

Eco-Friendly High Efficiency Turbo Blowers NXM Series

TURBO BLOWER NXM SERIES



Masterpiece Beyond Compare

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

The Highest Performance

With many years of experience in R&D and production know-how of turbo machineries, Neuros' NXM series provide field's best performance reaching up to 78% of total efficiency.

Excellent Reliability

Stability has been verified through the Waste Water Treatment process and other various processes. Its Award Winning High Speed Turbo Blowers are considered the industry reference for high quality thanks to the use of proven magnetic bearing, PMSM and blower aeration control system technologies.

Economical Life Cycle Cost

NXM series provide the end users with significant reduction in operating and maintenance costs through energy savings of up to 50%

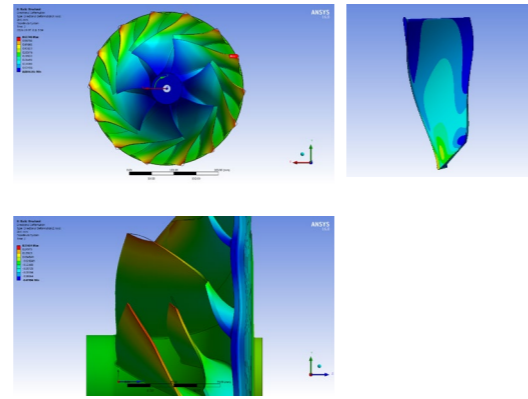
Customer Oriented Technology

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

The Highest Performance

High Efficiency Impeller with Aerodynamic Optimization Design

- High System Efficiency : Maximum 78%
- Impeller design know-how with the aerospace turbo engine technology
- Optimized size of impeller
- Decreased Leakage loss through optimized Labyrinth seal design
- Impeller's structural integrity is verified by a Spin Test at a rotational speed of 120%.
- Highest performance through precise manufacturing technology
- Most suitable material, forged Aluminum Alloy, is used for the high-speed turbo machinery to manufacture the impeller
- Machined with a 5-axis CNC machine to minimize tip clearance
- A hard anodizing coating on the impeller and casing improves corrosion resistance and durability.



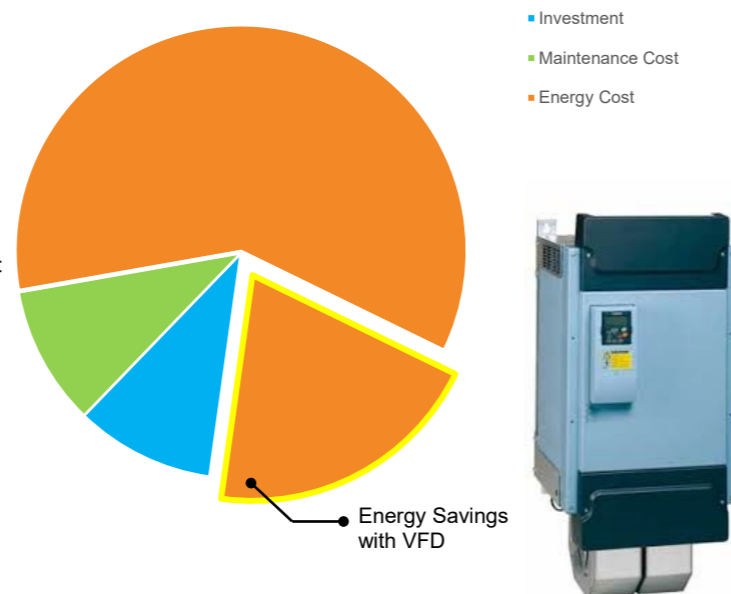
High Speed PMSM

- Self-developed Permanent Magnet Synchronous Motor(PMSM) 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

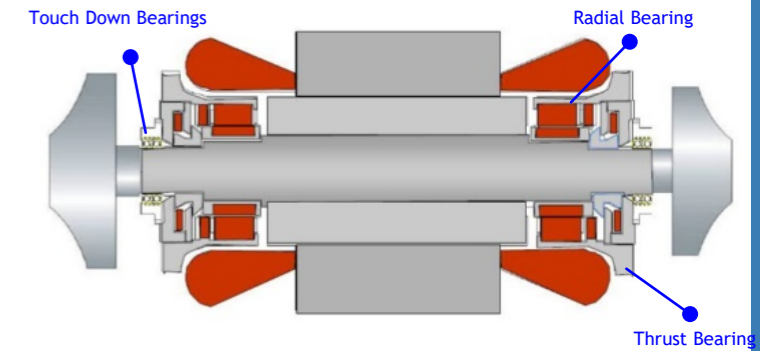
- Wide operational support
- Suitable to the applications that need flow control
- Soft start of below rated current at the time of initial start
- The Variable Frequency Drive(VFD) conserves energy by controlling the rotational speed of the PMSM in order to adjust the discharge pressure and flow rate
- Rapid load response



Excellent Reliability

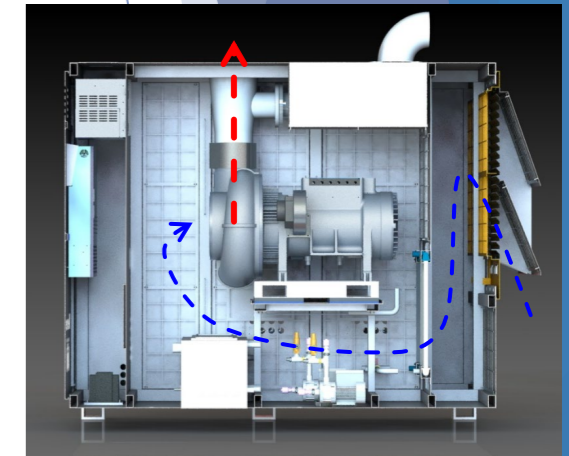
Magnetic Bearing

- Measure with 30 noncontact displacement sensors each for an ABM (Active Magnetic Bearing) in real time
- Optimized controlling system by producing displacement sensor itself
- Monitor displacement, unbalance, AMB voltage, electric current, temperature, speed etc. in real time
- Bearings possess heavy load capacity
- Possess margin and able to monitor while landing in emergency (Soft bearing touch down)
 - Hard Landing (emergency landing in high RPM : 10 times)
 - Soft Landing (emergency landing in low RPM : 100times)



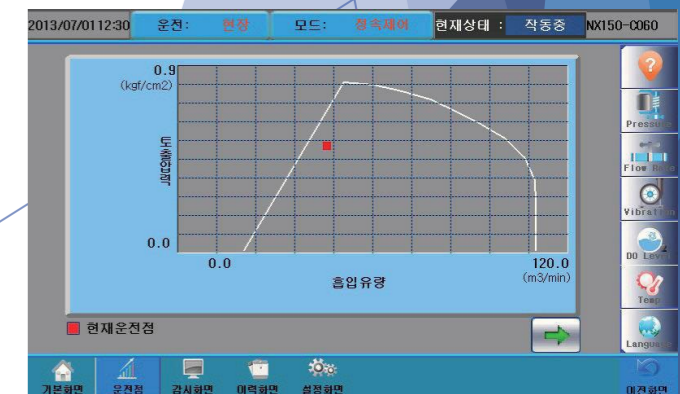
Patented Cooling System

- The blower motor, VFD and other electrical components are cooled off using blower inlet air.
- No heat emission from the blower to the surroundings
- Easy install and operation without any suction pipe



Surge Protection Logic

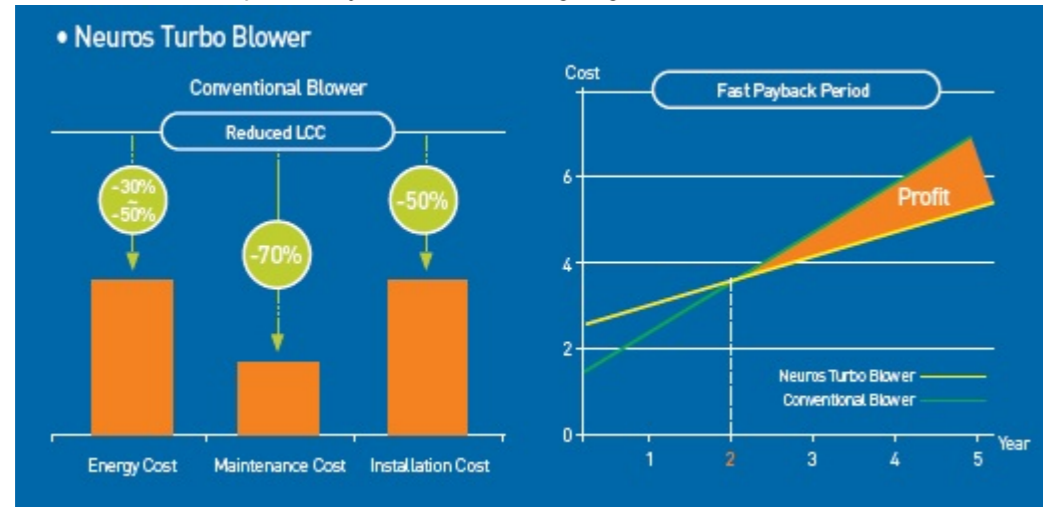
- Built-in Protection Logic in the blower to prevent surge during its operation by controlling its speed or blowing off air automatically



Economical Life Cycle Cost

Return on Investment

- NXM series can maximize the profitability of end users through significant reduction of LCC.



Low Maintenance Cost

- Regular maintenance involves only cleaning or replacing air filters.
- No expenditures on the replacement of oil, oil filters and water cooling systems.
- Reduced labor costs



Improved Filter System

- NXM 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 replaced.

	New Filtration System		Remarks
	Pro Filter	Main Filter	
Filtration Efficiency	80% @ 100µm	MERV11	ASHRAE 52.2-1999
Type	Coarse	Fine	
Material	Non-woven Fabric	Synthetic Fiber	
Stage	2 Stages (Pre Filter + Main Filter)		
Maintenance	<ul style="list-style-type: none"> Air Wash once a month Replacement every 3 months 	Replacement every 3-6 months	<ul style="list-style-type: none"> Warning & Fault Alarms Depending on Circumstances

Customer Oriented Technology

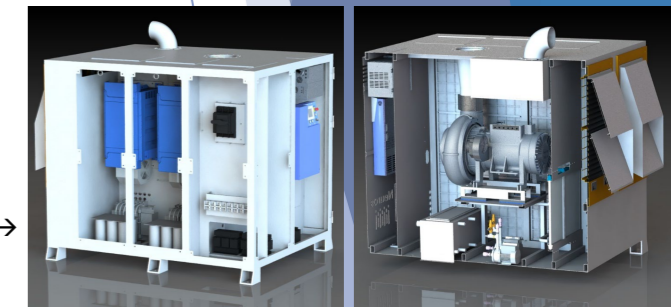
Control System to Meet Various Customer Demands

- PLC(Programmable Logic Controller) is the central control point of the blower. It allows the end users 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

- Low noise below 85dB(A)
- Decreased outdoor noise by placing BOV and silencer inside
- Noise suppression cover with soundproof panel
- Do not need special equipment or vibration dampers
- No contact while operating due to magnetic bearing
- Decrease noise effect by separating high voltage and low voltage → Keep control stable
- Cooling by fitting upper fan when harmonic filter is equipped
- Main power is available either top or bottom : Optimized wiring connections



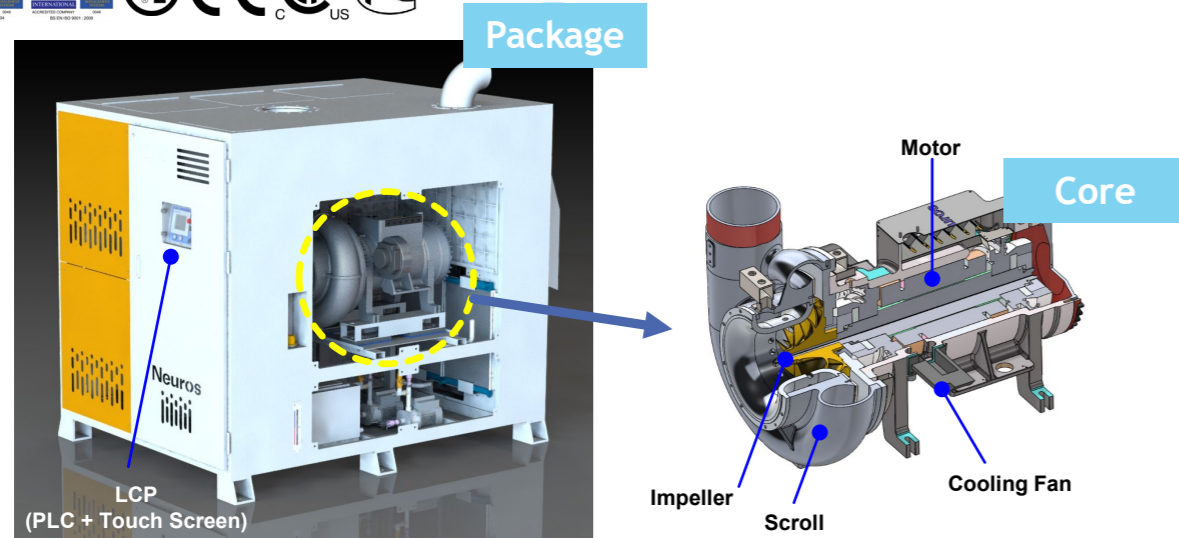
Turbo Blower Remote Monitoring System

- Monitor the conditions of turbo blower by checking state, operating point and sensor values
- Update new control program by accessing PLC remotely and analyze the cause remotely when problem occurs
- Monitor the sensor value of turbo blower, and save the sensor value and operation records



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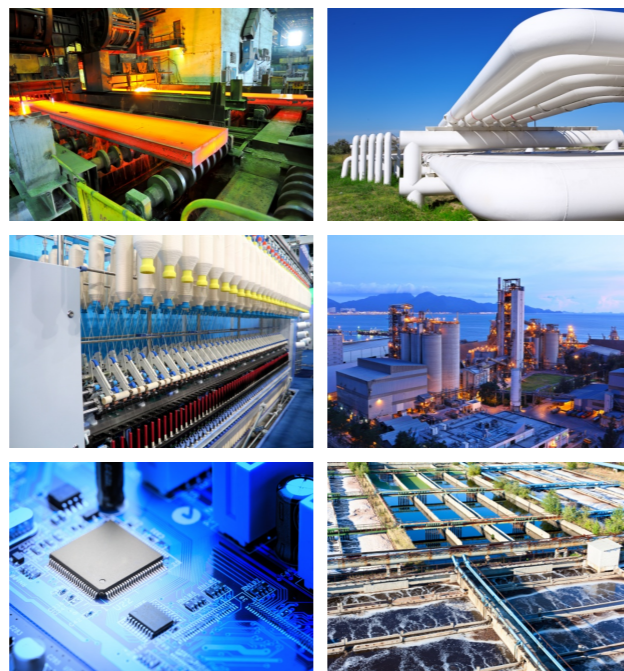
Product Specifications



Model	Discharge Pressure (kgf/cm ²) Flow Rate (m ³ /m)					Motor Power kW	Dimension			Weights kg
	0.5	0.6	0.7	0.8	1.0		W(mm)	D(mm)	H(mm)	
NXM150			122	103	82	150	1100	2500	2150	1600
NXM250		226	200	177	146	250	1100	2500	2150	2700
NXM350	301	290	272	259	209	350	1700	2700	2150	3000

Application

- Aeration for Waste Water Treatment Plant
 - Aerobic microorganism digests waste by providing air into the waste water
- Desulfurization in Power Plant
 - Oxygen Supply for Combustor
- Transfer of Powder Material (PE, PP, Food etc.)
 - Transferring powder to storage
- CGL (Continuous Galvanizing Line)
 - Air knife for pneumatic conveying, plating,
- Ventilation for Semi-Conductor Process
 - TFT-LCD, cell, module, color filter, etc
- Paper Dewatering
- Thread Interlacing Process



Neuros possess Air and Magnetic Bearing type of Turbo Blower Line-up for the first time in the field

Satisfy users' Needs for various types of turbo machineries
 Provide highest efficiency : 78% of total efficiency
 Full Line-up from small to big capacity : Biggest capacity in the field (350kW)



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