

NXHE SERIES

TWO-STAGE ROTARY SCREW
AIR COMPRESSORS
90-250 kW





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

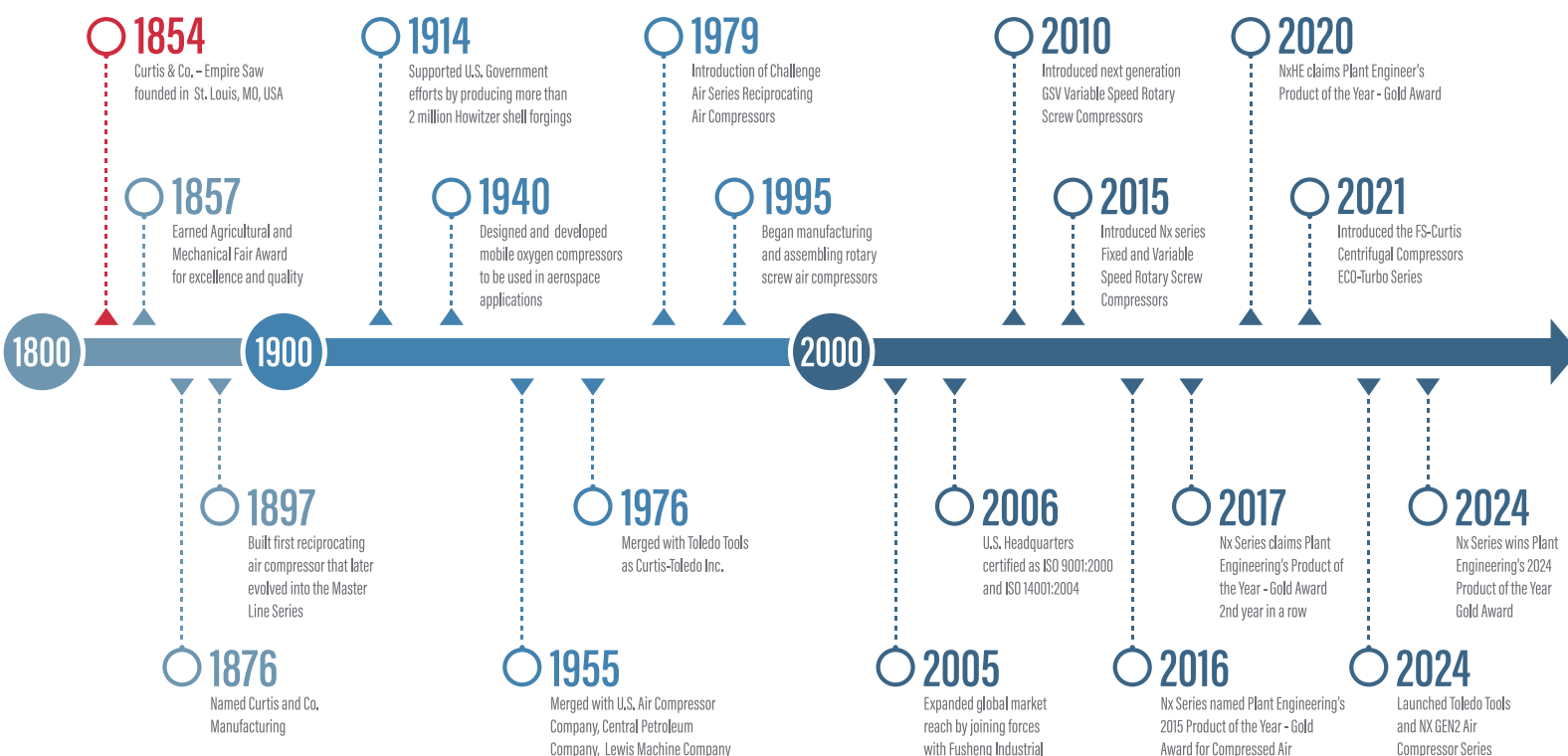
**FS-CURTIS WAS
FOUNDED ON BOTH.**

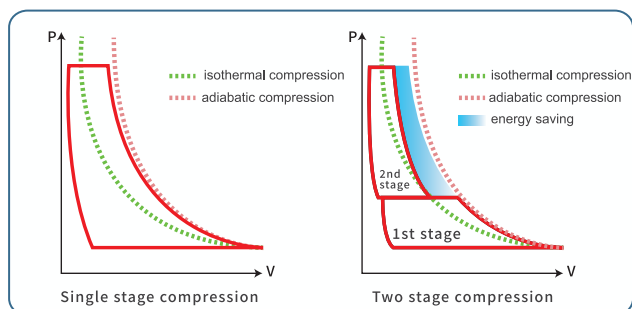


One-hundred and seventy years ago, the FS-Curtis way of doing business was established through two key commitments: a dedication to building quality products and a dedication to responsive customer service.

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





Compare to single stage compression, high temperature air compressed at first stage of two stage compressor is cooled down by oil and air being constant compressed to reduce second stage inlet temperature. Entire compression process is close to isothermal compression which reduces energy loss. Pressure ratio for each stage of two stage compression is decreased and leakage between rotor seal is reduced significantly. Outstanding increased air end volumetric efficiency optimized cost-efficiency ratio when operated in continuous full load.

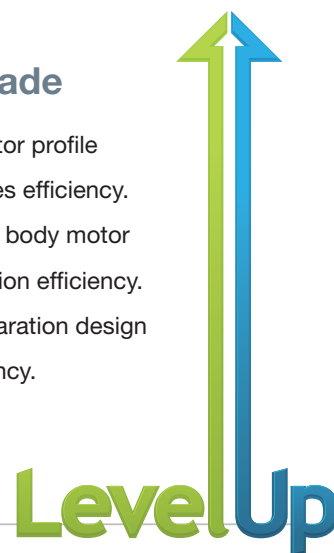
NXHE series

More outstanding two-stage compression



Efficiency upgrade

The design of the new rotor profile comprehensively improves efficiency. The coaxial design of the body motor ensures higher transmission efficiency. Air cooled oil cooled separation design for higher exhaust efficiency.





AIR END

More energy-efficient

The upgraded design of the rotor profile has improved compression efficiency and optimized the spray design, reducing the resistance of the spray while better utilizing the effectiveness of the coolant, making the compression process closer to isothermal compression. The entire air compressor unit has a lower specific power value.

Cancel the traditional coupling design and adopt a coaxial design for the body motor, eliminating transmission losses and making the motor and host seamlessly integrated, making it more sturdy and reliable.



More efficient motor drive

A more efficient oil cooled motor with higher energy efficiency performance, higher energy efficiency, higher protection level, and more reliable operation.



**IE4
Motor**

Power frequency model
IP66 IE4
Oil cooled induction motor

**IE5
Motor**

Variable frequency machine
IP66 IE5
Oil cooled permanent magnet variable frequency motor

Smaller footprint

Clever and more reasonable layout, with significantly reduced footprint compared to the old model, and sufficient maintenance space.



Unique Cooling Flow Field

■ Air-cooled models use centrifugal fan which direct cooler air from external to cool cooler. Hot air is exhausted from top of assembly directly. Meanwhile suction hole of centrifugal air blower located inside machine exhausts hot air directly to keep lower temperature within compressor and reduce operation noise. Only cover removal is needed for cleaning air cooling cooler instead of removing/installing air duct cover.

■ Water cooling model features heavy duty cooler with excellent cooling result and is suitable for high temperature environments. Compressed air passed at a time without pressure drop. Water goes inside of tube while air goes outside. Straight tube design is easy to clean.



Independent design of air aftercooling and oil cooler

- Both air-cooled and water-cooled models have independent air coolers and oil coolers.
- The temperature of the finished compressed air can be reduced as much as possible, without considering the emulsification caused by low oil temperature.
- More reasonable utilization of space, with built-in heat recovery and other devices.

VSD Control fan

■ VSD control fan design, fans are activated depending on the ambient temperature and running temperature. This design can adapt the temperature difference between different regions and is more efficiency.



High efficiency, easy to maintain oil separator

■ The supersized oil separator design features a larger separation area that reduce the pressure drop during the air/oil separation while providing better filtration, thus making the compressed air system more efficient.

A patented rotating shaft design is adopted on the separator cover. The replacement of oil separator is made much easier.



Intelligent Controller

- Intuitive and multilingual user interface for effortless operation
- Enhanced anti-interference performance ensures stable control
- Remote start/stop capability for flexible system management
- Built-in CAN bus communication interface for seamless integration



NXHE Series two-stage screw air compressor (air-cooled model)

Model	Delivery (m ³ /min)	Working pressure (MPa)	Motor power (kW)	Air outlet size	Indicative dimensions (mm)			Weight (kg)
					Length	Width	Height	
NXHE 90A-7	19.9	0.7	90	DN80	2400	1800	2000	3700
NXHE 90A-8	18.6	0.8						
NXHE 90A-10	15.7	1.0						
NXHE 90A-12	13.8	1.25						
NXHE 110A-7	23.9	0.7	110	DN80	2400	1800	2000	3800
NXHE 110A-8	22.3	0.8						
NXHE 110A-10	19.3	1.0						
NXHE 110A-12	16.8	1.25						
NXHE 132A-7	29.0	0.7	132	DN100	2800	2000	1998	4300
NXHE 132A-8	27.1	0.8						
NXHE 132A-10	23.4	1.0						
NXHE 132A-12	20.5	1.25						
NXHE 160A-7	36.0	0.7	160	DN100	2800	2000	1998	4500
NXHE 160A-8	33.6	0.8						
NXHE 160A-10	29.6	1.0						
NXHE 160A-12	26.0	1.25						
NXHE 200A-7	45.0	0.7	200	DN100	3200	2100	2100	6800
NXHE 200A-8	42.0	0.8						
NXHE 200A-10	37.8	1.0						
NXHE 200A-12	33.0	1.25						
NXHE 250A-7	57.0	0.7	250	DN100	3200	2100	2100	7000
NXHE 250A-8	53.0	0.8						
NXHE 250A-10	47.0	1.0						
NXHE 250A-12	42.0	1.25						

NXHE Series two-stage screw air compressor (water-cooled model)

Model	Delivery (m³/min)	Working pressure (MPa)	Motor power (kW)	Air outlet size	Indicative dimensions (mm)			Weight (kg)
					Length	Width	Height	
NXHE 90W-7	19.9	0.7	90	DN80	2400	1800	2000	3600
NXHE 90W-8	18.6	0.8						
NXHE 90W-10	15.7	1.0						
NXHE 90W-12	13.8	1.25						
NXHE 110W-7	23.9	0.7	110	DN80	2400	1800	2000	3700
NXHE 110W-8	22.3	0.8						
NXHE 110W-10	19.3	1.0						
NXHE 110W-12	16.8	1.25						
NXHE 132W-7	30.0	0.7	132	DN100	2800	2000	1998	4100
NXHE 132W-8	28.0	0.8						
NXHE 132W-10	24.5	1.0						
NXHE 132W-12	21.8	1.25						
NXHE 160W-7	37.5	0.7	160	DN100	2800	2000	1998	4300
NXHE 160W-8	34.3	0.8						
NXHE 160W-10	31.0	1.0						
NXHE 160W-12	27.6	1.25						
NXHE 200W-7	47.0	0.7	200	DN100	3200	2100	2100	6400
NXHE 200W-8	43.0	0.8						
NXHE 200W-10	38.8	1.0						
NXHE 200W-12	35.0	1.25						
NXHE 250W-7	59.0	0.7	250	DN100	3200	2100	2100	6600
NXHE 250W-8	55.0	0.8						
NXHE 250W-10	49.8	1.0						
NXHE 250W-12	44.8	1.25						



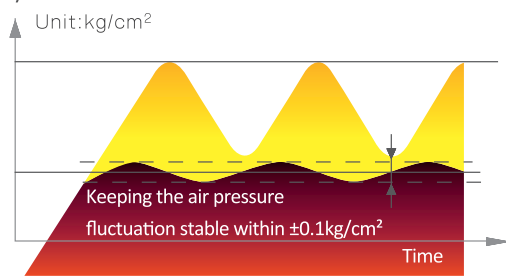
More efficient and energy-saving frequency conversion

The dual permanent magnet motor is directly driven, more sensitive in capturing subtle load changes in the compressor. The first and second speed ratio regulation is more flexible, convenient, and precise, ensuring stable and efficient exhaust pressure in the entire system.

Integrated structure, oil cooled permanent magnet motor and screw host are fully matched to form a closed whole permanent magnet motor that directly drives the rotor, reducing mechanical failure rate and vulnerable parts, and reducing mechanical noise; Not only does it achieve higher transmission efficiency, but it also has a compact structure.

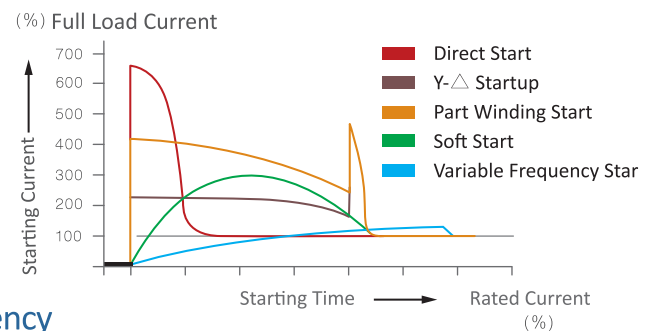
Constant pressure air supply

Variable frequency control can instantly respond to changes in customer's airflow demand, keeping the air pressure fluctuation stable within $\pm 0.1 \text{ kg/cm}^2$, eliminating the need for the traditional air compressor's set value of $1\text{-}2 \text{ kg/cm}^2$ for empty load and full load difference.



Variable frequency startup

Soft startup with variable frequency, smooth linear operation without the high current of traditional direct startup or star-delta startup. Reduces impact on electrical circuits, significantly extending the service life of electromagnetic contactors, motors, and compressor



NXHEV Series permanent magnet variable frequency two-stage screw air compressor (Air-cooled model)

Model	Delivery (m³/min)	Working pressure (MPa)	Motor power (kW)	Air outlet size	Indicative dimensions (mm)			Weight (kg)
					Length	Width	Height	
NXHEV 90A	4.1~19.9	0.7-1.25	90	DN80	2400	1800	2000	3700
NXHEV 110A	5.0~23.9	0.7-1.25	110	DN80	2400	1800	2000	3800
NXHEV 132A	6.2~29.0	0.7-1.25	132	DN100	2800	2000	2000	4200
NXHEV 160A	7.8~36.0	0.7-1.25	160	DN100	2800	2000	2000	4400
NXHEV 200A	9.9~45.0	0.7-1.25	200	DN100	3200	2100	2100	6850
NXHEV 250A	12.6~57.0	0.7-1.25	250	DN100	3200	2100	2100	7150

NXHEV Series permanent magnet variable frequency two-stage screw air compressor (Water-cooled model)

Model	Delivery (m³/min)	Working pressure (MPa)	Motor power (kW)	Air outlet size	Indicative dimensions (mm)			Weight (kg)
					Length	Width	Height	
NXHEV 90W	4.1 ~19.9	0.7-1.25	90	DN80	2400	1800	2000	3700
NXHEV 110W	5.0 ~23.9	0.7-1.25	110	DN80	2400	1800	2000	3800
NXHEV 132W	6.5 ~30.0	0.7-1.25	132	DN100	2800	2000	2000	4200
NXHEV 160W	8.3~37.5	0.7-1.25	160	DN100	2800	2000	2000	4400
NXHEV 200W	10.5~47.0	0.7-1.25	200	DN100	3200	2100	2100	6850
NXHEV 250W	13.4 ~59.0	0.7-1.25	250	DN100	3200	2100	2100	7150

CONTINUED COMMITMENT



A company history that dates 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.



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Distributed By:



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CORPLITERATURE: FSL-NX45260FLBREV3
Improvements and research are continuous at FS-Curtis. Specifications may change without notice.