

NXVi SERIES

DIRECT DRIVE, VARIABLE SPEED PERMANENT MAGNET MOTOR ROTARY SCREW AIR COMPRESSOR

15-75 KW





**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

1976

Merged with
Toledo Tools as
Curtis-Toledo Inc.

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.



More than 169 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

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 Commenced Indian operations

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



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.

INNOVATIVE COMPACT VERTICAL DESIGN POWERED BY EFFICIENCY

FS-Curtis NXVi Series air compressors are renowned worldwide for their legendary reliability. Equipped with a patented advanced airend, an exceptionally efficient permanent magnet motor driven by a smart VFD, and intelligent controller, FS Curtis NXVi series delivers unparalleled performance in the toughest conditions.

FS-Curtis NXVi Series air compressors operate at peak efficiency even with 80% reduction in air output and an advanced PID control algorithm helps to generate stable air pressure.

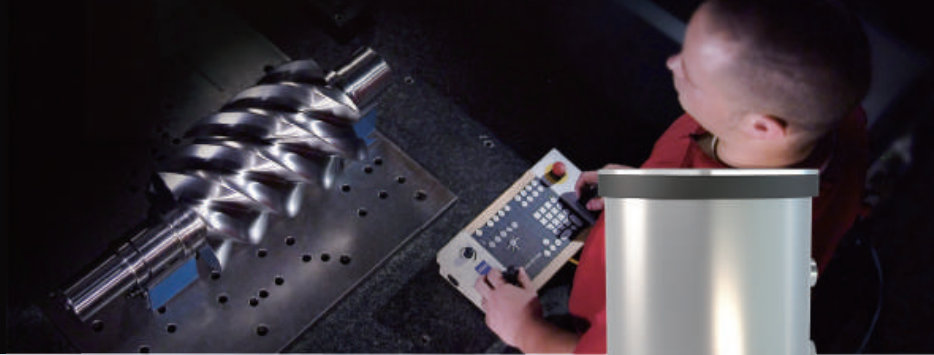
The compact vertical design saves valuable floor and workspace, provides easy maintenance access, and reduces total cost of ownership.

Count on Dependable FS Curtis NXVi series air compressors for steady performance, quiet operation, a quicker return on investment and unmatched durability.



STEADY **PERFORMANCE**
LEGENDARY **RELIABILITY**
UNMATCHED **DURABILITY**

Integrated Design



- The integrated design of Permanent Magnet Motor and Airend offers the best transmission efficiency.
- The vertical design ensures that the lubricating oil on the end face of the permanent magnet motor and the spiral rotor is fully infiltrated and further improves the cooling effect of the lubricating oil.
- Compact vertical design with fewer parts, no gears or belt results in reduced maintenance needs.
- It boasts VFD starting for smooth operations, precise constant air pressure control, and energy-saving capabilities, all enhanced by its fully enclosed variable frequency drive design, enabling reliable performance even in harsh environments.

Permanent Magnet Motor

- Efficiency of PM motor exceeds super premium (IE4) efficiency class
- Fully enclosed lightweight design
- Energy efficient over a wide speed range
- IP66 protection class rating
- Oil cooled - no cooling airflow required
- Oil-lubricated motor means no(re)greasing and reduced downtime.
- Longer service life

Patented Airend

- High precision airend designed at R&D center, Germany.
- 5:6 rotor profile air end with large rotor – low speed design guarantees highest performance, lesser vibrations, and longer service life.
- The lubricating oil is injected in compression chamber in the direction of air which significantly reduces oil resistance in the compression process and maximizes the efficiency.

Energy Saving Service-Friendly Package Design

Each component of the FS Curtis NXVi permanent magnet variable speed drive air compressor is meticulously crafted from design concept to actual application to ensure remarkable efficiency, resulting in higher energy-saving levels. The system and structure layout follows the principles of high reliability, high durability, and low noise. The NXVi series offers a space-saving smaller footprint that is easy to install and service friendly.

- Patented intake valve having high efficiency and energy-saving design reduces pressure loss, turbulence and noise.
- Air filter is made of multilayer nanocomposite material and has higher filtration levels, greater strength, longer service life, and significantly lower suction resistance.
- The separator, minimum pressure valve, and thermostatic valve are integrated, reducing the connections by up to 90%.
- Heavy-duty industrial hose assemblies have hydraulic fittings and can be reused.
- Non-asbestos gaskets with high temperature and pressure resistance are used to protect operators.
- The air inlet is equipped with a front filter screen to effectively prevent dust from entering, ensuring the internal cleaning of the air pressure system and ensuring the reliable operation of the unit.



INTELLIGENT AIMS Plus CONTROLLER

The Attentive controller provides a great variety of control and monitoring features, enabling you to enhance your compressor's efficiency and reliability significantly.

Using an advanced PID control algorithm controller controls the main drive motor and regulates system pressure within a predefined and narrow pressure band to maximize energy efficiency.

- Simple and easy to operate HMI shows major operation messages
- Dual pressure set points
- Remote control status
- Manual and fully automatic mode
- Auto restart after power failure
- RS-485 Modbus communication interface & sequence control (up to 8 compressors)
- Optional GoService platform - Compressor IoT Smart Service platform, hosted on the Cloud



Protection Features

- Phase sequence protection
- Malfunctioning of pressure and temperature sensor
- Frost Protection
- High discharge air temperature/pressure
- High system pressure and temperature
- Main Motor /fan motor overload
- Main motor and fan motor current monitoring
- High motor temperature
- Low oil pressure
- Input power supply fluctuation

Service & Maintenance Prompts

- Alarm/trip history records
- Motor service & maintenance time
- Compressor service & maintenance time
- Oil filter service & maintenance time
- Lubricating oil service & maintenance time
- Oil fine separator service & maintenance time
- Air filter service & maintenance time

eCOOL® 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 cooling airflow for greater energy efficiency, improved reliability and increases service life up to 50% longer for 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.



dBA SHIELD NOISE REDUCTION A SOUND INVESTMENT

The NXVi series' combines a unique bionic design axial flow fan with airflow baffling and optimized design of independent air inlet duct for sound insulation. It is so quiet that you can install the unit closer to where you want to use it. It can be used as on-site air compressor to further save working space and reduce the loss in pipelines.



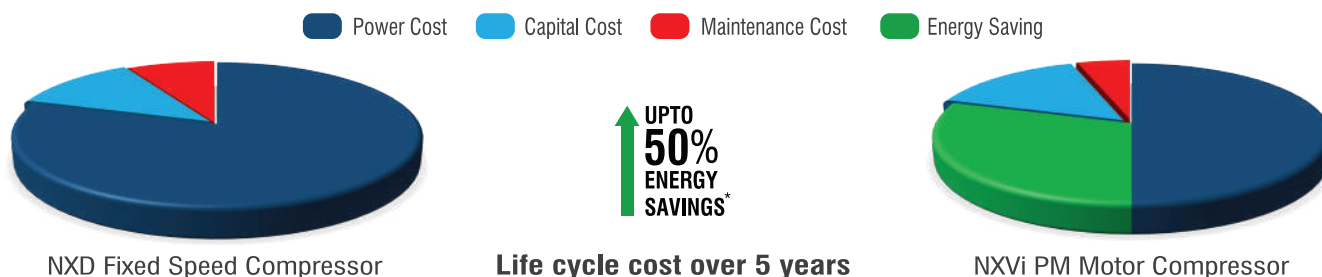
NXVi PM Motor Variable Speed Drive Air Compressor Series

An ECO-Friendly Smart Solution

Over 70% of a compressor's lifecycle cost is attributed to its energy consumption, and compressed air generation significantly contributes to a plant's total electricity bill. To significantly reduce energy costs and CO2 emissions, you can depend on the FS Curtis NXVi compressors, which offer remarkable energy savings of up to 50% in variable demand applications when compared to conventional fixed-speed compressors.

Pay only for the Air you Use

Variable speed drive of NXVi lowers the speed of airtend to modulate the output based on Real Time air demand. Thus substantially reducing the power consumption and wear. Experience optimal performance while paying only for the air you use, making the NXVi an ideal solution for maximizing energy savings and extending equipment lifespan.



TECHINCAL DATA

Model	Capacity FAD* (CFM)					Power		Noise Level** dB(A)	Dimensions	Weight (kg)
	5 Bar (g)	7 Bar (g)	8 Bar (g)	10 Bar (g)	12.5 Bar (g)	kW	hp		Length x Width x Height (mm)	
NXVi 15	19-90	19-77	18-76	18-70	16-60	15	20	70	690x660x1585	320
NXVi 18	41-142	34-114	31-107	25-88	23-78	18.5	25	70	800x790x1760	450
NXVi 22	43-146	42-145	41-140	37-126	30-103	22	30	70	800x790x1760	450
NXVi 30	67-232	60-207	57-195	49-167	42-143	30	40	72	940x850x1805	602
NXVi 37	75-258	74-254	69-237	60-207	51-176	37	50	72	940x850x1805	602
NXVi 45	103-353	90-309	84-287	75-256	63-214	45	60	72	1305x1105x1892	1100
NXVi 55	132-454	114-392	108-369	89-306	75-259	55	75	73	1395x1155x2000	1500
NXVi 75	165-568	148-509	142-487	123-422	104-356	75	100	73	1395x1155x2000	1500

* FAD Measured as per ISO1217, annexC, latest edition

**Noise level determined according to ISO 2151 in free field conditions, tolerance upto + -3 dB

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



CONTINUED COMMITMENT

A company history that dates back more than 169 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 169 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.



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