



**DRYBERG®**

**Refrigeration Dryers and Adsorption Dryers**



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DRYBERG® RF



# Refrigeration dryer DRYBERG® RF/AC

## DRYBERG® with Energy Saving

The DRYBERG® RF/AC is a next-generation refrigeration dryer designed for maximum energy efficiency and reliable compressed air treatment. Based on the proven thermal storage concept of DE Hybrid dryers, it integrates advanced Impulse Technology to intelligently adapt to real-time compressed air demand.



This smart control system ensures

- Optimal drying performance
- Significant energy savings
- Stable dew point control, even under fluctuating operating conditions

As a result, operating costs are reduced while system reliability is maximized.

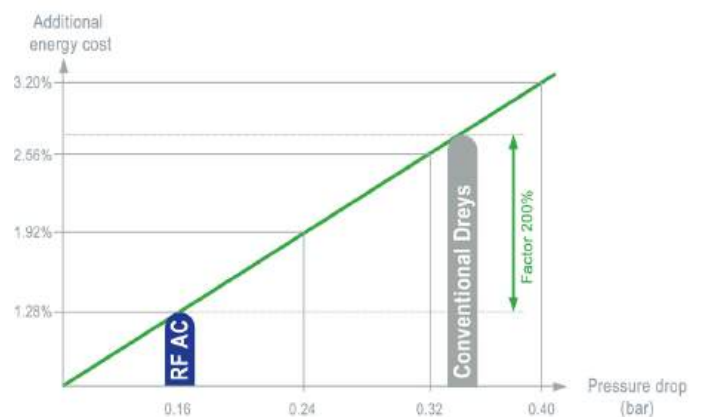


## High Efficiency with Minimal Pressure Drop

Excessive pressure loss increases compressor energy consumption and overall operating costs. The DRYBERG® RF/AC is engineered to minimize pressure drop through:

- Flow-optimized heat exchanger
- High-efficiency demister
- Precision-sized components for optimized airflow

The dryer achieves an average pressure drop of only 0.16 bar at full load, significantly improving overall compressed air system efficiency.



ENERGY SAVING



LOW PRESSURE LOSS



SUPERIOR RELIABILITY

# Functional Principle of DRYBERG® RF/AC

## Optimised Counter-Flow Drying with Maximum Energy Efficiency

In the DRYBERG® RF/AC refrigeration dryer, compressed air is dried using an optimised counter-flow process along the entire flow path. The air flows continuously downward without diversions, ensuring stable operation, low pressure loss, and highly efficient heat exchange.

### ① Pre-Cooling – Air/Air Heat Exchanger

Warm compressed air saturated with moisture enters the refrigeration dryer and is pre-cooled in the air-air heat exchanger. This initial heat exchange significantly reduces the thermal load for the subsequent cooling stage.

### ② Main Cooling – Air/Refrigerant Heat Exchanger

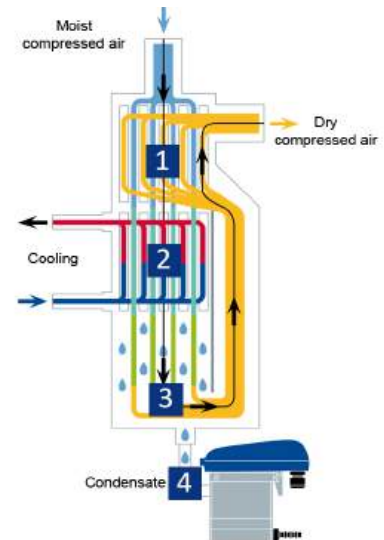
The pre-cooled compressed air is further cooled in the air-refrigerant heat exchanger to approximately 3 °C. Due to the effective pre-cooling, the required refrigerating capacity is reduced, resulting in improved energy efficiency.

### ③ Condensate Separation – Gravity-Assisted Chamber

The reduced flow velocity inside the generously dimensioned condensate collection chamber enables gravity-assisted droplet separation of nearly 99%. The broad return flow reliably prevents re-entrainment of already separated condensate droplets.

### ④ Condensate Drain – BEKOMAT®

The collected condensate is discharged through the level-controlled BEKOMAT® condensate drain, ensuring reliable and loss-free condensate removal under all operating conditions.



#### Eco advantages

- Adjustment of power consumption to the amended drying requirements
- Energy saving with fluctuating volume flow
- Active contribution to sustainability



#### Energy efficient and economical

- Lowest pressure losses due to flow optimised heat exchanger design
- Lowest energy input through balanced refrigerant compressor technology
- No compressed air loss due to effective condensate drainage with BEKOMAT®



#### Safe and reliable

- Efficient condensate separation through integrated demister
- Optimum protection of the refrigeration cycle



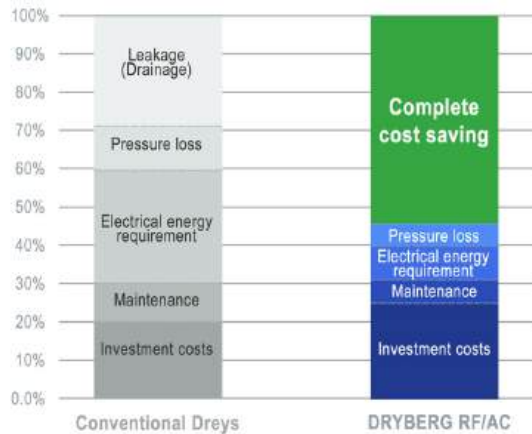
#### Easy to handle

- Clear overview of all operating statuses
- Continuous monitoring of condensate discharge
- Unique alarm alerts
- Timely maintenance and service information

# DRYBERG® RF/AC Refrigeration Dryer

## Optimized Drying for Reliable Compressed Air

The DRYBERG® RF/AC dries compressed air through a counter-flow process with highly efficient heat exchangers along the entire flow path. Air flows downward consistently, without diversions, ensuring stable and reliable performance.



Up to 55% cost savings compared to conventional refrigeration dryers in the first 5 years by utilising intelligent control systems

## Operational Benefits

- Clear overview of all operating statuses
- Continuous condensate monitoring
- Alarm alerts and timely maintenance notifications
- Integrated demister ensures safe and reliable operation

### ✓ Optimized Heat Exchangers

Air-air and air-refrigerant units cool compressed air to ~3°C, promoting effective cooling with minimal flow resistance.

### ✓ Pre-Cooling

Warm, moisture-saturated air is pre-cooled, reducing refrigerant demand and improving energy efficiency.

### ✓ High Droplet Separation

Gravity-assisted separation reaches nearly 99%, while the large condensate collection chamber prevents re-entrainment.

### ✓ Efficient Condensate Management

Condensate is drained via the level-controlled BEKOMAT®, ensuring no compressed air loss.

### ✓ Reheating

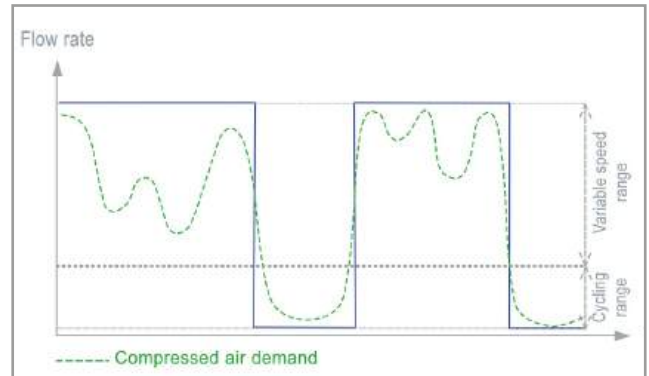
Dried air is reheated before exit, lowering relative humidity and recovering up to 60% of refrigerating capacity.

# DRYBERG® RF / AC – Intelligent Energy Saving Control

## DRYBERG® RF 1–16 / AC

### Energy Efficiency through Intelligent Cycling System

For volume flow rates above 1,000 m<sup>3</sup>/h, the DRYBERG® RF/AC combines the cycling system with variable-speed control of the refrigerant compressor. At higher capacities, the fan is also frequency-controlled, delivering stable drying performance with minimal energy input. This unique combination of intermittent and frequency-controlled operation allows precise adaptation to fluctuating drying requirements.



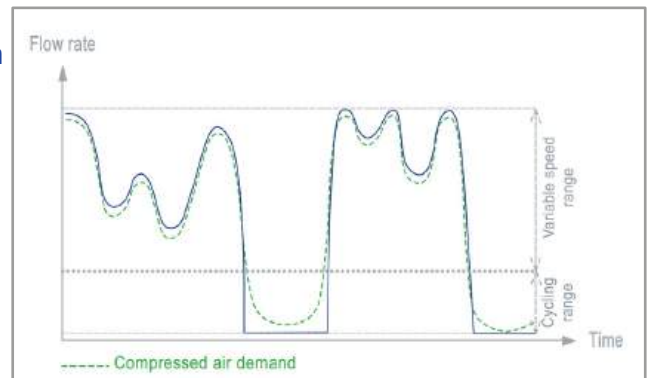
Key Features

- Designed for volume flows < 1,000 m<sup>3</sup>/h
- Demand-driven compressor switching
- Reduced energy consumption and operating costs
- Display of percentage energy savings
- Potential-free contact for alarm signal transmission

## DRYBERG® RF 19–90 / AC

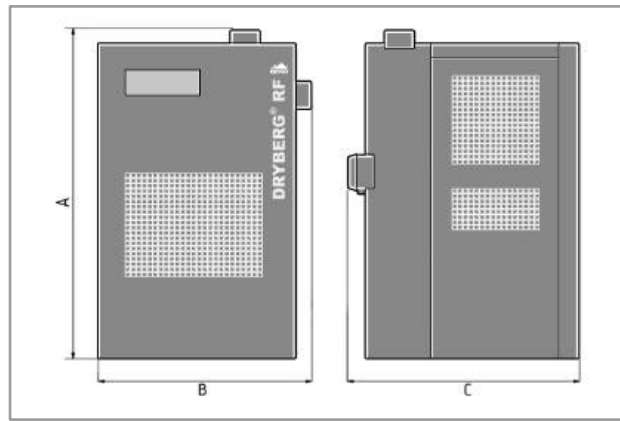
### Maximum Performance with Optimised Energy Consumption

For volume flow rates above 1,000 m<sup>3</sup>/h, the DRYBERG® RF/AC combines the cycling system with variable-speed control of the refrigerant compressor. At higher capacities, the fan is also frequency-controlled, delivering stable drying performance with minimal energy input. This unique combination of intermittent and frequency-controlled operation allows precise adaptation to fluctuating drying requirements.



Key Features

- Designed for volume flows > 1,000 m<sup>3</sup>/h
- High energy savings under variable load conditions
- Combination of cycling and frequency control systems
- Low-vibration, energy-efficient scroll compressors
- 4.7" intuitive touch screen for fast functional checks, including BEKOMAT®
- Potential-free alarm contact
- RS485 interface for external control and monitoring
- Alarm recording and event logging



## Technical Data of Refrigeration Dryer DRYBERG® RF / AC

Model	Nominal airflow		Dimension (A×B×C) [mm]	Power Supply	Nominal absorption power [kW]	Weight [kG]	Air connection
	[m³/min]	[m³/h]					
RF 01 / AC	1.2	72	475×370×515	230/1/50	0.21	28	G ½"
RF 02 / AC	1.8	108	475×370×515	230/1/50	0.29	32	G ½"
RF 03 / AC	3.2	192	740×345×445	230/1/50	0.48	39	G 1 ¼"
RF 04 / AC	4.3	258	740×345×445	230/1/50	0.71	40	G 1 ¼"
RF 05 / AC	5.2	312	825×485×455	230/1/50	0.72	50	G 1 ¼"
RF 06 / AC	6.1	366	885×555×580	230/1/50	0.82	54	G 1 ½"
RF 08 / AC	7.5	450	885×555×580	230/1/50	0.71	56	G 1 ½"
RF 10 / AC	10.5	630	975×555×625	230/1/50	0.92	56	G 2"
RF 13 / AC	13.0	780	975×555×625	230/1/50	1.40	94	G 2"
RF 16 / AC	16.8	1008	1105×665×725	230/1/50	1.50	144	G 2 ½"
RF 19 / AC	19.0	1140	1100×645×920	400/3/50	2.10	170	G 2 ½"
RF 22 / AC	21.0	1260	1465×790×1000	400/3/50	2.55	242	DN 80-PN16
RF 25 / AC	25.0	1500	1465×790×1000	400/3/50	2.85	275	DN 80-PN16
RF 32 / AC	30.0	1800	1465×790×1000	400/3/50	3.10	276	DN 80-PN16
RF 39 / AC	36.8	2208	1465×790×1000	400/3/50	3.50	311	DN 80-PN16
RF 45 / AC	40.0	2400	1750×1135×1205	400/3/50	4.30	463	DN100-PN16
RF 52 / AC	50.0	3000	1750×1135×1205	400/3/50	4.80	538	DN100-PN16
RF 60 / AC	60.0	3600	1750×1135×1205	400/3/50	5.60	540	DN100-PN16
RF 74 / AC	73.6	4416	1750×1135×1205	400/3/50	6.40	612	DN100-PN16
RF 90 / AC	90.0	5400	1810×1300×1750	400/3/50	8.40	830	DN150-PN16
RF110 / AC	110.4	6624	1810×1300×1750	400/3/50	10.80	940	DN150-PN16

Working pressure bar [g]	4	5	6	7	8	10	12	14
Correction factor F1	0.77	0.86	0.93	1.00	1.05	1.14	1.21	1.27

Air inlet temperature [°C]	25	30	35	40	45	50	55
Correction factor F2	1.20	1.11	1.00	0.81	0.67	0.55	0.45

Ambient temperature [°C]	25	30	35	40	45
Correction factor F3	1.00	0.95	0.88	0.79	0.68



# Heatless Adsorption Dryer – DRYBERG® AD

## Reliable and efficient compressed air drying

The DRYBERG® AD dryers are engineered with a specially developed aluminum profile that guarantees optimal airflow distribution through the desiccant bed. This robust design ensures:

- Long service life and reliable performance
- Minimal failure rates even under continuous operation
- Easy and secure floor-mounted installation for all dryer sizes



### Stable Dew Point Performance

The DRYBERG® AD guarantees reliable pressure dew points under demanding conditions:

- Standard version:  $-40\text{ }^{\circ}\text{C}$
- Optional version:  $-70\text{ }^{\circ}\text{C}$  (available on request)

This flexibility allows the system to meet the requirements of critical applications, such as electronics, pharmaceuticals, and food packaging.



### Advanced Filtration System

Every DRYBERG® AD dryer is supplied with a complete filtration package:

- Prefilter: captures particles, oil aerosols, and water droplets before they enter the drying unit, increasing operational reliability.
- Dust After-Filter: removes unavoidable desiccant dust on the outlet side, ensuring clean, safe, and dry compressed air for downstream processes.



### Oversized Silencers

To further improve performance, DRYBERG® AD dryers are equipped with two large silencers:

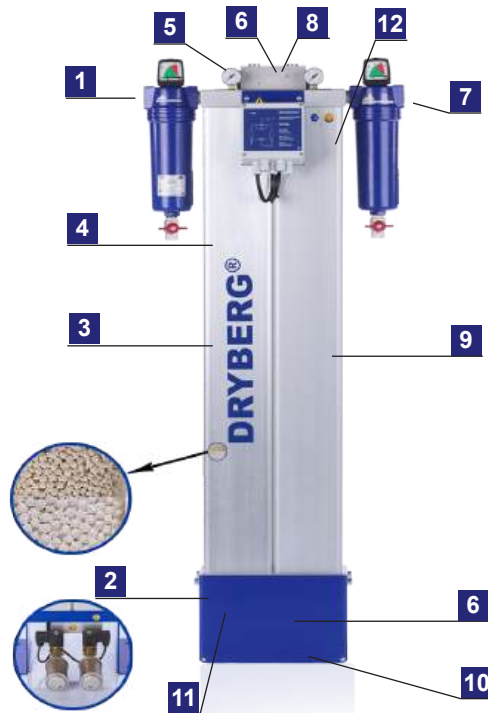
- Reduce noise levels significantly compared to conventional systems.
- Increase overall reliability by minimizing back pressure during purge cycles.
- Contribute to a safer and more comfortable working environment.

## Why It Matters for Your Operations

Choosing DRYBERG® AD means reducing downtime, lowering maintenance costs, and ensuring your compressed air system delivers the highest quality air consistently. With its advanced aluminum profile, optimized dew point control, and state-of-the-art filtration, the DRYBERG® AD is designed to support long-term, trouble-free operation in all industrial environments.

# Heatless Adsorption Dryer

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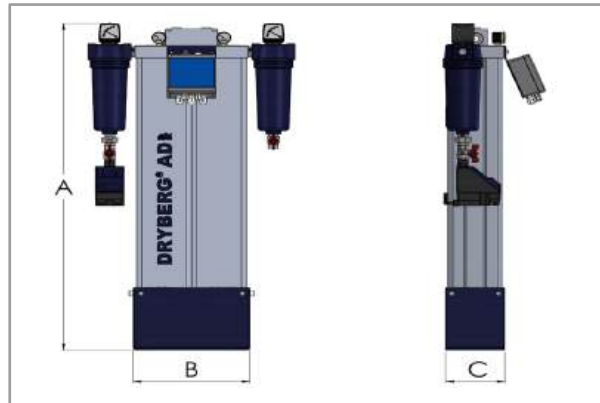


1. **Fine Prefilter** – removes coarse particles, oil aerosols, and condensate before entering the dryer.
2. **Inlet Diffuser** – ensures even air distribution into the desiccant bed.
3. **Pre-drying Wet Zone** – initial separation of moisture before adsorption.
4. **Desiccant Vessel (Adsorption Phase)** – active tower where moisture is absorbed by the desiccant.
5. **Outlet Diffuser** – collects and directs dry air towards the outlet.
6. **Inlet Shuttle Valve** – controls the airflow path into the active vessel.
7. **Dust After-Filter** – captures desiccant dust, ensuring safe and clean compressed air.
8. **Purging Air Nozzle** – releases a small amount of dry air to regenerate the desiccant bed.
9. **Desiccant Vessel (Regeneration Phase)** – tower undergoing purge and regeneration cycle.
10. **Blow-off Valves** – quick-release valves for purge air and condensate discharge (Bürkert quality).
11. **Silencers** – reduce noise levels during purge and blow-off operations.
12. **Electronic Control Unit** – manages cycle switching, compressor synchronization, and alarms.

## Specifications and field of application

Pressure dew point	-25 °C to -40 °C (-70 °C on request MS version)
Media	Compressed air
Min./Max. operating pressure	4 bar g / 16 bar g (PD-S0110:max. 13.5 bar g)
Inlet temperature	+20 °C up to +50 °C
Power supply	32 W, 230 V, 50-60 Hz
Protection class	IP 54
Purge air (average)	14%*
Installation site	installation inside in a non-aggressive atmosphere

\* at standard inlet conditions 7 bar g and 35 °C



## Technical Data of Heatless Adsorption Dryer DRYBERG® AD

Model	Nominal airflow		Dimension (A×B×C×D) [mm]	Weight [kG]	Air connection
	[m³/min]	[m³/h]			
AD 20	0.33	20	823×735×376×316	20	G 3/8"
AD 35	0.58	35	872×767×463×419	36	G 3/8"
AD 50	0.83	50	972×867×463×419	40	G 3/8"
AD 70	1.16	70	979×860×536×442	58	G 1/2"
AD 90	1.50	90	1119×1000×536×442	65	G 1/2"
AD 110	1.83	110	1299×1180×1180×442	73	G 1/2"

\*calculated at 1 bar (abs.) and 20°C at 7 bar g operating pressure and 35 °C compressed air inlet temperature (saturated condition)

### Dew Point - Correction factors

Operating temperature [°C]	-25	-40	-70
Correction factors F1	1.05	1.00	0.95

### Operating pressure [bar g] - Correction Factors F2

		4	5	6	7	8	9	10	11	12	13	14	15	16
Inlet temp (°C)	35	0.63	0.75	0.88	1.00	1.13	1.25	1.38	1.50	1.55	1.60	1.65	1.70	1.76
	40	0.55	0.66	0.77	0.88	0.99	1.10	1.21	1.32	1.43	1.54	1.65	1.70	1.76
	45	0.42	0.50	0.59	0.67	0.76	0.84	0.92	1.01	1.09	1.17	1.26	1.34	1.47
	50	0.35	0.41	0.48	0.55	0.62	0.69	0.76	0.83	0.90	0.96	1.03	1.10	1.17



# Heatless Adsorption Dryer - DRYBERG® AD

## Economical, Reliable and Service-Friendly

The DRYBERG® AD heatless adsorption dryer is designed as an economical and highly reliable solution for applications requiring low pressure dew points. When combined with PUREBERG® compressed air upstream filters and the optional BEKOMAT® condensate drain, it delivers maximum safety and performance as a fully integrated system solution. The energy-saving compressor synchronisation control significantly reduces operating costs by eliminating regeneration air consumption during compressor downtime. Additional energy savings are achieved thanks to the low average pressure drop of only 0.35 bar, including upstream and downstream filtration.



### Efficient Control and Easy Integration

The control and monitoring system of the DRYBERG® AD is designed for reliable, cost-effective operation. A potential-free alarm contact allows easy connection to a central control room for remote monitoring and automatic shutdown if required.



### Silencers and Valve Technology

Two generously dimensioned silencers provide higher operational reliability compared to conventional market solutions. High-quality piston valves ensure stable and long-lasting performance.



### Service-Friendly Design

The DRYBERG® AD is engineered for fast and uncomplicated servicing. Maintenance and repair work can be carried out efficiently, supported by the simple, quick, and clean cartridge replacement during service operations—minimising downtime and maintenance costs.



### Integrated Filtration Concept

The PUREBERG® FSW pre-filter and FDW after-filter are included as standard:

- **FSW pre-filter:** Removes particles, water droplets, and oil aerosols, improving dryer reliability and extending desiccant lifetime.
- **FDW after-filter:** Filters desiccant dust at the outlet, protecting downstream equipment.



### Key Features

- Heatless adsorption drying for low pressure dew points
- Reduced operating costs through compressor synchronisation
- No regeneration air during compressor downtime
- Low pressure drop (Ø 0.35 bar incl. filters)
- Remote monitoring via potential-free alarm contact
- High service friendliness and short maintenance times
- Integrated pre- and after-filtration as standard

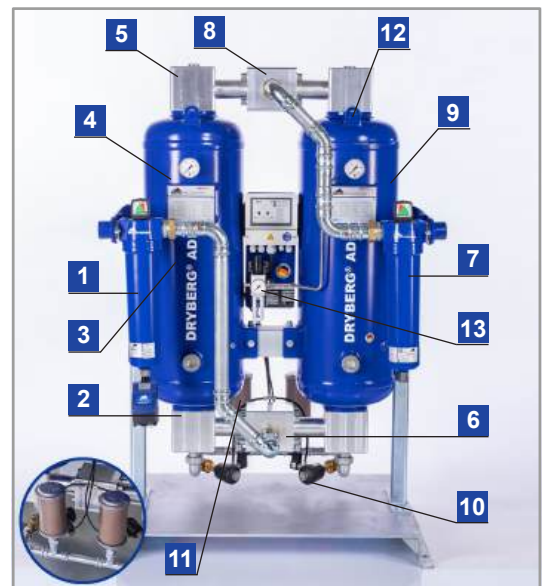
# High-end heatless adsorption dryer DRYBERG® AD

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## Switch-over

Once the regeneration process is done the pressure build up in the vessel is started by closing the purge valves. After reaching the operating pressure the air flow is changed from the adsorbing vessel to the freshly regenerated vessel. Adsorption now commences in the freshly regenerated vessel, while the other vessel enters its regeneration cycle.

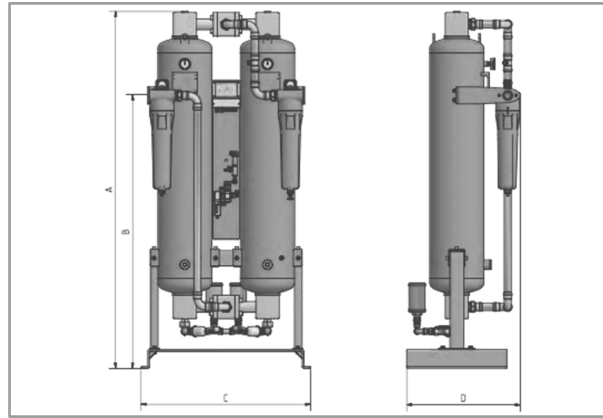
- 1 PUREBERG® FSW pre-filter
- 2 Inlet diffuser
- 3 Wet zone for pre-drying
- 4 Desiccant vessel (here in adsorption phase)
- 5 Outlet diffuser
- 6 Inlet shuttle valve
- 7 PUREBERG® FDW final filter
- 8 Purging air nozzle (outlet shuttle valve)
- 9 Desiccant vessel (here in regeneration phase)
- 10 Piston blow-off valves
- 11 Silencers
- 12 Electronic control device
- 13 Control pressure gauge for piston valves



## including

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- Operating control and monitoring by controller system including compressor unload stand-by
- PUREBERG® FSW prefilter with float drain (to remove oil mist, dust and condensate water droplets)
- BEKOMAT condensate drain, guarantees maximum safety and performance as a true system solution.
- PUREBERG® FDW final dust filter with manual drain
- Piston valves incl. control pressure gauge



## Technical Data of High-end heatless adsorption dryer DRYBERG® AD

Model	Nominal airflow		Dimension (A×B×C×D) [mm]	Weight [kG]	Air connection
	[m³/min]	[m³/h]			
AD 150	2.5	150	1304×853×745×650	174	G 1"
AD 210	3.5	210	1543×853×745×650	212	G 1"
AD 340	5.7	340	1531×1008×954×715	354	G 1 ½"
AD 480	8.0	480	1630×1008×954×715	375	G 1 ½"
AD 600	10	600	2090×1008×954×715	475	G 1 ½"
AD 820	13.7	820	1898×1173×1243×900	718	G 2"
AD 1000	16.7	1000	2198×1173×1243×900	851	G 2"
AD 1200	20	1200	2298×1173×1243×900	890	G 2"
AD 1400	23.3	1400	2120×1550×900×830	830	DN 80
AD 1700	28.3	1700	2120×1660×900×1120	1120	DN 80
AD 2000	33.3	2000	2130×1780×900×1290	1290	DN 80
AD 2500	41.7	2500	2330×1830×1020×1450	1450	DN 100
AD 3000	50	3000	2340×1980×1020×1750	1750	DN 100
AD 3500	58.3	3500	2450×1980×1350×2300	2300	DN 100
AD 4000	66.7	4000	2700×1980×1550×2700	2700	DN 150

- calculated at 1 bar (abs.) and 20°C at 7 bar g operating pressure and 35 °C compressed air
- inlet temperature (saturated condition)

Voltage, Frequency	230 V, 50
Power consumption	<60 W
Protection Class	IP 65
Filter (inlet)	Super fine - 0.01 µm
Filter(outlet)	Dust filter - 1 µ
Input for stand-by	standard

	Dew Point - Correction factors		
Operating temperature [°C]	-25	-40	-70
Correction factors F1	1.1	1.00	0.7

### Guidance for determining the dryer size:

Inlet volume flow  $V_{\text{eff}}$  : 40m³/h       $V_{\text{corr}} = V_{\text{eff}} / F1 = 40\text{m}^3/\text{h} / 0,77$   
 Operating pressure: 6 bar | g       $V_{\text{corr}} = 52 \text{ m}^3/\text{h}$   
 Inlet temperature: 40°C  
 Correction factor K1: 0,77      selected dryer size: AD60



# Adsorption Dryers – Heatless & Oil-Free

## DRYBERG® AD - CT

After compressed air is cooled and condensate is removed, it leaves the compressor in a moisture-saturated state. As the air continues to cool in downstream pipework, additional condensate is formed. This can cause corrosion, icing, system failures, and increased maintenance costs. For this reason, compressed air drying is a mandatory requirement in any air treatment system. When very low pressure dew points are required, adsorption dryers are the preferred solution.



### Operating Principle

In the DRYBERG® AD-CT, moisture is removed by adsorption using a high-quality desiccant material. Water vapour is stored in the large, open pores of the desiccant, effectively reducing the moisture content of the compressed air.

The compressed air enters the dryer through the inlet and is evenly distributed across the entire vessel cross-section by a diffuser and sieve system. This ensures optimal airflow and maximum contact time between air and desiccant, allowing efficient moisture adsorption. The dried and purified compressed air then exits the vessel through the outlet sieve.

### Regeneration Process

As moisture accumulates, the desiccant gradually becomes saturated. During the defined adsorption phase, the desiccant bed is fully and efficiently utilised. After a preset operating time, regeneration takes place according to the counter-flow principle.

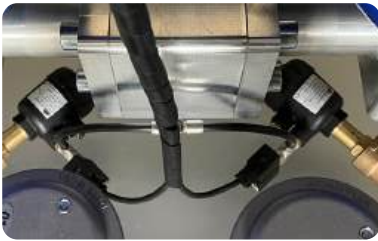
A portion of the dried compressed air is expanded through a nozzle and used to regenerate the saturated desiccant. The system continuously alternates between the two vessels, ensuring an uninterrupted dry air supply. With suitable inlet air quality, the service life of the desiccant can exceed 10,000 operating hours. After drying, the compressed air can be routed to an oil vapour adsorber for further purification.



#### Key Advantages

- Heatless, oil-free adsorption drying
- Suitable for very low pressure dew points
- Reliable protection against corrosion and icing
- Even air distribution for maximum adsorption efficiency
- Long desiccant lifetime with proper pre-treatment
- Continuous operation via twin-tower design

# Heatless oil free DRYBERG®



## Solenoid valves

The solenoid valves are supplied fully assembled and should also be installed as such. These valves are subject to a mechanical load.



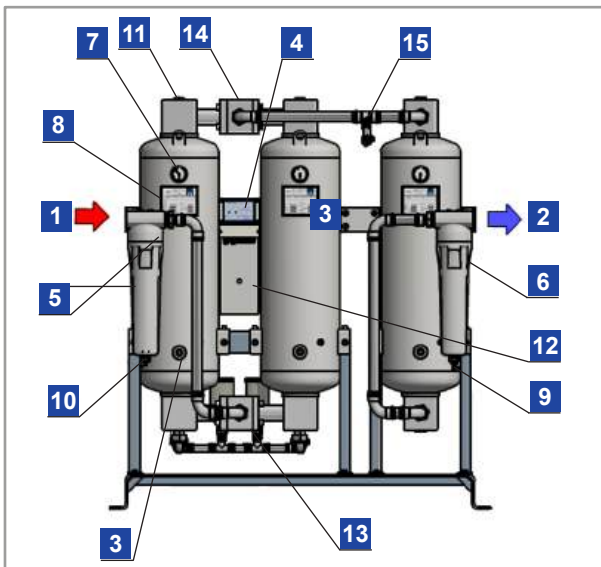
## Silencers

The silencers lessen the noise generation of the regeneration process. In these silencers, proportionate desiccant abrasion in the form of dust is retained.



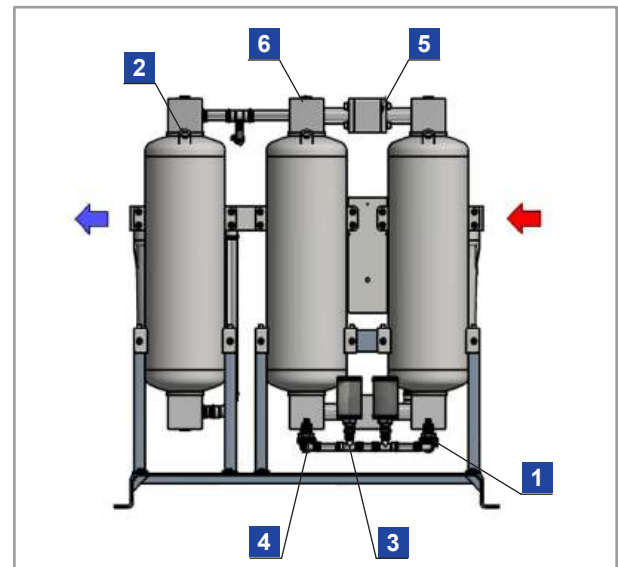
## Autodrain Bekomats

The DRYBERG® AD - CT heatless oil free adsorption dryer, combined with pre filter PUREBERG® F FW, F SW with BEKOMAT® 20 drain, guarantees maximum safety and performance as a true system solution.



## Equipment overview, front view

- 1** Compressed air inlet
- 2** Compressed air outlet
- 3** Draining nozzle desiccant
- 4** Controller
- 5** Prefilter (two stages)
- 6** After-filter
- 7** Pressure gauge
- 8** Vessel type plate
- 9** Manual drain after-filter
- 10** Condensate drain prefilter
- 11** Lifting lugs
- 12** Oil test indicator
- 13** Changeover valve inlet
- 14** Changeover valve outlet
- 15** Dewpoint sensor (optional)



## Equipment overview, rear view

- 1** Removable screw connection, bottom
- 2** Lifting lugs
- 3** Silencer
- 4** Solenoid valve
- 5** Purge air jet (internal)
- 6** Flanged pipe bridge with diffuser

# Heatless oil free DRYBERG® - Scope of Supply

## including

- DRYBERG® AD heatless adsorption dryer with pressure gauges
- Operating control and monitoring equipped with compressor unload stand-by
- Double stage pre FILTER PUREBERG® F FW, F SW with BEKOMAT® 20 drain (to remove oil-dust and condensate water droplets)
- BEKOMAT® condensate drain, guarantees maximum safety and performance as a true system solution.
- OILFREE CT activated carbon tower incl. pressure gauges
- PUREBERG® F DW final dust filter with manual drain
- Oil test indicator

## Technical Data of Adsorption Dryer heatless oil free

Model	Nominal airflow		Dimension (A×B×C×D) [mm]	Power supply	Weight [kG]	Air connection
	[m <sup>3</sup> /min]	[m <sup>3</sup> /h]				
AD 150 CT	2.5	150	1305×853×1220×650	230/1/50	251	G 1"
AD 180 CT	3.0	180	1420×853×1220×650	230/1/50	285	G 1"
AD 210 CT	3.5	210	1544×853×1220×650	230/1/50	305	G 1"
AD 340 CT	5.6	340	1531×1008×1653×716	230/1/50	552	G 1 ½"
AD 480 CT	8.0	480	1630×1008×1653×716	230/1/50	579	G 1 ½"
AD 600 CT	10	600	2090×1008×1653×716	230/1/50	779	G 1 ½"
AD 820 CT	13.6	820	1898×1173×2053×900	230/1/50	900	G 2"
AD 1000 CT	16.6	1000	2198×1173×2053×900	230/1/50	1299	G 2"
AD 1200 CT	20	1200	2298×1173×2053×900	230/1/50	1366	G 2"
AD 1500 CT	25	1500	2448×1697×2574×1178	230/1/50	1840	DN80
AD 2000 CT	33.5	2000	2448×1697×2574×1178	230/1/50	2050	DN80

- calculated at 1 bar (abs.) and 20°C at 7 bar g operating pressure and 35 °C compressed air
- inlet temperature (saturated condition)



**DRYBERG® ADP**

AD1

AD2

CE  
4001  
4001

# Heat Regeneration Adsorption Dryer

## DRYBERG® ADP

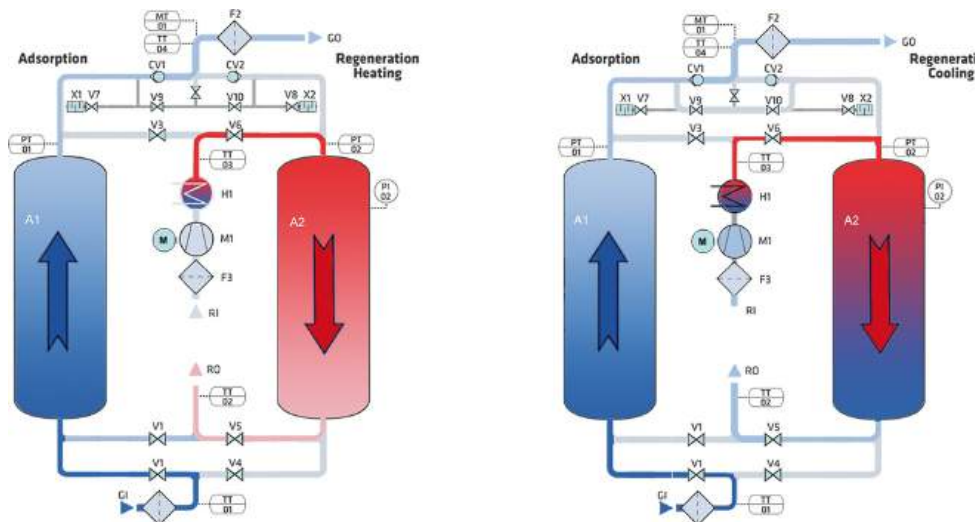
The DRYBERG® ADP heat-regenerated adsorption dryers deliver reliable and energy-efficient moisture removal for demanding compressed air applications. Designed and manufactured in Germany, these systems combine premium-quality components with advanced control technology and continuously optimised drying processes.

Thanks to the modular design, each system can be precisely adapted to customer-specific requirements and local environmental conditions. Optimised engineering and production processes ensure high operational safety, low energy consumption, and often lower investment costs compared to conventional adsorption dryers.



## Operating Principle

The DRYBERG® ADP consists of two adsorption columns operating alternately. While one column dries the compressed air under pressure, the second column is regenerated using heated air. This ensures a continuous supply of dry compressed air. The system is ideal for applications requiring low pressure dew points under high ambient temperature and humidity conditions.



### Key Advantages

- Heat-regenerated adsorption drying
- Reliable low PDP performance
- Energy-efficient operation
- Modular, customer-specific design
- Premium European components
- Made in Germany

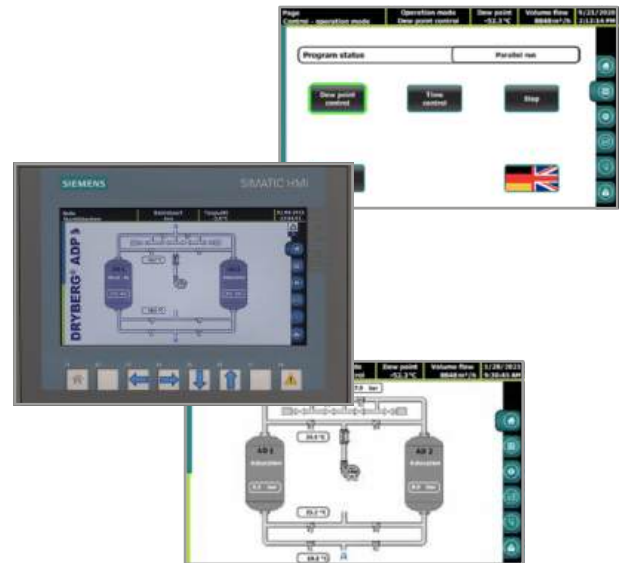
# Heat Regeneration Adsorption Dryer

## Control panel

All DRYBERG® ADP dryers are equipped with Siemens SIMATIC S7-1200 PLC with a 7" touch panel, providing:

- Easy access to system status, settings, alarms, and diagnostic information
- Advanced, user-friendly menu guidance
- Real-time display of operating parameters:
  - Vessel operating pressure
  - Regeneration process temperatures
  - Outlet pressure dew point

Authorized personnel can adjust operating parameters via the service menu, activate additional functions, and review trend curves for temperatures and dew points for up to 24 hours.



## Options

- Dew point control system
- Insulation
- PLC SIMATIC S7-300
- Switch over control for other valves
- Profibus
- Modbus

## APPLICATIONS

- Breathable and medical air
- Chip production and instrument air
- Bottling plants
- Glass manufacture
- Packaging machines
- Sprinkler systems
- Pneumatic control systems
- Optical measuring machines
- Measuring containers
- Painting plants
- Food industry, bagging of hygroscopic food

Code	Heading
A1-2	pressure vessel
F1	inlet filter (super fine coalescing)
F2	outlet filter (dust)
V1-6	ball valve with pneumatic actuator
V7-10	angle seated valve with pneumatic actuator
GI	air inlet
GO	air outlet
RI	regeneration air inlet
H1	heater
R0	regeneration air outlet
ES1-2	ekspansion silencer
CV1-2	check valve
TT1-4	temperature transducer
PI1-2	pressure indicator
PT1-2	pressure transducer
DT1	dew point transducer
M1	blower
F3	regeneration air filter

# Heat Regeneration Adsorption Dryer

## including

- PLC SIMATIC S7-1200 incl. touch panel KTP700
- Switch over control (proximity switches for valves K1 and K2)

Protection Class	IP 65
Filter (inlet)	Super fine - 0.01 µm
Filter(outlet)	Dust filter - 1 µm
Column insulation	Optional
Blower suction condition	Max 50 °C, 35% RH

## Specifications and field of application

Capacity volume flow	up to 9500 m <sup>3</sup> /h
Pressure dew point	40 °C
Media	compressed air, gases of fluid group 2
min. operating pressure	4 bar g
Max. operating pressure	11 bar g (size ADP1400 - ADP5000) - 10 bar g (size ADP6000 - ADP9500)

## Technical Data of Heat Regenerated High-End Adsorption Dryer DRYBERG® ADP

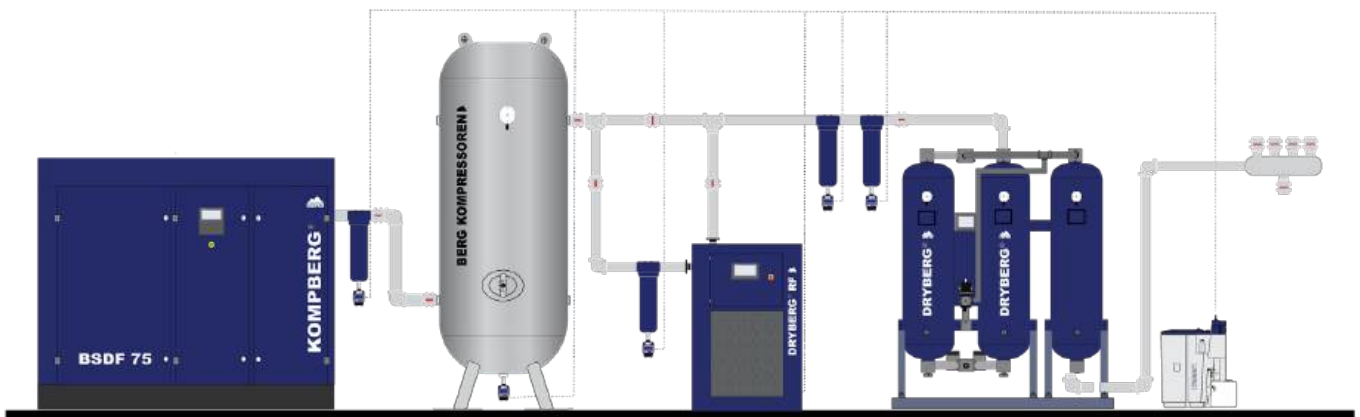
Model	Nominal airflow [Nm <sup>3</sup> /h]	Dimension (A×B×C) [mm]	Blower Power [kW]	Heater power [kW]	Weight [kG]	Air connection
ADP 400	400	1750×1030×2260	1.3	3.5	1200	DN 50
ADP 700	700	1860×1180×2310	1.6	7	1400	DN 50
ADP 1000	1000	1920×1280×2390	1.6	8	1500	DN 80
ADP 1400	1400	1920×1320×2420	1.6	10	1900	DN 80
ADP 1700	1700	2120×1450×2480	4	14	2300	DN 80
ADP 2000	2000	2180×1480×2550	4	17	2800	DN 80
ADP 2500	2500	2400×1520×2640	7.5	22	3400	DN 100
ADP 3000	3000	2400×1540×2630	8.5	26	3600	DN 100
ADP 3500	3500	2750×1900×2790	8.5	32	4000	DN 100
ADP 4000	4000	2800×1990×2890	8.5	35	4800	DN 150
ADP 5000	5000	2910×2040×2870	15	45	5600	DN 150
ADP 6000	6000	3400×2350×3000	15	56	6300	DN 150
ADP 7000	7000	3500×2280×3000	-	-	7200	DN 150
ADP 8200	8200	3600×2500×3100	-	-	8000	DN 150
ADP 9500	9500	3800×2600×3300	-	-	9000	DN 200

Working pressure bar [g]	4	5	6	7	8	9	10	11
Correction factor F1	0.63	0.75	0.88	1.00	1.13	1.25	1.38	1.50

Ambient temperature [°C]	25	30	35	40	42	45
Correction factor K2	1.00	1.00	0.97	0.87	0.80	0.64

# BERG Kompressoren GmbH

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