

JPD series



Why Do Compressed Air Systems Need Drying?

SPX FLOW provides compressed-air dryers and filters that remove oil, water, dirt, rust and pipe scale. Contaminants found in compressed air can adversely affect all components of an air distribution system, and can cause a malfunction of pneumatic control in the instrument air system.

Properly treated compressed air can improve work efficiency and reduces maintenance. Desiccant and refrigerated type compressed air dryers are used in the control air systems of power plants.

About SPX FLOW

SPX FLOW, Inc. (NYSE:FLOW) is a leading manufacturer of innovative flow technologies, many of which help define the industry standard in the market segments they serve. From its headquarters in Charlotte, North Carolina, it operates a sales and support network, centers of manufacturing excellence, and advanced engineering facilities, throughout the world. Its cutting-edge flow components and process equipment portfolio includes a wide range of pumps, valves, heat exchangers, mixers, homogenizers, separators, filters, UHT, and drying technology that meet many application needs. Its expert engineering capability also makes it a premium supplier of customized solutions and complete, turn-key packages to meet the most exacting of installation demands.

www.spxflow.com

JPD series

Desiccant Air Dryer External heater type

Jemaco JPD series is an economical system that consumes less operational air because part of the outlet dry air is heated by a heater installed outside the vessel and used as operating air, which is then used to operate the adsorbent of other vessels at rest. It is a heat adsorption type air dryer that provides excellent durability and reliability through design with carefully selected parts for the best function and highest reliability.

HOW IT WORKS

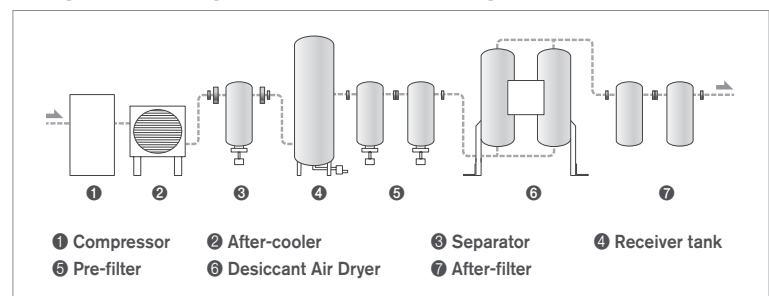
Compressed air enters dehumidified Vessel A through the inlet valve (A) from bottom to top, and is dehumidified to the -40°C dew point by the adsorbent. After that, it is discharged as clean dry air through a check valve and pipe (E) and supplied to the site. During operation, Vessel B is depressurized when the valve (B) is closed and the muffler (C) is opened.

After that, the valve (D) is opened, and part of the dry air (purge air) that has entered through the purge control valve (F) is heated to supply hot air through the valve (G) to remove moisture contained in the adsorbent inside Vessel B. At this time, as the Purge Saving Kit (H) operates and supplies external air through simultaneous intake, the amount of purge air is increased and the use of compressed air is reduced.

* Purge Saving Kit (Optional)

After operating and drying the adsorbent in Vessel B during the operation process, wet air is discharged through the purge outlet valve (D). The operating principle on the right page shows that Vessel A is part of the dehumidification process and Vessel B is part of the operation process. In addition, when the heating process is finished, the heater automatically stops to begin the cooling process, and when the cooling process is finished, pressurization is performed. The dehumidification vessel is in standby until the dehumidification process is completed. After that, when the valve (B) is opened and the valve (A) is closed by the controller, a vessel change occurs. As Vessel A starts the operation process, dehumidification continues in Vessel B.

Compressed air system installation example



Product features

STANDARD SPECIFICATION

Economical product with lower operational air consumption

- Part of the outlet dryer air is heated by a heater and used as operating air
- Removal of residual moisture by adsorbent, maximized adsorption capacity
- Ultra-low dew point available (-40°C PDP)
 - ※ When installing Purge Saving Kit (Optional)

External heater structure

- The adsorbent does not directly contact heat, ensuring optimal life of the adsorbent and product durability
- Maximized heating area of the heater, minimized heating density per unit area
- Maximized product life and efficiency at the same time

Compared to internally heated dryers, the temperature inside the vessel is lower and dew point control is easy

Use of high-performance butterfly switching valve

- All internal parts are made of stainless steel, providing high corrosion/abrasion resistance
- Easy maintenance and repair, minimized need for parts

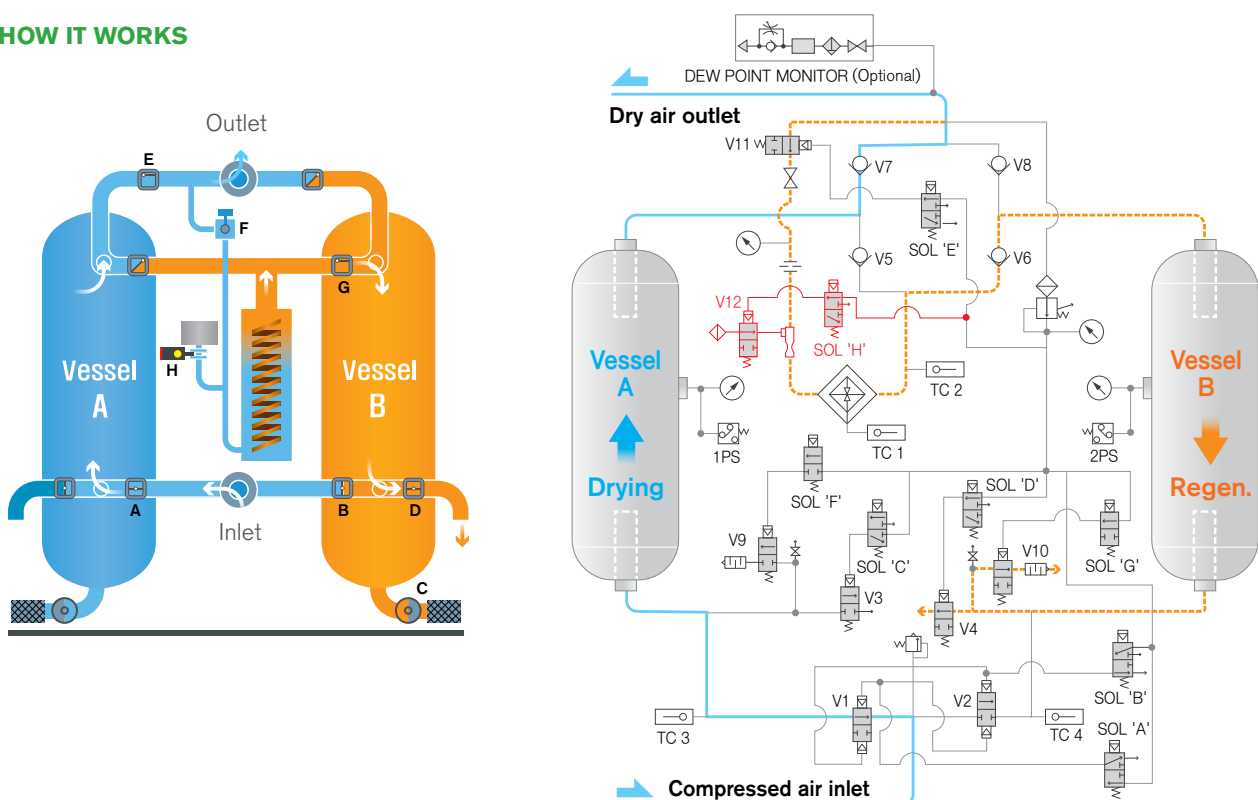
Efficient air flow with upward dehumidification and downward operation

The latest Jemaco New Controller (J-Con S) applied

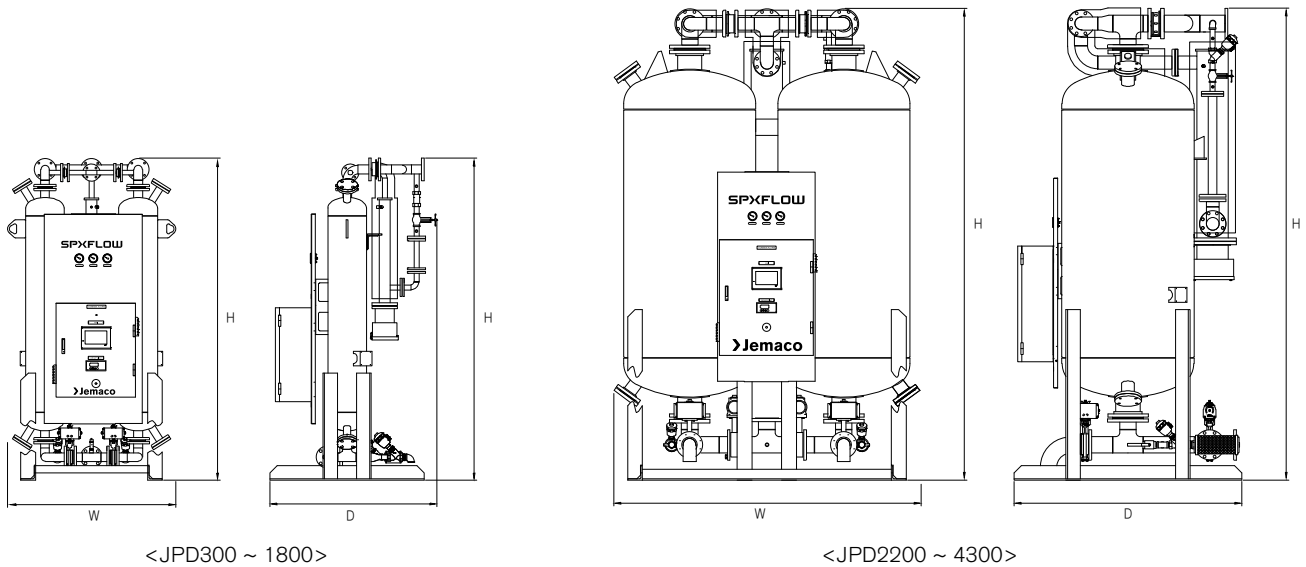
- HMI (Human Machine Interface) system tailored to user convenience
- The best maintenance system for on-site operation
- The latest control system ensures complete automatic control and operation stability of the air dryer
- Energy saving system with excellent effect (Optional)



HOW IT WORKS



DIMENSIONS



SPECIFICATIONS

Model	Inlet Flow Capacity (Nm ³ /min)	Dimension (H x W x D mm)	Weight (kg)	Inlet/Outlet Connections (FLG)	Heater (kW)	Maximum Power Usage Per Hour (kW)
JPD300	8.50	2,600 x 1,250 x 1,300	860	40A	7.2	4.5
JPD400	11.33	2,550 x 1,350 x 1,300	1,050	50A	8.7	5.4
JPD500	14.16	2,750 x 1,350 x 1,350	1,100		11	6.9
JPD600	16.99	2,800 x 1,400 x 1,400	1,250	80A	13	8.1
JPD750	21.24	2,950 x 1,600 x 1,500	1,650		16	10.0
JPD900	25.49	2,950 x 1,600 x 1,500	1,650		19	11.9
JPD1050	29.73	2,950 x 1,650 x 1,550	1,900	100A	22	13.8
JPD1300	36.81	3,150 x 1,700 x 1,600	2,300		27	16.9
JPD1500	42.40	3,050 x 1,850 x 1,650	2,500		31	19.4
JPD1800	50.97	3,050 x 2,050 x 1,800	2,750		37	23.1
JPD2200	62.30	3,200 x 2,150 x 1,900	3,450		46	28.8
JPD2600	73.62	3,200 x 2,000 x 1,900	3,450	125A	52	32.5
JPD3200	90.61	3,300 x 2,450 x 2,100	4,260		64	40.0
JPD3600	101.90	3,450 x 2,350 x 2,150	5,050		72	45.0
JPD4300	121.80	3,300 x 2,750 x 2,250	6,000	150A	86	53.8

※ Treatment flow rate is based on inlet temperature of 38°C, inlet pressure of 6.9barg, air pressure dew point of -40°C, and maximum operating pressure is 9.7barg.
(Pressure dew point -40°C when installing Purge Saving Kit)

※ Dryer weight includes adsorbent.

※ Standard power specification : 440V/3Ph/60Hz

※ Approved by the Korea Occupational Safety and Health Agency. (Vessel only)

※ Separate cost incurred upon request for adsorbent filling work.

Inlet Pressure (barg)	Inlet Temperature (°C)						
	16	21	27	32	38	43	49
4.1	1.03	1.01	0.99	0.80	0.58	0.43	0.32
4.8	1.10	1.08	1.07	0.94	0.68	0.5	0.37
5.5	1.17	1.15	1.14	1.08	0.79	0.58	0.43
6.2	1.24	1.22	1.2	1.18	0.89	0.66	0.49

Inlet Pressure (barg)	Inlet Temperature (°C)						
	16	21	27	32	38	49	49
6.9	1.30	1.28	1.26	1.24	1.00	0.74	0.55
7.6	1.36	1.34	1.32	1.30	1.11	0.82	0.61
8.3	1.42	1.40	1.38	1.36	1.22	0.90	0.67
9.0	1.48	1.46	1.44	1.42	1.33	0.99	0.74
9.7	1.53	1.51	1.49	1.47	1.44	1.07	0.80

Optional

ENERGY SAVING SYSTEM

Dew point control system

- The latest energy saving system that combines SPX FLOW's extensive know-how, rich experience, and top-tier technology
- Reduced overall energy cost by managing power consumption with a heater designed with SPX FLOW's special know-how
- Efficient product that compares and analyzes the condition of the adsorbent, the condition of the inlet pressure air or the output air, and the overall condition of the system in a variety of ways

Purge Saving Kit (Ejector) **Patent**

- Energy saving system designed exclusively for Jemaco JPD series
- The intake of low pressure air by forming a vacuum by using the velocity energy of compressed air injected at a high flow rate
- Reduces unnecessary consumption of purge air by using the intake air for operation
 - Reduced overall operating cost of air dryer
- Easy installation to improve product performance and maximize utility
 - Easily applicable to large-capacity operating conditions
 - Additional installation and renovation work available for energy management of existing products
 - Reasonable price and consistent performance
- Use of stainless steel material, simple structure and design
 - Guaranteed corrosion and abrasion resistance
 - Easy maintenance and repair with fewer issues



Purge Saving Kit (Optional)

ACCESSORIES



Butterfly valve



Cylinder valve



Dew point transmitter (Optional)

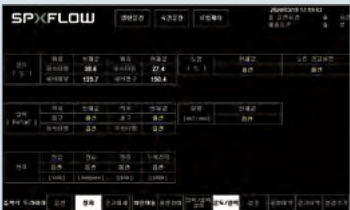
Jemaco New Controller (J-Con S)



Start-up screen



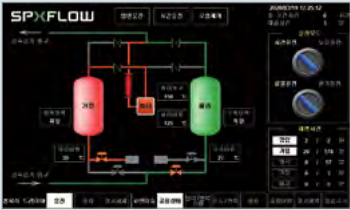
PLC Input/output status



Temperature status



Temperature/Dew point trend



Process status



Alarm history



Operation history



The Jemaco New Controller for Jemaco Desiccant air dryers enables safe and efficient management of air dryers while placing user convenience first by accommodating the various needs of our domestic and foreign customers. It provides a wide range of basic functions such as air dryer cycle and operation status setting, display, and various alarm functions as well as options that allow users to realize the unique value of air dryers.

Jemaco New Controller Specification

Providing the best specifications and functions																	
GUI (Graphic User Interface)																	
Full color LED touch screen	7" standard / 8.4"~15"(option)																
Easy change of set-value from the product																	
Provides detailed and understandable information with a total of 10 screens																	
Start-up screen, process status	<p>Provides various language modes : Korean and English installed as default : Other languages available as option</p> <hr/> <p>Temperature Unit selection -Celsius (°C), Fahrenheit (°F)</p> <hr/> <p>Pressure unit selection (option)</p> <hr/> <p>Dryer operating status : Drying time, total running time, regeneration time : Current vessel operation status, temperatures(heater inside/outlet, vessel bottom), valve status</p>																
PLC Input/output status	PLC input/output																
Temperature status	Temperatures (heater inside/outlet, vessel bottom)																
Settings	<p>Operation mode selection : fixed/dew, test mode (normal/high speed), pressure switch bypass</p> <hr/> <p>Regeneration time & temperature setting</p>																
Temperature trend	Real-time monitoring (heater inside/outlet, vessel bottom)																
Regeneration history	Regeneration mode start/finish date and time																
Dew point trend (option)	Real-time monitoring of dryer outlet dew point																
Service reminder	Valve, desiccant, filter service/maintenance reminder																
High-performance PLC																	
Vessel operation mode back-up																	
Various alarms including service reminder	<p>Provides a total of 26 types of alarms Provides warning details: Easy to analyze and troubleshoot errors in the process</p> <table border="0"> <tr> <td>: Heater inside overtemp.</td> <td>: High dew point temperature (option)</td> </tr> <tr> <td>: Heater outlet overtemp.</td> <td>: Temperature sensor malfunction</td> </tr> <tr> <td>: Heater low temperature</td> <td>: Emergency stop</td> </tr> <tr> <td>: Heating mode extend</td> <td>: Heater MC fault</td> </tr> <tr> <td>: Low pressure for vessel</td> <td>: Remote start signal loss</td> </tr> <tr> <td>: Regeneration high pressure for vessel</td> <td>: Local start signal loss</td> </tr> <tr> <td>: Depressurization fault</td> <td>: Valve, filter, desiccant service due</td> </tr> <tr> <td>: Repressurization fault</td> <td></td> </tr> </table>	: Heater inside overtemp.	: High dew point temperature (option)	: Heater outlet overtemp.	: Temperature sensor malfunction	: Heater low temperature	: Emergency stop	: Heating mode extend	: Heater MC fault	: Low pressure for vessel	: Remote start signal loss	: Regeneration high pressure for vessel	: Local start signal loss	: Depressurization fault	: Valve, filter, desiccant service due	: Repressurization fault	
: Heater inside overtemp.	: High dew point temperature (option)																
: Heater outlet overtemp.	: Temperature sensor malfunction																
: Heater low temperature	: Emergency stop																
: Heating mode extend	: Heater MC fault																
: Low pressure for vessel	: Remote start signal loss																
: Regeneration high pressure for vessel	: Local start signal loss																
: Depressurization fault	: Valve, filter, desiccant service due																
: Repressurization fault																	
Malfunction detection of critical component (parts)	Heater, blower, temperature sensor, MC (magnetic contactor)																
Dry contact signals	Alarm status, dryer run/stop status, remote/local status, dew point analog signal (option)																
DCS communication (option)	Modbus, ethernet, others																

JPD series

Desiccant Air Dryer
External heater type

SPXFLOW

Nomenclature

JPD Series

JPD <input type="text"/>						<input type="text"/>	
Model	Inlet Flow Capacity (Nm ³ /min)	Model	Inlet Flow Capacity (Nm ³ /min)	Model	Inlet Flow Capacity (Nm ³ /min)	Options	
300	8.50	900	25.49	2200	62.30	A	In/Out port ANSI
400	11.33	1050	29.73	2600	73.62	C	-73.3°C dew point under pressure (based on inlet temperature 25°C)
500	14.16	1300	36.81	3200	90.61	D	NEMA 4X Control Box (Cert. not included)
600	16.99	1500	42.40	3600	101.90	G	Xentaur dew point hygrometer
750	21.24	1800	50.97	4300	121.80	H	Panametrics dew hygrometer
						J	SS316 tubing
						K	Humidity indicator
						M	Modbus 485 communication
						N	Ethernet communication
						O	Vessel insulation
						P	In/Out pressure transmitter
						Q	Purge saving kit
						I2	Integrating wattmeter

- ※ Treatment flow rate is based on inlet temperature of 38°C and pressure of 6.9barg
- ※ All models : Approved by the Korea Occupational Safety and Health Agency (Vessel only)
- ※ JPD1300 or higher : Adsorbent supplied separately with the product
- ※ Separate cost incurred upon request for adsorbent filling work
- ※ J-CON S controller standard specification (HMI 7" Color)

SPX FLOW Technology Korea Co., Ltd.

Headquarters and factories

87, Jangansandan 9-ro, Jangan-eup, Gijang-gun, Busan, Republic of Korea
TEL. +82-51-728-5360, FAX. +82-51-728-5359

Seoul office

(Yangjae-dong, Geumgye Building), 3F, 10, Mabang-ro, Seocho-gu, Seoul, Korea 06778
TEL. +82-2-6297-4000, FAX. +82-2-783-0160

Contact Information:

www.spxflow.com

Some specifications in this bulletin may change without notice.
Bulletin C712E Rev.A (09/20) Copyright©2020 SPX FLOW Technology Korea Co., Ltd.