

KOBELCO



Kobelion II

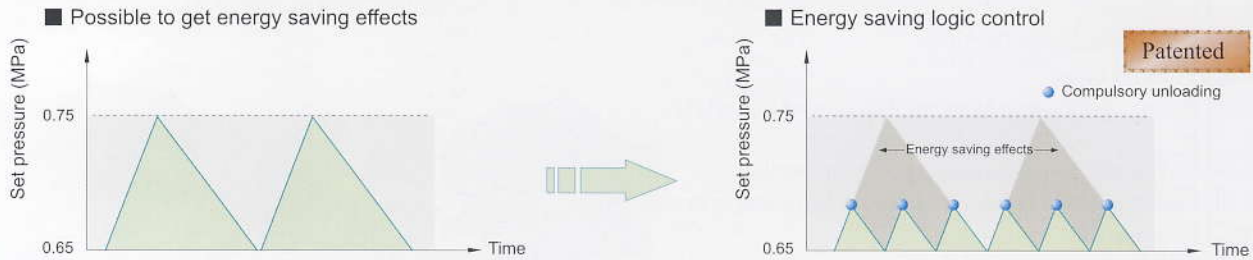
KOBELCO SCREW COMPRESSOR



Oil flooded screw compressors general catalog

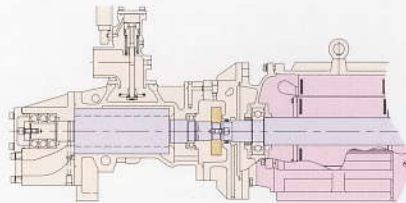
Energy saving logic function for optimal control

Possible to get maximum 6% of energy saving effect by Energy saving logic function, which could minimize excessive load operation for optimal control according to air usage status, installed in AG series.

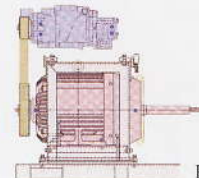


No belt structure in all models in the class

Adoption of step up gear as drive system to minimize energy loss caused by belt drive system. Replacement & Adjustment of the belt is not need.



Step up gear drive (AG/SG)

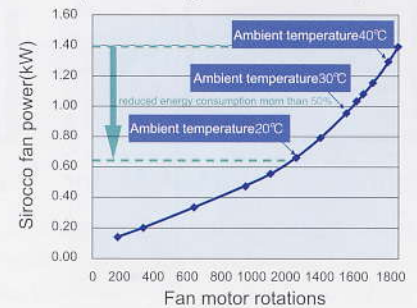


Belt drive (Conventional machine)

Adoption of inverter cooling fan

Achieved supreme reduction of energy loss by inverter control cooling fan. Wasteful energy consumption is minimized by the control of fan speed in proportion to the discharge air temperature. And, the durability is improved by stabilizing the temperature inside the compressor unit. In AG/SG series, the Inverter cooling fan is available only for 55 - 75kW machine.

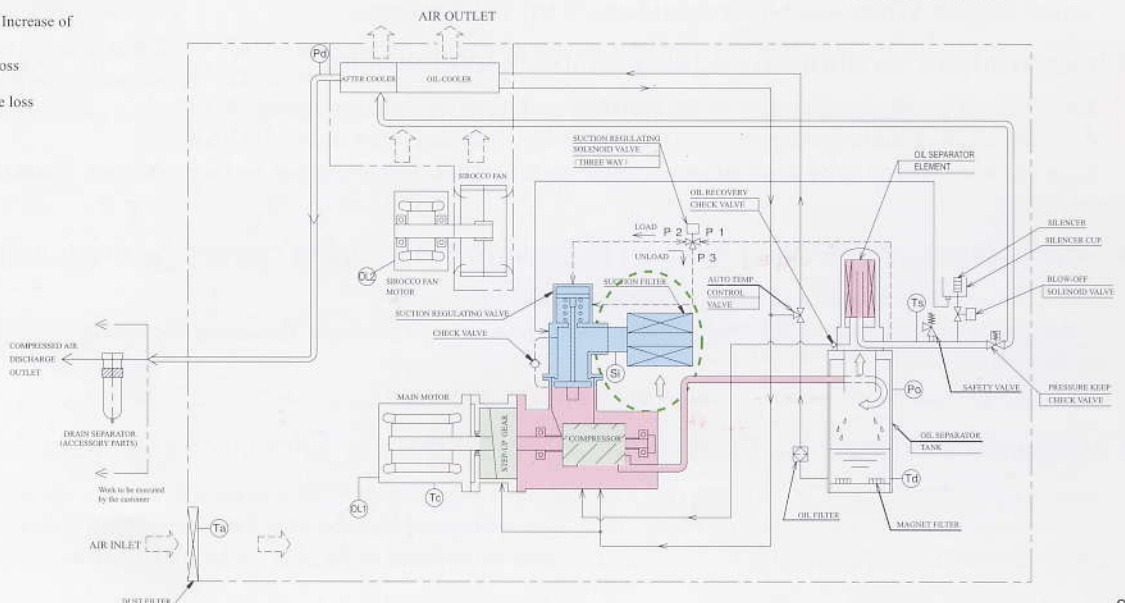
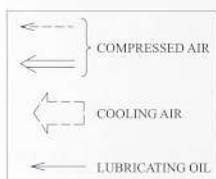
■ Cooling fan motor: inverter controlled (Load change characteristics)



Technical improvements of basic performances

Achieved the Maximum level of discharge volume and high efficiency in the class all over the world by improving all parts of components of screw unit in Kobelion II.

- Improvement on power efficiency, Increase of discharge volume
- Improvement on suction pressure loss
- Improvement on discharge pressure loss
- Suction temperature drop





Easy Maintenance

Features

- Permanent life time, New Kobelion's screw rotors installed
- Maximum Overhaul Interval of 6 years
- Long time maintenance interval for user's environmental condition
- long service life time & high performance, Kobelco genuine lubricating oil
- No motor bearing structure
- No capacity control valve structure
- Double lip sealing structure
- Large scale Dust Filter installed
- Water-Removal operation function installed
- 3 languages available, New liquid crystal electronic monitor installed
- PC connectivity modbus ready
- 2 languages displayed, New controller installed

	VS SERIES	AG SERIES	SG SERIES
Permanent life time, New Kobelion's screw rotors installed	○	○	○
Maximum Overhaul Interval of 6 years	○	○	○
Long time maintenance interval for user's environmental condition	○	○	○
long service life time & high performance, Kobelco genuine lubricating oil	○	○	○
No motor bearing structure	○	-	-
No capacity control valve structure	○	-	-
Double lip sealing structure	○	○	○
Large scale Dust Filter installed	○	○	○
Water-Removal operation function installed	○	○	○
3 languages available, New liquid crystal electronic monitor installed	○	○	-
PC connectivity modbus ready	○	○	-
2 languages displayed, New controller installed	-	-	○

● Possible to use Kobelion's screw rotors permanently

Screw Rotors developed by Steel manufacturer of Kobelco with Kobelco's own technology. Possible to use permanently Screw Rotors, which are made of special steel.

● Very easy daily maintenance

Adoption of double lip seal for shaft-sealing part. High Efficiency Interior Permanent Magnet Motors (IPM Motor) than the ones of other inverter compressors having normal induction motor.

No need to remove drain-water from oil reclaimer tank thanks to Water-Removal operation function.

Reduction of the time and the labor for daily maintenance thanks to the electronic monitor with self diagnose function

● Maximum Overhaul Interval of 6 years

Achieved the long service life by adopting combination of reliable angular bearings.

● High performance, Kobelco genuine lubricating oil

Long service life, High separation efficiency of oil/water, and Less carbon black. Better performance not only for the service life of the lubricating oil itself, but also for the discharge air & the internal system of the unit.

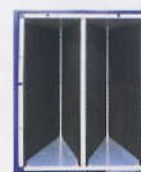


Oil separator element

Stereometric formula dust filter

Air filter

Oil filter



※ The contents & the condition of warranty and the contents of maintenance shall vary according to operating condition.

Large liquid crystal electronic monitor

Possible to select 3 languages (English, Japanese, and Chinese) in New liquid crystal electronic monitor.

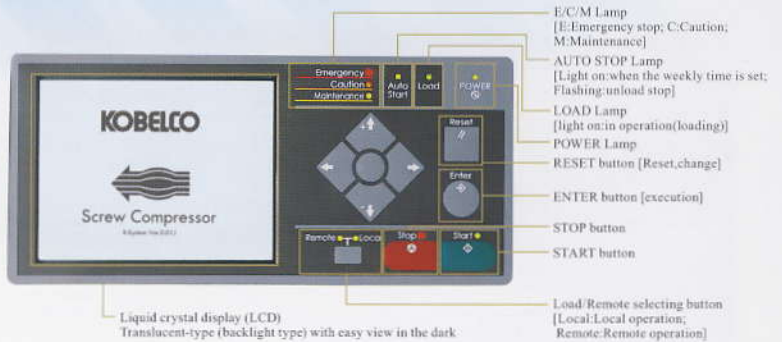
Very easy to handle the electronic monitor for daily maintenance such as pressure setting, operation mode setting, language display setting, and so on.

Even in a dark site, possible to read the information displayed on the electronic monitor of translucent type (Backlight type).

PC connectivity modbus ready

Output of machine conditions to DCS.

Input of operation signal.

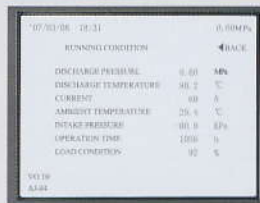


The main display contents

Setting of compressors



Running condition



Running record



Maintenance information



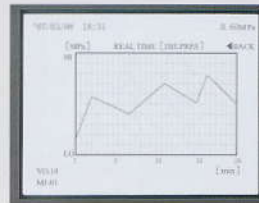
Caution information



Emergency stop information



Graphic display



Weekly timer

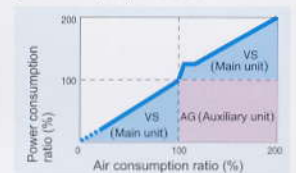


Energy saving operation function

In the case of the compressor units having the liquid crystal electronic monitor, possible to do Two-Unit alternate operation without a group control panel by simple wiring.



Example) VS-AG



New type controller

Display of necessary information for operation & maintenance with easy handling. Possible to select load/unload mode (EC mode) or load/unload+automatic start/stop mode (EL mode) in operation mode.

Display of operation status



Content of operation status

- Discharge temperature
- Operation mode
- Running hours
- Time for grease-up
- Error code
- Dryer preoperation

Emergency stop (Code)



Content of emergency stop

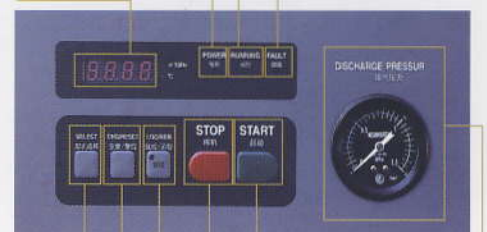
- Main motor overcurrent
- Discharge temperature rise
- Discharge temperature sensor failure
- Dryer fault
- Fan motor overcurrent or reverse phase
- Temperature rise after oil separator
- Sensor fault after oil separator

Power lamp(green)

Load lamp(green)

Four-digit LED indicator

Fault lamp(red)



Display select

Change/reset button

Local/remote select button

Discharge pressure gauge

Operation button(green)

Stop button(red)

Kobelion II - VS SERIES

Items		Unit	VS420A-22	VS730A-37	VS1020-55	VS1500A-75
Discharge air volume at	0.6MPa/6Bar	m ³ /min	0.66~4.18	1.19~7.30	1.69~10.20	2.55~15.00
	0.7MPa/7Bar	m ³ /min	0.66~3.91	1.19~6.80	1.69~9.50	2.55~13.90
	0.8MPa/8Bar	m ³ /min	0.66~3.60	1.19~6.33	1.69~8.83	2.55~13.00
Capacity control			Constant pressure, variable output with variable shaft power			
Motor	Nominal output	kW	22	37	55	75
	Type		Interral Permanent Magnet			
	No of poles		6P	4P		
	Insulation		F class			
	Protection		IP 44			
	Voltage	V	380/415, 50HZ			
	Starting system		Inverter			
Lubricant(oil)initial volume		L	14	25	45	51
Noise		dB(A)	58[60]	61[64]	64[66]	65[66]
Discharge pipe size		A	R1	R1.1/2	R2	R2
Dimensions	Width	mm	1350	1650	2050	2050
	Depth	mm	850	950	1200	1200
	Height	mm	1350	1500	1550	1550
Weight		kg	665	1060	1420	1870

Kobelion II - AG · SG SERIES

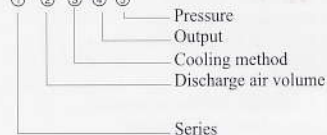
Items		Added	Unit	AG280A-15 SG280A-15	AG390A-22 SG390A-22	AG580A-30 SG580A-30	AG720A-37 SG720A-37	AG1070A-55 SG1070A-55	AG1490A-75 SG1490A-75
Discharge air volume at	0.75MPa/7.5Bar		m ³ /min	2.75	3.91	5.8	7.2	10.7	14.9
	0.85MPa/8.5Bar	H	m ³ /min	2.47	3.67	5.3	6.9	10.1	13.8
	1.0MPa/10Bar	GH	m ³ /min	2.05	3.1	4.5	5.8	8.7	12.2
Capacity control				load/unload					
Motor	Nominal output		kW	15	22	30	37	55	75
	Type			TEFC induction motor					
	No of poles			4P	2P				
	Insulation			F class					
	Protection			IP 55					
	Voltage	V		380/415, 50HZ					
	Starting system			Star Delta					
Lubricant(oil)initial volume			L	11	12	18	20	40	46
Noise			dB(A)	61[65]	62[66]	65[66]	64[66]	64[68]	68[69]
Discharge pipe size			A	R1	R1	R1.1/2	R1.1/2	R2	R2
Dimensions	Width		mm	1350	1350	1650	1650	2050	2050
	Depth		mm	850	850	950	950	1200	1200
	Height		mm	1350	1350	1500	1500	1550	1550
Weight			kg	620	685	915	1020	1660	1890

- (1) The discharge air volume is measured at suction temperature of 30°C and 75% RH.
- (2) The permissible operating ambient temperature is 2~40°C.
- (3) Noise levels are measured in an anechoic chamber at 1 meter height, 1.5 meter from the front. [] are for values for values for sides and rear.

Model

AG 720 A - 37 H

① ② ③ ④ ⑤



NO. H, GH
15, 22, 30, 37, 55, 75
A
420, 730, 1020, 1500 (VS)
280, 390, 580, 720, 1070, 1490 (AG-SG)
VS, AG, SG