

LCO₂ compressor station. Increasing LCO₂ pressure out of a low-pressure tank.



Construction

The station is assembled in a cabinet. Two pneumatically driven compressors are set up side by side. Both boosters need compressed air with 6 bar which has to be supplied by the customer. The compressed air supply pipe of each compressor is equipped with a pressure regulator, pressure gauge and ball valve.

Standard types

- LCO₂ compressor station with manual switch-over between the two boosters. Both compressors can be switched on and off manually and separately.
- LCO₂ compressor station with automatic, PLC-controlled switch-over between the two boosters. In case of a pressure drop at the operating compressor there is an automatic switch-over to the second compressor.

Properties and advantages

Linde offers a complete, one-stop solution for the supply of liquid CO₂ at a pressure of up to 80 bar, consisting of a CO₂ tank and the LCO₂ compressor station. The system is characterized by low investment costs, small installation efforts and easy handling.

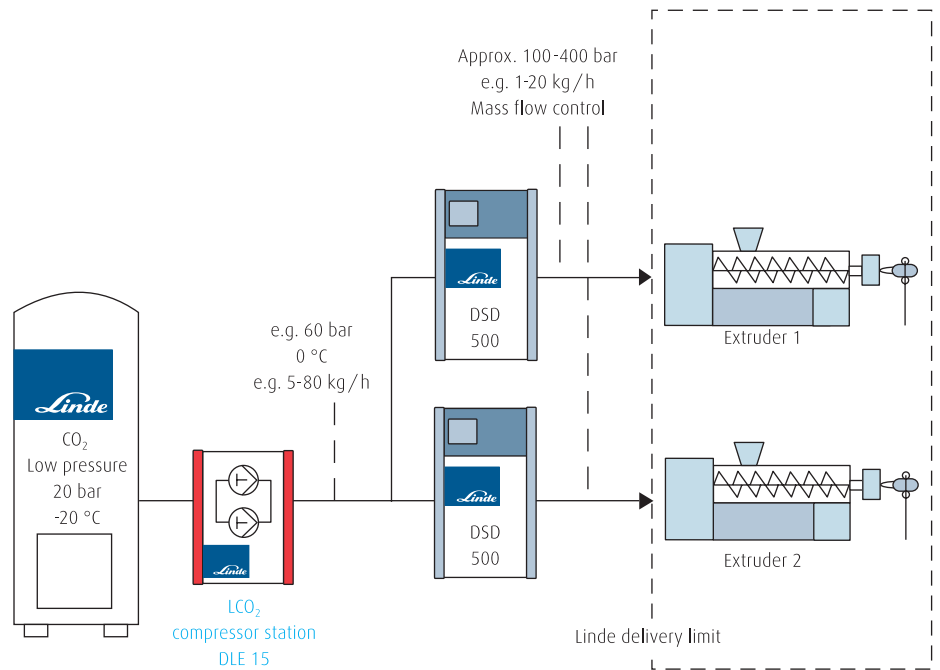
Main advantages

- The liquid CO₂ is supplied subcooled and bubble-free (i.e.: a phase separator or recooling is usually not necessary, even for sensitive applications).
- The LCO₂ compressor station is suitable to supply various kinds of dosing systems (e.g. metering pumps for the physical foaming of polymers) with LCO₂ (with decreased compressibility).
- The installation is simple. Only an inexpensive standard tank, the LCO₂ compressor station and a pipe to the consumer are necessary.
- The concept offers absolute supply reliability, even when filling CO₂ from container vehicles into tanks.
- The output adjusts automatically and with high flexibility to a variable demand. Thus, a serial installation with a metering pump is possible without any additional equipment.
- The CO₂ pressure can be adjusted easily corresponding to the demand by adjusting the compressed air pressure regulator.
- In contrast to other systems, the LCO₂ compressor station is absolutely resistant against gas bubbles in the liquid CO₂ coming from the tank.
- All wear parts are installed redundantly. For the LCO₂ compressor station, this guarantees a very high supply reliability and fewer maintenance periods.

Application examples

- Supply of liquid CO₂ to various kinds of metering pumps, e.g. for the physical foaming of plastics
- Supply of liquid CO₂ at higher pressures for cooling nozzles or capillary tubes, e.g. injection mold spot cooling.

LCO₂ compressor station



Technical data

CO ₂ final pressure	Adjustable between 40 and 80 bar; a special version for pressures up to 100 bar is available on request
CO ₂ inlet pressure	At least 18 bar, preferably 20 bar or higher
CO ₂ output	5 to 80 kg/h CO ₂ (at 60 bar CO ₂ final pressure); the maximum output depends on the final pressure and on the pressure of the compressed air
Compressed air supply	6 bar; consumption approx. 0.2 Nm ³ compressed air per kg CO ₂
Dimensions (l x w x h)	1,200 x 400 x 1,200 mm
Weight	Approx. 80 kg

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