

SAMSUNG COMPRESSOR

OIL- FREE CENTRIFUGAL
AIR COMPRESSOR

SM/SM100/SME
SERIES



Petrochemical



Manufacturing



Steel



Power
generation



Air Separation



Shipbuilding



SAMSUNG TECHWIN

SAMSUNG

DEPENDABLE SM SERIES



Way to ease your mind
Excellent solution and thorough service will guarantee customer's peace of mind



Stable operation



Risk-free



Saving the budget

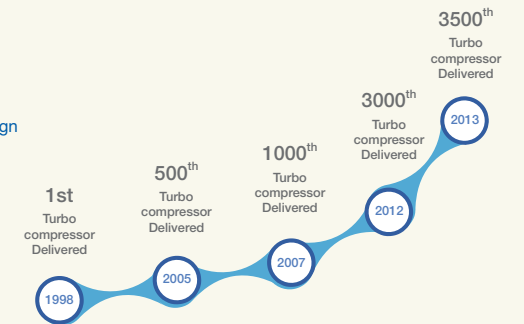


Stable operation

- Complying with global industry standards as ISO9001, API672 and customer specific requirements
- 100% Oil-Free compressed air without any contamination: ISO 8573-1 Class 0 certification
*ISO 8573-1 specifies purity classes of compressed air with respect to particles, water and oil independent of the location in the compressed air system at which the air is specified or measured
- Using three-dimensional design system to eliminate potential design flaws in the design phase
- Thorough quality control system in every single process to get rid of any risks

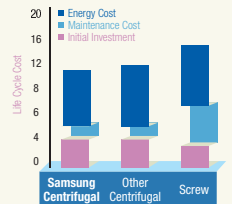


- The fastest growing in the industry since 1997
- Certified by major players in various industries in ME, Europe, Americas etc.



Saving the budget

- High efficiency oriented components and low maintenance design will provide customers with lower life-cycle cost
 - Flexible IGV adjusting the flow rate in accordance with the fluctuation of air consumption to reduce energy consumption up to 7%
 - Wear resistance materials as stainless steel for minimizing abrasion and corrosion
 - Precise 5-Axis machined impeller and long life guaranteed oil and gas seals
 - Simple and no wearing structure leads minimized maintenance effort and cost
- Energy saving analysis to diagnose current status and find the root cause of energy waste can minimize the unnecessary cost and keep customers' profit high



Risk-free

- Preventive maintenance program provides a guideline or an actual check service for keeping customer's equipment healthy
- Remote Monitoring System does daily check of customer's equipment, and provides prompt alarm/notification service once any problem happens

- RUSH112 service and wide range of service network minimizes downtime when emergency situation occurs

DEPENDABLE SM SERIES

Applications

- Air separation
- Petrochemical
- Refinery
- Steel plant
- PTA Plant
- Power plant
- Food
- Paper
- Manufacturing
- Automobile
- Glass
- Mining, etc.

Optimized design to maximize customer benefit

Low maintenance and high efficient design will play a key role to maximize customer profit



Energy Saving Inlet Guide Vane

- Precise control of air flow by efficient inlet air control
- Reduction of power consumption through partial load control
- Low pressure loss with airfoil profiled vanes



Durable Coolers

- Water-in-tube inter & aftercooler bundles allow simple maintenance and easy cleaning
- Corrosion/erosion resistant material applied for protecting damage of other components
- Minimizing pressure drop by optimized airflow



Simple & Neat Package

- Complete full package for plug & run provides easy and low-cost installation
- Full enclosure is applicable for clean appearance and quiet operation which creates a comfortable work environment (Low noise with sound enclosure)
- Minimizing maintenance cost by simple structure



Leak-Free Lubrication System

- Minimum air leakage and the loss of efficiency
- Perfectly preventing impurities inflow to gearbox by 10µm filter apply
- Complete lubrication system package (Including Oil reservoir, Auxiliary oil pump, Oil heater, Oil demister)



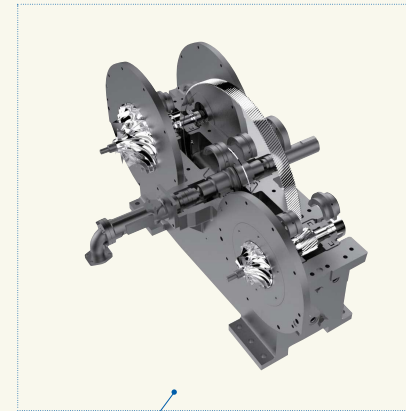
Maintenance friendly Gearbox

- Easy maintenance by horizontally split structure
- Minimum cost for inspection and maintenance



Solid & High efficient Main Drive Motor

- Energy cost saving with applying highly efficient package
- Custom motors are available reflecting client requirements (option)



Concentrating on efficiency with reliability

Core Unit is the heart of SM Series to achieve high efficiency and reliability by strictly selected optimized components and simple design



State-of-the-art 5-Axis Machined Impeller

- Precisely balanced and designed for stability and high efficiency
- Wide operational flexibility with turndown ratio of 30~40%
- 115% over speed spin test to guarantee its reliability
- SUS impellers for extended life cycle with low vibration and low noise



Long Life Thrust Bearing

- Tilting pad journal bearings applied on pinion gears offer reliable operation and almost permanent lifespan without replacement
- Low friction loss sleeve journal and taper landed thrust bearings are applied on bull gear



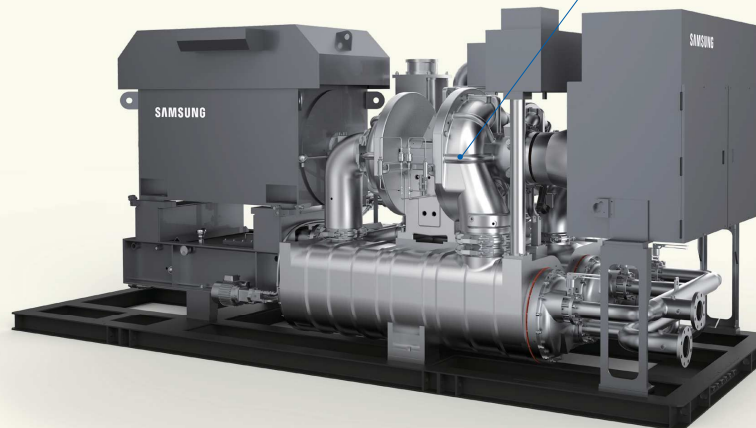
Precise Bull Gear and Pinions

- High precision gear system provides long-life time, low vibration and low noise
- Taper land bearings effectively support axial loads delivered from pinion gears that improve stability of rotation and efficiency
- Easy inspection of gear system without stage disassembly



Leak-Free Oil & Gas Seals

- Supply 100% oil-free air in accordance with ISO8573-1 class zero for minimizing loss from downtime
- Assured by 4 stage of sealing which satisfies API specification
- Split structure for easy check and maintenance



DEPENDABLE SM SERIES

Applications

- Air separation
- Petrochemical
- Refinery
- Steel plant
- PTA Plant
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- Glass
- Mining, etc.

Specification

Model		SM2000	SM3000	SM4000	SM5000	SM6000
Flow Rate	m ³ /hr	1,200~2,250	3,300~5,300	4,800~8,400	7,500~13,000	13,000~21,000
	CFM	800~1,450	1,950~3,100	2,830~5,000	4,800~8,800	7,650~12,100
Power	kW	130~255	210~680	310~1,010	490~1,540	780~2,350
	HP	175~345	282~913	410~1,350	660~1,800	1,050~3,150
Discharge Pressure	Bar A	6.5~10				3.5~18
	Psi A	95~145				50~265
Dimension(L×W×H)	mm	2,550×1,500×1,900	4,350×2,100×2,100	4,650×2,190×2,215	5,200×2,150×2,350	5,800×2,300×2,550
	inch	100×60×75	171×85×85	185×85×90	205×85×95	230×90×100
Weight	Kg	4,500	9,300	12,400	14,100	18,000

Customer oriented SAMSUNG Monitoring System

Provides convenient operation and accurate control



High-resolution color LCD touch screen panel

- Touch screen size : 7.0" Wide or 10.2" Wide
- Resolution/ Color : WVGA 800 x 480 / 65k Color



Reliable and stable Control System

- Conformity to EMC international standard during in operation: CE, RE, CS, RS, ESD, Surge, Burst (CISPR 11 Class A, IEC 61000-4)



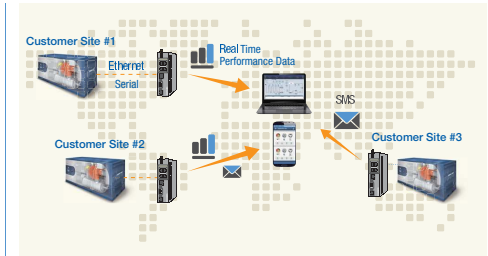
User friendly Interface with improved operability and legibility

- Conversion to ICON/animation of main information as operation/stop, valve status etc.
- Quickly and easily switchable screen by navigation bar



Automatic Control

- Anti-Surge Control : High shutdown ratio through minimizing surge margin
- Precise pressure control in overall operation range
- Local / Remote control function
- Self check and automatic resolution logic against errors



Complete control Package



- **Touch Plus M**
Real-time monitoring by PC and smartphone
- Warning and trouble shooting message transferred once alarm or shutdown occurs
- **Touch Plus R**
Compressor remote management and energy saving solution
- R1 (Remote Monitoring)
- R2 (R1 + Remote control)
- R3 (R1 + R2 + Load Sharing System)

Scope of Supply

- | | |
|---|---|
| <input checked="" type="checkbox"/> Air intake filter | <input type="checkbox"/> Sound Enclosure |
| <input checked="" type="checkbox"/> Inlet guide vanes | <input type="checkbox"/> Dual oil filter |
| <input checked="" type="checkbox"/> Blow off Valve and Silencer | <input type="checkbox"/> Block Valve |
| <input checked="" type="checkbox"/> Check valve and expansion joint | <input type="checkbox"/> Companion Flange |
| <input checked="" type="checkbox"/> Complete lubrication system | <input type="checkbox"/> Hot air piping |
| <input checked="" type="checkbox"/> Aftercooler | <input type="checkbox"/> Auto trap |
| <input checked="" type="checkbox"/> Drain traps on all coolers | <input type="checkbox"/> MODBUS/PROFIBUS Interface |
| <input checked="" type="checkbox"/> Main motor | <input type="checkbox"/> Motor winding/bearing protection |
| <input checked="" type="checkbox"/> PLC control system | |
| <input checked="" type="checkbox"/> Base Frame | |
| <input checked="" type="checkbox"/> Cooling water manifold | |
- ✓ Standard ○ Options

Touch Plus	L	M	R
Hardware	LCP	LCP & Remote Access Module	LCP(& MCP) & Desktop/Laptop
Software	Control Software	Mobile App.	SCADA Software
Connectivity	Serial Comm.	Internet	Ethernet
Features(Function)			
Real time monitoring	0	0	0
Control	0	x	0
Alarm/Notification	0	0	0
SMS Notification	x	0	x
Data Logging and Trending	x	x	0
Data Analysis	x	x	0
System Performance Report	x	x	0
Load Sharing	x	x	0

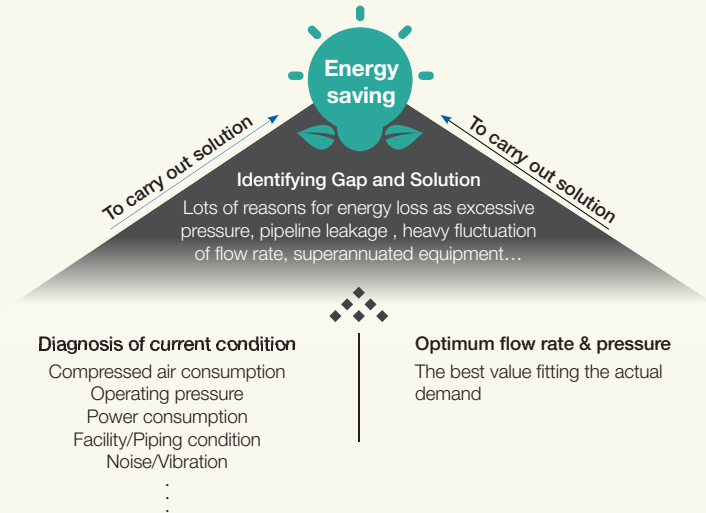
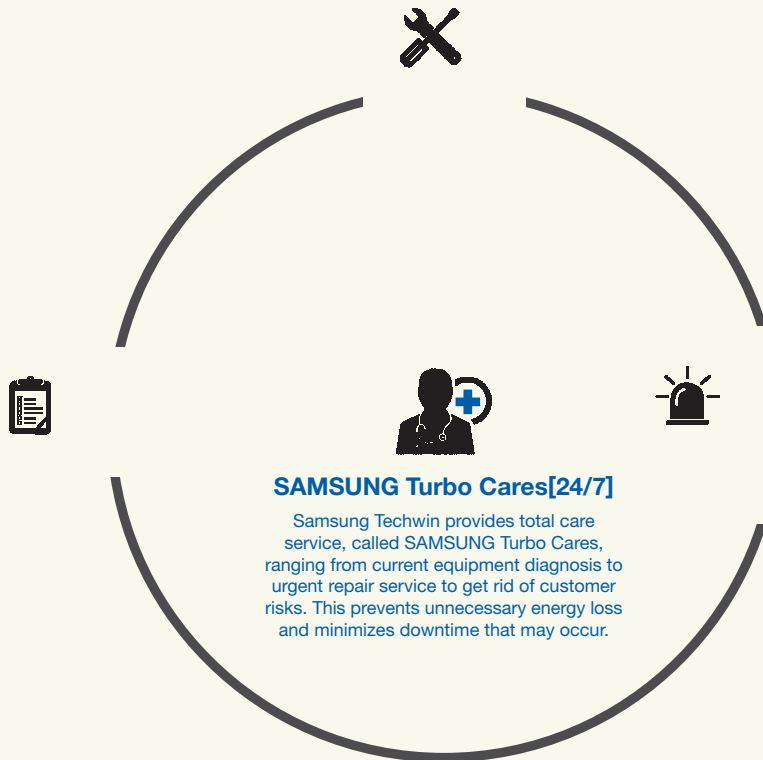
* LCP: Local Control Panel / MCP: Master Control Panel

DEPENDABLE SM SERIES

- SM Series
- SM100 Series
- SME Series

Applications

- Air separation
- Petrochemical
- Refinery
- Steel plant
- PTA Plant
- Power plant
- Food
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- Manufacturing
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Energy Diagnosis

Operators expect the equipment is being operated in the best condition. In many cases, however, most people cannot notice current energy loss until receiving any abnormal signs from their machines. As a health checkup service for compression systems, Samsung provides diagnosis service inspecting if current equipment is being operated properly and efficiently. Through this Service, customers can learn which part causes energy loss and how to improve the efficiency. Ultimately, customers can find hidden profit by optimizing the equipment.

Preventive maintenance program

To prevent malfunction during operation, Samsung provides 4 programs by operating time and specific programs are customized per each customer's requirements. This program will enable customer equipment running stably without any problem so that customers can minimize downtime and achieve low life cycle cost through saving additional trouble shooting cost.



DEPENDABLE SM SERIES

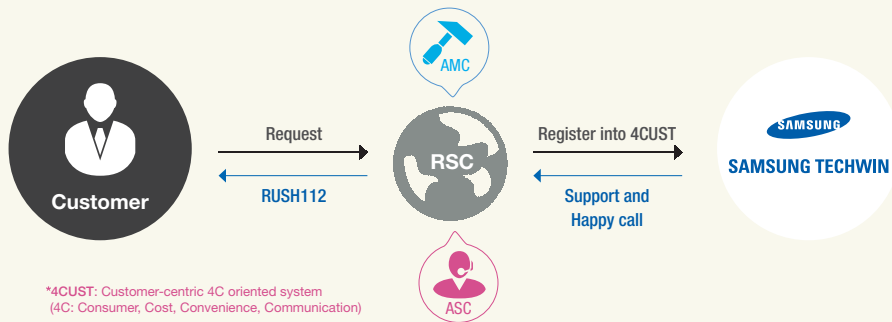
RUSH 112 Worldwide

Samsung Techwin is willing to provide immediate service to customers worldwide based on RUSH 112 philosophy.

[

Give a response within **1 hour**
 Visit user site within **1 day**
 Provide an initial resolution within **2 days**

]



*4CUST: Customer-centric 4C oriented system
 (4C: Consumer, Cost, Convenience, Communication)
 *RSC: Regional Service Center (AMC & ASC)

Wide Service Network

To provides prompt service for customers around the world, Samsung Techwin has built a large number of centers globally.

Customers can ask for service at anytime through those centers and get solutions in time.



- Office
- AMC (Authorized Maintenance Center)
- ASC (Authorized Service Center)



SAMSUNG TECHWIN

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ISO14001 Cert. No : EMS 54112
ISO9001 Cert. No : FM 24389

Present State of Samsung Techwin's Turbo Compressor Authentication

- ISO14001 Authentication
- Korea New Technology Authentication
- IR52 Jang Young Sil Award
- ISO9001 Authentication
- CE Authentication
- ASME-compliant
- ISO 8573-1 Class zero Authentication

▪ In order to improve the quality of our products, subject to changes without a notice.

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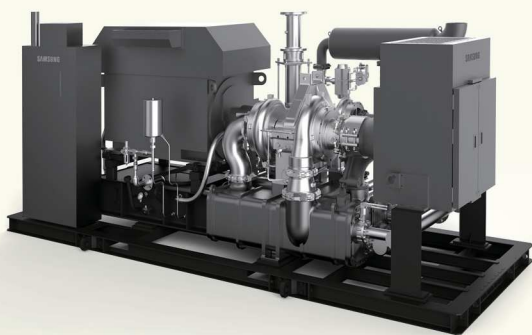
DRIVING PERFORMANCE SM100 SERIES

Samsung SM100 series focuses on accomplishing enhanced performance and efficiency to satisfy customers particularly seek performance-centered products



Flexible packages according to your needs

- Packaged plug & play type for easy installation
- Standard type without base frame, silencer, cooling water manifold and enclosure
 - Silencer and cooling water manifold can be added as an option

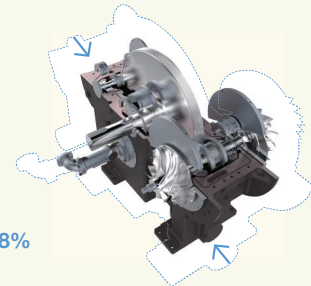


Package type



Advanced efficiency and performance through design modification

- Thrust collar applied to enhance operation reliability and mechanical efficiency by reducing mechanical loss and oil consumption
- Labyrinth seal of non-contacting type minimizing mechanical loss and needs of replacement
- Reduced distance between shafts to minimize oil mist friction and mechanical loss for improved performance and isothermal efficiency



Shorten by 18%



Standard type

DRIVING PERFORMANCE SM100 SERIES

Specification

Model		SM3100	SM4100	SM5100	SM6100	SM7100
Flow Rate	m ³ /hr	3,300~5,500	5,500~9,000	9,000~15,000	15,000~24,500	24,500~32,000
	CFM	2,000~3,250	3,250~5,300	5,300~8,800	8,800~15,000	15,000~19,000
Power	kW	200~580	300~930	500~1,500	800~2,500	1,000~3,100
	HP	270~780	400~1,200	670~2,010	1,070~3,350	1,340~4,155
Discharge Pressure	Bar A	3.5~13				3.5~11.4
	Psi A	50~188				50~165
Dimension(L×W×H)						
Standard Type	mm	3,640×1,892×1,980	3,890×1,870×2,090	5,010×1,990×2,100	4,970×1,990×2,850	5,700×2,800×2,950
	inch	143×74×82	153×74×82	197×78×83	196×78×112	224×110×116
Package Type	mm	5,220×2,090×2,060	5,510×2,150×2,150	6,450×2,200×2,390	6,910×2,200×3,050	-
	inch	217×82×81	217×84×84	254×87×94	272×87×120	-
Weigth						
Standard Type	Kg	7,900	10,700	10,900	13,900	20,500
Package Type		8,900	11,100	13,600	16,000	-

Scope of Supply

P	S	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Air intake filter
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Inlet guide vanes
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Blow off Valve and Silencer
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Check valve and expansion joint
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Complete lubrication system
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Aftercooler
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Drain traps on all coolers
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Main motor
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	PLC control system
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Base Frame
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Cooling water manifold

P	S	
<input type="checkbox"/>	<input type="checkbox"/>	Sound Enclosure
<input type="checkbox"/>	<input type="checkbox"/>	Dual oil filter
<input type="checkbox"/>	<input type="checkbox"/>	Block Valve
<input type="checkbox"/>	<input type="checkbox"/>	Companion Flange
<input type="checkbox"/>	<input type="checkbox"/>	Auto trap
<input type="checkbox"/>	<input type="checkbox"/>	MODBUS/PROFIBUS Interface
<input type="checkbox"/>	<input type="checkbox"/>	Motor winding/bearing protection

P Package type
S Standard type

✓ Standard ○ Options

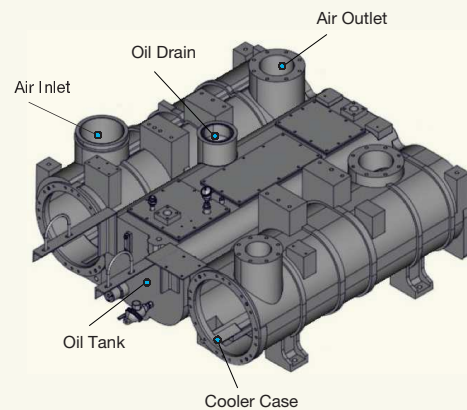
COMPACT PACKAGE MINIMIZING THE INITIAL INVESTMENT SME SERIES

SME Series, designed based on proven technology and abundant operating experience of SM Series, is the compact package composed of essential components as same performance with SM Series. Simple configuration achieves a minimum initial investment and superior space utilization.

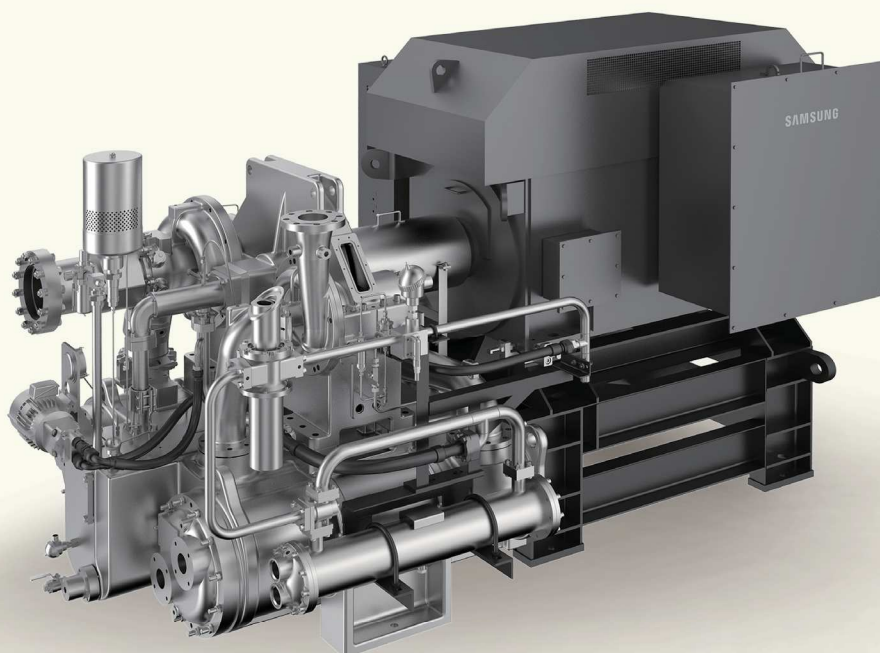


Benefits from compactness

- Integrated lubrication system including cooler and oil tank improves maintainability and this structure enables to drain oil easily
- Separated aftercooler allows easy and flexible customized layout so that customers can make better use of space
- Compact package fitting into 20ft standard container makes easy and low-cost transport



[Integrated lubrication system makes
better use of your work place]



COMPACT PACKAGE MINIMIZING THE INITIAL INVESTMENT SME SERIES

Specification

Model		SME3000	SME4000	SME5000	SME6000
Flow Rate	m ³ /hr	3,300~5,300	4,800~8,400	7,500~13,000	13,000~21,000
	CFM	1,950~3,100	2,830~5,000	4,800~8,800	7,650~12,100
Power	kW	210~550	310~850	490~1,540	780~2,000
	HP	282~740	410~1,140	660~1,800	1,050~2,700
Discharge Pressure	Bar A	3.5~11.4			
	Psi A	50~165			
Dimension(L×W×H)	mm	3,370×1,850×1,800	3,620×2,000×1,800	3,810×2,100×2,000	4,420×2,150×2,000
	inch	133×73×71	143×79×71	150×83×79	173×85×79
Weight	Kg	7,400	10,100	12,100	15,500

Scope of Supply

- | | |
|---|---|
| <input checked="" type="checkbox"/> Air intake filter | <input type="checkbox"/> Base Frame |
| <input checked="" type="checkbox"/> Inlet guide vanes | <input type="checkbox"/> Dual oil filter |
| <input checked="" type="checkbox"/> Blow off Valve and Silencer | <input type="checkbox"/> Block Valve |
| <input checked="" type="checkbox"/> Check valve and expansion joint | <input type="checkbox"/> Companion Flange |
| <input checked="" type="checkbox"/> Complete lubrication system | <input type="checkbox"/> Cooling water manifold |
| <input checked="" type="checkbox"/> Aftercooler | <input type="checkbox"/> Auto trap |
| <input checked="" type="checkbox"/> Drain traps on all coolers | <input type="checkbox"/> MODBUS/PROFIBUS Interface |
| <input checked="" type="checkbox"/> Main motor | <input type="checkbox"/> Motor winding/bearing protection |
| <input checked="" type="checkbox"/> PLC control system | |

Standard Options