Standard AC Motors

High Efficiency Three-Phase Induction Motors KⅡS Series

High Efficiency Three-Phase Induction Motors
KIIS Series

● For detailed information about regulations and standards, please see the Oriental Motor website.

- A review of the basic motor design has yielded unprecedented high efficiency and energy savings.
- Highest standard three-phase high efficiency motor which demonstrates the optimal characteristics when combined with an inverter.

See Full Product Details Online
www.orientalmotor.com

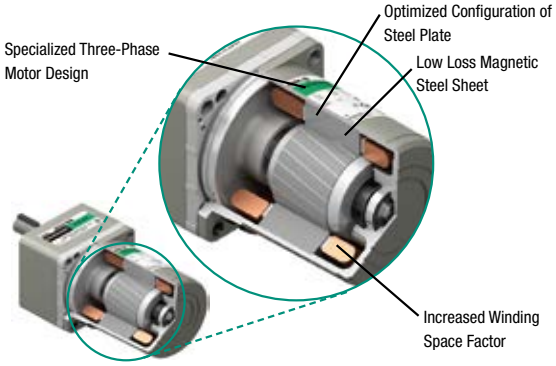
● Manual ● Specifications ● Dimensions
● CAD ● Characteristics ● Connection and Operation

Features

High Efficiency Three-Phase Motors through Optimal Design

●High Efficiency at a Maximum of 74%

Specialized components and an optimal magnetic design are used to make high efficiency three-phase motors with a maximum efficiency of 74%. Motors are fanless with increased motor torque.



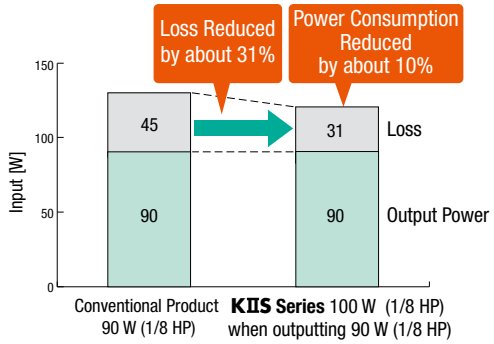
● Comparison of Maximum Efficiency (Reference values)

	60 W (1/12 HP) (60 Hz)	100 W (1/8 HP)* (60 Hz)
KIIS Series	69.8%	74.1%
Conventional Product	60.5%	64.7%

*Conventional product values are for 90 W (1/8 HP)

●Power Consumption Reduced by up to 10%

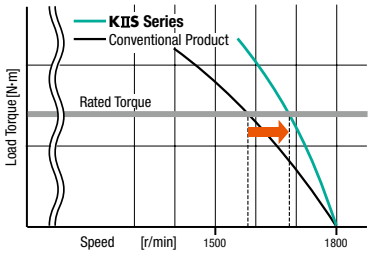
Compared to a conventional 90 W (1/8 HP) motor under the same conditions, power consumption is reduced by a maximum of about 10%, contributing to the equipment's energy savings.



●High Performance

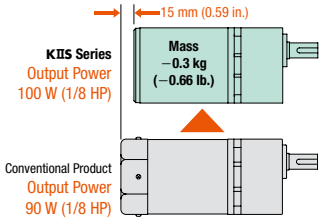
Characteristics have been improved through pursuit of the specifications required for the three-phase motor and a review of the design to create a high-performance motor with little speed reduction even with a large load.

● Changes in Speed according to Load



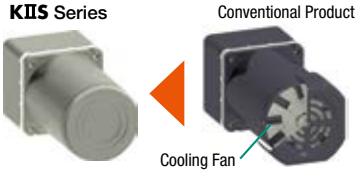
●Increased Motor Output Power

Output power of 100 W (1/8 HP) in a 90 mm (3.54 in.) frame size is achieved through increased efficiency. An overall length 15 mm (0.59 in.) shorter than the conventional motor contributes to equipment downsizing.



●Fanless

With reduced loss, there is less heat generation in the motor, so the cooling fan that was incorporated into the conventional 60 W (1/12 HP) min. products is no longer included.



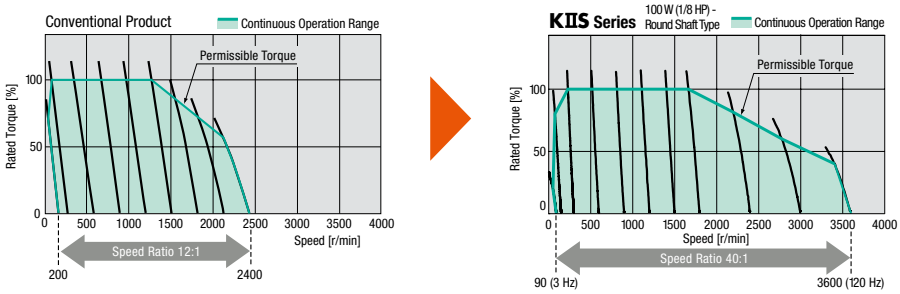
•No Dust, etc.

With no cooling fan, dust is not blown around.

Best Characteristics Achieved when Combined with an Inverter

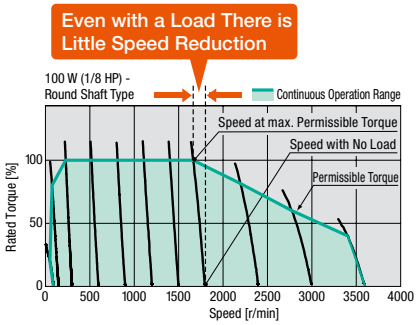
●Wide Range of Speeds

Speed can be controlled over a wide range using an inverter, from 3~120 Hz. Also, with improved characteristics, high torque can be exerted even at low speeds.



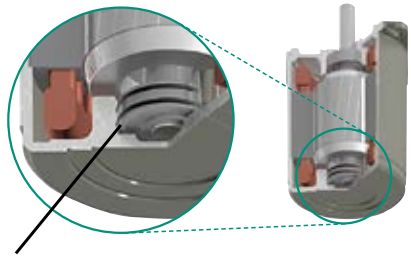
●Improved Speed Stability

Because it is a high-performance motor with little speed reduction even with a large load, stabilized speed control is possible.



●Handles High-Speed Rotation (Round shaft type)

Creep-free bearings, etc. are used in the round shaft type, and components capable of handling high-speed rotation have been selected and designed for inverter control.

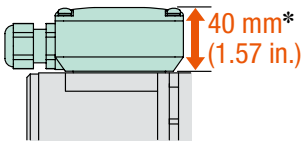


Uses Creep-Free Bearings
(Round shaft type only)

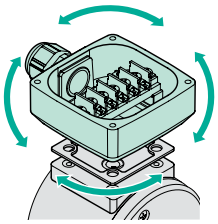
Slim Body Terminal Box (Terminal box type)

●Equipped with an Easy-to-Wire Slim Body Terminal Box

This new shape of terminal box is designed to make wiring the terminal block easier.
It has a slim body, with a cable outlet that can be rotated in 90° increments for 4 possible directions.



*The round shaft type is 46 mm (1.81 in.).



●IP66-Compliant Drip-Proof Specification

The seal structure for the motor, gearhead and terminal box components has been strengthened. The terminal box type* is compliant with the IP66 degree of protection.

*Excluding installation surface of round shaft type

IP66:
The IP indication that shows the watertight and dust-resistant performance are specified under IEC 60529 and IEC 60034-5.

Main Specifications

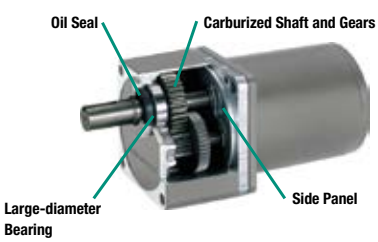
- Material
  - Case and terminal box: Aluminum
  - Output shaft: S45C
  - Screws: Stainless steel (externally facing screws only)
- Surface Treatment
  - Case and terminal box: Painted (excluding installation surface)

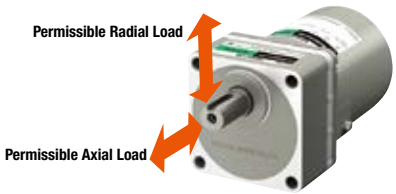
High-Strength Gearhead

Uses a gearhead that excels in both torque and strength.

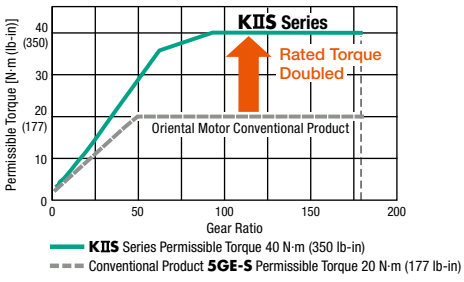
Parallel Shaft Combination Type

●Internal Gearhead Structure





Permissible Radial Load 500 N (112 lb.)
(10 mm (0.39 in.) from the end of the output shaft)
Permissible Axial Load 150 N (33 lb.)



Product Line

Induction Motors

Series	Voltage (VAC)	Type	Motor Frame Size, Output Power □90 mm (□3.54 in.)	
			60 W (1/12 HP)	100 W (1/8 HP)
KIIS Series Parallel Shaft Combination Type Round Shaft Type	Three-Phase 220/230	Terminal Box Type	●	●
		Lead Wire	●	●

Electromagnetic Brake Motors

Series	Voltage (VAC)	Type	Motor Frame Size, Output Power □90 mm (□3.54 in.)	
			60 W (1/12 HP)	100 W (1/8 HP)
KIIS Series Parallel Shaft Combination Type Round Shaft Type	Three-Phase 220/230	Terminal Box Type	●	●
		Cable	●	●

System Configuration

KIIS Series

AC Power Supply (Main power supply)

Accessories (Sold separately)

Flexible Couplings

Mounting Brackets

CR Circuit for Surge Suppression

●Example of System Configuration

Induction Motor	+	Sold Separately		
		Mounting Bracket	Flexible Coupling	CR Circuit for Surge Suppression
5IK60VEST2-25A		**SOL5UBF**	**MCL5518F12**	**EPCR1201-2**
$261.00		$29.00	$97.00	$5.00

● The system configuration shown above is an example. Other combinations are also available.

Product Number

Parallel Shaft Combination Type

5 I K 100 V ES M T2 - 15 A

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

Round Shaft Type

5 I K 100 V A - ES T2

① ② ③ ④ ⑤ ⑨ ⑥ ⑧

①	Motor Frame Size	**5**: 90 mm (3.54 in.)
②	Product Name	**I**: Induction Motor
③	Series	**K**: **KII** Series
④	Output Power (W)	(Example) **100**: 100 W (1/8 HP)
⑤	**V**: Three-Phase High Efficiency Motor	
⑥	Power Supply Voltage/Number of Poles	**ES**: Three-Phase 220/230 VAC 4-Pole
⑦	**M**: Power Off Activated Electromagnetic Brake Type	
⑧	**T2**: Terminal Box Type Blank: Lead Wire Type or Cable Type	
⑨	Gear Ratio and Shaft Configuration	Number: Gear Ratio for Gearhead **A**: Round Shaft Type
⑩	**A**: Imperial	

General Specifications

Item	Specifications
Insulation Resistance	100 MΩ or more when a 500 VDC megger is applied between the motor windings and the case after continuous operation under normal ambient temperature and humidity.
Dielectric Voltage	Sufficient to withstand 1.5 kVAC at 50 Hz or 60 Hz applied between the motor windings and the case for 1 minute after continuous operation under normal ambient temperature and humidity.
Temperature Rise	A gearhead or equivalent heat sink (200 × 200 mm (7.87 × 7.87 in.), 5 mm (0.20 in.) thick, material: aluminum) is connected to the motor and the winding temperature rise is measured at 80°C (144°F) or less using the resistance change method after rated load continuous operation under normal ambient temperature and humidity.
Thermal Class	130 (B)
Operating Ambient Temperature	−10～+40°C (+14～+104°F) (non-freezing)
Operating Ambient Humidity	85% or less (non-condensing)
Degree of Protection	Terminal Box Type: IP66 (Except for installation surface of round shaft type) Refer to page E-23 for the materials and surface treatments. Lead Wire Type: IP20 Cable Type: IP40

Note

- No built-in overheat protection device (thermal protector).
  When there is an overload or the output shaft is locked, use the electromagnetic switch and the inverter's electronic thermal function to prevent motor burnout.

Combination Type – List of Combinations

The combination type comes with the motor and parallel shaft gearhead pre-assembled.

Induction Motors

Product Name	Motor Product Name	Gearhead Product Name
5IK60VEST2-□A	5IK60VGVH-EST2	5GVH□A
5IK100VEST2-□A	5IK100VGVR-EST2	5GVR□A
5IK60VES-□A	5IK60VGVH-ES	5GVH□A
5IK100VES-□A	5IK100VGVR-ES	5GVR□A

Electromagnetic Brake Motors

Product Name	Motor Product Name	Gearhead Product Name
5IK60VESMT2-□A	5IK60VGVH-ESMT2	5GVH□A
5IK100VESMT2-□A	5IK100VGVR-ESMT2	5GVR□A
5IK60VESM-□A	5IK60VGVH-ESM	5GVH□A
5IK100VESM-□A	5IK100VGVR-ESM	5GVR□A

Induction Motors

60 W (1/12 HP)

□90 mm (□3.54 in.)

Parallel Shaft Combination Type/Round Shaft Type

Terminal Box Type　Lead Wire Type

Specifications – Continuous Rating

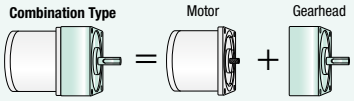
Product Name Upper Level: Combination Type Lower Level: Round Shaft Type		Output		Voltage	Frequency	Current	Starting Torque		Rated Torque		Rated Speed
Terminal Box Type	Lead Wire Type	W	HP	VAC	Hz	A	mN·m	oz-in	mN·m	oz-in	r/min
5IK60VEST2-□A **5IK60VA-EST2**	**5IK60VES-□A** **5IK60VA-ES**	60	1/12	Three-Phase 220	50	0.37	600	85	410	58	1400
					60	0.33	500	71	350	49	1670
		60	1/12	Three-Phase 230	50	0.38	600	85	410	58	1400
					60	0.33	500	71	350	49	1670

- The values in the table are characteristics for the motor only.
- No built-in overheat protection device (thermal protector).
  When there is an overload or the output shaft is locked, use the electromagnetic switch and the inverter's electronic thermal function to prevent motor burnout.
- Use an inverter setting frequency of 120 Hz or less when driving in combination with the inverter.

Product Line

Combination Type

Motor and gearhead are delivered pre-assembled.
The combination of motors and gearheads can be changed and they are also available separately.
In addition, the gearhead can be removed and the assembly position can be changed in 90° increments.



Combination Type with Parallel Shaft

Type	Product Name	Gear Ratio	List Price
Terminal Box Type	**5IK60VEST2-□A**	**5**, **6**, **7.5**, **9**, **12.5**, **15**, **18**	$250.00
		25, **30**, **36**, **50**, **60**, **75**, **90**, **100**	$261.00
		120, **150**, **180**	$271.00
		250, **300**	$305.00
Lead Wire Type	**5IK60VES-□A**	**5**, **6**, **7.5**, **9**, **12.5**, **15**, **18**	$228.00
		25, **30**, **36**, **50**, **60**, **75**, **90**, **100**	$239.00
		120, **150**, **180**	$249.00
		250, **300**	$283.00

The following items are included with each product.
Motor, Gearhead, Installation Screws, Parallel Key, Operating Manual

Round Shaft Type

Type	Product Name	List Price
Terminal Box Type	**5IK60VA-EST2**	$138.00
Lead Wire Type	**5IK60VA-ES**	$116.00

The following items are included with each product.
Motor, Operating Manual

Permissible Torque on Combination Types

50 Hz

Unit: Upper Values: N·m/Lower Values: lb-in

Product Name	Speed r/min	300	250	200	166	120	100	83	60	50	41	30	25	20	16.6	15	12.5	10	8.3	6	5
	Gear Ratio	**5**	**6**	**7.5**	**9**	**12.5**	**15**	**18**	**25**	**30**	**36**	**50**	**60**	**75**	**90**	**100**	**120**	**150**	**180**	**250**	**300**
5IK60VEST2-□A, **5IK60VES-□A**		1.8	2.2	2.8	3.3	4.6	5.5	6.6	8.8	10.6	12.7	17.6	21.2	26.4	30	30	30	30	30	30	30
		15.9	19.4	24	29	40	48	58	77	93	112	155	187	230	260	260	260	260	260	260	260

60 Hz

Unit: Upper Values: N·m/Lower Values: lb-in

Product Name	Speed r/min	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10	7.2	6
	Gear Ratio	**5**	**6**	**7.5**	**9**	**12.5**	**15**	**18**	**25**	**30**	**36**	**50**	**60**	**75**	**90**	**100**	**120**	**150**	**180**	**250**	**300**
5IK60VEST2-□A, **5IK60VES-□A**		1.6	1.9	2.4	2.8	3.9	4.7	5.7	7.5	9.0	10.8	15.1	18.1	22.6	27.1	30	30	30	30	30	30
		14.1	16.8	21	24	34	41	50	66	79	95	133	160	200	230	260	260	260	260	260	260

- The speed is calculated by dividing the motor's synchronous speed (50 Hz: 1500 r/min, 60 Hz: 1800 r/min) by the gear ratio.
  The actual speed is max.10% less, depending on the load.

Permissible Radial Load and Permissible Axial Load

→ Page E-17

- A number indicating the gear ratio is entered where the box □ is located within the product name.

Permissible Inertia J of Combination Types

→ Page E-19

Induction Motors

100 W (1/8 HP)

□90 mm (□3.54 in.)

Parallel Shaft Combination Type/Round Shaft Type

Terminal Box Type　Lead Wire Type

Specifications – Continuous Rating

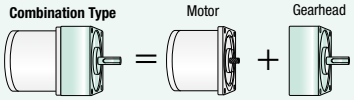
Product Name Upper Level: Combination Type Lower Level: Round Shaft Type		Output		Voltage	Frequency	Current	Starting Torque		Rated Torque		Rated Speed
Terminal Box Type	Lead Wire Type	W	HP	VAC	Hz	A	mN·m	oz-in	mN·m	oz-in	r/min
5IK100VEST2-□A 5IK100VA-EST2	5IK100VES-□A 5IK100VA-ES	100	1/8	Three-Phase 220	50	0.55	850	120	690	97	1400
					60	0.48	700	99	570	80	1680
		100	1/8	Three-Phase 230	50	0.57	850	120	690	97	1400
					60	0.48	700	99	570	80	1680

- The values in the table are characteristics for the motor only.
- No built-in overheat protection device (thermal protector).
  When there is an overload or the output shaft is locked, use the electromagnetic switch and the inverter's electronic thermal function to prevent motor burnout.
- Use an inverter setting frequency of 120 Hz or less when driving in combination with the inverter.

Product Line

Combination Type

Motor and gearhead are delivered pre-assembled.
The combination of motors and gearheads can be changed and they are also available separately.
In addition, the gearhead can be removed and the assembly position can be changed in 90° increments.



Combination Type with Parallel Shaft

Type	Product Name	Gear Ratio	List Price
Terminal Box Type	5IK100VEST2-□A	5, 6, 7.5, 9, 12.5, 15, 18	$269.00
		25, 30, 36, 50, 60	$289.00
		75, 90, 100, 120, 150, 180	$299.00
Lead Wire Type	5IK100VES-□A	5, 6, 7.5, 9, 12.5, 15, 18	$248.00
		25, 30, 36, 50, 60	$268.00
		75, 90, 100, 120, 150, 180	$278.00

The following items are included with each product.
Motor, Gearhead, Installation Screws, Parallel Key, Operating Manual

Round Shaft Type

Type	Product Name	List Price
Terminal Box Type	5IK100VA-EST2	$156.00
Lead Wire Type	5IK100VA-ES	$135.00

The following items are included with each product.
Motor, Operating Manual

Permissible Torque on Combination Types

50 Hz

Unit: Upper Values: N·m/Lower Values: lb-in

Product Name	Speed r/min	300	250	200	166	120	100	83	60	50	41	30	25	20	16.6	15	12.5	10	8.3
	Gear Ratio	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180
5IK100VEST2-□A, 5IK100VES-□A		3.1	3.7	4.7	5.6	7.8	9.3	10.7	14.8	17.8	21.4	29.7	35.6	40	40	40	40	40	40
		27	32	41	49	69	82	94	130	157	189	260	310	350	350	350	350	350	350

60 Hz

Unit: Upper Values: N·m/Lower Values: lb-in

Product Name	Speed r/min	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10
	Gear Ratio	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180
5IK100VEST2-□A, 5IK100VES-□A		2.6	3.1	3.8	4.6	6.4	7.7	8.8	12.3	14.7	17.6	24.5	29.4	34.6	40	40	40	40	40
		23	27	33	40	56	68	77	108	130	155	210	260	300	350	350	350	350	350

- The speed is calculated by dividing the motor's synchronous speed (50 Hz: 1500 r/min, 60 Hz: 1800 r/min) by the gear ratio.
  The actual speed is max.10% less, depending on the load.

Permissible Radial Load and Permissible Axial Load

→ Page E-17

Permissible Inertia J of Combination Types

→ Page E-19

- A number indicating the gear ratio is entered where the box □ is located within the product name.

Electromagnetic Brake Motors

60 W (1/12 HP)

□90 mm (□3.54 in.)

Parallel Shaft Combination Type/Round Shaft Type

Terminal Box Type　　Cable Type

Specifications – Continuous Rating

Product Name Upper Level: Combination Type Lower Level: Round Shaft Type		Output		Voltage	Frequency	Current	Starting Torque		Rated Torque		Rated Speed
Terminal Box Type	Cable Type	W	HP	VAC	Hz	A	mN·m	oz-in	mN·m	oz-in	r/min
5IK60VESMT2-□A 5IK60VA-ESMT2	5IK60VESM-□A 5IK60VA-ESM	60	1/12	Three-Phase 220	50	0.37	600	85	410	58	1400
					60	0.33	500	71	350	49	1670
		60	1/12	Three-Phase 230	50	0.38	600	85	410	58	1400
					60	0.33	500	71	350	49	1670

- The values in the table are characteristics for the motor only.
- No built-in overheat protection device (thermal protector).
  When there is an overload or the output shaft is locked, use the electromagnetic switch and the inverter's electronic thermal function to prevent motor burnout.
- Use an inverter setting frequency of 120 Hz or less when driving in combination with the inverter.

Electromagnetic Brake (Power off activated type)

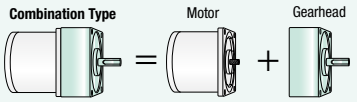
Product Name		Voltage	Frequency	Current	Input	Static Friction Torque	
Terminal Box Type	Cable Type	VAC	Hz	A	W	mN·m	oz-in
5IK60VESMT2-□A 5IK60VA-ESMT2	5IK60VESM-□A 5IK60VA-ESM	Single-Phase 220	50	0.04	6	500	71
			60				
		Single-Phase 230	50	0.04	6	500	71
			60				

- The values in the table are characteristics for the motor only.

Product Line

Combination Type

Motor and gearhead are delivered pre-assembled.
The combination of motors and gearheads can be changed and they are also available separately.
In addition, the gearhead can be removed and the assembly position can be changed in 90° increments.



Combination Type with Parallel Shaft

Type	Product Name	Gear Ratio	List Price
Terminal Box Type	5IK60VESMT2-□A	5, 6, 7.5, 9, 12.5, 15, 18	$384.00
		25, 30, 36, 50, 60, 75, 90, 100	$395.00
		120, 150, 180	$405.00
		250, 300	$439.00
Cable Type	5IK60VESM-□A	5, 6, 7.5, 9, 12.5, 15, 18	$362.00
		25, 30, 36, 50, 60, 75, 90, 100	$373.00
		120, 150, 180	$383.00
		250, 300	$417.00

The following items are included with each product.
Motor, Gearhead, Installation Screws, Parallel Key, Operating Manual

Round Shaft Type

Type	Product Name	List Price
Terminal Box Type	5IK60VA-ESMT2	$272.00
Cable Type	5IK60VA-ESM	$250.00

The following items are included with each product.
Motor, Operating Manual

- A number indicating the gear ratio is entered where the box □ is located within the product name.

Permissible Torque on Combination Types

50 Hz

Unit: Upper Values: N·m/Lower Values: lb-in

Product Name	Speed r/min	300	250	200	166	120	100	83	60	50	41	30	25	20	16.6	15	12.5	10	8.3	6	5
	Gear Ratio	**5**	**6**	**7.5**	**9**	**12.5**	**15**	**18**	**25**	**30**	**36**	**50**	**60**	**75**	**90**	**100**	**120**	**150**	**180**	**250**	**300**
5IK60VESMT2-□A		1.8	2.2	2.8	3.3	4.6	5.5	6.6	8.8	10.6	12.7	17.6	21.2	26.4	30	30	30	30	30	30	30
5IK60VESM-□A		15.9	19.4	24	29	40	48	58	77	93	112	155	187	230	260	260	260	260	260	260	260

60 Hz

Unit: Upper Values: N·m/Lower Values: lb-in

Product Name	Speed r/min	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10	7.2	6
	Gear Ratio	**5**	**6**	**7.5**	**9**	**12.5**	**15**	**18**	**25**	**30**	**36**	**50**	**60**	**75**	**90**	**100**	**120**	**150**	**180**	**250**	**300**
5IK60VESMT2-□A		1.6	1.9	2.4	2.8	3.9	4.7	5.7	7.5	9.0	10.8	15.1	18.1	22.6	27.1	30	30	30	30	30	30
5IK60VESM-□A		14.1	16.8	21	24	34	41	50	66	79	95	133	160	200	230	260	260	260	260	260	260

- The speed is calculated by dividing the motor's synchronous speed (50 Hz: 1500 r/min, 60 Hz: 1800 r/min) by the gear ratio.
  The actual speed is max.10% less, depending on the load.
- A number indicating the gear ratio is entered where the box □ is located within the product name.

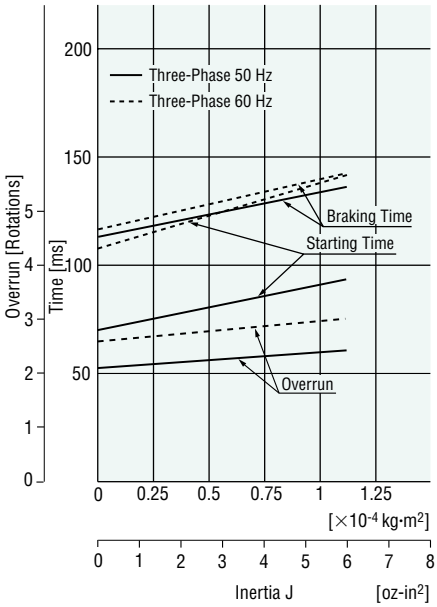
Permissible Radial Load and Permissible Axial Load

→ Page E-17

Permissible Inertia J of Combination Types

→ Page E-19

Starting and Braking Characteristics (Reference values - motor only)



Electromagnetic Brake Motors

100 W (1/8 HP)

□90 mm (□3.54 in.)

Parallel Shaft Combination Type/Round Shaft Type

Terminal Box Type　　Cable Type

Specifications – Continuous Rating

Product Name Upper Level: Combination Type Lower Level: Round Shaft Type		Output		Voltage	Frequency	Current	Starting Torque		Rated Torque		Rated Speed
Terminal Box Type	Cable Type	W	HP	VAC	Hz	A	mN·m	oz-in	mN·m	oz-in	r/min
5IK100VESMT2-□A 5IK100VA-ESMT2	5IK100VESM-□A 5IK100VA-ESM	100	1/8	Three-Phase 220	50	0.55	850	120	690	97	1400
					60	0.48	700	99	570	80	1680
		100	1/8	Three-Phase 230	50	0.57	850	120	690	97	1400
					60	0.48	700	99	570	80	1680

- The values in the table are characteristics for the motor only.
- No built-in overheat protection device (thermal protector).
  When there is an overload or the output shaft is locked, use the electromagnetic switch and the inverter's electronic thermal function to prevent motor burnout.
- Use an inverter setting frequency of 120 Hz or less when driving in combination with the inverter.

Electromagnetic Brake (Power off activated type)

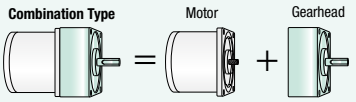
Product Name		Voltage	Frequency	Current	Input	Static Friction Torque	
Terminal Box Type	Cable Type	VAC	Hz	A	W	mN·m	oz-in
5IK100VESMT2-□A 5IK100VA-ESMT2	5IK100VESM-□A 5IK100VA-ESM	Single-Phase 220	50	0.04	6	500	71
			60				
		Single-Phase 230	50	0.04	6	500	71
			60				

- The values in the table are characteristics for the motor only.

Product Line

Combination Type

Motor and gearhead are delivered pre-assembled.
The combination of motors and gearheads can be changed and they are also available separately.
In addition, the gearhead can be removed and the assembly position can be changed in 90° increments.



Combination Type with Parallel Shaft

Type	Product Name	Gear Ratio	List Price
Terminal Box Type	5IK100VESMT2-□A	5, 6, 7.5, 9, 12.5, 15, 18	$404.00
		25, 30, 36, 50, 60	$424.00
		75, 90, 100, 120, 150, 180	$434.00
Cable Type	5IK100VESM-□A	5, 6, 7.5, 9, 12.5, 15, 18	$382.00
		25, 30, 36, 50, 60	$402.00
		75, 90, 100, 120, 150, 180	$412.00

The following items are included with each product.
Motor, Gearhead, Installation Screws, Parallel Key, Operating Manual

Round Shaft Type

Type	Product Name	List Price
Terminal Box Type	5IK100VA-ESMT2	$291.00
Cable Type	5IK100VA-ESM	$269.00

The following items are included with each product.
Motor, Operating Manual

- A number indicating the gear ratio is entered where the box □ is located within the product name.

Permissible Torque on Combination Types

●50 Hz

Unit: Upper Values: N·m/Lower Values: lb-in

Product Name	Speed r/min	300	250	200	166	120	100	83	60	50	41	30	25	20	16.6	15	12.5	10	8.3
	Gear Ratio	**5**	**6**	**7.5**	**9**	**12.5**	**15**	**18**	**25**	**30**	**36**	**50**	**60**	**75**	**90**	**100**	**120**	**150**	**180**
5IK100VESMT2-□A		3.1	3.7	4.7	5.6	7.8	9.3	10.7	14.8	17.8	21.4	29.7	35.6	40	40	40	40	40	40
5IK100VESM-□A		27	32	41	49	69	82	94	130	157	189	260	310	350	350	350	350	350	350

●60 Hz

Unit: Upper Values: N·m/Lower Values: lb-in

Product Name	Speed r/min	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10
	Gear Ratio	**5**	**6**	**7.5**	**9**	**12.5**	**15**	**18**	**25**	**30**	**36**	**50**	**60**	**75**	**90**	**100**	**120**	**150**	**180**
5IK100VESMT2-□A		2.6	3.1	3.8	4.6	6.4	7.7	8.8	12.3	14.7	17.6	24.5	29.4	34.6	40	40	40	40	40
5IK100VESM-□A		23	27	33	40	56	68	77	108	130	155	210	260	300	350	350	350	350	350

● The speed is calculated by dividing the motor's synchronous speed (50 Hz: 1500 r/min, 60 Hz: 1800 r/min) by the gear ratio.
The actual speed is max.10% less, depending on the load.

● A number indicating the gear ratio is entered where the box □ is located within the product name.

Permissible Radial Load and Permissible Axial Load

➜ Page E-17

Permissible Inertia J of Combination Types

➜ Page E-19

Starting and Braking Characteristics (Reference values - motor only)