ASCO’s automatic Dry Ice Machine BP420i produces slices in 10 different thicknesses and 2 different types of pellets at the push of a button.

The dies for the production of different sizes do not have to be changed manually as they are already built in and can be controlled at the touch screen panel. The BP420i features high density, fully automatic dry ice production for slices in ten different thicknesses. In addition, it is possible to produce pellets in two different sizes with a diameter of 3, 6, 10 or 16 mm (1/8, 1/4, 3/8 or 5/8 ”). Standard slice dimensions are 210 × 125× 20 - 70 mm (8.27 x 4.9 x 0.78 - 2.76 in). Other slice/pellet dimensions are available on request. Depending on the setting, the production capacity ranges from 240 to 400 kg/h (529 to 881.85 lb/h).

The automatic dry ice block, slice and pellet machine ASCO BP420i belongs to the ASCO i-Series line. It’s equipped with state-of-the-art remote control devices and thus is ready for a wide range of services in the areas of Remote Access, Remote Data, Remote Management.

Benefits of an in-house dry ice production:

- if for dry ice blasting: more efficient cleaning results, because: the fresher the dry ice, the more efficient the cleaning
- shorter production stops
- reduction of dry ice lost due to sublimation
- decreased logistics expenses connected with purchasing and disposing of dry ice

To maximise the CO₂ to dry ice conversion ratio the dry ice machine can be connected to an ASCO Revert Gas Recovery System.

**Specifications**

- Dimensions (L × W × H): approx. 2'540 × 1'100 × 3'750 mm (99.99 x 43.3 x 174.64 in)
- Weight: approx. 1'900 kg (4'188.78 lb)
- Voltage: 400 V / 50 Hz / 3 Ph + PE (other voltage available on request)
- Average power consumption: 6 kW (8.05 HP)
- CO₂ source: CO₂ storage tank, liquid phase (15 - 20 bar) (217.56 - 290 psi)
- Connectivity: remote access and data services: LAN, Ethernet, WiFi, 3G/4G
ASCO Automatic Dry Ice Machine BP420i: Key features

- **SIEMENS PLC SIMATIC ET-200S** - controls the whole process, injection and hydraulic for continuous automatic operation
- **New ASCO HMI** - multilingual 7" touch screen with different access levels, adjustable parameters, on-line production and product information as well as history file for supervisor
- **Remote control devices** - offers a wide range of possibilities to link Industry 4.0 with dry ice production
- **Profibus network** for fast communication between PLC and the numerically controlled hydraulic piston pump for a precise control of the flow and pressure to optimize the dry ice quality
- **Linear encoder** - for precise position control of piston and shutter plate (PCO)
- **Independent oil cooling and filtration system (ICFS)** - to increase lifetime of hydraulic equipment and to reduce oil consumption
- **10 different slice thicknesses and 2 pellet sizes** - possible at the push of a button (to be specified at time of order)
- **Auto-compensation** - of CO₂ pressure and temperature variation of CO₂ storage tank (ACPT) to ensure slice thickness control fully automatic
- **High quality stainless steel pressing chamber** - to protect the chamber against corrosion and reduce the cost of maintenance
- **Slide incl. slice speed reducing device** to appropriately decelerate the produced blocks for further processing
- **CO₂ gas recovery possible**
- **Easy operation and maintenance**
- **Simple and quick installation**
- **European standard CE**
- **Quality components, e.g. Siemens, ATOS**

### Slice, block and pellet information

<table>
<thead>
<tr>
<th>Dry ice product</th>
<th>Standard block / slice dimensions 210 × 125 mm (8.3 x 4.9 in)</th>
<th>Pellets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness in mm (Thickness in in)</td>
<td>20 (0.8 in)</td>
<td>22 (0.9 in)</td>
</tr>
<tr>
<td>Weight in gr/slice (Weight in lb/slice)</td>
<td>820 (1.8 lb)</td>
<td>900 (2.0 lb)</td>
</tr>
<tr>
<td>Capacity in kg/h (Capacity in lb/h)</td>
<td>240 (529 lb/h)</td>
<td>250 (551 lb/h)</td>
</tr>
</tbody>
</table>

This choice of sizes is only an extract and helps as production indication. The thickness of the blocks is adjustable by 1 mm from 20 to 70 mm (0.78 to 2.75 in). Our machines can be made to produce almost any size of slices / blocks upon special request. If you have a special need, please let us know.

Standard pellets sizes are diameters of 3, 6, 10 or 16 mm (1/8, 1/4, 3/8 or 5/8 "). Other sizes are available on request.
Automatic ASCO Dry Ice Machine BP420i: Applications

Airline catering (20-25 mm thickness) (0.78-1 in), transport cooling (thicker blocks) or pellets for other cooling or for dry ice blasting purposes: The automatic ASCO Dry Ice Machine BP420i produces high quality dry ice blocks, slices and pellets to cover all different market requests.

- **Catering services**
  - 10 different slice thicknesses
  - Airline trolleys
  - Transport cooling
  - etc.

- **Cooling**
  - 6, 10 and 16 mm pellets (1/8, 1/4, 3/8 “)
  - Food transportation
  - Fishing industry
  - Ice cream industry
  - Laboratories
  - Wineries
  - etc.

- **Dry ice blasting**
  - 3 mm pellets (1/8 “)
  - Foundries
  - Tyre production
  - Rubber-, food- and printing industry
  - etc.

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**Automatic ASCO Dry Ice Machine BP420i: Options**

**Pos. 001**

**Upgrade D3mm (1/8 “)**
To produce 3 mm (1/8”) pellets in addition to blocks with the same machine at the press of a button.

Capacity with 3 mm (1/8”) pellets = 400 kg/h (881.85 lb/h)

**part no. 22858**

**Pos. 002**

**Upgrade D6mm (1/4 “)**
To produce 6 mm (1/4”) pellets in addition to blocks with the same machine at the press of a button.

Capacity with 6 mm (1/4”) pellets = 400 kg/h (881.85 lb/h)

**part no. 22861**
### Automatic ASCO Dry Ice Machine BP420i: Options

<table>
<thead>
<tr>
<th>Pos. 003</th>
<th>Upgrade D10mm (3/8 &quot;&quot;)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>To produce 10 mm (3/8 &quot;) pellets in addition to blocks with the same machine at the press of a button.</td>
</tr>
<tr>
<td></td>
<td>Capacity with 10 mm (3/8 &quot;) pellets = 400 kg/h (881.85 lb/h)</td>
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<tr>
<td></td>
<td><img src="image1.png" alt="pellets" /></td>
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<tr>
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<td>part no. 22859</td>
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<tr>
<td>Pos. 004</td>
<td>Upgrade D16mm (5/8 &quot;)</td>
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<td></td>
<td>To produce 16 mm (5/8 &quot;) pellets in addition to blocks with the same machine at the press of a button.</td>
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<tr>
<td></td>
<td>Capacity with 16 mm (5/8 &quot;) pellets = 400 kg/h (881.85 lb/h)</td>
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<tr>
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<tr>
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<td>part no. 22860</td>
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<tr>
<td>Pos. 005</td>
<td>Set of spares</td>
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<tr>
<td></td>
<td>Recommended set of spare parts for approx. one to two years normal operation.</td>
</tr>
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<td><img src="image3.png" alt="spares" /></td>
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<td></td>
<td>part no. 4045162</td>
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