Air Saver Unit

The power saving and CO₂ reduction products
An easy solution to your environmental protection efforts! The air saving unit contributes to power savings and CO₂ reduction.

**Air Saver Unit ASC/ASV Series**

The Air Saver Unit can reduce air consumption by up to 50% and improves blow efficiency in air blow applications.

When an air saver unit is used, several positive effects can be expected. Air blow accounts for almost 50% of all compressed air used in plants. The air saver unit with a switching valve technology for air blow. Can reduce air consumption by up to 50%!

- Large reductions in plant air consumption.
- Savings in plant compressor power consumption.
- Reduction in plant CO₂ emissions.
- Big contribution to energy-saving activities.

Savings example (Using 1 ASV5000, Unit 8 hours/day and 20 days)

<table>
<thead>
<tr>
<th>Flow</th>
<th>4,888 NL/min</th>
<th>⇒</th>
<th>2,444 NL/min</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO₂ discharge</td>
<td>14.8 t</td>
<td>⇒</td>
<td>7.4 t</td>
</tr>
<tr>
<td>Cost</td>
<td>USD 384/month</td>
<td>⇒</td>
<td>USD 192/month</td>
</tr>
</tbody>
</table>

Total air saver unit cost reduction per year = USD$2,304
Pulsed air by Air Saver Unit reduces air consumption.

The Air saver unit is a valve that converts a continuous air blow to a pulsed air blow without the need for any other external control. Air is blown with a series of ON and OFF pulses. When the blow is OFF, there is no air consumption. This is how the air saver unit contributes to reduction in air consumption.

Air blow efficiency is improved.

Compared to continuous air blow, the pulsed air blow hits the work repeatedly, improving the efficiency of the air blow.
Installation is simple and reduction in air consumption can be realized immediately.

- When using a solenoid valve to control air blow, the air saver unit can replace this valve which will provide you immediate reduction in air consumption with no change to your PLC.

<Before introduction of the unit.>

<After introduction of the unit.>

When using manual valves such as ball valves...

ASV200, ASV500 & ASV2000 do not need electrical power. Installation of the unit brings immediate reduction in air consumption and improved efficiency.

<Before introduction of the unit.>

<After introduction of the unit.>

Realized the effect of the unit! Voice of customers.

[Company A] Food & beverage related manufacturer

“When we tested ASV5000, we achieved about 55% reduction of our air consumption. As air blow efficiency was improved, we planned to use more Air Saver Units for other areas in the plant.”

[Company B] Manufacturer for office document machines

“We are working on energy-saving activities. In those activities, we decided to use Air Saver Unit. We have more than 100 points of air blow, and we could reduce 42% of our air consumption by using this unit.”
### Variations

<table>
<thead>
<tr>
<th>Series</th>
<th>ASV200</th>
<th>ASC/ASO500</th>
<th>ASV2000</th>
<th>ASV5000</th>
<th>ASV13000</th>
<th>ASV15000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow(t/min)</td>
<td>150</td>
<td>450</td>
<td>2000</td>
<td>5000</td>
<td>13000</td>
<td>15000</td>
</tr>
<tr>
<td>Port size</td>
<td>M5</td>
<td>Rc1/8</td>
<td>Rc3/8</td>
<td>Rc1/2</td>
<td>1” (25A)</td>
<td>1 1/4” (32A)</td>
</tr>
</tbody>
</table>

#### Target works

- **Electric parts**
- **Beverage container**
- **Resin molded parts**
- **Machine Cutting parts**

#### Application

Deselectrification, blowing dust, Handling assist, Blowing of cutting dust.

### Specifications

<table>
<thead>
<tr>
<th>Function</th>
<th>Unit</th>
<th>ASV200</th>
<th>ASC500</th>
<th>ASO500</th>
<th>ASV2000</th>
<th>ASV5000</th>
<th>ASV13000</th>
<th>ASV15000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow (at 0.5MPa)</td>
<td>l/min(ANR)</td>
<td>150</td>
<td>450</td>
<td>450</td>
<td>2000</td>
<td>5000</td>
<td>13000</td>
<td>15000</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>°C</td>
<td>-5 ~ 50 Note 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pressure range</td>
<td>MPa</td>
<td>0.2 ~ 0.5 Note 2</td>
<td>0.2 ~ 0.5 Note 2</td>
<td>0 ~ 0.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pilot air supply</td>
<td>MPa</td>
<td>0.3 ~ 0.8 Internal pilot</td>
<td>0.3 ~ 0.8 Note 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blow</td>
<td></td>
<td>Pulse blow</td>
<td>Pulse</td>
<td>Pulse</td>
<td>Pulse/ Continuous blow</td>
<td>Pulse blow</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Port size (1,2)</td>
<td></td>
<td>M5</td>
<td>Rc1/8</td>
<td>Rc1/8</td>
<td>Rc3/8</td>
<td>Rc1/2</td>
<td>Rc1(25A)</td>
<td>Rc1 1/4(32A)</td>
</tr>
<tr>
<td>Rated voltage</td>
<td>V</td>
<td>Power is not necessary</td>
<td>DC24V</td>
<td>Power is not necessary</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power consumption</td>
<td>W</td>
<td>1.2W</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Grade of Insulation</td>
<td></td>
<td>JIS grade E</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Permissible voltage fluctuation</td>
<td>%</td>
<td>-</td>
<td>±10</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wiring</td>
<td></td>
<td>e-con standard 4 pole sockets</td>
<td>Note 4</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

Note 1) In case of using the Unit under 5°C, complete dry air by air dryer shall be supplied to prevent from freezing.
Note 2) Please note that supply air for port 1 should be more than 0.2MPa.
Note 3) Please note that supply air for port 1 should be more than 0.3MPa.
Note 4) Cable with e-CON connector (Model No. ASC-D24-CL10) will be ordered separately.
Ordering Instructions

ASV200 - AA - M5

1. Model No. ASV200 (Normal close, 2-position)
2. Voltage/Wiring AA: All air (Electricity is not necessary)
3. Port size M5

(Piping)
Port 1: Supply port (Compressor side)
Port 2: Output port (Blow nozzle side)
Port 3: Exhaust port*  
*In order to keep out dust, the air muffler (Model No. SL-M5) is recommended for exhaust port.
Dimensions
ASC500-1W-01 / ASO500-1W-01

(Piping)
Port 1: Supply port (Compressor side)
Port 2: Output port (Blow nozzle side)
Y port: Pilot exhaust port

(Power distribution/Air output)
Continuous blow: Pin 1 (-), Pin 2 (+)

*In order to avoid dust, air muffler is recommended to attach.

Ordering Instructions
ASC500 - 1W - 01

1. Model No.  ASC500: Normal close (2-position single solenoid)
   ASO500: Normal open (2-position single solenoid)
2. Voltage/Wiring  1W: 24VDC, e-CON standard 4-polar socket
3. Port size    01: Rc1/8

Note: Cable with e-CON connector (Model No. ASC-D24-CL10) will be ordered separately.
Piping
Port 1: Supply port (Compressor side)
Port 4: Output port (Blow nozzle side)
Pilot air supply port

Ordering Instructions

ASV2000 - AA - 03

1. Model No.  ASV2000: Normal close (2-position)
2. Voltage/Wiring  AA: All air (Electricity is not necessary)
3. Port size  Normark: without sub-base
03  : Rc3/8
Dimensions
ASV5000-AA-04

Unit (mm)

{Piping}
Port 1: Supply port (Compressor side)
Port 4: Output port (Blow nozzle side)
Pilot air supply port

Ordering Instructions

ASV5000 - AA - 04

1 2 3

1 Model No. ASV5000 (2-position, Single)
2 Voltage/Wiring AA: All air (Electricity is not necessary)
3 Port size No mark: without sub-base

04: Rc1/2
Dimensions
ASV13000-AA-25A

Ordering Instructions

ASV13000 - AA - 25A

1. Model No.
   ASV13000: Normal close (2-position)

2. Voltage/Wiring
   AA: All air (Electricity is not necessary)

3. Port size
   25A: Rc1

(Piping)
Port 1: Supply port (Compressor side)
Port 2: Output port (Blow nozzle side)
Pilot air supply port
Dimensions
ASV15000-AA-32A

Unit (mm)

Ordering Instructions

ASV15000 - AA - 32A

1 Model No. ASV15000: Normal close (2-position)
2 Voltage/Wiring AA: All air (Electricity is not necessary)
3 Port size Normark: without sub-base
   32A: Rc1 1/4

Piping

Port 1: Supply port (Compressor side)
Port 2: Output port (Blow nozzle side)
Pilot air supply port

Diagram showing port locations and dimensions.
Applications

Cleaning blow before assembly

Can be used in many applications where air blow is requirement

Drying applications

Swarf removal

PET bottle transfer

Cooling application

Ionizer

Dust removal

Assist blow for PET bottle transfer

Liquid removal after the manufacturing process
### Applications

## Pneumatic Solutions Beverage and Bottle Plants

<table>
<thead>
<tr>
<th>Process</th>
<th>Application</th>
<th>Advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before blow molding PET bottles</td>
<td>Pulse ionized blow by Air Saving Unit in order to remove particles before PET bottle are molded.</td>
<td>Pulse ionized blow and its blast of each pulse increase to remove particles effectively.</td>
</tr>
<tr>
<td>After blow molding PET bottles</td>
<td>Cleaning blow for particles that attach to the blow molded PET bottles</td>
<td>Reducing about 40% of consumption air.</td>
</tr>
<tr>
<td>Conveying PET bottles</td>
<td>Assisting blow to convey PET bottles.</td>
<td>Reducing about 40% of consumption air.</td>
</tr>
<tr>
<td>Conveying PET bottles</td>
<td>Escape blow for PET bottles when the line is stopped.</td>
<td>Reducing about 40% of consumption air.</td>
</tr>
<tr>
<td>Printing machine</td>
<td>Pulse ionized blow for PET bottles before pasting labels on them.</td>
<td>Pulse blow and its blast of each pulse increase to remove particles effectively.</td>
</tr>
<tr>
<td>Printing machine</td>
<td>Pulse ionized blow for bottles or caps before printing date on them.</td>
<td>Pulse blow and its blast of each pulse increase to remove particles effectively.</td>
</tr>
</tbody>
</table>