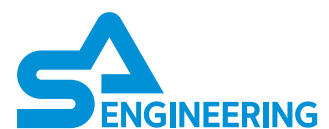




CHORUS

CENTRIFUGAL COMPRESSOR



CENTRIFUGAL COMPRESSOR

Innovative Performance & Design

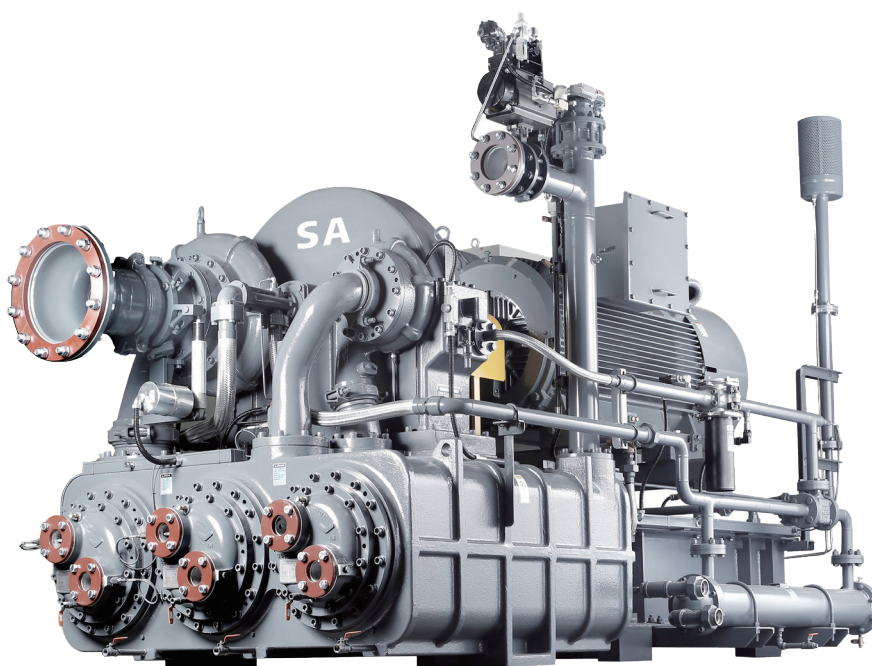
- Featuring Inter & After cooler and Lub. Oil system structurally separated from compressor core unit, it also provides:
 - Simple and compact design and noise minimized operation by adopting sound enclosure(option)
- Featuring 100% oil free and contamination free compressed air, it also provides:
 - Complete structural separation between lubricating and air compressing parts
- Maximum efficiency and quality safety is achieved by:
 - High efficiency aerodynamic design based on stage-of-the-art computer simulation methods
 - Adoption of the best quality components
 - Reliability verification by 115% over speed spin test
- Plug & play provides economic and quick installation
 - By immediately available single packaging design integrated with after cooler

Easy Maintenance

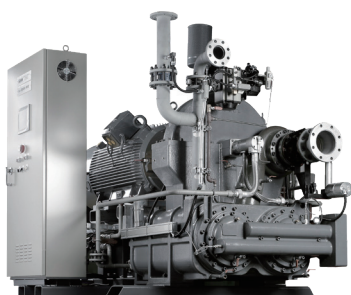
- By adopting horizontal split type gear cases, bearings, and air & oil seals
- Convenient and speedy maintenance by adopting straight type water in-tube bundles for inter & aftercooler
- Innovatively reduced hours of maintenance by module type design applied for all major components

Indefinite Durability

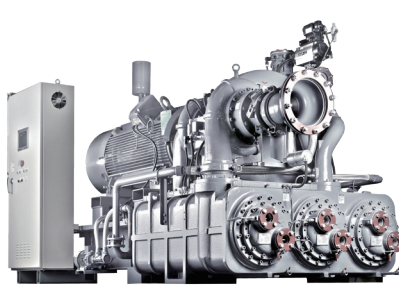
- By implementing strict quality control and test for all the main components
- Achieving impeccable durability and stability by established strict quality assurance system for compression capability essential for stable operation.



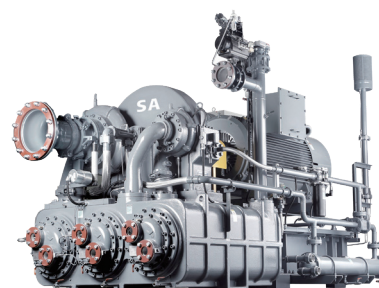
SPECIFICATIONS



CHORUS 30



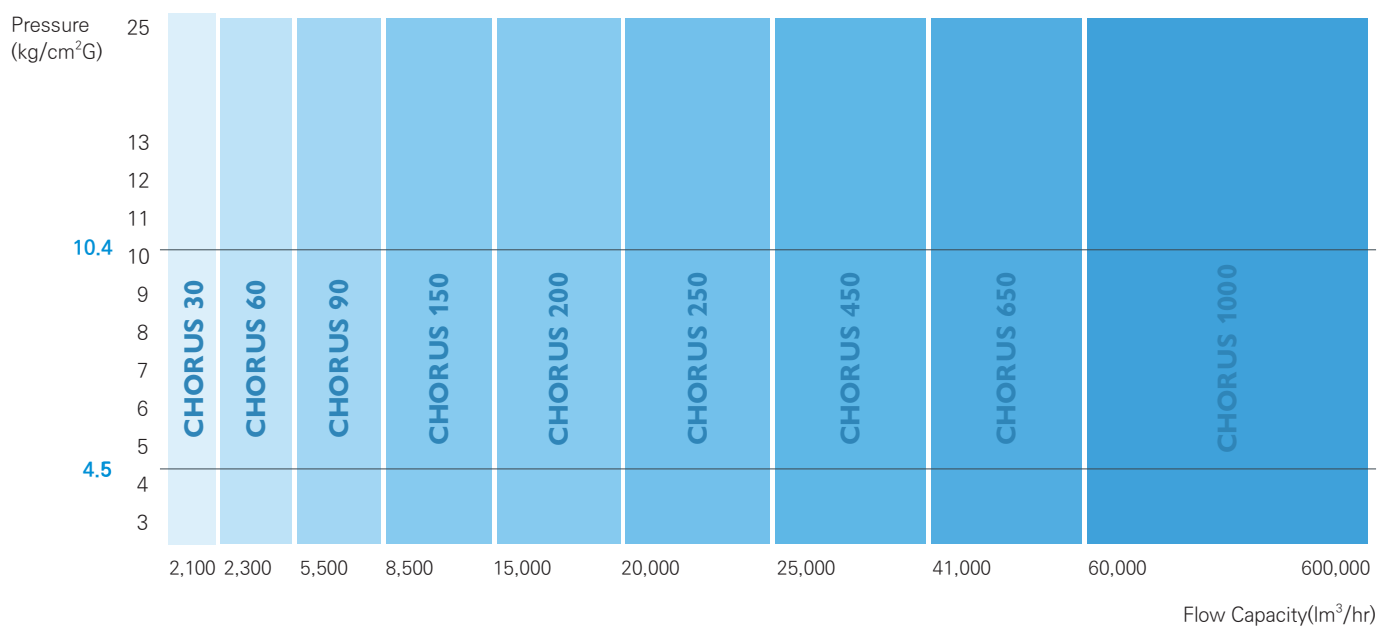
CHORUS 150



CHORUS 250

CHORUS SERIES

Description		CHORUS 30	CHORUS 60	CHORUS 90	CHORUS 150	CHORUS 200	CHORUS 250	CHORUS 450	CHORUS 650	CHORUS 1000
Capacity(lm ³ /hr)		2,100 ~ 2,450	2,450 ~ 5,500	5,500 ~ 8,500	8,500 ~ 15,000	15,000 ~ 20,000	20,000 ~ 25,000	25,000 ~ 41,000	41,000 ~ 60,000	50,000 ~ 600,000
Discharge Pressure (kg/cm ² .G)		2 ~ 8	3 ~ 25						3 ~ 40	3 ~ 80
Motor(Kw)		140 ~ 260	150 ~ 6,000						TBD	TBD
Dimension (mm)	W	2,650	3,600	4,000	4,600	4,900	5,000	5,300	7,500	TBD
	D	1,550	1,900	2,100	2,100	2,150	2,200	3,000	3,500	TBD
	H	1,650	2,000	2,200	2,500	2,550	2,600	3,200	4,000	TBD
Weight(kg)		5,900	7,200	8,000	10,000	19,000	22,000	24,000	29,000	TBD



CENTRIFUGAL COMPRESSOR

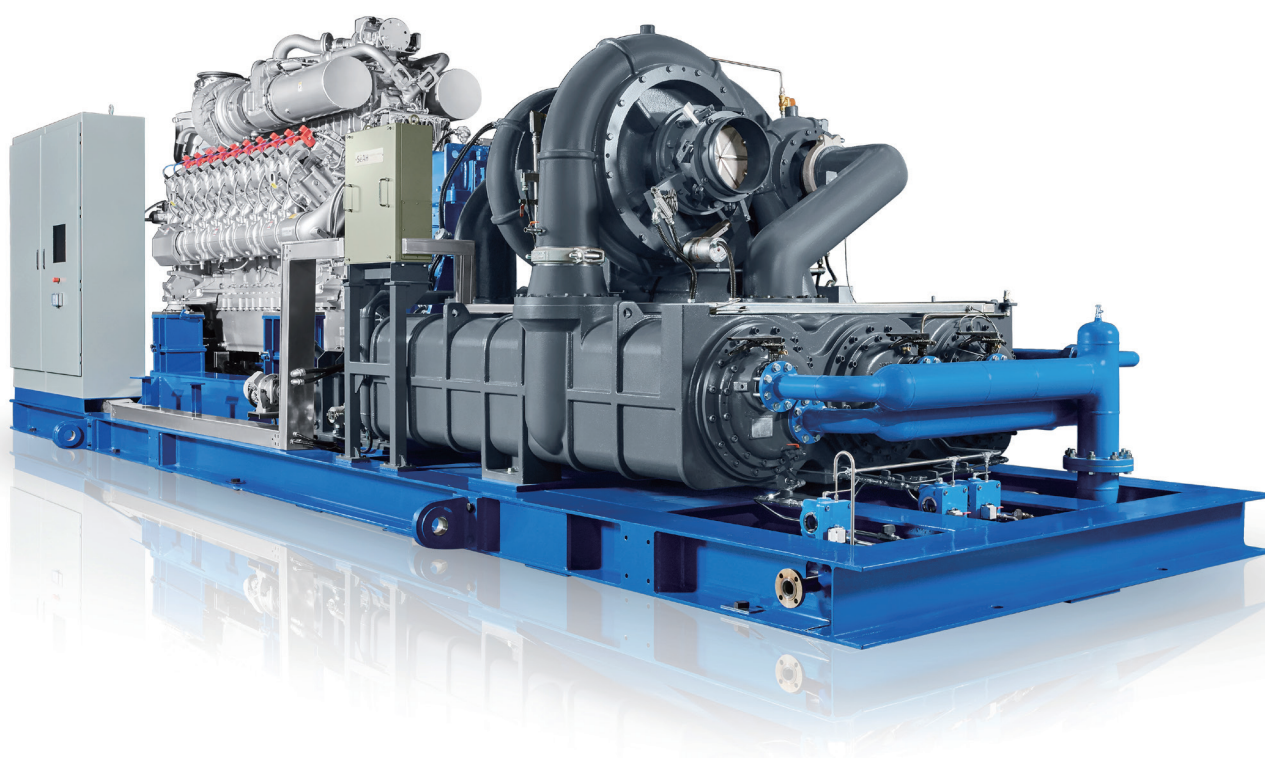
SCOPE OF SUPPLY

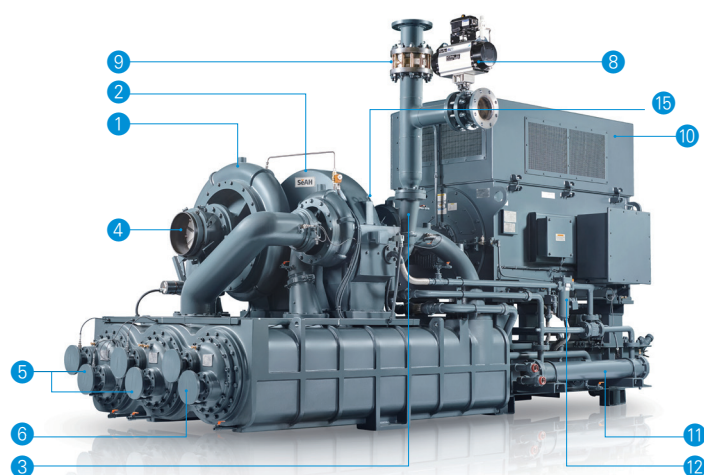
STANDARD EQUIPMENTS

- High efficiency CHORUS series turbo compressors based on state-of-the-art aerodynamic design
- Suction Filter
- Inter & After cooler / Oil cooler
- Vibration Detection System at each Stage
- High Efficiency Motor
- Automatic Drain Trap for all coolers
- PLC Control Panel including a 9.7" Wide Touch Screen Display
- Complete Lubrication System
- Inlet Guide Vane [I.G.V]
- Blow-Off Valve [B.O.V] & Silencer
- Constant Pressure Control / Anti-Surge Modulating Control

OPTIONAL EQUIPMENTS

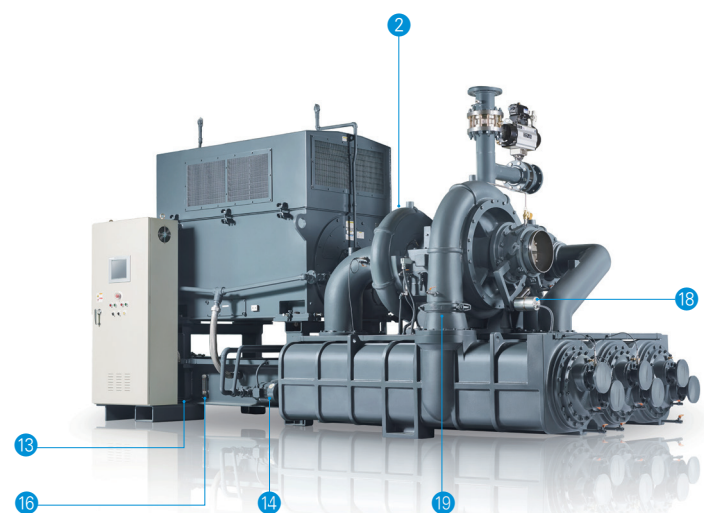
- Twin Oil Filter
- Motor Starter Panel
- Differential Pressure Monitoring System for Suction Filter
- Computerized Intelligent Group Control / Remote Control
- Human Machine Interface System [H.M.I]
- Steam Turbine Driver
- Package System
- Online & Mobile Monitoring
- Modbus/Profibus Interface





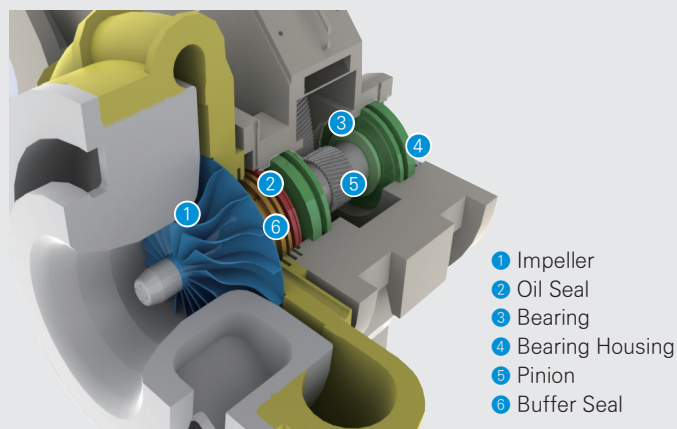
Standard List

- | | |
|----------------------|--------------------|
| 1 1st Stage | 11 Oil Cooler |
| 2 2nd Stage | 12 Oil Filter |
| 3 3rd Stage | 13 Control Panel |
| 4 I.G.V | 14 Aux. Oil Pump |
| 5 Inter Cooler | 15 Main Oil Pump |
| 6 After Cooler | 16 Oil Level Gauge |
| 7 Main Disc Coupling | 17 Oil Tank |
| 8 B.O.V | 18 I.G.V Actuator |
| 9 Check Valve | 19 V-Joint |
| 10 Main Motor | |



Option List

- I.G.V Positioner
- Cooling Water Manifold
- Auto Drain Trap(Electric or Pneumatic)
- Hot Air Variant
- Dual Oil Filter
- Dual Oil Cooler
- Stainless Steel for Oil Cooler
- Expansion Joint
- Cooler Cooper Fin
- Carbon Ring Seal



Carbon Float Ring

Buffered Labyrinth



High efficiency & optimized design technology for the best compressor performance

- 5-Axis machined high-efficiency Impeller with backward lean blade
- Wide operation range with maximized turndown ratio
- High efficiency and excellent durability impellers
- Compact size
- Optimized aero-matching through whole flow path

High performance, high reliability, and easy maintenance gear system

- Low noise & high precise helical gear
- Optimized gear design and manufacturing
- AGMA 6011 / API standard grade based design
- Compliance to DIN3961 Q4/Q5(AGMA2000 12/13)
- Individually replaceable pinion and bull gear
- Thrust Collar Gear Design



Maximized bearing load capacity & Minimizing mechanical loss

- Tilting Pad Journal Bearing(Pinion Gear)
- Sleeve Journal and Taper Land Thrust Bearing(Bull Gear)
- Easy maintenance by horizontally split design.
- Bearing design and manufacturing in conformance with API code
- Static / Dynamic simulation for optimized bearing performance

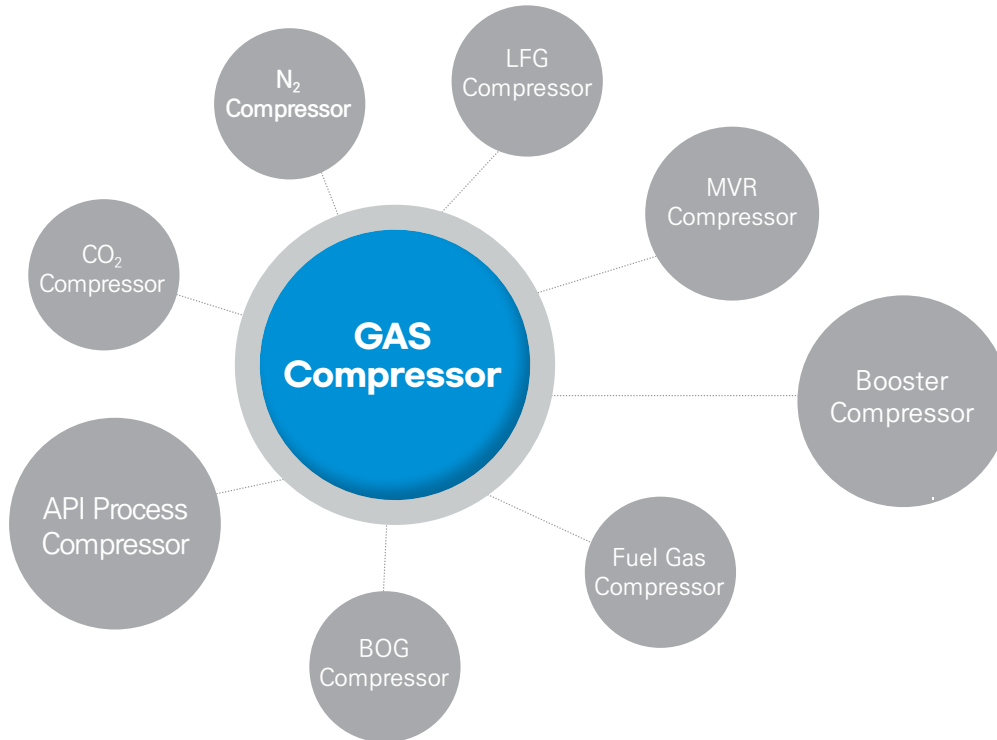


User-friendly monitoring system

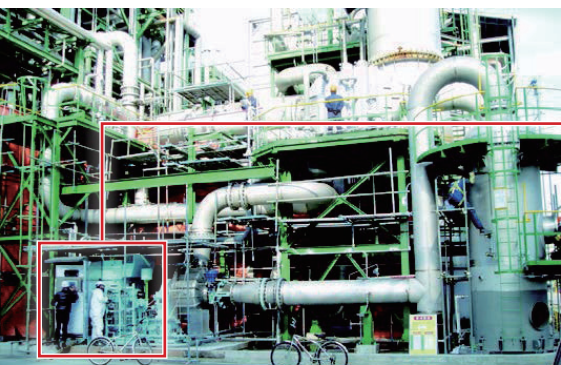
- Display of I.G.V & B.O.V status by opening rate
- Display of operation / stop status and setting values of Aux. equipment
- Separate display of operation, alarm and trip history
- Optimization of system control by monitoring compressor operation status in real time



PROCESS COMPRESSOR



As a company specializing in the design and manufacture of centrifugal compressors with advanced technology, SA Engineering provides high-performance and durable CHORUS series Air and Nitrogen compressor and the customized compressor such as booster, fuel gas compressor, MVR, CO₂ compressor, high-pressure gas compressor and API compressor with various industries (Steel, ASU, Petrochemical, Chemical, Power Plant etc.) in various regions around the world.



- Gases: Air, Fuel Gas, CO₂, N₂, LNG, Steam etc
- Single and Multi-stage(1–6 stages) Gear Type Centrifugal Compressors
- Compression up to 80kg/cm².G
- Flow up to 600,000 m³/hr
- Wide Operating Range due to Variable I.G.V and D.G.V
- Apply API 617 / API 672 / API 614



CO₂ Compressor



Mechanical Vapor Recompression
– Steam Compressor



Process Air Compressor
– API672 Air Compressor



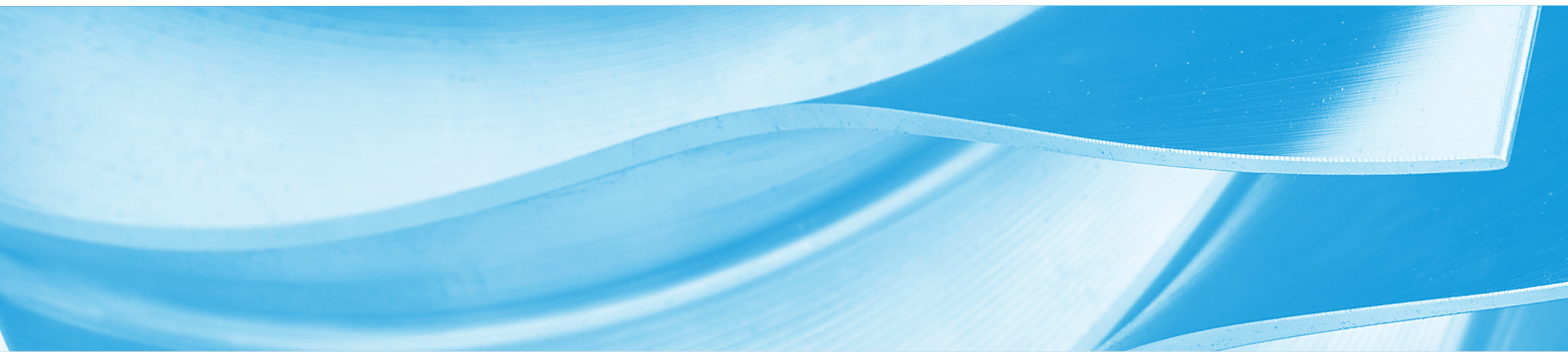
Fuel Gas Compressor

Compressed Air Care

It keeps the optimum operating conditions by providing the integrated management service including operation monitoring & verification and Before Service (B/S) & After Service (A/S) for compressors operated by customers.

Triple A SERVICE

1 hour	Reception	Reception within 1hour after C/S occurrence
1 day	Response	Analysis of C/S cause, securing of material
1 day	Action	Completion 1day of arrival at site



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