

# GS SERIES

## ROTARY SCREW COMPRESSORS



**VARIABLE SPEED DRIVE  
20-100HP**



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

**FS-CURTIS WAS FOUNDED ON BOTH.**

# A HISTORY OF

**1854**

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

**1857**

Earned Agricultural  
and Mechanical Fair  
award for excellence  
and quality

**1876**

Named Curtis  
and Co.  
Manufacturing

**1897**

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

**1914**

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

**1940**

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

**1955**

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



## **REAL-WORLD PEOPLE**

When you're successful, we're successful. That's why FS-Curtis listens. Trust and dependability are the foundations of our past and the fabric of our future, so you can count on being treated with the personal touch you deserve.

**“Trust and dependability are the foundations of our past and the fabric of our future.”**

**~ Brent Becker – President, FS-Curtis**



More than 150 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.

# EXCELLENCE

**1976**

Merged with Toledo Tools as Curtis-Toledo Inc.

**1979**

Introduction of Challenge Air Series reciprocating air compressors

**1995**

Began manufacturing and assembling Rotary Screw Air compressors

**2005**

Expanded global market reach by joining forces with Fusheng Industrial

**2006**

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

**2010**

Began assembling GS Variable Speed Rotary Screw compressors



## REAL-WORLD PRODUCTS

Take more than a century of experience building quality compressors, add in a staff that's listening to the needs of the market, and the result is a product lineup that's built for tough working conditions. No wonder so many customers around the world depend on FS-Curtis compressors day in and day out.

# THE PERFECT BLEND

## PRODUCTIVITY & PERFORMANCE

FS-Curtis is committed to quality, and that commitment shines through in every GSV Series compressor. Designed and built from the ground up to provide maximum performance and energy savings, the GSV Series features FS-Curtis exclusive DemandSmart™ Energy Management System and eCOOL® Technology. Plus, GSV Series compressors make life simple through easy installation and maintenance providing maximum uptime.



# GSV SERIES FEATURES AT A GLANCE

## DEMANDSMART™ ENERGY MANAGEMENT SYSTEM

*The ideal combination of Variable Speed Drive, Controller and Drivetrain.*

### VARIABLE SPEED DRIVE AND DRIVETRAIN

- Results in outstanding energy savings, day in and day out.
- Reduces life cycle costs.

### PRECISION-BUILT AIREND

- Exclusive slow-speed profile results in higher air delivery while reducing power consumption.

### AIMS PLUS CONTROLLER

- Reliable and easy to use.
- Sequencing of up to 8 compressors.

## eCOOL® TECHNOLOGY

*The ultimate in system protection and reliability.*

- Protects critical components from compressor-generated heat.
- Extends component life and reduces downtime.

## CUSTOMER-FOCUSED ENGINEERING

*Compact footprint for ease of installation and reduced costs.*

- Easily accessible parts to reduce maintenance time.
- Quiet operation to avoid interference with the work atmosphere.

## QUALITY COMPONENTS

*Built to the highest levels of dependability and reliability.*

- All components are generously sized and selected for the utmost in reliability.

## OPTIONAL INTEGRATED REFRIGERATED DRYER

*Saves floor space and reduces installation time and costs.*

- Drier air improves tool and equipment operation.



FS-Curtis is committed to quality, and that commitment is reflected in every GSV Series Compressor.



## ENERGY SAVINGS ARE SMART SAVINGS

Every dollar you save in energy costs is money that goes straight to your bottom line. And the FS-Curtis DemandSmart™ Energy Management System is designed to send plenty of energy savings your way.

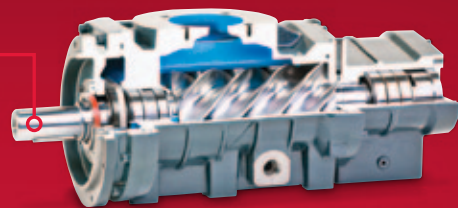
DemandSmart is an energy savings package made up of the controller, variable speed drive and airend to create greater overall efficiency. The innovative design maximizes energy savings and reduces overall operating costs.

---

## DemandSmart™ ENERGY MANAGEMENT SYSTEM

### PRECISION-BUILT AIREND — AN FS-CURTIS EXCLUSIVE

Proven in thousands of compressors worldwide, the FS-Curtis exclusive profile airend is part of the DemandSmart System. The direct-driven airend and drivetrain work together with the VSD to meet air demand when you need it.



Knowing that FS-Curtis uses the highest quality VFD components available gives our customers added peace of mind.



### AIMS PLUS CONTROLLER

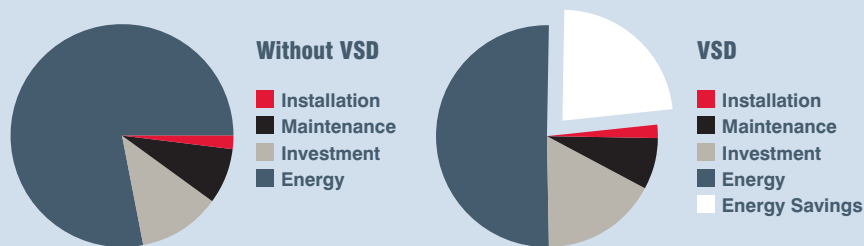
Increase productivity with the simple operation of the easy-to-use, text-based AIMS Plus Controller. Onboard diagnostics and integrated service timers make routine maintenance simple.

## INTELLIGENT VARIABLE SPEED DRIVE

One of the ways the DemandSmart system in GSV Series compressors maximizes energy savings is with a variable speed drive (VSD). The VSD allows you to match your energy usage to current system demands, eliminating the need to overpressure the system. So you'll save money by not wasting energy.

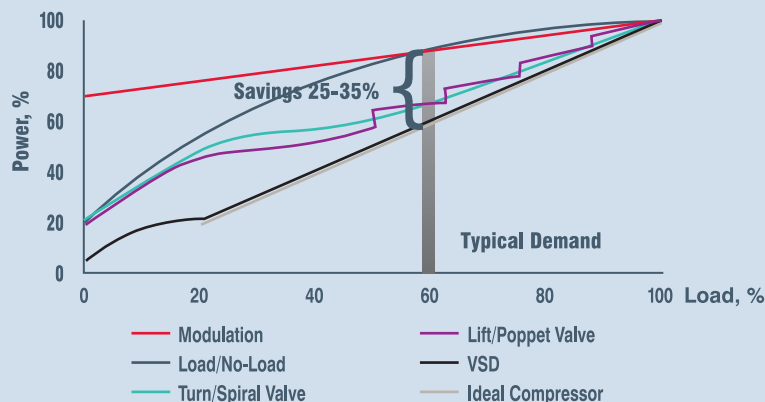
In addition, the soft starting capability of FS-Curtis' VSD reduces inrush current requirement, decreasing your power demand — and, of course, increasing your energy savings.

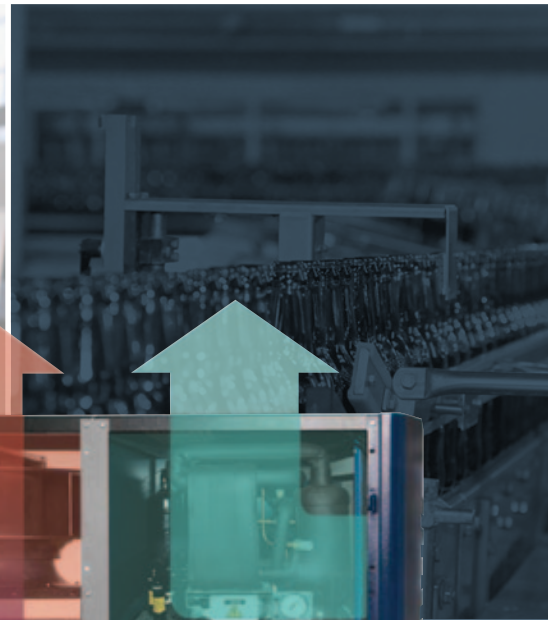
GSV SERIES WITH VSD LIFE CYCLE COST OVER 5 YEARS



- With no need for gears or belts, the VSD — coupled with the direct-drive airend — offers faster response and greater operational efficiency
- The VSD's lower airend speeds help reduce noise
- Matching the operating speed with changes in demand reduces component wear
- With DemandSmart technology, the VSD enhances quality by stabilizing air pressure at 1.5 psi increments
- Automatic protective features with built-in harmonic filtration eliminate the need to source additional corrective devices by protecting the unit from low line voltage, loss of a phase in power supply, high temperature and high pressure

ENERGY SAVINGS WITH VSD COMPARING LOAD/NO-LOAD POWER CONSUMPTION





eCool technology maximizes cooling airflow for greater energy efficiency, improved reliability and extended service life.



## eCOOL® TECHNOLOGY— A COOL INNOVATION

Compressors generate heat. FS-Curtis' exclusive eCOOL technology provides protection from heat. By combining smart compressor layout with intelligent component selection, eCOOL technology maximizes cooling airflow for greater energy efficiency, improved reliability and extended service life.

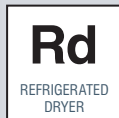
### EXTENDED SERVICE LIFE

eCool technology reduces thermal stress and increases service life up to 50% longer for motors and electrical components and up to 30-50% longer for bearings, hoses and seals.



# ADDED VALUE IN EVERY FEATURE

It's easy to see the value in the overall quality of FS-Curtis equipment. But that's just the beginning. FS-Curtis equipment is also designed to deliver energy savings and peace of mind that add up to even more value.



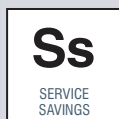
## OPTIONAL INTEGRATED REFRIGERATED DRYER

- Stabilizes the dew point for better air quality
- Drier air improves tool and equipment operation
- Reduces corrosion and prolongs tool and equipment life
- Single-point installation
- Environmentally friendly R134a refrigerant increases efficiency while reducing global warming
- Integrated dryer bypass is standard



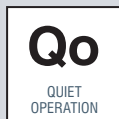
## COMPACT FOOTPRINT

Save money by saving space. The compact, intelligent GSV Series design takes up less space on your factory floor, reduces freight and installation costs, and attaches easily to your existing air ducts.



## SERVICE SAVINGS

Reduced maintenance time equals reduced unnecessary downtime — which, of course, can increase overall productivity. Thanks to the unique design of GSV Series equipment, most routine maintenance takes 30 minutes or less.



## QUIET OPERATION

The quality components that give FS-Curtis equipment reliable, long-term performance also help reduce noise. With 30% fewer moving parts, ultra quiet centrifugal fan, nylon laminated sound insulation, air intake attenuators and a vibration-damped sub-frame with double dampeners, the GSV Series operates smoothly and quietly day in and day out.



## ROBUST CONSTRUCTION

Strength and reliability are built into every FS-Curtis product. Compare FS-Curtis units with other brands and you'll see that FS-Curtis uses heavier-gauge metal, heavier-duty components and more. Simply put, FS-Curtis equipment is built to work and keep working.

# TECHNICAL DATA

MODEL	CAPACITY FAD*(CFM)						MOTOR POWER HP	SOUND LEVEL** db(A)	DIMENSIONS (L x W x H) inches	WEIGHT (LBS)	
	100 psi		125 psi		150 psi					w/o dryer	with dryer
	min	max	min	max	min	max					
GSV20	32	91	30	84	29	74	20	66	61.0 x 34.6 x 62.6	1620	1816
GSV25	32	113	30	106	29	95	25	66	61.0 x 34.6 x 62.6	1620	1816
GSV30	32	131	30	124	29	116	30	66	61.0 x 34.6 x 62.6	1620	1816
GSV40	60	190	56	180	50	162	40	70	69.0 x 37.0 x 68.5	2300	2640
GSV50	60	236	56	220	50	200	50	70	69.0 x 37.0 x 68.5	2300	2640
GSV75	115	353	115	332	115	299	75	73	93.9 x 47.6 x 72.6	4000	4550
GSV100	98	474	98	430	98	390	100	73	93.9 x 47.6 x 72.6	4000	4550

STANDARD FEATURES

- DemandSmart Technology
  - Energy-saving VSD
  - Precision manufactured FS-Curtis direct-drive airend
  - High-efficiency TEFC motors (inverter rated)
  - AIMS Plus controller
- eCOOL Intelligent Cooling Technology
- Integrated suction valve assembly
- Integrated discharge valve
- Premium filtration system
- High-performance synthetic lubricant oil
- Integrated oil thermostat for increased efficiency and leak-free operation
- Washable cabinet air filters
- Heavy-duty air intake filter
- Vibration-damped sub-frame
- Air-cooled oil cooler and aftercooler
- Laminated sound-insulation lining in enclosure cabinet
- Quiet centrifugal cooling fan
- High-quality stainless steel tubing and hydraulic fittings for leak-free operation
- Noise isolator pads under separator tank

PRECISION COMPONENTS

Every component has been carefully designed to offer you the highest level of reliability and efficiency.



OPTIONAL EQUIPMENT

- Integrated refrigerated dryer with dryer bypass system
- Moisture separator
- Zero-air-loss drains
- Food-grade lubricant

\* Capacity (FAD) measured in accordance with ISO 1217, Ed 3, Attachment C 1996, Ref. condition: Dry air, suction pressure 1 bar.

\*\* Sound Level in accordance with ISO 2151, edition 2004 with a tolerance of 3 dB(A). Due to continuous product development at FS-Curtis, design and specifications are subject to change without notice.



## EASY TO WORK WITH

Just as you get personal attention from FS-Curtis when selecting equipment, you're also supported worldwide by great people. You can count on the global FS-Curtis staff and representatives to listen to your needs and work with you to develop the solution that's best for your situation. Our people are committed to serving you well and FS-Curtis provides extensive training in the field and at our St. Louis headquarters to ensure that you have the support you need.

In addition, authorized FS-Curtis distributors use genuine FS-Curtis parts, lubricants and filter kits to maximize the service life of your equipment. And with a nationwide network of service centers, you don't need to worry about added downtime waiting for parts.

## QUALITY PARTS MATTER

At FS-Curtis, quality is never compromised. That's why we control production using ISO 9001:2008 and ISO 14001:2004 standards, and it's also why we maintain a large inventory of replacement parts.

Using only genuine FS-Curtis replacement parts not only helps ensure continued reliable service of your equipment, but the large inventory also helps keep parts affordable and available. We're dedicated to maximizing your productivity, and that includes maximizing your uptime.

---

**Through the dependability of our people and our quality-focused manufacturing, FS-Curtis will continue to be a trusted name serving even more markets through our ever-growing global presence.**



**CURTIS-TOLEDO®, INC.**

1905 KIENLEN AVENUE | ST. LOUIS, MO 63133  
314-383-1300 OR 800-925-5431

WWW.FSCURTIS.COM | INFO@FSCURTIS.COM

GSV LITERATURE: FORM NO. GSV0212 R1  
Improvements and research are continuous at FS-Curtis. Specifications may change without notice.

ISO 9001  
ISO 14001

© 2012 CURTIS-TOLEDO, INC.