

NX ULTRA SERIES

**FIXED AND DIRECT DRIVE VARIABLE SPEED PERMANENT
MAGNET MOTOR ROTARY SCREW AIR COMPRESSORS**

4-45kW FIXED SPEED

6-75kW VARIABLE SPEED





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

FS-CURTIS WAS FOUNDED ON BOTH.

A HISTORY OF

1854

Earned Agricultural and Mechanical Fair award for excellence and quality

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

1857

1876

Named Curtis and Co. Manufacturing

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

1897

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

1940

1955

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

Merged with Toledo Tools as Curtis-Toledo Inc.

1979

1976

Introduction of Challenge Air Series reciprocating air compressors



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 160 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

1995

Expanded global market reach by joining forces with Fusheng Industrial

2006

Introduced next generation GSV Variable Speed Rotary Screw compressors

2015

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

2017

NxHE claims Plant Engineer's Product of the Year - Gold Award

2021

2005

Began manufacturing and assembling Rotary Screw Air compressors

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

2010

Introduced Nx series Fixed and Variable Speed Rotary Screw compressors

2016

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

2020

Introduced the FS-Curtis Centrifugal Compressors ECO-Turbo Series

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.



HIGH-PERFORMANCE LEGENDARY RELIABILITY

POWERFUL PERFORMANCE

FS-Curtis Nx(V) series air compressors are renowned world wide for their legendary reliability and highly energy efficient operation. Equipped with an integrated patented advanced airend & an exceptionally efficient permanent magnet motor, a smart VFD, and an intelligent controller, FS Curtis Nx(V) series delivers unparalleled energy saving performance in the toughest conditions.

FS-Curtis Nx(V) 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 Nx(V) series air compressors for steady performance, quiet operation, a quicker return on investment and unmatched durability.





NX SERIES FEATURES AT A GLANCE

dBa shield noise reduction

Designed for quieter operation

- Extra thick sound installation
- Axial fan with unique bionic design of blades reduces noise
- Independent air inlet with sound muffling
- Can be installed in applications where dBA level is critical
- Can be used as an onsite compressor to reduce losses due to leakages in pipeline

eCOOL® Technology

The ultimate in system protection & reliability

- Protects critical components from compressor-generated heat
- Compartmentalized air flow design and standard aftercooler
- Extends component life and reduces downtime

Quality components

Build to the highest level of dependability and reliability

- Maintenance free patented intake valve with energy-saving design and streamline flow 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.
- High efficiency integrated air/oil separator with 1-3 ppm carryover
- The separator, minimum pressure valve, and thermostatic valve are integrated, reducing the connections by up to 90%.
- Energy-efficient oversized cooler
- Heavy-duty industrial hose assemblies with leak-free fittings
- Durable powder-coat painted enclosure
- Non-asbestos gaskets with high temperature and pressure resistance are used to protect operators.

New Integrated design of air end and PM motor

Designed for maximum performance, energy efficiency with reliability

- Coupling free design offers best transmission efficiency
- High efficiency precision built air end with patented 5:6 rotor profile
- Efficiency of oil-cooled PM motor is close to IE5 efficiency class
- Maintenance free design reduces downtime

Ease of maintenance

Designed for low cost of ownership, easy service little and little down time

- Easy access to all preventative maintenance components
- Controller alerts for maintenance intervals
- Every component is meticulously designed to have minimal or no downtime
- Easy to install Space-saving smaller footprint

Intelligent AIMS Plus controller

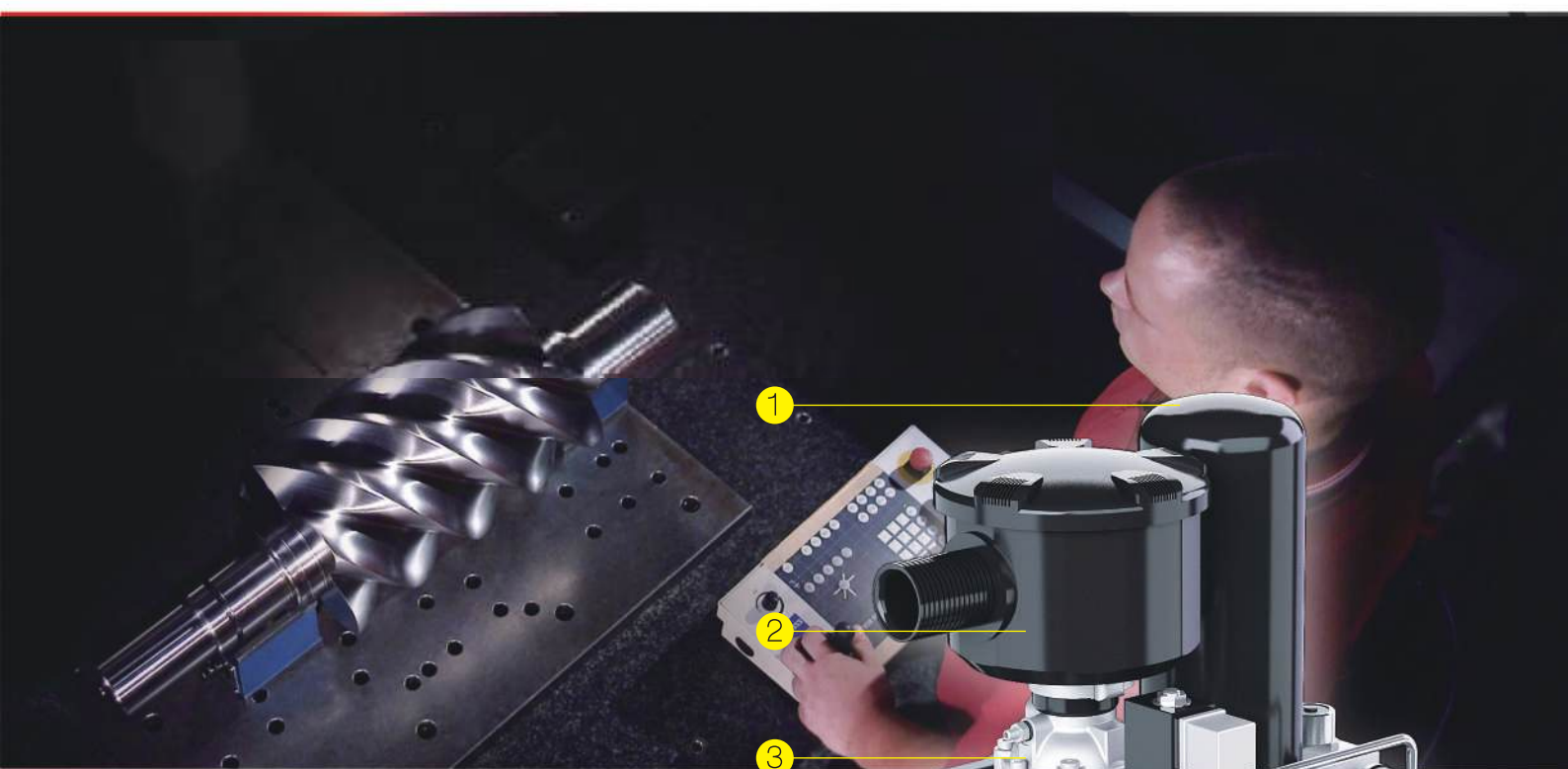
- Intuitive and easy to use
- Variety of control, monitoring and protection features
- RS485 Modbus communication interface & sequence control

Demandsmart energy management system

The ideal combination of variable speed drive, controller and drivetrain

- Super premium PM motor is energy efficient over a wide speed range
- Greatly reduces energy consumption at part load
- Reduces lifecycle costs by limiting energy consumption
- Fully enclosed variable drive enables reliable performance in harsh environments
- Precise air pressure control
- Wide working pressure range

Stable air pressure, steady airflow and quieter, continuous-duty operation are just a few of the advantages you get.



ALL-IN-ONE

- Integrated high efficiency air-end. Rotary screw air-end, oil receiver, air/oil separator, oil filter, air filter and suction valve are integrated into one state-of-the-art compressor unit without cooling and electric driven systems.
- External mounted filters are designed for easy maintenance, and there is no pressure lose in inner piping. Footprint saving designed is the first key point of smaller high efficiency air compressor, and it also provides the sufficient space for maintenance.

1 Air/Oil Separator

- Oil content in compressed air is controlled under a ideal range.
- Spin-on air/oil separator is designed for fast, easy replacement.
- Premium filtration efficiency and long service life.

3 Inlet Valve

- Fusheng patent inlet valve uses streamline flow channel design, reducing the pressure drop, turbulence and minimizing suction noise to increase the suction efficiency.

2 Air Filter

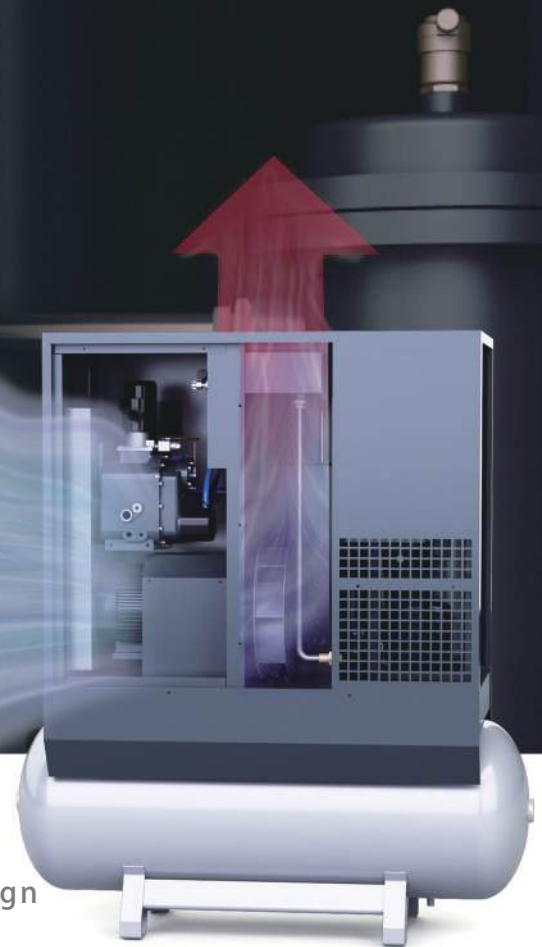
- Special paper media cartridge, easy filter change-out, convenient maintenance, absolute protection of downstream components, long service life.

4 Oil Filter

- Premium filtration reduces the residual constituents in compressed air. Effectively to remove particle and protection for all working parts.

Unique cooling flow design silent

- Hot and cold separation arrangement, the higher the temperature of the cooler is independent of a room, to achieve separation of hot and cold.
- Independent cooling duct directly to the heat generated by the moving parts just to take away, and the formation of high-speed convection of air, the cooling effect of the cooler to the extreme.
- Lower compression chamber temperature to inhale higher density, so that the suction efficiency optimization.



Efficient and environmentally friendly system design

- The system and structure layout follow the principle of high reliability, high efficiency and low noise.
- Adopt joint material that used Zinc to prevent corrosion and seal the end face to prevent leakage.
- Non-asbestos gasket with high temperature and pressure resistance to protect operators.
- From the design concept to the application of various components, fu sheng SA series has a more efficient performance.



Low Noise Level Design

- Whether configuration structure of air-end, or arrangement of cooling duct or framework of system, we eliminate noise from sound source. FSCURTIS Nx series air compressor has run low noise performance, giving you a quiet working environment.

Environmental protection refrigerant

- The refrigerant R134a is adopted in the cold dryer to protect ozone layer, which is approved and recommended by most countries.





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.

INTEGRATED DESIGN

Permanent Magnet motor and integrated design, without gear and belt, you will get best transmission efficiency.

VFD starting, stable operation, constant Air pressure control, save more energy.

Fully enclosed variable frequency drive design, even in harsh environment can also operate well.

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.

1



2

1

Powerful Magnet Motor

Oil-cooled magnet motor, the fully enclosed structure design, waterproof, dustproof, and the use of air compressor internal lubricating oil for heat dissipation, no excess oil cooling energy consumption, long service life, to ensure reliable energy saving effect.

2

Better Host Design

The lubricating oil injection of bearing and compression chamber has been accurately calculated, and the lubricating oil is injected in accordance with the compression direction of air, which significantly reduces unnecessary oil resistance in the compression process. With the consistent high-precision rotor of Fusheng, make the efficiency more superior.

Patented Inlet Valve



Streamline runner design, reduce the pressure loss, turbulence and noise in the work, high efficiency and energy saving.

Air filter Made Of Nanocomposite Material



Nanocomposite fiber multilayer materials are used. Higher filtration, greater strength, longer service life, and significantly lower suction resistance.

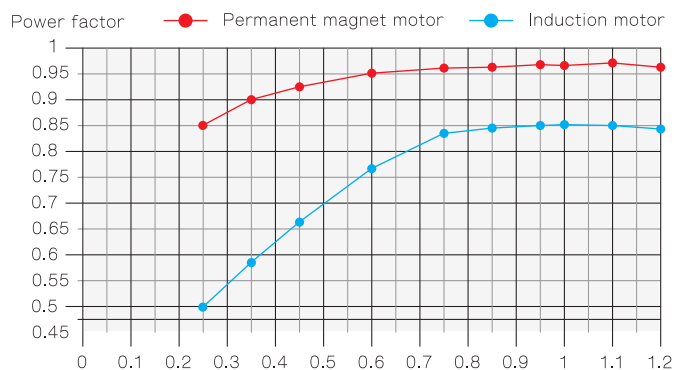
Efficient and environmentally friendly system design



- The system and structure layout follow the principle of high reliability, high efficiency and low noise.
- Adopt joint material that used Zinc to prevent corrosion and seal the end face to prevent leakage.
- Non-asbestos gasket with high temperature and pressure resistance to protect operators.
- Reasonable layout, small and light weight design, balance in reliability

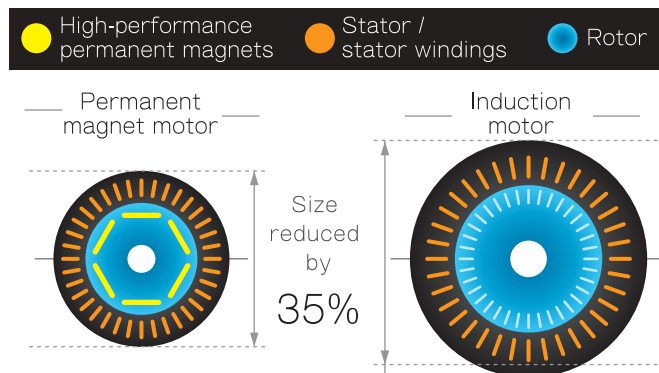
Highly efficient

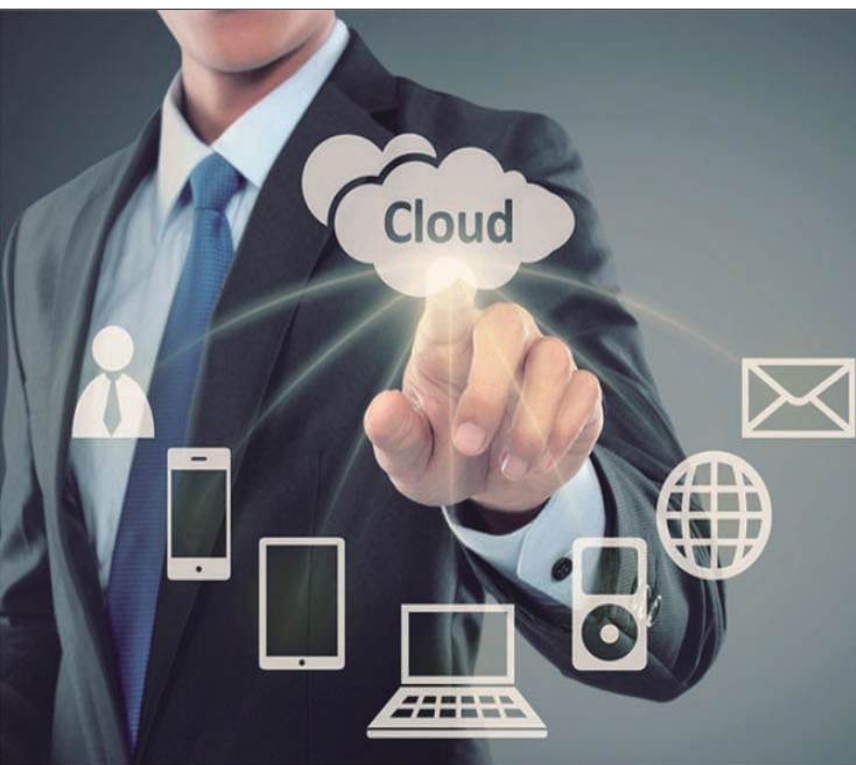
The permanent magnet motor maintains at good working conditions as it is synchronized at low rpm. The output is stable even within the range of rpm regulation, much better than a typical induction motor. Top efficiency is achieved even at light loading.



Light weight

Permanent magnets are used in place of windings to make the motor more compact and weigh less. The size of motor is 35% smaller for an highly compact and lightweight design as opposed to a typical induction motor.





GoService

Intelligent proactive service system.

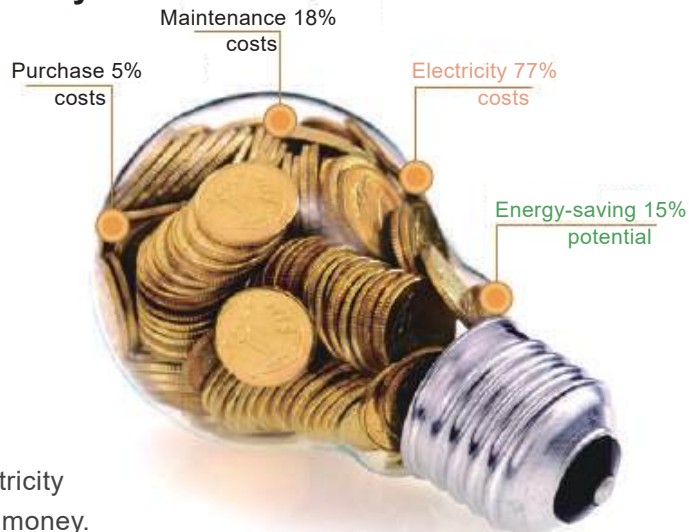
- IoT technology solutions, presenting device data in real-time.
- Instant alerts via email and SMS to notify relevant personnel.
- Optimized service processes, with service personnel responding promptly and proactively.
- Predictive maintenance, with advance notifications.
- Providing equipment analysis reports, compatible with the professional energy-saving services of Fusheng.

Building a high-altitude air quality first-class energy-efficient air compression station

Energy-saving/High-efficiency/Environmentally friendly

Air compressors are the key energy-consuming equipment of industrial enterprises, with huge energy-saving potential. In the operating cost of compressors, equipment purchase costs account for only 5%, maintenance costs account for 18%, and electricity costs account for an astonishing 77%.

Due to the trend, the design of air compression stations has gradually shifted from design institutes to manufacturers. With years of professional experience, we meticulously plan for every aspect, creating more energy-efficient and reliable intelligent air compression stations for you. Whether it's electricity costs or emission fees, you will save a significant amount of money.



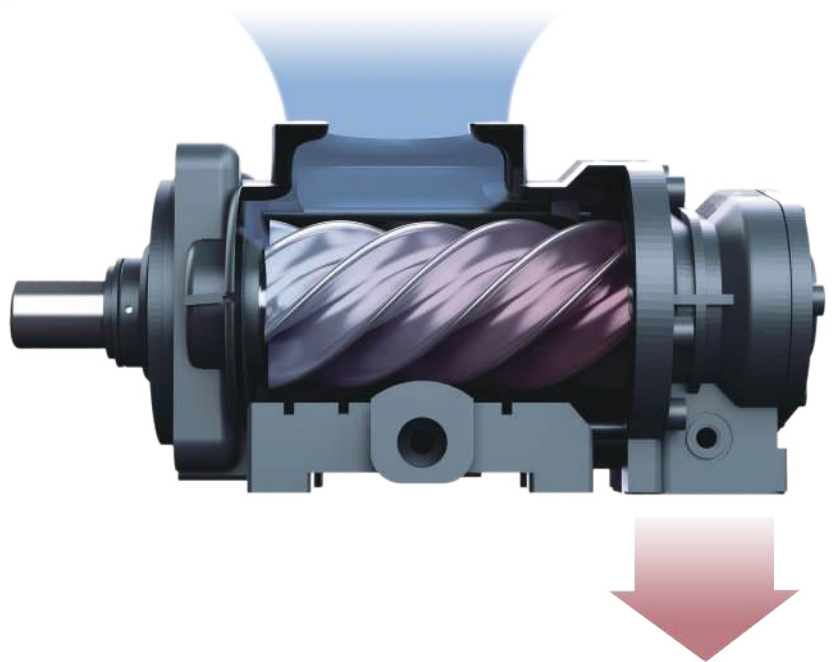
High Efficiency, Energy Saving

- The motor is integrated with the gearbox and airend to achieve almost 100% transmission efficiency.
- The lubricating oil content of bearing, compression chamber and gear has been calculated precisely, which can reduce unnecessary oil resistance and optimize the efficiency
- Simple structure, less wearing parts



High Efficiency Airend

- Fusheng's global R&D center in Germany is established with the aim to improve gear profile, volume efficiency and energy saving design and increase operating efficiency at low rpm.
- Fully utilize effective rotor length to maximize compression efficiency
- Significantly reduces operation noise



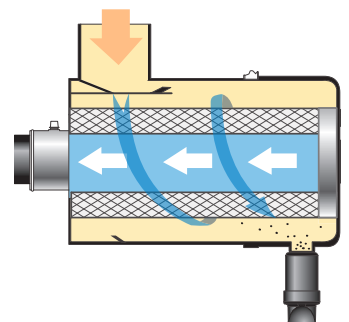
IE3 high efficiency motor

- IE3 electric motor is used for all SA⁺ series screw compressor. It gives the compressor greater performance and better energy efficiency.



Safe, efficient air filter system

- Large particles dust in the air will follow cyclone air fall in rubber slot that located in air filter front end instead of adsorbing on filter element surface and causing clog.



AIMS Plus – Intelligent Controller

Features and functions (Simplicity / Ingenuity / Reliability)

- Freeze -proofing and no-load running protection.
- Alarm/trip history record in consecutive 30 entries for maintenance and service inquiry.
- Monitoring main motor current.
- Monitoring fan current.
- Setting shutdown time due to unload too long.
- Selection for auto start after resetting power failure.
- Simple and easy-to-operate HMI to show major Operation message.
- Fault messages inquiry.
- Service & Maintenance prompts.
- Load management, with Modbus communication high expandability up to 8 compressor units, sequence setting.
- Language selection: English / Spanish / Portuguese / Traditional Chinese / Simple Chinese.



TECHNICAL DATA

Fixed Speed

MODEL	CAPACITY FAD (CMM)				MOTOR	SOUND LEVEL	DIMENSIONS	WEIGHT
	7 bar(g)	8 bar(g)	10 bar(g)	12 bar(g)	Kw / HP	dBA	(L x W x H mm)	kg
NxB-04	0.60	0.56	0.48	0.40	4.0 / 5.5	63	750 x 600 x 955	200
NxB-06	0.84	0.78	0.68	0.60	5.5 / 7.5	66		217
NxB-08	1.27	1.18	1.00	0.80	7.5 / 10	65	800 x 670 x 1100	275
NxB-11	1.82	1.70	1.55	1.35	11 / 15	66		285
NxD-15	2.50	2.40	2.10	1.80	15 / 22	72	1250 x 880 x 1515	610
NxD-18	3.15	2.85	2.60	2.15	18 / 25	72		653
NxD-22	4.00	3.70	3.30	2.70	22 / 30	72		670
NxD-30	5.50	5.10	4.50	3.80	30 / 40	72	1350 x 940 x 1680	820
NxD-37	6.85	6.25	5.60	4.80	37 / 50	72		860
NxD-45	8.50	8.00	6.80	6.00	45 / 60	72	1900 x 1100 x 1620	1250

*Noise level at 100% load(EN ISO 2151)



Variable Speed

MODEL	CAPACITY FAD (CMM)				MOTOR Kw / HP	SOUND LEVEL dBA	DIMENSIONS (L x W x H mm)	WEIGHT kg
	7 bar(g)	8 bar(g)	10 bar(g)	12 bar(g)				
NxV06-Ultra	0.29~0.96	0.26~0.87	0.21~0.70	0.18~0.61	5.5 / 7.5	70	690 x 660 x 1585	296
NxV08-Ultra	0.39~1.31	0.34~1.12	0.27~0.89	0.24~0.80	7.5 / 10	70		296
NxV11-Ultra	0.60~2.00	0.57~1.90	0.48~1.60	0.39~1.30	11 / 15	70		296
NxV15-Ultra	0.77~2.55	0.69~2.30	0.57~1.90	0.51~1.70	15 / 22	70		320
NxV18-Ultra	0.95~3.15	0.89~2.95	0.72~2.40	0.65~2.15	18 / 25	70	800 x 790 x 1760	450
NxV22-Ultra	1.19~3.98	1.16~3.85	1.04~3.45	0.85~2.82	22 / 30	70		450
NxV30-Ultra	1.71~5.70	1.61~5.35	1.38~4.60	1.19~3.95	30 / 40	72	940 x 850 x 1805	602
NxV37-Ultra	2.10~7.00	1.95~6.50	1.71~5.70	1.45~4.84	37 / 50	72		602
NxV45-Ultra	2.55~8.50	2.37~7.90	2.12~7.05	1.77~5.90	45 / 60	72	1305 x 1105 x 1890	1100
NxV55-Ultra	3.24~10.8	3.05~10.15	2.52~8.40	2.13~7.10	55 / 75	73	1395 x 1155 x 2000	1500
NxV75-Ultra	4.20~14.0	4.02~13.4	3.48~11.6	2.94~9.80	75 / 100	73		1500

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.



AUTHORIZED FS-CURTIS DEALER:



NX 04-45/NXV-Ultra 06-75
202403-112A000-E4