GSA Air Dryers

HYD-EP^{+} series

Eco Pro $^{plus+}$ energy saving ref. air dryer (Cycling Type)

Global Standard Air & Gas

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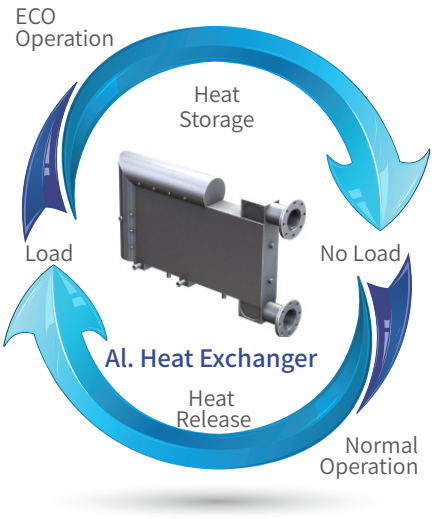
HYD-EP+ Energy saving refrigerated air dryer

GSA's Eco Pro Plus+ series refrigerated air dryer is a cycling system designed to save energy in a simple and efficient fashion. It is relatively simple, compact and highly reliable compared to products which use variable-speed drive (VSD) designed to control the RPM of the refrigerant compressor and a brushless DC (BLDC) motor or those with phase change materials (PCM) or thermal mass.

The aluminum heat exchanger of the generation-II, energy-saving refrigerated air dryer plays a role of thermal mass which has great heat transfer performances. Since the product is made with a single material, it has no thermal resistance. Therefore, cooling energy stored in the heat exchanger can be utilized efficiently. It generates the greatest efficiency at the lowest costs when load is low or the compressed air use pattern is intermittent with a long length of time by maximizing the use of cooling energy accumulated in the heat exchanger.



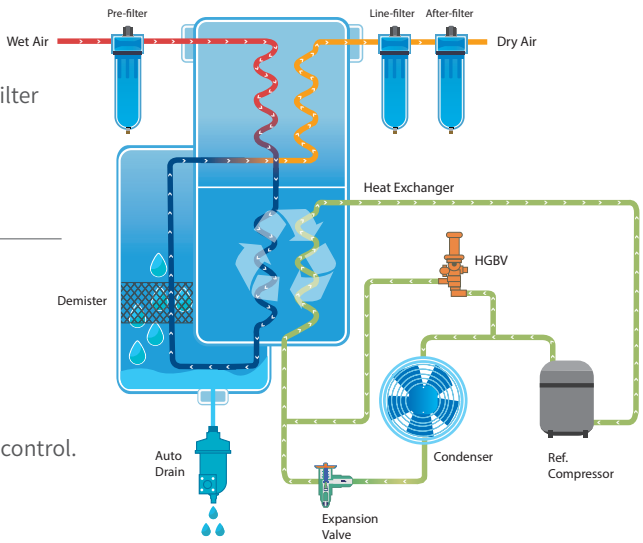
HYD-EP+ Classification

- Places that want to reduce electricity bills through significant energy savings
- Places with low demand of compressed air
- Places where compressed air is used intermittently
- Places where control is inconvenient when applied to unmanned facilities
- A place where the dryer is frequently turned on and off
- Places where the access to the dryer is inconvenient when installed in a remote place
- When subcooling occurs due to low load

HYD-EP+ Components

HYD-5EP+ ~ HYD-20EP+
5µm particulate Filter⊕HYD-EP+ Ref. Dryer⊕1ppm & 0.1ppm oil Removal Filter

HYD-30EP+ ~ HYD-100EP+
5µm particulate Filter⊕HYD-EP+ Ref. Dryer⊕1ppm Oil Removal Filter

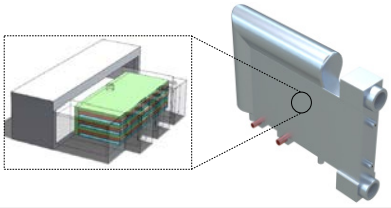


HYD-EP+ Features

- Built-in filters can save installation space.
- Easy installation without piping works for air filters.
- Energy saving design. The unit is operated and stopped through dewpoint control.
- Dew point check by mobile phone(some products)

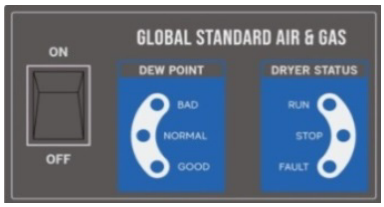
Innovative energy saving air dryer

Diverse Innovative Technologies



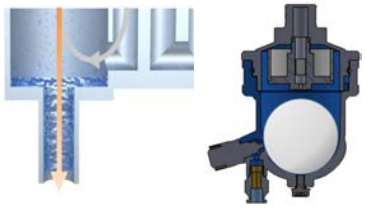
High-efficiency and high heat storage ratio Aluminum Heat Exchange

With a high-efficiency aluminum heat exchanger, GSA refrigerated air dryer offers stable dew points with a larger heat-transfer area and greater efficiency than other types of heat exchangers such as shell & tube and plate ones. Made with the same material, the GSA air dryer has no thermal resistance and is free from heat exchanger freeze-up or corrosion. Energy can be saved through dew point control using the heat storage function of the heat exchanger.



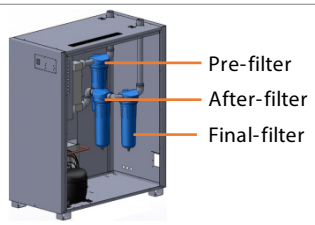
Simple and smart controller

The simple and functional controller helps users read the exact dew points. You can also monitor the dew point and status of your dryer by your mobile phone.
You can easily and easily check thedryer's operating status and energy saving status through the ECO lamp. You can check various operation information through the 4.3" color TFT LCD touch-type controller, and you can easily and conveniently manage the dryer anytime, anywhere throught smart control and communication functions.
(Options or some products)



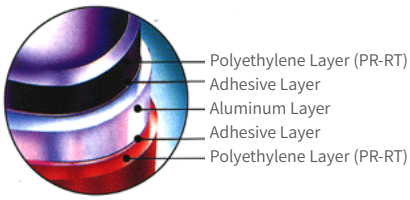
Highly reliable drain without compressed air loss

With a demister and a large separator inside the heat exchanger, it offers great condensate isolation efficiency. The isolated condensate is discharged through a magnetic float ensuring greater efficiency and operating performances, Compared to a gravitational drain trap, it reduces performance drop or failure in the drain caused by oil or various contaminants.



User convenience

A high-inlet-temperature cycling refrigerated air dryers have 2 to 3 air filters inside the unit. So piping works is not necessary for air filters. The compact design ensures easy and convenient installation especially in a small space. With an particulate filter and an oil filter, the unit provides high-quality compressed air.

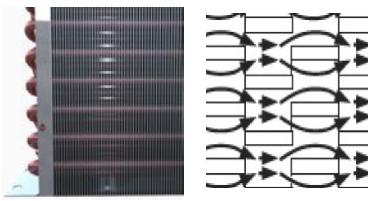


MEPOL Inner Pipe

The high-inlet temperature cycling dryer is durable and anti-corrosion because of MEPOL internal pipe. It can prevent pipe corrosion and microbial/bacterial formation. With great mechanical strength and pressure resistance, it reduces a risk of rupture caused by shock or fluid. With anti-scale properties, furthermore, it keeps the flow constant and reduces a possibility of differential pressure. Its easy machinability makes the compact design possible.

Minimizing the loss of compressed air with low differential pressure

Our heat exchanger minimizes differential pressure with a large heat-transfer area and sufficient cross section for the passage of compressed air. We enhanced heat-exchange efficiency and reduced differential pressure by minimizing resistance, making it possible to operate the compressed air system more efficiently at lower costs.



Efficiency Maximization with High-efficiency Condenser

For stable performances even under unfavorable circumstances like a tropical area, the grooved cooper tube and corrugated split fin were applied. The condenser is expanded in a complete and uniform. Its fin adhesion is high. It has a high coefficient of heat transfer. Therefore, it guarantees stable operations under diverse environments including tropical area.

Technical Specification

Design Conditions

- Inlet Pressure : 7barg
- Inlet Temperature : 40 °C (Max. 60 °C)
- Pressure Dew Point : 2 ~ 10 °C
- Ambient Temperature: 32 °C
- Design Pressure : 9barg

Notes

- R-134a and R-22 refrigerant are used for our standard models. The other refrigerant is also available.
- The capacity in the table is based on 60Hz.
- The other power supply is available.
- Units over 10barg is available.
- Models bigger than HYD-1200HT are available.
- The specification can be changed for product improvement without notice.

Model		Connection	Flow Rate	Built-in Filters		Power Consumption	Power Supply	Dimension (mm)			Whight
		A	㎥/min	μm/ppm/ppm	Size	kW	V / Ph / Hz	A	B	C	kg
HYD	5EP+	PT 15A	0.7	40/1/0.1	15A	0.3	220 / 1 / 60	420	660	760	41
	7EP+	PT 15A	1	40/1/0.1	15A	0.31		420	660	760	41
	10EP+	PT 20A	1.4	40/1/0.1	20A	0.32		420	660	760	41
	15EP+	PT 25A	1.9	40/1/0.1	25A	0.39		425	825	1005	50
	20EP+	PT 25A	2.7	40/1/0.1	25A	0.51		425	825	1005	50
	30EP+	PT 25A	3.9	5/1	25A	0.9		450	870	1010	76
	50EP+	PT 40A	6.7	5/1	40A	1.4		530	1030	1135	99
	75EP+	PT 50A	10.5	5/1	40A	2.1		530	1200	1220	135
	100EP+	PT 50A	14.2	5/1	50A	2.3	380 / 3 / 60	580	1300	1365	141
	Medium to large capacity high inlet temperature dryer										
	150HT(W)	PT 65A	21	N/A		4.18 (3.78)	380, 440 / 3 / 60	550	1200	1447	220
	200HT(W)	FLG. 80A	30			4.6 (4.2)		700	1200	1580	260
	250HT(W)	FLG. 100A	39			5.5 (5.1)		800	1500	1580	340
	300HT(W)	FLG. 100A	47			5.9 (5.5)		800	1500	1580	360
	400HT(W)	FLG. 100A	56			9.7 (8.9)		1000	1900	2015	680
	500HT(W)	FLG. 150A	66			12.7 (11.9)		1200	1800	1825	980
	600HT(W)	FLG. 150A	85			14.2 (13.4)		1200	2100	1825	1200
	800HT(W)	FLG. 200A	120			25.45 (23.2)		1500	1900	2150	1250
	900HT(W)	FLG. 200A	140			30.15 (27.9)		1500	1900	2150	1320
	1200HT(W)	FLG. 200A	180			40 (37)		2000	1900	2150	1450

Correction Factors

Correction factor by Inlet air temperature(EP⁺ Series)												
Inlet Air Temperature(°C)	35	40	45	50	55	60						
Correction Factor	1.05	1.00	0.7	0.58	0.48	0.4						
Correction factor by Inlet air temperature(HP Series)												
Inlet Air Temperature(°C)	35	40	45	50	55	60						
Correction Factor	1.12	1.05	1	0.6	0.5	0.42						
Correction factor by inlet air pressure												
Inlet air pressure(barg)	4	5	6	7	8	9						
Correction Factor	0.77	0.86	0.93	1.00	1.05	1.1						
Correction factor by ambient temperature												
Ambient Temperature(°C)	27	32	37	40	45	50						
Correction Factor	1.02	1.00	0.8	0.75	0.65	0.5						