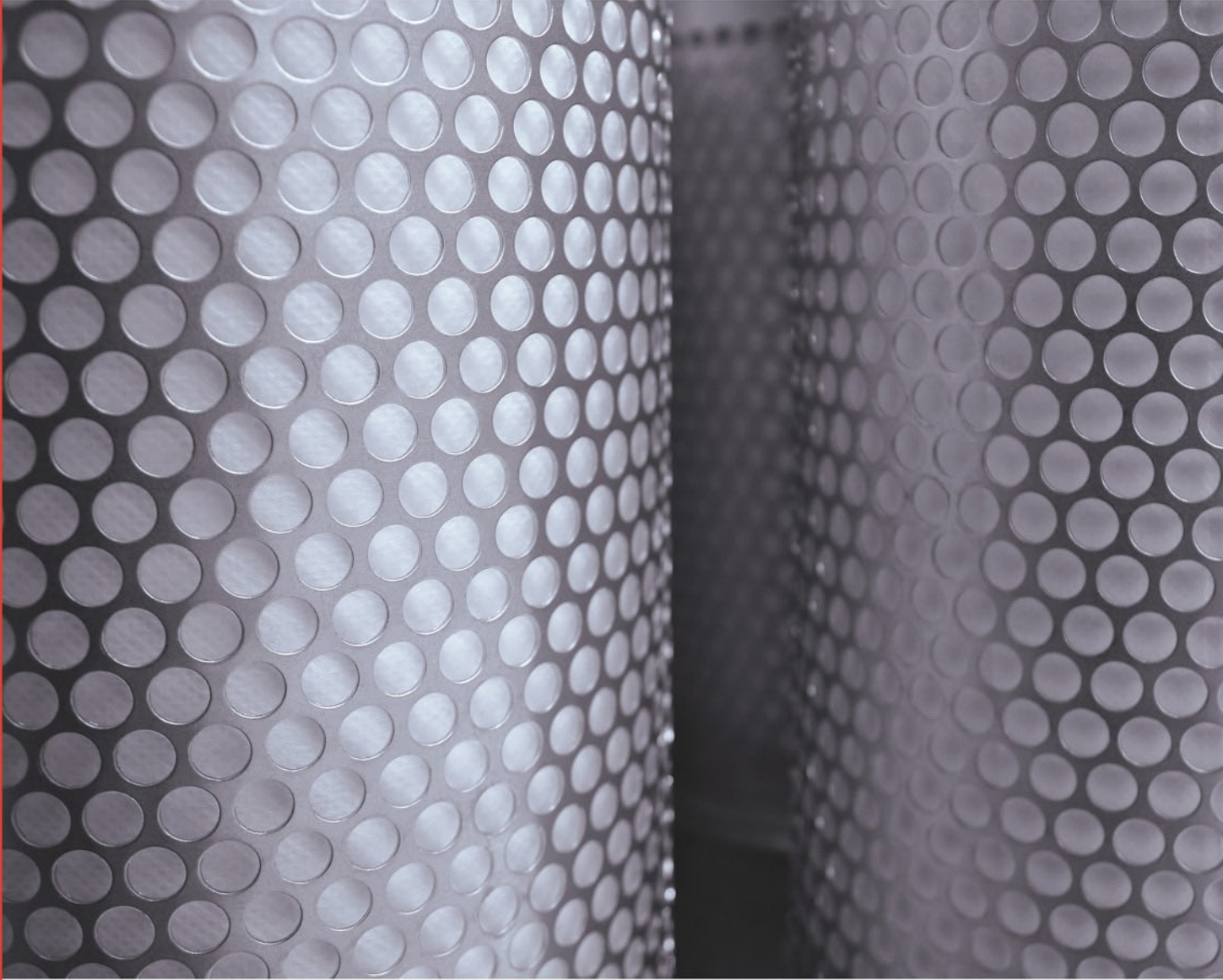


CELEBRATING
30th
YEAR

Manufacturing Forward


mikropor



General Catalogue

Compressed Air Systems

Behsan
PUMP & MOTOR

کمپرسور بهسان

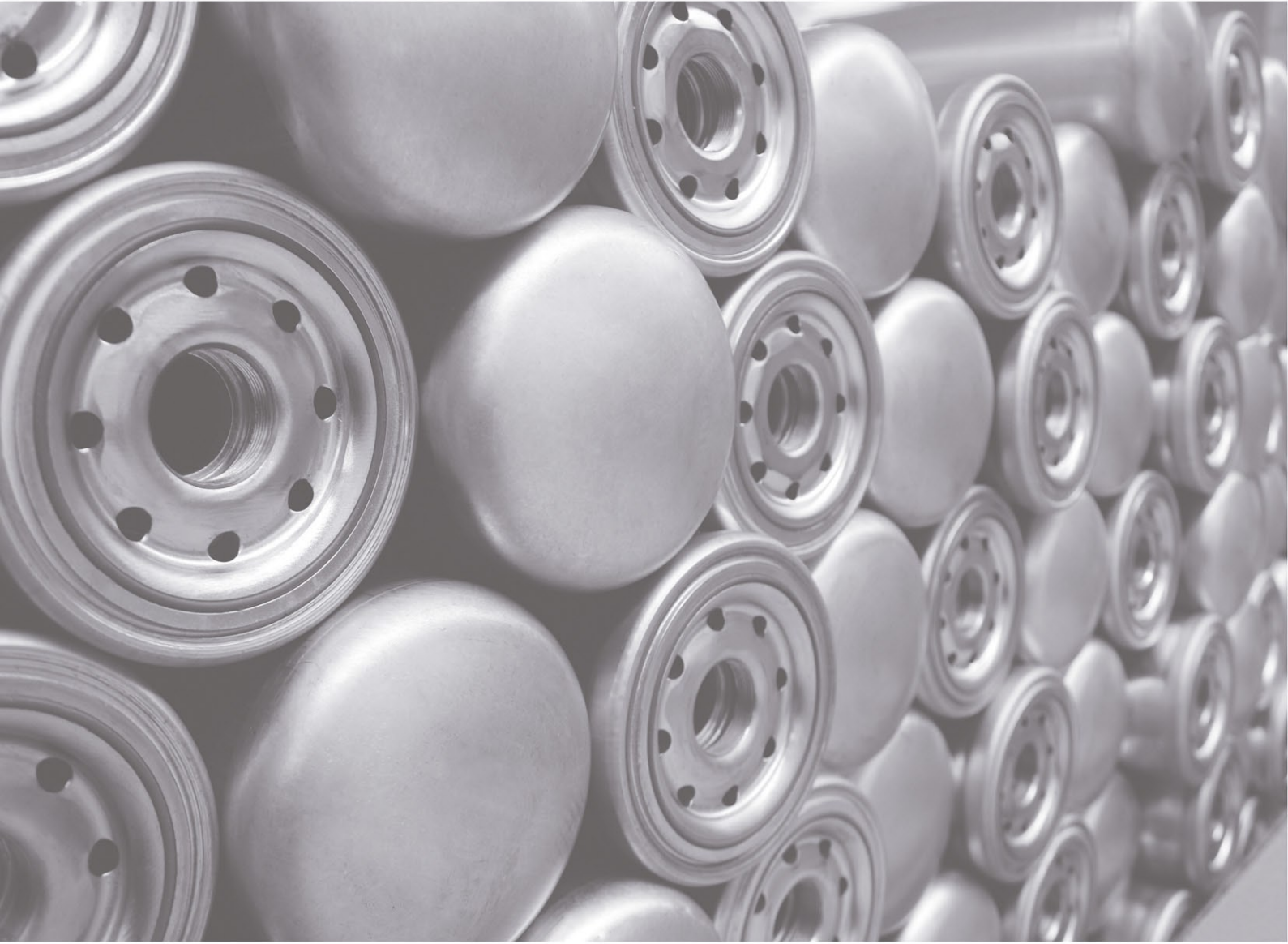
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اندیشه شهرک صنعتی زاگرس، خیابان صنعت، پلاک ۵

تلفن : ۰۲۱ ۴۶۸ ۵۳ ۱۱۱-۳ فاکس : ۰۲۱ ۴۶۸ ۵۳ ۱۱۳

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Ebrahimi@behsanair.com

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Manufacturing Forward

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Organize Sanayi Bolgesi Buyuk Selcuklu
Bulvari No: 4 06935, Ankara - Turkey

Company Introduction

Mikropor

Founded in 1987 and headquartered in Ankara, Turkey, Mikropor serves industrial filtration markets including air compressor equipment, compressed air purification, power generation, gas turbines, dust collection, clean room, transportation and HVAC.

Originally focused on manufacturing the best Air/Oil Separators for the compressor market, Mikropor has since extended into new dimensions of the filtration market and is now recognized around the world as a true industry leader. Mikropor has become the leading provider of quality filtration and purification products for air, gas and liquid applications.

Mikropor Products

- Air/Oil Separators for Screw Compressors
- Refrigerated and Desiccant Air Dryers
- Compressed Air Filters
- In-line Element Replacements
- Oil Filters
- PSA Nitrogen Generators
- Air/Intake Filters for Compressors
- Air/Intake Filters for HVAC Applications
- Air/Intake Filters for Gas Turbines
- HEPA/ULPA High Efficiency Filters for Clean rooms
- Liquid and Process Filters

Quality, Availability, Competitiveness...

Mikropor is ISO certified, technology-driven and committed to engineering innovations that satisfy customer expectations for quality products, reliable filtration performance and extreme value.

Through continued investment and innovation Mikropor has delivered a steady stream of new products, services, proprietary manufacturing processes and new technologies that provides continuing value for our customers.



AIR FILTERS

Air Filters for Air Compressors



Mikropor Air Filters

Mikropor Air Filters are the first line of defense for a compressor and have a significant impact on the service life of the compressor, lubricant, air/oil separators and oil filters. Mikropor offers the highest efficiency air intake filters in the market, outperforming the competition and delivering more value to customers.

EQUAL SPACE SYSTEM



Micro-glass and Mini-pleat System in Air Filters

Our Micro-glass Mini-Pleated Air Filters reach a 99.99 % efficiency faster than cellulose air filters and provides better protection by allowing fewer contaminants to pass through the media.

Mikropor Nano Media holds up to five (5) times more contaminants than conventional cellulose air filters, making them ideal for extended maintenance periods.



Micro-glass fiber at X500 magnification



Cellulose fiber at X500 magnification



Mikropor Micro-glass fibers are very fine nano scale fibers and are Eighty (80) times smaller in diameter than cellulose fiber. This results in extremely high initial efficiency and protects the air compressor better than any filter available in the market. The Mikropor Mini-Pleat system guarantees equal space between each filter pleat and maintains "V" pleated geometry throughout the service life of the filter. As a result, 100% of the surface area performs equally and delivers the expected protection, while minimizing pressure drops.

Air Intake Filters for Air Compressors (Mikroline Series)

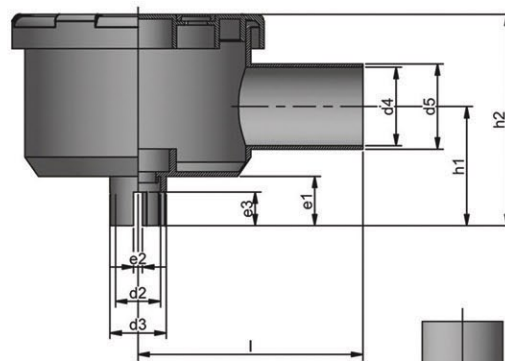


Mikroline Series

Mikropor's air intake elements are designed for the removal of dust or particulate in the air intake systems of compressors, machines, pumps, blowers, etc. Based on the density of the dust load, Mikropor offers two series with different sizes and capacities : Mikroline and Makroline.

Applications

Mikroline Air Intake Filters are well suited for applications with low dust loads such as power generators, piston compressors, as well as air cleaner ventilation of gear units and the filtration of liquid tanks.



General working conditions

Type	Overall design	Volumetric flow range (m ³ /min)	Continuous operating temperature	Short time maximum operating temperature
Mikroline Air Intake Filters	Highly reliable plastic air cleaner housing with high quality element	1 m ³ /min to 4 m ³ /min	-30°C to +100°C	+120°C

Dimensions

Model	d1	d2	d3	d4	d5	e1	e2	e3	e4	h1	h2	l	Nominal Flow Rate (m ³ /min)	Compressor connection Type
MIFH-0120	112	20	25	35	38	22	4	15	-	53	94	100	1	Internal tightened
MIFH-0130	112	30	35	35	38	22	4	15	-	53	94	100	1	Internal tightened
MIFH-0140	112	40	45	35	38	22	4	15	-	53	94	100	1	Internal tightened
MIFH-0240	140	40	45	35	38	22	4	15	-	67	114	120	2	Internal tightened
MIFH-0252	140	52	57	35	38	22	16.25	15	8.125	67	114	120	2	Internal tightened
MIFH-0260	140	60	65	35	38	22	4	15	-	67	114	120	2	Internal tightened
MIFH-0271	140	71	76	35	38	22	4	15	-	67	114	120	2	Internal tightened
MIFH-0452	181	52	57	58	60	22	16.25	15	8.125	102	164	154.5	4	Internal tightened
MIFH-0460	181	60	65	58	60	22	4	15	-	102	164	154.5	4	Internal tightened
MIFH-0471	181	71	76	58	60	22	4	15	-	102	164	154.5	4	Internal tightened

Note: Measure unit is mm

Air Intake Filters (Makroline Series)



Design

Mikropor Makroline Air Intake Filters are designed to provide maximum performance for those customers with extremely high dust capacity and low pressure drop air intake filter demands. These Makroline filters are also suitable for higher temperature use.

Applications

Mikropor Makroline Air Intake Filters are designed for medium and heavy dust load conditions for applications such as Air Compressors, Construction Machines, Agricultural Machines, Harvesting Machines, etc.

Advantages

The advantages of Makroline Air Intake Filters are:

- Operational reliability
- Long service life because of its highly efficient and reliable filter element replacements
- Low pressure drop
- Impact resistant corrosion free housing polypropylene
- Excellent price/performance ratio

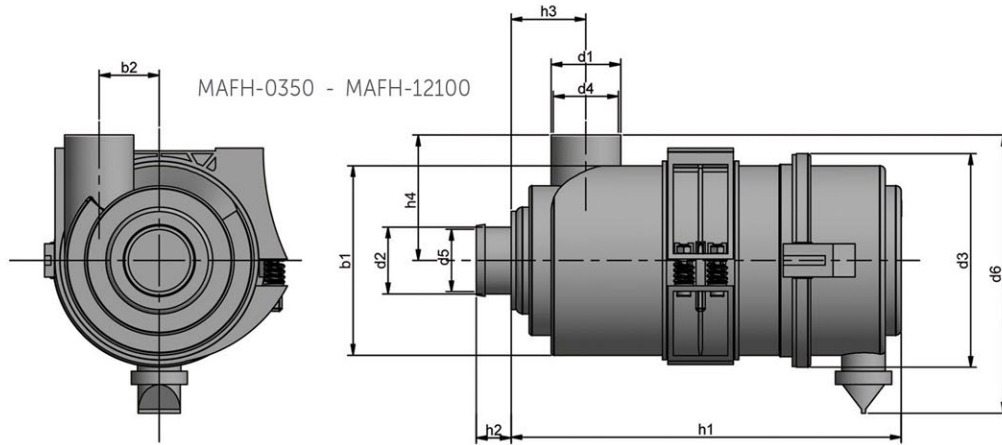
Mikropor Makroline Air Intake Filters' user friendly and flexible bracket system provides the the ability for easy installation. The brackets can be turned in various positions which provides numerous fitting possibilities. Mikropor's versatile production offers these brackets in different sizes.



General working conditions for Makroline Air Intake Filters

Type	Overall design	Volumetric flow range (m ³ /min)	Continuous operating temperature	Short time maximum operating temperature
Makroline Air Intake Filters	Highly reliable plastic air cleaner housing with high quality element, center tube in housing, radial seal	3 m ³ /min to 28 m ³ /min	-30°C to +80°C	+100°C

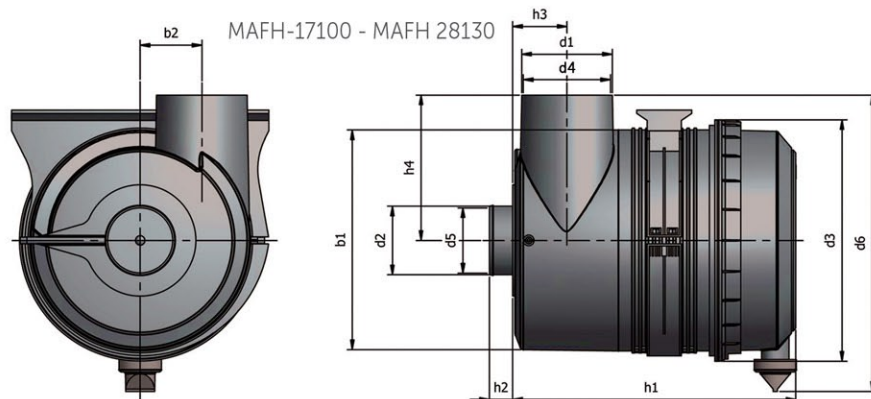
Easy various mounting possibilities



Technical Specifications

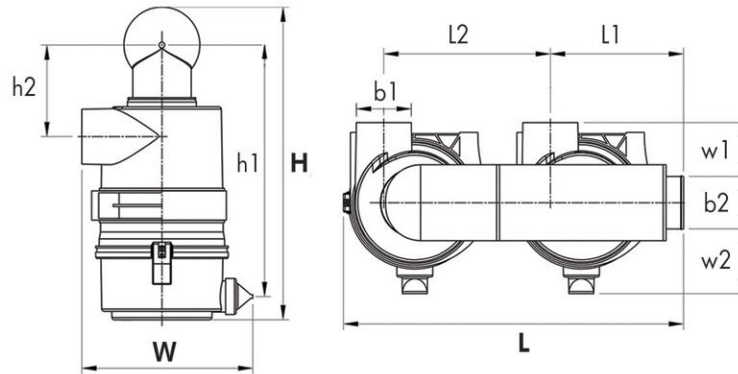
Model	b1	b2	d1	d2	d3	d4	d5	d6	h1	h2	h3	h4	Nominal Flow Rate (m ³ /min)	Compressor connection Type
MAFH-0350	142	45	52	50	160	49	47	209	292	26	56	94	3-4	External Clamped
MAFH-0360	142	45	52	60	160	49	57	209	292	26	56	94	3-4	External Clamped
MAFH-0870	200	53	94	70	226	89	64	293	380	30	67	137	8-10	External Clamped
MAFH-08100	200	53	94	100	226	89	94	293	380	30	67	137	8-10	External Clamped
MAFH-1270	200	53	94	70	227	89	64	293	520	30	67	137	12-14	External Clamped
MAFH-12100	200	53	94	100	227	89	94	293	520	30	67	137	12-14	External Clamped
MAFH-17100	297	86.5	110	100	323	104	93	399.5	414.5	30	93.5	190	17	External Clamped
MAFH-17110	297	86.5	110	110	323	104	103	399.5	414.5	30	93.5	190	17	External Clamped
MAFH-17130	297	86.5	110	130	323	104	123	399.5	414.5	30	93.5	190	17	External Clamped
MAFH-18100	322	90	132	100	352	127	95	432	413	34	79	212	18	External Clamped
MAFH-18110	322	90	132	110	352	127	105	432	413	34	79	212	18	External Clamped
MAFH-18130	322	90	132	130	352	127	125	432	413	34	79	212	18	External Clamped
MAFH-18150	322	90	132	150	352	127	145	432	413	34	79	212	20	External Clamped
MAFH-20100	322	90	132	100	352	127	95	432	443	34	79	212	20	External Clamped
MAFH-20110	322	90	132	110	352	127	105	432	443	34	79	212	20	External Clamped
MAFH-20130	322	90	132	130	352	127	125	432	443	34	79	212	22	External Clamped
MAFH-22100	322	90	132	100	352	127	95	432	473	34	79	212	22	External Clamped
MAFH-22110	322	90	132	110	352	127	105	432	473	34	79	212	22	External Clamped
MAFH-22130	322	90	132	130	352	127	125	432	473	34	79	212	24	External Clamped
MAFH-24100	322	90	132	100	352	127	95	432	503	34	79	212	24	External Clamped
MAFH-24110	322	90	132	110	352	127	105	432	503	34	79	212	24	External Clamped
MAFH-24130	322	90	132	130	352	127	125	432	503	34	79	212	26	External Clamped
MAFH-26100	322	90	132	100	352	127	95	432	533	34	79	212	26	External Clamped
MAFH-26110	322	90	132	110	352	127	105	432	533	34	79	212	26	External Clamped
MAFH-26130	322	90	132	130	352	127	125	432	533	34	79	212	28	External Clamped
MAFH-28100	322	90	132	100	352	127	95	432	563	34	79	212	28	External Clamped
MAFH-28110	322	90	132	110	352	127	105	432	563	34	79	212	28	External Clamped
MAFH-28130	322	90	132	130	352	127	125	432	563	34	79	212	28	External Clamped

Note:
The measure unit is " mm "



Air Intake Filters (Makroline Series with Collector)

Model	L	L1	L2	H	h1	h2	W	w1	w2	b1	b2	Nominal Flow Rate (m ³ /min)	Compressor connection Type
MAFHC-2-16130 (MAFH-08100x2)	585	228	285	535	430	157	293	92	113	94	130-150	16	External Clamped
MAFHC-2-24130 (MAFH-12100x2)	585	228	285	680	575	157	293	93	112	94	130-150	24	External Clamped
MAFHC-3-36130 (MAFH-12100x3)	870	228	285	680	575	157	293	93	112	94	130-150	36	External Clamped
MAFHC-4-48130 (MAFH-12100x4)	1155	228	285	680	575	157	293	93	112	94	130-150	48	External Clamped



MAFHC-2-16130
(MAFH-08100 X 2)



MAFHC-2-24130
(MAFH-12100 X 2)



MAFHC-3-36130
(MAFH-12100 X 3)



MAFHC-4-48130
(MAFH-12100 X 4)



Conwrap Separators

Mikropor 'Conwrap' Separators are standard wrapped style separators. These separators are designed for outside to inside flow and can be used with all oil injection Rotary Vane and Rotary Screw Compressors. Conwrap separators operate between 1 to 60 m³/min flow rate at 7 bar with 1 to 3 mg/m³ oil carry over.

'3S' Air / Oil Separators

The revolutionary Mikropor '3S' Separator is designed to fit the smaller separator housings without sacrificing operating performance. The '3S' separator has double to triple capacity when compared to a conventional separator with the same dimensions. The '3S' separator has 1/2 - 1/3 of volume of a conventional separator functioning in the same operating conditions. This increased capacity is achieved with specially designed progressive type, deep bed, coalescing media using an increased number of wraps.



Pleated Air / Oil Separators

Pleated separators increase the media surface area to reach higher capacities and maintain dimensions. Mikropor manufactures dozens of pleated separator designs.

Spin - on type Air / Oil Separators

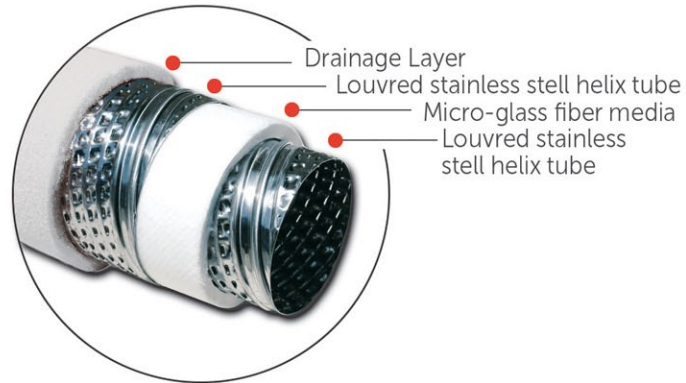
Mikropor Spin-On Type Air / Oil Separators are manufactured as an exchangeable element. Because Spin-Ons do not require a compressor housing, they permit uncomplicated and quick replacement without dismantling the compressor. Spin-On Type Air/Oil Separators are available for 0,6 to 7 m³/min flow rates operating at 7 bar.



AIR FILTER ELEMENTS

Micro - Glass Fiber

High efficiency Micro-Glass nanofiber media (80 times finer than Cellulose Fiber) delivers higher targeted efficiencies, longer service life, wide chemical and synthetic lubricant compatibility even at extreme working temperatures.



Element 4 Levels

Mikropor offers four (4) layers of Superior Protection- from 1 micron to .01 micron. Durable element construction and an efficient drain layer ensures continued performance after optimal element change periods.

Helix Tubes for Strength

Mikropor Compressed Air Filters have louvred stainless steel helix tubes providing increased strength and protection against severe pressure drops while improving performance by forcing air to pass diagonally through the element.

Synthetic compatibility and Durable Epoxy

Mikropor Compressed Air Filters are compatible with all synthetic lubricants in the industry. Durable Epoxy securely bonds the robust end caps to the filter tubes and will not be affected by synthetic lubricant in compressed air.



Test

With over thirty (30) years of experienced Mikropor manufactures the best performing replacement elements in the industry. Through rigorous testing and validation processes Mikropor assures the customers that the replacement elements are even better performs equal to or better than compared to the original elements. Replacement elements have been designed and tested in the state-of the art test laboratories.

Mikropor labs are capable of making the following tests ;

- Differential pressure at given flow rates
- Particle efficiency tests
- Oil aerosols measurements
- Pressure dew point

All tests are conducted as per the relevant ISO 12500 test standards.



Replacement Elements



- ALMIG
- ATLAS COPCO
- BEA
- COMPAIR
- DELTECH
- DOMNICK HUNTER
- DOMNICK HUNTER
(Evolution Range)
- FAI FILTER
- HANKISON
- HIROSS
- KAESER
- MTA
- OMI
- ULTRA FILTER
- WALKER
- ZANDER



WATER SEPARATORS

Water Separators



Mikropor water separators have been designed for the removal of bulk liquid water and particulate from compressed air and gases. Unique centrifugal action removes contaminants at low-pressure drop for maximum energy savings. Mikropor water separators are available from 1/4" - 3" pipe sizes and for flows up to 2200m³/h (1294 scfm)

Note: While highly efficient, condensate separators will not remove 100% of the oil from the air stream additional coalescing and particulate filters downstream maybe required to remove the fine traces of oil, water and particles..

Note: Automatic drain valves are fitted as standard. All separator bodies are coated with electrostatic powder paint finish both inside and out.



Correction Factor

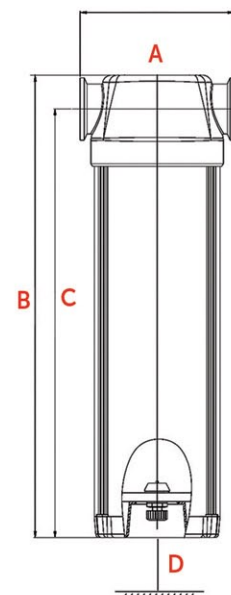
Operating Pressure (barg)	1	3	5	7	9	11	13	15	16
PSIG	15	44	73	100	131	160	189	218	247
Correction Factor	0,5	0,71	0,87	1	1,12	1,22	1,32	1,44	1,57

For maximum flow rate, multiply model flow rate show in the above table by the correction factor corresponding to the working pressure.

Technical Specifications

Model	Connection Size	Flow Rate		Housing Dimensions (mm)			
		(m ³ /h)	(scfm)	A	B	C	D
G25WS	1/4"	25	14	103	257.5	236	160
G100WS	1/2"	100	58	103	257.5	236	210
G200WS	3/4"	200	117	123	304	277	285
G300WS	1"	300	176	123	304	277	380
G600WS	1 1/2"	600	353	123	320	285	470
G1200WS	2"	1200	706	160	484	443	560
G2200WS	3"	2200	1294	193	546	490	610

Maximum Recommended Operating Temperature	80 °C
Minimum Recommended Operating Temperature	1,5 °C
Typical Pressure Loss at Rated Flow	50 mbar
Maximum Working Pressure	16 barg



Flanged Compressed Water Separators



Flanged Water Separators

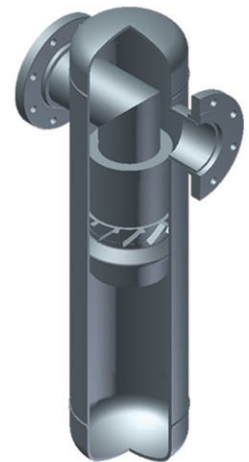
Mikropor flanged water separators have been designed for the removal of bulk liquid water and particulate from compressed air and gases. Unique centrifugal action removes contaminants at low-pressure drop for maximum energy savings. Mikropor flanged water separators are available from DN80 - DN200 flange sizes and flows up to 14000 m³ (8236 scfm) (For larger sizes please contact the sales team)

Note: While highly efficient, condensate separators will not remove the oil from the air stream additional coalescing and particulate filters downstream maybe required to remove the fine traces of oil, water and particles.

Technical Specifications

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Model	Connection Size	Flow Rate		Housing Dimensions (mm)					
		(m ³ /h)	(scfm)	A	B	C	D	E	F
F-2500WS	DN80	2500	1407,5	200	934	450	75	280	1289
F-3200WS	DN100	3200	1882,3	220	964	450	75	280	1319
F-4300WS	DN100	4300	2529,4	220	928	530	75	280	1283
F-6500WS	DN150	6500	3823,5	285	1092	580	75	280	1447
F-8500WS	DN150	8500	5000	285	1091	650	75	280	1446
F-11000WS	DN200	11000	6470,5	340	1168	750	75	280	1523
F-14000WS	DN200	14000	8235,2	340	1201	800	75	280	1556

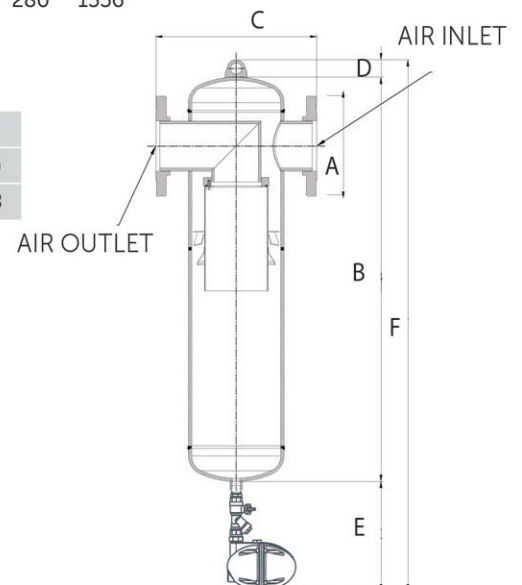


Correction Factor

Operating Pressure (barg)	1	3	5	7	9	11	13	14
PSIG	15	44	73	100	131	160	189	200
Correction Factor	0,5	0,71	0,87	1	1,12	1,22	1,32	1,38

For maximum flow rates, multiply model flow rate show in the above table by the correction factor corresponding to the working pressure.

Maximum Recommended Operating Temperature	80 °C
Minimum Recommended Operating Temperature	1,5 °C
Typical Pressure Loss at Rated Flow	50 mbar
Maximum Working Pressure	14 barg



COMPRESSED AIR FILTERS



G Series Compressed Air Filters

Mikropor Compressed Air Filters have been designed to meet all requirements of compressed air filtration world. These air filters provide more comfortable usage for end users an increased endurance, higher efficiency at lower pressure drop and more port size options.

Filtration

Due to the usage of deep pleating technique the filtration area has increased remarkably which leads to a better filtration and higher dirt holding capacity. Mikropor Compressed Air Filters have been designed to remove airborne contamination in compressed air stream, delivering energy efficient operation and reliable performance.

Features

The air filters have four (4) ranges of efficiencies, removing contaminants as small 0.01 micron at up to 290 psi (20barg) - 1/4" to 3" NPT/BSP pipe sizes. A protected auto float drain (2mm orifice) is standard for optimal and reliable removal of liquid contaminants.

These air filters have a zero-porosity aluminum and durable epoxy powder-coat finish, along with a corrosion-resistant internal coating for a long service life. Filter combinations are configured to meet specific application requirements. Filters comply with PED and perform as per related ISO 8573 standards. These filters may be equipped with differential pressure gauges for easy maintenance and energy efficiency. Mikropor compressed air filters are always recommended with this system.

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Types of Compressed Air Filters

- P** Pre-Filter / Particulate Filter
(Filter/Element air flow direction is out side to inside)
- X** General Purpose Filter / Water Removal
(Filter/Element air flow direction is inside to outside)
- Y** Coalescing Filter / Oil Removal
(Filter/Element air flow direction is inside to outside)
- A** Activated Carbon Filter / Odor Removal
(Filter/Element air flow direction is outside to inside)



Technical specifications

Model	Connection Size			Flow Rate		Max. working pressure (barg)	Element Model	Housing Dimensions (mm)				
				(m ³ /h)	(scfm)			A	B	C	D	E
G20	-	1/4"	-	20	12	20	M20	75	45	193	175	100
G40	-	3/8"	-	40	24	20	M40	75	45	193	175	100
G25	1/4"	3/8"	1/2"	25	15	20	M25	102	45	219,5	197,5	125
G50	1/4"	3/8"	1/2"	50	30	20	M50	102	45	219,5	197,5	125
G100	3/8"	1/2"	-	100	58	20	M100	102	45	257,5	235,5	165
G150	1/2"	3/4"	1"	150	88	20	M150	123	45	302,5	275,5	205
G200	3/4"	1"	-	200	117	20	M200	123	45	366,5	339,5	265
G250	3/4"	1"	-	250	147	20	M250	123	45	406,5	379,5	315
G300	1"	1 1/4"	1 1/2"	300	176	20	M300	123	45	463	427,5	365
G500	1 1/4"	1 1/2"	-	500	294	20	M500	123	45	493	457,5	395
G600	1 1/4"	1 1/2"	-	600	353	20	M600	123	45	538	502,5	440
G851	1 1/4"	1 1/2"	2"	851	500	20	M851	160	45	625,5	583,8	495
G1210	2"	-	-	1210	712	20	M1210	160	45	695,5	653,8	565
G1520	2"	2 1/2"	3"	1520	930	20	M1520	194	45	730	672	445
G1820	2 1/2"	3"	-	1820	1140	20	M1820	194	45	870	813	565
G2220	3"	-	-	2220	1380	20	M2220	194	45	924	867	615
G2620	3"	-	-	2620	1541	20	M2620	194	45	1068	1011	695

Specifications	Pre Filtering	General Purpose	Oil Removal	Activated Carbon
Grade	P	X	Y	A
Particle Removal (Micron)	5	1	0,01	0,01
Max. Oil carryover at 21°C (mg/m ³)	5	0,5	0,01	0,003
Max. working temperature (°C)	80	80	80	25
Initial pressure loss (mbar)	40	80	100	80
Pressure loss for element change (mbar)	700	700	700	700
Element colour code	WHITE	WHITE	WHITE	METAL SS

INDICATOR TYPE
Gauge with or without electrical contact
DRAIN TYPE
Electro - adjustable
External float type
Zero-loss Drain
Manual

14

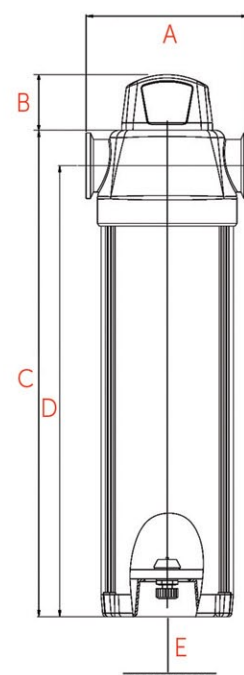
Correction Factor

Operating Pressure (barg)	1	3	5	7	9	11	13	15	16	18	20
PSIG	15	44	73	100	131	160	189	218	232	261	290
Correction Factor	0,5	0,71	0,87	1	1,12	1,22	1,32	1,44	1,50	1,57	1,63

For maximum flow rate, multiply model flow rate show in the above table by the correction factor corresponding to the working pressure.

NOTES:

- Grade A must not operate in oil saturated conditions.
 - Grade A elements should be replaced periodically to suit the applications but must be changed at least every six months.
 - Grade A will not remove certain gases including carbon monoxide and carbon dioxide. Please refer to works if in doubt.
 - Flow rates are based on a 7 bar operating pressure, for flows at other pressures use correction factor given above.
 - All filters are suitable for use with mineral and synthetic oils.
 - Gauge type pressure indicators are fitted to models G20 to G2620 as standard.
 - All filters are in conformity with the Pressure Equipment Directive (97/23/EC)
- ORDERING:** The complete filter model number contains the size and grade, example - 1" general purpose filter model G250MX with replacement filter element model M250X. 250 Represent 250m³ /h capacity and x represents the general purpose element.



GO Series Compressed Air Filters

GO Series

New addition to our G series, Mikropor "GO" series compressed air filters are designed for easy element replacement for "zero clearance" ability.

Features

The air filters have four (4) ranges of efficiencies, removing contaminants as small as 0.01 micron at up to 290 psi (20 barg) - 1/4" to 3" NPT/BSP pipe sizes. A protected auto float drain (2mm orifice) is standard for optimal and reliable removal of liquid contaminants.

These air filters have zero-porosity aluminum and durable epoxy powder-coat finish, along with a corrosion resistant internal coating for a long service life.

Filter combinations are configured to meet specific application requirements.

Filter comply with PED and perform as per related ISO 8573 standards.

These filters may be equipped with differential pressure gauges for easy maintenance and energy efficiency. Mikropor compressed air filters are always recommended with this system.



NEW
for OEM use

Element Features

Mikropor offers Superior protection - from 1 micron to 0,01 micron.

Durable element construction and efficient drain layer ensures continued performance after optimal element change. Elements are also easy to replace with the head clips.



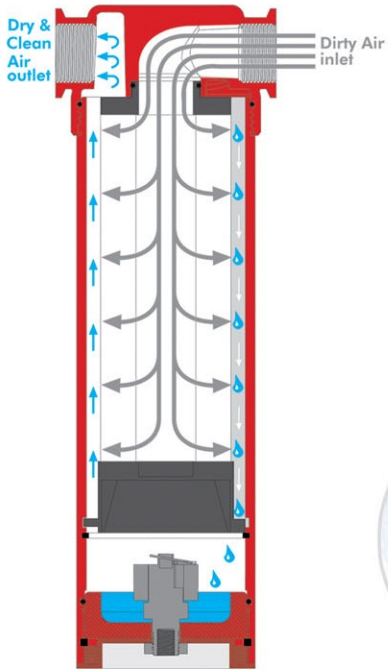
**TO REMOVE THE ELEMENT
TWIST CLOCKWISE**



**MIKROPOR ELEMENTS
HAVE BEEN DESIGNED
FOR EASY HANDLING**



- 1- Deep pleating also enables a lower pressure drop
- 2- Supreme collapse resistance due to usage of fluted stainless tube provides strength against pressure drops while improving the performance by passing air diagonally through the element.
- 3- PVC impregnated foam favours Water / Oil drainage

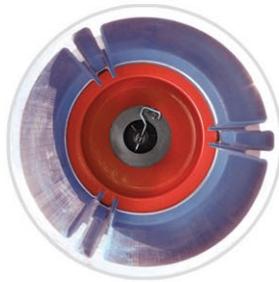


Head Clamping

Head Clamping provides serial connection of filters without any extra piping

Drainage Ribs

Drainage Ribs favors the humidity flow.



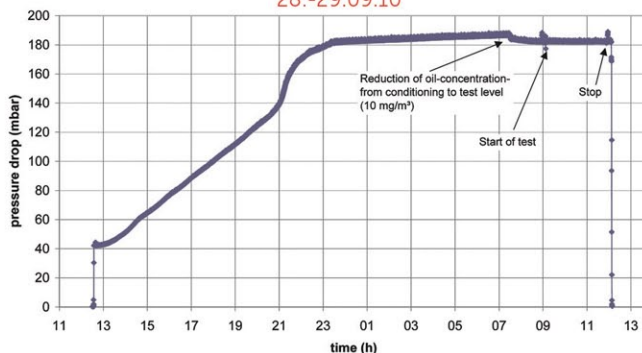
Zero Clearance

A major innovation for end user is the zero clearance design Provides for an easier bowl removal without using tool

Independent test report as per ISO12500 - 1

Filterelement:	M50Y		
Element	002		
Standard parameters and measuring results			
Measuring parameters	unit	standard	Test
Calendar date of test			28./29.09.10
Inlet temperature	°C	20 ± 5	18,5 ± 0,5
Inlet pressure	bar (e)	7	7
Ambient temperature	°C	20 ± 5	17,5 ± 0,5
Inlet dew point	°C	≤ 10 °C	0 - 4
Main flow through the test filter	m³/h		50
Partial flow	m³/h		5,1
Time of conditioning	h		20,38
Measuring time	h		2,75
Inlet oil concentration at conditioning	mg/m³		23 ± 1
Inlet oil concentration at test	mg/m³	10 ± 10%	10 ± 1
Residual oil concentration	mg/m³		0,01
Pressure drop filter element	mbar		183
Remarks	mouth of probe oil-free		
Test carried out by			
Signature			

Mikropor M50Y-2 at 50m³/h ANR - 7 bar(e)
28.-29.09.10



Anodising

Anodising provides supreme corrosion resistance. Anodised surface treatment is proved to be better than other surface treatment methods such as Alocrome coating. Contact Mikropor to get Comparison Test results between Competitor Filters with Alocrome coating and Mikropor Filters with Anodising treatment.



With Anodising



Without Anodising

Technical Specifications

Model	Connection Size			Flow Rate		Max. working pressure (barg)	Element Model	Housing Dimensions (mm)				
				(m³/h)	(scfm)			A	B	C	D	E
GO20	-	1/4"	-	20	12	20	MO20	75	45	193	175	100
GO40	-	3/8"	-	40	24	20	MO40	75	45	193	175	100
GO25	1/4"	3/8"	1/2"	25	15	20	MO25	102	45	214,5	192,5	125
GO50	1/4"	3/8"	1/2"	50	30	20	MO50	102	45	214,5	192,5	125
GO100	3/8"	1/2"	-	100	58	20	MO100	102	45	252,5	230,5	165
GO150	1/2"	3/4"	1"	150	88	20	MO150	123	45	297,5	270,5	205
GO200	3/4"	1"	-	200	117	20	MO200	123	45	361,5	334,5	265
GO250	3/4"	1"	-	250	147	20	MO250	123	45	401,5	374,5	315
GO300	1"	1 1/4"	1 1/2"	300	176	20	MO300	123	45	458	422,5	365
GO500	1 1/4"	1 1/2"	-	500	294	20	MO500	123	45	488	452,5	395
GO600	1 1/4"	1 1/2"	-	600	353	20	MO600	123	45	533	497,5	440
GO851	1 1/4"	1 1/2"	2"	851	500	20	MO851	160	45	622,5	581	495
GO1210	2"	-	-	1210	712	20	MO1210	160	45	692,5	651	565
GO1520	2"	2 1/2"	3"	1520	930	20	MO1520	194	45	725,5	669	445
GO1820	2 1/2"	3"	-	1820	1140	20	MO1820	194	45	865	808	565
GO2220	3"	-	-	2220	1380	20	MO2220	194	45	919,5	863	615
GO2700	3"	-	-	2700	1541	20	MO2700	194	45	1063,5	1007	695

Specifications	Pre Filtering	General Purpose	Oil Removal	Activated Carbon
Grade	P	X	Y	A
Particle Removal (Micron)	5	1	0,01	0,01
Max. Oil carryover at 21°C (mg/m³)	5	0,5	0,01	0,003
Max. working temperature (°C)	80	80	80	25
Initial pressure loss (mbar)	40	80	100	80
Pressure loss for element change (mbar)	700	700	700	700
Element colour code	WHITE	WHITE	WHITE	METAL SS

INDICATOR TYPE
Gauge with or without electrical contact

DRAIN TYPE
Electro - adjustable
External float type
Zero-loss Drain
Manual

Correction Factor

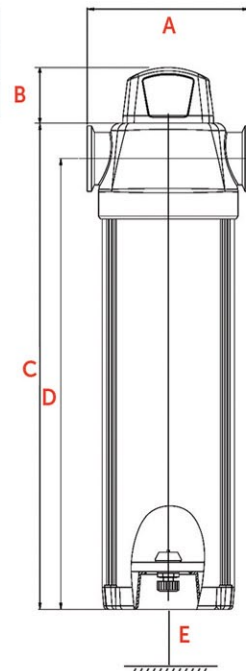
Operating Pressure (barg)	1	3	5	7	9	11	13	15	16	18	20
PSIG	15	44	73	100	131	160	189	218	232	261	290
Correction Factor	0,5	0,71	0,87	1	1,12	1,22	1,32	1,44	1,50	1,57	1,63

For maximum flow rate, multiply model flow rate show in the above table by the correction factor corresponding to the working pressure.

NOTES:

- Grade A must not operate in oil saturated conditions.
- Grade A elements should be replaced periodically to suit the applications but must be changed at least every six months.
- Grade A will not remove certain gases including carbon monoxide and carbon dioxide. Please refer to works if in doubt.
- Flow rates are based on a 7 bar operating pressure, for flows at other pressures use correction factor given above.
- All filters are suitable for use with mineral and synthetic oils.
- Gauge type pressure indicators are fitted to models GO25 to GO2700 as standard.
- All filters are in conformity with the Pressure Equipment Directive (97/23/EC)

ORDERING: The complete filter model number contains the size and grade, example - 1" general purpose filter model GO250MX with replacement filter element model MO250X. 250 Represent 250m³/h capacity and x represents the general purpose element.



Flanged Compressed Air Filters



High Performance Elements inside



Features

- Elements are assembled by the help of a tie rod system
- Two external float drains for maximum drainage
- Unique design for pre-separation zone
- Strong welded design
- CE and ASME tanks available
- Design for easy element change from top flange

External Float Drain

Mikropor external drains designed to remove liquid condensation from collection points in a Compressed Air System. Durable epoxy powder-coat finish and corrosion resistant internal anodised coating for longer service life.



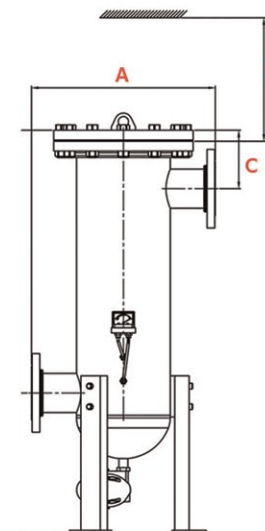
Technical Specifications

Model	Drain Port Size	Inlet/Outlet Port Size	Flow Rate		Max. working pressure (barg)	Element Model	Number of Elements	Housing Dimensions (mm)				
			(m ³ /h)	(scfm)				A	B	C	D	E
F2500	1/2"	DN80	2500	1470	14	M1200	2	450	1287	277	747	650
F3200	1/2"	DN100	3200	1880	14	M1200	3	450	1317	277	767	650
F4300	1/2"	DN100	4300	2530	14	M1200	4	530	1344	279	769	650
F6500	1/2"	DN150	6500	3825	14	M1200	6	580	1425	331	796	650
F8500	1/2"	DN150	8500	5000	14	M1200	8	650	1439	333	798	650
F11000	1/2"	DN200	11000	6470	14	M1200	10	750	1504	365	825	650
F14000	1/2"	DN200	14000	8235	14	M1200	14	800	1545	383	833	650
F17000	1/2"	DN250	17000	10000	14	M1200	16	850	1583	417	862	650
F21000	1/2"	DN300	21000	12350	14	M1200	17	850	1680	447	887	650
F25500	1/2"	DN350	25500	15000	14	M1200	23	850	1778	487	917	650
F30000	1/2"	DN350	30000	17650	14	M1200	28	850	1778	487	917	650

Specifications	Pre Filtering	General Purpose	Oil Removal	Activated Carbon
Grade	P	X	Y	A
Particle Removal (Micron)	5	1	0,01	0,01
Max. Oil carryover at 21°C (mg/m ³)	5	0,5	0,01	0,003
Max. working temperature (°C)	80	80	80	25
Initial pressure loss (mbar)	40	80	100	80
Pressure loss for element change (mbar)	700	700	700	700
Element colour code	WHITE	WHITE	WHITE	METAL SS

DRAIN TYPE
Electro - adjustable
External float type
Zero-loss Drain
Manual

Minimum clearance for element change



Correction Factor

Operating Pressure (barg)	1	3	5	7	9	11	13	14
PSIG	15	44	73	100	131	160	189	200
Correction Factor	0,5	0,71	0,87	1	1,12	1,22	1,32	1,38

For maximum flow rate, multiply model flow rate show in the above table by the correction factor corresponding to the working pressure.

NOTES:

- 1) Grade A must not operate in oil saturated conditions.
- 2) Grade A elements should be replaced periodically to suit the applications but must be changed at least every six months.
- 3) Grade A will not remove certain gases including carbon monoxide and carbon dioxide. Please refer to works if in doubt.
- 4) Flow rates are based on a 7 bar operating pressure, for flows at other pressures use correction factor given above.
- 5) All filters are suitable for use with mineral and synthetic oils.
- 6) Other standards for flanged connections are available.
- 7) Direction of air flow, inside to out, through filter element

ORDERING:

The complete filter model number contains the size and grade, Example - pipe size NW100 oil removal filter with model filter 3200MY replacement filter element model M1200Y.

Mist Eliminator Compressed Air Filters

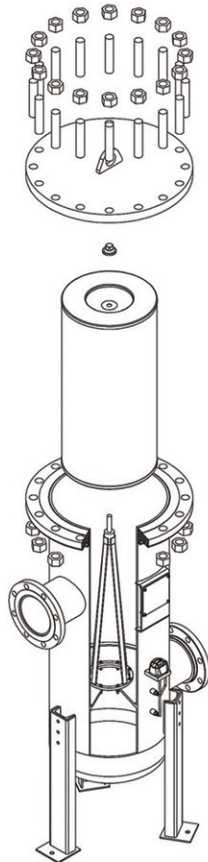


Applications include

- Capturing oil fog, mist, or smoke from exhaust and pressure unloading vents on oil flooded compressors, vacuum pumps and blowers
- Any application requiring Low Delta P coalescing of large air volumes
- Vacuum Freeze Drying
- Vacuum Out - Gasing and Vacuum Coating
- Food Processing
- Nailers/Staplers
- Industrial Vacuum Processes
- Cement & Paper Processing

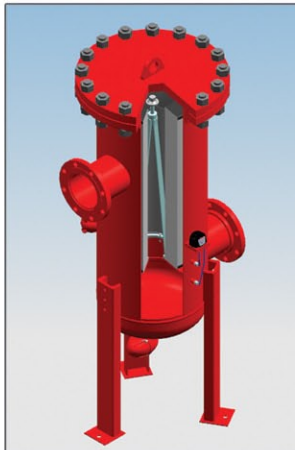
Design

- Mist Eliminators are designed to meet the demand for:
- Efficient removal of oil-mist carryover from piston or oil flooded rotary compressors
 - Long service life
 - Strength to withstand strenuous operating conditions
 - Protection from oil slugs or compressor Air/ Oil separator failure



Features

- Very Low pressure drop
- Large oil catching efficiency
- Easy field cleaning
- Positive sealing O-rings
- Temperature (continuous)
4°C (40°F) min. 80°C (176°F) max.
- Auto Float Drain is Standard
- Multiple drain Style Options Available
- Pressure Rating of 14 barg (200 psig)



- Removal of particles down to 0.01 micron including coalesced liquid water and oil providing a maximum remaining oil aerosol content of 0.01 ppm
- Increased surface area in a given volume allows low velocity separation of ultra fine oil mist
- Elements are grounded to canister minimizing static electricity problems

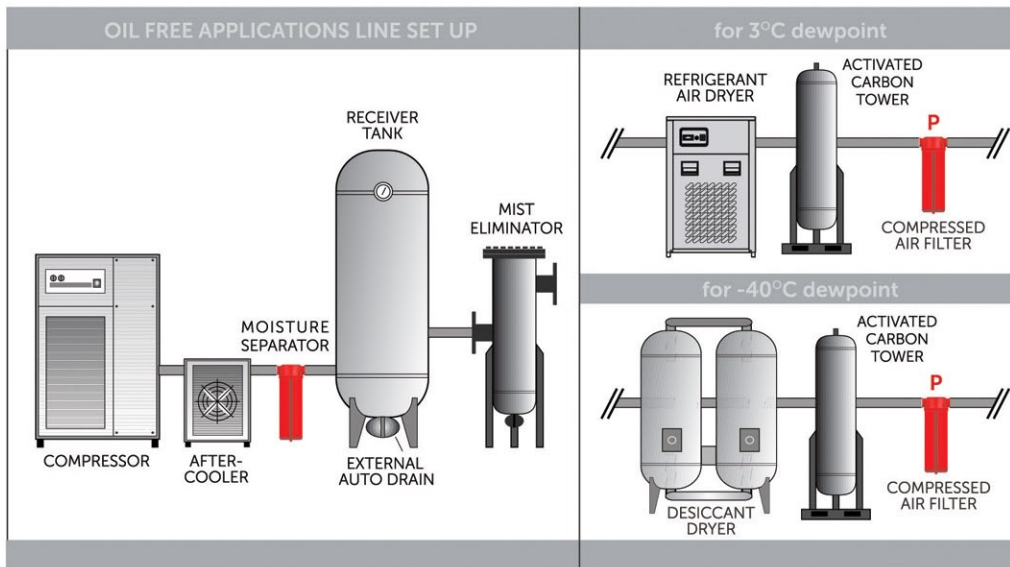
Mist Eliminator Element

- Ultra low pressure drop reduces energy costs.
- Positive gasket seals eliminate media bypass
- Filter change out differential 2.5 psig (170 mbar)
- True Air / Oil Separator
- Long service life



Technical specifications

Model	Drain Port Size	Inlet/Outlet Port Size	Flow Rate		Max. working pressure (barg)	Housing Dimensions (mm)							
			(m ³ /h)	(scfm)		A	B	C	D	ØE	ØF	G	H
ELM-150	1/2"	DN50	255	150	14	500	1003	209	459	203	103	305	330
ELM300	1/2"	DN50	510	300	14	500	1105	209	559	203	103	407	435
ELM-600	1/2"	DN50	1020	600	14	500	1461	209	916	203	103	762	790
ELM-800	1/2"	DN80	1360	800	14	500	1655	279	1084	203	103	915	950
ELM-1200	1/2"	DN80	2040	1200	14	600	1520	281	931	254	103	762	790
ELM-1600	1/2"	DN80	2720	1600	14	600	1671	281	1086	254	103	915	950
ELM-2100	1/2"	DN100	3570	2100	14	700	1575	335	953	300	129	762	790
ELM-2750	1/2"	DN100	4675	2750	14	700	1726	335	1100	300	129	915	950
ELM-4200	1/2"	DN150	7140	4200	14	800	1670	393	983	365	181	762	790
ELM-6000	1/2"	DN150	10200	6000	14	800	1925	393	1238	365	181	950	1045
ELM-8000	1/2"	DN200	13600	8000	14	850	2020	417	1277	386	233	1016	1045
ELM-10000	1/2"	DN250	17000	10000	14	1000	2118	417	1307	407	337	1016	1045
ELM-12000	1/2"	DN300	20400	12000	14	1000	2688	497	1847	437	337	1524	1550

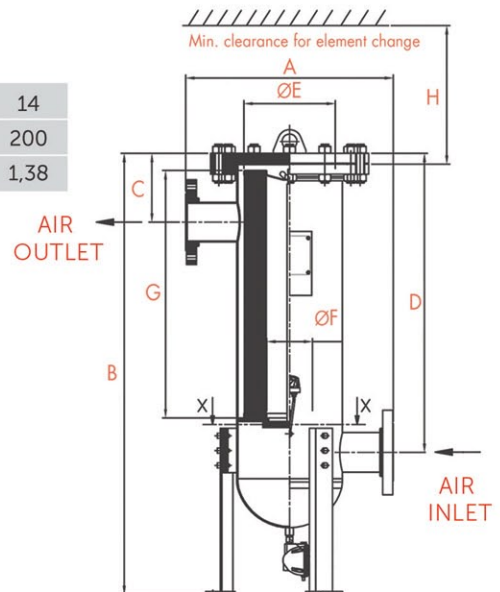


Correction Factor

Operating Pressure (barg)	1	3	5	7	9	11	13	14
PSIG	15	44	73	100	131	160	189	200
Correction Factor	0,5	0,71	0,87	1	1,12	1,22	1,32	1,38

For maximum flow rate, multiply model flow rate show in the above table by the correction factor corresponding to the working pressure.

DRAIN TYPE
Electro - adjustable
External float type
Zero-loss Drain
Manual



High Pressure Compressed Air Filters



High Pressure
High Performance
350 bar

Features

Mikropor manufactures a line of High Performance Compressed Air Filters, Moisture Separators in two different range **50 bar** range made of Aluminum, no welding, strong and reliable design. **350 bar** range made of Steel, no welding, and designed for reliability at very high pressure applications.

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Anodised Aluminum Design with High Performance

Mikropor High Pressure Range Compressed Air Filters are NO weld design. These filters are built with a very thick wall thickness and as a result are extremely robust. In-house high pressure test facilities assure the performance.

All inner and outer surfaces of **50 bar** aluminum design filters are anodised. **350 bar** Carbon Steel design filters are epoxy electro powder coated.

DRAIN TYPE

HG - Manual Brass Drain

HGH - Manual Brass Drain

50 bar



Technical Specifications

Model	Drain Port Size	Flow Rate at 50 bar		Max. working pressure (barg)	Element Model	Housing Dimensions (mm)				
		(m ³ /h)	(scfm)			A	B	C	D	E
HG100	1/4"	71	42	50	M25	106	119	30	88	201
HG300	1/2"	212	125	50	M50	106	119	30	88	201
HG600	3/4"	425	250	50	M100	106	119	30	88	201
HG850	1"	595	350	50	M150	123	140	39,5	103	357
HG1200	1"	850	500	50	M200	123	140	39,5	103	357
HG1600	1 1/2"	1600	940	50	M250	123	140	39,5	103	357
HG2500	2"	2500	1470	50	M2500	159	179	56	133	380
HG3000	2 1/2"	3000	1765	50	M3000	159	179	56	133	380

Model	Drain Port Size	Flow Rate at 350 bar		Max. working pressure (barg)	Element Model	Housing Dimensions (mm)			
		(m ³ /h)	(scfm)			A	B	C	D
HGH100	1/4"	102	60	350	M25	113,4	115,4	25,75	155
HGH300	1/2"	298	175	350	M50	113,4	115,4	25,75	158,5
HGH600	3/4"	595	350	350	M100	109,4	115,4	32,25	207
HGH850	1"	850	500	350	M150	133	138	37,35	250
HGH1200	1"	1190	700	350	M200	133	138	37,35	314
HGH1600	1 1/2"	2240	1317	350	M250	128	138	44,4	368
HGH2500	2"	3500	2058	350	M2500	145	158	51,5	393
HGH3000	2 1/2"	4200	2470	350	M3000	160	178	57,6	386

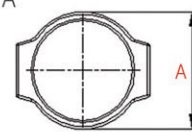
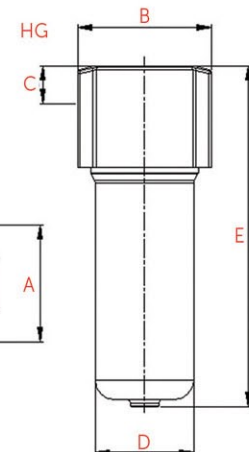
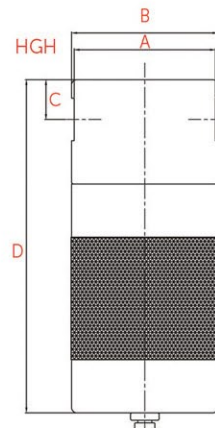
Specifications	Pre Filtering	General Purpose	Oil Removal	Activated Carbon
Grade	P	X	Y	A
Particle Removal (Micron)	5	1	0,01	0,01
Max. Oil carryover at 21°C (mg/m ³)	5	0,5	0,01	0,003
Max. working temperature (°C)	80	80	80	25
Initial pressure loss (mbar)	40	80	100	80
Pressure loss for element change (mbar)	700	700	700	700
Element colour code	WHITE	WHITE	WHITE	METAL SS

NOTES:

- 1) Grade A must not operate in oil saturated conditions.
- 2) Grade A elements should be replaced periodically to suit the applications but must be changed at least every six months.
- 3) Grade A will not remove certain gases including carbon monoxide and carbon dioxide. Please refer to works if in doubt.
- 4) All filters are suitable for use with mineral and synthetic oils.
- 5) The above housings require only one filter element.
- 6) Direction of air flow, inside to out, through filter element. Except grade A
- 7) Manual drain is standard. Electronic timer is optional.

ORDERING:

The complete filter model number contains the size and grade, Example - 1/4" general purpose filter model HG100MX with replacement filter element model M100X.



Activated Carbon Tower

Activated Carbon Tower



Many industries such as the electronic and hospital industries, pharmaceutical industries, food and beverage industries require the removal of the residual oil vapors and odors from the compressed air. Mikropor's solution for this application is the MCT Series activated carbon towers. With standard pre and after filters such as particulate filters, water coalecers and oil coalecers the oil content inside the compressed air can be reduced to 0.01 mg/m³ (0.01 ppm) For applications of EXTREME air quality such as hospital, pharmaceutical industries, or food and beverage industries, the residual oil content may need to be reduced to 0.003 mg/m³ (0.003 ppm). MCT filters such as Mikropor activated carbon G series, GO series, F series filters or MCT activated carbon towers are a must for such kind of applications.

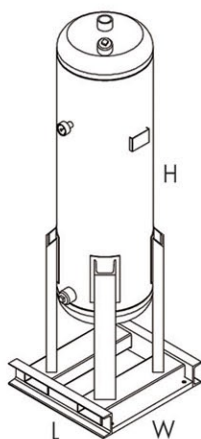
Correction Factor

Operating Pressure (barg)	1	3	5	7	9	10
PSIG	15	44	73	100	131	145
Correction Factor	0,5	0,71	0,87	1	1,12	1,15

Maximum Recommended Operating Temperature	25 °C
Maximum Oil carryover at 21 °C (mg/m ³)	0.003
Maximum Working Pressure	10 barg

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Technical Specifications



Model	Connection Size	Flow Rate (m ³ /h)	Max. working pressure (barg)	Active carbon (kg)	Housing Dimensions (mm)		
					Length	Width	Height
MCT130	1"	130	10	14	347	450	1172
MCT185	1"	185	10	20	450	563	1413
MCT250	1"	250	10	28	430	601	1370
MCT300	1 1/2"	300	10	37	500	649	1336
MCT360	1 1/2"	360	10	37	500	649	1336
MCT440	1 1/2"	440	10	46	500	648	1536
MCT575	1 1/2"	575	10	56	469	604	1733
MCT680	2"	680	10	74	550	540	1936
MCT850	2"	850	10	97	580	600	1957
MCT1000	2"	1000	10	128	657	638	1617
MCT1250	DN80	1250	10	149	708	880	2400
MCT1500	DN80	1500	10	167	708	880	2558
MCT1800	DN80	1800	10	210	810	980	2423
MCT2200	DN80	2200	10	262	810	1100	2600
MCT2700	DN80	2700	10	320	910	1100	2758
MCT3200	DN100	3200	10	356	866	1050	3023
MCT3600	DN100	3600	10	400	866	1050	3237
MCT4400	DN100	4400	10	537	1130	1250	2914
MCT5000	DN150	5000	10	624	1130	1310	3420
MCT6300	DN150	6300	10	754	1230	1410	3365
MCT7200	DN150	7200	10	845	1430	1575	3075
MCT8800	DN150	8800	10	1009	1430	1575	3369
MCT10800	DN200	10800	10	1148	1430	1650	3863

Compressed Air Dryers IS Economy Series

Mikropor Air Dryers

Mikropor knows the importance of high quality compressed air and guarantees to provide customers with the highest available quality air in the market. Using clean, dry air is extremely important for all kinds of air powered applications. Moisture or contamination in the air which will come from the standard compressor outlet will cause complicated system errors. These complications will decrease productivity and may affect the production quality of final products.

Advantages

- Low pressure drop saves compressor power
- Quick start and reaction time provides additional production time
- Every dryer is specially designed according to its flow with the right components to consume lowest energy
- Highly energy-efficient R134a refrigerant is standard across all models
- A state of the art heat exchanger design provides the highest cost saving one in the industry
- Best in class refrigerant compressors consume less energy against competitor dryers
- Pressure switches control the condenser's fan motor for saving energy and letting the system operate at desired 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 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 IS Series Refrigerant Circuit and Insulation

Mikropor only 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 power to the heat exchangers with excellent and extraordinary no loss insulation system. Mikropor dryers supply constant dewpoint at all flow ranges. This perfect insulation idea continues on the refrigeration circuit side as well. With this insulation concept and oversized condensers (even for ultra-high ambient temperatures) Mikropor Refrigerated Air Dryers offer the highest technology with its custom solutions.





Digital Controller (Digi-Pro)

Digi-Pro Digital controller is standard on IS10 - IS190

ESD Digital controller is standard on IS200 - IS260

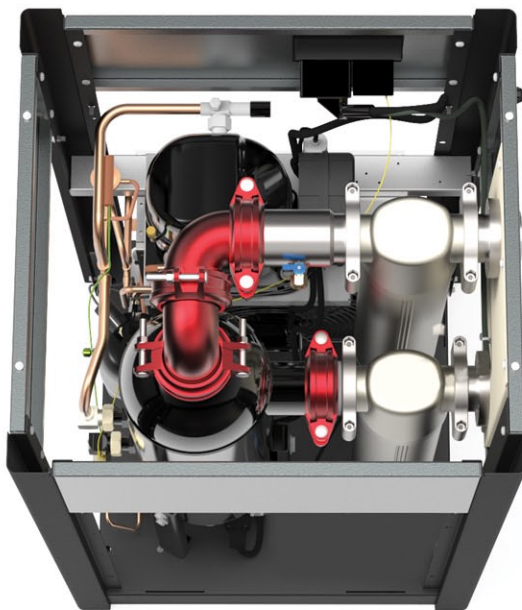


Electrical wires are separated from Refrigerant side

There are very few electrical wires inside the refrigerant side of the dryer. Electrical box has an external cover with access from the outside of the dryer. Therefore there is no need to open dryer panels electrical access.

Compact Design

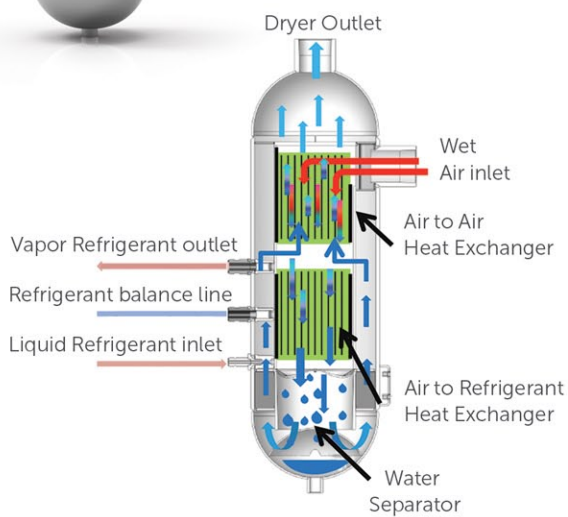
Mikropor dryers are highly reliable, efficient, have small space demands and offer low cost ownership. Mikropor Refrigerated Air Dryers are suitable for the smallest installation spaces. Having two filters integrated into the dryer frame offers a huge advantage to the service techs and end users. The integrated filters save labor time, piping cost and space at the facilities where the Mikropor Dryer is used. The compact size also offers flexibility and economy during their transport.





Aluminum Plate Heat Exchanger is standard

- Very Low Pressure Drop
- Thin Aluminum Plate Thickness
- High Heat Transfer Surface Area
- Strong Due to External Thick Cylindrical Wall
- Water Separator is Optimized for Best Performance



Scroll Compressors

Scroll Compressors are energy efficient and strong against liquid shocks. For energy saving scroll compressors are used for 400 Nm³/h and above IS Dryers.

27



Easy Access

Easy access in to the cooling components in seconds by the help of screw free panels and plastic handles. Easy for Service and more working space. Service techs save time by not removing fasteners.



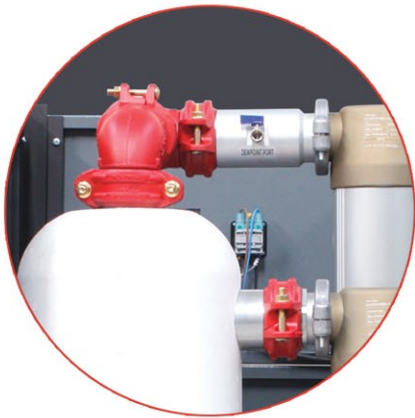


Zero Clearance Compressed Air Filters with High Performance Elements

Compressed Air Filter kit is standard on the Mikropor Dryers. The filter with X Element (coalescing filter for water removal) is used for up to 1 micron particles and the Filter with Y Element (coalescing filter for oil removal) is used to remove oil down to 0.01 ppm. Zero clearance design helps service technicians to replace the element in minutes.

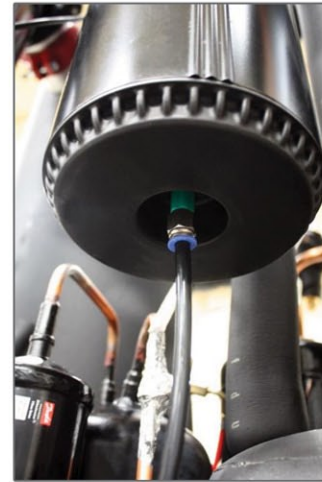
Mikropor Refrigerated Air Dryers are designed by engineers who had received all of the design feedback from field engineers and service technicians. This service friendly design makes Mikropor dryers very unique in the industry. Dryer Filter kit which has 2 elements, 2 automatic drains and 2 viton o-rings helps the customers to operate the dryers at its best performance until next planned maintenance. Replacing drains on the filters is very critical when replacing elements. Because drains may get clogged with dirt and oil over time.





Grooved couplings and fittings

On Compressed Air lines, Grooved couplings and fittings are commonly used in the industry. These couplings increase flexibility on connections, help the service technician to dismantle and assemble pipes easily and quickly



Replacement Filter Element

Pressure drop is a huge concern in compressed air. In many applications high pressure drops will cause a decrease in the pressure at the point of use. Sometimes this low pressure is not enough for the machines or processes to operate correctly. In addition dirt particles and oil in the compressed air system may block the filters quickly. 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. An alarm / warning indicating that the filters are changed periodically is provided by a digital controller on the Mikropor Air Dryer. When this alarm triggers, the filter must be changed to avoid loss of performance and pressure drop.

Excessive Water Droplet Drains

Liquid water droplets coming from the line to the inlet of the dryer is separated by the inlet filter and drained. Filter auto drain have manual valves on it. This allows the system to be depressurized when these filters go to service.



Digital Controller (Digi-Pro)

Mikropor beginning to produce a new generation of air dryers with Digi-Pro series controller. With the Digi-Pro series controllers, air dryers have outstanding technology for both functionality and dynamism, as well as appearance.

New controller design offers to users adjustments with one finger so easier accessibility. Design and dynamism senior technology reaches a top level with touch keys.

The multi-functional display provides an accurate digital dew point display as well as coded alarm monitoring of the refrigerant dryer.

Digital controller with embedded features,

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





ESD Digital Controller

Mikropor Refrigerated Air dryers with ESD Digital controller has a lot of economy features and alarm capabilities.

Refrigeration dryers are usually the most efficient dryer solution for the compressed air applications.

With the help of the highly engineered ESD Mikropor Refrigerated Air dryers will reduce your energy consumption. ESD helps the service techs to monitor many useful parameters on the dryer and guides them to troubleshoot any problem very easily.



ESD is very useful when there is no air coming in to the dryer when the dryer is running. Especially during the nights, weekends and holidays many companies do not stop their dryers although they do not run compressed air. ESD saves a huge amount of money by simply shutting the dryer down automatically when it is not in use.

IS Dryer Technical Specifications

Model	Capacity (m ³ /h)	Voltage	Connection Size	Filter Quantity and Type	Element Type	Pressure Drop (mbar)	Control Type	Max. Working Pressure (bars)	Max. Ambient Temp. (°C)	Max. Inlet Temp. (°C)
IS10	23	230/1/50	1/2"	1 * GKO45X + 1 * GKO45Y	MKO45 KIT	115	Digi-Pro	16	45	50
IS20	38	230/1/50	1/2"	1 * GKO45X + 1 * GKO45Y	MKO45 KIT	170	Digi-Pro	16	45	50
IS30	53	230/1/50	1/2"	1 * GKO45X + 1 * GKO45Y	MKO45 KIT	280	Digi-Pro	16	45	50
IS35	70	230/1/50	1/2"	1 * GKO70X + 1 * GKO70Y	MKO70 KIT	250	Digi-Pro	16	45	50
IS40	100	230/1/50	3/4"	1 * GKO150X + 1 * GKO150Y	MKO150 KIT	100	Digi-Pro	16	45	50
IS50	155	230/1/50	3/4"	1 * GKO150X + 1 * GKO150Y	MKO150 KIT	220	Digi-Pro	16	45	50
IS60	190	230/1/50	3/4"	1 * GKO150X + 1 * GKO150Y	MKO150 KIT	320	Digi-Pro	16	45	50
IS70	210	230/1/50	1 1/2"	1 * GKO500X + 1 * GKO500Y	MKO500 KIT	220	Digi-Pro	16	45	50
IS80	305	230/1/50	1 1/2"	1 * GKO500X + 1 * GKO500Y	MKO500 KIT	320	Digi-Pro	16	45	50
IS90	375	230/1/50	1 1/2"	1 * GKO500X + 1 * GKO500Y	MKO500 KIT	200	Digi-Pro	16	45	50
IS100	495	230/1/50	2"	1 * GKO851X + 1 * GKO851Y	MKO851 KIT	310	Digi-Pro	16	45	50
IS110	623	230/1/50	2"	1 * GKO1210X + 1 * GKO1210Y	MKO1210 KIT	240	Digi-Pro	16	45	50
IS120	930	230/1/50	2"	1 * GKO1210X + 1 * GKO1210Y	MKO1210 KIT	150	Digi-Pro	16	45	50
IS130	1200	230/1/50	2"	1 * GKO1210X + 1 * GKO1210Y	MKO1210 KIT	190	Digi-Pro	16	45	50
IS140	1388	400/3/50	3"	1 * GKO1820X + 1 * GKO1820Y	MKO1820 KIT	350	Digi-Pro	16	45	50
IS150	1800	400/3/50	3"	1 * GKO1820X + 1 * GKO1820Y	MKO1820 KIT	290	Digi-Pro	16	45	50
IS160	2500	400/3/50	3"	1 * GKO2700X + 1 * GKO2700Y	MKO2700 KIT	190	Digi-Pro	16	45	50
IS170	2775	400/3/50	3"	1 * GKO2700X + 1 * GKO2700Y	MKO2700 KIT	350	Digi-Pro	16	45	50
IS180	3330	400/3/50	DN100	Not Included	Not Included	270	Digi-Pro	16	45	50
IS190	3915	400/3/50	DN100	Not Included	Not Included	380	Digi-Pro	16	45	50
IS200	5085	400/3/50	DN100	Not Included	Not Included	320	ESD-3	16	45	50
IS210	5850	400/3/50	DN100	Not Included	Not Included	350	ESD-3	16	45	50
IS220	6975	400/3/50	DN150	Not Included	Not Included	320	ESD-3	16	45	50
IS230	7875	400/3/50	DN150	Not Included	Not Included	350	ESD-3	16	45	50
IS240	9000	400/3/50	DN150	Not Included	Not Included	350	ESD-3	16	45	50
IS250	10500	400/3/50	DN200	Not Included	Not Included	350	ESD-3	16	45	50
IS260	12500	400/3/50	DN200	Not Included	Not Included	350	ESD-3	16	45	50

CORRECTION FACTORS FOR IS AIR DRYERS								
Inlet Temperature (°C)	30	35	40	45	50	60	-	-
F1	1.29	1	0.92	0.78	0.65	0.45	-	-
Ambient Temperature (°C)	20	25	30	35	40	50	-	-
F2	1.05	1	0.98	0.93	0.84	0.7	-	-
Pressure (Bar)	4	6	7	8	10	12	14	16
F3	0.80	0.94	1	1.04	1.11	1.16	1.22	1.25

Example for choosing the correct Dryer;

If a compressor delivers 200 m³/h at 6 bars the dryer inlet temperature is 40°C and ambient temperature is 30°C Please choose your Dryer as follows;

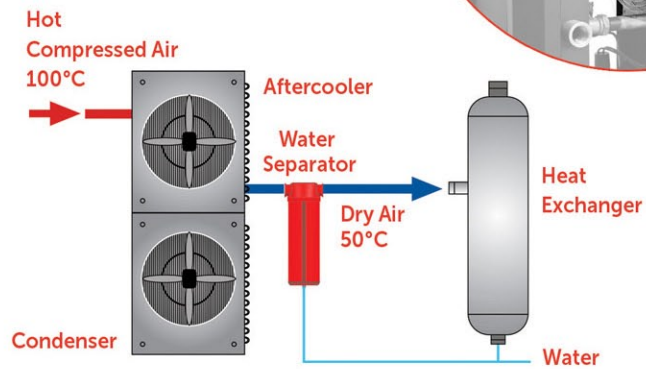
$$200 / 0.94 / 0.92 / 0.98 = 236 \text{ m}^3/\text{h}$$

The correct Dryer for this application is IS80

High Temperature Air Dryer



Most of compressor manufacturers do not use aftercooler on their piston type compressors. Therefore compressed air exits the compressor at about 100°C temperature. Mikropor High Temperature Dryer has an aftercooler to reduce the inlet temperature.



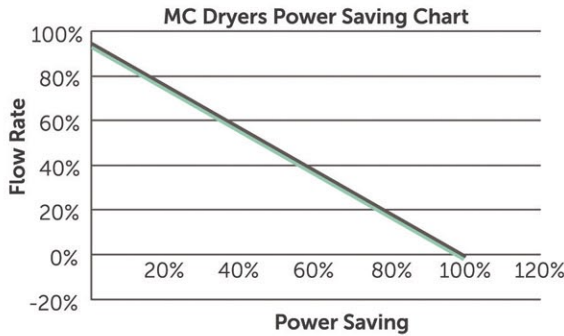
Model	Capacity (m³/h)	Voltage	Connection Size (BSP)	Refrigerant Gas	Dimensions (mm)			Max. Working Pressure (bars)	Max. Ambient Temp. (°C)	Max. Inlet Temp. (°C)
					Width	Length	Height			
MH31	31	230/1/50	1/2"	R-134a	445	445	955	16	45	104
MH52	52	230/1/50	1/2"	R-134a	445	445	955	16	45	104
MH75	75	230/1/50	1/2"	R-134a	445	445	955	16	45	104
MH106	106	230/1/50	3/4"	R-134a	445	445	955	16	45	104
MH160	160	230/1/50	3/4"	R-134a	510	625	910	16	45	104
MH212	212	230/1/50	3/4"	R-134a	510	625	910	16	45	104

CORRECTION FACTORS FOR MH AIR DRYERS												
Pressure (Bar)	4.1	5	6	7	7.9	8.5	10	11	12	13	14	16
Factor Pressure : F1	0.70	0.75	0.80	0.83	0.86	0.90	0.93	0.96	1.00	1.10	1.12	1.15
Ambient Temperature (°C)	4	10	16	24	29	35	38	40	46	49	-	-
Factor Ambient : F2	1.10	1.10	1.10	1.10	1.07	1.03	1.00	0.96	0.82	0.55	-	-
Inlet Temperature (°C)	4	10	16	21	26	32	38	65	82	93	98	104
Factor Inlet : F3	1.40	1.40	1.40	1.40	1.35	1.30	1.27	1.06	1.00	0.85	0.78	0.75
Dewpoint (°C)	3.3	5.0	7.2	10.0	12.8	15.5						
Factor Dewpoint : F4	0.65	0.73	0.80	1.00	1.10	1.22						

Cycling (Thermal Mass) Air Dryer

Save the ENERGY

Mikropor Cycling Dryers cool a special liquid and stores it in a cold tank having 1°C temperature. This liquid is cycled in the dryer to cool down compressed air. This technology helps the customers to consume much less ENERGY when the dryer gets 5-95% air flow. The Mikropor Cycling dryer non-cycling or frequency driven dryers when energy consumption is concerned.



All components that are exposed to water-glycol mixture are either stainless steel (Heat exchanger, Tank, Pump) or Aluminum (Dryer heat exchanger) Therefore there is no risk of rust.



Technical Specifications

Model	Capacity (m³/h)	Voltage	Connection Size	Refrigerant Gas	Dimensions (mm)			Max. Working Pressure (bars)	Max. Ambient Temp. (°C)	Max. Inlet Temp. (°C)
					Width	Length	Height			
MC318	318	230/1/50	1 1/2"	R-134a	590	710	1215	16	45	50
MC370	370	230/1/50	1 1/2"	R-134a	590	710	1215	16	45	50
MC425	425	230/1/50	1 1/2"	R-134a	590	710	1215	16	45	50
MC530	530	400/3/50	1 1/2"	R-134a	845	745	1270	16	45	50
MC690	690	400/3/50	2"	R-134a	845	745	1270	16	45	50
MC850	850	400/3/50	2"	R-134a	845	745	1270	16	45	50
MC1060	1060	400/3/50	2"	R-134a	1165	810	1490	16	45	50
MC1487	1487	400/3/50	3"	R-134a	1165	810	1490	16	45	50
MC1805	1805	400/3/50	3"	R-134a	1165	810	1490	16	45	50
MC2125	2125	400/3/50	3"	R-134a	1165	445	1885	16	45	50
MC2550	2550	400/3/50	3"	R-134a	1165	445	1885	16	45	50
MC3400	3400	400/3/50	DN100	R-134a	1165	1570	1985	16	45	50
MC4250	4250	400/3/50	DN100	R-134a	1165	1570	1985	16	45	50
MC5100	5100	400/3/50	DN150	R-134a	1225	2000	1985	16	45	50
MC6375	6375	400/3/50	DN150	R-134a	1225	2190	1985	16	45	50

Example for choosing the correct Dryer:

If an air compressor delivers 200 Nm³/h at 5 bars, the dryer inlet temperature is 45°C and ambient temperature is 30°C. Please choose your Dryer Model as follows; $200 / 0,85 / 0,72 / 0,93 = 351 \text{ Nm}^3/\text{h}$ The correct Dryer Model for this application is MC370.

CORRECTION FACTORS FOR MC AIR DRYERS									
Inlet Temperature (°C)	30	35	40	45	55	60	65	-	
F1	1.18	1.00	0.85	0.72	0.54	0.47	0.38	-	
Ambient Temperature (°C)	22	25	30	35	45	50	-	-	
F2	1.09	1.00	0.93	0.88	0.74	0.66	-	-	
Pressure (Barg)	3.5	4.1	5	7	8.5	10	12	14	
F3	0.75	0.77	0.85	1.00	1.10	1.16	1.25	1.3	

High Pressure Series



Mikropor has manufactured unique and patented Refrigerated Air Dryers since 2001. Durable, compact and efficient Mikropor dryers are quickly becoming the global standard for performance.

Heat Exchanger design is unique and patented.

The Mono-Block Heat Exchanges are constructed with thick, steel tubes specially treated to resist corrosion.

HIGH PRESSURE 40 Bar

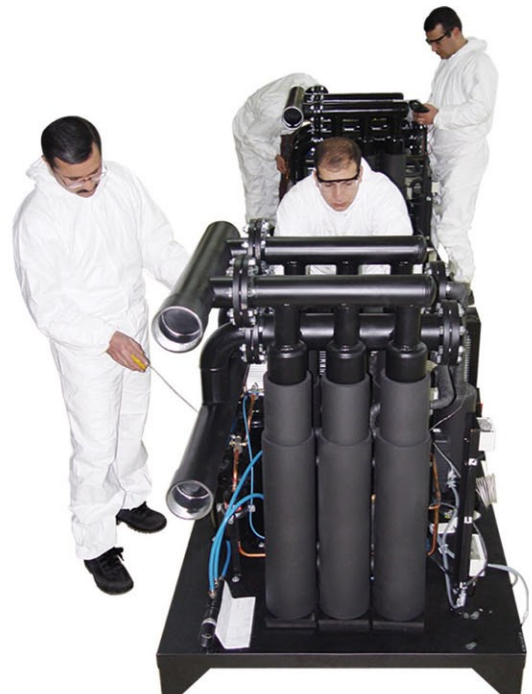
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VT33HP-VT2923HP HIGH PRESSURE SERIES

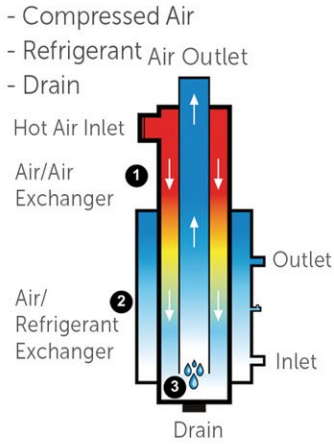
The heavy-duty steel construction makes it the most reliable, long lasting heat exchanger available. Specially designed louvered copper pleats are welded to the steel tubes with a proprietary technology. This design achieves a hyper-efficient 100% contact between the air and refrigerant circuits delivering state-of-art performance and great cooling efficiency.

The state-of-art Mono-Block design features very low differential pressure delivering significant energy savings. The Mono-Block Heat-Exchanger is compact and allows the dryer to be smaller and reduces the space required for the dryer.

Mikropor offers a variety of Mono-Block dryers equipped with the Mono-Block Heat-Exchanger to meet a full range of capacity and power requirements.



**Standard
3 IN 1 Mono block
Steel Heat Exchanger**



**PISTON
COMPRESSOR**



Fin Exchanger

- High surface of exchange from 10 to 20 times larger than the competition
- Direct transfer of the cold from the refrigerant to the compressed air
- No exterior connection between economizer and separator
- Strong and robust built heat exchanger
- Special anti-corrosion treatment
- Perfect thermal insulation
- Small volume of refrigerant

The Separator Efficiency

- Double centrifugation due to the bottom fin
- Reserved direction for the compressed air
- Gravity effect to the condensed water
- Special anti-return system
- Separator integrated to the system



**5 Year
Heat Exchanger
Guarantee**

Frigorific Circuit

- Two valve regulation system (thermal and by-pass), allowing to fill properly the exchanger and giving then a max. temperature to the exchanger
- High quality security test of potential leakage
- Use of Tecumseh hermetic compressor as standard
- High quality, long lasting components
- Quick start and reaction time

SCROLL COMPRESSOR

- Better coefficient of power
- Less energy consumption
- Higher resistance to liquid shocks



Digital controllers



High Pressure Series

Model	Capacity		Condenser Air Flow (m ³ /h)	Fittings (BSP)	Voltage	Power (kw)	Pressure Drop (Bar)	Dimensions (mm)		
	(m ³ /h)	(scfm)						Width	Length	Height
VT 33HP	33	19	100	3/8"	230/1/50	0.25	0.01	570	440	490
VT 38HP	38	22	370	3/8"	230/1/50	0.25	0.02	570	440	490
VT 54HP	54	32	340	3/8"	230/1/50	0.25	0.03	570	440	490
VT 87HP	87	51	370	3/4"	230/1/50	0.28	0.02	760	490	530
VT 135HP	135	79	340	3/4"	230/1/50	0.35	0.05	760	490	530
VT 190HP	190	112	410	3/4"	230/1/50	0.58	0.06	760	490	530
VT 218HP	218	128	800	3/4"	230/1/50	0.66	0.08	760	490	530
VT 256HP	256	151	980	1"	230/1/50	0.8	0.13	780	575	730
VT 355HP	355	209	980	1"	230/1/50	1.1	0.16	780	575	730
VT 412HP	412	242	980	1"	230/1/50	1.3	0.22	780	575	730

NOTE: 115V/1/60 Hz. is Optional

Model	Capacity		Condenser Air Flow (m ³ /h)	Fittings (BSP)	Voltage	Power (kw)	Dimensions (mm)		
	(m ³ /h)	(scfm)					Width	Length	Height
VT 461HP	461	271	980	1 1/2"	230/1/50	1.3	620	730	1040
VT 577HP	577	339	980	1 1/2"	230/1/50	1.3	810	760	1300
VT 705HP	705	415	980	1 1/2"	230/1/50	1.4	810	760	1300
VT 904HP	904	532	2250	1 1/2"	230/1/50	1.9	810	760	1300

NOTE: 115V/1/60 Hz. or 400-440V/3/50 - 60 Hz. is Optional

Model	Capacity		Condenser Air Flow (m ³ /h)	Fittings (BSP)	Voltage	Power (kw)	Dimensions (mm)		
	(m ³ /h)	(scfm)					Width	Length	Height
VT 1149HP	1149	676	2250	2 1/2"	400-440/3/50-60	2.4	870	770	1500
VT 1305HP	1305	768	2250	2 1/2"	400-440/3/50-60	2.6	870	770	1500
VT 1648HP	1648	969	2250	2 1/2"	400-440/3/50-60	2.6	870	770	1500
VT 1873HP	1873	1102	5000	2 1/2"	400-440/3/50-60	3	1180	1070	1600
VT 2309HP	2309	1358	4800	2 1/2"	400-440/3/50-60	4.3	1180	1070	1600
VT 2444HP	2444	1438	7000	2 1/2"	400-440/3/50-60	5	1180	1070	1600
VT 2932HP	2932	1725	7000	DN60	400-440/3/50-60	5.6	1180	1070	1600

REFRIGERANT: R134a Flow given at atmospheric pressure at 20°C (ISO 1217) in accordance with normes ISO 7183 - 8573-1 and Pneurop 6611 - Class 4-7 bar -35°C IN -25°C ambient

Correction Factor

(Bar)	20	25	30	35	40	45	50	-	-	-	-
Factor Pressure F1	1.19	1.10	1.07	1.04	1.02	1	0.98	-	-	-	-
Ambient Temp. (°C)	-	-	-	-	20	25	30	35	40	42	-
Factor R134a F2	-	-	-	-	0.93	1	1.07	1.15	1.22	1.27	-
Inlet Temp. (°C)	-	-	-	-	30	35	40	45	50	55	60
Factor Inlet F3	-	-	-	-	0.83	1	1.18	1.38	1.59	1.83	2.04

Maximum Pressure (50 Bar)
Nominal Working Pressure (40 Bar)

Automatic Drain
Pneumatic operated membrane valve

CD	: Condensate drain
SI	: Ambient temperature until -20°C
HDD	: Ambient temperature until +60°C
REP	: Alarm report
E	: Water condenser
DC	: Digital controller
MCP	: Micro processor
MDTOT	: Zero loss drain

OPTIONS: Just put following suffix requested after the reference number of the dryer.
Example: VT1648HP**DC**

ISO Standards

AIR LINE DESIGN	AIR LINE DESIGN 1	APPLICATION	ISO 8573.1: 2010 CLASS
<p>COMPRESSOR</p> <p>AFTER-COOLER</p> <p>MOISTURE SEPARATOR</p> <p>RECEIVER TANK</p> <p>EXTERNAL AUTO DRAIN</p>	<p>COMPRESSED AIR FILTERS</p>	SIMPLE	2.-3
	<p>COMPRESSED AIR FILTERS</p> <p>REFRIGERANT AIR DRYER</p> <p>COMPRESSED AIR FILTERS</p>	GENERAL PURPOSE	1.4.1
	<p>COMPRESSED AIR FILTERS</p> <p>REFRIGERANT AIR DRYER</p> <p>COMPRESSED AIR FILTERS</p>	ODORLESS	1.4.1
	<p>COMPRESSED AIR FILTERS</p> <p>DESICCANT DRYER</p> <p>COMPRESSED AIR FILTERS</p>	CRITICAL	1.2.1 (-40 °C) 1.1.1 (-70 °C)

PURITY CLASS	ISO8573.1 : 2010 COMPRESSED AIR QUALITY STANDARD							
	SOLID PARTICULATE				WATER		OIL	
	Max. Number of Particles per m ³			Particle Size (micron)	Concentration (mg/m ³)	Vapour Pressure Dewpoint	Liquid (g/m ³)	Total oil (Aerosol, Liquid and Vapour) (mg/m ³)
	0.1- 0.5 micron	0.5 - 1 micron	1.0 - 5 micron					
0	As specified and determined by equipment user and supplier							
1	≤20000	≤400	≤10	-	-	≤-70°C	-	≤0.01
2	≤400000	≤6000	≤100	-	-	≤-40°C	-	≤0.1
3	-	≤900000	≤1000	-	-	≤-20°C	-	≤1
4	-	-	≤10000	-	-	≤+3°C	-	≤5
5	-	-	≤100000	-	-	≤+7°C	-	-
6	-	-	-	5	5	≤+10°C	-	-
7	-	-	-	40	10	-	0.5	-
8	-	-	-	-	-	-	5	-
9	-	-	-	-	-	-	10	-

For Solid Particles	For Water	For Oil
P - Class 3	Mikropor Air Dryers are Class 3	P - Class 4
X - Class 3		X - Class 3
Y - Class 1	Mikropor Desiccant Air Dryers are A - Class 1	Y - Class 1
A - Class 1		A - Class 1

Heatless Desiccant Air Dryers

Heatless Desiccant Air Dryers

Mikropor MDA Heatless Desiccant Air Dryers provide constant $-40\text{ }^{\circ}\text{C}$ ($-70\text{ }^{\circ}\text{C}$ Optional) pressure 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 design so the dryer operates perfectly through the service life of the dryer. MDA 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.

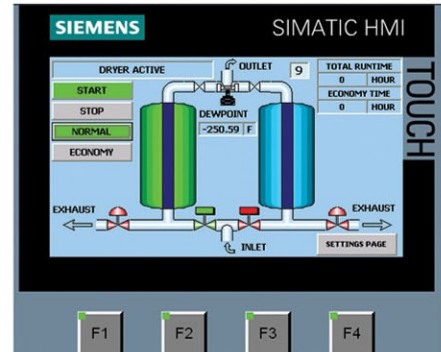


This saves
ENERGY
and helps
the world
become
more
"GREEN"



Principle of Operation

The twin tower design allows for continuous adsorption of water vapor from compressed air by using the hygroscopic 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 super - dry air from the outlet at near atmospheric pressure. The purge flow rate is adjustable to suit the specific outlet conditions (desired dewpoint) The super dry air flows in a counter direction through the wet bed, sweeping all the water vapour previously absorbed by the desiccant. MDA ensures 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 take place. Purge flow and de-pressurization are in downward direction, counter flow to the drying air flow.



PLC is standard

MDA Desiccant Dryers has an extremely reliable electronic controller for optimal performance over the lifetime of the dryers. Touch screen PLC is capable of showing the cycles as well as the valves which operate in real time. This is also capable of showing dewpoint. User friendly multi-lingual PLC. PLC helps the end users understand the operation system and issues easily.



Activated Alumina

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

Technical Specifications

Model	Connection Size	Inlet Flow Rate		Voltage	Max. working pressure (bar)	Pressure Drop (mbar)	Total Weight (Packed) (Kg)	Active Alumina (Kg)	Dimensions (mm)		
		(m ³ /h)	(scfm)						Length	Width	Height
MDA 130	1"	130	80	230/1/50-60	10	≤ 130	160	40	600	814	1312
MDA 185	1"	185	100	230/1/50-60	10	≤ 130	180	54	600	808	1566
MDA 250	1"	250	150	230/1/50-60	10	≤ 130	200	75	760	772	1580
MDA 300	1 1/2"	300	200	230/1/50-60	10	≤ 130	250	100	690	900	1558
MDA 360	1 1/2"	360	215	230/1/50-60	10	≤ 130	250	100	690	900	1558
MDA 440	1 1/2"	440	250	230/1/50-60	10	≤ 130	340	125	698	900	1759
MDA 575	1 1/2"	575	300	230/1/50-60	10	≤ 130	500	151	680	900	1991
MDA 680	2"	680	400	230/1/50-60	10	≤ 130	535	202	680	960	2216
MDA 850	2"	850	500	230/1/50-60	10	≤ 130	750	264	857	1016	2277
MDA 1000	2"	1000	600	230/1/50-60	10	≤ 130	755	357	1010	1075	2386
MDA 1250	DN80/PN16	1250	700	230/1/50-60	10	≤ 130	1000	404	1100	1294	2413
MDA 1500	DN80/PN16	1500	800	230/1/50-60	10	≤ 130	1050	454	1010	1300	2547
MDA 1800	DN80/PN16	1800	1000	230/1/50-60	10	≤ 130	1215	566	1110	1513	2479
MDA 2200	DN80/PN16	2200	1250	230/1/50-60	10	≤ 130	1550	708	1110	1460	2793
MDA 2700	DN80/PN16	2700	1500	230/1/50-60	10	≤ 130	1890	852	1252	1533	2831
MDA 3200	DN100/PN16	3200	1750	230/1/50-60	10	≤ 130	2240	954	1212	1653	3054
MDA 3600	DN100/PN16	3600	2000	230/1/50-60	10	≤ 130	2330	1070	1210	1653	3268
MDA 4400	DN100/PN16	4400	2500	230/1/50-60	10	≤ 130	3000	1436	1535	1905	2910
MDA 5000	DN150/PN16	5000	3000	230/1/50-60	10	≤ 130	3180	1670	1714	1843	3382
MDA 6300	DN150/PN16	6300	4000	230/1/50-60	10	≤ 130	3450	2016	1693	2114	3328
MDA 7200	DN150/PN16	7200	4500	230/1/50-60	10	≤ 130	3600	2446	1795	2518	3047
MDA 8800	DN150/PN16	8800	5000	230/1/50-60	10	≤ 130	3850	2906	1795	2518	3341
MDA 10800	DN200/PN16	10800	6000	230/1/50-60	10	≤ 130	4200	3354	1875	2583	3747
MDA 12500	DN200/PN16	12500	7360	230/1/50-60	10	≤ 130	6470	3894	1935	2545	4175

EFFICIENCY RATING	X PRE FILTER	Y PRE FILTER	P AFTER FILTER	For special requirements please contact our Technical Department
		1 micron particle removal and 0.5 mg/m ³ oil removal	0.01 micron particle removal and 0.01 mg/m ³ oil removal	

Correction Factor

(Bar)	4.5	5	6	7	8	9	10	All desiccant dryers are designed according to Pneurop conditions as per ISO7183
Factor Pressure F1	0.69	0.75	0.88	1	1.12	1.25	1.37	
Inlet Temperature (°C)	20	25	30	35	40	45	50	
Factor Inlet F2	1	1	1	1	0.80	0.73	0.59	

Pressure dewpoint	-40 °C / -70 °C (optional)
Nominal inlet temperature	35 °C
Nominal working pressure	7 bar
Maximum inlet temperature	50 °C
Maximum working pressure	10 bar
Maximum ambient temperature	50 °C

ORDERING:

If a compressor delivers 850 Nm³/h at 9 barg pressure and 45°C inlet temperatures please choose your dryer as follows; $850/1.25/0.73 = 931 \text{ Nm}^3/\text{h}$
The correct Dryer for this is MDA1000

Mikropor MDA Heatless Desiccant Air Dryers provide constant -40 °C (-70 °C is optional) pressure dew point. These dryers are designed to supply clean and dry compressed air for critical applications. As pre and after-filters are supplied along with Mikropor Heatless Air Dryers to keep the air stream clean and maintain the integrity of the desiccant medium.

Heated Desiccant Air Dryers

Heated Desiccant Air Dryers

A centrifugal blower and high efficiency heater eliminates the use of valuable compressed air to be used for desiccant regeneration.

The completely automatic drying system uses blower to pull ambient Air and pass it through the heater. This hot Air stream flows opposite to drying flow direction. Hot Air above 200 °C regenerates the moisture inside desiccant bed and strips it completely of all moisture. The advanced control system monitors the dew point and adjusts the heating / regeneration accordingly thereby providing valuable energy savings.

- Dew point monitoring and control
- Computer Control - Display Status
- Display Alarms - Display Pressure
- Remote Start/Stop - Low Pressure Alarm
- Minimum Pressure monitoring valve
- High pressure switches and alarms
- Externally heated or heatless dryer functions integrated to the MBP dry



Correction Factor

(Bar)	4.5	5	6	7	8	9	10
Factor Pressure F1	0.69	0.75	0.88	1	1.12	1.25	1.37
Inlet Temp. (°C)	20	25	30	35	40	45	-
Factor Inlet F2	1	1	1	1	0.80	0.73	-

Pressure dewpoint	-40 °C
Nominal inlet temperature	35 °C
Nominal working pressure	7 bar
Maximum inlet temperature	45 °C
Maximum working pressure	10 bar
Maximum ambient temperature	40 °C

Technical Specifications

Model	Capacity (m³/h)	Connection Size	Pressure Drop (mbar)	Max. working pressure (bar)	Voltage	Average Power (kw)	Fuse Amper	Activated Alumina (Kg)	Dimensions (mm)		
									Width	Length	Height
MBP 850	850	2"	≤ 130	10	230/1/50	9,4	40	264	1290	1180	2299
MBP 1000	1000	2"	≤ 130	10	230/1/50	9,4	40	357	1200	1310	2415
MBP 1250	1250	DN80	≤ 130	10	230/1/50	12	50	404	1610	1270	2468
MBP 1500	1500	DN80	≤ 130	10	230/1/50	12	50	454	1610	1270	2563
MBP 1800	1800	DN80	≤ 130	10	230/1/50	14,5	63	566	1563	1515	2479
MBP 2200	2200	DN80	≤ 130	10	230/1/50	17,5	63	708	1563	1455	2789
MBP 2700	2700	DN80	≤ 130	10	230/1/50	21,4	100	852	1615	1514	2836
MBP 3200	3200	DN100	≤ 130	10	230/1/50	21,4	100	954	1710	1660	3054
MBP 3600	3600	DN100	≤ 130	10	230/1/50	31,1	125	1070	1710	1660	3268
MBP4400	4400	DN100	≤ 130	10	230/1/50	36,1	125	1436	1975	2492	2910
MBP 5000	5000	DN125	≤ 130	10	230/1/50	39,4	160	1670	2045	2560	3382
MBP 6300	6300	DN150	≤ 130	10	230/1/50	49,4	200	2016	2090	2963	3328
MBP 7200	7200	DN150	≤ 130	10	230/1/50	49,4	200	2446	2020	3363	3047
MBP 8800	8800	DN150	≤ 130	10	230/1/50	72,3	260	2906	2020	3363	3341
MBP 10800	10800	DN200	≤ 130	10	230/1/50	78,7	320	3354	2492	3481	3765

Ice Cube (IC) Static Air Dryers

Static Air Dryers

ICE CUBE dryers have static condensers without a cooling fan. Therefore they are energy efficient with low noise level and compact design. Ice Cube dryers also have long service life and low maintenance needs.

Advantages

- Superior Energy Saving due to static condenser
- Efficient refrigerant compressor
- Low pressure drop
- +7°C dew point
- No condenser blockage due to wide condenser design
- Standard Expansion valve.
- 3 in 1 heat exchanger design (air/air – air/refrigerant – water separator in 1 block)
- Easy to service Auto-drain
- No loss of compressed air (Zero Loss)
- Less refrigerant gas used than equivalents, enviromentally friendly



Applications

Ideal for hospitals and laboratories with compact design and low noise needs. **ICE CUBE** dryers are also suitable for other applications which need dry air with a low price.

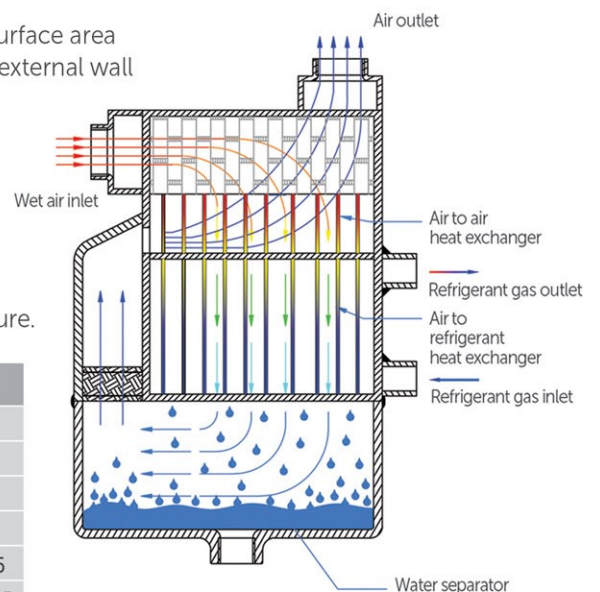
Technical Specifications

Model	Capacity (m ³ /h)	Voltage	Connection Size	Absorbed Power (kw)	Max. Amp.	Fuse Amp.	Refrigerant Gas	Pressure Drop	Max. Working Pressure (bars)	Max. Ambient Temp. (°C)	Max. Inlet Temp. (°C)
IC10	50	230/1/50	1/2"	0.28	2.98	4	R-134a	140	16	43	50
IC20	70	230/1/50	1/2"	0.31	2.08	4	R-134a	170	16	43	50
IC30	100	230/1/50	1/2"	0.43	4.8	8	R-134a	200	16	43	50
IC40	130	230/1/50	3/4"	0.56	4.8	8	R-134a	180	16	43	50

Model	Length (mm)	Width (mm)	Height (mm)	Weight (kg)
IC10	396	366	520	21
IC20	396	366	520	23
IC30	396	366	520	25
IC40	396	366	758.5	34

Aluminum Plate Heat Exchanger

- High heat transfer surface area
- Strong due to thick external wall
- Low pressure drop
- Water Separator is optimized for the best performance



Correction Factor

For maximum flow rate, multiply model flow rate show in the table below by the correction factor corresponding to the working pressure.

CORRECTION FACTORS FOR IC STATIC AIR DRYERS									
Inlet Temperature (°C)	30	35	40	45	50	-	-	-	-
F1	1.29	1.00	0.92	0.78	0.65	-	-	-	-
Ambient Temperature (°C)	20	25	30	35	40	43	-	-	-
F2	1.05	1	0.98	0.93	0.84	0.81	-	-	-
Pressure (Barg)	4	6	7	8	10	12	14	16	-
F3	0.80	0.94	1.00	1.04	1.11	1.16	1.22	1.25	-

PSA Nitrogen Generator

PSA Nitrogen Generator Serie

Pressure Swing Adsorption (PSA) type Nitrogen Generation system is used to separate and enrich Nitrogen from Oxygen employs **CMS (Carbon Molecular Sieve)** for adsorbent. Carbon Molecular Sieve (CMS) adsorbs Oxygen and Water Vapor molecules under certain pressure while allowing Nitrogen to pass through.

The Nitrogen Generator is a two-bed adsorber system.

The Nitrogen Generator consists of two adsorber vessels filled with CMS, a valve assembly, air filters, main pressure regulator, and a product receiver tank. Clean and dry air is directed to one of the adsorber beds where oxygen and water vapor is adsorbed faster than nitrogen in the pore structure of the CMS, thus increasing the nitrogen purity of the product gas stream to the desired level (95 – 99.999% as required by customer). This product flows out of the top of the adsorber bed, through the valve, and into the product receiver at a pressure slightly below the feed air pressure

Applications:

- Metal industry,
- Chemical industry
- Purge
- Plastic industry
- Charge nitrogen gas in tires
- Production process and storage of food

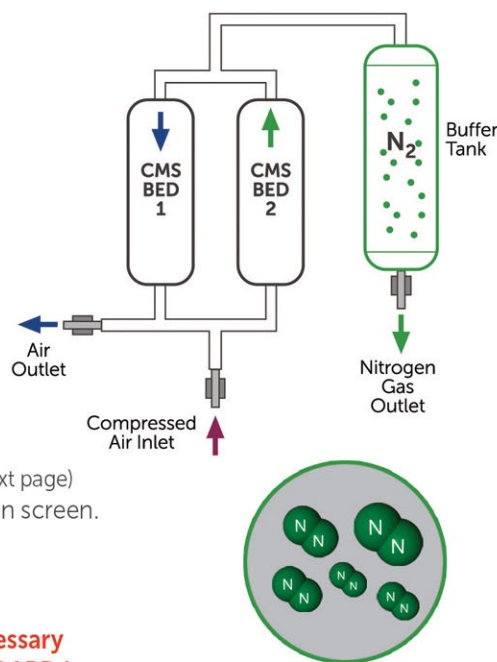
Optional:

- Oxygen Analyzer
- Flow Meter
- Dew Point Sensor (pic.3 see next page)
- Nitrogen purity can be seen on screen.

Features :

NOTE: Mikropor provides necessary Nitrogen Buffer Tank as STANDARD !

- Simple structure, compact design, full automated operation
- **7/24** Nitrogen production in your own place. (pic.1)
- **Touch Screen PLC** for controlling the complete system (pic.2 see next page)
- PLC Screen for Monitoring and visualization the progress
- Rapid start-up and Safety system
- Due to well design of silencer, low noise levels during depressurization and purge (pic.4 see next page)
- Durable piston valves for **long-life** operation (pic.5 see next page)
- On demand production, **low cost**
- High performance. Design the purity and capacity of nitrogen gas meeting to customer's requirements. **(Nitrogen Purity 95%~99.999% is available)**
- Minimum maintenance cost. replace filter element periodically only and get normal service for the compressor



7/24 Own Nitrogen production
(pic.1)

Low Noise Silencer (pic.4)



Touch Screen PLC (pic.2)



Dew point Sensor (pic.3)



Long Life Piston Valve (pic.5)



Air Filter

Reference Conditions

Inlet Compressed Air Pressure	Outlet Nitrogen Pressure	Ambient Temperature	Inlet air dewpoint	
			3°C (under 99.5% purity)	-40°C (above 99.5% purity)
7.5 Bar(g)	6 Bar(g)	25°C	Refrigerant air dryer and activated carbon filter is required	Desiccant air dryer and activated carbon filter is required

Model	Free Nitrogen Delivery @ following purity level (Nm ³ /h)									
	95%	97%	98%	99%	99.5%	99.90%	99.95%	99.99%	99.999%	
MNG-10	2,7	2,2	1,9	1,5	1	0,8	0,7	0,5	0,2	Modular
MNG-20	4,4	3,5	3,1	2,4	2	1,3	1,1	0,8	0,4	
MNG-35	8,1	6,5	5,6	4,4	3,5	2,3	2,0	1,4	0,7	
MNG-60	13,5	10,8	9,4	7,3	6	3,8	3,4	2,4	1,2	
MNG-95	21,2	17,0	14,8	11,5	9,5	6,0	5,3	3,7	1,9	
MNG-120	28,2	22,5	19,6	15,3	12	8,0	7,1	5,0	2,5	Twin Tower
MNG-150	35,1	28,1	24,4	19,0	15	10,0	8,8	6,2	3,1	
MNG-250	57,0	45,5	39,6	30,8	25	16,2	14,3	10,0	5,0	
MNG-330	75,1	60,0	52,2	40,6	33	21,4	19,0	13,2	6,6	
MNG-450	101,4	81,0	70,5	54,9	45	28,9	25,5	17,8	8,9	
MNG-510	114,4	91,4	79,6	62,0	51	32,6	28,8	20,1	10,0	
MNG-570	128,1	102,4	89,1	69,3	57	36,5	32,2	22,5	11,2	
MNG-730	163,8	130,9	114,0	88,7	73	46,6	41,2	28,8	14,4	
MNG-910	204,1	163,1	142,0	110,5	91	58,1	51,4	36,0	18,0	
MNG-1110	248,2	198,3	172,6	134,3	111	70,7	62,5	43,6	21,8	
MNG-1230	275,7	220,3	191,8	149,2	123	78,5	69,4	48,4	24,2	
MNG-1370	307,5	245,6	213,8	166,4	137	87,5	77,4	54,0	27,0	
MNG-1820	406,6	324,8	282,8	220,1	182	115,7	102,3	71,4	35,7	
MNG-2050	458,5	366,3	318,9	248,2	205	130,5	115,4	80,5	40,2	
MNG-2950	660,6	527,8	459,5	357,6	295	188,0	166,3	116,0	58,0	
MNG-3540	792,0	632,8	550,9	428,7	354	225,4	199,4	139,1	69,5	
MNG-4160	931,0	743,7	647,4	503,8	416	265,0	234,3	163,5	81,7	
MNG-5560	1241,7	992,0	863,6	672,1	556,0	353,4	312,5	218,1	109,0	
MNG-9170	2048,0	1636,1	1424,3	1108,4	917,0	582,9	515,5	359,7	179,7	
MNG-11200	2501,2	1998,3	1740,0	1353,8	1120,0	712,0	629,6	439,4	219,4	

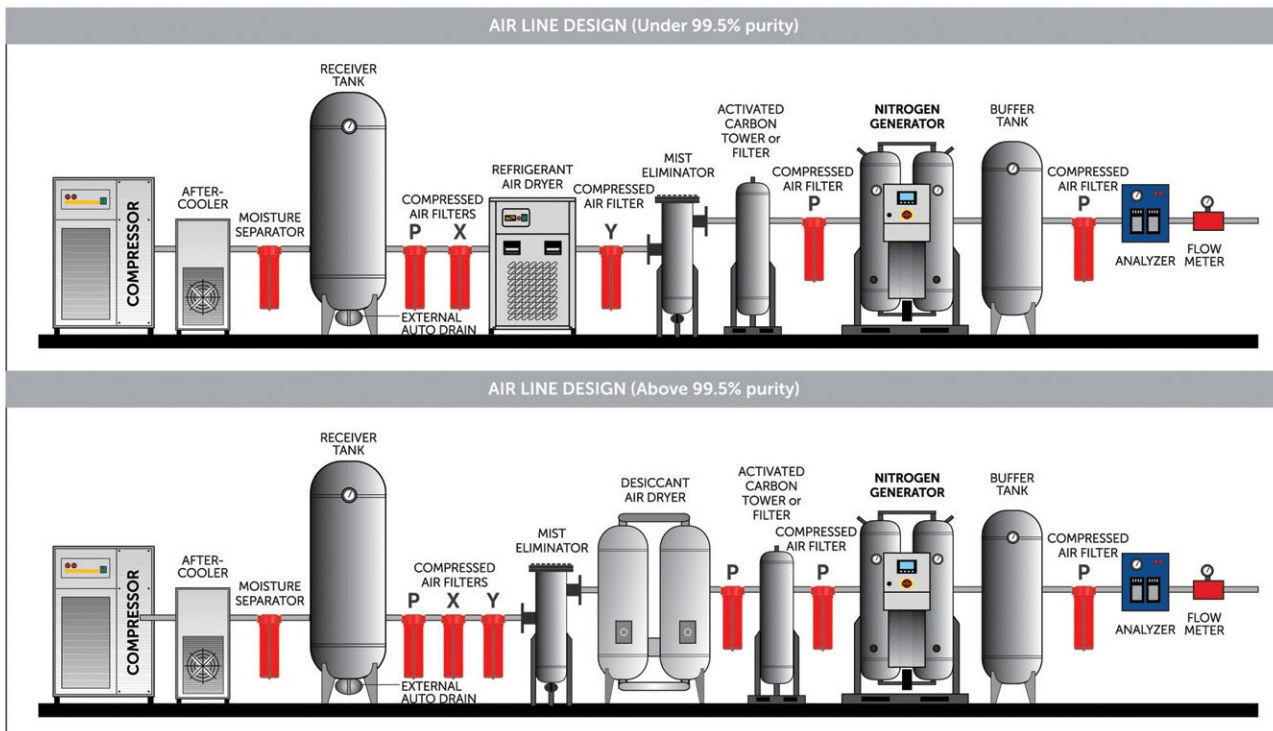
Technical Specifications

N2 NITROGEN

Model	Buffer Tank	Connections		Dimensions (mm)		
		Air Inlet	Nitrogen Outlet	Length	Width	Height
MNG-10	26 L	1/2"	1/2"	670	500	1130
MNG-20	35 L	1/2"	1/2"	1043	596	1284
MNG-35	52 L	1/2"	1/2"	1082	689	1278
MNG-60	70 L	1/2"	1/2"	1100	890	1433
MNG-95	97 L	1/2"	1/2"	1659	760	1485
MNG-120	126 L	1/2"	1/2"	1634	890	1442
MNG-150	151 L	1/2"	1/2"	1634	890	1639
MNG-250	280 L	3/4"	1/2"	1760	892	1975
MNG-330	408 L	1"	1/2"	1901	950	2025
MNG-450	464 L	1"	1/2"	2218	1010	2134
MNG-510	515 L	1"	3/4"	2208	1010	2028
MNG-570	573 L	1"	3/4"	2208	1010	2226
MNG-730	712 L	1"	3/4"	2685	1110	2084
MNG-910	1,042 m ³	1 1/2"	1"	2727	1220	2485
MNG-1110	1,29 m ³	1 1/2"	1"	2896	1322	2521
MNG-1230	1,402 m ³	2"	1"	2898	1322	2724
MNG-1370	1,498 m ³	2"	1 1/4"	2895	1355	2941
MNG-1820	2,019 m ³	2"	1 1/2"	3599	1793	2634
MNG-2050	2,336 m ³	2 1/2"	1 1/2"	3390	1964	3124
MNG-2950	2,336 m ³	2 1/2"	2"	4074	2245	2787
MNG-3540	2,336 m ³	2 1/2"	2"	4024	2375	3054
MNG-4160	2,336 m ³	2 1/2"	2"	4020	2376	3317
MNG-5560	2,336 m ³	DN100	2 1/2"	4125	2175	3811
MNG-9170	2,336 m ³	DN100	DN80	-	-	-
MNG-11200	2,336 m ³	DN150	DN100	-	-	-

Note: Mikropor supplies buffer tank volumes for 99,5% and higher Nitrogen purities. For purities lower than 99,5%, it may be necessary to use additional tank.

"Mikropor reserves the right to change the design and / or dimensions and / or weight of his products at any time without any notice or liability."



Modular Desiccant Air Dryers

Modular Desiccant Air Dryers

The light weight modular design of the NEW dryer series brings a whole new concept in compressed air technology, offering total installation flexibility to meet specific needs.

Mikropor's new Modular Desiccant Dryers are less than the half weight and size of a traditional twin tower design, allowing even the largest models to be easily moved through a standard doorway.

Mikropor's innovative Modular Air Dryers make it easier and more affordable than ever to deliver high-quality compressed air for virtually wherever it's needed.

Mikropor Modular Desiccant Dryers have cosmetic beauty and can be located in clean and nice environments with being an eye sore.

Offered in a sizes from 5 m³/h to 400 m³/h with dew point of -40°C to -70°C (optional) these dryers are equipped with everything you need, requiring only air inlet / outlet connections.

Using a highly engineered inlet and purge manifold design, Mikropor proudly offers one of the lowest pressure drop desiccant dryer in the industry.

- Small footprint, lightweight, advanced compact design
- Corrosion protected Aluminum construction
- Hassle-free, reliable electronic controls
- Can be floor, bench or wall mounted
- Quite enough to be placed in any work environment
- Easy installation, easy maintenance

The new Modular Desiccant Dryers combine proven traditional dryer principles with the latest technology to provide unsurpassed efficiency, flexibility and world-renowned Mikropor reliability for your critical dry air applications.



Technical Specifications

Model	Capacity		Connection Size	Max. working pressure (bar)	Voltage	Weight (Kg)	Dimensions (mm)		
	(m ³ /h)	(scfm)					Width	Length	Height
MMD3	5	3	1/2"	16	115-240V/50-60Hz.	17	320	336	558
MMD5	10	5	1/2"	16	115-240V/50-60Hz.	19	320	320	633
MMD10	20	10	1/2"	16	115-240V/50-60Hz.	27	320	320	908
MMD15	25	15	1/2"	16	115-240V/50-60Hz.	31	370	350	808
MMD20	35	20	1/2"	16	115-240V/50-60Hz.	42	370	350	1108
MMD25	45	25	1/2"	16	115-240V/50-60Hz.	48	370	350	1258
MMD30	50	30	1/2"	16	115-240V/50-60Hz.	54	370	350	1508
MMD40	70	40	1 1/2"	16	115-240V/50-60Hz.	71	410	495	1250
MMD50	85	50	1 1/2"	16	115-240V/50-60Hz.	78	410	495	1400
MMD60	100	60	1 1/2"	16	115-240V/50-60Hz.	92	410	495	1750
MMD75	130	75	1 1/2"	16	115-240V/50-60Hz.	120	430	622	1300
MMD100	170	100	1 1/2"	16	115-240V/50-60Hz.	133	430	622	1450
MMD120	200	120	1 1/2"	16	115-240V/50-60Hz.	152	430	622	1750
MMD180	300	180	1 1/2"	16	115-240V/50-60Hz.	186	410	734	1499
MMD240	400	240	1 1/2"	16	115-240V/50-60Hz.	235	410	889	1497

Various application options

Modular Desiccant Air Dryers can be mounted to the wall by with easily to use mounting brackets to win more space and also can be applied to the ground very easily.



PLC Monitor

The mini PLC is very friendly and shows the working action simultaneously. It is possible to get an alarm signal or remote control thanks to an easy access plug below the dryer.



Correction Factor

(Bar)	4.5	5	6	7	8	9	10	11	12	13	14	15	16
Factor Pressure F1	0.69	0.75	0.88	1	1.12	1.25	1.37	1.50	1.62	1.74	1.87	1.99	2.11
Inlet Temp. (°C)	20	25	30	35	40	45	50	-	-	-	-	-	-
Factor Inlet F2	1	1	1	1	0.80	0.73	0.59	-	-	-	-	-	-

Pressure dewpoint	-40 °C / -70 °C (opt.)
Nominal inlet temperature	35 °C
Nominal working pressure	7 bar
Maximum inlet temperature	50 °C
Maximum working pressure	16 bar
Maximum ambient temperature	50 °C



Deliquescent Dryer

Deliquescent Dryer

There are some applications which need dry air but there is no electricity available such as sand blasting the iron bridges. The compressed air is generally generated by portable compressors. Mikropor Deliquescent Dryer first cools hot and wet air discharged from the compressor by the help of the integrated pneumatic aftercooler. Cooling forces a substantial quantity of entrained moisture to condense. But even after exiting the aftercooler, the air is saturated with vapor (100% relative humidity). The majority of this water is drained by the help of a centrifugal moisture separator. The compressed air then passes through the drying vessel, which contains specially formulated desiccant. The desiccant cuts the humidity of the air roughly in half. Air finally flows through an particle filter to trap any fine particles in the air flow.

Applications

- Plant air back up
- Oil and gas drying
- Blasting and coating mobile paint booths
- Applications which has explosive gases in the environment
- Sawmills, lumber yards, asphalt plants, ready mix concrete



Technical Specifications

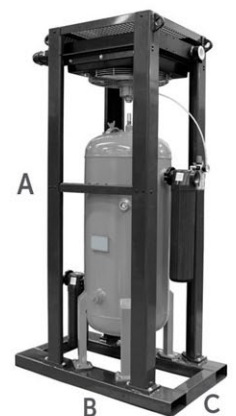
Model	Capacity		Connection Size	Max. working pressure (bar)	Air Motor Consumption (m³/h)	Desiccant material Qty. Per Unit (Kg)	Weight (Kg)	Dimensions (mm)		
	(m³/h)	(scfm)						A Height	B Length	C Width
MDEL-425	425	250	1 1/2"	10	16	114	300	2050	1200	690
MDEL-680	680	400	2"	10	24	181	345	2050	1200	690
MDEL-1360	1360	800	2 1/2"	10	35.5	227	525	2200	1200	840
MDEL-2040	2040	1200	2 1/2" (in) 3" (out)	10	42.5	340	690	2350	1500	840
MDEL-2720	2720	1600	3"	10	120	453	850	2450	1750	1100

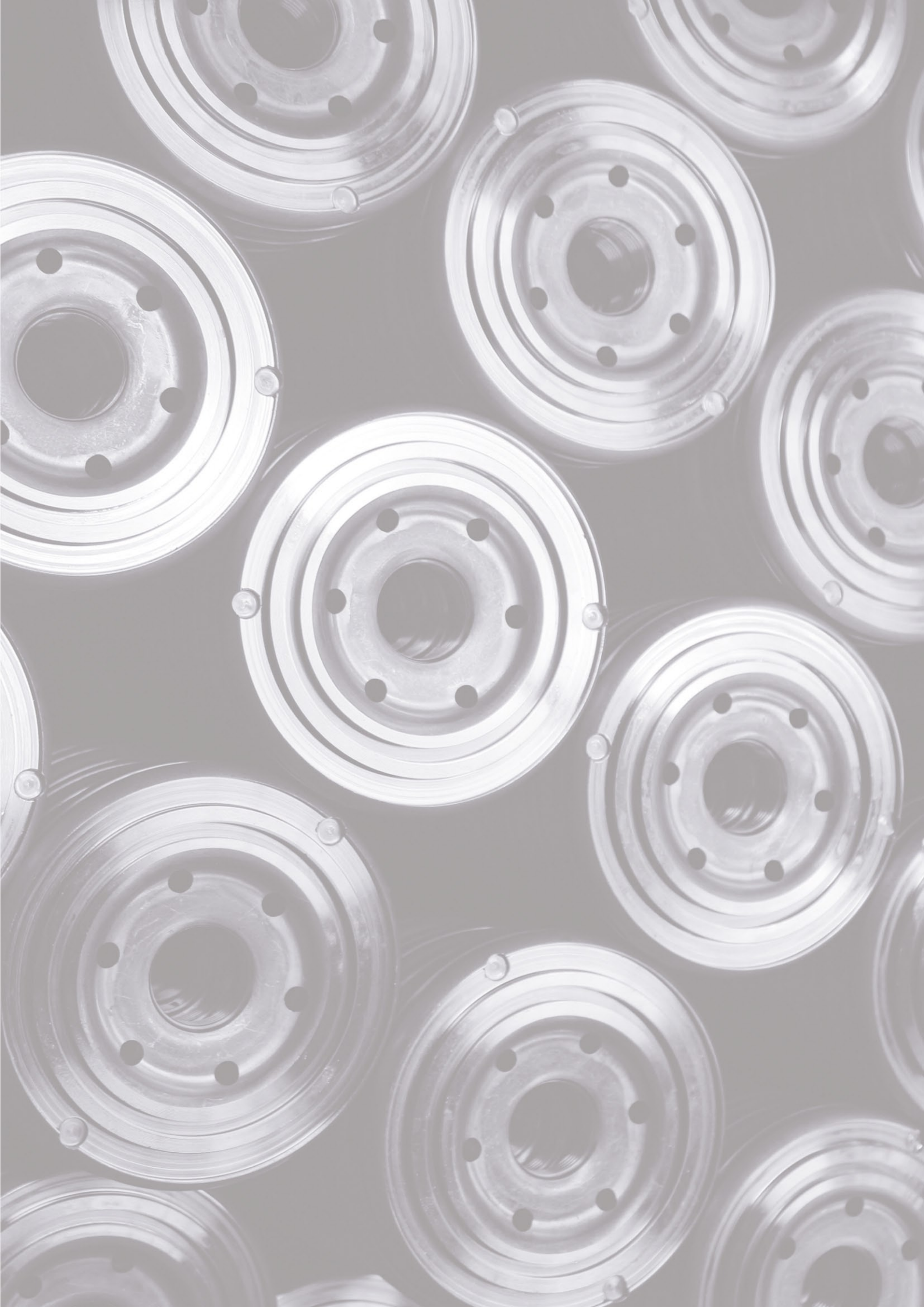
Model	Maximum Capacities (m³/h)				
	4 Bar	6 Bar	7 Bar	9 Bar	10 Bar
MDEL-425	262	380	425	540	595
MDEL-680	435	600	680	865	950
MDEL-1360	870	1210	1360	1730	1900
MDEL-2040	1300	1815	2040	2590	2850
MDEL-2720	1735	2420	2720	3455	3800



Equipments

- Air motor for aftercooler
- Open frame fork lift skid
- Four point lifting lugs
- 5 micron particulate after-filter
- Initial fill of special desiccant
- PED / ASME Code dryer vessel
- Filter Regulator Lubricator
- Safety Relief valve
- Manual drain valve
- Pressure gauge
- Protective screen above aftercooler
- Temperature gauge kit (optional)
- Internal epoxy coating for long vessel life
- Two dryer sight windows for desiccant viewing





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