

## MIRAI COLD 10D RELEASE

We at Mirai Intex are proud to introduce unique and especially developed refrigeration machine added to our product portfolio. Same as the rest of our refrigeration machines, only air is used as a refrigerant and no oil is used for the machine's lubrication, making MIRAI Cold the most environmentally friendly Ultra-Low Temperature (ULT) refrigeration solution.

[MIRAI Cold 10 D](#) as the letter "D" stands for direct expansion. Air is directly expanded to the special heat exchanger located inside the cold chamber. The heat exchanger is equipped with a fan for optimal airflow in the chamber. Developed by [Mirai Intex](#) to work with air as a refrigerant and optimized for MC 10 D it is designed in closed cycle for small/ medium cryotherapy chambers.

The heart of MC 10 D is Mirai's high-tech turbo-module, manufactured in house. Performance testing results have pushed cooling capacity up to 5.8 kW; the temperature range was unchanged (-40 °C to -110°C). We have created the ideal solution for cryo-targeting, in terms of machine performance, combining compact dimensions with higher efficiency.

Probably the most visible difference of MC 10D lies in having :

### HEAT EXCHANGER

It is designed and developed by Mirai Intex for the MC 10 D. Maximum performance is achieved by optimum internal pressure drop. To minimise ice accumulation the surface is hydrophobic. The speed of the auxiliary fan is automatically controlled by the machine. The fan motor is located outside the chamber to prevent heat leakage and the use of heaters.

### LOW SYSTEM PRESSURE

Direct expansion machines are no exception when it comes to low operating pressures. The maximum pressure for the standard MC 10 D is 3 bar and for the Power Boost option it is 5.8 bar. The System Pressure Unit (SPU) controls the air cycle pressure by injecting or evacuating the appropriate amount of air, while controlling the cleanliness and dryness of the air. The SPU is included as standard on the MC 10 D.

### PART LOAD EFFICIENCY

A factory-installed frequency inverter allows the load to be automatically adapted to the cooling needs of the cryo-chamber all over the operation hours. This significantly reduces operating costs. Another advantage of the inverter is a fast power recovery of up to 100%.

### IMPORTANT FEATURES

Automatic precise temperature homogeneity, unique defrosting procedures, rapid recovery between full-body cryotherapy sessions.

The new MIRAI Cold offers:

- One of the “greenest” refrigerants R729 (natural air) with GWP = 0
- Lack of contacting pairs = no oil for lubrication needed
- Decent cooling capacity
- Advanced remote control system regulating machine’s performance
- Frequency inverter for precise partial load operation
- High cooling capacity with minimal noise level
- Remote monitoring and remote software updates
- Compact dimensions

[MIRAI Cold 10D](#) is ready for any demanding ULT application, that requires same cooling capacity and offers unbeatable performance combined with an environmentally friendly approach.

Contact us at [sales@mirai-intex.com](mailto:sales@mirai-intex.com) to learn more!