Dry Ice Production / Dosing

ASCO Dry Ice Refilling System ARS

part no. 901501

The automatic ASCO Dry Ice Refilling System ARS was specially developed to **transfill dry ice pellets of various sizes precisely and as required into different containers and shipping boxes.** A special device lifts up already loaded storage containers and tilts the pellets into an insulated storage hopper, from where the required quantities of pellets can be precisely and steplessly dosed into smaller storage boxes using an oscillating conveyor feeder and a digital weighing system. The ASCO Dry Ice Refilling System ARS is an excellent and highly efficient tool to complement the dry ice pellet logistic. **It was developed especially for the pharmaceutical, food and logistics industries and can be used without local dry ice production.**

The compact machine consists of a combination of lift-and-tilt unit, a storage hopper and an oscillating feeder with touchscreen control. The entire unit is started at the push of a button and can be operated intuitively via touchscreen, buttons and foot pedal. All functions are controlled by a touchscreen, which ensures a good overview and easy operation. The filling weight can be keyed in quickly and easily and the dosing process is triggered by a foot pedal. This allows the customization and monitoring of the amount of pellets.

Specifications

Re-filling capacity:	up to 2'000 kg / h (4'400 lb / h)
Dosing accuracy:	+/- 0.1 kg (0.2 lb) at 3kg (6.6 lb) filled units
Voltage:	400 V/ 3AC/ 50Hz/ N/ PE
	24V control voltage
Connected power:	2.5 kW (3.4 HP)
Electrical protection:	min. 20A/ max. 32A
Pneumatic system supply:	min. 6 bar (87 psi), dry, oil free
Ambient temperature:	+ 5°C up to + 35°C (41°F up to 95°F)
Dimensions (L × W × H):	approx. 3'860 mm x 2'300 mm x 3'770 mm (4'850 mm tipping height)
	approx. 152 in x 90.5 in x 148 in (191 in tipping height)
Weight:	approx. 3'900 kg (8'600 lb)
Requirements installation site:	min. C20/25 concrete (uncracked)
	min. 200mm (7.9 in) foundation thickness
Connectivity and remote access:	LAN
Base media:	3, 6, 10, 16 mm (1 / 8, 1 / 4, 3 / 8, 5 / 8 in) dry ice pellets
Dry ice supply:	ASCO AT440 or AT240W container (variable)
Container carrying capacity:	max. 800 kg (1764 lb)
Storage hopper volume:	approx. 1 m3 (35 cu ft)

ASCO Dry Ice Refilling System ARS: Function and applications

Thanks to the ASCO Dry Ice Refilling System ARS, dry ice pellets can be transfilled from large storage containers directly into smaller containers or smaller boxes and dosed by weight. This is particularly helpful when cold chains must not be interrupted and goods are to be sent under cryogenic conditions. For the filling of the dry ice pellets, individually storable presettings are available that define the amount of the pre-filling and main filling with dry ice. This means that goods can be covered all around with the cooling medium. A visual message on the display confirms that the preset filling quantity has been reached by means of an integrated scale.

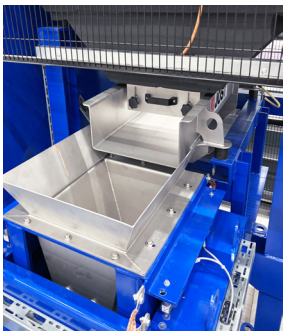
The full integration of the system into the control system offers absolute system security, as all functions are centrally displayed and monitored. The automatic container refilling system for dry ice pellets is designed as standard for the ASCO AT440 and AT240W dry ice containers but can also be loaded with other storage containers. The integration of the refilling system into fully automatic dry ice production on conveyor belts can be freely selected (supply and removal of the containers including filling).

Ergonomic operation

- Automatic filling process
- Automaic discharge
- Safety barriers with safety switch
- Simultaneous refilling and dosing possible

Central control

- 7" Touchscreen
- Foot pedal for dosing
- Switches for manual mode



Refilling system

- Fill level monitoring
- Stepless dosing with oscillating feeder
- Insulated storage bunker made in stainless steel

ASCO Dry Ice Refilling System ARS: Key features

- **Higher-level control** - regulates the entire process, the dry ice prefilling, the filling of the oscillating feeder, the fill level monitoring and the dosage of the dry ice pellets according to weight.
- **SIEMENS PLC with 7 "HMI Colour-Touchscreen** - 7" Touchscreen with different access levels, adjustable parameters as well as set and reached filling quantity. Including LAN remote access.
- **Foot pedal for actuating the filling process -** the preset filling quantity is conveniently triggered by the foot pedal and enables two-handed handling or organization of the filling process.
- **Integrated fill level monitoring -** if the required dry ice pellet quantity in the storage hopper falls below the required level, the machine automatically goes into a waiting mode until the correct fill level is reached again. If the storage hopper is full, the lifting unit remains in waiting position until it can be filled again. An overfilling of the storage hopper is not possible.
- **High process reliability -** optimal process monitoring using the integrated load cell ensures optimal performance and high process reliability. The unit is not designed for dry ice storage and can be fully discharged at the push of a button.
- **Integrated access security and protection** - Safety doors with safety switch according to EC 2006/42/EC Machinery Directive.

ASCO Dry Ice Refilling System ARS: Options

Pos. 001

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For precise dosing and refilling of dry ice pellets in various containers and shipping boxes.

Consisting of lifting and tilting unit, insulated storage hopper with scale, stepless oscillating feeder and integrated central control unit.

Without transport conveyor system.