

Eco-Friendly High Efficiency Turbo Blowers and Compressors  
Born from aerospace technology

# Turbo Blower NX Series Turbo Compressor NC Series



# Masterpiece beyond compare

Customer satisfaction is our number one priority at Neuros which is the secret behind every blower that we make. NX and NC series are the embodiment of highest efficiency and quality.



## THE HIGHEST PERFORMANCE

With years of experience in the research and development of gas turbine engines, used in aircraft, and production know-how of turbo machineries, Neuros' Turbo blowers and Turbo compressors provide the world best in performance reaching up to 75% of total efficiency.



## EXCELLENT RELIABILITY

Its Award Winning High Speed Turbo Blowers are considered the industry reference for high quality thanks to the use of state-of-the-art and proven air bearing, PMSM and blower aeration control system technologies.



## ECONOMICAL LIFE CYCLE COST

The turbo blower provides the end users with significant reduction in operating costs through energy savings of up to 40% (according to a third party study), low installation and maintenance costs – only air filters need periodical cleaning or changing.



## CUSTOMER ORIENTED TECHNOLOGY

User-friendly PLC for easy control, monitoring and diagnostics. Eco-friendly technology with low noise and vibration and no oil system.



# Born from aerospace technology

Neuros' Turbo Blower and Compressor technology was founded and utilized in the aerospace and defense industry, making the technology tested and reliable. Consequently, Neuros acquired a premium brand reputation by providing sustainable and energy efficient solutions to its customers.

Neuros will continue to provide value-added energy efficient solutions through the continuous improvement, development and innovation of industrial turbo machineries as well as the commercialization of the next generation turbo charger and the environmental control system in the field of automation and aviation industry.



# THE HIGHEST PERFORMANCE

The ultimate turbo machinery integrating the latest state-of-the-art aerospace high performance technologies.

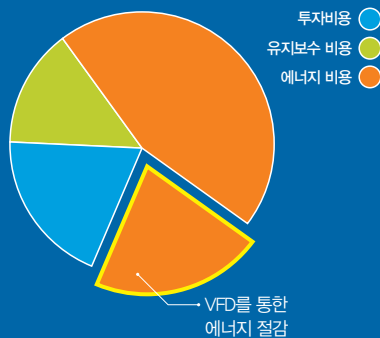
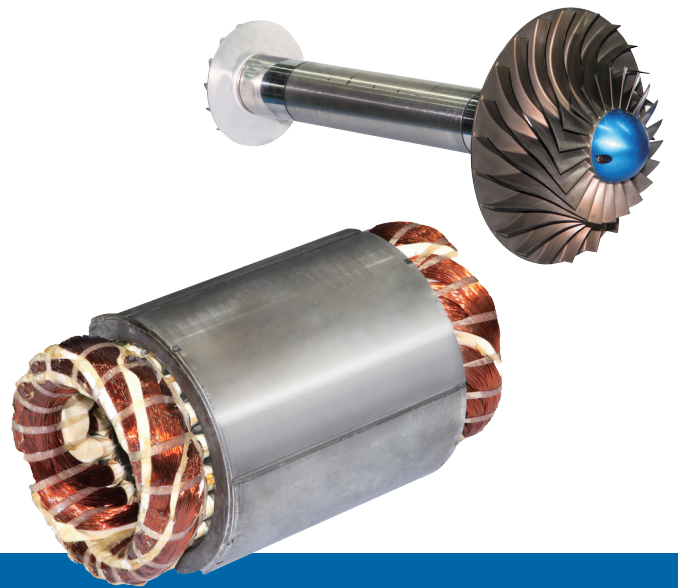


## High Efficiency Aerodynamic Design Centrifugal Compressor

- The design of the impeller and diffuser play a key role in maximizing the efficiency of the turbo machinery.
- Impeller's structural integrity is verified by a Spin Test at a rotational speed of 120%.
- Most suitable material, Aluminum Alloy is used for the high-speed turbo machinery to manufacture the impeller, which is forged with 5-axis to minimize tip clearance
- Impeller is higher integrity and higher fatigue life, as well as a larger diameter and precise impeller shape combined with optimal specific speed resulting in higher efficiency.
- A hard anodizing coating on the impeller and casing improves corrosion resistance and durability.

## High Speed PMSM

- Permanent Magnet Synchronous Motor (PMSM) designed by Neuros has a high efficiency and power factor of more than 95%.
- Permits continuous operation with low current loss and offers excellent speed control.
- There is negligible mechanical loss during operation thanks to the rotor of motor and impeller being directly coupled.



## High Efficiency VFD

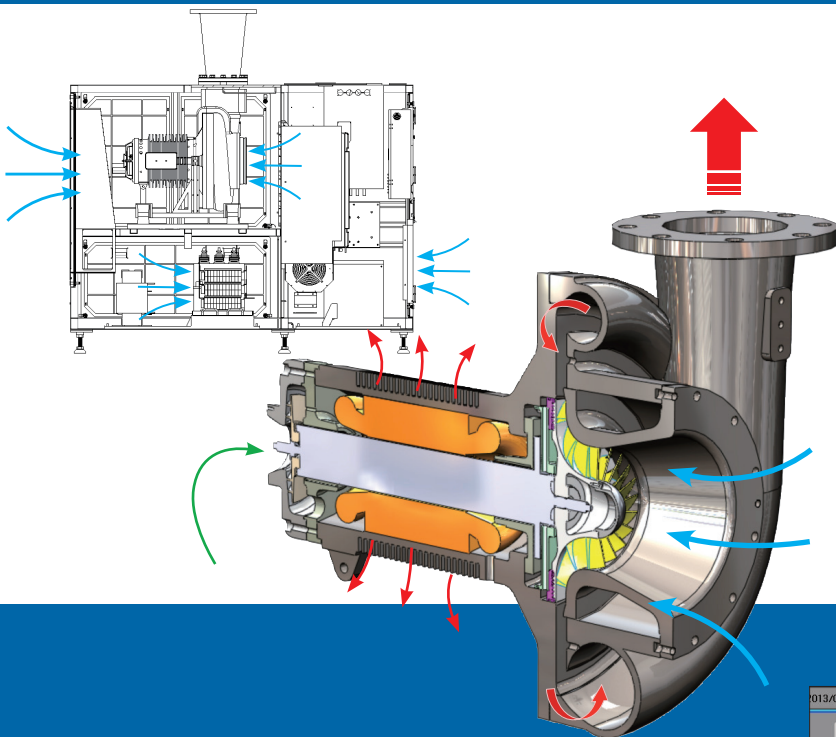
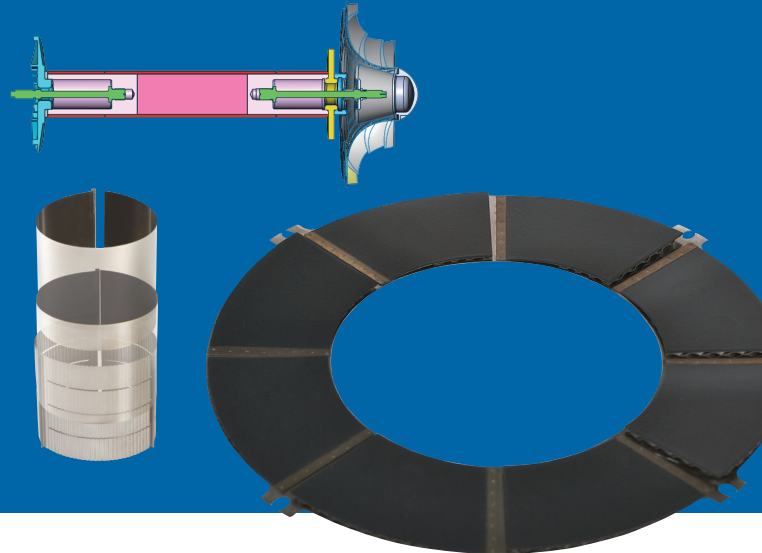
- The Variable Frequency Drive(VFD) conserves energy by controlling the rotational speed of the PMSM in order to adjust the discharge pressure and flow rate to meet customer needs.
- Soft starting of below 100% current at the time of initial start
- Rapid load response

# EXCELLENT RELIABILITY

Proven air bearing and patented cooling system ensure continued trouble-free operation.

## Aerospace Air Bearing Technology

- Non-contact air bearing that utilizes the dynamic pressure of air fluid. It is composed of two parts: a corrugated bump foil and high temperature alloy inner foil. As the rotor speeds up, a thin film of air creates a cushion between the shaft and the bearing surface.
- 100% Oil-free Compressed Air – no lubricating oil or associated maintenance required.
- Reliable and proven technology used in aircraft Environmental Control Systems and Air Cycle Machines.  
[Neuro's air bearing used in a small-size turbo compressor installed in a fuel cell vehicle passed 1,000,000 start/stop test.]
- Patent No. 10-0604132; Patent No. 10-0081103

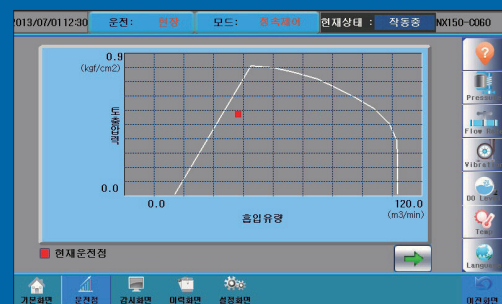


## Patented Cooling System

- The blower motor, VFD and other electrical components are cooled off using blower inlet air.
- No heat emission from the blower to the surroundings
- Cooling System Patent No. 10-0572849

## Surge Protection Logic

- Built-in Protection Logic in the blower to prevent it from surging during its operation by controlling speed or blow-off automatically

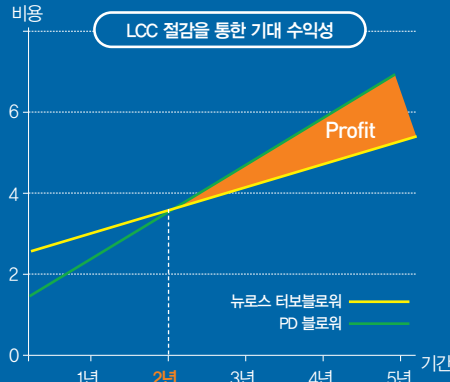
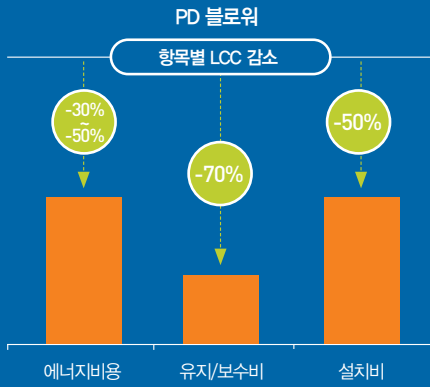


# ECONOMICAL LIFE CYCLE COST

Low LCC thanks to the blower's high efficiency and low maintenance costs.

## 해석 요청

### • 뉴로스 터보블로워



## Return on Investment

- NX / NC series can maximize the profitability of end users through significant reduction of LCC
- Neuros' Turbo Compressors save customers 50 to 70% of energy in applications that require a more flexible operation with air pressure of 120 - 250 kPa by replacing conventional compressors which produce 700 - 1,000 kPa.

## Low Maintenance Cost

- Regular maintenance involves cleaning or replacing air filters as required.
- No expenditures on the maintenance of oil, oil filter and water cooling systems. And save more manpower to do it.



	New Filtration System		Remarks	Applying
	Pre Filter	Main Filter		
Filtration Efficiency	80% @ 100 μm	99% @ 2 μm	ASHRAE 52.2-1999	
Type	Coarse	Fine		
Material	Non-woven Fabric	Synthetic Fiber		
Stage	2 Stages (Pre Filter + Main Filter)			
Maintenance	Air Wash once a month Replacement every 3 months	Replacement every 3-6 months	<ul style="list-style-type: none"> <li>•Warning &amp; Fault Alarms</li> <li>•Depending on Circumstances</li> </ul>	

## Improved filter system

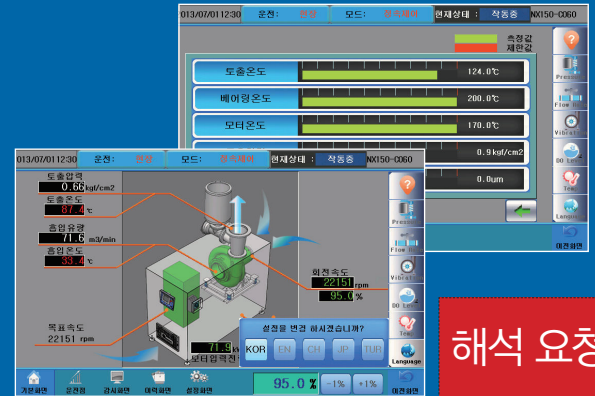
- NX and NC series use a Two-Stage filtration system to protect the mechanical and electrical components and increase their efficiency.
- An alarm will alert the operator when the differential pressure goes above a preset point indicating that the filter needs to be changed.

# CUSTOMER ORIENTED TECHNOLOGY

Easy to Use Control System and Eco-Friendly Technology.

## Control System to Meet Various Customer Demands

- Programmable Logic Controller is the central control point of the blower. It allows the end user to run the blower in automated mode at constant speed, pressure, flow or dissolved oxygen control mode.
- It is equipped with an easy to use touch screen which allows for easy control, monitoring and diagnostics to view all blower parameters and conditions.
- The blowers and compressors can be controlled and monitored remotely using a Master Control Panel through communication protocols such as Ethernet, Modbus, Profibus, and Hard Wiring.
- Various languages are available including English, Chinese, Japanese, Korean, Turkish and Russian.

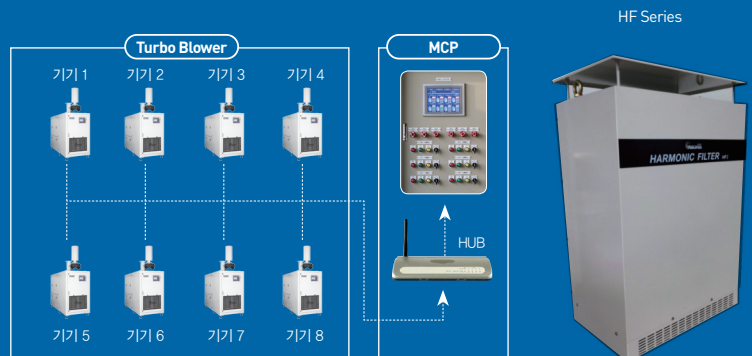


## Eco-Friendly & User-Friendly Design

- Thanks to the patented non-contact air bearing and enclosure, the blowers have very low vibration of less than 1mm/s and noise levels below 85 dB(A), reducing the noise pollution without the need for special foundations.
- Patent No. 10-0572850
- No environmental pollution by 100% Oil-Free System.
- CO<sub>2</sub> emission reduction thanks to the energy savings
- Construction, electricity and plumbing costs are reduced with small footprint
- Plug & Play machine

## Optional items

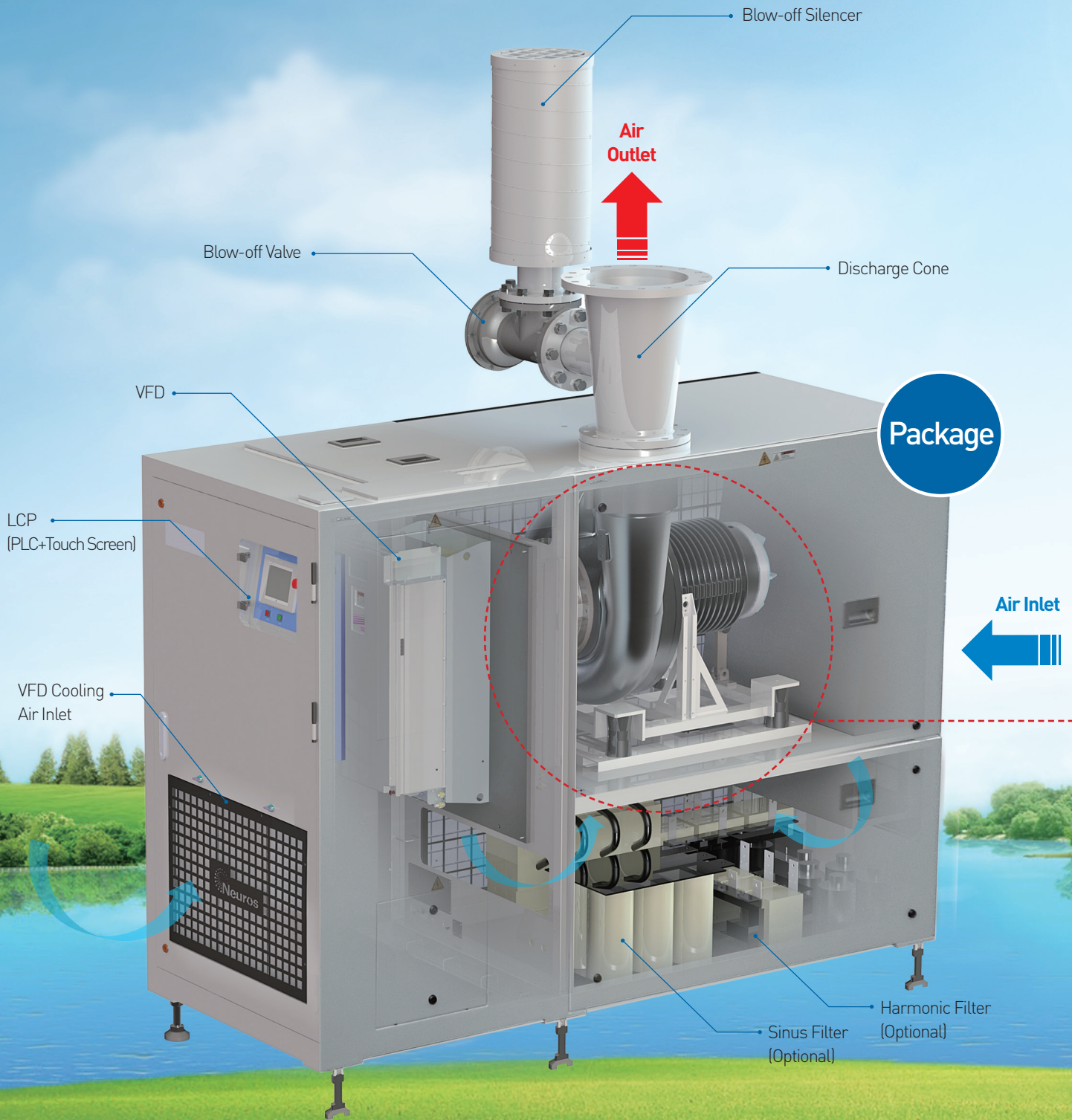
- Master Control Panel (MCP) can be used to control up to 12 blowers giving the operator one point of control and monitoring, and each machine can be controlled through the remote communication with SCADA.
- Harmonic Filter can be installed inside or outside the enclosure of the NX/NC models which provide an additional level of protection from harmonic distortion, removing harmonics generated during operation below the levels of THD\_V 5%, THD\_I 8%.



해석 요청

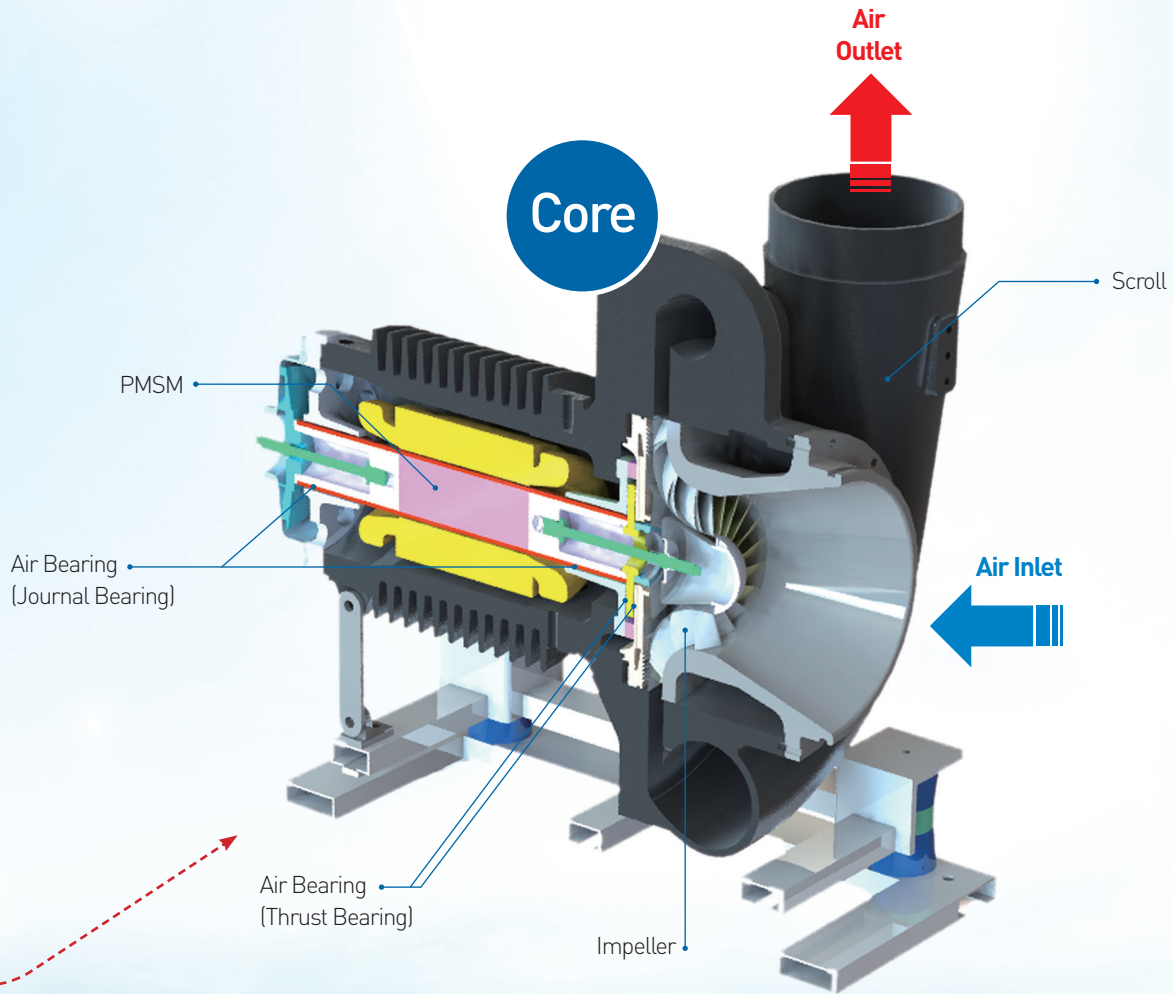


# High efficiency Turbo Blowers and





# Compressors are a smart choice for mankind and nature



## NX Series Turbo Blower

- Suction Flow Rate: 9-532 m<sup>3</sup>/min
- Discharge Pressure : 0.3-1.0 kgf/cm<sup>2</sup>G
- Turndown : 45-100%
- Noise Level : Below 85dB(A)
- 100% Oil-free system
- Compliance with ISO5389, ASME PTC 10

## NC Series Turbo Compressor

- Suction Flow Rate: 12-230 m<sup>3</sup>/min
- Discharge Pressure : 1.1-2.0 kgf/cm<sup>2</sup>G
- Turndown: 70-100%
- Noise level: Below 85dB(A)
- 100% Oil-free system
- Compliance with ISO5389, ASME PTC 10

# Product Specifications



NX 터보블로워 표준형



NC 터보압축기



전장 분리형, 옥외형

해석 요청

## Specifications

Model	Specifications			Dimensions and Weights(standard)			
	Cooling	Suction Flow (m³/min)	Motor Power (kW)	W (mm)	D (mm)	H (mm)	Weight (kg)
NX30	Air	9 ~ 23	22	770	1070	940	340
NX50	Air	19 ~ 45	37	770	1550	1350	580
NX75	Air	28 ~ 62	56	770	1550	1350	700
NX100	Air	42 ~ 98	75	770	1550	1350	780
NX150	Air	63 ~ 129	112	770	1750	1350	800
NX200	Air	85 ~ 167	149	1000	2300	1650	1079
	Water	85 ~ 167	149	1000	2100	1650	1070
NX250	Air	98 ~ 169	179	1400	2400	2020	1070
	Water	98 ~ 169	179	1400	2100	2020	1750
NX300	Air	131 ~ 257	224	1400	2400	2020	1370
	Water	131 ~ 257	224	1400	2100	2020	1750
NX350	Air	144 ~ 266	246	1400	2400	2020	1370
	Water	144 ~ 266	246	1400	2100	2020	1770
NX400	Air	170 ~ 334	298	1680	2240	1900	2110
	Water	170 ~ 334	298	1680	2240	1900	2190
NX500	Air	196 ~ 337	358	1880	3000	2150	3420
	Water	196 ~ 337	358	1880	3000	2150	2580
NX600	Air	262 ~ 514	448	1880	3000	2150	3420
	Water	262 ~ 514	448	1880	3000	2150	3020
NX700	Air	288 ~ 532	492	1880	3000	2150	3420
	Water	288 ~ 532	492	1880	3000	2150	3020
NC50	Water	12 ~ 14	37	1010	1300	1620	690
NC100	Water	26 ~ 33	75	970	1750	1560	1150
NC300	Water	82 ~ 115	224	1400	2100	2020	1970
NC600	Water	164 ~ 230	448	1880	3000	2150	3390

※ Discharge Pressure: NX series(0.3 ~ 1.0 kgf/cm² G), NC series(1.1 ~ 2.0 kgf/cm² G)  
 ※ Reference Conditions: 1.033 kgf/cm² A, 20°C, 65% RH  
 ※ Tolerance: Air Flow ±4%, Power ±5%

※ Compliance with ISO5389, ASME PTC 10  
 ※ The specification of the product may be changed for improvement of performance without notice.

# Reference Sites

## 1. Water and Waste Water Treatment Plant



WWTP of Daejeon(NX200), Korea



WWTP of Hoeya, Ulsan (NX150), Korea



WWTP of Suji, Youngin(NX300), Korea



Sudokwon Landfill Site(NX150), Korea



Hollister(NX150, 100), USA



Rupert(NX300), USA



Hedong(NX300), China



Chang Sha(NX300), China



Podolsk(NX300), Russia



Malatya 2 OSB(NX300), Turkey



Kyowa(NX300), Japan



Abu Dhabi(NX300), UAE

## 2. Industry



Honam Petrochemical(NX50), Korea



LG Ulsan Chemical (NX150), Korea



Sam Woo Text Mill(NC50), Korea



Nisshin steel(NX100), Japan

## 3. Dual Core



American Bottoms (NX600), USA



Cincinnati(NX500), USA



Tuzla Deri OSB 2(NC600), Turkey



Yuhan-Kimberly(NC500), Korea

# Global Sales Network

Neuros has the most experience in the world with over 2,500 units installed in 18 different countries, including over 670 units in North America alone. Neuros is an export-driven company with more than 75% of its sales generated from exports.



## Headquarters & Factory

Neuros Co. Ltd.  
274, Techno 2-ro, Yuseong-gu,  
Daejeon 305-510, Korea  
Tel : +82-42-865-7300  
Fax : +82-42-865-7320  
www.neuros.com  
sales@neuros.co.kr

## Local Subsidiary

NTM Inc.  
Suit 408B~409, 4th Floor,  
Hong qiao jing zuo Building,  
No.280-2 Hong jing Road,  
Minhang District,  
201103, Shanghai, China  
Tel : +86-21-5432-3757~9  
Fax : +86-21-5432-3755  
www.neuros.com/chn/  
ntm@neuros.co.kr

## Joint Venture

APGN Inc.  
1270 Michele-Bohec  
Blainville, Quebec, J7C 5S4,  
Canada  
Tel : +1-450-939-0799  
Fax : +1-450-939-2115  
www.apg-neuros.com  
customerservice@apg-neuros.com



Neuros Co., Ltd. 274, Techno 2-ro, Yuseong-gu, Daejeon 305-510, Korea  
<http://www.neuros.com> Tel : 042-865-7300 / Fax : 042-865-7320 / Email : [neuros@neuros.co.kr](mailto:neuros@neuros.co.kr)  
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