

Dry Ice Pelletizers



CIP-SERIES

for every dry ice need a fitting model

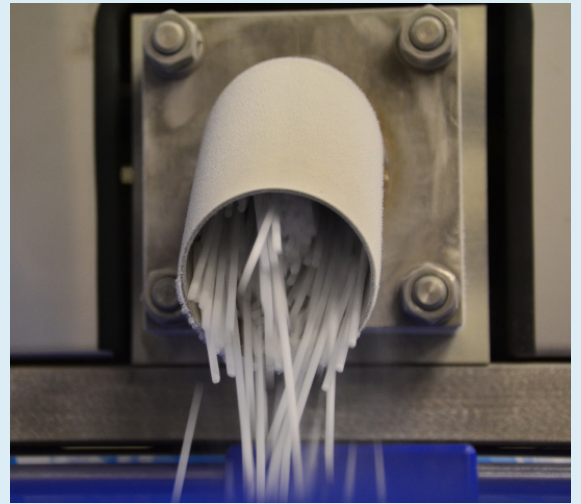
Efficient dry ice production!

Dry ice is the solid form of CO₂ with a temperature of -79°C. At ambient conditions, dry ice sublimates directly from solid to gas. Dry ice can be used for a lot of applications in different industries:

- › dry ice cleaning
- › refrigerated transport
- › catering industry
- › transport of medical goods
- › declamping of metal parts
- › smoke generation for show effect
- › carbonic maceration
- › process cooling
- › inerting a storage tank

Depending on the size of the company and the use of the dry ice, different sizes of pelletisers are available, ranging from XS to L.:

- › **CIP-5XS: produces up to 35 kg dry ice/hour**
- › **CIP-5S: „ „ 100 kg dry ice/hour**
- › **CIP-5M: „ „ 180 kg dry ice/hour**
- › **CIP-5L: „ „ 320 kg dry ice/hour**



The CIP-5 series can be delivered with different extrusion plates. The pelletisers can produce different formats of dry ice:

- › 3 mm dry ice pellets for dry ice cleaning
- › 10 and 16 mm dry ice sticks for refrigeration and other applications

To produce your own dry ice you need the following components:

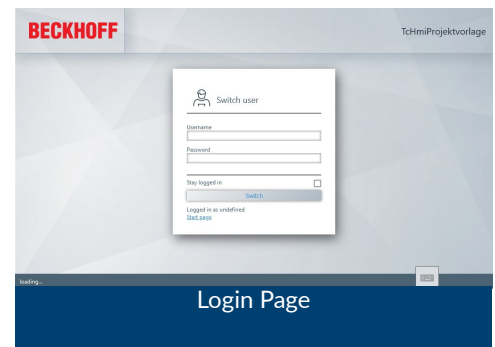
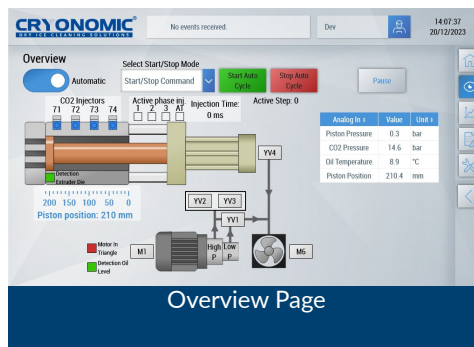
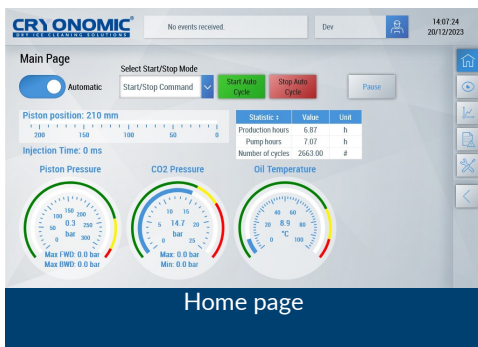
1. A tank of 2.000-50.000 liters liquid CO₂ under pressure of 20 bar en with a constant temperature of -20°C.
2. CRYONOMIC dry ice pelletizer
3. CRYONOMIC dry ice containers: alle info about these containers can be found in the leaflet. "Dry ice containers".



Unique characteristics of the CIP-5 series

- › **Continuous measurement** and auto-tuning of key process parameters to ensure safe and reliable operation
- › **Integrated pressure regulator** ensures safe operation and constant pellet quality and production rate independent of changes in supply pressure
- › Visual and audible alarm with **error recording and operation stop** when these process parameters are out of spec
- › All functionalities are displayed on an **ergonomic touchscreen**.
- › **Three ways to stop production:** manual, on time and by external trigger such as scale or CO₂ detector.
- › **Remote start/stop** possible
- › **Production pause function** to avoid production waste when changing containers
- › **Delayed production stop** that allows the CO₂ supply line to be emptied after closing the supply valve
- › Changing extrusion plates can be done in a few minutes
- › **Hydraulic silent motor** with fast start-up protocol

Ergonomic Touchscreen Controller



Equipped for Industry 4.0

Dry Ice machine connected to the internet provides many benefits:

- › Save money on unnecessary service tips
- › Faster support, less downtime

1. Remote access (if wanted)

- › **Remote customer support:** faster diagnose of problems
- › Prevent unnecessary service trips
- › Faster support, less downtime

Focus on cyber security: Secure VPN connection in accordance with ISO 270001 norm

- › Possibility to log in and control remotely and provide customer support
- › Management of multiple pelletizers possible

2. 10" touch screen & Browser based interface

- › Possible to **control HMI with any browser on Tablet, PC, Smartphone** (no extra software needed)

3. Notification on HMI for Preventive maintenance

- › **Keep track** of production hour
- › Notification when it is recommended to change specific components
- › Possibility to **predict failure** of parts with data analyses (e.g. CO2 pressure regulator, injection valves, linear encoder, ...)
- › Prevent long periods of downtime

4. Extensive user management

- › Different logins and access rights for different users: Operator, Technician, Supervisors, ...
- › Easy to expand and customise to meet demands of customer
- › HMI automatically adapt its screens in relation to logged in user
- › Possibility to log in with integrated RFID reader (no logins and passwords needed)

Extra options:



Integrated scale



Pelletiser, scale and CO₂- detector can be operated with a remote controller



The dry ice blasting machine can be filled directly with dry ice

Technical information



CIP-5 SERIES	CIP-5XS art. P22800	CIP-5S (i) art. P22700	CIP-5M (i) art. P22600	CIP-5L (i) art. P22500
Production capacity ⁽¹⁾	Tot 35 kg/h	Tot 100 kg/h	Tot 180 kg/h	Tot 320 kg/h
Pellet diameter	3 mm, 10 mm, 16 mm			
Dimensions excl. socket in mm (L x W x H)	1.000 x 400 x 880	1.000 x 705 x 1.035	1.380 x 710 x 1.785	1.600 x 830 x 1.805
Weight (excl. hydraulic oil)	130 kg	310 kg	530 kg	800 kg
Oil content	18 liter	36 liter	54 liter	90 liter
Power consumption	3 kW	3 kW	7,5 kW	9 kW
Power supply	400V/ 50Hz/ 3Ph+N+PE		400V/ 50Hz/ 3Ph+PE	
Liquid CO ₂ supply	Liquid CO ₂ moisture: < 65 ppm and completely oil free			
Pressure liquid CO ₂	16 - 21 bar			
Inlet connection liquid CO ₂	1/2" BSP	1/2" BSP	3/4" BSP	3/4" BSP
Outlet gas CO ₂	1" BSP	1" 1/4 BSP	2" BSP	2" BSP

⁽¹⁾ Production capacity depends on pellet diameter, gas tank pressure, liquid CO₂ temperature, atmospheric condition and user settings.

How to store and transport dry ice?

In order to store the dry ice as long as possible, we have designed special thick walled dry ice containers: the **CRYONOMIC® Isolated Containers** or CIC series. These strong and well-insulated containers combine quality and hygiene of the monobloc structure in polyethylene with stainless steel reinforcements. **All food grade certified.**



CRYONOMIC® dry ice containers are used worldwide under extreme temperatures in all continents of the world.

SMALL CIC-FAMILY

3 small containers, ideal for companies that regularly need to transport or store smaller quantities of dry ice. These containers are ideal for labs, transport of small goods, catering, smoke machines...



Capacity: from 26 kg to 73 kg dry ice

BIG CIC-FAMILY

3 large containers, which have already proven their worth for companies that have to transport or store large quantities of dry ice. These containers are suitable for dry ice blasting machines for chemical companies, renovation companies, transport of vaccines and medical products...



Capacity: from 125 kg to 440 kg dry ice

CRYONOMIC®

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For more information,
visit our website

Contact your local distributor
for technical advice or for a demonstration:

Check your local contact on www.cryonomic.com