



# RDS SERIES

ENERGY SAVING REFRIGERATED COMPRESSED  
AIR DRYERS 2500-12500 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

<b>1854</b>	<b>1857</b>	<b>1876</b>	<b>1897</b>	<b>1914</b>	<b>1940</b>	<b>1955</b>	<b>1976</b>
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.
<b>1979</b>	<b>1995</b>	<b>2005</b>	<b>2006</b>	<b>2010</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
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





# SUPERIOR AIR QUALITY IS JUST THE BEGINNING

RDS Series dryers not only enhance air quality, but they also enhance energy savings through FS-Curtis' DemandSmart™ technology.

So when you take the world-class quality found in FS-Curtis compressors and add in the heightened performance from RDS Series dryers, the result is simply outstanding. Your production process will be protected, and the DemandSmart energy savings will add up day in and day out. Manufactured for ideal integration with FS-Curtis compressors, RDS Series dryers provide a constant dew point that meets the ISO 8573.1 standard to protect your investment and maintain your production quality.



# TRUE ENERGY-SAVING DESIGN

All FS-Curtis RDS Series dryers utilize three industry-leading technologies to optimize energy savings and performance.

## DEMANDSMART ENERGY MANAGEMENT SYSTEM

**DemandSmart™**  
ENERGY MANAGEMENT SYSTEM

By monitoring the incoming heat load to determine how much cooling energy is required to maintain stable dew point control, this energy-saving control system is able to make precise refrigeration compressor adjustments to match the varying heat loads, maximizing energy savings.



## STAINLESS-STEEL BRAZED PLATE HEAT EXCHANGER

To deliver unparalleled performance and superior reliability, FS-Curtis crafts its exchangers from premium grade 316SS and uses advanced metal forming and bonding techniques. Layers of sinusoidal flow paths form large, smooth channel flow cavities, helping to ensure low pressure drop.

## INTEGRATED TWO-STAGE FILTRATION SYSTEM

5.0 mg/m<sup>3</sup> oil aerosol bulk liquids and 3.0-micron solid particulates are removed by the efficient, effective two-stage filtration system. In the first stage, two stainless-steel orifice tubes provide 10-micron mechanical separation. During the second stage, an in-depth fiber media captures solid and liquid particles to 3 microns.

An optional high-efficiency oil removal filter with a corrosion resistant inner and outer cores remove solid particles to 0.01 micron. The first stage features multiple layers of fiber media and a media screen to remove larger particles. After this prefiltering, the second stage utilizes multiple layers of bonded, blended fiber media for fine coalescence.

# PRODUCT RANGE

In addition to the three main technologies, each model in the RDS Series has its own unique benefits for an ideal match to application needs.



### RDS2500-3000

- Digital scroll refrigerant compressor with environmentally friendly R-404a refrigerant for high reliability, long service life and quiet working environment
- DemandSmart energy management system provides energy-saving results
- Lift-out panel design provides easy access for maintenance
- No-air-loss condensate drain prevents energy loss

### RDS3750-12500

- Digital scroll refrigerant compressor with environmentally friendly R-404a refrigerant for high reliability, long service life and quiet working environment
- No-air-loss condensate drain prevents energy loss
- Enhanced DemandSmart energy management system displays real-time status and measures energy savings
- Multi-station design for easy movement and precise match of demand

# TECHNICAL DATA

## ISO 8573.1 QUALITY CLASSES

Class	Solid Particles - Maximum Numbers of Particles per m <sup>3</sup>			Humidity and Liquid Water		Oil
	Particle Size (micron)			Pressure Dew Point		Total concentration, Aerosol, Liquid, and Vapor
	0.10 - 0.5	0.5 - 1.0	1.0 - 5.0	°C	°F	mg/m <sup>3</sup>
0	As Specified			As Specified		≤ 0.01
1	100	1	0	≤ -70	≤ -94	≤ 0.1
2	100,000	1,000	10	≤ -40	≤ -40	≤ 1
3	-	10,000	500	≤ -20	≤ -4	≤ 5
4	-	-	1,000	≤ +3	≤ +38	
5	-	-	20,000	≤ +7	≤ +45	
6				≤ +10	≤ +50	



MODELS	Capacity <sup>1</sup> (scfm)	POWER SUPPLY	INLET/OUTLET (npt. male)	DIMENSIONS (LxWxH-In.)	WEIGHT (Lbs.)
RDS90	90	115/1/60			241
RDS120	120	208-230/1/60	1" NPT	20 x 27 x 38	258
RDS140	140	220-240/1/50			263
RDS190	190			32 x 34 x 39	408
RDS240	240		1-1/2" NPT		478
RDS280	280	208-230/3/60		32 x 35 x 46	497
RDS360	360	380-420/3/50	2" NPT		540
		460/3/60			708
RDS450	450	575/3/60			793
RDS540	540		2-1/2" NPT	42 x 35 x 58	844
RDS675	675				1615
RDS800	800		3" NPT	52 x 40 x 85	1650
RDS1000	1000				1770
RDS1250	1250		4" ANSI Fig.	52 x 48 x 85	1890
RDS1500	1500	208-230/3/60			2110
RDS1750	1750	380-420/3/50			2205
RDS2000	2000	460/3/60	6" ANSI Fig.	56 x 54 x 85	2248
RDS2500	2500				2488
RDS3000	3000				3391
RDS3750	3750		8" Flange	81 x 85 x 96	3474
RDS5000	5000				5412
RDS6250	6250		10" Flange	81 x 125 x 98	5624
RDS7500	7500	460/3/60			7664
RDS8750	8750	575/3/60		81 x 164 x 99	7876
RDS10000	10000	230/3/60			9623
RDS11250	11250		12" Flange		9836
RDS12500	12500			81 x 202 x 99	

<sup>1</sup>Rated Flow Capacity – Conditions for rating above dryers are: compressed air at dryer inlet: 100 psig and 100°F saturated; ambient temperature: 100°F; cooling water temperature: 85°F; operating on 60 Hz power supply.



## CONTINUED COMMITMENT

A company history that dates back more than 165 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 165 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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Improvements and research are continuous at FS-Curtis. Specifications may change without notice.

ISO 9001  
ISO 14001

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