

# Heatless Air Dryer

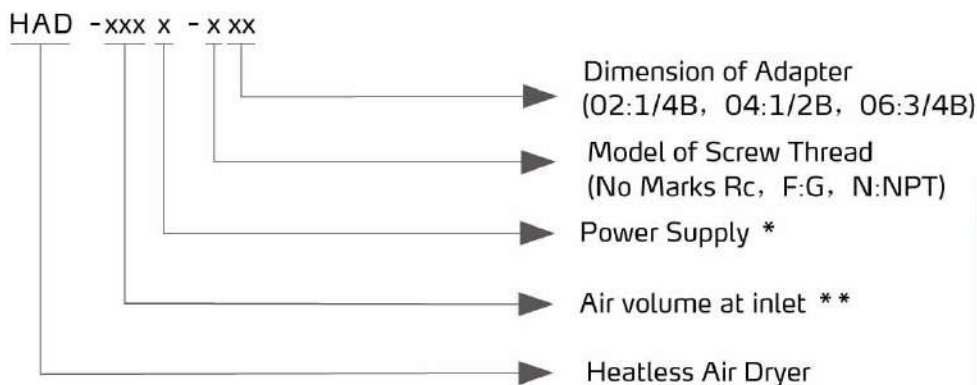
HAD-0106-06



Refer carefully to this manual before operation.

# HAD-U Series

## ■ Coding Principle



Note \*

\* 0: One-phase AC100V(50Hz) AC100~110V(60Hz)

1: One-phase AC110V(50Hz)

5: One-phase AC200V(50Hz) AC200~220V(60Hz)

6: One-phase AC220V(50Hz)

\*\* 010: 0.1m<sup>3</sup>/min

020: 0.2m<sup>3</sup>/min

035: 0.35m<sup>3</sup>/min



Control Panel

## ■ Features

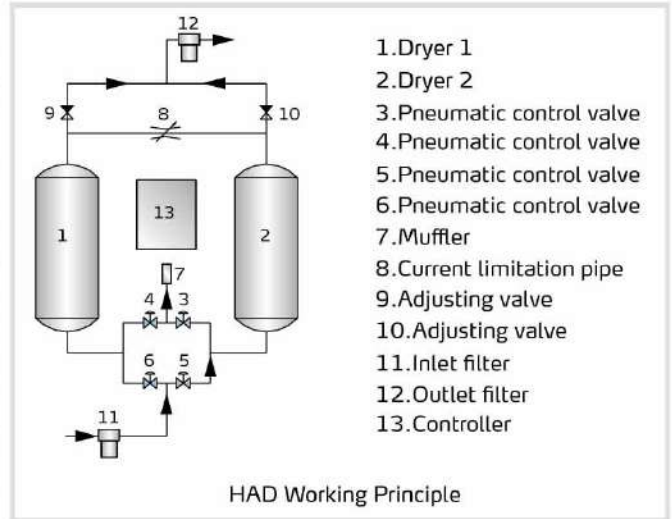
- With compact structure and stable operation, the range of dew-point variation is  $\pm 3^{\circ}\text{C}$  and the noise level is lower than 85dB.
- Auto circuit control and safety devices are simple and stable. After operation for 5,000~10,000 hours, the indicator light calls for renewal of corresponding parts to ensure safe handling with optimal performance.
- High-quality absorbent of 4A molecular sieve .
- Aluminum alloy die-casting is adopted which offers good shape, convenience for disassembling and maintenance.
- The throughput is 0.1~0.35m<sup>3</sup>/min, working pressure is 0.39~0.98MPa and the dew-point can reach  $-40^{\circ}\text{C}$ ~-60°C.
- The rational tank design makes the contact time of compressed air and absorbent adjustable which reaches the required dew-point of finished compressed air.
- The amount of regenerative air is adjustable according to operating load of the dryer to make optimal the velocity and time of the flowing air passing through the absorbent coat and bring the performance of the absorbent into full play.
- Rational system configuration makes it possible to remove oil and heavy pollutant in the air before it enters the drying tank.
- High-quality SMC solenoid valve and microprocessor have the function of automatic timing and task switching between the two tanks.

## ■ Application

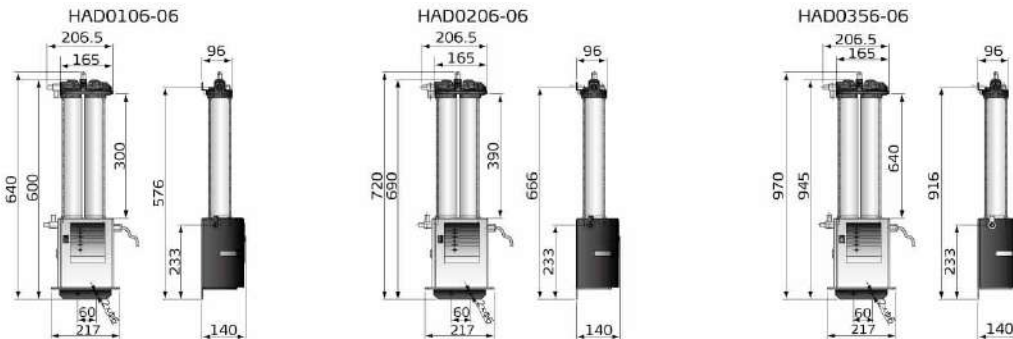
When collocating with SHD-U (combined as SHD-U-HD model), it is suitable for drying engineering plastics with a certain requirement for moisture content such as ABS, PC, PE and PVC. When collocating with SCAD in use with low dew-point dried air, it can dry material more easily.

## Working Principle

Heatless regenerative air dryer takes advantage of theory of Pressure Swing Adsorption. Desiccant adsorbs moisture under pressure and releases moisture under reduced pressure. The compressed air after passing through inlet filter 11 enters into dry barrel 1 (or dried barrels 2) through pneumatic control valve 6 (or 5). Then it make absorption dry with desiccant bed layer, and later exist from non-return valve 9 (or 10) to enter outlet filter 12 to be filtered, finally exist from the outlet to dry and purify air. A part of dry air (about 15%) enters dry barrel 2 (or dried barrel 1) through current limitation pipe 8 to blow and regenerate desiccants with saturated water, then air passes through pneumatic control valves 3 (or 4) to exist out of muffler 7. Drying barrel 1, 2 work alternately to regenerate.



## Outline Drawings



## Specifications

Item	Model	HAD-0106-06	HAD-0206-06	HAD-0356-06
Processing Capacity	Air volume at inlet (m <sup>3</sup> /min)	0.10	0.20	0.35
	Air volume at outlet (m <sup>3</sup> /min)	0.086	0.172	0.300
	Regenerated air flow (m <sup>3</sup> /min)	0.014	0.028	0.050
Range of Application	Applicable medium	Compressed air		
	Allowable pressure (MPa)	0.39~0.98		
	Inlet air temperature (°C / %)	5~50 / Not saturated (no droplet exists)		
	Ambient temperature (°C)	2~40		
	Dew-point of outlet air (°C)	-40~-60 under pressure of 4~6kg		
Power		1Φ, 230VAC, 50Hz		
Dimensions	External dimensions (mm)	640x217	720x217	970x217
	Pipe diameter	Rc 3/8		
	Weight (kg)	7.5	9	12
Equipment Specifications	Dehumidifying & Regeneration method	Pressure swing method		
	Dehumidifying & Regeneration cycle time	2 min. (4, 6, 8 min. switching)		
	Filtration of Inlet filter	0.01μm		
	Filtration of outlet filter	1μm		

Notes: The air tightness test should conform to testing standard of JIS Z 2332.

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