

D SERIES

DESICCANT COMPRESSED AIR DRYERS
7-5400 SCFM





**SOME COMPANIES ARE FOUNDED ON HARD WORK.
OTHERS ARE FOUNDED ON IDEALS.**

FS-CURTIS WAS FOUNDED ON BOTH.

More than 165 years ago, the FS-Curtis way of doing business was established through two key commitments: a dedication to building quality products and a dedication to responsive customer service.

Over the decades, the company and its products have evolved through innovation and new technologies. But those commitments to quality and service remain unchanged. Today, just as in 1854, FS-Curtis customers can depend on our products for reliable, long-term service. Equally as important, they can depend on getting the same from our people.

A HISTORY OF EXCELLENCE

1854 1857 1876 1897 1914 1940 1955 1976

Curtis & Co. – Empire Saw founded in St. Louis, MO, USA

Earned Agricultural and Mechanical Fair award for excellence and quality

Named Curtis and Co. Manufacturing

Built first reciprocating air compressor that later evolved into the Master Line Series

Supported U.S. Government efforts by producing more than 2 million Howitzer shell forgings

Designed and developed mobile oxygen compressors to be used in Aerospace applications

Merged with U.S. Air Compressor Company, Central Petroleum Company, Lewis Machine Company

Merged with Toledo Tools as Curtis-Toledo Inc.

1979 1995 2005 2006 2010 2015 2016 2017

Introduction of Challenge Air Series reciprocating air compressors

Began manufacturing and assembling Rotary Screw Air compressors

Expanded global market reach by joining forces with Fusheng Industrial

U.S. Headquarters certified as ISO9001:2000 and ISO14001:2004

Introduced next generation GSV Variable Speed Rotary Screw compressors

Introduced Nx series Fixed and Variable Speed Rotary Screw compressors

Nx Series named Plant Engineering's 2015 Product of the Year - Gold Award for Compressed Air

Nx Series claims Plant Engineering's Product of the Year - Gold Award 2nd year in a row

PRECISION PERFORMANCE

THE SAME COMMITMENT TO WORLD-CLASS QUALITY FOUND IN FS-CURTIS COMPRESSORS IS ALSO THE FOUNDATION OF THE D SERIES COMPRESSED AIR DRYERS.

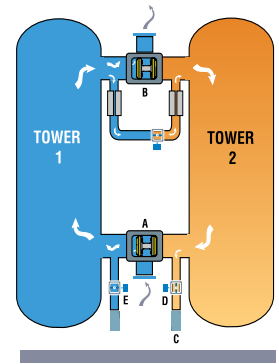
Compressed air users have relied on FS-Curtis to provide compressed air treatment solutions for critical applications worldwide. D Series desiccant dryers improve air system efficiency by using leading industry technology and premium grade activated alumina.



HOW IT WORKS

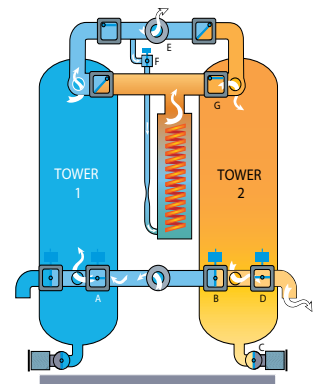
HEATLESS REGENERATION

Moist, filtered compressed air enters the pressurized on-line desiccant-filled drying Tower 1 through the shift valve (A). Up-flow drying enables the desiccant to strip the air stream of moisture. Clean, dry compressed air exits through shift valve (B) to feed the air system. When in regeneration mode, Tower 2 depressurizes to atmosphere through the muffler (C) when the valve (D) opens. A portion of dry compressed air (purge air) is diverted before exiting (B) and passes through off-line Tower 2 and exits at valve (D) to desorb the moisture from the desiccant. Once desorbed, valve (D) closes and Tower 2 is re-pressurized. At tower shift-over, valve (E) will open, causing shift valves (A & B) to shift. Tower 2 will be placed on-line to dry the bed. Operations will switch and Tower 1 will be regenerated.



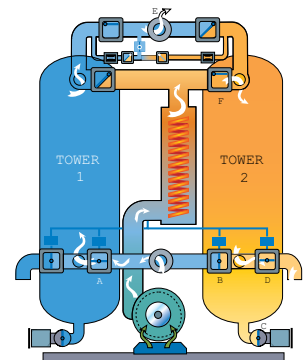
HEATED PURGE REGENERATION

Moist, filtered compressed air enters the pressurized on-line desiccant-filled drying Tower 1 through valve (A). Up-flow drying enables the desiccant to strip the air stream of moisture. Clean, dry compressed air exits through valve (E) to feed the air system. Tower 2 (when in regeneration mode) closes valve (B), then depressurizes to atmosphere through muffler (C). Valves (D & G) open and the heater turns on. A portion of dry compressed air (purge air) is diverted before exiting (E) and passes through the heater. Hot dry purge air desorbs the moisture from the desiccant as it flows down through Tower 2 to exit at valve (D). Once desorbed, the heater turns off and cool dry purge air continues to pass until the desiccant bed is cooled. Finally, valve (D) closes and Tower 2 is re-pressurized. At a fixed time interval, valve (B) will open and Tower 2 will be placed on-line to dry the bed and valves (A & D) will close. Operations will switch and Tower 1 will be regenerated.



BLOWER PURGE REGENERATION

Filtered compressed air enters on-line desiccant-filled, drying Tower 1 through valve (A). Up-flow drying enables the desiccant to strip moisture from the airstream. Clean, dry compressed air exits through (E) to feed the air system. Tower 2 (shown in regeneration mode) valve (B) closed, depressurizes to atmosphere through muffler (C). Valves (D & F) open and the heater turns on. The high-efficiency blower draws ambient air and feeds it through the heater. The ambient airstream passes through valve (F) and flows downward through the moist desiccant in Tower 2, collecting water vapor before exiting valve (D). Once the desiccant is fully desorbed, the heater turns off. Valves (F & D) close and Tower 2 is re-pressurized. At a fixed time interval, valve (B) will open and Tower 2 will be placed on-line to dry the airstream and valve (A) will close. Operations will switch and Tower 1 will be regenerated.



PURE. COMPACT. PRODUCTIVITY.

DLM (7-40 SCFM)

HEATLESS MODULAR DESICCANT AIR DRYERS

DLM desiccant air dryers protect moisture sensitive applications requiring low pressure dew points. Delivers dew points of ISO 8573-1: 2010 Class 1 (-94°F, -70°C) and Class 2 (-40°F, -40°C) with flow rates of 7 to 40 scfm (12 to 68 nm³/h). Critical applications include labs, hospitals, pharmaceutical manufacturing and other high-tech installations. The DLM Series incorporate a time proven design, with superior features and reliability, in a compact and easy to install package.

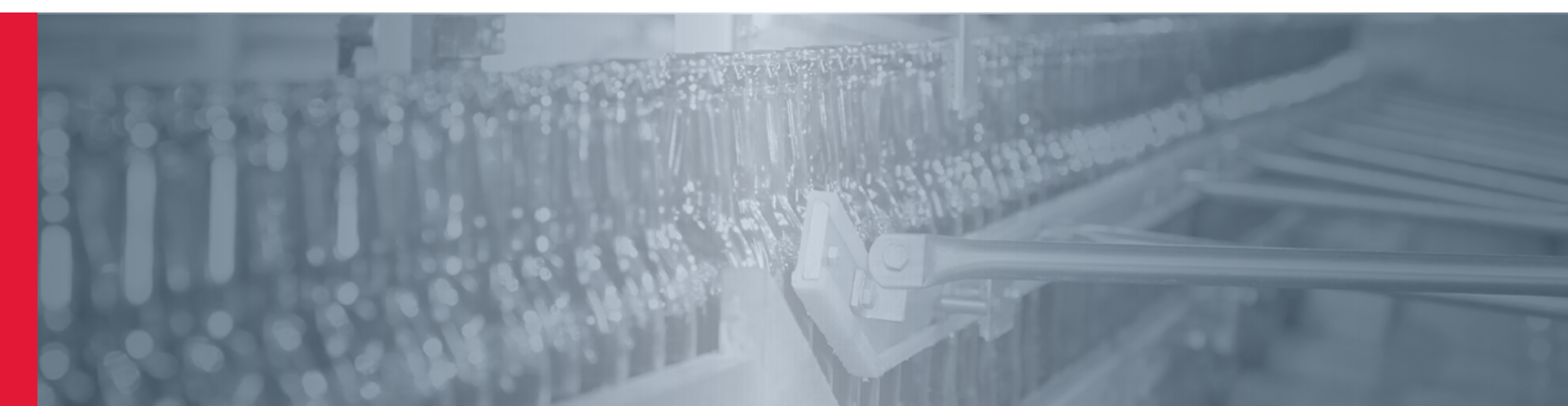


- Consistent outlet pressure dew points
- Selectable pressure dew point performance for maximum application flexibility
- Minimum purge air usage saves energy
- Desiccant beds sized to prevent fluidization
plus slow and complete regeneration prevents desiccant aging
- Non-lubricated, soft seated control valves promotes reliable operation
- Heavy duty purge exhaust muffler for quiet operation

TECHNICAL DATA

MODELS	INLET FLOW ¹ (-40°F) scfm	POWER SUPPLY	INLET/OUTLET NPT male	DIMENSIONS (LxWxH-in.)	WEIGHT (Lbs.)
DLM-7	7	110-120/1/60 220-240/1/60	1/2"	7 x 14 x 19	77
DLM-13	13			7 x 14 x 26	93
DLM-18	18			7 x 14 x 35	112
DLM-21	21			7 x 14 x 43	132
DLM-27	27			7 x 15 x 39	154
DLM-40	40			7 x 15 x 49	181

¹-Inlet flow - Conditions for rating above dryers are: compressed air at dryer inlet: 100 psig inlet pressure; 100% relative humidity.



MATCH PERFORMANCE BY DEMAND

DL (40-5400 SCFM)

HEATLESS DESICCANT DRYERS

FS-Curtis DL desiccant dryers are available with three application specific control systems. No matter what your application, there's a control system just right for your needs.

FS-Curtis DL heatless desiccant dryers deliver consistent outlet pressure dew points to -100°F. By combining the proven benefits of desiccant drying technology with the industry leading design, FS-Curtis' DL dryers provide the most reliable compressed air drying system for various applications.

- Up-flow drying which allows water and heavy contaminants to drop out of the air stream
- Premium grade desiccant beads enhance surface area, requires minimum purge air, and have high crush strength
- ASME and CRN certified pressure vessels
- Optional pre-mounted filtration package increases lifetime of desiccant and avoids system contamination
- Precision switch valves automatically shift to low pressure side of the circuit to control process flow

STANDARD CONTROLLER

- Time controlled bed regeneration cycles offer consistent performance and economy of purchase
- Simple timer based controller

SELECTABLE PURGE CONTROLLER

- Tailor the drying cycles to match your peak air demand in 10% increments
- Controller offers four pressure dew point settings to increase your savings

AUTOMATIC ENERGY SAVINGS CONTROLLER

- Automatically matches purge air use to the demand on the system
- Controller offers four pressure dew point settings to increase your savings
- Controller features vacuum fluorescent text display that communicates energy savings, operating mode and service reminders



TECHNICAL DATA

MODELS ¹	INLET FLOW ² @ 100 psig scfm	POWER SUPPLY	INLET / OUTLET NPT Male	DIMENSIONS (LxWxH-In.)	WEIGHT (Lbs.)
DLS/DLP/DLE40	40	DLS 100-120/1/60 DLP/DLE 100-240/1/60 12-24VDC	1" NPT	49 x 34 x 35	365
DLS/DLP/DLE60	60			64 x 34 x 35	445
DLS/DLP/DLE90	90			81 x 34 x 35	575
DLS/DLP/DLE115	115		2" NPT	57 x 46 x 41	685
DLS/DLP/DLE165	165			75 x 51 x 41	1010
DLS/DLP/DLE260	260			65 x 58 x 42	1215
DLS/DLP/DLE370	370			73 x 58 x 42	1350
DLS/DLP/DLE450	450			104 x 55 x 51	1473
DLS/DLP/DLE590	590			107 x 57 x 51	2134
DLS/DLP/DLE750	750		3" ANSI Flg.	112 x 63 x 59	2414
DLS/DLP/DLE930	930			115 x 66 x 59	2875
DLS/DLP/DLE1130	1,130			120 x 68 x 59	3722
DLS/DLP/DLE1350	1,350			117 x 74 x 59	4167
DLS/DLP/DLE1550	1,550			4" ANSI Flg.	119 x 82 x 59
DLS/DLP/DLE2100	2,100		125 x 86 x 67		9010
DLS/DLP/DLE3000	3,000		6" ANSI Flg.		124 x 100 x 88
DLS/DLP/DLE4100	4,100	124 x 105 x 89		12000	
DLS/DLP/DLE5400	5,400				

¹-DLS: standard controller; DLP: selectable purge controller; DLE: automatic energy savings controller.

²-Inlet flow - Conditions for rating above dryers are: compressed air at dryer inlet: 100°F inlet 100 psig inlet pressure; 100% relative humidity, 100°F ambient temperature, and 5 psi pressure drop.

DEMAND MORE

DHP (300-3200 SCFM)

HEATED PURGE DESICCANT DRYERS

FS-Curtis' externally heated purge desiccant dryers offer consistent dew point performance and are equipped with our advanced purge booster. DHP Series dryers consume less dried compressed air volume for regeneration purpose by the use of a low-watt density heater. Reduce air loss to align supply-side equipment with demand-side requirements to optimize your air system.

- Low-watt density heater saves energy and prevents premature desiccant aging
- Premium grade desiccant beads enhance surface area and have high crush strength
- NEMA4 rated electrical enclosure
- Optional pre-mounted filtration package increases lifetime of desiccant and avoids system contamination



TECHNICAL DATA

MODELS	INLET FLOW ¹ @ 100 psig scfm	POWER SUPPLY	INLET / OUTLET NPT Male	DIMENSIONS (LxWxH-in.)	WEIGHT (Lbs.)
DHP300	300	460/3/60	1.5" NPT	98 x 48 x 43	1400
DHP400	400			105 x 53 x 50	1800
DHP500	500		2" NPT	108 x 55 x 50	1800
DHP600	600			114 x 60 x 62	2000
DHP750	750		3" FLG	113 x 64 x 62	2400
DHP900	900			118 x 66 x 62	2400
DHP1050	1,050			116 x 80 x 62	2900
DHP1300	1,300			124 x 85 x 64	3400
DHP1500	1,500		4" FLG	121 x 97 x 64	5100
DHP1800	1,800			7800	
DHP2200	2,200		7800		
DHP2600	2,600		9000		
DHP3200	3,200				

¹-Inlet flow - Conditions for rating above dryers are: compressed air at dryer inlet; 100°F inlet 100 psig inlet pressure; 100% relative humidity, 100°F ambient temperature, and 5 psi pressure drop.



ULTIMATE PERFORMANCE. SOLID RELIABILITY.

DHB SERIES (500-4300 SCFM)

BLOWER PURGE DESICCANT DRYERS

DHB blower purge desiccant dryers improve air system efficiency by the use of a dedicated axial blower, instead of a percentage of dehydrated purge air, to regenerate the off-line desiccant tower. ISO 8573.1 Class 2 dew point performance is guaranteed. DHB dryers do not use compressed air asz purge air and thus are 100% efficient at delivering full supply-side compressor capacity.

- Industrial level high capacity blowers operate efficiently and quietly
- Low-watt density heater saves energy and prevents premature desiccant aging
- Premium grade desiccant beads enhance surface area and have high crush strength
- NEMA4 rated electrical enclosure
- Optional pre-mounted filtration package increases lifetime of desiccant and avoids system contamination

TECHNICAL DATA

MODELS	INLET FLOW ¹ @ 100 psig scfm	POWER SUPPLY	INLET / OUTLET NPT Male	DIMENSIONS (LxWxH-In.)	WEIGHT (Lbs.)
DHB500	500	460/3/60	2" NPT	105 x 53 x 70	1866
DHB600	600			108 x 55 x 71	2111
DHB750	750			114 x 60 x 83	2456
DHB900	900		3" FLG	113 x 64 x 84	2472
DHB1050	1,050			118 x 66 x 85	2981
DHB1300	1,300			116 x 80 x 93	3576
DHB1500	1,500			124 x 85 x 104	5359
DHB1800	1,800		4" FLG	121 x 97 x 117	5359
DHB2200	2,200			128 x 97 x 117	8018
DHB2600	2,600			124 x 105 x 130	8123
DHB3200	3,200		6" FLG	121 x 97 x 117	9333
DHB3600	3,600			128 x 97 x 117	9833
DHB4300	4,300			124 x 105 x 130	12350

¹-Inlet flow - Conditions for rating above dryers are: compressed air at dryer inlet: 100°F inlet 100 psig inlet pressure; 100% relative humidity, 100°F ambient temperature, and 5 psi pressure drop.



CONTINUED COMMITMENT

A company history that dates back more than 160 years is a company history that, to us, is just the beginning. FS-Curtis is committed to offering a world-class portfolio of products. Through the dependability of our people and our quality-focused manufacturing, FS-Curtis will continue to be the most trusted and dependable name in compressed air serving even more markets through our ever-growing global presence.

You can count on **FS-Curtis** to approach the next 160 years by staying true to the values and strengths that are appreciated by our customers today.

A WORLD OF DIFFERENCE

The FS-Curtis headquarters in St. Louis, Missouri, U.S.A. is the anchor of a larger global network. FS-Curtis builds quality products — and a quality reputation — at locations around the world.

In addition to our manufacturing and packaging locations, a large global network of sales agents and distributors ensures that sales and service support is available around the world, day in and day out.

ST. LOUIS, MO USA (HEADQUARTERS)

PUNE, INDIA | JUNDIAI, BRAZIL | OBERHAUSEN, GERMANY | SHANGHAI, CHINA | TAIPEI, TAIWAN | PITTSBURGH, PA USA (FS-ELLIOTT)
ZHONGSAN, CHINA | BEIJING, CHINA (FUSHENG) | ZHONGSAN, CHINA (FUSHENG) | HO CHI MINH CITY, VIETNAM (FUSHENG)



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CORPLITERATURE: FSL-DRYFLBREV4

Improvements and research are continuous at FS-Curtis. Specifications may change without notice.

ISO 9001

ISO 14001

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