

Compressed Air Drying Solutions

PROVEN QUALITY
ON A GLOBAL SCALE

ivysads.com



DESIGNED AND BUILT FOR STRENGTH,
DURABILITY, AND RELIABILITY.

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Our Vision

Ivys is committed
to responsible
and sustainable
environmental
solutions



IVYS

Purely Driven

A World Powered by Clean Energy

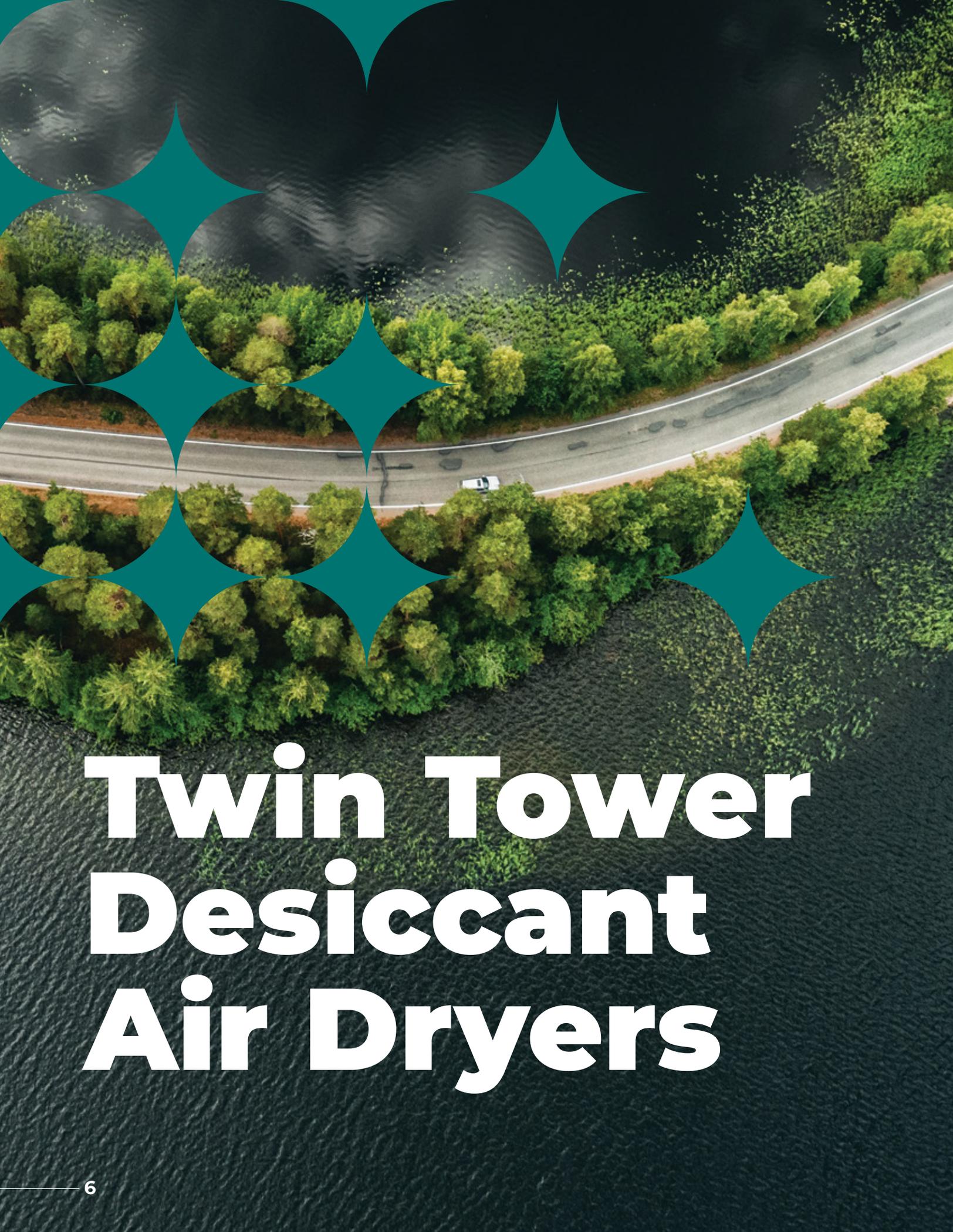
By providing both high-performance and innovative technological solutions for the purification of renewable gas and by offering a wide range of equipment for the conditioning, compression, and filtration of air and gas, Ivys is part of the great line of companies aiming to decarbonize the planet. A sustainable development model that integrates economic growth with social and environmental responsibility.

Our slogan, “Purely Driven”, reflects our vision of a cleaner planet, our continued search for more efficient solutions, and our dedication to building an organization of excellence together, true to its values.

Industrial Compressed Air and Gas Treatments are at the Core of Ivys' Technology

At Ivys, we design, engineer, manufacture, and service industrial equipment for compressed air dedicated to a wide variety of industrial applications around the world.



An aerial photograph of a winding road through a lush green forest, with a body of water in the foreground. The image is overlaid with a pattern of teal, four-pointed starburst shapes. The text 'Twin Tower Desiccant Air Dryers' is prominently displayed in white, bold, sans-serif font in the lower half of the image.

Twin Tower Desiccant Air Dryers

Ivys' Twin Tower Dryers represent the best of modern engineering technology, maximizing user return on investment with built-in reliability at the lowest running cost.



Product line

TWIN TOWER



◆ Heatless Air Dryer HLA

Pressure Swing Adsorption (PSA)



15% Purge

◆ Heat Regenerative Air Dryer HRA

Temperature Swing Adsorption (TSA)



8% Purge

Lowest Capital Cost

✦ Blower Purge Air Dryer BPA

TSA Heating with Ambient Air



→ **3% Purge**
Lowest Carbon Footprint
Greatest Energy Savings

→ Lowest Life Cycle Cost

Heatless Air Dryer – HLA

TWIN TOWER

Advantages

- ◆ The most affordable dryer in the line
- ◆ The lowest electrical consumption
- ◆ Simply designed for easy maintenance



System specifications

Design Pressure (psig/barg)	200/13.8
Option (psig)	300
Volume Flow Range (SCFM/m ³ /h)	40-1,630/69-2,800
Operating Temps (°F/°C)	50-120/10-50
Pipe/Port Size (NPT/FLG)	¼" -2"/3"
Standard Dew Point (°F/°C)	-40/-40
Dew Point Option (°F/°C)	-100/-70

Higher flows, pressures, and port sizes are available upon request.

Model	Pipe Size	Inlet Flow at 7 barg and 38 °C		Dimensions						Weight	
		(100 psig and 100 °F)		Height		Width		Depth		kg	lb
		SCFM	m ³ /h	mm	in	mm	in	mm	in		
HLA 80	¾" NPT	80	126	2,134	84	762	30	610	24	204	450
HLA 100	1" NPT	100	158	2,134	84	762	30	610	24	204	450
HLA 125	1" NPT	125	197	2,134	84	762	30	610	24	204	450
HLA 150	1" NPT	150	237	2,159	85	864	34	610	24	295	650
HLA 200	1" NPT	200	315	2,159	85	864	34	610	24	295	650
HLA 250	1½" NPT	250	394	2,184	86	991	39	610	24	306	675
HLA 300	1½" NPT	300	473	2,184	86	991	39	610	24	567	1,250
HLA 400	2" NPT	400	631	2,210	87	1,118	44	660	26	567	1,250
HLA 500	2" NPT	500	789	2,235	88	1,194	47	660	26	567	1,250
HLA 600	2" NPT	600	946	2,235	88	1,194	47	660	26	1,315	2,900
HLA 800	3" FLG	800	1,262	2,464	97	1,676	66	1,016	40	1,315	2,900
HLA 1000	3" FLG	1,000	1,577	2,464	97	1,676	66	1,016	40	1,769	3,900
HLA 1250	3" FLG	1,250	1,972	2,464	97	1,676	66	1,016	40	1,769	3,900
HLA 1500	3" FLG	1,500	2,366	2,464	97	1,676	66	1,016	40	2,261	4,985
HLA 2000	4" FLG	2,000	3,155	2,921	115	2,134	84	1,499	59	2,261	4,985
HLA 2500	4" FLG	2,500	3,943	2,921	115	2,134	84	1,524	60	3,583	7,900
HLA 3000	6" FLG	3,000	4,732	3,480	137	2,616	103	1,778	70	3,583	7,900
HLA 3500	6" FLG	3,500	5,521			Contact Factory				4,309	9,500
HLA 4000	6" FLG	4,000	6,309			Contact Factory				4,309	9,500
HLA 4500	6" FLG	4,500	7,098			Contact Factory				5,670	12,500
HLA 5000	6" FLG	5,000	7,887			Contact Factory				5,670	12,500

* m³/h at 20 °C and 1 bar (a) | Tables, dimensions and weights are for reference only.

		Temperature Correction		
Operating Temperature	°F	80	100	120
	°C	25	38	50
Multiply Flow By		1.10	1.00	0.56

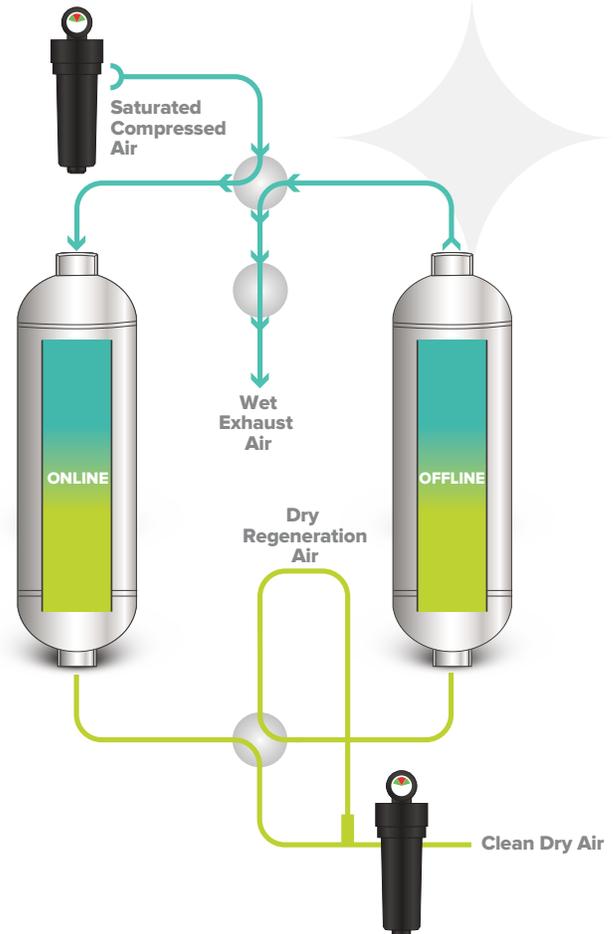
		Pressure Correction		
Operating Pressure	psig	80	100	130
	barg	5.5	7	9
Multiply Flow By		0.82	1.00	1.26

Principle of Operation

Dual-tower desiccant dryers for the continuous dynamic adsorption of water vapor from compressed air. Using pressure swing adsorption technology (PSA)*, air is dried under pressure by passing through one desiccant bed while the other bed is being regenerated.

Regeneration

Regeneration of the wet desiccant is accomplished without the use of heat. A small portion of the dried air process, called purge, is passed through the wet desiccant bed at near atmospheric pressure. This super-dry air strips the desiccant of all previously adsorbed water vapor.



*HOW IT WORKS: PRESSURE SWING ADSORPTION

Pressure swing adsorption (PSA) is a widely used technology for air and gas purification. It is a regenerative process, accomplished by reducing pressure. At moderate pressures, such as 100 pounds per square inch, an adsorbent can support a certain amount of moisture. When that pressure is reduced to ambient air pressure, the adsorbent can support only a smaller amount of moisture. By alternating (swinging) the pressure from high to low between two adsorbent-filled vessels, you can adsorb large quantities of moisture at higher pressure in the online vessel and then release the trapped moisture at lower pressure in the offline vessel, thoroughly drying the air.

Features and Benefits

◆ Ready for operation

Fully assembled packaged unit comes complete with desiccant.

◆ Maximum removal of moisture and lowest dew point assured during the adsorption process

Regeneration purge flow is counter-current to the direction of air flow during drying.

◆ Controlled repressurization

Prevents line surges and minimizes desiccant attrition.

◆ Fail-safe design

Compressed air continues to flow through during power and/or pilot air failure.

◆ Continuous visual color indication or display

A moisture indicator is provided.

◆ PSA fixed 10-minute cycle

All functions are performed automatically by a PLC.

◆ High surface/volume ratio provides maximum adsorption

High-performance activated alumina desiccant.

◆ Low power requirement

Universal 110/240 V power supply.

◆ Ivys' filters are best-in-class, ISO/CRN certified

Coalescing pre-filter and particulate after-filter with DPIs and drains, mounted and pre-piped on most models, supplied loose on others.

Options

- ◆ Class 3000 fittings
- ◆ Stainless steel tubing and fittings
- ◆ Low dew point option (-100 °F/-70 °C LDP)
- ◆ Auto-Dew energy saver
- ◆ Rockwell (Allen-Bradley) PLC
- ◆ 200 psig design pressure
- ◆ 3-valve bypass
- ◆ 9-valve bypass

Warranties

- ◆ 2-year warranty on dryers
- ◆ 5-year warranty on all switching valves

Heat Regenerative Air Dryer – HRA

TWIN TOWER

Advantages

- ◆ Heat-regenerated 8-hour NEMA cycle
- ◆ Less air consumption
- ◆ 8% average purge loss
- ◆ Auto-Dew energy saver
- ◆ 3-valve bypass



System specifications

Design Pressure (psig/barg)	150/10.3
Volume Flow Range (SCFM/m ³ /h)	500–4,500/860–7,750
Operating Temps (°F/°C)	50-120/10-50
Pipe/Port Size (NPT/FLG)	2"/3"–6"
Standard Dew Point (°F/°C)	-40/-40

Higher flows, pressures and port sizes are available upon request.

Model	Pipe Size	Inlet Flow at 7 barg and 38 °C		Dimensions						Weight	
		(100 psig and 100 °F)		Height		Width		Depth		kg	lb
		SCFM	m ³ /h	mm	in	mm	in	mm	in		
HRA 200	1" NPT	200	321	2,261	89	965	38	1,067	42	431	950
HRA 250	1 1/2" NPT	250	394	2,286	90	1,092	43	1,092	43	499	1,100
HRA 300	1 1/2" NPT	300	473	2,286	90	1,092	43	1,092	43	567	1,250
HRA 400	2" NPT	400	631	2,337	92	1,143	45	1,194	47	680	1,500
HRA 500	2" NPT	500	789	2,337	92	1,143	45	1,194	47	726	1,600
HRA 600	2" NPT	600	946	2,337	92	1,143	45	1,194	47	953	2,100
HRA 800	3" FLG	800	1,262	2,337	92	1,524	60	2,032	80	1,134	2,500
HRA 900	3" FLG	900	1,420	2,413	95	1,524	60	2,032	80	1,270	2,800
HRA 1000	3" FLG	1,000	1,577	2,413	95	1,524	60	2,032	80	1,860	4,100
HRA 1250	3" FLG	1,250	1,972	2,413	95	1,524	60	2,032	80	2,132	4,700
HRA 1500	3" FLG	1,500	2,366	2,413	95	1,524	60	2,032	80	2,223	4,900
HRA 2000	4" FLG	2,000	3,155	2,870	113	1,727	68	2,159	85	2,404	5,300
HRA 2500	4" FLG	2,500	3,943	2,870	113	1,727	68	2,159	85	2,812	6,200
HRA 3000	6" FLG	3,000	4,732	3,404	134	2,083	82	3,175	125	3,447	7,600
HRA 3500	6" FLG	3,500	5,521	3,404	134	2,083	82	3,175	125	3,765	8,300

*m³/h at 20 °C and 1 bar (a) | Tables, dimensions and weights are for reference only.

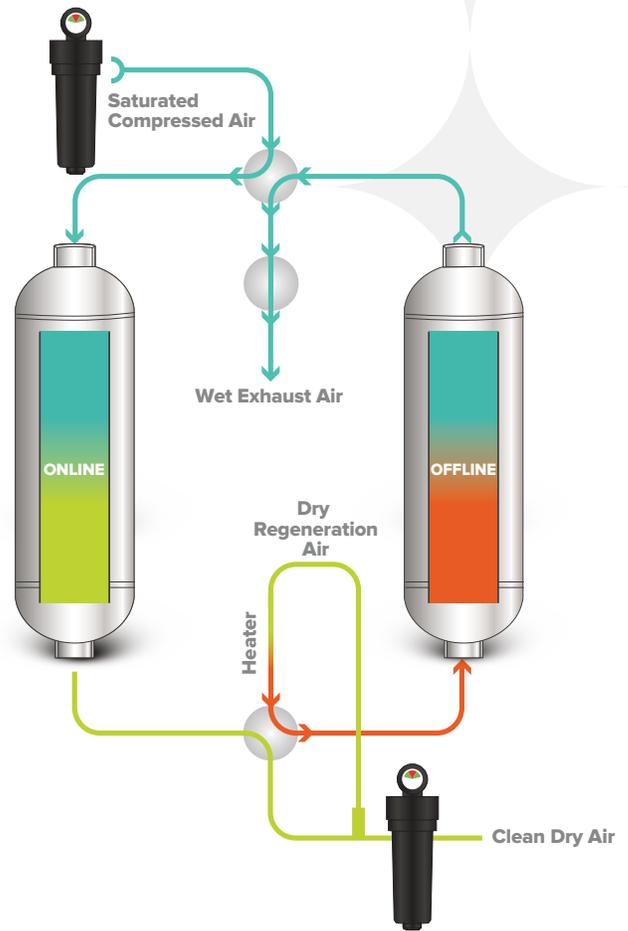
		Temperature Correction		
Operating Temperature	°F	80	100	120
	°C	25	38	50
Multiply Flow By		1.10	1.00	0.56

		Pressure Correction		
Operating Pressure	psig	80	100	130
	barg	5.5	7	9
Multiply Flow By		0.82	1.00	1.26

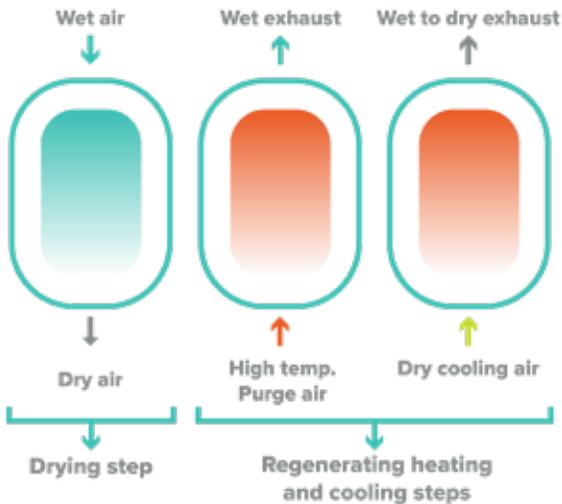
Operating Principle

At the normal operating temperature in the online tower, water vapor adheres to the desiccant so that only dry air leaves the outlet. An electric heater then raises the desiccant temperature in the offline tower that releases the adsorbed water vapor. The desiccant must be cooled before switching back online.

Dried air is used for both heating and cooling. The process is called “Temperature Swing Adsorption” (TSA) because drying and regeneration rely upon swinging between two temperature-based adsorption equilibrium conditions, characterized by long cycles, measured in hours.



TSA Technology Schematic



Features and Benefits

◆ Ready for operation

Fully assembled packaged unit comes complete with desiccant.

◆ Maximum removal of moisture and lowest dew point assured during the adsorption process

Regeneration purge flow is counter-current to the direction of air flow during drying.

◆ Controlled repressurization

Prevents line surges and minimizes desiccant attrition.

◆ Fail-safe design

Compressed air continues to flow through during power and/or pilot air failure.

◆ Continuous visual color indication or display

A moisture indicator is provided.

◆ TSA operates on a fixed 8-hour cycle

All functions are performed automatically by a PLC.

◆ Very high surface/volume ratio provides maximum adsorption

Optimized activated alumina desiccant.

◆ Ivys' filters are best-in-class, ISO/CRN certified

Coalesces pre-filter and particulate after-filter with DPIs and drains, mounted and pre-piped on some models, supplied loose on others.

Options

- ◆ Stainless steel tubing and fittings
- ◆ Low dew point option (-100 °F/-70 °C PDP)
- ◆ Rockwell (Allen-Bradley) PLC
- ◆ 9-valve bypass

Warranties

- ◆ 2-year warranty on dryers
- ◆ 5-year warranty on all switching valves

Blower Purge Air Dryer – BPA

TWIN TOWER

Advantages

- ✦ Very efficient at higher flows
- ✦ 3% average purge loss
- ✦ Auto-Dew energy saver
- ✦ 3-valve bypass



System specifications

Design Pressure (psig/barg)	150/10.3
Option (psig/barg)	200/13.79
Volume Flow Range (SCFM/m ³ /h)	40-1,630/69-2,800
Operating Temps (°F/°C)	50-120/10-50
Pipe/Port Size (NPT/FLG)	¼"-2"¾"
Standard Dew Point (°F/°C)	-40/-40
Dew Point Option (°F/°C)	-100/-70

Higher flows, pressures and port sizes are available upon request.

Model	Pipe Size	Inlet Flow at 7 barg and 38 °C		Dimensions						Weight	
		(100 psig and 100 °F)		Height		Width		Depth		kg	lb
		SCFM	m ³ /h	mm	in	mm	in	mm	in		
BPA 500	2" NPT	500	789	2,337	92	1,143	45	1,803	71	1,134	2,500
BPA 650	2" NPT	650	1,043	2,337	92	1,143	45	1,803	71	1,247	2,750
BPA 800	3" FLG	800	1,262	2,413	95	1,524	60	2,362	93	1,860	4,100
BPA 1000	3" FLG	1,000	1,577	2,413	95	1,524	60	2,362	93	2,041	4,500
BPA 1250	3" FLG	1,250	1,972	2,464	97	1,524	60	2,362	93	3,719	8,200
BPA 1500	3" FLG	1,500	2,366	2,464	97	1,651	65	2,362	93	3,719	8,200
BPA 2000	4" FLG	2,000	3,155	2,896	114	1,651	65	2,692	106	4,445	9,800
BPA 2500	4" FLG	2,500	3,943	2,896	114	2,083	82	2,692	106	6,804	15,000
BPA 3000	6" FLG	3,000	4,732	3,404	134	2,083	82	3,302	130	8,618	19,000
BPA 3500	6" FLG	3,500	5,521	3,404	134	2,083	82	3,302	130	8,618	19,000
BPA 4000	6" FLG	4,000	6,309	3,404	134	2,083	82	3,327	131	12,701	28,000
BPA 5000	6" FLG	5,000	7,887	3,404	134	2,083	82	3,302	130	Contact Factory	
BPA 6000	6" FLG	6,000	9,464	Contact Factory			3,353	132	Contact Factory		
BPA 7000	8" FLG	7,000	11,041	Contact Factory							
BPA 8000	8" FLG	8,000	12,618	Contact Factory							
BPA 9000	10" FLG	9,000	14,196	Contact Factory							
BPA 10000	10" FLG	10,000	15,773	Contact Factory							

*m³/h at 20 °C and 1 bar (a) | Tables, dimensions and weights are for reference only.

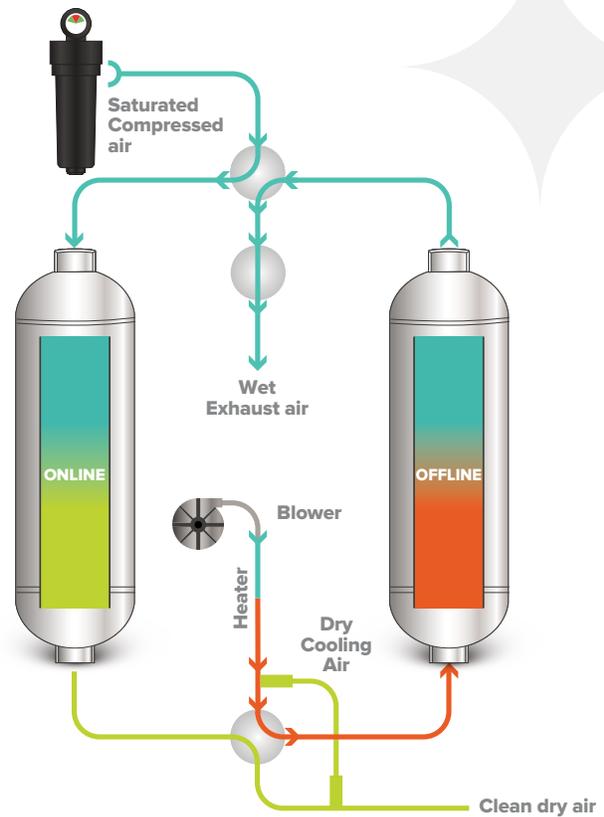
		Temperature Correction		
Operating Temperature	°F	80	100	120
	°C	25	38	50
Multiply Flow By		1.10	1.00	0.56

		Pressure Correction		
Operating Pressure	psig	80	100	130
	barg	5.5	7	9
Multiply Flow By		0.82	1.00	1.26

Operating Principle

At the normal operating temperature in the online tower, water vapor adheres to the desiccant so that only dry air leaves the outlet.

A blower pushes fresh air through an electric heater to raise the temperature in the offline tower to release the adsorbed water vapor. Ambient, then dried air, is drawn through the desiccant before switching back online.



Features and Benefits

◆ Ready for operation

Fully assembled packaged unit comes complete with desiccant.

◆ Maximum removal of moisture and lowest dew point assured during the adsorption process

Regeneration purge flow is counter-current to the direction of air flow during drying.

◆ Controlled repressurization

Prevents line surges and minimizes desiccant attrition.

◆ Fail-safe design

Compressed air continues to flow through during power and/or pilot air failure.

◆ Continuous visual color indication or display

A moisture indicator is provided.

◆ TSA operates on a fixed 8-hour cycle

All functions are performed automatically by a PLC.

◆ Very high surface/volume ratio provides maximum adsorption

Optimized activated alumina desiccant.

◆ Ivys' filters are best-in-class, ISO/CRN certified

Coalescing pre-filter and particulate after-filter with DPls and drains, mounted and pre-piped on some models, supplied loose on others.

Options

- ◆ Stainless steel tubing and fittings
- ◆ Low dew point option (-100 °F/-70 °C PDP)
- ◆ Rockwell (Allen-Bradley) PLC
- ◆ 9-valve bypass

Warranties

- ◆ 2-year warranty on dryers
- ◆ 5-year warranty on all switching valves

Options

VALVE BYPASS

The 3-valve and 9-valve bypass options provide a quick and safe way to take the dryer in or out of operation in a fraction of second without shutting down the entire air system.

LOW-PRESSURE DEW POINT (LPD)

Many industrial applications require extremely low pressure dew points. Ivys' dryers with the LPD option are designed to provide a consistent $-100^{\circ}\text{F}/-70^{\circ}\text{C}$ pressure dew point for these critical applications.

STAINLESS STEEL TUBING

Standard Ivys' dryers use nylon tubing for the pilot air assembly. For customers using stainless steel as standard material for tubing systems, Ivys offers the option of replacing the nylon tubing with stainless steel tubing.

CLASS 3000 FITTINGS

Threaded Class 3000 fittings for connections $\leq 2"$ are used in all Ivys standard heated dryers (HRA, BPA and VRA series). For heatless dryers (HLA series), threaded Class 150 fittings are the standard for connections $\leq 2"$. Some industrial sectors have adopted stricter standards for pressure piping systems. For the latter types of applications, Ivys can incorporate threaded Class 3000 fittings in the HLA series dryer.

ROCKWELL (ALLEN-BRADLEY) PLC

Many industrial facilities use Rockwell (Allen-Bradley) PLCs as standard equipment. For these customers, Ivys' dryers can be equipped with this kind of PLC to facilitate the connectivity and simplicity of the control system configuration.

AUTO-DEW ENERGY SAVINGS AVAILABLE FOR ALL MODELS

In a fixed-cycle dryer, one tower is always undergoing regeneration, regardless of the load on the compressed air system. The Ivys' Auto-Dew option reduces energy usage by delaying the start of the regeneration cycle until the online tower is fully saturated.

The dew point at the dryer outlet is monitored with a precision hygrometer, which senses when the online tower can no longer maintain dew point. When compressed air demand is low, the dryer uses correspondingly less energy.

Without Auto-Dew, one tower is always regenerating, even at partial demand.



With Auto-Dew, the regenerated tower stands by until the online tower is fully saturated.





Discover our Filters,
Service, and Parts
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**Cycling
Refrigerated
Compressed
Air Dryer**

**Refrigerated
High-Temperature
Air Dryer**

COMPRESSED AIR

Designed and built for strength, durability, and reliability, Ivys' Cycling Refrigerated Compressed Air Dryer (RAD) and Refrigerated High-Temperature Compressed Air Dryer (RADH) offer a host of innovative design features focused on performance, energy efficiency, and quick maintenance.



Cycling Refrigerated Compressed Air Dryer

RAD

Advantages and Features at a Glance

- ◆ Energy-saving controller
- ◆ Insulated 3-in-1 heat exchanger aluminum plate
- ◆ High-efficiency compressor
- ◆ Environmentally friendly R-134a refrigerant
- ◆ Built-in 1-micron pre-filter and 0.01-micron after-filter up to RAD1100
- ◆ Fan cycle switch
- ◆ Refrigerant pressure gauges standard on 175 CFM and larger units
- ◆ Consistent dew point performance
- ◆ Low power consumption
- ◆ Low pressure drop
- ◆ Every dryer has a 2-year limited warranty
- ◆ High-quality fan motors
- ◆ Oversized condenser
- ◆ Victaulic couplings and fittings
- ◆ Built-in water separator, applicable to RADH only

Certifications





Energy-Saving Controller Lowers Operating Costs

The Cycling Refrigerated Compressed Air Dryer comes equipped with Digi-Pro, a state-of-the-art digital controller or energy-saving device (ESD) with money-saving features and alarm capabilities to help service technicians monitor many useful parameters and readings.

Digi-Pro

- ◆ One-finger touch key for ease and accessibility
- ◆ Digital dew point monitoring
- ◆ Display with energy-saving mode
- ◆ Periodic maintenance interval display and status report
- ◆ Hours-run meter
- ◆ Fahrenheit and centigrade selection



The Digi-Pro user interface consists of a larger-than-average custom display, with decimal point and function icons, and four touch keys.

Cycling Refrigerated Compressed Air Dryer

RAD

Aluminum Plate Heat Exchanger

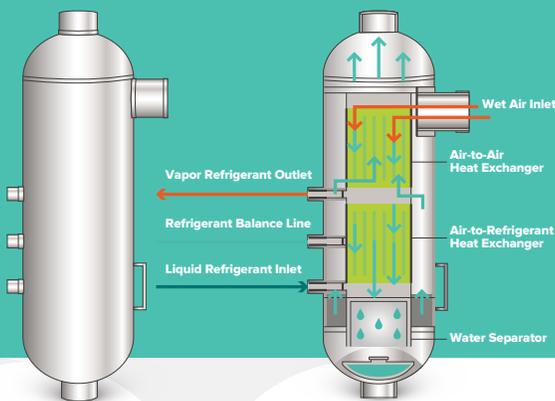
The Cycling Refrigerated Compressed Air Dryer is equipped with a compact monobloc heat exchanger module, specially designed to dry compressed air.

- ◆ Very low pressure drop
- ◆ Centrifugal condensate separator for high-efficiency condensate removal requires no maintenance
- ◆ Rust-free for long service life

R-134a Refrigerant Gas

Key to the design of the Cycling Refrigerated Compressed Air Dryer is its use of environmentally friendly R-134a refrigerant gas, making it suitable for low and high-temperature applications while retaining excellent thermodynamic properties.

- ◆ Does not deplete the ozone layer
- ◆ Thermodynamic properties similar to R-12 (dichlorodifluoromethane)
- ◆ 100% chlorine-free
- ◆ Completely inert
- ◆ Operates at nearly half the pressure of other refrigerants so compressor lifespan is increased
- ◆ R-134a makes the refrigerant dryer much more tolerant to adverse conditions, such as high ambient temperature



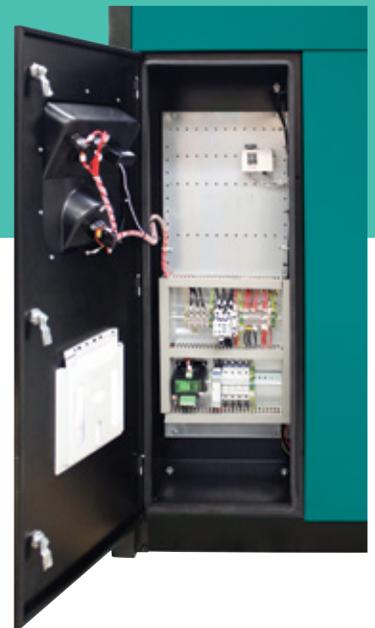
Scroll Compressors

Selected for their resistance to liquid shock and high-energy efficiency, scroll compressors are used in our larger models (RAD 550 and above) – ideal because they are compact, quiet, and low-maintenance.



Streamlined Wiring and Electrical Protection

Quick and easy access to the dryer internals is a key design feature. The RAD 550 and larger dryers include a unique electrical box, which can be accessed from the outside via an access panel. This makes it easy to reach the controls for installation, setup, and service. All our dryers are rated to IP54 standard, which means the electrical controls are protected from dust and water spray from any direction.



Cycling Refrigerated Compressed Air Dryer

RAD

Built-In Quick-Change Filters and Compact Design

Using feedback from field engineers and service technicians, our design engineers created an industry first: the unique “quick-change” filter system, suitable for smaller installation spaces.

- ◆ Two integrated filter housings – a huge advantage in space efficiency and service ease
- ◆ Service-friendly, low-clearance design allows for maintenance in minutes
- ◆ Labour and piping costs are greatly reduced during installation, and compact design allows for flexibility in placement and increased economy during transport
- ◆ Tie-rod-free, quick-change design allows replacement elements to be easily inserted and resealed in a fraction of the time of a traditional system



Pressure Bar		Factor 1
psi	bar	
58	4	0.80
87	6	0.94
101	7	1
116	8	1.04
145	10	1.11
174	12	1.16
203	14	1.22
232	16	1.25

Inlet Temperature		Factor 2
°F	°C	
86	30	1.36
95	35	1.05
100	37.8	1.00
104	40	0.97
113	45	0.82
122	50	0.68

Ambiant Temperature		Factor 3
°F	°C	
68	20	1.20
77	25	1.14
86	30	1.12
95	35	1.06
100	37.8	1
104	40	0.96

Victaulic Grooved Couplings and Fittings

These offer increased connection flexibility and durability, allowing service technicians to dismantle and assemble piping efficiently.

Condensate Drains on Filters

The drain tube can be easily connected to a central condensate drain tubing network or point of disposal, eliminating the need for traditional extensive drain lines and time-consuming installation.



Plug the correct values into the **FORMULA** below using your current compressor specifications and the correct **FACTORS** from the charts above.

Use the **New Capacity** and round up to next size dryer. Refer to the chart on the previous page to determine the correct dryer model.

Formula	Compressor Capacity ÷ Factor 1 ÷ Factor 2 ÷ Factor 3 = New Capacity
	275 0.94 0.97 1.12 269 SCFM

The correct model would be the **RAD 375**.

EXAMPLE

Air compressor specifications

- Compressor Capacity: **275 SCFM**
- Inlet Temperature: **104 °F**
- Quality Class 4 air required
- Max Operating Pressure: **87 psi (6bar)**
- Ambient Temperature: **86 °F**

Cycling Refrigerated Compressed Air Dryer

RAD

Technical Specifications

Nominal Pressure	Maximum Operating Pressure	Maximum Ambient Temperature	Minimum Ambient Temperature	Maximum Inlet Temperature
100 psi (7 bar)	232 psi (16 bar)	113 °F (45 °C)	39 °F (4 °C)	122°F (50 °C)

Model	Capacity Outlet PDP ($\leq +3\text{ }^{\circ}\text{C}/37.4\text{ }^{\circ}\text{F}$) (ISO8573.1 Class 4)		Capacity Outlet PDP ($\leq +7\text{ }^{\circ}\text{C}/44.6\text{ }^{\circ}\text{F}$) (ISO8573.1 Class 5)		Connection	Electrical Supply	Power
	SCFM	m ³ /h	SCFM	m ³ /h			
RAD-10	9	17	11	19	½" NPT	115/1/60	0.4
RAD-15	15	28	18	32	½" NPT	115/1/60	0.5
RAD-20	21	38	24	44	½" NPT	115/1/60	0.5
RAD-40	40	73	46	83	¾" NPT	115/1/60	0.5
RAD-60	62	112	71	129	¾" NPT	115/1/60	1.1
RAD-75	76	138	88	158	¾" NPT	115/1/60	1.2
RAD-85	84	152	97	175	1 ½" NPT	115/1/60	1.4
RAD-125	122	221	140	254	1 ½" NPT	230/1/60	1.7
RAD-150	150	272	173	313	1 ½" NPT	230/1/60	1.9
RAD-200	198	359	228	413	2" NPT	230/1/60	2.2
RAD-250	250	452	287	520	2" NPT	230/1/60	2.7
RAD-375	372	674	428	776	2" NPT	230/1/60	3.0
RAD-480	481	870	553	1,001	2" NPT	230/1/60	3.6
RAD-550	556	1,007	639	1,158	3" NPT	575/3/60	1.6
RAD-725	721	1,305	829	1,501	3" NPT	575/3/60	1.6
RAD-1000	1,001	1,813	1,151	2,085	3" NPT	575/3/60	2.4
RAD-1100	1,111	2,012	1,278	2,314	3" NPT	575/3/60	2.4
RAD-1350	1,342	2,429	1,543	2,794	4" FLG	575/3/60	3.6
RAD-1550	1,568	2,839	1,803	3,265	4" FLG	575/3/60	3.6
RAD-2050	2,037	3,688	2,342	4,241	4" FLG	575/3/60	5.1
RAD-2350	2,343	4,242	2,694	4,879	4" FLG	575/3/60	5.1
RAD-2800	2,794	5,058	3,213	5,817	6" FLG	575/3/60	5.1
RAD-3150	3,154	5,711	3,627	6,567	6" FLG	575/3/60	6.4
RAD-3600	3,605	6,527	4,145	7,506	6" FLG	575/3/60	7.6
RAD-4200	4,205	7,614	4,836	8,756	8" FLG	575/3/60	7.6
RAD-5000	5,006	9,065	5,757	10,424	8" FLG	575/3/60	10.1

Refrigerant Gas	Nominal Inlet Pressure	Nominal Ambient Temperature	Nominal Inlet Air temperature	Refrigerant Gas
R-134a	100 psi (7 bar)	(100 °F/37.8 °C)	(100 °F / 37.8 °C)	R-134a

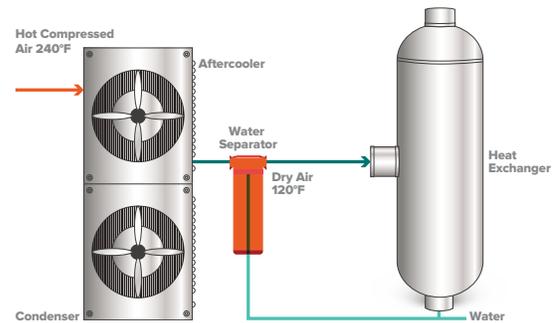
Pressure Drop		Dimensions						Weight	
		Length		Width		Height			
psi	mbar	in	mm	in	mm	in	mm	lb	kg
2.2	150	17	423	16	393	22	567	71	32
3.2	220	17	423	16	393	22	567	71	32
5.1	350	17	423	16	393	22	567	71	32
1.5	100	19	473	18	453	33	832	112	51
3.2	220	19	473	18	453	33	832	117	53
4.6	320	19	473	18	453	33	832	121	53
3.2	220	22	553	20	503	34	874	172	78
4.6	320	22	553	20	503	34	874	183	83
2.9	200	22	553	20	503	34	874	190	86
4.5	310	27	678	26	648	46	1,157	353	160
3.5	240	29	728	37	948	46	1,157	363	165
2.2	150	37	948	29	728	54	1,370	485	220
2.8	190	37	948	29	728	54	1,370	507	230
5.1	350	37	948	31	798	58	1,460	595	270
4.2	290	37	948	31	798	58	1,460	628	285
2.8	190	46	1,163	31	778	68	1,725	864	292
5.1	350	46	1,163	31	778	68	1,725	904	410
3.9	270	55	1,397	33	847	70	1,770	1,085	492
5.5	380	55	1,397	33	847	70	1,770	1,146	520
4.6	320	58	1,467	42	1,077	76	1,930	1,534	696
5.1	350	58	1,467	42	1,077	76	1,930	1,583	718
4.6	320	86	2,188	42	1,062	76	1,925	1,984	900
5.1	350	86	2,188	42	1,062	76	1,925	2,239	925
5.1	350	106	2,697	35	897	78	1,975	2,150	975
5.1	350	106	2,697	35	897	78	1,975	2,425	1,100
5.1	350	100	2,550	61	1,550	83	2,100	3,086	1,400

Refrigerated High-Temperature Air Dryer

RADH

HIGH-TEMPERATURE AIR DRYER

Many small compressors do not use an aftercooler in their designs. Therefore, compressed air exits the compressor at a temperature of about 240 °F. These High-Temperature Dryers incorporate an aftercooler to reduce the inlet temperature, providing efficient dew point management. High-Temperature Air Dryers also have a built-in water separator.



Technical Specifications

Model	Capacity	Voltage	Connection Size	Dimensions			Max. Working Pressure	Max. Ambient Temp.	Max. Inlet Temp.
	SCFM			Width	Length	Height			
			NPT	in	in	in	psi	°F	°F
RADH-25	25	115/1/60	½"	17.5	17.5	37.6	230	120	240
RADH-50	50	115/1/60	¾"	17.5	17.5	37.6	230	120	240
RADH-75	75	115/1/60	¾"	20	24.6	35.8	230	120	240
RADH-100	100	115/1/60	¾"	20	24.6	35.8	230	120	240

Correction Factors

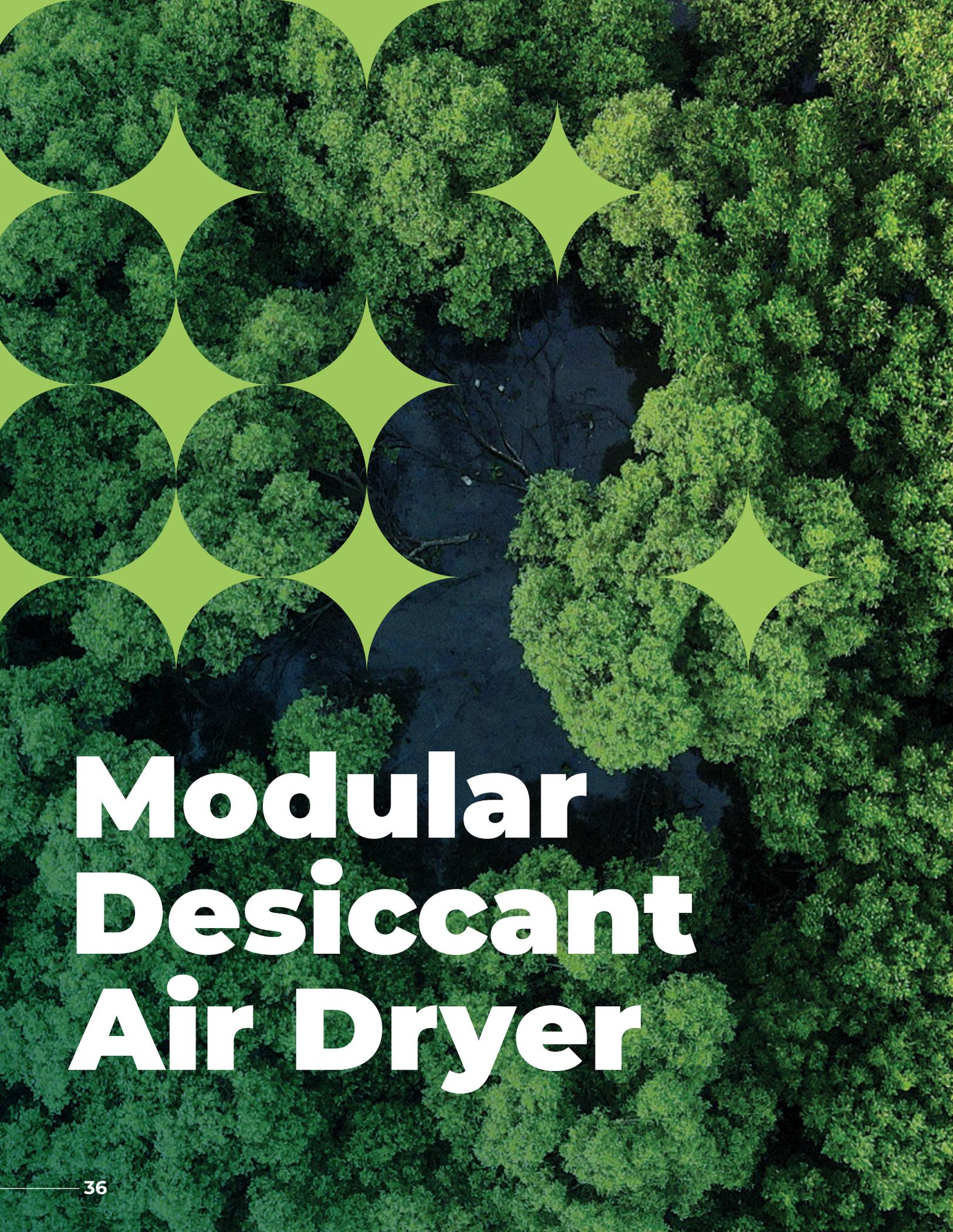
Correction Factors For MH Air Dryers													
Inlet Temperature (°F)	39	50	61	70	79	90	100	149	180	199	208	219	240
F1	1.4	1.4	1.4	1.4	1.35	1.3	1.27	0.106	1	0.85	0.78	0.75	0.7
Ambient Temperature (°F)	39	50	61	75	84	95	100	104	115	120	-	-	-
F2	1.1	1.1	1.1	1.1	1.7	0.103	1	0.96	0.82	0.55	-	-	-
Pressure (psi)	60	73	87	102	115	123	145	160	175	189	203	230	-
F3	0.7	0.75	0.8	0.83	0.88	0.9	0.93	0.96	1	1.1	1.12	1.15	-

EXAMPLE

If an air compressor delivers 50 SCFM at 145 psi, the dryer inlet temperature is 180 °F and ambient temperature is 115 °F. Please choose your dryer model as follows: $50 \cdot 10.93 \cdot 1 / 0.82 = 65$ SCFM. Dryer model for this application is RADH-75.



Discover our Filters,
Service, and Parts
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Modular Desiccant Air Dryer

Compressed air systems are critical components in automotive, food and beverage, electronics, pharmaceutical, and many other general industrial-use applications, thanks to ever-increasing demands for cleaner, oil-free, and dry compressed air. As an important source of energy, not only does air need to be clean and contaminant-free, it also needs to be super-dry to maximize overall system efficiency. Any form of water or oil vapor can cause costly downtime, machine damage, and product spoilage.



Modular Desiccant Air Dryers

MAD

Modular System Advantages

Taking compressed air treatment to the next level through advanced technology, Ivys' industrial modular air dryers combine proven reliable dryer principles with unsurpassed flexibility, affordable space-saving design, and operational safety and efficiency.

Unsurpassed flexibility

◆ Designed for any space challenge

Lightweight, the Modular Desiccant Air Dryer is less than half the weight and size of a traditional twin-tower design. Even the largest model can easily fit through a doorway.

◆ Designed for a range of flows

From 3 to 213 SCFM (4 to 343 Nm³/h) with dew points of -40 °F/-40 °C (-100 °F/-70 °C optional), these dryers are fully equipped, requiring only air inlet/outlet connections.

◆ Designed for most installation options

Wall, bench, or floor mount.



CRN



Modular System Advantages

All Ivys dryers are under warranty for two years, except for the following components: electrical, activated alumina, and mufflers.

Wall-Mounting
Brackets



Affordable space-saving design

◆ Small footprint

The compact Modular Desiccant Air Dryer comes fully equipped with a power cable and mounting brackets for wall, ground, or bench installation.

◆ Quality, lightweight aluminum construction

For corrosion resistance.

◆ Easy to install and easy to use

Plug and go: you only need to attach the supplied pre- and after-filters. The simple digital display tells you what you need to know.

◆ Hassle-free maintenance

Easy access for desiccant change-out and servicing.

Efficient, Reliable, Safe Operation

◆ Efficient

Using a highly engineered inlet and purge manifold design, the Modular Desiccant Air Dryer is one of the lowest pressure-drop desiccant dryers in the industry.

◆ Reliable and durable

Completely automatic, proven electronic controls, high-performance valves, high-quality/high-density-filled desiccant.

◆ Tested and proven

100% tested for leaks, operation, and performance. Every dryer has a 2-year limited warranty.

◆ Delivers highest quality compressed air.

In accordance with ISO 8573-1, Class 2 (standard) and Class 1 (optional).

◆ Lower life-cycle costs

Thanks to low-energy operation and simplified maintenance.



PLC Monitor and Easy-Access Maintenance

The simple digital display tells you what you need to know.

Technical Specifications

Model	Capacity		Connection	Dimensions						Weight	
	SCFM	Nm ³ /h		Width		Length		Height		lb	kg
			NPT	in	mm	in	mm	in	mm		
MAD 3	3	4	½"	13	320	13	336	22	558	38	17
MAD 5	4	7	½"	13	320	13	320	25	633	42	19
MAD 10	9	14	½"	13	320	13	320	36	908	60	27
MAD 15	13	21	½"	15	370	14	350	32	808	68	31
MAD 20	18	20	½"	15	370	14	350	44	1,108	93	42
MAD 25	22	36	½"	15	370	14	350	50	1,258	106	48
MAD 30	27	43	½"	15	370	14	350	59	1,508	119	54
MAD 40	36	57	1 ½"	16	410	20	495	49	1,250	157	71
MAD 45	44	71	1 ½"	16	410	20	495	55	1,400	172	78
MAD 55	53	86	1 ½"	16	410	20	495	69	1,750	203	92
MAD 70	67	107	1 ½"	17	430	25	622	51	1,300	265	120
MAD 90	89	143	1 ½"	17	430	25	622	57	1,450	293	133
MAD 110	107	172	1 ½"	17	430	25	622	69	1,750	335	152
MAD 160	160	257	1 ½"	16	410	29	734	59	1,499	410	186
MAD 215	213	343	1 ½"	16	410	35	889	59	1,497	518	235

Pressure Dew Point	Nominal Inlet Temperature	Nominal Working Pressure	Maximum Inlet Temperature	Maximum Working Pressure	Maximum Ambient Temperature	Voltage
-40 °F (-40 °C) [-100 °F (-70 °C) option]	100 °F (37.8 °C)	100 psi (7 bar)	122 °F (50 °C)	232 psi (16 bar)	122 °F (50 °C)	115-240 V/ IPH/50-60H

Correction Factors

Max Operating Pressure		Factor 1
psi	bar	
65	4.5	0.69
72	5	0.75
87	6	0.88
100	7	1
116	8	1.12
130	9	1.25
145	10	1.37
160	11	1.5
174	12	1.62
188	13	1.74
203	14	1.87
218	15	1.99
232	16	2.11

Inlet Temperature		Factor 2
°F	°C	
68	20	1.12
77	25	1.12
86	30	1.12
95	35	1.12
100	40	1.00
113	45	0.82
122	50	0.66

Options

- ◆ **Auto-Dew Dew Point Monitor** Provides reliable, compact, continuous performance monitoring with alarms, etc. Can be configured for remote control monitoring.
- ◆ **Ivys' Pre- & After-Filters** Designed to give you the cleanest, driest air possible.
- ◆ **Low Dew Point (-40 °F/-40 °C) Auto-Dew Dew Point Monitor** Provides reliable, compact, continuous performance monitoring with alarms, etc. Can be configured for remote control monitoring.

Replacements and spares

- ◆ Elements within the filters should be replaced annually to continue delivering superior results.
- ◆ **Angle Body Piston Valves**
- ◆ **Activated Alumina Desiccant** Ours boasts a high-crush strength with a superior surface/volume ratio.



CHOOSING THE RIGHT DRYER MODEL

Plug the correct values into the **FORMULA** below using your present compressor specifications and the correct **FACTORS** from the charts above.

Use the **New Capacity** and round up to next size dryer. Refer to the chart on the opposite page to determine the correct dryer model.

Formula	Compressor Capacity ÷ Factor 1 ÷ Factor 2 = New Capacity			
	120	0.88	0.82	166 SCFM

The correct model would be the **MAD 215**.

EXAMPLE

Air compressor specifications

- Compressor Capacity: 120 SCFM
- Max Operating Pressure: 87 psi (6 bar)
- Inlet Temperature: 113 °F/45 °C

Filters, Service, and Parts



INDUSTRIAL AIR AND GAS FILTRATION

Ivys provides best-in-class filtration solutions for compressed air and natural gas.

- ◆ Practical solutions developed from over 50 years of experience
- ◆ Full range of products for one-stop shopping
- ◆ Proven quality on a global scale

SERVICE AND PARTS

We support you for all your equipment needs!

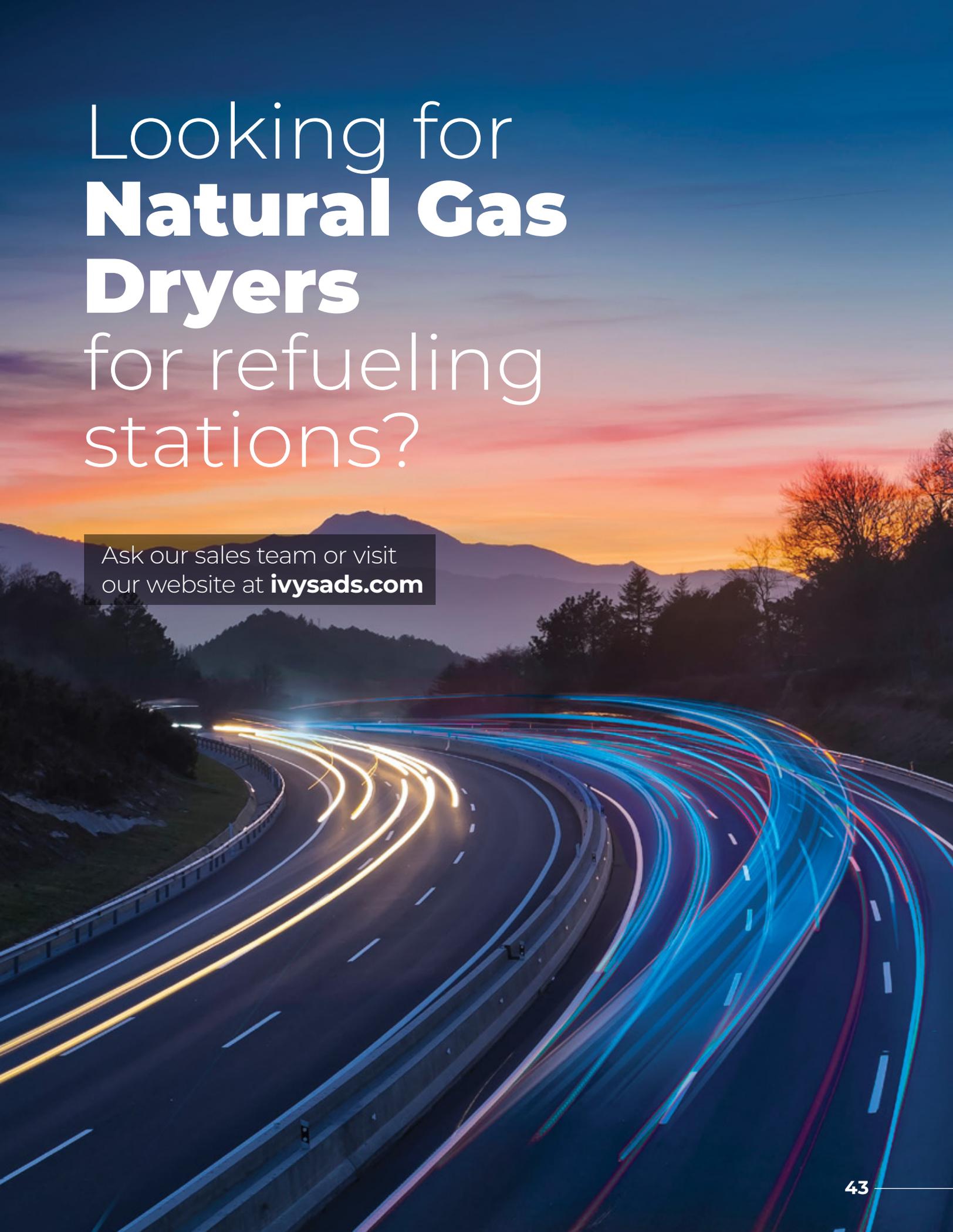
Ivys is committed to providing you with top-quality services and a complete range of replacement parts/spares for your compressed air and gas equipment of all makes and models.

- ◆ Fully-certified technicians on call
- ◆ On-site commissioning
- ◆ Preventative maintenance
- ◆ Servicing and upgrading
- ◆ Replacements and spare parts for all makes and models



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