Experience the advanced technology

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Representative

ISO9001 Cert. No : FM 24369
ISO14001 Cert. No : EMS 54112

Present State of Samsung Techwin's Turbo compressor Authentication

- 97.7 ISO14001 Authentication
- 97.11 Korea New Technology Authentication
- 98.4 IR52 Jang Young Sil Award
- 99.2 ISO9001 Authentication
- 01.7 CE Authentication

SAMSUNG TECHWIN

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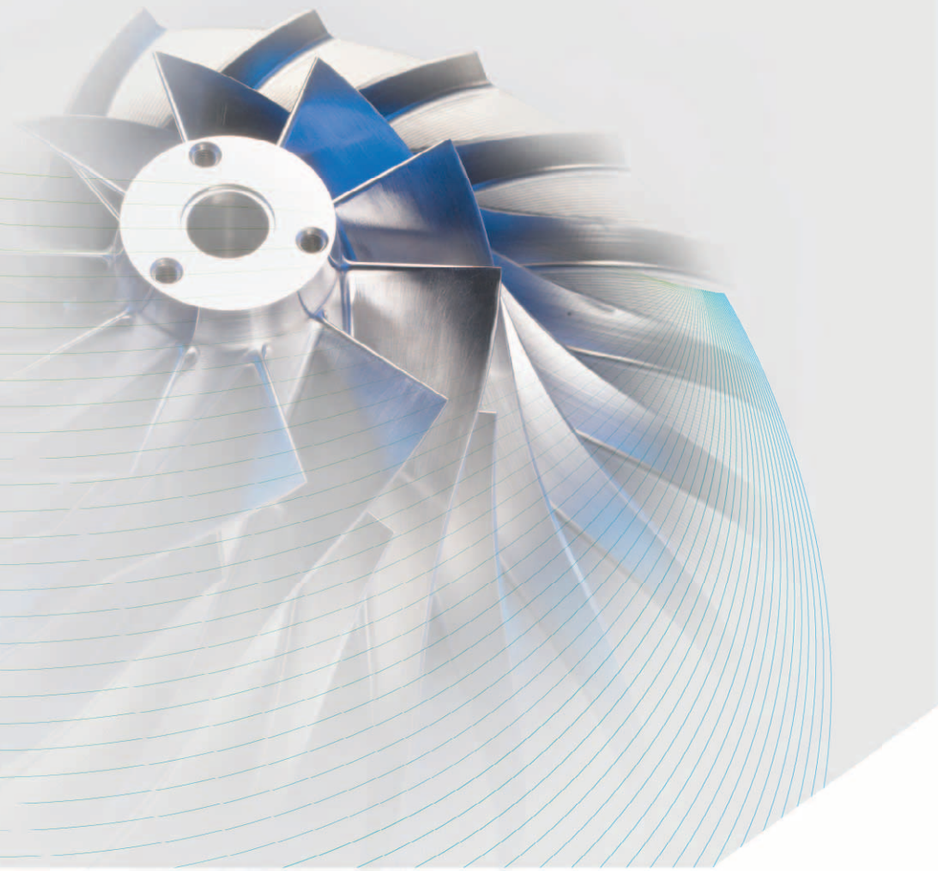
www.samsungcomp.com

Samsung Compressor

For Air and Engineered Centrifugal Compressors



Samsung Techwin is the sole gas turbine engine manufacturer in Korea.
Samsung Techwin provides total service ranging from assembly to overhaul and parts production of gas turbine engines.
Boasting the finest technology in design, development and production, Samsung Techwin demands an international presence for outstanding quality and service.
By combining precision machinery with integrated technologies, Samsung Techwin is leading the energy equipment industry by developing technology that includes industrial air compressors, LNG carriers, gas compressors for FPSO(Floating Production Storage and Offloading), expanders and power generation systems.

SAMSUNG TECHWIN

Contents

Industrial Air Compressors
- SM3000 ~ SM6000 ---- 4P
- SM2000 / SA2000 ---- 8P
- TM400 ~ TM1500 ---- 12P
- SL Series ---- 16P

Engineered Compressors
- SM7000 / SM8000 ---- 18P

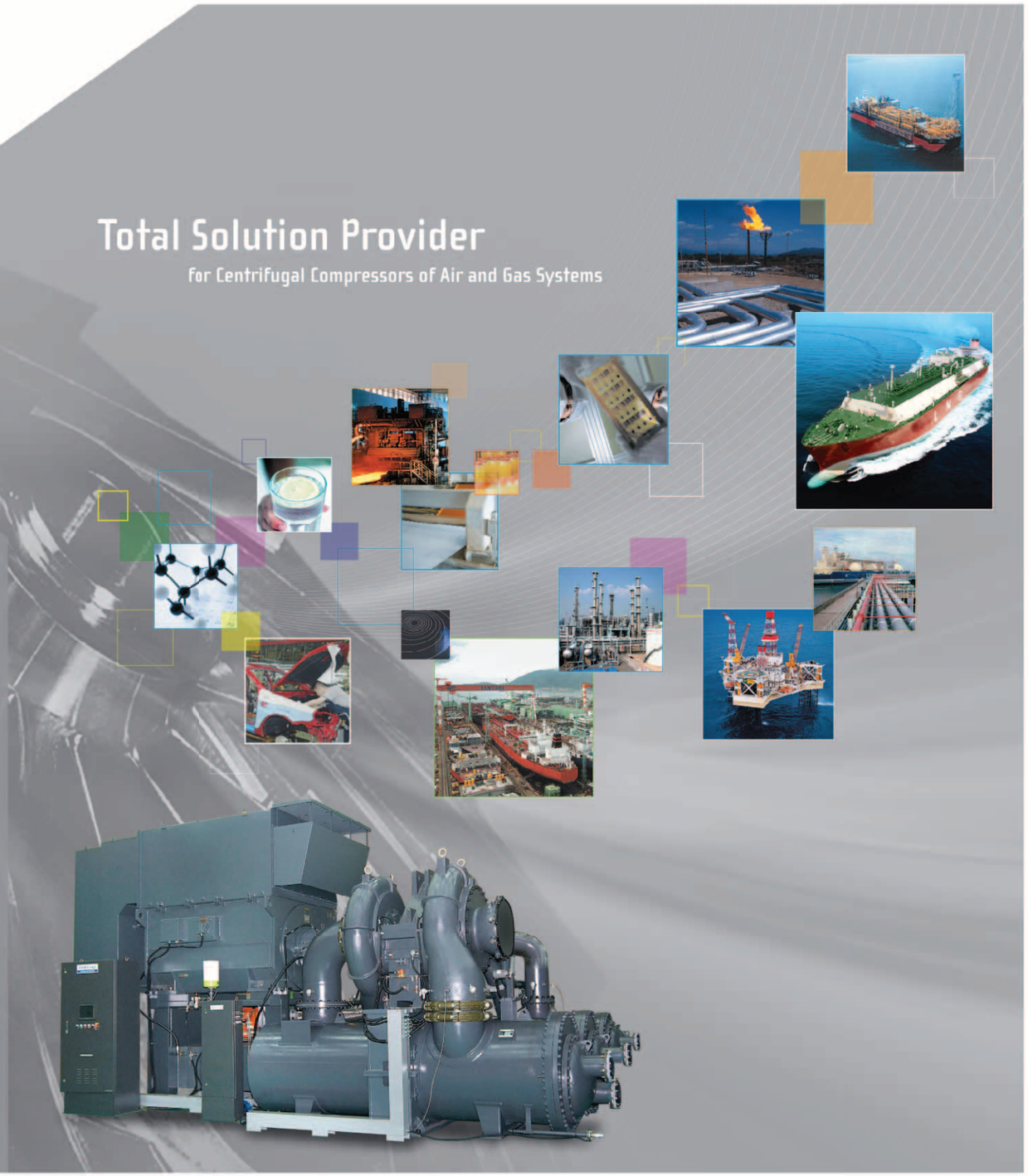
Supplementary F
acilities
– Dryers (SDR / SDB / SDN) ---- 22P
– Controller ---- 26P

Product Support (Aftermarket) ---- 28P

Global Network 30P

Total Solution Provider

for Centrifugal Compressors of Air and Gas Systems



Great Technology

**Samsung's aircraft engine technology making our way in the world-
The leading technology of Samsung has achieved an amazing innovation in the history of air compressors.**

SM Series, world top compressors, made by Samsung technology under the name of Samsung - They are masterpieces of air compressors with remarkable efficiency of main components based on the air craft engine technology.
Experience the real value of the SM series proven at all industrial sites where air is required.
Their remarkable and unsurpassed efficiency will provide you with satisfaction beyond imagination.

SM3000~SM6000

Inclusive

- Air Inlet Filter • Inlet Guide Vanes • After Cooler • Silencer • Check Valve
- Cooling Water Manifold • Main Drive Motor • Blow-off Valve • Controller
- Water Drain Traps

High Performance

We have realized fantastic high efficiency system by world-level dynamic analysis.

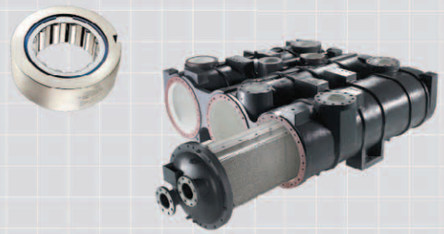
- **Optimized design completed by cutting-edge technology**
  - Realization of optimized impeller by aero-dynamic design via 3-D CF interpretation
  - Optimal body of rotation design via rotor dynamic interpretation
  - Static characteristic and low vibration component design via finite elements method
- **Backward lean type super-efficient impeller**
  - Provides high efficiency over whole operation range with optimized blade angle
  - Makes possible long-life use with anti-rust, abrasion resistant material and realizes low-noise and –vibration
  - Guarantees reliability through 115% over speed spin test
- **Outstanding high precision single helical gear system**
  - Effectively supports axial load delivered from pinion gears, and is designed and manufactured according to KS/AGMA standard
  - Guarantees long- life on nitration heat treatment, Thrust Collar minimizes energy losses.
  - Bull Gear : KS 0, AGMA 12
    Pinion Gear : KS 1, AGMA 13
- **Highly efficient variable inlet guide vane(IGV)**
  - Optimizes the control of air inlet volume and rotation angle when compressed air consumption volume varies
  - Accordingly, improves the performance of compressor remarkably and reduces power consumption
- **Bearing with excellent efficiency and increased durability**
  - Prevents oil whip and lengthens service life in case of high speed rotation,
  - 4 lobes and axle bearings effectively removes stress on axle, and minimizes friction loss
- **New conceptual automatic control system of monitoring and direct-adjusting**
  - Automatically senses temperature, pressure, and vibration of compressor core and all data
  - When any problem leading to system overload occurs, removes it after advance warning
  - Realizes the program to stop automatically when system overloads

Perfect Reliability

Customers always trust the state-of-the-art mechanism and the thorough quality control

- **System protection by adopting anti-reverse rotation clutch(optional)**
  - High reliability is obtained by the realization of automatic cut-off to protect compressor and production system, when backlash thrust occurs due to system error at the later phase of compressor
- **Sealing system satisfying API specification**
  - Perfect sealing system of 4 stages provides 100% pure Air
  - Labyrinth/Carbon Seal combination guarantees long- life use and maximizes easy examination and maintenance
  - Using low-pressure oil minimizes the basic problems of air loss and oil permeation
- **Establishment of high reliability through severe and strict tests**
  - 3 stage strict test from components and modules to final products guarantees excellent equipment reliability
- **Control system actualized by the unique electronic /control technology of Samsung**
  - New-conceptual surge control logic makes stable operation possible with increase of 3-5% surge margin
  - Stabilizes system by the application of counter system against momentary power failure(option)

- **Establishment of perfect and thorough quality assurance system**
  - Samsung's own quality assurance system based on aviation industry as well as ISO9001, international quality standard, provides high reliability
  - Establishes good credibility of customers by 24 hours exhaustive after-sale service for 365 days a year



SM3000-SM6000
Industrial Air Compressors

Low Life Cycle Cost

Full package, highly efficient single unit system, accomplishes minimum cost and heightens competitiveness

- **Advanced system realizing economic efficiency in cost through energy reduction**
  - Economic with low power consumption per a unit flux via highly efficient impellor and wide operation range
  - IGV system which optimally controls flux in proportion to system load remarkably reduces energy in spite of throttle valve
  - Wide operation range to properly meet the flux variance of customer prevents frequent loading/unloading and leads to energy cost reduction on customer side

Easy Maintenance

Distinctive construction design technology give birth to unique maintenance system

- **Innovative process makes possible quick, accurate, and easy examination/maintenance**
  - Module type design is simple in maintenance and greatly reduces
  - Maintenance hours, compared to non-module type
  - Bearing and gearbox constructed by horizontally separate method make possible speedy maintenance and repair
- **New conceptual intercooler with improved construction for simple maintenance**
  - Straight water-in-tube type makes cleaning and maintenance convenient
  - Plate fined tube type structure increases cooling effect and minimizes pressure loss
  - Special surface coating lengthens life of intercooler by suppressing scale production
- **Horizontally separated gearbox designed to make maintenance convenient**
  - Horizontally separated type(taper pin type) makes excellent repetitive assembly
  - The examination and maintenance of the core are possible without uninstalling accessory pipes minimizing costs
  - Highly rigid form design of single unit casting absorbs vibration and minimizes noise

Easy Operation

The convenience of high-tech machinery with no equal attracts your attention

- **Large touch screen color LCD**
  - Displaying all data of compressor operation
  - Grasping present compressor condition at a glance allows immediate measures when any problem occurred
  - Simple ON/OFF button makes handling easy
- **Automatic dual or modulating control**
  - If compressed air consumption varies, the linked control of blow-off valve and inlet guide vane makes compressor system run in optimal condition
  - Amazing turn down ratio by 35% provides broad operation scope
- **Linked control(HMI)**
  - With excellent compatibility of SM Series and technical ability, it is possible to unite with any present operating system easily
  - Convenient linked control is available with Web basis control system(option)

Innovative Design

Excellent function and performance with high level exterior design makes more splendid

- **Innovative package design not to be found in existing compressor**
  - Single unit with all components in each modules placed on base frame realizes convenient transport
  - Lift & Put construction with no additional expense for installation realizes inexpensive installation
  - Operation is possible by connecting pipes and electricity only by simple connectivity with other system
- **Improved maintenance and convenience with opened enclosure**
  - Fully opened construction with good open enclosure (option) improves the convenience of maintenance and use
  - Patented foam acoustic absorbent (option) realizes low-noise and elegant exterior design
- **Realization of pleasant workshop environment**
  - Rational design based on functionality realizes a system to increase work efficiency

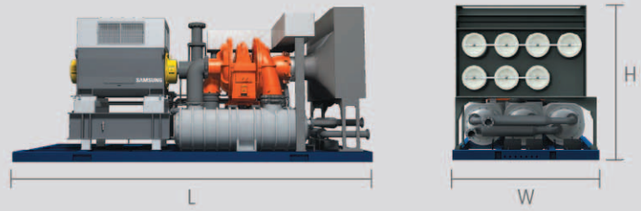
SM3000-SM6000
Industrial Air Compressors

Technical Data

Specifications

Model		SM 3000	SM 4000	SM 5000	SM 6000
Capacity	m^3/hr	3,000 ~ 5,500	5,000 ~ 8,500	8,000 ~ 15,000	14,000 ~ 23,000
	CFM	1,800 ~ 3,200	2,900 ~ 5,000	4,700 ~ 8,800	8,200 ~ 13,500
Motor	kW	210 ~ 2,390			
	HP	280 ~ 3,200			
Discharge Pressure	Bar A	4.5 ~ 20			
	Psi A	65 ~ 290			
Dimension(L x W x H)	mm	4,350 x 2,100 x 2,100	4,650 x 2,100 x 2,220	5,200 x 2,150 x 2,100	5,800 x 2,300 x 2,550
Weight	kg	7,000	9,000	12,000	18,000

※ Weight : excluding sound-proof enclosure, including electrical motor



Product Range

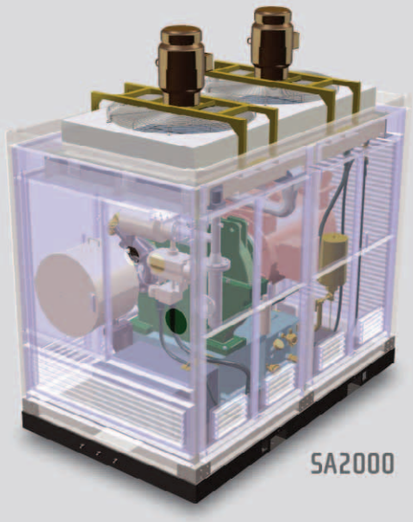
Great Technology

Samsung Techwin have won the world level fame –

Final products of turbo compressor made with first & best technical ability
SM2000/SA2000 are final products of turbo compressor made by best elite experts
who believes in "customer is always right" and have world level know-how
and present you with satisfaction beyond expectation

SM2000 Water Cooled Type / SA2000 Air Cooled Type

SM2000



SA2000

Inclusive

- Compressor Core Unit • Motor • Motor Starter • Control System
- Discharge Check Valve • Inlet Guide Vane • Inlet Filter D/P Gauge • Silencer
- Blow-off Valve Assy • Lubrication System • Sound-proof Enclosure

Options

- Monitoring System • Modulating Control • Sequence Control • API Code
- Control Power Quality Protection • Dual oil coolers • Automatic Condensate Drain Traps

High Performance

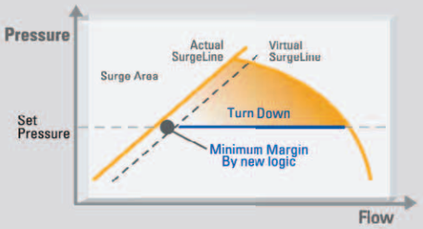
- **Optimized design via cutting edge dynamic analysis**
  - Aero-dynamic design accomplishes high efficiency, and reduces energy consumption by 20%, compared to displacement compressor, by recycling air loss caused by variable IGV and discharge variance
  - Opened enclosure and acoustic absorbent makes pleasant workshop environment, and renovation of gear box realizes low-noise
  - Adoption of perfect carbon steel or abradable seal over 4 stages and use of low pressure oil minimizes energy loss and provides 100% pure air
- **Auto dual or modulating control**
  - When discharging compressed air varies, linked control of inlet guide vane and blow off valve runs compressor system in optimal condition
  - Complete realization of stable compressed air production by securing broad turn down ration

Low Life Cycle Cost

- **Economic operation system with energy reduction**
  - All components, depending on model, are mounted on base frame as a single unit, which makes transport convenient, Lift & Put which does not need additional expense for set-up makes installation inexpensive
  - Long maintenance cycle and guarantee for life over 20 year use minimizes maintenance expense
- **Easy and speedy examination and maintenance process**
  - Compared to non-module type, module type design makes examination and maintenance simple and greatly reduces maintenance hours
  - All gear boxes and bearing constructions made horizontally separate method makes maintenance simple

Perfect Reliability

- **Verified quality assurance system through stringent test**
  - Strict quality assurance system for compression capability essential to stable operation is established, and provides impeccable durability and stability
  - Implementing the test of efficiency and durability of components, each module and system earns equipment reliability
- **Unique new-conceptual control system of Samsung**
  - Provides stable operation by applying new-conceptual Anti-surge Control Logic accomplished with amazing state-of-the-art electronic/control technology of Samsung
  - System stability is upgraded by applying counter system against momentary power failure and makes possible ceaseless equipment operation while momentary power failure



Easy Operation

- **Color LCD touch screen panel**
  - Interactive method enables anybody to input all values necessary to operation without difficulty and the definite display of operating condition of compressor also makes easy to deal with when any problem occurs
- **Automatic and linked control**
  - Automatically sensing temperature, pressure, vibration of compressor Core and all data of motor and monitoring to remove system overload after advance warning and to enact auto-stop function when system is overloaded
  - Excellent compatibility permits to unite easily with existing system
  - Web base control system (option) makes linked control possible

Samsung is the solution for your business

❶ Application of anti-reverse rotating prevention clutch(option)
When backlash occurs owing to breakdown of discharging air backlash prevention device, mechanical blocking protects compressor and production system

❷ Closed loop air system
Minimizes noise by re-circulated air discharged from blow-off valve

❸ Inlet guide vane(IGV)
When compressed air consumption volume changes, stable operation, realizes remarkable improvement of compressor and power consumption reduction together with stable operation by controlling air inlet volume and whole angle of air optimally

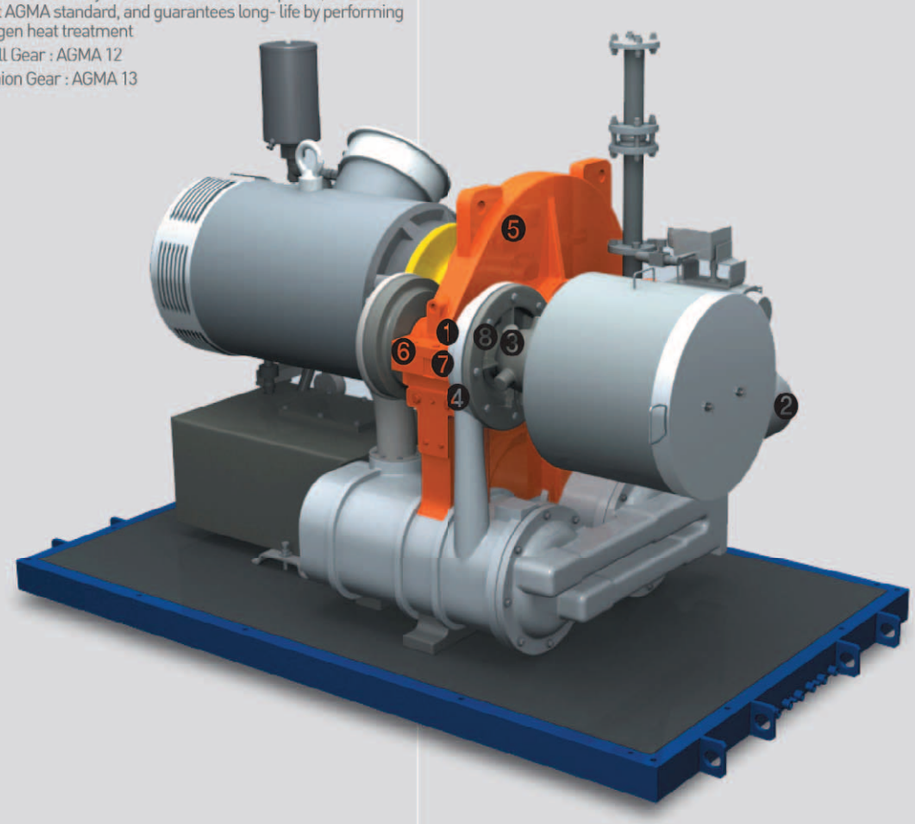
❹ 100% oil-free air sealing system
By adopting carbon seal / abradable seal, maximizes convenience of examination/maintenance and minimizes basic problem of energy loss and oil permeation because of low pressure lubrication system

❺ Single helical integral gear
Supports effectively axle load delivered from pinion, is made to meet AGMA standard, and guarantees long- life by performing nitrogen heat treatment
- Bull Gear : AGMA 12
- Pinion Gear : AGMA 13

❻ Horizontally separate gear case
Application of Taper Pin method emphasizes repetitive assembly, minimizes maintenance expense because it is possible without breaking up accessory pipes to examine and repair Core, high rigidity form design of single unit casting absorbs vibration and reduces noise, and minimizes unnecessary maintenance expense because problem of gear box can always be checked without dismantling

❼ Cutting edge bearing
Tilting pad journal bearing assembled at pinion gear, while rotating at high speed prevents oil whip and provides long life in use, and axle bearing made with 4 lobes mounted at bull gear and tapered land minimizes friction loss with sufficient supporting power

❽ High performance impeller
Backward lean type impeller with optimal blade angle provides high efficiency in the whole operation range and can be used semi permanently due to anti-rust and abrasion resistant material



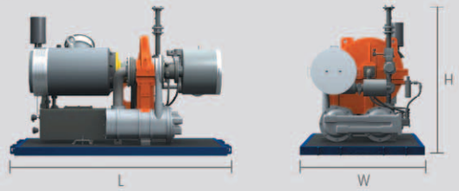
SM2000 Technical Data

Specifications

SM 2000		
Capacity	m^3/hr	750 ~ 3,000
	CFM	440 ~ 1,800
Motor	kW	93 ~ 260
	HP	125 ~ 350
Discharge Pressure	Bar A	6.5 ~ 10
	Psi A	90 ~ 140
Dimension(L x W x H)	mm	2,550 x 1,500 x 1,900
Weight	kg	3,400

※ Weight : including sound-proof enclosure & electrical motor

Product Range



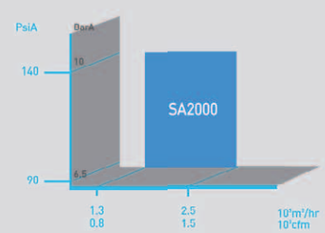
SA2000 Technical Data

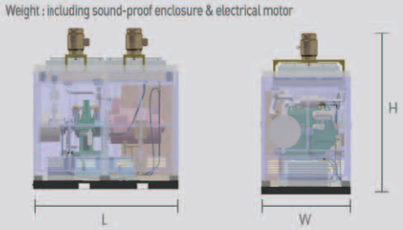
Specifications

SA 2000		
Capacity	m^3/hr	1,300 ~ 2,500
	CFM	770 ~ 1,500
Motor	kW	140 ~ 260
	HP	185 ~ 350
Discharge Pressure	Bar A	6.5 ~ 10
	Psi A	90 ~ 140
Dimension(L x W x H)	mm	2,550 x 1,500 x 2,800
Weight	kg	4,500

※ Weight : including sound-proof enclosure & electrical motor

Product Range





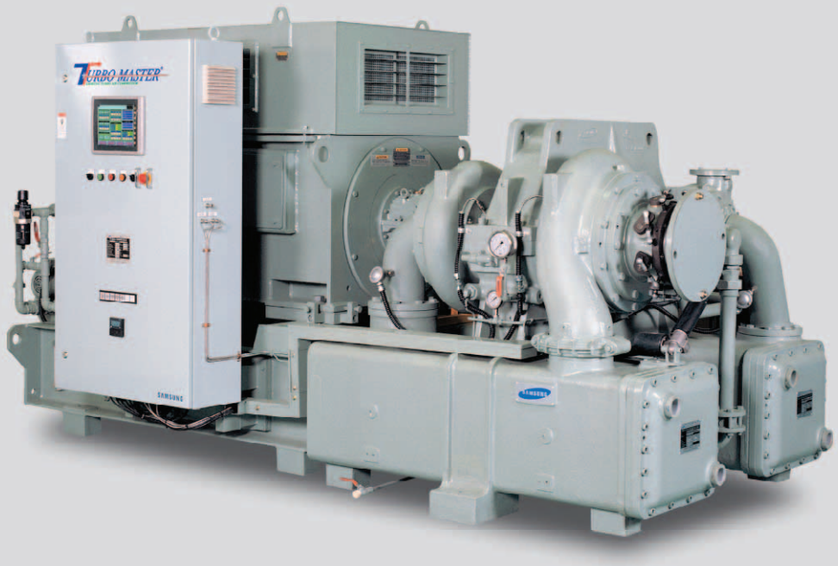
Visionary Mechanism!

The Best Performance

High efficiency turbo air compressor, TurboMaster

TurboMaster gives excellent all industrial sites where require oil-free air efficiency and satisfaction never experienced before. TurboMaster, it is top level compressor made under the name of Samsung

TM400~TM1500



Inclusive

• Air Inlet Filter • Inlet Filter D/P Gauge • Blow-off Silencer • Inlet Guide Vanes
• Check Valve • Main Drive Motor • Motor Starter • Blow-off Valve • Controller
• Lubrication System

High Performance

- **Optimal design completed with dynamic analysis and state-of-the-art technology**
  - Aerodynamically optimized impeller design through 3-D CFD interpretation
  - Optimized impeller design via rotor dynamics
  - Static characteristic and low vibration components design via finite elements method

Perfect Reliability

- **Verified quality assurance system through stringent testing**
  - Strict quality assurance system for compression capability essential to stable operation is established, and provides impeccable durability and stability
  - Implementing the test of efficiency and durability of components, each module and system earns equipment reliability

Low Life Cycle

- **Economic operation system through energy reduction**
  - Turbo Master with high efficiency impellor and broad operation range is economic because of low electricity consumption per unit discharge
  - IGV system creates more energy saving effect than throttle valve by 9% because it optimally controls discharge in proportion to system load

Easy Maintenance

Modular construction design technology makes available specific maintenance system

- **Innovative process makes possible speedy, accurate, and easy examination/maintenance**
  - TurboMaster designed as module type is simple and speedy in maintenance and greatly reduces maintenance hours, compared to non-module type
  - All bearings, seal and gear box construction made by horizontally separate method make possible speedy maintenance and repair

Easy Operation

The convenience of a high-tech machinery with no equal attracts your attention

- **Touch screen type large color LCD**
  - Manifest display of all values and all data of compressor essential to operation
  - Grasping present compressor state at a glance, any problem encountered can be managed quickly
  - Simple ON/OFF button makes handling easy
- **Automatic dual or modulating control**
  - If compressed air consumption changes, the linked control of blow-off valve and inlet guide vane makes compressor system run in optimal condition
  - Amazing turn down ratio by 35% provides broad operation scope
- **Linked control(HMI)**
  - With excellent compatibility of SM series and technical ability, it is possible to unite with present operating system easily
  - Conveniently linked control is available with Web basis control system (option)

First-Class Solution!
Premium Technology

High Performance Components

TurboMaster is designed to exercise optimal efficiency in broad operation range, and is made with verified top-level components. It also has flexibility and appropriateness to meet all the various need of customer.

• High performance impeller

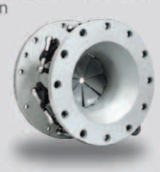
- Backward lean type impeller of TurboMastern provides high efficiency over whole working range because of optimal blade angle and anti-rust and abrasion resistant material makes possible semi permanent use
- Guarantees credibility with 115% over speed spin test performance

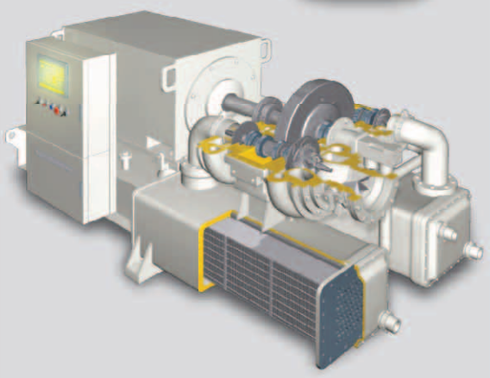
• Horizontally separate type gearbox case

- By adopting Taper Pin method, gearbox case with repetitive assembly capability minimizes maintenance expense because it is possible without breaking up accessory pipes to examine and repair Core
- High rigidity form design of single unit casting absorbs vibration and reduces noise

• Inlet guide vane(IGV)

- Basically adopted variable IGV optimally controls air inlet volume and air rotation angle, when compressed air consumption volume varies and improves the capacity of compressor remarkably and makes possible reduce power consumption together with stable operation





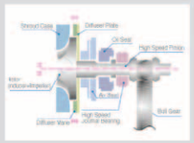
• Gear system

- Single helical integral gear offsets aero-dynamic backlash thrust load, and is designed and manufactured to meet KS/AGMA standards
- Guarantees semi permanent life due to nitration heat treated thrust collar adoption minimizes energy loss.
  - ▶Bull Gear : KS 0, AGMA 12
  - ▶Pinion Gear : KS 1, AGMA 13

• Bearing

- Tilting pad journal bearing assembled at pinion gear prevents oil whip at high speed rotation and provides long life
- Thrust bearing composed of 4 lobes and tapered land mounted at bull gear effectively removes stress on axle and minimizes friction loss

• Sealing system



- Perfect sealing system over 4-stages provides 100% pure air
- Guarantees semi permanent life and maximizes the convenience of xamination/maintenance
- Use of low pressure oil minimizes basic problem of energy loss and oil permeation

• Intercooler

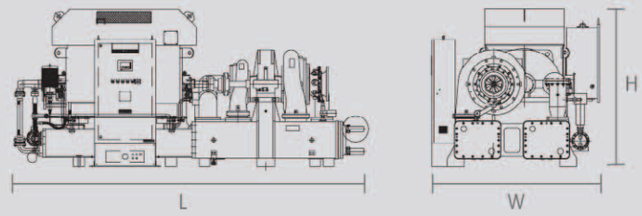
- Straight type water-in-tube method makes cleaning and maintenance convenient
- Has excellent cooling effect and minimizes input loss because of plate finned tube type construction
- Special surface coating checks Scale production and lengthens intercooler life

Technical Data

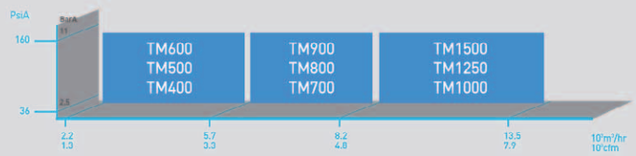
Specifications

Model		TM400	TM500	TM600	TM700	TM800	TM900	TM1000	TM1250	TM1500
Capacity	m³/hr	2,200 ~ 13,500								
	CFM	1,300 ~ 7,950								
Motor	kW	300 ~ 1,120								
	HP	400 ~ 1,500								
Discharge Pressure	Bar A	2.5 ~ 11								
	Psi A	36 ~ 160								
Dimension(L x W x H)	mm	2,900 x 1,600 x 1,800			3,210 x 1,900 x 1,930			3,985 x 2,070 x 1,980		
Weight	kg	4,500 ~ 10,200								

※ Weight : encluding electrical motor



Product Range



Great Technology

Low pressure turbo compressor born by the technology and experience of Samsung Techwin

The low pressure turbo compressor of Samsung is developed by applying the design technology used in SM series of Samsung turbo compressor whose excellent efficiency has been recognized in world compressor market.
This product will introduce to the low pressure market a new standard with its reliable stable performance, high efficiency, semi permanent life, and convenient operation/ maintenance system.

Excellent Performance

- Guarantees high credibility and actualizes stable performance in various operation situation because it is developed by applying turbo compressor technology
- Highly efficient operation capability peculiar advantage of centrifugal type achieves excellent reduction of power
- Low noise/low vibration is possible by the low pressure compressor developed based on precision technology for aircraft turbine engine
- Provides separate Sound-Proof Enclosure at the customer's request

Easy Maintenance

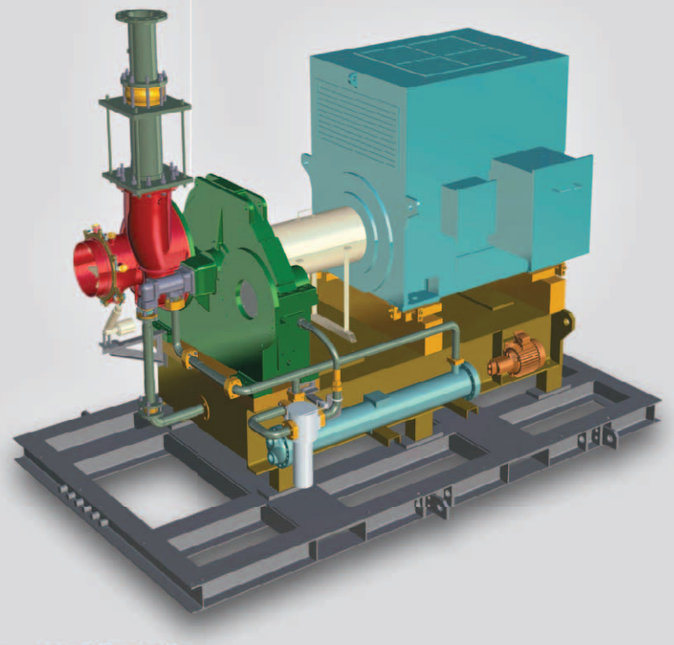
- From the development stage of low pressure compressor, the design fully in mind of the concept for operation/ maintenance makes installation simple and makes operation/ maintenance convenient

Speedy After-Sales Service

- Samsung's own independent A/S system provides speedy and thorough customer service in technology

Indefinite Durability

- Such components as impeller, gear, shroud, scroll are precisely made, and guaranteed semi permanent life reduces maintenance/ repair expense



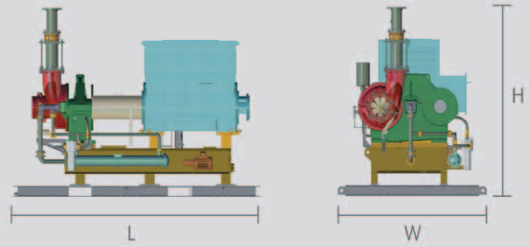
Inclusive

• Inlet Guide Vanes • Check Valve • Main Drive Motor
• Blow-off Valve • Controller

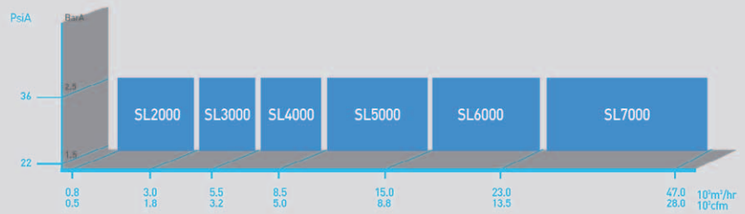
Technical Data

Specifications

Model		SL 2000	SL 3000	SL 4000	SL 5000	SL 6000	SL 7000
Capacity	m^3/hr	800 ~ 1,500	3,000 ~ 5,500	5000 ~ 8,500	8,000 ~ 15,000	14,000 ~ 23,000	22,000 ~ 47,000
	CFM	470 ~ 900	1,800 ~ 3,200	2,900 ~ 5,000	4,700 ~ 8,800	8,200 ~ 13,500	13,000 ~ 28,000
Motor	kW	55 ~ 1,720					
	HP	75 ~ 2,300					
Discharge Pressure	Bar A	1.5 ~ 2.5					
	Psi A	22 ~ 36					
Dimension(L x W x H)	mm	2,550 x 1,500 x 1,900	3,350 x 2,000 x 2,100	3,500 x 2,100 x 2,170	4,100 x 2,150 x 2,400	4,300 x 2,300 x 2,500	6,900 x 4,500 x 4,000



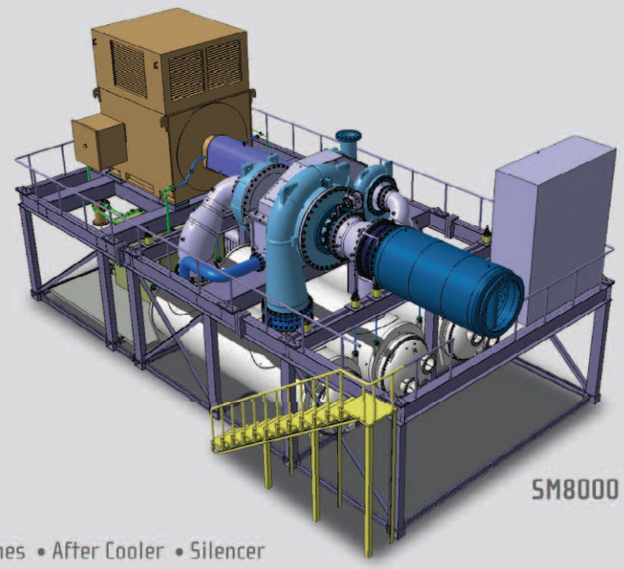
Product Range



Visionary Mechanism!
The Best Performance

SM7000/SM8000

SM7000



SM8000

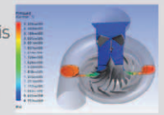
Inclusive

• Air Inlet Filter • Inlet Guide Vanes • After Cooler • Silencer
• Check Valve • Main Drive Motor • Blow-off Valve • Controller

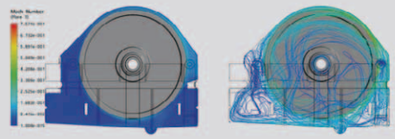
SM7000

High Performance

- **Optimized design completed by the state-of-the-art technology**
  - Aerodynamic design via 3-D flow analysis
  - Construction design via FEA intensity analysis
  - Design via Harmonic vibration analysis



- **Essential components with high reliability**
  - Forged impeller of stainless steel
  - Item balancing according to API 672 specifications
  - Reliability guarantee through 115% over-speed testing
  - Aluminum diffuser treated by hard Anodizing
- **Tilting pad journal bearing design**
  - Realizes the design strong against unbalancing and verified technology and efficiency
- **Adoption of thrust bearing**
  - Optimal design in aerodynamics and mechanics
  - Minimization of the gap between impellor shrouds heightens aerodynamic efficiency
  - Adoption of high efficient taper-land thrust bearing
- **Realization of high precision gear system**
  - High precision realizes the operation of low noise and long life
  - Precise gearbox interior design
  - Realizes minimal windage loss by the design of low mechanical loss type verified through test



- **Semi permanent sealing system design**
  - Non contact labyrinth type
  - 4-stage system to realize 100% oil-free provides air seal, oil seal, and buffer air and guarantees no load
  - Oil vent hole between air seal and oil seal
  - Horizontal separate construction makes possible easy check, change, and maintenance without rotor separation

- **Rigid rotor design**
  - Simple type rotor design realizes the operation for long life
  - Meeting API 672 specifications

Perfect Reliability

- **Establishment of perfect quality assurance system**
  - ISO 9001
  - Aero & military Standards
- **Attainment of high reliability by every kind of severe and difficult tests**
  - Complete component test, endurance & performance test
  - Spin / Hydraulic / NDI / Endurance Test

Low Life Cycle Cost & Easy Maintenance

- **Realization of innovative process for convenient examination/maintenance**
  - Module type design makes maintenance simple and greatly saves maintenance hours, compared to non-module type
- **Easy maintenance for intercooler and aftercooler**
  - Adoption of straight type Water-in-Tube method
  - Adoption of cupro nickel tube hard to be eroded
  - High temperature epoxy coating of high quality prevents air path erosion and improves air quality

- **Mounting up-to-date multi-function control panel**
  - Intuitional arrangement of screen for user's convenience
  - Realization of optimal operation logic depending on user discharge
  - Monitoring compressor data, equipment protection logic and self check-up function
  - High resolution standard LCD touch screen
  - Flexible main controller on PLC base

- **Linked control system**
  - Provides compressed air stably and continuously
  - Evenly distributed operation
  - Requires the smallest man-power for operation

Innovative Design

- **Adoption of module type design**
  - SKD(Semi-Knock-Down) assembly method provides convenient transport
  - Provides an installation fit to customer's site and test operation
- **Short delivery meeting market demand**
  - Guarantees shortest delivery in the world within 6 months

Visionary Mechanism!
The Best Performance

SM8000

High Performance

- **Optimized design completed by the state-of-the-art technology**
  - Aerodynamic design via 3-D flow analysis
  - Construction design via FEA intensity analysis
  - Design via harmonic vibration analysis
- **Essential components with high reliability**
  - Forged impeller of stainless steel
  - Item balancing according to API 672 specifications
  - Reliability guarantee through 115% over-speed testing
  - Stainless steel diffuser
- **Tilting pad journal bearing design**
  - Realizes the design strong against unbalancing and verified technology and efficiency
- **Adoption of thrust collar**
  - Optimal design in aerodynamics and mechanics
  - Minimization of the gap between impellor shrouds heightens aerodynamic efficiency
  - Improves efficiency with least mechanical loss
- **Realization of high precision gear system**
  - High precision realizes the operation of low noise and long life
  - Precise gearbox interior design
  - Realizes minimal windage loss by the design of low mechanical loss type verified through test
- **Semi permanent sealing system design**
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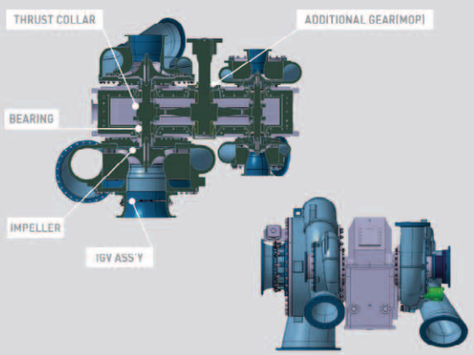
  - 4-stage system to realize 100% oil-free provides air seal, oil seal, and buffer air and guarantees no load
  - Oil vent hole between air seal and oil seal
  - Horizontal separate construction makes possible easy check, change, and maintenance without rotor separation
- **Rigid rotor design**
  - Simple type rotor design realizes the operation for long life
  - Meets API 672 specifications



Perfect Reliability

- **Establishment of perfect quality assurance system**
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  - Aero & military standards
- **Attainment of high reliability through every kind of strict and difficult tests**
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  - Flexible main controller on PLC base
- **Linked control system**
  - Provides compressed air stably and continuously
  - Evenly distributed operation
  - Requires the smallest man-power for operation

Innovative Design

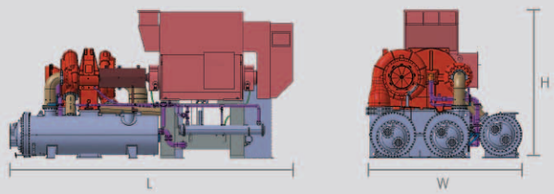
- **Adoption of module type design**
  - SKD(Semi-Knock-Down) assembly method provides convenient transport
  - Double floored steel structure makes operation and maintenance easy
  - Provides an installation fit to customer's site and test operation
- **Short delivery meeting market demand**
  - Guarantees shortest delivery in the world within 6 months

SM7000 Technical Data

Specifications

SM 7000		
Capacity	m^3/hr	25,000 ~ 80,000
	CFM	14,700 ~ 47,100
Motor	kW	2,000 ~ 9,500
	HP	2,700 ~ 12,800
Discharge Pressure	Bar A	4.5 ~ 25
	Psi A	65 ~ 363
Dimension(L x W x H)	mm	8,000 x 4,400 x 4250
Weight	kg	45,000

Product Range

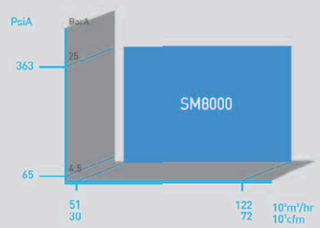


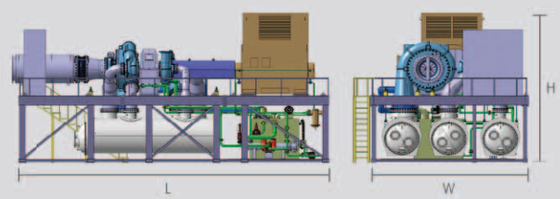
SM8000 Technical Data

Specifications

SM 8000		
Capacity	m^3/hr	80,000 ~ 293,000
	CFM	47,100 ~ 172,300
Motor	kW	6,700 ~ 35,200
	HP	9,000 ~ 47,200
Discharge Pressure	Bar A	4.5 ~ 25
	Psi A	65 ~ 363
Dimension(L x W x H)	mm	13,000 x 6,500 x 7,000
Weight	kg	148,000

Product Range





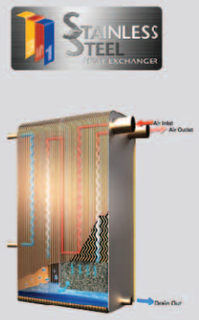
Dryer SDR Series
Freezing Type Dryers

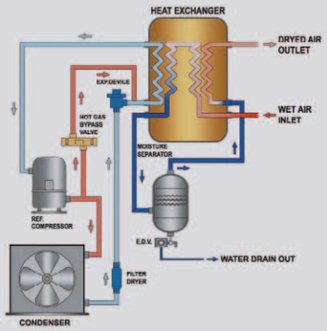
Dryer SDB Series
Absorptive Type Dryers

SDR Series

First Stainless Steel Plate-Type Heat Exchanger in Domestic Market

- Use stainless steel which guarantees corrosion resistance
- Integrated construction of re-heater and evaporator
- Reduction of the air dryer product dimension
- Cutting down the volume of refrigerant filling
- High efficiency plate-type heat exchanger performance
- Reduction of operation cost (high efficiency design for performance)
- Clean brazing made in high vacuum furnace
- Single unit construction improves pipe pressure loss
- Carries out helium leakage test for all products





Characteristics of SDR Series

Standard Specifications

- Adoption Of Stainless Steel Plate-Type Heat Exchanger
- EGI Not Easily Scratched, Eroded And Contaminated (electric galvanized steel plate)
- Application Of High efficiency Water-cooling Condenser
- DSM(Dryer System Monitor) Controller
  - Power on/off switch
  - Dew point monitor(LED lamp)
    - ▶Indication of dew point temperature
    - ▶Indication of sensor malfunction
- Electronic Drain Valve Control Function
  - Setting operating time and tests
  - Instruction of valve working
  - Installation of fuse for circuit protection

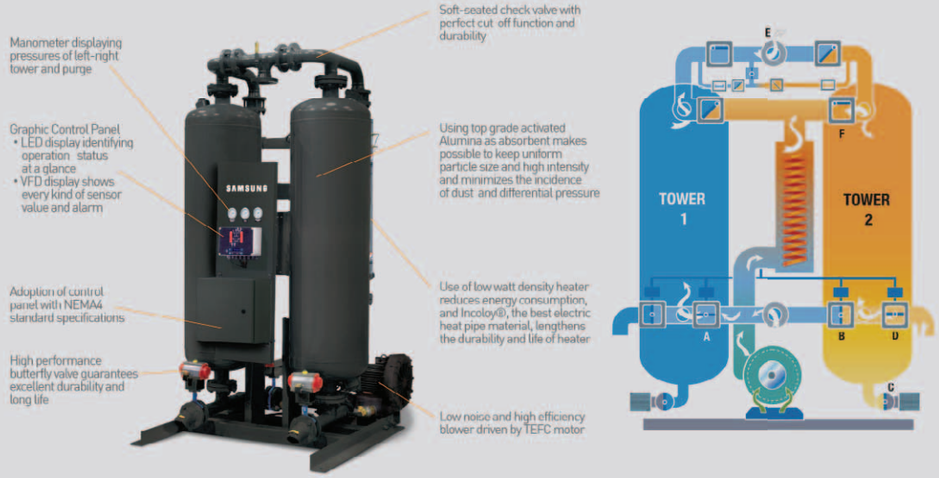
Options

- Air-Cooling Refrigerant Condenser
- Eco-refrigerant R-407C
- Diverse Filter And Drain Trap For Various Specification
- Application Of Protection Grade Over IP44
- SCM(System Control Monitor) Controller
  SCM, displaying on LCD monitor operation status of refrigerant and air temperature, is the stat-of-the-art system to keep optimal operating condition by preventing dryer damage caused by low pressure refrigerant, low pressure oil and over current
- RS-485 Communication And Dry Contact Are Available
- Setting Working Frequency Of Auto Drain valve
- Setting And Changing Password Is Available

SDB Series

The leader of highly efficient absorption type air dryer minimizes compressed air loss but maximizes economic efficiency

Characteristics of Product Part



Characteristics of SDB Series

Standard Specifications

- HTMS(Healing Time Management System):
  Reduces unnecessary heater operation, in order to save energy consumption, by optimizing the duration for blower and heater operation when the sensor finds out that regenerating tower obtains enough temperature
- MEMA4 control box
- Maintaining FI sale design makes dehumidifying condition continue
- Effective air flow design for dehumidifying upward and regenerating downward method
- Graphic control panel and VFD text display

Options

- VAC(Variable Absorption Cycle):
  An effective operation method that minimizes purge air by reducing the number of tower change and saves energy consumption but lengthens equipment life through the work of VAC sensor which waits, until the absorbent inside the tower absorbs enough moisture, and changes itself into regenerating cycle
- Dew point meter
- Moisture indicator
- Attainment of ASME code design, U stamp and other authentication
- PLC controller
- Various engineering specifications

Dryer SDN Series
Heat Circulating Regeneration Type Dryers

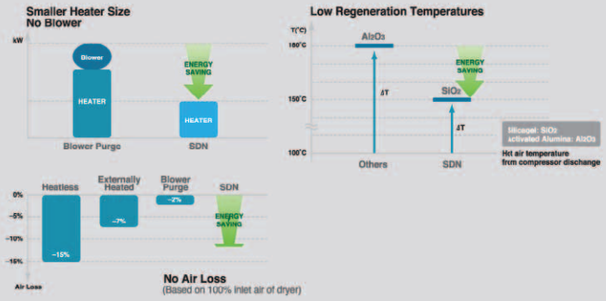
Visionary Mechanism!
The Best Performance

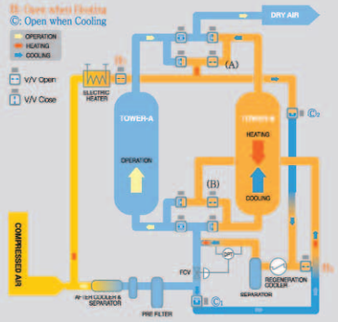
SDN Series

High efficient energy saving dryer, with no purge air loss, and cutting down heater volume drastically by utilizing heat of compressed air

Saving of Energy and Cost

- **Heat of compression**
  - Type of utilizing the heat, produced during compressing process, at the regenerating process of dryer
  - Reduces electric energy consumption by cutting down heater volume more than 50% in comparison with Blower Heater Purge
- **Non-purge air dryer**
  - Non-purge type composed of closed system which does not use purge air in regenerating process
  - Prevents air loss and provides up-to-date energy saving system, by keeping 100% discharge produced from compressor
- **Energy-efficient silicagel desiccant**
  - Reduces energy necessary to regeneration by the exceptional absorbing power of silicagel and allows regeneration at low temperature
  - The mixture of silicagel and 15% activated alumina increases friction resistance





Characteristics of SDN Series

Standard specifications

- -40℃ PDP air quality
- Fail safe design
- IP41 control panel
- 7.7" color LCD touch screen
- Pressure & temperature gage on tower
- High performance butterfly valve

Options

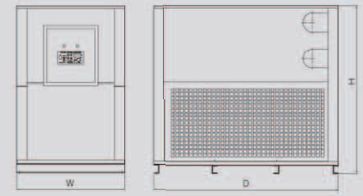
- DPOS(Dew Point-dependant Operating System): A system, that prolongs tower change time till the dew point of dry air, monitored by dewpoint meter, reaches preset value, is an effective operation method which reduces the number of tower change, cuts down the use of heater but lengthens equipment life, depending on air property and discharge variance
- PLC controller
- Various engineering specifications

Technical Data

SDR Series Specification

Model	Flow Capacity (Nm³/hr)	Power Consumption (kW)	Electrical Connection (V/Ph/Hz)	Air Connections (FLG)	Dimensions(mm) H	W	D	Approx. Weight (kg)
SDR1400	1,700	5.2		3" (80A)	1,470	750	1,400	385
SDR1800	2,130	6.8		4" (100A)	1,470	750	1,400	400
SDR2200	2,560	8.5		4" (100A)	1,470	750	1,400	440
SDR2700	2,990	9.4		4" (100A)	1,582	980	1,600	850
SDR3600	3,990	10.2		6" (150A)	1,628	1,050	1,800	1,000
SDR4500	4,990	11.5		6" (150A)	1,628	1,050	1,800	1,050
SDR5400	5,900	13.0		6" (150A)	1,628	1,050	1,800	1,100
SDR7200	7,980	16.2	380~440/3/60	8" (200A)	2,320	1,500	2,850	2,000
SDR9000	9,960	22.1		8" (200A)	2,320	1,500	2,850	2,300
SDR10800	11,975	27.5		8" (200A)	2,320	1,500	2,850	2,500
SDR14400	15,960	52.4		8" (200A)	2,320	1,500	3,800	3,500
SDR18000	19,320	66.0		10" (250A)	2,400	1,600	4,800	5,000
SDR21600	23,940	72.5		10" (250A)	2,400	1,600	4,800	5,500
SDR21600 이상 대용량은 별도견적								

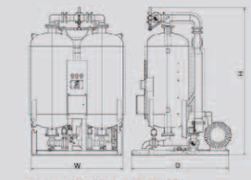
1] Rating conditions are 35℃, 7 barG, 100% relative humidity inlet air, 25℃ ambient temperature and outlet dewpoint 4℃
2] Consult factory for special electrical connections
3] For optional air cooled type, Remote Condenser installed in case of SDR7200 and larger models
4] Standard refrigerant R407C



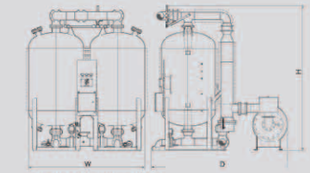
SDB Series Specification

Model	Flow Capacity (Nm³/hr)	Blower (kW)	Heater Rated Output (kW)	Air Connections (FLG)	Dimensions(mm) H	W	D	Approx. Weigh (kg)
SDB2000	1,784	3.7	19	3" (80A)	2,870	1,626	2,134	1,352
SDB2500	2,209	3.7	23	3" (80A)	2,997	1,676	2,159	1,622
SDB2900	2,549	5.6	28	3" (80A)	2,946	2,032	2,362	2,431
SDB3500	3,058	5.6	33	3" (80A)	2,946	2,032	2,362	2,431
SDB4300	3,738	7.5	40	4" (100A)	3,150	2,159	2,642	3,637
SDB5100	4,417	11.0	45	4" (100A)	3,150	2,159	2,642	3,685
SDB6200	5,437	5.6	54	4" (100A)	3,073	2,464	2,972	4,233
SDB7000	6,116	7.5	60	6" (150A)	3,251	2,464	2,972	4,460
SDB8400	7,306	7.5	70	6" (150A)	3,150	2,667	3,302	5,602
SDB10000	8,705	11.0	88	8" (200A)	3,600	2,800	3,450	7,282
SDB12700	11,080	15.0	112	8" (200A)	3,700	3,100	3,500	8,883
SDB16300	14,256							
SDB18100	15,828			별도 견적				
SDB21700	18,994							
SDB23600	20,576							

1] Rating conditions are 35℃, 7 barG, 100% relative humidity inlet air, 35℃ ambient temperature and outlet dewpoint -40℃
2] Ring Blower installed for SDB2000 ~ SDB5100, Turbo Blower installed for SDB6200 and larger models
3] Electrical Connection: 50Hz



Models: SDB2000 ~ SDB5100

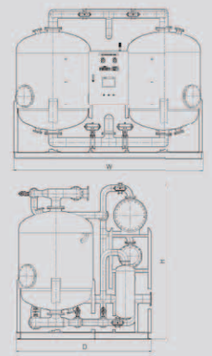


Models: SDB6200 ~ SDB23600

SDN Series Specification

Model	Flow Capacity (Nm³/hr)	Heater Rated Output (kW)	Cooling Water Consumption (㎥/hr)	Air Connections (FLG)	Dimensions(mm) H	W	D	Approx. Weigh (kg)
SDN2100	1,700	18	3.3	2 1/2"	2,110	2,400	1,500	1,700
SDN2800	2,100	23	4.1	2 1/2"	2,250	2,600	1,600	2,000
SDN3100	2,500	27	4.9	3"	2,310	2,700	1,700	2,300
SDN3800	3,000	32	5.7	3"	2,320	2,800	1,800	2,800
SDN4100	3,300	36	6.4	4"	2,440	2,900	1,900	3,300
SDN5300	4,200	46	8.2	4"	2,620	3,200	2,000	4,700
SDN6600	5,300	58	9.4	5"	2,780	3,400	2,200	6,300
SDN7500	6,000	65	11.0	5"	2,830	3,500	2,400	7,000
SDN8800	7,000	76	12.4	5"	3,040	3,600	2,400	7,600
SDN10000	8,000	87	14.2	6"	3,080	3,700	2,500	8,800
SDN10800	8,500	92	15.0	6"	3,160	3,700	2,600	9,500
SDN13800	11,000	120	19.5	8"	3,360	4,200	2,900	12,000
SDN16900	13,500	146	26.3	8"	3,730	4,500	3,200	16,000
SDN18800	15,000	163	29.1	8"	3,730	4,600	3,300	17,000
SDN22500	18,000	150	31.0	8"	3,240	5,200	3,100	18,000
SDN25000	20,000	166	34.3	10"	3,240	5,400	3,200	23,000
SDN25000 이상 대용량은 별도견적								

1] Rating conditions are 35℃, 7 barG, 100% relative humidity inlet air, cooling water supply temperature 32℃ and outlet dewpoint -40℃
2] Electrical Connection: 50Hz



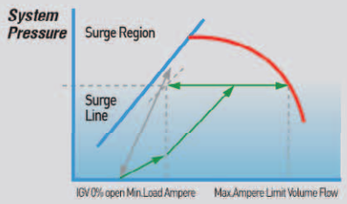
Visionary Mechanism!
The Best Performance

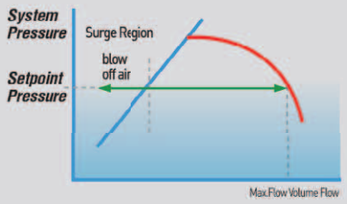
Touch Plus
Compressor Controller

Touch Plus

High performance compressor control system designed conveniently and safely

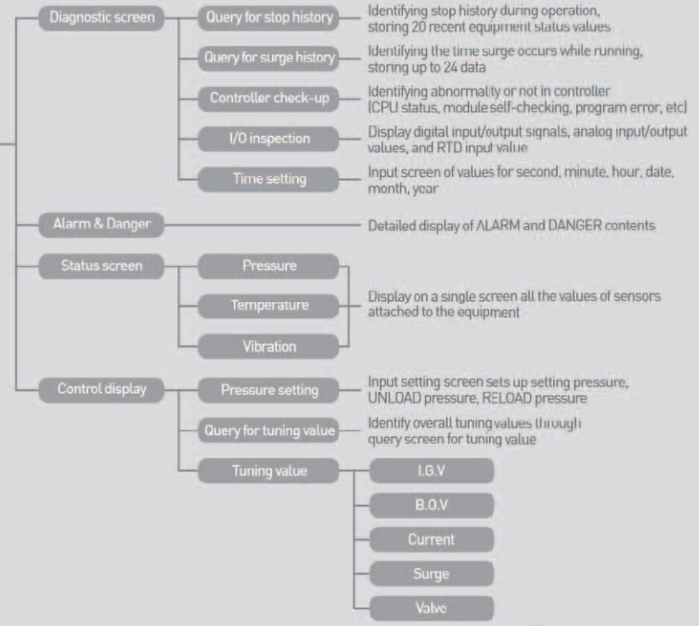
- **Large color LCD touch screen panel**
  - 10.4" x 5.7" LCD touch screen allows all the necessary values during operation to be simply input, displays various data obviously on a single screen to find out compressor condition easily, and makes possible deal with any problem without difficulty when it occurs
  - System design for user's convenience
- **Automatic control**
  - Simple establishment of linked operation control / remote control function (Basic built-in: Modbus, RS485 Serial Port)
- **PLC with excellent generality**
  - Guarantees system control stability
  - Speedy maintenance
- **Guarantee of system control stability**
  - provides high reliability, stability, and flexibility of operation condition
- **Autodual & modulate control**
  - Automatically carries out autodual work that, when the consumption of discharging compressed air varies, butter-fly valve is open if the value is higher than the setting pressure value and closed if the value goes down below the setting pressure value
  - Linked control of inlet guide vane makes system operate in optimal condition and starts to produce compressed air without fault





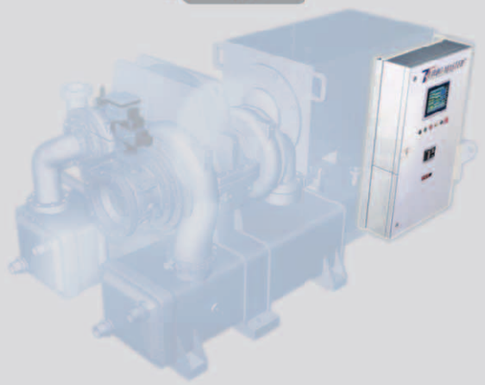
Screen Mapping

Main Screen



Supporting Various Application System

- **HMI, sequence system**
  - Installed at the central control room and allows to do real-time watch on the condition of compressor at the distant site with simple mouse handling
- **Load sharing system**
  - Reducing energy consumption is possible by linked control of multi- compressors remote and by dealing with supply pressure in real time



Standard Specifications	Options	Touch PLUS Specification	Application Record
• PLC controller & MCC panel • Sensors - Pressure transmitter - Temperature RTD - Vibraton • Test operation and education	• Demolition of existing panel and installation of new panel • Wiring and tubing • Modulating control • MMI, sequence system	• Main power input - Type : 220/440V 60Hz - Capacity : 6.5KW • Size [L x W x H]mm - 800 x 300 x 1350mm	• Atlas copco • Joy cooper • Kawasaki • Mitsubishi • I/R turbo • Eiliott turbo

Great Technology

Real time monitoring service lead-time with the introduction of web-based customer service! 24 hours a day / 7 days a week speedy service through global service network enhances customer's merit by the guarantee of optimal operation condition and reliability

Product Support
Customer Service

Extensive & Comprehensive Product Support

- **Genuine parts**
  - Genuine products sales considering optimal performance, reliability and stability
  - Supply of up-to-date parts combined with state-of-the-art manufacture and technology
  - Protection of customer's property by using genuine products
  - Guarantee of optimal performance and operation conditio

Contractual Services

- **Extended guaranteeies**
  - Provides extended guarantee program for 5 years against the defect of compressor with service contract
- **Service agreement**
  - Maintaining high performance and operation condition with customized service
  - Providing systematic program and skilled service
  - Maintenance cost reduction and minimization of risk
    - ▶ Fixed-price contract
    - ▶ Planned and preventive maintenance
    - ▶ Diagnosing program utilizing monitoring program for vibration and heat
    - ▶ Timely supply of reserve parts
    - ▶ Customized report

Upgrade Solutions

- **Engineering upgrades**
  - Upgrades existing compressor with up-to-date design and manufacturing technology
  - Improvement of reliability and efficiency with the latest material and cutting edge technology
  - Up-tc-date design concept and manufacturing innovation
  - Maintenance and operation cost reduction
  - Compressor performance elevation
  - Extension of equipment life
- **Control system upgrades**
  - Reconstruction of compressor control panel applying IT technology of Samsung
  - Removal of power waste due to discharge loss by optimizing operation condition

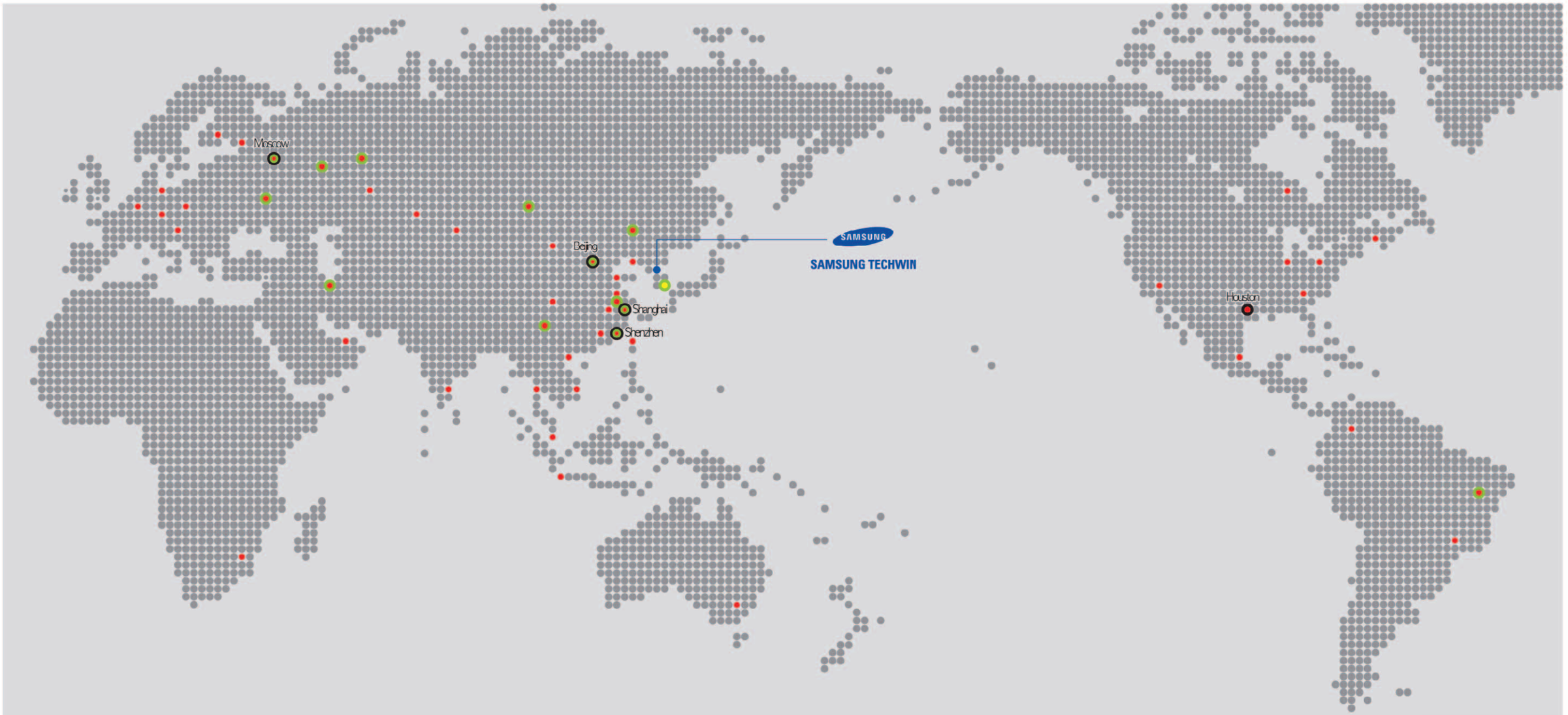
Operational & Maintenance Training

- Running education center of 178.5m2 size located within Changwon Factory
- Customer education to maintain the same quality as manufacturer's and education at maintenance center
- Technical support for site and design department
- Construction of stage-by-stage education program (Level -1, Level – 11)

AMC(Authorized Maintenance Center)

- Running certified repair center and retaining world-wide strategic bases
- Establishment of full ability for maintenance under the education system of manufacturer
- Establishment of quality control and maintenance system under the management of manufacturer
- Providing speedy and accurate customer service through global AMC

Global Network



- Headquarters
- Manufacturing Facilities
- Overseas Subsidiaries
- Sales Representatives
- AMC (Authorized Maintenance Center)

■ Headquarters

Korea - Seoul TEL : +82-2-3467-7545, 7554
FAX : +82-2-3467-7540, 7520

■ Manufacturing Facilities

Korea - Changwon-City TEL : +82-55-260-2470, 2571
FAX : +82-55-260-2739

■ Overseas Subsidiaries

- SSMT (Shanghai Samsung Mechatronics & Trading Co., Ltd.)
  China - Shanghai TEL : +86-21-5423-5050 FAX : +86-21-5423-5122
  China - Beijing
  China - Shenzhen TEL : +86-755-2674-8338 FAX : +86-755-2674-8338(#8400)
- Houston Turbo Design & Development Center
  USA -Houston TEL : +1-281-599-3377 FAX : +1-281-599-7734
- Russia, Moscow Office
  Russia - Moscow TEL : +7-495-788-3906 FAX : +7-495-788-3905