



# DESICCANT COMPRESSED AIR DRYERS

Externally Heated; Heated Blower Purge; Heatless; Modular

*3 – 7500 cfm*



# CLEAN, DRY COMPRESSED AIR IS ESSENTIAL

Sullair Desiccant Compressed Air Dryers are engineered for the most critical applications — providing dry compressed air where you need it most.

Compressed air contamination such as water, dust, bacteria, microorganisms and industrial acids can ruin product and foul processes. Removing these contaminants is essential to help protect your downstream equipment and reduce maintenance cost and downtime.

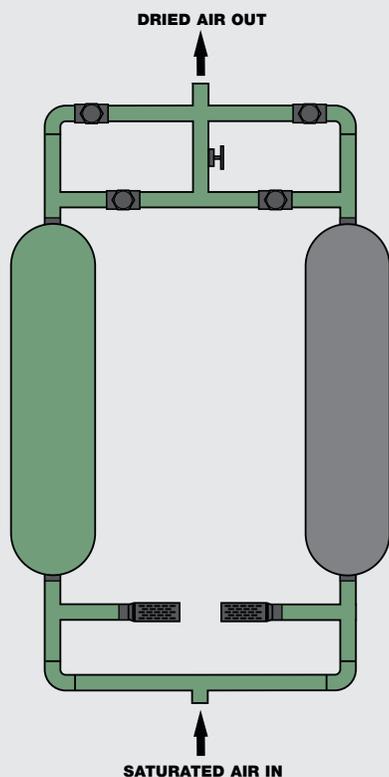
- Ideal for applications requiring extremely low dewpoint  
-40°F/-40°C

## REGENERATION METHODS

### Heatless

*Uses an average of 15% of process air during the regeneration process*

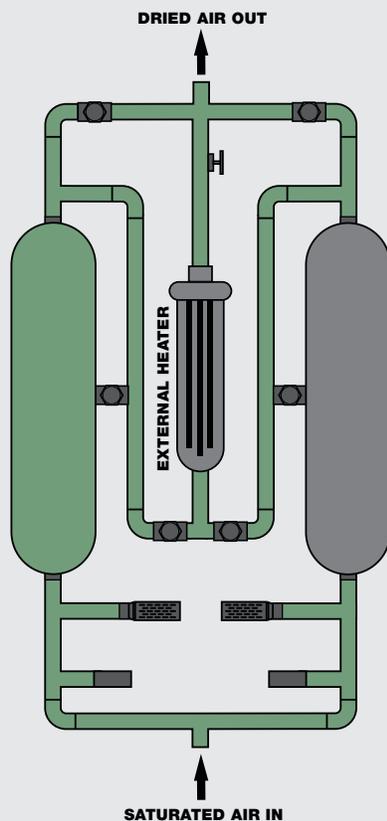
Heatless dryers divert a small amount of dried process air from the drying vessel to regenerate the opposite vessel.



### Externally Heated

*Uses an average of 8% of process air during the regeneration process*

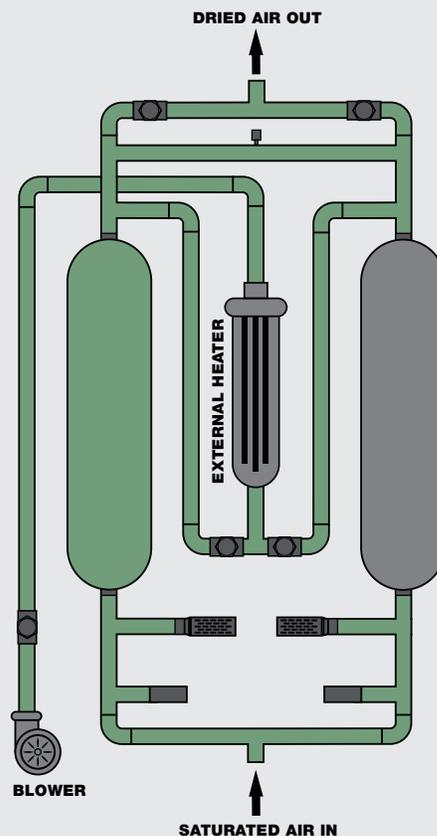
Heated dryers use an additional heat source—reducing process air loss during the regeneration process. The additional heat source helps enhance the drying and regeneration process while saving energy.



### Heated Blower Purge

*Uses an average of 2% of process air during the regeneration process*

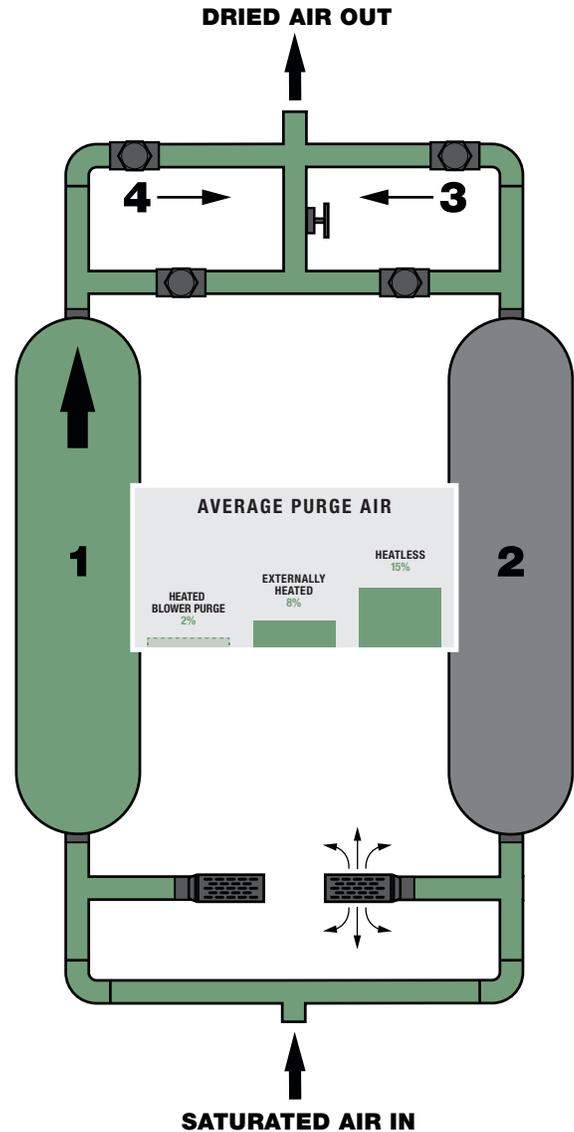
Heated Blower Purge dryers use a combination of an additional heat source, air from a blower and little to no process air. The three-tiered method helps optimize drying and regeneration processes while reducing energy consumption — maximizing energy cost savings over the lifecycle.



## HOW DESICCANT DRYING WORKS

Sullair Desiccant Dryers have a dual tower design in which both vessels are filled with desiccant material. Moisture migrates to the driest material available. Desiccant material adsorbs moisture—separating it from saturated compressed air. (As long as the desiccant material is drier than the air entering the dryer.)

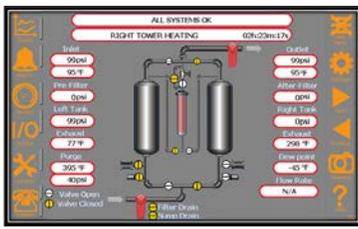
1. Saturated, compressed air passes through vessel one where the desiccant adsorbs moisture. This helps lower the dewpoint to expel dry compressed air
2. Once vessel one reaches a set level of saturation, the air switches to pass through vessel two
3. While the air is passing through vessel two, vessel one dries and regenerates the desiccant material
4. When vessel two reaches a set level of saturation, the air switches to pass through vessel one



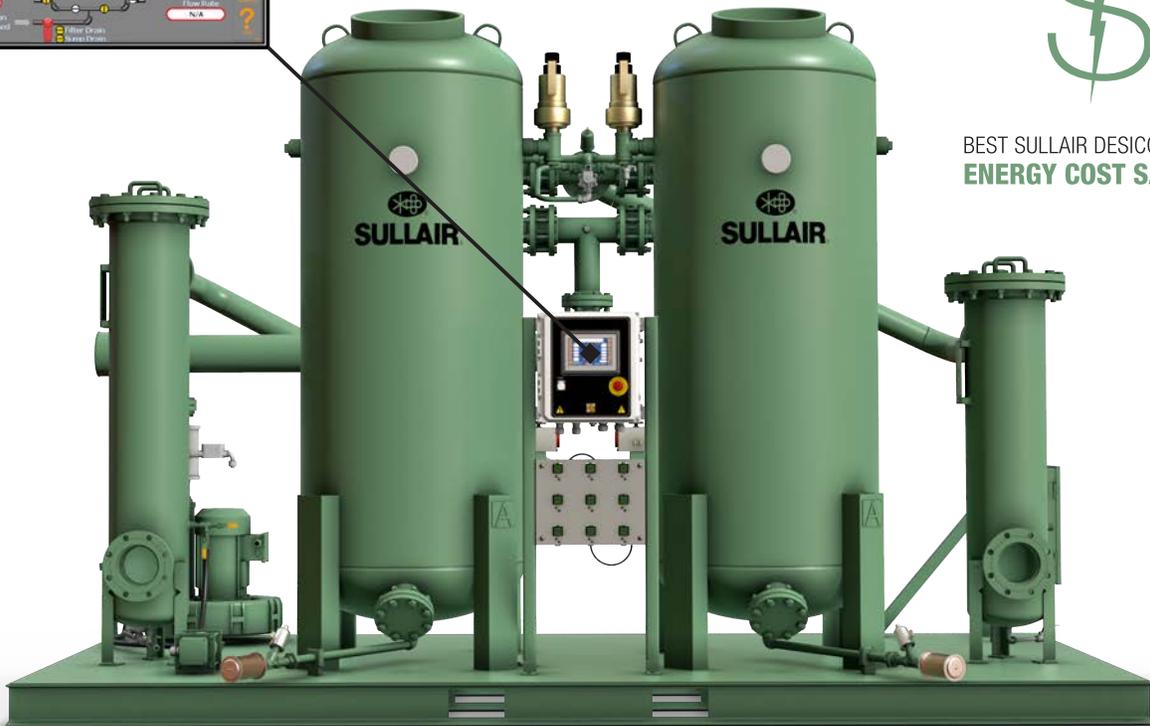
## SULLAIR DESICCANT DRYERS

- SAV Series — Heated Blower Purge — 500 to 7500 cfm
- SAH Series — Externally Heated — 500 to 3000 cfm
- SA Series — Heatless — 55 to 3000 cfm
- DMD Series — Modular — 3 to 240 cfm





BEST SULLAIR DESICCANT FOR  
ENERGY COST SAVINGS



## SAV SERIES

### DESICCANT HEATED BLOWER PURGE COMPRESSED AIR DRYER 500 – 7500 cfm

- Blower regeneration technology with heat source helps save energy and optimize drying and regeneration processes
- Allen-Bradley® PLC Color Touch Screen Controller
  - Sullair Desiccant Dryer (SDD) Energy Management System matches supply to demand—Up to 80% in energy savings
  - Heatless backup for more uptime
  - Dewpoint control
  - Supplemental cooldown
  - Alarm systems designed to help reduce downtime with easy detection and diagnostics
  - Remote monitoring of operation status, data trends and alarms via email or text alerts
- -40°F/-40°C dewpoint performance
- Desiccant designed for higher packing density increases efficiency and reliable operation
- High-Performance switching valves help provide worry-free performance tailored to your application
- Engineered to stand up to harsh environments
  - Rugged frame with forklift pockets for easy transit and installation
- NEMA 12
- Single pre-filter and after-filter mounted
- ASME/CRN\* vessels
- ETL listed (UL/CSA standards)

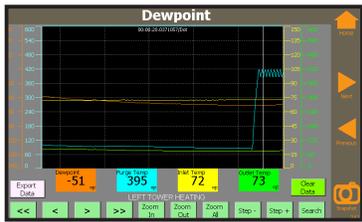
#### Standard Options

- 3-valve bypass
- 575V/3Ph/60Hz power
- NEMA 4
- Stainless steel control line tubing
- Tank insulation
- Outdoor low ambient kit
- Timer drain on pre-filter

#### Additional Options Available on Request

- Customized filtration
- Instrumentation
- ASME B31.3 piping
- Pneumatic controls
- High pressure - 200 psi & 250 psi

\*CRN vessels not available for SAV7500 models



BRIDGE BETWEEN  
ECONOMICAL



ENERGY  
SAVINGS

## SAH SERIES

### DESICCANT EXTERNALLY HEATED COMPRESSED AIR DRYER 500 – 3000 cfm

- External heat source helps save energy
- Allen-Bradley® PLC Color Touch Screen Controller
  - Sullair Desiccant Dryer (SDD) Energy Management System matches supply to demand—Up to 80% in energy savings
  - Heatless backup for more uptime
  - Dewpoint control
  - Alarm systems designed to help reduce downtime with easy detection and diagnostics
  - Remote monitoring of operation status, data trends and alarms via email or text alerts
- -40°F/-40°C dewpoint performance
- Desiccant designed for higher packing density increases efficiency and reliable operation
- High-Performance switching valves help provide worry-free performance tailored to your application
- Engineered to stand up to harsh environments
  - Rugged frame with forklift pockets for easy transit and installation
- NEMA 12
- Single pre-filter and after-filter mounted
- ASME/CRN vessels
- ETL listed (UL/CSA standards)

#### Standard Options

- 3-valve bypass
- 575V/3Ph/60Hz power
- NEMA 4
- Stainless steel control line tubing
- Tank insulation
- Outdoor low ambient kit
- Timer drain on pre-filter

#### Additional Options Available on Request

- Customized filtration
- Instrumentation
- ASME B31.3 piping
- Pneumatic controls
- High pressure - 200 psi & 250 psi

DEWPOINT: -45°F			✂
EXTENDED DRYING LEFT: 10:37:26			
INLET: 80°F	100psi	P-FILTER	🔔
OUTLET:	100psi	0 psid	
L-TOWER	R-TOWER	A-FILTER	⚙
100 psi	100 psi	0 psid	

Advanced Heatless Touch  
Screen Controller



## SA SERIES

### DESICCANT HEATLESS COMPRESSED AIR DRYER 55 – 3000 cfm

- Allen-Bradley® PLC Basic Controller
  - Selectable cycle setting
  - Manual stepping
- -40°F/-40°C dewpoint performance
- Desiccant designed for higher packing density increases efficiency and reliable operation
- High-Performance switching valves help provide worry-free performance tailored to your application
- Engineered to stand up to harsh environments
- NEMA 12
- Single pre-filter and after-filter mounted
- ASME/CRN vessels
- ETL listed (UL/CSA standards)

#### Standard Options

- Enhanced controller options
  - Plus
    - Sullair Desiccant Dryer (SDD) Energy Management System matches supply to demand—Up to 80% in energy savings
    - Select alarms
  - Heatless Advanced includes Plus features and:
    - Touch Screen
    - Additional alarms
    - Remote monitoring of operation status, data trends and alarms via email or text alerts
- 3-valve bypass
- NEMA 4X stainless steel
- Stainless steel control line tubing
- Outdoor low-ambient kit
- Timer drain on pre-filter
- High Pressure 200 psi

#### Additional Options Available on Request

- Customized filtration
- NEMA 7
- Additional instrumentation
- ASME B31.3 Piping
- Pneumatic controls
- High Pressure 250 psi

# ALLEN-BRADLEY® PLC COLOR TOUCH SCREEN CONTROLLER

AVAILABLE FOR SAV, SAH AND SA MODELS

Controller Features	SA Series Basic	SA Series Plus	SA Series Advanced	SAH Series Advanced	SAV Series Advanced
Allen-Bradley PLC	X	X	X	X	X
Compressor demand via external dry contact	X	X	X		
SSD Energy Management System		X	X	X	X
Dewpoint Control		X	X	X	X
Inlet pressure and temperature sensors			X	X	X
MODBUS/TCP communications via standard ethernet port			X	X	X
SD card slot for accessing historical data and alarm information			X	X	X
Selectable cycle settings	X	X	X		
Full color graphics touch panel control for user interface			X	X	X
Heatless Backup Operation				X	X
Manual Stepping	X	X	X	X	X
Supplemental Cooldown					X
Dry contact for common alarm		X	X	X	X
Flashes green when in energy savings mode			X	X	X
Flashes red when an alarm is present			X	X	X
Optional 4-20 mA output for remotely monitoring dewpoint			X	X	X

## SULLAIR DESICCANT DRYER (SDD) ENERGY MANAGEMENT SYSTEM

HELPS SAVE ENERGY BY MATCHING OUTPUT TO DEMAND—MEANING YOU ONLY DRY THE AIR YOU NEED.

Alarm Features	SA Series Plus	SA Series Advanced	SAH Series Advanced	SAV Series Advanced
Common alarm relay	X	X	X	X
Tower failed to blowdown	X	X	X	X
Failed to switch		X	X	X
Tower failed to repressurize	X	X	X	X
High inlet temperature		X	X	X
Low inlet pressure		X	X	X
High dewpoint	X	X	X	X
Sensor failure for all sensors	X	X	X	X
High and low purge temperatures			X	X
Left/right clogged muffler		X	X	X
Low purge pressure				X
Clogged inlet filter		X	X	X



## DMD SERIES

DESICCANT MODULAR COMPRESSED AIR DRYER  
3 – 240 cfm

- Compact design
- Inlet and purge manifold design for low pressure drop
- Mini PLC monitor
- Completely automatic
- Point-of-use placement

### Options

- Pre- and after-filter (shipped loose)
- Mounted filters with 3-valve bypass
- Visual moisture indicator
- Energy efficient demand cycle control
- Dewpoint monitor
- -4°F (-20°C) or -100°F (-73°C) pressure dewpoint

# TECHNICAL SPECIFICATIONS

## SAV SERIES

### DESICCANT HEATED BLOWER PURGE COMPRESSED AIR DRYERS

#### FREQUENCY: 60 Hz & 50 Hz

Model #	Flow Rate (cfm)	Connection Size (NPT)	Height (in)	Width (in)	Depth (in)	Total Fill Weight (lbs)
SAV500	500	2"	85	55	49	2840
SAV600	600	2"	89	57	52	3420
SAV800	800	2"	96	68	60	4490
SAV1000	1000	3"	103	78	60	5700
SAV1200	1200	3"	115	96	66	6300
SAV1500	1500	3"	114	114	66	7165
SAV2000	2000	4" FLG	113	120	72	9850
SAV2600	2600	4" FLG	111	144	84	12,210
SAV3000	3000	6" FLG	111	144	84	12,650
SAV4000	4000	6" FLG	113	168	96	18,910
SAV5000	5000	6" FLG	112	180	102	21,590
SAV6000	6000	6" FLG	112	186	102	24,890
SAV7500	7500	8" FLG	137	204	106	29,490

#### CAPACITY CORRECTION FACTORS FOR DIFFERING OPERATING PRESSURE

Operating Pressure <i>psi</i>	80	85	90	95	100	105	110	115	120	125	130
Correction Factor	0.83	0.87	0.91	0.96	1.00	1.04	1.09	1.13	1.17	1.22	1.26

#### CAPACITY CORRECTION FACTORS FOR DIFFERING INLET AIR TEMPERATURES

Inlet Air Temperature <i>°F</i>	80	85	90	95	100	105	110	115	120
Correction Factor	1.17	1.17	1.17	1.15	1.00	0.87	0.76	0.66	0.58

**Air flow capacity = Operating pressure x Inlet air temperature**

<b>Standard outlet pressure dewpoint <i>°F</i></b>	-40
<b>Standard operating voltage</b>	460V/3PH
<b>ETL listed (UL/CSA standards)</b>	
<b>NEMA 12</b>	
<b>ASME/CRN* vessels</b>	
<b>Min/max inlet air temperature <i>°F</i></b>	50/120
<b>Min/max operating pressure <i>psi</i></b>	80/135, 80/150 (2000-7500 cfm)
<b>Average purge air**</b>	2%

\* CRN vessels not available for SAV7500 models

\*\* Purge air percentage is the amount of dried compressed air diverted from the active drying vessel to the other vessel during the regeneration process. The diverted air does not return to the system. The lower the average purge percentage, the higher system efficiency is.

# TECHNICAL SPECIFICATIONS

## SAH SERIES

DESICCANT EXTERNALLY HEATED COMPRESSED AIR DRYERS

**FREQUENCY: 60 Hz & 50 Hz**

Model #	Flow Rate (cfm)	Connection Size (NPT)	Height (in)	Width (in)	Depth (in)	Total Fill Weight (lbs)
SAH500	500	2"	86	55	51	2060
SAH600	600	2"	93	57	51	2350
SAH800	800	2"	92	68	56	3035
SAH1000	1000	3"	103	78	63	4195
SAH1200	1200	3"	115	96	66	5215
SAH1500	1500	3"	115	114	66	7765
SAH2000	2000	4" FLG	113	120	72	8565
SAH2600	2600	4" FLG	111	144	78	11,562
SAH3000	3000	6" FLG	111	144	78	12,002

### CAPACITY CORRECTION FACTORS FOR DIFFERING OPERATING PRESSURE

Operating Pressure <i>psi</i>	80	85	90	95	100	105	110	115	120	125	130
Correction Factor	0.83	0.87	0.91	0.96	1.00	1.04	1.09	1.13	1.17	1.22	1.26

### CAPACITY CORRECTION FACTORS FOR DIFFERING INLET AIR TEMPERATURES

Inlet Air Temperature <i>°F</i>	90	95	100	105	110	115	120
Correction Factor	1.12	1.10	1.06	1.00	0.93	0.86	0.80

**Air flow capacity = Operating pressure x Inlet air temperature**

- Standard outlet pressure dewpoint *°F*** -40
- Standard operating voltage** 480V/3PH
- ETL listed (UL/CSA standards)**
- NEMA 12**
- ASME/CRN vessels**
- Min/max inlet air temperature *°F*** 50/120
- Min/max operating pressure *psi*** 80/135, 80/150 (2000-3000 cfm)
- Average purge air\*** 8%

\* Purge air percentage is the amount of dried compressed air diverted from the active drying vessel to the other vessel during the regeneration process. The diverted air does not return to the system. The lower the average purge percentage, the higher system efficiency is.

# TECHNICAL SPECIFICATIONS

## SA SERIES

### DESICCANT HEATLESS COMPRESSED AIR DRYERS

#### FREQUENCY: 60 Hz & 50 Hz

Model #	Flow Rate (cfm)	Connection Size (NPT)	Height (in)	Width (in)	Depth (in)	Weight (lbs)
SA55	55	¾"	79	24	27	400
SA100	100	1"	86	52	36	468
SA130	130	1"	86	52	36	496
SA200	200	1½"	86	52	36	692
SA250	250	1½"	85	52	36	776
SA300	300	1½"	85	52	36	796
SA400	400	2"	88	52	36	1626
SA500	500	2"	88	52	36	1735
SA600	600	2"	89	56	60	1740
SA800	800	2"	89	56	60	2120
SA1000	1000	3"	98	65	61	3676
SA1200	1200	3"	110	65	61	4605
SA1500	1500	4" FLG	117	72	77	4985
SA2000	2000	4" FLG	113	118	59	5206
SA2600	2600	4" FLG	111	138	67	7600
SA3000	3000	4" FLG	111	138	67	8300

#### CAPACITY CORRECTION FACTORS FOR DIFFERING OPERATING PRESSURE

Operating Pressure <i>psi</i>	80	90	100	110	120	130	140
Correction Factor	0.83	0.91	1.00	1.09	1.17	1.26	1.29

#### CAPACITY CORRECTION FACTORS FOR DIFFERING INLET AIR TEMPERATURES

Inlet Air Temperature <i>°F</i>	90	95	100	105	110	115	120
Correction Factor	1.17	1.15	1.00	0.87	0.76	0.66	0.58

**Air flow capacity = Operating pressure x Inlet air temperature**

<b>Standard outlet pressure dewpoint <i>°F</i></b>	-40
<b>Standard operating voltage</b>	120V/1PH
<b>ETL listed (UL/CSA standards)</b>	
<b>NEMA 12</b>	
<b>ASME/CRN vessels</b>	
<b>Min/max inlet air temperature <i>°F</i></b>	50/120
<b>Min/max operating pressure <i>psi</i></b>	80/150
<b>Average purge air*</b>	15%

\* Purge air percentage is the amount of dried compressed air diverted from the active drying vessel to the other vessel during the regeneration process. The diverted air does not return to the system. The lower the average purge percentage, the higher system efficiency is.

# TECHNICAL SPECIFICATIONS

## DMD SERIES

### DESICCANT MODULAR COMPRESSED AIR DRYERS

#### FREQUENCY: 60 Hz & 50 Hz

Model #	Flow Rate (cfm)	Connection Size (NPT)	Height (in)	Width (in)	Depth (in)	Weight (lbs)
DMD-3	3	½"	22	13	10	32
DMD-5	5	½"	25	13	10	36
DMD-10	10	½"	36	13	10	52
DMD-15	15	½"	32	15	10	57
DMD-20	20	½"	44	15	10	79
DMD-25	25	½"	50	15	10	90
DMD-30	30	½"	59	15	10	107
DMD-40	40	1½"	49	16	17	156
DMD-50	50	1½"	55	16	17	172
DMD-60	60	1½"	69	16	17	202
DMD-75	75	1½"	51	16	23	257
DMD-100	100	1½"	57	16	23	286
DMD-120	120	1½"	69	16	23	334
DMD-180	180	1½"	59	16	28	407
DMD-240	240	1½"	59	16	33	519

#### CAPACITY CORRECTION FACTORS FOR DIFFERING OPERATING PRESSURE

Operating Pressure <i>psi</i>	50	60	70	80	90	100	110	120	130	140	150	175	200	225	250
Correction Factor	0.56	0.65	0.74	0.83	0.91	1.00	1.04	1.08	1.12	1.16	1.2	1.29	1.37	1.45	1.52

#### CAPACITY CORRECTION FACTORS FOR DIFFERING INLET AIR TEMPERATURES

Inlet Air Temperature <i>°F</i>	70	80	90	100	105	110	115	120
Correction Factor	1.12	1.1	1.06	1	0.93	0.86	0.8	0.75

**Air flow capacity = Operating pressure x Inlet air temperature**

Standard outlet pressure dewpoint <i>°F</i>	-40
Standard operating voltage	115–230V/1PH
Pre- and post-filtration recommended	
Pre-filtration grade <i>µm</i>	.01
Post-filtration grade <i>µm</i>	1
ASME/CRN vessels	
cULus control panel	
Max inlet air temperature <i>°F</i>	122
Min/max ambient air temperature <i>°F</i>	34/122
Min/max operating pressure <i>psi</i>	58/232
Average purge air*	15%

\* Purge air percentage is the amount of dried compressed air diverted from the active drying vessel to the other vessel during the regeneration process. The diverted air does not return to the system. The lower the average purge percentage, the higher system efficiency is.

FOR MORE INFORMATION, CONTACT YOUR LOCAL AUTHORIZED SULLAIR DISTRIBUTOR.

