

Air Tank

Series VBAT



How to Order



Made to Order

(For details, refer to page 11.)

- Compact connections are possible with booster regulators.
- It can be used alone as a tank.
- Also partially compatible with overseas standards



VBAT05A1



VBAT10S1



VBAT20S1



VBAT38A1

Standard Product (For Japanese Market)

Note) The thread type for each port is Rc.

VBAT 10 A 1 - S

Tank internal capacity

Symbol	Internal capacity
05	5 L
10	10 L
20	20 L
38	38 L

Material

Symbol	Material
A	Carbon steel (SS400)
S	Stainless steel 304

Option

Symbol	Option
Nil	None
V	Drain valve

Option

Symbol	Option	Applicable model
Nil	None Note)	All models
R	Safety valve (Set pressure: 1 MPa)	VBAT05A1, VBAT10A1 VBAT20A1, VBAT38A1
S	Safety valve (Set pressure: 2 MPa)	VBAT05A1 VBAT10A1

Note) A safety valve port is provided only when option R or S is selected.

CE Certified Product

VBAT 10 A F - SV - Q

Tank internal capacity

Symbol	Internal capacity
05	5 L
10	10 L
20	20 L
38	38 L

Material

Symbol	Material
A	Carbon steel (SS400)

CE certified product
(Self-declaration document attached)

Accessories

Symbol	Accessories	Applicable model
RV	Safety valve (Set pressure: 1 MPa) Drain valve	VBAT20A VBAT38A
SV	Safety valve (Set pressure: 2 MPa) Drain valve	VBAT05A VBAT10A

Thread type

Symbol	Thread type
Nil	Rc
F	G

Caution

When used as a single unit (not connected with a booster regulator) and pressurized at over 1 MPa at normal temperatures, the air tank falls under the scope of the "High Pressure Gas Safety Act" in Japan.

Product Not Applicable to the ASME Standard

VBAT 05 A N 1 - SV - X11

Tank internal capacity

Symbol	Internal capacity
05	5 L
10	10 L

Material

Symbol	Material
A	Carbon steel (SS400)

Thread type

Symbol	Thread type
Nil	Rc
N	NPT Note)

Product not applicable to the ASME standard

Option

Symbol	Option
Nil	None Note 1)
V	Drain valve Note 1)
S	Safety valve (Set pressure: 2 MPa) Note 1)
SV	Safety valve (Set pressure: 2 MPa) Note 2) Drain valve

Note 1) Customers are responsible for preparing a safety valve.

Note 2) Safety valve does not meet ASME specifications.

Note) Pressure unit of NPT products: psi. This product is for overseas use only according to the new Measurement Law. (The SI unit type is provided for use in Japan.)



Series VBAT

Specifications

Standard Product (For Japanese Market)

Model	VBAT05□1	VBAT10□1	VBAT20□1	VBAT38□1
Fluid	Compressed air			
Tank capacity (L)	5	10	20	38
Max. operating pressure (MPa)	VBAT□A1	2.0		1.0
	VBAT□S1	2.0		
IN port size	3/8	3/8	1/2	1/2
OUT port size	3/8	1/2	1/2	3/4
Ambient and fluid temperature (°C)	0 to 75			
Weight (kg)	VBAT□A1	6.6	10	14
	VBAT□S1	3.2	4.9	12
Material	VBAT□A1	Carbon steel (SS400)		
	VBAT□S1	Stainless steel 304		
Paint	VBAT□A1	Outside: Silver paint, Inside: Rustproof paint		
	VBAT□S1	None		

Note) The accessories and options are included in the same container.

CE Certified Product

Model	VBAT05A□-SV-Q	VBAT10A□-SV-Q	VBAT20A□-RV-Q	VBAT38A□-SV-Q
Fluid	Compressed air			
Tank capacity (L)	5	10	20	38
Max. operating pressure (MPa)	2.0		1.0	
IN port size	3/8	1/2	3/4	3/4
OUT port size	3/8	1/2	1/2	3/4
Ambient and fluid temperature (°C)	0 to 75			
Weight (kg)	6.6	10	14	21
Material	Carbon steel (SS400)			
Paint	Outside: Silver paint, Inside: Rustproof paint			

Note) The accessories and options are included in the same container.

Product Not Applicable to the ASME Standard

Model	VBAT05A□1-□-X11	VBAT10A□1-□-X11
Fluid	Compressed air	
Tank capacity (L)	5	10
Max. operating pressure (MPa)	2.0	
IN port size	3/8	3/8
OUT port size	3/8	1/2
Ambient and fluid temperature (°C)	0 to 75	
Weight (kg)	6.6	11
Material	Carbon steel (SS400)	
Paint	Outside: Silver paint, Inside: Rustproof paint	

Note) The accessories and options are included in the same container.

Design

Warning

1. Operating pressure

- Operate this product below the maximum operating pressure. If it is necessary, take appropriate safety measures to ensure that the maximum operating pressure is not exceeded.

• When the tank alone is used

Use a pressure switch or a safety valve to ensure that the maximum operating pressure is not exceeded.

2. Connection

- Connect a filter or a mist separator to the OUT side of the tank. Because the inner surface of the tank is untreated, there is a possibility of dust flowing out to the outlet side.
- A VBA booster regulator can be connected directly with the tank accessories as indicated combinations below.

		Booster regulator		
		VBA1□A	VBA2□A	VBA4□A
Air tank	VBAT05A	●	—	—
	VBAT05S	●	●	—
	VBAT10A	—	●	●
	VBAT10S	—	●	●
	VBAT20A	—	●	●

Selection

Caution

- Consider the operating conditions and operate this product within the specification range.
- When using the air tank with a booster regulator, refer to "Sizing" on page 5 or SMC Pneumatic System Energy Saving Program.

Mounting

Caution

1. Accessories

- Refer to the operation manual (VBAT-M1, M2, M3, M4) regarding combining booster regulators with older model air tanks.
- The accessories are secured by bands to the feet of the air tank. Once removed, make sure not to lose them.

2. Installation

- Install the tank away from people. It is dangerous if the accumulated air inside the tank were to seep out.
- Do not mount the air tank on a moving part or a place with vibration.
- When connecting a booster regulator with the tank, refer to the operation manual first, which is provided with the air tank before assembling.
- Refer to the operation manual regarding mounting methods when using long bolts.
- To mount the air tank on a floor surface, use the four holes to secure the tank with bolts or anchor bolts.

Maintenance

Warning

1. Inspection

- The use of pressure vessels could lead to an unexpected accident due to external damage or internal corrosion caused by drainage. Therefore, make sure to check periodically for external damage, or the extent of internal corrosion through the port hole. An ultrasonic thickness indicator may also be used to check for any reduction in material thickness.

2. Draining

- If this product is used with a large amount of drainage, the drainage could flow out, leading to equipment malfunction or corrosion inside the tank. Therefore, drain the system once a day.