

# 0.72°/0.36° Stepper Motors PKP Series/PK Series



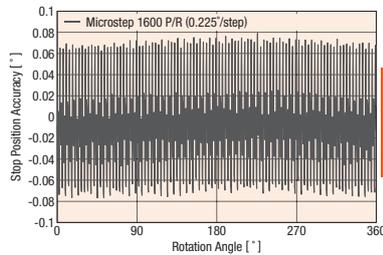
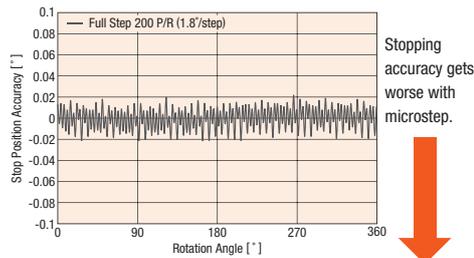
This is a high torque and low vibration stepper motor with a basic step angle of 0.72° (resolution of 500 steps per revolution). High positioning accuracy is possible through low vibration and reduced noise. (A separate dedicated driver is required to operate each motor.)

## Features

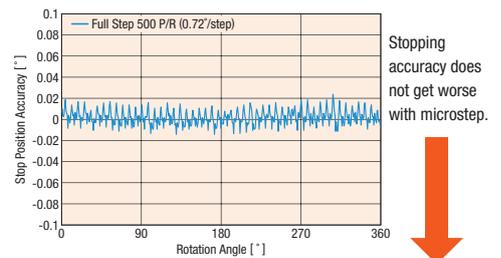
### High Accuracy

Since the step angle of 0.72°/0.36° Stepper Motor in the **PKP** Series is at 0.72° (high-resolution type at 0.36°) and the stopping accuracy is at ±0.05°, highly accurate positioning is possible. In addition, the stop position accuracy controlled by a microstep driver has almost the same high accuracy as that controlled by a full-step driver.

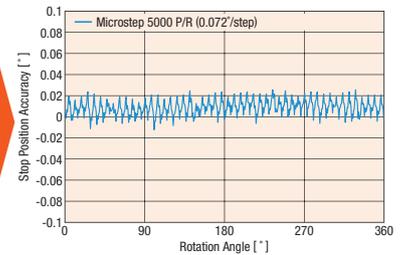
● General 1.8° Stepper Motor



● 0.72°/0.36° Stepper Motor **PKP** Series  
(Driver: **CVD** driver for 0.72°/0.36° Stepper Motor)



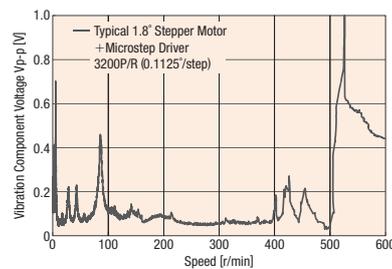
**PKP Series**  
Highly accurate positioning for 0.72°/0.36° Stepper Motor is possible.



### Low Vibration and Reduced Noise

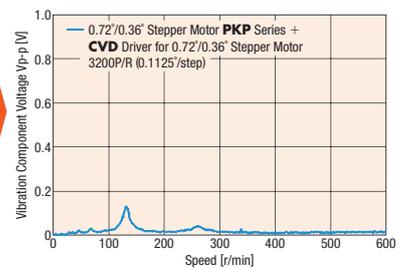
Because the basic step angle is small at 0.72° (0.36° for high-resolution type), the vibrations and noise are lower than the 1.8° stepper motor with a basic step angle of 1.8°. Also, vibrations and noise can be further reduced through control with the driver of the microstep drive.

● Example of 1.8° Stepper Motor  
Vibration Characteristics



**PKP Series**  
Vibration characteristics for 0.72°/0.36° Stepper Motor have been further improved.

● Example of 0.72°/0.36° Stepper Motor  
Vibration Characteristics



## Product Line

–: Not Offered in This Product Line

Type	Basic Step Angle	Frame Size					
		20 mm	28 mm	42 mm	56.4 mm	60 mm	85 mm
Standard Type	0.72°						
High-Resolution Type	0.36°	–	–		–		–
Standard Type with Encoder	0.72°		–				–

### ● 0.72°/0.36° Stepper Motor and Driver Package **CVK** Series

These packages consists of a motor and DC power supply input driver, enabling the performance of the 0.72°/0.36° stepper motor **PKP** Series motor to be maximized.

High-performance 0.72°/0.36° stepper motor and driver packages reduce vibrations and noise by utilizing a digitally-controlled full-time microstep driver.



Overview, Product Series

AC Input Motor & Driver

0.36°/Geared  
**αSTEP Absolute AZ**

0.36°/Geared  
**αSTEP AR**

0.72°/Geared  
**RKII**

DC Input Motor & Driver

0.36°/Geared  
**αSTEP Absolute AZ**

0.36°/Geared  
**αSTEP AR**

1.8°/0.72°/0.36°  
**CVK**

0.72°/0.36°/Geared  
**CRK**

1.8°/Geared  
**RBK**

Motor Only /Driver Only

1.8°/0.9°  
**PKP/PK**

Geared  
**PKP/PK**

0.72°/0.36°  
**PKP/PK**

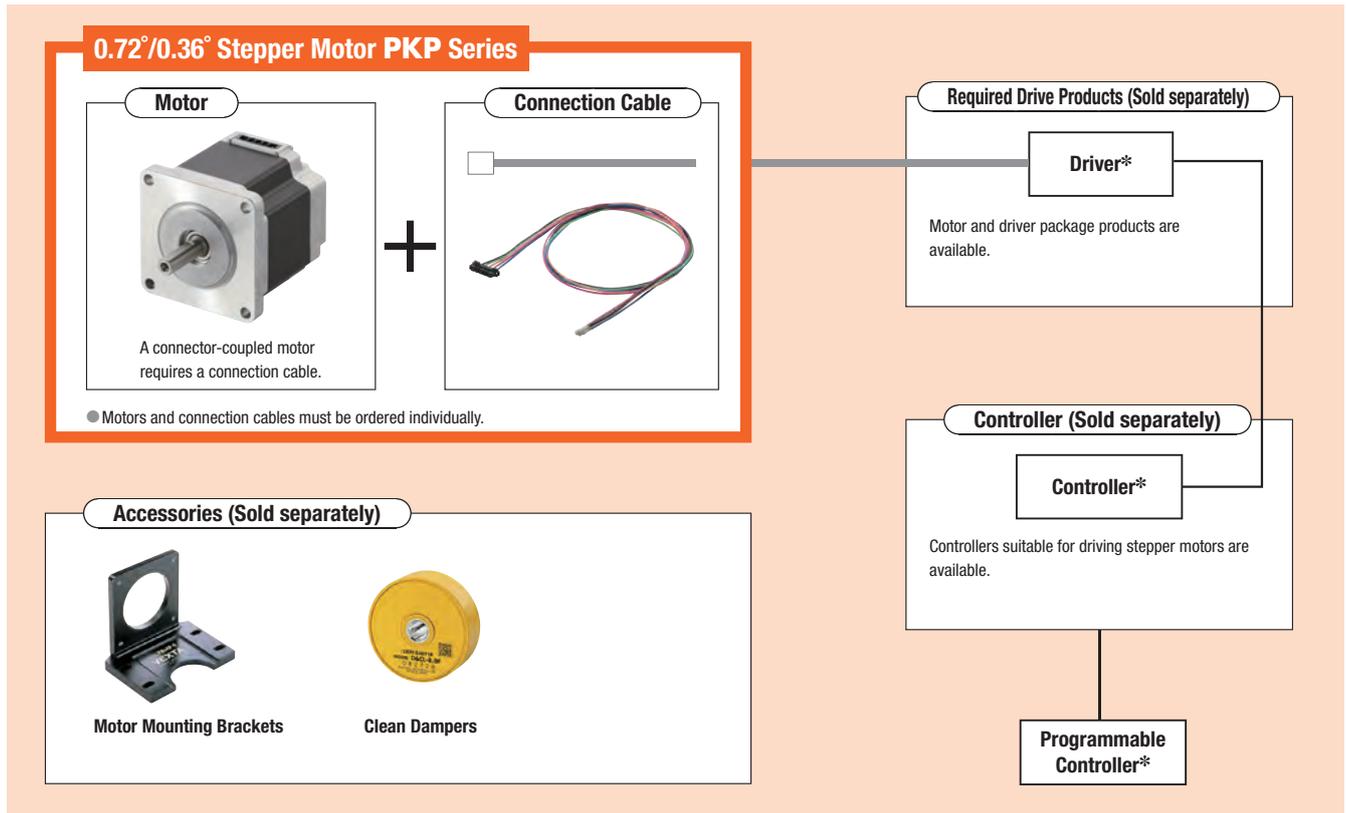
Driver

Accessories

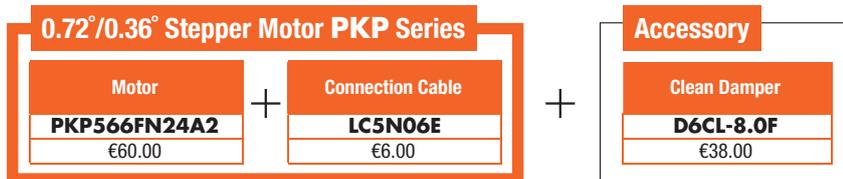
### System Configuration

These accessories allow 0.72°/0.36° stepper motor in the **PKP** Series to be used for various operations.

\* Not supplied.



● **Example of System Configuration**



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

## Product Number

### Motor

◇ Frame Size 20 mm, 85 mm

Standard type

**PK 5 1 3 P A**

① ② ③ ④ ⑤ ⑧

**PK 5 9 6 H N A W**

① ② ③ ④ ⑥ ⑦ ⑧ ⑪

Standard Type with Encoder

**PK 5 1 3 P A - R2G L**

① ② ③ ④ ⑤ ⑧ ⑨ ⑩

◇ Frame Size 28 mm, 42 mm, 56.4 mm, 60 mm

Standard Type, High-Resolution Type

**PKP 5 6 6 F N 24 A 2**

① ② ③ ④ ⑤ ⑦ ⑧ ⑨ ⑩

**PKP 5 4 4 M N 18 A**

① ② ③ ④ ⑥ ⑦ ⑧ ⑨

Standard Type with Encoder

**PKP 5 6 6 F N 24 A 2 - R2G L**

① ② ③ ④ ⑤ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫

### Connection Cable

◇ Connection Cable for Motor

**LC 5 N 06 E**

① ② ③ ④ ⑤

◇ Connection Cable for Encoder

**LC E 08 A - 006**

① ② ③ ④ ⑤

①	Series Name	<b>PK: PK Series</b>
②	<b>5: 0.72°/0.36° Stepper Motor</b>	
③	Motor Frame Size	<b>1: 20 mm 9: 85 mm</b>
④	Motor Case Length	
⑤	Motor Classification	
⑥	Motor Type	Blank: Standard Specifications <b>H: High-Speed Specifications</b>
⑦	Number of Lead Wires	<b>N: 5 Leads</b>
⑧	Configuration	<b>A: Single Shaft B: Double Shaft</b>
⑨	Encoder Resolution	<b>R2G: 500 P/R</b>
⑩	Encoder Output Circuit Type	<b>L: Line Driver Output</b>
⑪	Cable Identification	Blank: Connector Connection Method <b>W: Lead Wire Type</b>

①	Series Name	<b>PKP: PKP Series</b>
②	<b>5: 0.72°/0.36° Stepper Motor</b>	
③	Motor Frame Size	<b>2: 28 mm 4: 42 mm</b> <b>6: 56.4 mm</b> (60 mm when the motor classification is "F")
④	Motor Case Length	
⑤	Motor Classification	<b>F: Motor Frame Size of 60 mm</b>
⑥	Motor Type	Blank: Standard Type <b>M: High-Resolution Type</b>
⑦	Number of Lead Wires	<b>N: 5 Leads</b>
⑧	Motor Winding Specifications	
⑨	Configuration	<b>A: Single Shaft B: Double Shaft</b>
⑩	Reference Number	
⑪	Encoder Resolution	<b>R2G: 500 P/R</b>
⑫	Encoder Output Circuit Type	<b>L: Line Driver Output*</b>

\*Encoder of voltage output for output circuit type is also available.  
For details, please contact your nearest Oriental Motor sales office.

①	Cables	<b>LC: Connector-Type Leads</b>
②	<b>5: 0.72°/0.36° Stepper Motor</b>	
③	Cable Type	<b>N: For 0.72°/0.36° Stepper Motor</b>
④	Cable Length	<b>06: 0.6 m 10: 1 m</b>
⑤	Reference Number	

①	Cables	<b>LC: Connector-Type Leads</b>
②	Cable Type	<b>E: For Encoder</b>
③	Applicable Models	<b>08: For Line Driver Output*</b>
④	Reference Number	
⑤	Cable Length	<b>006: 0.6 m</b>

\*A voltage output cable is available.  
For details, please contact your nearest Oriental Motor sales office.

Overview,  
Product  
Series

AC Input  
Motor &  
Driver

0.36°/Geared  
**αSTEP**  
Absolute  
**AZ**

0.36°/Geared  
**αSTEP**  
**AR**

0.72°/Geared  
**RKII**

DC Input  
Motor &  
Driver

0.36°/Geared  
**αSTEP**  
Absolute  
**AZ**

0.36°/Geared  
**αSTEP**  
**AR**

1.8°/0.72°  
/0.36°  
**CVK**

0.72°/0.36°  
/Geared  
**CRK**

1.8°/Geared  
**RBK**

Motor Only  
/Driver Only

1.8°/0.9°  
**PKP/PK**

Geared  
**PKP/PK**

0.72°/0.36°  
**PKP/PK**

Driver

Accessories

## Product Line

### ● Motor

#### ◇ Standard Type

Product Name (Single Shaft)	List Price	Product Name (Double Shaft)	List Price
<b>PK513PA</b>	€103.00	<b>PK513PB</b>	€107.00
<b>PKP523N12A</b>	€39.00	<b>PKP523N12B</b>	€41.00
<b>PKP525N12A</b>	€45.00	<b>PKP525N12B</b>	€48.00
<b>PKP543N18A2</b>	€42.00	<b>PKP543N18B2</b>	€45.00
<b>PKP544N18A2</b>	€45.00	<b>PKP544N18B2</b>	€47.00
<b>PKP545N18A2</b>	€49.00	<b>PKP545N18B2</b>	€52.00
<b>PKP546N18A2</b>	€51.00	<b>PKP546N18B2</b>	€54.00
<b>PKP564N28A2</b>	€51.00	<b>PKP564N28B2</b>	€54.00
<b>PKP566N28A2</b>	€56.00	<b>PKP566N28B2</b>	€58.00
<b>PKP568N28A2</b>	€69.00	<b>PKP568N28B2</b>	€71.00
<b>PKP564FN24A2</b>	€56.00	<b>PKP564FN24B2</b>	€58.00
<b>PKP564FN38A2</b>	€56.00	<b>PKP564FN38B2</b>	€58.00
<b>PKP566FN24A2</b>	€60.00	<b>PKP566FN24B2</b>	€63.00
<b>PKP566FN38A2</b>	€60.00	<b>PKP566FN38B2</b>	€63.00
<b>PKP569FN24A2</b>	€74.00	<b>PKP569FN24B2</b>	€76.00
<b>PKP569FN38A2</b>	€74.00	<b>PKP569FN38B2</b>	€76.00
<b>PK596HNAW</b>	€117.00	<b>PK596HNBW</b>	€121.00
<b>PK599HNAW</b>	€157.00	<b>PK599HNBW</b>	€161.00
<b>PK5913HNAW</b>	€196.00	<b>PK5913HNBW</b>	€204.00

#### ◇ High-Resolution Type

Product Name (Single Shaft)	List Price	Product Name (Double Shaft)	List Price
<b>PKP544MN18A</b>	€41.00	<b>PKP544MN18B</b>	€43.00
<b>PKP546MN18A</b>	€47.00	<b>PKP546MN18B</b>	€50.00
<b>PKP564FMN24A</b>	€52.00	<b>PKP564FMN24B</b>	€54.00
<b>PKP566FMN24A</b>	€56.00	<b>PKP566FMN24B</b>	€59.00
<b>PKP569FMN24A</b>	€70.00	<b>PKP569FMN24B</b>	€72.00

### ● Connection Cable for Motor

Product Name	Length L (m)	List Price
<b>LC5N06A</b>	0.6	€6.00
<b>LC5N10A</b>	1	€9.00
<b>LC5N06B</b>	0.6	€6.00
<b>LC5N10B</b>	1	€9.00
<b>LC5N06C2</b>	0.6	€8.00
<b>LC5N10C2</b>	1	€10.00
<b>LC5N06E</b>	0.6	€6.00

### ● Connection Cable for Encoder

#### ◇ For Line Driver Output

Product Name	Length L (m)	List Price
<b>LCE08A-006</b>	0.6	€11.00

## Included

Type	Operating Manual
Common to All Types	1 Set

## Details Including Specifications

The motors specified by the above product names are the same as products in the **CVK** Series. Refer to 0.72°/0.36° stepper motor **CVK** Series for details on specifications, speed – torque characteristics, dimensions, etc.

#### ◇ Standard Type with Encoder

Product Name	List Price
<b>PK513PA-R2GL</b>	€162.00
<b>PKP543N18A2-R2GL</b>	€93.00
<b>PKP544N18A2-R2GL</b>	€95.00
<b>PKP545N18A2-R2GL</b>	€101.00
<b>PKP546N18A2-R2GL</b>	€103.00
<b>PKP564N28A2-R2GL</b>	€103.00
<b>PKP566N28A2-R2GL</b>	€107.00
<b>PKP568N28A2-R2GL</b>	€120.00
<b>PKP564FN24A2-R2GL</b>	€107.00
<b>PKP564FN38A2-R2GL</b>	€107.00
<b>PKP566FN24A2-R2GL</b>	€112.00
<b>PKP566FN38A2-R2GL</b>	€112.00
<b>PKP569FN24A2-R2GL</b>	€125.00
<b>PKP569FN38A2-R2GL</b>	€125.00