

Patented

As much as 99.99% of water is removed from the inside of air tubes by our own special collision separation technique!

Magic Air is a revolutionary air compression cleaner that uses absolutely no filters or other components.

Our own proprietary collision separation technique (patented) enables Magic Air to remove as much as 99.99% of the water content from air passing through it. Such stellar performance ensures that the air passing through pipes is always dry and clean, dramatically reducing any rusting or build-up of grease on the pipes' inner walls. This is possible even with Magic Air's compact size and affordable cost.

Magic Air has arrived with a unique new standard that promises to herald a real dry Air Revolution and wipe clean the water problems that other compressed air systems still leave behind.

Magic Air Performance Test

● Test Method

Air of 100 cc in volume containing a mixture of water and ink was injected through the air intake of Magic Air at a rate of 30 cc/min.

● Water removal rate

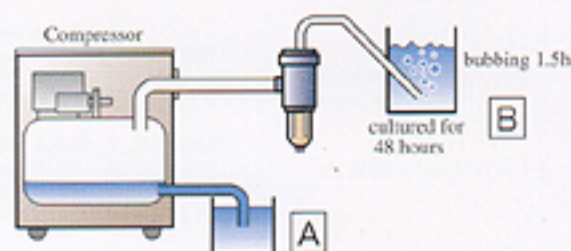
Pressure	Water removal rate (liters/min.)	50	200	400	800	1200	1600	2000
3 kgf/cm ²								
5 kgf/cm ²		99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%
7 kgf/cm ²								

● Test Results for General Bacteria in Compressor Drains

Tested Item	Test Item	Result	
Water drained from compressor	General bacteria count	22,000/ml	A
Air passing through Magic Air subjected to bubbling for 1.5 hours	General bacteria count (air-borne bacteria)	4/ml (cultured for 48 hours)	B

Note: Test method was based on clean water test method (as defined by the Environmental Health Bureau of the Ministry of Health and Welfare).

Tested by Japan Environmental Hygiene Center.



The Basic Principle

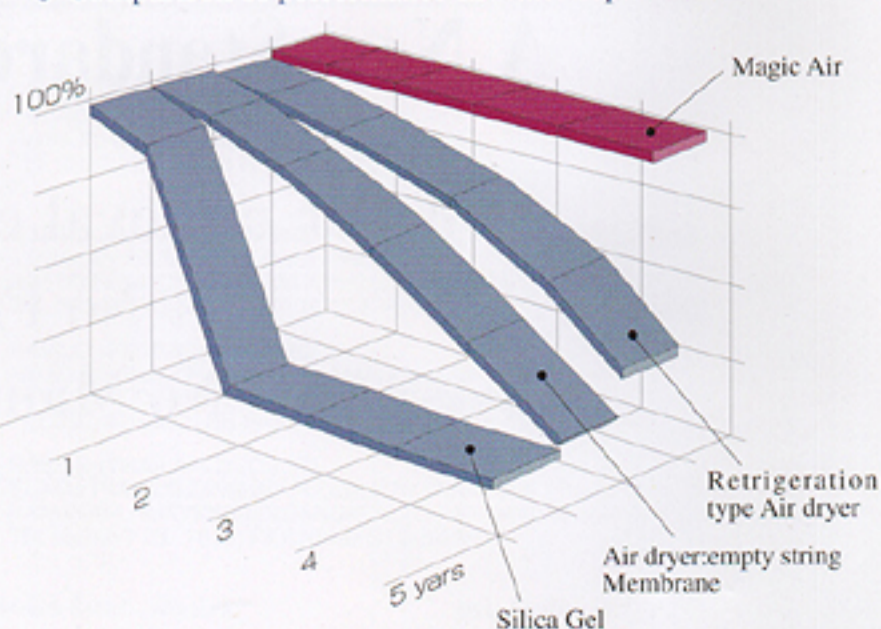
1 Special collision separation technique causes articles of higher specific gravity to fall toward the bottom.

2 Separated via centrifugal action.

3 Since moisture is centrifuged out, no water droplets remain at the center of the fluid.

General bacteria, water droplets, oily particles, dirt




● Comparison of performance in water separation










Clean, dry air boosts operating efficiency of air pressure equipment.

Effect

Economical No filter + No maintenance =
Amazing Economy!

- Cost of component  = Zero
- Labor cost to replace components  = Zero
- Time required to replace components  = Zero

Features Just compare the Magic Air with existing products!
Lots of unbeatable Magic Air merits:

-  **No Filter** High performance always assured, since Magic Air uses no filters or other consumables.
-  **No Maintenance** Extremely economical, since no money has to be spent on purchasing and replacing filters and the like which are not used.
-  **Low Price** Significantly cheaper than conventional freeze-type air dryers, contributing to reduction in equipment costs.
-  **No Power Supply** Since no electricity is used, no wiring work is necessary. Installation is very easy.
-  **Compact Design** Easily installed in a wide variety of mechanical systems, due to the Magic Air's space-saving design.
-  **No CFCs** Environmentally friendly, since no ozone-depleting CFC gases are used.
-  **Flexible Air Pressure** Accommodates a wide range of air pressures: 1-10 kgf/cm²

Magic Air FAQ

Q Does performance fall if air pressure drops?

A No. Magic Air uses a combination of special collision separation and centrifugal separation, as well as compression and expansion techniques, to remove as much as 99.99% of the water. Even if the air pressure drops, so long as it remains within the 1-10 kgf/cm² range, high performance is not affected.

Q Can oil inside the air lines be removed, too?

A Oil that flows in with drain water can be removed, but oil that has been vaporized cannot be removed. (Strictly speaking, vaporized oil cannot be removed by a freeze dryer, either. Since the presence of oil is possibly due to a worn oil seal in the compressor cylinder, we recommend servicing it as soon as possible.)

Q Isn't Magic Air more expensive than filter systems?

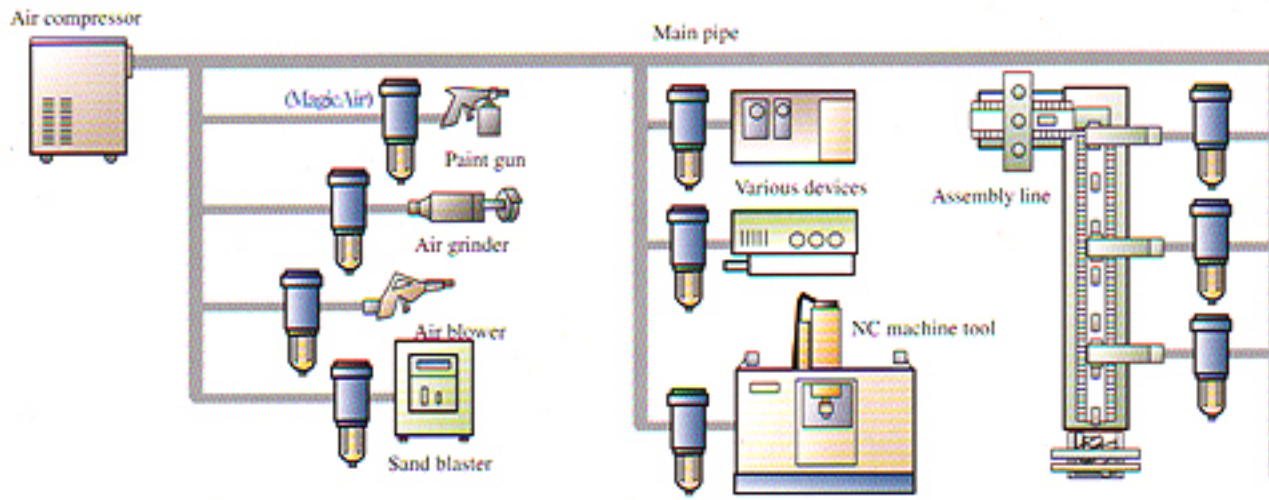
A Not at all. This is because there are no running costs with Magic Air, since it uses no filters and requires no maintenance. Furthermore, the Magic Air dramatically reduces problems caused by water, such as rust in the pipes, allowing the equipment to run more cleanly and efficiently. Magic Air is therefore a very economical investment. In fact, the Magic Air's performance is so favorable compared to freeze dryers that many customers prefer to use Magic Airs instead of dryers.

Q What is the life expectancy of a Magic Air?

A The Magic Air can be used for 5 years. There are no parts in the main body that will wear out. (In fact, the auto drain could wear out first.) Actual life expectancy, however, really depends on the environment where the Magic Air is used.



Ideal Magic Air installations



Main Applications

Industrial machinery
 Medical equipment
 Packing machines
 Food processors
 Air-driven tools
 Painting tools
 NC machine tools
 Precision measuring
 Instruments
 Air blowers

* Magic Air can be used in a wide variety of other areas requiring dry air.

Note: Since water condensation occurs when there are temperature differences between the air outside the pipe and air passing through the pipe from the compressor, Magic Airs should be installed near the devices connected at the ends of the pipes.

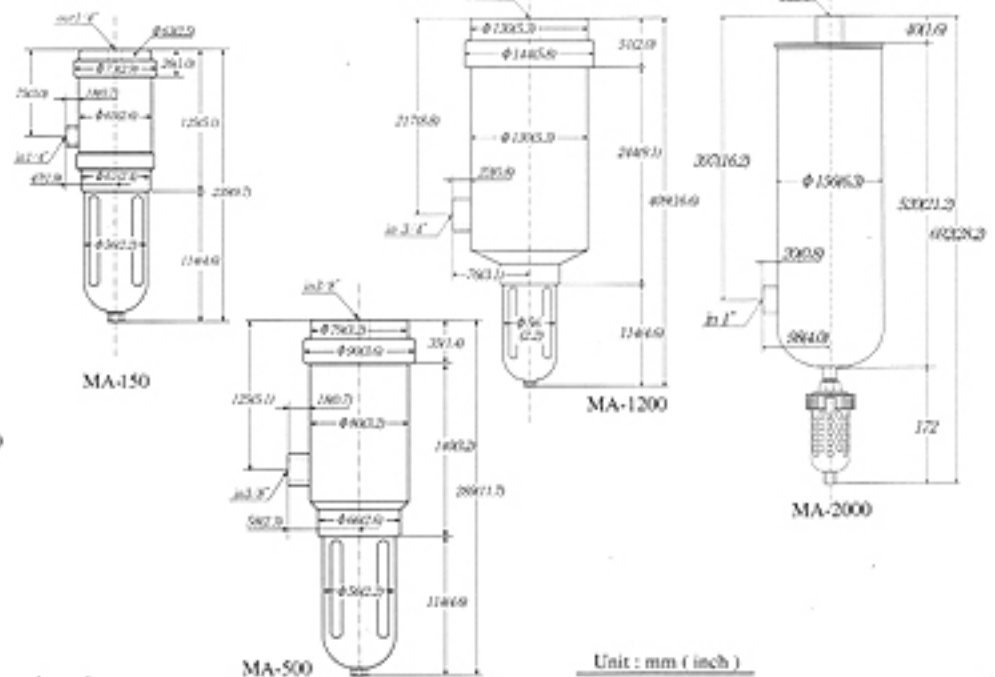
Note: You can maximize the cleaning effect by installing the Magic Air unit at least 30 feet from the compressor. And install the Magic Air unit 10 feet or less from the end of the air pipe. Please note that this product is not a device for dehumidifying humid air.

Main Specifications

Item	MA-150	MA-500	MA-1200	MA-2000
Max. flow rate (liters/min.)	150	500	1200	2000
Pressure drop(Mpa){kgf/cm ² }	0.00 ~ 0.07{0.0 ~ 0.7}		0.00 ~ 0.05{0.0 ~ 0.5}	
Working pressure range(Mpa){kgf/cm ² }	0.1 ~ 1.0{1.0 ~ 10.2}			
Proof pressure(Mpa){kgf/cm ² }	1.5{15.3}			
Liquid temperature	5C° ~ 65C°{41°F~ 149°F}			
Automatic drain	AD-32(SMC make)			B5102-4C-FJ(CKD make)
Drain diameter(Rc)	1/4	3/8	3/4	1 inch
Weight(kg)	0.6	1.25	3.0	12.0



Dimensions



Unit : mm (inch)

Caution concerning safety: Before using the Magic Air, be sure to read the notes of caution concerning its use described in the user's manual supplied with the Magic Air when purchased.

*Details in this catalog are current as of January 1998. Specifications and other details are subject to change without notice.