

The most important needs may not always be seen, may not always be heard. That is precisely what makes them so important. We train the eyes and ears of our heart so as to provide optimum response to all our customers needs.

"Heart to Heart" is

our way of saying that we view things from our customers perspective. Through this market-oriented approach to doing business, we want to contribute to society.

Safety Precautions

- 1. Before operating, be sure to read the entire instruction manual and follow all safety directions.
- 2. Never attempt to perform unauthorized equipment modifications. Doing so could cause accidents resulting in injury.
- 3. The compressors are designed to compress air. Never use them with other gases. Doing so could result in accidents or breakdowns.
- 4. Never directly inhale the compressed air or use it for respiration systems of any kind. Doing so could cause pulmonary injury.



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Address inquiries to:





>>> IE3 Motor Models **KOBELCO**



OIL-FREE SCREW COMPRESSORS GENERAL CATALOG



Emeraude is the French word for "emerald"; we have chosen this word for our new product line as it conveys the image of luxury, adamantine durability, and brilliant clarity. The word thus associates the appeal of the emerald with that of finely crafted products produced with pioneering technology.

You can't think of "Eco-Compressor", without KOBELCO Emeraude series.

KOBELCO Oil-free Compressors offer extremely high efficiency with superior Specific Power Consumption ("SPC"), the energy saving index for Compressors. This is just as "Eco-car" becomes popular for its low CO2 emmission and low fuel consumption.

Superior "SPC" can save more energy, and all the user can take large benefit from that as minimizing compressor life-cycle cost.

KOBELCO, a pioneer of Compressor technologies in Japan, always explore the front-line of Oil-Free Screw Compressor with its proven history and advanced technologies.

KOBELCO Emeraude series promise world top purity of clean air, efficiency and Eco-friendliness.

Emeraude Series











>>> Installation of IE3 motors starts in 2015

What is TOP-RUNNER Program?

TOP-RUNNER Program is a regulatory scheme to improve energy efficiency by setting the standards for products in Japan. It was incorporated as an element of the Energy Conservation Law in Japan. From FY2015, the program starts covering industrial motors and requires them to meet the IE3 standard.

Background of TOP-RUNNER Program

It is estimated that 75% of total electric power consumption in industrial sector is due to the use of industrial motors. Moreover, 97% of all industrial motors used in Japan are equivalent to IE1 level. Therefore, replacing conventional motors to IE3 motors gives a substantial effect on energy-saving.

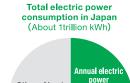
45%

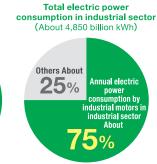
⟨ Level of industrial motors' energy efficiency ⟩





IE2 ··· High Efficiency





[Reference: researched by Agency for Natural Resources and Energy]

Single-speed three-phase squirrel cage induction motor

Motor output	Pole number	Voltage	Frequency (Hz)	Type of use
0.75~375kW	2-poles, 4-poles, 6-poles	Below 1000V	50Hz, 60Hz, 50/60Hz	S1 (Constant rating) or S3(Intermittent-service rating) with over 80% of load time.

Motors with Special insulation, motors with Delta star guidance system, Marine motors, Submerged motors, [Excluded models] High-slip motors, Gate motors, Canned motors. Motors that are used under cryogenic environment, and intercession ventilation motors that is designed specially for inverter start.

**Caution: Even though the value of motor output is same, there is a possibility that the breaker size is different depending on each motors' feature such as rotation speed, guidance current, and starting torque.

Motors installed in Standard Compressors

	Main motors	Cooling fan motors	Oil pump motors
Iverter-drivenn motors, consolidated driving machine	×	•	•
Other constant speed motors	•	•	•

Benefits gained by installing IE3 motors

- ①IE3 motors have higher efficiency comparing with standard efficiency motors (IE1 level motors).
- 2 By the reduction of energy consumption, it will reduce CO2 emissions and contribute to the global enviromental protection.

All models of KOBELCO compressor meet IE3 standard.

ZEMERAUDE-ALE

Best-in-class performance with full-range line-up.



ALE75WII



55~400 kW

8.9~69.1 m³/min

Energy Saving

Superior unit design for energy saving

Silencer

High performance silencer reducing high-frequency noise, and lower the total noise level.

1st / 2nd stage Air End

World-top rotor profile offers not only high performance but also enables high pressure operation (1.03MPa) with enough safety margin.

Drain discharge Solenoid valve

Reliable force discharge drainer with timer and solenoid valve make sure drain discharge and minimize air loss.

Lubricant filters

Longer bearing life-time and improved reliablity, thanks to high performance lubericant filter.

Capacity control valve

Longer life of capacity control valve can extend its maintenance interval upto 6 vears.



Built-in Control Panel Proven protection for

electric failure equiping · circuit breaker (power

Exhaust cleaner

Super fine exhaust cleaner

reduce internal pressure of

gear box, and free from oil

It guarantee high purity oilfree air without optional oil

Main motor

increase reliability of total

Durable TEFC motor

breather

package.

supply for auxiliaries) circuit protector (control

Inter cooler / after cooler

Efficient Water-cooled gas coolers feature the industry's first plate-fin water-in-tube structure. This enables 1/5 pressure loss and longer maintenance cycle (1 year \rightarrow 3 years) compared with conventional

■ Efficient energy saving with "Energy-Saving Logic" which minimize discharge pressure fluctuation (ALE/FE)



Patented

Energy-Saving Logic with optimum capacity controls and superb control efficiency is a standard feature.

Minimization of capacity controls

Pressure control range

Conventional models: 0.1MPa

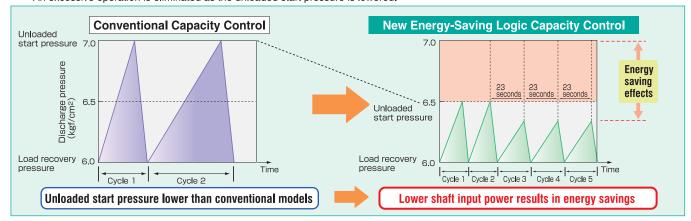


Emeraude: 0.05MPa

Optimum control method selected

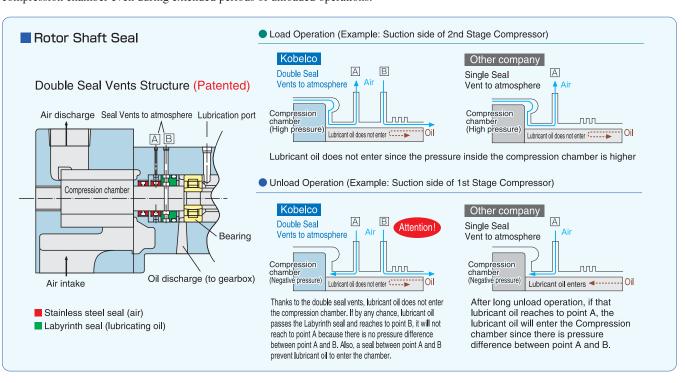
●Loaded-unloaded switching operation

Unloaded operation is forcibly performed at every capacity control cycle (23 seconds) by the "Energy Saving Logic". An excessive operation is eliminated as the unloaded start pressure is lowered.



Ultimate clean air (ALE·FE)

The oil-free design introduces absolutely no oil to the rotor chamber in the process. Stainless steel shaft-seal rings are used to prevent the generation of carbon dust, and Kobelco's patented twin atmospheric shaft vents prevent lubricating oil from contaminating the compression chamber even during extended periods of unloaded operations.



ISO8573-1 **Class Zero Certified**

eeri-liO %001

The Zero Class certification (ISO8573-1 [-:-:0]), which represents the highest level of purity for quality classifications of compressed air, was received for the (Emeraude ALE) series of products, in acknowledgement for the oil-free technology of Kobelco.



TÜV is an abbreviation for Technische Überwachungs Verein. This international third party test and certification organization, based in Germany, specializes in technical safety and quality evaluations. The organization is recognized globally for their independence, neutrality, specialized knowledge and strict standards.

●Certificate issued by TÜV

High Performance ••

High performance & sophisticated functions

High performance screw unit (ALE-FE)

Design of the two-stage compressor unit and a reduction in package internal pressure losses resulted in an energy saving by 8% over existing models.

Furthermore, a plate-fin, the first in the industry, was incorporated for the water-cooled, inter cooler and after cooler, reducing the air pressure loss to 1/5.



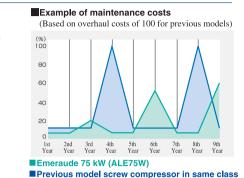
Improved maintainability

Extended overhaul schedules

- ■Recommended overhaul schedule for the 2nd stage was extended to every 6 years, whereas the 1st stage was extended to every 9 years 〈55-290kW〉 (for an annual operation of 8,000 hours).
- Annual maintenance involves changing the oil, oil filter element and exhaust cleaner only.

Frequency of capacity control operations

The life is extended to six times that of conventional models, with reliability and maintainability also improved.



Capability with 1.03 MPa specifications

All models are equipped with a compressor main unit that can operate with a pressure of up to 1.00-1.03 MPa.

Improvement on durability for ambient

Reviewing the total cooling system including design of coolers and cooling fan with savety margin, the compressor can operate even under ambient temperature of 45°C.

※Long-time continuous operation at ambient temperatures of 40℃ or higher may shorten lifetime of components such as electric equipment and O-rings comparing with normal operation.

Safety •••

Safety & Peace of Mind

Totally enclosed fan-cooled motors are adopted to increase motor durability. (ALE-FE)

Totally enclosed fan-cooled (TEFC) motor with enough capacity is selected to reduce the motor coil temperature and motor bearing temperature, leading significant improvement of reliability. Motor coil thermal detector is equipped for safety aspect.



■ Protection features (ALE·FE)

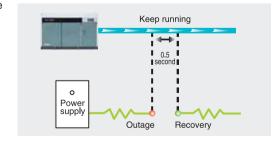
Various improved protection for Electric parts.

Continuous operation during power outage.

Compressor does not stop running if the power recovers within the time you set.

※You can set the time to 0.5 seconds at longest.

■ Continuous operation during power outage



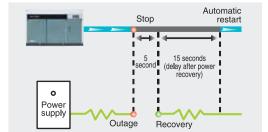
Automatic restart from temporary power outage.

Compressor restarts automatically at the time you set. You can set the time from 15 to 99 seconds after the power recovery.

 $\ensuremath{\mathrm{\%}}$ You can use this function as long as the power recovers within 20 seconds.

Automatic restart from temporary power outage

*Example: Restart time set at 15 seconds after the power recovery



Ecology •••

Environmental considerations

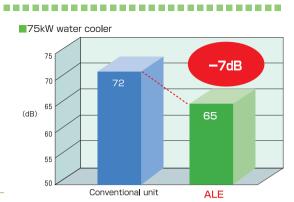
Noise Reduction

Pulse noise is reduced by the perforated plate silencer, whereas the blade noise from the exhaust fan is reduced by optimum louver, thereby realizing top of its class low noise levels.

Exhaust cleaner that requires no oil mist breather piping (standard equipment with FE, ALE and AVE)

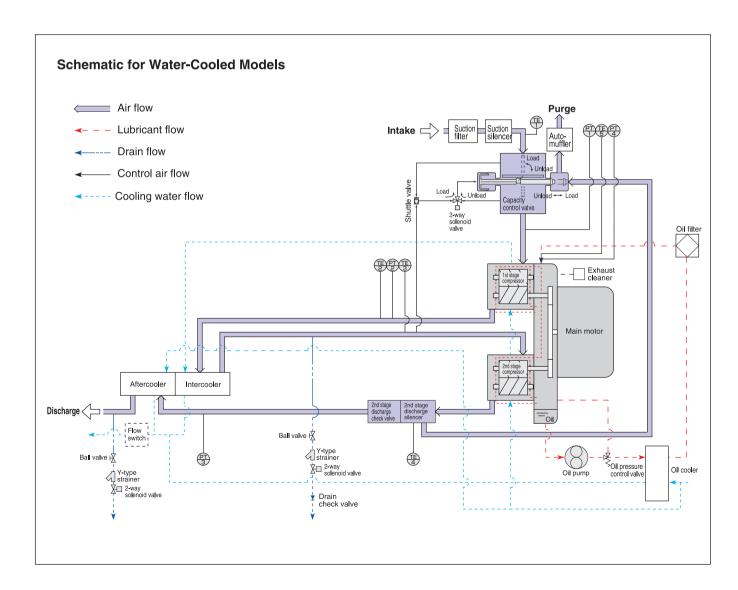
Conventional countermeasure for oil mist is discharging the oil mist outside of package by using oil mist breather piping, which may cause the environmental problem. To avoid pollution, it was necessary to install filter on the end of piping or corona separation-type mist collector. Newly developed Exhaust Cleaner utilizes super fine filter which can be installed inside the compressor package, and no more breather piping is

This Exhaust Cleaner has its self oil separation and recovery function. This can prevent differential pressure increase and can realize long term maintenance interval.





- ■Oil separation performance: 99% or more (to a level where oil smoke cannot be verified visually).
- ■Equipped with separated oil self recovery function



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The standard for the two-stage dry air compressor that generates highly

pressurized air efficiently.



Energy Saving

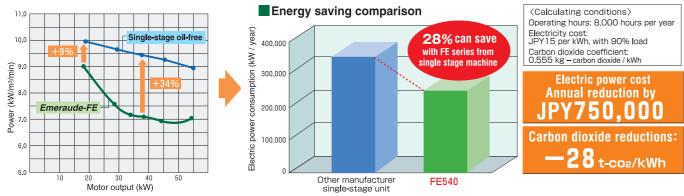
Output

 $22 \sim 55 \, kW$

2,05~7,7 m³/min

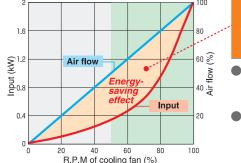
Extremely high energy saving feature realized by the two-stage compression design.

Two-stage compressor is equiped for energy saving, reducing life-cycle cost and improving reliability. It can achieve 9~34% higher efficiency compared with single-stage oil-free screw compressor.



Inverter Cooling Fan (FE200~790)

In the Emeraude-FE series, the cooling fan is also controlled by the inverter for further save energy.



This is where energy is saved!

Up to 80% of energy saved with cooling unit (fan operated)

- The Rpm of the inverter fan is proportional to ambient temperature and load ratio. So that power saving can be achieved with low ambient temperature and low load
- ■Temperature inside the compressor unit can be so stable that the durability is

Low noise

The noise of exhaust hot air have been reduced by using inverter sirocco fan. At unload or low ambient temperature operation, the inverter sirocco fan operate at lower Rpm and reduced the noise level. The improved design suction duct also help to achieve lower suction noise.

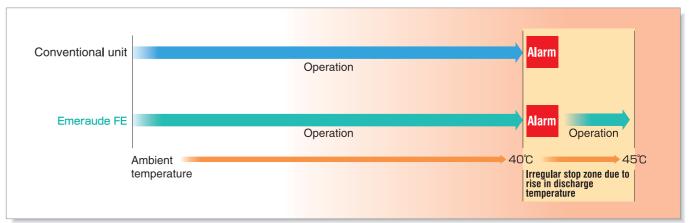


High Performance

High performance & sophisticated functions

Improvement on durability for ambient

Reviewing the total cooling system including design of coolers and cooling fan with safety margin, the compressor can operate even under ambient temperature of 45°C.



**Long-time continuous operation at ambient temperatures of 40°C or higher may shorten lifetime of components such as electric equipment and O-rings comparing with normal operation.

Improved maintainability

Extended overhaul schedules

Recommended overhaul schedule of Air End (for both 1st and 2nd stage) was extended to 6 years. As for water cooled machine, maintainability of coolers also improved with easy cleaning construction.

High-performance intake filter

A two-stage separation system (centrifugal separation and filtering separation with high dust collection efficiency) is adopted as a counter measure against dusty environments.



Ecology ***

Environmental considerations

Using new type of refrigerant

R407C of no ozone destruction coefficient is used for all dryers.

Using new intake valves

To prevent oil contamination, air pressure is used for capacity control, instead of oil pressure.

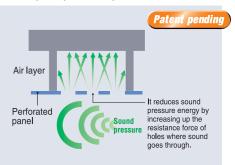
Noise insulation material that is easily sorted for disposal

Materials are easily sorted for disposal, when disposing of the compressor unit (treated as industrial waste).

Reduction of pulse noise

A perforated panel silencer is adopted to reduce high-frequency noise (more then 1KHz,) and unconfortable noise.

Principle of perforated panel silencer



Kobelco Inverters are Far Above Others Both in Efficiency and Reliability INVERTER



Ultimate high efficiency and energy saving thanks to Inverter equipped Two-stage Oil-free screw







Energy Saving

VF.VE.ALE.V

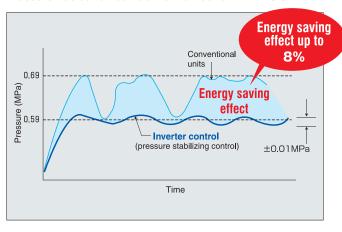
Eliminate energy loss with optimum capacity control and pressure stabilizing control

No matter what the load condition, Kobelco inverter control achieves ideal energy savings without unnecessary motor rotation. Instantly responding to any changes in demand pressure, pressure fluctuation could be minimized within ±0.01 MPa, thus supplying the required air volume with precisely controlled operating energy.

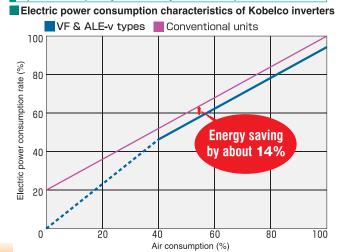
Inverter control Optimum capacity contro Minimize energy loss Pressure stabilizing contro

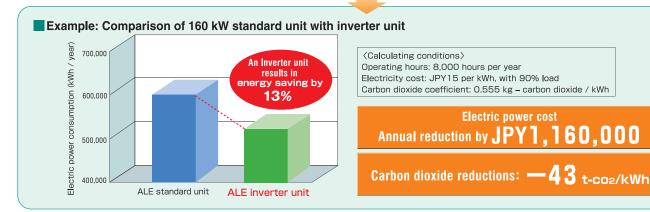
Energy savings with pressure stabilizing control

Pressure fluctuation can be maintained to within ±0.01MPa.



Optimum capacity control by Variable Speed Control



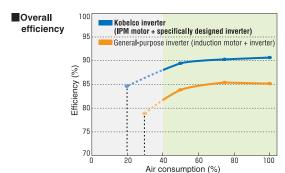


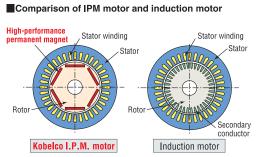
High Performance •••

High performance & sophisticated functions

Equipped with the world's first IPM motor

IPM motor achieves higher efficiency than either general-purpose induction motors or high-efficiency induction motors. Specifically designed inverter couple with IPM motor can make a power-saving effect that no-conventional inverter can make.

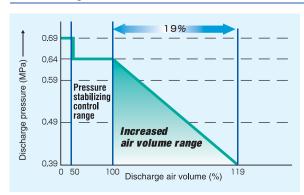






comparatively low temperatures. thereby increasing the life of bearing grease and reducing motor maintenance works.

Wide range Control (VF model only)



Focus of energy savings from "suppression" to "effective use'

Kobelco's wide range control provides maximum air volume at your required pressure.Remarkable expansion has been achieved in range control and lowpressure operation range. Realizing the biggest air volume under low-pressure operation has met energy-saving needs and provided abundant merit for users.

■ Change in air volume by Wide Range Control of VF

(Max. increase ratio in air volume expressed based on 100% discharge air volume at 0.64 MPa)

Discharge pressure	0.64MPa	0.59MPa	0.49MPa	0.39MPa
Air volume	5.4	5.6	6.0	6.4
Increase ratio in air volume.	100%	103%	111%	119%

Line pressure control (optional)

The compressor can be controlled by detecting the pressure from the air line.

- Maintain a necessary pressure in the line
- The best energy saving operation is realized with an optimized discharging pressure
- Keep track of the pressure losses (losses in electric power consumption)

Safety •••

Safety & Peace of Mind

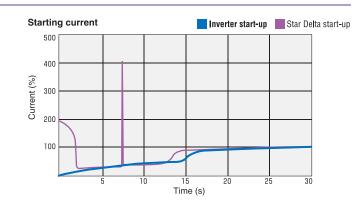
Built-in Higher harmonic reactor as standard

It reduces harmonics generated by the inverter.

* Complies with harmonic suppression guidelines by the Japan Electrical Manufacturer's Association (JEMA)

Soft start by KOBELCO inverter

It reduces peak current when starting-up, thus ensuring smooth start-up and reducing power supply equipment cost.



Stable operations under various environments



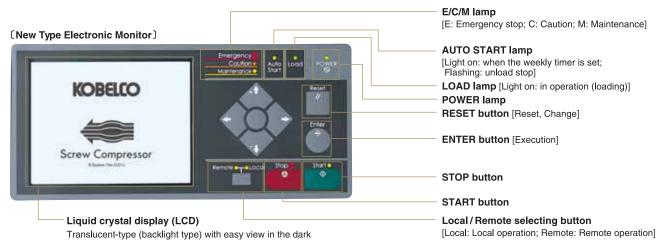
Controller, Finest standard of user-friendly interface (for FE, ALE, AVE)

This monitor can be used not only to keep track of the operating conditions but also to set the discharging pressure, etc.

The operating records, graphic displays, weekly timers, daily reports and weekly report management, can be conducted.

Operation data can be output through "Modubs" (optional).

■The front control panel of the controller is complete with a waterproof specification equivalent to IP65.



Principal features and displays



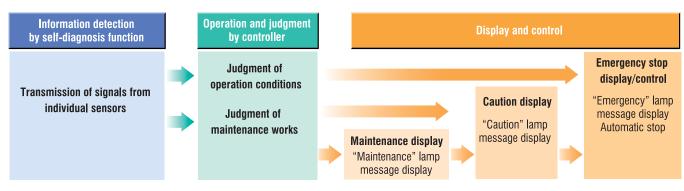
Pre-alarm system to avoid sudden failure

Mechanism of pre-alarm system

The Controller is equipped with a sophisticated early pre-alarm system with self-diagnostic functions, display functions, warning functions and an automatic stopping function, to prevent sudden failures.

The computer determines the condition of the compressor, based on information derived from the sensor detections and data settings. Since the necessary maintenance information is notified by messages and lamps, the Controller not only makes it easy to perform daily inspections and management, but the early detection of problems and rapid responses also can be possible.

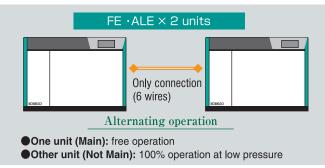
Since external output terminals for a combined display of individual functions, such as maintenance, alarm and abnormal stop, are standard equipment, it is possible to manage operating conditions outside the machine room, where the equipment is installed.



Alternating the operation of two units without a control panel (standard feature)

Two-unit alternate operation of Emeraude models can be done by simple wiring. Unlike conventional units, no specifically designed panel for two-unit alternate operation is needed. First-Started unit or Next-Started unit can be selected from the monitor.

*Depends on the compressor's combination , there is a passibility you cannot use this function.



VF · VE SERIES with Kobelco Inverters installed

Air-Cooled Models (with integrated dryer/compressor only)

Item	Model	VF640AD/AⅢ	VE790AD/AⅢ					
Frequency	Hz	50/60 du	al rating					
Discharge air	volume m³/min	5.4~6.4	7.9					
Suction	Pressure	Atmospheri	ic pressure					
conditions Temperature 0		2~	2~40					
Discharge condition	Pressure (gauge pressure) MPa	0.69~0.39(pressure stabilizing control 0.64 or less)	0.69(pressure stabilizing control 0.64 or less)					
Compressor sh	aft input power kW	37.0	52.7					
	Nominal output kW	37	55					
motor	Voltage V	200/200 • 220 [380 • 400 • 415/380 • 400 • 440]	200/200 • 220 [380 • 400 • 415/400 • 440]					
	Starting system	Inverter						
	Specification	6-pole permanent magnet, 3-phase, synchronism, totally enclosed fan-cooled (air-cooled), F class						
Drive system		Step-up gear						
Discharge pip	oe diameter A	40A (R1 • 1/2)	50A (R2)					
Cooling fan m	otor output kW	2.	2.2					
	Pressure dew point °C(F)	Pressure dew point 10 (50) /12	(54) or under (6.9bar/3.9bar)					
Dryer	Input kW	2.15/2.60	2.35/2.85					
	Coolant type/method	R-407C, ca	pillary tube					
Initial lubricar	nt charge L	1:	3					
Nominal dimen	sions (WXDXH)mm	2,080×1,200×1,500 (1,780×1,200×1,500)	2,580×1,200×1,500 (2,080×1,200×1,500)					
Nominal weig	ht kg	1,360 〈1,275〉	1,620 〈1,430〉					
Noise (at fron	t) dB(A)	68	67					
Oil pump out	out kW	0.	4					

Water-Cooled Models (with integrated dryer/compressor only)

Item	Model	VF640WD/W	VE790WD/W					
Frequency	Hz	50/60 du	al rating					
Discharge air	volume m³/min	5.4~6.4	7.9					
Suction	Pressure	Atmospheric	Atmospheric pressure					
conditions	Temperature ℃	2~	40					
Discharge condition Pressure (gauge pressure) MPa		0.69~0.39(pressure stabilizing control 0.64 or less)	0.69(pressure stabilizing control 0.64 or less)					
Compressor sh	aft input power kW	37.0	52.7					
	Nominal output kW	37	55					
Compressor	Voltage V	200/200•220 [380•400•415/380•400•440]	200/200 • 220 [380 • 400 • 415/400 • 440]					
motor	Starting system	Inve	rter					
	Specification	6-pole permanent magnet, 3-phase, synchronism, totally enclosed fan-cooled (air-cooled), F class						
Drive system		Step-up gear						
Discharge pip	e diameter A	40 (R1 • 1/2)	50 (R2)					
	Quality	Industrial water						
Cooling water	Quantity L/min	55	80					
	Head m	Minimum 15;	maximum 50					
Cooling water	pipe diameter A	25 (R1)	32 (R1·1/4)					
Cooling fan m	otor output kW	0.	05					
	Pressure dew point °C	Pressure dew point 10 (50) /12	(54) or under (6.9bar/3.9bar)					
Dryer	Input kW	2.15/2.60	2.35/2.85					
	Coolant type/method	R-407C, ca	pillary tube					
Initial lubricar	t charge L	10	3					
Nominal dimen	sions (WXDXH)mm	2,080×1,200×1,500 (1,780×1,200×1,500)	2,580×1,200×1,500 (2,080×1,200×1,500)					
Nominal weig	ht kg	1,335 〈1,250〉	1,595 〈1,405〉					
Noise (at fron	t) dB(A)	64	65					
Oil pump outp	out kW	0	4					

- *Discharge air volumes is converted to compressor suction condition(30°C).
- *Discharge pressures are measured after the check valve.
- *Service factor(SF) of Main Motor is 1.1.
- *Noise values are measured in an anechoic chamber at a height of 1 meter and a distance of 1.5m from the front/back and both sides of the package and at full load.
- *Values within brackets () are measured in an anechoic chamber at a height of 1 meter and a distance of 1.5m from the front of the unit and at full load.
- *Since the cooling for the compressed air & the inside of the compressor unit depends on the surrounding air condition, the surrounding air must be properly ventilated to prevent the ambient temperature from rising above 40°C.
- *Cooling water temperature should not exceed 32°C.
- *Please be sure to use the lubricating oil recommended by KOBELCO.
- $*\ \langle\ \rangle$ The weight and dimensions shown above are the values including the dryer.
- *Air produced by these compressors should not be used in respiratory equipment furnishing air for direct inhalation.
- *Appearance and specifications are subject to change without notice.
- *Consult us individually, regarding guaranteed performance values.

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ALE SERIES with Kobelco Inverters installed

Air-Cooled Models (compressor only)

Item	Model	ALE65AⅢ-v	ALE75AⅢ-v	ALE100AⅢ-v	ALE65AⅢ-vH	ALE75AⅢ-vH	ALE100AⅢ-vH		
Frequency	Hz			50	/60				
Discharge air	volume m³/min	10.5	13.0	17.2	9.2	10.4	15.6		
Suction	Pressure		Atmospheric pressure						
conditions	Temperature °C			0~	·45				
Discharge condition	Pressure (gauge pressure) MPa	0.7(pressure stabili	zing control 0.7 or less) >	XAvailable pressure 0.75	0.88(press	ure stabilizing control 0.	83 or less)		
Compressor sh	aft input power kW	66.2	77.3	103	66.5	74.7	103		
	Nominal output kW	7	75	100	7	5	100		
	Voltage V	200/200 • 220 [380 •	400 • 415 / 400 • 440]	380 • 400 • 415/400 • 440	200/200 • 220 [380 • 400 • 415/400 • 440]		380 • 400 • 415/400 • 440		
	Starting system	Inverter							
	Specification	6-pole permanent magn totally enclosed fan-coo	et, 3-phase, synchronism, led (air-cooled), F class	4-pole, permanent magnet, 3-phase, synchronism, totally enclosed fan-cooled (air cooled), F class	6-pole permanent magnet, 3-phase, synchronism, totally enclosed fan-cooled (air-cooled), F class		4-pole, permanent magnet, 3-phase, synchronism, totally enclosed fan-cooled (air cooled), F class		
Drive system				Step-u	p gear				
Discharge pip	e diameter A			JIS10k-	-50A RF				
Cooling fan m	otor output kW	2	.2	3.0	2	.2	3.0		
Initial lubricar	t charge L	30	5	50	3	80	50		
Nominal dimen	sions (WXDXH) mm	2,250×1,4	150×1,780	2,460×1,500×2,100	2,250×1,4	150×1,780	2,460×1,500×2,100		
Nominal weig	ht kg	2,210	2,410	3,010	2,2	210	3,010		
Noise (at fron	t) dB(A)	65	67	66	67	6	68		
Oil pump outp	out kW	1.5	2	2.2	1	.5	2.2		

*Discharge air volumes is converted to compressor suction condition(30°C).
*Discharge pressures are measured after the check valve.
*Service factor(SF) of Main Motor is 1.1.
*Noise values are measured in an anechoic chamber at a height of 1 meter and a distance of 1.5m from the front of the unit and at full load.
*Since the cooling for the compressed air & the inside of the compressor unit depends on the surrounding air condition, the surrounding air must be properly ventilated to prevent the ambient temperature from rising above 45°C.

*Please be sure to use the lubricating oil recommended by KOBELCO.
*Air produced by these compressors should not be used in respiratory equipment furnishing air for direct inhalation.
*Oil pump / cooling fan thermal relay setting values for 50Hz models are different from those for 60Hz models.

*Appearance and specifications are subject to change without notice. *Consult us individually, regarding guaranteed performance values.

Water-Cooled Models (compressor only)

	Model	ALE65WⅢ-v	ALE75WⅢ-v	ALE100WⅢ-v	ALE160WⅢ-v	ALE180WⅢ-v	ALE250WⅢ-v	ALE270WⅢ-v		
Frequency	Hz	1			50/60					
Discharge air	volume m³/min	10.6	13.2	17.4	29.8	33.9	45.0	49.3		
Suction	Pressure			F	Atmospheric pressure					
conditions	Temperature °C				0~45					
Discharge condition	Pressure (gauge pressure) MPa			0.7(pressure stabilizi	ng control 0.7 or less)	*Available pressure 0.75				
Compressor sh	aft input power kW	66.2	76.0	100.6	164.8	184.0	257.4	278.1		
	Nominal output kW	7	5	100	160	180	27	70		
Compressor	Voltage V	200/200 • 220 [380 • 400 • 415/400 • 440] 380 • 400 • 415/400 • 440								
motor	Starting system	Inverter								
	Specification	6-pole permanent magne totally enclosed fan-coole	it, 3-phase, synchronism, l ad (air-cooled), F class	4-pole, permanen	it magnet, 3-phase, sy	nchronism, totally en	closed fan-cooled (ai	r cooled), F class		
Drive system					Step-up gear					
Discharge pip	oe diameter A		JIS10k-50A RF		JIS10k-	-65A RF	JIS10k-	-80A RF		
	Quality				Industrial water					
Cooling water	Quantity L/min	95	107	146	265	295	410	440		
./utor	Head m			Mii	nimum 15; maximum	60				
Cooling water	r pipe diameter A	JIS10k	.—32A	JIS10k-40A	JIS10k-	-50A RF	JIS10k-	-65A RF		
Initial lubricar	nt charge L	20		3	5		7	-		
Nominal dimen	sions (WXDXH) mm	2,120×1,1	70×1,680	2,600×1,335×1,887	7 2,900×1,565×1,960		3,250×1,5	65×2,243		
Nominal weig		2,270	2,710	3,210	4,210		5,410	5,510		
Noise (at fron		64	65	66	6	9	70	71		
Oil pump outp	put kW		0.75			1.	5			
Item	Model	ALE65WⅢ-vH	ALE75WⅢ-vH	ALE100WⅢ-vH	ALE160WⅢ-vH	ALE180WⅢ-vH	ALE250WⅢ-vH	ALE270WⅢ-vH		
Frequency	Hz				50/60					
Discharge air	volume m³/min	9.3	10.6	16.0	26.2	29.5	39.9	42.5		
Suction	Pressure	Atmospheric pressure								
conditions	Temperature °C				0~45					
Discharge condition	Pressure (gauge pressure) MPa		Temperature			88(pressure stabilizing control 0.88 or less)				
Compressor sh			0	.88(pressure stabilizi	ng control 0.88 or less	3) Available pressure 0.9	3			
- compression	aft input power kW	64.7	74.0	1.88(pressure stabilizione 102.2	ng control 0.88 or less 164.8	s) **Available pressure 0.9 185.2	255.0	275.5		
	aft input power kW Nominal output kW	64.7	74.0							
Compressor			74.0 5	102.2	164.8 160	185.2	255.0 27			
	Nominal output kW	7 200/200•220 [380•	74.0 5 400·415/400·440]	102.2	164.8 160	185.2 180	255.0 27			
Compressor	Nominal output kW Voltage V	7	74.0 5 400·415/400·440]	102.2	164.8 160	185.2 180 80*400*415/400*440	255.0 27	70		
Compressor	Nominal output kW Voltage V Starting system	7 200/200•220 [380•	74.0 5 400·415/400·440]	102.2	164.8 160 3 Inverter	185.2 180 80*400*415/400*440	255.0 27	70		
Compressor	Nominal output kW Voltage V Starting system Specification	7 200/200•220 [380•	74.0 5 400·415/400·440]	102.2	164.8 160 3 Inverter at magnet, 3-phase, sy	185.2 180 80·400·415/400·440 /nchronism, totally er	255.0 27	r cooled), F class		
Compressor motor Drive system Discharge pip	Nominal output kW Voltage V Starting system Specification	7 200/200•220 [380•	74.0 5 400·415/400·440] et. 3-phase, synchronism, ed (air-cooled), F class	102.2	164.8 160 3 Inverter at magnet, 3-phase, sy Step-up gear	185.2 180 80·400·415/400·440 /nchronism, totally er	255.0 27) closed fan-cooled (ai	r cooled), F class		
Compressor motor Drive system Discharge pip Cooling	Nominal output kW Voltage V Starting system Specification e diameter A	7 200/200•220 [380•	74.0 5 400·415/400·440] et. 3-phase, synchronism, ed (air-cooled), F class	102.2	164.8 160 3 Inverter at magnet, 3-phase, sy Step-up gear JIS10k—	185.2 180 80·400·415/400·440 /nchronism, totally er	255.0 27) closed fan-cooled (ai	r cooled), F class		
Compressor motor Drive system Discharge pip	Nominal output kW Voltage V Starting system Specification de diameter A Quality Quantity L/min Head m	7 200/200+220 [380+ 6-pole permanent magne totally enclosed fan-cook	74.0 5 400·415/400·440] at, 3-phase, synchronism, at (air-cooled), F class	102.2 100 4-pole, permaner	164.8 160 3 Inverter at magnet, 3-phase, sy Step-up gear JIS10k— Industrial water	185.2 180 80·400·415/400·440 /nchronism, totally er 65A RF	255.0 27) closed fan-cooled (ai JIS10k-	r cooled), F class		
Compressor motor Drive system Discharge pip Cooling water Cooling water	Nominal output kW Voltage V Starting system Specification de diameter A Quality Quantity L/min Head m r pipe diameter A	7 200/200+220 [380+ 6-pole permanent magne totally enclosed fan-cook	74.0 5 400•415/400•440] at, 3-phase, synchronism, ad (air-cooled), F class JIS10k—50A RF	102.2 100 4-pole, permaner	164.8 160 3 Inverter at magnet, 3-phase, sy Step-up gear JIS10k— Industrial water 265	185.2 180 80·400·415/400·440 /nchronism, totally er -65A RF 295	255.0 27) closed fan-cooled (ai JIS10k-	r cooled), F class -80A RF		
Compressor motor Drive system Discharge pip Cooling water Cooling water Initial lubricar	Nominal output kW Voltage V Starting system Specification de diameter A Quality Quantity L/min Head m r pipe diameter A nt charge L	7 200/200+220 [380+ 6-pole permanent magne totally enclosed fan-coole 95 JIS10k	74.0 5 400•415/400•440] at, 3-phase, synchronism, ad (air-cooled), F class JIS10k—50A RF 107 c—32A 0	102.2 100 4-pole, permaner 146 Mii JIS10k—40A	164.8 160 3 Inverter It magnet, 3-phase, sy Step-up gear JIS10k— Industrial water 265 Inimum 15; maximum	185.2 180 80·400·415/400·440 /nchronism, totally er -65A RF 295	255.0 27) closed fan-cooled (ai JIS10k- 410 JIS10k- 7	r cooled), F class -80A RF 440 -65A RF		
Compressor motor Drive system Discharge pip Cooling water Cooling water Initial lubricar Nominal dimen	Nominal output kW Voltage V Starting system Specification de diameter A Quality Quantity L/min Head m r pipe diameter A nt charge L sisions (WXDXH) mm	7 200/200+220 [380+ 6-pole permanent magne totally enclosed fan-coole 95 JIS10k 2 2,120×1,1	74.0 5 400-415/400-440] st. 3-phase, synchronism, ad (air-cooled), F class JIS10k—50A RF 107 4—32A 0 70×1,680	102.2 100 4-pole, permaner 146 Mii JIS10k—40A 2,600×1,335×1,887	164.8 160 3 Inverter It magnet, 3-phase, sy Step-up gear JIS10k- Industrial water 265 nimum 15; maximum JIS10k- 35 2,900×1,5	185.2 180 80·400·415/400·44(/nchronism, totally er -65A RF 295 60 -50A RF 65×1,960	255.0 27) closed fan-cooled (ai	r cooled), F class -80A RF 440 -65A RF 0 65×2,243		
Compressor motor Drive system Discharge pip Cooling water Cooling wate Initial lubricar Nominal dimen	Nominal output kW Voltage V Starting system Specification De diameter A Quality Quantity L/min Head m r pipe diameter A tt charge L sions (WXDXH) mm iht kg	7 200/200+220 [380+ 6-pole permanent magne totally enclosed fan-cook 95 JIS10k 2,120×1,1 2,3	74.0 5 400-415/400-440] st, 3-phase, synchronism, ed (air-cooled), F dass JIS10k—50A RF 107 4—32A 0 70×1,680	102.2 100 4-pole, permaner 146 Mii JIS10k—40A 2,600×1,335×1,887 3,210	164.8 160 3 Inverter Int magnet, 3-phase, sy Step-up gear JIS10k— Industrial water 265 Inimum 15; maximum JIS10k— 35 2,900×1,5	185.2 180 80·400·415/400·440 ynchronism, totally er -65A RF 295 60 -50A RF 65×1,960 10	255.0 27) closed fan-cooled (ai	r cooled), F class -80A RF 440 -65A RF 0 65×2,243 5,510		
Compressor motor Drive system Discharge pip Cooling water Cooling water Initial lubricar Nominal dimen	Nominal output kW Voltage V Starting system Specification De diameter A Quality Quantity L/min Head m r pipe diameter A nt charge L sions (WXDXH) mm tht kg tt) dB(A)	7 200/200+220 [380+ 6-pole permanent magne totally enclosed fan-coole 95 JIS10k 2 2,120×1,1	74.0 5 400-415/400-440] st. 3-phase, synchronism, ad (air-cooled), F class JIS10k—50A RF 107 4—32A 0 70×1,680	102.2 100 4-pole, permaner 146 Mii JIS10k—40A 2,600×1,335×1,887 3,210	164.8 160 3 Inverter It magnet, 3-phase, sy Step-up gear JIS10k- Industrial water 265 nimum 15; maximum JIS10k- 35 2,900×1,5	185.2 180 80·400·415/400·440 ynchronism, totally er -65A RF 295 60 -50A RF 65×1,960 10	255.0 27) closed fan-cooled (ai	r cooled), F class -80A RF 440 -65A RF 0 65×2,243		

*Discharge air volumes is converted to compressor suction condition(30°C).

*Discharge pressures are measured after the check valve.

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

*Noise values are measured in an anechoic chamber at a height of 1 meter and a distance of 1.5m from the front of the unit and at full load.

*Since the cooling for the compressed air & the inside of the compressor unit depends on the surrounding air condition, the surrounding air must be properly ventilated to prevent the ambient temperature from rising above 45°C.

*Cooling water temperature should not exceed 35°C.

*Please be sure to use the lubricating oil recommended by KOBELCO.
*Air produced by these compressors should not be used in respiratory equipment furnishing air for direct inhalation.
*Oil pump / cooling fan thermal relay setting values for 50Hz models are different from those for 60Hz

models.

*Appearance and specifications are subject to change without notice.

*Consult us individually, regarding guaranteed performance values.

Specifications

FE SERIES

Air-Cooled Models

Item	Model	FE200AD/AII-5/6	FE370AD/AⅢ-5/6	FE480AD/AⅢ-5/6	FE540AD/AⅢ-5/6	FE640AD/AII-5/6	FE770AD/AⅢ-5/6
Frequency	Hz			50/	60		
Discharge air	r volume m³/min	2.05	3.7	4.8	5.4	6.4	7.7
Suction	Pressure			Atmospher	ic pressure		
conditions	Temperature °C			2~	-40		
Discharge condition	Pressure (gauge pressure) MPa			0.0	69		
Compressor sh	haft input power kW	18.8	27.7	33.7	38.1	44.5	54.5
	Nominal output kW	22	30	37	45	45	55
Compressor	Voltage V		200/200 • 220 [380 • 40	0.415/380.400.440] 200/200.220[380.400.415/40			·400·415/400·440]
motor	Starting system			Star	Delta		
	Specification		2-pole totally enclos	ed fan-cooled (air-cooled), insulation class F, rate	d for continuous use	
Drive system	l			Step-u	p gear		
Discharge pip	pe diameter A	25 (R1)		40 (R1 • 1/2)		50 (R1 • 1/2)
Cooling fan r	notor output kW	1	.5		2	.2	
Initial lubrica	nt charge L	1	1		1	3	
Noise (at fror	nt] dB(A)	63	64	67	68	65 (63)	67 (66)
Oil pump out	put kW			0	4		

■With integrated dryer

Item	Model	FE200ADⅢ-5/6	FE370ADⅢ-5/6	FE480ADⅢ-5/6	FE540ADⅢ-5/6	FE640ADⅢ-5/6	FE770ADⅢ-5/6	
	Pressure dew point °C		Below 10 at discharge pressure					
· ·	Input kW	0.67/0.83	1.36/1.72			2.35/2.85		
	Coolant type/method			R-407C Capillary tube				
Nominal dime	nsions (WXDXH) mm	1,650×90	00×1,500	1,950×1,100×1,500 2,580×1,200×1,500				
Nominal weig	ght kg	925	1,005	1,255	1,265	1,510	1,700	

■Compressor only

Item Model	FE200AⅢ-5/6	FE370AⅢ-5/6	FE480AⅢ-5/6	FE540AⅢ-5/6	FE640AⅢ-5/6	FE770AⅢ-5/6
Nominal dimensions (WXDXH)mm	1,650×90	00×1,500	1,950×1,	100×1,500	2,580×1,	200×1,500
Nominal weight kg	870	940	1,170	1,180	1,350	1,510

Water-Cooled Models

	orea models							
Item	Model	_	FE370WD/WⅢ-5/6	FE480WD/WII-5/6	FE540WD/WⅢ-5/6	FE640WD/WⅢ-5/6	FE770WD/WⅢ-5/6	
Frequency	Hz	_	50/60					
Discharge air	volume m³/min	_	3.7	4.8	5.4	6.4	7.7	
Suction	Pressure	_			Atmospheric pressure			
conditions	Temperature °C	_			2~40			
Discharge condition	Pressure (gauge pressure) MPa				0.69			
Compressor shaft input power kW —			27.7	33.7	38.1	44.5	54.5	
	Nominal output kW		30	37	45	45	55	
Compressor	Voltage V	_	200/200•	220 [380 • 400 • 415/380 • 4	400•440]	200/200 • 220 [380 •	400 • 415 / 400 • 440]	
_	Starting system		Star Delta					
	Specification	_	2-pole totally enclosed fan-cooled (air-cooled), insulation class F, rated for continuous use					
Drive system		_	Step-up gear					
Discharge pip	oe diameter A	_	25 (R1) 40 (R1·1/2) 50 (R2)				50 (R2)	
	Quality	_			Fresh water	·		
Cooling water	Quantity L/min		40	50	60	65	80	
water	Head m	_			Minimum 15; maximum 50			
Cooling water	r pipe diameter A	_		25 (R1)		32 (R	1 • 1/4)	
Cooling fan r	notor output kW	_		0.05		0	.1	
Initial lubrica	nt charge L	_	11		1	3		
Noise (at fror	nt) dB(A)	_	61	63	64	63	65	
Oil pump out	put kW	_			0.4			

■With integrated drver

	With meglated dijer								
Item	Model	-	FE370WDⅢ-5/6	FE480WDⅢ-5/6	FE540WDⅢ-5/6	FE640WDⅢ-5/6	FE770WDⅢ-5/6		
	Pressure dew point °C	_		Below 10 at discharge pressure					
Dryer	Input kW	_	1.36/1.72	1.36/1.72 1.70/2.03					
	Coolant type/method			R-407C Capillary tube					
Nominal dime	nsions (WXDXH) mm	_	1,650×900×1,500	1,950×1,1	00×1,500	2,580×1,2	200×1,500		
Nominal weight kg —			995	1,230	1,240	1,500	1,685		

Compressor only

= compressor only						
Item Model	_	FE370WⅢ-5/6	FE480WⅢ-5/6	FE540WⅢ-5/6	FE640WⅢ-5/6	FE770WⅢ-5/6
Nominal dimensions (WXDXH) mm	_	1,650×900×1,500	1,950×1,	00×1,500	2,580×1,2	200×1,500
Nominal weight kg	_	930	1,145	1,155	1,340	1,495

*Discharge air volumes is converted to compressor suction condition(30°C).

*Discharge pressures are measured after the check valve.

*Service factor (SF) of Main Motor is 1.1 (FE640/770/630H).

*Noise values are measured in an anechoic chamber at a height of 1 meter and a distance of 1.5m from the front/back and both sides of the package and at full load.

*Values within brackets () are measured in an anechoic chamber at a height of 1 meter and a distance of 1.5m from the front of the unit and at full load.

*Since the cooling for the compressed air & the inside of the compressor unit depends on the surrounding air condition, the surrounding air must be properly ventilated to prevent the ambient temperature from rising above 40 $^{\circ}$ C.

*Cooling water temperature should not exceed 32°C.

*Please be sure to use the lubricating oil recommended by KOBELCO.

*Please be sure to use "KOBELCO SUPER GREASE" for greasing motor bearings.

Air-Cooled Models

	Model	FEOGRALIA DI ILIA TI E IO	FEOGRALIA D. (LIA TE F. (2)	FE 400LIAD (LIATE F (0	FFF COLLAD (LIA TE F (C	FECCOLIAD (LIATE 5 (C	
Item	Model	FE200HAD/HAII-5/6	FE260HAD/HAⅢ-5/6	FE400HAD/HAII-5/6	FE530HAD/HAⅢ-5/6	FE630HAD/HAⅢ-5/6	
Frequency	Hz			50/60			
Discharge air	volume m³/min	2.0	2.6	4.0	5.3	6.3	
Suction	Pressure		Atmospheric pressure				
conditions	Temperature °C			2~40			
Discharge condition	Pressure (gauge pressure) MPa			0.88			
Compressor sl	haft input power kW	21.3	27.2	34.7	44.0	50.5	
_	Nominal output kW	22	30	37	45	55	
	Voltage V	200/200 • 220 [380 • 400 • 415/380 • 400 • 440] 200/200 • 220 [380 • 400 • 415/380					
motor	Starting system		Star Delta				
	Specification	2	2-pole totally enclosed fan-cod	oled (air-cooled), insulation cla	ss F, rated for continuous use		
Drive system				Step-up gear			
Discharge pip	oe diameter A	25 (R1)		40 (R1·1/2)		
Cooling fan n	notor output kW	1	.5		2.2		
Initial lubrical	nt charge L	1	1		13		
Noise (at fron	dB(A)	63	64	67	68	66 [64]	
Oil pump out	put kW			0.4			

■With integrated dryer

Item	Mode	FE200HADII-5/6	FE260HADⅢ-5/6	FE400HADⅢ-5/6	FE530HADⅢ-5/6	FE630HADⅢ-5/6
Pressure dew point °C				Below 10 at discharge pressure	Э	
Dryer	Input kV	0.67/0.83	1.36/1.72		1.70/2.03	
	Coolant type/method	1		R-407C Capillary tube		
Nominal dimensions (WXDXH)mm		1,650×9	00×1,500	1,950×1,1	00×1,500	2,580×1,200×1,500
Nominal weight kg		925	975	1,250	1,260	1,670

■Compressor only

Item Mod	FE200HAⅢ-5/6	FE260HAⅢ-5/6	FE400HAⅢ-5/6	FE530HAⅢ-5/6	FE630HAⅢ-5/6
Nominal dimensions (WXDXH) m	n 1,650×9	00×1,500	1,950×1,	100×1,500	2,580×1,200×1,500
Nominal weight k	g 870	910	1,170	1,180	1,510

Water-Cooled Models

Item	Model	_	_	FE400HWD/HWⅢ-5/6	FE530HWD/HWII-5/6	FE630HWD/HWⅢ-5/6			
Frequency	Hz	_	_		50/60				
Discharge air	volume m³/min	_	_	4.0	5.3	6.3			
Suction	Pressure	_	_		Atmospheric pressure				
conditions	Temperature °C	_	_		2~40				
Discharge condition	Pressure (gauge pressure) MPa	_	_		0.88				
Compressor sh	naft input power kW	_	_	34.7 44.0 50.5		50.5			
Nominal output kW		_	_	37	45	55			
Compressor Voltage V		_	_	200/200 • 220 [380 • 400 • 415/380 • 400 • 440] 200/200 • 220 [380 • 400 • 415					
motor	Starting system	_	_	Star Delta					
	Specification	_	_	2-pole totally enclosed fan-co	oled (air-cooled), insulation cla				
Drive system		_	_		Step-up gear				
Discharge pi	oe diameter A	_	_		40 (R1·1/2)				
	Quality	_	_		Fresh water				
Cooling water	Quantity L/min	_	_	50	65	75			
	Head m	_	_		40 (R1·1/2) Fresh water				
Cooling water	r pipe diameter A	_	_	25 (R1)	32 (R1 • 1/4)			
Cooling fan r	notor output kW	_	_	0.	05	0.1			
Initial lubrica	nt charge L				13				
Noise (at from	nt) dB(A)	_	_	63 64		64			
Oil pump out	put kW	-	_		0.4				

■With integrated dryer

Item	Model	_	_	FE400HWDⅢ-5/6	FE530HWDII-5/6	FE630HWDII-5/6
Pressure dew point °C		_		E	Below 10 at discharge pressure 1.70/2.03	
Dryer	Input kW			1.70/2.03		
	Coolant type/method	_			R-407C Capillary tube	
Nominal dimensions (WXDXH)mm —		_	_	1,950×1,1	00×1,500	2,580×1,200×1,500
Nominal weight kg		_		1,230	1,240	1,655

■Compressor only

Item Model	_	_	FE400HWⅢ-5/6	FE530HWⅢ-5/6	FE630HWⅢ-5/6
Nominal dimensions (WXDXH)mm	_	_	1,950×1,	100×1,500	2,580×1,200×1,500
Nominal weight kg	_	_	1,145	1,155	1,495

*Air produced by these compressors should not be used in respiratory equipment furnishing air

for direct inhalation.

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*Appearance and specifications are subject to change without notice.

*Consult us individually, regarding guaranteed performance values.

Specifications

ALE SERIES

Discharge pressure 0.7MPa

Air-Cooled Models

■Compressor only

<u> </u>	ompressor only						
Item	Model	ALE55AⅢ-5/6	ALE65AⅢ-5/6	ALE75AⅢ-5/6	ALE90AⅢ-5/6	ALE100AⅢ-5/6	
Frequency	Hz			50/60			
Discharge air	volume m³/min	8.9/9.0	10.3/10.5	12.9/13.0	15.9	17.2	
Suction	Pressure	Atmospheric pressure					
conditions	Temperature °C			0~45			
Discharge condition Pressure (gauge pressure) MPa 0.7 % Available pressure 0.75							
Compressor sh	aft input power kW	55.7/56.0	64.7/66.3	76.8/77.3	92.7	102.8/103.0	
	Nominal output kW	55	65	75	90	100	
Compressor	Voltage V		200	/200•220 [380•400•415/400•	440]		
motor	Starting system	Star Delta					
	Specification		2-pole totally enclosed fan-co	oled (air cooled), insulation class F, rated for continuous use			
Drive system				Gear			
Discharge pip	e diameter A			JIS10k-50A RF			
Cooling fan m	notor output kW		2.2		3	.0	
Initial lubricar	nt charge L	3	30		50		
Nominal dimensions (WXDXH) mm			1,880×1,450×1,780		2,060×1,5	500×2,100	
Nominal weight kg		1,930	2,060	2,260	3,0	090	
Noise (at fron	t) dB(A)	64	65	67	65	66	
Oil pump out	out kW	1.	.5		2.2		

^{*}Discharge air volumes is converted to compressor suction condition(30°C).

Discharge pressure 0.88MPa

Air-Cooled Models

Compressor only

Compress	Model	ALEEFAW F (OLL	ALEGEA W. E. (OLL	ALEZEA W.E.(OLL	A1 F00 A TT F (01 I			
Item	Model	ALE55AⅢ-5/6H	ALE65AⅢ-5/6H	ALE75AⅢ-5/6H	ALE90AⅢ-5/6H			
Frequency	Hz		50	/60				
Discharge air	volume m³/min	7.6/7.5	9.2/9.2	10.2/10.4	13.1/13.2			
Suction Pressure			Atmospher	ic pressure				
conditions	Temperature ℃		0~	-45				
Discharge condition	Pressure (gauge pressure) MPa		3.0	88				
Compressor sh	aft input power kW	55.7/54.9	66.9/66.5	73.2/74.7	90.7/91.3			
Compressor	Nominal output kW	55	65	75	90			
	Voltage V	200/200•220 [380•400•415/400•440]						
motor	Starting system	Star Delta						
	Specification	2-pole totally enclosed fan-cooled (air cooled), insulation class F, rated for continuous use						
Drive system			Ge	ear				
Discharge pip	oe diameter A		JIS10k-	-50A RF				
Cooling fan n	notor output kW		2.2		3.0			
Initial lubrica	nt charge L		30		50			
Nominal dimer	nsions (WXDXH)mm	1,880×1,450×1,780			2,060×1,500×2,100			
Nominal weig	ıht kg	1,930	2,060	2,080	3,090			
Noise (at front) dB(A)		66	67	68	67			
Oil pump out	put kW		1.5	<u> </u>	2.2			

^{*}Discharge air volumes is converted to compressor suction condition(30°C).

^{*}Discharge pressures are measured after the check valve.
*Service factor(SF) of Main Motor is 1.1.

^{*}Noise values are measured in an anechoic chamber at a height of 1 meter and a distance of 1.5m from the front of the unit and at full load.

^{*}Since the cooling for the compressed air & the inside of the compressor unit depends on the surrounding air condition, the surrounding

air must be properly ventilated to prevent the ambient temperature from rising above 45°C.

*Please be sure to use the lubricating oil recommended by KOBELCO.

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

^{*}Appearance and specifications are subject to change without notice.

^{*}Consult us individually, regarding guaranteed performance values.

^{*}Discharge pressures are measured after the check valve.

^{*}Service factor(SF) of Main Motor is 1.1.

^{*}Noise values are measured in an anechoic chamber at a height of 1 meter and a distance of 1.5m from the front of the unit and at full load.

^{*}Since the cooling for the compressed air & the inside of the compressor unit depends on the surrounding air condition, the surrounding air must be properly ventilated to prevent the ambient temperature from rising above 45°C.

^{*}Please be sure to use the lubricating oil recommended by KOBELCO.

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

^{*}Appearance and specifications are subject to change without notice.
*Consult us individually, regarding guaranteed performance values.

ALE SERIES

Discharge pressure 0.7MPa

Water-Cooled Models

Compressor only

Compress	ompressor only								
Item	Model	ALE55WⅢ-5/6	ALE65WⅢ-5/6	ALE75WⅢ-5/6	ALE90WⅢ-5/6	ALE100WⅢ-5/6			
Frequency	Hz			50/60					
Discharge air	volume m³/min	9.1/9.2	10.6	13.2	16.2	17.4			
Suction	Pressure			Atmospheric pressure					
conditions	Temperature °C			0~45					
Discharge condition	Pressure (gauge pressure) MPa			0.7 % Available pressure 0.75					
Compressor sh	aft input power kW	56.2/55.9	65.9/66.2	76.2/76.0	91.8/91.9	100.2/100.6			
	Nominal output kW	55	65	75	90	100			
Compressor	Voltage V		200	/200 • 220 [380 • 400 • 415/400 • 4	140]				
motor	Starting system			Star Delta					
	Specification		2-pole totally enclosed fan-co	oled (air cooled), insulation cla	ss F, rated for continuous use				
Drive system				Gear					
Discharge pip	e diameter A	JIS10k—50A RF							
	Quality			Industrial water					
Cooling water	Quantity L/min	80	95	107	132	144			
	Head m			Minimum 15, maximum 60					
Cooling wate	r pipe diameter A		JIS10k-32A RF		JIS10k-	-40A RF			
Initial lubrica	nt charge L	2	0		35				
Nominal dimer	sions (WXDXH)mm		1,780×1,170×1,680		2,200×1,3	335×1,887			
Nominal weig	ht kg	1,980	2,110	2,330	2,770	2,790			
Noise (at from	t) dB(A)	63	64	6	5	66			
Oil pump output kW 0.75									

Discharge pressure 0.69MPa

Water-Cooled Models

Compressor only

Compress		41 =100M = 10	A. 5700MW 5 (0	** = 3 * 5 * 4 * 5 * 6	A. 5300M 5 (0		
Item	Model	ALE120WⅢ-5/6	ALE132WⅢ-5/6	ALE145WⅢ-5/6	ALE160WⅢ-5/6		
Frequency	Hz		50/	60			
Discharge air	volume m³/min	22.3/22.1	24.7/24.5	27.3/27.4	29.8		
Suction	Pressure		Atmospheric pressure				
conditions	Temperature °C		0~	45			
Discharge condition	Pressure (gauge pressure)		0.7 %Available	pressure 0.75			
Compressor sh	naft input power kW	123.6	136.0/135.8	148.9/149.1	164.8		
	Nominal output kW	120	132	145	160		
Compressor	Voltage V	380 • 400 • 415/440 [3	3,000/3,300+6,600]	380 • 400 • 415/440 [3,00	400 • 415/440 [3,000 • 6,000/3,300 • 6,600]		
motor	Starting system		Reactor with sepa	rate starter panel			
	Specification	2-pole to	otally enclosed fan-cooled (air cooled)	, insulation class F, rated for continuo	ous use		
Drive system			Gear				
Discharge pip	oe diameter A	JIS10k—65A RF					
	Quality		Industria	al water			
Cooling water	Quantity L/min	195	215	250	265		
	Head m		Minimum 15,	maximum 60			
Cooling water	r pipe diameter A		JIS10k-	50A RF			
Initial lubrica	nt charge L		3	5			
Nominal dimer	nsions (WXDXH)mm	2,400×1,565×1,850 [2,650×1,565×1,850]	2,700×1,5	565×1,850		
Nominal weig	jht kg	3,880 [4,180•4,580]	3,920 [4,120 • 4,520]	4,290 [4,890]	4,440 [5,040 • 4,940]		
Noise (at from	nt〕 dB(A)	67	6	8	69		
Oil pump out	put kW		1.	5			

- *Discharge air volumes is converted to compressor suction condition(30 $^{\circ}$ C).
- *Discharge pressures are measured after the check valve. *Service factor(SF) of Main Motor is 1.1.
- *Noise values are measured in an anechoic chamber at a height of 1 meter and a distance of 1.5m from the front of the unit and at full load.
- *Since the cooling for the compressed air & the inside of the compressor unit depends on the surrounding air condition,
- the surrounding air must be properly ventilated to prevent the ambient temperature from rising above 45°C.
- *Cooling water temperature should not exceed 35°C.
 *Please be sure to use the lubricating oil recommended by KOBELCO.
- *Nominal dimensions and Nominal weight in brackets [] are for 3000/3300 •6000/6600V specification.
- *Air produced by these compressors should not be used in respiratory equipment furnishing air for direct inhalation.
- *Appearance and specifications are subject to change without notice. *Consult us individually, regarding guaranteed performance values.

Specifications

ALE SERIES

Discharge pressure 0.7MPa

Water-Cooled Models

■Compressor only

Item	Model	ALE180WⅢ-5/6	ALE200WⅢ-5/6	ALE220WⅢ-5/6	ALE250WⅢ-5/6	ALE270WⅢ-5/6		
	Hz	ALL TOUVE 0/0	ALLEGOVVIII 0/0	50/60	ALLEOUVVIII 0/0	ALLETOWN B 070		
Frequency		33.6/33.9	37.4/37.4	22,22	45.0/45.0	49.2/49.3		
Discharge air		33.6/33.9	37.4/37.4	39.7/39.7	45.0/45.0	49.2/49.3		
Suction conditions	Pressure			Atmospheric pressure				
conditions	Temperature °C			0~45				
Discharge condition	Pressure (gauge pressure)			0.7 *Available pressure 0.75				
Compressor sh	naft input power kW	184.8/184.0	206.0/205.9	226.4/225.7	257.5/257.4	276.5/278.1		
	Nominal output kW	180	200	220	250	270		
Compressor	Voltage V		3,000 [380·400·415] (6,000)/3,300 [440] (6,600)					
motor	Starting system	Reactor with separate starter panel						
ţ	Specification	2	-pole totally enclosed fan-coc	led (air cooled), insulation cla	ss F, rated for continuous use			
Drive system				Gear				
Discharge pip	oe diameter A	JIS10k-65A RF	JIS10k—80A RF					
	Quality			Industrial water				
Cooling water	Quantity L/min	295	325	360	410	440		
wator	Head m			Minimum 15, maximum 60				
Cooling water	r pipe diameter A	JIS10k-50A RF		JIS10k-	-65A RF			
Initial lubrica	nt charge L	35		7	0			
Nominal dimer	nsions (WXDXH)mm	2,700×1,565×1,850		2,700×1,5	65×2,133			
Nominal weig	jht kg	5,010 [4,510] 《5,010》	6,530 [5,930] 《6,630》	6,110 [5,910] 《6,210》	6,160 [5,960] 《6,260》	6,310 [6,110] 《6,410》		
Noise (at fror	nt) dB(A)	6	9	7	0	71		
Oil pump out	put kW			1.5				

Item	Model	ALE305WⅢ-5/6	ALE340WⅢ-5/6	ALE370WⅢ-5/6				
Frequency	Hz		50/60					
Discharge air	volume m³/min	56.9	63.5/63.6	69.0/69.1				
Suction Pressure		Atmospheric pressure						
conditions	Temperature ℃		0~45					
Discharge condition	Pressure (gauge pressure) MPa		0.69					
Compressor shaft input power kW		304.1/304.4	338.8/339.0	367.8/368.4				
	Nominal output kW	305	340	370				
	Voltage V	380 • 415 • 3,000 《6,000》 /3,000 《6,600》						
1110101	Starting system	Reactor with separate starter panel						
	Specification	4-pole totally enclosed fan-cooled (air cooled), insulation class F, rated for continuous use						
Drive system		Gear						
Discharge pip	e diameter A	JIS10k—100A RF						
	Quality		Industrial water					
Cooling water	Quantity L/min	570	620	670				
	Head m	Minimum 15, maximum 60						
Cooling wate	r pipe diameter A	JIS10k—80A RF						
Initial lubrica	nt charge L	100						
Nominal dimer	sions (W×D×H)mm		3,500×2,000×2,400					
Nominal weig	ht kg	7,710 《8,660》	7,910 《8,760》	8,210 《8,910》				
Noise (at fron	t) dB(A)		75					
Oil pump out	out kW		2.2					

*Discharge air volumes is converted to compressor suction condition(30°C).

*Discharge pressures are measured after the check valve. *Service factor(SF) of Main Motor is 1.1.

*Noise values are measured in an anechoic chamber at a height of 1 meter and a distance of 1.5m from the front of the unit and at full load.

*Since the cooling for the compressed air & the inside of the compressor unit depends on the surrounding air condition,

the surrounding air must be properly ventilated to prevent the ambient temperature from rising above 45°C.

*Cooling water temperature should not exceed 35°C.
*Please be sure to use the lubricating oil recommended by KOBELCO.

*Nominal weight in brackets [] are for 380 • 400 • 415 • 440 V and brackets () are for 6000 • 6600 V specification.

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

*Appearance and specifications are subject to change without notice.
*Consult us individually, regarding guaranteed performance values.

ALE SERIES

Discharge pressure 0.88MPa

Water-Cooled Models

Compressor only

Compress	our only								
Item	Model	ALE55WⅢ-5/6	ALE65WⅢ-5/6	ALE75WⅢ-5/6					
Frequency	Hz		50/60						
Discharge air	volume m³/min	7.7/7.8	9.3/9.3	10.5/10.6					
Suction Pressure		Atmospheric pressure							
conditions	Temperature ℃		0~45						
Discharge condition	Pressure (gauge pressure) MPa		0.88 Available pressure 0.93						
Compressor sh	aft input power kW	53.8/53.8	65.6/64.7	73.4/74.0					
	Nominal output kW	55	65	75					
Compressor	Voltage V	200/200•220 [380•400•415/400•440]							
motor	Starting system	Star Delta							
	Specification	2-pole totally enclosed fan-cooled (air cooled), insulation class F, rated for continuous use							
Drive system		Gear							
Discharge pip	oe diameter A	JIS10k—50A RF							
	Quality	Industrial water							
Cooling water	Quantity L/min	80	95	107					
	Head m	Minimum 15, maximum 60							
Cooling water	r pipe diameter A	JIS10k—32A RF							
Initial lubrica	nt charge L	20							
Nominal dimer	nsions (WXDXH)mm	1,780×1,170×1,680							
Nominal weig	ıht kg	1,980	2,110	2,100					
Noise (at from	t) dB(A)	65	66	67					
Oil pump out	put kW	_	0.75						

Item Model		ALE90WⅢ-5/6H	ALE110WⅢ-5/6H	ALE120WⅢ-5/6H	ALE145WⅢ-5/6H				
Frequency	Hz		50/60						
Discharge air volume m³/min		13.8/14.0	17.0/17.1	18.0/18.2	23.6/23.6				
Suction Pressure			Atmospheric pressure						
conditions	Temperature ℃		0~45						
Discharge condition	Pressure (gauge pressure) MPa		0.88 *Availabl	le pressure 0.93					
Compressor shaft input power kW		87.6/88.4	111.2/111.3	118.9/119.7	149.2/149.2				
Nominal output kW		90	110	120	145				
Compressor	Voltage V	200/200 • 220 [380 • 400 • 415/400 • 440]	380.400.4	15/400•440	3,000 [400] (6,000)/3,000 [440] (6,600)				
motor	Starting system		Reactor with separate starter panel						
	Specification	2-pole totally enclosed fan-cooled (air cooled), insulation class F, rated for continuous use							
Drive system		Gear							
Discharge pip	oe diameter A		JIS10k—65A RF						
	Quality	Industrial water							
Cooling water	Quantity L/min	132	160	172	250				
	Head m		maximum 60						
Cooling water	r pipe diameter A	JIS10k—40A RF JIS10k—50A RF							
Initial lubrica	nt charge L	35							
Nominal dimensions (WXDXH) mm			2,200×1,335×1,887		2,700×1,565×1,850				
Nominal weight kg		2,770	2,910	2,950	4,890 [4,290] 《4,890》				
Noise (at front) dB(A)		67	68	69	70				
Oil pump out	put kW		0.75		1.5				

- *Discharge air volumes is converted to compressor suction condition(30°C).
 *Discharge pressures are measured after the check valve.
- *Service factor(SF) of Main Motor is 1.1.
- *Noise values are measured in an anechoic chamber at a height of 1 meter and a distance of 1.5m from the front of the unit and at full load.
- *Since the cooling for the compressed air & the inside of the compressor unit depends on the surrounding air condition, the surrounding air must be properly ventilated to prevent the ambient temperature from rising above 45°C.

 *Cooling water temperature should not exceed 35°C.

- *Cooling water temperature should not exceed 35 C.

 *Please be sure to use the lubricating oil recommended by KOBELCO.

 *Nominal weight in brackets [] are for 400 440 V and brackets () are for 6000 6600 V specification.

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

 *Appearance and specifications are subject to change without notice.
- *Consult us individually, regarding guaranteed performance values.

Specifications

ALE SERIES

Discharge pressure 0.88MPa

Water-Cooled Models

■Compressor only

Item	Model	ALE160WⅢ-5/6H	ALE180WⅢ-5/6H	ALE220WⅢ-5/6H	ALE250WⅢ-5/6H			
Frequency	Hz	50/60						
Discharge air	volume m³/min	25.8/26.2	29.6/29.5	35.6/35.8	39.7/39.9			
Suction Pressure			Atmospheric pressure					
conditions	Temperature °C	0~45						
Discharge condition	Pressure (gauge pressure) MPa		0.88 %Availabl	e pressure 0.93				
Compressor shaft input power kW		164.5/164.8	184.4/185.2	226.6/226.6	254.8/255.0			
Nominal output		160	180	220	250			
Compressor	Voltage V	3,000[380·400·415] (6,000)/3,300[440] (6,600)						
motor	Starting system	Reactor with separate starter panel						
	Specification	2-pole totally enclosed fan-cooled (air cooled), insulation class F, rated for continuous use						
Drive system		Gear						
Discharge pip	oe diameter A	JIS10k-	-65A RF	JIS10k—80A RF				
	Quality	Industrial water						
Cooling water	Quantity L/min	265	295	360	410			
	Head m		Minimum 15,	maximum 60				
Cooling wate	r pipe diameter A	JIS10k-	-50A RF	JIS10k—65A RF				
Initial lubrica	nt charge L	3	35	70				
Nominal dimer	nsions (WXDXH)mm	2,700×1,5	565×1,850	2,700×1,565×2,133				
Nominal weig	jht kg	5,040 [4,440] 《4,940》	5,010 [4,510] 《5,010》	6,110 [5,910] 《6,210》				
Noise (at fron	nt) dB(A)	7	'1	72				
Oil pump out	put kW		1.5					

Item	Model	ALE270WⅢ-5/6H	ALE290WⅢ-5/6H	ALE370WⅢ-5/6E	ALE400WⅢ-5/6E		
Frequency	Hz	50/60					
Discharge air	volume m³/min	41.9/42.5	45.3/46.0	56.8	63.4/63.5		
Suction conditions Pressure Temperature °C			Atmospher	ic pressure			
		0~45					
Discharge condition Pressure (gauge pressure) MPa		0.88 *Availab	le pressure 0.93	0.9	93		
Compressor shaft input power kW		275.4/275.5	297.6/297.2	357.7/357.4	396.3/397.1		
Nominal output kW		270	290	370	400		
	Voltage V	3,000 [380 • 400 • 415] 《6,000》/3,300 [440] 《6,600》		3,000 [380•415] 《6,0	000》/3,300《6,600》		
Compressor motor	Starting system		Reactor with sepa	arate starter panel			
	Specification	2-pole totally enclosed insulation class F, rat	fan-cooled (air cooled), ed for continuous use	4-pole totally enclosed fan-cooled (air cooled), insulation class F, rated for continuous use			
Drive system		Gear					
Discharge pip	oe diameter A	JIS10k-	-80A RF	JIS10k—	100A RF		
	Quality	Industrial water					
Cooling water	Quantity L/min	440	475	670	720		
	Head m	Minimum 15,		5, maximum 60			
Cooling water	r pipe diameter A	JIS10k—65A RF		JIS10k—80A RF			
Initial lubrica	nt charge L	70		100			
Nominal dimensions (WXDXH)mm		2,700×1,5	2,700×1,565×2,133		00×2,400		
Nominal weig	ıht kg	6,210 [6,310] 《6,310》	6,460 [6,160] 《6,460》	8,210[8,210] 《8,900》 8,510[8,510] 《8,91			
Noise (at fron	nt) dB(A)	7	'3	75			
Oil pump out	put kW	1	.5	2.2			

- *Discharge air volumes is converted to compressor suction condition(30°C).
- *Discharge pressures are measured after the check valve.

 *Service factor(SF) of Main Motor is 1.1.
- *Noise values are measured in an anechoic chamber at a height of 1 meter and a distance of 1.5m from the front of the unit and at full load.
- *Since the cooling for the compressed air & the inside of the compressor unit depends on the surrounding air condition, the surrounding air must be properly ventilated to prevent the ambient temperature from rising above 45°C.

 *Cooling water temperature should not exceed 35°C.

- *Please be sure to use the lubricating oil recommended by KOBELCO.
- *Nominal weight in brackets [] are for 380 \cdot 400 \cdot 415 \cdot 440V and brackets () are for 6000 \cdot 6600V specification.
- *Air produced by these compressors should not be used in respiratory equipment furnishing air for direct inhalation.
 *Appearance and specifications are subject to change without notice.
- *Consult us individually, regarding guaranteed performance values.

ALE SERIES

Water-Cooled Models

■Compressor only

_	Jor only								
Item	Model	ALE55WⅢ-5/6EX	ALE75WⅢ-5/6EX	ALE100WⅢ-5/6EX	ALE120WⅢ-5/6EX				
Frequency	Hz		50/60						
Discharge air	volume m³/min	7.2/7.3	9.2/9.2	13.8/13.9	15.9/15.9				
Suction Pressure		Atmospheric pressure							
conditions	Temperature °C		0~45						
Discharge condition	Pressure (gauge pressure) MPa		1.0 %Available	pressure 1.03					
Compressor shaft input power kW		54.4/55.1	69.8/69.0	94.4/94.9	109.6/109.8				
Nominal output kW		55	75	100	120				
Compressor	Voltage V	:	200/200•220 [380•400•415/400•440]		380 • 400 • 415/400 • 440				
motor	Starting system	Star Delta							
	Specification	2-pole to	otally enclosed fan-cooled (air cooled), insulation class F, rated for continuo	ous use				
Drive system		Gear							
Discharge pip	oe diameter A	JIS10k—50A RF							
	Quality		Industrial water						
Cooling water	Quantity L/min	80	107	144	172				
	Head m		Minimum 15,	maximum 60					
Cooling wate	r pipe diameter A	JIS10k-	-32A RF	JIS10k—40A RF					
Initial lubrica	nt charge L	2	0	35					
Nominal dimensions (WXDXH)mm		1,780×1,1	70×1,680	2,200×1,335×1,887					
Nominal weight kg		2,770	2,780	2,790	2,950				
Noise (at fror	nt) dB(A)	67	68	70	71				
Oil pump out	put kW		0.	75					

Item	Model	ALE160WⅢ-5/6EX	ALE180WⅢ-5/6EX	ALE250WIII-5/6EX	50WII-5/6EX ALE270WIII-5/6EX ALE290WIII-5/6EX			
Frequency	Hz			50/60				
Discharge air	volume m³/min	23.6/23.5	26.3/26.2	35.7/35.8	39.6/39.8	41.9/42.5		
Suction	Pressure	Atmospheric pressure						
conditions	Temperature °C			0~45				
Discharge condition	Pressure (gauge pressure) MPa			1.0 *Available pressure 1.03				
Compressor sh	naft input power kW	161.7/161.8	177.4/178.0	245.9/244.5	276.5/276.4	298.7/298.1		
Nominal output kW		160	180	250	270	290		
Compressor	Voltage V	3,000 [380 • 415 • 400] (6,000) /3,300 [440] (6,600)						
motor	Starting system	Reactor with separate starter panel						
	Specification	2-pole totally enclosed fan-cooled (air cooled), insulation class F, rated for continuous use						
Drive system		Gear						
Discharge pip	oe diameter A	JIS10k—65A RF JIS10k—80A RF						
	Quality	Industrial water						
Cooling water	Quantity L/min	265	295	410	440	475		
	Head m			Minimum 15, maximum 60				
Cooling wate	r pipe diameter A	JIS10k-	JIS10k—50A RF		JIS10k—65A RF			
Initial lubrica	nt charge L	35		70				
Nominal dimer	nsions (WXDXH)mm	2,700×1,5	665×1,850	2,700×1,565×2,133				
Nominal weig	ıht kg	5,040 [4,440] 《4,940》	5,010 [4,510] 《5,010》	6,110 [5,910] 《6,210》	6,210 [6,010] 《6,310》	6,460 [6,160] 《6,460》		
Noise (at from	nt) dB(A)	7	3	74 75				
Oil pump out	put kW			1.5				

- *Discharge air volumes is converted to compressor suction condition(30°C).
- *Discharge pressures are measured after the check valve.
- *Service factor(SF) of Main Motor is 1.1.
- *Noise values are measured in an anechoic chamber at a height of 1 meter and a distance of 1.5m from the front of the unit and at full load.
- *Since the cooling for the compressed air & the inside of the compressor unit depends on the surrounding air condition,
- the surrounding air must be properly ventilated to prevent the ambient temperature from rising above 45°C.
- *Cooling water temperature should not exceed 35°C.
- *Please be sure to use the lubricating oil recommended by KOBELCO.
- *Nominal weight in brackets [] are for 380 \cdot 415 \cdot 400V and brackets () are for 6000 \cdot 6600V specification.
- *Air produced by these compressors should not be used in respiratory equipment furnishing air for direct inhalation.
- *Appearance and specifications are subject to change without notice.
- *Consult us individually, regarding guaranteed performance values.

Notes on Installation

Location to avoid when installing the compressor

- 1. Location that is exposed to rain for indoor-use models
- 2. Uneven location or location with many vibrations
- 3. Location at high temperature and humidity Since the unit is cooled using ambient air, the ambient temperature must not exceed 40°C for FE and 45°C for ALE, with sufficient ventilation provided for the operation of the units.
- 4. Location with much dust or poisonous gas

In tightly-closed rooms

- 1. Be sure to use the suction port, exhaust port, ventilating fan, or exhaust duct to provide sufficient ventilation in tightly-closed rooms.
- 2. Note that the compressor unit may come to an abnormal stop when the room temperature reaches 40°C for FE and 45°C for ALE.

Ventilating method and fan air flow rate

ole ventilating method	Wh	Exhaust d	uct method	Exhaust duct + ver	ntilating fan method
Exhaust	Ventilating method	Exhaust		The duct shall not block the dryer exhaust port. Suction	
ess ventilation air quantity (m³/min)	Generated heat (MJ/h) Compressor Proc	Process ventilation	air quantity (m³/min)	Process ventilation	air quantity (m³/min)
pressor only With integrated dryer	Compressor only With integrated exhaust air quantity	Compressor only	With integrated dryer	Compressor only	With integrated drye
225 245	Complessor only dryer (m³/min) d	22	42	90	107
315 351	AII 81 88 65 65 65 65	30	69	100	134
380 435	АШ 113 127 65 АШ 137 157 80	40	92	120	172
425 479	AII 153 173 80	45	97	125	177
490 546	AII 177 197 110	50	103	160	213
590 666	АШ 213 240 110	60	134	170	244
321 –)II 232 — 200	-	154	200	_
376 —)II 271 — 200			200	
431 –)III 311 — 200	_		200	
510 —)III 368 — 300	_		300	
565 —	H)II 407 — 300				
255 278	HAII 93 100 65	25	46	300	111
315 354	HAII 114 128 65	30	69	100	134
395 449	HAII 142 162 80	40	94	120	174
490 546	HAII 177 197 80	50	103	130	183
555 607	HAII 199 219 110	55	110	165	220
t a ventilating fan at the high on of a wall on the compressor st port and provide a suction port at the osition of a wall on the suction elocity shall be 2 m/s or less in bening area of the air suction	positic exhau side, a low p side. The v	Calculate the pressure loss (resistance) of the exhaust duct, based on the exhaust quantity of the compressor. If FE is 5 mm H ₂ O or less and if ALE is 2 mm H ₂ O or less, then a connection can be made directly to the exhaust port of the compressor. Make use of the ducting marks on the upper cover of the compressor, when connecting the exhaust duct. Further, ensure that the exhaust duct is removable. Since the room temperature rises even when a duct is directly attached, install the ventilating fan described above. The mounting method for the ventilating fan and the suction port are the same as for the entire ventilation method.		If the pressure loss (resistance) of the exhaust duct is 5 mm H ₂ O or more for FE and 2 mm H ₂ O or more for ALE, then install a ventilating fan inside the duct to secure the above fan air flow, with consideration for pressure losses. In such cases, ensure that the gap between the inlet of the exhaust duct and the exhaust port of the compressor, H, is 300 to 400 mm for FE and 200 to 300 mm for ALE. Be sure to operate the ventilating fan while the compressor is in operation and stop the ventilating fan when the compressor is stopped. Ensure that the velocity of air flow through the opening area of the air suction port is 2 m / sec. or less.	
_	<u> </u>		connecting the exh ensure that the exh removable. Since t temperature rises e directly attached, is ventilating fan des mounting method if an and the suction as for the entire ve Ensure that the vel through the openin	connecting the exhaust duct. Further, ensure that the exhaust duct is removable. Since the room temperature rises even when a duct is directly attached, install the ventilating fan described above. The mounting method for the ventilating fan and the suction port are the same	connecting the exhaust duct. Further, ensure that the exhaust duct is removable. Since the room temperature rises even when a duct is directly attached, install the ventilating fan described above. The mounting method for the ventilating fan and the suction port are the same as for the entire ventilation method. Ensure that the velocity of air flow through the opening area of the air

- ·A noise may be heard outside through the duct depending on the location of the opening of the exhaust duct.
- ·Do not mount the dryer in the exhaust section of the dryer.
- The functionality of the dryer is deteriorated.
- 'The above indicated exhaust air flow rates are for reference only. Figures may vary, depending on the various conditions
- of the environment in which the installation is made.

How to obtain the required quantity of ventilation

> $n \times H \times 1000$ $1.2 \times \triangle T \times 60$

- H: Generating heat value per unit MJ/h
 - : Number of installation units △T: Permissible temperature rise t1—t0
 - t1: Permissible room temperature (°C) t0: Open-air temperature (°C)

for FE and $_{t}$ = 10°C for ALE. For room temperature (t1), use 40°C for FE and 45°C for ALE. 1kcal/h=0.004186MJ/h

Precaution for IE3 motor

When you adopt IE3 compressor, replace the motor, or conduct maintenance activity, please make sure to follow the below points.

IE3 motors have following attributes.

- It is possible that the size and volume of IE3 motor is bigger than a conventional motor.
- Replacing the motor of existing compressor to IE3motor might requires extra work or modification. ● The motor might not fit in the package. ● In order to adjust the rotational speed, extra parts might be required.
- 2 Rated speed of IE3 motor is likely to be increased.

Therefore, suitability of the size of circuit breaker might need to be considered. When you replace conventional motor, Start-up current tends to be increased.

When replacing the existing compressors to IE3 compressors, please confirm the breaker size recommended by the manufacturer.

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Kobelco filters

Optimum quality clean air, suitable for specific applications, is supplied

If you need to remove water, dust and particle from Emeraude discharged air, KOBELCO filter can be utilized. You can choose the combination as per required clean grade.



Filter used	Application	Effects
Oil-free dry air	General applications Protection of main pipes from contamination, removal of larger solid contaminants, removal of particulates in dryer system, large air pressure tool, automation of equipment, etc.	Removal of moisture and oil
Oil-free dry air	Paint applications and precision facilities Robotics, precision air pressure tools, instruments, spray painting, air transport, air bearing, air motor, etc.	Removal of moisture and oil
Oil-free dry air	Food, pharmaceutical and electronics industries High quality clean air, plastic molding, film processing, as well as the manufacture of sophisticated instruments, precision air compressors, cosmetic products, food products, dairy products, etc.	Filtration of odors (oil mist and hydro carbons) *Carbon monoxide, carbon dioxide and methane cannot be removed.

* Above example is for an air temperature of 21°C

Item		370	660	960	1320	1980	2580
Processed air quantity	m³/min	3.7	6.6	9.6	13.2	19.8	25.8
Connector diameter	Inch	1	1 • 1/2	2	2	2	2 • 1/2
Dortioulate size		1 μm 0.5PPM					
KA grade (oil removal filter) Particulate size Maximum oil residue		0.01μm 0.01PPM					
KCS grade (activated charcoal odor filter)	0.003PPM						
Applicable compressor			FE480 FE540 FE640	VF640 VF790 FE770 ALE55	ALE65 ALE75	ALE90 ALE100	ALE120 ALE132
	Processed air quantity Connector diameter KO grade (universal filter) KA grade (oil removal filter) KCS grade (activated charcoal odor filter)	Processed air quantity m³/min Connector diameter Inch KO grade (universal filter) Particulate size Maximum oil residue KA grade (oil removal filter) Particulate size Maximum oil residue KCS grade (activated charcoal odor filter) Maximum oil residue	Processed air quantity m³/min 3.7 Connector diameter Inch 1 KO grade (universal filter) Particulate size Maximum oil residue KA grade (oil removal filter) Particulate size Maximum oil residue KCS grade (activated charcoal odor filter) Maximum oil residue	Processed air quantity m³/min 3.7 6.6 Connector diameter Inch 1 1 1.1/2 KO grade (universal filter) Particulate size Maximum oil residue KA grade (oil removal filter) Particulate size Maximum oil residue KCS grade (activated charcoal odor filter) Maximum oil residue FE200 FE370 FE540	Processed air quantity m³/min 3.7 6.6 9.6 Connector diameter Inch 1 1 ⋅ 1/2 2 KO grade (universal filter) Particulate size Maximum oil residue 0.5 KA grade (oil removal filter) Particulate size Maximum oil residue 0.0° KCS grade (activated charcoal odor filter) Maximum oil residue 0.0° FE200 FE370 FE480 FE540 FE770 FE540 FE770	Processed air quantity m³/min 3.7 6.6 9.6 13.2	Processed air quantity m³/min 3.7 6.6 9.6 13.2 19.8

^{*} The intake air quantity has a value for intake pressure of 0.69 MPa. Please contact Kobelco for other pressures

Modbus Module

Filter specification table

Collective management of compressors with remote surveillance.

Kobelco air compressor monitoring system

Modbus Module realize remote operation and control (start/stop load/un-load) receiving pressure, temperature, current data via Modbus protocol.

Real-time monitoring from office can save your manpower and ease to make swift action for incident.



Econo Mild II (Group Control Panel)

When using multiple compressors, the system ensures efficient energy-saving control.

- ■The system automatically selects and controls the optimum number of units in accordance with airflow needs.
- ■Two to six compressors can be connected to the system.
- ■The system supports multiple-unit operation including a Kobelco inverter-equipped compressor.



Operability is enhanced by a touch panel color LCD monitor

- An easy-to-view and easy-to-use, touch panel full color LCD monitor is included.
- Just touch the screen to select the number of units and make settings.
- **■** Fault history monitaring system installed





Previously optional features are included as standard

The following previously optional four features are included as standard.

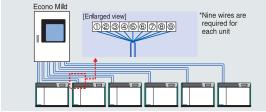
- Momentary interruption protection (within 0.5 second), automatic recovery from power failure
- Timer to switch from the first to the second compressor Weekly timer
- Support for multiple-unit operation including an inverter compressor

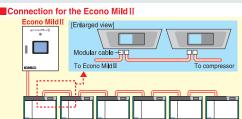
KOBELCO

Easy connection with a modular cable

The Econo Mild II and compressors can be connected with a modular cable. The compressors can be connected with each other in a multi-drop configuration.

*Units without a new monitor or conventional units must be connected with a plug.

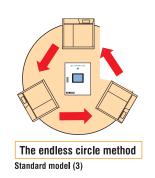


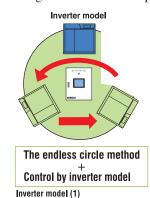


Precise control for different model types

When using standard models, the endless circle method is used to balance operating hours and numbers of compressor starts for all models.

When using inverter models, units are operated for load control, to achieve ideal working conditions in air consumption maintaining a stable level of air pressure.

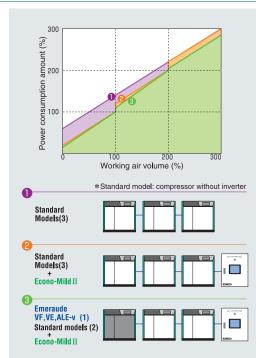




Standard model (2)

Optimum control for all combinations

Support for standard model (Kobelco compressors without inverter) only, a combination of standard model and a Kobelco inverter model, and Kobelco inverter model only.



 $_3$

The strong partnership with our customers is producing fruitful results throughout the world.

Kobelco compressor sales and production locations are based in the regions of Asia and North America, in response to expanding demand overseas.

Domestically Kobelco responds to customer requirements in a meticulous manner through sales offices and service centers nationwide, which provide support for customers in a coordinated manner, covering all their needs ranging from daily support work to proposals for the implementation of new technologies.



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