SULLAIR
AIR TREATMENT

Desiccant Dryers

SULLAIR®

Always air. Always there.®

SULLAIR

AN INDUSTRY LEADER

LEADERSHIP

Since 1965, Sullair has been recognized worldwide as an innovator and leader in rotary screw compression and vacuum technology. Sullair designs and manufactures its own rotors and air end assemblies. The award-winning rotary screw design sets the industry standard and delivers the quality and reliability you expect from a leader.

TECHNOLOGY

Using the most modern technologies, equipment and advanced manufacturing techniques, Sullair designs, manufactures, assembles, and tests the most innovative compressed air and vacuum products in the industry. Sullair products are known around the world for their universally applicable design, outstanding craftsmanship and superior quality.

COMMITMENT TO INNOVATION

Underlying Sullair leadership is a dedication to excellence and a commitment to innovation. We are constantly exploring new ideas and seeking new ways to meet the industry's need for increasingly energy efficient compressed air and vacuum solutions.

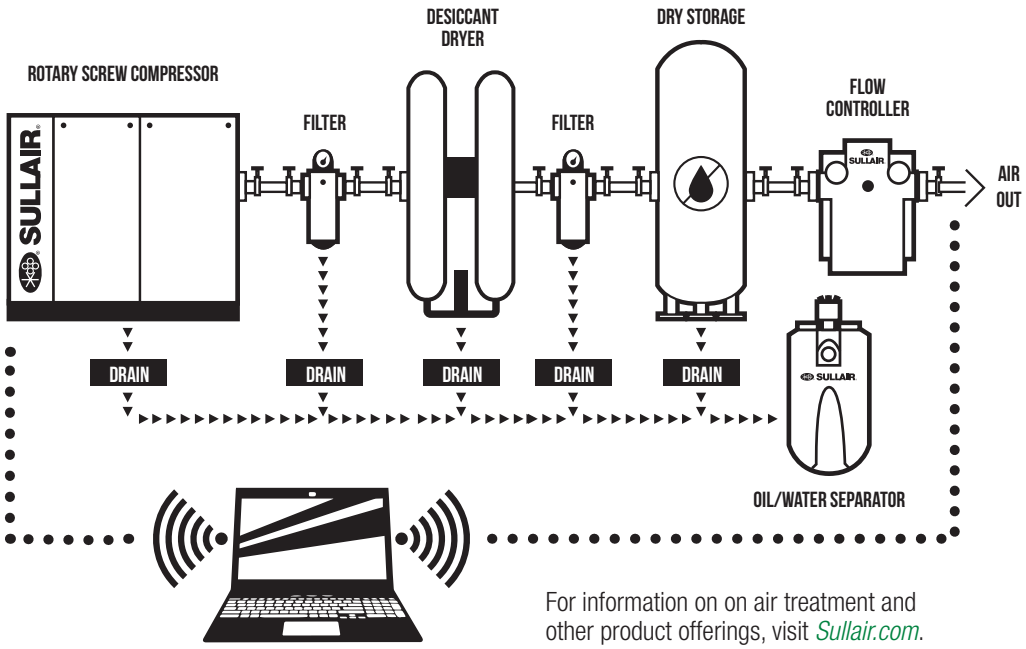
THE IMPORTANCE OF CLEAN, DRY COMPRESSED AIR

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.

- Moisture in compressed air remains in a vapor state through the compression cycle, so it is not a problem until it leaves the compressor.
- At 75°F (24°C) 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 (2°C) at 100 psig, the water vapor condenses into 46 gallons of liquid.

Desiccant dryers adsorb moisture from the compressed air as the air passes through the desiccant.



For information on on air treatment and other product offerings, visit *Sullair.com*.

DESICCANT REGENERATIVE DRYERS

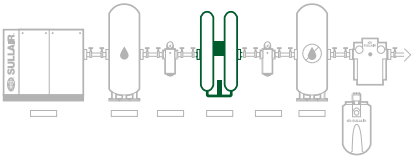
SULLAIR DESICCANT DRYERS ARE AVAILABLE IN THE FOLLOWING CONFIGURATIONS:

- **DMD — Desiccant Modular Dryer** — 3 to 240 scfm
- **DHL — Desiccant Heatless Dryer** — 80 to 5000 scfm
- **DEX — Desiccant Externally Heated Dryer** — 200 to 3500 scfm
- **DBP — Desiccant Blower Purge Dryer** — 500 to 10,000 scfm

Desiccant Dryer Features

The Sullair desiccant regenerative dryer family is ideal for outdoor compressed air piping and operations that require an extremely low dew point to -40°F (-4°F or -100°F optional). By combining the proven benefits of desiccant drying with the most advanced designs, Sullair offers a reliable system to clean and dry compressed air for the most critical applications.

Max Inlet Temperature: 150°F (66°C)
Max Inlet Pressure: 230 psig
Max Ambient Temperature: 120°F (50°C)



SULLAIR
DESICCANT REGENERATIVE DRYERS

DESICCANT MODULAR DRYER (DMD)

STANDARD FEATURES

- Completely automatic
- Compact design
- -40°F pressure dew point
- Adjustable wall mounted
- Quick and easy connection
- Long-lasting high-quality components

OPTIONS

- Pre- and after-filter (shipped loose)
- Mounted filters with three valve bypass
- Visual Moisture Indicator
- Energy efficient Demand Cycle Control with dew point monitor
- Dew point monitor
- -4°F (-20°C) or -100°F (-73°C) pressure dew point

DHL SERIES

80 – 5000 SCFM

STANDARD FEATURES

- PLC controls with text display
- Pre- and after-filter pre-piped and mounted
- Field adjustable drying cycle time (10 –15 min.)
- Pilot air filter
- Easy front access control panel
- -40°F pressure dew point
- Fully automatic self contained dryer
- Adjustable purge valves
- High quality valves
- Purge flow indicator
- ASME/CRN code welded pressure vessels
- UL/CUL electrical certified
- Separate drain and fill port
- Robust steel frame with floor stand
- Separate safety pressure relief valve for each tank
- Stainless steel inlet/outlet diffusers

OPTIONS

- Demand Cycle Controller
- NEMA 4, 4x enclosure
- High pressure up to 500 psig
- Failure to shift alarm
- Pneumatic control timer
- Optional voltage
- High dew point alarm
- Dew point monitoring system
- -4°F (-20°C) and -100°F (-73°C) pressure dew point
- 3 valve and 9 valve bypass options
- Visual moisture indicator
- Low ambient package
- Sub zero ambient package

SULLAIR
DESICCANT REGENERATIVE DRYERS

DEX AND DBP SERIES

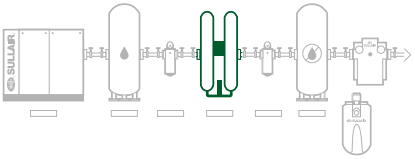
200 – 10,000 SCFM

STANDARD FEATURES

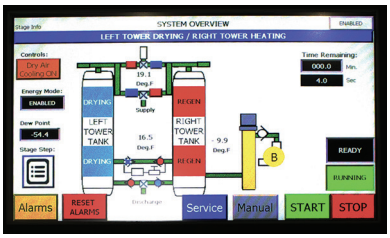
- Same high quality standard features as DHL
- Insulated heater housing and piping
- High outlet temperature shut off and alarm
- User-friendly diagnostic control display
- Safety back-up contactors
- PLC control and display (Siemens)
- Thermostatically controlled heating
- Safety heater thermostat
- Low-watt density heater
- Tower pressure gauges
- Fail safe design in case of power failure
- Color touch screen monitor
- PLC ethernet communication port

OPTIONS

- Demand Cycle Control
- Pre-piped filter and bypass packages
- Low bed temperature shut off with light and contact
- High heater remote temperature alarm
- NEMA 4, 4x enclosures
- Visual moisture indicator
- 3 valve and 9 valve bypass options
- Optional voltage
- Failure to shift alarm
- -4°F (-20°C) pressure dew point
- Purge flow meter
- Dew point monitoring system
- Low ambient package
- Microprocessor based controls/Modbus
- Sub zero ambient package
- Allen-Bradley PLC with color touch screen monitor



ADVANTAGES OF SULLAIR
HEATED DESICCANT DRYERS



Advanced PLC Controller

A programmable PLC controller with back lit display is standard on all DHL series dryers. The controller is simple to use and comes standard with these great features:

- PLC read out
- Adjustable cycle time
- Filter change alarm
- Failure to switch contact
- Dew point monitoring contacts
- Red light alarm indicator

Optional Demand Cycle Controller — Dew Point Meter

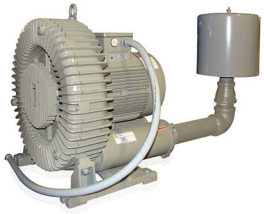
The dew point transmitters are reliable, compact and provide continuous monitoring of the dryer performance. With available options, the monitors can be used as indicators, alarm units or controllers. Its simple but powerful interface permits the user to choose between multiple units, output data to a PC using the serial interface, set alarm levels and do field calibration of the sensor.

Desiccant Adsorption

Sullair uses a high quality activated alumina desiccant for all our desiccant dryers. The desiccant has high crush strength media with a very high surface/volume ratio. To achieve alternative dew points, the Sullair dryer uses a mixture of adsorption media.

Butterfly Valve

These versatile valves provide precision control and bubble tight shut off. The digitally controlled actuators have easy PLC interface and feature fast response times. The butterfly valve is carbon steel with stainless steel disc and staff (800 scfm and above).The tongue-and-groove seat design ensures complete isolation of the flowing media from the body and stem. Rugged and reliable, these valves are designed to provide years of trouble free service.

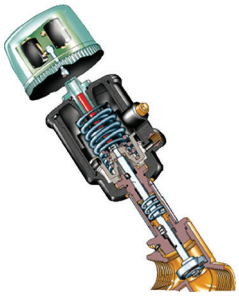


High Efficiency Blower

The centrifugal blower is sized optimally to provide continuous air stream to the heater for regeneration.

The blower is equipped with:

- Intake filter
- Muffler for quieter operation
- Safety belt guard and check
- Relief valves for high-pressure safety



Angle Body Piston Valve

The high performance two-way direct acting valves are designed for reliability and durability. The valve uses a profiled disc in conjunction with a high-resolution compact positioned and linear feedback potentiometer to provide precise proportional flow. The stainless steel internals and a tough fiber composite actuator body, along with the use of oversized bearing and Viton seals makes it possible to consistently provide smooth piston movement for an extended time period.

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 assure the highest quality standards in manufacturing.

We have centered our operations around three key pillars: innovation, durability and people.

INNOVATION

Sullair has a long history of breakthrough solutions, from cutting-edge rotary screw technology in our air compressors to premium lubricants including the 10,000-hour Sullube®. We continuously explore new ideas and technologies to find better, more energy efficient compressed air solutions. Our customers recognize this innovative history and look for more to come.

DURABILITY

Our customers describe Sullair air compressors as bulletproof — and the proof can be viewed on roadsides. Do you ever see well-used Sullair compressors on construction sites? That's because they are still running! We have profiled a number of our customers including a factory owner in Rockford, Illinois, who has used the same Sullair compressor since 1979, and we know there are others out there operating even older units.

PEOPLE

At the end of the day, the people are what tie all of this together. We are proud to say that Sullair employees, our experienced distributors and our loyal customers are Always There.

DESICCANT REGENERATIVE
DRYERS

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SULLAIR HEATLESS DESICCANT MODULAR DRYERS (DMD)

Standard Features

- Completely automatic
- Compact design
- -40°F pressure dew point
- Adjustable wall mounted
- Quick and easy connection
- Long lasting high quality components

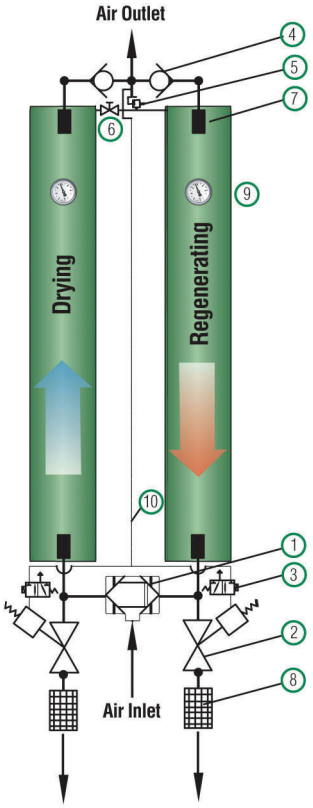
Options

- Pre- and after-filter (shipped loose)
- Mounted filters with three valve bypass
- Visual Moisture Indicator
- Energy efficient Demand Cycle Control with dew point monior
- Dew point monitor
- -4°F or -100°F pressure dew point

Desiccant Modular Dryer

DMD drawing description:

1 Inlet valve
2 Purge exhaust valve
3 Pilot valve
4 Outlet check valve
5 Pressure relief valve
6 Purge adjustment valve
7 Stainless steel inlet defuser
8 Purge exhaust muffler
9 Pressure gauge
10 Control air line



DESICCANT MODULAR DRYER

MODEL	SCFM	INLET – OUTLET CONNECTION	WIDTH IN	DEPTH IN	HEIGHT IN	WEIGHT LBS	ELECTRICAL	PRE-FILTER	AFTER-FILTER
DMD-3	3	1/2" NPT	13	10	22	32	115 - 230 / 1 / 50 & 60 Hz	FXH-25	FXFR-25
DMD-5	5	1/2" NPT	13	10	25	36	115 - 230 / 1 / 50 & 60 Hz	FXH-25	FXFR-25
DMD-10	10	1/2" NPT	13	10	36	52	115 - 230 / 1 / 50 & 60 Hz	FXH-25	FXFR-25
DMD-15	15	1/2" NPT	15	10	32	57	115 - 230 / 1 / 50 & 60 Hz	FXH-25	FXFR-25
DMD-20	20	1/2" NPT	15	10	44	79	115 - 230 / 1 / 50 & 60 Hz	FXH-25	FXFR-25
DMD-25	25	1/2" NPT	15	10	50	90	115 - 230 / 1 / 50 & 60 Hz	FXH-25	FXFR-25
DMD-30	30	1/2" NPT	15	10	59	107	115 - 230 / 1 / 50 & 60 Hz	FXH-45	FXFR-45
DMD-40	40	1-1/2" NPT	16	17	49	156	115 - 230 / 1 / 50 & 60 Hz	FXH-45	FXFR-45
DMD-50	50	1-1/2" NPT	16	17	55	172	115 - 230 / 1 / 50 & 60 Hz	FXH-65	FXFR-65
DMD-60	60	1-1/2" NPT	16	17	69	202	115 - 230 / 1 / 50 & 60 Hz	FXH-65	FXFR-65
DMD-75	75	1-1/2" NPT	16	23	51	257	115 - 230 / 1 / 50 & 60 Hz	FXH-130	FXFR-130
DMD-100	100	1-1/2" NPT	16	23	57	286	115 - 230 / 1 / 50 & 60 Hz	FXH-130	FXFR-130
DMD-120	120	1-1/2" NPT	16	23	69	334	115 - 230 / 1 / 50 & 60 Hz	FXH-130	FXFR-130
DMD-180	180	1-1/2" NPT	16	28	59	407	115 - 230 / 1 / 50 & 60 Hz	FXH-240	FXFR-240
DMD-240	240	1-1/2" NPT	16	33	59	519	115 - 230 / 1 / 50 & 60 Hz	FXH-240	FXFR-240

DESICCANT REGENERATIVE
DRYERS

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DESICCANT HEATLESS DRYER

MODEL	SCFM	INLET – OUTLET CONNECTION	WIDTH IN	DEPTH IN	HEIGHT IN	WEIGHT LBS	ELECTRICAL	PRE-FILTER	AFTER-FILTER
DHL-80	80	3/4" NPT	24	31	84	450	115-1-60	FXH-130	FXFR-130
DHL-100	100	1" NPT	24	31	84	550	115-1-60	FXH-130	FXFR-130
DHL-125	125	1" NPT	24	31	84	600	115-1-60	FXH-130	FXFR-130
DHL-150	150	1" NPT	24	33	84	650	115-1-60	FXH-240	FXFR-240
DHL-200	200	1" NPT	24	33	84	880	115-1-60	FXH-240	FXFR-240
DHL-250	250	1-1/2" NPT	24	39	87	1250	115-1-60	FXH-350	FXFR-350
DHL-300	300	1-1/2" NPT	24	39	87	1350	115-1-60	FXH-350	FXFR-350
DHL-400	400	2" NPT	26	45	89	1900	115-1-60	FXH-475	FXFR-475
DHL-500	500	2" NPT	26	45	89	2200	115-1-60	FXH-700	FXFR-700
DHL-600	600	2" NPT	26	45	89	2500	115-1-60	FXH-700	FXFR-700
DHL-800	800	3" FLG	40	66	93	2800	115-1-60	FXH-1350	FXFR-1350
DHL-1000	1000	3" FLG	40	66	93	4150	115-1-60	FXH-1350	FXFR-1350
DHL-1250	1250	3" FLG	40	70	93	4400	115-1-60	FXH-1350	FXFR-1350
DHL-1500	1500	3" FLG	40	70	93	4700	115-1-60	FXH-1600	FXFR-1600
DHL-2000	2000	3" FLG	40	76	97	4900	115-1-60	FWH-2500	FXFR-2500
DHL-2500	2500	4" FLG	50	93	109	5600	115-1-60	FWH-2500	FXFR-2500
DHL-3000	3000	6" FLG	50	93	109	8100	115-1-60	FWH-3800	FXFR-3800
DHL-3500	3500	6" FLG	64	118	117	8300	115-1-60	FWH-3800	FXFR-3800
DHL-4000	4000	6" FLG	64	118	117	10500	115-1-60	FWH-5000	FXFR-5000
DHL-4500	4500	6" FLG	64	120	122	11800	115-1-60	FWH-5000	FXFR-5000
DHL-5000	5000	6" FLG	64	120	122	14500	115-1-60	FWH-5000	FXFR-5000

CAPACITY CORRECTION FACTORS (FOR ALL SULLAIR DESICCANT DRYERS)

CORRECTION FACTOR FOR INLET AIR PRESSURE (F1)

INLET PRESSURE	psig	50	60	70	80	90	100	110	120	130	140	150	175	200	225	250
	bar	3.5	4.1	4.8	5.5	6.2	6.9	7.6	8.3	9	9.7	10.3	12.1	13.8	15.5	17.3
FACTOR PRESSURE: F1		0.56	0.65	0.74	0.83	0.91	1	1.04	1.08	1.12	1.16	1.2	1.29	1.37	1.45	1.52

CORRECTION FACTOR TEMPERATURE (F2)

°F	70	80	90	100	105	110	115	120
°C	21	27	32	38	40	43	46	49
FACTOR: F2	1.12	1.1	1.06	1	0.93	0.86	0.8	0.75

Air flow capacity = Nominal capacity of the dryer x Factor F1 x Factor F2

DESICCANT REGENERATIVE
DRYERS

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DESICCANT EXTERNALLY HEATED DRYER

MODEL	SCFM	INLET – OUTLET CONNECTION	WIDTH IN	DEPTH IN	HEIGHT IN	WEIGHT LBS	ELECTRICAL	KW	PRE-FILTER	AFTER-FILTER
DEX-200	200	1" NPT	34	35	92	950	460-3-60	3	FXH-240	FXRHT-240
DEX-250	250	1-1/2" NPT	34	36	92	1100	460-3-60	3	FXH-350	FXRHT-350
DEX-300	300	1-1/2" NPT	34	36	92	1250	460-3-60	5	FXH-350	FXRHT-350
DEX-400	400	2" NPT	45	47	92	1500	460-3-60	6	FXH-475	FXRHT-475
DEX-500	500	2" NPT	45	47	92	1600	460-3-60	7	FXH-700	FXRHT-700
DEX-600	600	2" NPT	45	47	92	2100	460-3-60	9	FXH-700	FXRHT-700
DEX-800	800	3" FLG	60	80	95	2500	460-3-60	11	FXH-925	FXRHT-925
DEX-900	900	3" FLG	60	80	95	2800	460-3-60	13	FXH-925	FXRHT-925
DEX-1000	1000	3" FLG	60	80	95	4100	460-3-60	15	FXH-1350	FXRHT-1350
DEX-1250	1250	3" FLG	60	80	110	4700	460-3-60	18	FXH-1350	FWRHT-1350
DEX-1500	1500	3" FLG	60	80	110	4900	460-3-60	20	FXH-1600	FWRHT-1600
DEX-2000	2000	3" FLG	62	80	110	5300	460-3-60	25	FWH-2500	FWRHT-2500
DEX-2500	2500	4" FLG	65	82	110	6200	460-3-60	25	FWH-2500	FWRHT-2500
DEX-3000	3000	6" FLG	65	82	110	7600	460-3-60	30	FWH-3800	FWRHT-3800
DEX-3500	3500	6" FLG	70	85	120	8300	460-3-60	38	FWH-3800	FWRHT-3800

DESICCANT BLOWER PURGE DRYER

MODEL	SCFM	INLET – OUTLET CONNECTION	WIDTH IN	DEPTH IN	HEIGHT IN	WEIGHT LBS	ELECTRICAL	KW	PRE-FILTER	AFTER-FILTER
DBP-500	500	2" NPT	45	71	92	2500	460-3-60	10	FXH-700	FXRHT-700
DBP-650	650	2" NPT	45	71	92	2750	460-3-60	12	FXH-700	FXRHT-700
DBP-800	800	3" FLG	60	93	95	4100	460-3-60	18	FXH-925	FXRHT-925
DBP-1000	1000	3" FLG	60	93	95	4500	460-3-60	24	FXH-1350	FXRHT-1350
DBP-1250	1250	3" FLG	60	93	95	8200	460-3-60	30	FXH-1350	FXRHT-1350
DBP-1500	1500	3" FLG	60	93	95	8200	460-3-60	36	FXH-1600	FXRHT-1600
DBP-2000	2000	4" FLG	65	106	109	9800	460-3-60	45	FWH-2500	FWFHT-2500
DBP-2500	2500	4" FLG	75	106	120	15000	460-3-60	50	FWH-2500	FWFHT-2500
DBP-3000	3000	6" FLG	75	106	120	15000	460-3-60	55	FWH-3800	FWFHT-3800
DBP-3500	3500	6" FLG	82	150	132	19000	460-3-60	60	FWH-3800	FWFHT-3800
DBP-4000	4000	6" FLG	94	160	132	19000	460-3-60	70	FWH-5000	FWFHT-5000
DBP-5000	5000	6" FLG	94	180	140	28000	460-3-60	80	FWH-5000	FWFHT-5000
DBP-6000	6000	6" FLG	CF	CF	CF	CF	460-3-60	90	FWH-6500	FWFHT-6500
DBP-7000	7000	8" FLG	CF	CF	CF	CF	460-3-60	105	FWH-8300	FWFHT-8300
DBP-7500	7500	8" FLG	CF	CF	CF	CF	460-3-60	125	FWH-8300	FWFHT-8300
DBP-9000	9000	10" FLG	CF	CF	CF	CF	460-3-60	135	FWH-10000	FWFHT-10000
DBP-10000	10000	10" FLG	CF	CF	CF	CF	460-3-60	140	FWH-10000	FXFHT-10000

CORRECTION FACTOR FOR INLET AIR PRESSURE (F1)

INLET PRESSURE	psig	50	60	70	80	90	100	110	120	130	140	150	175	200	225	250
	bar	3.5	4.1	4.8	5.5	6.2	6.9	7.6	8.3	9	9.7	10.3	12.1	13.8	15.5	17.3
FACTOR PRESSURE: F1		0.56	0.65	0.74	0.83	0.91	1	1.04	1.08	1.12	1.16	1.2	1.29	1.37	1.45	1.52

CORRECTION FACTOR FOR TEMPERATURE (F2)

°F	70	80	90	100	105	110	115	120
°C	21	27	32	38	40	43	46	49
FACTOR: F2	1.12	1.1	1.06	1	0.93	0.86	0.8	0.75

Air flow capacity = Nominal capacity of the dryer x Factor F1 x Factor F2

FOR MORE INFORMATION, CONTACT YOUR LOCAL AUTHORIZED SULLAIR DISTRIBUTOR.

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