SCAD-U Compressed Air Dryers

Removes moisture, water, oil, solid air particles, and other contaminants from compressed air.

Comet’s SCAD series compressed air dryers integrate plastic drying and conveying into one compact unit. They are ideally suited for vertical and stand-alone injection molding machines where space is limited due to factory height. SCAD dryers are portable and can move easily from one injection molding machine to the next, and have both low noise and energy consumption levels.

Hot, dry air is created by sending the compressed air into a pipe-type heater. This unique up-blowing design enables hot air to evenly distribute and dry the plastic resin.

**Standard Features**
- Cost effective, compact, portable, and easy to install and operate.
- PID temperature controller reaches ±1°F.
- Drying is not influenced by ambient temperatures or humidity.
- SCAD-1U – SCAD-6U is equipped with a dual-layer glass tube insulated hopper to easily view material levels.
- SCAD-12U – SCAD-40U hopper is made of stainless steel ensuring no material contamination.
- Compressed air pressure sensor ensures safe, reliable operation.
- Voltage outlet-type temperature controller is placed together with an SSR control loop prolonging service life.
- Overheat protection avoids high temperatures.
- Air outlet filter reduces pollutants to the environment.
- Warning light monitors operation.

**Options**
- When drying hygroscopic engineered plastic, a regenerative, heatless air dryer (HAD) is available to ensure dewpoints reach -40°F or below.
- SCAD-1U – SCAD-6U can be placed with a VL-50 venturi loader for material feeding.
- SCAD-12U – SCAD-40U can be placed with an SAL-1U vacuum loader for automatic material feeding.
- 24-hour auto start/stop timer for SCAD-1U – SCAD-6U.
Application

Comet’s SCAD series is best suited for drying small batches of commonly used engineered plastics such as ABS and PS. It is also suitable as a preheating treatment before molding.

Working Principle

Clean, low pressure air expands as it passes through the pressure regulating valve and solenoid valve to reduce the dewpoint temperature. It then passes through a drying heater where the temperature is precisely controlled by a closed loop PID temperature controller. Simultaneously, a partial vacuum is generated inside the body of the dryer. Rapid heating causes the moisture trapped within the plastic pellet to be forced to the pellet surface. This moisture is carried away by dry air injected into the resin hopper and released through a filter basket into the atmosphere.

By the time the plastic resin is processed through the body of the dryer into the screw of the molding machine, the moisture is removed.
Drying Principle

High pressure air blows into the drying heater via the pressure regulating valve, solenoid valve and throttle valve. It continues into the drying hopper where the moisture from the plastic pellets is removed. Air is discharged through the return air filter for recycling.

Loading Principle

High pressure air, controlled by the solenoid valve, is blown into the suction pipe. This accelerates the airflow and generates negative pressure to drive material feeding and capture the pellets into the drying hopper. Air then discharges through the exhaust filter into the atmosphere.

Optional HAD Heatless Air Dryer

Function

The optional HAD heatless air dryer is the easiest way to provide a factory with clean, dry compressed air. The membrane acts as a refrigerant air conditioner reducing the dewpoint to 40°F (4°C), the requirement for drying materials and molding plastics.

Installation

The HAD can be attached to the processing machine or stand mounted. The air inlet and outlet of SCAD-U’s are connected with air pipelines.

Please note: For optimal performance, filters must be cleaned regularly to prevent water and oil from entering the drying hopper and damaging the molecular sieve.
## Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Drying Temp. Max (°C)</th>
<th>Drying Hopper Capacity (L)</th>
<th>Heater Power (W)</th>
<th>Air Pressure (kgf/cm²)</th>
<th>Air Consumption (m³/hr)</th>
<th>Dimensions (mm) (H x W x D)</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCAD-1U</td>
<td></td>
<td>1</td>
<td>500</td>
<td>0.7</td>
<td></td>
<td>620 x 310 x 220</td>
<td>10</td>
</tr>
<tr>
<td>SCAD-3U</td>
<td></td>
<td>3</td>
<td></td>
<td>1.9</td>
<td></td>
<td>660 x 320 x 220</td>
<td>13</td>
</tr>
<tr>
<td>SCAD-6U</td>
<td></td>
<td>6</td>
<td></td>
<td>3.75</td>
<td></td>
<td>870 x 350 x 220</td>
<td>15</td>
</tr>
<tr>
<td>SCAD-12U</td>
<td></td>
<td>12</td>
<td>600</td>
<td>4.25</td>
<td></td>
<td>780 x 430 x 360</td>
<td>25</td>
</tr>
<tr>
<td>SCAD-20U</td>
<td></td>
<td>20</td>
<td>900</td>
<td>7</td>
<td></td>
<td>1060 x 500 x 400</td>
<td>30</td>
</tr>
<tr>
<td>SCAD-40U</td>
<td></td>
<td>40</td>
<td>1200</td>
<td>14</td>
<td></td>
<td>1000 x 530 x 430</td>
<td>45</td>
</tr>
</tbody>
</table>

Note: 1) Compressed Air: oil content ≤ 3mg/m³  
2) Power supply: 1φ, 230VAC, 50Hz / 60HZ

We reserve the right to change specification without prior notice.