

No.1 Share in Japan

ORION®

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

Refrigerated Air Dryer ARX Series Specifications

Model

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

《Air Cooled》 ARX2300A
ARX3100A-E
ARX3500A-E



Model			Water Cooled Models			
Item			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			
Operating ranges	Cooling water flow rate	m ³ /h	4.8	5.2	5.4	9
	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			
Outside dimensions	Cooling water operating pressure (gauge pressure)	MPa	0.3~0.7			
	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)			-	○	○	○
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

Model			Air Cooled Models		
Item			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)			-	○	○
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

- 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%) LSF : 1 μm (Filtration efficiency: 99.999%) MSF : 0.01 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	-		

Model	DSF/LSF/MSF/KSF	5300A	6100A	8000A
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%) LSF : 1 μm (Filtration efficiency: 99.999%) MSF : 0.01 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		
	Dimensions (front face × depth × height)	DSF : 640×442×1239 LSF/MSF : 640×442×1224 KSF : 640×442×1056 680×594×1757		
	Mass	kg DSF/LSF/MSF : 48 KSF : 46 DSF / LSF / MSF / KSF : 95		
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 "Compressed air - Part 2 : Test methods for oil aerosol content", not including oil-vapor.

※ Refer to the specifications sheet for further details.

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.

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

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.

※ Please ask to your dealer about coefficient at dew point 3°C.

Air Cooled Models

Inlet air ℃		40			45			50			55			60			
Pressure dew point ℃		5	10	15	5	10	15	5	10	15	5	10	15	5	10	15	
Temperature correction coefficient	Ambient temperature (℃)	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

※ Please ask to your dealer about coefficient at dew point 3°C.

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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Important:

This catalog contains product specifications as of Jul., 2016.

- Images in this catalog are printed images and actual product colors may differ from the colors herein.
- Product mechanisms, specifications, etc. listed in this catalog are subject to change without notice.
- Designed by Orion Machinery Japan. Assembled in Thailand.

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