

Dry Ice Production

ASCO Automatic Dry Ice Machine BP420

part no. 900127



ASCO's state-of-the-art automatic Dry Ice Machine BP420 produces 10 different slice thicknesses and 2 different types of pellets at the push of a button.

The dies for the production of different sizes of dry ice do not have to be changed manually as they are already built in and can be controlled at the touch screen panel. Depending on the setting the production capacity ranges from 240 to 400kg/h (529 to 881.85lb/h).

The automatic, dry ice block, slice and pellet machine **ASCO BP420** is a fully Siemens PLC SIMATIC ET-200S controlled and supervised hydraulically driven unit.

The **ASCO** Dry Ice Machine BP420 features high density, fully automatic dry ice production for slices in 10 different thicknesses changeable by 1 mm. Standard slice dimensions are 210 x 125 x 20-70 mm (8.27 x 4.9 x 0.78-2.76 in) .in addition it is possible to produce two different pellets sizes with a diameter of 3, 6, 10 or 16 mm (1/8, 1/4, 3/8 or 5/8 in). Other slice/ pellet dimensions are available on request.

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



Touch screen for good overview and easy operation

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 expense connected with purchasing and disposing of dry ice

Specifications

Dimensions (L x W x H):	approx. 2'540 x 1'100 x 3'750 mm (99.99 x 43.3 x 174.64 in)
Weight:	approx. 1'900 kg
Voltage:	400 V / 50 Hz / 3 Ph + PE (other voltage available on request)
Average power consumption:	6 kW (8.05 HP)
CO ₂ source:	CO ₂ storage tank, liquid phase (15-20 bar) (217.56-290 psi)

ASCO Automatic Dry Ice Machine BP420: 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
- **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
- **Anodized high grade aluminium 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
- Robust construction

Slice, block and pellet information

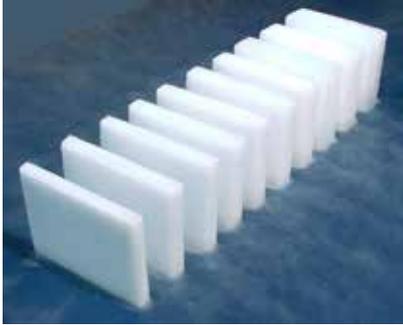
Dry ice product	Standard block / slice dimensions 210 × 125mm (8.27 x 4.9 in)										Pellets
	20 (0.8 in)	22 (0.9 in)	25 (1 in)	30 (1.2 in)	35 (1.4 in)	40 (1.6 in)	45 (1.8 in)	50 (1.9 in)	60 (2.4 in)	70 (2.8 in)	
Thickness in mm (Thickness in in)	20 (0.8 in)	22 (0.9 in)	25 (1 in)	30 (1.2 in)	35 (1.4 in)	40 (1.6 in)	45 (1.8 in)	50 (1.9 in)	60 (2.4 in)	70 (2.8 in)	all diameters
Weight in gr/slice (Weight in lb/slice)	820 (1.8 lb)	900 (2.0 lb)	1'020 (2.2 lb)	1'210 (2.7 lb)	1'410 (3.1 lb)	1'620 (3.6 lb)	1'820 (4.0 lb)	2'020 (4.5 lb)	2'420 (5.3 lb)	2'830 (6.2 lb)	-
Capacity in kg/h (Capacity in lb/h)	240 (529 lb/h)	250 (551 lb/h)	300 (661.4 lb/h)	240 (529 lb/h)	270 (595.3 lb/h)	300 (661.4 lb/h)	330 (727.5 lb/h)	350 (771.6 lb/h)	330 (727.5 lb/h)	390 (859.8 lb/h)	400 (881.8 lb/h)

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 in). Other sizes are available on request.

Automatic ASCO Dry Ice Machine BP420: Applications

Airline catering (20-25mm 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 BP420 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 in)

- Food transportation
- Fishing industry
- Ice cream industry
- Laboratories
- Wineries
- etc.



Dry ice blasting

3 mm pellets (1/8 in)

- Foundries
- Tyre production
- Rubber-, food- and printing industry
- etc.

Automatic ASCO Dry Ice Machine BP420: Options

Pos. 001

Upgrade D3mm (1/8 in)

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

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

part no. 22858



Pos. 002

Upgrade D6mm (1/4 in)

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

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

part no. 22861



Automatic ASCO Dry Ice Machine BP420: Options

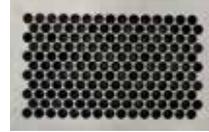
Pos. 003

Upgrade D10mm (3/8 in)

To produce 10 mm (3/8 in) pellets in addition to blocks with the Same machine at the press of a button.

Capacity with 10 mm (3/8 in) pellets = 400 kg/h (881.85 lb/h)

part no. 22859



Pos. 004

Upgrade D16mm (5/8 in)

To produce 16 mm (5/8 in) pellets in addition to blocks with the same machine at the press of a button.

Capacity with 16 mm (5/8 in) pellets = 400 kg/h (881.85 lb/h)

part no. 22860



Pos. 005

Set of spares

Recommended set of spare parts for approx. one to two years normal operation.

part no. 4045162



Pos. 006

ASCO Passive Saw for ASCO Dry Ice Machine BP420

Passive saw to divide dry ice blocks up to 25 mm (0.98 in) thickness

Consisting of:
Conveyor belt and one saw blade to cut the blocks into two.
Power connection: 400V/50Hz"

part no. 900720



Pos. 007

Spare blade incl. Holder for Passive Saw

Allows the integration of a second blade to divide the dry ice slice into three pieces.

part no. 4062692