

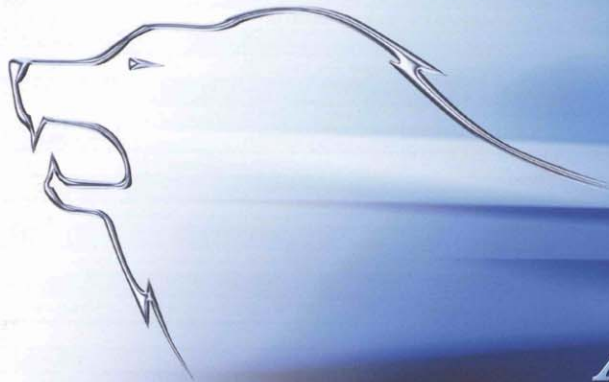
# Kobelion-AG·SG SERIES

KOBELCO SCREW COMPRESSOR

*Simple, yet highly sophisticated*

The AG and SG series boasts the same basic functions as the top-of-the-line VX and VS series.

Kobelion's standard screw compressor series changes the concept of simplicity.



AG SERIES

The AG series pursues efficiency and energy saving, supported by new type electronic monitor.



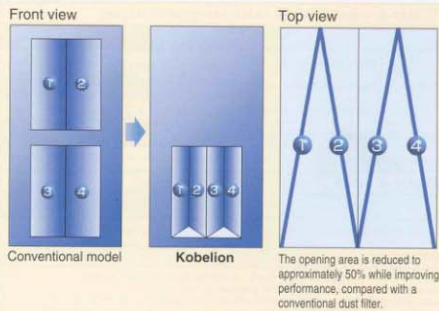
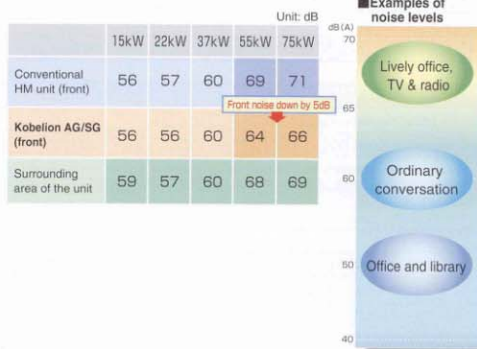
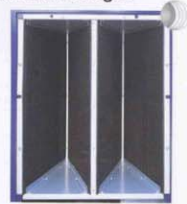
## Environment Suitability

### Noise reduction (Kobelion's unique noise reduction strategy)

The use of a new type rotor design, the two-box unit design, new dust filter structure, and optimization of the sound absorbing material suppress operating noise, not only on the front side of the unit, but in any directions. New unit design also contributes to gentler operating sound. Moreover, the AG/SG900~1230 (Air-cooled models) employs an inverter cooling fan in an attempt to further noise reduction.

### New design of the dust filter structure enlarges the intake surface area.

The reduction of the opening area and enlargement of the intake surface area enable the intake of more clean air and significantly reduce noise coming from the sides of the unit. (Air cooled models only of AG/SG370-900-1230)





**SG** SERIES

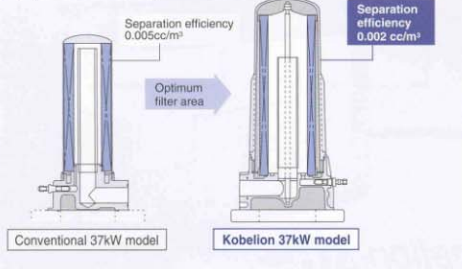
The SG series provides information needed for operation and combines energy-saving control functions and simple operation.

**The world's highest level of clean air is supplied.**

The use of a large oil separator element reduces oil mist in discharge air to 0.002cc/m<sup>3</sup> or less. The resulting reduction in consumption of lubricating oil cuts the annual running cost.



**Improved element's performance**



**New type refrigerant**

Kobellon built-in dryers are all furnished with new type refrigerant (R407C) with zero ozone-destruction-coefficient.

**Improved dust resistance**

Intake filters for cooling air and the air-intake port to the airend have been enlarged. Enhanced resistance to dusty environments has also been provided by introducing a two-stage centrifugal dust-removal process.



**Automatic oil reclaim system of mechanical seal**

Waste oil from the mechanical seal does not need to be discharged outside.

# Kobelion-AG·SG<sup>SERIES</sup>

KOBELCO SCREW COMPRESSOR

## Increased performance, efficiency, and reliability

### Increased durability against high ambient temperature

The two-box design inside the package allows for efficient cooling of the unit. Larger coolers and use of a double-sirocco fan enables operation without unexpected shutdown even at an ambient temperature as high as 45°C.

\* Long-time continuous operation at an ambient temperature of 40°C or higher may shorten the life of lubricating oil, electrical components, O-rings, etc. compared with normal operation.

#### Inverter cooling fan (AG/SG900~1230)

The use of an inverter-controlled cooling fan reduces power consumption of the fan under low loading operation.

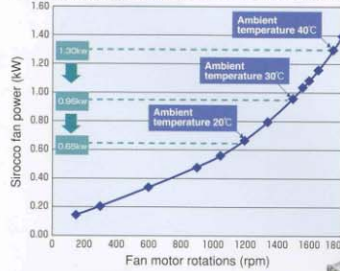
- A waste of electricity consumption is minimized by controlling fan rotations with discharge air temperature.
- Durability is improved by stabilizing temperature inside the compressor unit.
- The fan rotation speed is forcefully raised in a high temperature environment to increase cooling capacity.

#### Motor protection function mounted

A totally-enclosed motor is used in all AG and SG models. The motor is protected by the standard equipment of the motor coil temperature detection mechanism.

#### Surge killer against 12,000V lightning and Noise filter are built in.(AG)

■ Cooling fan motor: inverter controlled (load change characteristics) AG1230A



The cooling fan is inverter-controlled type



### Energy-saving design of built-in dryer's drain solenoid valve

The dryer's solenoid valve timer stops while the compressor is out of operation. Thus, air discharge caused by useless drain motion is terminated to prevent the line pressure drop.

### Momentary interruption and power outage protection with automatic restart are in place. (AG)

Momentary interruption protection...up to 0.2sec  
Power outage protection with automatic restart...up to 20sec.

## Low maintenance



#### Long-Life Poly-V Belt

Replacement interval is every 12,000 hours. Tension adjustment is not needed during that time.

#### Equipped with Water-Removal function (Patent pending)

Daily drainage of condensed moisture is not required.



**Kobelion-SG<sup>SERIES</sup>**  
KOBELCO SCREW COMPRESSOR

**Kobelion-AG<sup>SERIES</sup>**  
KOBELCO SCREW COMPRESSOR

### New type controller (SG)

The controller provides information needed for operation and maintenance to make operation even simpler. Furthermore, energy-saving functions are enhanced by three U-, EC-, and EL-mode operation controls. (P- and U-mode operation controls for SG230~SG610.)

#### Display

##### Running hours

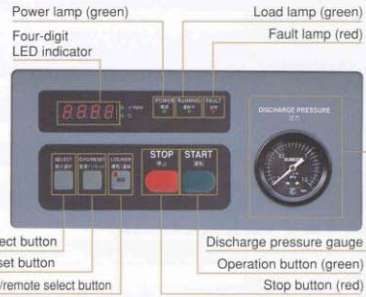


##### Fault code



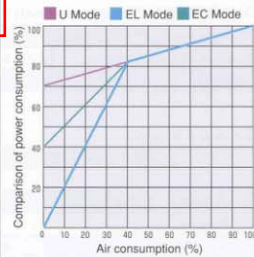
#### Other displayed descriptions

- Discharge temperature ● operation mode ● remaining time until grease up (only displayed for SG900/1230)
- Setting for continuous running when dryer has trouble (only displayed for built-in dryer compressors)
- Setting for pre-operation dryer (only displayed for built-in dryer compressors)



Kobelion-SG (SG900, SG1230)				
Kobelion-AG (All models)				
Mode	MC — (Microcomputer)	EL — (Electro)	EC — (Economy)	U — (Economy)
Features:	<p>Constant automatic calculation of load conditions. Produces greatest cost advantages in single-unit operation.</p> <p>First sensing function in the industry (built-in flow sensors and line pressure sensors) and advanced microprocessor control functions provide optimum energy-saving operation constantly predicting the air usage by sensing the system pressure change. (Patent pending)</p>	<p>Delivers superb energy-saving performance with multiple units</p> <p>In addition to EC mode operating features, this mode features automatic compressor stop when no load is detected. Even with multiple units, the microprocessor control function allows energy-saving operation without the need to provide a separate central control panel.</p>	<p>Energy-saving operation while maintaining minimum set pressure</p> <p>This mode includes the features of the U-mode with the addition of a purge function. When line pressure rises, compressed air is released to the atmosphere and oil passage to volumetric valve is rerouted, thus enhancing energy-conservation during intermittent use.</p>	<p>Optimum mode for stable air supply with minimal pressure fluctuation</p> <p>In this mode, the compressor motor runs constantly and a variable intake throttle valve is used to provide stepless air supply responding to changes in the amount of air used. As a result, a stable supply of air can be provided while eliminating discharge pressure fluctuations.</p>
Kobelion-SG (SG230~SG610)	<p>P-mode [intermittent operation] Automatic start/stop and purge functions save energy significantly.</p> <p>U-mode [continuous operation] Load and unload operation minimize changes in pressure, and steady air supply is prioritized.</p>			

### Responds sensitively to usage conditions, producing low-energy



### New type electronic monitor included as standard (AG)

\* For basic performance, refer to pages on 1,2.



### Two-unit alternate operation and link operation with VX and VS extends the range of applications.

#### Two-unit alternate operation of two Kobelion units

Connection (only six wires)

AG (main unit) / AG (auxiliary unit)

Connection by simple wiring.

#### Link operation with Kobelion VX and VS units

Connection (only three wires)

VX/VS (main unit) / VX/VS (main unit) / AG (auxiliary unit)

An energy-saving backup operation with the VX and VS units can be easily set up from a new type electronic monitor.

**Dedicated group control panel is not needed.**

## SPECIFICATIONS (Standard specifications)

### AG Series

#### ■ Air-Cooled Models

Item	Model	AG370AD / A-5/6 [H]	AG610AD / A-5/6 [H]	AG900AD / A-5/6 [H]	AG1230AD / A-5/6 [H]
Frequency	Hz	50/60			
Discharge air volume	m <sup>3</sup> /min	3.7 [3.2]	6.1 [5.5]	9.0 [7.5]	12.3 [10.0]
Intake conditions	Pressure	Atmospheric pressure			
	Temperature	2~40			
Discharge conditions	Pressure (gauge pressure) MPa	0.69 [0.83]			
	Temperature	45°C or less (under conditions of ambient temperature of 30°C)			
Discharge pipe diameter	A	25A (R1)	40A (R1·1/2)	10K-50A flange	
Shaft input power	Output	22.5	37.7	55.0	76.0
	Voltage	200/200·220 [380·400·415/400·440]			
Compressor motor	Specification	4-pole TEFC, insulation class F		2-pole TEFC, insulation class F	
	Starting system	Star Delta			
Fan motor output	kW	—	—	2.2	3.7
Lubricant (oil) initial volume	L	13	20	60	70
Noise	dB(A)	57 [56]	60 [60]	68 [65]	69 [67]

#### ■ Air-Cooled Models (with integrated dryer)

Item	Model	AG370AD-5/6 [H]	AG610AD-5/6 [H]	AG900AD-5/6 [H]	AG1230AD-5/6 [H]
Dryer	Discharge air dew point	12°C at discharge pressure			
	Power consumption	1.48/1.82	1.79/2.15	2.49/3.02	3.58/4.30
	Coolant & control method	R407C, capillary tube			
Nominal dimensions (W×D×H)	mm	1,290×880×1,350	1,650×900×1,500	2,580×1,200×1,500	
Nominal weight	kg	790	1,100	1,660	1,550+300

#### ■ Air-Cooled Models (Compressor only)

Item	Model	AG370A-5/6 [H]	AG610A-5/6 [H]	AG900A-5/6 [H]	AG1230A-5/6 [H]
Nominal dimensions (W×D×H)	mm	1,290×880×1,350	1,650×900×1,500	2,080×1,200×1,500	
Nominal weight	kg	725	1,000	1,520	1,550

#### ■ Water-Cooled Models

Item	Model	AG370WD / W-5/6 [H]	AG610WD / W-5/6 [H]	AG900WD / W-5/6 [H]	AG1230WD / W-5/6 [H]
Frequency	Hz	50/60			
Discharge air volume	m <sup>3</sup> /min	3.7 [3.2]	6.1 [5.5]	9.0 [7.5]	12.3 [10.0]
Intake conditions	Pressure	Atmospheric pressure			
	Temperature	2~40			
Discharge conditions	Pressure (gauge pressure) MPa	0.69 [0.83]			
	Temperature	45°C or less (under conditions of ambient temperature of 30°C)			
Discharge pipe diameter	A	25A (R1)	40A (R1·1/2)	10K-50A flange	
Shaft input power	Output	22.5	37.7	55.0	76.0
	Voltage	200/200·220 [380·400·415/400·440]			
Compressor motor	Specification	4-pole TEFC, insulation class F		2-pole TEFC, insulation class F	
	Starting system	Star Delta			
Coolant (water)	Coolant volume L/min	35	60	80	100
	Temperature	30			
Diameter of cooling water outlet/inlet connection pipe	A	R3/4	25A (R1)	Rc2 / R2	
Lubricant (oil) initial volume	L	17	22	60	70
Noise	dB (A)	55 [55]	59 [59]	65 [65]	67 [67]

#### ■ Water-Cooled Models (with integrated dryer)

Item	Model	AG370WD-5/6 [H]	AG610WD-5/6 [H]	AG900WD-5/6 [H]	AG1230WD-5/6 [H]
Dryer	Discharge air dew point	12°C at discharge pressure			
	Power consumption	1.48/1.82	1.79/2.15	2.49/3.02	3.58/4.30
	Coolant & control method	R407C, capillary tube			
Nominal dimensions (W×D×H)	mm	1,290×880×1,350	1,650×900×1,500	2,580×1,200×1,500	
Nominal weight	kg	790	1,100	1,710	1,590+300

#### ■ Water-Cooled Models (Compressor only)

Item	Model	AG370W-5/6 [H]	AG610W-5/6 [H]	AG900W-5/6 [H]	AG1230W-5/6 [H]
Nominal dimensions (W×D×H)	mm	1,290×880×1,350	1,650×900×1,500	2,080×1,200×1,500	
Nominal weight	kg	725	1,000	1,570	1,590

\*Values within brackets [ ] are for H specification models (discharge pressure 0.83 MPa)

\*Discharge air volumes have been converted to compressor intake conditions.

\*Discharge air dew points are values under the ambient temperature of 35°C and at 0.69 MPa.

\*Please be sure to use "KOBELCO genuine oil" or the lubricating oil recommended by KOBELCO.

\*Noise values are measured at a height of 1.0 m and at a distance of 1.5 m in all directions from the compressor package in anechoic chamber and under full-loading operation.

Values within brackets ( ) are measured at a distance of 1.5 m from the front of the machine of and at a height of 1.0 m of it under full-loading operation.

\*Air produced by these compressors should not be used in respiratory equipment furnishing air for direct inhalation.

\*Since compressors depend on ambient air for cooling, the installation location must be properly ventilated to prevent ambient temperatures from rising above 40°C.

\*Specifications and descriptions are subject to change without notice.

\*For other voltage specifications, please consult with nearest dealers.

\*Service factor(SF) of Main Motor is 1.1.

\*Be aware that a difference in water head level at cooling water inlet and outlet of 15 m or more may cause cooling water to flow too rapidly and cause the tube nest of the heat exchanger to erode. When the difference in water head level exceeds 15 m, adjust the water feed valve to reduce the difference to 15 m or less (10 m or less for AG610WD/W-5/6 [H]).

## SG Series

### ■ Air-Cooled Models

Item	Model	SG230AD / A-5/6 [H]	SG370AD / A-5/6 [H]	SG610AD / A-5/6 [H]	SG900AD / A-5/6 [H]	SG1230AD / A-5/6 [H]
Frequency	Hz	50/60				
Discharge air volume	m <sup>3</sup> /min	2.3 [2.05]	3.7 [3.2]	6.1 [5.5]	9.0 [7.5]	12.3 [10.0]
Intake conditions	Pressure	Atmospheric pressure				
	Temperature °C	2~40				
Discharge conditions	Pressure (gauge pressure) MPa	0.69 [0.83]				
	Temperature °C	45°C or less (under conditions of ambient temperature of 30°C)				
Discharge pipe diameter	A	25A (R1)		40A (R1·1/2)	10K-50A flange	
Shaft input power	Output	15.7	22.5	37.7	55.0	76.0
	Voltage V	200/200·220 [380·400·415/400·440]				
Compressor motor	Specification	2-pole TEFC, insulation class F		4-pole TEFC, insulation class F	2-pole TEFC, insulation class F	
	Starting system	Direct starter [Star Delta]		Star Delta		
Fan motor output	kW	—	—	—	2.2	3.7
Lubricant (oil) initial volume	L	10	13	20	60	70
Noise	dB(A)	59 [56]	57 [56]	60 [60]	68 [65]	69 [67]

### ■ Air-Cooled Models (with integrated dryer)

Item	Model	SG230AD-5/6 [H]	SG370AD-5/6 [H]	SG610AD-5/6 [H]	SG900AD-5/6 [H]	SG1230AD-5/6 [H]
Dryer	Discharge air dew point °C	12°C at discharge pressure				
	Power consumption kW	1.17/1.33	1.48/1.82	1.79/2.15	2.49/3.02	3.58/4.30
	Coolant & control method	R407C, capillary tube				
Nominal dimensions (W×D×H) mm		1,030×750×1,250	1,290×880×1,350	1,650×900×1,500	2,580×1,200×1,500	—
Nominal weight	kg	485	790	1,100	1,660	1,550+300

### ■ Air-Cooled Models (Compressor only)

Item	Model	SG230A-5/6 [H]	SG370A-5/6 [H]	SG610A-5/6 [H]	SG900A-5/6 [H]	SG1230A-5/6 [H]
Nominal dimensions (W×D×H) mm		1,030×750×1,250	1,290×880×1,350	1,650×900×1,500	2,080×1,200×1,500	—
Nominal weight	kg	435	725	1,000	1,520	1,550

### ■ Water-Cooled Models

Item	Model	SG370WD / W-5/6 [H]	SG610WD / W-5/6 [H]	SG900WD / W-5/6 [H]	SG1230WD / W-5/6 [H]	
Frequency	Hz	50/60				
Discharge air volume	m <sup>3</sup> /min	3.7 [3.2]	6.1 [5.5]	9.0 [7.5]	12.3 [10.0]	
Intake conditions	Pressure	Atmospheric pressure				
	Temperature °C	2~40				
Discharge conditions	Pressure (gauge pressure) MPa	0.69 [0.83]				
	Temperature °C	45°C or less (under conditions of ambient temperature of 30°C)				
Discharge pipe diameter	A	25A (R1)	40A (R1·1/2)	10K-50A flange		
Shaft input power	Output	22.5	37.7	55.0	76.0	
	Voltage V	200/200·220 [380·400·415/400·440]				
Compressor motor	Specification	4-pole TEFC, insulation class F			2-pole TEFC, insulation class F	
	Starting system	Star Delta				
Coolant (water)	Coolant volume L/min	35	60	80	100	
	Temperature °C	30				
Diameter of cooling water outlet/inlet connection pipe	A	R3/4	25A (R1)	Rc2 / R2		
Lubricant (oil) initial volume	L	17	22	60	70	
Noise	dB (A)	55 [55]	59 [59]	65 [65]	67 [67]	

### ■ Water-Cooled Models (with integrated dryer)

Item	Model	SG370WD-5/6 [H]	SG610WD-5/6 [H]	SG900WD-5/6 [H]	SG1230WD-5/6 [H]	
Dryer	Discharge air dew point °C	12°C at discharge pressure				
	Power consumption kW	1.48/1.82	1.79/2.15	2.49/3.02	3.58/4.30	
	Coolant & control method	R407C, capillary tube				
Nominal dimensions (W×D×H) mm		1,290×880×1,350	1,650×900×1,500	2,580×1,200×1,500	—	
Nominal weight	kg	790	1,100	1,710	1,590+300	

### ■ Water-Cooled Models (Compressor only)

Item	Model	SG370W-5/6 [H]	SG610W-5/6 [H]	SG900W-5/6 [H]	SG1230W-5/6 [H]
Nominal dimensions (W×D×H) mm		1,290×880×1,350	1,650×900×1,500	2,080×1,200×1,500	—
Nominal weight	kg	725	1,000	1,570	1,590

\*Values within brackets [ ] are for H specification models (discharge pressure 0.83 MPa)  
 \*Discharge air volumes have been converted to compressor intake conditions.  
 \*Discharge air dew points are values under ambient temperature of 35°C and 0.69 MPa.  
 \*Please be sure to use "KOBELCO genuine oil" or the lubricating oil recommended by KOBELCO.  
 \*Noise values are measured at a height of 1.0 m and at a distance of 1.5 m in all directions from the compressor package in anechoic chamber and under full-loading operation.  
 Values within brackets ( ) are measured at a distance of 1.5 m from the front of the machine of and at a height of 1.0 m of it under full-loading operation.  
 \*Air produced by these compressors should not be used in respiratory equipment furnishing air for direct inhalation.

\*Since compressors depend on ambient air for cooling, the installation location must be properly ventilated to prevent ambient temperatures from rising above 40°C.  
 \*Specifications and descriptions are subject to change without notice.  
 \*For other voltage specifications, please consult with nearest dealers.  
 \*Service factor(SF) of Main Motor is 1.1.  
 \*Be aware that a difference in water head level at cooling water inlet and outlet of 15 m or more may cause cooling water to flow too rapidly and cause the tube nest of the heat exchanger to erode. When the difference in water head level exceeds 15 m, adjust the water feed valve to reduce the difference to 15 m or less (10 m or less for SG610WD-W-5/6 [H]).