



Manufacturing Forward

MHL SERIES HEATLESS DESICCANT AIR DRYERS



www.mikroporamerica.com

Manufacturing Forward





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.

www.mikroporamerica.com

MHL SERIES HEATLESS DESICCANT AIR DRYERS

Mikropor MHL Heatless Desiccant Air Dryers provide constant -40°F (-100°F Optional) pressurize dew point. These dryers are designed to supply clean and very dry compressed air for critical applications. Pre-filters and after-filters are standard on all Mikropor Heatless Air Dryers to keep the air stream clean and maintain the integrity of the desiccant medium. A very reliable electronic controller is utilised so the dryer operates perfectly through its service life. MHL Series Heatless Desiccant Dryers are equipped with special valves and high quality desiccants in order to assure performance and provide the lowest pressure drops available in the market.



Principle of Operation

The twin tower design allows for continuous adsorption of water vapor from compressed air by using the desiccant with high crush strength and a high surface/volume ratio. Drying is accomplished by passing compressed air through one desiccant bed adsorbing moisture while the other is being simultaneously regenerated with the expanded purge air.

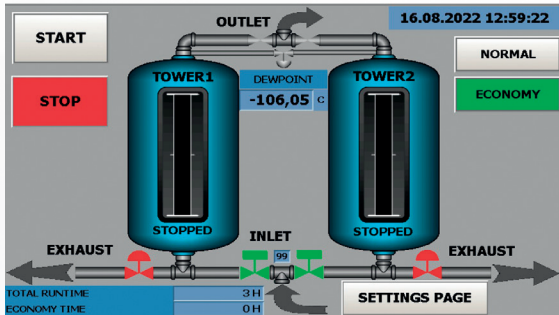
Regeneration of desiccant is accomplished without the use of heat. The wet bed is dried by diverting a small portion of the dry air from the outlet at near atmospheric pressure. The purge flow rate is adjustable to suit the specific outlet conditions (desired dew point). The dry air flows in a counter direction through the wet bed, sweeping all the water vapor previously absorbed by the desiccant. MHL dryers ensure pressure equalization in the twin towers prior to switching.

This prevents line surge and minimizes desiccant attrition. The tower being reactivated will be gradually re-pressurized at the end of its reactivation cycle before switch over takes place. Purge flow and de-pressurization are in downward direction, counter to the drying air flow.

This saves ENERGY and helps the world become more "GREEN"



MHL SERIES HEATLESS DESICCANT AIR DRYERS



HMI Touch Screen PLC

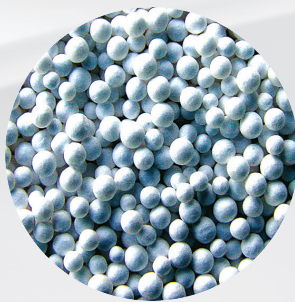
PLC is Standard

The standard controller of the series with capable of displaying PSA working parameters. The touch screen HMI, is capable of displaying the cycles as well as the valves as they operate in real-time. This is also capable of showing dew points. User-friendly multi-lingual HMI helps the end users understand the system's operation and identify any issues easily.

Correction Factor for MDA Series

Pressure (psig)	Factor Pressure F1	Inlet Temperature (°F)	Factor Inlet F2
50	0.56	70	1.16
60	0.65	80	1.11
70	0.74	90	1.06
80	0.83	100	1
90	0.91	105	0.9
100	1	110	0.86
110	1.06	115	0.7
120	1.08	120	0.6
130	1.12	-	-
140	1.16	-	-
150	1.2	-	-
175	1.29	-	-
200	1.37	-	-

All desiccant dryers are designed according to Pneurop conditions as per ISO 7183.



Activated Alumina

In order to achieve consistent dew point, Mikropor uses a mixture of adsorption media in its heatless range of desiccant dryers. Activated Alumina and Molecular Sieve are used in varying ratios depending on the application.

MHL SERIES HEATLESS DESICCANT AIR DRYERS

Technical Specifications

Model	Capacity (scfm)	Connection Size	Max. Working Pressure (psig)	Pressure Drop (psig)	Voltage	Average Power (kW)	Dimensions*		
							Length (in)	Width (in)	Height (in)
MHL 80	80	1"	200	≤1.9	110-240V/1Ph/50-60Hz	<0.1	36	40	59
MHL 100	100	1"	200	≤1.9	110-240V/1Ph/50-60Hz	<0.1	36	40	69
MHL 150	150	1 1/4" NPT	200	≤1.9	110-240V/1Ph/50-60Hz	<0.1	36	40	66
MHL 200	200	1 1/4" NPT	200	≤1.9	110-240V/1Ph/50-60Hz	<0.1	41	40	64
MHL 250	250	1 1/2" NPT	200	≤1.9	110-240V/1Ph/50-60Hz	<0.1	41	42	74
MHL 300	300	1 1/2" NPT	200	≤1.9	110-240V/1Ph/50-60Hz	<0.1	41	42	83
MHL 400	400	1 1/2" NPT	200	≤1.9	110-240V/1Ph/50-60Hz	<0.1	45	47	89
MHL 500	500	2" NPT	200	≤1.9	110-240V/1Ph/50-60Hz	<0.1	58	71	94
MHL 600	600	2" NPT	200	≤1.9	110-240V/1Ph/50-60Hz	<0.1	53	51	97
MHL 800	800	3" NPT	200	≤1.9	110-240V/1Ph/50-60Hz	<0.1	55	56	101
MHL 1000	1000	3" NPT	200	≤1.9	110-240V/1Ph/50-60Hz	<0.1	59	56	98
MHL 1250	1250	3" 150# FLG	200	≤1.9	110-240V/1Ph/50-60Hz	<0.1	65	56	100
MHL 1500	1500	3" NPT	200	≤1.9	110-240V/1Ph/50-60Hz	<0.1	85	67	91
MHL 2000	2000	4" 150# FLG	200	≤1.9	110-240V/1Ph/50-60Hz	<0.1	85	71	105
MHL 2500	2500	4" 150# FLG	200	≤1.9	110-240V/1Ph/50-60Hz	<0.1	83	71	119
MHL 3000	3000	4" 150# FLG	200	≤1.9	110-240V/1Ph/50-60Hz	<0.1	83	71	131
MHL 4000	4000	6" 150# FLG	200	≤1.9	110-240V/1Ph/50-60Hz	<0.1	134	107	120
MHL 5000	5000	6" 150# FLG	200	≤1.9	110-240V/1Ph/50-60Hz	<0.1	145	110	132
MHL 6000	6000	8" 150# FLG	200	≤1.9	110-240V/1Ph/50-60Hz	<0.1	166	136	153

Given flows are at 100 psig pressure with reference to 68°F and 14 psig atmospheric air suction as per ISO 7183.

*Design dimensions and weight information may vary upon request. Please contact Mikropor technical team for more information.

Efficiency Rating	X Pre-Filter		Y Pre-Filter		P After Filter	
	1 micron particle removal and 0.1 ppm oil removal		0.01 micron particle removal and 0.1 ppm oil removal		5 micron particle removal (removes desiccant particles after the dryer)	
Pressure Dew Point		Nominal Inlet Temperature	Nominal Working Pressure	Maximum Inlet Temperature	Maximum Working Pressure	Maximum Ambient Temperature
-40°F / -100°F (optional)		100°F	100 psig	120°F	200 psig	120°F

*For special requirements please contact the technical teams.

MHL SERIES HEATLESS DESICCANT AIR DRYERS



Mikropor America Inc.

4921 Ohio Street, Michigan City, IN 46360

☎ 219 878 1550 ✉ support@mikroporamerica.com

📷 🌐 📺 mikropor

www.mikroporamerica.com

All rights reserved. © 2025, Mikropor. No part of this publication may be published, changed or reproduced in any form without permission.

150825