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ISO Quality Policy

Orion strives to offer products that delight its customers.

オリオンクリーンエアシステム
冷凍式圧縮空気除湿装置

Clean Air System

(Heavy Duty Models)**Low Pressure Loss & Energy Saving****Eco-Friendly Refrigerant Applied****Powerful performance in Asia
with heavy duty specification**

ARX3500A-E



ARX7400A-WE

Best Match for Inverter Compressor & Oil-Free Compressor

Specifications Refrigerated Air Dryer

ARX Series

Model

《Water Cooled》 ARX2900A-W
ARX4100A-WE
ARX5300A-WE
ARX7400A-WE

《Air Cooled》 ARX2300A
ARX3100A-E
ARX3500A-E



ARX3500A-E



ARX7400A-WE

| Item | | | Model | | | |
|---|---|---------------------|-----------------------|---------------|---------------|------------------------|
| | | | Water Cooled Models | | | |
| | | | ARX2900A-W | ARX4100A-WE | ARX5300A-WE | ARX7400A-WE |
| Air processing conditions | Air processing capacity | m ³ /min | 29 | 41 | 53 | 74 |
| | Inlet air pressure | MPa | 0.69 | | | |
| | Inlet air temperature | °C | 45 | | | |
| | Outlet pressure dew point | °C | 10 | | | |
| | Cooling water temperature | °C | 32 | | | |
| | Cooling water flow rate | m ³ /h | 4.8 | 5.2 | 5.4 | 9 |
| Operating ranges | Inlet air temperature | °C | 10~60 | | | |
| | Ambient temperature | °C | 2~45 | | | |
| | Compressed air pressure | MPa | 0.29~0.98 | | | |
| | Cooling water temperature | °C | 2~34 | | | |
| | Cooling water operating pressure (gauge pressure) | MPa | 0.3~0.7 | | | |
| Outside dimensions | H × D × W | mm | 1500×1000×802 | 1500×1000×802 | 1500×1199×850 | 1620×1654×877 |
| Mass | | kg | 278 | 350 | 395 | 495 |
| Air connection | | FLG | 2 · 1/2B (65A) | 3B (80A) | 4B (100A) | 4B (100A) |
| Dual-Drive Eco system (Capacity control function) | | | - | o | o | o |
| Refrigerant | | | R407C | R407C | R407C | R410A |
| Electrical specifications | Power | V | Three phase 380V 50Hz | | | |
| | Power consumption | kW | 4.2 | 6.8 | 9.5 | 12.5 |
| | Electric current | A | 8 | 12.5 | 17.5 | 21 |
| Recommended pre-filter | Installed before the ARX | (Option) | DSF2900A | DSF4100A | DSF5300A | DSF6100A, DSF8000A-SUS |

※ Special-order models available with an air pressure specification of 1.0 MPa.

※ Air processing capacity figures are based on ANR and adjusted to atmospheric pressure, 32°C, 75% RH.

※ Refer to the specifications sheet for further details. ※ Always install a Super Drain Filter (DSF) along the piping before the ARX unit.

※ Air connection flange : JIS 10K FF, No companion flange is attached.

| Item | | | Model | | |
|---|---------------------------|---------------------|-----------------------|---------------|---------------|
| | | | Air Cooled Models | | |
| | | | ARX2300A | ARX3100A-E | ARX3500A-E |
| Air processing conditions | Air processing capacity | m ³ /min | 23 | 31 | 35 |
| | Inlet air pressure | MPa | 0.69 | | |
| | Inlet air temperature | °C | 50 | | |
| | Outlet pressure dew point | °C | 10 | | |
| | Ambient temperature | °C | 35 | | |
| Operating ranges | Inlet air temperature | °C | 10~60 | | |
| | Ambient temperature | °C | 2~45 | | |
| | Compressed air pressure | MPa | 0.29~0.98 | | |
| Outside dimensions | H × D × W | mm | 1500×1500×802 | 1500×1500×802 | 1500×1500×802 |
| Mass | | kg | 323 | 385 | 380 |
| Air connection | | FLG | 2 · 1/2B (65A) | 3B (80A) | 3B (80A) |
| Dual-Drive Eco system (Capacity control function) | | | - | o | o |
| Refrigerant | | | R407C | R407C | R407C |
| Electrical specifications | Power | V | Three phase 380V 50Hz | | |
| | Power consumption | kW | 5.6 | 10 | 10 |
| | Electric current | A | 10.5 | 18 | 18 |
| Recommended pre-filter | Installed before the ARX | (Option) | DSF2900A | DSF3500A | |

※ Special-order models available with an air pressure specification of 1.0 MPa.

※ Air processing capacity figures are based on ANR and adjusted to atmospheric pressure, 32°C, 75% RH.

※ Refer to the specifications sheet for further details. ※ Always install a Super Drain Filter (DSF) along the piping before the ARX unit.

※ Air connection flange : JIS 10K FF, No companion flange is attached.

Super Filter Series Product Specifications

Model

《4 Unit Types and 24 Models to Suit Your Needs》 DSF/LSF/MSF/KSF2900A ~ 8000A-SUS



- For Heavy Duty ARX Air Flow.
- Stainless Steel Vessel Standard (For both cleanliness and reduced weight.)
- Highly Efficient Filter Element (Made in Japan)
 - Super Drain Filter DSF Series : Removes water droplets and solid particulate (5 μm and larger).
 - Super Line Filter LSF Series : Removes solid particulate (1 μm and larger).
 - Super Mist Filter MSF Series : Removes oil and solid particulate (0.01 μm and larger).
 - Super Activated Carbon Filter KSF Series : Oil and odor removal (oil concentration at outlet: 0.003 wt ppm).

| Model | DSF/LSF/MSF/KSF | 2900A | 3500A | 4100A |
|---------------------------------------|--|--|---|--|
| Air processing capacity (at 0.69 MPa) | m ³ /min | 29 | 35 | 41 |
| Body and housing | | Stainless steel | | |
| Operating ranges | Operating ranges | Mpa 0.1 - 0.98 (DSF: 0.2 - 0.98, KSF:0.05 - 0.98) | | |
| | Inlet air temperature | °C 5 - 60 | | |
| | Ambient temperature | °C 2 - 60 | | |
| Performance specifications | Filtration | DSF : 5 μm (Liquid water separation efficiency: 99%) MSF : 0.01 μm (Filtration efficiency: 99.999%) | | LSF : 1 μm (Filtration efficiency: 99.999%) KSF : Adsorption by activated carbon fiber |
| | Output oil concentration | Wtppm MSF : 0.01 KSF : 0.003 ※ Subject to inlet air conditions of the system piping. | | |
| When to replace filter element | | One year or pressure loss 0.02 MPa for DSF, 0.035 MPa for LSF/MSF, whichever comes first. | | |
| Main dimensions | Air connection (FLG) | 2 1/2B (65A), JIS 10K FF | 3B (80A), JIS 10K FF | |
| | Dimensions (front face × depth × height) | DSF : 590×290×1013 LSF/MSF : 590×290×999 KSF : 590×290×823 | DSF : 590×290×1170 LSF/MSF : 590×290×1159 KSF : 590×290×980 | |
| | Mass | kg 26 | 28 | |
| Element | EDS/ELS/EMS/EKS models | 1300 | 2000 | |
| | Quantity | 2 | 2 | |
| Accessories | Auto drain trap | FD-10-A (DSF) | FD2 (LSF/MSF) | None with KSF |
| | Pressure differential gauge | DG-50A (Comes standard only with the MSF. Available as an option on other models.) | | |
| | Other | | | |

※Air processing capacity is converted to the suction air condition (at atmospheric pressure, 32deg.C and 75%).

※Special-order models available with an air pressure specification of 1.0 MPa.

※Air connection flange : JIS 10K FF, No companion flange is attached.

※Oil concentration is measured in conformity with ISO8573-2 "Test method of oil concentration", not including oil-vapor.

※Refer to the specifications sheet for further details.

| Model | DSF/LSF/MSF/KSF | 5300A | 6100A | 8000A-SUS |
|---------------------------------------|--|--|---------------|--|
| Air processing capacity (at 0.69 MPa) | m ³ /min | 53 | 61 | 80 |
| Body and housing | | Stainless steel | | |
| Operating ranges | Operating ranges | MPa 0.1 - 0.98 (DSF: 0.2 - 0.98, KSF:0.05 - 0.98) | | |
| | Inlet air temperature | °C 5 - 60 | | |
| | Ambient temperature | °C 2 - 60 | | |
| Performance specifications | Filtration | DSF : 5 μm (Liquid water separation efficiency: 99%) MSF : 0.01 μm (Filtration efficiency: 99.999%) | | LSF : 1 μm (Filtration efficiency: 99.999%) KSF : Adsorption by activated carbon fiber |
| | Output oil concentration | Wtppm MSF : 0.01 KSF : 0.003 ※ Subject to inlet air conditions of the system piping. | | |
| When to replace filter element | | One year or pressure loss 0.02 MPa for DSF, 0.035 MPa for LSF/MSF, whichever comes first. | | |
| Main dimensions | Air connection (FLG) | 4B(100A), JIS 10K FF | | 4B(100A), GB/RF |
| | Dimensions (front face × depth × height) | DSF : 640×442×1239 LSF/MSF : 640×442×1224 KSF : 640×442×1056 | | 680×639×1779 |
| | Mass | kg DSF/LSF/MSF : 48 KSF : 46 | | DSF : 117 LSF/MSF : 116 KSF : 115 |
| Element | EDS/ELS/EMS/EKS models | 2000 | | 2000 |
| | Quantity | 3 | | 4 |
| Accessories | Auto drain trap | FD-10-A (DSF) | FD2 (LSF/MSF) | None with KSF |
| | Pressure differential gauge | DG-50A (Comes standard only with the MSF. Available as an option on other models.) | | |
| | Other | | | Stand |

※Air processing capacity is converted to the suction air condition (at atmospheric pressure, 32deg.C and 75%).

※Special-order models available with an air pressure specification of 1.0 MPa.

※Air connection flange : JIS 10K FF, No companion flange is attached.

※Oil concentration is measured in conformity with ISO8573-2 "Test method of oil concentration", not including oil-vapor.

※ Refer to the specifications sheet for further details.

※With GB/RF companion flanges for 8000A-SUS.

Heavy Duty Model Selection Coefficient

Heavy Duty ARX Model Choice

Air dryer processing capacity differs based on operating conditions. Confirm the installation location and operating requirements and choose the model that adequately meets your needs.

$$\text{Dryer processing air flow (m}^3\text{/min)} = \textcircled{1} \text{ standard air flow (m}^3\text{/min)} \times \textcircled{2} \text{ the temperature correction coefficient} \times \textcircled{3} \text{ the pressure correction coefficient}$$

① Standard Air Flow

Water Cooled Models

| Model | ARX | 2900A-W | 4100A-WE | 5300A-WE | 7400A-WE |
|--|-----|---------|----------|----------|----------|
| Air processing capacity(m ³ /min) | | 29 | 41 | 53 | 74 |

Air Cooled Models

| Model | ARX | 2300A | 3100A-E | 3500A-E |
|--|-----|-------|---------|---------|
| Air processing capacity(m ³ /min) | | 23 | 31 | 35 |

② Temperature Correction Coefficient

Water Cooled Models

| Inlet air °C | 40 | | | 45 | | | 50 | | | 55 | | | 60 | | |
|------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Pressure dew point °C | 5 | 10 | 15 | 5 | 10 | 15 | 5 | 10 | 15 | 5 | 10 | 15 | 5 | 10 | 15 |
| Temperature correction coefficient | 0.88 | 1.14 | 1.14 | 0.77 | 1.00 | 1.14 | 0.66 | 0.91 | 1.10 | 0.59 | 0.83 | 0.98 | 0.54 | 0.75 | 0.89 |

* In water cooled models, use the coefficients above regardless of the temperature of the cooling water. Note however that the cooling water should be 2-34 °C.

Air Cooled Models

| Inlet air °C | | 40 | | | 45 | | | 50 | | | 55 | | | 60 | | | |
|------------------------------------|--------------------------|----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Pressure dew point °C | | 5 | 10 | 15 | 5 | 10 | 15 | 5 | 10 | 15 | 5 | 10 | 15 | 5 | 10 | 15 | |
| Temperature correction coefficient | Ambient temperature (°C) | 30 | 0.85 | 1.15 | 1.37 | 0.83 | 1.12 | 1.35 | 0.78 | 1.06 | 1.27 | 0.67 | 0.88 | 1.04 | 0.62 | 0.80 | 0.92 |
| | | 32 | 0.82 | 1.12 | 1.34 | 0.80 | 1.09 | 1.31 | 0.76 | 1.03 | 1.24 | 0.64 | 0.85 | 1.01 | 0.60 | 0.75 | 0.89 |
| | | 35 | 0.79 | 1.09 | 1.30 | 0.77 | 1.06 | 1.28 | 0.73 | 1.00 | 1.21 | 0.62 | 0.81 | 0.98 | 0.57 | 0.70 | 0.86 |
| | | 40 | 0.60 | 0.81 | 0.98 | 0.58 | 0.80 | 0.96 | 0.55 | 0.75 | 0.91 | 0.47 | 0.62 | 0.75 | 0.44 | 0.56 | 0.66 |

③ Pressure Correction Coefficient

| Air pressure MPa | 0.29 | 0.39 | 0.49 | 0.59 | 0.69 | 0.79 | 0.89 | 0.98 |
|---------------------------------|------|------|------|------|------|------|------|------|
| Pressure correction coefficient | 0.73 | 0.80 | 0.87 | 0.93 | 1.00 | 1.07 | 1.13 | 1.2 |

ISO Certification

Orion Machinery Asia Co., Ltd is an ISO Certified, Quality Management company.



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