



MK Series

Digital Cycling
Compressed Air Dryers



New Digi-Pro
Digital Controller
with New Features

MK Series Digital Cycling Compressed Air Dryers

Mikropor Air Quality Focus

Mikropor knows the importance of high quality compressed air and provides customers with the highest quality air possible. Using clean, dry air is extremely important for most air powered applications. Moisture or contamination in the air from the compressor discharge will result in many complications to production equipment. These complications will decrease productivity and may affect the production quality of final products.

Applications

Mikropor provides an entire range of products for filtration and air purification applications to fit various market requirements (ISO 8573 Standards). Food production, pharmaceuticals, dairies, breweries, clean conveying air, chemical plants, pure air and clean room 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.

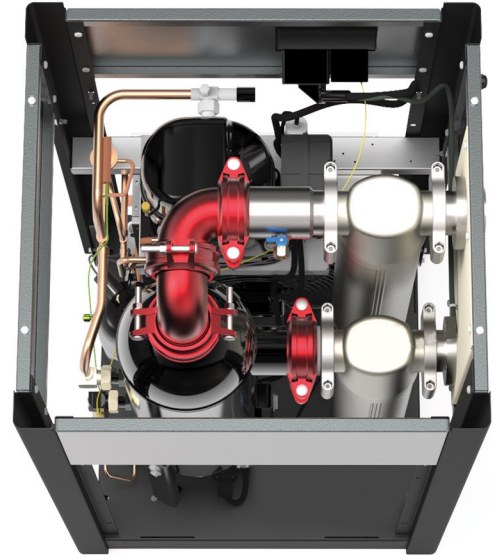
The Refrigerant Circuit and Insulation

Mikropor exclusively uses environmentally friendly R134a refrigerant gas in the dryers. This refrigerant is suitable for both low and high temperature applications. R-134a has excellent thermodynamic properties and can operate at very low pressure compared to other refrigerants. This will in turn increase the refrigerant compressor's service life. With R-134a Mikropor dryers can operate at very high ambient temperatures. Mikropor engineers add extra capability to the heat exchangers with a superior no loss insulation system. Mikropor MK Series Digital Cycling air dryers supply constant dewpoint at all flow ranges. This perfect insulation philosophy continues to the refrigeration circuit side also. Superior insulation and oversized condensers (for ultra-high ambient temperatures) enable the MK Series Dryers to offer continuous air quality.



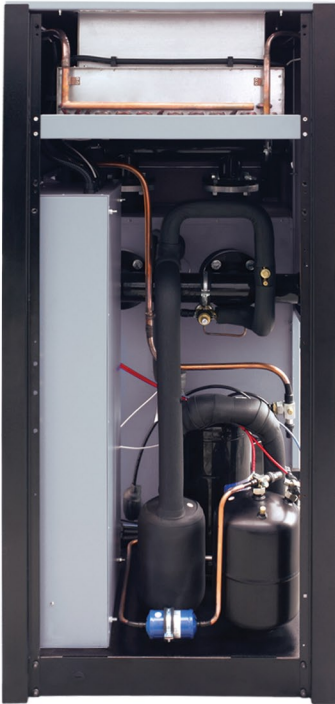
Compact Design **MK Series**

MK Series air dryers are highly reliable, efficient, have small space requirements and offer low cost ownership. Integration of pre / post filtration within the dryer cabinet saves labor time, installation cost and valued production space. The compact size also offers flexibility and economy during transportation.



Advantages

- Low pressure drop saves compressor energy consumption.
- Quick start and reaction time ensures production uptime.
- Highly energy-efficient R134a refrigerant is standard across all models.
- A state of the art Mikropor "3 in 1" heat exchanger design provides the unmatched longevity and efficiency of cooling.
- Best in class refrigerant compressors consume less energy.
- Cycle logic of the condenser's fan motor enables further energy savings.



SAFETY - Electrical cabinet isolation

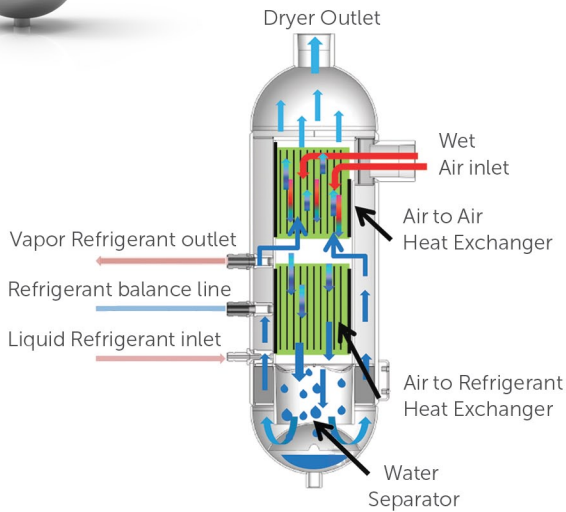
- Electrical Panel separated from service areas of the dryer.
- Minimization of electrical components from refrigerant side of dryer.
- Electrical controls access without exposure to high heat areas.





Mikropor Advanced "3 in 1" Heat Exchanger

- Thermally Optimized Encapsulated Design
 - Air to Air Exchanger
 - Refrigerant to Air Exchanger
 - Multi Stage Moisture Separation
 - High Strength Aluminum Design
- Large Surface Area for Heat Transfer
- Robust Cylindrical Casing



Scroll Compressors

Scroll Compressors are energy efficient and strong against liquid shocks. For maximum energy savings, scroll compressors are used in larger models.



Easy of Service

Easy access in to the cooling components in seconds by the help of "easy lift" panels with integrated finger slots. Simplifies service access with quick access by technicians (no screws / fasteners to remove)

AIR DRYER





MK Series Air Dryer Features

- High Efficiency
- Eco Mode Digital Cycling
- Very Low Pressure Drop
- Designed for extreme tropical conditions
- 140°F Max Inlet Temp Design @ Max Flow

Digi-Pro Digital Controller (10 scfm to 425 scfm units)

Mikropor MK Series air dryers incorporate our exclusive Digi-Pro series controller. The Digi-Pro series controllers have outstanding technology for both functionality and durability in addition to visual appeal. The new controller design offers ease of adjustment with one finger, with accurate digital dew point display in addition to coded alarm monitoring of the dryer.



Digital controller with embedded features,

- Digital dew point monitoring
- Energy-saving "Eco Mode" display
- Periodic maintenance interval display
- Status report
- Hours run meter
- Fahrenheit and Centigrade selection



The Refrigerant Circuit Pressure Gauges

MK Series Dryers are Service Friendly. The suction and discharge pressure gauges are already hooked up on the refrigerant circuit of MK Series Dryer.

ESD Digital Controller (550 scfm to 5000 scfm units)

Mikropor MK Series Air dryers of larger capacity feature the feature rich ESD Digital controller. With the help of the highly engineered ESD Digital Controls on the MK Series Cycling Air dryers will reduce your energy consumption. The ESD interface assists the users to monitor many useful parameters on the dryer and guides them to troubleshoot any problem very easily. During the nights, weekends and holidays many companies do not stop their dryers although the compressors may be stopped. The ESD Digital Controller saves huge amount of money by simply shutting the dryer down automatically when it is not in use.





COMPACT DESIGN



Grooved couplings and fittings

The compressed air circuit utilizes grooved couplings and fittings to ensure a positive connection without leaks. These couplings assist the service technician to dismantle and assemble pipes easily and quickly.

Service Safety

The GO Series Filter integration features an auto drain with manual valves. Manual valves allow the system to be depressurized safely when service is needed.

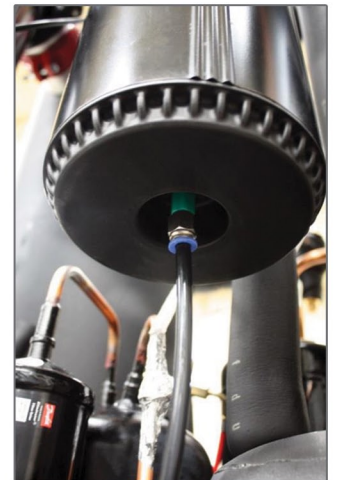


Zero Clearance Compressed Air Filters with High Performance Elements

Mikropor GO Series compressed air filters are an MK Series dryer standard. The X Pre-Filter (coalescing filter for water removal) is used for up to 1 micron particles and the Y Post-Filter (coalescing filter for oil removal) is used to remove oil down to 0.01 ppm. Listening to customer needs our engineers created a service friendly design. The Zero clearance design helps service technicians to replace the element in just a few minutes. The MK Series dryer/filter combination has 2 elements, 2 automatic drains and 2 viton o-rings to ensure operation of the dryers at its best performance until the next planned maintenance.



Easy Service



Process Air Quality Protection

Pressure drop is a large concern in compressed air. In many applications high pressure drops will cause a decrease in the pressure at the point of use relating to machines or processes not operating correctly. Presence of dirt particles and oil in the compressed air system may result in filter blockage. It is important for the end users and service technicians to recognize if there is a problem in the system. The performance of the filters directly affects the pressure drop and system performance. Therefore, it is very important that the filter elements are changed at the filter service time. MK Series Digital Controls feature an alarm / warning indicating the appropriate time to change the filter elements. When the indication should occur, the element change will assist to avoid loss of performance and pressure drop.

Technical Specifications

Model	Capacity (scfm)	Voltage	Connection Size (NPT)	Filter Quantity and Type	Element Type	Pressure Drop (psi)	Controller Type	Max. Working Pressure (psi)	Max. Ambient Temp. (°F)	Max. Inlet Temp. (°F)
MK-US-10	10	115/1/60	1/2" NPT	1*GKO45M X + 1*GKO45M Y	MKO 45 KIT	1.5	Digi-Pro	230	122	140
MK-US-15	15	115/1/60	1/2" NPT	1*GKO45M X + 1*GKO45M Y	MKO 45 KIT	1.7	Digi-Pro	230	122	140
MK-US-25	25	115/1/60	1/2" NPT	1*GKO45M X + 1*GKO45M Y	MKO 45 KIT	2.8	Digi-Pro	230	122	140
MK-US-30	30	115/1/60	1/2" NPT	1*GKO70M X + 1*GKO70M Y	MKO 70 KIT	2.8	Digi-Pro	230	122	140
MK-US-35	35	115/1/60	3/4" NPT	1*GKO150M X + 1*GKO150M Y	MKO 150 KIT	1.2	Digi-Pro	230	122	140
MK-US-60	60	115/1/60	3/4" NPT	1*GKO150M X + 1*GKO150M Y	MKO 150 KIT	1.6	Digi-Pro	230	122	140
MK-US-75	75	115/1/60	3/4" NPT	1*GKO150M X + 1*GKO150M Y	MKO 150 KIT	2.3	Digi-Pro	230	122	140
MK-US-100	100	115/1/60	1 1/2" NPT	1*GKO500M X + 1*GKO500M Y	MKO 500 KIT	1.6	Digi-Pro	230	122	140
MK-US-125	125	115/1/60	1 1/2" NPT	1*GKO500M X + 1*GKO500M Y	MKO 500 KIT	2.2	Digi-Pro	230	122	140
MK-US-140	140	230/1/60	1 1/2" NPT	1*GKO500M X + 1*GKO500M Y	MKO 500 KIT	2.8	Digi-Pro	230	122	140
MK-US-175	175	230/1/60	2" NPT	1*GKO851M X + 1*GKO851M Y	MKO 851 KIT	1.6	Digi-Pro	230	122	140
MK-US-200	200	230/1/60	2" NPT	1*GKO1210M X + 1*GKO1210M Y	MKO 1210 KIT	1.9	Digi-Pro	230	122	140
MK-US-350	350	460/3/60	2" NPT	1*GKO1210M X + 1*GKO1210M Y	MKO 1210 KIT	2.6	Digi-Pro	230	122	140
MK-US-425	425	460/3/60	2" NPT	1*GKO1210M X + 1*GKO1210M Y	MKO 1210 KIT	2.9	Digi-Pro	230	122	140
MK-US-550	550	460/3/60	3" NPT	1*GKO1820M X + 1*GKO1820M Y	MKO 1820 KIT	2.0	ESD-3	230	122	140
MK-US-700	700	460/3/60	3" NPT	1*GKO1820M X + 1*GKO1820M Y	MKO 1820 KIT	2.5	ESD-3	230	122	140
MK-US-900	900	460/3/60	3" NPT	1*GKO2700M X + 1*GKO2700M Y	MKO 2700 KIT	1.7	ESD-3	230	122	140
MK-US-1100	1100	460/3/60	3" NPT	1*GKO2700M X + 1*GKO2700M Y	MKO 2700 KIT	2.2	ESD-3	230	122	140
MK-US-1350	1350	460/3/60	DN100 Flange	Not Included	Not Included	1.7	ESD-3	230	122	140
MK-US-1500	1500	460/3/60	DN100 Flange	Not Included	Not Included	1.9	ESD-3	230	122	140
MK-US-2000	2000	460/3/60	DN100 Flange	Not Included	Not Included	2.7	ESD-3	230	122	140
MK-US-2350	2350	460/3/60	DN100 Flange	Not Included	Not Included	2.8	ESD-3	230	122	140
MK-US-2750	2750	460/3/60	DN150 Flange	Not Included	Not Included	2.5	ESD-3	230	122	140
MK-US-3000	3000	460/3/60	DN150 Flange	Not Included	Not Included	2.5	ESD-3	230	122	140
MK-US-3600	3600	460/3/60	DN150 Flange	Not Included	Not Included	2.5	ESD-3	230	122	140
MK-US-4000	4000	460/3/60	DN200 Flange	Not Included	Not Included	2.5	ESD-3	230	122	140
MK-US-5000	5000	460/3/60	DN200 Flange	Not Included	Not Included	2.5	ESD-3	230	122	140

Correction Table

CORRECTION FACTORS FOR MK AIR DRYERS										
Inlet Temperature (°F)	85	90	95	100	110	120	130	140	150	-
F1	1.20	1.14	1.08	1.00	0.75	0.60	0.50	0.45	0.35	-
Ambient Temperature (°F)	60	80	90	100	105	110	115	120	-	-
F2	1.12	1.08	1.06	1.00	0.96	0.90	0.80	0.65	-	-
Pressure (psi)	60	60	75	100	115	125	150	175	200	230
F3	0.75	0.77	0.85	1.00	1.06	1.10	1.16	1.25	1.30	1.35

Correction sample:

If an air compressor delivers 180 scfm at 150 psi, the dryer inlet temperature is 130°F and ambient temperature is 115°F. Please choose your Dryer Model as follows;
 $180 / 1,16 / 0,50 / 0,80 = 388$ scfm
 Dryer Model for this application is MK-US-425

CELEBRATING
30th
YEAR

Manufacturing Forward
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