

Brno, 4th of March, 2024

## **MIRAI INTEX Unveils Groundbreaking Process Cooling Innovation: Introducing MIRAI X CRYO**

**MIRAI INTEX, a leading company in the refrigeration industry, proudly announces the launch of its latest product, MIRAI X CRYO. Designed with the semiconductor industry in mind, this cutting-edge solution with a temperature range from -120 °C to +50°C promises unparalleled performance and versatility for various industry applications with easy integration.**

MIRAI X CRYO sets a new standard in temperature control technology, boasting the widest temperature range yet from -120 °C to +50°C while ensuring the highest precision ( $\pm 0.025$  °C temperature accuracy at idle) and reliability. From extreme cold to moderate heat, this innovative system delivers consistent and accurate temperature control, meeting the stringent requirements of various industries such as semiconductor production, process cooling, pharmaceuticals, and vacuum coating.

A key feature of MIRAI X CRYO is its commitment to sustainability. Zero Global Warming Potential (GWP) is seamlessly integrated into the design, thanks to advanced air cycle technology. This not only aligns with MIRAI's ongoing dedication to environmental responsibility but also reflects compliance with EU policies, where environmental considerations are paramount and will increasingly play a significant role in decision-making processes.

"With the unveiling of MIRAI X CRYO, we're not just introducing a refrigeration system," said Vladyslav Tsyplakov, Development Director at MIRAI INTEX. "We're ushering in a new era of sustainable precision. Its unparalleled performance in cooling speed and temperature accuracy makes it a game-changer across industries, including the frequently discussed microchip manufacturing and other processes. MIRAI X CRYO isn't just a solution for today; it's a commitment to a 'forever ecological' tomorrow. Through this message, we extend an invitation to partners worldwide to join us in collaboration."

MIRAI X CRYO is set to redefine standards for temperature control in multiple industries. For more information, visit [mirai-intex.com](https://mirai-intex.com) or contact [sales@mirai-intex.com](mailto:sales@mirai-intex.com)

About MIRAI INTEX:

MIRAI INTEX is a leading provider of innovative refrigeration solutions, dedicated to delivering cutting-edge technology under the MIRAI Cold brand, with a focus on sustainability and performance. With a track record of excellence and a commitment to customer satisfaction, MIRAI INTEX continues to push the boundaries of what is possible in the field of refrigeration and introduces the new product line, MIRAI X CRYO, meeting the stringent requirements of various industry applications.

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# MIRAI X CRYO

WHERE HEAT MEETS COLD

Developed for process cooling  
from -120 °C to +50 °C and  
various industry applications

## PRODUCT SPECIFICATIONS

- **THE WIDEST TEMPERATURE RANGE**

From -120 °C to +50 °C  
Accuracy  $\pm 0.025$  °C at idle

- **FAST COOL DOWN SPEED**

From +20 °C to -100 °C in 30 seconds

- **BOOST MODE**

Up to 7.5 kW additional capacity

- **MOTOR POWER**

10 kW, 15 kW, 20 kW

- **VARIOUS INDUSTRY APPLICATIONS**

- **ZERO GWP**

With the air cycle technology



# MIRAI X CRYO

## KEY PRODUCT FEATURES AIR CYCLE CRYOCHILLER

### TECHNICAL DATA

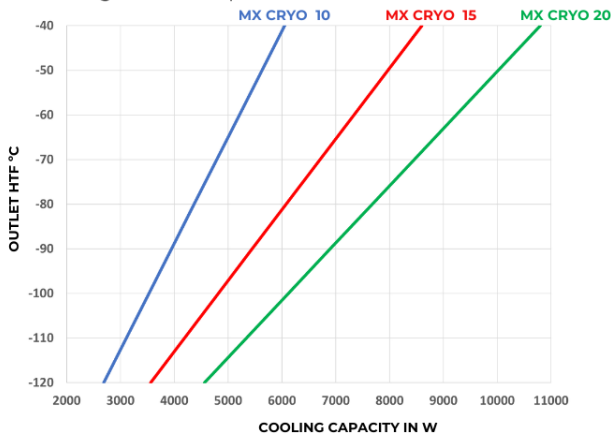
<b>TEMPERATURE RANGE</b>	from -120°C up to +50°C		
<b>TEMPERATURE ACCURACY AT IDLE</b>	±0.025°C		
<b>REFRIGERANT</b>	Natural Air (R729)		
<b>MOTOR POWER</b>	10 kW	15 kW	20 kW
<b>COMPRESSOR</b>	Mirai Turbo-Compressor (water-cooled)		
<b>HEATING</b>	12 kW		
<b>PUMP</b>	2,2 kW		
<b>DIMENSIONS (HxLxW) ±5 mm</b>	1880x1340x990		
<b>POWER SUPPLY</b>	~3 PE+N/3PE, 400 V/440V/480V, 50HZ/60 Hz		



### GRAPHS

#### COOLING CAPACITY

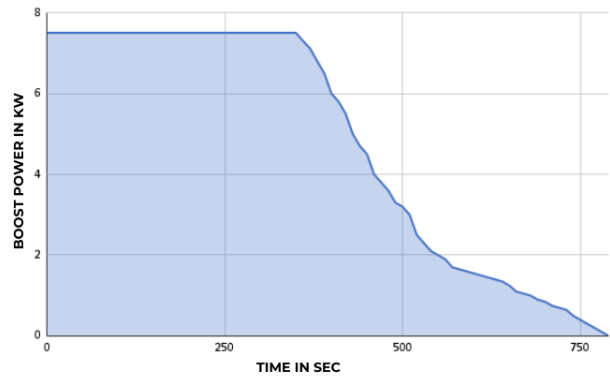
Cooling capacity of the **MIRAI X CRYO** over a temperature range of -40 °C to -120°C. At cooling water temperature +10 °C



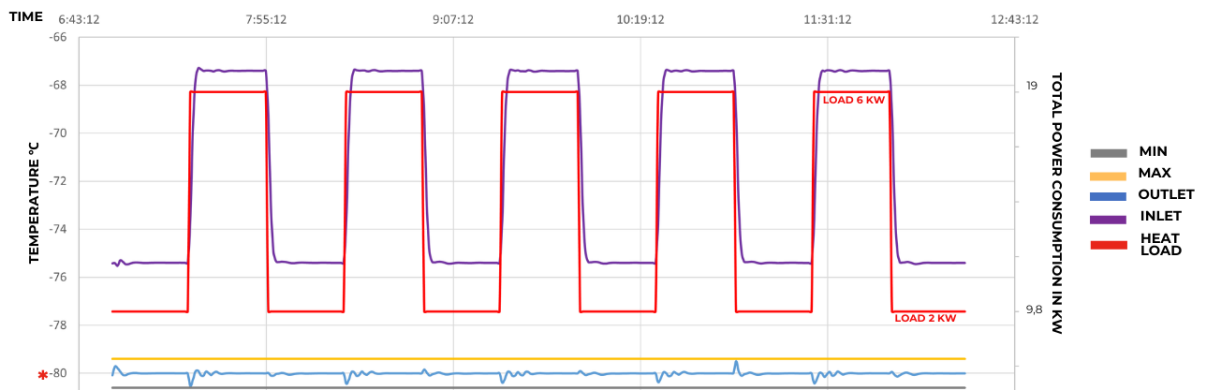
#### COLD POWER BOOST

At -80°C setpoint, the machine cools to -110°C and accumulates cold energy with boost and generated following power. The system can accumulate boost when operating in heating or standby mode.

\*+Cooling capacity of machine



#### PERFORMANCE



\*± 0,8°C TEMPERATURE CONTROL UNDER CHANGING LOAD