

Heated Dryers



A-type

Zinger

Specializing in
Energy-Efficient Design

Blower heated dryer with CDA purge





Specializing in Energy-Efficient Design



Mission and Vision

- Business Philosophy :
Energy-saving, environmentally friendly,
meet customers expectations
- Quality policy :
Stable performance, quality compliance,
power consumption verification, reliability

Business Scope

- Design and manufacture of adsorption dryers for
compressed air drying systems
- Energy-saving retrofit of heatless dryers
- Energy-saving by patented waste heat utilization
- Energy-saving design, and the compression heat
recovery
- Maintenance, servicing, and replacement of
consumables for dryer
- Reduce carbon footprint to meet the circular
economy

Patent

ISO9001

Energy efficiency

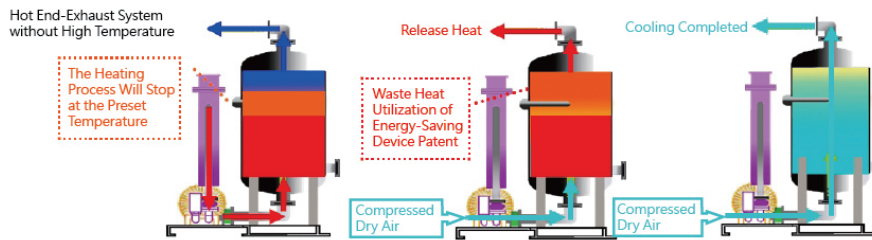


Verification report



Heated desiccant air dryer

Patent features



- 1 Our self-developed patented energy-saving design, internal waste heat is utilized in the heating and cooling processes to reduce power consumption, improving of 20% energy efficiency than the conventional heated dryers.
- 2 Using our patented waste heat recovery technology. The proportion of waste heat increases by desiccant degradation, and the energy efficiency of heatrecovery can meet over 30%.
- 3 Our unique design, the regeneration process can be adjusted based on the operation condition to optimize the heater, and blower power consumption this is more cost-effective than conventional heated dryers.

Automation control

The ZINGER heated adsorption dryer is with touchable HMI, and PLC. It features an automatic detection function, which shows the operation status, and warning & alarm information.

Safety design

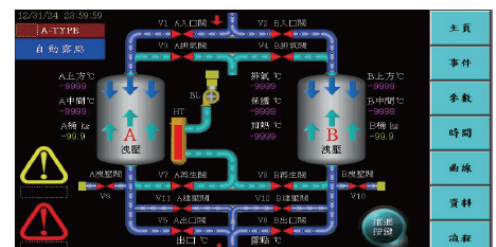
The ZINGER dryer prioritizes air supply, pressure drop protection, and over-heating protection in its design to maintain a continuous air supply to the downstream. The protection priority can be adjusted according to customer requirements.

The HMI fully displays the operating status, also the parameters of temperature, pressure, dew point and more. The parameters settings can be directly modified under password protection.

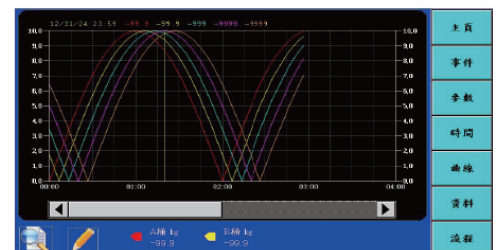
Excellent services

24/7 on-call service, comprehensive spare parts inventory, and excellent after-sales service.

HMI Display



Trend records



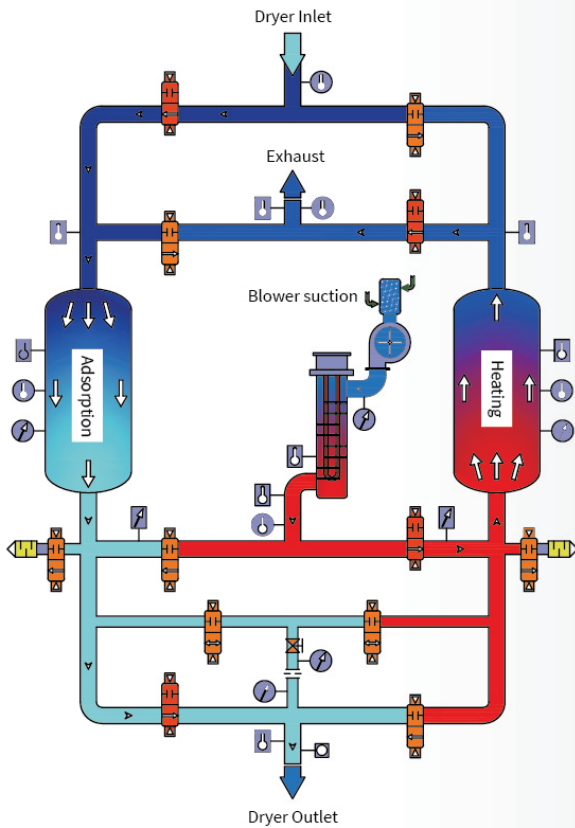
Parameters setting

流量時間	1200s	Min	罐型時間	1200s	Min	主頁
流量壓力	120.0	Ka	罐型壓力	120.0	Ka	事件
最小加熱時間	1200s	Min	最小冷卻時間	1200s	Min	參數
最大加熱時間	1200s	Min	最大冷卻時間	1200s	Min	時間
加熱時間	1200s	Min	移動時間	1200s	Min	曲線
加熱停止-中斷溫度	120.0	℃	冷卻停止-中斷溫度	120.0	℃	資料
加熱出口保護溫度	120.0	℃	冷卻停止-上方溫度	120.0	℃	下頁
加熱溫度	120.0	℃	冷卻停止-中間溫度	120.0	℃	流程
加熱溫度	120.0	℃	罐內溫度	120.0	℃	
移動時間	1200s	Min	罐內溫度	120.0	℃	
移動時間	1200s	Min	罐內溫度	120.0	℃	

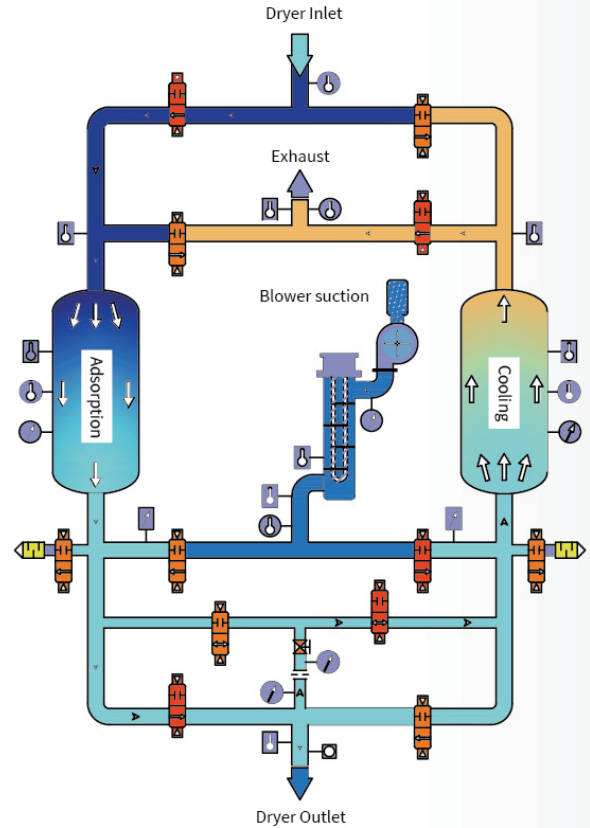


A-TYPE CDA purge dryer

Adsorption/Heating Process



Adsorption/Cooling Process



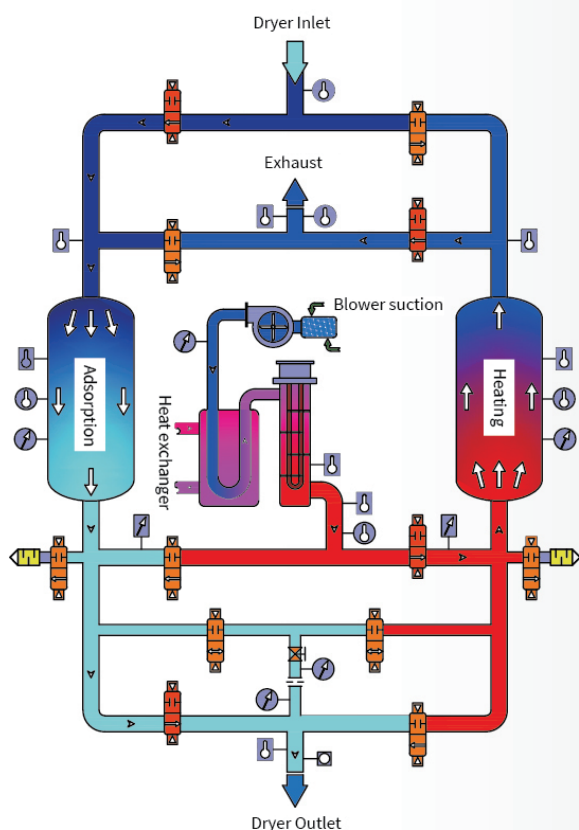
A-TYPE

- Process flow direction is from top to bottom, compacting the adsorbent and reducing dust disturbance, which extends the lifetime of downstream filters.
- The adsorption and regeneration processes are reversed to ensure no repeated adsorption during regeneration process.
- The heating and cooling processes are in the same direction, utilizing the principle of hot air rising to save energy.
- Patented internal waste heat utilization energy-saving design.
- External air heating for desorption reduces CDA consumption by more than 80% compared to the heatless dryer.
- Fully cooling prevents moisture residue, avoiding dew point spikes.

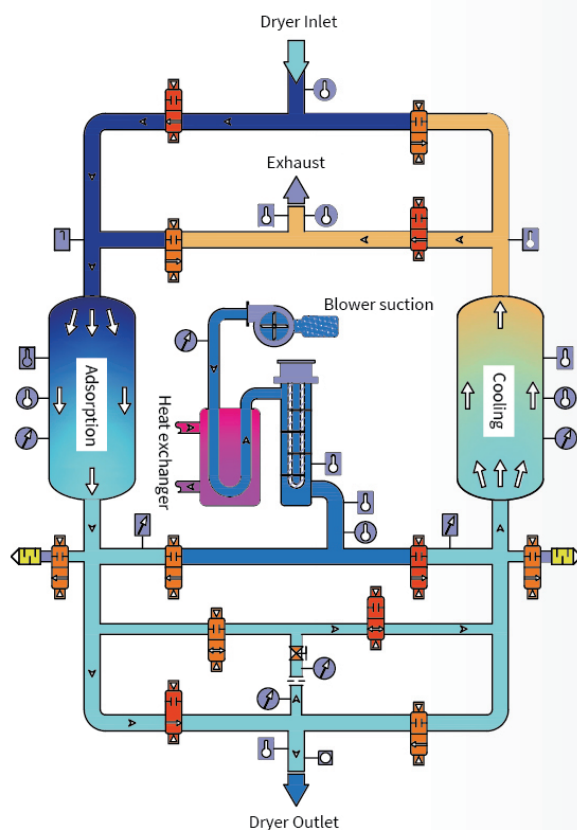


HEA-TYPE CDA purge dryer with heat recovery

Adsorption/Heating Process



Adsorption/Cooling Process



HEA-TYPE

- Process flow direction is from top to bottom, compacting the adsorbent and reducing dust disturbance, which extends the lifetime of downstream filters.
- The adsorption and regeneration processes are reversed to ensure no repeated adsorption during regeneration process..
- The heating and cooling processes are in the same direction, utilizing the principle of hot air rising to save energy.
- Patented internal waste heat utilization energy-saving design.
- Utilizes compressor heat, saving heating energy for desorption process.
- Circular economy design saves cooling water and provides hot water for special purpose.
- External air heating for desorption reduces CDA consumption by more than 80% compared to the heatless dryer.
- Fully cooling prevents moisture residue, avoiding dew point spikes.
- Customized dryer design.

SPECIFICATIONS (A TYPE)

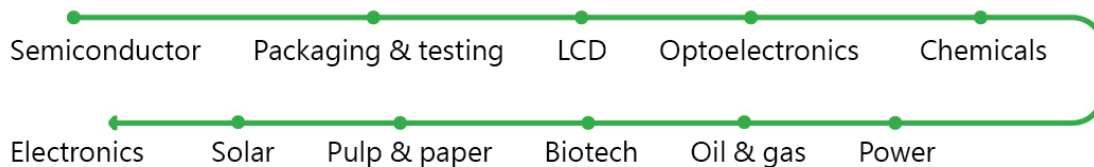
Model ACMM	Tube Dia	Dryer Body Dimensions (mm)			
	INCH	Length	Width	Height	Weight(kg)
ZIN630A	12	5180	4630	4680	27300
ZIN540A	12	4840	4050	4610	24000
ZIN480A	12	4840	4050	4300	21800
ZIN420A	10	4540	4050	4100	18000
ZIN360A	10 / 8	4340/4240	3930/3885	4120/4030	15700/15000
ZIN280A	8	3820	3475	3850	11200
ZIN230A	8 / 6	3610	3445/2325	3795/3720	10450/9800
ZIN180A	8 / 6	3370	3390/2230	3400/3325	8500/7900
ZIN150A	6	3070	2135	3325	6600
ZIN130A	6	3070	2135	3020	6200
ZIN115A	6	2950	2080	3200	5400
ZIN100A	6 / 4	2950/2650	2080/1840	2900/2840	5000/4600
ZIN085A	4	2480	1790	2780	3700
ZIN075A	4	2255	1670	2985	3350
ZIN060A	4	2255	1670	2680	3200
ZIN050A	4	2455	1670	2375	2880
ZIN040A	4 / 3	1990	1610/1510	2495/2465	1950/1900
ZIN030A	3	2160	1400	2130	1650
ZIN025A	3	2060	1300	2445	1550
ZIN020A	3	2060	1300	2140	1450
ZIN015A	2	1500	1015	1860	720
ZIN010A	1.5	1110	1055	1826	650

※ The 'ZIN' at the beginning of the model represents the brand code."

Under conditions of 7 kg/cmÇ and 20°C at the inlet, the middle digit in the model represents the flow capacity in M3/min.



Applications and References



Standard assembly

- Modbus protocol RS-485
- Pre-filter (PDI, Auto-steam trap)
- After-filter (PDI)
- Touchable HMI display
- Air supply pipeline with SUS304
- Energy-saving design
- Energy management system
- Dew point meter
- SCR controller device
- Rectifier device
- Desiccant: Activated alumina
- Flange: JIS10K



Option

- Dryer vessel Insulation
- Carbon bed filter (with PDI)
- Final filter (with PDI)
- Ethernet protocol
- Customized design
- Filter PDT
- Dessicant: Molecular sieve
- Flange type:
IS 10K,16K,20K,40K
ANSI 150LB,300LB,600LB
DIN(GB) PN10,PN16,PN25,PN40
- Flowmeter
- Metering unit

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