



# INSTRUCTION MANUAL

(IDX-OM-C005-C)

MODEL IDG1

## MEMBRANE AIR DRYER

Before operating, you should first thoroughly read this manual. Keep this instruction manual. Specification and equipment are subject to change without any obligation on the part of the manufacturer.

### Safety Cautions

Each and individual product have its own operating specification. Operate product with out-of-specification conditions could lead to failure of product. Follow product specification and cautionary points before & during installation and operation.

### Caution

Ignoring of emphasized notification could cause mis-handle of product which may lead to the injured of people and the damage of things.

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### Caution Operation

- Make sure to operate with in specifications. (Refer to P.4.)
- Any of substances in table 1 should not be contained in compressed air and surrounding. (If any of them is contained, it causes the damage of case.)

Table 1. Harmful Substances

type	Harmful Substances
Solvent	Acetone, Benzene, Phenol, Toluene, Trichloroethylene, Cresol, Thinner, Aniline, Chloroform, Methyl, Alcohol, Dioxane, Tetrahydrofuran, Methylene Chloride, Xylene, Cyclohexanone, Carbon Tetrachloride, etc.
Acid	Sulfuric Acid, Nitric Acid, Hydrochloric Acid, Acetic Acid, Lactic Acid, Chromic Acid, etc.
Gas	Chlorine, Sulfurous Acid, Hydrogen Sulfide, Bromine, etc.
Oil	Hydraulic Fluid (Phosphatic Ester), Fuel oil, Kerosene, Water Soluble Cutting Fluid (Alkaline), etc.

- Do not use it as breathing air dehumidifier.
- Operating pressure should be below 0.85MPa.
- Working fluid and ambient temperature should be between -5°C and 55°C. (Not Frozen.)
- About 10 minutes of time lag is necessary for achieving rated dew point after the flowing of compressed air. Only start to operate secondary machine after the achieve of dew point.

## ⚠ Caution Installation

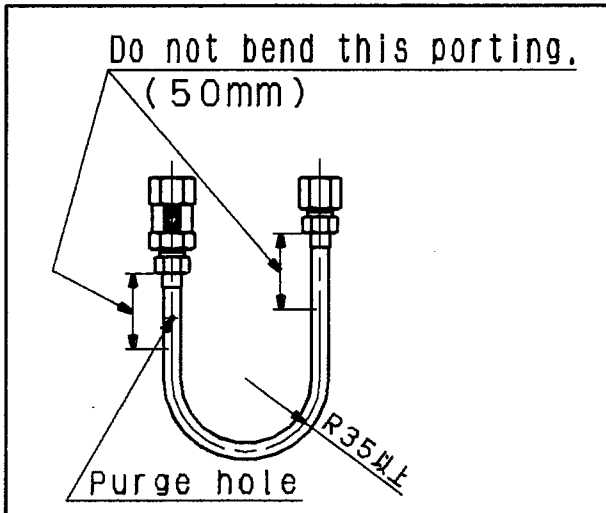
- On inlet side of membrane air dryer, surely install mist separator and micro mist separator.  
[Without them, it does not perform well because water and oil flow in.]

Table 2. Recommendable Separators

Description	Model Number
Mist Separator	AM150-□□C AFM20-□□C
Micro Mist Separator	AMD150-□□C AFD20-□□C

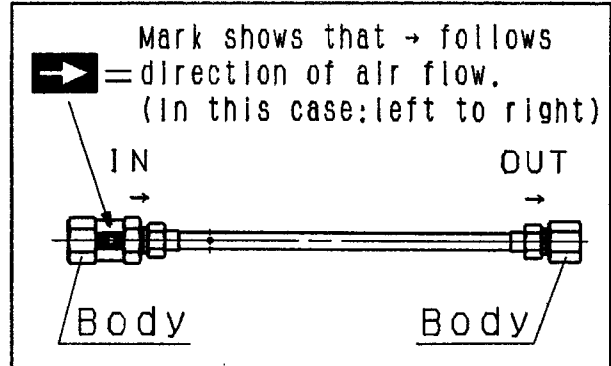
For details of each separator, refer to our catalogues of "Air Cleaning Equipment" and "Air Filter".

- During performing piping of membrane air dryer, maintain a minimum bending radius of 35mm. Besides that 50mm below the module should not be bent. (Cause of damage)



- Install pressure reducing valve on outlet side of membrane air dryer. [If it is installed on inlet side, performance goes down due to pressure down.]
- Though air is exhausted from the purge hole, it is not leakage due to failure. It is the normal outlet of purge air. (See P.5.)  
[The performance is deteriorated if the outlet of purged air is blocked.]

- Flush pipes before installation.
- Do not confuse inlet and outlet of compressed air.  
[If compressed air does not flow in correct direction, performance can not be proper.]

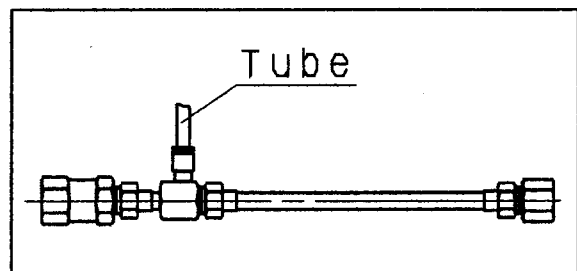


- Install where rainwater and direct sunlight are shutted out.
- Do not install in places subjected to vibration.
- Tighten pipes fixing body with spanner or adjustable spanner.

Table 3. Tightening Torque

Port Size	Tightening Torque N·m
1/4	12~14

- Tube size with one touch fitting (Option P) for purging use please refer to P.4 for purging air tube size and length of tube should be 5m and below. For purging air tube 5m and above, please do not install valve if tube is bend or constructed. If the dehumidifying performance will lower.



## ⚠ Caution Maintenance

● Make sure that equipment is depressurized to zero before maintenance.

[It is dangerous resulting in damage and slipping out of parts.]

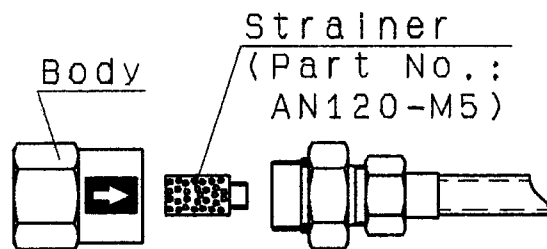
<Maintenance: Once in 10 years>

● Replacement of Membrane air dryer should be done after operation of approximate 10 years.

## Troubleshooting

● If something abnormal has occurred by any possibility, examine it following the table below. And yet if it cannot be handled, contact any selling agency or our office located nearest you. [Make sure that equipment is depressurized to zero before maintenance or repair.]

Situations	Causes	Solutions
● Performance is unsatisfactory.	● Inlet air temperature is high.	<ul style="list-style-type: none"> <li>● Improve ventilation to lower the ambient temperature of where air compressor is installed. (Lower inlet air temperature.)</li> <li>● Install after cooler or something substituted for on inlet side of membrane air dryer to lower air temperature.</li> </ul>
	● Ambient temperature is high.	● Improve ventilation to lower the ambient temperature.
	● Air flow rate is large.	● Check the specifications, reduce the flow rate to lower than rated flow rate.
	● Inlet air pressure is low.	● Check the specifications, raise the pressure to more than minimum working pressure.
	● Purging air volume is small.	<ul style="list-style-type: none"> <li>● Check outlet for purging air.</li> <li>● Check the purging air piping.                             <ol style="list-style-type: none"> <li>a. Remove any block on bend on the purging air piping.</li> <li>b. Piping for purging air is reduce or longer than specified length, refer to P.4 for correction.</li> </ol> </li> </ul>
● Membrane air dryer pressure drop is large.	● Clogging of strainer	<ul style="list-style-type: none"> <li>● Replace dew point checker.</li> </ul>



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# Specifications

Model		IDG1
Condition	Max. Working Press.	0.85MPa
	Min. Working Press.	0.3 MPa
	Working Fluid	Compressed Air
	Ambient and Working Fluid Temp.	-5~55°C (Not Frozen)
Performance	Outlet Air Dew point (Atmospheric Press.)	-20°C
	Inlet Air Flow Rate	12.5L/min(ANR)(Note1)
	Outlet Air Flow Rate	10L/min(ANR)
	Purging Air Flow Rate	2.5L/min(ANR)
	Inlet Air Press.	0.7MPa
	Inlet Air Temp.	25°C (Saturated)