

## PRESUS<sup>®</sup>C. Efficient pressure increase of liquid carbon dioxide.



PRESUS<sup>®</sup>C50

Multiple industrial applications require high-mass-flow liquid carbon dioxide (LIC) at constant high pressure. Customers who have two or three-shift operations often demand extremely reliable systems. Inadequate supply systems may cause bubbles in the LIC, leading to poor product quality or failures in subsequent processes. PRESUS<sup>®</sup>C stations supply bubble-free carbon dioxide at constant controlled conditions.

### Efficient operation

PRESUS<sup>®</sup> compressors are pneumatically driven, which means they are controlled by the downstream pressure. The pistons move only upon decreasing pressure but stand still if no liquid is consumed. This minimises energy requirements and extends equipment service. The pneumatic drive and control concept provides high levels of efficiency especially for users with intermittent operation.

### Standardised units

Linde's pneumatic PRESUS<sup>®</sup>C stations are characterised by their high levels of reliability due to their standard design of pump redundancy and pneumatic drive sources. During service or maintenance, LIC is supplied by the parallel unit. Switching between the units is done either manually or automatically by a PLC. Continuous supply is assured so as not to interrupt the production process. Two equipment sizes allow for different customers' requirements to be satisfied.

### Operation benefits

- Reliable and continuous supply of subcooled liquid carbon dioxide at high pressures
- Automatic stop, no consumption of energy during pause
- Pneumatically driven, therefore no electric energy supply required
- Mass flow adapts automatically to customers' needs
- Maximum availability due to redundant design

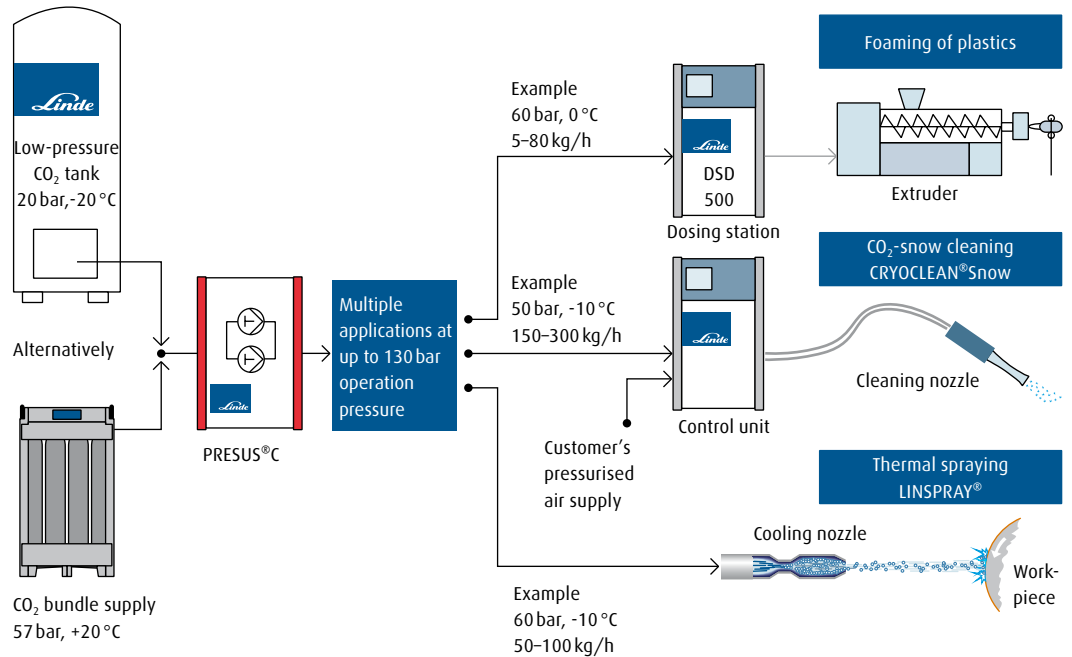
### Installation benefits

- CO<sub>2</sub> source from one vacuum-insulated or foam-insulated standard tank
- Single pipe results in lower installation costs compared to ring pipe
- Low noise level
- Optional devices for temperature conditioning available

Available units

|                                    | PRESUS®C10   | PRESUS®C50  |
|------------------------------------|--|---|
| CO <sub>2</sub> operation pressure | Up to 130 bar  | Up to 70 bar  |
| CO <sub>2</sub> inlet pressure     | Standard max. 25 bar<br>Optional max. 60 bar                         | Standard max. 25 bar<br>Optional max. 60 bar                          |
| CO <sub>2</sub> mass flow*         | 5 to 100 kg/h  | 30 to 500 kg/h  |
| Average need of pressurised air *  | Approx. 0.1 to 0.2 Nm <sup>3</sup> per kg<br>CO <sub>2</sub> , 6 bar | Approx. 0.05 to 0.1 Nm <sup>3</sup> per kg<br>CO <sub>2</sub> , 6 bar |
| Weight                             | Approx. 150 kg   | Approx. 180 kg  |
| Dimensions (W x H x D)             | 1,330 x 1,460 x 420 mm   | 1,330 x 1,460 x 420 mm  |

\*) Guide value depending on point of operation. Quality of pressurised air according to ISO 8573.



Declarations and certificates

- EU Declaration of Incorporation
- EU Declaration of Conformity, as requested by customer
- Acceptance test certificate 3.1 bulk
- Test report 2.2 bulk

Maintenance and service

- Express and weekend delivery service
- Period test of electronics according to BGV A3
- LIPROTECT®SP
- ACURRA®/SECCURA® bulk management
- Delivery service PRO

Typical applications

- Physical foaming of plastics – bubble-free supply of LIC to dosing pumps (e.g. DSD 500)
- Cleaning of surfaces with dry ice particles, e.g. CRYOCLEAN® Snow – high LIC flows at very constant pressures in intermittent operation mode
- Coating processes by thermal spraying process, e.g. LINSPRAY® – high reliability for optimised cooling
- Temperature control of plastics injection moulds – bubble-free LIC supply for high-performance cooling of hot spots