



REFRIGERATED DRYERS

Cycling; Non-Cycling; High Pressure; High Temperature

20 – 30,000 scfm



THE IMPORTANCE OF CLEAN, DRY COMPRESSED AIR

HOW MUCH WATER IS TOO MUCH? ANY AMOUNT OF WATER IS TOO MUCH.

Water jeopardizes everything you want your compressed air system to do. It ruins product and fouls processes. Removing it is vital in order to protect both your equipment and your operations.

Sullair Refrigerated Air Dryers reliably remove harmful moisture and contaminants from compressed air, helping protect your compressed air system, machinery and downstream tools.

How?

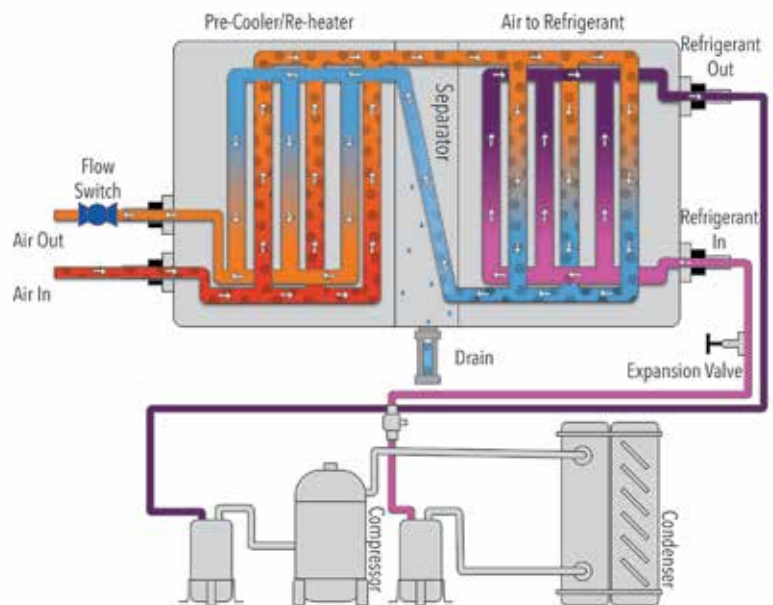
Saturated, compressed air enters the system and moves into the pre-cooler/re-heater, where it is pre-cooled by the cold outgoing air.

The air is then directed through the air-to-refrigerant heat exchanger, where it is cooled to 38°F by the refrigeration system.

The cold, saturated air flows into the three-stage separator, where liquids are removed from the air.

This separated condensate is then ejected from the system via the condensate drain.

The cold, dry air is then reheated by the incoming warm air before leaving the dryer.



REFRIGERATED DRYER TYPES

Non-Cycling

Non-cycling dryers are ideal for running at full load because they maintain a constant energy consumption no matter the flow and air demand. Using a hot gas bypass, they maintain a consistent dew point and control the amount of refrigerant circulating through the dryer.

Digital Scroll

Advanced digital scroll technology saves the highest amount of energy possible in a refrigerated air dryer — up to 91% while in operation. Communication with the system evaporator — via temperature probe — adjusts refrigeration capacity to the temperature exiting the dryer while maintaining a consistent dewpoint.

REFRIGERATED DRYERS

The next generation of Sullair Refrigerated Air Dryers focuses on high quality manufacturing standards, durable packaging and consistent, reliable dew point performance in all flow conditions.

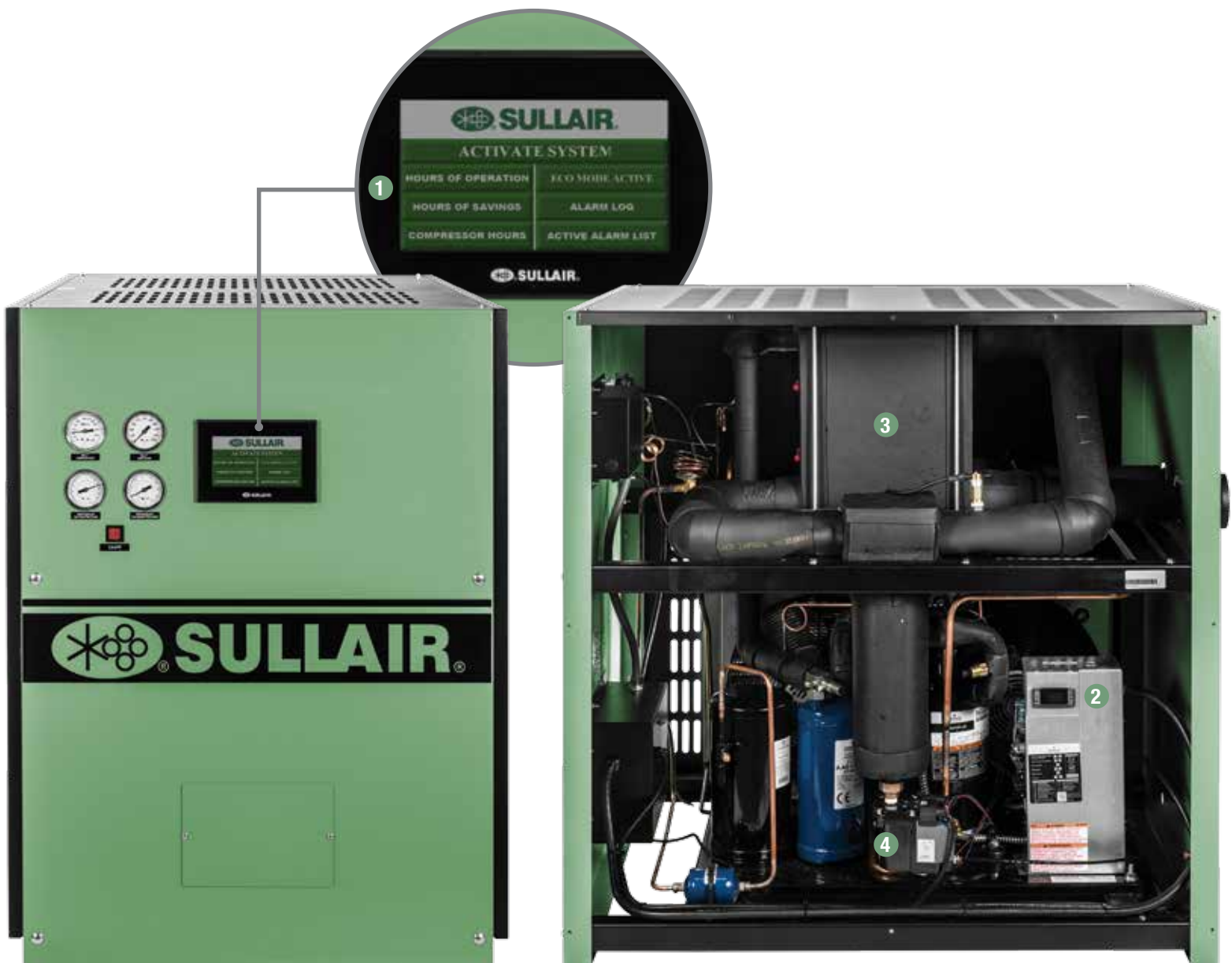
SULLAIR REFRIGERATED AIR DRYERS ARE BUILT FOR DURABLE PERFORMANCE, OPTIMUM RELIABILITY AND FEATURE:

- Stainless steel heat exchangers for consistent dew point and corrosion resistance
- 3-in-1 heat exchangers with internal separator and evaporator provide simplified maintenance and parts and reduce size
- Advanced digital scroll compressors for the highest performance with reduced power and energy consumption
- Zero air loss drains to remove condensate from the system without losing compressed air
- Environmentally friendly R-134a and R-404a refrigerants standard
- High heat transfer and large flow areas ensuring low pressure drop
- Easily serviceable cabinet
- Durable powder coated cabinets on enclosed models to protect the inner workings of the dryer from harsh environments
- Units with three phase voltage have a phase monitor to protect the compressor while eliminating possible phase reversal, loss and unbalance
- Electronic Unit Controller for easy service (*200 scfm and above*)

SULLAIR REFRIGERATED AIR DRYERS ARE AVAILABLE IN THE FOLLOWING CONFIGURATIONS:

- **ATRH — Refrigerated High Temperature** — 20 to 125 scfm
- **ATRN — Refrigerated Non-Cycling** — 25 to 1000 scfm
- **ATRX — Refrigerated Extreme High Pressure** — 20 to 275 scfm
- **ATRP — Refrigerated High Pressure Stainless Steel** — 45 to 1000 scfm
- **ATRD — Refrigerated Energy Saving** — 200 to 2000 scfm
- **ATRS — Refrigerated Digital Cycling** — 1000 to 10,000 scfm
- **ATRDE — Refrigerated Large Flow Energy Saving** — 4000 to 30,000 scfm
- **ATRME — Refrigerated Thermal Mass** — 4000 to 30,000 scfm

ENGINEERED TO SAVE



All Sullair Refrigerated Air Dryers come with a 3-year bumper-to-bumper warranty.

ATRD SERIES

ENERGY SAVING DIGITAL TOUCHSCREEN REFRIGERATED AIR DRYERS 200 – 2000 scfm

Combines the reliability and separation efficiency of non-cycling dryers with the added energy savings of digital cycling and a state-of-the-art touchscreen.

Energy Savings

The Sullair ATRD Energy Saving Series senses air demand and shuts compressor off when no air flow is detected to optimize savings.

1. Standard Digital Touchscreen Features:

- Sullair ATRD 7" state-of-the-art Color Touchscreen Controller
 - Provides easy access to all key dryer performance parameters
- Event log stores critical data and alarms
- ECO Mode Control
- Automatic restart when air flow is sensed

2. Electronic Unit Controller (EUC)

Standard on units 200 scfm and above

The Electronic Unit Controller is designed specifically for demanding refrigeration applications to ensure precision in installation and operation. The EUC replaces existing adjustable low pressure controls, fan cycle switches and other relays, creating a virtually maintenance-free dryer.

EUC Features:

- Bump start (*where applicable*)
- Data storage
- Short cycling protection



3. Heat Exchangers

- High performance stainless steel for consistent dew point and corrosion resistance
- 3-in-1 heat exchangers with internal separator and evaporator provide simplified maintenance and parts and reduce size



4. Zero Air Loss Drain

- Removes condensate from system without losing compressed air



All Sullair Refrigerated Air Dryers come with a 3-year bumper-to-bumper warranty.



ATRN SERIES

NON-CYCLING REFRIGERATED AIR DRYERS 25 – 1000 scfm

Ensure consistent, reliable dew point performance in all flow conditions using a three-step separation process heat exchanger to thoroughly remove more than 99% of condensed moisture from the compressed air.

Standard Non-Cycling Features:

- Dryer on/off switch
- Dryer on light
- Refrigeration suction pressure gauge
- Refrigeration discharge gauge (*ATRN 200 and above*)
- Inlet pressure gauge (*ATRN 400 and above*)

ATRH SERIES

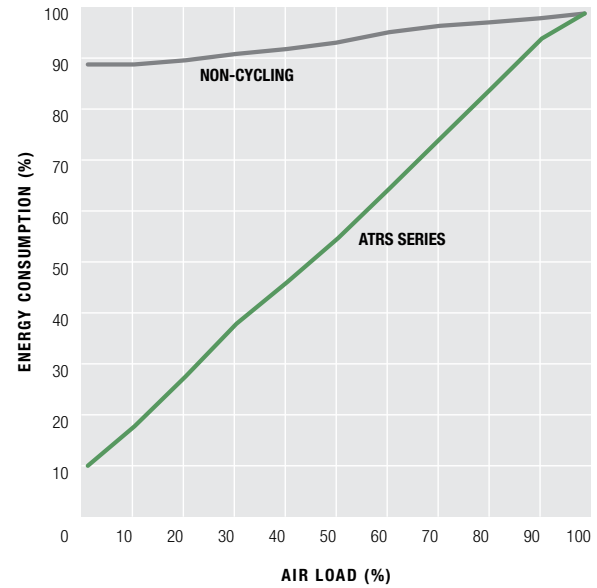
HIGH TEMPERATURE DRYERS 20 – 125 scfm

Combines oversized refrigerated circuits, separators and high-efficiency heat exchangers into a single unit for high-inlet temperature applications.

Standard High Temperature Features:

- Maximum inlet temperature: 205°F/96°C
- Maximum inlet pressure: 200 psig
- Fully automatic operation
- Space-saving compact design
- No air-cooled aftercooler required for compressor

All Sullair Refrigerated Air Dryers come with a 3-year bumper-to-bumper warranty.



ATRS SERIES

DIGITAL CYCLING REFRIGERATED AIR DRYER 1000 – 10,000 scfm

Digitally cycles on and off to immediately and accurately adjust output to optimize energy.

Energy Savings

The Sullair ATRS Energy Saving Digital Cycling Series provides true money savings using proprietary programming in the Allen-Bradley PLC to precisely match power usage to air demand by automatically cycling the digital scroll refrigeration compressor from a loaded to unloaded state. This allows energy consumption to range from as low as 10% to 100% maximum capacity.

Optimum Performance, Fewer Parts

The Sullair ATRS Series is engineered with 71% fewer parts to provide greater reliability and reduced maintenance.

Expands with you

Increase your drying power as your plant grows. Modular units — configured in 500 and 1000 scfm increments — precisely match your air flow demand by 10 to 100%.

You can interface up to five modular dryers with isolation valves to expand drying capacity. Modular systems provide backup drying and lower pressure drop without increasing power consumption.

Standard Digital Cycling Features:

- Allen-Bradley PLC MicroLogix™ color touchscreen controller
- Monitors controls and system performance, tracks energy savings and displays system operation steps and alarms
- Ethernet ready

All Sullair Refrigerated Air Dryers come with a 3-year bumper-to-bumper warranty.



ATRX SERIES

REFRIGERATED EXTREME HIGH PRESSURE AIR DRYERS 20 – 275 scfm

Available in 1200, 3625, 5000 and 6000 psig offerings

Uses air-side 316 stainless steel components to provide corrosion resistance in extreme high pressure applications up to 6000 psig. The Sullair ATRX Series is designed for extreme high pressure applications such as pre-treatment for breathing air applications, pressure testing and other applications where the air must be pre-dried.

Standard Extreme High Pressure Features:

- Non-Cycling
- Maximum inlet pressure: 6000 psig
- 316 stainless steel air-side components



ATRP SERIES

REFRIGERATED HIGH PRESSURE STAINLESS STEEL AIR DRYERS 45 – 1000 scfm

Uses air-side 316 stainless steel components to provide corrosion resistance in high pressure applications up to 725 psig.

The Sullair ATRP Series is designed for the PET market, injection molding, military functions and other high pressure applications.

Standard High Pressure Features:

- Non-Cycling
- Maximum inlet pressure: 725 psig
- 316 stainless steel air-side components

All Sullair Refrigerated Air Dryers come with a 3-year bumper-to-bumper warranty.

ATRDE SERIES

REFRIGERATED LARGE FLOW ENERGY SAVING AIR DRYERS 4000 – 30,000 scfm

Combines shell-and-tube heat exchangers with rotary screw compressors to provide a consistent dew point over variable load conditions and class-leading pressure drop.

Sullair ATRDE Series Refrigerated Air Dryers optimize energy by modulating refrigeration compression to match output needs.

Standard Large Flow Energy Saving Features:

- Non-cycling refrigerated air dryer
 - Flow range: 4000 – 30,000 scfm
 - Designed for continuous duty cycle
- 4-inch display with customizable controls and dryer operation status
- Communication through RS-232/RS-485 combo port

ATRME SERIES

REFRIGERATED THERMAL MASS AIR DRYERS 4000 – 30,000 scfm

Uses high efficiency compressors with defined loading and unloading capacities and a thermal mass medium for energy storage to provide a consistent dew point for large air volumes.

Sullair ATRME Series Refrigerated Air Dryers decrease air distribution system costs, lengthen tool life and reduce maintenance downtime and system damage.

Standard Thermal Mass Features:

- Cycling thermal mass dryer
 - Flow range: 4000 – 30,000 scfm
 - Designed to run from 0–100% load
 - Compressor continuously modulates from 25–100% demand
- 4-inch display with customizable controls and dryer operation status
- Communication through RS-232/RS-485 combo port



All Sullair Refrigerated Air Dryers come with a 3-year bumper-to-bumper warranty.

ABOUT SULLAIR

For more than 50 years, Sullair has been on the leading edge of compressed air solutions. We were one of the first to execute rotary screw technology in our air compressors, and our machines are famous all over the world for their legendary durability. As the industry moves forward, Sullair will always be at the forefront with quality people, innovative solutions, and air compressors that are built to last.

Sullair was founded in Michigan City, Indiana in 1965, and has since expanded with a broad international network to serve customers in every corner of the globe. Sullair has offices in Chicago and manufacturing facilities in the United States, China and India — all ISO 9001 certified to ensure the highest quality standards in manufacturing. In addition, Sullair Suzhou and Shenzhen facilities are ISO 9001, ISO 14001 and OHSAS 18001 certified.

**RELIABILITY.
DURABILITY.
PERFORMANCE.**

These are the pillars that drive the quality of Sullair compressed air solutions. It's a promise we keep with every machine we make.

RELIABILITY

Customers who work with Sullair have found that the intangibles make all the difference — things like trust, confidence, and peace of mind. They go to work every day having full faith in their equipment, as well as the knowledge that dedicated distributors and Sullair personnel have their back every step of the way.

DURABILITY

Bulletproof. Built to last. However you spin it, Sullair compressed air solutions are in it for the long haul, driven by the design of the legendary air end. In factories and shops all over the world, you'll find Sullair compressors that have stood the test of time, running consistently today like they did on day one.

PERFORMANCE

You have high expectations for your operations, and we make machines that share your work ethic. Sullair compressed air solutions do what they're supposed to do, and they do it extremely well for a very long time. And working with us means not only access to clean, quality air, but also the tools you need to optimize this vital resource.



 **SULLAIR**®

Specifications enclosed

FOR MORE INFORMATION, CONTACT YOUR LOCAL AUTHORIZED SULLAIR DISTRIBUTOR.



ATRN SERIES

NON-CYCLING REFRIGERATED AIR DRYERS



FREQUENCY: 60 Hz

MODEL #	VOLTAGE - PHASE	TYPE OF COOLING	scfm	INLET/OUTLET CONNECTION (NPT)	DRAIN OUTLET CONNECTION	HEIGHT (in)	WIDTH (in)	DEPTH (in)	WEIGHT (lbs)
ATRN 25	115-1	Air-cooled	25	1/2"	1/4"	15	16	16	76
ATRN 25	208/230-1	Air-cooled	25	1/2"	1/4"	15	16	16	76
ATRN 40	115-1	Air-cooled	40	3/4"	1/4"	15	16	16	78
ATRN 40	208/230-1	Air-cooled	40	3/4"	1/4"	15	16	16	78
ATRN 50	115-1	Air-cooled	50	3/4"	1/4"	15	16	16	80
ATRN 50	208/230-1	Air-cooled	50	3/4"	1/4"	15	16	16	80
ATRN 60	115-1	Air-cooled	60	3/4"	1/4"	15	16	16	102
ATRN 60	208/230-1	Air-cooled	60	3/4"	1/4"	15	16	16	102
ATRN 75	115-1	Air-cooled	75	1"	1/4"	32	22	22	124
ATRN 75	208/230-1	Air-cooled	75	1"	1/4"	32	22	22	124
ATRN 100	115-1	Air-cooled	100	1"	1/4"	32	22	22	138
ATRN 100	208/230-1	Air-cooled	100	1"	1/4"	32	22	22	138
ATRN 125	115-1	Air-cooled	125	1"	1/4"	32	22	22	156
ATRN 125	208/230-1	Air-cooled	125	1"	1/4"	32	22	22	156
ATRN 150	115-1	Air-cooled	150	1"	1/4"	32	22	22	162
ATRN 150	208/230-1	Air-cooled	150	1"	1/4"	32	22	22	162
ATRN 200	230-1	Air-cooled	200	1-1/2"	1/4"	36	28	32	240
ATRN 250	230-1	Air-cooled	250	1-1/2"	1/4"	36	28	32	332
ATRN 250	208/230-3	Air-cooled	250	1-1/2"	1/4"	36	28	32	332
ATRN 250	460-3	Air-cooled	250	1-1/2"	1/4"	36	28	32	332
ATRN 250	575-3	Air-cooled	250	1-1/2"	1/4"	36	28	32	332
ATRN 300	230-1	Air-cooled	300	2"	1/4"	36	28	32	345
ATRN 300	208/230-3	Air-cooled	300	2"	1/4"	36	28	32	345
ATRN 300	460-3	Air-cooled	300	2"	1/4"	36	28	32	345
ATRN 300	575-3	Air-cooled	300	2"	1/4"	36	28	32	345
ATRN 400	230-1	Air-cooled	400	2"	1/4"	45	34	48	567
ATRN 400	208/230-3	Air-cooled	400	2"	1/4"	45	34	48	567
ATRN 400	460-3	Air-cooled	400	2"	1/4"	45	34	48	567
ATRN 400	575-3	Air-cooled	400	2"	1/4"	45	34	48	567
ATRN 500	230-1	Air-cooled	500	2"	1/4"	45	34	48	582
ATRN 500	208/230-3	Air-cooled	500	2"	1/4"	45	34	48	582
ATRN 500	460-3	Air-cooled	500	2"	1/4"	45	34	48	582
ATRN 500	575-3	Air-cooled	500	2"	1/4"	45	34	48	582
ATRN 600	230-1	Air-cooled	600	3"	1/4"	45	34	48	598
ATRN 600	208/230-3	Air-cooled	600	3"	1/4"	45	34	48	598
ATRN 600	460-3	Air-cooled	600	3"	1/4"	45	34	48	598
ATRN 600	575-3	Air-cooled	600	3"	1/4"	45	34	48	598
ATRN 800	230-1	Air-cooled	800	3"	1/4"	50	40	58	790
ATRN 800	208/230-3	Air-cooled	800	3"	1/4"	50	40	58	790
ATRN 800	460-3	Air-cooled	800	3"	1/4"	50	40	58	790
ATRN 800	575-3	Air-cooled	800	3"	1/4"	50	40	58	790
ATRN 1000	230-1	Air-cooled	1000	3"	1/4"	50	40	58	800
ATRN 1000	208/230-3	Air-cooled	1000	3"	1/4"	50	40	58	800
ATRN 1000	460-3	Air-cooled	1000	3"	1/4"	50	40	58	800
ATRN 1000	575-3	Air-cooled	1000	3"	1/4"	50	40	58	800

CAPACITY CORRECTION FACTORS FOR DIFFERING AMBIENT AIR TEMPERATURES (C1)

Ambient Temperature (°F)	70	80	90	100	110	115	120
Correction Factor	1.10	1.07	1.05	1.00	0.94	0.85	0.65

CAPACITY CORRECTION FACTORS FOR DIFFERING INLET AIR TEMPERATURES (C2)

Inlet Temperature (°F)	80	90	100	110	120	140
Correction Factor	1.50	1.21	1.00	0.82	0.72	0.61

CAPACITY CORRECTION FACTORS FOR DIFFERING SYSTEM AIR PRESSURE (C3)

System Pressure (psig)	50	75	100	125	150	175	200	225	250
Correction Factor	0.85	0.95	1.00	1.07	1.13	1.18	1.20	1.22	1.24

CAPACITY CORRECTION FACTORS FOR DIFFERING PRESSURE DEW POINT REQUIREMENTS (C4)

Dew Point (°F)	38	41	45	50
Correction Factor	1.00	1.12	1.17	1.22

NOTES:

- For other conditions, consult your local Sullair representative
- For optional voltage consult factory
- Performance ratings based on standard conditions of 100°F inlet air temperature, 100°F ambient temperature, 100 psig inlet pressure
- Max inlet temperature: 140°F
- Max ambient temperature: 120°F
- Max pressure: 232 psig

TO SIZE THE DRYER CAPACITY FOR ACTUAL CONDITIONS

$$\text{Adjusted Capacity} = \text{scfm} \times C1 \times C2 \times C3 \times C4$$

To calculate the capacity of a given dryer based on non-standard operating conditions, multiply the standard capacity by the appropriate correction factor(s).

Dryer Model:	ATRN-100
Standard Capacity:	100 scfm
Actual Operating Conditions:	90°F ambient temperature (C1) = 1.05 100°F inlet temperature (C2) = 1.00 125 psig system pressure (C3) = 1.07 38°F required dew point (C4) = 1.00

$$\text{Adjusted Capacity} = 100 \text{ scfm} \times 1.05 \times 1.0 \times 1.07 \times 1.0 = 112.4 \text{ scfm}$$

TO SELECT THE DRYER MODEL FOR ACTUAL CONDITIONS

$$\text{Adjusted Capacity} = \text{scfm} / C1 / C2 / C3 / C4$$

To choose a dryer based on a given flow at non-standard operating conditions, divide the given flow by the appropriate correction factor(s).

Given Flow:	75 scfm
Actual Operating Conditions:	80°F ambient temperature (C1) = 1.07 90°F inlet temperature (C2) = 1.21 100 psig system pressure (C3) = 1.00 38°F required dew point (C4) = 1.00

$$\text{Adjusted Capacity} = 75 \text{ scfm} / 1.07 / 1.21 / 1.0 / 1.0 = 57.9 \text{ scfm}$$

Select Dryer Model: ATRN-60

ATRH SERIES

HIGH TEMPERATURE DRYERS



FREQUENCY: 60 Hz

MODEL #	VOLTAGE - PHASE	TYPE OF COOLING	scfm	INLET/OUTLET CONNECTION (NPT)	DRAIN OUTLET CONNECTION	HEIGHT (in)	WIDTH (in)	DEPTH (in)	WEIGHT (lbs)
ATRH 20	115-1	Air-cooled	20	1/2" FPT	1/4"	15	16	16	102
ATRH 35	115-1	Air-cooled	35	1/2" FPT	1/4"	15	18	18	125
ATRH 50	115-1	Air-cooled	50	3/4" FPT	1/4"	16	20	20	145
ATRH 75	208/230-3	Air-cooled	75	1" FPT	1/4"	36	28	30	225
ATRH 100	208/230-3	Air-cooled	100	1" FPT	1/4"	36	28	30	250
ATRH 125	208/230-3	Air-cooled	125	1" FPT	1/4"	36	28	30	250



CAPACITY CORRECTION FACTORS FOR DIFFERING AMBIENT AIR TEMPERATURES (C1)

Ambient Temperature (°F)	75	85	95	100	105	115	120
Correction Factor	1.10	1.07	1.03	1.00	0.96	0.82	0.55

CAPACITY CORRECTION FACTORS FOR DIFFERING INLET AIR TEMPERATURES (C2)

Inlet Temperature (°F)	90	100	150	180	200	205
Correction Factor	1.30	1.27	1.06	1.00	0.98	0.90

CAPACITY CORRECTION FACTORS FOR DIFFERING SYSTEM AIR PRESSURE (C3)

System Pressure (psig)	30	45	60	75	90	100	115	130	145	160	175	190	200
Correction Factor	0.30	0.50	0.70	0.75	0.80	0.83	0.86	0.90	0.93	0.96	1.00	1.10	1.12

CAPACITY CORRECTION FACTORS FOR DIFFERING PRESSURE DEW POINT REQUIREMENTS (C4)

Dew Point (°F)	38	41	45	50	55	60
Correction Factor	0.65	0.73	0.80	1.00	1.10	1.22

NOTES:

- For other conditions, consult your local Sullair representative
- For optional voltage consult factory
- Performance ratings based on standard conditions of 100°F inlet air temperature, 100°F ambient temperature, 100 psig inlet pressure
- Max inlet temperature: 205°F
- Max ambient temperature: 120°F
- Max pressure: 232 psig

TO SIZE THE DRYER CAPACITY FOR ACTUAL CONDITIONS

$$\text{Adjusted Capacity} = \text{scfm} \times C1 \times C2 \times C3 \times C4$$

To calculate the capacity of a given dryer based on non-standard operating conditions, multiply the standard capacity by the appropriate correction factor(s).

Dryer Model:	ATRH-100
Standard Capacity:	100 scfm
Actual Operating Conditions:	95°F ambient temperature (C1) = 1.03 150°F inlet temperature (C2) = 1.06 160 psig system pressure (C3) = 0.96 50°F required dew point (C4) = 1.00
Adjusted Capacity = 100 scfm x 1.03 x 1.06 x 0.96 x 1.0 = 104.8 scfm	

TO SELECT THE DRYER MODEL FOR ACTUAL CONDITIONS

$$\text{Adjusted Capacity} = \text{scfm}/C1/C2/C3/C4$$

To choose a dryer based on a given flow at non-standard operating conditions, divide the given flow by the appropriate correction factor(s).

Given Flow:	80 scfm
Actual Operating Conditions:	75°F ambient temperature (C1) = 1.10 150°F inlet temperature (C2) = 1.06 200 psig system pressure (C3) = 1.12 50°F required dew point (C4) = 1.00
Adjusted Capacity = 80 scfm/1.1/1.06/1.12/1.0 = 61.3 scfm	
Select Dryer Model: ATRH-75	

ATRD SERIES

ENERGY SAVING REFRIGERATED AIR DRYERS



FREQUENCY: 60 Hz

MODEL #	VOLTAGE - PHASE	TYPE OF COOLING	scfm	INLET/OUTLET CONNECTION (NPT)	DRAIN OUTLET CONNECTION	HEIGHT (in)	WIDTH (in)	DEPTH (in)	WEIGHT (lbs)
ATRD 200	230-1	Air-cooled	200	1-1/2"	1/4"	36	28	32	240
ATRD 250	230-1	Air-cooled	250	1-1/2"	1/4"	36	28	32	332
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ATRD 250	460-3	Air-cooled	250	1-1/2"	1/4"	36	28	32	332
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ATRD 800	230-1	Air-cooled	800	3"	1/4"	50	40	58	790
ATRD 800	208/230-3	Air-cooled	800	3"	1/4"	50	40	58	790
ATRD 800	460-3	Air-cooled	800	3"	1/4"	50	40	58	790
ATRD 800	575-3	Air-cooled	800	3"	1/4"	50	40	58	790
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ATRD 1000	208/230-3	Air-cooled	1000	3"	1/4"	50	40	58	800
ATRD 1000	460-3	Air-cooled	1000	3"	1/4"	50	40	58	800
ATRD 1000	575-3	Air-cooled	1000	3"	1/4"	50	40	58	800
ATRD 1250	208/230-3	Air-cooled	1250	3"	1/4"	50	40	58	852
ATRD 1250	460-3	Air-cooled	1250	3"	1/4"	50	40	58	852
ATRD 1250	575-3	Air-cooled	1250	3"	1/4"	50	40	58	852
ATRD 1500	208/230-3	Air-cooled	1500	4" FLG	1/4"	84	42	64	1625
ATRD 1500	460-3	Air-cooled	1500	4" FLG	1/4"	84	42	64	1625
ATRD 1500	575-3	Air-cooled	1500	4" FLG	1/4"	84	42	64	1625
ATRD 1750	208/230-3	Air-cooled	1750	4" FLG	1/4"	84	42	64	1800
ATRD 1750	460-3	Air-cooled	1750	4" FLG	1/4"	84	42	64	1800
ATRD 1750	575-3	Air-cooled	1750	4" FLG	1/4"	84	42	64	1800
ATRD 2000	208/230-3	Air-cooled	2000	4" FLG	1/4"	84	42	64	2250
ATRD 2000	460-3	Air-cooled	2000	4" FLG	1/4"	84	42	64	2250
ATRD 2000	575-3	Air-cooled	2000	4" FLG	1/4"	84	42	64	2250

CAPACITY CORRECTION FACTORS FOR DIFFERING AMBIENT AIR TEMPERATURES (C1)

Ambient Temperature (°F)	70	80	90	100	110	115	120
Correction Factor	1.10	1.07	1.05	1.00	0.94	0.85	0.65

CAPACITY CORRECTION FACTORS FOR DIFFERING INLET AIR TEMPERATURES (C2)

Inlet Temperature (°F)	80	90	100	110	120	140
Correction Factor	1.50	1.21	1.00	0.82	0.72	0.61

CAPACITY CORRECTION FACTORS FOR DIFFERING SYSTEM AIR PRESSURE (C3)

System Pressure (psig)	50	75	100	125	150	175	200	225	250
Correction Factor	0.85	0.95	1.00	1.07	1.13	1.18	1.20	1.22	1.24

CAPACITY CORRECTION FACTORS FOR DIFFERING PRESSURE DEW POINT REQUIREMENTS (C4)

Dew Point (°F)	38	41	45	50
Correction Factor	1.00	1.12	1.17	1.22

NOTES:

- For other conditions, consult your local Sullair representative
- For optional voltage consult factory
- Performance ratings based on standard conditions of 100°F inlet air temperature, 100°F ambient temperature, 100 psig inlet pressure
- Max inlet temperature: 140°F
- Max ambient temperature: 120°F
- Max pressure: 232 psig

TO SIZE THE DRYER CAPACITY FOR ACTUAL CONDITIONS

$$\text{Adjusted Capacity} = \text{scfm} \times C1 \times C2 \times C3 \times C4$$

To calculate the capacity of a given dryer based on non-standard operating conditions, multiply the standard capacity by the appropriate correction factor(s).

Dryer Model:	ATRD-1000
Standard Capacity:	1000 scfm
Actual Operating Conditions:	90°F ambient temperature (C1) = 1.05 100°F inlet temperature (C2) = 1.00 125 psig system pressure (C3) = 1.07 38°F required dew point (C4) = 1.00
Adjusted Capacity = 1000 scfm x 1.05 x 1.0 x 1.07 x 1.0 = 1123.5 scfm	

TO SELECT THE DRYER MODEL FOR ACTUAL CONDITIONS

$$\text{Adjusted Capacity} = \text{scfm}/C1/C2/C3/C4$$

To choose a dryer based on a given flow at non-standard operating conditions, divide the given flow by the appropriate correction factor(s).

Given Flow:	250 scfm
Actual Operating Conditions:	80°F ambient temperature (C1) = 1.07 90°F inlet temperature (C2) = 1.21 100 psig system pressure (C3) = 1.00 38°F required dew point (C4) = 1.00
Adjusted Capacity = 250 scfm/1.07/1.21/1.0/1.0 = 193.1 scfm	
Select Dryer Model: ATRD-200	

ATRS SERIES

DIGITAL CYCLING REFRIGERATED AIR DRYERS



SULLAIR®

FREQUENCY: 60 Hz

MODEL #	VOLTAGE - PHASE	REFRIGERANT COMPRESSOR TYPE	scfm	INLET/OUTLET CONNECTION (NPT)	DRAIN OUTLET CONNECTION	HEIGHT (in/mm)	WIDTH (in/mm)	DEPTH (in/mm)	WEIGHT (lbs/kg)
ATRS-1000	460-3	Digital Scroll	1000	3" NPT	1/4"	48/1220	38/966	54/1372	810/1786
ATRS-1250	460-3	Digital Scroll	1250	3" NPT	1/4"	48/1220	38/966	54/1372	860/1896
ATRS-1500	460-3	Digital Scroll	1500	4" FLG	1/4"	84/2134	58/1474	41/1042	1650/3638
ATRS-1750	460-3	Digital Scroll	1750	4" FLG	1/4"	84/2134	58/1474	41/1042	2250/4961
ATRS-2000	460-3	Digital Scroll	2000	4" FLG	1/4"	84/2134	58/1474	41/1042	2300/5071
ATRS-2500	460-3	Digital Scroll	2500	6" FLG	1/4"	52/1321	114/2896	65/1651	2370/1075
ATRS-3000	460-3	Digital Scroll	3000	8" FLG	1/4"	110/2794	124/3150	44/1118	3980/1806
ATRS-3500	460-3	Digital Scroll	3500	8" FLG	1/4"	110/2794	124/3150	44/1118	5180/2350
ATRS-4000	460-3	Digital Scroll	4000	8" FLG	1/4"	110/2794	124/3150	44/1118	4600/2087
ATRS-4500	460-3	Digital Scroll	4500	8" FLG	1/4"	102/2591	186/4725	44/1118	4950/2246
ATRS-5250	460-3	Digital Scroll	5250	8" FLG	1/4"	102/2591	186/4725	44/1118	6750/3062
ATRS-6000	460-3	Digital Scroll	6000	8" FLG	1/4"	102/2591	186/4725	44/1118	6900/3130
ATRS-7000	460-3	Digital Scroll	7000	10" FLG	1/4"	109/2769	247/6274	44/1118	11,623/5273
ATRS-8000	460-3	Digital Scroll	8000	10" FLG	1/4"	109/2769	247/6274	44/1118	11,823/5363
ATRS-8750	460-3	Digital Scroll	8750	12" FLG	1/4"	111/2820	308/7824	47/1194	15,528/7044
ATRS-10,000	460-3	Digital Scroll	10,000	12" FLG	1/4"	111/2820	308/7824	47/1194	15,777/7157

CAPACITY CORRECTION FACTORS FOR DIFFERING AMBIENT AIR TEMPERATURES (C1)

Ambient Temperature (°F)	70	80	90	100	110	115	120
Correction Factor	1.10	1.07	1.05	1.00	0.94	0.85	0.65

CAPACITY CORRECTION FACTORS FOR DIFFERING INLET AIR TEMPERATURES (C2)

Inlet Temperature (°F)	80	90	100	110	120	140
Correction Factor	1.50	1.21	1.00	0.82	0.72	0.61

CAPACITY CORRECTION FACTORS FOR DIFFERING SYSTEM AIR PRESSURE (C3)

System Pressure (psig)	50	75	100	125	150	175	200	225	250
Correction Factor	0.85	0.95	1.00	1.07	1.13	1.18	1.20	1.22	1.24

CAPACITY CORRECTION FACTORS FOR DIFFERING PRESSURE DEW POINT REQUIREMENTS (C4)

Dew Point (°F)	38	41	45	50
Correction Factor	1.00	1.12	1.17	1.22

NOTES:

- For other conditions, consult your local Sullair representative
- For optional voltage consult factory
- Performance ratings based on standard conditions of 100°F inlet air temperature, 100°F ambient temperature, 100 psig inlet pressure
- Max inlet temperature: 140°F
- Max ambient temperature: 120°F
- Max pressure: 232 psig

TO SIZE THE DRYER CAPACITY FOR ACTUAL CONDITIONS

$$\text{Adjusted Capacity} = \text{scfm} \times C1 \times C2 \times C3 \times C4$$

To calculate the capacity of a given dryer based on non-standard operating conditions, multiply the standard capacity by the appropriate correction factor(s).

Dryer Model:	ATRS-1000
Standard Capacity:	1000 scfm
Actual Operating Conditions:	90°F ambient temperature (C1) = 1.05 100°F inlet temperature (C2) = 1.00 125 psig system pressure (C3) = 1.07 38°F required dew point (C4) = 1.00
Adjusted Capacity = 1000 scfm x 1.05 x 1.0 x 1.07 x 1.0 = 1123.5 scfm	

TO SELECT THE DRYER MODEL FOR ACTUAL CONDITIONS

$$\text{Adjusted Capacity} = \text{scfm}/C1/C2/C3/C4$$

To choose a dryer based on a given flow at non-standard operating conditions, divide the given flow by the appropriate correction factor(s).

Given Flow:	1275 scfm
Actual Operating Conditions:	80°F ambient temperature (C1) = 1.07 90°F inlet temperature (C2) = 1.21 100 psig system pressure (C3) = 1.00 38°F required dew point (C4) = 1.00
Adjusted Capacity = 1275 scfm/1.07/1.21/1.0/1.0= 984.8 scfm	
Select Dryer Model: ATRS-1000	