

## HEXEH HM12-60

# HEXEH Aluminum Step Servo Motor Mount Instruction Manual

Models: HM12-57, HM12-60, HM15-57, HM15-60, HM15-80, HM15-86

## 1. INTRODUCTION

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This manual provides comprehensive instructions for the installation, operation, and maintenance of your HEXEH Aluminum Step Servo Motor Mount. This product is designed to securely fix and support stepper or servo motors in various applications, ensuring stable and precise operation.

Please read this manual thoroughly before installation and use to ensure correct assembly and optimal performance.

## 2. PRODUCT OVERVIEW

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The HEXEH motor mount is an integrated bracket crafted from durable aluminum, designed for longevity and reliable performance. Its primary function is to provide a stable mounting solution for various NEMA-sized stepper and servo motors, facilitating connection to ball screws.

Key features include:

- **Integrated Design:** Combines motor mounting and bearing support for enhanced precision.
- **Durable Construction:** Made from high-quality aluminum for strength and corrosion resistance.
- **Easy Installation:** Designed for straightforward setup and replacement.
- **Versatile Compatibility:** Supports a range of NEMA motor sizes and SFU ball screw diameters.



Figure 1: Front view of the HEXEH HM12-60 Aluminum Step Servo Motor Mount, showing the integrated bearing housing and mounting base.



Figure 2: Side view of the HEXEH HM12-60 mount, highlighting the robust aluminum construction and mounting points.



Figure 3: Top view of the HEXEH HM12-60 mount, illustrating the bearing assembly and motor attachment interface.

### 3. COMPATIBILITY

The HEXEH motor mounts are available in various models, each designed for specific NEMA motor sizes and SFU ball screw series. Refer to the table below to select the appropriate mount for your application.

Mount Model	Compatible NEMA Motor Size	Compatible SFU Ball Screw Series
HM10-57	NEMA23	SFU1204/1205/1210
HM10-60	NEMA24	SFU1204/1205/1210
HM12-57	NEMA23	SFU1604/1605/1610
HM12-60	NEMA24	SFU1604/1605/1610
HM15-57	NEMA23	SFU2004/2005/2010
HM15-60	NEMA24	SFU2004/2005/2010
HM15-80	NEMA32	SFU2004/2005/2010

Mount Model	Compatible NEMA Motor Size	Compatible SFU Ball Screw Series
HM15-86	NEMA34	SFU2004/2005/2010
HM20-80	NEMA32	SFU2505/2510
HM20-86	NEMA34	SFU2505/2510

## 4. PACKING LIST

Upon opening the package, please verify that all components are present and undamaged:

- 1x Motor Integrated Seat (Mount)
- 1x Locking Nut
- Set of Spacers/Rings (Quantity may vary by model)



Figure 4: Example of different HEXEH motor mount configurations, illustrating the variety of designs.

## 5. SETUP AND INSTALLATION

Proper installation is crucial for the performance and longevity of your motor and ball screw system. Follow these general steps, referring to the specific technical diagrams for your model.

1. **Select the Correct Mount:** Ensure you have chosen the appropriate motor mount model based on your NEMA motor size and SFU ball screw series, as detailed in the Compatibility section. Pay close attention to mounting hole diameters and center distances.
2. **Prepare the Mounting Surface:** Ensure the surface where the mount will be installed is clean, flat, and stable.
3. **Attach the Motor:** Secure your stepper or servo motor to the motor mount using appropriate fasteners. Ensure the motor shaft is correctly aligned with the bearing bore of the mount.
4. **Install the Ball Screw:** Insert the ball screw into the bearing housing of the mount. For models with angular contact bearings (e.g., C5 Angular Contact), ensure proper pre-load is applied during assembly as per standard bearing installation practices. Use the provided locking nut and spacers to secure the ball screw.

5. **Mount the Assembly:** Secure the entire motor and mount assembly to your machine frame or desired structure using suitable bolts through the base mounting holes. Ensure all fasteners are tightened to the manufacturer's recommended torque specifications (if available) to prevent vibration and misalignment.

*Note: For optimal performance, especially with angular contact bearings, ensure proper pre-loading during installation. Always use the most appropriate ball screw for your application.*

## HM12-57-V系列 HM12-60-V系列

项目号	部件名称	数量
1	传动座主机/Housing	1
2	格兰/Gland	1
3	顶圈/Top ring	2
4	骨架油封/ Simmerrings	2
5	角接触轴承7001 Angular contact bearings7001	1组
6	M12x1S锁紧螺母M M12X1S locknut	1组



### 特点:

一体化马达座定位孔与轴承安装孔采取一体化加工,能最大限度保证马达轴心/联轴器轴心/轴承孔轴心/丝杠轴心等四位一体从而克服了分离式马达座与分离式轴承座联合安装时难以同轴的缺点!  
Integrated motor mount positioning holes and the bearing mounting hole take the integration process, to ensure maximum motor shaft / coupling axial / axial bearing hole / screw axis other four a break to overcome the separation of motor housing when the split bearing joint is difficult to install shortcomings!

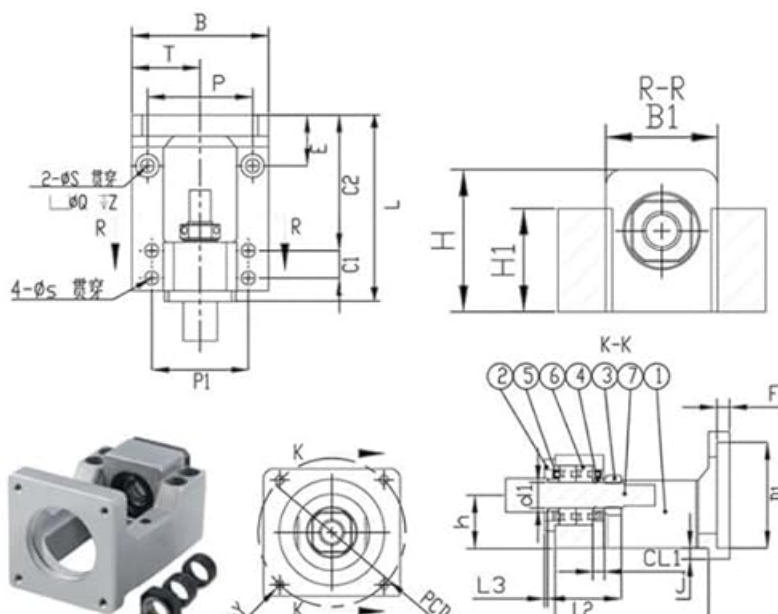
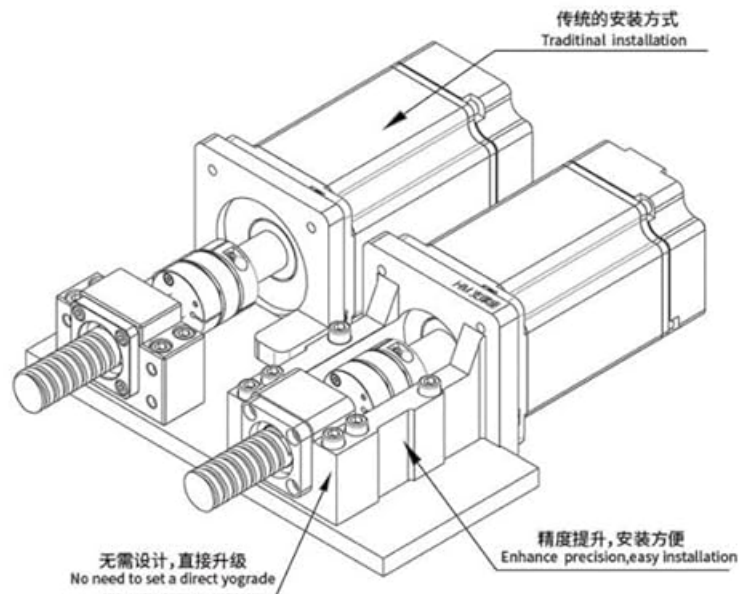
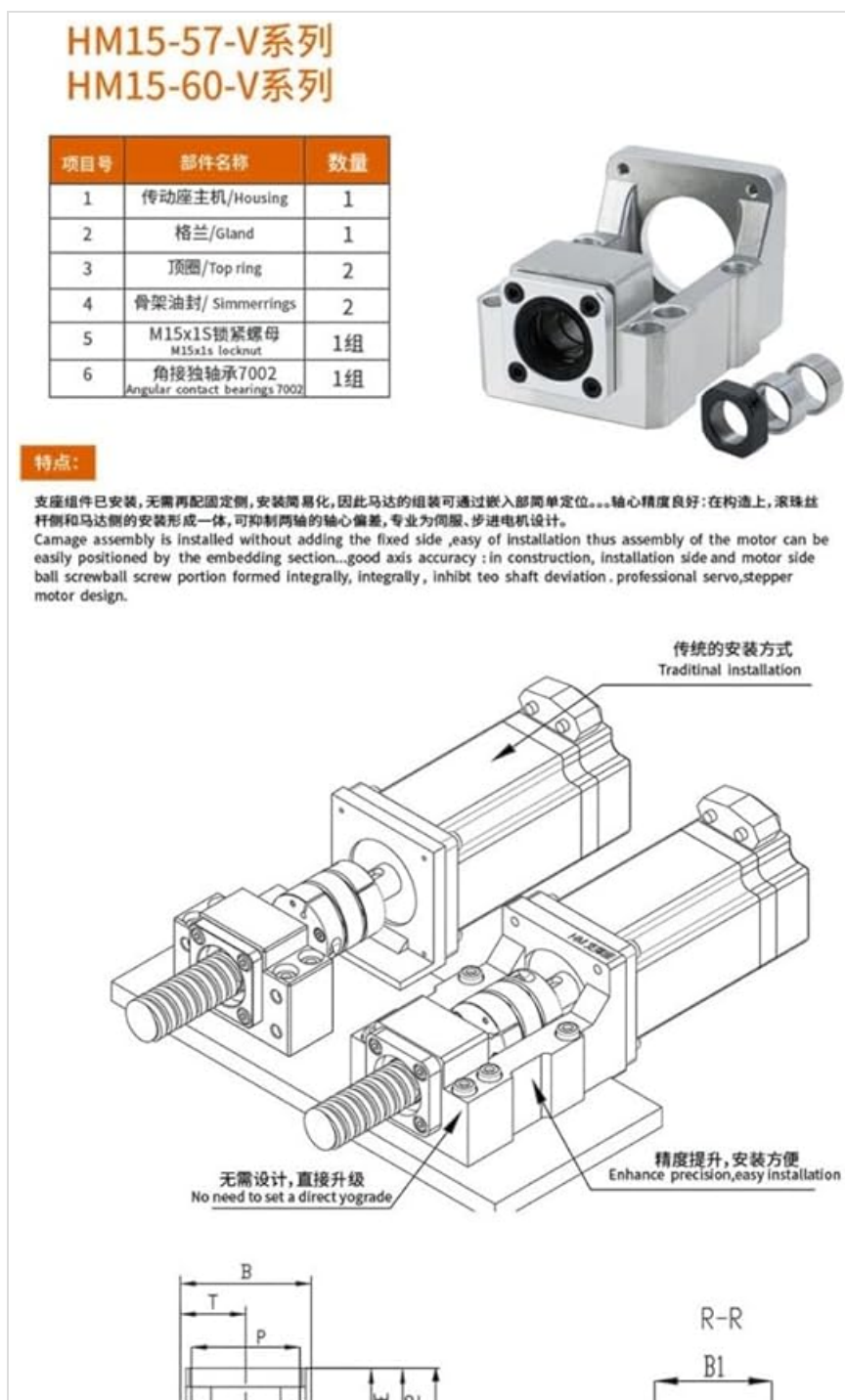
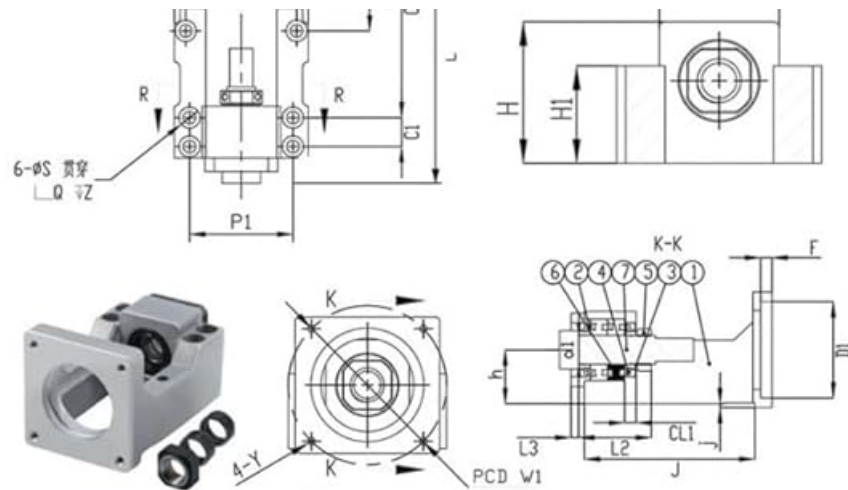




Figure 5: Technical diagram for HM12-57 and HM12-60 series mounts, including dimensions and assembly details.





选型尺寸表/ Selection Size Chart

单位:mm

型号 Model	D1	W1	Y	L	h0.02	B	P	P1	T	轴径d1	CL1	L2	L3	H	H1	δ1
HM15-57-V	38.1	66.7	M4	103	28	70	58	54	35	15	6	38	3	48	33	39
HM15-60-V	50	70	M4	103	28	70	58	54	35	15	6	38	3	48	33	39

型号 Model	S	Q	Z	E	C1	C2	F	J	j	重量 Weight	轴承型号 bearing type	支持端 End support	联轴器 Coupling
HM15-57-V	6.6	11	7	32	15	77	6	85	2	0.43	7002	BF15	30-42Φ12-12
HM15-60-V	6.6	11	7	32	15	77	6	85	2	0.43	7002	BF15	30-42Φ12-14

备注:

- 1.使用之轴承经预压处理,轴向0间隙 (All types make preload)
- 2.轴承采用P5配对DF组装,最适宜滚珠丝杆使用。  
(Bearing P5 pairing DF assembled using the most appropriate ball screw.)

Figure 6: Technical diagram for HM15-57 and HM15-60 series mounts, including dimensions and assembly details.

## HM15-80-V系列 HM15-86-V系列

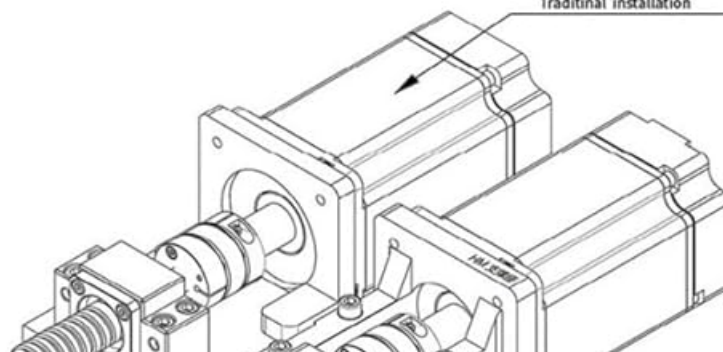
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传统的安装方式  
Traditinal installation



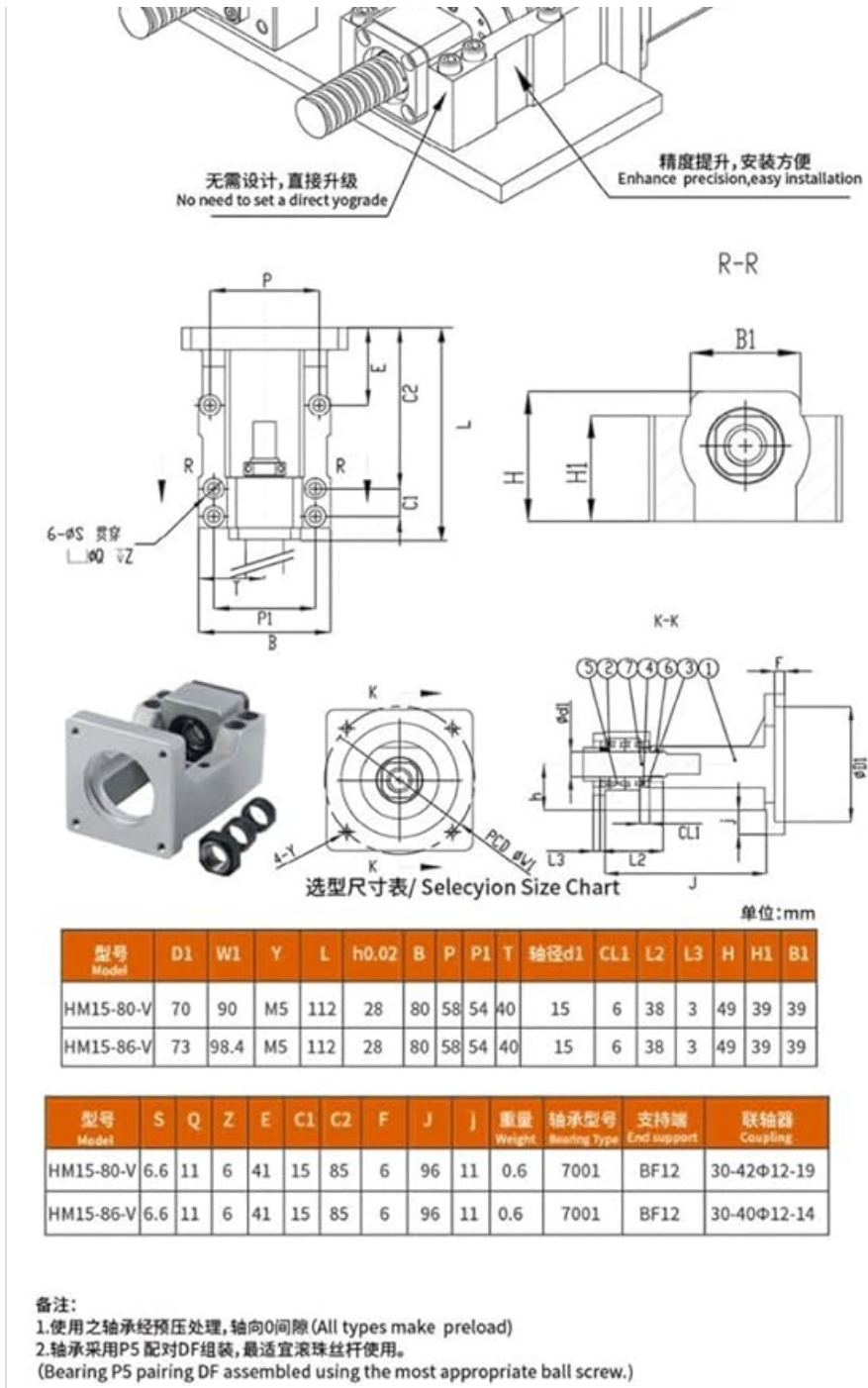


Figure 7: Technical diagram for HM15-80 and HM15-86 series mounts, including dimensions and assembly details.

## 6. OPERATING

Once installed, the motor mount functions as a passive support component. Ensure that the motor and ball screw operate smoothly without excessive vibration or noise. Any unusual sounds or movements may indicate an installation issue or component misalignment.

## 7. MAINTENANCE

The HEXEH motor mount requires minimal maintenance. Regular inspection is recommended to ensure continued optimal performance:

- **Visual Inspection:** Periodically check the mount for any signs of wear, damage, or corrosion.
- **Fastener Check:** Verify that all mounting bolts and the ball screw locking nut remain securely tightened.

Re-tighten if necessary.

- **Cleanliness:** Keep the mount and surrounding area free from dust, debris, and lubricants that could interfere with operation or cause premature wear.

## 8. TROUBLESHOOTING

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If you experience issues with your motor and ball screw assembly, consider the following troubleshooting steps:

- **Excessive Vibration or Noise:** This often indicates misalignment between the motor and ball screw, or loose mounting fasteners. Re-check all connections and ensure proper alignment.
- **Motor Not Seating Properly:** Verify that the correct mount model has been selected for your motor and ball screw. Check for any obstructions or manufacturing defects.
- **Ball Screw Play:** Ensure the locking nut is securely tightened and that any required bearing pre-load has been correctly applied.

If problems persist after performing these checks, please contact technical support.

## 9. SPECIFICATIONS

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Specification	Detail
Brand	HEXEH
Product Type	Aluminum Step Servo Motor Mount / Integrated Bracket
Material	Aluminum
Item Weight	3.53 ounces (100 Grams)
Package Dimensions	1.18 x 0.79 x 0.39 inches
Assembly Required	No (assembly of motor/ball screw to mount is required)
Number of Pieces	1 (motor integrated seat)

## 10. WARRANTY AND SUPPORT

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**Warranty:** This product is provided without an explicit warranty.

**Technical Support:** We are committed to providing assistance for our products. If you encounter any technical problems or have questions regarding the installation or operation of your HEXEH motor mount, please do not hesitate to contact us via email. We typically respond to inquiries within 24 hours.

For support, please visit our official website or contact us at [support@hexah.com](mailto:support@hexah.com).

