SULLAIR®

DESICCANT COMPRESSED AIR DRYERS

Heated Blower Purge; Heated; Heatless

3 – 10,000 scfm

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 it is essential to help protect your downstream equipment and reduce maintenance cost and downtime.

- Ideal for applications requiring extremely low dew point
  -40°F/-40°C (-100°F/-73°C optional)

REGENERATION METHODS

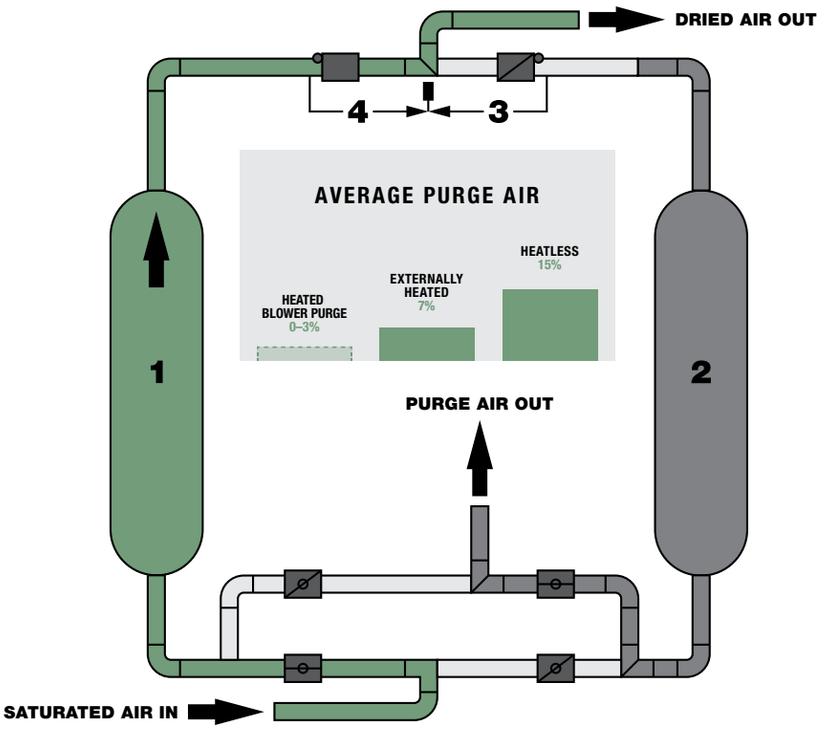
Heatless
Heatless dryers divert a small amount of dried process air from the drying vessel to regenerate the opposite vessel.

Heated
Heated dryers use an additional heat source—reducing or eliminating process air loss during the regeneration process.

HOW DESICCANT DRYING WORKS

Sullair Desiccant Dryers have a dual tower design in which both vessels are filled with desiccant material.

1. Saturated, compressed air passes through vessel one where the desiccant adsorbs moisture — lowering 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



** A coalescing pre-filter is required prior to entering the dryer.*

SULLAIR DESICCANT DRYERS

The Sullair Desiccant Regenerative Dryer family combines the proven benefits of desiccant drying with the most advanced designs and monitoring technology — providing dry compressed air for the most critical applications.

SULLAIR DESICCANT COMPRESSED AIR DRYERS ARE AVAILABLE IN THE FOLLOWING CONFIGURATIONS:

- **DBP Series — Heated Blower Purge** — 500 to 10,000 scfm
- **DEX Series — Externally Heated** — 200 to 3500 scfm
- **DP Series — Heatless Premium** — 80 to 2800 scfm
- **D Series — Heatless** — 80 to 800 scfm
- **DMD Series — Modular** — 3 to 240 scfm

DBP SERIES

DESICCANT HEATED BLOWER PURGE REGENERATIVE DRYERS
500 – 10,000 scfm

- 7″ DTS Controller for reliable control at your fingertips
  - Purge flow indicator
  - Dew point monitoring
  - Adjustable cycle time
    - 10–15 minutes
  - Optional demand cycle control
- -40°F/-40°C dew point performance
- Engineered to stand up to harsh environments
  - High performance butterfly valves help reduce seal wear and leakage

Options

- Demand cycle control
- Pre-piped filter
- 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 switch pressure alarm
- Outlet pressure dew point -4°F (-20°C)
- Purge flow meter
- Dew point monitoring system
- Low ambient package
- Microprocessor based controls/Modbus
- Subzero ambient package
- Allen-Bradley PLC with color touch screen monitor

DEX SERIES

DESICCANT EXTERNALLY HEATED REGENERATIVE DRYERS
200 – 3500 scfm

- 7″ Desiccant Touch Screen (DTS) Controller for reliable control at your fingertips
  - Purge flow indicator
  - Dew point monitoring
  - Adjustable cycle time
    - 10–15 minutes
  - Optional demand cycle control
- -40°F/-40°C dew point performance
- Engineered to stand up to harsh environments
  - High performance butterfly valves help reduce seal wear and leakage

Options

- Demand cycle control
- Pre-piped filter
- 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 switch pressure alarm
- Outlet pressure dew point -4°F (-20°C)
- Purge flow meter
- Dew point monitoring system
- Low ambient package
- Microprocessor based controls/Modbus
- Subzero ambient package
- Allen-Bradley PLC with color touch screen monitor

- Smart condition-based switching for ease of operation
- Easy touch screen access to maintenance & operational data — including histogram

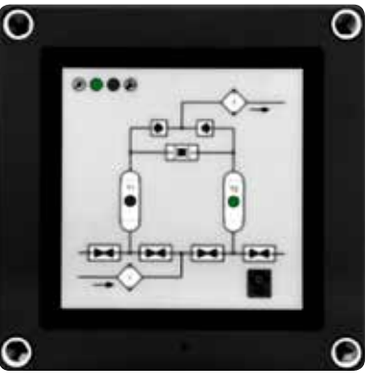
DP SERIES

PREMIUM DESICCANT HEATLESS REGENERATIVE DRYERS
80 – 2800 scfm

- 3.8″ DTS Controller for maximum efficiency
  - Condition monitoring for ease of operation
  - Energy Management System
  - Humidity sensor helps reduce purge air and energy consumption
  - Optional dew point sensor
- -40°F/-40°C dew point performance
  - Optional -100°F/-73°C
- Built for simplified maintenance and service with open frame design and histogram
- Engineered to stand up to harsh environments
- High performance angle body valves with PTFE seals help reduce air leakage
  - Reduced maintenance costs with service kits
- Minimized noise via exhaust valve speed control

Options

- Dew point monitor display
- Failure to switch pressure alarm
- Delta pressure filter alarm with gauge
- Webpage with data log
- Pneumatic controls
- Pre-piped filter



- Compressor synchronization
- Configurable time-based vessel switching

D SERIES

DESICCANT HEATLESS REGENERATIVE DRYERS
80 – 800 scfm

- LED Desiccant Controller (DC) with dryer schematic
- -40°F/-40°C dew point performance
  - Optional -100°F/-73°C
- Built for simplified maintenance and service
- High performance angle body valves with PTFE seals help reduce air leakage
  - Reduced maintenance costs with service kits
- Minimized noise via exhaust valve speed control

Options

- Pre-piped filter

DMD SERIES

DESICCANT MODULAR REGENERATIVE DRYERS
3 – 240 scfm

- 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 with dew point monitor
- Dew point monitor
- -4°F (-20°C) or -100°F (-73°C) pressure dew point

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 and China — all ISO 9001 certified to ensure the highest quality standards in manufacturing. In addition, Sullair Suzhou and Shenzhen facilities are ISO 14001 and OHSAS 18001 certified.

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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 innovative designs pioneering the air treatment industry. And ready to stand the test of time.

PERFORMANCE

Sullair is constantly innovating to improve our compressed air solutions. For our compressed air treatment line, this means more energy efficiency. With air treatment being a vital part of your entire compressed air system, Sullair is committed to helping you protect your equipment and manage your operating expenses.

D SERIES
DESICCANT HEATLESS REGENERATIVE DRYERS

SULLAIR®

FREQUENCY: 60 Hz & 50 Hz

Model #	Flow Rate (scfm)	Connection Size (NPT)	Height (in)	Width (in)	Depth (in)	Empty Weight (lbs)	Total Fill Weight (lbs)
D80	80	¾″	59	34	24	214	144
D100	100	1″	70	34	24	240	167
D120	120	1″	70	34	24	240	167
D160	160	1¼″	72	39	27	311	262
D200	200	1¼″	72	39	27	311	262
D250	250	1½″	75	45	32	460	384
D300	300	1½″	75	45	32	460	384
D400	400	2″	77	51	36	649	539
D500	500	2″	79	54	38	845	715
D650	650	2½″	81	62	41	1074	917
D800	800	2½″	81	63	44	1270	1114

CAPACITY CORRECTION FACTORS FOR DIFFERING OPERATING PRESSURE

Operating Pressure *psig*	60	70	80	90	100	110	120	130	140	150
Correction Factor	0.65	0.74	0.83	0.91	1	1.12	1.16	1.2	1.25	1.29

CAPACITY CORRECTION FACTORS FOR DIFFERING INLET AIR TEMPERATURES

Inlet Air Temperature *°F*	90	95	100	105	110	115	120
Correction Factor	1.07	1.04	1	0.86	0.73	0.64	0.55

Air flow capacity = Operating pressure x Inlet air temperature

Standard outlet pressure dew point *°F* -40
Optional outlet pressure dew point *°F* -100
Standard operating voltage 115V/1PH
Pre- and post-filtration required
Required pre-filtration grade *µm* .01
Required post-filtration grade *µm* 1
cULus control panel
NEMA 4 indoor
ASME approved vessels
Min/max inlet air temperature *°F* 40/120
Min/max operating pressure *psig* 60/150
Average Purge Air* 15%
CRN approved vessels available. For more details, contact your Sullair Sales Representative.

** 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. Meaning the lower the average purge percentage, the higher system efficiency is.*

DP SERIES
PREMIUM DESICCANT HEATLESS REGENERATIVE DRYERS

SULLAIR®

FREQUENCY: 60 Hz & 50 Hz

Model #	Flow Rate (scfm)	Connection Size	Height (in)	Width (in)	Depth (in)	Empty Weight (lbs)	Total Fill Weight (lbs)
DP80	80	¾″ NPT	59	34	24	231	144
DP100	100	1″ NPT	70	34	24	255	167
DP120	120	1″ NPT	70	34	24	255	167
DP160	160	1¼″ NPT	72	39	27	311	262
DP200	200	1¼″ NPT	72	39	27	311	262
DP250	250	1½″ NPT	75	45	32	460	384
DP300	300	1½″ NPT	75	45	32	460	384
DP400	400	2″ NPT	77	51	36	649	539
DP500	500	2″ NPT	79	54	38	845	715
DP650	650	2½″ NPT	82	62	41	1074	917
DP800	800	2½″ NPT	81	63	44	1270	1114
DP1000	1000	2½″ Flange ANSI	90	66	30	1490	1160
DP1200	1200	2½″ Flange ANSI	91	66	32	1792	1400
DP1500	1500	3″ Flange ANSI	90	72	39	2814	1840
DP1900	1900	3″ Flange ANSI	96	72	39	2814	2240
DP2300	2300	4″ Flange ANSI	103	78	45	4168	3260
DP2800	2800	4″ Flange ANSI	103	78	45	4168	3260

CAPACITY CORRECTION FACTORS FOR DIFFERING OPERATING PRESSURE

Operating Pressure *psig*	60	70	80	90	100	110	120	130	140	150
Correction Factor	0.65	0.74	0.83	0.91	1	1.12	1.16	1.2	1.25	1.29

CAPACITY CORRECTION FACTORS FOR DIFFERING INLET AIR TEMPERATURES

Inlet Air Temperature *°F*	90	95	100	105	110	115	120
Correction Factor	1.07	1.04	1	0.86	0.73	0.64	0.55

Air flow capacity = Operating pressure x Inlet air temperature

Standard outlet pressure dew point *°F* -40
Optional outlet pressure dew point *°F* -100
Standard operating voltage 115V/1PH
Pre- and post-filtration required
Required pre-filtration grade *µm* .01
Required post-filtration grade *µm* 1
cULus control panel
NEMA 4 indoor
ASME approved vessels
Min/max inlet air temperature *°F* 40/120
Min/max operating pressure *psig* 60/150
Average Purge Air* 15%
CRN approved vessels available. For more details, contact your Sullair Sales Representative.

** 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. Meaning the lower the average purge percentage, the higher system efficiency is.*

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DBP SERIES
DESICCANT HEATED BLOWER PURGE REGENERATIVE DRYERS

SULLAIR®

FREQUENCY: 60 Hz

Model #	Flow Rate (scfm)	Connection Size	Height (in)	Width (in)	Depth (in)	Weight (lbs)
DBP-500	500	2" NPT	92	45	71	2500
DBP-650	650	2" NPT	92	45	71	2750
DBP-800	800	3" Flange ANSI	95	60	93	4100
DBP-1000	1000	3" Flange ANSI	95	60	93	4500
DBP-1250	1250	3" Flange ANSI	95	60	93	8200
DBP-1500	1500	3" Flange ANSI	95	60	93	8200
DBP-2000	2000	4" Flange ANSI	109	65	106	9800
DBP-2500	2500	4" Flange ANSI	120	75	106	15,000
DBP-3000	3000	6" Flange ANSI	120	75	106	15,000
DBP-3500	3500	6" Flange ANSI	132	82	150	19,000
DBP-4000	4000	6" Flange ANSI	132	94	160	19,000
DBP-5000	5000	6" Flange ANSI	140	94	180	28,000
DBP-6000	6000	6" Flange ANSI	CF	CF	CF	CF
DBP-7000	7000	8" Flange ANSI	CF	CF	CF	CF
DBP-7500	7500	8" Flange ANSI	CF	CF	CF	CF
DBP-9000	9000	10" Flange ANSI	CF	CF	CF	CF
DBP-10,000	10,000	10" Flange ANSI	CF	CF	CF	CF

CAPACITY CORRECTION FACTORS FOR DIFFERING OPERATING PRESSURE

Operating Pressure *psig*	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 *°F*	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 dew point *°F*	-40
Standard operating voltage	460V/3PH
Pre- and post-filtration required	
Required pre-filtration grade *µm*	.01
Required post-filtration grade *µm*	1
ASME/CRN approved pressure vessels	
cULus control panel	
Max inlet air temperature *°F*	120
Min/max ambient air temperature *°F*	34/12
Min/max operating pressure *psig*	50/150
Average Purge Air*	3%

** 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. Meaning the lower the average purge percentage, the higher system efficiency is.*

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DEX SERIES
DESICCANT EXTERNALLY HEATED REGENERATIVE DRYER

SULLAIR®

FREQUENCY: 60 Hz

Model #	Flow Rate (scfm)	Connection Size	Height (in)	Width (in)	Depth (in)	Weight (lbs)
DEX-200	200	1″ NPT	92	34	35	950
DEX-250	250	1½″ NPT	92	34	36	1100
DEX-300	300	1½″ NPT	92	34	36	1250
DEX-400	400	2″ NPT	92	45	47	1500
DEX-500	500	2″ NPT	92	45	47	1600
DEX-600	600	2″ NPT	92	45	47	2100
DEX-800	800	3″ Flange ANSI	95	60	80	2500
DEX-900	900	3″ Flange ANSI	95	60	80	2800
DEX-1000	1000	3″ Flange ANSI	95	60	80	4100
DEX-1250	1250	3″ Flange ANSI	110	60	80	4700
DEX-1500	1500	3″ Flange ANSI	110	60	80	4900
DEX-2000	2000	3″ Flange ANSI	110	62	80	5300
DEX-2500	2500	4″ Flange ANSI	110	65	82	6200
DEX-3000	3000	6″ Flange ANSI	110	65	82	7600
DEX-3500	3500	6″ Flange ANSI	120	70	85	8300

CAPACITY CORRECTION FACTORS FOR DIFFERING OPERATING PRESSURE

Operating Pressure *psig*	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 *°F*	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 dew point *°F* -40
Standard operating voltage 460V/3PH
Pre- and post-filtration required
Required pre-filtration grade *µm* .01
Required post-filtration grade *µm* 1
ASME/CRN approved pressure vessels
cULus control panel
Max inlet air temperature *°F* 120
Min/max ambient air temperature *°F* 34/120
Min/max operating pressure *psig* 50/150
Average Purge Air* 7%

** 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. Meaning the lower the average purge percentage, the higher system efficiency is.*

DMD SERIES
DESICCANT MODULAR REGENERATIVE DRYERS

SULLAIR®

FREQUENCY: 60 Hz & 50 Hz

Model #	Flow Rate (scfm)	Connection Size (in) 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 *psig*	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 *°F*	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 dew point *°F*	-40
Standard operating voltage	115–230V/1PH
Pre- and post-filtration required	
Required pre-filtration grade *µm*	.01
Required post-filtration grade *µm*	1
ASME/CRN approved pressure vessels	
cULus control panel	
Max inlet air temperature *°F*	122
Min/max ambient air temperature *°F*	34/122
Min/max operating pressure *psig*	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. Meaning the lower the average purge percentage, the higher system efficiency is.*

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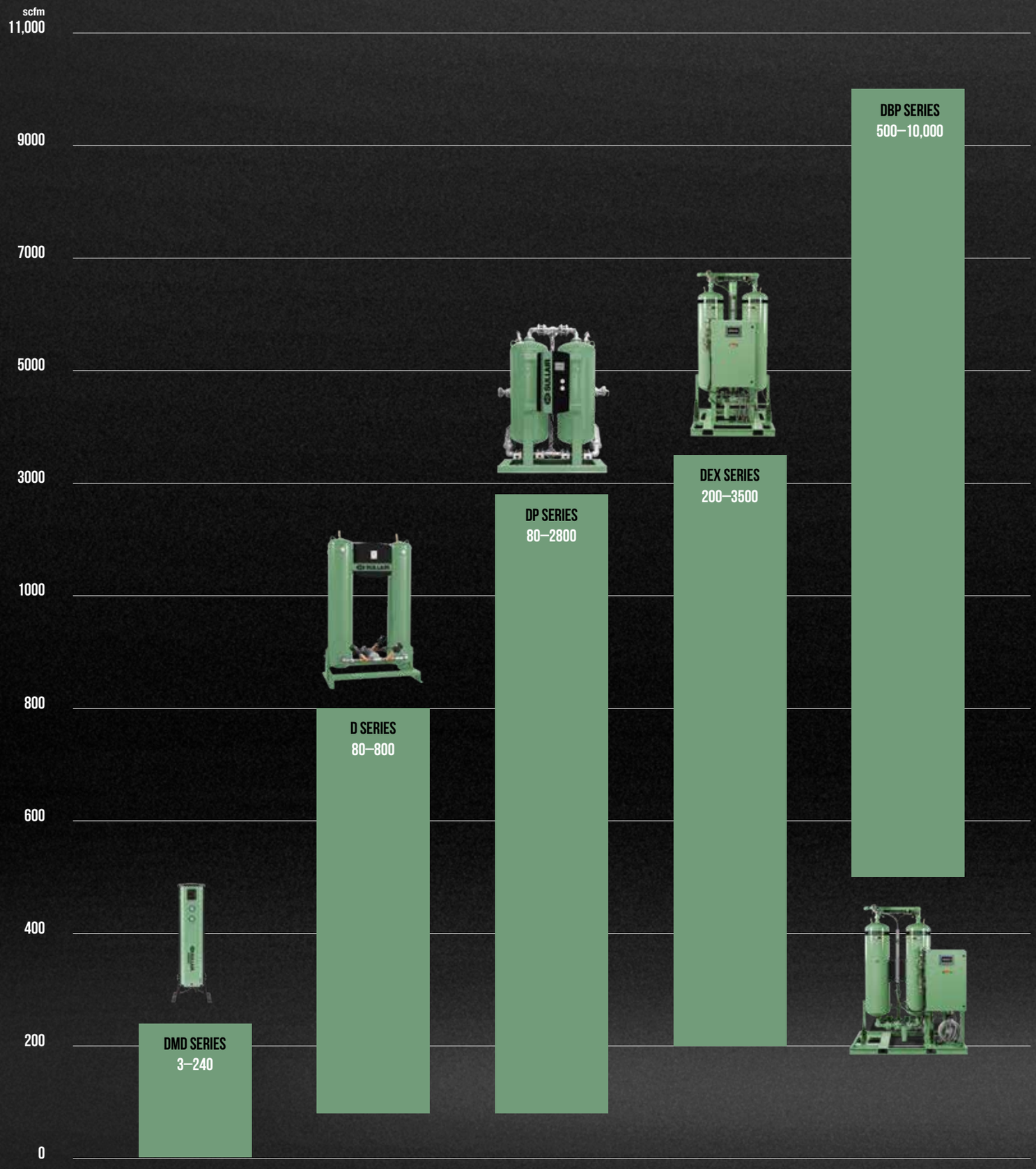
FOR MORE INFORMATION, CONTACT YOUR LOCAL AUTHORIZED SULLAIR DISTRIBUTOR.



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