Doc. No. AMX-OM-Q013-B

# Operation Manual

PRODUCT NAME

## Membrane Air Dryer

MODEL / Series / Product Number

## IDG10,IDG10H
## IDG20,IDG20H

**SMC Corporation**

## Contents

# Membrane Air Dryer Safety Instructions

These safety instructions are intended to prevent hazardous situations and/or equipment damage.
These instructions indicate the level of potential hazard with the labels of “Caution,” “Warning” or “Danger.”
They are all important notes for safety and must be followed in addition to International Standards (ISO/IEC)*1), and other safety regulations.

*1) ISO 4414: Pneumatic fluid power -- General rules relating to systems.
ISO 4413: Hydraulic fluid power -- General rules relating to systems.
IEC 60204-1: Safety of machinery -- Electrical equipment of machines .(Part 1: General requirements)
ISO 10218-1992: Manipulating industrial robots -Safety.
etc.

| | |
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| **Caution** | **Caution** indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury. |
| **Warning** | **Warning** indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury. |
| **Danger** | **Danger** indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury. |

## ⚠Warning

**1. The compatibility of the product is the responsibility of the person who designs the equipment or decides its specifications.**
Since the product specified here is used under various operating conditions, its compatibility with specific equipment must be decided by the person who designs the equipment or decides its specifications based on necessary analysis and test results.
The expected performance and safety assurance of the equipment will be the responsibility of the person who has determined its compatibility with the product.
This person should also continuously review all specifications of the product referring to its latest catalog information, with a view to giving due consideration to any possibility of equipment failure when configuring the equipment.

**2. Only personnel with appropriate training should operate machinery and equipment.**
The product specified here may become unsafe if handled incorrectly.
The assembly, operation and maintenance of machines or equipment including our products must be performed by an operator who is appropriately trained and experienced.

**3. Do not service or attempt to remove product and machinery/equipment until safety is confirmed.**
1.The inspection and maintenance of machinery/equipment should only be performed after measures to prevent falling or runaway of the driven objects have been confirmed.
2.When the product is to be removed, confirm that the safety measures as mentioned above are implementedand the power from any appropriate source is cut, and read and understand the specific product precautions of all relevant products carefully.
3. Before machinery/equipment is restarted, take measures to prevent unexpected operation and malfunction.

**4. Contact SMC beforehand and take special consideration of safety measures if the product is to be used in any of the following conditions.**
1. Conditions and environments outside of the given specifications, or use outdoors or in a place exposed to direct sunlight.
2. Installation on equipment in conjunction with atomic energy, railways, air navigation, space, shipping, vehicles, military, medical treatment, combustion and recreation, or equipment in contact with food and beverages, emergency stop circuits, clutch and brake circuits in press applications, safety equipment or other applications unsuitable for the standard specifications described in the product catalog.
3. An application which could have negative effects on people, property, or animals requiring special safety analysis.
4.Use in an interlock circuit, which requires the provision of double interlock for possible failure by using a mechanical protective function, and periodical checks to confirm proper operation.

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**1. The product is provided for use in manufacturing industries.**
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## Limited warranty and Disclaimer/Compliance Requirements

The product used is subject to the following “Limited warranty and Disclaimer” and “Compliance Requirements”. Read and accept them before using the product.

### Limited warranty and Disclaimer

**1. The warranty period of the product is 1 year in service or 1.5 years after the product is delivered, whichever is first.*2) Also, the product may have specified durability, running distance or replacement parts. Please consult your nearest sales branch.**
**2. For any failure or damage reported within the warranty period which is clearly our responsibility, a replacement product or necessary parts will be provided. This limited warranty applies only to our product independently, and not to any other damage incurred due to the failure of the product.**
**3. Prior to using SMC products, please read and understand the warranty terms and disclaimers noted in the specified catalog for the particular products.**
***2) Vacuum pads are excluded from this 1 year warranty.**
**A vacuum pad is a consumable part, so it is warranted for a year after it is delivered.Also, even within the warranty period, the wear of a product due to the use of the vacuum pad or failure due to the deterioration of rubber material are not covered by the limited warranty.**

### Compliance Requirements

1. **The use of SMC products with production equipment for the manufacture of weapons of mass destruction (WMD) or any other weapon is strictly prohibited.**
2. **The exports of SMC products or technology from one country to another are governed by the relevant security laws and regulations of the countries involved in the transaction. Prior to the shipment of a SMC product to another country, assure that all local rules governing that export are known and followed.**

**⚠ Caution**

**1. SMC products are not intended for use as instruments for legal metrology.**
Measurement instruments that SMC manufactures or sells have not been qualified by type approval tests relevant to the metrology (measurement) laws of each country. Therefore, SMC products cannot be used for business or certification ordained by the metrology (Measurement) laws of each country.

# 2. Installations and Operations:

## Design

### ⚠ Caution

**a. Devise a layout which considers the position of the purge air discharge ports.**

Purge air is humid air. Devise a layout in which the humid purge air will not cause corrosion or malfunction of peripheral equipment.

**b. When very clean air is required**

(Supplying clean air to air bearings, blowing of semiconductor parts, etc.) Install a micro mist separator or Super Mist Separator on the outlet side of this equipment. Grease is applied inside of the Regulator used in the V type unit. When air with high purity is required, please either mount the Super Mist Separator on the outlet side or use a made-to-order product, which is provided with a Micro Mist Separator (Series AWD) instead of a Regulator.

**c. Time to reach the rated dew point**

A certain amount of time is required to achieve the rated dew point after the air begins flowing into the membrane air dryer. Use the times below as a guide, and begin operating the outlet side equipment after the rated dew point is achieved.

Standard dew point -20°C, -15°C : about 10 min.

## Selection

### ⚠ Caution

**a. Consider the purge air flow rate in total flow rate requirements.**

Find the purge air flow rate from the charts and calculate the “required outlet air flow rate + purge air flow rate”. The air supply capacity must be at lease equal to the calculated flow or the required outlet air flow rate cannot be obtained.

**b. Use the proper size tubing for purge air discharge (Option : P)**

The dehumidification capacity decreases in proportion to the length of the tubing for discharging purge air. Use tubing of the specified size and keep its length to 5 meters or less.

## Mounting

### ⚠ Caution

**a. Do not obstruct the purge air discharge ports.**

Dehumidification performance will decrease or may become impossible if purge air back pressure becomes too high or purge air stops flowing.

**b. Provide proper filtration on the inlet side of a membrane air dryer.**

Performance will be reduced If the inlet air contains oil, water, or other contaminations that can clog the membrane pores. Install an AFM Mist Separator or an AMH Micro Mist Separator with Pre-filter on the inlet side of membrane dryer. Install an air filter or main line filter on the inlet side of the mist separator when there are large quantities of dust (solid foreign matter). An AFM Mist Separator and AFD Micro Mist Separator or an AMH Micro Mist Separator with Pre-filter are already installed on the M and V unit types.

**c. Remove water droplets from the inlet air**

Water droplets in the air can lower performance and cause malfunction.

**d. Large quantities of dust (solid foreign matter) are contained in the supply air.**

When there are large quantities of dust (solid foreign matter), install an air filter or main line filter to the inlet side of the mist separator.

**e. Install a regulator on the outlet side of the membrane air dryer.**

Dehumidification performance will be reduced if a regulator is a regulator is installed on the inlet side of the membrane dryer.

**f. Ensure that intermittent pressure is not applied to the product.**

Do not frequently operate a solenoid valve on the inlet side. The membrane dryer can be damaged if inlet pressure is applied intermittently.

**g. Installation of Bracket Assembly (Accessory).**

Please attach by a customer.
Tightening torque : 1.4 N・m
Hexagonal key : nominal 4

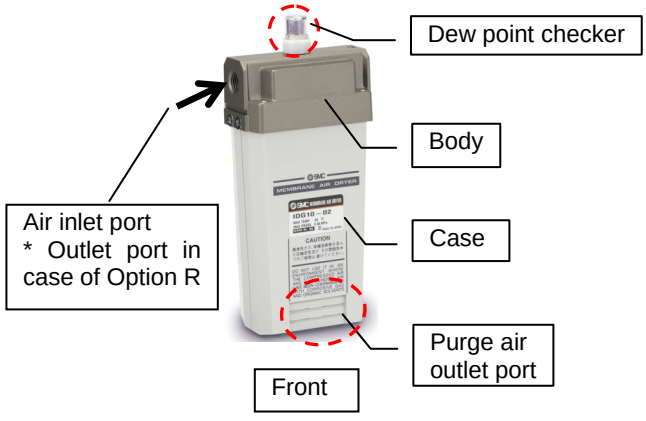


Fig 2.1 Names of parts

# 2. Installations and Operations:

## Piping

### ⚠ Warning

**a. Confirm locking of case and body**

When using in a unit, be sure to set the air pressure to zero before using a Mist Separator or Micro Mist Separator with modular connections. Also, confirm that the body and case are locked together with a click before starting the flow of compressed air.

**b. Confirm tightening of the holder.**

Before starting the flow of compressed air, turn the Membrane air dryer's holder in its tightening direction, confirming that it is completely tightened and that the case will not come off.

### ⚠ Caution

**a. Use of tools**

Hold the upper portion of the body (aluminum die-casted section) with a spanner or adjustable angle wrench. Do not turn it while holding the case section.

**b. Drain piping for separators**

Use a tube of the prescribed size and keep the length within 5 meters or less when installing drain piping for Mist Separators or Micro Mist Separators. Be sure that the tube does not rise up or become folded over.

**c. Flush pipes before installation.**

Use an air blower to flush the piping to thoroughly remove any cutting chips, cutting oil, or debris from the piping inside, before connecting them. If they enter the inside of products, they could cause products to malfunction, lower performance or damage the elemen.

## Air Supply

### ⚠ Caution

**a. Compressed air supply capacity**

An air source that has a supply capacity that is larger than the "necessary outlet air flow rate (dry air flow rate) + purge air flow rate" is required. See the purge air flow rate diagram in the catalog for the purge air flow rate.

**b. Avoid chemical substances which have an adverse effect on the product**

The chemical substances stated in the table below can reduce the performance or damage the membrane element. Do not use the membrane dryer in an environment containing these chemicals substances.

| Type | Harmful Substances |
|---|---|
| Solvent | Acetone, Benzene, Phenol, Toluene, Trichloroethylene, Xylene, Cresol, Thinner, Aniline, Chloroform, Ethyl Alcohol, Methyl Alcohol, Chlorobenzene, Trichloroethane, Ethylbenzene, Isopropyl Alcohol, Dioxane, Tetrahydrofuran, Methyl Chloride, Cyclohexanone, Carbon Tetrachloride, Methyl Ketone, Ethyl Ketone, etc. |
| Acid | Sulfuric Acid, Nitric Acid, Hydrochloric Acid, Acetic Acid, Lactic Acid, Chromic Acid, etc. |
| Gas | Chlorine, Sulfurous Acid, Hydrogen Sulfide, Bromine, Ozone, Ammonia, etc. |
| Oil | Hydraulic Fluid (Phosphoric Ester), Fuel Oil, Water Soluble Cutting Fluid (Alkaline), Kerosene, etc. |
| Strong Bases | Lithium hydroxide, Sodium hydroxide, Potassium hydroxide, Calcium hydroxide, etc. |
| Others | Anaerobic thread lockers |

## Operating Environment

### ⚠ Caution

**a. Do not use at temperatures (fluid or ambient temperatures) higher than the prescribed operating conditions.**

Resin is used in the membrane module (element), and it can be damaged by operation at high temperatures. confirm that the fluid temperature does not exceed the membrane dryer's range of operating conditions during use, especially when installed immediately after a reciprocating type air compressor.

**b. Keep the inlet air temperature lower than the ambient temperature.**

Condensation and water drops may accumulate inside of the membrane dryer's body and reduce its dehumidification capacity if the membrane air dryer's body is cooled by the ambient air.

# 3. Maintenance and Checks

## ⚠ Caution

a. **Do not remove the parts and piping when the product is pressurized. Always confirm that there is no residual pressure present before removal of unit. Replacement while residual pressure is present in the product may cause injury or damage of the product.**

b. **Precautions for membrane module removal**

When the filter and membrane air dryer is connected by spacer (modular connection), be sure to remove the membrane dryer before replacement.

c. **Color of the dew point indicator**

The color of the dew point indicator shows the condition of the outlet air from the membrane air dryer.

- Dew point indicator color and humidity of air

(1) Bluish ←→ Pinkish

Bluish --- Relative humidity approx. 10% or less

Pinkish --- Relative humidity approx. 50% or higher

(2) Greenish ←→ Yellowish

Greenish --- Relative humidity approx. 10% or less

Yellowish --- Relative humidity approx. 50% or higher

*1. It takes time for the color of the dew point indicator changes.

*2. Use a dew point meter for confirming the correct dew point.

-Discoloration other than above

Absorbent is used for the dew point indicator. The absorbent absorbs vaporized oil or other gas components which cannot be eliminated by micro mist separator and the dew point indicator may turn colors other than specified above.

In this case, it is difficult to check the humidity of the outlet air. Please replace the dew point indicator regularly.

It is possible to avoid discoloration by installing a super mist separator which absorbs vaporized oil and an odor removal filter. It is recommended to add the super mist separator and an odor removal filter after replacing the dew point indicator.

### Service Parts

Table 3-1. Membrane module kit and Dew point indicator kit

| Model \ Name | Membrane module kit | Dew point Indicator kit |
|---|---|---|
| IDG10 | IDG-EL10 | IDG-DP01 |
| IDG10H | IDG-EL10H | |
| IDG20 | IDG-EL20 | |
| IDG20H | IDG-EL20H | |
| IDG10 Option : P | IDG-EL10 | IDG-DP01-X001 |
| IDG10H Option : P | IDG-EL10H | |
| IDG20 Option : P | IDG-EL20-P | |
| IDG20H Option : P | IDG-EL20H-P | |

# 4. Specifications

1) Single Unit Type

| Model | | Specifications | | | |
|---|---|---|---|---|---|
| | | IDG10 | IDG20 | IDG10H | IDG20H |
| Range of operating conditions | Fluid | Compressed Air | | | |
| | Inlet air pressure MPa | 0.3～0.85 | | | |
| | Inlet air temperature °C *Note 1 | -5～55 | | | |
| | Ambient temperature °C *Note 1 | -5～55 | | | |
| Standard performance | Outlet air atmospheric pressure dew point °C | -20 | | -15 | |
| Standard performance conditions | Inlet air flow rate L/min(ANR) *Note 2 | 125 | 250 | 111 | 222 |
| | Outlet air flow rate L/min(ANR) | 100 | 200 | 100 | 200 |
| | Purge air flow rate L/min(ANR) *Note 3 | 25 | 50 | 11 | 22 |
| | Inlet air pressure MPa | 0.7 | | | |
| | Inlet air temperature °C | 25 | | | |
| | Inlet air saturation temperature °C | 25 | | | |
| | Ambient temperature °C | 25 | | | |
| Dew point indicator purge air flow rate | | 1L/min (ANR) {In case of inlet air pressure 0.7 MPa} | | | |
| Port size | | 1/4 ・ 3/8 | | | |
| Mass kg (With bracket) | | 0.43 (0.51) | 0.66 (0.76) | 0.43 (0.51) | 0.66 (0.76) |

2) Unit Type (Unit M, Unit V)

| Model | | | Specifications | | | |
|---|---|---|---|---|---|---|
| | | | IDG10M4 IDG10V4 | IDG20M4 IDG20V4 | IDG10HM4 IDG10HV4 | IDG20HM4 IDG20HV4 |
| Component equipment | Mist separator | | AFM30-A | | | |
| | Micro mist separator | | AFD30-A | | | |
| | Regulator (Type V only) | | AR25-B | | | |
| | Spacer | | Y300(T)-A | | | |
| Range of operating conditions | Fluid | | Compressed Air | | | |
| | Inlet air pressure MPa | | 0.3～0.85 | | | |
| | Inlet air temperature °C | *Note1 | -5～55 | | | |
| | Ambient temperature °C | *Note1 | -5～55 | | | |
| Standard Performance | Outlet air atmospheric pressure dew point °C | *Note2 | -20 | | -15 | |
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| | Inlet air saturation temperature °C | | 25 | | | |
| | Ambient temperature °C | | 25 | | | |
| Dew point indicator purge air flow rate | | | 1 L/min (ANR) {In the case of inlet air pressure 0.7MPa} | | | |
| Regulator construction (about Type V) | | | Relief type | | | |
| Port size | | | 1/4 ・ 3/8 | | | |
| Mass kg | | Type M | 1.0 | 1.3 | 1.0 | 1.3 |
| | | Type V | 1.3 | 1.5 | 1.3 | 1.5 |

* Note 1. When using the product in the temperature range between -5 and 5 deg. C, prevent water droplets from entering the inlet port. (No freezing of the fluid)
* Note 2. “ANR” indicates the flow rate converted to the value at 20 deg. C, under the atmospheric pressure and the state of relative humidity 65%.
* Note 3. Iccludes 1 L/min [ANR] of purge air flow (at 0.7 MPa inlet air pressure) for the dew point indicator.

| Revision history |
| --- |
| A: Changes to Maintenance and Checks<br>B: Correction of specification column. |

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Doc. No. AMX-OM-Q021-B

# Operation Manual

PRODUCT NAME

Membrane Air Dryer

MODEL / Series / Product Number

IDG60,IDG60H
IDG75,IDG75H
IDG100,IDG100H

**SMC Corporation**

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### ⚠ Caution

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**b. When very clean air is required**

(Supplying clean air to air bearings, blowing of semiconductor parts, etc.) Install a micro mist separator or Super Mist Separator on the outlet side of this equipment. Grease is applied inside of the Regulator used in the V type unit. When air with high purity is required, please either mount the Super Mist Separator on the outlet side or use a made-to-order product, which is provided with a Micro Mist Separator (Series AWD) instead of a Regulator.

**c. Time to reach the rated dew point**

A certain amount of time is required to achieve the rated dew point after the air begins flowing into the membrane air dryer. Use the times below as a guide, and begin operating the outlet side equipment after the rated dew point is achieved.

Standard dew point -20°C, -15°C : about 10 min.

## Selection

### ⚠ Caution

**a. Consider the purge air flow rate in total flow rate requirements.**

Find the purge air flow rate from the charts and calculate the “required outlet air flow rate + purge air flow rate”. The air supply capacity must be at lease equal to the calculated flow or the required outlet air flow rate cannot be obtained.

**b. Use the proper size tubing for purge air discharge (Option : P)**

The dehumidification capacity decreases in proportion to the length of the tubing for discharging purge air. Use tubing of the specified size and keep its length to 5 meters or less.

## Mounting

### ⚠ Caution

**a. Do not obstruct the purge air discharge ports.**

Dehumidification performance will decrease or may become impossible if purge air back pressure becomes too high or purge air stops flowing.

**b. Provide proper filtration on the inlet side of a membrane air dryer.**

Performance will be reduced If the inlet air contains oil, water, or other contaminations that can clog the membrane pores.

An AMH Micro Mist Separator with Pre-filter are already installed on the M and V unit types.

**c. Remove water droplets from the inlet air**

Water droplets in the air can lower performance and cause malfunction.

**d. Large quantities of dust (solid foreign matter) are contained in the supply air.**

When there are large quantities of dust (solid foreign matter), install an air filter or main line filter to the inlet side of the mist separator.

**e. Install a regulator on the outlet side of the membrane air dryer.**

Dehumidification performance will be reduced if a regulator is a regulator is installed on the inlet side of the membrane dryer.

**f. Ensure that intermittent pressure is not applied to the product.**

Do not frequently operate a solenoid valve on the inlet side. The membrane dryer can be damaged if inlet pressure is applied intermittently.

**g. Installation of Bracket Assembly (Accessory)**

Please attach by a customer.

Tightening torque : 1.4 N・m

Hexagon key : nominal 4

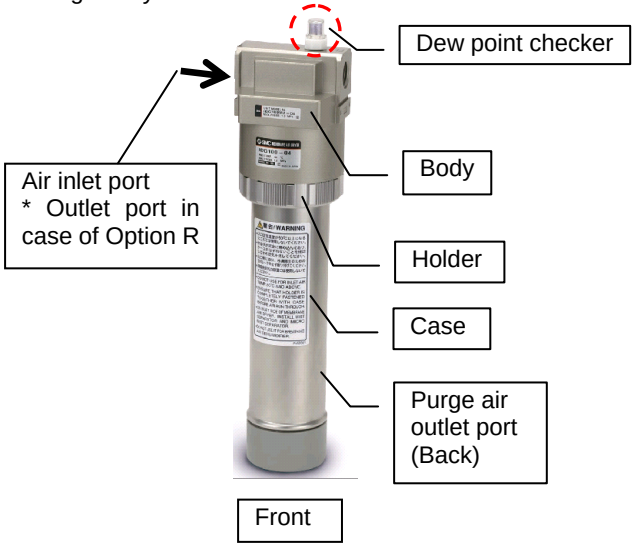


Fig 2.1 Names of parts

# 2. Installations and Operations:

## Piping

### ⚠ Warning

**a. Confirm locking of case and body**

When using in a unit, be sure to set the air pressure to zero before using a Mist Separator or Micro Mist Separator with modular connections. Also, confirm that the body and case are locked together with a click before starting the flow of compressed air.

**b. Confirm tightening of the holder.**

Before starting the flow of compressed air, turn the Membrane air dryer's holder in its tightening direction, confirming that it is completely tightened and that the case will not come off.

**c. Exhaust the purged air discharge (Option : P)**

The piping of purge air for dehumidification and for the dew point checker can be combined, but do not combine it with compressed air lines or drain piping or merge the purge air with exhaust air from other equipment. Back-pressure through the purged air exhaust port can cause damage or poor performance.

### ⚠ Caution

**a. Use of tools**

Hold the upper portion of the body (aluminum die-casted section) with a spanner or adjustable angle wrench. Do not turn it while holding the case section.

**b. Drain piping for separators**

Use a tube of the prescribed size and keep the length within 5 meters or less when installing drain piping for Mist Separators or Micro Mist Separators. Be sure that the tube does not rise up or become folded over.

**c. Flush pipes before installation.**

Use an air blower to flush the piping to thoroughly remove any cutting chips, cutting oil, or debris from the piping inside, before connecting them. If they enter the inside of products, they could cause products to malfunction, lower performance or damage the element.

## Air Supply

### ⚠ Caution

**a. Compressed air supply capacity**

An air source that has a supply capacity that is larger than the "necessary outlet air flow rate (dry air flow rate) + purge air flow rate" is required. See the purge air flow rate diagram in the catalog for the purge air flow rate.

**b. Avoid chemical substances which have an adverse effect on the product**

The chemical substances stated in the table below can reduce the performance or damage the membrane element. Do not use the membrane dryer in an environment containing these chemicals substances.

| Type | Harmful Substances |
|---|---|
| Solvent | Acetone, Benzene, Phenol, Toluene, Trichloroethylene, Xylene, Cresol, Thinner, Aniline, Chloroform, Ethyl Alcohol, Methyl Alcohol, Chlorobenzene, Trichloroethane, Ethylbenzene, Isopropyl Alcohol, Dioxane, Tetrahydrofuran, Methyl Chloride, Cyclohexanone, Carbon Tetrachloride, Methyl Ketone, Ethyl Ketone, etc. |
| Acid | Sulfuric Acid, Nitric Acid, Hydrochloric Acid, Acetic Acid, Lactic Acid, Chromic Acid, etc. |
| Gas | Chlorine, Sulfurous Acid, Hydrogen Sulfide, Bromine, Ozone, Ammonia, etc. |
| Oil | Hydraulic Fluid (Phosphoric Ester), Fuel Oil, Water Soluble Cutting Fluid (Alkaline), Kerosene, etc. |
| Strong Bases | Lithium hydroxide, Sodium hydroxide, Potassium hydroxide, Calcium hydroxide, etc. |
| Others | Anaerobic thread lockers |

## Operating Environment

### ⚠ Caution

**a. Do not use at temperatures (fluid or ambient temperatures) higher than the prescribed operating conditions.**

Resin is used in the membrane module (element), and it can be damaged by operation at high temperatures. confirm that the fluid temperature does not exceed the membrane dryer's range of operating conditions during use, especially when installed immediately after a reciprocating type air compressor.

**b. Keep the inlet air temperature lower than the ambient temperature.**

Condensation and water drops may accumulate inside of the membrane dryer's body and reduce its dehumidification capacity if the membrane air dryer's body is cooled by the ambient air.

# 3. Maintenance and Checks

## ⚠ Caution

a. **Do not remove the parts and piping when the product is pressurized. Always confirm that there is no residual pressure present before removal of unit. Replacement while residual pressure is present in the product may cause injury or damage of the product.**

b. **Precautions for membrane module removal**

When the filter and membrane air dryer is connected by spacer (modular connection), be sure to remove the membrane dryer before replacement.

c. **Color of the dew point indicator**

The color of the dew point indicator shows the condition of the outlet air from the membrane air dryer.

- Dew point indicator color and humidity of air

(1) Bluish ←→ Pinkish

Bluish --- Relative humidity approx. 10% or less

Pinkish --- Relative humidity approx. 50% or higher

(2) Greenish ←→ Yellowish

Greenish --- Relative humidity approx. 10% or less

Yellowish --- Relative humidity approx. 50% or higher

*1. It takes time for the color of the dew point indicator changes.

*2. Use a dew point meter for confirming the correct dew point.

-Discoloration other than above

Absorbent is used for the dew point indicator. The absorbent absorbs vaporized oil or other gas components which cannot be eliminated by micro mist separator and the dew point indicator may turn colors other than specified above.

In this case, it is difficult to check the humidity of the outlet air. Please replace the dew point indicator regularly.

It is possible to avoid discoloration by installing a super mist separator which absorbs vaporized oil and an odor removal filter. It is recommended to add the super mist separator and an odor removal filter after replacing the dew point indicator.

### Service Parts

Table 3-1. Membrane module kit (Element) and Dew point indicator kit

| Name / Model | Membrane module kit | Dew point indicator kit |
|---|---|---|
| IDG60,60H | IDG-EL60 | IDG-DP01 |
| IDG75,75H | IDG-EL75 | |
| IDG100,100H | IDG-EL100 | |
| IDG60,60H Option : P | IDG-EL60 | IDG-DP01-X001 |
| IDG75,75H Option : P | IDG-EL75 | |
| IDG100,100H Option : P | IDG-EL100 | |

# 4. Specifications

1) Single Unit Type

| Model | | Specifications | | | | | |
|---|---|---|---|---|---|---|---|
| | | IDG60 | IDG75 | IDG100 | IDG60H | IDG75H | IDG100H |
| Range of operating conditions | Fluid | Compressed Air | | | | | |
| | Inlet air pressure MPa | 0.3～1.0 | | | | | |
| | Inlet air temperature °C *Note 1 | -5～50 | | | | | |
| | Ambient temperature °C *Note 1 | -5～50 | | | | | |
| Standard performance | Outlet air atmospheric pressure dew point °C | -20 | | | -15 | | |
| Standard performance conditions | Inlet air flow rate L/min(ANR) *Note 2 | 725 | 900 | 1190 | 665 | 830 | 1110 |
| | Outlet air flow rate L/min(ANR) | 600 | 750 | 1000 | 600 | 750 | 1000 |
| | Purge air flow rate L/min(ANR) *Note 3 | 125 | 150 | 190 | 65 | 80 | 110 |
| | Inlet air pressure MPa | 0.7 | | | | | |
| | Inlet air temperature °C | 25 | | | | | |
| | Inlet air saturation temperature °C | 25 | | | | | |
| | Ambient temperature °C | 25 | | | | | |
| Dew point indicator purge air flow rate | | 1L/min (ANR) {In case of inlet air pressure 0.7 MPa} | | | | | |
| Port size | | 3/8 ・ 1/2 | 1/2 | | 3/8 ・ 1/2 | 1/2 | |
| Mass kg (With bracket) | | 1.50 (1.65) | 1.50 (1.65) | 1.55 (1.70) | 1.50 (1.65) | 1.50 (1.65) | 1.55 (1.70) |

2) Units type (Unit M, Unit V)

| Model | | | Specifications | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | IDG60M2 IDG60V4 | IDG75M2 IDG75V4 | IDG100M2 IDG100V4 | IDG60HM2 IDG60HV4 | IDG75HM2 IDG75HV4 | IDG100HM2 IDG100HV4 |
| Component equipment | Micro mist separator with prefilter | | AMH350C | AMH450C | | AMH350C | AMH450C | |
| | Regulator (Type V only) | | AR40-B | | | | | |
| | Spacer (Type V only) | | Y400-A | | | | | |
| Range of operating conditions | Fluid | | Compressed Air | | | | | |
| | Inlet air pressure MPa | | 0.3～1.0 | | | | | |
| | Inlet air temperature °C *Note1 | | -5～50 | | | | | |
| | Ambient temperature °C *Note1 | | -5～50 | | | | | |
| Standard Performance | Outlet air atmospheric pressure dew point °C *Note2 | | -20 | | | -15 | | |
| Standard Performance conditions | Inlet air flow rate L/min(ANR) | | 720 | 888 | 1185 | 665 | 818 | 1100 |
| | Outlet air flow rate L/min(ANR) | | 600 | 750 | 1000 | 600 | 750 | 1000 |
| | Purge air flow rate L/min(ANR) *Note 3 | | 120 | 138 | 185 | 65 | 68 | 100 |
| | Inlet air pressure MPa | | 0.7 | | | | | |
| | Inlet air temperature °C | | 25 | | | | | |
| | Inlet air saturation temperature °C | | 25 | | | | | |
| | Ambient temperature °C | | 25 | | | | | |
| Dew point indicator purge air flow rate | | | 1 L/min (ANR) {In the case of inlet air pressure 0.7MPa} | | | | | |
| Regulator construction (about Type V) | | | Relief type | | | | | |
| Port size | | | 3/8 ・ 1/2 | 1/2 | | 3/8 ・ 1/2 | 1/2 | |
| Mass kg | | Type M | 2.7 | 3.2 | 3.3 | 2.7 | 3.2 | 3.3 |
| | | Type V | 3.1 | 3.7 | 3.8 | 3.1 | 3.7 | 3.8 |

* Note 1. When using the product in the temperature range between -5 and 5 deg. C, prevent water droplets from entering the inlet port. (No freezing of the fluid)
* Note 2. “ANR” indicates the flow rate converted to the value at 20 deg. C, under the atmospheric pressure and the state of relative humidity 65%.
* Note 3. Includes 1 L/min [ANR] of purge air flow (at 0.7 MPa inlet air pressure) for the dew point indicator.

| Revision history |
| --- |
| A: Changes to Maintenance and Checks<br>B: Correction of specification column |

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