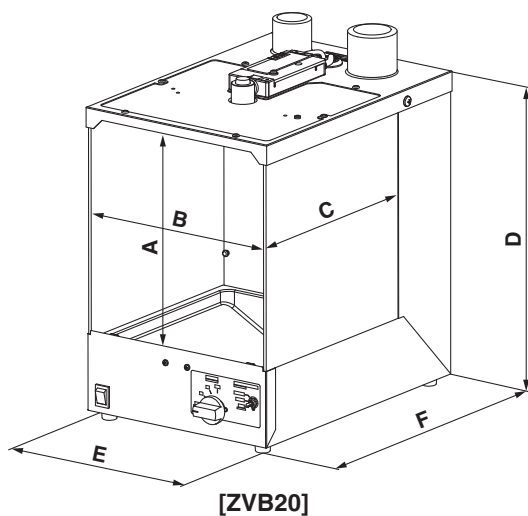


--- Air blow
⊕ ⊖ Ionized air

ZVB Series



Dimensions



Model	A	B	C	D	D' Note 1)	E	F	F' Note 2)
ZVB20	211	202	212	310	351	210	297	341
ZVB40	248	392	298	349	390	400	384	428

Note 1) Dimension D' is the overall height including the knob of the regulator.

Note 2) Dimension F' is the overall depth including the switch lever on the front and the exhaust port on the back.

Refer to the operation manual for detailed dimensions.