

Sullair Regenerative Desiccant Dryers 3 to 12,000 SCFM



SD Dryer
100-3400 scfm

SM Dryer
3-1650 scfm

SDB Dryer
1200-12000 scfm

SDE Dryer
400-3500 scfm

60 HZ Models



Solving the Problems of Moisture Contamination

problem

The importance of clean, dry compressed air.

Water jeopardizes everything you want your compressed air system to do. It ruins product and fouls processes. Here's how:

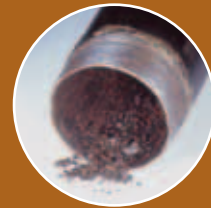
- In addition to water, compressed air can also contain dirt, wear particles, bacteria and lubricating fluid.



Water mixes with these pollutants to form an unwanted abrasive sludge.



This sludge, often acidic, rapidly wears tools and pneumatic equipment.



Sludge corrodes piping and can foul product and air-operated devices.

- Sludge blocks valves and orifices, causing high maintenance and costly air leaks.

How much water is too much? Any amount of water is too much.

- Relative humidity is the amount of water vapor in air relative to what it could hold at a given temperature.
- Moisture in compressed air remains in a vapor state through the compression cycle, so it is not a problem until it leaves the compressor.
- Air discharged from a compressor is approximately 150°F to 450°F.
- At 75°F and 75% relative humidity, a 75 HP compressor takes in 46 gallons of water vapor in 24 hours. When this air is cooled to approximately 35°F at 100 psig, the water vapor condenses into 46 gallons of liquid!



Clean, dry compressed air is essential to your production or process.



Solution

Sullair Desiccant Dryers provide clean, dry air by removing the water. The result: corrosion and damage are eliminated.

- Productivity improves and maintenance costs are reduced.
- The service life of air tools, motors and cylinders is extended.
- The life of your entire compressed air system is prolonged.
- Eliminates freezing in outdoor compressed air lines.
- Eliminates corrosion in compressed air lines.
- Reduction or even elimination of bacterial growth.

Production Efficiency



Maintenance Costs

The benefits of Sullair Regenerative Desiccant Dryers:

Clean, dry compressed air

Sullair desiccant air dryers use a bed of high quality activated alumina desiccant to adsorb water from compressed air providing a continuous dewpoint as low as -40°F (standard) or -100°F (optional). While one tower is drying the air the other is being regenerated. The dryer operates continually and automatically with no interruption of flow and no dewpoint spikes.

Reliable operation.

Conservative design limits, high quality valves, fail safe controls and attention to detail assure long, trouble-free service life.



Sullair Series SD-100 to SD-

**Sullair Heatless Regenerative Dryer
100 to 3400 scfm up to 140 psig*
Dry air to -40°F pressure dew point**

Standard features

- **ASME coded pressure vessels and piping.**
- **Durable, low maintenance valves.**
- **NEMA 4, CSA approved electrical panel.**
- **Tower and purge pressure gauges.**
- **Efficient, abrasion resistant activated alumina desiccant.**
- **Moisture indicator or optional digital dewpoint readout.**
- **Depressurization mufflers for noise reduction.**
- **Fail safe PLC controls.**
- **No interruption of flow.**
- **No dewpoint spikes.**

* For higher pressures, contact Sullair or your Sullair Distributor.

Designed for Sub-freezing Temperatures

These regenerative dryers are ideal for installations with outdoor compressed air piping, and for processes that require an extremely low dew point to -40°F as standard or optional -100°F .



3400



Sullair SD dryers use activated alumina desiccant to adsorb water vapor from compressed air. By combining the proven benefits of desiccant drying with the most advanced designs, Sullair offers an extremely compact, reliable system to clean and dry compressed air for the most critical applications.

Easy Installation

Sullair dryers are prepackaged requiring only air inlet/outlet and single point power connections. Sullair recommends the use of a Sullair MPH/PH coalescing pre-filter to ensure long desiccant life and MPR/PR particulate after-filter to catch any desiccant dust.

Wide Range of Operating Conditions

The Sullair SD dryers can operate with inlet temperatures from 80°F to 120°F, inlet pressures from 80 to 140 psig and flows from 100 to 3400 scfm. They can be sized to provide either a -40°F or -100°F outlet pressure dewpoint.

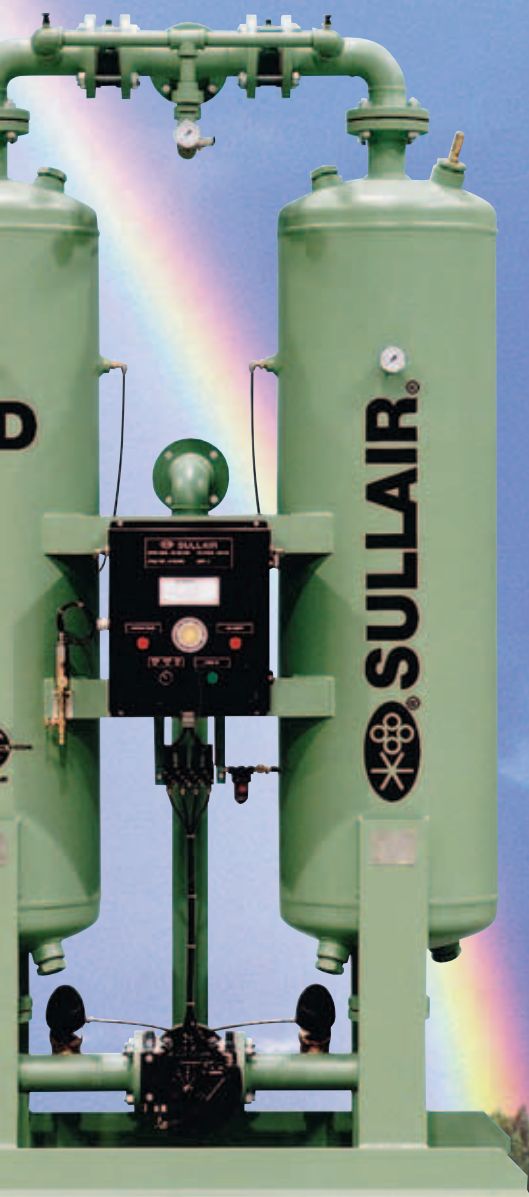
Market Leading Design

- Towers are built in accordance with ASME Section VIII Div 1.
- Desiccant is a high quality activated alumina with high adsorption and abrasion resistance.
- Towers and piping are shot blasted and then protected with an anti-corrosive acrylic polyurethane.
- Depressurization mufflers offer reduced noise levels

- High strength nylon control lines feed filtered control air to high quality solenoids. (Copper or stainless steel optional.)
- Heavy duty inlet and exhaust valves have stainless steel internals and Teflon valve seats for reliability and long service life.
- Repressurization circuit for smooth change over and long desiccant life.

Options

- Dewpoint Dependent Switching (DDS). If the hygrometer senses that there is moisture-adsorption capacity available in the on-line desiccant bed before the tower reaches the end of its cycle, a signal is sent to the controller to delay the changeover and utilize the spare desiccant capacity. Dryers with DDS can achieve energy savings from 30% to as much as 80%.
- Mounted filters with bypass arrangements.
- -100°F dewpoint.



Sullair Series SM-3 to SM-1650

Sullair Heatless Regenerative Dryer
3 to 1650 scfm up to 232 psig
Dry air to -40°F pressure dew point

Standard features

- Small footprint, lightweight, advanced design.
- High tensile extruded aluminum construction.
- Alocrom and dry epoxy powder corrosion protection.
- Snowstorm desiccant filling provides greater efficiency and less attrition.
- Modular design allows flexibility to meet any flow requirements.
- Efficient abrasion-resistant activated alumina desiccant.
- Depressurization mufflers mounted in an acoustic shroud for optimum noise reduction.
- Fail safe electronic solid state timer controls (SM-24 through SM-1650).
- No interruption of flow.
- No dewpoint spikes.





The SM modular desiccant air dryers combine proven traditional twin-tower dryer principles with the latest technology to provide unsurpassed efficiency, flexibility and reliability for critical dry air applications.

Easy to Install

Sullair SM dryers are less than half the weight and size of a traditional twin tower package allowing even the largest models to be moved through a standard doorway. They are prepackaged requiring only air inlet/outlet and single point power connections. Sullair recommends the use of a Sullair MPH/PH coalescing pre-filter to ensure long desiccant life and MPR/PR particulate after-filter to catch any desiccant dust.

Wide Range of Operating Conditions

The Sullair SM dryers can operate with inlet temperatures from 41°F to 122°F, inlet pressures from 58 to 232 psig (may be lower on some models) and can be banked to meet any flow. They can be sized to provide either a -40° or -100°F outlet pressure dewpoint.

Market Leading Design

- High tensile extruded aluminum towers, alocrom treated and externally coated in a dry epoxy powder for optimum corrosion protection.
- Snowstorm filled activated alumina desiccant for the highest possible efficiency and reduced channeling.
- Dual depressurization mufflers mounted in an acoustic shrouding offer the lowest noise levels.
- Electronic solid state timers with LED power and fault indication (SM-24 through SM-1650).
- Modular aluminum extruded valves with stainless steel stems and polystone valve seats (SM-106 through SM-1650).
- Optimum parts commonality through modular design.

Modular Capabilities

- Buy only what you need, pay only for what you use... bank multiple dryers for greatest flexibility.
- 100% standby with just one additional bank.
- Isolate individual units for service or maintenance while maintaining a continuous supply of dry air.
- Add additional banks (dryers) when needed to meet future air requirements.
- Turn banks on and off to meet changing air flow requirements.
- Maximum parts commonality.

Options

- Dewpoint Dependent Switching (DDS). If the hygrometer senses that there is moisture-adsorption capacity available in the on-line desiccant bed before the tower reaches the end of its cycle, a signal is sent to the controller to delay the changeover and utilize the spare desiccant capacity. Dryers with DDS can achieve energy savings from 30% to as much as 80%.
- -100°F dewpoint.



Sullair Series SDB and SDE

**Sullair Externally Heated and Externally Heated
Blower Purge Regenerative Dryers
400 to 12,000 scfm at up to 140 psig*
Dry air to -40°F pressure dewpoint**

Standard features

- Temperature dependent heating and cooling cycles for optimum energy savings and reliability.
- Fail safe, fully automatic interlocked PLC controls.
- Nema 4, CSA approved high and low voltage electrical panels.
- Digital text display with numerous alarms and indicators.
- High quality solenoid valves and control tubing.
- Efficient, abrasion-resistant activated alumina desiccant.
- Moisture indicator or optional digital dewpoint readout.
- Depressurization mufflers for noise reduction.
- No interruption of flow.
- Cooling cycle to eliminate dewpoint spikes.

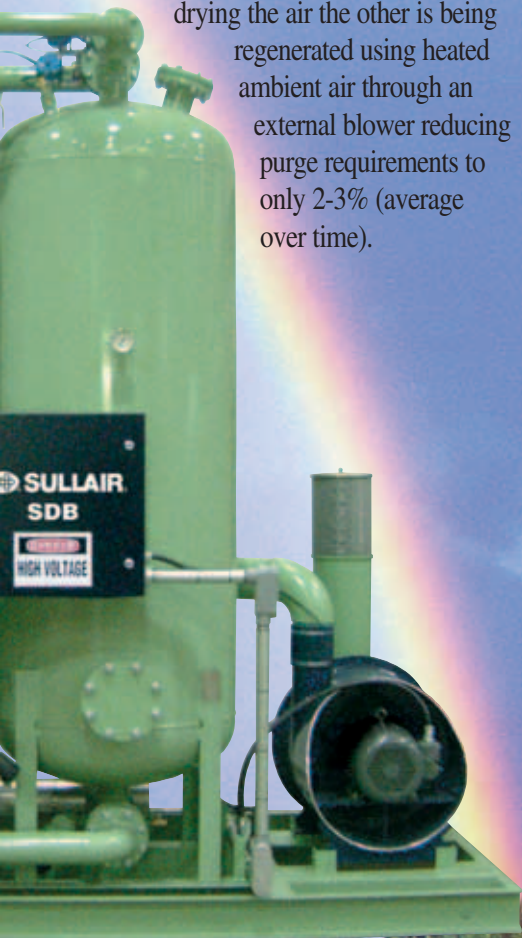
* For higher pressures, contact Sullair or your Sullair Distributor.





Clean Dry Compressed Air

Sullair SDE Externally Heat Reactivated desiccant air dryers use a bed of high quality activated alumina desiccant to adsorb water from compressed air providing continuous dewpoints as low as -40°F (standard) or -100°F (optional). While one tower is drying the air the other is being regenerated using heated dry air reducing purge requirements to only 7% of the rated flow of the dryer. Sullair SDB Blower Purge desiccant air dryers use a bed of high quality activated alumina desiccant to adsorb water from compressed air providing continuous dewpoints as low as -40°F (standard) or -65°F (optional). While one tower is drying the air the other is being regenerated using heated ambient air through an external blower reducing purge requirements to only 2-3% (average over time).



Reliable Operation

Conservative design limits, high quality valves, fail safe PLC controls and attention to detail assure a long trouble free service life.

Designed for Critical Dewpoint Applications

Sullair SDE and SDB heated desiccant air dryers combine proven dryer sizing parameters with high quality components and technologically advanced controls to provide reliable dry air for even the most critical applications.

Easy to Install

Sullair dryers are prepackaged requiring only air inlet/outlet and single point power connections. Sullair recommends the use of a Sullair MPH/PH coalescing pre-filter to ensure long desiccant life and MPR/PR particulate after-filter to catch any desiccant dust.

Wide Range of Operating Conditions

The Sullair SDE and SDB dryers can operate with inlet temperatures from 50°F to 120°F, inlet pressures from 60 to 140 psig. The SDE dryers can handle flows from 400 to 3500 scfm and provide a steady outlet dewpoint of -40°F (standard) or -100°F (optional). The SDB dryers can handle flows from 1200 to 12,000 scfm and provide a steady outlet dewpoint of -40°F (standard) or -65°F (optional).

Market Leading Design

- Towers are built in accordance with ASME Section VIII Div 1.

- Low watt density incoloy sheath heater elements for long element life.
- Low noise, reliable centrifugal blower with direct mounted long shaft motor and intake filter (SDB only).
- Desiccant is a high quality activated alumina with high adsorption and abrasion resistance.
- Towers and piping are shot blasted and then protected with an anti-corrosive silicone acrylic.
- Depressurization mufflers offer reduced noise levels.
- High strength copper and nylon control lines feed filtered control air to high quality solenoids. (All copper or stainless steel optional.)
- Heavy duty inlet and exhaust valves have stainless steel internals and Teflon valve seats for reliability and long service life.
- Cooling and repressurization circuit for smooth change over, long desiccant life and steady dewpoint.

Options

- Dewpoint Dependent Switching (DDS). If the hygrometer senses that there is moisture-adsorption capacity available in the on-line desiccant bed before the tower reaches the end of its cycle, a signal is sent to the controller to delay the changeover and utilize the spare desiccant capacity. Dryers with DDS can achieve energy savings from 30% to as much as 80%.
- Mounted filters with bypass arrangements.
- -100°F dewpoint (SD and SDE only).

SD and SM specifications

SD Heatless Regenerative Air Dryers

Model	Max Inlet Flow SCFM ¹	Inlet/Outlet Connection	Required Pre and After Filter ²	Height (in)	Dimensions ⁴ Width (in)	Depth ³ (in)	Total Weight ⁴	Standard Voltage
SD-100	100	1" NPT	MPH/MPR-170	68	41	26	850	115/1/60
SD-160	160	1" NPT	MPH/MPR-170	71	41	26	900	115/1/60
SD-220	220	1 1/2" NPT	MPH/MPR-300	82	41	22	950	115/1/60
SD-300	300	1 1/2" NPT	MPH/MPR-300	71	47	28	1185	115/1/60
SD-400	400	1 1/2" NPT	MPH/MPR-420	83	51	28	1300	115/1/60
SD-500	400	1 1/2" NPT	MPH/MPR-420	83	51	28	1300	115/1/60
SD-600	400	1 1/2" NPT	MPH/MPR-420	83	51	28	1300	115/1/60
SD-820	820	3" FLG	MPH/MPR-910	106	60	45	2920	115/1/60
SD-1050	1050	3" FLG	MPH/MPR-1315	106	60	48	3400	115/1/60
SD-1200	1200	3" FLG	MPH/MPR-1315	118	60	56	4150	115/1/60
SD-1450	1450	4" FLG	PH/PR-1600	119	64	58	4610	115/1/60
SD-1710	1710	4" FLG	PH/PR-2100	119	64	58	5104	115/1/60
SD-2000	2000	4" FLG	PH/PR-2100	128	80	45	5600	115/1/60
SD-2350	2350	4" FLG	PH/PR-2750	119	80	45	6300	115/1/60
SD-2750	2750	4" FLG	PH/PR-2750	130	89	52	7500	115/1/60
SD-3400	3400	6" FLG	PH/PR-4200	132	93	58	9300	115/1/60

NOTES

¹ Maximum rated inlet flow at CAGI conditions of 100 deg. F and 100 psig.

² Filters are sold separately unless 3V option is purchased.

³ Depth does not include mounted mufflers which may project beyond the dryer skid on some models.

⁴ Weights and dimensions are approximate and do not include 3V option. Contact Sullair for drawings.

SM Modular Heatless Regenerative Air Dryers

Model	Max Inlet Flow SCFM ¹	Inlet/Outlet Connection	Required Pre and After Filter ²	Height (in)	Dimensions ³ Width (in)	Depth (in)	Total Weight ³	Standard Voltage
SM-3	3	1/4" NPT	MPH/MPR-20	15	7	4	12	115/1/60
SM-6	6	1/4" NPT	MPH/MPR-20	19	7	4	15	115/1/60
SM-13	13	1/4" NPT	MPH/MPR-20	28	7	4	20	115/1/60
SM-24	24	1/2" NPT	MPH/MPR-65	33	12	12	70	115/1/60
SM-32	32	1/2" NPT	MPH/MPR-65	40	12	12	81	115/1/60
SM-42	42	1/2" NPT	MPH/MPR-65	46	12	12	92	115/1/60
SM-53	53	1/2" NPT	MPH/MPR-65	53	12	12	103	115/1/60
SM-65	65	1/2" NPT	MPH/MPR-65	59	12	12	114	115/1/60
SM-88	88	3/4" NPT	MPH/MPR-125	69	12	12	132	115/1/60
SM-106	106	1" NPT	MPH/MPR-170	57	9	23	176	115/1/60
SM-129	130	1" NPT	MPH/MPR-170	63	9	23	198	115/1/60
SM-175	176	1" NPT	MPH/MPR-170	73	9	23	229	115/1/60
SM-160	160	2" NPT	MPH/MPR-470	63	10	28	298	115/1/60
SM-240	240	2" NPT	MPH/MPR-470	63	10	32	397	115/1/60
SM-320	320	2" NPT	MPH/MPR-470	63	10	36	485	115/1/60
SM-400	400	2" NPT	MPH/MPR-470	63	10	40	551	115/1/60
SM-480	480	2-1/2"NPT	MPH/MPR-850	63	10	45	650	115/1/60
SM-560	560	2-1/2"NPT	MPH/MPR-850	63	10	49	761	115/1/60
SM-640	640	2-1/2"NPT	MPH/MPR-850	63	10	53	882	115/1/60
SM-800	800	2-1/2"NPT	MPH/MPR-850	63	10	62	1146	115/1/60
SM-1100	1104	3" NPT	MPH/MPR-1315	71	22	75	1683	115/1/60
SM-1350	1380	4" NPT	MPH/MPR-2120	71	22	88	1969	115/1/60
SM-1650	1656	4"NPT	MPH/MPR-2120	71	22	101	2255	115/1/60

NOTES

¹ Maximum rated inlet flow at 95 deg. F and 102 psig.

² Filters are sold separately.

³ Weights and dimensions are approximate. Contact Sullair for drawings.

SDE and SDB specifications

SDB Blower Purge Desiccant Air Dryers

Model	Max Inlet Flow (scfm) ¹	Connection Size	Required Pre- and After-Filter ²	Dimensions ⁴			Total Weight (lbs) ⁴	Standard Voltage	Heater kW	Blower HP
				Height (in)	Width (in)	Depth (in) ³				
SDB-1200	1200	3" FLG	MPH/MPR 1315	113	102	60	5060	460/3/60	26	7.5
SDB-1600	1600	3" FLG	PH/PR 1600	125	102	60	6450	460/3/60	30	7.5
SDB-1900	1900	4" FLG	PH/PR 2100	119	120	61	7900	460/3/60	36	10
SDB-2200	2200	4" FLG	PH/PR 2100	119	120	61	8940	460/3/60	43	10
SDB-2700	2700	4" FLG	PH/PR 2750	130	120	62	10050	460/3/60	51	10
SDB-3700	3700	6" FLG	PH/PR 4200	140	131	72	12750	460/3/60	75	15
SDB-4300	4300	6" FLG	PH/PR 7000	153	131	72	14700	460/3/60	86	20
SDB-5600	5600	6" FLG	PH/PR 7000	154	156	84	19050	460/3/60	120	25
SDB-7000	7000	8" FLG	PH/PR 7000	160	188	95	24150	460/3/60	CF	CF
SDB-8700	8700	8" FLG	PH/PR 11000	168	188	95	29850	460/3/60	CF	CF
SDB-10500	10500	CF	PH/PR 11000	CF	CF	CF	CF	460/3/60	CF	CF
SDB-12000	12000	CF	PH/PR 16500	CF	CF	CF	CF	460/3/60	CF	CF

NOTES

¹ Maximum rated inlet flow at CAGI conditions of 100 deg F and 100 psig.

² Filters are sold separately unless 3V option is purchased.

³ Depth does not include mounted mufflers which project beyond the dryer skid in some models.

⁴ Weights and dimensions are approximate and do not include 3V option. Contact Sullair for drawings.

SDE Heat Reactivated Desiccant Air Dryers

Model	Max Inlet Flow SCFM ¹	Connection Size	Required Pre- and After-Filter ²	Dimensions ⁴			Total Weight (lbs) ⁴	Standard Voltages	Heater kW
				Height (in)	Width (in)	Depth (in) ³			
SDE-400	400	2" NPT	MPH/MPR 470	88	62	34	2244	230/3/60	6
SDE-500	500	2" NPT	MPH/MPR 700	88	62	34	2500	230/3/60	6
SDE-650	650	2" NPT	MPH/MPR 700	100	62	34	2862	230/3/60	8
SDE-820	820	3" FLG	MPH/MPR 910	100	62	48	3728	460/3/60	12
SDE-1000	1000	3" FLG	MPH/MPR 1315	112	62	48	4137	460/3/60	17
SDE-1225	1225	3" FLG	MPH/MPR 1315	124	62	48	4558	460/3/60	21
SDE-1500	1500	3" FLG	PH/PR 1600	113	71	51	5150	460/3/60	25
SDE-1800	1800	4" FLG	PH/PR 2100	127	71	51	6520	460/3/60	28
SDE-2100	2100	4" FLG	PH/PR 2100	128	71	51	8442	460/3/60	30
SDE-2500	2500	4" FLG	PH/PR 2750	119	84	50	11078	460/3/60	36
SDE-3500	3500	6" FLG	PH/PR 4200	139	81	62	16178	460/3/60	50

NOTES

¹ Maximum rated inlet flow at CAGI conditions of 100 deg F and 100 psig.

² Filters are sold separately unless 3V option is purchased.

³ Depth does not include mounted mufflers which project beyond the dryer skid in some models.

⁴ Weights and dimensions are approximate and do not include 3V option. Contact Sullair for drawings.

Sullair air quality guarantee

...an air quality guarantee that's as good as gold.

Sullair assures that its System—compressor, dryer and filter—will meet specific performance levels throughout its operational life. We offer a one-year test/review period, backed by a purchase refund guarantee, to verify the performance of the Sullair System.

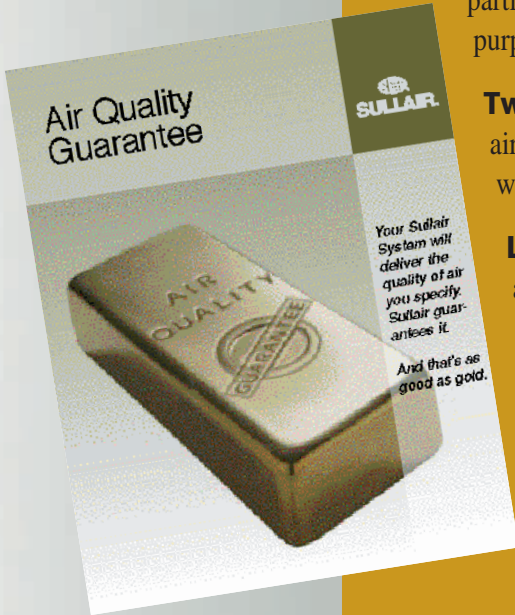
The Sullair System. The Sullair System matches a Sullair compressor, a Sullair dryer and Sullair filters. Dry air is filtered to remove atmospheric particulate, aerosols and other pollutants to provide compressed air for general purposes to the most critical application.

Two levels of air quality. Sullair recognizes that the requirements for air quality vary according to each compressed air application. For this reason, we provide Systems that achieve two distinct levels of air quality.

Level 1 consists of a Sullair compressor, Sullair dryer and Sullair MPF and MPH or PF/PH filters. The compressed air from this System contains particulates no larger than .01 micron, including coalesced liquid water and lubricants. Maximum remaining oil aerosol content is 0.01 parts per million by weight (ppm/w) @ 70°F, including oil vapor. The air from this Sullair System meets the most stringent ISO standard (ISO 8573.1, Class 1) for air quality.

Level 2 offers the highest quality compressed air for critical applications. The air from this Sullair System exceeds the ISO standard (ISO 8573.1, Class 1) for air quality with the use of the MPC or PC filter. The System includes a Sullair compressor, Sullair dryer and Sullair MPF, MPH and MPC or PF, PH and PC filters. The odor-free compressed air from this system contains particulates no larger than 0.01 micron, including water and oil aerosol content of 0.01 ppm/w @ 70°F. The remaining oil vapor content is less than 0.003 ppm/w.

Select the System. Select the air quality level to meet your plant air or process requirements. You can be assured that the quality of air from the Sullair System you specify will remain consistent for the life of the equipment. Sullair guarantees it. And that's as good as gold.



These Systems are not intended to remove carbon monoxide, methyl isocyanate or other noxious, corrosive or toxic gases, vapors or fumes. The system does not provide breathing air.



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