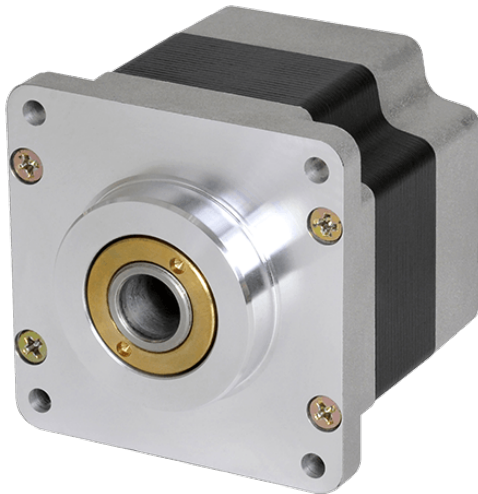


Hollow Shaft Type 5-phase Stepper Motor

(□ 42 mm, □ 60 mm, □ 85 mm)



AHK Series CATALOG

For your safety, read and follow the considerations written in the instruction manual, other manuals and Autonics website.

The specifications, dimensions, etc. are subject to change without notice for product improvement. Some models may be discontinued without notice.

Features

- Direct connection of Ball-screw, TM-screw and etc. without couplings
- No resonance (vibration, noise) due to removed coupling
- Low cost of applied system by improving the coupling accuracy and reducing the number of parts and installation process
- Compact and light weight with high accuracy, high speed and high torque
- Ideal for building compact sized system

Ordering Information

This is only for reference, the actual product does not support all combinations. For selecting the specified model, follow the Autonics website.

A H ① K - ② 5 ③ ④ ⑤ - ⑥

① Max. stop torque

Number: Max. stop torque (unit: kgf cm)

② Rated current

S: 0.75 A / Phase
M: 1.4 A / Phase
G: 2.8 A / Phase

③ Frame size

4: □ 42 mm
6: □ 60 mm
9: □ 85 mm

④ Axial length

Number: Refer to 'Dimensions'

⑤ Shaft type

No mark: single shaft
W: dual shaft

⑥ Wiring method

No mark: Pentagon
S: Standard (option)

Product Components

- Product
- Instruction manual

Specifications

Model	AH1K-S543-□	AH2K-S544-□	AH3K-S545-□
Max. stop torque	1.3 kgf cm (0.13 N m)	1.8 kgf cm (0.18 N m)	2.4 kgf cm (0.24 N m)
Rotor inertia moment	$35 \times 10^{-7} \text{ kg} \cdot \text{m}^2$	$54 \times 10^{-7} \text{ kg} \cdot \text{m}^2$	$68 \times 10^{-7} \text{ kg} \cdot \text{m}^2$
Rated current	0.75 A / Phase		
Basic step angle	0.72° / 0.36° (Full / Half step)		
Unit weight (packaged)	≈ 0.25 kg (≈ 0.35 kg)	≈ 0.30 kg (≈ 0.40 kg)	≈ 0.40 kg (≈ 0.50 kg)

Model	AH4K-□564□-□	AH8K-□566□-□	AH16K-□569□-□
Max. stop torque	4.2 kgf cm (0.42 N m)	8.3 kgf cm (0.83 N m)	16.6 kgf cm (1.66 N m)
Rotor inertia moment	$175 \times 10^{-7} \text{ kg} \cdot \text{m}^2$	$280 \times 10^{-7} \text{ kg} \cdot \text{m}^2$	$560 \times 10^{-7} \text{ kg} \cdot \text{m}^2$
Rated current	S: 0.75 A / Phase M: 1.4 A / Phase		
Basic step angle	0.72° / 0.36° (Full / Half step)		
Unit weight (packaged)	≈ 0.60 kg (≈ 0.87 kg)	≈ 0.80 kg (≈ 1.07 kg)	≈ 1.30 kg (≈ 1.57 kg)

Model	AH21K-□596□-□	AH41K-□599□-□	AH63K-□5913□-□
Max. stop torque	21 kgf cm (2.1 N m)	41 kgf cm (4.1 N m)	63 kgf cm (6.3 N m)
Rotor inertia moment	$1,400 \times 10^{-7} \text{ kg} \cdot \text{m}^2$	$2,700 \times 10^{-7} \text{ kg} \cdot \text{m}^2$	$4,000 \times 10^{-7} \text{ kg} \cdot \text{m}^2$
Rated current	M: 1.4 A / Phase G: 2.8 A / Phase		
Basic step angle	0.72° / 0.36° (Full / Half step)		
Unit weight (packaged)	≈ 1.70 kg (≈ 2.18 kg)	≈ 2.80 kg (≈ 3.28 kg)	≈ 3.80 kg (≈ 4.28 kg)

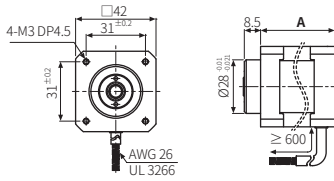
Motor phase	5-phase
Insulation class	B type (130°C)
Insulation resistance	Between motor coil and case: $\geq 100 \text{ M}\Omega$ (500 VDC≐ megger)
Dielectric strength ⁰¹⁾	Between motor coil and case: 1,000 VAC~ 50 / 60 Hz for 1 minute
Temperature rise	$\leq 80^\circ\text{C}$ (5-phase excitation for rated current, while stop)
Ambient temp.	-10 to 50°C, storage: -25 to 85°C (no freezing or condensation)
Ambient humi.	35 to 85%RH, storage: 35 to 85%RH (no freezing or condensation)
Protection rating	IP30 (IEC34-5 standard)
Approval	CE EAC

01) In case of rated current: 0.75 A / Phase, Between motor coil and case: 500 VAC~ 50 / 60 Hz for 1 minute

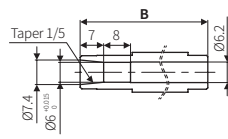
Dimensions

- Unit: mm, For the detailed drawings, follow the Autonics website.
 - The external shaft must be processed as shown below.
 - The corresponding motor follows direct connection instead of using coupling.
 - Depending on shaft processing, hollow shaft can be used both single and dual.
- Gray line in shaft process is only available in dual shaft type.

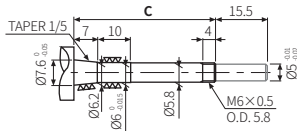
42 mm



Hole dimensions

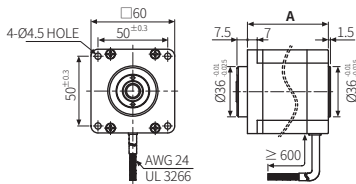


Shaft Process

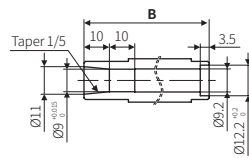


Axial length	3	4	5
A	33	39	47
B	38	44	52
C	42.5	48.5	56.5

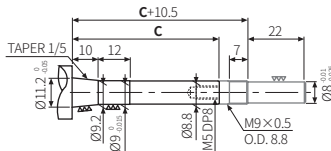
60 mm



Hole dimensions

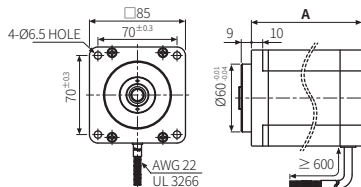


Shaft process

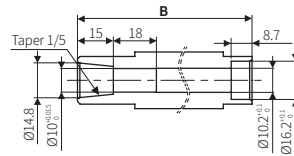


Axial length	4	6	9
A	48.5	59.5	89
B	49.3	60.3	89.8
C	46	57	86.5

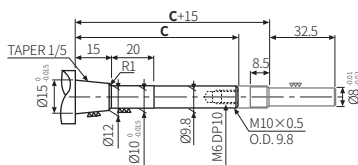
85 mm



Hole dimensions



Shaft process



Axial length	6	9	13
A	68	98	128
B	73	102.5	133
C	64.5	94	124.5