LINGYU 凌宇

—COMPRESSED AIR SYSTEM—

ZHONGSHAN LINGYU MACHINERY CO., LTD.

Main Product:

- Air cooled/water cooled /energy-saving refrigerated dryer
- Heatless regeneration / heated regeneration / modular adsorption dryer
- Zero loss/ micro air consumption adsorption dryer
- PSA nitrogen generator
- Filter and accessories

Corporate mission:

To provide professional, comprehensive and competitive complete solutions and services for industrial gas separation and purification

Corporate vision:

To be a leading enterprise in the industry and create a world-renowned brand

Corporate development philosophy:

Technology-supported value-driven

Marketing strategy:

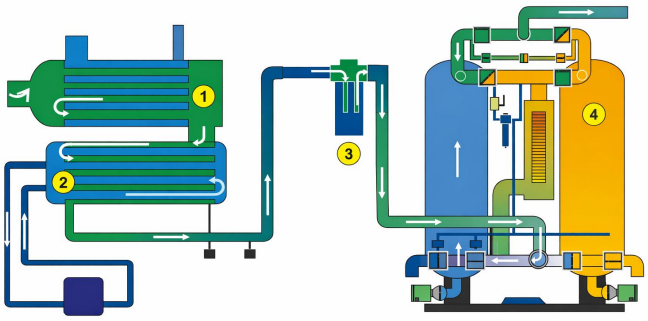
To win the market with high-quality products and professional service

DH SERIES

COMBINED COMPRESSED AIR DRYER

Operating conditions

Applicable Fluid: Compressed air; non-corrosive air
Rated Inlet Pressure: 0.7 MPa
(Usable range: 0.6 MPa–1.0 MPa; other pressure ratings available on **rec**
Rated Inlet Temperature: 50°C (Maximum inlet temperature: ≤ 80°C)
Regeneration Mode: Heatless / Heat-regenerated (low heat)
Cooling Method: Air-cooled / Water-cooled
Outlet Pressure Dew Point: ≤ −40°C
Adsorbent: Activated alumina + high-performance molecular sieve
Rated Ambient Temperature: 35°C (Usable range: 2°C–45°C)



Working Principle

Note: Standard units are equipped with one middle filter; additional filters can be configured as needed.

Design Features

Energy Efficiency

By using a refrigerated air dryer to reduce the moisture content of the inlet air to the desiccant dryer, the load on the desiccant dryer is significantly reduced. This lowers regeneration air consumption and extends the service life of the adsorbent. While ensuring a more stable and lower outlet pressure dew point, the combined dryer system achieves higher overall efficiency and improved energy savings.

Advanced Refrigeration and Adsorption Drying System Design

The refrigeration drying system is engineered to increase both the contact area and contact time between compressed air and refrigerant, ensuring more thorough heat exchange. High-precision refrigeration components, advanced expansion and throttling devices, and automatic temperature and capacity modulation systems adjust dynamically to actual operating conditions, effectively reducing the power consumption of the refrigeration compressor and further improving energy efficiency.

The adsorption drying system employs high-efficiency adsorbents with optimized adsorption cycles. Featuring high mechanical strength and excellent abrasion resistance, the system delivers superior adsorption performance. Moisture adsorption is carried out at low temperatures using an optimized process, significantly increasing adsorption depth and achieving ultra-low pressure dew points.

Integrated Design

The unit features a compact footprint and easy installation. Backed by years of technical research and manufactured using modern processes and equipment, each product undergoes rigorous testing and inspection and is released from the factory only after meeting all operational standards.

Working Principle

Moist compressed air first enters the precooler of the refrigeration drying system, where it exchanges heat with dry, low-dew-point air from the adsorption drying system. This process raises the temperature of the low-dew-point air while simultaneously reducing the temperature of the compressed air entering the evaporator, removing part of the moisture and lowering it to near ambient temperature, thereby reducing the load on the evaporator.

The air then enters the evaporator for further heat exchange, where the compressed air is cooled to a pressure dew point of approximately 2–10°C. At this stage, most of the moisture, oil vapor, and some impurities in the compressed air condense and are separated from the air by a gas–water separator, achieving preliminary drying.

The pre-dried compressed air then passes through an oil removal filter and enters the adsorption drying system. Within the adsorption bed, high-efficiency molecular sieves perform deep adsorption, producing low-dew-point compressed air. The low-dew-point compressed air is subsequently filtered through a precision filter to remove fine particles, ultimately delivering ultra-low dew point, clean compressed air.

Technical Parameter

AH Series Refrigerated Air Dryer + HH Series Heatless Desiccant Air Dryer

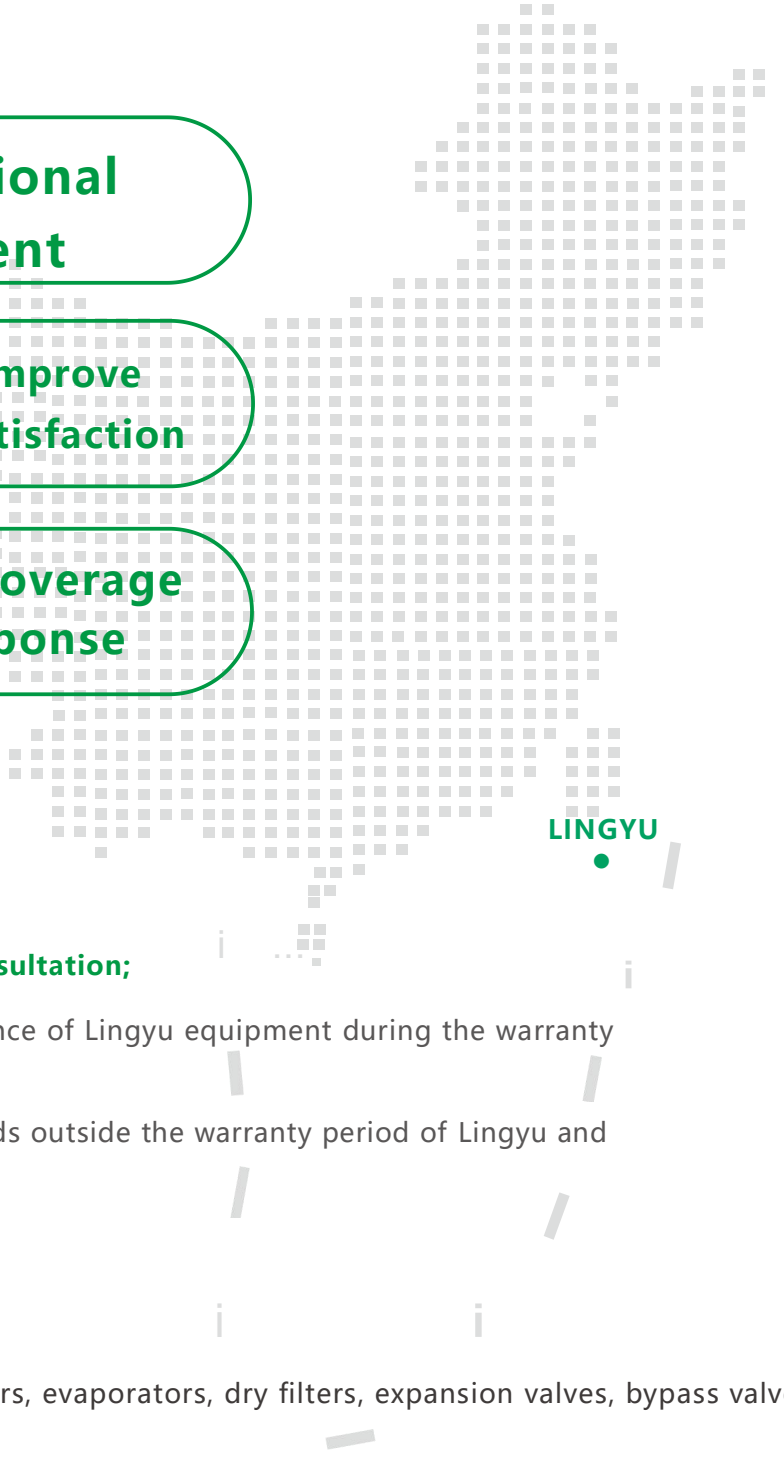
Model	Capacity (m^3/min)	Voltage (V/Hz)	Power (kW)	Inlet/Outlet	Weight (kg)	Dimensions (mm)
LY-DH10AHN	1.5	220/50	0.9	G1"	182	1260×762×1803
LY-DH20AHN	2.5	220/50	1	G1"	263	1260×940×1700
LY-DH30AHN	3.8	220/50	1.2	G1½"	420	1345×1030×1773
LY-DH50AHN	6.5	220/50	1.6	G1½"	574	1455×1160×1847
LY-DH75AHN	10.5	220/50	2.3	G2"	782	1665×1295×2175
LY-DH100AHN	13.5	380/50	2.8	G2"	980	1665×1356×2225
LY-DH120AHN	17	380/50	2.9	DN65	1072	1725×1346×2384
LY-DH150AHN	21.5	380/50	5.2	DN80	1399	1955×1459×2265
LY-DH180AHN	25	380/50	5.3	DN80	1554	1950×1459×2465
LY-DH200AHN	28	380/50	5.6	DN80	1820	2070×1560×2448
LY-DH250AHN	32	380/50	6.3	DN80	2010	2115×1600×2642
LY-DH300AHN	37	380/50	7.9	DN100	2336	2140×1760×2680
LY-DH400AHN	45	380/50	10.6	DN100	2750	2270×1830×2801

AH Series Refrigerated Air Dryer + HH Series Heat-Regenerated (Low-Heat) Desiccant Air Dryer

Model	Capacity (m^3/min)	Voltage (V/Hz)	Power (kW)	Inlet/Outlet	Weight (kg)	Dimensions (mm)
LY-DH10AHH	1.5	380/50	2.3	G1"	187	1260×762×1803
LY-DH20AHH	2.5	380/50	2.5	G1"	270	1260×940×1700
LY-DH30AHH	3.8	380/50	3.6	G1½"	430	1345×1030×1773
LY-DH50AHH	6.5	380/50	5	G1½"	580	1455×1160×1847
LY-DH75AHH	10.5	380/50	5.7	G2"	890	1665×1295×2175
LY-DH100AHH	13.5	380/50	9.1	G2"	1090	1665×1356×2225
LY-DH120AHH	17	380/50	13	DN65	1255	1725×1346×2384
LY-DH150AHH	21.5	380/50	15.1	DN80	1420	1955×1459×2265
LY-DH180AHH	25	380/50	15.3	DN80	1720	1950×1459×2465
LY-DH200AHH	28.5	380/50	15.8	DN80	1970	2070×1560×2448
LY-DH250AHH	32	380/50	19.2	DN80	2070	2115×1600×2642
LY-DH300AHH	37	380/50	21.1	DN100	2540	2140×1760×2680
LY-DH400AHH	45	380/50	27	DN100	2830	2270×1830×2801

OUR SERVICES

LINGYU Services



Service Content

- **Provide free after-sales consultation;**
- Debug, repair, and maintenance of Lingyu equipment during the warranty period;
- Survey the site of other brands outside the warranty period of Lingyu and formulate plans.

Complete Accessories

- **Refrigerated air dryer**

  Fans, compressors, condensers, evaporators, dry filters, expansion valves, bypass valves, pressure gauges, various drains, etc.
- **Adsorption air Dryers**

  Valves, electrical boxes, adsorbents, diffusers, silencers, solenoid valves, check valves, etc.
- **Other accessories**

  Various filter elements, differential pressure gauges, etc.

CONTACT US

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