

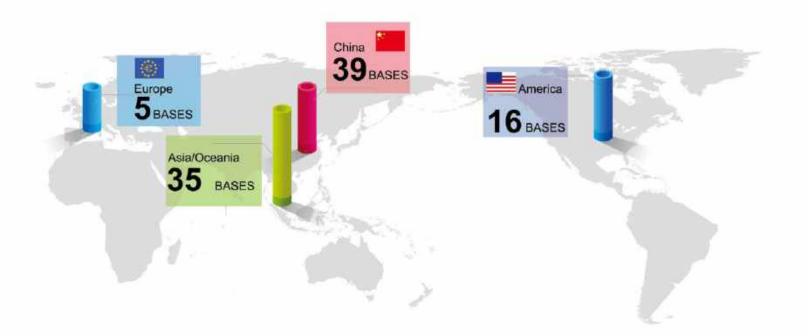
Heart to Heart

our way of saying that we view things from our customersperspective. Through this marketoriented approach to doing business, we want to contribute to society.



OIL FLOODED SCREW COMPRESSORS OIL FLOODED SCREW AIR COMPRESSORS SG15-75A SG22-75AV 15-75kW

KOBE STEEL GROUP Overseas Base



About KOBELCO

KOBELCO is a corporate brand of KOBE STEEL GROUP who is a major steel producer in Japan founded in 1905.

KOBE STEEL adopts diversified farming system and has 8 major business unit, Iron & Steel, Aluminum & Copper, Welding, Machinery, Engineering, Construction Machinery, Mobile Crane, and other business unit like Real Estate.

Each business unit is leading Japanese industry with its 'Only One / Number One' technology.

Now the consolidate subsidiaries are more than 200, and total numbers of employee reaches 35,469 in 03.2012.



Group Name: Kobe Steel, LTD. Unified Trademark: KOBELCO Founding Date: Sep.1, 1905





KOBELCO COMPRESSORS DEVELOPMENT HISTORY

About KOBELCO Compressors

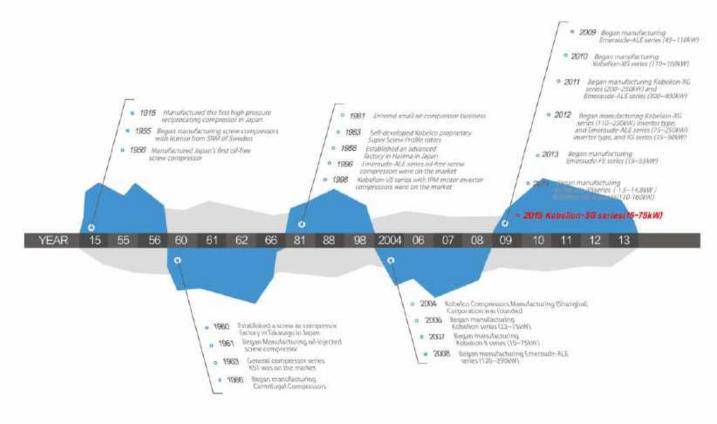
Kobelco has a long history of compressors manufacturing and technologies since it produced a high pressure reciprocating compressor for the first time in Japan in 1915. It made Japan's first oil-free screw compressor in 1956. In addition, it began to get involved in the production of centrifugal compressor in 1966, thus becoming one of the world's few comprehensive compressor manufacturers that can produce all piston, screw, centrifugal compressors.

Kobelco, as a material producer, is acquainted with material characteristics and properties, as well as material processing technology. It can develop and produce high efficiency, high performance, high quality products. Its experienced techniques and proven product quality, as well as the eternal pioneer spirit and the pursuit of a more perfect quality make it the industry leader.

Nowadays, Kobelco produces oil-injected and oil-free screw compressors in Japan, US and China and supplys to all over the world.



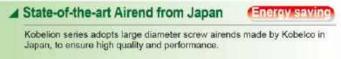
Kobelco factory is certified by ISO9001 Quality management, and ISO14001 Environmental Management.





Inherit history and experienced expertise!

Kobelion series oil flooded screw compressors incorporate Kobelco's half a century's expertise in screw compressor research and manufacture. It takes the highest flow capacity worldwide as the center, and also has both the highest performance and the best quality in the global market.

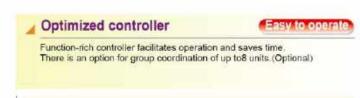




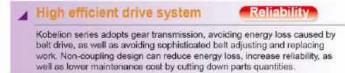
















Kobelion is derived from the combination of Kobe Steel Group's trademark "Kobelco" and "Lion".

We select the king of all animals -- the lion, as the series name, because we can provide customers with the newest choices and get their trust.

Proven high reliability isn't a transient glory, but a permanent value beyond era and nations. It represents various beginnings of the prelude to the ballrooms.

4 SG15-75A SG22-75AV 15-75kW

Proven reliable crystal of technology

We have been innovating ceaselessly to provide you with the optimized compressed air solution since it produced Japan's first high pressure piston compressor in 1915.

The highest flow capacity

It adopts big diameter screw airends to offer the highest capacity in the world.

SG V inverter models adopt wide range control to discharge big air capacity when pressure is low.

High reliability

High efficient inlet/outlet systems to ensure adapting to high ambient temperature.

Easy maintenance

Easy for maintaining and long interval period.

Low noise

Lower pulsation noise, improve tone quality.

Inverter driving -- The Perfect reflection of high performance and energy saving!

KOBELIONSG INVETER

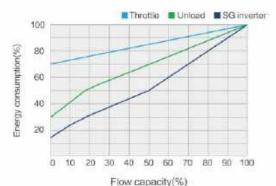
The combination of the most advanced motor technology and inverter technology, to reflect excellent reliability and energy saving.

Adopt wide range capacity control function and constant pressure control to reduce power consumption

Kobelco's exclusive inverter and Energy Saving Logic control can get optimized energy saving effect, no matter what load condition it is.

They can trace the pressure changes quickly and contain the pressure fluctuation in ±0.01MPa, supply necessary flow capacity by optimized power.

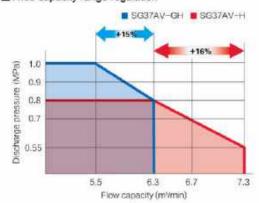
■Energy saving characteristics



Adopt increase capacity range control in low pressure Wide Range Control

It significantly expands the flow capacity range when running inlow pressure, increases the maximum flow capacity, and provides the best solutions for energy-saving requirements.

■Wide capacity range regulation



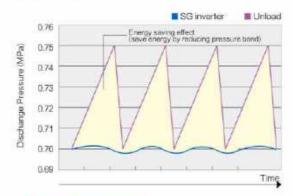
Other characteristics

High frequency reactor is a standard configuration to filter out high frequency harmonics produced by inverter.

Forced cooling on inverter prevents trip at high temperature in summer.

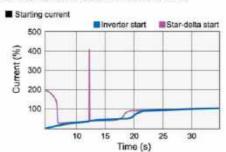
Coating on electronic panel can resist dirt and moisture effectively and enduringly.

■Capacity regulation



Inverter starter

Reduce starting current and torque to realize steady soft startup, as well as lower electrical devices cost.





Expertise by many years' experience, and dedicated design!

STANDARD

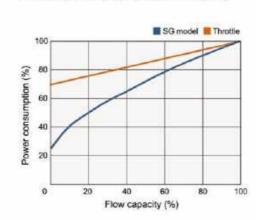
KOBELIONSG

Gather Kobelco's mature screw compressor technology to ensure high efficiency and reliability.

Unload regulation reduces energy consumption

SG series adopt unload/load mode which has better energy consumptions efficiency compared to previous modulating mode.

In addition, big unloading valves are treated by special oxidized aluminum membrane. It assures steady air supply and energy saving by loading and unloading.

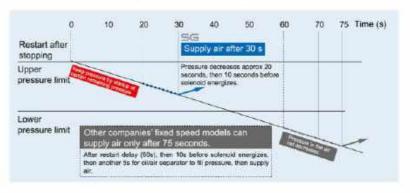


■ Can start up with certain remaining pressure

It can supply air at certain remaining pressure.

It is better than other companies' models which require

1 minute starting delay, to avoid pressure drops beneath lower limit.



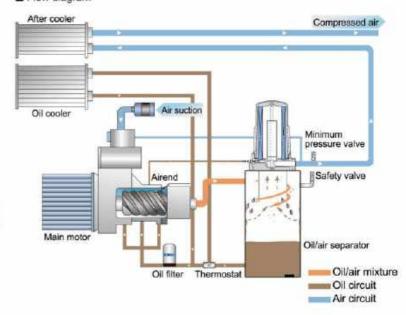
■ High efficient inlet/outlet systems

Cold/warm cooling air sections and professional air duct design, which consider fully of internal flow pattern and thermal pattern, ensures adaptation to high ambient temperature, as well as reducing noise.

It also considers fully of temperature rises around thermal sensitive parts and controller.



Flow diagram





Elaborate design of all details



Guarantee high quality air

Supply clean air

SG series ensures air quality by adopting high efficient air inlet filter and oil filter.

Olnlet air treatment

As countermeasure of dusty ambient, to adopt centrifugal separation and filter separation, to improve dust collection efficiency and reliability.



Oil treatment

Reduce remaining oil in the outlet air to less than 1.6 ppm by 3 steps high efficient oil separation: centrifugal force, gravity, and filtration

Centrifugal separation

The mixture of compressed air and oil from airend rotates in the oil separator, oil is separated by centrifugal force.

2nd step Gravity

The oil which is separated by centrifugal force to the inner wall flows down to the bottom by gravity.

There are several magnets at the bottom of the separator to filter out metal scraps in the air stream, in order not to scratch the separating element.

3rd step Filtration

Adopt big separating elements to suit its flow capacity.

The cylindrical separating element is mainly composed of fiber, to filter out the remaining oil mist.

High efficient oil filter

Adopt big oil filter with high separating efficiency to ensure clean oil, as well as prolong oil and related parts' service life.



High efficient coolers

Oil cooler and after cooler are separated to not only improve efficiency, but also avoid damaging coolers due to different temperatures, so as to prolong their



■No condensate accumulation

No condensate appears due to thermostat, needn't remove condensate.

■Kobelco Tough Grease

Adopt Kobelco's patented TOUGH grease to improve motor efficiency by 2%, as well as ensure more stable running because of its long service interval and high temperature endurance.

X Only 55-75kW



Oil

Newly developed high performance synthetic oil (Extra oil).

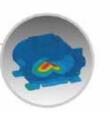
RBOT test time can be up to 5 times longer than ordinary air screw compressor service time, with sludge volume less



Low noise

Adopt advanced new FEM analysis, new designed structure, optimized muffle material, etc. to achieve super low running noise.

Consider fully of sound pressure/sound tone/sound volume by adding insulation boards and air duct etc, to reduce noise which is the lowest in its category.



■Centrifugal fan

The low speed centrifugal fan produces a large amount of cooling air with high efficiency and low energy consumption.



■Intelligent control system

IP65 protection, LCD high resolution display with background light.

Automatic operation with abundant icon display. Several communication ways can be chosen. Qualified by IEC61000 EMC test, certified by UL, CE.



■Standard functions

It can self-diagnose, display data, caution, and emergency stop the machine, etc. It protects components such as motor, fan, etc in the air compressor.

Daily management handling is very easy, such as operation mode setting, pressure setting, language setting, as well as screen display, etc.

It displays abundant informations about air compressor's operation and maintenance, let operator know its operation status timely.

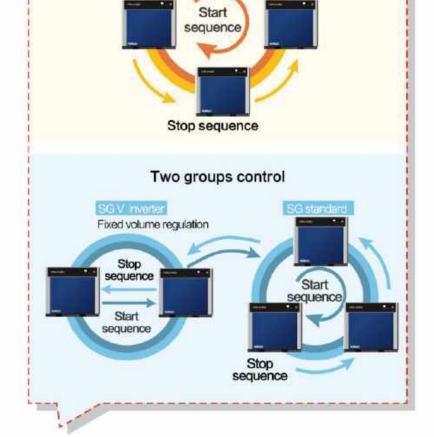
Running log can be read. It can record up to 50 latest malfunction events.

It can switch language setting between Chinese and Eng-

It can be reset automatically.

■Powerful communication function(Optional)

By installing a Kobelco proprietary communication module of RS485, controller can set communication protocol of RS485 by software, or select MODBUS as a means of communication between master and slave compressors, or connect with other same configured controllers as a network for ISC control. Customer can remotely control the air compressor by the I/O interfaces on the controller.



Standby group control

SG standard serie

■Group control (Optional)

By installing a Kobelco proprietary communication module of RS485, there are up to 8 air compressors that can be group controlled.

For standby group control, the standby compressors will startup one after another if the compressed air is insufficient after the first compressor starts. For two groups' control, we can put fixed speed units and inverter units at two different groups respectively, to achieve more ideal energy saving effect.



Specifications

Provide a full range of services

SG V INVERTER SERIES

R. R. Control	Max.		Flow capac	olty(m³/min)		Motor power	Connection	Dimensions	Dir	mensions(m	m)	Weight
Model	(MPa)	0.55MPa	0.7 MPa	0.8 MPa	1.0MPa	(kW)	CONTROL	dB(A)	1.	W	н	(kg)
SG22AV-H		4.1	3.7	3.4		22	R,1	58	1,500	880	1,350	730
SG37AV-H		7.3	6.7	6.3		37	R,1 1/2	65	1,740	970	1,550	940
SG55AV-H	5775	10.5	10.0	9.5	130	55	R,2	66	2,050	1,280	1,750	1,680
SG75AV-H		14.6	13.5	12.7		75	R,2 1/2	67	2,050	1,280	1,750	2,240
SG22AV-GH		3.4	3.4	3.4	2.9	22	R,1	58	1,500	880	1,350	730
SG37AV-GH		6.3	6.3	6.3	5.5	37	R ₂ 1 1/2	65	1,740	970	1,550	940
SG55AV-GH	1.05	9.5	9.5	9.5	8.6	55	R,2	66	2,050	1,280	1,750	1,680
SG75AV-GH		12.7	12.7	12.7	11.1	75	R_2 1/2	67	2,050	1,280	1,750	2,240

SG SERIES

14245551	Max.	Flow	Motor power	A CONTRACTOR	Dimensions		Dimensions(mm)		Weight
Model	(MPa)	(m³/min)	(kW)	Connection	dB(A)	L	W	н	(kg)
SG15A		2.5	15	R ₂ 1	57	1,500	088	1,350	640
SG22A		3.7	22	R,1	58	1,500	880	1,350	700
SG30A	0.75	5.4	30	R ₂ 1 1/2	61	1,740	970	1,550	840
SG37A	0.75	6.7	37	R ₂ 1 1/2	65	1,740	970	1,550	890
SG55A		10.0	55	R,2	66	2,050	1,280	1,750	1,640
SG75A		13.5	75	R ₂ 2 1/2	67	2,050	1,280	1,750	2,190
SG15A-H		2.25	15	R ₂ 1	57	1,500	880	1,350	640
SG22A-H		3.4	22	R ₂ 1	58	1,500	880	1,350	700
SG30A-H	0.00	4.9	30	R ₂ 1 1/2	61	1,740	970	1,550	840
SG37A-H	0.85	6.3	37	R ₂ 1 1/2	65	1,740	970	1,550	890
SG55A-H		9.5	55	R,2	66	2,050	1,280	1,750	1,640
SG75A-H		12.7	75	R ₂ 2 1/2	67	2,050	1,280	1,750	2,190
SG15A-GH		1.86	15	R ₂ 1	57	1,500	880	1,350	640
SG22A-GH		2.9	22	R ₂ 1	58	1,500	880	1,350	700
SG30A-GH	4.05	4.3	30	R ₂ 1 1/2	61	1,740	970	1,550	840
SG37A-GH	1.05	5.5	37	R ₂ 1 1/2	65	1,740	970	1,550	890
SG55A-GH		8.6	55	R,2	66	2,050	1,280	1,750	1,640
SG75A-GH		11.1	75	R ₂ 2 1/2	67	2,050	1,280	1,750	2,190

*please refer to (Standard Speafication Manual) for more details

MODEL NAME EXPLANATION

SG	37	Α	V-	Н
Series	Motor output	Cooling method	Starting system	Pressure
SG	15~75kW	A: Air cooled		Nil: 0.75MPa H: 0.85MPa GH: 1.05MPa

■ Notes:

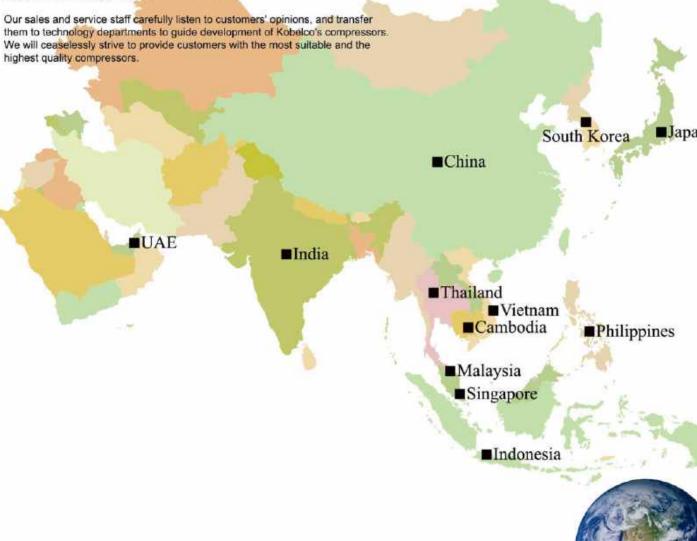
Power supply: 380,415V/50Hz/3ph/3wire Flow capacity: Value converted to inlet conditions

Air inlet conditions: 1 bar, 20°C, 0%

KOBELCO NET WORK

Kobelco has set up a sales/service network around the world to meet customers' requirement more perfectly. It can provide various services from daily technique support to technology proposals.

Our sales and service staff carefully listen to customers' opinions, and transfer them to technology departments to guide development of Kobelco's compressors. We will ceaselessly strive to provide customers with the most suitable and the





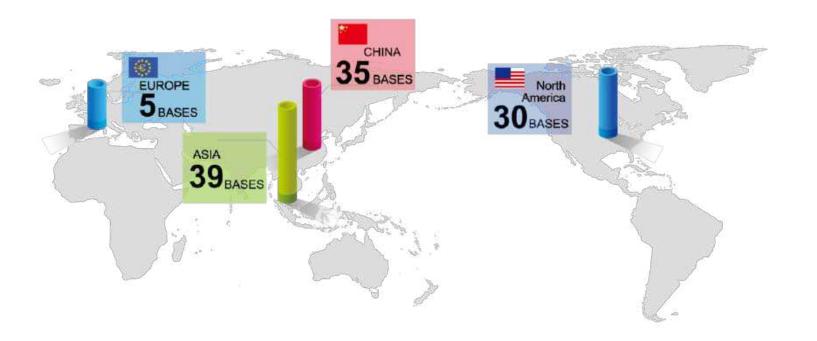
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Fortune 500 Magazine as one of the world's top

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KOBELCO COMPRESSORS DEVELOPMENT HISTORY

About KOBELCO Compressors

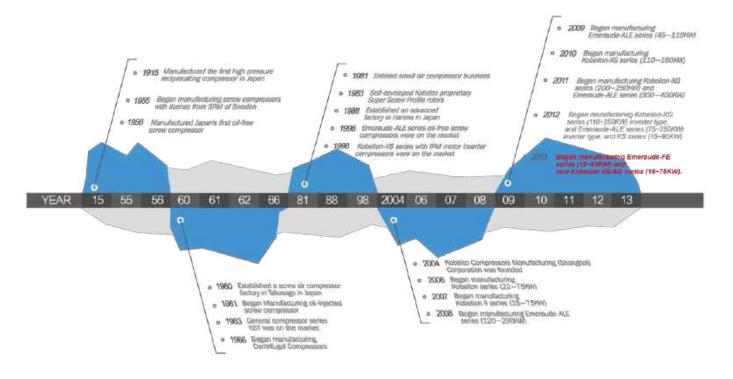
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Nowadays, Kobelco produces oil-injected and oil-free screw compressors in Japan, US and China and supplys to all over the world.



Kobelco factory is certified by ISO9001 Quality management, and ISO14001 Environmental Management.





Inherit history and experienced expertise, reach the highest capacity and energy efficiency in the world!

Kobelion series oil flooded screw compressors incorporate Kobelco's half a century's expertise in screw compressor research and manufacture. It takes the highest flow capacity worldwide as the center, and also has both the highest performance and the best quality in the global market.











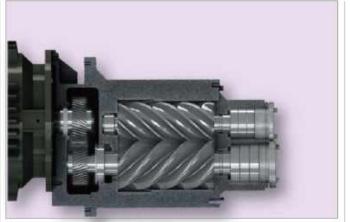


High performance controller Adopt new touch type liquid crystal display, more easy to operate and time saving. It can coordinate up to 6 units without an additional group controller.



High efficient drive system Kobelion series adopts gear transmission, avoiding energy loss caused by belt drive, as well as avoiding sophisticated belt adjusting and replacing work. Non-coupling design can reduce energy loss, increase reliability, as well as

lower maintenance cost by cutting down parts quantities



Proven reliable crystal of technology

We have been innovating ceaselessly to provide you with the optimized compressed air solution since it produced Japan's first high pressure piston compressor in 1915.

The highest flow capacity

It adopts big diameter screw airends to offer the highest capacity in the world.

VS inverter models adopt wide range control to discharge big air capacity when pressure is low.

High efficiency and energy saving

This series adopts gear transmission without coupling design in order to reduce energy loss.

Kobelco's patent - Energy Saving Logic function.

High reliability

High efficient inlet/outlet systems to ensure adapting to high ambient temperature.

Easy maintenance

Easy for maintaining and long interval period.

Low noise

Lower pulsation noise, improve tone quality.

无油变频空压机

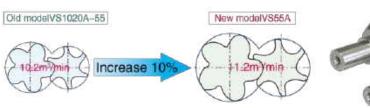


Inverter driving -- The Perfect reflection of high performance and energy saving! KOBELION /S

The combination of the most advanced motor technique and inverter technology. Adopt the best Premium motor with high efficient inverter to reflect excellent reliability and energy saving.

The highest flow capacity worldwide

It adopts newly developed airend with bigger screws, to optimize structure and supply the highest capacity in the world.



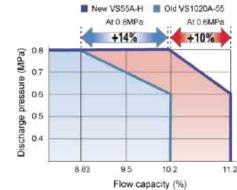
Motor power	kW	22	37	55	75
Flow capacity	m³/min	4.2	7.6	11.2	15.7
Increasing percentage	%	-	4%	10%	5%

#Compared with old model at 0.6 MPa outlet pressure

Adopt function of increasing flow rate when

it is in low discharge pressure wide Range Control

Increases flow rate by using the surplus power when it is running in low discharge pressure.



Expand flow capacity range in low pressure to increase its maximum capacity, as well as supply optimized solution for energy saving.

- Offer the most suitable pressure and the maximum flow capacity by Wide Range Control.

■ VS55A-H's capacity variation under Wide Range Control

Discharge pressure (MPa)	0.8	0.7	0.6	0.55
Capacity (m//min)	10.1	10.7	11.2	11.2
Added flow capacity (%)	100	106	111	111

Adopt wide range capacity control function and constant pressure control to reduce power consumption

Kobelco's exclusive inverter and Energy Saving Logic control can get optimized energy saving effect, no matter what load condition it is. They can trace the pressure changes quickly and contain the pressure fluctuation in ±0.01MPa, supply necessary flow capacity by optimized power.

■ Inverter control



Advanced PREMIUM

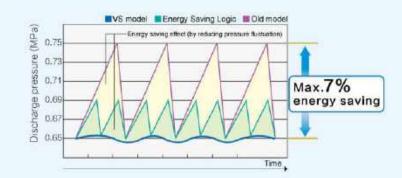
Adopt IE3 premium motor with class F insulation and IP55 protection, which prevents dust and water from

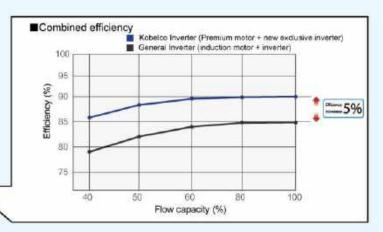
Adopt high temperature bearings to prolong motor's



■ Energy saving by constant pressure control

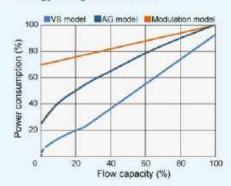
Pressure fluctuation can be controlled within ±0.01MPa.





Regulate flow capacity by changing rotating speed

■ Energy saving characteristics



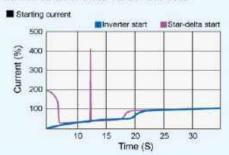
■ Energy saving example (VS55A compare with standard model)



Calculation conditions Running 6000 hours/year. Unit price: 0.15 US\$/KWh. Average loading rate: 60%.

Inverter starter

Reduce starting current and torque to realize steady soft startup, as well as lower electrical devices cost.



Other characteristics

High frequency reactor is a standard configuration to filter out high frequency harmonics produced by inverter.

Forced cooling on inverter prevents trip at high temperature in summer.

Coating on electronic panel can resist dirt and moisture effectively and enduringly.



Expertise by many years' experience, and dedicated design! KOBELIONAG

AG series incorporate Kobelco's proven screw compressor technology to ensure high efficiency and reliability, make your factory peace of mind

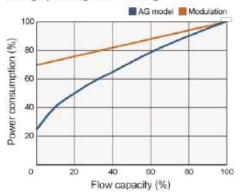
■ The highest flow capacity worldwide

Its newly developed compressor's "heart" - airend, with bigger screws, to optimize structure and supply the highest capacity in the world.

Motor power	kW	15	22	30	37	55	75
Flow capacity	m³/min	2.75	3.91	5.8	7.2	10.7	14.9

■ Unload regulation reduces energy consumption

AG series adopt unload/load mode which has better energy consumptions efficiency compared to previous modulating mode. In addition, big unloading valves are treated by special oxidized aluminum membrane. It assures steady air supply and energy saving by loading and unloading.

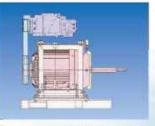


■ Direct drive transmission

There is a gearbox between airend and motor without coupling, in order to reduce mechanical losses. Compared with belt driving, it avoids energy loss caused by belt transmission, as well as trifle maintenance on belt and pulley. Air supply will stop if belt breaks.



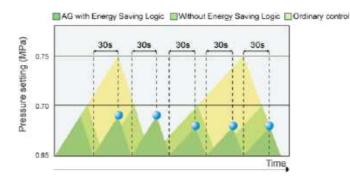
Speed up gears



Speed up belt (ordinary model)

■ Energy Saving Logic Kobelco Patent

It can unload the compressor in advance if unload/load cycle is longer than setting time (30 seconds). Thus lower pressure fluctuation and eliminate energy consumption caused by unneces-





Energy saving centrifugal fan

Fan motor's energy consumption is reduced up to 68% compared with other same power models.



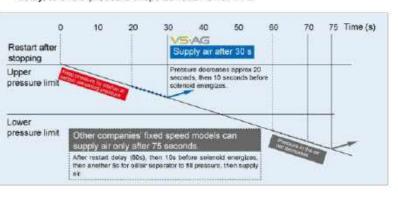
Main motor power (KW)	15	22	30	37
Old fan motor (KW)	0.75	0.75	2.1	2.2
New fan motor (KW)	0,55	0.55	1.1	1.5
Power reduction	27%	27%	50%	68%

#For all VS/AG series.

Can start up with certain remaining pressure

It can supply air at certain remaining pressure.

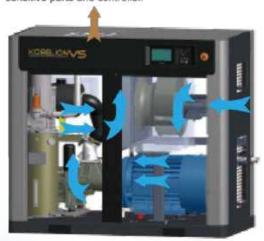
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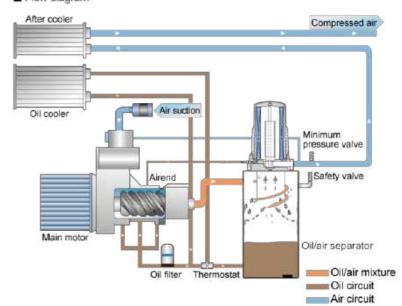
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Cold/warm cooling air sections and professional air duct design, which consider fully of internal flow pattern and thermal pattern, ensures adaptation to high ambient temperature, as well as reducing noise.

It also considers fully of temperature rises around thermal sensitive parts and controller.

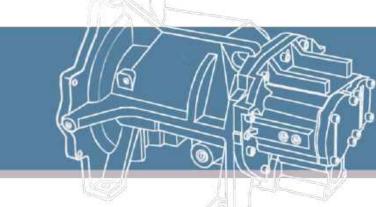


Flow diagram





Elaborate Design of Details



High efficient coolers

Oil cooler and after cooler are separated to not only improve efficiency, but also avoid damaging coolers due to different temperatures, so as to prolong their



The low speed centrifugal fan produces a large amount of cooling air with high efficiency and low energy consumption.

■ KOBELCO TOUGH GREASE

Adopt Kobelco's patented TOUGH grease to improve motor efficiency by 2%, as well as ensure more stable running because of its long service interval and high temperature endurance.

@ Only 55-75kW.

□ Oil

Newly developed high performance synthetic oil (Extra oil). RBOT test time can be up to 5 times longer than ordinary air screw compressor service time, with sludge volume less than 1/10.

High efficient motors

Insulation class F, protection class IP55 effectively prevent dust and water from entering motor.

In addition, it is standard configured with Phase Sequence Relay to prevent motor from reverse rotation, in order to protect units.

It also contains thermocouple to detect motor coil's temperature to protect motor.

Low noise

Adopt advanced new FEM analysis, new designed structure, optimized muffle material, etc. to achieve super low running noise.

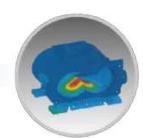
Consider fully of sound pressure/sound tone/sound volume by adding insulation boards and air duct etc, to reduce noise which is the lowest in its category.











Adopt big high efficient air inlet filters

Adopt big air inlet filters to reduce pressure loss and prolong cleaning interval, in order to cope with dusty environment.

Centrifugal + filtration: 2 steps separation.

ISO 5011 dust filtering accuracy 99.98%.

Oil separator

Reduce remaining oil in the outlet air to less than 1.6 ppm by 3 steps high efficient oil separation: centrifugal force, gravity, and filtration.

Centrifugal force

The mixture of compressed air and oil from airend rotates in the oil separator, oil is separated by centrifugal force.

2nd step Gravity

The oil which is separated by centrifugal force to the inner wall flows down to the bottom by gravity.

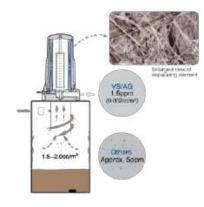
There are several magnets at the bottom of the separator to filter out metal scraps in the air stream, in order not to scratch the separating element.

3rd step Filtration

Adopt big separating elements to suit its flow capacity. The cylindrical separating element is mainly composed of fiber, to filter out the remaining oil mist.

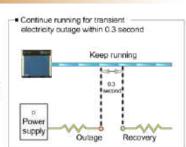
High efficient oil filter

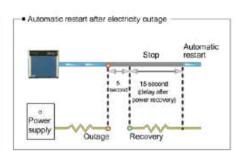
Adopt big oil filter with high separating efficiency to ensure clean oil, as well as prolong oil and related parts' service life.



Perfect electrical protections

- Setting for transient electricity outage...within 0.3 sec. The compressor doesn't stop if electricity outage is within the setting time. The compressor will stop only when electricity outage exceeds the setting time. (For AG it is 0.2 sec.)
- ◆ Setting for automatic restart after electricity outage...1~20sec. (Example as right) Resuming electricity is set at 5 sec, delay setting is 15 sec. after electricity resumes.
- Built-in 7,500V surge protector and noise filter.





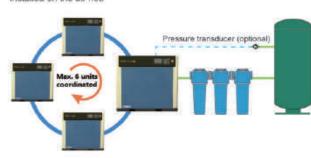
Function Rich Big ITCS Controller

Energy Saving Solution



Standard configured multiple units control function

Up to 6 units can be coordinated without an additional multiple-units controller, nor is an additional pressure transducer. These compressors can also be group controlled through an additional pressure transducer installed on the air net.



If Multiple units control function and Modbus function can't be used simultaneously. If you need the two functions simultaneously, please install another multiple units controller

4 standard units

4 AG units

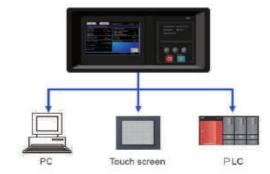
1 VS unit

4 VS units

11,

Standard configured MODBUS module

MODBUS module is a standard configuration, which can realize Modbus communications that monitor compressors' real time status. It facilitates management and responds to emergencies swiftly.



Comparison of power consumptions Combination1 175.000 Combination2 133,600 Model:37KW, 4 units. Annual unning:8000 hours Electricity price:0.15US\$#Wh Average loading number:1.5 units Flow capacity (%)

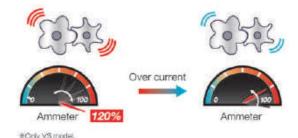
Standard configured USB data download function

Detailed running data can be stored. Data before and after an accident can be read. Diagnosed data can be available without installing a measuring instrument.



Over current protection

Motor speed will slowdown if inverter detects an over current, in order to continue supply air and prevent emergency shutdown.

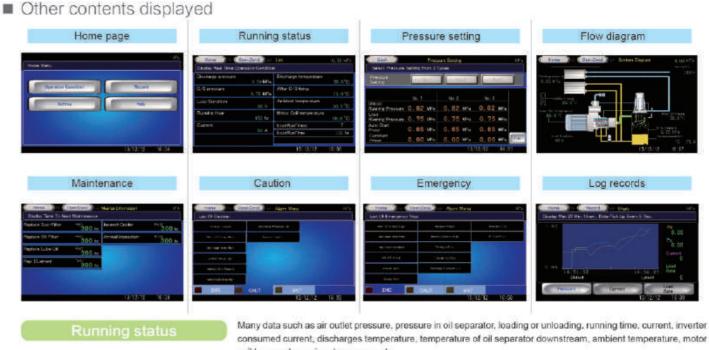


Up to 30 self-diagnose functions, display maintenance/caution/emergency stop signals timely, and corresponding

troubleshooting measures. Facilitate daily inspection/maintenance/management, as well as prevent compressor

12.

Running data/charts display



from breaking suddenly to ensure safe production.

Current data display (every 5 seconds).

There are at most 7 start/stop combination settings in a week. Each combination setting can set different pressures.

Operation data display (each hour of the latest 24 hours). Display contents: discharge pressure, current, loading rate.

Specifications

Provide a Full Range of Services

VS Inverter Series

* * Acceptant	Мак.	L	Flow capa	city (m³/min)		Main motor	Outlet	Noise	Dir	nensions (m	m)	Weight
Model	(MPa)	0.55MPa	0.7 MPa	0.8 MPa	1.0MPa	power (KW)	connection	dB(A)	W	D	Н	(kg)
VS22A-H		4.2	3.91	3.67		22	1"	58	1,500	880	1,350	730
VS37A-H	0.85	7.6	7.2	6.9		37	1 1/2"	61	1,740	970	1,550	1,050
VS55A-H	0.85	11.2	10.7	10.1		55	2"	64	2,050	1,280	1,750	1,940
VS75A-H		15.7	14.9	13.8		75	2"	67	2,050	1,280	1,750	2,460
VS22A-GH		3,67	3.67	3.67	3,1	22	1"	58	1,500	880	1,350	730
VS37A-GH	1.05	6.9	6.9	6.9	5.8	37	1 1/2*	61	1,740	970	1,550	1,050
VS55A-GH	1.00	10.1	10.1	10.1	8.7	55	2"	64	2,050	1,280	1,750	1,940
VS75A-GH	,	13.8	13.8	13.8	12.2	75	2"	67	2,050	1,280	1,750	2,400

AG Series

144.1411	Max.	Flow capacity	Main motor	Outlet	Noise	1	Dimensions(mm)		Weight
Model	(MPa)	(m³/min)	power(KW)	connection diameter	dB(A)	W	D	н	(kg)
AG15A		2.75	15	1"	57	1,500	088	1,350	640
AG22A	i i	3.91	22	3".	58	1,500	880	1,350	700
AG30A	0.75	5.8	30	1 1/2"	61	1,740	970	1,550	885
AG37A	0.75	7.2	37	1 1/2"	61	1,740	970	1,550	1,000
AG55A		10.7	55	2"	64	2,050	1,280	1,750	1,800
AG75A		14.9	75	2"	67	2,050	1,280	1,750	2,250
AG15A-H		2,47	15	1"	57	1,500	880	1,350	640
AG22A-H		3.67	22	1"	58	1,500	880	1,350	700
AG30A-H	0.05	5,3	30	1 1/2"	61	1,740	970	1,550	885
AG37A-H	0.85	6.9	37	1 1/2"	61	1,740	970	1,550	1,000
AG55A-H		10.1	55	2"	64	2,050	1,280	1,750	1,800
AG75A-H		13.8	75	2"	67	2,050	1,280	1,750	2,250
AG15A-GH		2.05	15	1"	57	1,500	880	1,350	640
AG22A-GH		3.1	22	1"	58	1,500	880	1,350	700
AG30A-GH	4.05	4.5	30	1 1/2"	61	1,740	970	1,550	885
AG37A-GH	1.05	5.8	37	1 1/2"	61	1,740	970	1,550	1,000
AG55A-GH		8.7	55	2*	64	2,050	1,280	1,750	1,800
AG75A-GH		12.2	75	2"	67	2,050	1,280	1,750	2,250

#For details please refer to "Specification Manual"

Model name explanation (*VS is inverter model, AG is standard)

VS	37	A -	Н
Series name	Main motor power	Cooling method	Discharge pressure
VS AG	15~75kW	A: Air cooled	No: 0.75MPa H: 0.85MPa GH: 1.05MPa

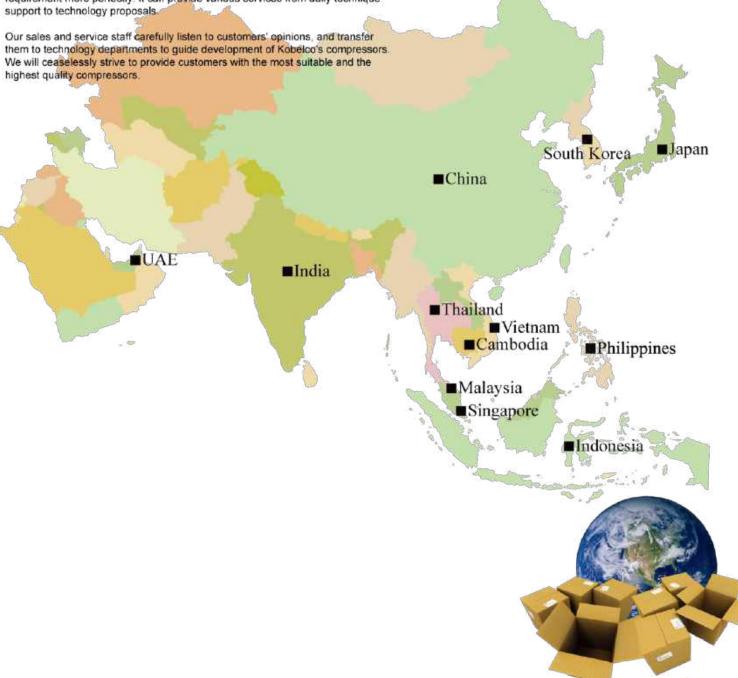
■ Notes:

Power supply: 380,415V/50Hz/3ph/3wire Flow capacity: Convert the outlet flow to the air inlet conditions Air inlet conditions: 1 bar, 20℃, 0%

KOBELCO NET WORK

Kobelco has set up a sales/service network around the world to meet customers' requirement more perfectly. It can provide various services from daily technique

them to technology departments to guide development of Kobelco's compressors. We will ceaselessly strive to provide customers with the most suitable and the





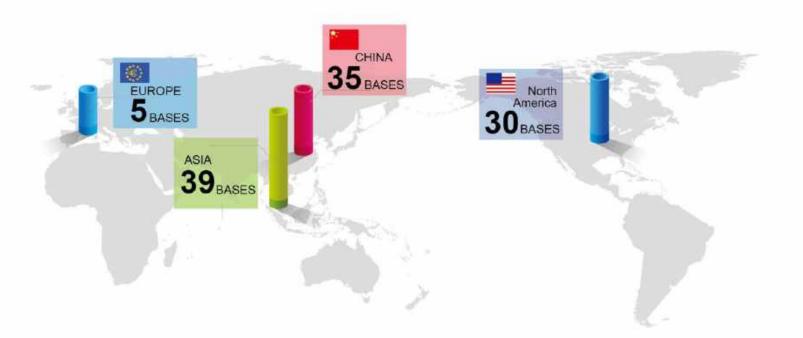
Heart to Heart

our way of saying that we view things from our customersperspective. Through this marketoriented approach to doing business, we want to contribute to society.





KOBE STEEL GROUP Overseas Bases



About KOBELCO

KOBELCO is a corporate brand of KOBE STEEL GROUP who is a major steel producer in Japan founded in 1905.

KOBE STEEL adopts diversified farming system and has 8 major business unit, Iron & Steel, Aluminum & Copper, Welding, Machinery, Engineering, Construction Machinery, Mobile Crane, and other business unit like Real

Each business unit is leading Japanese industry with its 'Only One / Number

Now the consolidate subsidiaries are more than 200, and total numbers of employee reaches 35,469 in 03.2012.



Fortune 500 company Magazine as one of the world's top 500 corporations



Innovator 100 Thomson Reuters Top 100 Global Innovator

Group Name: Kobe Steel, LTD. Unified Trademark: KOBELCO Founding Date: Sep.1, 1905





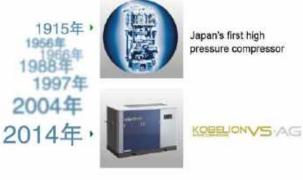
KOBELCO COMPRESSORS DEVELOPMENT HISTORY

About KOBELCO Compressors

Kobelco has a long history of compressors manufacturing and technologies since it produced a high pressure reciprocating compressor for the first time in Japan in 1915. It made Japan's first oil-free screw compressor in 1956. In addition, it began to get involved in the production of centrifugal compressor in 1966, thus becoming one of the world's few comprehensive compressor manufacturers that can produce all piston, screw, centrifugal compressors.

Kobelco, as a material producer, is acquainted with material characteristics and properties, as well as material processing technology. It can develop and produce high efficiency, high performance, high quality products. Its experienced techniques and proven product quality, as well as the eternal pioneer spirit and the pursuit of a more perfect quality make it the industry leader.

Nowadays, Kobelco produces oil-injected and oil-free screw compressors in Japan, US and China and supplys to all over the world.



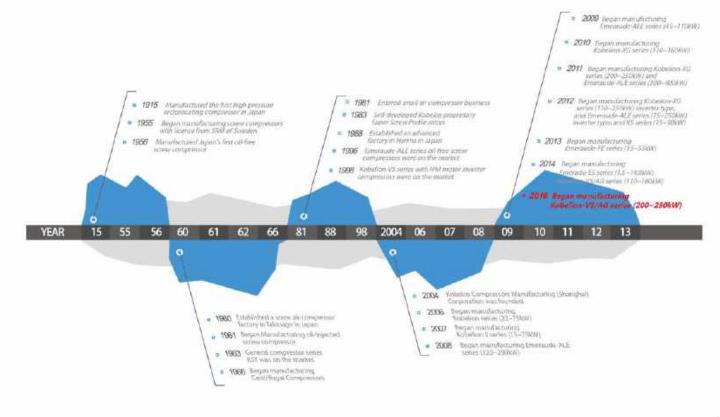








Kobelco factory is certified by ISO9001 Quality management, and ISO14001 Environmental Management.

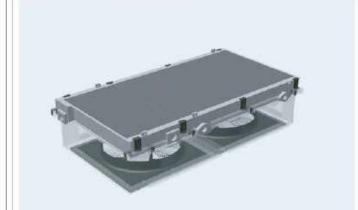




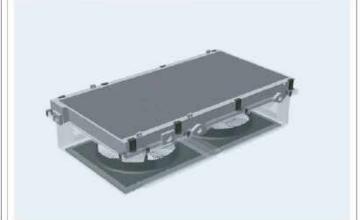
Inherit history and experienced expertise, reach the highest capacity and energy efficiency in the world!

Kobelion series oil flooded screw compressors incorporate Kobelco's half a century's expertise in screw compressor research and manufacture. It takes the highest flow capacity worldwide as the center, and also has both the highest performance and the best quality in the global market.

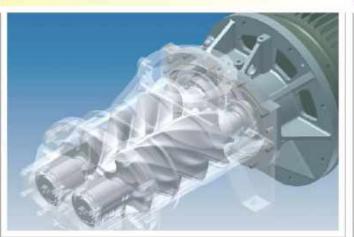












Adopt new touch type liquid crystal display, more easy to operate and time saving. It can coordinate up to 6 units without an additional group controller.





SCREW COMPRESSOR

Kobelion is derived from the combination of Kobe Steel Group's trademark "Kobelco" and "Lion".

We select the king of all animals -- the lion, as the series name, because we can provide customers with the newest choices and get their trust.

Proven high reliability isn't a transient glory, but a permanent value beyond era and nations. It represents various beginnings of the prelude to the ballrooms.

 VS110-250AW AG110-250AW XG3900-4730W(V) 110-250kW

Proven reliable crystal of technology

We have been innovating ceaselessly to provide you with the optimized compressed air solution since it produced Japan's first high pressure piston compressor in 1915.

The highest flow capacity

It adopts big diameter screw airends to offer the highest capacity in the world.

High efficiency and energy saving

This series adopts gear transmission without coupling design in order to reduce energy loss.

Kobelco's patent - Energy Saving Logic function.

High reliability

High efficient inlet/outlet systems to ensure adapting to high ambient temperature.

Easy maintenance

Easy for maintaining and long interval period.

Low noise

Lower pulsation noise, improve tone quality.



Inverter driving -- The Perfect reflection of high performance and energy saving!

KOBELIONVS _

The combination of the most advanced motor technique and inverter technology reflects excellent reliability and energy saving.

Expertise by many years' experience, and dedicated design!

KOBELIONAG

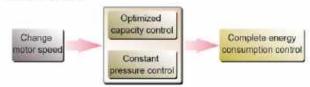
AG series incorporate Kobelco's proven screw compressor technology to ensure high efficiency and reliability.



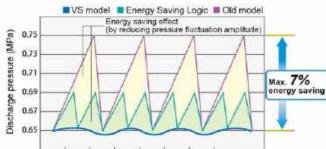
Adopt optimizing capacity control and constant pressure control to reduce power consumption

VS inverter adjust rotating speed along with the air consumption to achieve the best energy saving. This inverter can quickly respond to the pressure change so that the pressure fluctuation is minimized within ±0.01MPa and can supply required air by optimized power.

■ Inverter control



Energy saving by constant pressure control

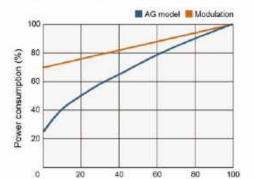


Pressure fluctuation can be controlled within ±0.01MPa

AG series adopt unload/load mode which has better energy consumptions efficiency compared to previous modulating mode. In addition, big unloading valves are treated by special oxidized aluminum membrane. It assures steady air supply and energy

consumption

saving by loading and unloading.

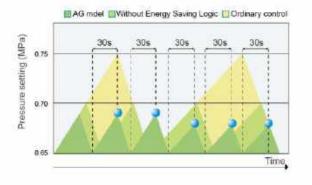


Flow capacity (%)

Unload regulation reduces energy

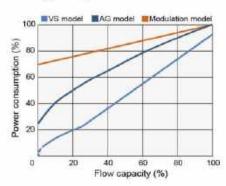


It can unload the compressor in advance if unload/load cycle is longer than setting time (30 seconds). Thus lower pressure fluctuation and eliminate energy consumption caused by unnecessary pressure rise.



Regulate flow capacity by changing rotating speed

■ Energy saving characteristics



■ Energy saving example (VS110A compare with standard AG110A)



Calculation conditions:

Running 6000 hours/year. Unit price: 0.15 US\$/kWh. Average loading rate: 60%.

Can start up with certain remaining pressure

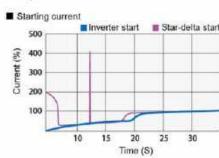
It can supply air at certain remaining pressure.

It is better than other companies' models which require 1 minute starting delay, to avoid pressure drops beneath lower limit.



Inverter starter

Reduce starting current and torque to realize steady soft startup, as well as lower electrical devices cost.



Other characteristics

High frequency reactor is a standard configuration to filter out high frequency harmonics produced by inverter.

Forced cooling on inverter prevents trip at high temperature in summer.

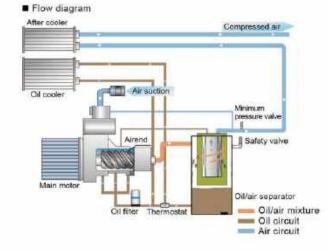
Coating on electronic panel can resist dirt and moisture effectively and enduringly.



High efficient inlet/outlet systems

Cold/warm cooling air sections and professional air duct design, which consider fully of internal flow pattern and thermal pattern, ensures adaptation to high ambient temperature, as well as reducing noise.

It also considers fully of temperature rises around thermal sensitive parts and controller.



Function Rich Big ITCS Controller



The new liquid crystal electronic controller



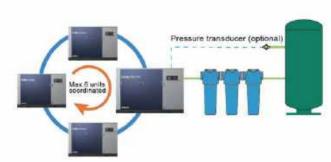
■ New functions → 7 inches big LCD high resolution screen with background lighting → Multiple units control → Standard configured MODBUS module → USB data download function → Over current protection → Flow chart display → 3 pressure settings → Many password protections

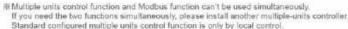
KOBELIONVS AG

Standard configured multiple units control function

7.

Up to 6 units can be coordinated without an additional multipleunits controller, nor is an additional pressure transducer. These compressors can also be group controlled through an additional pressure transducer installed on the air net

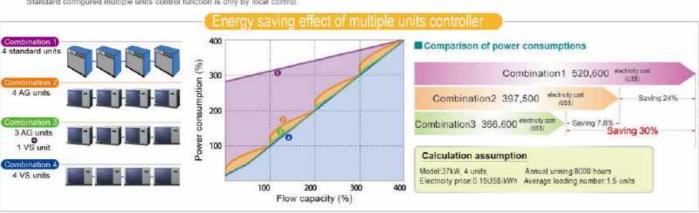




■ Standard configured MODBUS module

MODBUS module is a standard configuration, which can realize Modbus communications that monitor compressors' real time status. It facilitates management and responds to emergencies swiftly.





Standard configured USB data download function

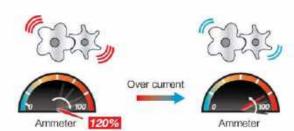
Detailed running data can be stored. Data before and after an accident can be read. Diagnosed data can be available without installing a measuring instrument.



Over current protection

#For VS model only.

Motor speed will slowdown if inverter detects an over current, in order to continue supply air and prevent emergency shutdown.





Running status

Many data such as air outlet pressure, pressure in oil separator, loading or unloading, running time, current, inverter consumed current, discharges temperature, temperature of oil separator downstream, ambient temperature, motor coil temperature, air net pressure, etc.

Maintenance

Up to 30 self-diagnose functions, display maintenance/caution/emergency stop signals timely, and corresponding troubleshooting measures. Facilitate daily inspection/maintenance/management, as well as prevent compressor from breaking suddenly to ensure safe production.

weekly timer

There are at most 7 start/stop combination settings in a week. Each combination setting can set different pressures.

Punning data/charte display

Current data display (every 5 seconds).

Operation data display (each hour of the latest 24 hours).

Display contents: discharge pressure, current, loading rate.

Display contents: discharge pressure, current, loading rat



Twin Airends for Energy-saving, High Efficiency And Reliability.

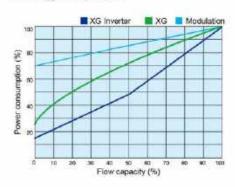
KOBELIONXG-

You have more choices offered by twin Airends for energy-saving, High efficiency and reliability.

Pursue the lowest power consumption

XG inverter adjust rotating speed along with the air consumption to greatly save the energy consumption. This is the most economical mode.

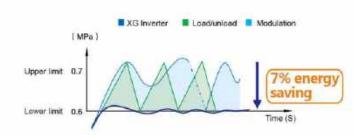
■ Energy saving curves



Energy saving by constant pressure control

Pressure fluctuation can be controlled within ± 0.01 MPa by adjusting rotating speed. Reduce energy consumption by unnecessary pressure hikes.

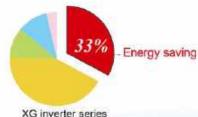
■ Save 7% energy by reducing pressure 0.1MPa



Energy saving effect of inverter

The lifetime cost for air compressor is categorized as electricity consumption, maintenance, machine purchase, labor, etc. 86% among them are electricity cost. We can reduce air compressor's lifetime cost by adopting XG inverter series.





Other advantages

Improve reliability

Inverter's start-up acceleration time can be regulated, in order to reduce moment impact on mechanical parts to improve reliability, and prolong service life.

By the way, inverter can eliminate current surge when startup, to protect electrical devices.

Reduce compressor noise

Motor speed slows down in most time, as well as fewer unloading blow-off, effectively decreases noise when compressor is running.

Kotelon XG

Common features for XG series

Twin airends in parallel

The highest level of flow capacity and efficiency in the world. Slow rotor speeds maximize service life for rotating parts and bearings. Lower noise and pulsation.



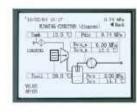
■ Coordination of two units

2 units can be coordinated running by simply wiring LCDs. Group controller isn't needed.



■ Real time display of flow diagram

Add flow diagram display to facilitate knowing running status.



■ Condensate monitoring

To prevent from condensation accumulating, discharge temperature is monitored and the monitor alerts if condensed.

■ Self-diagnosis to prevent emergent stop

LCD controller can show various conditions such as maintenance information, caution and emergency stop etc.

It can also display corresponding remedy methods in the LCD controller, to deal with emergent matters promptly.



Maintenance 10 items, recommend services for various

Caution 8 items, request check and repair at once.

Emergency 13 items, display corresponding remedy methods in the LCD controller for dealing promptly.

Standard configured Liquid crystal display electronic controller

IP65 protection, high resolution display with LCD background lighting. Chinese, Japanese, English three languages display.

It not only monitors running status of compressor, but also sets parameters such as discharge pressure, etc.

It can also record operation, display chart, set time weekly, manage daily and weekly information.



9.



Elaborate Design of Details





High efficient coolers

Oil cooler and after cooler are separated to not only improve efficiency, but also avoid damaging coolers due to different temperatures, so as to prolong their lifetimes.



■ TOUGH GREASE

Adopt Kobelco compressors's exclusive TOUGH grease to improve motor efficiency by 2%, as well as ensure more stable running because its long service interval and high temperature endurance. ※For VS/AG model only.

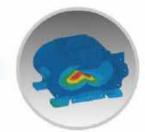


High efficient motors

Insulation class F, protection class IP55 total enclosure effectively prevents dust and water from entering motor.

In addition, it is standard configured with Phase Sequence Relay to prevent motor from rotating reversely, in order to protect units.

It also embeds a thermocouple to detect motor coil's temperature to protect motor



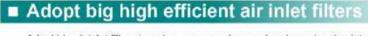
Low noise

Adopt advanced new FEM analysis, new designed structure, optimized muffle material, etc. to achieve super low running noise. Consider fully of sound pressure/sound tone/sound volume by adding insulation boards and air duct etc, to reduce noise that it is the lowest in its



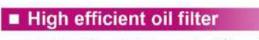
Draw out water cooler bundles

convenient cleaning and servicing if they are clogged.



Adopt big air inlet filters to reduce pressure loss and prolong cleaning interval, in order to cope with dusty environment.

Centrifugal + filtration: 2 steps separation. ISO Fine TD 99.98%.



Adopt big oil filter with high separating efficiency to ensure clean oil, as well as prolong oil and related parts' service lifetimes.

Oil separator

Reduce remaining oil in the outlet air to less than 2 ppm by 3 steps high efficient oil separation: centrifugal force, gravity, and filtration.



The mixture of compressed air and oil from airend rotates in the oil separator, oil is separated by centrifugal force.

2nd step: Gravity

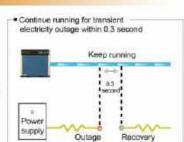
The oil which is separated by centrifugal force to the inner wall flows down to the bottom by gravity.

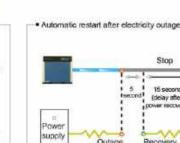
There are several magnets at the bottom of the separator to filter out metal scraps in the air stream, in order not to scratch the separating element.

Adopt big separating elements to suit its flow capacity. The cylindrical separating element is mainly composed of fiber, to filter out the remaining oil mist.

Perfect electrical protections

- Setting for transient electricity outage...within 0.3 sec. The compressor doesn't stop if electricity outage is within the setting time. The compressor will stop only when electricity outage exceeds the setting time. (For AG it is 0.2 sec.)
- Setting for automatic restart after electricity outage...1-20sec. (Example as right) Resuming electricity is set at 5 sec, delay setting is 15 sec. after electricity resumes.





12.





Internal bundles of oil cooler and after cooler can be drawn out for Built-in 7,500V surge protector and noise filter. (XG model is 12.000V)

11,

Specifications

Provide a full range of services

VS/XG Inverter Series

Model	Max	Flow	Main	Outlet connection	Noise		Dimensions (mm)		Weight
Model	pressure (MPa)	(m/min)	motor power (kW)	diameter	dB(A)	Length	Width	Height	(kg)
VS110A/W		21.4	110	R ₂ 3/DN80Flange	69	2,600	1,600	1,850	3,000(2,900)*
VS132A/W		25.4	132	R ₂ 3/DN80Flange	70	2,600	1,600	1,850	3,250(3,050)
VS160A/W		30.3	160	R ₂ 3/DN80Flange	71	2,600	1,600	1,850	3,600(3,250)
VS200A/W	0.75	37.3	200	R ₂ 4/DN100Flange	73(72)	3,060	2,120	2,150	4,900(5,000)
VS250A/W		43.4	250	R ₂ 4/DN100Flange	75(72)	3,060	2,120	2,150	5,300(5,400)
XG3900WV-200	- 2	39.0	200	R ₂ 4/DN100Flange	75	3,060	2,120	2,150	5,240
XG4730WV-250		47.3	250	R ₂ 4/DN100Flange	75	3,060	2,120	2,150	5,650
VS110A/W-H		20.2	110	R ₂ 3/DN80Flange	69	2,600	1,600	1,850	3,000(2,900)
VS132A/W-H		24.1	132	R ₂ 3/DN80Flange	70	2,600	1,600	1,850	3,250(3,050)
VS160A/W-H		28.8	160	R ₂ 3/DN80Flange	71	2,600	1,600	1,850	3,600(3,250)
VS200A/W-H	0.85	34.2	200	R ₂ 4/DN100Flange	73(72)	3,060	2,120	2,150	4,900(5,000)
VS250A/W-H		41.4	250	R ₂ 4/DN100Flange	75(72)	3,060	2,120	2,150	5,300(5,400)
XG3900WV-200H		36.6	200	R ₂ 4/DN100Flange	75	3,060	2,120	2,150	5,240
XG4730WV-250H		44.1	250	R ₂ 4/DN100Flange	75	3,060	2,120	2,150	5,650
VS110A/W-GH		18.6	110	R ₂ 3/DN80Flange	69	2,600	1,600	1,850	3,000 (2,900)
VS132A/W-GH		21.4	132	R ₂ 3/DN80Flange	70	2,600	1,600	1,850	3,250 (3,050)
VS160A/W-GH	1.0	23.8	160	R ₂ 3/DN80Flange	71	2,600	1,600	1,850	3,500 (3,150)
VS200A/W-GH	53350	31.1	200	R ₂ 4/DN100Flange	73(72)	3,060	2,120	2,150	4,900(5,000)
VS250A/W-GH		38.6	250	R-4/DN100Flange	75(72)	3,060	2,120	2,150	5,300(5,400)

AG/XG Series

Model	Max.	Flow	Main	Outlet connection	Noise		Dimensions (mm)	(i	Weight
iviogei	pressure (MPa)	(m ¹ /min)	motor power (kW)	diameter	dB(A)	Length	Width	Height	(kg)
AG110A/W		21.4	110	R ₂ 3/DN80Flange	69	2,600	1,600	1,850	2,950(2,850)
AG132AW		25.4	132	R ₂ 3/DN80Flange	70	2,600	1,600	1,850	3,150(2,950)
AG160AW		30.3	160	R ₂ 3/DN80Flange	71	2,600	1,600	1,850	3,500(3,150)
AG200AW		37.3	200	R ₂ 4/DN100Flange	73(72)	3,060	2,120	2,150	4,900(5,000)
AG250A/W	0.75	43.4	250	R ₂ 4/DN100Flange	75(72)	3,060	2,120	2,150	5,300(5,400)
XG3900W-200		39.0	200	R ₂ 4/DN100Flange	75	3,060	2,120	2,150	5,020
XG3900W-200T		39.0	200	R ₂ 4/DN100Flange	75	3,060	2,120	2,150	6,120
XG4730W-250		47.3	250	R ₂ 4/DN100Flange	75	3,060	2,120	2,150	5,430
XG4730W-250T		47.3	250	R ₂ 4/DN100Flange	75	3,060	2,120	2,150	6,320
AG110AW-H		20.2	110	R ₂ 3/DN80Flange	69	2,600	1,600	1,850	2,950(2,850)
AG132AW-H		24.1	132	R ₂ 3/DN80Flange	70	2,600	1,600	1,850	3,150(2,950)
AG160A/W-H		28.8	160	R ₂ 3/DN80Flange	71	2,600	1,600	1,850	3,500(3,150)
AG200AW-H		34.2	200	R ₂ 4/DN100Flange	73(72)	3,060	2,120	2,150	4,900(5,000)
AG250A/W-H	0.85	41.4	250	R ₂ 4/DN100Flange	75(72)	3,060	2,120	2,150	5,300(5,400)
XG3900W-200H		36.6	200	R ₂ 4/DN100Flange	75	3,060	2,120	2,150	5,020
XG3900W-200HT		36.6	200	R ₂ 4/DN100Flange	75	3,060	2,120	2,150	6,120
XG4730W-250H		44.1	250	R ₂ 4/DN100Flange	75	3,060	2,120	2,150	5,430
XG4730W~250HT		44.1	250	R ₂ 4/DN100Flange	75	3,060	2,120	2,150	6,320
AG110AW-GH		18.6	110	R ₂ 3/DN80Flange	69	2,600	1,600	1,850	2,950(2,850)
AG132AW-GH		21.4	132	R ₃ 3/DN80Flange	70	2,600	1,600	1,850	3,150(2,950)
AG160AW-GH		25.8	160	R ₂ 3/DN80Flange	71	2,600	1,600	1,850	3,500(3,150)
AG200AW-GH		31.1	200	R ₂ 4/DN100Flange	73(72)	3,060	2,120	2,150	4,900(5,000)
AG250AW-GH	1.0	38.6	250	R ₂ 4/DN100Flange	75(72)	3,060	2,120	2,150	5,300(5,400)
XG3900W-200GH		35.3	200	R ₂ 4/DN100Flange	75	3,060	2,120	2,150	5,020
XG3900W-200GHT		35.3	200	R ₂ 4/DN100Flange	75	3,060	2,120	2,150	6,120
XG4730W-250GH		40.7	250	R ₂ 4/DN100Flange	75	3,060	2,120	2,150	5,430
XG4730W-250GHT		40.7	250	R ₂ 4/DN100Flange	75	3,060	2,120	2,150	6,320

■ Notes:

Power supply: 380V/50Hz/3 phases 3 lines Discharge air volume is converted into the air inlet conditions. Air inlet conditions: 1 bar, 20 €, 0%.

@ Water-cooled models' data in () Please refer to "Specification Manual" for the further detail

KOBELCO NET WORK Kobelco has set up a sales/service network around the world to meet customers'

Our sales and service staff carefully listen to customers' opinions, and transfer them to technology departments to guide development of Kobelco's compressors. We will ceaselessly strive to provide customers with the most suitable and the highest quality compressors.

