TURBO BLOWER

Eco-friendly, High Efficiency Turbo Blower

SA ENGINEERING

History since 1987

1987 ····· Founded

1994 ····· Developed turbo (centrifugal-type) air compressor for the first time in Korea

2002 ····· Started air-foil bearing type turbo blower business

2003 ····· Developed turbo blower(HB35, HB50)

2004 ····· Acquired corporate-affiliated research institute certification

2005 ····· Developed turbo blower GT series

····· Patent registration (fuel cell system, turbo machine)

2013 ····· Developed turbo blower NGT series

····· Acquired certification for High Efficiency Energy Equipment

2016 ····· Developed high-pressure and explosion-proof turbo blower

2019 ····· Developed 1000hp turbo blower

2023 ····· Changed company name to SA Engineering Co., Ltd.

CE

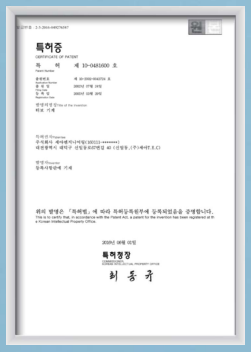
UL

High Efficiency System

ISO 9001

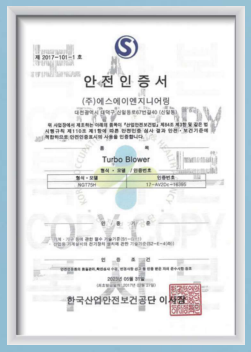
ISO 14001

Explosion-Proof



Patent

Performance



Safety

Being a industry leader,
High efficiency turbo blower for green future

The best turbo technology achieved by long-term,
constant research and development realizes turbo blower corresponding
to the needs of low-energy green future.

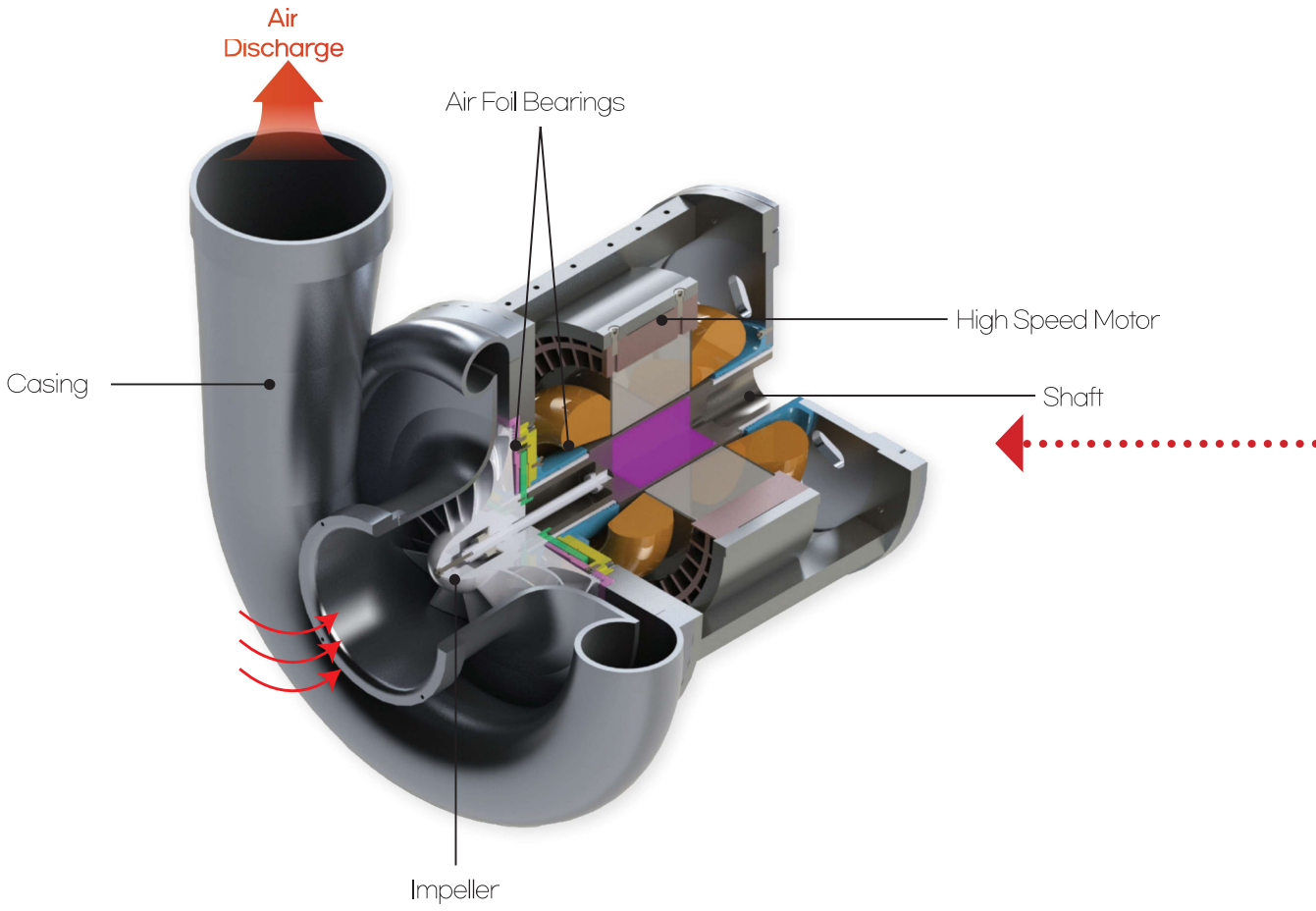
State of The Art Technology

Maximize Productivity

- Optimally integrated core technologies for air foil bearings, motors, impellers, etc. provide stability and reliability for operation.
- Optimized motor speed control technology using a variable frequency drive (VFD) makes it possible to maximize productivity with minimal energy consumption.

Peace of Mind

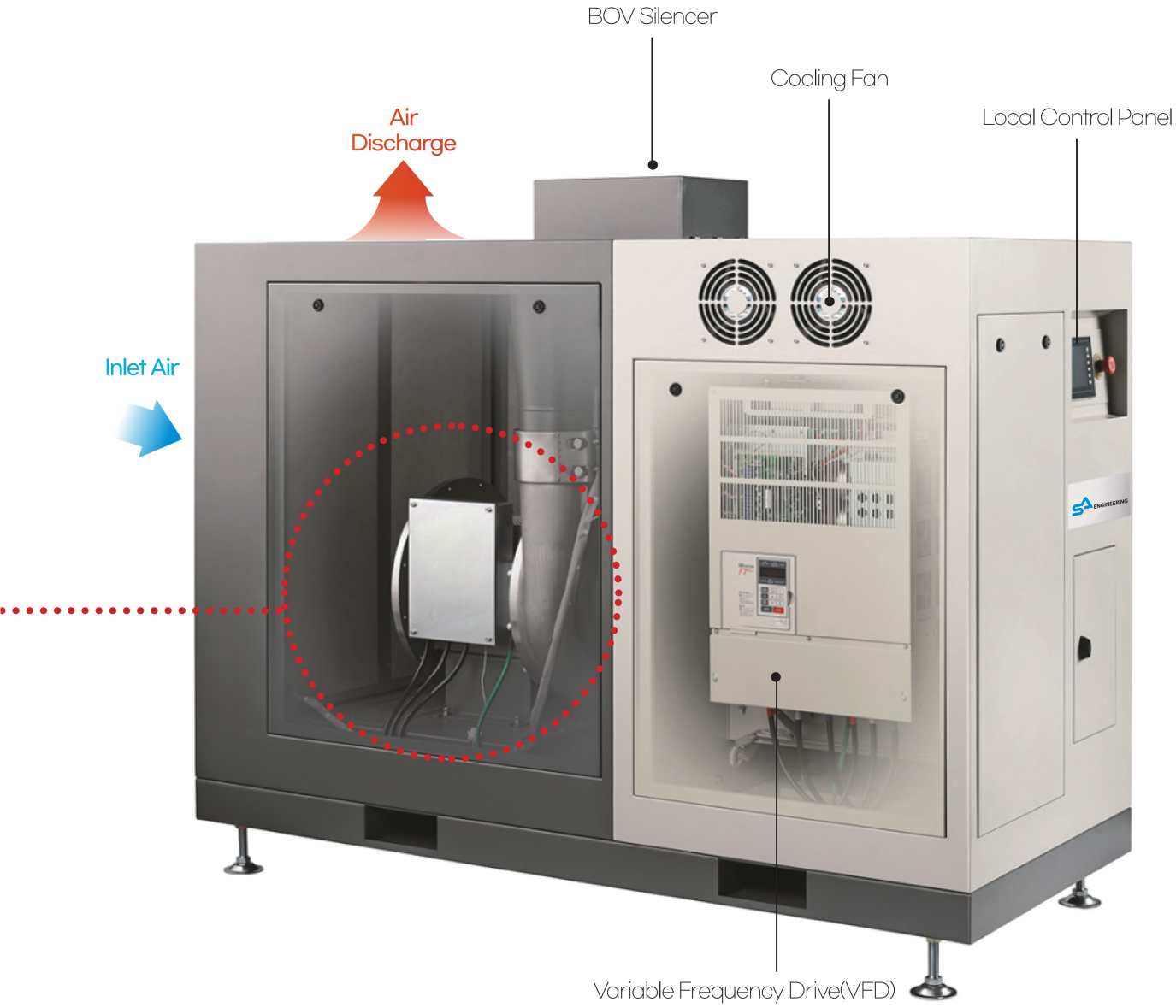
- 100% Oil-less system makes turbo blower free from the productivity losses and maintenance expenses due to oil permeation.
- Provides comfortable operation with low package vibration and noise less than 80 dB (A), not requiring additional foundation work.



Turbo Blower System

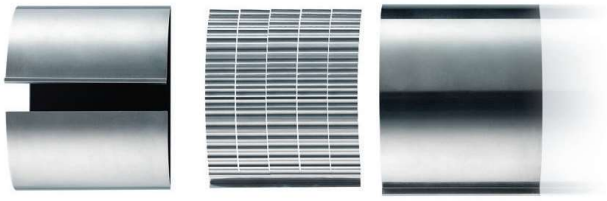
Plug and Play Concept

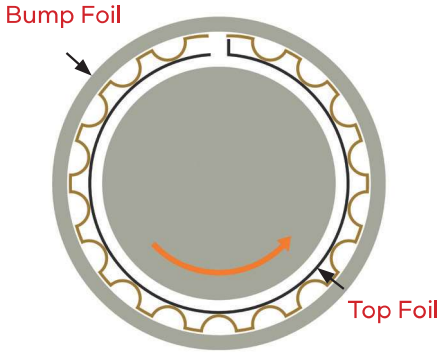
- The turbo blower realizes single unit package integrating all functions such as programmable logic controller (PLC), variable frequency drive (VFD), etc.
- The state-of-the-art design ensures energy and time saving effects without auxiliaries.

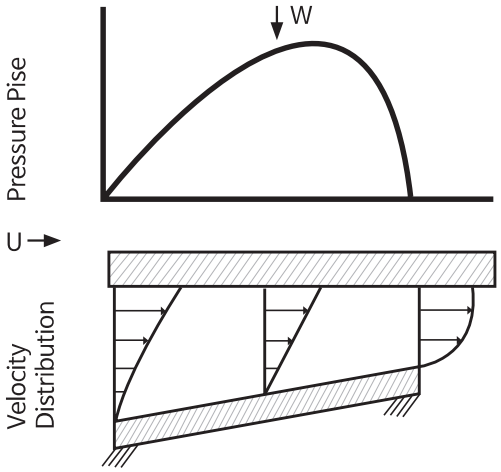


Optimized High-Efficiency System

High efficiency and eco-friendly turbo blowers by perfect combination between stability and efficiency.





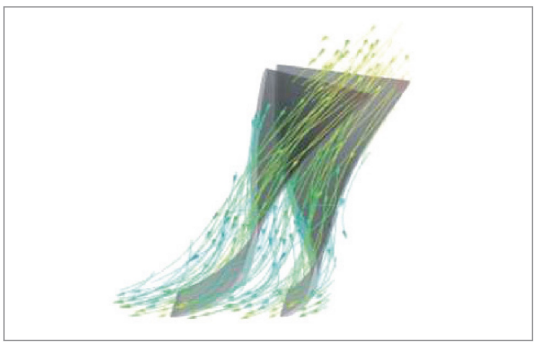


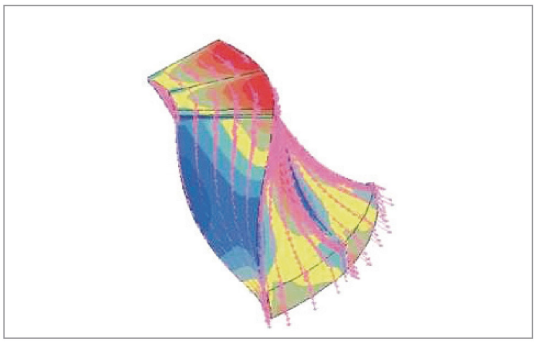
UNIQUE AIR FOIL BEARINGS

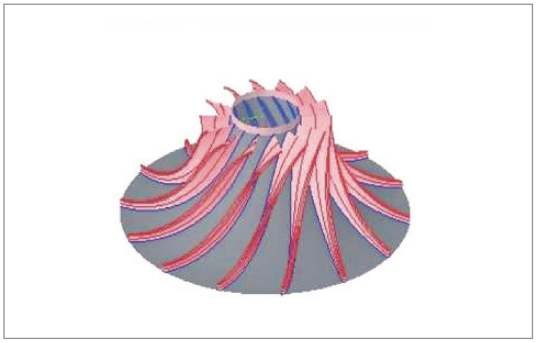
- Adoption of hydrodynamic design to use air film between shaft and bearings made by high speed rotors
- Non-contact bearings without friction with shafts during rotation maximizes energy efficiency
- 100% Oil-Less & air lubricated system

HIGH EFFICIENT MILLED IMPELLER

- Backward Leaning type impellers allow for high efficiency
- Optimized assembly technology increases efficiency and turndown range
- 5-Axis CNC machining provides greatly precise design shape and superb durability



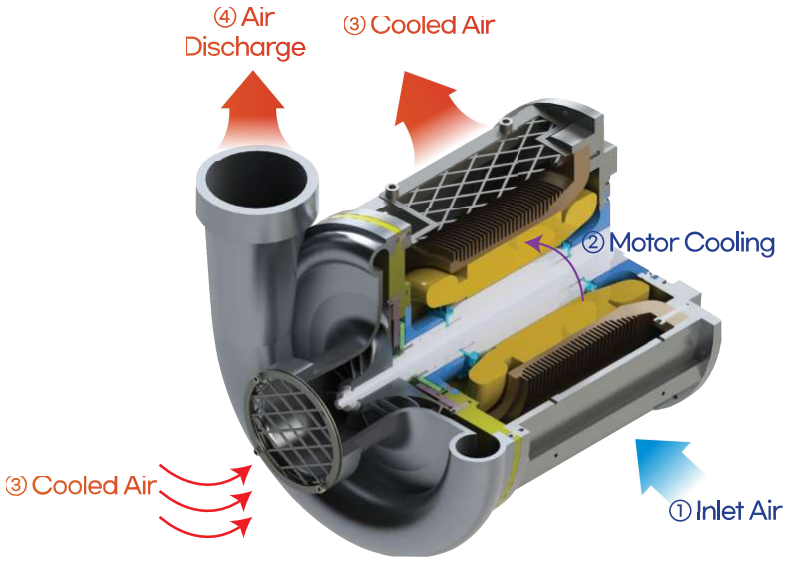




Optimized High-Efficiency System

HIGHEST DURABILITY HIGH SPEED MOTOR

- Patented self-cooling system provides high efficiency over whole working range during high speed rotation (Pat. No. : 10-0481600)
- Featuring a simple design, it also provides excellent durability in extreme conditions
- Supplied with high speed induction or permanent magnet synchronous motors

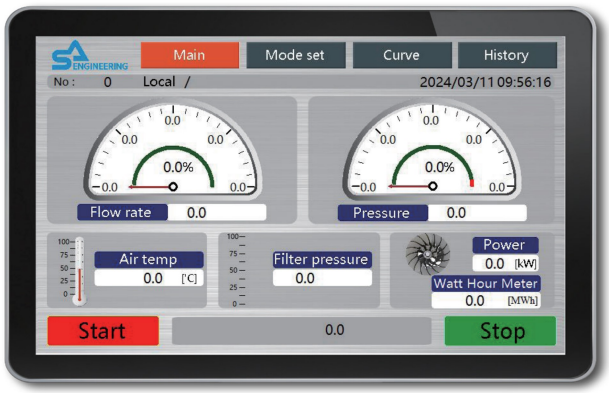


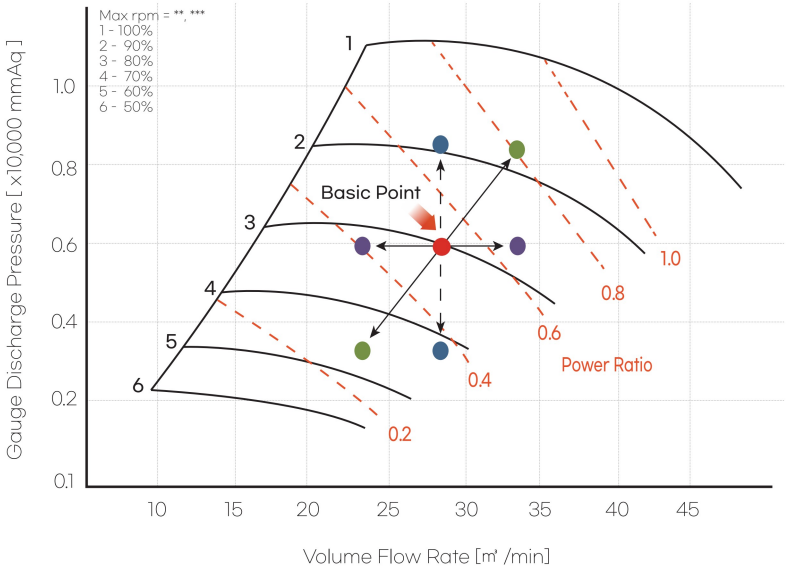
SIMPLE AND POWERFUL COOLING SYSTEM

- Simple and high efficiency cooling system without auxiliaries (Air / Liquid cooling type)
- Self-cooling system by inlet air for motor and electrical parts

ADVANCED CONTROL AND MONITORING

- User-friendly interface with graphical display
- Realization of Plug & Play solution enables quick installation with minimum preparation
- Programmable Logic Controller (PLC) provides more versatile and flexible operation against environmental changes
- Built-in various control modes and communications protocol



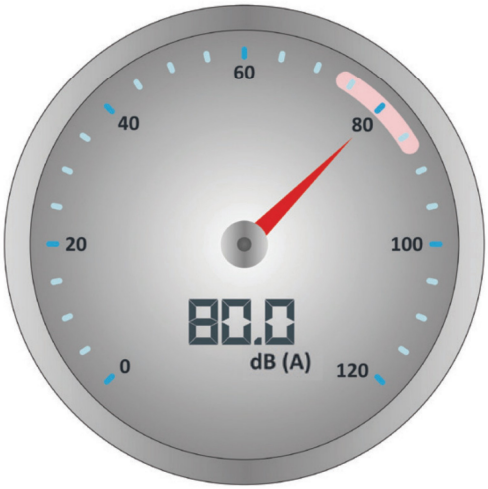


OPERATION MODE

- Constant Speed
- Constant Flow Rate
- Proportion
- Dissolved Oxygen
- Constant Power

MAXIMIZE YOUR BENEFITS

- Realization of low-noise system less than 80dB(A) with enclosure enables installation in residential area
- Cost reduction by space saving and easy installation
- 100% Oil-less system provides comfortable operation

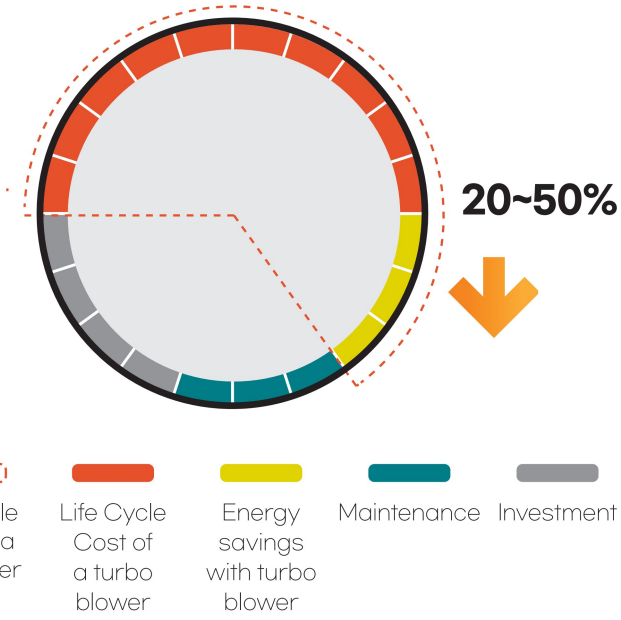


The Best Energy Saving Solution

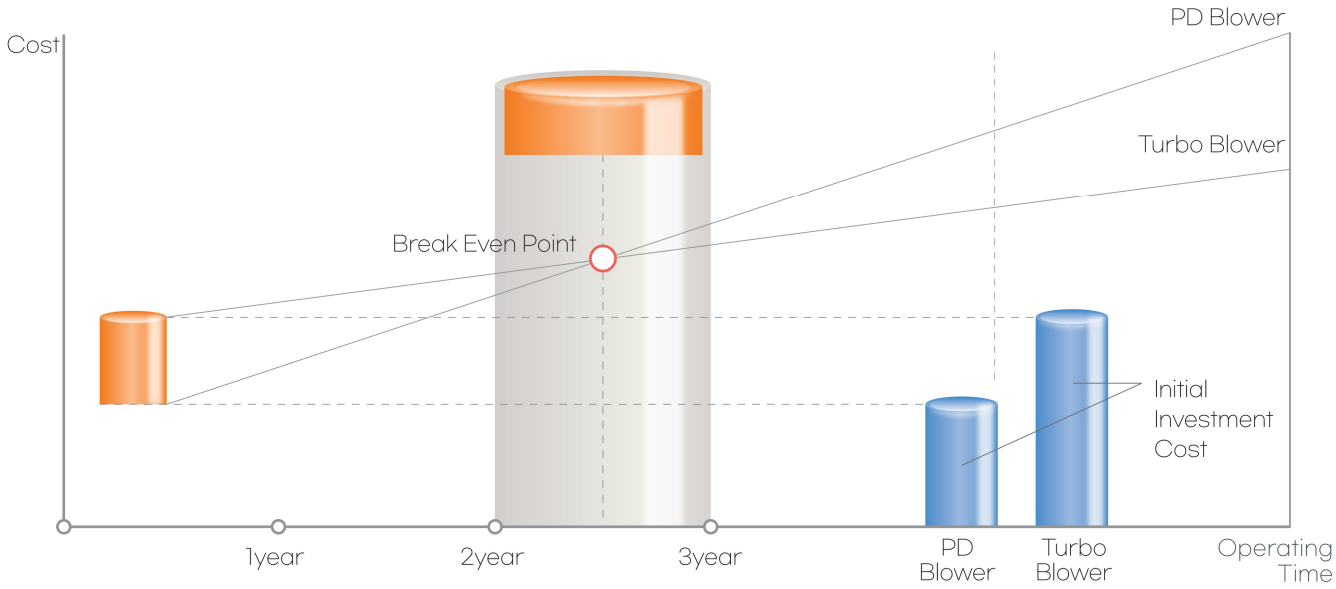
ENERGY SAVINGS UP TO 20-50%

A turbo blower ensures customers profit by greatly reducing operation costs compared to conventional blowers. These excellent energy saving technologies enable investment recovery within two or three years.

- Adoption of VFD
- Adjusting motor speeds precisely according to air demand
- Maximum 20–50% savings on energy costs for operation
- Focused on energy cost reduction and maximization of customers profits



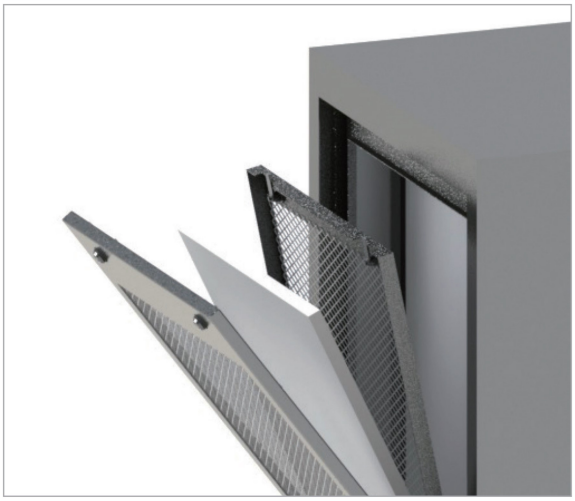
Economical effects compared to PD Blower



EASY MAINTENANCE

- Easy replacement process of components maximizes customers convenience.
- Simple and easy maintenance process provides high efficiency operation by reducing maintenance expenses and hours.

Air Filter

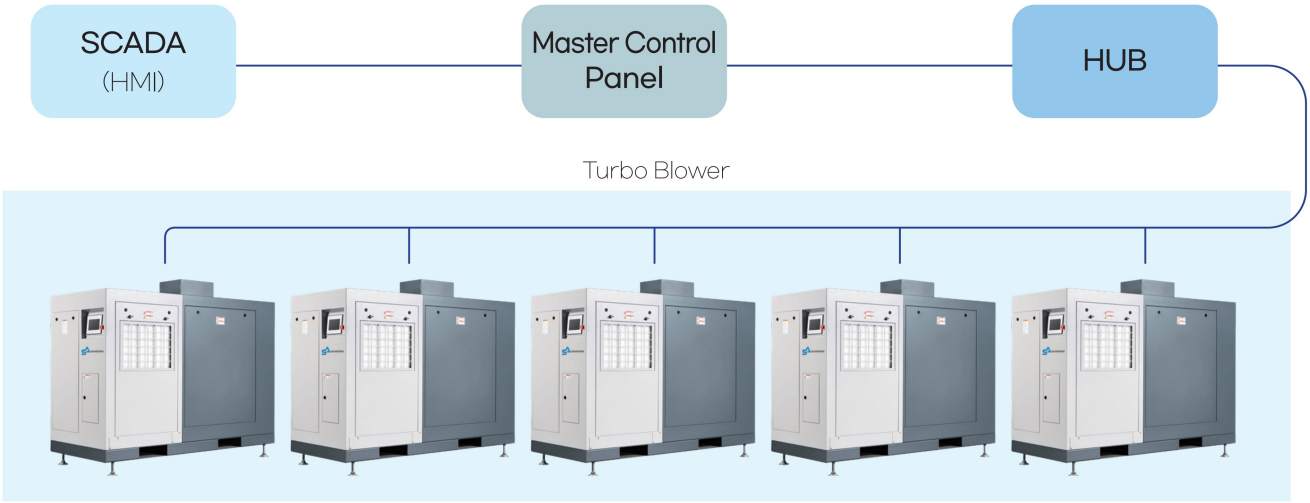


Coolant

※ Only applicable to Liquid cooling type model

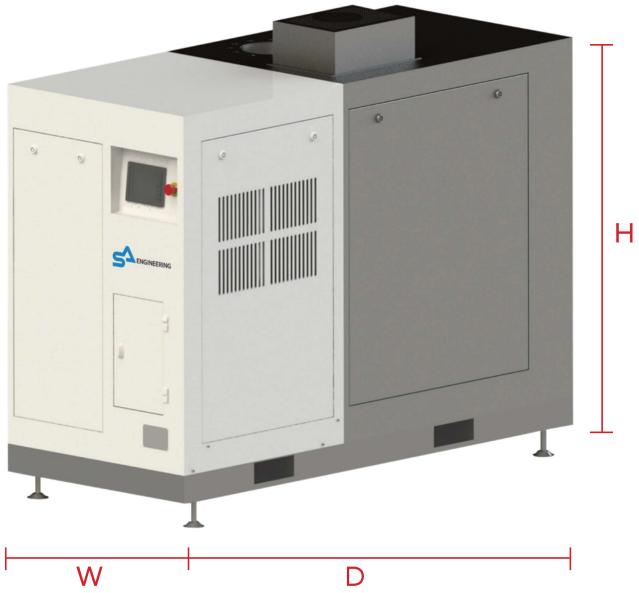
TOTAL MANAGEMENT SOLUTION

- Realization of optimized operation solution by flexible controls.
- Computerized intelligent group control and monitoring system provide stability for operation.



SA Engineering Turbo Blower NGT-Series

Front View



Rear View

※ Optional Type

Standard Type

Duct (Flange) Type

NGT-SERIES

MODEL		NGT 5	NGT 10	NGT 20	NGT 30	NGT 50	NGT 75	NGT 100
Suction Flow(㎥/min)		3.5~4.6	6.5~8	12~19	18~26	16~44	22~62	28~71
Dis.Pressure(kgf/㎠G)		0.3~0.6		0.3~0.8		0.3~1.5		
Dimension	W(㎜)	600		750		750	850	
	D(㎜)	1000		1580		1650	2000	
	H(㎜)	900		1150		1150	1370	

MODEL		NGT 125	NGT 150	NGT 200	NGT 250	NGT 300	NGT 400	NGT 500
Suction Flow(㎥/min)		46~98	63~120	86~162	90~193	130~255	172~324	186~376
Dis.Pressure(kgf/㎠G)		0.3~1.0						0.3~1.2
Dimension	W(㎜)	950	950	950	1300		1600	1600
	D(㎜)	2250	1950	2050	2000		2100	2310
	H(㎜)	1500	1550	1550	1755		1810	1810

※ Operation Conditions : 20℃, 1.033kgf/㎠, 65%RH ※ Tolerance : ±5%
※ At the above data may be revised and regarding special specifications, consult manufacturer.

Explosion-Proof Turbo Blower EX-Series

High-efficiency explosion-proof turbo blowers for industrial applications

Blower

Control Panel

FEATURES

- 100% Oil Less with airfoil bearings
- High efficiency Induction Motor, H Class Insulation
- Realizes high reliability and optimal performance
- Outdoor installation
- Explosion-Proof Class : Ex e IIC T3 Gb
- IP Rating : IP54

APPLICATIONS

- Pneumatic conveying of raw materials in chemical plants which oil, gas and Liquid hydrogen are handled
- Chemical fiber, Semiconductor and cement industry
- For industrial processes such as dry, vacuum

EX-SERIES

MODEL		EX-NGT 50	EX-NGT 75	EX-NGT 100	EX-NGT 150	EX-NGT 200	EX-NGT250	EX-NGT 300
Suction Flow Rate (㎥/min)		20	30	41	59	79	103	124
Discharge Pressure(kgf/cm2G)		0.3~1.0						
Dimension (W*D*H_mm)	Blower	850×1650×1150	900×1950×1350	900×1950×1350	1000×1950×1505	950×1750×1758	1175×1846×1758	1175×1846×1758
	Control Panel	1000×950×1720 (Installation in non-hazardous areas)				1290×1240×1920 (Installation in non-hazardous areas)		

※ For the control panel in hazardous area, consult manufacturer

High Pressure Turbo Blower NGP-Series

100% Oil-less high pressure blower with air foil bearings

- No lubricant, eco-friendly 100% Oil-Less airfoil bearing technology
- Provides optimum pure air and maximize energy savings
- Minimize loss and maintenance cost compared to the conventional equipment such as screw compressor
- Built-in PLC and touch screen, User-friendly interface for control and monitoring
- Low noise and vibration, Simple maintenance
- Application : Chemical textile plant, Semiconductor industry, LCD/Glass industry, Power plant

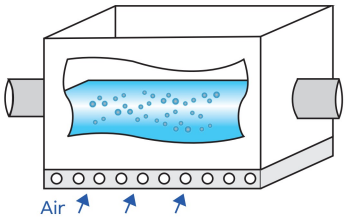
NGP-SERIES

MODEL	NGP 150	NGP 200	NGP 300
Suction Flow Rate(㎥/min)	35	45	68
Discharge Pressure (kgf/㎠G)	1.5/2.0/2.5/3.0		

APPLICATION

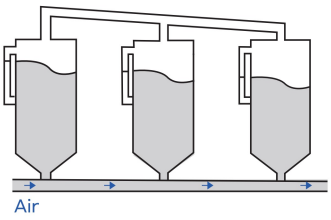
WATER AND WASTEWATER TREATMENT

- Supplies compressed air to water treatment facilities for wastewater treatment microorganism cultivation
- Increases the active oxygen with lower discharge temperature and maximizes productivity



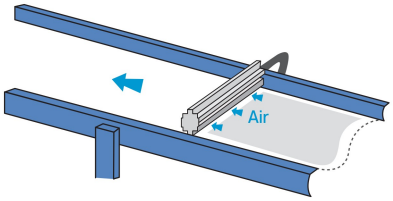
PNEUMATIC CONVEYING

- Conveys powder materials such as cement, pellet, etc. by feeding compressed air to transfer Line
- Use a induction type motor in poor environment with impurities (Iron content)



OTHERS

- Utilized for various purposes such as dry, dehumidification, burner, desulfurization, etc. in industrial sites
- Increase in productivity by drying products using compressed air without heating equipment



SA Engineering Co.,Ltd
40, Sinildong-ro 67beon-gil, Daedeok-gu, Daejeon 306-230 Korea
Tel. (+82) 42 931 8240 Fax. (+82) 42 931 8370
www.saeg.co.kr

Shanghai office
A710, Hongqiaojingzuo, No.280-2, Hongjing Road, Shanghai, 201103
Tel. +86-21-6231-1835