ASCO

All about CO_2

Product Catalogue

The Complete CO_2 Solution
US Version 4.9

ascoco2.com

Table of Contents

ASCO reserves the right to modify all specifications without prior notice.

All photos and drawings are used for marketing purposes only.

General Information about CO_2

What is CO_2?

Carbon dioxide is the combination of two atoms of oxygen joined with a single atom of carbon. Its chemical formula CO_2, is almost as well known as that of water, H_2O and it is frequently referred to by its formula rather than its name.

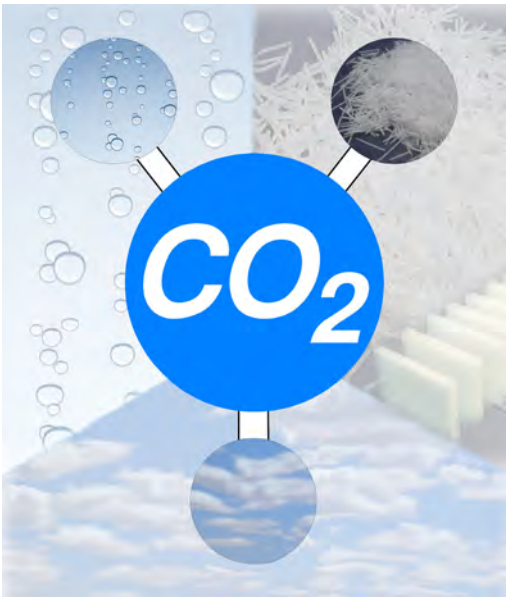
In nature's chain of life, the mutual dependence of plant and animal life is maintained though the link of carbon dioxide. Every time we breathe we release this gas, which plants need for life. Though the process of photosynthesis, the plants separate the carbon from the oxygen. In turn, plants release the pure oxygen, which we need to survive. We reverse the process, and by combining the oxygen with carbon from the foods we eat, produce carbon dioxide again.

CO_2 is a colourless, inert gas approximately 1½ times heavier than air and 0.03% is present in the earth's atmosphere. It is odorless, has a sweet biting taste (soda water) and is highly stable (difficult to separate).

It is produced in varying amounts by the common process of combustion of fuels high in carbon content. The most common source of fuel for combustion is oil which, when mixed with the correct proportion of air, burns to produce around 15% CO_2 in the flue gases of a CO_2 plant. After combustion has taken place, the CO_2 can be separated from the flue gases and, though a simple process, made available for the many commercial purposes to which it can be applied.

CO_2 can exist in thee forms:

- in gaseous form: for the beverage and food industries
- in liquid form: in a storage tank under pressure
- in solid form: called dry ice (for cooling, blasting etc.)



GASEOUS CO_2 can be liquefied under pressure provided its temperature is below 31 °C (88 °F), this temperature being referred to as the CRITICAL POINT. If compressed and cooled below the critical point, a colourless fluid, approximately the same density as water, is produced.

CO_2 will remain in the liquid form as long as its temperature remains below the critical point but will return to the gaseous state if its temperature rises above this point, regardless of the pressure applied.

LIQUID CO_2 can be stored indefinitely at

High pressure
or
Low pressure

as follows:

High Pressure CO_2
High pressure liquid CO_2 is produced by compressing the gaseous CO_2 in multistage compressors to pressures in the neighbourhood of 69 bar (1000 psi) pressure, then cooling it to around 18 °C (65 °F). It is customarily filled into specially constructed steel cylinders. Like water, liquid CO_2 can be weighed, and this is the normal form of measuring it.

Low Pressure CO_2
Low pressure liquid is an alternative method of storing CO_2 and is produced either by expanding high pressure CO_2 to a lower pressure or by refrigeration. It is held in specially constructed storage tanks, heavily insulated and equipped with refrigeration units to hold the internal tank pressure at or below 21 bar (305 psi) and -18 °C (-0.4 °F) temperature. Pressure switches are incorporated to control the refrigeration units and safety mechanism and electrical alarms are fitted to release the tank pressure and raise an alarm in the event of refrigeration malfunction.

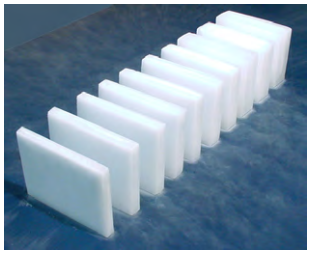
General Information about CO_2

Low pressure liquid CO_2 (sometimes referred to as “bulk”) is transported to one place from another in insulated road tankers or trailers (or, in some countries, by rail tank wagons), the liquid being simply transferred from mobile to static tank by pumping or gravity feed.

Unlike water, carbon dioxide cannot exist in the open air in liquid form. It must be held under pressure or refrigeration (or a combination of both) to remain in the liquid state.

SOLID CO_2 (customarily known as “DRY ICE”)
Dry ice is the product of processing liquid CO_2. If the pressure of liquid CO_2 is suddenly released, a proportion of that liquid will change to the solid state (becoming dry ice “snow”) and the remainder will revert to gas (revert gas). When the snow is compressed under hydraulic or mechanical action, blocks or pellets of dry ice are formed. The revert gas (gaseous CO_2) can be readily reclaimed and converted back to liquid by recompression and reliquefaction, thence returned to the dry ice block machine or pelletizer for further processing.

The temperature of dry ice is -79 °C (-110 °F) and in the atmoshere it will pass directly from the solid to the gaseous stage, leaving no moisture or trace of its presence except the cold.



CO_2 is our Life

Many generations - and individual lifetimes! - of experience have perfected **ASCO**‘s ability to provide the most complete and best matched CO_2 system available.

From the CO_2 production or recovery plant to storage, dry ice blasting, cylinder filling, dry ice making and even dry ice wrapping, it‘s all **ASCO**. This ability to provide matched components benefits **ASCO** clients as they can comfortably develop and grow their business without changing suppliers.

Having the largest range of CO_2 and dry ice components also enables **ASCO** customers to make full use of the versatile nature of CO_2 and its vast number of uses, thus gaining maximum value from the product. For example a soft drink bottler could easily develop an extra cash flow business from surplus CO_2 (or excess plant capacity) by adding **ASCO** dry ice equipment and / or cylinder filling gear to supply CO_2 to other users.

ASCO‘s website provides details of their most up to date CO_2 and dry ice plants. All **ASCO** equipment is space efficient, designed for easy operation, maintenance and engineered for maximum reliability and life. Component materials are selected to balance capital cost and plant longevity and from the flue gas oxygen sensor on the plant to the level indicator on the CO_2 storage tank all controls are effective, logical, clear, and linked to a PLC.

ASCO‘s technology, combined with a wide range of CO_2 equipment, makes it easy for their clients to mix and match components and thus tailor their CO_2 / dry ice system from the one shop.

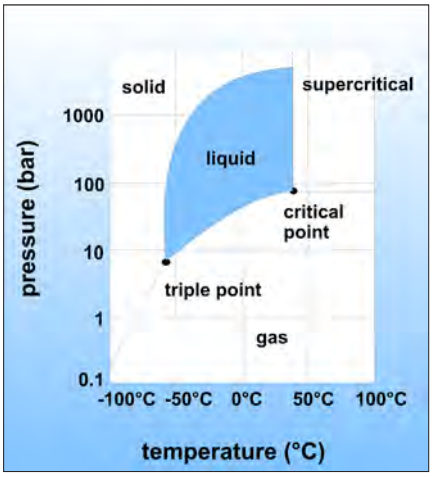
Significant new **ASCO** CO_2 plant sales to Africa, South America and the Middle East indicates that many bottlers, brewers and merchant CO_2 companies prefer working with a single supplier and that supplier is **ASCO**. Let our life add life to your business.

General Information about CO_2

From Liquid CO_2 into Dry Ice

Carbon Dioxide has 3 physical states of gas, liquid and solid which depend on temperature and pressure.

The relationship between the 3 states is shown on the pressure-temperature phase diagram beside.



CO_2 phase diagram

Where does CO_2 come from?

CO_2 is derived from a number of sources including combustion of carbonaceous fuels, fermentation, natural wells, and as a by-product of industrial processes such as ethylene oxide and bioethanol production and ammonia synthesis.

The Solid State (Dry Ice)

Below the triple point (5.2 bar (75 psi), -56.6 °C, (-69 °F)) CO_2 can only appear in its solid and gaseous state. Dry Ice is the common trade name for solid CO_2. At atmospheric pressure it has a temperature of approx. -79 °C (-110 °F). The solid CO_2 changes directly into its gaseous state. This evaporation (sublimation) does not leave any residues. Dry ice is non-toxic, non-inflammable, inert, without smell and bacteriostatic. It is white and has a density of approx. 1'500 kg/m³ (93.6 lb/ft³) in its compact state. Dry ice is an ideal refrigerant which qualifies especially well for various applications. It has a high cooling capacity and heat transfer is very high when in direct contact with the cold material.

Dry ice slices and blocks

16 mm (5/8 ") pellets

3 mm (1/8 ") pellets

ASCO has the best range of dry ice machines for dry ice production.

The Liquid State

Within a temperature range between -56.6 °C (-71 °F) and 31 °C (88 °F) and pressure greater than 5.2 bar (75 psi) and less than 74 bar (1'073 psi) respectively CO_2 is in its liquid state except at very high pressures. This means that, below 5.2 bar (75 psi), CO_2 exists only in its solid or gaseous state. At 5.2 bar (75.psi) and -56.6 °C (-71 °F) all thee states (solid, liquid and gas) are present. This is called the triple point.

General Information about CO_2

The critical point of CO_2 lies at a temperature of approx. 31 °C (88 °F) and a pressure of approx. 74 bar (1073 psi). Normal CO_2 liquid can only be formed at temperatures below 31 °C (88 °F). Above the critical point there is no physical difference between the liquid and gaseous phase. This supercritical state is also called „Fluid“. The liquid state is important for the storage and transportation of CO_2 as well as during cooling and freezing applications. During release of the liquid CO_2 to atmosphere a temperature of -79 °C (-110 °F) is reached. This is associated with a high cooling capacity due to the evaporation heat which is extracted from the environment when releasing the liquid CO_2.

Horizontal CO_2 storage tank

Vertical CO_2 storage tank

ISO container for transportation of CO_2

The Gaseous State

CO_2 gas has a density of approx. 1.9 kg/m³ (0.12 lb/ft³) at atmospheric pressure and +15 °C (59 °F). CO_2 has many unique and beneficial features which make it valuable in the preservation of packaged food, in explosion and fire protection, in pest control and as protective gas in inert-gas-welding. In all these applications it is important for the CO_2 gas to drive out and replace the atmospheric oxygen. Moreover, CO_2 gas is used for enriching the atmosphere in greenhouses, in storing fruits and vegetables and for pH control when treating potable and waste water.

CO_2 for beverage carbonation

CO_2 fumigation in pest control

www.ascoco2.com

provides details of our most up to date CO_2 and dry ice plants. All ASCO equipment is space efficient, designed for easy operation and maintenance and engineered for maximum reliability and life.

CO_2 Recovery

ASCO CO_2 Stack Gas Recovery Systems (SGR)

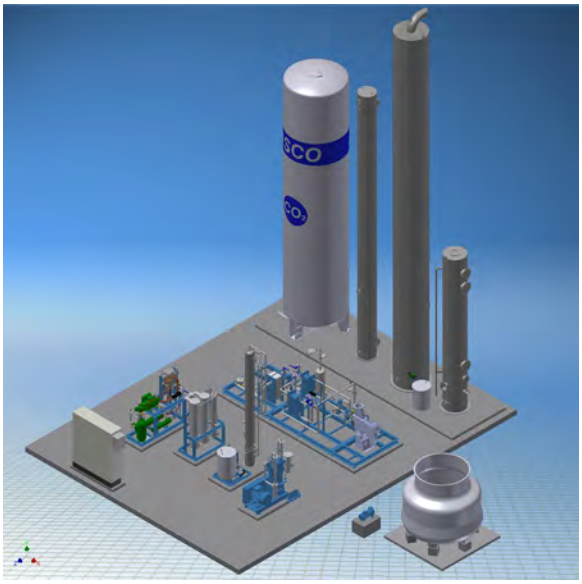
ASCO's innovative ASCOSORB CO_2 Stack Gas Recovery Technology turns your vent flue gas into a usable and profitable source of CO_2.

CO_2 gas won by a **ASCO** Stack Gas Recovery System is a by-product of flue gas production from boilers as well as from other flue gas sources offering an economic CO_2 source to any CO_2 consumer or reseller. **ASCO**, as a provider of complete CO_2 solutions, offers CO_2 Stack Gas Recovery Systems with various capacities.

The revolutionary **ASCOSORB CO_2 Stack Gas Recovery Technology** features the following **key benefits:**

- Reliable and economic source of CO_2 to the end user as opposed to self burning processes or purchasing liquid CO_2
- **The ASCOSORB Technology brings to the ASCO CO_2 Stack Gas Recovery Plant tremendous reduction in total energy usage offering greatly reduced OPEX: only approx. 1.3 MW_{th} / MT produced CO_2**
- The **ASCOSORB** Technology brings to the CO_2 stack gas recovery plant innovations such as **reduced solvent consumption** again contributing reduced operating cost to the already reduced OPEX
- The specially formulated **ASCOSORB** solvent utilized with the **ASCO** CO_2 Stack Gas Recovery System is **resistant to any level of oxygen** typical of flue gas sources allowing greater system efficiencies and longevity of the plant
- Liquid CO_2 quality produced by an **ASCO** CO_2 Stack Gas Recovery System **meets specifications of ISBT**, food and beverage, and customer final liquid quality specifications
- **ASCO** CO_2 Stack Gas Recovery Systems offer a **capacity range from 500 to 2'000 kg/h (1'100 to 4'400 lb/h)**

ASCO's CO_2 Stack Gas Recovery Technology extracts nearly the total volume of CO_2 gas content in flue gas streams. Key is the specially formulated **ASCOSORB** extraction solvent which provides the CO_2 Stack Gas Recovery Plant with reduced OPEX as a result of its CO_2 gas extraction and loading capability compared to other competitive solvent mixtures. This technology not only offers the end user a reliable CO_2 source but as well considered by many a green approach to the overall concept to CO_2 gas recovery. Combined with the specially formulated **ASCOSORB** Solvent, the ASCO CO_2 Stack Gas Recovery System utilizes stainless steel process towers and pumps to ensure long and effective equipment life and reliable performance for years to come.



ASCO CO_2 Stack Gas Recovery Systems: Features

Feature	Benefit
Stainless steel construction	Long plant longevity
Low energy consumption	Low OPEX
Integrated amine recovery	Contributing to the already reduced OPEX
High CO_2 extraction	Low carbon foot print
Retrofits easily to existing CO_2 production plants	Modernize your existing plant by eliminating fuel burning and saving up to 70 % production costs.
Flexible layout	Compact, modular component design means fast and easy installation and provides an economical use of available space, covering a variety of different layouts.
Inline scrubber water recirculation and treatment system	Designed to handle all the process scrubbing water, this system recycles, neutralises and sheds the process heat from the water all in one circuit. This significantly reduces the volume of water discharged to drain, providing an economical and environmentally friendly water system.
Process towers location	Option of indoor or outdoor installation of all process towers allows flexibility of layout in a variety of different situations. Outdoor location also reduces the required weather protection for the system.
Oilfree CO_2 compressor	Specially designed for use with CO_2 gas, the oilfree compressor means there is no possibility of CO_2 contamination with oil.
High pressure stainless steel purifier	Longer residence time provides ultra-efficient NO_x and H_2S removal.
Carbon filter	A high capacity carbon filtration column is installed in the CO_2 gas inlet line to the liquefier, to provide further assurance of pure and odour-free CO_2.
Centralized control panel	Automatic plant operation and visual display (HMI) provide one touch read-outs of process data from a centralized position.

CO_2 2-stage-compressor

Outdoor towers

High pressure purifier

ASCO CO_2 Stack Gas Recovery Systems

General process description

Flue gas from boiler exhausts (be it existing, new or even power generators) contain combustion products like CO_2, water vapor, N_2, O_2, CO, and possibly SO_2 depending on the fuel being used. This flue gas, under the **ASCOSORB** process, is first cooled and treated for SO_2 effectively rendering a flue gas to a proper operating temperature and reaching an acceptable level of SO_2 prior to entering the **ASCOSORB** process of CO_2 Gas extraction.

Once cooled and treated the flue gas enters the CO_2 stack gas recovery system for extraction of CO_2 gas from the flue gas, using specially formulated **ASCOSORB** absorption solvent combined with process towers and packing for best overall efficiency. These towers include the CO_2 gas absorber and CO_2 stripper. It's the combination of the specially formulated **ASCOSORB** solvent and the optimized packing technology that gives the extraction process the efficiency to nearly extract all the CO_2 present in the flue gas as well as be resistant to any level of O_2 present in the source stream. Once absorbed, the CO_2 gas is carried away within the special **ASCOSORB** solvent, and remaining products of combustion are vented off the top of the absorber tower. The solvent, enriched with CO_2, is passed to the stripper tower which uses reboiled lean solvent combined with tower and structured packing material to liberate the CO_2 gas from the enriched solvent stream. The exit CO_2 gas from the stripper is at a controlled temperature and pressure ready for further processing.

Process unit

CO_2 gas processing from the **ASCO** CO_2 Stack Gas Recovery System is completed with the efficient and high quality supply of **ASCO** compression, purification, drying and liquefaction equipment typical of supply with our production and by-product recovery plants. This ensures the liquid CO_2 produced from the total **ASCO** CO_2 Stack Gas Recovery Plant exceeds the parameters set forth by many customers and industry standards.

Liquefaction unit

Capacities

Available standard capacities: 500 to 2'000 kg / h (1'100 to 4'400 lb/h)

Individually engineered plants available for capacities up to 11'000 kg / h (24'250 lb/h)

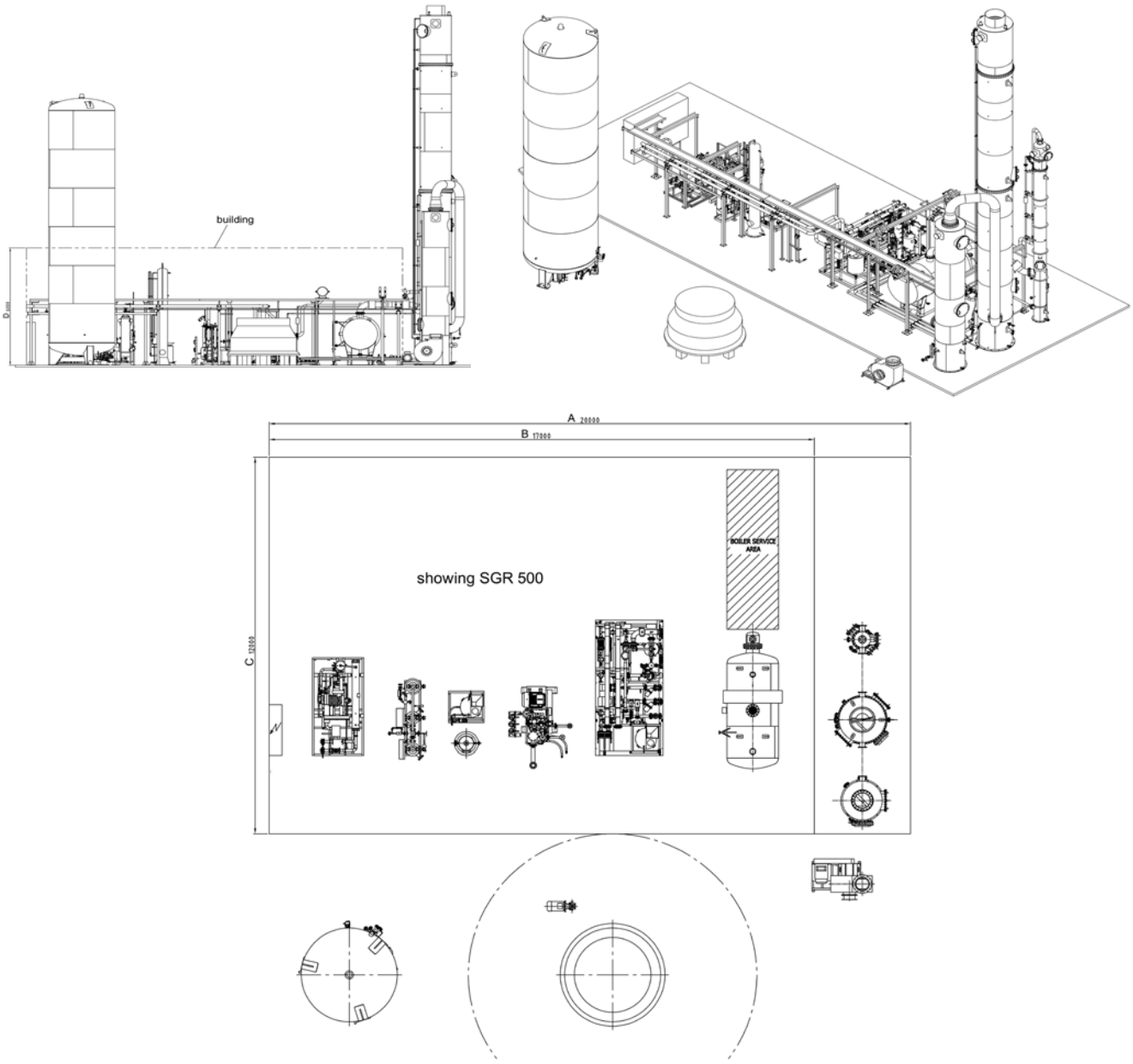
Utility Consumptions

Thermal energy consumption: only approx. 1.3 mW_{th} / MT produced CO_2

Complete information of utility consumptions provided with each **ASCO** proposal for a CO_2 Stack Gas Recovery System.

ASCO CO_2 Stack Gas Recovery Systems

Standard Layout Proposal dimensions in mm (in)				
Capacity	**A**	**B**	**C**	**D**
500 kg / h (1'100 lb / h)	20'000 (787)	17'000 (670)	12'000 (472)	6'000 (236)
1'000 kg / h (2'200 lb / h)	21'300 (838)	18'300 (720)	14'150 (557)	6'000 (236)
1'500 kg / h (3'300 lb / h	30'000 (1'181)	25'000 (984)	17'500 (689)	6'500 (256)
2'000 kg / h (4'400 lb / h	34'500 (1'358)	28'500 (1'122)	18'000 (708)	7'000 (275)



Subject to technical changes / improvements

CO_2 Recovery

ASCO CO_2 By-Product Recovery Systems (BPR)

ASCO's innovative CO_2 Gas Recovery Technology turns your vented by-product gas into profitable CO_2.

Be it for an alcoholic fermentation process (e.g. breweries, ethanol operations, distilleries or wineries), other industrial sources (e.g. ammonia production or hydrogen reforming) or natural sources, **ASCO** will find your individual CO_2 recovery solution.

ASCO's By-Product CO_2 Gas Recovery System can make this opportunity a reality to those interested in developing a business case and realizing the potential rewards of recovering CO_2 gas from these sources. Our systems, manufactured of the highest quality in materials and workmanship, offers extremely low operating costs placing the least OPEX against CAPEX providing a far greater return on investment.

ASCO By-Product Recovery Systems: Key features

ASCO By-Product CO_2 Gas Recovery Systems enhance the overall concept for your recovery opportunity considering the following **key benefits:**

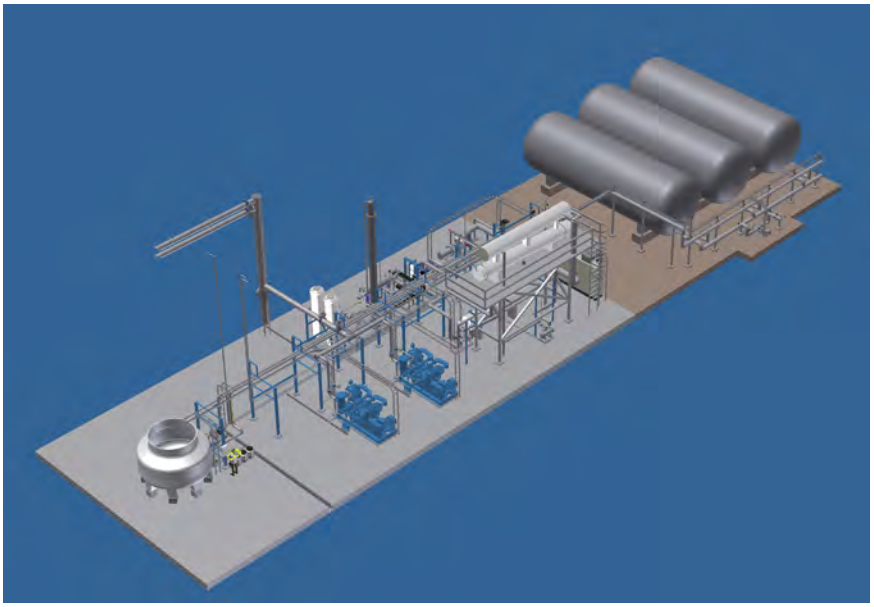
- **ASCO** CO_2 Gas Recovery Systems can be applicable to a variety of sources;
- Our advanced technology is strategically positioned offering lowest cost production/ton;
- The environmentally friendly technology – gas scrubbing, purifying, drying - eliminates chemical treatment and handling and offers overall reduced effluent and cost savings/ton;
- Totally automatic process – plant operations and liquid CO_2 tank farm management;
- The **ASCO** CO_2 Gas Recovery System achieves liquid CO_2 purity of 99.998 % from an inlet CO_2 gas source purity as low as 98.5%;
- For CO_2 sources with a purity of 95 % or higher, we offer recovery systems on request.
- Final liquid CO_2 quality exceeds international food and beverage standards.
- **Capacities available from 500 to 6'500 kg / h (1'100 to 14'330 lb/h) (other capacities on request)**

ASCO CO_2 By-Product Recovery Systems

General process description

From a raw gas source ⇒ ≥ 99.998 % pure CO_2.

Alcohol sources	Industrial sources	Natural sources
CO_2 gas is generated as a by-product of the **alcoholic fermentation process** (e.g. breweries, ethanol operations, distilleries, wineries). This then is collectively reclaimed from the fermentation area though adequately sized collection pipe lines for common feed to the **ASCO** CO_2 Gas Recovery System. The gas at this point will be at low pressure and combined purity of >98.5 %.	CO_2 gas can be generated as a by-product of **various industrial sources** (e.g. ammonia production or hydrogen reforming) and as such can be reclaimed for feed to the **ASCO** CO_2 Gas Recovery System.	CO_2 gas can be generated from **natural origin** (e.g. from natural underground wells). These source gases then can be reclaimed for feed to the **ASCO** CO_2 Gas Recovery System.
The recovery plant compresses CO_2 gas, elevating the pressure to approximately 18 barg (260 psi) for CO_2 gas processing that being: washing, purifying, drying and CO_2 gas condensing. Our selection of specially designed compressors offer the best in energy utilization, dry gas compression and ease of maintenance.		
Once compressed, CO_2 gas is treated for removal of impurities typical of these sources by high pressure high efficiency CO_2 gas washing (scrubbing) providing a CO_2 purity of min 99.9 %.		
ASCO's system design further enhances the gas quality by proper CO_2 gas purifying. This is accomplished by an activated desiccant bed for gas drying to a dew point of minus 40 °C (104 °F) at pressure (-62 °C (-80 °F) at atmospheric pressure) followed by carbon polish filter, again subject to raw gas and process conditions. Once the operation is completed, the final gas will be odour free, colour free and taste free, preparing for the last stages of purification.		
As a means of final purification the CO_2 gas is condensed (separation of non-condensable gases). CO_2 gas condensing is accomplished by use of an independent refrigeration system that liquefies CO_2 gas at approximately 18 barg (260 psi) and minus 24 °C (75 °F). The non-condensable gases present in the CO_2 gas are separated and purged from the system automatically and reused for regeneration gas within the plant.		
Liquid CO_2 leaving the CO_2 condenser flows by gravity to a liquid CO_2 purification system to achieve a final liquid CO_2 purity of 99.998 %. Thereafter, high quality liquid CO_2 is pumped to a liquid CO_2 storage tank for handling the liquid CO_2 such as bulk supply, cylinder supply, dry ice supply for chilling or dry ice supply for blast cleaning.		



CO_2 Gas Revert Recovery

ASCO CO_2 Gas Revert Recovery Systems (RRSi)

ASCO CO_2 Gas Revert Recovery Systems are engineered to efficiently recover the revert CO_2 gas from **ASCO** Dry Ice Pellet and Block Machines which normally direct the revert (flash) gas to the atmosphere.

Advantages of CO_2 Revert Recovery Systems:

- Reducing dry ice production costs up to 50 % by recovering the normally "lost" CO_2 gas due to vent typical of dry ice manufacturing
- Automatic (PLC) operation
- Heavy duty, compact and efficient design
- Packaged, prepiped and prewired for timely installation

When dry ice is produced the conversion rate from liquid CO_2 to dry ice is approx. 40 - 45 %. This means 55 - 60 % is lost to the atmosphere. This conversation rate is a physical fact and therefore, unfortunately, not to change. **With the ASCO CO_2 Revert Recovery System (RRS), however, most of the CO_2 can be recovered** which leads to a **final conversion rate of approx. 90 - 95 %.**

As models of **ASCO's i-Series**, the CO_2 Gas Revert Recovery Systems RRSi are 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.**

Specifications

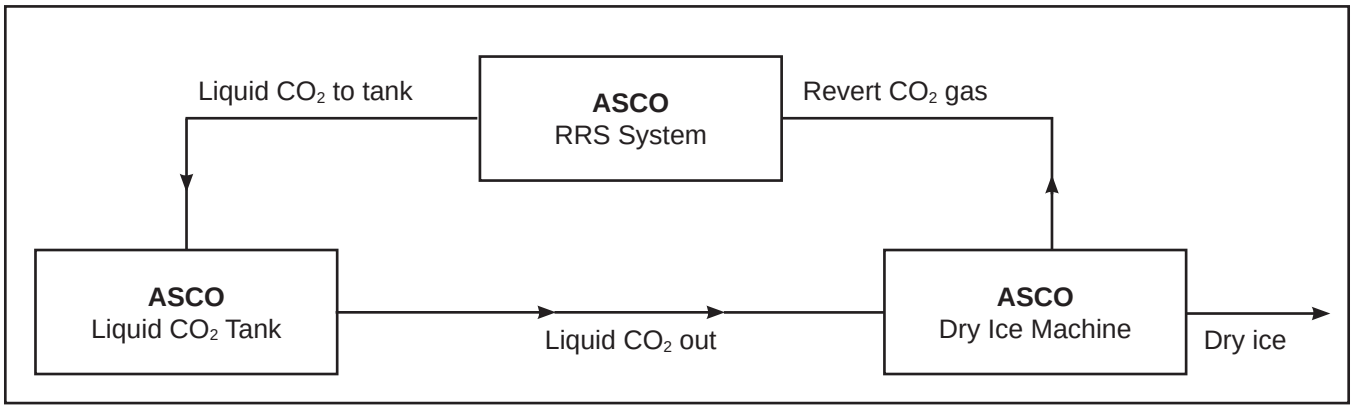
Model	**RRS 1020i**
Revert CO_2 gas (lb/h)	1020 kg/h (2249)
Absorbed power in kW (HP) approx.	184 (247)
Installed power in kW (HP)	247 (331)
Est. cooling water flow rate requirement m^3/h (ft^3/h)	40.2 (1420)
Dimensions LxWxH in mm (ft)	6800 x 5400 x 6700 (22.31 x 17.72 x 21.98)
Voltage:	480 VAC ± 5 % / 3ph + PE / 60 Hz
Instrument control air:	< 2m^3/h (< 70.3 ft^3/h), 6 bar g (87 psi), dew point -40 °C (F), oil free
Sound level:	approx. 86 dB

Exact specification according to technical offer details.

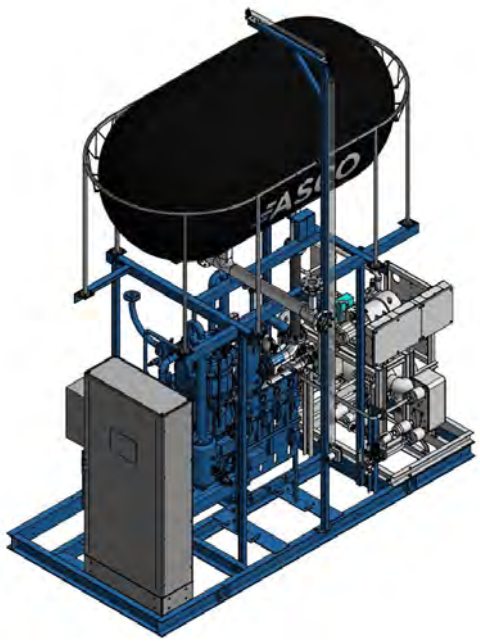
ASCO CO_2 Gas Revert Recovery Systems: Special features

CO_2 buffer balloon	Specially designed, made of foodgrade acceptable material, to provide a constant back pressure to the dry ice machine as well as provide constant supply conditions of CO_2 flow to the gas compressor. Local conditions may require reheating of the CO_2 revert gas which can be supplied as required for each application.
CO_2 compressor	A water-cooled, dry-running, non-lubricated and oil-free 2-stage CO2 piston compressor, with separate cooling for each stage, compresses the recovered gas down to 18-20 barg (261-290 psi).
CO_2 liquefier	Liquefies the compressed CO_2 gas though a standard refrigeration loop. The re-liquefied CO_2 is then returned to the liquid CO_2 storage tank for reuse in dry ice production.
Control system	A central control system automatically controls the entire process and houses the electric motor distribution, starting, operator interface and PLC control system.

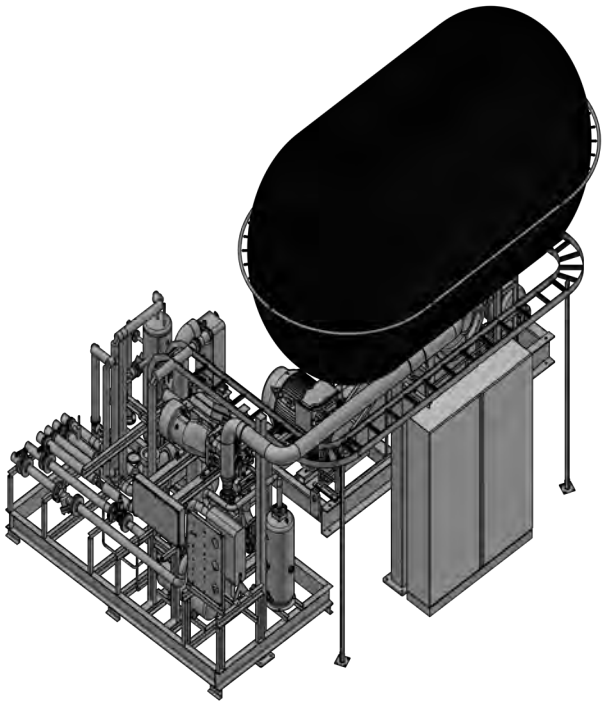
How the ASCO CO_2 Revert Recovery System interconnects with ASCO Dry Ice Equipment:



ASCO CO_2 Gas Revert Recovery System RRS: Sample views RRS



Example RRS 320i



Example RRS 1020i

ASCO CO_2 Gas Revert Recovery System RRS: Available standard capacities

Pos. 001

ASCO CO_2 Gas Revert Recovery System RRS 320i (water-cooled)

part no. 901504

To recover up to **320 kg/h (705 lb/h)** of revert CO_2 gas from the production of dry ice.

Scope of supply:

- CO_2 gas balloon buffer storage (mounted remotely or directly on the RRS)
- CO_2 compressor, dry running 2 stage, water cooled
- CO_2 liquefier, refrigerant, water cooled with stainless steel CO_2 codenser
- Allowance for insulated outlet CO_2 liquid line from the RRS to the liquid CO_2 storage tank (up to 10 m) (33 ft)
- Central control panel with operator interface
- Modularized design is prepiped, prewired and precabled for fast installation
- ASCO i-Series connection for remote maintenance and diagnostics

The RRS 320i should be positioned as close as possible to the dry ice production (max. 8m distance and max. 4 arches).

Utility specifications according to technical offer details - without options and accessories

Example picture

not available for US market

Pos. 002

ASCO CO_2 Gas Revert Recovery System RRS 540i (water-cooled)

part no. 901505

To recover up to **540 kg/h (1190 lb/h)** of revert CO_2 gas from the production of dry ice.

Scope of supply:

- CO_2 gas balloon buffer storage (mounted remotely or directly on the RRS)
- CO_2 compressor, dry running 2 stage, water cooled
- CO_2 liquefier, refrigerant, water cooled with stainless steel CO_2 codenser
- Allowance for insulated outlet CO_2 liquid line from the RRS to the liquid CO_2 storage tank (up to 10 m 33 ft)
- Central control panel with operator interface
- Modularized design is prepiped, prewired and precabled for fast installation
- ASCO i-Series connection for remote maintenance and diagnostics

The RRS 540i should be positioned as close as possible to the dry ice production (max. 8m distance and max. 4 arches).

Utility specifications according to technical offer details - without options and accessories

Example picture

not available for US market

ASCO CO_2 Gas Revert Recovery System RRS: Available standard capacities

Pos. 003

ASCO CO_2 Gas Revert Recovery System RRS1020i (water-cooled)

part no. 901508

To recover up to **1020 kg/h (2‘249 lb/h)** of revert CO_2 gas from the production of dry ice.

Scope of supply:

- CO_2 gas balloon buffer storage (mounted remotely or directly on the RRS)
- CO_2 compressor, dry running 2 stage, water cooled
- CO_2 liquefier, refrigerant, water cooled with stainless steel CO_2 codenser
- Allowance for insulated outlet CO_2 liquid line from the RRS to the liquid CO_2 storage tank (up to 10 m) (32.8 ft)
- Central control centre and control panel with operator interface
- Modularized design is prepiped, prewired and precabled for fast installation
- ASCO i-Series connection for remote maintenance and diagnostics

The RRS 1020i should be positioned as close as possible to the dry ice production (max. 8m distance and max. 4 arches).

Utility specifications according to technical offer details - without options and accessories

Example picture

ASCO CO_2 Gas Revert Recovery System RRS: Options

Remote PanelView

part no. 4070295

The ASCO Remote PanelView makes it possible to monitor the system at a second location up to 95m (311 ft) away.

Spare parts package

The spare parts package includes parts for 2 years of operation.
Designed according to the system size:

ASCO CO_2 Gas Revert Recovery System RRS 1020i

part no. 4070509

ASCO CO_2 Gas Revert Recovery System RRS: Options

Water Cooling System (Induced Draft Axial Fan Counterflow)

High performance cooling water system with a corrosion resistant cooling tower, complete with cooling water pump, associated valves and accessories for the cooled water needed.
Designed according to the system size:

ASCO CO_2 Gas Revert Recovery System RRS 1020i — **part no. 4070512**

Water Cooling System (Closed Circuit)

High performance closed circuit cooling water systems are used as an alternative to open circuit cooling with heat exchangers in those cases where the cooling liquid for the user's equipment needs to keep its chemical and physical properties constant over time and not be contaminated by external elements. Generally filled with water or water with glycol.
Designed according to the system size:

ASCO CO_2 Gas Revert Recovery System RRS 1020i — **part no. 4070513**

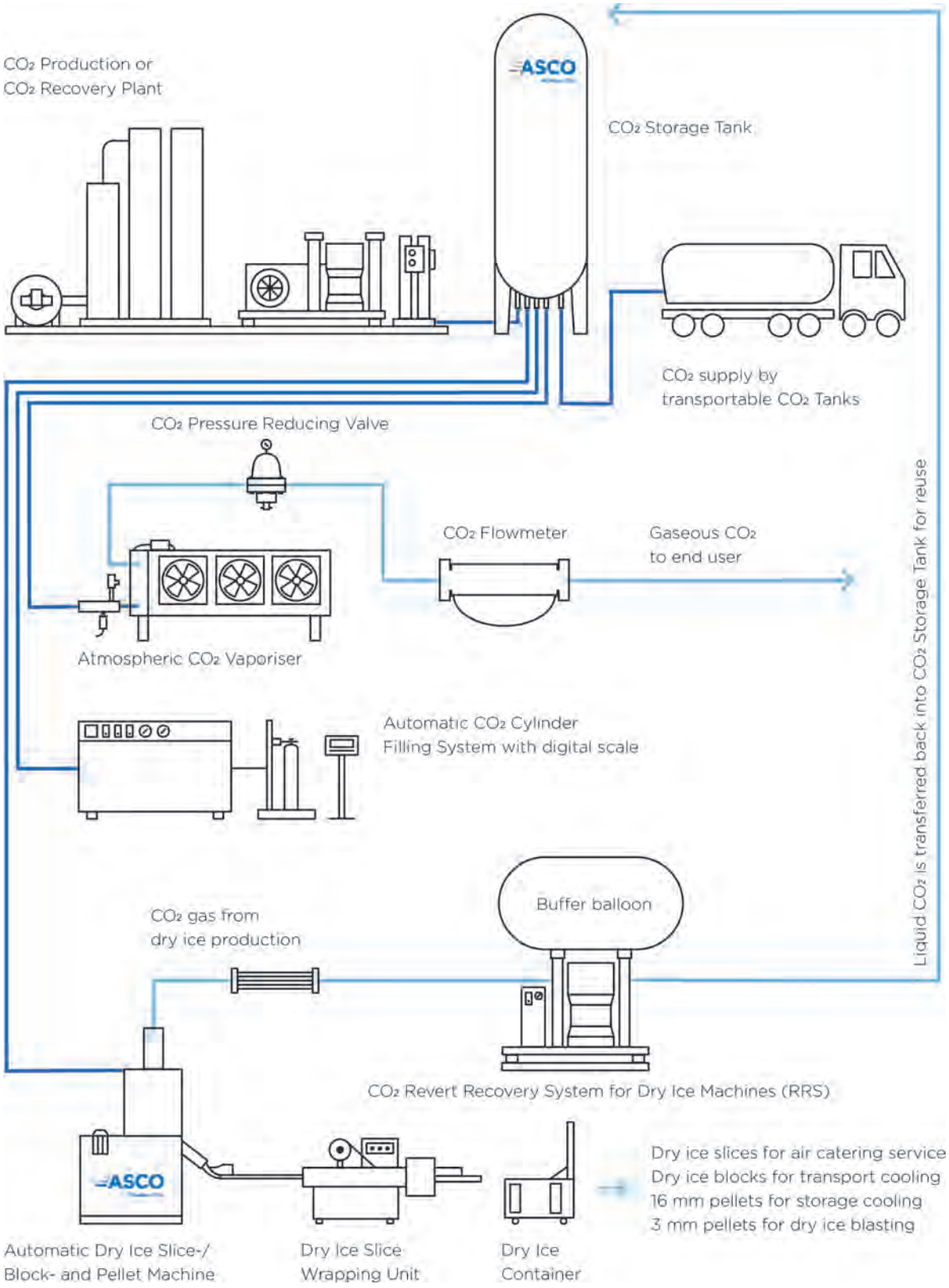
Water Cooling System (Adiabatic Cooler)

Ideal for saving water at a high efficiency at the same time. A high performance cooled water system with a corrosion resistant cooling tower, complete with cooling water pump, associated valves and accessories.
Designed according to the system size:

ASCO CO_2 Gas Revert Recovery System RRS 1020i — **part no. 4070514**

ASCO - the complete CO_2 Solution

Complete your ASCO CO_2 Production- / Recovery Plant with some of our many accessories



All photos and drawings are used for marketing purposes only.

CO_2 Storage

ASCO CO_2 Storage Tanks Vacuum Insulated

ASCO CO_2 Storage Tanks include a high quality perlite vacuum insulation and are supplied complete with all pipework, valves, safety devices, liquid level indicator, pressure gauge, automatic pressure build up and pressure reducing systems allowing fast and easy installation on site.

The inner tank is made of stainless steel or carbon steel. The outer vessel has a durable protective coating to guard against corrosion.

All interconnecting pipework is made of stainless steel. Special connections are included to allow easy installation of any ancillary equipment such as vaporisers, cylinder filling systems, transfer pumps and dry ice machines etc.

- **compact**
- **simple and safe to operate**
- **easily installed**

Horizontal and vertical tanks

ASCO Storage Tanks are available as horizontal or vertical versions.

Cryogenic gases

Vertical **ASCO** Storage Tanks can also be configured for other liquefied cryogenic gases (N_2, O_2, Ar).

Specifications

Inner vessel:	Stainless or carbon steel	**Piping:**	Stainless steel
Outer vessel:	Carbon steel	**Level indication:**	Differential pressure measuring device (outlet 4 - 20 mA)
Max. working pressure (CO_2 Tanks):	22 bar (319 psi)	**Filling connections:**	According to ASCO flow diagram
Insulation:	High quality vacuum perlite	**Approval:**	PED 2014/68/EU or AD2000 and other international codes

ASCO reserves the right to modify all specifications without prior notice.

ASCO CO_2 Storage Tanks: Special features

Advantages of ASCO vacuum insulated CO_2 Storage Tanks:

- Low maintenance
- Installation is straightforward
- All pipework on vacuum insulated tanks are made of stainless steel
- Vacuum insulated tanks include automatic pressure build up and pressure reducing systems
- Special connections are included to allow easy installation of vaporisers, cylinder filling systems, transfer pumps and dry ice machines
- Tanks can be ordered with different pipework arrangement for other liquefied cryogenic gases (Nitrogen, Oxygen, Argon)

Easy Handling and easy Installation on Site:

ASCO's vacuum insulated Storage Tanks are designed for easy handling and installation on site.

The stainless steel pipework offers the possibility to connect the following equipment to the tank:

- CO_2 cylinder filling aystems
- Atmospheric CO_2 vaporisers
- Dry ice pelletizers / block machines
- CO_2 production plants
- CO_2 recovery systems
- CO_2 transfer pumps

Typical ASCO CO_2 Pipework: Arrangement

All pipework and valves are made of stainless steel. Automatic pressure build up and pressure reducing systems are standardly included to provide stable tank pressure condition.

Optional:

If a tank is used for storing CO_2 without regular withdrawal, a refrigeration unit can be supplied.

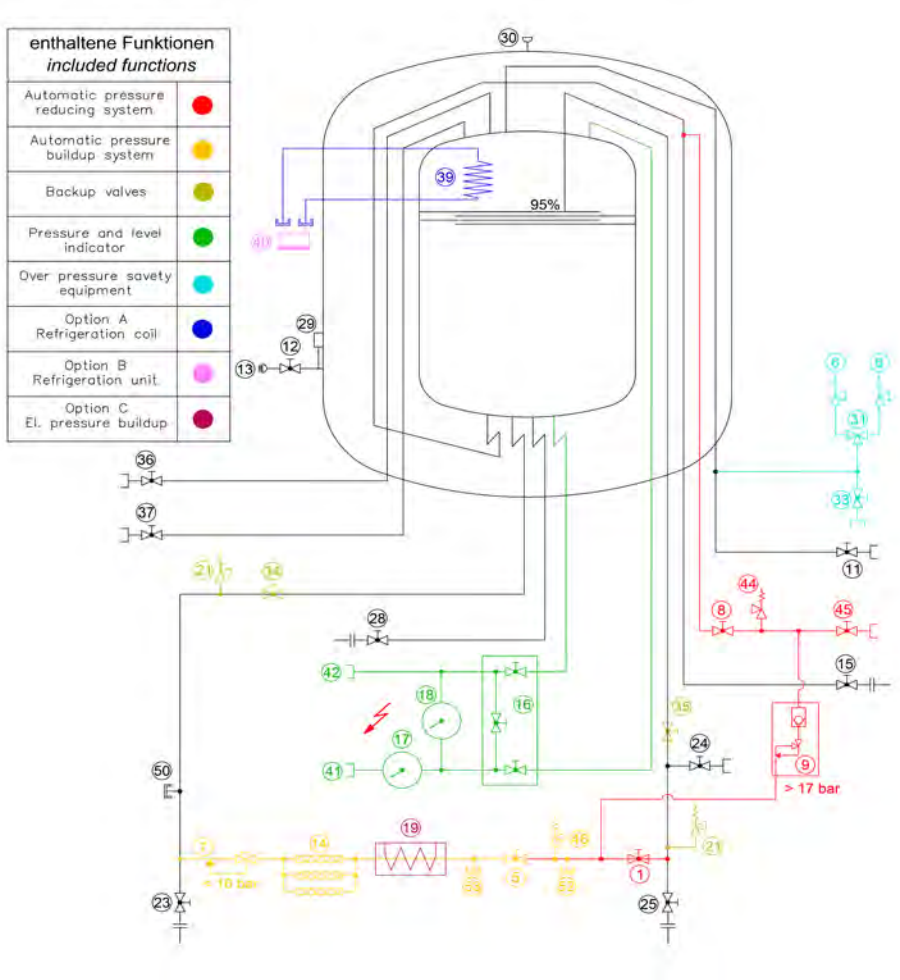
Pressure and Level Indicator:

Differential pressure indicator Media 7 for liquid level indication

- Microprocessor-controlled transmitter with interface for configuration and programming on site
- Digital display (LCD) for temperatures down to –40 °C (-40 °F) with 100 % bar graph as well as alarm and warning markers
- Two-wire connection for 4 - 20 mA signal

Vertical vacuum insulated ASCO CO_2 Tanks

Flow diagram No. 700

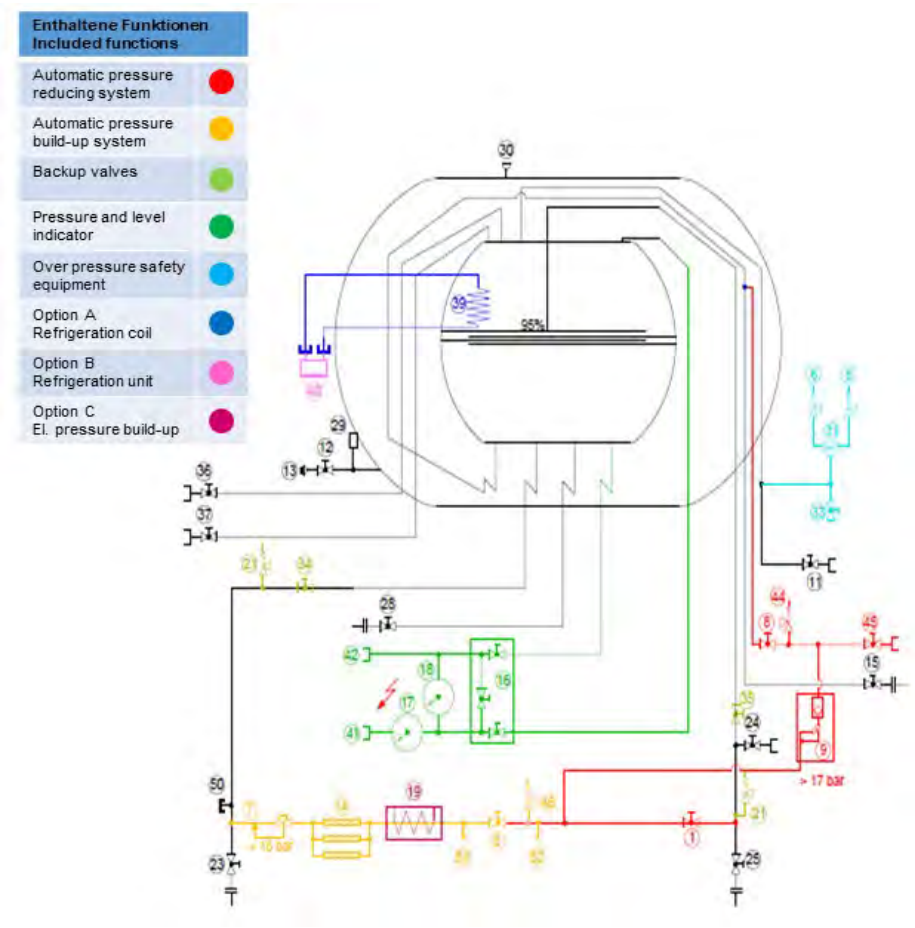


All pipework is aligned inside the tank and the connections are at the bottom of the tank.

1	Shut-off valve pressure reducing system
5	Shut-off valve pressure building system
6	Main safety valve
7	Pressure building regulator
8	Shut-off valve pressure reducing system
9	Pressure reducing regulator
11	Vent valve
12	Valve for vacuum probe
13	Vacuum probe
14	Vaporiser for pressure building system
15	Valve for liquid withdrawal (vaporiser)
16	Thee valve manifold
17	Pressure gauge
18	Liquid leve indicator
19	Electrical pressure building heater
21	Line safety valve
23	Valve for liquid fill connection
24	Overflow valve
25	Valve for gas fill connection
28	Valve for liquid withdrawal
29	Evacuation connection outer casting
30	Bursting disk for outer tank
31	Change over valve
33	Vent valve
34	Back-up valve liquid line
35	Back-up valve gas line
36	Valve for gas withdrawal
37	Valve for gas withdrawal
39	Refrigeration coil
40	Refrigeration unit
41	Connection for pressure measuring
42	Connection for pressure measuring
44	Line safety valve
45	Valve for plant
46	Line safety valve
50	Connection for liquid withdrawal
52	Connection for liquid withdrawal
53	Connection for liquid withdrawal

Horizontal vacuum insulated ASCO CO_2 Tanks

Flow diagram No. 750



All pipework is aligned inside the tank and the connections are at the bottom of the tank.

1	Shut-off valve pressure reducing system
5	Shut-off valve pressure build-up system
6	Main safety valve
7	Pressure build-up regulator
8	Shut-off valve pressure reducing system
9	Pressure reducing regulator
11	Vent valve
12	Valve for vacuum probe
13	Vacuum probe
14	Vaporiser for pressure build-up system
15	Valve for liquid withdrawal (vaporiser)
16	Thee valve manifold
17	Pressure gauge
18	Liquid leve indicator
19	Electrical pressure build-up heater
21	Line safety valve
23	Valve for liquid fill connection
24	Overflow valve
25	Valve for gas fill connection
28	Valve for liquid withdrawal
29	Evacuation connection outer casting
30	Bursting disk for outer tank
31	Change over valve
33	Vent valve
34	Back-up valve liquid line
35	Back-up valve gas line
36	Valve for gas withdrawal
37	Valve for gas withdrawal
39	Refrigeration coil
40	Refrigeration unit
41	Connection for pressure measuring
42	Connection for pressure measuring
44	Line safety valve
45	Valve for plant
46	Line safety valve
50	Connection for liquid withdrawal
52	Connection for liquid withdrawal
53	Connection for liquid withdrawal

Vertical vacuum insulated ASCO Storage Tanks: Available standard capacities

Pos. 001

6.4 t (14'110 lb) / 6‘400 l vertical, vacuum insulated storage tank

Tank to be supplied complete with all pipework in stainless steel, valves, safety devices, differential pressure liquid level indicator, vacuum insulated
- diameter: 1‘600 mm (63 in) / height: 7‘500 mm (295 in)
- including registration by German TÜV
  according to PED 2014/68/EU and AD2000 (also for CH)

CO_2: (available options please see flow diagram no. 700)
- maximum filling weight of **6'100 kg (13'448 lb)**
- safety valve setting 22 bar (319 psi)
- inner vessel made of stainless steel

part no.

CO_2 **900800**

Pos. 002

11.0 t (24'251 lb) / 11‘000 l vertical, vacuum insulated storage tank

Tank to be supplied complete with all pipework in stainless steel, valves, safety devices, differential pressure liquid level indicator, vacuum insulated.
- diameter: 2‘200 mm (87 in) / height: 6‘400 mm (252 in)
- including registration by German TÜV
  according to PED 2014/68/EU and AD2000 (also for CH)

CO_2: (available options please see flow diagram no. 700)
- maximum filling weight of **10‘540 kg (23'237 lb)**
- safety valve setting 22 bar (319 psi)
- inner vessel standardly made of carbon steel, also available in stainless steel

LIN, LOX, LAR:
- maximum net capacity of **10‘450 litres (2'761 gal)**
- MAWP 18.5 bar (268 psi)
- inner vessel made of stainless steel

part no.

CO_2 **900737**
LIN, LOX, LAR 4046463

Pos. 003

17.0 t (37'479 lb) / 17‘000 l vertical, vacuum insulated storage tank

Tank to be supplied complete with all pipework in stainless steel, valves, safety devices, differential pressure liquid level indicator, vacuum insulated.
- diameter: 2‘200 mm (87 in) / height: 8‘950 mm (352 in)
- including registration by German TÜV
  according to PED 2014/68/EU and AD2000 (also for CH)

CO_2: (available options please see flow diagram no. 700)
- maximum filling weight of **16‘290 kg (35'913 lb)**
- safety valve setting 22 bar (319 psi)
- inner vessel standardly made of carbon steel, also available in stainless steel

LIN, LOX, LAR:
- maximum net capacity of **16‘150 litres (4'266 gal)**
- MAWP 18.5 bar (268 psi)
- inner vessel made of stainless steel

part no.

CO_2 **900741**
LIN, LOX, LAR 4046464

Vertical vacuum insulated ASCO Storage Tanks: Available standard capacities

Pos. 004

20.0 t (44'093 lb) / 20‘000 l vertical, vacuum insulated storage tank

Tank to be supplied complete with all pipework in stainless steel, valves, safety devices, differential pressure liquid level indicator, vacuum insulated.

- diameter: 2‘200 mm (87 in) / height: 10‘250 mm (404 in)
- including registration by German TÜV according to PED 2014/68/EU and AD2000 (also for CH)

CO_2: (available options please see flow diagram no. 700)

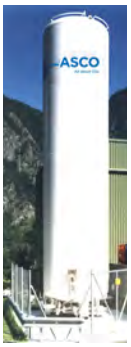
- maximum filling weight of **19‘160 kg (42'241 lb)**
- safety valve setting 22 bar (319 psi)
- inner vessel standardly made of carbon steel, also available in stainless steel

LIN, LOX, LAR:

- maximum net capacity of **19‘000 litres (5'019 gal)**
- MAWP 18.5 bar (268 psi)
- inner vessel made of stainless steel

part no.

CO_2	900743
LIN, LOX, LAR	4046465



Pos. 005

23.0 t (50'706 lb) / 23‘000 l vertical, vacuum insulated storage tank

Only available for CO_2 storage

Tank to be supplied complete with all pipework in stainless steel, valves, safety devices, differential pressure liquid level indicator, vacuum insulated.

- diameter: 2‘200 mm (87 in) / height: 11‘600 mm (457 in)
- including registration by German TÜV according to PED 2014/68/EU and AD2000 (also for CH)

CO_2: (available options please see flow diagram no. 700)

- maximum filling weight of **22‘110 kg (48'744 lb)**
- safety valve setting 22 bar (319 psi)
- inner vessel standardly made of carbon steel, also available in stainless steel

part no.

CO_2	900744

Pos. 006

28.0 t (61'729 lb) / 28‘000 l vertical, vacuum insulated storage tank

Tank to be supplied complete with all pipework in stainless steel, valves, safety devices, differential pressure liquid level indicator, vacuum insulated.

- diameter: 2‘500 mm (98 in) / height: 10‘350 mm (407 in)
- including registration by German TÜV according to PED 2014/68/EU and AD2000 (also for CH)

CO_2: (available options please see flow diagram no. 700)

- maximum filling weight of **26‘820 kg (59'128 lb)**
- safety valve setting 22 bar (319 psi)
- inner vessel standardly made of carbon steel, also available in stainless steel

LIN, LOX, LAR:

- maximum net capacity of **26‘600 litres (7'027 gal)**
- MAWP 18.5 bar (268 psi)
- inner vessel made of stainless steel

part no.

CO_2	900745
LIN, LOX, LAR	4046466

Vertical vacuum insulated ASCO Storage Tanks: Available standard capacities

Pos. 007

32.0 t (70'548 lb) / 32‘300 l vertical, vacuum insulated storage tank

Tank to be supplied complete with all pipework in stainless steel, valves, safety devices, differential pressure liquid level indicator, vacuum insulated.
- diameter: 2‘500 mm (98 in) / height: 11‘600 mm (457 in)
- including registration by German TÜV
  according to PED 2014/68/EU and AD2000 (also for CH)

CO_2: (available options please see flow diagram no. 700)
- maximum filling weight of **30‘660 kg (67'594 lb)**
- safety valve setting 22 bar (319 psi)
- inner vessel standardly made of carbon steel, also available in stainless steel

LIN, LOX, LAR:
- maximum net capacity of **30‘690 litres (8'107 gal)**
- MAWP 18.5 bar (268 psi)
- inner vessel made of stainless steel

part no.

CO_2	900746
LIN, LOX, LAR	4046467

Pos. 008

37.0 t (81'571 lb) / 36‘600 l vertical, vacuum insulated storage tank

Tank to be supplied complete with all pipework in stainless steel, valves, safety devices, differential pressure liquid level indicator, vacuum insulated.
- diameter: 2‘500 mm (98 in) / height: 12‘900 mm (508 in)
- including registration by German TÜV
  according to PED 2014/68/EU and AD2000 (also for CH)

CO_2: (available options please see flow diagram no. 700)
- maximum filling weight of **35‘450 kg (78'154 lb)**
- safety valve setting 22 bar (319 psi)
- inner vessel standardly made of carbon steel, also available in stainless steel

LIN, LOX, LAR:
- maximum net capacity of **34‘770 litres (9'185 gal)**
- MAWP 18.5 bar (268 psi)
- inner vessel made of stainless steel

part no.

CO_2	900747
LIN, LOX, LAR	4046468

Pos. 009

41.0 t (90'390 lb) / 41‘000 l vertical, vacuum insulated storage tank

Tank to be supplied complete with all pipework in stainless steel, valves, safety devices, differential pressure liquid level indicator, vacuum insulated.
- diameter: 2‘500 mm (98 in) / height: 14‘200 mm (557in)
- including registration by German TÜV
  according to PED 2014/68/EU and AD2000 (also for CH)

CO_2: (available options please see flow diagram no. 700)
- maximum filling weight of **39‘280 kg (86'598 lb)**
- safety valve setting 22 bar (319 psi)
- inner vessel standardly made of carbon steel, also available in stainless steel

LIN, LOX, LAR:
- maximum net capacity of **38‘950 litres (10'290 gal)**
- MAWP 18.5 bar (268 psi)
- inner vessel made of stainless steel

part no.

CO_2	900748
LIN, LOX, LAR	4046469

Vertical vacuum insulated ASCO Storage Tanks: Available standard capacities

Pos. 010

50.0 t (110'231 lb) / 50‘000 l vertical, vacuum insulated storage tank

Tank to be supplied complete with all pipework in stainless steel, valves, safety devices, differential pressure liquid level indicator, vacuum insulated.

- diameter: 3‘000 mm (118 in) / height: 12‘000 mm (472 in)
- including registration by German TÜV
  according to PED 2014/68/EU and AD2000 (also for CH)

CO_2: (available options please see flow diagram no. 700)

- maximum filling weight of **47‘900 kg (105'601 lb)**
- safety valve setting 22 bar (319 psi)
- inner vessel standardly made of carbon steel, also available in stainless steel

LIN, LOX, LAR:

- maximum net capacity of **47‘500 litres (12'548 gal)**
- MAWP 18.5 bar (268 psi)
- inner vessel made of stainless steel

part no.

CO_2	900750
LIN, LOX, LAR	4046470

Pos. 011

60.0 t (132'277 lb)/ 61‘000 l vertical, vacuum insulated storage tank

Only available for LIN, LOX, LAR storage

Tank to be supplied complete with all pipework in stainless steel, valves, safety devices, differential pressure liquid level indicator, vacuum insulated.

- diameter: 3‘000 mm (118 in) / height: 13‘900 mm (472 in)
- including registration by German TÜV
  according to PED 2014/68/EU and AD2000 (also for CH)

CO_2: (available options please see flow diagram no. 700)

- maximum filling weight of **59‘500 kg (131'175 lb)**
- safety valve setting 22 bar (319 psi)
- inner vessel standardly made of carbon steel, also available in stainless steel

LIN, LOX, LAR:

- maximum net capacity of **57‘950 litres (15'309 gal)**
- MAWP 18.5 bar (268 psi)
- inner vessel made of stainless steel

part no.

CO_2	900830
LIN, LOX, LAR	4046471

Pos. 012

73.0 t (160'938 lb) / 73‘000 l vertical, vacuum insulated storage tank

Only available for CO_2 storage.

Tank to be supplied complete with all pipework in stainless steel, valves, safety devices, differential pressure liquid level indicator, vacuum insulated.

- diameter: 3‘000 mm (118 in) / height: 16‘400 mm (646 in)
- including registration by German TÜV
  according to PED 2014/68/EU and AD2000 (also for CH)

CO_2: (available options please see flow diagram no. 700)

- maximum filling weight of **69‘930 kg (154'169 lb)**
- safety valve setting 22 bar (319 psi)
- inner vessel standardly made of carbon steel, also available in stainless steel

part no.

CO_2	900751

Vertical vacuum insulated ASCO Storage Tanks: Available standard capacities

Pos. 013

100.0 t (220'462 lb) / 100‘000 l vertical, vacuum insulated storage tank

Only available for CO_2 storage

part no.

CO_2 900752

Tank to be supplied complete with all pipework in stainless steel, valves, safety devices, differential pressure liquid level indicator, vacuum insulated.

- diameter: 3‘600 mm (142 in) / height: 15‘350 mm (604 in)
- including registration by German TÜV
  according to PED 2014/68/EU and AD2000 (also for CH)

CO_2: (available options please see flow diagram no. 700)

- maximum filling weight of **95'800 kg (211'203 lb)**
- safety valve setting 22 bar (319 psi)
- inner vessel standardly made of carbon steel, also available in stainless steel
- available options please see flow diagram no. 700

Horizontal vacuum insulated CO_2 Storage Tanks: Available standard capacities

Pos. 014

11.0 t (24'251 lb) / 11‘000 l horizontal, vacuum insulated CO_2 storage tank

part no. 900804

Tank to be supplied complete with all pipework in stainless steel, valves, safety devices, differential pressure liquid level indicator, vacuum insulated.

- diameter: 2‘200 mm (87 in) / length: 6‘400 mm (252in)
- including registration by German TÜV according to PED 2014/68/EU and AD2000 (also for CH)
- maximum filling weight of **10‘540 kg (23'237 lb)**
- safety valve setting 24 bar (348 psi) (if stainless steel upgrade 22 bar) (319 psi)
- inner vessel standardly made of carbon steel, also available in stainless steel
- available options please see flow diagram no. 750

Pos. 015

17.0 t (37'479 lb) / 17‘000 l horizontal, vacuum insulated CO_2 storage tank

part no. 900805

Tank to be supplied complete with all pipework in stainless steel, valves, safety devices, differential pressure liquid level indicator, vacuum insulated.

- diameter: 2‘200 mm (87 in) / length: 9'000 mm (352 in)
- including registration by German TÜV according to PED 2014/68/EU and AD2000 (also for CH)
- maximum filling weight of **16‘290 kg (35'919 lb)**
- safety valve setting 24 bar (348 psi) (if stainless steel upgrade 22 bar) (319 psi)
- inner vessel standardly made of carbon steel, also available in stainless steel
- available options please see flow diagram no. 750

Pos. 016

20.0 t (44'093 lb) / 20‘000 l horizontal, vacuum insulated CO_2 storage tank

part no. 900906

Tank to be supplied complete with all pipework in stainless steel, valves, safety devices, differential pressure liquid level indicator, vacuum insulated.

- diameter: 2‘200 mm (87 in) / length: 10‘250 mm (404 in)
- including registration by German TÜV according to PED 2014/68/EU and AD2000 (also for CH)
- maximum filling weight of **19‘160 kg (42'241 lb)**
- safety valve setting 24 bar (348 psi) (if stainless steel upgrade 22 bar) (319 psi)
- inner vessel standardly made of carbon steel, also available in stainless steel
- available options please see flow diagram no. 750

Horizontal vacuum insulated CO_2 Storage Tanks: Available standard capacities

Pos. 017

28.0 t (61'729 lb) / 28‘000 l horizontal, vacuum insulated CO_2 storage tank

part no. 900807

Tank to be supplied complete with all pipework in stainless steel, valves, safety devices, differential pressure liquid level indicator, vacuum insulated.

- diameter: 2‘500 mm (98 in) / length: 10‘400 mm (407 in)
- including registration by German TÜV according to PED 2014/68/EU and AD2000 (also for CH)
- maximum filling weight of **26‘820 kg (59'128 lb)**
- safety valve setting 24 bar (348 psi) (if stainless steel upgrade 22 bar) (319 psi)
- inner vessel standardly made of carbon steel, also available in stainless steel
- available options please see flow diagram no. 750

Pos. 018

32.0 t (70'548 lb) / 32‘300 l horizontal, vacuum insulated CO_2 storage tank

part no. 900808

Tank to be supplied complete with all pipework in stainless steel, valves, safety devices, differential pressure liquid level indicator, vacuum insulated.

- diameter: 2‘500 mm (98 in) / length: 11‘600 mm (457 in)
- including registration by German TÜV according to PED 2014/68/EU and AD2000 (also for CH)
- maximum filling weight of **30‘660 kg (67'594 lb)**
- safety valve setting 24 bar (348 psi) (if stainless steel upgrade 22 bar) 319 psi)
- inner vessel standardly made of carbon steel, also available in stainless steel
- available options please see flow diagram no. 750

Pos. 019

37.0 t (81'571 lb) / 36‘600 l horizontal, vacuum insulated CO_2 storage tank

part no. 900809

Tank to be supplied complete with all pipework in stainless steel, valves, safety devices, differential pressure liquid level indicator, vacuum insulated.

- diameter: 2‘500 mm (98 in) / length: 12‘900 mm (508 in)
- including registration by German TÜV according to PED 2014/68/EU and AD2000 (also for CH)
- maximum filling weight of **35‘450 kg (78'154 lb)**
- safety valve setting 24 bar (348 psi) (if stainless steel upgrade 22 bar) (319 psi)
- inner vessel standardly made of carbon steel, also available in stainless steel
- available options please see flow diagram no. 750

Horizontal vacuum insulated CO_2 Storage Tanks: Available standard capacities

Pos. 020

41.0 t (90'390 lb) / 41‘000 l horizontal, vacuum insulated CO_2 storage tank

part no. 900810

Tank to be supplied complete with all pipework in stainless steel, valves, safety devices, differential pressure liquid level indicator, vacuum insulated.

- diameter: 2‘500 mm (98 in) / length 14‘150 mm (557 in)
- including registration by German TÜV
  according to PED 2014/68/EU and AD2000 (also for CH)
- maximum filling weight of **39‘280 kg (86'598 lb)**
- safety valve setting 24 bar (348 psi)(if stainless steel upgrade 22 bar) (319 psi)
- inner vessel standardly made of carbon steel, also available in stainless steel
- available options please see flow diagram no. 750

Pos. 021

50.0 t (110'231 lb) / 50‘000 l horizontal, vacuum insulated CO_2 storage tank

part no. 900811

Tank to be supplied complete with all pipework in stainless steel, valves, safety devices, differential pressure liquid level indicator, vacuum insulated.

- diameter: 3‘000 mm (118 in) / length: 11‘990 mm (472 in)
- including registration by German TÜV
  according to PED 2014/68/EU and AD2000 (also for CH)
- maximum filling weight of **47‘900 kg (105'601 lb)**
- safety valve setting 24 bar (348 psi) (if stainless steel upgrade 22 bar) (319 psi)
- inner vessel standardly made of carbon steel, also available in stainless steel
- available options please see flow diagram no. 750

CO_2 Storage

ASCO CO_2 Storage Tanks Polyurethane Insulated

ASCO polyurethane insulated (PU) Storage Tanks are constructed in various standard sizes, ranging from 10 t to 100 t capacity of liquid carbon dioxide. Each unit is compactly designed, simple and safe to operate and easily installed.

The **ASCO** pressure vessels are designed and built per PED and AD2000, maximum allowable working pressure is 24 bar (348 psi). Tanks are supplied complete with all pipework in stainless steel, valves and safety devices (as described in our tank flow diagram).

ASCO PU insulated CO_2 Storage Tanks are available as vertical and horizontal version.

Insulated, completely pre-wired electrical system with control cabinet, level-indicator media6 or loadcell, pressure build-up heater, safety devices, valves, pipework. All our systems are completely pretested before shipment.

Capacities given is based on a 95 % full volume. Vessels are insulated with 150 to 200 mm (5.91 to 7.87 in) polyurethane foam, covered by an aluminium sheet and are primed.

The tank content can be shown either by differential pressure indicator and pressure gauge or load cells.

Specifications

Pressure vessel:	Made of carbon steel, 24 bar (348 psi) design pressure
Insulation:	PU insulated, 150 - 200 mm (6 - 8 in), covered by aluminium sheet
Piping:	Stainless steel
Contents gauge:	Differential pressure measuring device (outlet 4-20 mA)
Filling connections:	According to flow diagram
Approval:	ED 2014/68/EU and AD2000

ASCO reserves the right to modify all specifications without prior notice.

PU insulated ASCO CO_2 Storage Tanks: Overview standard capacities

Available standard capacities vertical PU insulated ASCO CO_2 Storage Tanks:

Tank capacity (liquid CO_2 in kg) (lb)	Dimensions (height × diameter in mm) (in)	approx. empty weight in kg (lb)	part no.
9'800 (21'605)	5'250 × 1'800 (207 x 71)	4'800 (10'582)	4046602
14'700 (32'408)	7'250 × 1'800 (285 x 71)	5'300 (11'684)	4046603
17'650 (38'912)	8'750 × 1'800 (344 x 71)	6'500 (14'330)	4046604
22'550 (49'714)	10'250 × 1'800 (404 x 71)	7'800 (17'196)	4046605
29'500 (65'036)	8'250 × 2'400 (325 x 94)	9'500 (20'944)	4046606
39'150 (86'311)	9'750 × 2'400 (384 x 94)	11'200 (24'692)	4046607
48'900 (101'780)	12'550 × 2'400 (494 x 94)	13'600 (29'983)	4046608
58'700 (129'411)	14'550 × 2'400 (573 x 94)	14'850 (32'739)	4046609
97'850 (215'722)	14'000 × 3'200 (55 x 126)	25'800 (56'879)	4046610

Available standard capacities horizontal PU insulated ASCO CO_2 Storage Tanks:

Tank capacity (liquid CO_2 in kg) (lb)	Dimensions (length × diameter in mm) (in)	approx. empty weight in kg (lb)	part no.
9'800 (21'605)	5'805 × 1'900 (229 x 75 in)	4'000 (8'818)	4046592
14'700(32'408)	7'305 × 1'900 (288 x 73 in)	5'000 (11'023)	4046593
17'650 (17'650)	8'800 × 1'900 (346 x 73 in)	6'000 (13'228)	4046594
22'550 (49'714)	10'300 × 1'900 (406 x 73 in)	7'000 (15'432)	4046595
29'500 (65'036)	11'800 × 1'900 (465 x 73 in)	8'600 (18'960)	4046596
39'150 (86'311)	10'800 × 2'400 (425 x 73 in)	10'300 (22'708)	4046597
48'900 (101'780)	14'000 × 2'400 (551 x 73 in)	13'600 (29'983)	4046598
58'700 (129'411)	15'500 × 2'400 (610 x 94 in)	15'000 (33'069)	4046599
97'850 (215'722)	13'500 × 3'000 (531 x 118 in)	29'500 (65'036)	4046600

All horizontal PU insulated ASCO CO_2 Storage Tanks are delivered skid-mounted.

PU insulated ASCO CO_2 Storage Tanks: Standard scope of supply

- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

Additionally either a load cell or a differential pressure indicator (Media 7) has to be chosen (see options).

Vertical PU insulated ASCO CO_2 Storage Tanks: Available standard capacities

Pos. 001

ASCO CO_2 VT PU Storage Tank, 10 t (22'046 lb) TÜV/PED

part no. 4046602

10 t vertical, with a maximum filling weight of **9'800 kg (21'605 lb)**

- diameter: 1'800 mm (71 in) / height: 5'300 mm (207 in)
- empty weight: approx. 4'800 kg (10'582 lb)
- working temperature: -40 °C (-40 °F) to +50 °C (+122 °F)

Safety valve setting 24 bar (348 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices.
Incl.:

- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

Pos. 002

ASCO CO_2 VT PU Storage Tank, 15 t (33'069 lb)TÜV/PED

part no. 4046603

15 t vertical, with a maximum filling weight of **14'700 kg (32'408 lb)**

- diameter: 1'800 mm (71 in) / height: 7'300 mm (285 in)
- empty weight: approx. 5'300 kg (11'685 lb)
- working temperature: -40 °C (-40 °F) to +50 °C (+122 °F)

Safety valve setting 24 bar (348 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices.
Incl.:

- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

Pos. 003

ASCO CO_2 VT PU Storage Tank, 18 t (39'683 lb) TÜV/PED

part no. 4046604

18 t vertical, with a maximum filling weight of **17'650 kg (38'912 lb)**

- diameter: 1'800 mm (71 in) / height: 8'800 mm (344 in)
- empty weight: approx. 6'500 kg (14'110 lb)
- working temperature: -40°C (-40 °F) to +50 °C (+122 °F)

Safety valve setting 24 bar (348 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices.
Incl.:

- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

Vertical PU insulated ASCO CO_2 Storage Tanks: Available standard capacities

Pos. 004

ASCO CO_2 VT PU Storage Tank, 23 t (50'706.3 lb) TÜV/PED

part no. 4046605

23 t vertical, with a maximum filling weight of **22'550 kg (49'714 lb)**

- diameter: 1'800 mm (71 in) / height: 10'300 mm (404 in)
- empty weight: approx. 7'800 kg (17'196 lb)
- working temperature: -40 °C (-40 °F) to +50 °C (+122 °F)

Safety valve setting 24 bar (348 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices.
Incl.:

- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

Pos. 005

ASCO CO_2 VT PU Storage Tank, 30 t (66'139 lb) TÜV/PED

part no. 4046606

30 t vertical, with a maximum filling weight of **29'500 kg (65'036 lb)**

- diameter: 2'400 mm (94 in) / height: 8'300 mm (325 in)
- empty weight: approx. 9'500 kg (20'944 lb)
- working temperature: -40 °C (-40 °F) to +50 °C (+122 °F)

Safety valve setting 24 bar (348 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices.
Incl.:

- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

Pos. 006

ASCO CO_2 VT PU Storage Tank, 40 t (88'185 lb) TÜV/PED

part no. 4046607

40 t vertical, with a maximum filling weight of **39'150 kg (86'311 lb)**

- diameter: 2'400 mm (94 in) / height: 9'800 mm (384 in)
- empty weight: approx. 11'200 kg (24'692 lb)
- working temperature: -40 °C (-40 °F) to +50 °C (+122 °F)
-

Safety valve setting 24 bar (348 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices.
Incl.:

- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

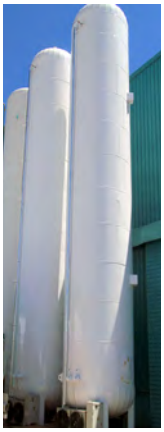
Vertical PU insulated ASCO CO_2 Storage Tanks: Available standard capacities

Pos. 007

ASCO CO_2 VT PU Storage Tank, 50 t (110'231 lb) TÜV/PED

part no. 4046608

50 t vertical, with a maximum filling weight of **48'900 kg (107'806 lb)**



- diameter: 2'400 mm (94 in) / height: 12'600 mm (494 in)
- empty weight: approx. 13'600 kg (29'983 lb)
- working temperature: -40 °C (-40 °F) to +50 °C (+122 °F)

Safety valve setting 24 bar (348 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices.
Incl.:

- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

Pos. 008

ASCO CO_2 VT PU Storage Tank, 60 t (132'277 lb) TÜV/PED

part no. 4046609

60 t vertical, with a maximum filling weight of **58'700 kg (139'411 lb)**

- diameter: 2'400 mm (94 in) / height: 14'600 mm (573 in)
- empty weight: approx. 14'850 kg (32'739 lb)
- working temperature: -40 °C (-40 °F) to +50 °C (+122 °F)

Safety valve setting 24 bar (348 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices.
Incl.:

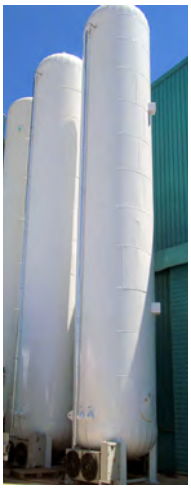
- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

Pos. 009

ASCO CO_2 VT PU Storage Tank, 100 t (220'462 lb) TÜV/PED

part no. 4046610

100 t vertical, with a maximum filling weight of **97'850 kg (215'722 lb)**



- diameter: 3'200 mm (126 in) / height: 14'000 mm (551 in)
- empty weight: approx. 25'800 kg (56'879 lb)
- working temperature: -40 °C (-40 °F) to +50 °C (+122 °F)

Safety valve setting 24 bar (348 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices.
Incl.:

- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

Horizontal PU insulated ASCO CO_2 Storage Tanks: Available standard capacities

Pos. 010

ASCO CO_2 HT PU Storage Tank, 10 t TÜV/PED

part no. 4046592

10 t horizontal, with a maximum filling weight of **9'800 kg** (21'605 lb)

- diameter: 1'900 mm (75 in) / length: 5'805 mm (229 in)
- empty weight: approx. 4'000 kg (8'818 lb)
- working temperature: -40 °C (-40 °F) to +50 °C (+122 °F)

Safety valve setting 24 bar (348 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices, skid-mounted.
Incl.:
- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

Pos. 011

ASCO CO_2 HT PU Storage Tank, 15 t TÜV/PED

part no. 4046593

15 t horizontal, with a maximum filling weight of **14'700 kg (32'408 lb)**

- diameter: 1'900 mm (75 in) / length: 7'305 mm (288 in)
- empty weight: approx. 5'000 kg (11'027 lb)
- working temperature: -40 °C (-40 °F) to +50 °C (+122 °F)

Safety valve setting 24 bar (348 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices, skid-mounted.
Incl.:
- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

Pos. 012

ASCO CO_2 HT PU Storage Tank, 18 t TÜV/PED

part no. 4046594

18 t horizontal, with a maximum filling weight of **17'650 kg (38'912 lb)**

- diameter: 1'900 mm (75 in) / length: 8'800 mm (346 in)
- empty weight: approx. 6'000 kg (13'228 lb)
- working temperature: -40 °C (-40 °F) to +50 °C (+122 °F)

Safety valve setting 24 bar (348 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices, skid-mounted.
Incl.:
- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

Horizontal PU insulated ASCO CO_2 Storage Tanks: Available standard capacities

Pos. 013

ASCO CO_2 HT PU Storage Tank, 23 t TÜV/PED

part no. 4046595

23 t horizontal, with a maximum filling weight of **22'550 kg (49'714 lb)**

- diameter: 1'900 mm (75 in) / length: 10'300 mm (406 in)
- empty weight: approx. 7'000 kg (15'432 lb)
- working temperature: -40 °C (-40 °F) to +50 °C (+122 °F)

Safety valve setting 24 bar (348 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices, skid-mounted.
Incl.:
- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

Pos. 014

ASCO CO_2 HT PU Storage Tank, 30 t TÜV/PED

part no. 4046596

30 t horizontal, with a maximum filling weight of **29'500 kg (65'036 lb)**

- diameter: 1'900 mm (75 in) / length: 11'800 mm (465 in)
- empty weight: approx. 8'600 kg (18'960 lb)
- working temperature: -40 °C (-40 °F) to +50 °C (+122 °F)

Safety valve setting 24 bar (348 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices, skid-mounted.
Incl.:
- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

Pos. 015

ASCO CO_2 HT PU Storage Tank, 40 t TÜV/PED

part no. 4046597

40 t horizontal, with a maximum filling weight of **39'150 kg (86'311 lb)**

- diameter: 2'400 mm (95 in) / length: 10'800 mm (425 in)
- empty weight: approx. 10'300 kg (22'708 lb)
- working temperature: -40 °C (-40 °F) to +50 °C (+122 °F)

Safety valve setting 24 bar (348 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices, skid-mounted.
Incl.:
- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

Horizontal PU insulated ASCO CO_2 Storage Tanks: Available standard capacities

Pos. 016

ASCO CO_2 HT PU Storage Tank, 50 t TÜV/PED

part no. 4046598

50 t horizontal, with a maximum filling weight of **48'900 kg** (107'806 lb)

- diameter: 2'400 mm (95 in) / length: 14'000 mm (551 in)
- empty weight: approx. 13'600 kg (29'983 lb)
- working temperature: -40 °C (-40 °F) to +50 °C (+122 °F)

Safety valve setting 24 bar (348 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices, skid-mounted.
Incl.:
- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

Pos. 017

ASCO CO_2 HT PU Storage Tank, 60 t TÜV/PED

part no. 4046599

60 t horizontal, with a maximum filling weight of **58'700 kg (129'411 lb)**

- diameter: 2'400 mm (95 in) / length: 15'500 mm (610 in)
- empty weight: approx. 15'000 kg (33'069 lb)
- working temperature: -40 °C (-40 °F) to +50 °C (+122 °F)

Safety valve setting 24 bar (348 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices, skid-mounted.
Incl.:
- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

Pos. 018

ASCO CO_2 HT PU Storage Tank, 100 t TÜV/PED

part no. 4046600

100 t horizontal, with a maximum filling weight of **97'850 kg (215'722 lb)**

- diameter: 3'000 mm (118 in) / length: 13'500 mm (532 in)
- empty weight: approx. 29'500 kg (65'036 lb)
- working temperature: -40 °C (-40 °F) to +50 °C (+122 °F)

Safety valve setting 24 bar (348 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices, skid-mounted.
Incl.:
- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

Vertical & horizontal PU insulated ASCO CO_2 Storage Tanks: Options

Pos. 019

Refrigeration unit for ASCO CO_2 H/VT PU10-30 t Storage Tank — **part no. 4046612**

Pos. 020

Refrigeration unit for ASCO CO_2 H/VT PU 40-100 t Storage Tank — **part no. 4046613**

Pos. 021

Heating unit for ASCO CO2 H/VT PU Storage Tank — **part no. 4046614**

Heating unit to hold the pressure stable inside the tank

Pos. 022

Load cell for ASCO CO_2 H/VT PU Storage Tank 40 - 100 t — **part no. 4046615**

Load cell instead of differential pressure indicator Media 7

Pos. 023

Media 7 for ASCO CO_2 H/VT PU Storage Tank — **part no. 4046616**

Differential pressure indicator Media 7 for liquid level indication instead of load cell

Please note that the standard version of the tanks is NOT equipped with any filling level indication! Therefore one of the options (part no. 4046615 or 4046616) must be chosen.

CO_2 Storage

ASCO 20‘ ISO Tank Containers

ASCO CO_2 and Cryogenic 20‘ ISO Tank Containers include a high quality vacuum multi-laminar super insulation and are supplied complete with all pipework, valves, safety devices, liquid level indicator, pressure gauge and optional with transfer pump and filling hoses.

All tank containers are designed for transportation by road, ship and rail.

The models are also available on semi-trailer and/or with tractor.

Inner vessels and pipework are made of stainless steel - used for multipurpose transportation of CO_2, N_2, O_2 and Ar.

ASCO reserves the right to modify all specifications without prior notice.

Specifications:

1. Main Data

Commodity	approx. 19‘650 l (5'191 gal)
Gross water volume:	19'650 l
Max. allowed working pressure:	22 bar (319 psi)
Tare weight:	approx 8‘600 kg (18'960 lb)
Max. gross weight:	36‘000 kg (79'366 lb)
Max. payload:	LCO2:approx. 19‘600 kg (43'211 lb)
	LIN:approx. 14‘950 kg (32'959 lb)
	LOX:approx. 21‘240 kg (46'826 lb)
	LAR:approx. 26‘130 kg (57'607 lb)
Tolerances:	on volume 1 %, on weight 2 %
Codes and regulations:	ADR / RID / IMDG / (UN-T75) / UIC
Insulation:	Vacuum with multi-layer insualtion
Height:	approx. 2‘600 mm (102 in)
Width:	approx 2‘440 mm (96 in)
Overall length:	6‘060 mm (239 in)
ISO-corner castings:	20' x 8' x 8'6" ISO dimensions (508 x 203.2 x 218.4 mm)

2. Tank

Inner Vessel	
Max. allowed working pressure:	22 bar (319 psi)
Pressure vessel code:	AD 2000-Regelwerk
Test and calculation pressure:	29.9 bar (434 psi)
Design temperature:	-196 °C (-321 °F) / +50 °C (+122 °F)
Outer diameter:	2‘200 mm (87 in)
Number of baffles:	2

Outer Vessel	
Design pressure:	-1 bar (-14.5 psi) (full vacuum)
Design temperature:	-20 ° C (-4 °F) / +50 °C (+122 °F)
Outer diameter:	2‘420 mm (95.28 in) (not protruding over the frame members)
Overall length:	6‘000 mm (236.22 in) (not protruding over the frame members)

Insulation	
Type	vacuum + multi-layer insulation (super insulated)

Materials	
Inner vessel of CO_2 tanks:	Stainless steel type 1.4311/EN 10028-7 or equivalent
Inner vessel of cryogenic tanks:	Stainless steel type 1.4311/DIN 17440 or equivalent
Outer vessel:	Carbon steel S235JRG2/EN 10025 or equivalent
Piping:	Stainless steel type 340 (L)
Valves for CO_2 tanks:	Ball valves, stainless steel, for CO_2
Valves for cryogenic tanks	Cryogenic valves

3. Frame

The frame is of „Beam Type“, consisting 8‘ x 8‘6“-frame at each end, connected to each end. Handling to be done by means of the corner castings only. The container can be secured by twist locks on rail and road vehicles complying to the relevant requirements of ISO 668 freight containers.

Lockable Machinery Compartment:

All stainless steel pipework and valves neatly arranged in a lockable machinery compartment.
Outside of the machinery compartment is a lockable document holder installed.

Available Types:

ASCO‘s 20‘ ISO Tank Containers are optionally available on semi-trailer and/or tractor.

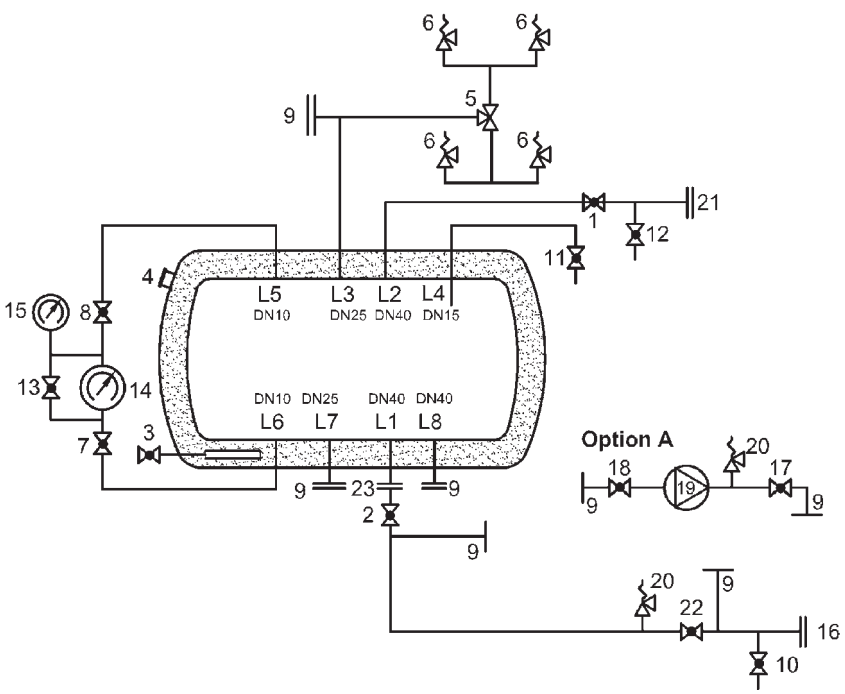
All ISO tank containers include:

- inner vessel made of **stainless steel**
- all pipe work made of **stainless steel**
- all valving necessary for proper operation (stainless steel ball valves for CO_2 and bronze globe valves for cryogenic)
- all necessary safety equipment
- all instruments and safety lines that form part of the tank, including pressure and level gauge
- transfer pump and filling hoses (optional)

Larger sizes also available. Please ask for details!

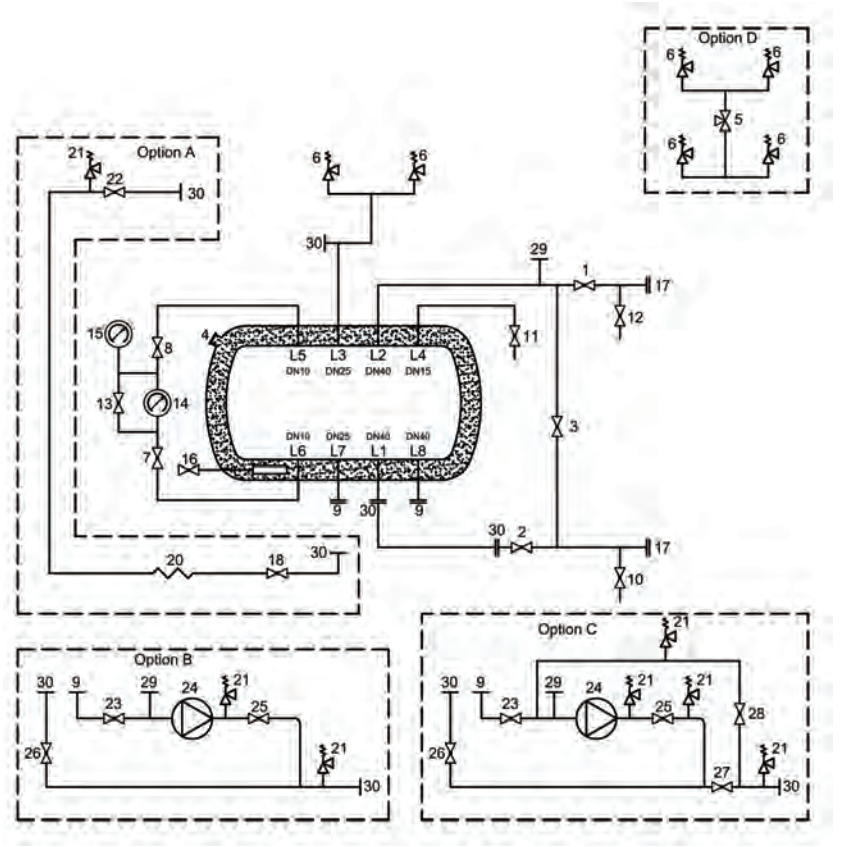
ASCO 20‘ ISO Tank Container

Typical flow diagram for 20‘ ASCO ISO Tank Cryogenic Container



1	Vapour balance line valve
2	Main bottom isolation valve
3	Vacuum point
4	Bursting disc vacuum jacket
5	Divertor valve
6	Safety valve
7	Instrument liquid valve
8	Instrument gas valve
9	Flange connection with blindflange (without option)
10	Fill and discharge line purge valve
11	Trycock nett capacity 95% valve
12	Vapour line purge valve
13	Level gauge balance line valve
14	Liquid gauge level
15	Pressure gauge
16	Connection fill and discharge line (flange coupling)
17	Liquid from pump delivery valve
18	Pump isolation valve
19	Pump
20	Thermal relief valve
21	Connection vapour line (flange coupling)
22	Fill and discharge valve
23	Flange connection

Typical flow diagram for 20‘ ASCO ISO Tank CO_2 Container



1	Vapour balance line valve
2	Bottom fill isolation valve
3	Top fill isolation valve
4	Bursting disc vacuum jacket
5	Divertor valve
6	Safety valve
7	Instrument liquid valve
8	Instrument gas valve
9	Flange connection with blindflange (without option)
10	Fill line purge valve
11	Trycock nett capacity 95% valve
12	Vapour line purge valve
13	Level gauge balance line valve
14	Liquid gauge level valve
15	Pressure gauge
16	Vacuum point
17	Flange connection with blindflange
18	Liquid to pressure build up valve
19	Pump
20	Fin vaporiser
21	Thermal relief valve
22	Pressure build up gas return valve
23	Liquid to pump fill valve
24	Pump
25	Liquid from pump delivery valve
26	Pump by-pass valve
27	Liquid from pump delivery valve
28	Bottom fill pump isolation valve
29	Coupling with plug
30	Flange connection

20‘ ASCO ISO Tank Container: Available standard capacities

Pos. 001

ASCO CO_2 20‘ ISO Tank Container

part no. 4046396

Vaccum super insulated 20‘ ISO tank container (UN-T75) with stainless steel inner vessel, including hose box.

Gross water volume: approx. 19‘650 l
Max allowed working pressure: 22 bar (319 psi)
Tare weight: approx. 8‘600 kg (18'960 lb)
Max. gross weight: 36‘000 kg (79'366 lb)
Max. payload: approx: **LCO2: 19‘600 kg (43'211 lb)**

Optionally available on semi-trailer and/or tractor.

All ISO tank container include:
- inner vessel made of stainless steel
- all pipework made of stainless steel
- all valving necessary for proper operation
- all necessary safety equipment
- all instruments and safety lines that form part of the tank, including pressure and level gauge
- optionally transfer pump and filling hoses are available

Pos. 002

Cryogenic ASCO 20‘ ISO Tank Container

part no. 4046398

Vaccum super insulated 20‘ ISO tank container (UN-T75) with stainless steel inner vessel, including hose box.

Gross water volume: approx. 19‘650 l
Max allowed working pressure: 22 bar (319 psi)
Tare weight: approx. 8‘600 kg (18'960 lb)
Max. gross weight: 36‘000 kg (79'366 lb)
Max. payload: approx: **LIN: 14‘950 kg (32'959lb)**
LOX: 21‘240 kg (46'826 lb)
LAR: 26‘130 kg (57'607 lb)

Optionally available on semi-trailer and/or tractor.

All ISO tank container include:
- inner vessel made of stainless steel
- all pipework made of stainless steel
- all valving necessary for proper operation
- all necessary safety equipment
- all instruments and safety lines that form part of the tank, including pressure and level gauge
- optionally transfer pump and filling hoses are available

CO_2 Storage

ASCO CO_2 Tanks Transportable / ASCO CO_2 Semi-Trailers

ASCO supplies different sizes of transportable CO_2 tanks which can be mounted on any suitable truck or trailer locally. Transportable tanks are a cost saving alternative to conventional road tankers as the operator may use the vehicle for other duties as well as bulk CO_2 transport. The tank is a self-contained unit mounted on a base frame and when empty it can easily be craned on or off as required. Suitable lifting lugs are on the top of the tank.

While transportable (demountable) CO_2 tanks provide cost efficiency, our CO_2 semi-trailers provide even more logistics efficiency.

The special design of both our transportable CO_2 tanks and semi-trailers allows simple operation. A lockable machinery compartment houses the transfer pump and motor, control valves, contents and pressure gauges and pipework.

ASCO Transportable CO_2 Tanks and CO_2 Semi-Trailers: Key features

- Short loading and unloading times thanks to proven design and user-ergonomy
- Highest possible capacity and lowest tare weight without compromising safety and durability, paying back customer's investments very early
- Special insulation considering least possible evaporation rate under extreme temperatures of different countries
- Versatile and adjustable design to be in conformity with different national standards
- Easy maintenance with highly accessible equipment panel, durable accessories
- Piping instrumentation design assuring maximum efficiency and safety

Transportable ASCO CO_2 Tanks/CO_2 Semi-Trailers: Available standard capacities

Pos. 001

ASCO CO_2 TPU transportable LCO_2 Tank, 6 m³ (212 ft³)

part no. 4046547

6 m³ PUR insulated truck mountable LCO_2 transport tank
incl. Smith MC–3H LCO_2 transfer pump with flexible hoses 5 m

Gross volume:	6'098 litres (1'611 gal)
Net volume (% 95):	5'793 litres (1'530 gal)
Empty weight:	approx. 3'750 kg (8'267 lb)
Max. filling weight:	approx. 6'123 kg (13'499 lb)
Max. total weight:	approx. 9'873 kg (21'766 lb)
MDMT at mAWP:	-40 °C (-40 °F)
Test Temp:	min. 10 °C (50 °F) / max. 40 °C (104 °F)
MAWP:	24 bar (348 psi)
Thermal insulation:	PUR insulation

Pos. 002

ASCO CO_2 TPU transportable LCO_2 Tank, 12 m³ (424 ft³)

part no. 4046548

12 m³ PUR insulated truck mountable LCO_2 transport tank
incl. Smith MC–3H LCO_2 transfer pump with flexible hoses 5 m

Gross volume:	12'127 litres (3'204 gal)
Net volume (% 95):	11'520 litres (3'043 gal)
Empty weight:	approx. 4'500 kg (9'921 lb)
Max. filling weight:	approx. 10'638 kg (23'453 lb)
Max. total weight:	approx. 15'138 kg (33'374 lb)
MDMT at mAWP:	-40 °C (-40 °F)
Test Temp:	min. 10 °C (50 °F) / max. 40 °C (104 °F)
MAWP:	24 bar (348 psi)
Thermal insulation:	PUR insulation

Pos. 003

ASCO CO_2 Semi-Trailer 25 m³ (883 ft³) PUR

part no. 4046544

incl. Smith MC–3H LCO_2 transfer pump with flexible hoses 5 m
equipped with OSMAN KOC brand axles

Insulation:	Polyurethan
Gross volume:	25'000 litres (6'604 gal)
Net volume (% 95):	23'750 litres (6'274 gal)
MAWP:	24 bar (348 psi)
Max. payload:	24'627 kg (54'293 lb)
Gross vehicle weight:	35'000 kg (77'162 lb)
Electrical system:	24 V
Truck requirements:	king-pin height 1'250 mm (49 in)
Tests:	Designs, calculations, visual dimensions and radiographic control are performed under the inspection of Bureau Veritas.

Available Options:

Pos. 004

LCO_2 flowmeter system

part. no. 4046545

Flowmeter system for transportable tanks and semi-trailers

Electronic acquisition, display, recording, analysis, remote transmission and archiving of analog and digital input signals. The device will be installed into the tank/ semi-trailer.

Pos. 005

BPW Eco Plus Suspension Axles for ASCO Semi-Trailer

part. no. 4046546

Optional axle system for ASCO LCO_2 Semi-Trailer 24.2 m³ (855 ft³)

CO_2 Gas Dosing for Water Neutralisation

ASCO CO_2 Gas Dosing Systems

ASCO CO_2 Dosing System (single line)

Wherever you need to have an exact quantity of CO_2 gas to be dosed, the **ASCO** CO_2 Gas Dosing System is ideal! Typically, the **ASCO** CO_2 Gas Dosing System is used together with water desalination plants.

The system is equipped with a CO_2 pressure reducing valve, filtration unit, CO_2 gas flowmeter, CO_2 regulating valve, pressure gauges, safety valves and a completely pre-wired control cabinet.

In case of maintenance the system provides a manual by-pass line, which also can be monitored by the flowmeter. Herefore, changing a filter cartridge or doing any other service work on the system is quick and easy!

As raw and fitting material **ASCO** uses mainly stainless steel. This makes the system very resistant and extends the products life cycle.

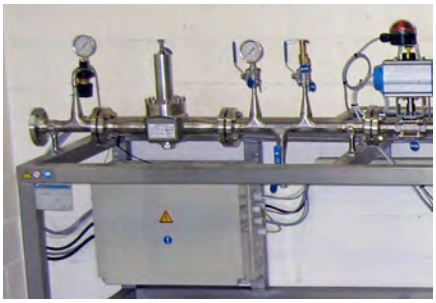
Advantages of an ASCO CO_2 Gas Dosing System:

- easy to install
- very accurate
- 4 - 20 mA output signal
- robust stainless steel construction
- no auxiliary equipment like air compressor needed, only power supply is required

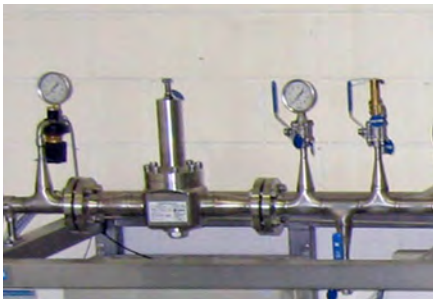
Site conditions

Min. ambient air temperature:	10 °C (50 °F), optional with heater for vaporiser down to 4 °C (39 °F)
Max. ambient air temperature:	38 °C (100 °F), optional with air conditioned cabinet up to 50 °C (122 °F)
Humidity:	34 % to 99 %
Wind speed max:	19 m/s (62 ft/s), tank foundation must be recalculated by local civil engineer
Uniform building code:	seismic zone 2A
Temperature treated water:	15 °C (59 °F) to 35 °C (95 °F)
Side stream water pressure:	4 bar (58 psi) max.

ASCO CO_2 Gas Dosing System: Components

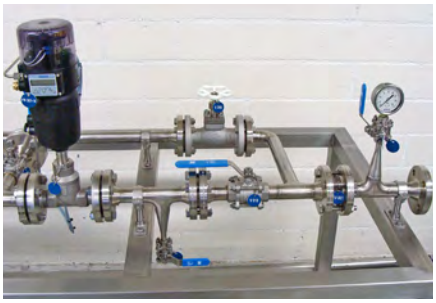


- flanged inlet incl. counter flange
- control cabinet
- all equipment mounted on robust stainless steel frame

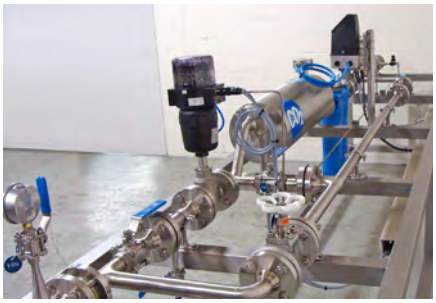


- pressure reducing valve for easy adjustment of inlet pressure

- **ASCO** CO_2 Gas Flowmeter for accurate measuring of the flow rate
- provides a 4-20 mA output signal which can be processed on the customer's main control



- actuating valve to adjust flow of CO_2 gas



- by-pass-line for manual operation

- filtration unit

Static mixer / Gas dispersion system

As per customer's requirement, **ASCO** includes static mixers or a complete gas dispersion system in order to ensure a reliable solubility of the CO_2 gas in the customer's main stream water. The used components feature the following key benefits:

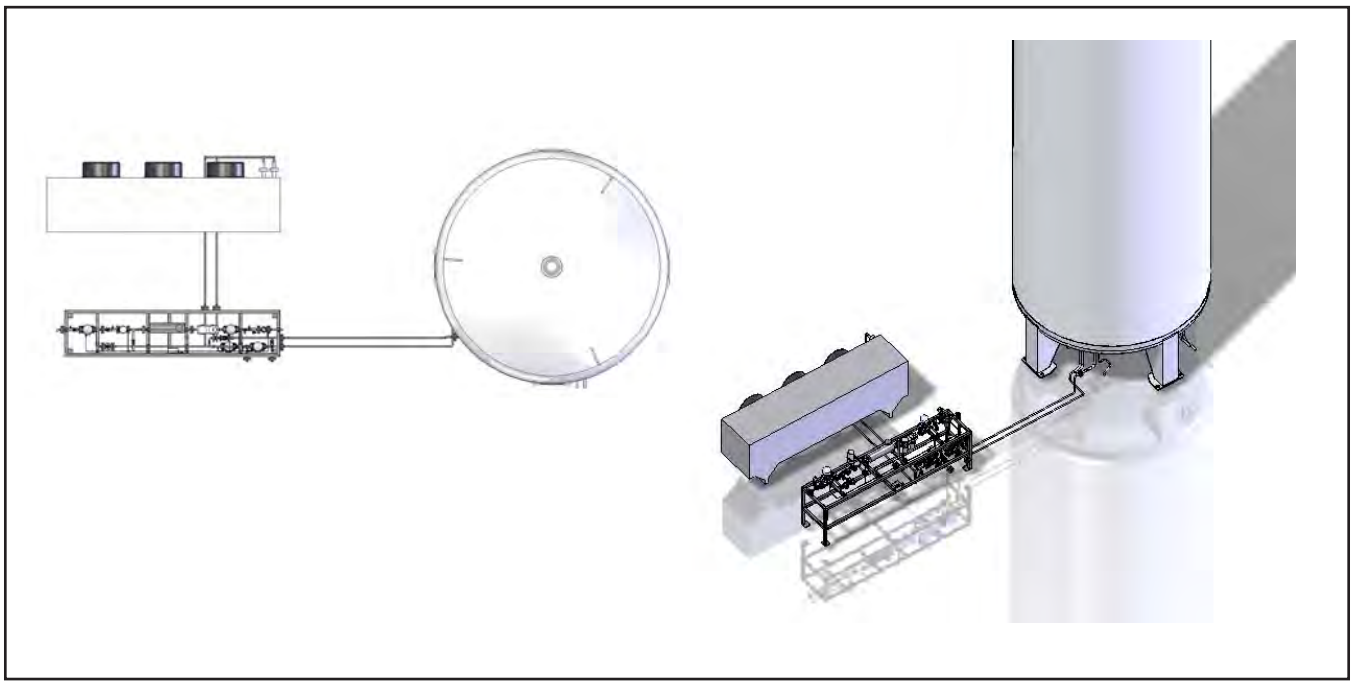
- highly efficient mixing
- low energy consumption
- no moving parts for maintenance free operation
- no direct motive power required

CO_2 feeding via side stream into the main water stream

Reliable solubility of the CO_2 gas thanks to special design of the static mixer

ASCO CO_2 Gas Dosing System: Example layout of a single line

Please note that all systems in this catalogue are only examples. Each system is customised and requires detailed engineering.



Example layout of a complete **ASCO** CO_2 Gas Dosing System (single line) with CO_2 tank and vaporiser

ASCO supplies a fully preinstalled and pretested system consisting of one storage tank, one vaporiser, one dosing system and, if desired, static mixers or a complete gas dispersion system.

The pipework of the **ASCO** CO_2 Gas Dosing System is completely welded to minimise installation works on site. Only the connection between storage tank and vaporiser has to be welded directly on site.

All civil related works, like site planning, foundations, electrical supply, installation material, water side stream and installation on site are customer‘s responsibility.

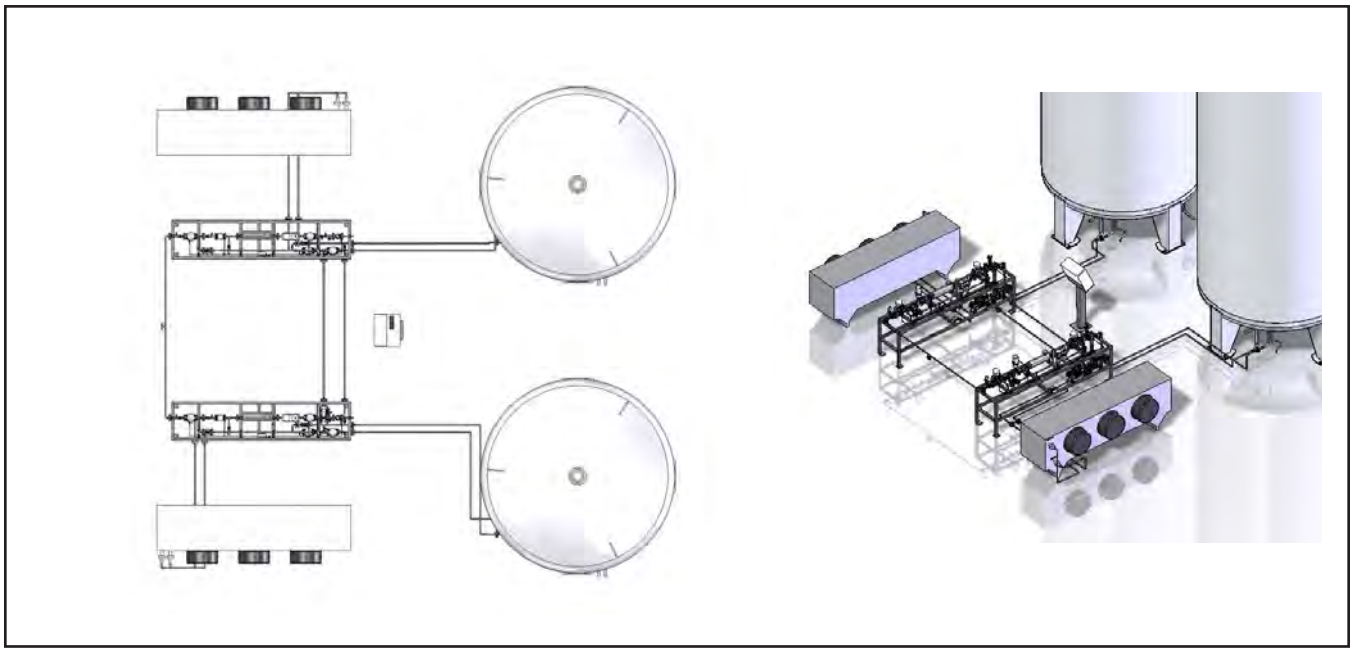
ASCO CO_2 Gas Dosing System: Standard scope of supply (single line)

ASCO supplies a fully preinstalled and pretested system consisting of:

- 1 × **ASOC** CO_2 Gas Dosing System line consisting of
  - filtration unit
  - flow regulating valve
  - automatic shut off valve
  - pressure reducing valve
  - manual shut off valve
  - safety valves
  - discharge valve
  - control cabinet, prewired
  - all mounted on a stainless steel base frame
- 1 × CO_2 flowmeter including digital display
- 1 × CO_2 storage tank (capacity has to be specified at time of order)
- 1 × atmospheric CO_2 vaporiser (capacity has to be specified at time of order)
- 1 × static mixer or gas dispersion system (capacity has to be specified at time of order)

ASCO CO_2 Gas Dosing System: Example Layout of a redundant dosing system

Please note that all systems in this catalogue are only examples. Each system is customised and requires detailed engineering.



Example layout of a complete redundant **ASCO** CO_2 Gas Dosing System with CO_2 tanks and vaporisers

ASCO provides a completely redundant system which automatically controls and regulates the CO_2 flow depending on a set point coming from the LCP with integrated HMI.

Depending on the condition of the storage tanks, vaporisers and the dosing systems, the system will detect and decide what parts need to take over the load to guarantee a continuous CO_2 injection into the side stream water. All operating conditions and status information are displayed on the touch panel and are available as data bloc for customers main control.

Redundant ASCO CO_2 Gas Dosing System: Standard scope of supply

ASCO supplies a fully preinstalled and pretested system consisting of:

- 2 x **ASCO** CO_2 Gas Dosing System lines consisting of
  - filtration unit
  - flow regulating valve
  - automatic shut off valve
  - pressure reducing valve
  - manual shut off valve
  - safety valves
  - discharge valve
  - all mounted on a stainless steel base frame
- 2 x CO_2 flowmeters including digital display
- 1 x control cabinet (PLC)
- 2 x CO_2 storage tanks (capacity has to be specified at time of order)
- 2 x atmospheric CO_2 vaporisers (capacity has to be specified at time of order)
- 1 x static mixer or gas dispersion system (capacity has to be specified at time of order)
- 1 x automatic change over system

ASCO CO_2 Gas Dosing System: Available standard capacities

Pos. 001

CO_2 Gas Dosing System 5 - 50 kg/h (11- 110 lb/h) (single line)

part no. 900135

- 1 × **ASCO** CO_2 Gas Dosing System consisting of
  - filtration unit
  - flow regulating valve
  - automatic shut off valve
  - pressure reducing valve
  - manual shut off valve
  - safety valves
  - discharge valve
  - control cabinet, prewired
  - all mounted on a stainless steel base frame
- 1 × CO_2 flowmeter including digital display

For a running **ASCO** CO_2 Gas Dosing System following equipment is necessary:

- 1 × CO_2 storage tank (capacity has to be specified at time of order)
- 1 × atmospheric CO_2 vaporiser (capacity has to be specified at time of order)
- 1 × static mixer or gas dispersion system (capacity has to be specified at time of order)

Pos. 002

CO_2 Gas Dosing System 30 - 300 kg/h (66-660 lb/h) (single line)

part no. 900136

- 1 × **ASCO** CO_2 Gas Dosing System consisting of
  - filtration unit
  - flow regulating valve
  - automatic shut off valve
  - pressure reducing valve
  - manual shut off valve
  - safety valves
  - discharge valve
  - control cabinet, prewired
  - all mounted on a stainless steel base frame
- 1 × CO_2 flowmeter including digital display

For a running **ASCO** CO_2 Gas Dosing System following equipment is necessary:

- 1 × CO_2 storage tank (capacity has to be specified at time of order)
- 1 × atmospheric CO_2 vaporiser (capacity has to be specified at time of order)
- 1 × static mixer or gas dispersion system (capacity has to be specified at time of order)

Pos. 003

CO_2 Gas Dosing System 100 - 800 kg/h (220-1'770 lb/h) (single line)

part no. 900137

- 1 × **ASCO** CO_2 Gas Dosing System consisting of
  - filtration unit
  - flow regulating valve
  - automatic shut off valve
  - pressure reducing valve
  - manual shut off valve
  - safety and discharge valves
  - control cabinet, prewired
  - all mounted on a stainless steel base frame
- 1 × CO_2 flowmeter including digital display

For a running **ASCO** CO_2 Gas Dosing System following equipment is necessary:

- 1 × CO_2 storage tank (capacity has to be specified at time of order)
- 1 × atmospheric CO_2 vaporiser (capacity has to be specified at time of order)
- 1 × static mixer or gas dispersion system (capacity has to be specified at time of order)

CO_2 Vaporising

Atmospheric ASCO CO_2 Vaporiser

The atmospheric **ASCO** CO_2 Vaporiser has been developed to drastically reduce CO_2 vaporisation costs. Available ambient air is used to achieve energy savings of over 95 % compared to standard electric vaporisers. The fans are automatically controlled temperature-dependent and only work if a consumer equipment is in operation.
As each vaporiser is supplied prepiped and prewired, installation can be made within minutes. Bases for floor mounting are included.
In addition to our standard models, we offer **individual solutions** of modern and easy to maintain CO_2 vaporisers. In accordance with your requirements, we provide you with a suitable CO_2 vaporiser.

Advantages of an atmospheric ASCO CO_2 vaporiser:

- **NEW:** External control cabinet with 10 m connection cable for flexible installation and operation
- 25 times less energy compared with electrically heated vaporisers
- Designed for continuous and automatic operation (no attendance required)
- Built-in temperature sensors PT1000 to prevent liquid CO_2 from flowing through
- 2 coil system to ensure safe defrosting with built in solenoid valves
- With temperature-controlled start/stop device for intelligent power control
- Simple and fast installation, only electric power and CO_2 required
- Vaporisers with tubes in stainless steel or copper available

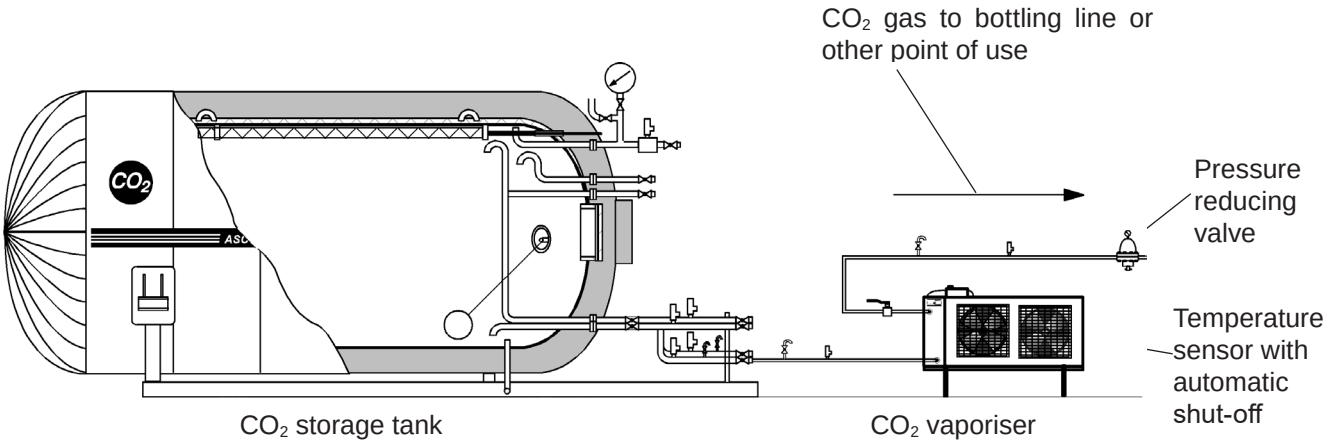
Specifications

Vaporising capacity (approx.) from liquid CO_2 at 17 bar (247 psi)	length/width/height mm without control box	in/out connections outer Ø	net weight kg approx.	power consumption	max. operating pressure
200 kg/h SS (440 lb/h)	2‘200 × 900 × 1'000 (87 × 35 × 39 in)	1“ PN 40	243 kg (536 lb)	1.6 kW (2.1 HP)	25 bar (363 psi)
300 kg/h SS (660 lb)	3‘000 × 900 × 1'000 (118 × 35 × 39 in)	1“ PN 40	308 kg (679 lb)	2.4 kW (3.2 HP)	25 bar (363 psi)
500 kg/h SS (1100 lb/h)	3‘000 × 900 × 1'200 (118 × 35 × 47 in)	1“ PN 40	342 kg (754 lb)	2.4 kW (3.2 HP)	25 bar (363 psi)
1‘000 kg/h SS (2200 lb/h)	4‘200 × 1'000 × 1‘450 (165 × 39 × 57 in)	1“ PN 40	595 kg (1311 lb)	5.4 kW (7.2 HP)	25 bar (363 psi)

SS = with stainless steel tubes EN 1.4301 / AISI 304
Dimensions external control cabinet (L x W x H): 600 x 250 x 600 mm (24 x 9.8 x 24 in)

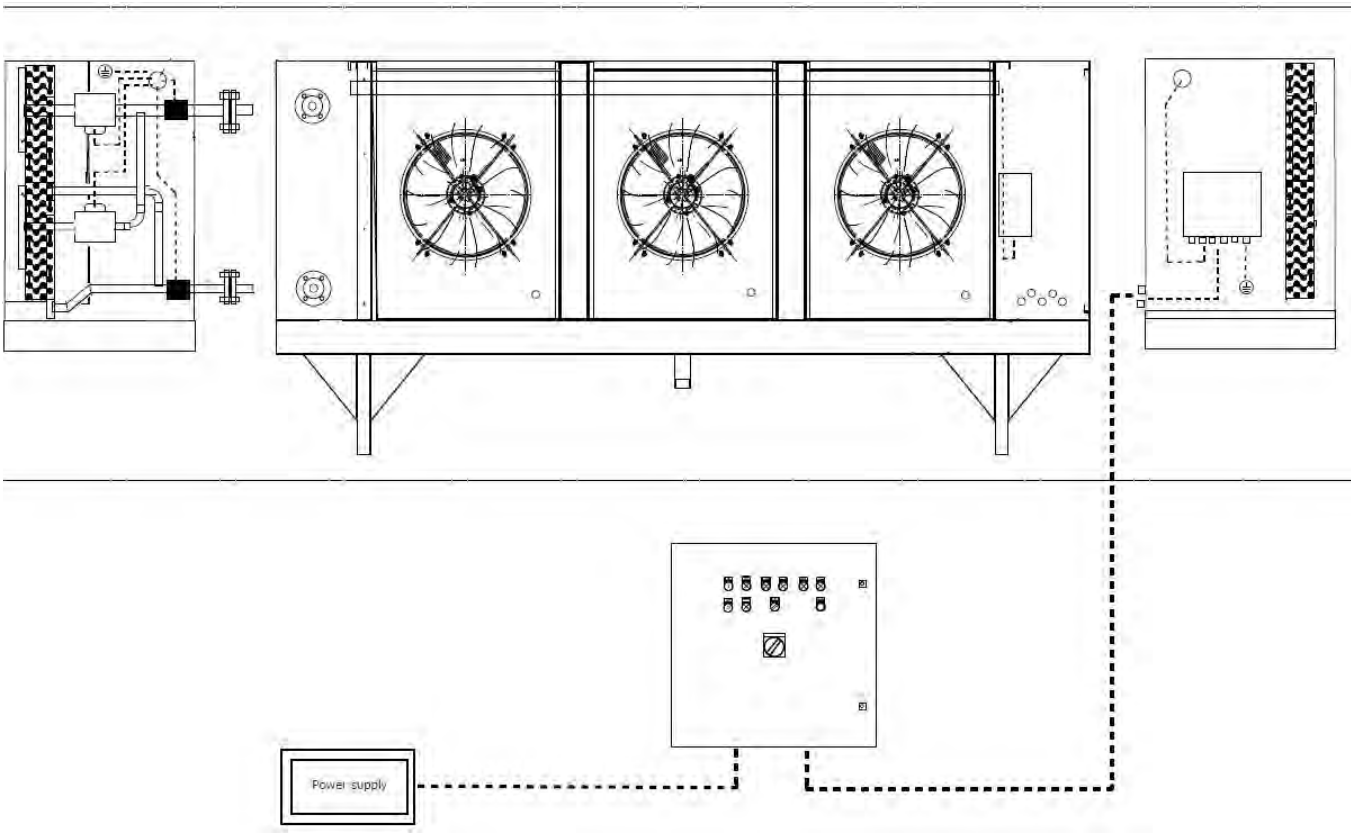
Ambient air temperature: min. +10 °C, max. +45 °C (min. +50 °F , max. +113 °F)

Atmospheric ASCO CO_2 Vaporisers: Description



Liquid carbon dioxide is taken from a tank, completely evaporated in the vaporiser and fed to the point of use. In order to ensure safe defrosting of the vaporiser, it is equipped with two autonomous coils, which are controlled by a solenoid valve each. While one vaporiser coil is in service, the other is being defrosted. The fans only operate if a consumer equipment is obtaining CO_2 gas and the difference between inlet and outlet in the vaporiser reaches a defined level. This is monitored continuously.

The arrangement shown above permits operation of the vaporiser at air temperatures of max. +45 °C (+113 °F) , at least +10 °C (+50 °F) and, at reduced capacity as low as +5 °C (+41 °F) in order to be able to utilise the vaporiser thoughout the year, the unit should be installed inside a building away from the most inclement weather, for example in a boiler room or similar.



Atmospheric ASCO CO_2 Vaporisers: Description and installation

Description

ASCO Atmospheric CO_2 Vaporisers are supplied as one unit, prewired, pretested (incl. pressure test to 35.4 bar) (513 psi) and ready for immediate use.
They consist of a special heat exchanger unit with stainless steel tubes and aluminium fins.
Air is forced through the heat exchanger by fans. Any condensate dropping from the tubes is collected by an aluminium tray mounted on the bottom of the unit, and an outlet pipe can be connected to drain. The unit also includes solenoid valves and a complete control box. A temperature sensor is also incorporated to ensure no liquid CO_2 can pass through the vaporiser.

Installation

ASCO Vaporisers should ideally be installed in areas such as boiler houses and similar warm rooms (max. temperature of +45 °C (+113 °F). External installation is only recommended where ambient air temperature is above +10 °C (+50 °F)and max. +45 °C (max. +113 °F). They also operate at +5 °C (+41 °F) but at reduced capacity.

Terminal box for external control cabinet

External control cabinet with 10 m connecting cable, temperature sensors and cabinet heating

1'000 kg/h (2'200 lb/h) Atmospheric ASCO CO_2 Vaporiser: Air intake side

Two independent coils

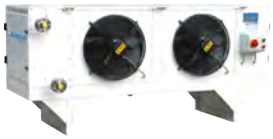
Atmospheric ASCO CO_2 Vaporiser: Available standard capacities

Pos. 001

200 kg/n (440 lb/h) atmospheric ASCO CO_2 SS Vaporiser

part no. 901420

With temperature dependent start/stop device
Cooling circuit made of stainless steel tubes EN 1.4301 / AISI 304
400 VAC ± 5 %/ 50 Hz / 3 Ph + PE +N
(other voltages and frequencies on request)



air flow total:	3.4 m^3/sec (120 ft^3/sec)
coil volume:	15 l (4 gal)
net weight:	243 kg (536 lb)
fan speed:	1'330 rpm
no. of fans:	2
power cons. per fan:	0.8 kW (1.1 HP)
flange connection:	1" PN40

Minimum ambient air temperature required +10 °C (+50 °F), max. +45 °C (+113 °F)

Pos. 002

300 kg/h (660 lb/h) atmospheric ASCO CO_2 SS Vaporiser

part no. 901421

With temperature dependent start/stop device
Cooling circuit made of stainless steel tubes EN 1.4301 / AISI 304
400 VAC ± 5 %/ 50 Hz / 3 Ph + PE +N
(other voltages and frequencies on request)

air flow total:	5.1 m^3/sec (180 ft^3/sec)
coil volume:	22 l (6 gal)
net weight:	308 kg (679 lb)
fan speed:	1'330 rpm
no. of fans:	3
power cons. per fan:	0.8 kW (1.1 HP)
flange connection:	1" PN40

Minimum ambient air temperature required +10 °C (+50 °F), max. +45 °C (+113 °F)

Pos. 003

500 kg/h (1'100 lb) atmospheric ASCO CO_2 SS Vaporiser

part no. 901422

With temperature dependent start/stop device
Cooling circuit made of stainless steel tubes EN 1.4301 / AISI 304
400 VAC ± 5 %/ 50 Hz / 3 Ph + PE +N
(other voltages and frequencies on request)

air flow total:	5.1 m^3/sec (180 ft^3/sec)
coil volume:	41 l (11 gal)
net weight:	342 kg (754 lb)
fan speed:	1'330 rpm
no. of fans:	3
power cons. per fan:	0.8 kW (1.1 HP)
flange connection:	1" PN40

Minimum ambient air temperature required +10 °C (+50 °F), max. +45 °C (+113 °F)

Atmospheric ASCO CO_2 Vaporiser: Available standard capacities

Pos. 004

1000 kg/h (2200 lb/h) atmospheric ASCO CO_2 SS Vaporiser — **part no. 901423**

With temperature dependent start/stop device
Cooling circuit made of stainless steel tubes EN 1.4301 / AISI 304
400 VAC ± 5 %/ 50 Hz / 3 Ph + PE +N
(other voltages and frequencies on request)

air flow total:	9.9 m^3/sec (350 ft^3/sec)
coil volume:	78 l (21 gal)
net weight:	595 kg (1'311 lb)
fan speed:	890 rpm
no. of fans:	3
power cons. per fan:	1.8 kW (2.4 HP)
flange connection:	1“ PN40

Minimum ambient air temperature required +10 °C (+50 °F), max. +45 °C (+113 °F)

Atmospheric CO_2 Vaporisers: Options

Pos. 001

Dome loaded pressure reducing valve C31 — **part no. 4046817**

for gaseous and liquid CO_2
incl. repair kit (diaphagm and O-ring)

Pos. 002

Dome loaded pressure reducing valve C2-K32 — **part no. 4046644**

for gaseous and liquid CO_2
incl. repair kit (diaphagm and O-ring)

Pos. 003

Line safety assembly 1“- 25 bar (363 psi) welding connection — **part no. 4046831**

Consisting of:
- stainless steel pipe 1“ 300 mm (12 in)
- safety valve 25 bar (363 psi)
- vent ball valve stainless steel 1/4“

Atmospheric CO_2 Vaporisers: Options

Pos. 004

CO_2 flowmeter MF15

part no. 4062504

Mass flow sensor Type MF15 (fully calibrated) assembled to process pipe DN 15, PN 40 with flange connection DIN 2635.
Measuring range 0 - 1‘000 kg/h (0- 2200 lb/h) at 22 bar (319 psi)
The flow computer (on wall bracket) is equipped with digital display of current CO_2 flow rate in kg/h as well as totalizer and integrated keyboard.
10 meter connection cable with plug is prewired and connected.
Voltage 115 -230 V, 50/60 Hz

Accessories included:

- 2 pcs counterflange DN 15/PN40 welding (item no. 910101)
- 8 pcs screw m12 x 45, hex., inox (item no. 100020)
- 8 pcs nut M12, inox (item no. 100022)
- 2 pcs gasket DN15, 2 x 51 x 22 mm (item no. 110150)

Pos. 005

CO_2 flowmeter MF25

part no. 4062505

Mass flow sensor Type MF25 (fully calibrated) assembled to process pipe DN 25, PN 40 with flange connection DIN 2635.
Measuring range 0 - 2‘700 kg/h (0 - 5'940 lb/h) at 22 bar (319 psi)
The flow computer (on wall bracket) is equipped with digital display of current CO_2 flow rat in kg/h as well as totalizer and integrated keyboard.
10 meter connection cable with plug is prewired and connected.
Voltage 115 - 230 V, 50/60 Hz

Accessories included:

- 2 pcs counterflange DN 25/PN40 welding (item no. 910301)
- 8 pcs screw M12 x 45, hex., inox (item no. 100020)
- 8 pcs Nut M12, inox (item no. 100022)
- 2 pcs gasket DN25, 2 x 71 x 35 mm (0.08 x 2.80 x 1.38 in) (item no. 110151)

CO_2 Cylinder Filling

ASCO CO_2 Cylinder Filling System LH900

part no. 901250

The **ASCO LH900 Liquid CO_2 Filling Pump** has been developed as a universal unit for filling high pressure CO_2 cylinders by weight.

Like all **ASCO** Equipment, the Cylinder Filling and Weighing System is thoroughly factory pretested before dispatch.

Thanks to the separate control unit, the pump can be placed in a different location if wanted.

Easy operation

Via the weighing platform the exact bottle weight is determined and shown on the display. This enables the user to check whether the empty bottle weight is correct.

The selected filling weight can now be set on the display (if the same bottle size is filled several times with the same amount, it only has to be entered once).

If the desired filling weight has been reached, the solenoid valves activate the bypass. The CO_2 bottle can now be easily and safely uncoupled. This ensures easy and safe handling.

Specifications	**LH900**	**LH900 TwinFill**
Measurements (W × D × H):		
Pump stand	845 x 600 x 675 mm (33 x 24 x 27 in)	845 x 600 x 675 mm (33 x 24 x 27 in)
Control panel	505 x 500 x min. 1‘035 mm (max 1‘335 mm) (20 x 20 x min. 41 in) (max. 53 in)	915 x 615 x 1‘210 mm (36 x 24 x 48 in)
Floor scale	635 x 575 x 2‘200 mm (25 x 23 x 87 in)	630 x 590 x 2‘200 mm (25 x 23 x 87 in)
Weights:		
Floor weighing platform	150 kg max. loading (330 lb)	150 kg max. loading (330 lb)
Pump stand	134 kg (295 lb)	134 kg (295 lb)
Control panel	37 kg with tripod (81 lb)	94 kg (207 lb)
Floor scale	55 kg (121 lb)	60 kg (132 lb)
Power consumption el. motor	4 KW	4 KW
Voltage	480 VAC ±5 %/ 60 Hz / 3 Ph + PE + N (other voltages and frequencies on request)	480 VAC ±5 %/ 60 Hz / 3 Ph + PE + N (other voltages and frequencies on request)
Safety valve inlet	40 bar (580 psi)	40 bar (580 psi)
Safety valve outlet	130 bar (1886 psi)	130 bar (1886 psi)

ASCO LH900: Standard scope of supply

ASCO CO_2 Cylinder Filling Pump LH900

part no. 901250

Complete CO_2 cylinder filling pump with a capacity of 900 kg/h (1'984 lb/h), with automatic revert and automatic shut-off.

Comprising of:
- pump with motor on base frame
- filling armature
- filling stand with weighing system
- control unit
- connection hoses between pump and control stand / control stand and filling stand 1.5 m (59 in)
- **filling head quick connector not included**

ASCO CO_2 Cylinder Filling Pump LH900 TwinFill

part no. 901330

Complete CO_2 cylinder filling pump with a capacity of 900 kg/h (1'984 lb/h), with automatic revert and automatic shut-off. As TwinFill version, the LH900 has two filling stands with integrated weighing units and an advanced filling control.

The extended filling control unit with connections for two separate filling armatures and two filling stands allows independent operation on each filling stand. Therefore a CO_2 bottle can be prepared on one stand while a bottle is being filled at the other stand. A parallel or alternately filling of both bottles is therefore flexibly possible.

Comprising of:
- pump with motor on base frame
- filling armature
- two filling stands with weighing system
- connection hoses between pump and control stand / control stand and filling stand 1.5 m (59 in)
- **filling head quick connectors not included**

ASCO LH900: Options

Pos. 001

Adhesive label printer

part no. 4063981

For PE film labels containing
- date / time
- tare
- net and gross weight
- fillers identification

Including interface unit and connection cables. TwinFill version needs 2 printers.

Must be ordered and calibrated with the system. Subsequent installation is not possible.

ASCO LH900: Options

Pos. 002

Filling head quick connect standard CO_2

part no. 4043971

W21.8 x 1/14“ DIN 477 Nr.6, Type B thread

Pos. 003

Filling head quick connect

part no. 4044082

CGA 320 ANG

Pos. 004

Filling head quick connect

part no. 4044006

3/4"

Pos. 005

Filling head quick connect

part no. 4044083

Pin

Pos. 006

Connecting Kit LH900 / LH900 TwinFill

part no. 4044065

This set of flexible high pressure hoses provides a safe connection between the Cylinder Filling Pump and the LCO2 pipework.

Length: 1.5 m (4.9 ft)
Connection inlet: 22LR-G3/4"
Connection outlet: 15LR-G1/2"

Pos. 007

Spare parts kit

part no. 4067591

Includes a recommended selection of spare parts to ensure constant operation.

Sample image

CO_2 Transfer Pumps

ASCO CO_2 Transfer Pumps: Low to Low Pressure

MC-3-SS with motor on baseframe

ASCO CO_2 Transfer Pumps have steel housings and long life shaft seals. The pumps have hardened steel gears and thrust washers to give long service life. The mechanical seal fitted provides leak free operation.

These economical pumps need no lubrication and no day-to-day maintenance. A unique design allows parts to adjust automatically for wear. Highest efficiency is maintained for a very long time.

Installation is simple as no chain or belt drives or gear reduction motors are required. Pumps can be directly connected to standard speed low-cost electric motors. By simply changing the shaft rotation, pumps can be used to pump in or out though the same piping.

Specifications

Pump capacities (approx.)

Pump model	Differential Pressure bar	Differential Pressure lb/in²	Electrical consumption in kW	Pump capacity at 1'460 R.P.M. kg/h (50 Hz)*	Pump capacity at 1'750 R.P.M. kg/h (60 Hz)*
MC-3-SS	0	0	4.0 (5.4 HP)	17'000 (37'500 lb/h)	20'000 (44'100 lb/h)
	1.4	20	4.0 (5.4 HP)	16'000 (35'300 lb/h)	19'000 (41'900 lb/h)
	3.5	50	5.5 (7.4 HP)	14'000 (30'900 lb/h)	16'000 (35'300 lb/h)

* under ideal conditions

Pumps on baseframes with motors

Pump model	Motor Size		R.P.M.		Net weight	Weight packed
	50 Hz	60 Hz	50 Hz	60 Hz		
MC-3-SS	5.5 kW (7.4 HP)	6.3 kW (8.5 HP)	1'460	1'750	108 kg (238 lb)	130 kg (287 lb)
MC-3-SS movable	5.5 kW (7.4 HP)	6.3 kW (8.5 HP)	1'460	1'750	205 kg (452 lb)	248 kg (547 lb)

Voltage: 400 VAC ± 5 %/ 50 Hz / 3 Ph + PE (other voltages and frequencies on request)
460 VAC ± 5 %/ 60 Hz / 3 Ph + PE (other voltages and frequencies on request)

ASCO CO_2 Transfer Pumps: Low to Low Pressure

Pos. 001

ASCO CO_2 Transfer Pump MC-3-SS with motor

part no. 900092

on stainless steel baseframe

Complete heavy-duty type low to low pressure CO_2 transfer pump with a transfer capacity up to 17‘000 kg/h (37'500 lb/h) at 1‘460 rpm (50 Hz) or 20‘000 kg/h (44'100 lb/h) at 1‘750 rpm (60 Hz) and differential pressure of 0 barg with a 5.5 kW (7.4 HP) at 50 Hz or 6.3 kW (8.5 HP) at 60 Hz motor. The pump is designed for 2 ½ inch (63.5 mm) NPT inlet and outlet ports insides of pump. Rotation is reversible.

Pos. 002

ASCO CO_2 Transfer Pump MC-3-SS without motor

part no. 4068521

Complete heavy-duty type low to low pressure CO_2 transfer pump with a transfer capacity up to 17‘000 kg/h (37'500 lb/h) at 1‘460 rpm (50 Hz) or 20‘000 kg/h (44'100 lb/h) at 1‘750 rpm (60 Hz) and differential pressure of 0 bar with a 5.5 kW (7.4 HP) at 50 Hz or 6.3 kW (8.5 HP) at 60 Hz motor. The pump is designed for 2 ½ inch (63.5 mm) NPT inlet and outlet ports insides of pump. Rotation is reversible.

Pos. 003

ASCO CO_2 Transfer Pump MC-3-SS movable, flange connection

part no. 900096

incl. motor and stainless steel baseframe on wheels.

Complete heavy-duty type low to low pressure CO_2 transfer pump with a transfer capacity up to 17‘000 kg/h (37'500 lb/h) at 1‘460 rpm (50 Hz) or 20‘000 kg/h (44'100 lb/h) at 1‘750 rpm (60 Hz) and differential pressure of 0 barg with a a 5.5 kW (7.4 HP) at 50 Hz or 6.3 kW (8.5 HP) at 60 Hz motor. The pump is designed for DN40 flange. Rotation is reversible.

Including:

- control box
- 10 m (394 in) cable
- handrail made in stainless steel
- flanged safety device with discharge valve
- flange connection DN40 according DIN 2635

ASCO CO_2 Transfer Pumps Low to Low Pressure: Options

Pos. 001

Filling hose SS, DN25, 1.5“ - 1.5“, 5.90 m (19 ft)

part no. 4043732

Stainless steel hose DN25 with total length of 5.90m. (19 ft)
With protection wire over total length.
Both ends flat sealed with union nut g1 1/2“ in brass.

Pos. 002

Filling hose SS, DN40, flange DN40/PN40, 5.90 m (19 ft)

part no. 4043736

Stainless steel hose DN40 with total length of 5.90 m. (19 ft)
With protection wire over total length.
Both ends flange DN40/PN40 according DIN 2635

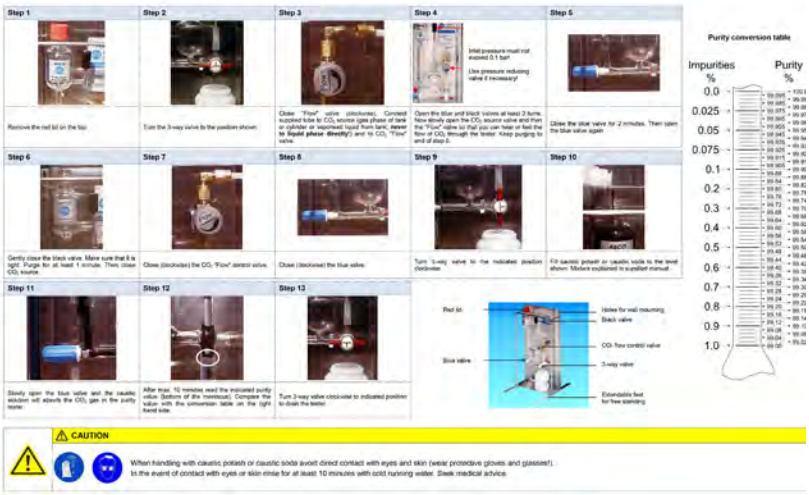
CO_2 Testing Equipment

ASCO CO_2 Gas Purity Tester

part no. 900138

The **ASCO** CO_2 Gas Purity Tester has been designed to measure the purity of CO_2 up to 99.995 % in a quick, easy and reliable way. Essential for bottling plants, breweries, beverage manufacturers and industrial gas companies.

The complete kit contains all equipment for a simple, safe and fast CO_2 gas purity test and is complete with easy instructions (step by step pictures on a laminated A3 sheet). The **ASCO** CO_2 Gas Purity Tester (stainless steel) can be used either wall-mounted or free standing.



Easy step by step instruction

ASCO CO_2 Gas Purity Tester: Standard scope of supply

ASCO CO_2 Gas Purity Tester

part no. 900138

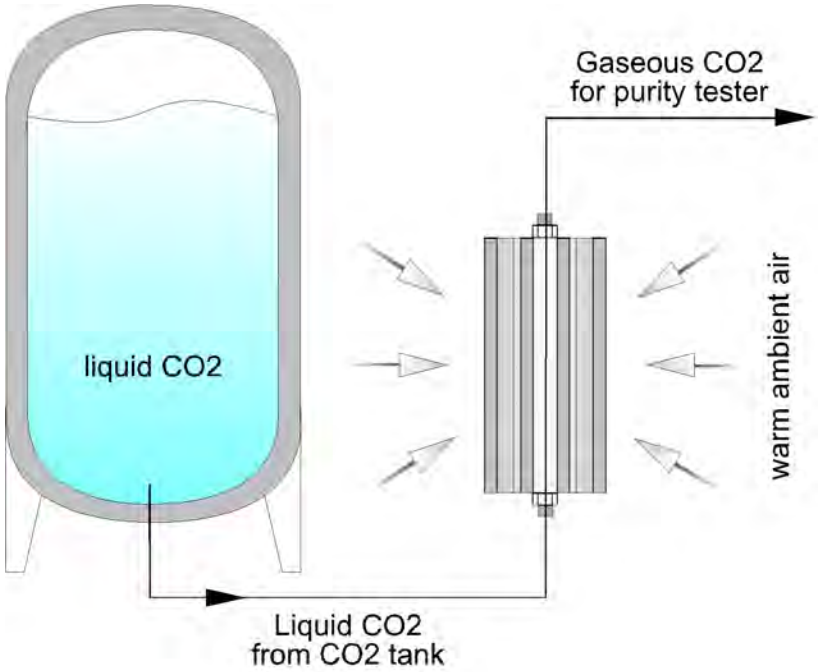
Complete kit comprises:

- CO_2 purity tester
- pair of protective gloves
- protective glasses
- two plastic containers
- flexible hose

Mini-Vaporiser for CO_2 Gas Purity Tester: Application

CO_2 Mini-Vaporiser for ASCO CO_2 Gas Purity Tester

The mini-vaporiser vaporises liquid CO_2 into gaseous form. Gaseous CO_2 will be used to measure the CO_2 purity with the purity tester.



ASCO CO_2 Gas Purity Tester: Options

Pos. 001

Mini-Vaporiser for CO_2 Gas Purity Tester

part no. 4046324

Equipped with flow regulator
Maximum inlet pressure 25 bar (348 psi)

Including:
- adaptor 1 1/2" (38 mm) made of stainless steel
- adaptor 1“ made of stainless steel
- high pressure hose, PFTE, DN5, 6L, 2 m (6.6 ft)
- short instruction manual A3

Testing Equipment

ASCO CO_2 Carbonation Tester Type III

part no. 900900

The **ASCO** CO_2 Carbonation Tester is used to identify any strange odour and/or taste in CO_2. With this simple, easy to use kit you can check the quality of your liquid or gaseous CO_2 from bulk tanks or CO_2 cylinders.

The set includes a CO_2 carbonation unit, CO_2 cartridge with special inner coating, adaptors made of stainless steel and emptying device for CO_2 cartridge and easy instructions.

Following the easy, laminated an coloured step-by-step instructions with pictures, a sample of water carbonated is tested. The carbonated water is compared for taste and smell with a non-carbonated sample of the same water.

Advantages of a ASCO CO_2 Carbonation Tester:

- easy handling
- no calibration required
- ready for immediate use
- quick and cheap testing method
- for gaseous and liquid CO_2

Easy step by step instruction

ASCO CO_2 Carbonation Tester: Standard scope of supply

ASCO CO_2 Carbonation Tester

part no. 900900

Complete kit comprises:

- CO_2 aluminium cylinder with special hard inner coating for neutral taste
- unit to carbonate water
- 2 glass bottles 0.615 l
- device to empty CO_2 cylinder
- four adaptors:
  - 1 1/2“ female
  - 1“ female
  - 1/4“ male
  - CO_2 female (W21.8 × 1/14“)

Testing Equipment

ASCO CO_2 Dew Point Tester

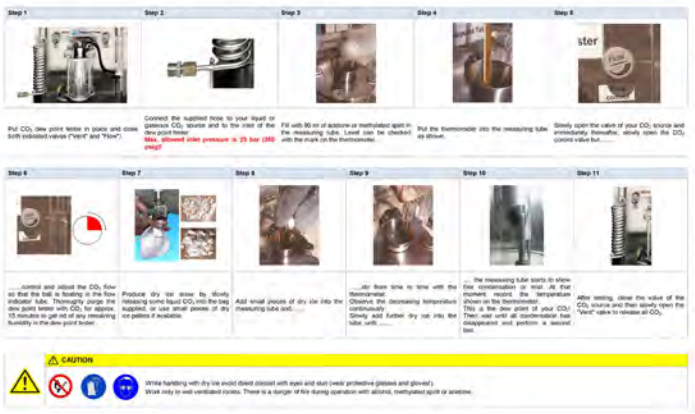
part no. 4046255

The **ASCO** CO_2 Dew Point Tester reliably indicates the dew point (moisture content) of your CO_2.

This equipment makes it easy to measure the dew point of liquid and gaseous CO_2. A laminated, illustrated step-by-step short instruction sheet in A3 format and a detailed instruction manual are supplied with each tester. The **ASCO** CO_2 Dew Point Tester (stainless steel) can be used either wall-mounted or free-standing.

Advantages of a CO_2 Dew Point Tester:

- easy handling
- no calibration required
- ready for immediate use
- for gaseous and liquid CO_2



Easy step by step instruction

ASCO CO_2 Dew Point Tester: Standard scope of supply

ASCO CO_2 Dew Point Tester

part no. 4046255

Complete kit comprises:

- complete dew point tester
- thermometer
- pair of protective gloves
- protective glasses
- dry ice snow bag
- high pressure hose

ASCO CO_2 Flowmeter

The **ASCO** CO_2 Flowmeter has been developed to accurately measure CO_2 gas flow in closed pipes.

The power unit, which supplies 230 V, operates a microprocessor controlled flow computer and one sensor.

The **ASCO** CO_2 Flowmeter is a complete system which is supplied fully calibrated and wired and therefore very easy to install.

Features

- easy to install
- very accurate (0.1 %)
- single point measurement
- no pressure and temperature compensation required
- no moving parts
- direct mass flow reading
- tension free contact alarm and fault status output
- self-testing electronics

Accurate CO_2 measurement can help to find CO_2 leaks and to achieve optimum CO_2 yields. Practical tests have shown that by using an **ASCO** CO_2 Flowmeter, CO_2 savings of up to 30 % can be achieved.

Specifications

		Type MF15 part no. 4062504	**Type MF25 part no. 4062505**
Measuring range:		1'000 kg/h (2'200 lb/h) at 22 bar (319 psi)	2'700 kg/h (5'940 lb/h) at 22 bar (319 psi)
Nominal pipe diameter:		15 mm (0.6")	25 mm (1")
Connections (flanges DIN 2635, PN 40):		DN 15 (1/2")	DN 25 (1")
Max. working pressure:		40 bar (580 psi) (tested to 60 bar) (870 psi)	40 bar (580 psi) (tested to 60 bar) (870 psi)
Medium temperature:		-50 to +180 °C (-58 to +356 °F)	-50 to +180 °C (-58 to +356 °F)
Permissible ambient temperature:		-20 to +55 °C (-4 to +131 °F)	-20 to +55 °C (-4 to +131 °F)
Accuracy:		0.1 % of rate (above 10 kg/h) (22 lb/h)	0.1 % of rate (above 10 kg/h) (22 lb/h)
Repeatability:		± 0.5 % of rate	± 0.5 % of rate
Materials of construction:		AISI 316L/1.4435/1.4404	AISI 316L/1.4435/1.4404
Weight approx:	- sensor	6 kg (13 lb)	10 kg (22 lb)
	- controller	5 kg (11 lb)	5 kg (11 lb)

ASCO CO_2-Flowmeter MF15: Standard scope of supply

ASCO CO_2 Flowmeter MF15

part no. 4062504

Mass flow sensor Type MF15 (fully calibrated) assembled to process pipe DN 15, PN 40 with flange connection DIN 2635.
Measuring range 0 - 1‘000 kg/h (0 - 2200 lb/h) at 22 bar (319 psi)
The flow computer (on wall bracket) is equipped with digital display of current CO_2 flow rate in kg/h as well as totalizer and integrated keyboard.
10 meter connection cable with plug is prewired and connected.
Voltage 115 -230 V, 50/60 Hz

Accessories included:
- 2 pcs counterflange DN 15/PN40 welding (item no. 910101)
- 8 pcs screw M12 x 45, hex., inox (item no. 100020)
- 8 pcs Nut M12, inox (item no. 100022)
- 2 pcs gasket DN15, 2 x 51 x 22 mm (item no. 110150)

ASCO CO_2-Flowmeter MF25: Standard scope of supply

ASCO CO_2 Flowmeter MF25

part no. 4062505

Mass flow sensor Type MF25 (fully calibrated) assembled to process pipe DN 25, PN 40 with flange connection DIN 2635.
Measuring range 0 - 2‘700 kg/h (0 - 5'940 lb/h) at 22 bar (319 psi)
The flow computer (on wall bracket) is equipped with digital display of current CO_2 flow rate in kg/h as well as totalizer and integrated keyboard.
10 meter connection cable with plug is prewired and connected.
Voltage 115 - 230 V, 50/60 Hz

Accessories included:
- 2 pcs counterflange DN 25/PN40 welding (item no. 910301)
- 8 pcs screw M12 x 45, hex., inox (item no. 100020)
- 8 pcs Nut M12, inox (item no. 100022)
- 2 pcs gasket DN25, 2 x 71 x 35 mm (0.08 x 2.80 x 1.4 in) (item no. 110151)

CO_2 Equipment

ASCO CO_2 Cylinder Valve

part no. 4046736

ASCO CO_2 Cylinder Valve are used on standard CO_2 cylinders to regulate the CO_2 supply.

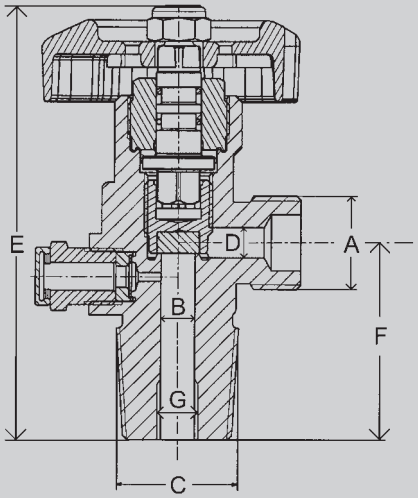
The CO_2 valve consists of an aluminium hand wheel and brass body. The theading is conical for safe and proper sealing.

All **ASCO** CO_2 Cylinder Valves are equipped with bursting disc for maximum safety.

Specifications

A	=	W 21,8 x 1/14” to DIN 477
B	=	Ø 8 mm (0.3 in)
C	=	28.8 x 1/14”
D	=	Ø 7 mm (0.3 in)
E	=	112 mm (4.4 in)
F	=	47 mm (1.9 in)
G	=	M10 x 0.75 mm (0.03 in)
Bursting disc	=	190 bar (2756 psi)
Handwheel	=	Aluminium
Valve Body	=	Brass
Weight approx.	=	520 g (1.45 lb)

Valves to other specifications on request!



ASCO CO_2 Cylinder Valve: Standard scope of supply

ASCO CO_2 Cylinder Valve

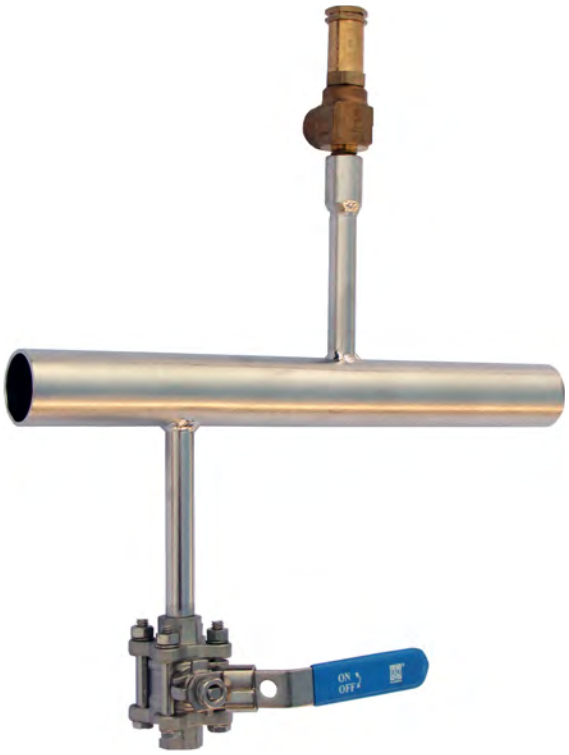
part no. 4046736

in brass, with:

- O-Ring
- max. operating pressure 200 bar (2'900 psi)
- inner thead for syphon tube
- aluminium hand wheel
- bursting safety disc (bursting pressure 190 bar) (2'755 psi)

ASCO Line Safety Assembly

part no. 4046831



Whenever an **ASCO** CO_2 Vaporiser or Tank is installed, a line safety assembly must be added in case liquid CO_2 is trapped between 2 valves in the pipeline. If this happens the safety valve will activate to avoid damaging the pipework.

ASCO Line Safety Assembly: Standard scope of supply

Pos. 001

Line safety assembly 1" - 25 bar (363 psi) welding connection

part no. 4046831

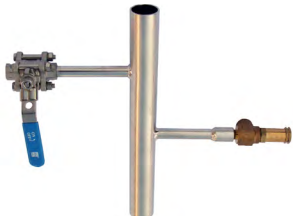
Consisting of:
- stainless steel pipe 1“ 300 mm (11.8 in)
- safety valve 25 bar (363 psi)
- vent ball valve stainless steel ¼“

Pos. 002

Line safety assembly 1" - 30 bar (435 psi)

part no. 4046828

Consisting of:
- stainless steel pipe 1“ 250 mm (9.8 in)
- one side welding connection
- other side tank connection, silver solder
- raiser tube for safety valve
- safety valve 30 bar (435 psi)
- vent ball valve stainless steel ¼“



CO_2 Equipment

ASCO CO_2 Pressure Reducing Valve

C31

C2-K32

The ideal and reliable high-flow CO_2 pressure reducing valve for use with CO_2 gas or liquid.

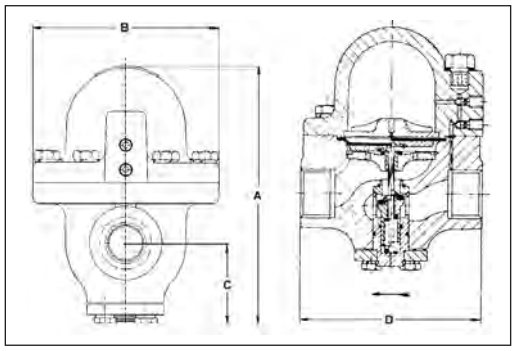
Advantages of a CO_2 pressure reducing valve:

- Constructed in brass (C31) and meehanite (C2-K32) with stainless steel trim
- Abrasion and dirt resistant rubber valve seats
- Dome loading either from inlet line or separate gas supply
- Stable and noiseless operation
- Positive gas-tight shut-off
- High-flow contoured passages

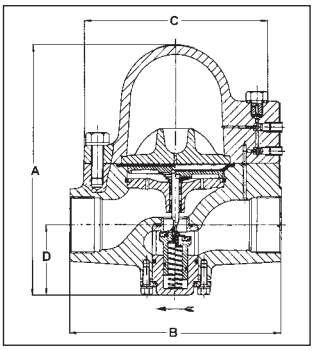
Specifications

	Type C31 part no. 4046817	**Type C2-K32 part no. 4046644**
CO_2 gas output per hour calculated at inlet pressure at 18 bar (261 psi)		
• outlet at 5 bar (73 psi)	621 kg/h (1'369 lb/h)	3'142 kg/h (6'927 lb/h)
• outlet at 8 bar (116 psi)	621kg/h (1'369 lb/h)	3'142 kg/h (6'927 lb/h)
• outlet at 10 bar (145 psi)	615 kg/h (1'356 lb/h)	3'114 kg/h (6'865 lb/h)
Connection	R 1"	R 2"
Weight approx.	6 kg (13 lb)	19 kg (42 lb)
Maximum inlet pressure Maximum outlet pressure	100 bar (1450 psi) 0.5 - 70 bar (7-1015 psi)	70 bar (1015 psi) 0.5 - 70 bar (7-1015 psi)

ASCO CO_2 Pressure Reducing Valve: Dimensions



C31



C2-K32

	Type C31 part no. 4046817	Type C2-K32 part no. 4046644
A	170 mm (6.7 in)	263 mm (10.4 in)
B	126 mm dia. (5 in)	227 mm (9 in)
C	52 mm (2 in)	197 mm dia. (7.8 in)
D	127 mm (5 in)	75 mm (3 in)

ASCO CO_2 Pressure Reducing Valve C31: Standard scope of supply

ASCO CO_2 Pressure Reducing Valve C31 (Dome Loaded) **part no. 4046817**

for gaseous or liquid CO_2
incl. repair kit (diaphragm and O-ring)

ASCO CO_2 Pressure Reducing Valve C2-K32: Standard scope of supply

ASCO CO_2 Pressure Reducing Valve C2-K32 (Dome Loaded) **part no. 4046644**

for gaseous or liquid CO_2
incl. repair kit (diaphragm and O-ring)

Safety

ASCO CO_2 Gas Detectors

ASCO CO_2 Gas Detectors are used to protect personnel wherever CO_2 gas or dry ice is used in closed areas, for example during dry ice blasting or when producing dry ice. **ASCO** offers wall-mounted solutions for area monitoring and portable devices for personal protection.

ASCO CO_2 Gas Detectors ensure continuous and automatic CO_2 content measuring in the ambient air using infrared absorption measuring (NDIR). This technology is very troublere-sistant to temperature variations or air draughts and therefore measures very accurately. The CO_2 gas detectors are very simple to handle and all components are built splash proof.

ASCO CO_2 Gas Detector AGS for area monitoring (wall-mounted)

ASCO CO_2-Gas-Detector AGS Station

part no. 5002981

Stationary CO_2 Gas-Detector AGS for CO_2 content monitoring in rooms, consisting of a display and sensor unit.

Characteristics:
- Alarm signals acoustically and visually at 3 limit values
- Calibration with Nitrogen N_2
- Versatile connection and integration options
- IP54 housing classified for dust and splash protection
- Integrated emergency power battery

Specifications Detector

Dimensions/weight:	140 x 90 x 48 mm (5.5 x 3.5 x 1.9 in) / approx. 0.9 kg (1.9 lb)
Material box:	plastic (IP54)
Resolution:	0.1 Vol. % CO_2 (10ppm bei 0~10,000ppm/100ppm bei 10,001~50,000ppm)
Voltage/ Power supply:	
DC:	9 - 32 VDC (12 – 32 VDC recommended), 2 A
AC adapter:	Input: 100 – 240 VAC, 50/60 Hz, 0,6 A Output: 12 VDC, 2000 mA
Max. power consumption:	approx. 2 W
Relay preliminary alarm/alarm:	below 2 A at 30 VDC or 250 VAC, SPDT
Analog output signal:	4 - 20 mA

Specifications Sensor

Size/weight:	170 x 126 x 69 mm (6.7 x 5 x 2.7 in) / approx. 0.5 kg (1 lb)
Material box:	plastic (IP54)
Gas entry:	diffusion
Measuring method:	nondispersive infrared measurement (NDIR)
Measuring range:	0 - 5 Vol. % CO_2 (0 - 50.000 ppm)
Accuracy:	0.1 Vol. % CO_2 (+- 100 ppm oder +- 5%)
Operating temperature:	0 to +50 °C

ASCO CO_2 Gas Detector AGP for personal safety

ASCO CO_2 Gas Detector AGP

part no. 5002980

Portable CO_2 Gas Detector to protect employees in areas where carbon dioxide buildup may cause personal harm.

Features:
- Audible, visual strobe and vibrating alarms
- Man down alarm
- Rechargeable Li-ion battery
- Two calibration methods
- Heavy duty metal clip

Specifications

Alarm settings:	3 thresholds
Alarm signals:	audible, visual, vibrating
Dimensions:	98 x 50 x 42 mm (3.9 x 2.0 x 1.7 in)
Weight:	approx. 0.14 kg (0.3 lb)
Material:	plastic material (IP54)
Power:	4.2 V, 1500 mAh Li-ion battery rechargeable (USB cable included)
Operating conditions:	0° - 50° C
Warm up time:	approx. 5 sec.
Resolution:	1 ppm; 0.01 vol % CO_2
Accuracy:	±40 ppm / ±3 %
Gas entry:	diffusion
Measuring method:	nondispersive infrared measurement (NDIR)
Measuring range:	0 - 5 vol % CO_2
Calibration interval:	1 year
Calibration method:	Nitrogen or ambient air

Dry Ice Storage

ASCO Dry Ice Box AT126

part no. 4063246

The **ASCO** Dry Ice Box AT126 is especially designed and developed for the storage of dry ice and offers good isolation. The material used on this formstable and lightweight box makes it robust and shock resistant for frequent use.

Thanks to the clever design with integrated bases no pallet is needed to stack the dry ice boxes.

Specifications	**AT126**
Material:	expanded PP (Polypropylene)
Inner dimensions (L × W × H):	663 × 456 × 420 mm (26 x 18 x 17 in)
Outer dimensions (L × W × H):	803 × 596 × 671 mm (32 x 23 x 26 in)
Weight empty:	10.3 kg (22.7 lb)
Cubic capacity:	approx. **126 litres (4.5 ft³)**
Average storage loss:	approx. 7.4 % / day
Capacity with pellets:	approx. 100 kg (220.6 lb)
Capacity with blocks:	approx. 155 kg (341.7 lb)

Dry Ice Storage: Options

Pos. 001

Dry ice shovel big

part no. 4046629

For optimum filling of the 3 mm (1/8 in) dry ice pellets into the ASCO Dry Ice Blasting equipment

Dimensions (L x W): 270 x 180 mm (11 x 7 in)
Wooden handle: 110 mm (4 in)
Material: wood / aluminium

Dry Ice Storage

ASCO Dry Ice Container AT240W

part no. 4063652

The **ASCO** Dry Ice Container AT240W made of polyethylene with foam filled cavities provides excellent insulation values.

The container has a lid with integrated hinges and a simple but very stable closing mechanism. The locking made of stainless steel is adjustable and offers the possibility to seal the container.

The integrated securable wheels (2 fixed wheels, 2 castor wheels) allow easy handling wherever the container is needed. The wheels are within the scope of supply, but are not mounted at delivery.

Specifications	**AT240W**
Material:	Polyethylene with integrated foam as isolation
Inner dimensions (L × W × H):	940 × 500 × 530 mm (37 × 20 × 21 in)
Outer dimensions (L × W × H):	1'150 x 705 x 1'020 mm (45 x 28 x 40 in)
Working height (with open lid):	925 mm (36 in)
Weight empty:	54 kg (119 lb)
Locks:	Stainless steel
Cubic capacity:	approx. **240 litres (8.5 ft³)**
Average storage loss:	approx. 4.0 % / day
Capacity with pellets:	approx. 188 kg (414 lb)
Capacity with blocks:	approx. 280 kg (617 lb)

Dry Ice Storage: Options

Pos. 001

Dry ice shovel big

part no. 4046629

For optimum filling of the 3 mm (1/8 in) dry ice pellets into the ASCO Dry Ice Blasting equipment

Dimensions (L x W): 270 x 180 mm (11 x 7 in)
Wooden handle: 110 mm (4 in)
Material: wood / aluminium

Dry Ice Storage

ASCO Dry Ice Container AT440

part no. 4064262

The specially developed foam-in-place urethane insulation of the **ASCO** Dry Ice Container AT440 provides outstanding temperature control and long lasting durability.

The special design of the cover and the bottom allows for easy stacking of the containers. Innovative gasket design between lid and container locks cold in. Furthermore, the reduced rib and label area profiles allow for increased insultation, yielding much lower sublimation rates.

The **ASCO** Dry Ice Container AT440 corresponds to Euro pallet designed to a 1'200 x 800 mm (47.2 x 31.5 in) footprint and therfore can be used ideally for storage and transport purposes.

Specifications	**AT440**
Material:	Polyethylene with integrated foam as isolation
Inner dimensions (L × W × H):	1'025 × 650 × 655 mm (40× 26 × 26 in)
Outer dimensions (L × W × H):	1'175 × 800 × 990 mm (46 × 32 × 39 in)
Working height (with open lid):	920 mm (36 in)
Weight empty:	60 kg (132 lb)
Cubic capacity:	**approx. 440 litres (15.54 ft³)**
Average storage loss:	approx. 4.1 % / day
Capacity with pellets:	approx. 344 kg (758 lb)
Capacity with blocks:	approx. 512 kg (1'129 lb)

Dry Ice Storage: Options

Pos. 001

Dry ice shovel big

part no. 4046629

For optimum filling of the 3 mm (1/8 in) dry ice pellets into the ASCO Dry Ice Blasting equipment

Dimensions (L x W): 270 x 180 mm (11 x 7 in)
Wooden handle: 110 mm (4 in)
Material: wood / aluminium

Dry Ice Production

ASCO Dry Ice Pelletizer P15i-D3

part no. 901318

The **ASCO** Dry Ice Pelletizer P15i is a compact and powerful dry Ice machine from our **i-Series line**. Having a production capacity of 150 kg/h (331 lb/h) it meets the demands for higher dry ice quantities plus quality and flexibility in the daily working process.

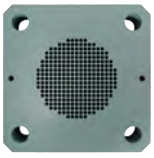
As a model of **ASCO**'s i-Series, it is equipped with state-of-the-art remote control devices and thus is ready for a wide range of services in the areas of **Remote Access, Remote Data, Remote Management.** Whether for fast and efficient trouble shooting and maintenance or for gathering production and performance data - the **ASCO** i-Series offers a wide range of possibilities to **link Industry 4.0 with dry ice production.**

The **ASCO** Dry Ice Pelletizer P15i is driven by a powerful hydraulic unit featuring instant push button start. All functions are controlled by a Siemens PLC with touch screen. A fully automatic control of oil temperature and dry ice snowing process guarantees continuous dry ice production without any supervision right from pushing the start button.

To maximise the CO_2 to dry ice conversion ratio the dry ice pelletizer can be connected to an **ASCO** Revert Gas Recovery System.

Benefits of an in-house dry ice production:

- 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



Extruder plate for 3 mm (1/8 ") pellets
The dry ice pelletizer P15i-D3 is standardly equipped with an extruder plate for pellets with a diameter of 3 mm (1/8 ").

Specifications

Production capacity:	150 kg/h (331 lb/h) ± 5% at 16 - 20 bar (232 - 290 psi) CO_2 inlet pressure
Voltage:	480 VAC ± 5 %/ 60 Hz / 3 Ph + PE (other voltages and frequencies on request)
Max. power consumption:	5.6 kW (7.5 HP)
Dimensions (L x W x H):	1'560 x 800 x 1'450 mm (61 x 32 x 57 in)
Weight net:	440 kg (970 lb) (without hydraulic oil) 500 kg (1'100 lb) (with hydraulic oil)
Weight packed:	approx. 550 kg (1'213 lb) (without hydraulic oil)
CO_2 inlet connection:	1“ BSP female
CO_2 source:	CO_2 storage tank, liquid phase (16 - 20 bar) (232 - 290 psi)
Connectivity and remote access:	LAN, Ethernet, WiFi, 3G (other data services on demand)

ASCO Dry Ice Pelletizer P15i-D3: Function and applications

The **ASCO** Dry Ice Pelletizer P15i requires a liquid CO_2 supply (pressure 16 - 20 bar) (232 - 290 psi) and power supply of 480 V / 60 Hz /3 Ph + PE (other voltages available on request). The machine features instant push button start and all functions are controlled by an inbuilt PLC. Dry ice snow is produced in the snowing chamber, pressed and then extruded by a powerful hydraulic unit. Hard, dense dry ice pellets are produced shortly after pushing the start button.

To ensure continuous, reliable operation of the pelletizer, oil temperature, oil level, cycle time, injection time, operation hours, due date of service, motor overload, amount dry ice produced since last start, CO_2 inlet pressure and hydraulic pressure are all monitored and displayed on the touch screen of the P15i's PLC.

Options

The **ASCO** Dry Ice Pelletizer P15i is standardly equipped with an extruder plate for the production of pellets with a diameter of 3 mm (1/8 "). Such pellets are used especially for dry ice blasting purposes. Optional extruder plates for the production of 10 mm (3/8 ") and 16 mm (5/8 ") pellets (for cooling purposes) are also available. other dimensions are available on request. The P15i, however, can also be delivered standardly equipped with such an extruder plate.

Pellet size	 3 mm (1/8 ")	 10 mm (3/8 ")	 16 mm (5/8 ")
Operating range	Dry ice blasting	Cooling purposes	Cooling purposes

ASCO Dry Ice Pelletizer P15i-D3: Key features

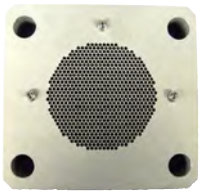
- **PLC SIEMENS-S7-1200** - controls the complete process, injection and hydraulic
- **Siemens touch screen 7"** - with different access levels and information regarding the started production
- **Remote control devices** - offers a wide range of possibilities to link Industry 4.0 with dry ice production.
- **Independent performance** - very constant production, independent of pressure and temperature in the range of 16 - 20 bar (232 -290 psi).
- **Integrated production control system** - definition and supervision of production quantity
- **High process reliability** - optimised process monitoring provides optimal performance and increases process reliability
- **Easy maintenance / optimal service planning** - comprehensive error history, indication on touch screen when next service is due
- **Minimum floor space for high production performance**

ASCO Dry Ice Pelletizer P15i-D3: Standard scope of delivery

Extruder plate for 3 mm (1/8 ") pellets

Pellets for **blasting purposes**

part no. 4044250



i-Series

Enables remote access and data services via LAN, Ethernet, WiFi, 3G (other data services on demand)
Discounts, features, period of validity and monthly subscription fees depend on the selected i-Series service contract.

ASCO Dry Ice Pelletizer P15i-D3: Options

Pos. 001

Extruder plate for 10 mm (3/8 ") pellets

Pellets for **cooling purposes**

part no. 4044255

Pos. 002

Extruder plate for 16 mm (5/8 ") pellets

Pellets for **cooling purposes**

part no. 4044253

Pos. 003

Spare parts kit

Includes a recommended selection of spare parts to ensure constant operation.

part no. 4068379

Sample image

Pos. 004

Connecting Kit 1" A220P/A240P/P15(i)/P28i

For flexible connection.

Lenght: 1.5 m

part no. 4044246

Dry Ice Production

ASCO Dry Ice Pelletizer P28i-D3

part no. 900903

The **ASCO** Dry Ice Pelletizer P28i is a compact and powerful dry Ice machine from our **i-Series line**. Having a production capacity of 280 kg/h (617 lb/h) it meets the demands for higher dry ice quantities plus quality and flexibility in the daily working process.

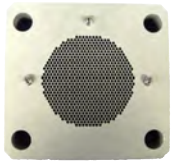
As a model of **ASCO**'s i-Series, it is equipped with state-of-the-art remote control devices and thus is ready for a wide range of services in the areas of **Remote Access, Remote Data, Remote Management.**
Be it for fast and efficient trouble shooting and maintenance or for gathering production and performance data - the **ASCO** i-Series offers a wide range of possibilities to **link Industry 4.0 with dry ice production.**

The **ASCO** Dry Ice Pelletizer P28i is driven by a powerful hydraulic unit featuring instant push button start. All functions are controlled by a Siemens PLC with touch screen. A fully automatic control of oil temperature and dry ice snowing process guarantees continuous dry ice production without any supervision right from pushing the start button.

To maximise the CO_2 to dry ice conversion ratio the dry ice pelletizer can be connected to an **ASCO** Revert Gas Recovery System.

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



Extruder plate for 3 mm (1/8 ") pellets
The ASCO Dry Ice Pelletizer P28i is standardly equipped with an extruder plate for the production of pellets with a diameter of 3 mm (1/8 ").

Specifications

Production capacity:	280 kg/h (617 lb/h) ± 5% at 16 - 20 bar (232 - 290 psi) CO_2 inlet pressure
Voltage:	480 VAC ± 5 %/ 60 Hz / 3 Ph + PE (other voltages and frequencies on request)
Max. power consumption:	5.6 kW (7.5 HP)
Dimensions (L x W x H):	1'560 x 800 x 1'450 mm (61 x 32 x 57 in)
Weight net:	440 kg (970 lb) (without hydraulic oil) 500 kg (1'100 lb) (with hydraulic oil)
Weight packed:	approx. 550 kg (1'213 lb) (without hydraulic oil)
CO_2 inlet connection:	1" BSP female
CO_2 source:	CO_2 storage tank, liquid phase (16 - 20 bar) (232 - 290 psi)
Connectivity and remote access:	LAN, Ethernet, WiFi, 3G (other data services on demand)

ASCO Dry Ice Pelletizer P28i-D3: Function and applications

The **ASCO** Dry Ice Pelletizer P28i requires a liquid CO_2 supply (pressure 16 - 20 bar) (232 - 290 psi) and power supply of 480 V / 60 Hz /3 Ph + PE (other voltages available on request). The machine features instant push button start and all functions are controlled by an inbuilt PLC. Dry ice snow is produced in the snowing chamber, pressed and then extruded by a powerful hydraulic unit. Hard, dense dry ice pellets are produced shortly after pushing the start button.

To ensure continuous, reliable operation of the pelletizer, oil temperature, oil level, cycle time, injection time, operation hours, due date of service, motor overload, amount dry ice produced since last start, CO_2 inlet pressure and hydraulic pressure are all monitored and displayed on the touch screen of the P28i's PLC.

Options

The **ASCO** Dry Ice Pelletizer P28i is standardly equipped with an extruder plate for the production of pellets with a diameter of 3 mm (1/8 "). Such pellets are used especially for dry ice blasting purposes. Optional extruder plates for the production of 10 mm (3/8 ") and 16 mm (5/8 ") pellets (for cooling purposes) are also available. The P28, however, can also be delivered standardly equipped with such an extruder plate.

Pellet size	 3 mm (1/8 ")	 10 mm (3/8 ")	 16 mm (5/8 ")
Operating range	Dry ice blasting	Cooling purposes	Cooling purposes

ASCO Dry Ice Pelletizer P28i-D3: Key features

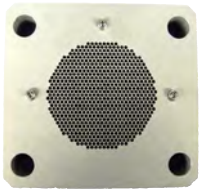
- **PLC SIEMENS-S7-1200** - controls the complete process, injection and hydraulic
- **Siemens touch screen 7"** - with different access levels and information regarding the started production
- **Remote control devices** - offers a wide range of possibilities to link Industry 4.0 with dry ice production.
- **Independent performance** - very constant production, independent of pressure and temperature in the range of 16 - 20 bar (232 -290 psi).
- **Integrated production control system** - definition and supervision of production quantity
- **High process reliability** - optimised process monitoring provides optimal performance and increases process reliability
- **Easy maintenance / optimal service planning** - comprehensive error history, indication on touch screen when next service is due
- **Minimum floor space for high production performance**

ASCO Dry Ice Pelletizer P28i-D3: Standard scope of delivery

Extruder plate for 3 mm (1/8 ") pellets

Pellets for **blasting purposes**

part no. 4044250



i-Series

Enables remote access and data services via LAN, Ethernet, WiFi, 3G (other data services on demand)
Discounts, features, period of validity and monthly subscription fees depend on the selected i-Series service contract.

ASCO Dry Ice Pelletizer P28i-D3: Options

Pos. 001

Extruder plate for 10 mm (3/8 ") pellets

Pellets for **cooling purposes**

part no. 4044255

Pos. 002

Extruder plate for 16 mm (5/8 ") pellets

Pellets for **cooling purposes**

part no. 4044253

Pos. 003

Spare parts kit

Includes a recommended selection of spare parts to ensure constant operation.

part no. 4068379

Sample image

Pos. 004

Connecting Kit 1" A220P/A240P/P15(i)/P28i

For flexible connection.

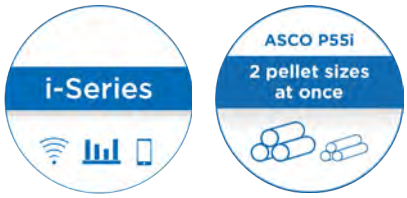
Lenght: 1.5 m

part no. 4044246

Dry Ice Production

ASCO Dry Ice Pelletizer P55i

part no. 901462



The **ASCO** Dry Ice Pelletizer P55i is one of the most powerful dry Ice machines from **ASCO**'s i-Series line. Having a production capacity of 550 kg/h (1212 lb/h) it meets the demands for high dry ice quantities plus quality and flexibility in the daily working process.

As a model of **ASCO**'s i-Series, it is 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.**
Be it for fast and efficient trouble shooting and maintenance or for gathering production and performance data - the **ASCO** i-Series offers a wide range of possibilities to **link Industry 4.0 with dry ice production.**

The **ASCO** Dry Ice Pelletizer P55i is driven by two powerful hydraulic units, which are running **independently** by the push of a button. This allows the **production of identical or different pellet sizes** in combination with the offered extruder plates. All functions are controlled by a Siemens PLC with a 12" touch screen. A fully automatic control of oil temperature and dry ice snowing process guarantees continuous dry ice production without any supervision right from pushing the start button.

To maximise the CO_2 to dry ice conversion ratio to 90 - 95% the dry ice pelletizer can be connected to an **ASCO** Revert Gas Recovery System.

Standardly equipped without extruder plates.

Please refer to the options below.

Specifications

Production capacity:	550 kg/h (1212 lb/h) ± 5 % at 16 - 19 bar (232 - 275 psi) CO_2 inlet pressure
Voltage:	480 VAC ± 5 %/ 60 Hz / 3 Ph + PE (other voltages and frequencies on request)
Max. power consumption:	11.3 kW (15.2 HP)
Dimensions (L x W x H):	1'600 × 1'500 × 1'650 mm (63 x 59 x 65 in)
Weight net:	1'660 kg (3'660 lb) (without hydraulic oil) 1'770 kg (3'902 lb) (with hydraulic oil)
Weight packed:	approx. 1'830 kg (4'034 lb) (without hydraulic oil)
CO_2 inlet connection:	1“ BSP female
CO_2 source:	CO_2 storage tank, liquid phase (16 - 20 bar) (232 - 290 psi)
Connectivity and remote access:	LAN, Ethernet, WiFi, 3G (other data services on demand)

ASCO Dry Ice Pelletizer P55i: Function and applications

The **ASCO** Dry Ice Pelletizer P55i requires a liquid CO_2 supply (pressure 16 - 20 bar) (232 - 290 psi) and power supply of 480 V / 60 Hz /3 Ph + PE (other voltages available on request). The machine features instant push button start and all functions are controlled by an inbuilt PLC and operated via the 12" touch screen. Dry ice snow is injected into the two snow chambers, pressed and then extruded by two powerful and independent hydraulic units. Hard, dense dry ice pellets are produced shortly after pushing the start button.

To ensure continuous, reliable operation of the pelletizer, oil temperature, oil level, cycle time, injection time, operation hours, due date of service, motor overload, amount dry ice produced since last start, CO_2 inlet pressure and hydraulic pressure are all monitored and displayed on the touch screen of the P55i's PLC. This data can also be evaluated and stored permanently via suitable i-Series service contracts.

Various production modes enable a "non-stop" production, the production to a defined pre-set quantity or a fully automatic operation with input and output signals via the digital COM Interface.

Options

The **ASCO** Dry Ice Pelletizer P55i is standardly not equipped with an extruder plate for the production of pellets. Optional extruder plates for the production of 3 mm (1/8 "), 10 mm (3/8 ") and 16 mm (5/8 ") pellets (for cooling purposes) are also available.

Pellet size	 3 mm (1/8 ")	 10 mm (3/8 ")	 16 mm (5/8 ")
Operating range	Dry ice blasting	Cooling purposes	Cooling purposes

ASCO Dry Ice Pelletizer P55i: Key features

- **PLC SIEMENS-ET200SP** - controls the complete process, injection and hydraulic
- **Siemens TP1200 Comfort 12 " Touch-Screen** - with different access levels and information regarding the ongoing production
- **Digital 24V COM Interface and remote control devices** - offers a wide range of possibilities to link Industry 4.0 with dry ice production
- **Independent performance** - very constant production, independent of pressure and temperature in the range of 16 - 20 bar (232 -290 psi) for both dry ice exits
- **Integrated production control system** - definition and supervision of production quantity per cylinder
- **High process reliability** - optimised process monitoring provides optimal performance and increases process reliability
- **Easy maintenance / optimal service planning** - comprehensive error history, indication on touch screen when next service is due and service history available
- **Minimum floor space for high production performance**

ASCO Dry Ice Pelletizer P55i: Standard scope of delivery

i-Series

Enables remote access and data services via LAN, Ethernet, WiFi, 3G (other data services on demand)
Discounts, features, period of validity and monthly subscription fees depend on the selected i-Series service contract.

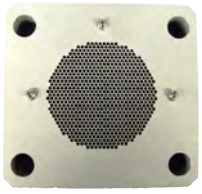
ASCO Dry Ice Pelletizer P55i: Options

Pos. 001

Extruder plate for 3 mm (1/8 ") pellets

part no. 4044250

Pellets for **blasting purposes**



Pos. 002

Extruder plate for 10 mm (3/8 ") pellets

part no. 4044255

Pellets for **cooling purposes**

Pos. 003

Extruder plate for 16 mm (5/8 ") pellets

part no. 4044253

Pellets for **cooling purposes**

Pos. 004

Spare parts kit

part no. 4066011

Includes a recommended selection of spare parts to ensure constant operation.

Sample image

Pos. 005

Connecting Kit 1" A220P/A240P/P15(i)/P28i/P55i

part no. 4044246

For flexible connection.

Lenght: 1.5 m

Dry Ice Production

ASCO Dry Ice Pelletizer P75i

part no. 901154

The Pelletizer P75i is the most powerful model in the range of **ASCO i-Series dry ice production machines**. At ASCO, i-Series stands for interconnected production. Be it for quick and efficient trouble shooting and maintenance or for gathering of production and performance data - the i-Series offers a wide range of options to link industry 4.0 dry ice production to industry 4.0.

The P75i is the workhorse among the ASCO dry ice pelletizers with a **production capacity of 750 kg/h (1'653 lb/h)**. It is built for long-term operation incorporating a heavy duty type hydraulic system controlled by an integrated PLC with touch screen interface. Fully automatic control of oil temperature and dry ice snow production process guarantees continuous dry ice production without any supervision right from the beginning.

By default, the P71i operates with a low noise level and can be optionally equipped with an automatic extruder plate changer.Simply change the production from one set pellet size to another size at the push of a button.

To maximise the CO_2 to dry ice conversion ratio the dry ice pelletizer can be connected to an **ASCO Revert Gas Recovery System**.

Standardly equipped without extruder plate.

Please refer to the options below.

Specifications

Production capacity:	750 kg/h (1‘653 lb/h)
Voltage:	480 VAC ± 5 %/ 60 Hz / 3 Ph + PE (other voltages and frequencies on request)
Max power consumption:	19 kW (25.5 HP)
Dimension (L × W × H):	1'700 x 1'100 x 3'860 mm (67 x 44 x 152 in)
Weight net:	1'550 kg (3‘410 lb) (without hydraulic oil & options) 1'800 kg (3‘960 lb) (with hydraulic oil)
Weight packed:	2‘250 kg (4‘950 lb) (without hydraulic oil)
Ø consumption:	7.5 kW (10 HP)
Noise level P75i standard:	<79 dB(A)
CO_2 inlet connection:	1 × 1/2“ BSP female CO_2 liquid 1 × 1/4“ BSP female CO_2 gas
CO_2 source:	CO_2 storage tank, liquid phase (15 - 20 bar) (218 - 290 psi)
Connectivity and remote access:	LAN, Ethernet, WiFi, 3G (other data services on demand)

ASCO Dry Ice Pelletizer P75i: Options

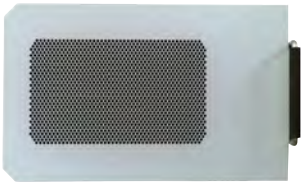
Pos. 001

Extruder plate for 3 mm (1/8 ") pellets

part no. 4045146

Extruder plate for ASCO Dry Ice Pelletizer P75i
For manual plate exchange

Pellets for **blasting purposes**



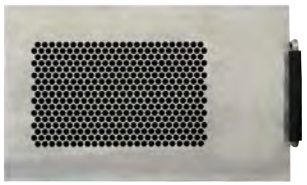
Pos. 002

Extruder plate for 6 mm (1/4 ") pellets

part no. 4045147

Extruder plate for ASCO Dry Ice Pelletizer P75i
For manual plate exchange

Pellets for **cooling purposes**



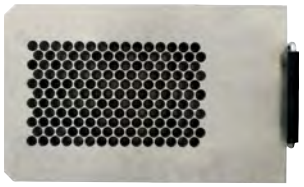
Pos. 003

Extruder plate for 10 mm (3/8 ") pellets

part no. 4045148

Extruder plate for ASCO Dry Ice Pelletizer P75i
For manual plate exchange

Pellets for **cooling purposes**



Pos. 004

Extruder plate for 16 mm (5/8 ") pellets

part no. 4045149

Extruder plate for ASCO Dry Ice Pelletizer P75i
For manual plate exchange

Pellets for **cooling purposes**

Pos. 005

Extruder plate for 19 mm (3/4 ") pellets

part no. 4045150

Extruder plate for ASCO Dry Ice Pelletizer P75i
For manual plate exchange

Pellets for **cooling purposes**

ASCO Dry Ice Pelletizer P75i: Automatic Pellet Size Changer

Pos. 006

Automatic pellet size changer for P75i

part no. 4066383

Option for automatic pellet size changeover between two determined diameters.

No extruder plates included. Please select the desired plates from the list of options.

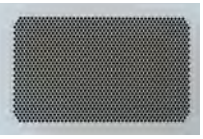
Pos. 007

Extruder plate for 3 mm (1/8 ") pellets

part no. 4066385

Extruder plate for ASCO Dry Ice Pelletizer P75i with automatic pellet size changer

Pellets for **blasting purposes**



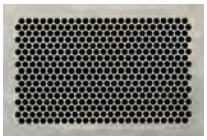
Pos. 008

Extruder plate for 6 mm (1/4 ") pellets

part no. 4066458

Extruder plate for ASCO Dry Ice Pelletizer P75i with automatic pellet size changer

Pellets for **cooling purposes**



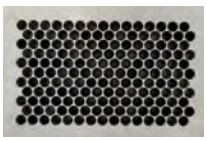
Pos. 09

Extruder plate for 10 mm (3/8 ") pellets

part no. 4066459

Extruder plate for ASCO Dry Ice Pelletizer P75i with automatic pellet size changer

Pellets for **cooling purposes**



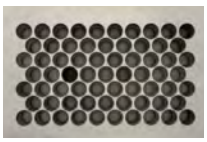
Pos. 010

Extruder plate for 16 mm (5/8 ") pellets

part no. 4066386

Extruder plate for ASCO Dry Ice Pelletizer P75i with automatic pellet size changer

Pellets for **cooling purposes**



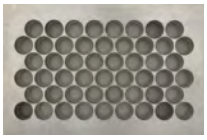
Pos. 011

Extruder plate for 19 mm (3/4 ") pellets

part no. 4066460

Extruder plate for ASCO Dry Ice Pelletizer P75i with automatic pellet size changer

Pellets for **cooling purposes**



ASCO Dry Ice Pelletizer P75i: Options

Pos. 012

ASCO Spare parts kit for P75i US

Includes a recommended selection of spare parts to ensure constant operation.

part no. 4066502

Sample image

Pos. 013

Exhaust pipe set 250 - 160

For discharging exhaust gas into the atmosphere.
Height approx. 300 cm / 100"

part no. 4045163

Sample image

Dry Ice Production

ASCO Automatic Dry Ice Machine BP420i

part no. 901190

ASCO's automatic Dry Ice Machine BP420i produces slices in ten different thicknesses and two 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 (8.3 x 4.9 x 0.8 - 2.8 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 882 lb/h).

By default, the BP420i operates with a low noise level.

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.**
Be it for fast and efficient trouble shooting and maintenance or for gathering production and performance data - the **ASCO** i-Series offers a wide range of possibilities to **link Industry 4.0 with dry ice production.**

To maximise the CO_2 to dry ice conversion ratio the dry ice machine can be connected to an **ASCO** Revert Gas Recovery System.

Specifications

Production capacity:	400 kg/h (880 lb/h)
Voltage:	480 VAC ± 5 %/ 60 Hz / 3 Ph + PE (other voltages and frequencies on request)
Dimension (L × W × H):	2‘540 x 1‘100 x 3‘750 mm (100 x 44 x 148 in)
Weight net:	1‘700 kg (3‘740 lb) (without hydraulic oil & options) 1'900 kg (4‘180 lb) (with hydraulic oil)
Weight packed:	2‘300 kg (5‘060 lb) (without hydraulic oil)
Average power consumption:	6 kW (8 HP)
Noise level BP420i standard:	< 82 dB (A)
CO_2 inlet connection:	1 × 1/2“ BSP female CO_2 liquid 1 × 1/4“ BSP female CO_2 gas
CO_2 source:	CO_2 storage tank, liquid phase (15 - 20 bar) (218 - 290 psi)
Connectivity and remote access:	LAN, Ethernet, 3G (other data services on demand)

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 CO_2 pressure and temperature variation of CO_2 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
- **CO_2 gas recovery possible**
- **Easy operation and maintenance**
- **Simple and quick installation**
- **Quality components, e.g. Siemens, ATOS**

Slice, block and pellet information

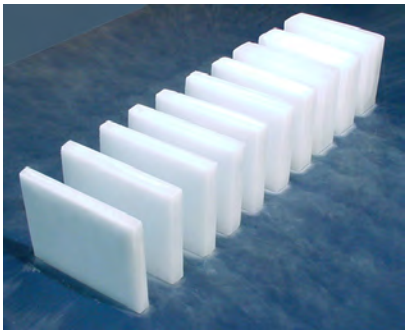
Dry ice product	Standard block / slice dimensions 210 × 125 mm (8.3 x 4.9 in)										Pellets
Thickness in mm (Thickness in in)	20 (0.8)	22 (0.9)	25 (1)	30 (1.2)	35 (1.4)	40 (1.6)	45 (1.8)	50 (1.9)	60 (2.4)	70 (2.8)	all Ø
Weight in gr/slice (Weight in lb/slice)	820 (1.8)	900 (2.0)	1'020 (2.2)	1'210 (2.7)	1'410 (3.1)	1'620 (3.6)	1'820 (4.0)	2'020 (4.5)	2'420 (5.3)	2'830 (6.2)	-
Capacity in kg/h (Capacity in lb/h)	240 (529)	250 (551)	300 (661)	240 (529)	270 (595)	300 (661)	330 (728)	350 (772)	330 (728)	390 (860)	400 (882)

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 (0.8 to 2.8 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) (0.8 -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 (1/4, 3/8, 5/8")

- 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.

Automatic ASCO Dry Ice Machine BP420i: Options

Pos. 001

Ice Loader for Dry Ice blocks/ slices

part no. 901370

For reasons of weight and occupational health and safety, we recommend using the Ice Loader instead of the standard block brake for a controlled and timed handover of blocks / slices from 1.2 kg (2.7 lb) or 30 mm (1.2 in) thickness.

The Ice Loader is tailored to the production capacities of the BP420i and designed for the standard block / slice sizes of 210 × 125 mm (8.3 x 4.9 in). It has its own electrical switch cabinet with logo PLC control and is controlled and protected via the main switch cabinet of the BP420i.

A pneumatic connection is required for mechanical operation (min. 6 bar).

For the production of dry ice pellets, the Ice Loader can be manually decoupled from the dry ice machine.

Automatic ASCO Dry Ice Machine BP420i: Options

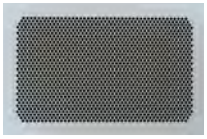
Pos. 002

Upgrade D3 mm (1/8")

part no. 22858

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 (882 lb / h)



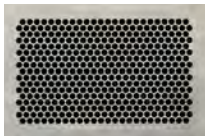
Pos. 003

Upgrade D6 mm (1/4")

part no. 22861

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 (882 lb / h)



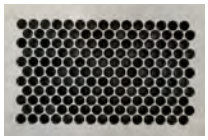
Pos. 004

Upgrade D10 mm (3/8")

part no. 22859

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

Capacity with 10 mm (3/8") pellets = 400 kg / h (882 lb / h)



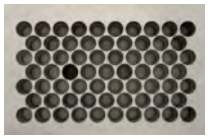
Pos. 005

Upgrade D16 mm (5/8")

part no. 22860

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

Capacity with 16 mm (5/8") pellets = 400 kg / h (882 lb / h)



Pos. 006

Set of spares

part no. 4066340

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

Sample image

Pos. 007

Exhaust pipe set 250 - 160

part no. 4045163

For discharging exhaust gas into the atmosphere.
Height approx. 300 cm / 100"

Sample image

Dry Ice Production

ASCO Automatic Dry Ice Machine BP425i

part no. 901340

ASCO's automatic Dry Ice Machine BP425i produces slices in ten different thicknesses and two 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 BP425i 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 - 125 mm (8.3 x 4.9 x 0.8 - 4.9 in). Other slice/ pellet dimensions are available on request. Depending on the setting, the production capacity ranges from 190 to 400 kg / h (418 to 882 lb / h).

By default, the BP425i operates with a low noise level.

The automatic dry ice block, slice and pellet machine **ASCO** BP425i belongs to the **ASCO** i-Series line. It is 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.**
Be it for fast and efficient trouble shooting and maintenance or for gathering production and performance data - the **ASCO** i-Series offers a wide range of possibilities to **link Industry 4.0 with dry ice production.**

To maximise the CO_2 to dry ice conversion ratio the dry ice machine can be connected to an **ASCO** Revert Gas Recovery System.

Specifications

Production capacity:	400 kg / h (882 lb/h) (Pellets)
Voltage:	480 VAC ± 5 %/ 60 Hz / 3 Ph + PE (other voltages and frequencies on request)
Dimension (L × W × H):	2'540 x 1'100 x 3'750 mm (100 x 44 x 148 in)
Weight net:	1'700 kg (3'740 lb) (without hydraulic oil & options) 1'900 kg (4'180 lb) (with hydraulic oil)
Weight packed:	2'300 kg (5'060 lb) (without hydraulic oil)
Average power consumption:	6 kW (8 HP)
Noise level BP425i standard:	< 82 dB (A)
Verified breakage rate (slices/ blocks):	< 3 %
CO_2 inlet connection:	1 × 1 / 2" BSP female CO_2 liquid 1 × 1 / 4" BSP female CO_2 gas
CO_2 source:	CO_2 storage tank, liquid phase (15 - 20 bar) (218 - 290 psi)
CO_2 conversion rate:	approx. 43% (without optional Revert Recovery System)
Connectivity and remote access:	LAN, Ethernet, 3G (other data services on demand)

ASCO Automatic Dry Ice Machine BP425i: 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 CO_2 pressure and temperature variation of CO_2 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
- **CO_2 gas recovery possible**
- **Easy operation and maintenance**
- **Simple and quick installation**
- **Quality components, e.g. Siemens, ATOS**

Slice, block and pellet information

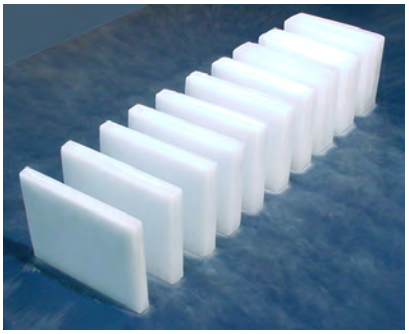
Dry ice product	Standard block / slice dimensions 210 × 125 mm (8.3 x 4.9 in)										Pellets
Thickness in mm (Thickness in in)	20 (0.8)	22 (0.9)	25 (1.0)	30 (1.2)	40 (1.6)	50 (1.9)	60 (2.4)	70 (2.8)	100 (3.9)	125 (4.9)	all Ø
Weight in gr / slice (Weight in lb / slice)	820 (1.8)	900 (2.0)	1'020 (2.2)	1'210 (2.7)	1'620 (3.6)	2'020 (4.4)	2'420 (5.3)	2'830 (6.2)	4'000 (8.8)	5'000 (11.0)	-
Capacity in kg / h (Capacity in lb / h)	200 (441)	220 (485)	250 (551)	190 (418)	250 (551)	300 (661)	280 (617)	330 (727)	350 (771)	380 (837)	400 (882)

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 125 mm (0.8 to 4.9 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 '').

Automatic ASCO Dry Ice Machine BP425i: Applications

Airline catering (20 - 25 mm thickness) (0.8 - 1 in), transport cooling (thicker blocks) or pellets for other cooling or for dry ice blasting purposes: The automatic **ASCO** Dry Ice Machine BP425i 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 (1/4, 3/8, 5/8")

- 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.

Automatic ASCO Dry Ice Machine BP425i: Options

Pos. 001

Ice Loader for Dry Ice blocks/ slices

part no. 901370

For reasons of weight and occupational health and safety, we recommend using the Ice Loader instead of the standard block brake for a controlled and timed handover of blocks / slices from 1.2 kg (2.7 lb) or 30 mm (1.2 in) thickness.

The Ice Loader is tailored to the production capacities of the BP425i and designed for the standard block / slice sizes of 210 × 125 mm (8.3 x 4.9 in). It has its own electrical switch cabinet with logo PLC control and is controlled and protected via the main switch cabinet of the BP425i.

A pneumatic connection is required for mechanical operation (min. 6 bar).

For the production of dry ice pellets, the Ice Loader can be manually decoupled from the dry ice machine.

Automatic ASCO Dry Ice Machine BP425i: Options

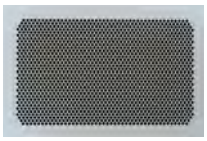
Pos. 002

Upgrade D3 mm (1/8")

part no. 22858

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 (882 lb / h)



Pos. 003

Upgrade D6 mm (1/4")

part no. 22861

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 (882 lb / h)

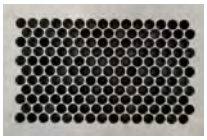
Pos. 004

Upgrade D10 mm (3/8")

part no. 22859

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

Capacity with 10 mm (3/8") pellets = 400 kg / h (882 lb / h)



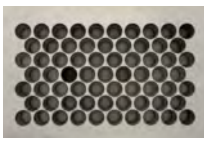
Pos. 005

Upgrade D16 mm (5/8")

part no. 22860

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

Capacity with 16 mm (5/8") pellets = 400 kg / h (882 lb / h)



Pos. 006

Set of spares

part no. 4066388

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

Sample image

Pos. 007

Exhaust pipe set 250 - 160

part no. 4045163

For discharging exhaust gas into the atmosphere.
Height approx. 300 cm / 100"

Sample image

Dry Ice Production

ASCO Dry Ice Reformer R70i

part no. 901511

The **ASCO** Dry Ice Reformer R70i has been developed for producing dense dry ice blocks in various sizes by compressing dry ice pellets. **Be it in combination with an existing or with a new dry ice pelletizer, the ASCO Dry Ice Reformer R70i is a very convenient tool to complement the dry ice pellet business with dry ice blocks.**

The compact machine is driven by a powerful and unique hydraulic unit featuring instant push button start. All functions are controlled by a Siemens PLC S7-1200. A touch screen provides good overview and easy operation, a comprehensive monitoring, easy maintenance and optimal service planning. An integrated production control system allows to define and supervise the amount of blocks or weight to be produced.

Specifications

Production capacity*:	300 to 700 kg / h (440 - 1543 lb) (depending on block size)
Voltage:	480 VAC ± 5 %/ 60 Hz / 3 Ph + PE (other voltages and frequencies on request)
Dimensions (L × W × H):	1'140 × 1'140 × 1'620 mm (45 x 45 x 64 in)
Weight net:	approx. 510 kg (1122 lb) (without hydraulic oil) approx. 580 kg (1276 lb) (with hydraulic oil)
Weight packed:	680 kg (1'499 lb)
Total power installed:	9.5 kW (12.7 HP)
Max. average power consumption:	< 3 kW (4 HP)
Standby mode:	0.6 kW (0.8 HP)
Connectivity and remote access:	LAN, Ethernet, 3G (other data services on demand)
Basis media:	3 mm (1/8 ") dry ice pellets
Dry ice density blocks:	≥ 1.54 kg / dm³ (96 lb/ft³)
Standard block/slice sizes:	210 × 125 mm (8.3 x 4.9 in), thickness 16 to 60 mm (0.6 to 2.3 in) resp. weight 650 to 2'430 g (1.4 to 5.4 lb) (thickness and weight stepless adjustable)

	Standard block /slice size 210 × 125 mm (8.3 x 4.9 in)								
Thickness in mm** (Thickness in in)	16 (0.6)	18 (0.7)	20 (0.8)	22 (0.9)	25 (1)	30 (1.2)	40 (1.6)	50 (2)	60 (2.4)
Weight in g / block approx. (Weight in lb/block approx.)	650 (1.4)	730 (1.6)	810 (1.8)	890 (2)	1'010 (2.2)	1'220 (2.7)	1'620 (3.6)	2'030 (4.5)	2'430 (5.4)
Performance in kg / h approx. (Performance in lb/h approx.)	300 (661)	320 (705)	336 (741)	370 (816)	400 (882)	460 (1014)	562 (1'239)	649 (1'431)	700 (1'543)

* The indications regarding production capacity are based on the use of 3 mm pellets, freshly produced on ASCO dry ice pelletizers.

** This choice of sizes is only an extract and helps as production indication. The thickness or the weight of the blocks is alternatively stepless adjustable.

ASCO Dry Ice Reformer R70i: Function and applications

The **ASCO** Dry Ice Reformer R70i is started on the 7" Siemens comfort touch screen panel. All functions are controlled by the inbuilt PLC. Dry ice pellets with a diameter of 3 mm (1/8 ") are filled into the dry ice hopper. From there they are conveyed to the pressing chamber automatically, where they are predosed and compressed into high-quality dry ice blocks.

To ensure continuous, reliable operation of the reformer, oil level, cycle time, operation hours, due date of service, motor overload, amount of produced dry ice blocks since last start and hydraulic pressure are all monitored and displayed on the touch screen of the R70i's PLC.

Dry Ice Reformer R70i: Key features

- **SIEMENS PLC** - controls the complete process, filling of the pressing chamber and the hydraulic with its main and side cylinder.
- **Siemens comfort touch screen 7" HMI**- Multilingual 7" Touch-Screen with different access levels and adjustable parameters.
- **Integrated production control system** - definition and supervision of amount of blocks or weight to be produced.
- **Alternatively thickness or weight of blocks stepless adjustable** (16 to 60 mm (0.6 to 2.4 in) resp. 650 to 2'430 g (1.4 to 5.4 lb). Corresponding calculation happens automatically.
- **Integrated block thickness control and fill level monitoring** - dif the required amount of dry ice pellets in the hopper falls short, the machine automatically goes into a waiting mode until the correct fill level is reached again.
- **High process reliability** - optimal process monitoring provides optimal performance and high process reliability.
- **Remote control devices** - offers a wide range of possibilities to link Industry 4.0 with dry ice production.
- **System integration -** can be combined with all ASCO pelletizer and ASCO packaging machines APM120.

Automatic Dry Ice Reformer R70i: Options

Pos. 001

Podium for Dry Ice Pelletizer

part no. 4063845

Customized podium to elevate a dry ice pelletizer to directly charge the ASCO Dry Ice-Reformer R70i with pellets.

Pos. 002

ASCO Pellet Feeder for Dry Ice Reformer R70i

part no. 4063846

Conveyor belt for automatic filling of the R70i dry ice reformer with pellets from an ASCO P15i or P28i dry ice pelletizer.

Pos. 003

ASCO Pellet Feeder for Dry Ice Reformer R70i

part no. 4070858

Universal conveyor belt for automatic filling of the R70i dry ice reformer with pellets from all ASCO dry ice pelletizers.

Pos. 004

Set of spares

part no. 4068310

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

Sample image

Dry Ice Production / Sawing

ASCO Dry Ice Active Saw - AAS

part. no. 901471

The electric dry ice active saw **ASCO AAS** was specially designed for cutting dry ice slices. Thanks to an output of up to 600 slices per hour, it is suitable for being operated in conjunction with several dry ice production machines. The dry ice blocks can either be cut in half with a saw blade or cut into three equally sized slices with two saw blades.

Different production centers are possible in combination with the ASCO dry ice machines BP420i, BP425i, the re-former R70i as well as with the ASCO packaging machines AMP120 and APM140. The standard layouts are listed for each of the packaging machines.

The machine is supplied with one saw blade as standard, if necessary it can be converted to the optional double saw blades within a few minutes. The operating speed of the dry ice saw is fixed via the motor speed.

Specifications

Dimensions (L × W × H):	1'902 × 816 × 1'363 mm (75 x 32 x 54 in)
Sawing performance:	600 dry ice blocks per hour
Block dimensions (L × W):	125 mm x 210 mm or 254 mm (5 in x 8 in or 10 in)
Block thickness (H):	16 - 70 mm (0.6 - 2.8 in)
Sound level:	max. 81 dB (A)
Drive:	electric motor
Electrical power supply:	480 VAC / 6.25 A / 60Hz / 3 phases + earth (other voltages and frequencies on request with extra charge)
Motor power:	3.0 kW (4 hp)
Net weight:	280 kg (617 lb)
Packed weight:	approx. 350 kg (approx. 772 lb)

ASCO Dry Ice Active Saw - AAS

Pos. 001

ASCO AAS01

part no. 901471

Active dry ice saw for sawing (halving) blocks of dry ice.

The machine is supplied with one saw blade and is ready for use immediately

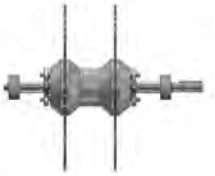
ASCO Dry Ice Active Saw - AAS: Options

Pos. 001

Saw blade shaft with 2 saw blades

part no. 4068584

For cutting the dry ice blocks into 3 equal slices.



Pos. 002

Spare parts kit

part no. 4068852

Includes a recommended selection of spare parts to ensure constant operation.

Example picture

Dry Ice Production / Wrapping

ASCO Automatic Wrapping Machine APM120

The automatic wrapping machine ASCO APM120 has been specifically developed for wrapping dry ice slices. Thanks to its output of up to 60 slices per minute the APM120 can be used in combination with multiple dry ice production machines.

The operating speed can be individually adapted at the central control panel.

All our standard versions offered are listed hereafter.

The dimension of the dry ice slices to be wrapped has to be specified at the time of ordering. The machine is being delivered with one roll of wrapping film which is needed for initial set up and for commissioning at site.

Specifications

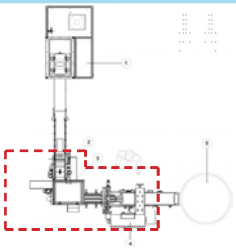
Dimensions (L x W x H):	3'670 × 956 × 1'720 mm (144 x 38 x 68 in)
Performance:	Up to 60 slices/min (depending of dry ice production machine)
Wrapping material:	Polypropylen MD447/40 (Standard),
Product size (L x W x H):	Up to 210 mm × 125 mm (8 x 5 in) at 18 - 25 mm (0.7 - 1.0 in) thickness (has to be specified at time of order) Minumum length 70 mm (2.8 in)
Running direction:	Right-sided as standard (looking at the machine from the front, the product is fed in from the right and the packed slices are discharged on the left)
Air supply:	6 bar (87 psi)
Air consumption:	120 liters/min. of filtered and dry compressed air
Voltage:	480 VAC ± 5 %/ 60 Hz / 3 Ph + PE + N (other voltages and frequencies on request)
Total power installed:	6 . 5 - 11.5 kW (8.7 - 15.4 HP)
Auxiliary ciruits:	24 VDC
Net weight:	Approx. 550 kg (1'212 lb)
Film reel:	Max. width 500 mm (17 in) (standard 340 mm (13 in) depending of slice dimensions Max. reel diameter 350 mm (14 in) Core diameter 70 - 76 mm (2.8 - 3 in)

Automatic Wrapping Machine APM120: Versions for BP420

Pos. 001

Automatic Wrapping Machine APM120
non extendable

Automatic wrapping machine designed to run with 1 x BP420 without option for extension.

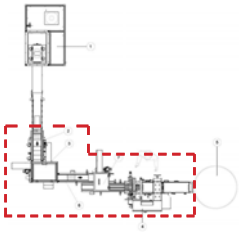


part no. 4064787

Pos. 002

Automatic Wrapping Machine APM120
for 1 BP420, extendable

Automatic wrapping machine designed to run with 1 x BP420, extendable to run with 2 x or 3 x BP420

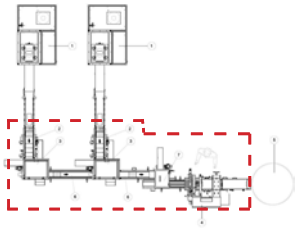


part no. 4064786

Pos. 003

Automatic Wrapping Machine APM120
for 2 BP420, extendable

Automatic wrapping machine designed to run with 2 x BP420, extendable to run with 3 x BP420

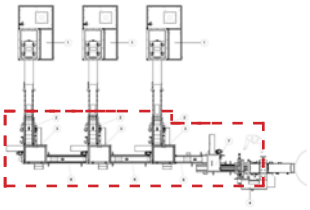


part no. 4064788

Pos. 004

Automatic Wrapping Machine APM120
for 3 BP420

Automatic wrapping machine designed to run with 3 x BP420



part no. 4064789

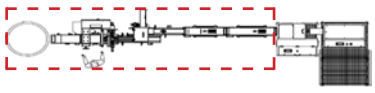
Automatic Wrapping Machine APM120: Versions for Reformer R70i

Pos. 001

Automatic Wrapping Machine APM120
for ASCO Dry Ice Reformer R70i

Automatic wrapping machine designed to run with the ASCO Dry Ice Reformer R70i

part no. 901214



Automatic Wrapping Machine APM120: Options

Pos. 001

Rotary table for ASCO Wrapping Machine Ø 1.2 m

part no. 4045179

Low quantity buffering device complete with:
- metallic support with three legs
- rotating table
- motor

Pos. 002

Packaging film unprinted

part no. 4045171

With 340 mm (13.39 in)
Length approx. 1'400 running meters
Thickness 40 µm

Corporate branding upon request.

Dry Ice Production / Bagging

ASCO Pellets Bagging Machine PBM

With its packaging machine PBM, **ASCO** is presenting a compact solution for automated bagging of dry ice pellets. Three models are available depending on the intended filling quantity:

- **PBM 500** for bags from 0.5 kg to 3.0 kg (1.1 to 6.6 lb)
- **PBM 1000** for bags from 0.5 kg to 7.0 kg (1.1 to 15.4 lb)
- **PBM 1500** for bags from 3.0 kg to 11.0 kg (6.6 to 24.2 lb)

The **ASCO** PBM is equipped with an accurate weighing system and is optimised for packing dry ice pellets with a diameter of 3 to 16 mm (0.12 to 0.63 in).

The packaging machine comes with an auger elevator to connect with the dry ice pelletizer and a discharge conveyor. The bag size setting is changed via touch panel with the pre-set possibility for 250 programs.

Specifications	**PBM 500**	**PBM 1000**	**PBM 1500**
Performance (kg/h):	up to 700 kg/h (1'540 lb/h) bags of 0.5 kg (1.1 lb) approx. 400kg/h (880 lb/h)	up to 1000 kg/h (2'200 lb/h) bags of 0.5 kg (1.1 lb) approx. 400kg/h (880 lb/h)	up to 1500 kg/h (3300 lb/h)
Tolerance max.:	0.5 - 3.0 kg bag: ±50 g (1.1 - 6.6 lb bag: ± 0.1 lb)	0.5 - 3.0 kg bag: ±50 g (1.1 - 6.6 lb bag: ± 0.1 lb) 3.0 - 6.0 kg bag: ±100 g (6.6 - 13.2 lb bag: ± 0.2 lb) 6.0 - 7.0 kg bag: ±150 g (13.2 - 15.4 lb bag: ± 0.3 lb)	3.0 - 6.0 kg bag: ±100 g (6.6 - 13.2 lb bag: ± 0.2 lb) 6.0 - 11.0 kg bag: ±200g (13.2 - 24.2 lb bag: ± 0.4 lb)
Max. foil width:	530 mm (21.0 in)	680 mm (26.8 in)	950 mm (37.4 in)
Bag size (W x L):	32 x 60 mm to 250 x 400 mm (1.3 x 2.4 in to 9.8 x 15.7 in)	32 x 60 mm to 320 x 400 mm (1.3 x 2.4 in to 12.6 x 15.7 in)	50 x 60 to bis 455 x 600 mm (2 x 2.4 in to 17.9 x 23.6 in)
Voltage:	480 VAC ± 5 %/ 60 Hz / 3 Ph + PE + N (other voltages and frequencies on request)		
Power consumption:	5 kW (6.7 HP)	7 kW (9.4 HP)	8 kW (10.7 HP)
Pneumatic supply:	6 bar (87 psi); max 100 l/min (depends on bag size)		
Weight machine:	approx. 400 kg (880 lb)	approx. 530 kg (1168 lb)	approx. 850 kg (1874 lb)
Weight conveyors:	200 / 70 kg (441 / 154 lb)	200 / 70 kg (441 / 154 lb)	200 / 70 kg (441 / 154 lb)
Dimensions (L x W x H)	6.9 x 1.4 x 3.0 m (22.6 x 4.6 x 9.9 ft)	7.3 x 1.3 x 3.0 m (24 x 4.3 x 9.9 ft)	8.2 x 1.7 x 3.5 m (27 x 5.6 x 11.5 ft)

ASCO Pellets Bagging Machine - PBM

Pos. 001

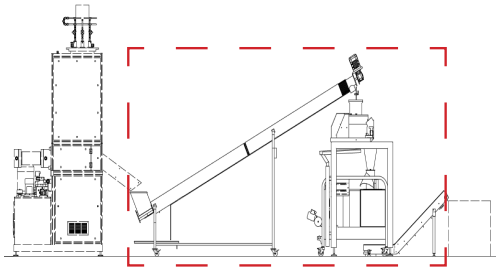
ASCO PBM 500

part no. 901482

Automatic bagging machine for dry ice pellets in bags of 0.5 to 3.0 kg (1.1 to 6.6 lb)

Including auger elevator to connect to the dry ice pelletizer and discharge conveyor

Delivered with a set of spare parts and one roll of packaging film which is needed for installation



Pos. 002

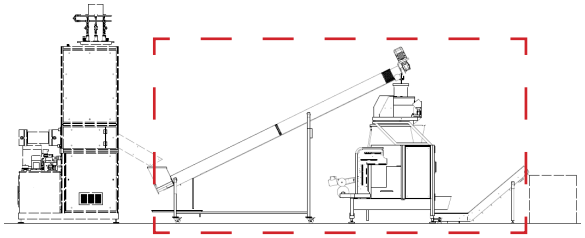
ASCO PBM 1000

part no. 901483

Automatic bagging machine for dry ice pellets in bags of 0.5 to 7.0 kg (1.1 to 15.4 lb)

Including auger elevator to connect to the dry ice pelletizer and discharge conveyor

Delivered with a set of spare parts and one roll of packaging film which is needed for installation



Pos. 003

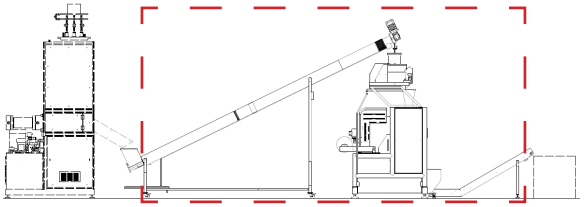
ASCO PBM 1500

part no. 901484

Automatic bagging machine for dry ice pellets in bags of 3.0 to 11.0 kg (6.6 to 24.2 lb)

Including auger elevator to connect to the dry ice pelletizer and discharge conveyor

Delivered with a set of spare parts and one roll of packaging film which is needed for installation



Automatic Pellets Bagging Machine PBM: Options

Pos. 001

Rotary table Ø 1.2 m (11 in)

part no. 4045179

Low quantity buffering device complete with:
- Metallic support with three legs
- Rotating table
- Motor

Pos. 002

Packaging film neutral for PBM 500 perforated

part no. 4066962

Width: 530 mm (21 in)
Strength: 80 µm
Length / roll: 500 rm (1'640 ft)
Weight: 20 kg (44 lb)
Core diameter: 77 mm (3 in)

Automatic Pellets Bagging Machine PBM: Options

Pos. 003

Packaging film neutral for PBM 1000 perforated

part no. 4066963

Width: 680 mm (27 in)
Strength: 100 µm
Lenght / roll: 500 rm (1'640 ft)
Weight: 32 kg (71 lb)
Core diameter: 77 mm (3 in)

Pos. 004

Packaging film neutral for PBM 1500 perforated

part no. 4066964

Width: 950 mm (37 in)
Strength: 120 µm
Length / roll: 400 rm (1'312 ft)
Weight: 43 kg (95 lb)
Core diameter: 77 mm (3 in)

Pos. 005

ASCO Dry Ice Container AT240W

part no. 4063652

Foam insulated polyethylene container for dry ice storage with wheels
Cubic capacity: approx. 240 litres (8.5 ft^3)
Capacity with pellets: approx. 188 kg (414 lb)
Average storage loss: 4.0 % per day
Dimensions (L x W x H): 1'150 x 705 x 1'020 mm
(45x 28 x 40 in)

Pos. 006

ASCO Dry Ice Container AT440

part no. 4064262

Foam insulated polyethylene container for dry ice storage.
Cubic capacity: approx. 440 litres (15.5 ft^3)
Capacity with pellets: approx. 344 kg (758 lb)
Average storage loss: 4.1 % per day
Dimensions (L x W x H): 1'175 x 800 x 990 mm
(46 x 32 x 39 in)

Dry Ice Production / Dosing

ASCO Dry Ice Refilling System ARS

part no. 900991

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:	480 V/ 3AC/ 60Hz/ N/ PE
	24V control voltage
Connected power:	approx. 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.

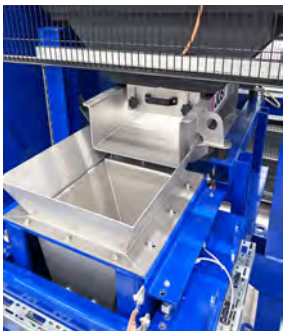
The full integration of the system into the control system offers absolute system security, as all functions are centrally displayed and monitored. The automatic container refilling system for dry ice pellets is designed as standard for the ASCO AT440 and AT240W dry ice containers but can also be loaded 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

ASCO Dry Ice Refilling System ARS US

part no. 900991

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.

ASCO Dry Ice Blasting Technology
General Information

What is CO_2?

Carbon dioxide or CO_2 is an odourless, inert gas approximately 1½ times heavier than air and 0.03 % is normally present in the earth‘s atmosphere. It is also found in great quantities in volcanoes, earth cracks, other sources and in the metabolism of plants, animals, and human beings.

Commercially, CO_2 can be recovered as a by-product from various chemical industries and is usually stored in a tank after recovery. Carbon dioxide can exist in thee forms:

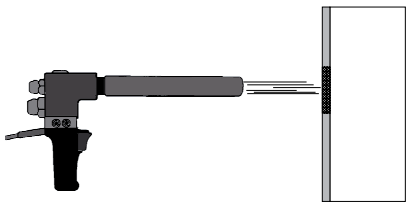
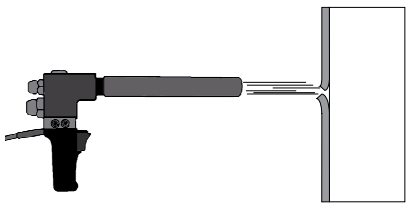
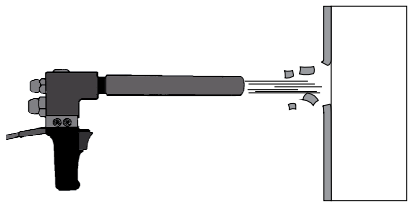
- in gaseous form	(for the beverage and food industries)
- In liquid form	(in a storage tank under pressure)
- in solid form	(called dry ice, for cooling, blasting etc.)

What is Dry Ice?

Dry ice is produced from liquid carbon dioxide. inside a pelletizer, the liquid carbon dioxide is expanded under controlled conditions. This physical change forms dry ice snow. This snow is then pressed though an extruder plate into round, hard pellets (enlongated grains with a diameter of 3 mm or 1.7 mm) (0.12 in or 0.07 in). Dry ice has a temperature of approx. -79 °C (-110 °F).

Cleaning Method

The ASCO Dry Ice Blasting machine accelerates the pellets with compressed air to a speed of approx. 300 m/s (984.25 ft/s). The pellets hit the object to be cleaned. The surface is shock-frozen in a fraction of a second. Due to the cracking of the surface, the pellets can reach under the dirt and remove it using their kinetic energy. Immediately after impact, the pellets sublimate without leaving any moisture behind. Since the hardness of the pellets is only approx. 2 Mohs, the cleaning is virtually non-abrasive, and the surface quality is maintained.

		
The thermo shock As a result of the sudden and intense temperature shock on the surface, the coating or impurity contracts.	**The cracking** As a result of the contraction the coating cracks and the material becomes brittle due to the cold.	**The cleaning** The dry ice pellets hit the surface with great speed and remove the detached coating and clean the surface material.

General Information

Where can this unique cleaning method be applied?

The ASCO Dry Ice Cleaning Technology is a gentle non-abrasive cleaning method suitable on almost all surfaces especially for mold cleaning in foundries, in the tire manufacturing, the plastic injection molding industry and the cleaning of machinery in general but especially in the food manufacturing process. Basically, it easily removes all materials, which react to differences in temperature or kinetical energy or a combination of both of them like release agent, plastic, synthetic and food residues, foam (e.g. PU), paint, varnish, adhesives, wax, bitumen, etc. without damaging or altering the surface. Another benefit is that it reduces the amount of waste material considerably.

What are the advantages over other cleaning methods?

Wherever conventional cleaning methods cause long and expensive down-time of equipment, machinery and/or labor, this modern technique considerably reduces down-time. The often costly and intensive after-treatment of the cleaned surfaces is no longer necessary.
Another major benefit is that the removal and disposal of contaminated blasting media is completely eliminated as the dry ice pellets simply sublimate back to the atmosphere.

Increased productivity – cost saving

- Since this cleaning technology is dry and non-abrasive, it can be applied directly onto the object to be cleaned. Thus down time can be reduced to a minimum. Time is saved and cooling down or the other way around heating up of tools is obsolete.
- Cleaning of machinery, tools, molds, conveyors etc. can be done without removing them from the machine.
- Cleaning even during the running process is no problem.
- Another benefit is that it reduces the amount of waste material considerably, especially for hazardous waste.

Increased quality – non-abrasive

- The hardness of dry ice pellets can be compared with the hardness of chalk. Therefore the surface structure of the cleaning surface is not being damaged nor altered in any way.
- A gentle but nevertheless effective cleaning technology.
- Suitable for very sensitive and fine-structured surfaces (CD-stamp, wafer, polished surfaces)
- Fine edges and delicate structures remain unchanged.
- Non scrubbing (Steel brushes, scraper)

Dry

- Cleaning with dry ice is a dry and non-conductive cleaning process.

Health

- By eliminating the use of solvents and hazardous chemicals the dry ice cleaning method is safe for people and environment.

Environment friendly

- The dry ice sublimates on impact onto the surface. Only the removed contaminant remains. It is not necessary to dispose the cleaning media – it reduces waste dramatically!
- No sewage – or cleaning and filtration of waste water
- No contamination by hazardous additives, chemicals etc.
- No remains of the cleaning media
- Non toxic
- No use of water, therefore no breading ground for germs

Powerful – a fast cleaning technology

- Powerful – hardly no loss of pressure by extending the hoses up to 75 m (246 ft) length and 35 m (115 ft) height.
- Direct cleaning for instance onto hot molds without having to cool them down first.
- Normally, no disassembling of the machine parts is necessary.
- ASCO dry ice blasting is the perfect solution for many different applications in various industries.

Compact and mobile

- The equipment is light, mobile, maintenance-free, reliable and easy to operate.

Necessary Equipment

ASCO Dry Ice Blasting Unit

Depending on the application, the appropriate dry ice blasting unit can be chosen. Our range consists of six different **ASCO** models with different performances and features.

Various nozzles (barrel, flat and angled nozzles) with different air flows are available to allow even higher flexibility.

ASCO Dry Ice Pelletizer

Dry ice pellets with a diameter of 3 mm (0.12 in) are standardly used for the dry ice blasting technology. This size of dry ice can usually be bought from a local gas company. To ensure a ready supply of high quality pellets, having in-house your own dry ice machine is a definite advantage.

ASCO Air Compressor

In order to give the dry ice pellets the necessary speed and blasting effect, compressed air must be fed to the blasting unit.

Depending on the application, compressed air between 2 - 20 bar (29 - 290 psi) and an air flow between 1 - 15 m^3/min (35.3 - 529.7 ft^3/min) is required.

Technical Specifications of Blasting Air

To reach a certain cleaning performance, a corresponding air pressure and volume is needed. Generally, the more air volume is used, the more powerful the units are. **ASCO** Dry Ice Blasting Units have enough power for each application, thus minimising production down times.

Below please find a list showing the standard air consumption of each unit. These figures are valid for the use with the standard nozzle and can very if other nozzles are used:

Working pressure	Air consumption (m^3/min.)		
	ASCOJET 1208	ASCOJET 1701	ASCOJET 1708
2 bar (29 psi)	1.1 (39 ft^3/min)	-	-
3 bar (44 psi)	1.6 (57 ft^3/min	-	-
4 bar (58 psi)	2.1 (75 ft^3/min)	3.7 (131 ft^3/min)	3.7 (131 ft^3/min)
6 bar (87 psi)	2.9 (103 ft^3/min)	4.6 (162 ft^3/min)	4.6 (162 ft^3/min)
7 bar (102 psi)	3.5 (124 ft^3/min)	5.0 (177 ft^3/min)	5.0 (177 ft^3/min)
8 bar (116 psi)	4.0 (142 ft^3/min)	5.4 (191 ft^3/min)	5.4 (191 ft^3/min)
10 bar (145 psi)	5.1 (181 ft^3/min)	6.2 (219 ft^3/min)	6.2 (219 ft^3/min)

***OHP additive:** Combination blasting with blasting gun additive OHP (Blasting nozzle additive)
***HP:** Double hose system with blasting gun HP (High Performance Barrel Nozzle HP255)

Note: These figures are valid for each unit equipped with its standard gun. If the above consumption rates do not suit your requirements, please inform us when asking for a quote.

In order to ensure the perfect function of our blasting equipment, **ISO-standard 8573-1 must be complied within the following areas:**

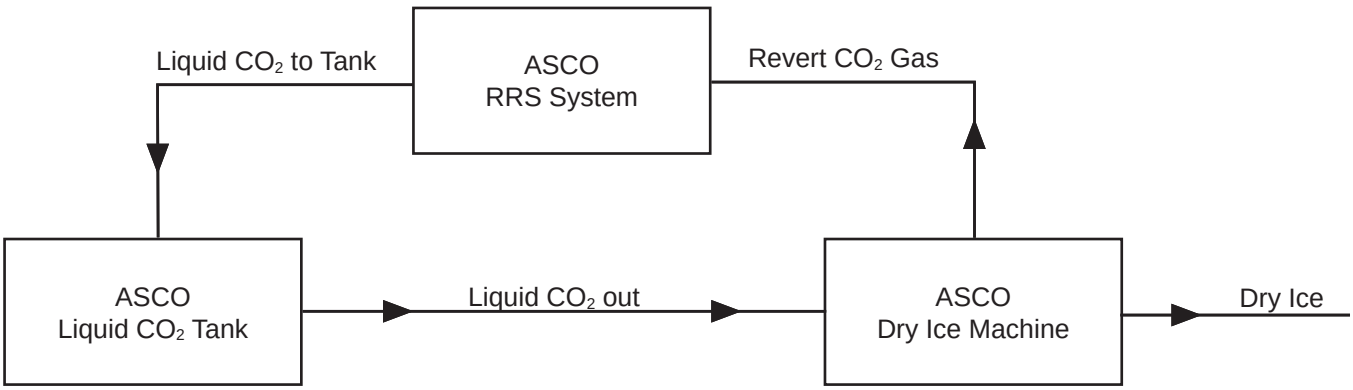
	Class	Max. target value
Oil content	Class 3	Max. residual oil content 1 mg/m^3
Particle size and density	Class 3	Max. particle size 5µm, density 5 mg/m^3
Pressure dew point	Class 4	Max. residual water contant 5.953 g/m^3 and pressure dew point of +3 °C (+37 °F)

CO_2 Revert Recovery System

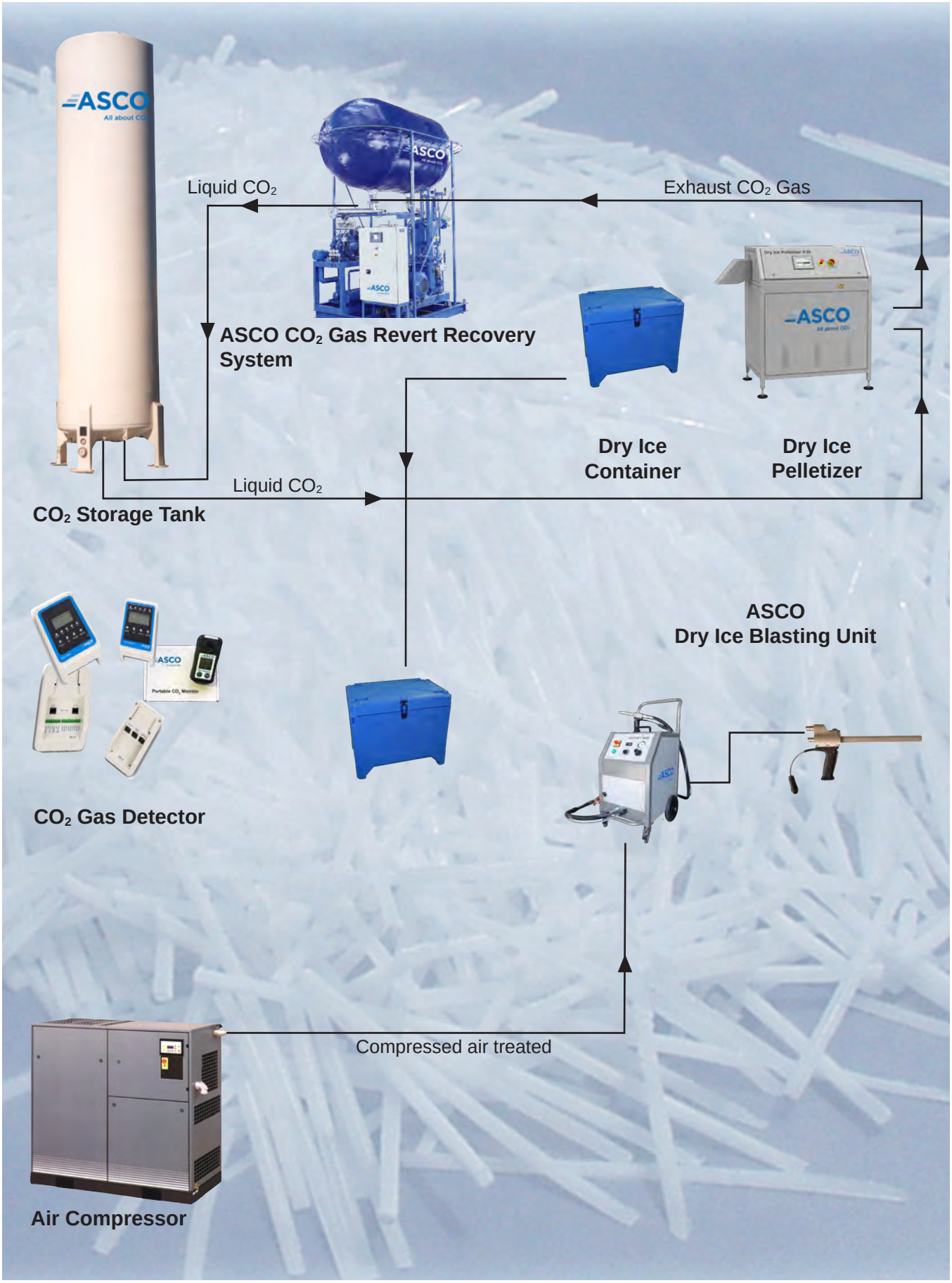
When dry ice is produced the conversion rate from liquid CO_2 to dry ice is approx. 40 - 45 %. With a CO_2 Revert Recovery System, however, most of the otherwise lost CO_2 can be recovered to give a final conversion rate of approx. 90 - 95 %. It goes without saying that with such a CO_2 Recovery System the dry ice production costs can be reduced enormously.

ASCO offers several CO_2 Revert Recovery Systems for its different dry ice pelletizers with a recovery capacity from 70 to 2'500 kg (154 to 5'500 lb) CO_2 gas per hour. ASCO Dry Ice Pelletizers are made so that a CO_2 recovery system can easily be connected. We will be pleased to help you choose the right CO_2 Revert Recovery System.

- reducing dry ice costs up to 50 % by recovering the normally „lost“ CO_2 gas
- automatic (PLC) operation
- compact design
- skid mounted for easy installation (ASCO RRS 300 and ASCO RRS 560)
- heavy duty construction



Overview ASCO Dry Ice Blasting System

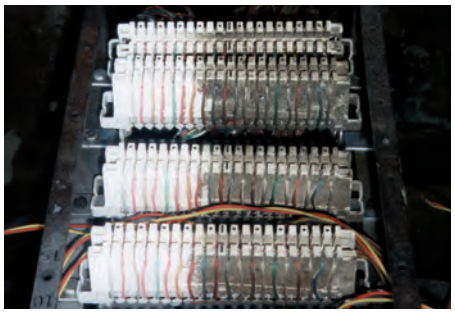


Applications

Nowadays, the **ASCO** Dry Ice Blasting Technology is used in most industries, specially where a dry, environmentally friendly, powerful and non-abrasive cleaning method is required. Below is an extract from our application list outlining the most common uses. Please call us if more information about applications is required.

Aircraft	Pharmaceutical industry
Automotive industry	Power plants
Chemical industry	Printing industry
Cleaning companies/ Facility management	PU-production
Electric components	Repair of fire damage
Food industry	Rubber industry
Foundries	Ship building
Injection moulding	Tyre manufacturing
Paper industry	etc.

Dry ice blasting technology can be used wherever paint, varnish, resin, wax, oil, grease, release agent etc. has to be removed without damaging the surface. Even delicate parts like switch boards and other electric components can be cleaned.



Cleaning of a switch board of a national Telecommunication Company. In this way short circuits can be avoided.

Cleaning of an industrial fan in a hotel kitchen. Due to the thick layer of greasy residues, the fan no longer operated efficiently.

Dry ice cleaning in the paper industry: The removal of paper residues and lubrication oil from paper production machines also eliminates burn marks.

Applications

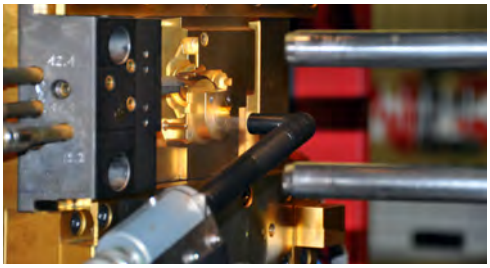
Foundries

Cleaning of a hot ingot mould without dismantling

Core box cleaning in a grey iron foundry

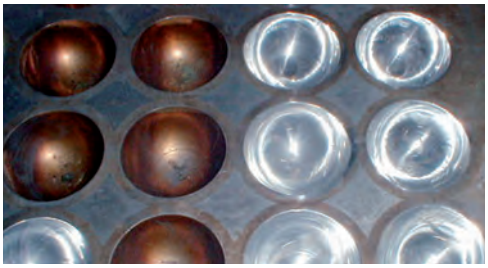
Plastics industry

Cleaning of a mould in PU-production



Cleaning of injection moulds

Rubber industry



Cleaning of moulds for the production of tennis balls

Cleaning of tyre moulds

Food industry

Removal of cheese and tomato residues in a pizza bakery

Cleaning of a hot waffle iron

Applications

Printing industry

Printing machine before ...

... and after cleaning

Façade cleaning

Stonewall before and after cleaning

Wooden façade before and after cleaning

Fire damage

Fire damage before ...

... and after cleaning

More than just a Cleaning Method

In the field of the dry ice blasting technology ASCO has specialised in offering individual and complete solutions for the specific needs of customers. These individual solutions can start with a single dry ice blasting machine. ASCO‘s policy is then to help and advise its customers on how to achieve their best dry ice cleaning solution.

Solutions can include:

- **development of an in-house dry ice production**
- **noise control booths**
- **automated dry ice cleaning**
- **safety concepts**
- **customized products like special blasting guns or nozzles**
- **etc.**

ASCO Dry Ice Blasting is therefore a cleaning method that can be individually tailored to increase quality and flexibility in your daily working process.

Automated mould cleaning in the plastics industry. This robot technology can also be applied to cleaning other moulds like ingot moulds and core boxes.

Automated spraying on and removal of release agent in the PU-production: The robot can be programmed for spraying on the release agent and for removing it with dry ice.

Dry Ice Blasting Unit

ASCOJET® 1208

complete (fully adjustable) **part no. 900961**

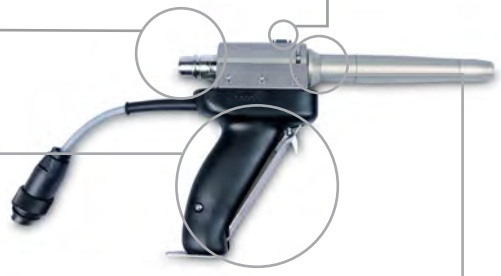
The ASCOJET® features a new modern frame design and self-explanatory pictogram. This powerful blasting machine is very easy to use and is particularly suitable for use in industries.

The newly integrated grounding roll and the protective grating in the pellet hopper guarantee safe handling during the blasting process.

Powerful and very handy blasting gun:

Thanks to a **quick connect coupling** the gun can be attached to the blasting unit very easily.

Increased security thanks to the **locking pin**, which makes a sudden opening of the locking mechanism of the nozzle impossible.



The **ergonomic gun handle** ensures very easy handling and comfortable operation when blasting over longer periods. The new developed safety button is ideal for left and right-hander.

A **quick exchange system** allows nozzles to be changed within seconds without any tools.

Specifications

Material:	frame and cover sheets made of powder-coated steel
Dimensions (L × W × H) incl. wheels/folded handle:	635 x 491 x 872-1'220 mm (variable) (25 x 20 x 35-48 in)
Weight empty:	approx.62 kg (136 lb)
Content of pellet hopper:	approx. 9 kg (20 lb)
Working pressure:	0 - 10 bar (0 - 145 psi) (adjustable)
Dry ice consumption:	20 - 40 kg/h (44 - 88 lb/h) (stepless)
Voltage:	120 V, 60 Hz, 1 Ph (other voltages on request)
Power consumption:	500 W (0.7 HP) nominal
Inlet hose connection:	3/4" BSP female 3/4" Claw coupling fitted

ASCOJET® 1208: Special features

Powerful and handy blasting gun with quick connect coupling

Highly manoeuvrable

Quick connect coupling at blasting hose

Lightweight and compact

Integrated holding device for hose

Vertically adjustable handle for easy handling

Integrated grounding wire for more safety

Insulated pellet hopper with 9 kg (20 lb) capacity

Control panel for easy overview

ASCOJET® 1208: Standard scope of supply

Pos. 001

Blasting gun OHS6

part no. 4063745

Standard for the ASCOJET® 1208
Length: 26 cm (10.2 in)
Weight: 1.0 kg (2.2 lb)
Blasting pressure: 0 - 10 bar (0 - 145 psi)
(Blasting gun OHS6 V2016 without nozzle part no. 4064771)

OHS

including the corresponding blasting nozzle

High performance barrel nozzle 707.15/12

part no. 4047321

Standard for the blasting gun OHS
Powerful nozzle with low air consumption
Outlet opening: approx. Ø 12 mm (0.5 in)
Length: 15 cm (6 in)
Inner diameter: 7 mm (0.3 in)

Pos. 002

Hose assembly 5 m for OHS gun ID16 mm (197 in ID 0.6 in)

part no. 4047104

Standard for the ASCOJET® 1208, can also be used as an extension of the hose assembly incl. control cable, grounded

OHS

ASCOJET® 1208: Standard scope of supply

Pos. 002

Claw coupling with 19 mm (3/4") male thread — **part no. 4063848**

For fast connection and disconnection of the air line to the blasting equipment

Already mounted on the unit.

Pos. 003

Power cable 10 m (32 in) — **part no. 4063978**

ASCOJET® 1208 tool case: Scope of supply

Pos. 001

Tool case ASCOJET® 1208 — **part no. 4064567**

Tool case complete
(contains below articles pos. 002 - 007)

OHS
OHP

Pos. 002

Tool case ASCOJET® 1208 empty — **part no. 4064570**

Empty tool case with matching insert

OHS
OHP

Pos. 003

Barrel nozzle 707.09/10 — **part no. 4047228**

Thanks to an inner diameter of only 7 mm (0.3 in) the barrel nozzle has a very economical air consumption but is nevertheless powerful

Outlet opening: approx. Ø 10 mm (0.4 in)
Length: 9 cm (3.5 in)
Inner diameter: 7 mm (0.3 in)

OHS
OHP

Pos. 004

Flat nozzle 709.23/45 — **part no. 4047216**

Powerful nozzle suitable for blasting large areas

Outlet opening: approx. 45 x 3.5 mm (1.77 x 0.14 in)
Length: 23 cm (9 in)
Inner diameter: 9 mm (0.4 in)

OHS
OHP

Pos. 005

Angled nozzle 708.28/10/45° — **part no. 4047222**

A powerful nozzle for confined spaces with very low air consumption

Outlet opening: approx. Ø 10 mm (0.4 in)
Length: 28 cm (11 in)
Inner diameter: 8 mm (0.3 in)

OHS
OHP

ASCOJET® 1208 tool case: Scope of supply

Pos. 006

Angled nozzle 708.25/10/75°

part no. 407223

A powerful nozzle for confined spaces with very low air consumption

Outlet opening: approx. Ø 10 mm (0.4 in)
Length: 25 cm (10 in)
Inner diameter: 8 mm (0.3 in)

OHS
OHP

Pos. 007

Lighting kit for dry ice blasting gun

part no. 4064129

Compact torch
LED light 160 lumen, 160 cm (63 in)
Up to 25 hours battery life (3 x 1.5V AAA)
Batteries not included in scope of supply
Length: 10.6 cm (4.2 in)
Weight: 120 g (0.4 lb)

OHS
OHP
HP

ASCOJET® 1208: Options

Pos. 001

Barrel nozzle 707.15/12

part no. 4047321

Thanks to an inner diameter of only 7 mm (0.3 in) the barrel nozzle has a very economical air consumption but is nevertheless powerful

Outlet opening: approx. Ø 12 mm (0.5 in)
Length: 15 cm (6 in)
Inner diameter: 7 mm (0.3 in)

OHS
OHP

Pos. 002

Pellet cutter OHS

part no. 4047026

For sensitive blasting applications

With safety quick connect coupling, 2.5 m (8.2 ft) hose and control cable, grounded

OHS

Pos. 003

Protective sleeve for one hose system 165 mm (6.5 in)

part no. 4047265

To protect the control cable and blasting hose from dirt and damages

Available in meters

OHS
OHP

Pos. 004

Protective hood for ASCOJET® 1208

part no. 4064528

The newly developed hood for our blasting equipment protects the control elements from contamination. The transparent cover can be opened for easy view on and access to the operation elements. For cleaning the hood can easily be taken off

ASCOJET® 1208: Options

Pos. 005

Spare parts kit ASCOJET® 1208

part no. 4066285

Includes a recommended selection of spare parts to ensure constant operation.

Sample image

Pos. 006

Compressed air hose 7.5 m (24.6 ft) / ID 25 mm (1 in)

part no. 4045955

Connecting hose between air compressor and dry ice blasting machine, incl. claw coupling and safety ring for fast and easy connection / disconnection
Material: Fabric hose / metal
Dimension: 7.5 m (24.6 ft)
Weight: 2.4 kg (5.3 lb)

Pos. 007

Nozzle extension 700.150 OHP/OHS

part no. 4046018

Modular nozzle extension for OHS and OHP dry ice blasting guns with a total length of up to 1.5 m (59 in) with nozzle

Length 1: 455 mm (18 in) without nozzle
Length 2: 580 mm (23 in) without nozzle
Length 3: 835 mm (33 in) without nozzle
Length 4: 960 mm (38 in) without nozzle
Length 5: 1340 mm (53 in) without nozzle

OHS
OHP

Weight in full length: 1.50 kg (3.3 lb)
Inner diameter: 10 mm (0.4 in)
Material: aluminium

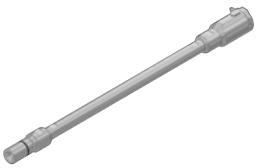
Pos. 008

Nozzle extension 700.62 OHP/OHS

part no. 4063373

Modular for nozzle extension for OHS and OHP dry ice blasting guns with a length of 668 mm (26.3 in)

OHS
OHP



Weight: 0.6 kg (1.3 lb)
Inner diameter: 10 mm (0.4 in)
Material: aluminium

Dry Ice Blasting Unit

ASCOJET® 1701

complete (fully adjustable) **part no. 901030**

The ASCOJET® 1701 is a compact, mobile dry ice blasting unit featuring a handy one hose system which has been specially developed to maintain efficient cleaning with contaminants which are harder to remove.

This powerful unit is suitable for industrial end users like foundries, tyre manufacturers, food industry and printing industry who require high performance and easy handling.

Powerful and handy blasting gun:

Thanks to a **quick connect coupling** the gun can be attached to the blasting unit very easily.

Increased security thanks to the **locking pin**, which makes a sudden opening of the locking mechanism of the nozzle impossible.

The **ergonomic gun handle** ensures very easy handling and comfortable operation when blasting over longer periods. The new developed safety button is ideal for left and right-hander.

An **quick exchange system** allows nozzles to be changed within seconds without any tools.

Specifications

Material:	frame and cover sheets made of powder-coated steel
Dimensions (L × W × H) incl. wheels & handle:	752 x 608 x 1'103 mm (30 x 24 x 44 in)
Weight empty:	approx. 104 kg (229 lb)
Content of pellet hopper	approx. 23 kg (51 lb)
Blasting pressure:	0 - 10 bar (0 - 145 psi) (adjustable)
Dry ice consumption:	25 - 80 kg/h (55 - 176 lb/h) (stepless)
Max. power consumption:	600 W (0.80 HP) nominal
Voltage:	120 V, 60 Hz, 1 Ph (other voltages on request)
Inlet hose connection:	3/4" BSP female 3/4" Claw coupling fitted

ASCOJET® 1701: Special features

Powerful and handy blasting gun with quick connect coupling

Highly manoeuvrable

Integrated holding device for hose

Lightweight and compact

Quick connect coupling at blasting hose

Box for gun, nozzles and tools

Distributor unit for pulsation-free blasting

Insulated pellet hopper with 23 kg (50 lb) capacity

Control panel for easy overview

ASCOJET® 1701: Standard scope of supply

Pos. 001

Blasting gun OHP

part no. 4063749

Standard for the ASCOJET® 1701
Length: 33 cm (12.9 in)
Weight: 1.05 kg (2.3 lb)
Blasting pressure: 0 - 10 bar (0 - 145 psi)
(Blasting gun OHP4 without nozzle part no. 4064749)

including the corresponding blasting nozzle

OHP

High performance barrel nozzle 709.23/15

part no. 4047144

Standard for the blasting gun OHP
Most powerful nozzle of the ASCOJET® single-hose system
Outlet opening: approx. Ø 15 mm (0.6 in)
Length: 23 cm (9 in)
Inner diameter: 9 mm (0.4 in)

Pos. 002

Hose assembly 7.5 m (24.6 ft) for OHP gun

part no. 4045987

Standard for the ASCOJET® 1701, can also be used as an extension of the hose assembly incl. control cable, grounded.

OHP

ASCOJET® 1701: Standard scope of supply

Pos. 002

Claw coupling with 19 mm (3/4") male thread

part no. 4063848

For fast connection and disconnection of the air line to the blasting equipment

Already mounted on the unit.

Pos. 003

Power cable 10 m (32 in)

part no. 4063978

ASCO 1701 tool case: Scope of supply

Pos. 001

Tool case ASCOJET® 1701 / 1708

part no. 4064572

Tool case complete
(contains below articles pos. 002 - 008)

OHP

Pos. 002

Tool case ASCOJET® 1701 / 1708 empty

part no. 4064575

Empty tool case with matching insert

OHP

Pos. 003

High performance barrel nozzle 709.17/14

part no. 4045402

Powerful and handy nozzle

Outlet opening: approx. Ø 14 mm (0.5 in)
Length: 17 cm (6.7 in)
Inner diameter: 9 mm (0.4 in)

OHP

Pos. 004

Barrel nozzle short 709.09/11

part no. 4045403

Powerful nozzle to clean in narrow spaces

Outlet opening: approx. Ø 11 mm (0.4 in)
Length: 9 cm (3.5 in)
Inner diameter: 9 mm (0.4 in)

OHP

ASCO 1701 tool case: Scope of supply

Pos. 005

Barrel nozzle special 709.42/15

part no. 4047141

The nozzle is designed to allow for a comfortable working position of the person in charge and is very powerful

OHP

Outlet opening: approx. Ø 15 mm (0.6 in)
Length: 42 cm (16.5 in)
Inner diameter: 9 mm (0.4 in)

Pos. 006

Angled nozzle 708.28/10/45°

part no. 4047222

A powerful nozzle for confined spaces with low air consumption

OHS
OHP

Outlet opening: approx. Ø 10 mm (0.4 in)
Length: 28 cm (11 in)
Inner diameter: 8 mm (0.3 in)

Pos. 007

Flat nozzle 709.23/45

Part no. 4047216

Powerful nozzle suitable for blasting large areas

OHS
OHP

Outlet opening: approx. 45 × 3.5 mm (1.77 x 0.14 in)
Length: 23 cm (9 in)
Inner diameter: 9 mm (0.4 in)

Pos. 008

Lighting kit for dry ice blasting gun

part no. 4047129

Compact torch
LED light 160 lumen, 160 cm (63 in)
Up to 25 hours battery life (3 x 1.5V AAA)
Batteries not included in scope of supply
Length: 10.6 cm (4.2 in)
Weight: 120 g (0.4 lb)

OHS
OHP
HP

ASCOJET® 1701: Options

Pos. 001

Angled nozzle 709.28/11/45°

part no. 4047219

A powerful nozzle for very confined spaces and difficult to reach spots

OHP

Outlet opening: approx. Ø 11 mm (0.4 in)
Length: 28 cm (10.9 in)
Inner diameter: 9 mm (0.4 in)

Pos. 002

Angled nozzle 709.25/11/75°

part no. 4047220

A powerful nozzle for very confined spaces and difficult to reach spots

OHP

Outlet opening: approx. Ø 11 mm (0.4 in)
Length: 25 cm (9.8 in)
Inner diameter: 9 mm (0.4 in)

ASCOJET® 1701: Options

Pos. 003

Pellet cutter OHP

part no. 4047257

For sensitive blasting applications

With safety quick connect coupling, 2.5 m (8.2 ft) hose and control cable, grounded

OHP

Pos. 004

Converter coupling ASCOJET® 1701 - 1208

part no. 4047040

This converter coupling makes it possible that the OHS gun with the corresponding blasting hose of the ASCOJET® 1208 can be connected to the ASCOJET® 1701

OHS

Length: 7.8 cm (3.0 in)
Weight: 0.2 kg (0.4 lb)
Outlet opening: approx. Ø 34 mm (1.3 in)

Pos. 005

Blasting gun OHS

part no. 4063745

Standard for the ASCOJET® 1208
Length: 26 cm (10.2 in)
Weight: 1.0 kg (2.2 lb)
Blasting pressure: 0 - 7 bar (0 - 102 psi)

OHS

Including the corresponding blasting nozzle

High performance barrel nozzle 707.15/12

part no. 4047321

Standard for the blasting gun OHS
Powerful nozzle with low air consumption
Outlet opening: approx. Ø 12 mm (0.5 in)
Length: 15 cm (5.9 in)
Inner diameter: 7 mm (0.3 in)

Pos. 009

Hose assembly 5 m (16.4 ft) for OHS gun

part no. 4047104

Standard for the ASCOJET® 1208, can also be used as an extension of the hose assembly
incl. control cable, grounded

OHS

Pos. 007

Nozzle extension 700.150 OHP/OHS

part no. 4046018

Modular nozzle extension for OHS and OHP dry ice blasting guns with a total length of up to 1.5 m (59 in) with nozzle

OHS
OHP

Length 1: 455 mm (18 in) without nozzle
Length 2: 580 mm (23 in) without nozzle
Length 3: 835 mm (33 in) without nozzle
Length 4: 960 mm (38 in) without nozzle
Length 5: 1340 mm (53 in) without nozzle

Weight in full length: 1.50 kg (3.3 lb)
Inner diameter: 10 mm (0.4 in)
Material: aluminium

ASCOJET® 1701: Options

Pos. 008

Barrel nozzle 707.09/10

part no. 4047228

Thanks to an inner diameter of only 7 mm (0.27 in) the barrel nozzle has a very economical air consumption but is nevertheless powerful

OHS
OHP

Outlet opening: approx. Ø 10 mm (0.4 in)
Length: 9 cm (3.5 in)
Inner diameter: 7 mm (0.3 in)

Pos. 009

Barrel nozzle 707.15/12

part no. 4047321

Thanks to an inner diameter of only 7 mm (0.3 in) the barrel nozzle has a very economical air consumption but is nevertheless powerful

OHS
OHP

Outlet opening: approx. Ø 12 mm (0.5 in)
Length: 15 cm (6 in)
Inner diameter: 7 mm (0.3 in)

Pos. 010

Angled nozzle 708.25/10/75°

part no. 4047223

A powerful nozzle for confined spaces with low air consumption

OHS
OHP

Outlet opening: approx. Ø 10 mm (0.4 in)
Length: 25 cm (9.8 in)
Inner diameter: 8 mm (0.3 in)

Pos. 011

Nozzle extension 700.62 OHP/OHS

part no. 4063373

Modular for nozzle extension for OHS and OHP dry ice blasting guns with a length of 668 mm (26.3 in)

OHS
OHP

Weight: 0.6 kg (1.3 lb)
Inner diameter: 10 mm (0.4 in)
Material: aluminium

Pos. 012

Spare parts kit ASCOJET® 1701

part no. 4066288

Includes a recommended selection of spare parts to ensure constant operation.

Sample image

Pos. 013

Compressed air hose 7.5 m (24.6 ft) / ID 25 mm (1 in)

part no. 4045955

Connecting hose between air compressor and dry ice blasting machine, incl. claw coupling and safety ring for fast and easy connection / disconnection
Material: Fabric hose / metal
Dimension: 7.5 m (24.6 ft)
Weight: 2.4 kg (5.3 lb)

ASCOJET® 1701: Options

Pos. 014

Protective sleeve one hose sys. 165 mm (6.5 in)

part no. 4047265

To protect the control cable and blasting hose from dirt and damages

Available per meter

Pos. 015

Protective hood for ASCOJET® 1701/1708

part no. 4065213

The newly developed hood for our blasting equipment protects the control elements from contamination. The transparent cover can be opened for easy view on and access to the operation elements. For cleaning the hood can easily be taken off

Dry Ice Blasting Unit

ASCOJET® 1708 Combi Blaster

complete (fully adjustable) **part no. 900901**

The **ASCOJET® 1708 Combi Blaster** is the first ASCO dry ice blasting unit which allows the use of an additional blasting material in the blasting flow and therefore offers the best combination of gentle cleaning with dry ice pellets and the additional abrasive effect of a carefully selected additive.

Powerful, handy, minimal secondary pollution and reduced noise emission thanks to a low air consumption - The **ASCOJET® 1708 Combi Blaster** is perfectly suitable for industrial end users of all kinds.

Powerful and handy blasting gun:

Thanks to a **quick connect coupling** the gun can be attached to the blasting unit very easily.

Increased security thanks to the **locking pin**, which makes a sudden opening of the locking mechanism of the nozzle impossible.

The **ergonomic gun handle** ensures very easy handling and comfortable operation when blasting over longer periods. The newly developed safety button is ideal for left and right hander.

A **quick exchange system** allows nozzles to be changed within seconds without any tools.

Specifications

Material:	frame and cover sheets made of powder-coated steel
Dimensions (L × W × H) incl. wheels & handle:	752 x 608 x 1‘103 mm (30 x 24 x 44 in)
Weight empty:	approx. 110 kg (243 lb)
Content of pellet hopper:	approx. 23 kg (51 lb)
Content of box for additive:	approx. 12 kg (26 lb) (depending on additive)
Blasting pressure with additive:	4 - 8 bar (58 - 116 psi) (adjustable)
Blasting pressure w/o additive:	0 - 10 bar (0 - 145 psi) (adjustable)
Dry ice consumption:	25 - 80 kg/h (55 - 176.lb/h) (stepless)
Additive consumption:	up to 25 kg/h (55 lb/h) (depending on blasting pressure)
Max. power consumption:	600 W (0.8 HP) nominal
Voltage:	120 V, 60 Hz, 1 Ph (other voltages on request)
Inlet hose connection:	3/4" BSP female 3/4" Claw coupling fitted

ASCOJET® 1708 Combi Blaster: Special features

Powerful and handy blasting gun with quick connect coupling

Highly manoeuvrable

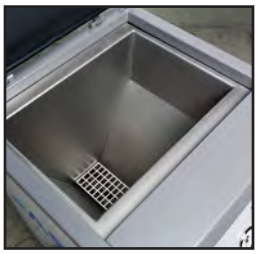
Integrated holding device for hose

Lightweight and compact

Quick connect coupling at blasting hose

Box for additive with approx. 12 kg (26 lb) capacity

Distributor unit for pulsation-free blasting



Insulated pellet hopper with 23 kg (50 lb) capacity

Control panel for easy overview

ASCOJET® 1708 Combi Blaster Standard scope of supply

Pos. 001

Blasting gun additive OHP

Standard for the ASCOJET® 1708
Length: 29.5 cm (11.6 in)
Weight: 1.05 kg (2.3 lb)
Blasting pressure: 0 - 10 bar (0 - 145 psi)
incl. protection glove additive (part no. 4061690)
(Blasting gun OHP4 without nozzle part no. 4064796)

including the corresponding blasting nozzle

OHP

part no. 4063751

part no. 4061580

Blasting nozzle additive OHP

Standard for the ASCOJET® 1708
Special nozzle for combined blasting with dry ice and blasting sand
Outlet opening: approx. Ø 13 mm (0.5 in)
Length: 22.5 cm (8.9 in)
Inner diameter: 8 mm (0.3 in)

Pos. 002

Hose assembly 7.5 m (24.6 ft) for OHP gun additive

Standard for the ASCOJET® 1708

OHP

part no. 4061696

ASCOJET® 1708 Combi Blaster: Standard Scope of supply

Pos. 003

Protective hood for ASCOJET® 1701/1708

part no. 4065213

The newly developed hood for our blasting equipment protects the control elements from contamination. The transparent cover can be opened for easy view on and access to the operation elements. For cleaning the hood can easily be taken off.

Pos. 004

Claw coupling with 19 mm (3/4") male thread

part no. 4063848

For fast connection and disconnection of the air line to the blasting equipment

Already mounted on the unit.

Pos. 005

Power cable 10 m (32 in)

part no. 4063978

ASCOJET® 1708 Tool Case: Scope of supply

Pos. 001

Tool case ASCOJET® 1701 / 1708

part no.. 4064572

Tool case complete
(contains below articles pos. 002 - 008)

OHP

os. 002

Tool case ASCOJET® 1701 / 1708 empty

part no. 4064575

Empty tool case with matching insert

OHP

Pos. 003

High performance barrel nozzle 709.17/14

part no. 4045402

Powerful and handy nozzle

Outlet opening: approx. Ø 14 mm (0.6 in)
Length: 17 cm (6.7 in)
Inner diameter: 9 mm (0.4 in)

OHP

Pos. 004

Barrel nozzle short 709.09/11

part no. 4045403

Powerful nozzle to clean in narrow spaces

Outlet opening: approx. Ø 11 mm (0.4 in)
Length: 9 cm (3.5 in)
Inner diameter: 9 mm (0.4 in)

OHP

ASCOJET® 1708 Tool Case: Scope of supply

Pos. 005

Barrel nozzle special 709.42/15

part no. 4047141

The nozzle is designed to allow for a comfortable working position of the person in charge and is very powerful

Outlet opening: approx. Ø 15 mm (0.6 in)
Length: 42 cm (16.5 in)
Inner diameter: 9 mm (0.4 in)

OHP

Pos. 006

Angled nozzle 708.28/10/45°

part no. 4047222

A powerful nozzle for confined spaces with low air consumption

Outlet opening: approx. Ø 10 mm (0.4 in)
Length: 28 cm (11.0 in)
Inner diameter: 8 mm (0.3 in)

OHS
OHP

Pos. 007

Flat nozzle 709.23/45

part no. 4047216

Powerful nozzle suitable for blasting large areas

Outlet opening: approx. 45 × 3.5 mm (1.77 x 0.14 in)
Length: 23 cm (9.0 in)
Inner diameter: 9 mm (0.3 in)

OHS
OHP

Pos. 008

Lighting kit for dry ice blasting gun

part no. 4064129

Compact torch
LED light 160 lumen, 160 cm (63 in)
Up to 25 hours battery life (3 x 1.5V AAA)
Batteries not included in scope of supply
Length: 10.6 cm (4.2 in)
Weight: 120 g (0.4 lb)

OHS
OHP
HP

ASCOJET® 1708: Options

Pos. 001

High performance barrel nozzle 709.23/15

part no. 4047144

Powerful and handy nozzle
Standard for the blasting gun OHP
Most powerful nozzle of the ASCOJET® single-hose system
Outlet opening: approx. Ø 15 mm (0.6 in)
Length: 23 cm (9.0 in)
Inner diameter: 9 mm (0.4 in)

OHP

Pos. 002

Angled nozzle 709.28/11/45°

part no. 4047219

A powerful nozzle for very confined spaces and difficult to reach spots

Outlet opening: approx. Ø 11 mm (0.4 in)
Length: 28 cm (11.0 in)
Inner diameter: 9 mm (0.4 in)

OHP

ASCOJET® 1708: Options

Pos. 003

Angled nozzle 709.25/11/75°

part no. 4047220

A powerful nozzle for very confined spaces and difficult to reach spots

OHP

Outlet opening: approx. Ø 11 mm (0.4 in)
Length: 25 cm (9.8 in)
Inner diameter: 9 mm (0.4 in)

Pos. 004

Pellet cutter OHP

part no. 4047257

For sensitive blasting applications

OHP

With safety quick connect coupling, 2.5 m (8.2 ft) hose and control cable, grounded

Pos. 005

Converter coupling ASCOJET® 1701 - 1208

part no. 4047040

This converter coupling makes it possible that the OHS gun with the corresponding blasting hose of the ASCOJET® 1208 can be connected to the ASCOJET® 1701

OHS

Length: 7.8 cm (3.0 in)
Weight: 0.2 kg (0.4 lb)
Outlet opening: approx. Ø 34 mm (1.3 in)

Pos. 006

Blasting gun OHS

part no. 4063745

Standard for the ASCOJET® 1208
Length: 26 cm (10.2 in)
Weight: 1.0 kg (2.2 lb)
Blasting pressure: 0 - 7 bar (0 - 102 psi)

OHS

including the corresponding blasting nozzle
High performance barrel nozzle 707.15/12

part no. 4047321

Standard for the blasting gun OHS
Powerful nozzle with low air consumption
Outlet opening: approx. Ø 12 mm (0.5 in)
Length: 15 cm (6.0 in)
Inner diameter: 7 mm (0.3 in)

Pos. 007

Hose assembly 5 m (16.4 ft) for OHS gun

part no. 4047104

Standard for the ASCOJET® 1208, can also be used as an extension of the hose assembly
incl. control cable, grounded

OHS

Pos. 008

Nozzle extension 700.150 OHP/OHS

part no. 4046018

Modular nozzle extension for OHS and OHP dry ice blasting guns with a total length of up to 1.5 m (59 in) with nozzle

OHS
OHP

Length 1: 455 mm (18 in) without nozzle
Length 2: 580 mm (23 in) without nozzle
Length 3: 835 mm (33 in) without nozzle
Length 4: 960 mm (38 in) without nozzle
Length 5: 1340 mm (53 in) without nozzle

Weight in full length: 1.50 kg (3.3 lb)
Inner diameter: 10 mm (0.4 in)
Material: aluminium

ASCOJET® 1708: Options

Pos. 009

Barrel nozzle 707.09/10

part no. 4047228

Thanks to an inner diameter of only 7 mm (0.27 in) the barrel nozzle has a very economical air consumption but is nevertheless powerful

OHS
OHP

Outlet opening: approx. Ø 10 mm (0.4 in)
Length: 9 cm (3.5 in)
Inner diameter: 7 mm (0.3 in)

Pos. 010

High performance barrel nozzle 707.15/12

part no. 4047321

Standard for the blasting gun OHS
Powerful nozzle with low air consumption
Outlet opening: approx. Ø 12 mm (0.5 in)
Length: 15 cm (6.0 in)
Inner diameter: 7 mm (0.3 in)

OHS
OHP

Pos. 011

Angled nozzle 708.25/10/75°

part no. 4047223

A powerful nozzle for confined spaces with low air consumption

OHS
OHP

Outlet opening: approx. Ø 10 mm (0.4 in)
Length: 25 cm (9.8 in)
Inner diameter: 8 mm (0.3 in)

Pos. 0012

Nozzle extension 700.62 OHP/OHS

part no. 4063373

Modular for nozzle extension for OHS and OHP dry ice blasting guns with a length of 668 mm (26.3 in)

OHS
OHP

Weight: 0.6 kg (1.3 lb)
Inner diameter: 10 mm (0.4 in)
Material: aluminium

Pos. 013

Spare parts kit ASCOJET® 1708 Combi Blaster

part no. 4066290

Includes a recommended selection of spare parts to ensure constant operation.

Sample image

ASCOJET® 1708: Options

Pos. 014

Compressed air hose 7.5 m (24.6 ft) / ID 25 mm (1 in)

Part no. 4045955

Connecting hose between air compressor and dry ice blasting machine, incl. claw coupling and safety ring for fast and easy connection / disconnection
Material: Fabric hose / metal
Dimension: 7.5 m (24.6 ft)
Weight: 2.4 kg (5.3 lb)

Pos. 015

Protective sleeve for one hose system 165 mm (6.5 in)

part no. 4047265

To protect the control cable and blasting hose from dirt and damages

Available in meters

ASCO

All about CO_2

Head Office
ASCO CARBON DIOXIDE LTD
Industriestrasse 2, CH-8590 Romanshorn
T +41 71 466 80 80 / F +41 71 466 80 66
info@ascoco2.com / ascoco2.com

Subsidiary Germany
ASCO KOHLENSÄURE AG
Sprudelstrasse 3, DE-53557 Bad Hönningen
T +49 2635 92 534-0
F +49 2635 92 534 192

Subsidiary USA
ASCO CARBON DIOXIDE INC
80-4 Industrial Loop North, Orange Park, FL 32073
T+1 904 374 9590 /Toll free +1 877 633 0996
usa@ascoco2.com