


mikropor



MKE PRO SERIES DIGITAL CYCLING - INTEGRATED FILTRATION



Mikropor began its journey in 1987 with a passion to create “Tomorrow’s Technology” and has become one of the leading manufacturers of atmospheric air filtration solutions and compressed air treatment systems for a variety of industries.

By closely following the latest developments in technology, Mikropor’s “Best in Class” products and solutions are appreciated by customers in more than 100 countries.

The company’s sustainable growth has been provided by its passion for innovation and commitment to quality, as well as its dedication to technology. Mikropor is an environmentally conscious company that values people, while developing products that extend the needs and expectations of customers.

With this mission, Mikropor continues to become one of the most recognized brands in the world by expanding its global penetration in the field of technological filtration and contributes to a healthier planet.

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Key Features

-  10 years warranty on Aluminum Heat Exchanger (includes labor).
-  Wide Range of Capacities: The MKE-PRO series caters to diverse needs with models ranging from MKE-PRO 23 to MKE-PRO 12500, supporting air flow capacities from 23 m³/h to 12500 m³/h
-  Integrated Filtration up to 5850 m³/h
-  Advanced, Digital Control System
-  Comply with the ISO 7183 standard
-  Fully Hermetic and contains greenhouse gas covered by the Kyoto Protocol
-  Low GWP Refrigerant, R513a (631)
-  Electronic Zero-Loss Drain (Optional for Monophase Units, Standard for Triphase Units)

Advantages

-  New Technology, Aluminum Microchannel Refrigerant Condenser
-  Low pressure drop ensures reduced compressor power consumption
-  Quick start and reaction time provides additional production time
-  Every dryer is specially designed with the most efficient components to consume the lowest energy
-  Highly energy efficient and environmentally friendly next generation R513a refrigerant is standard across all models
-  Fully hermetic design
-  A state-of-the-art heat exchanger design provides the highest cost saving in the industry due to the lowest differential pressure.
-  Pressure switches control the condenser's fan motor for saving energy and letting the system operate at various conditions

Applications

Mikropor provides an entire range of products for filtration and air purification applications at a cost effective price.

Applications Include

Food production, dairies, breweries, clean conveying air, chemical plants, pure air and cleanroom technology, pharmaceutical industry, weaving machines, photo labs, paint spraying, powder coating, packaging, control and instrument air, sand and/or shot blasting, general air works, microchip production, optics, process air as well as many other markets.

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The MKE-PRO Series Refrigerant Circuit and Insulation

Mikropor Refrigerated Air Dryers are engineered to deliver superior performance by employing R513a, an environmentally responsible refrigerant that operates efficiently under both low and high temperature conditions. With low system pressure, the service life of the compressor is significantly extended. Mikropor's advanced design integrates oversized condensers, enhanced heat exchangers, and an exceptional zero-loss drain system, ensuring consistent dew point levels even under extreme ambient conditions. Mikropor Refrigerated Air Dryers offer the highest technology with its custom solutions.

Digi-Pro Digital Controller

- Digital Dew Point Monitoring
- Energy-Saving Mode Display
- Periodic Maintenance Interval Display
- Status Report
- Run-hours Meter
- Fahrenheit and Celsius Selection



ESD Digital Controller

- Energy Saving: Automatically shuts down and dryer when not in use significantly reducing energy consumption
- Monitoring Capability
- Advanced Alarm Functions
- Troubleshooting Assistance
- Efficiency Optimization
- Modbus RS485 Ready



Electrical Components Are Isolated from the Refrigeration Circuit



In Mikropor dryers, electrical wiring is physically separated from the refrigeration section, ensuring enhanced safety and ease of service. The electrical box is externally mounted and accessible without opening the dryer panels. This design eliminates the need to interfere with the refrigeration circuit during electrical maintenance, allowing for faster and safer service operations.

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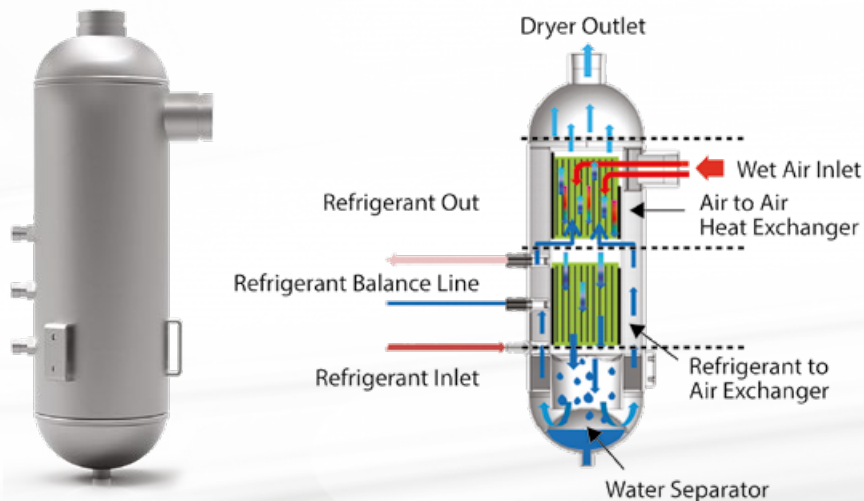
Sealed for Performance – Hermetic Design Excellence

Mikropor Dryers are built with a fully hermetically sealed design refrigeration system, providing complete protection against external contaminants. The sealed refrigeration circuit ensures maximum reliability, zero leakage and virtually no maintenance requirements. This closed system extends the service life of internal components while guaranteeing stable, energy-efficient performance even under most demanding conditions.



Aluminum Plate Heat Exchanger

The system features a very low pressure drop and utilizes thin aluminum plates with a high heat transfer surface area for maximum efficiency. Its external thick cylindrical wall provides structural strength, while the integrated water separator is optimized to deliver the best performance and designed to work efficiently at all loads.



New Technology, Aluminum Microchannel Refrigerant Condenser

The system is designed to minimize energy loss through low pressure drop and offers high heat transfer capacity for efficient operation. Its surface coating provides protection against corrosive environments, ensuring long-term durability. Additionally, it requires less refrigerant gas and is resistant to galvanic reactions and corrosion.

The microchannel condenser offers the best efficiency in its class.

The dryer enclosure also includes a removable-washable air flow filter panel to better protect the condenser.



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Zero Clearance Compressed Air Filters with High Performance Elements

Integrated dual pre&post filtration system for capacities between 3300-5800 m³/h

Mikropor Refrigerated Air Dryers up to 5850 m³/h are equipped with a standard Compressed Air Filter Kit, including two high-performance coalescing filters:

X Element: Removes water and particles down to 1 micron

Y Element: Removes oil aerosols down to 0.01 ppm

The zero-clearance design allows element replacement in minutes. Developed with field feedback, this service-friendly design ensures reliable performance until the next maintenance.

Electronic Zero-Loss Drain

The Mikropor MZL Series Zero-Loss Condensate Drains are designed for zero-loss of compressed air thus eliminating excess amount of compressed air waste. The MZL Series have digital control features that provides alarms when drain is clogged and to alert the user when regular maintenance is required unlike standard mechanical drains. The MZL Series is also extremely easy to Troubleshoot if a problem arises.



Zero-Loss Drain

Correction Factor for MKE-PRO Series

Inlet Temperature (°C)	F1	Ambient Temperature (°C)	F2	Pressure (barg)	F3
30	1.29	20	1.05	4	0.80
35	1.00	25	1.00	6	0.94
40	0.92	30	0.98	7	1.00
45	0.78	35	0.93	8	1.04
50	0.65	40	0.84	10	1.11
60	0.45	45	0.76	12	1.16
-	-	50	0.70	14	1.22
-	-	-	-	16	1.25

Choosing the Correct Dryer

If an air compressor delivers 200 m³/h at 6 barg, the dryer inlet temperature is 40°C and ambient temperature is 30°C. Please choose your Dryer Model as follows; 200 / 0.94 / 0.92 / 0.98 = 236 m³/h Dryer Model for this application is MKE-PRO 305

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Model	Capacity (m3/h)	Power Supply* (V / Ph / Hz)	Connection Size	Filter Quantity and Type	Replacement Filter Element Kit	Pressure Drop (mbar)	Control Type	Dimensions		
								Length (mm)	Width (mm)	Height (mm)
MKE-PRO 23	23	230 / 1 / 50	1/2"	Integrated - GKON-65 X/Y	MKON65 KIT	100	Digi-Pro	372	369	792
MKE-PRO 38	38	230 / 1 / 50	1/2"	Integrated - GKON-65 X/Y	MKON65 KIT	150	Digi-Pro	372	369	792
MKE-PRO 53	53	230 / 1 / 50	1/2"	Integrated - GKON-65 X/Y	MKON65 KIT	250	Digi-Pro	372	369	792
MKE-PRO 70	70	230 / 1 / 50	1/2"	Integrated - GKON-65 X/Y	MKON65 KIT	220	Digi-Pro	372	369	792
MKE-PRO 100	100	230 / 1 / 50	3/4"	Integrated - GKON-155 X/Y	MKON155 KIT	90	Digi-Pro	454	473	932
MKE-PRO 155	155	230 / 1 / 50	3/4"	Integrated - GKON-155 X/Y	MKON155 KIT	195	Digi-Pro	454	473	932
MKE-PRO 190	190	230 / 1 / 50	3/4"	Integrated - GKON-155 X/Y	MKON155 KIT	285	Digi-Pro	454	473	932
MKE-PRO 210	210	230 / 1 / 50	1 1/2"	Integrated - GKON-405 X/Y	MKON405 KIT	195	Digi-Pro	556	556	975
MKE-PRO 305	305	230 / 1 / 50	1 1/2"	Integrated - GKON-405 X/Y	MKON405 KIT	285	Digi-Pro	556	556	975
MKE-PRO 375	375	230 / 1 / 50	1 1/2"	Integrated - GKON-405 X/Y	MKON405 KIT	175	Digi-Pro	556	556	975
MKE-PRO 495	495	230 / 1 / 50	2"	Integrated - GKON-805 X/Y	MKON805 KIT	275	Digi-Pro	648	678	1277
MKE-PRO 623	623	230 / 1 / 50	2"	Integrated - GKON-805 X/Y	MKON805 KIT	215	Digi-Pro	648	678	1277
MKE-PRO 930	930	230 / 1 / 50	2"	Integrated - GKON-1205 X/Y	MKON1205 KIT	135	Digi-Pro	947	727	1500
MKE-PRO 1200	1200	230 / 1 / 50	2"	Integrated - GKON-1205 X/Y	MKON1205 KIT	170	Digi-Pro	947	727	1500
MKE-PRO 1388	1388	400 / 3 / 50	3"	Integrated - GKON-HC-1805 X/Y	MKON-HC1805 KIT	310	Digi-Pro	948	798	1580
MKE-PRO 1800	1800	400 / 3 / 50	3"	Integrated - GKON-HC-1805 X/Y	MKON-HC1805 KIT	255	Digi-Pro	948	798	1580
MKE-PRO 2500	2500	400 / 3 / 50	3"	Integrated - GKON-HC-2775 X/Y	MKON-HC2775 KIT	170	Digi-Pro	1163	778	1842
MKE-PRO 2775	2775	400 / 3 / 50	3"	Integrated - GKON-HC-2775 X/Y	MKON-HC2775 KIT	310	Digi-Pro	1163	778	1842
MKE-PRO 3330	3330	400 / 3 / 50	DN100 Flange	Integrated - GKO5850M X/Y	MKO 5850 KIT	270	Digi-Pro	1577	993	2026
MKE-PRO 3915	3915	400 / 3 / 50	DN100 Flange	Integrated - GKO5850M X/Y	MKO 5850 KIT	380	Digi-Pro	1577	993	2026
MKE-PRO 5085	5085	400 / 3 / 50	DN100 Flange	Integrated - GKO5850M X/Y	MKO 5850 KIT	320	ESD-3	1647	1077	2126
MKE-PRO 5850	5850	400 / 3 / 50	DN100 Flange	Integrated - GKO5850M X/Y	MKO 5850 KIT	350	ESD-3	1647	1077	2126
MKE-PRO 6975	6975	400 / 3 / 50	DN150 Flange	Externally Connected - F6500M X/Y**	Not Included	320	ESD-3	2188	1062	2144
MKE-PRO 7875	7875	400 / 3 / 50	DN150 Flange	Externally Connected - F8500M X/Y**	Not Included	350	ESD-3	2188	1062	2144
MKE-PRO 9000	9000	400 / 3 / 50	DN150 Flange	Externally Connected - F8500M X/Y**	Not Included	350	ESD-3	2247	1200	2164
MKE-PRO 10500	10500	400 / 3 / 50	DN200 Flange	Externally Connected - F11000M X/Y**	Not Included	350	ESD-3	2247	1200	2164
MKE-PRO 12500	12500	400 / 3 / 50	DN200 Flange	Externally Connected - F14000M X/Y**	Not Included	350	ESD-3	2547	1550	2222

*Please contact with your responsible Sales/CRM responsible for alternative voltage options

**Not integrated and not included in standard package

Given flows are at 7 barg pressure with reference to 20°C and 1 bar atmospheric air suction as per ISO 7183 standard

Nominal Working Pressure	7 barg
Maximum Working Pressure	16 barg
Minimum Working Pressure	4 barg
Nominal Inlet Temperature	35°C
Maximum Inlet Temperature	60°C
Minimum Inlet Temperature	5°C
Nominal Ambient Temperature	25°C
Maximum Ambient Temperature	50°C
Minimum Ambient Temperature	5°C
Refrigerant	R513a



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Ahi Evran OSB Mah. Oğuz Cad. No: 5 Sincan, 06935, Ankara-Türkiye

+90 312 267 0700 mikropor@mikropor.com

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www.mikropor.com