

AUTOMATION TECHNOLOGY ENGINEERING INDUSTRIAL TRADE INDUSTRIAL SERVICE TECHNICS

REFERENCE:

The new type of machines i³® MicroClean 2™
for dry ice cleaning



CLIENT:

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PROJECT COMPLETED BY:

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PROJECT:

The new type of machines
i³® MicroClean 2™
for dry ice cleaning

i³® MicroClean 2™

Blumenbecker Polska and the new generation of precision dry ice cleaning from Cold Jet are the technical solutions for Industry 4.0.

Our 110-240V AC (50/60 Hz) control and power solutions have become part of the i³® MicroClean 2™ equipment used in the dry ice cleaning technology that offered by Cold Jet Sp. z o.o.

Cold Jet is a pioneer and world leader in the production of dry ice cleaning machines and dry ice production equipment. It has been operating in Poland since 2010, completing projects for its customers all over the world.

WHAT IT IS COLD JET TECHNOLOGY

■ It's a dry ice cleaning process that involves using dry ice pellets (solidified carbon dioxide) or microparticles that are blown out at high-speed and sublimate on impact, tearing dirt and debris off the substrate.

This is the most effective alternative to other methods such as abrasive cleaning, sodium cleaning and sand cleaning. Thus, it is the most friendly for Environmental cleaning and surface preparation technique that is available on the market.

The use of this technology does not require the use of water or other chemical substances and does not produce secondary waste.

Dry ice blasting can be used in industries such as: aerospace, automotive, industrial cleaning services, food industry, plastics and composites, renovation, foundry, textiles and others.

Cold Jet Sp. z o.o. as a leading manufacturer of dry ice cleaning machines, has to meet a wide range of technical, environmental and design requirements on behalf of its customers in many industrial sectors.

SUPPORT FROM BLUMENBECKER:

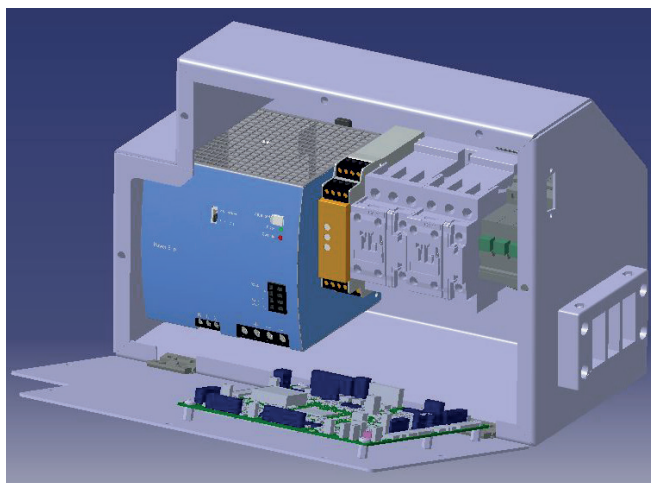
■ Choosing the right supplier/right solution provider for design, industrial automation and control panel manufacturing has been a key development factor for the entire MicroClean dry ice cleaning product line.

Therefore, the company Cold Jet has chosen its supplier very carefully and focused on long-term cooperation with Blumenbecker Polska.



OUR INDUSTRIAL AUTOMATION CONTROL SYSTEMS ARE ALWAYS IN LINE WITH THE CUSTOMER'S NEEDS:

Blumenbecker Polska always takes into account all the technical requirements of its customers devices to provide them with a high level of performance and reliability of the final device. This was also the case when Cold Jet commissioned us to develop a new type of control and power supply for the latest i³® MicroClean 2™ machine.



3D Model — Inside i³® MicroClean 2™



TECHNICAL REQUIREMENTS OF THE DEVICE, WHICH WE HAD TO CONSIDER FROM THE CUSTOMER SIDE:

- A** **Increase machine productivity** — based on the increased power of the i³® MicroClean 2™ compared to the previous model, so it can effectively remove more demanding dirt.
- B** **Increase machine efficiency** — increase productivity by 25%, to enable faster cleaning with an uninterrupted stream of in the shortest possible time.
- C** **Reduce machine operating costs** — a 20% reduction in the cost of consumables, resulting in lower cleaning costs and faster return on investment when purchasing a MicroClean 2™ machine for end customers.



■ A 7-inch color screen with rotary control console and a light dry ice level indicator (LED) has been introduced to digitize the final product. The main control unit is an STM32 programmable microcontroller. All these solutions have led to miniaturization and ergonomics of the device.

The functionality of the software and all updates have been designed in this way, so the end user of the i³® MicroClean 2™ devices is able to automatically perform them via the internet. For this purpose, the control system has been equipped with an IoT module.

Our cooperation and mutual trust was the result of the involvement of our design team, who continuously adopted changes in power supply and control system of equipment according to customer needs and electrical standards.

The approach to environmental protection and the production of eco-friendly equipment was an important factor within the framework of our together cooperation, on the other hand offering custom/non-standard design solutions was also an obvious and important factor too.

Since 2015, Blumenbecker Polska has completed many devices for Cold Jet in the field of dry ice cleaning/blasting process, like: **Elite 20**, **i³ MicroClean**, **i³® MicroClean 2™**, which are highly successful in the UE and USA retail market.

For the Elite 20 type of devices for dry ice cleaning, the UL 508a certification was necessary, which is required for the US market and involves a number of requirements in electrical power supply, which must be met in order to be approved for sale. Our long-term and successful cooperation with Cold Jet began from that moment in time.



WE LOOK FORWARD
TO HEARING FROM YOU.