



**FS**CURTIS



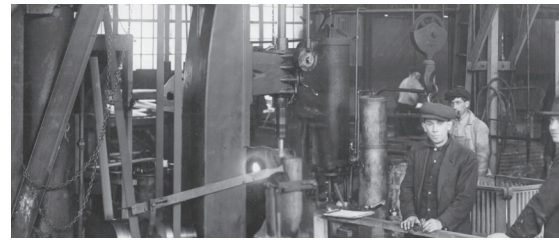
**TWO STAGE ROTARY  
SCREW AIR COMPRESSORS  
55-250 kW**

**NX**THE SERIES



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

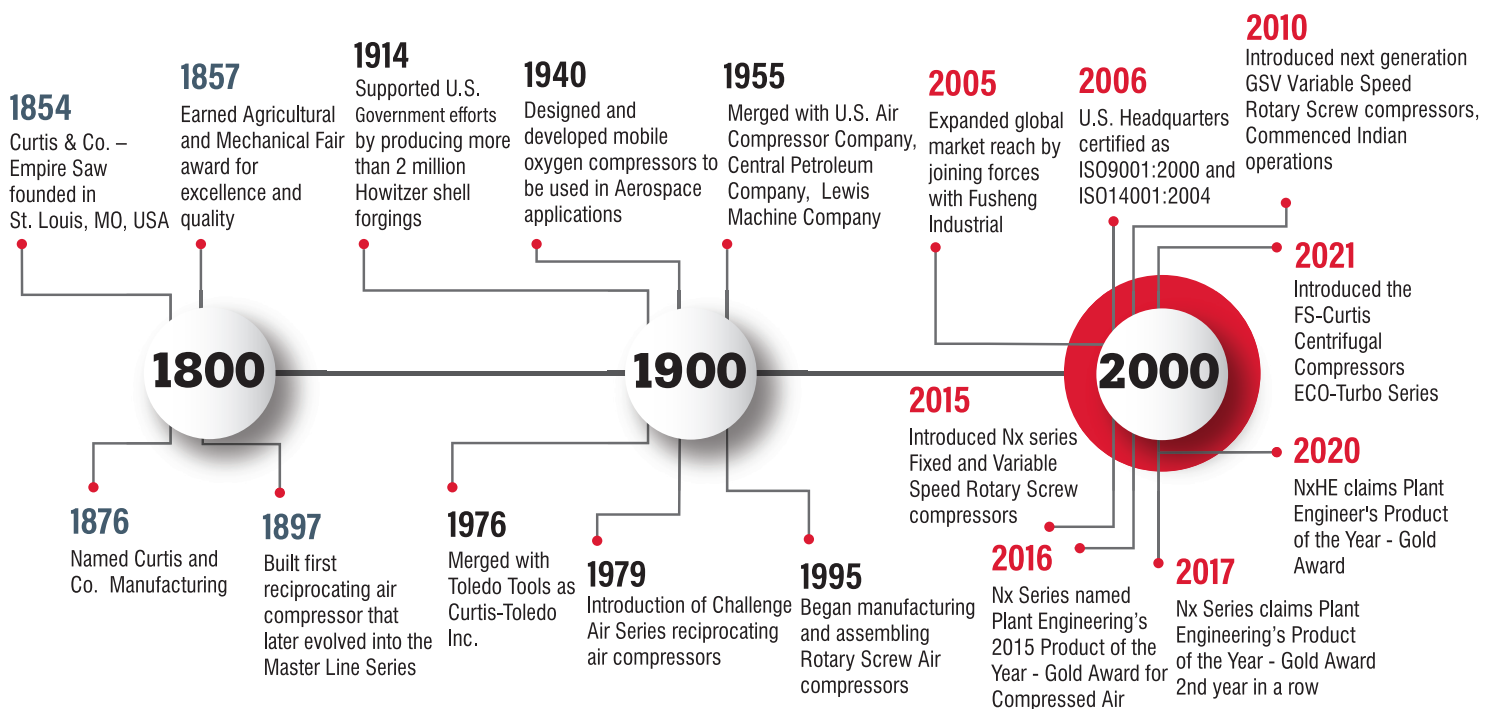
**FS-CURTIS WAS  
FOUNDED ON BOTH.**



More than 170 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.

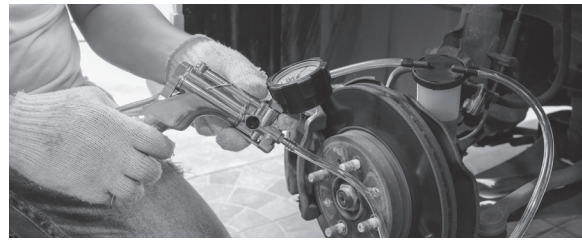
Over the decades, the company and its products have evolved through innovation and new technologies. But those commitments to quality and service remain unchanged. Today, just as in 1854, FS-Curtis customers can depend on our products for reliable, long-term service. Equally as important, they can depend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

## A HISTORY OF EXCELLENCE



# SETTING THE STANDARD FOR ENERGY EFFICIENCY WITH

# TWO-STAGE COMPRESSION



The FS-Curtis NxHE Series two-stage rotary screw air compressors are heavily relied upon in industry for their legendary reliability and highly energy efficient operation. NxHE splits the compression process into two stages and removes heat of compression in between. The result is less input horsepower required to generate the same flow as single stage. Splitting the compression process over two stages also reduces the compression ratio, which results in lower thrust loads on the bearings and longer air end life. NxHE two-stage compressors offer unparalleled energy efficiency in a reliable long life industrial air compressor - making it ideal for high flow base load industrial applications.

More acfm per horsepower than single stage equals power savings, and the ability to select a smaller compressor

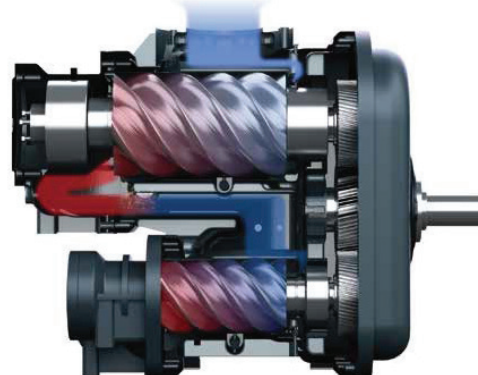
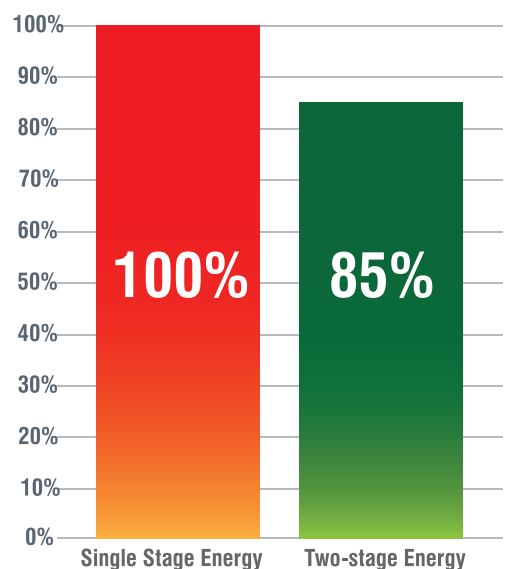
Lower specific power/higher Isentropic Efficiency than single stage equals power saving

Two-stage air end life is considerably longer than its single stage counterpart due to reduced thrust loads on bearings (lower compression ratio in each stage)

Over / Under design allows for inter-stage cooling which removes heat of compression and improves overall efficiency

Independent bearing lubrication system delivers oil to critical wear points to extend air end life

Compared to same size single stage, the NxHE two-stage compressor delivers up to 15% more flow, which means you can select a smaller two-stage NxHE to achieve up to 15% power savings!



## FEATURES AT A GLANCE

### dB A SHIELD NOISE REDUCTION

Designed for quiet operation.

- Centrifugal cooling fan and compartmentalized package air flow make for extremely smooth and quiet operation.
- Extra thick, laminated oil-proof sound insulation greatly reduces noise

### eCOOL® TECHNOLOGY

The ultimate in system protection and reliability.

- Protects critical components from compressor-generated heat
- Intelligent component layout optimizes cooling air flow through the package and improves overall efficiency and reliability.
- Extends component life and reduces downtime

### QUALITY COMPONENTS

Built to the highest levels of dependability and reliability.

- Exclusive FS-Curtis air end utilizes precision cut rotor profiles to maximize efficiency.
- Premium efficiency TEFC (IP55, Class F) main motor protects against dust ingress and high operating temperatures, prolonging the life of the motor.
- Components are generously sized to reduce pressure drop throughout the package, increasing overall efficiency.

### SUPERIOR PACKAGE DESIGN

Designed for low cost of ownership and sustainable reliability.

- Pulsation-free compressed air
- 100% continuous duty
- Easy to maintain
- Controls
- Load/Unload
- Modulation
- Variable Speed
- Energy efficiency at full load delivers more air for the money in a smaller footprint



### DEMANDSMART ENERGY MANAGEMENT SYSTEM

The ideal combination of variable speed drive, controller and drivetrain.

- Greatly reduces energy consumption at part load
- Reduces lifecycle costs by limiting energy consumption

### iCOMMAND CONTROLLER

- Intuitive and easy to use full color HMI
- Expanded functionality for integration with higher level communication systems
- Trending and graphing capabilities
- Precisely controls and protects your compressor



### Extended Warranty Program

All NX Series products are backed by an optional industry leading warranty:

Just register the machine online, Use only FS-Curtis Genuine Parts and Lubricants per the required maintenance schedule, and you will have peace of mind knowing that your machine is backed by the NxGEN Warranty.

To know more about extended warranty, please contact our nearest sales representative.

# FS-SMARTCONNECT



FS-SmartConnect is an intuitive IoT monitoring feature that continuously captures live data from the compressor. With FS-SmartConnect you can ensure optimized performance, efficiency and compressor health. The data collected from the compressor is sent to the cloud, where an online dashboard provides access to all connected devices. This cloud access offers around-the-clock monitoring, ensuring the health of your compressed air assets in real time!

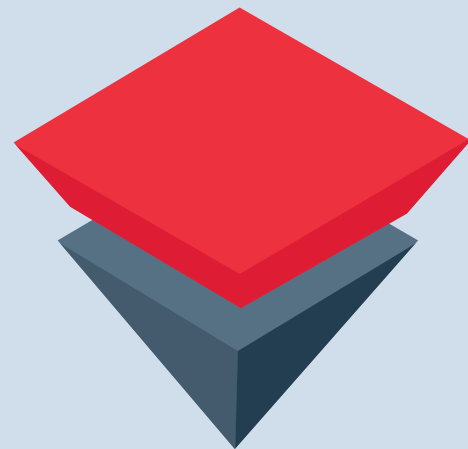
Improve production efficiency and maximize uptime

- Achieve sustainable reliability
- Monitor the health of your compressed air assets in real time
- Partner with your service provider for peace of mind
- Customer access to the cloud with customized alerts



## CHOOSE YOUR SERVICE LEVEL

With FS-SmartConnect, you have two service platforms to choose from depending on the level of detailed reporting needed.



### FS-SMART CONNECT PREMIUM

#### FS-SMARTCONNECT PREMIUM

- Customer Access to the Cloud
- Customized Alerts
- FS-Curtis Technical Support
- Energy Assessment of Compressor Unit(s)
- Detailed Compressor Performance Report

### FS-SMARTCONNECT INSIGHT

- Customer Access to the Cloud
- Customized Alerts
- FS-Curtis Technical Support

## iCOMMAND CONTROLLER



Designed to help you optimize performance to save energy, limit downtime and save YOU money!

The all new iCommand controller delivers improved flexibility and functionality with intuitive navigation and simple control. The full-color screen HMI displays real time information about current compressor operating status and puts complete compressor control at your fingertips!

**CONTROL YOUR COMPRESSOR,  
DON'T LET IT CONTROL YOU.**

### Expanded Functionality



- RS485 communication interface increases your ability to connect to higher level communications
- Eight (8) analog inputs and eight (8) analog outputs brings flexibility and the ability to trigger critical functions in your compressed air system based on air compressor status
- Serial communication with GPRS allows live data exchange with cloud server

### Trending & Graphing Capabilities



- Real time and historical data trending keeps your finger on the pulse of your entire compressed air system
- Continuously tracks pressure, temperature and usage to easily diagnose and optimize your compressed air system

### Important Features



- Auto restart (after power outage)
- Restart delay
- Remote on/off
- Remote loaded/unloaded
- Operating mode selection
- Sequence control of up to 8 FS-Curtis air compressors
- Calendar/time-based system operating schedule
- Antifreeze protection
- Realtime maintenance interval tracking and alerts
- Main motor and Fan motor current monitoring
- Main motor bearing and winding temperature monitoring



# NXHE SERIES

TWO STAGE ROTARY SCREW AIR COMPRESSORS 55- 250 kW

# E-COOL TECHNOLOGY

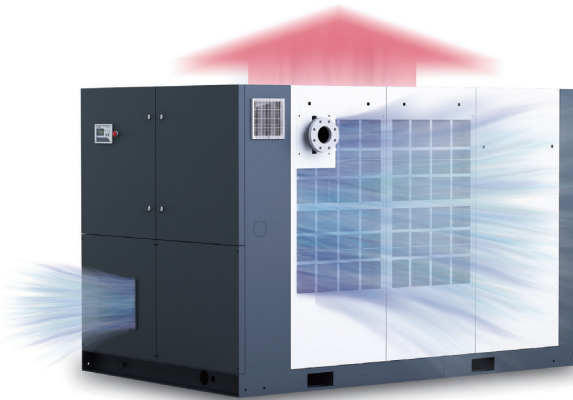
## A COOL INNOVATION

Compressors generate heat. FS-Curtis' exclusive eCOOL technology provides protection from heat and reduces thermal stress.

By combining smart compressor layout with intelligent component selection, eCOOL technology maximizes motors and electrical components and up to 30-50% longer for bearings, hoses and seals.



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



## VSD control fan design

Fans are activated depending on the ambient temperature and running temperature. The temperature difference between different regions are managed more effectively and energy is conserved

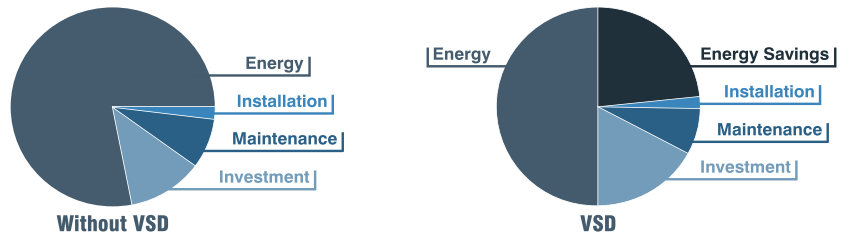


# OPTIONAL DEMANDSMART™ SYSTEM

## ENERGY SAVINGS ARE SMART SAVINGS

Take control of your energy savings with our optional DemandSmart™ Energy Management System, which includes the controller, variable- speed drive, and airend to create greater overall efficiency. This innovative design maximizes energy savings and reduces overall operating costs.

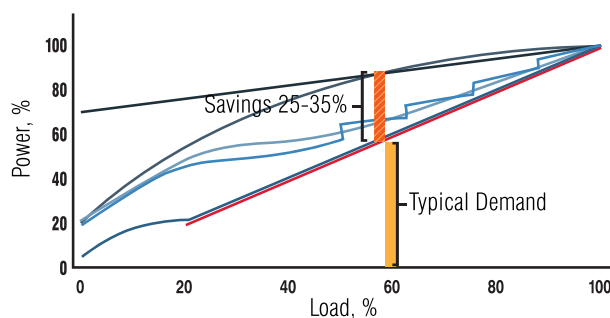
NX SERIES WITH VSD LIFE CYCLE COSTS OVER 5 YEARS



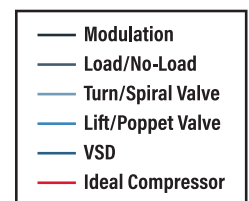
## INTELLIGENT VARIABLE SPEED DRIVE

Take control of your energy savings with our optional DemandSmart™ Energy Management System, which includes the controller, variable- speed drive, and airend to create greater overall efficiency. This innovative design maximizes energy savings and reduces overall operating costs.

- The VSD - time-proven directly coupled design - offers faster response and greater operational efficiency
- Variable operation slows airend speed, which lowers energy costs and reduces 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 psi increments
- Built-in DC choke protects against harmonic disturbances and eliminates the need to source additional corrective devices.



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



## TECHNICAL SPECIFICATIONS

### FIXED SPEED

MODEL	CAPACITY FAD (CFM)*#				NOMINAL MOTOR POWER	NOISE LEVEL**	DIMENSIONS	WEIGHT
	7 Bar (g)	8 Bar (g)	10 Bar (g)	12.5 Bar(g)				
NXHE- 55	459	424	371	332	55	75	2400 x 1380 x 1850	2355
NXHE- 75	537	501	449	396	75	75	2400 x 1380 x 1850	2475
NXHE- 90	703	636	554	487	90	80	2980 x 1800 x 1805	3970
NXHE- 110	844	788	682	593	110	80	2980 x 1800 x 1805	4070
NXHE- 132	1024	936	826	724	132	80	3300 x 2120 x 1998	5050
NXHE-160	1271	1187	1045	918	160	83	3300 x 2120 x 1998	5100
NXHE- 200	1589	1483	1335	1165	200	85	3700 x 2100 x 2100	7000
NXHE-250	2013	1872	1660	1483	250	85	3700 x 2100 x 2100	7200

### VARIABLE SPEED

MODEL	CAPACITY FAD (CFM)*				NOMINAL MOTOR POWER	NOISE LEVEL**	DIMENSIONS	WEIGHT
	7 Bar (g)	8 Bar (g)	10 Bar (g)	12.5 Bar(g)				
NXHE- 55	138~459	127~424	111~371	100~332	55	75	2400 x 1380 x 1850	2410
NXHE- 75	161~537	150~501	135~449	119~396	75	75	2400 x 1380 x 1850	2490
NXHE- 90	211~703	191~636	166~554	146~487	90	80	3250 x 1800 x 1805	4070
NXHE- 110	253~844	236~788	204~682	178~593	110	80	3250 x 1800 x 1805	4170
NXHE- 132	307~1024	281~936	248~826	217~724	132	80	3500 x 2120 x 1998	4976
NXHE-160	381~1271	356~1187	314~1045	275~918	160	83	3500 x 2120 x 1998	5150
NXHE- 200	477~1589	445~1483	400~1335	350~1165	200	85	3900 x 2100 x 2100	7800
NXHE-250	604~2013	562~1872	498~1660	445~1483	250	85	3900 x 2100 x 2100	8100

\* FAD measured as per ISO1217, annex C, latest edition.

\*\*Noise level determined according to ISO 2151 in free field conditions, tolerance of 3 dB

Water cooled options details are available on request

Details of 315 kW,355 kW and 400 kW models are available on request

Due to continuous engineering improvements, design and specifications are subject to change without prior notice

# INDUSTRY APPLICATIONS

FS-Curtis has earned the reputation for building the most rugged industrial-duty compressor you can buy. Our professional engineering staff and factory-trained distributor network are committed to supplying you with a complete offering of the very best in compressed air equipment.

- **Industrial Manufacturing**
- **Power Generation**
- **Food & Beverage**
- **Paper**
- **Mining**
- **Automotive**
- **Fabricated Metals**
- **Natural Gas Industry**
- **Textiles**
- **Printing and Packaging**



# CONTINUED COMMITMENT

A company history that dates back more than 170 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 170 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)

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

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