

No.1 Share in Japan



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



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



ARX3500A-E



ARX7400A-WE

Refrigerated Air Dryer : Water Cooled Models

Descriptions	Type	ARX				
		2900A-W	4100A-WE	5300A-WE	7400A-WE	
Air Prossessing capacity	m³/min	29	41	53	74	
Inlet Air Temperature	℃	10~60	Rated Condition			
Dew Point Temperature	℃	3~15				
Ambient Temperature	℃	2~45	Air Pressure	Dew Ponit (PDP)	Inlet Air Temp.	
Operation Pressure	MPa	0.29~0.98	0.69MPa	10℃	45℃	
Cooling Water Temperature	℃	2~34	Cooling Water Flow Rate at 32℃			
Cooling Water Pressure (Guage Pressure)	MPa	0.3~0.7	4.8m³/h (ARX2900A-W)	5.2m³/h (ARX4100A-WE)	5.4m³/h (ARX5300A-WE)	9m³/h (ARX7400A-WE)
Dimentions (H×D×W)	mm	1500×1000×802	1500×1000×802	1500×1199×850	1620×1654×877	
Mass	kg	278	350	395	495	
Pipe Connections	FLG	2・1/2B (65A)	3B (80A)	4B (100A)		
Dual-Drive Eco System		—	○			
Refrigerant		R407C				R410A
Power Source		3ph 380V±10% (50Hz)				
Power Consumption	kW	4.2	6.8	9.5	12.5	
Electric Current	A	8	12.5	17.5	21	
Reccmmended Pre-Filter (Option)		DSF2900A	DSF4100A	DSF5300A	DSF8000A	

Refrigerated Air Dryer : Air Cooled Models

Descriptions	Type	ARX				
		2300A	3100A-E	3500A-E		
Air Prossessing capacity	m³/min	23	31	35		
Inlet Air Temperature	℃	10~60	Rated Condition			
Dew Point Temperature	℃	3~15				
Ambient Temperature	℃	2~45	Air Pressure	Ambient Temp.	Dew Ponit (PDP)	Inlet Air Temp.
Operation Pressure	MPa	0.29~0.98	0.69MPa	35℃	10℃	50℃
Dimentions (H×D×W)	mm	1500×1500×802				
Mass	kg	323	385		380	
Pipe Connections	FLG	2 · 1/2B (65A)	3B (80A)			
Dual-Drive Eco System		—	○			
Refrigerant		R407C				
Power Source		3ph 380V±10% (50Hz)				
Power Consumption	kW	5.6	10			
Electric Current	A	10.5	18			
Reccmmended Pre-Filter (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℃, 75% RH.

※ Refer to the specification sheet for further details. ※ Please install a Super Drain Filter (DSF) before ARX air dryer to guarantee its performance.

※ 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).

Descriptions		Type DSF/LSF/MSF/KSF	2900A	3500A	4100A
Air processing capacity	0.69 MPa	m ³ /min	29	35	41
Body and housing			Stainless steel		
Operating Ranges	Fluid		Compressed Air		
	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	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		
	Outlet 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.		
Air Connection (FLG)			2 1/2B (65A), JIS 10K FF 3B (80A), JIS 10K FF		
Mass		kg	26	28	
Accessories	Filter Element	Type	EDS/ELS EMS/EKS	1300	2000
		Quantity		2	2
	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		-		

Descriptions		Type DSF/LSF/MSF/KSF	5300A	6100A	8000A
Air processing capacity	0.69 MPa	m ³ /min	53	61	80
Body and housing			Stainless steel		
Operating Ranges	Fluid		Compressed Air		
	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	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		
	Outlet 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.		
Air Connection (FLG)			4B(100A), JIS 10K FF		
Mass		kg	DSF/LSF/MSF : 48 KSF : 46		DSF / LSF / MSF / KSF : 95
Accessories	Filter Element	Type	EDS/ELS EMS/EKS	2000	2000
		Quantity		3	4
	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 specification sheet for further details.

Model Selection

Model Selection

- 1** Temperature conditions
Table A : Water Cooled Models
Table B : Air Cooled Models
Table C : Air Pressure Coefficient
- 2** Calculate the necessary air capacity for the model selection.
Air capacity required =
Intake air volume / (A or B × C)
- 3** Please select the suitable model from the specification which has bigger Air Processing Capacity (P1) than the air capacity required.

Model selection Example (Air Cooled Models)

Inlet Air Temp.	60°C	Ambient Temp.	35°C	Air Flow	21.4m³/min
PDP	10°C	Air Pressure	0.59MPa	Frequency	50Hz

- 1** From charts, Inlet temp. coefficient → **0.70**
Air Pressure coefficient → **0.93**
- 2** Air capacity required for Orion Dryer,
21.4 / (0.70×0.93)=32.8m³/min
- 3** The suitable model to process 32.8m³/min is ARX3500A-E, as its capacity exceeds the required value.

A: Inlet Air Temperature Coefficient (Water Cooled Models)

Inlet air temperature (°C)	40			45			50			55			60		
Outlet dew point (°C)	5	10	15	5	10	15	5	10	15	5	10	15	5	10	15
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

B: Inlet Air Temperature Coefficient (Air Cooled Models)

Inlet air temperature (°C)		40			45			50			55			60		
Outlet dew point (°C)		5	10	15	5	10	15	5	10	15	5	10	15	5	10	15
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

C: Air Pressure Coefficient

Air pressure (MPa)	0.29	0.39	0.49	0.59	0.69	0.79	0.89	0.98
Coefficient	0.73	0.80	0.87	0.93	1.00	1.07	1.13	1.2

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

※The coefficient is only for reference, please ask ORION dealer about its guaranteed performance.

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 Nov., 2017.
- 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.