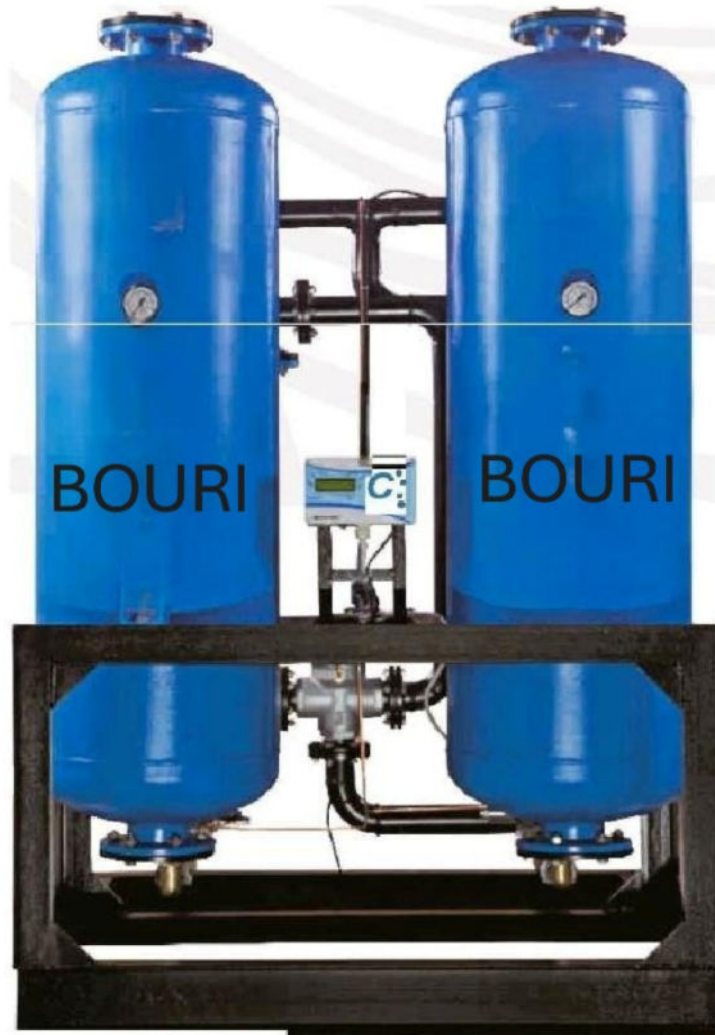


**BOURI AIR DRYER**

Heatless Air Dryers



**Works**

#Opposite M/s. SMV Beverages Ltd. Tata-Kandra Main Road. 116. Bhatia, Adityapur, Jamshedpur, India  
# T-2 (P), Tetuldanga Industrial Area, Tetuldanga, Ghatsila, East Singhbhum, Jharkhand, India

**Regd. Office**

**Address: 8B, Elite Apartment, 4th Floor, Road No-7th Extension, Sonari 831011, Jamshedpur, Jharkhand, India**

Email: [info@bouricompressors.com](mailto:info@bouricompressors.com) Website: [www.bouricompressors.com](http://www.bouricompressors.com)

Ph: 0657-3559169. Mob: +91 9934361301

**GSTIN: 20AALCB7875N1Z4-----BOURI COMPRESSORS INDIA PVT LTD**

**Resident Engineer :** Kolkata (WB) | Durgapur (WB), Jharsuguda (Odisha), Angul (Odisha), Raipur (CG) Raigarh (CG)

# Heatless Adsorption Dryers

Heatless Adsorption Dryers are used when the high quality compressed air is required. With activated alumina the heatless dryer can produce up to  $-40^{\circ}\text{C}$  Pressure Dew Point and can be extended to  $-70^{\circ}\text{C}$  by using molecular sieves.

Heatless Adsorption dryers can be used for applications that require ISO 8573-1 Class 1,2 & 3

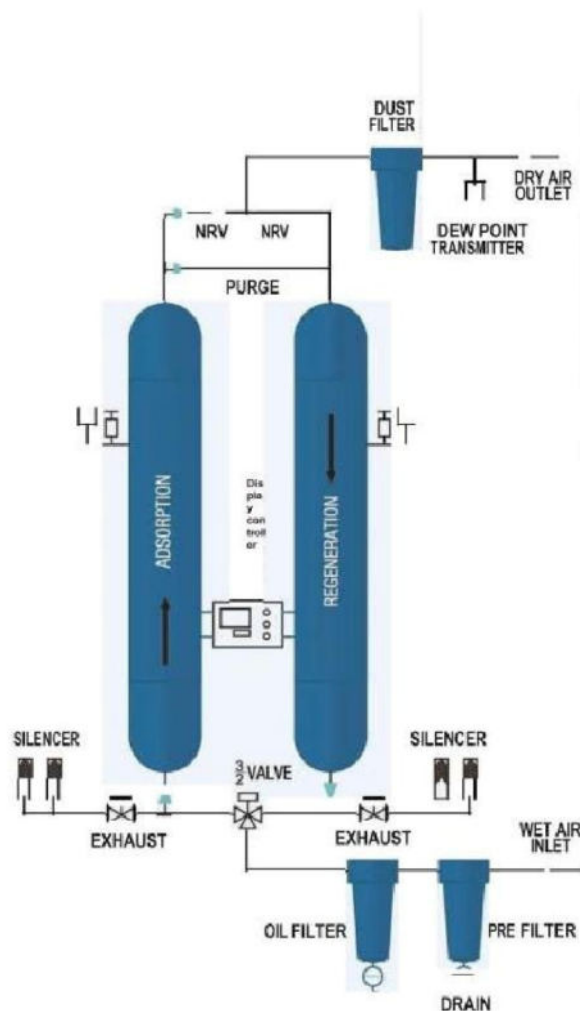
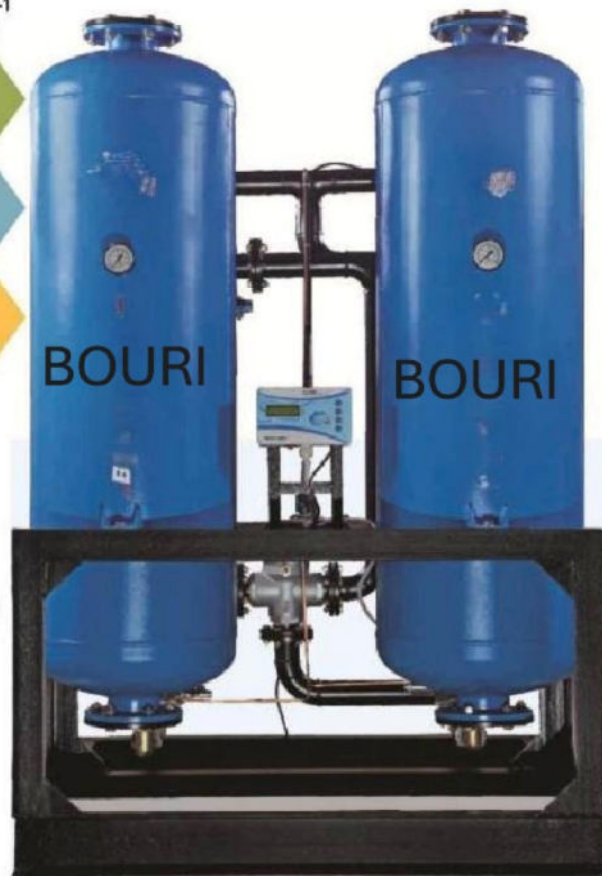
	Maximum pressure dew point	
	$^{\circ}\text{C}$	$^{\circ}\text{F}$
0	As specified	
1	-70	-94
2	-40	-40
3	-20	-4
4	3	38
5	7	45
6	10	50

ISO 8573-1  
Class

1

2

3



## Working principle

The Dryer utilizes two vertical pressure vessels filled with a desiccant such as activated alumina, silica gel or molecular sieve. The compressed air passes through the desiccant bed before being distributed to the plant. As the air passes through the desiccant, water vapour is removed from the air through a process called adsorption.

Adsorption is defined as the binding of molecules or particles to a surface. The binding to the surface is usually weak and reversible. As the compressed air is passing through one vessel where water vapour is being adsorbed, the desiccant in the other vessel is undergoing regeneration where the water vapour that was previously adsorbed is removed. Regeneration is accomplished by extracting a portion of the dry air as it exits the active vessel, expanding this air to atmospheric pressure and passing it over the desiccant that is to be regenerated.

## Salient Features

Desiccant Dryers follow a modular a modular design to enable augmentation and simplify the service procedures. All components are powder coated with durable quality finish for long life.



### 1 ROBUST CONSTRUCTION

Sturdy box frame with complete floor stand to withstand vibration and transit damage.



### 2 LOW OPERATING COST

- Amply sized to save heat of adsorption and minimize the purge usage
- Limited velocities through tower prevent bed fluidization, stops desiccant dusting
- Large desiccant bed ensures sufficient contact time to produce -40°C (-70°C dew point with molecular sieves). Flanged fill and drain ports for ease of desiccant replacement
- Heavy-duty purge exhaust mufflers enable quiet operation
- The safety of the unit is ensured through pressure gauge and safety valve on both towers



### 3 BUILT TO LAST

Every dryer is equipped with pre-filter, oil filter and after-filters with replaceable cartridges to ensure long life.



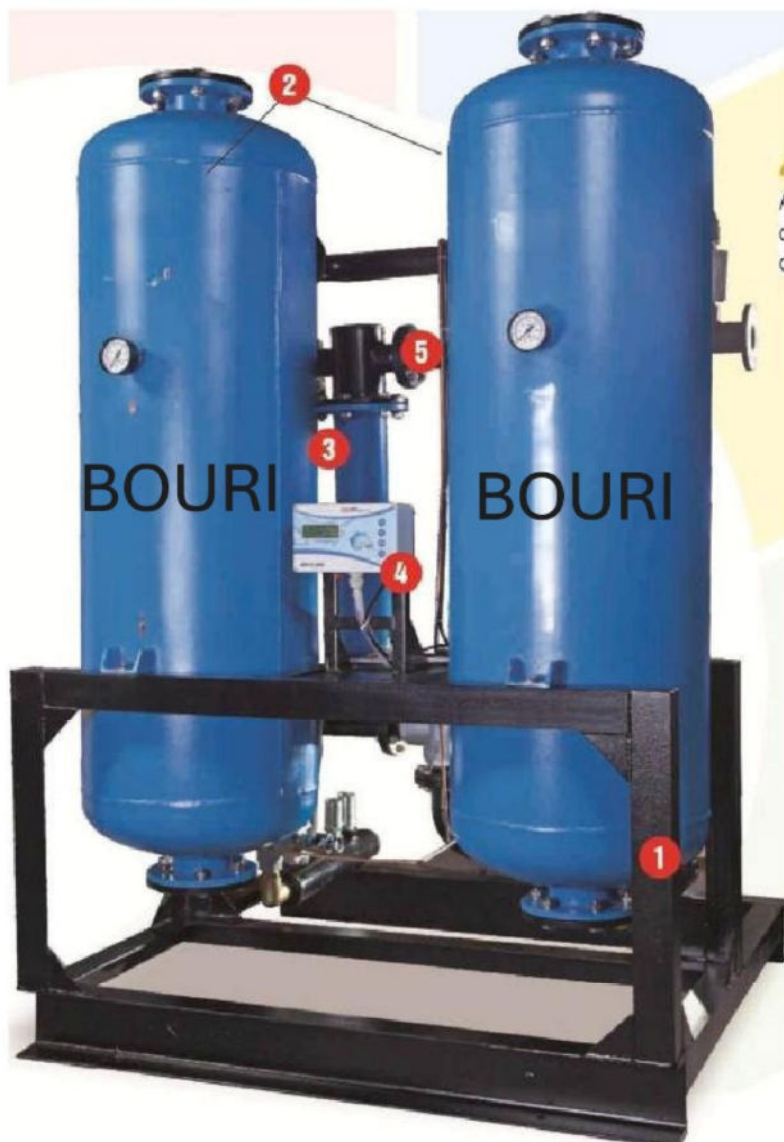
### 4 USER-FRIENDLY INTERFACE

As standard option DNO, mini/r provides a digital display controller which provides user-friendly details of the dryer function.



### 5 PURGE ECONOMIZER

Purge economizer is a standard option for mini, mini/r, and / desiccant dryers. Custom purge settings are possible through the display interface.





## Applications

Micro-electronics Industry | Chemical Industry | Hospitals | Food processing Industry | Pharmaceutical Industry



### DEW POINT BASED SWING CONTROL (DPSC)

Heatless Dryers are available with optional DPSC system which reduces purge losses and saves energy.

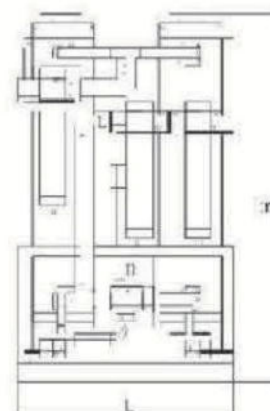
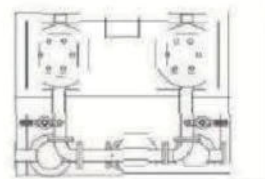
The DPSC system consists of a hygrometer that can reliably measure the dew point of the compressed air at outlet and displays at the control panel. As the exact quality of the output air is measured and displayed, the purge operation of the dryer is controlled based on the output of the air quality.

There is a great energy saving because the switching of the towers is not based on the fixed timing and hence reduces loss of purge air especially during part-load operations.



### Technical Specifications

Model	Airflow		Max. Operating Pressure		Power Supply	End Conn.	Dimensions (mm)		
	m <sup>3</sup> /min	cfm	Kg/cm <sup>2</sup>	psi			L	W	H
S60-HL	1.7	60	12	171	230/1/50	1"	560	465	1532
S80-HL	2.27	80	12	171	230/1/50	1"	568	465	1826
S100-HL	2.83	100	12	171	230/1/50	1"	680	680	1658
S125-HL	3.54	125	12	171	230/1/50	1 1/2"	740	580	1700
S150-HL	4.25	150	12	171	230/1/50	1 1/2"	740	580	1970
S200-HL	5.66	200	12	171	230/1/50	1 1/2"	870	690	1760
S250-HL	7.08	250	12	171	230/1/50	1 1/4"	870	690	2010
S300-HL	8.49	300	12	171	230/1/50	2"	1090	880	1893
S350-HL	9.91	350	12	171	230/1/50	2"	1010	810	2150
S400-HL	11.32	400	12	171	230/1/50	2"	1300	1100	1570
S500-HL	14.16	500	12	171	230/1/50	2"	1210	1100	1824
S600-HL	16.99	600	12	171	230/1/50	2 1/2"	1220	1110	2160
S750-HL	21.24	750	12	171	230/1/50	2 1/2"	1650	1270	2150
S900-HL	25.48	900	12	171	230/1/50	3"	1900	1350	1850
S1000-HL	31.15	1000	12	171	230/1/50	3"	1800	1540	2095



**Note:** Due to continuous engineering improvements, technical specifications are subject to change without prior notice. Specifications for higher capacity dryers than above models are available on request.

### Easy Installation and operation

- Installation flexibility  
optional wall mount provided
- Electronic digital display

### Service and Maintenance

- Total Modular canopy Design
- Easy fitments of all components and the data from micro controller ensures the preventive maintenance and easy serviceability

8



### Optimal Design

- Compact design
- Lower Footprint

### Efficient operation

- Tight packing of desiccants using the snow-strom method provides a seamless flow of compressed air in to tower resulting in the higher efficient

### High Reliability

- Desiccant dusting is reduced through re-pressurization

### Technical Specifications

Model	Airflow		Max. Operating Pressure		Power Supply	End Connections	Dimensions (mm)		
	cfm		Kg/cm <sup>2</sup>	psi			L	W	H
SAS15	15		10	145	230/1/50	½"	330	156	715
SAS20	20		10	145	230/1/50	½"	330	156	715
SAS30	30		10	145	230/1/50	½"	350	168	1015
SAS40	40		10	145	230/1/50	½"	350	168	1015
SAS50	50		10	145	230/1/50	¾"	450	230	1085
SAS60	60		10	145	230/1/50	¾"	450	230	1085



**Note:** Due to continuous engineering improvements, technical specifications are subject to change without prior notice. Specifications for higher capacity dryers than above models are available on request.

### Flow correction factor

- During the selection of the dryer, capacity correction to be used when operating conditions differ from performance data
- To get dryer capacity based on conditions, divide capacity by correction factors {X, Y, Z}

#### Inlet Pressure (X)

Pressure	5	6	7	8	9	10
CF	0.75	0.88	1	1.13	1.25	1.38

#### Inlet Temperature (Y)

Temp.	40	45	50
CF	1	0.97	0.88

#### Dew Point (Z)

Temp.	-20	-40
CF	1.1	1

# SA Series Heatless Adsorption Dryers

Arid series adsorption dryers have been designed under standard conditions to obtain dew point of -40 deg C, especially for small compressed air flow treatments. Our simple and robust design provides superior operational performance and high reliability. Arid series adsorption dryers have installation flexibility and a lower footprint which is ideal for point of use, laboratories, and confined areas.

## Why air quality management?

The contaminants of compressed air delivered by air compressors include moisture, dust and oil particles which affects the air quality. Most of the compressed air applications require clean air and the quality of air requirement varies with the application. The untreated compressed air is most expensive because it may cause increased machinery down time, product rejection and added maintenance cost. As defined in ISO: 8573.1 high quality of compressed air can be achieved only by filtration, water separation and drying.

Small Heatless Adsorption dryers can be used for applications that require ISO 8573-1 Class 1, 2 & 3

	Maximum pressure dew point	
	°C	°F
0	As specified	
1	-70	-94
2	-40	-40
3	-20	-4
4	3	38
5	7	45
6	10	50

ISO 8573-1  
Class

1

2

3



## Applications

Telecom Industry | Paint Booths | Small-scale  
Pneumatic Tools | Pneumatic Control Systems  
Dental Hospitals | Truck and Train Air Brake  
Systems | CNC | Automobile Services

