

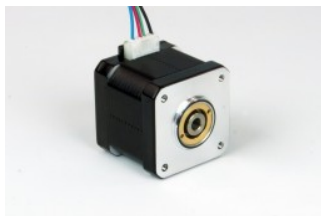
# HH17-101

Hollow Shaft, NEMA 17 High Torque Step Motor



## Product Features

- Hollow shaft for mounting custom shafts or lead screws
- High torque design
- NEMA 17 frame size
- 2-phase hybrid step motor
- 1.8 degree step angle
- Shipped with detachable lead/connector pigtail



## Description

### Product Description:

The HH17-101 two-phase stepper motor features a hollow shaft with a 5 mm bore. The hollow shaft allows for the attachment of lead screws and customized shafts without disassembling the motor.

This step motor is suitable for a wide range of motion control applications and is recommended for use with our popular [ST5 stepper drives](#).

Sold & Serviced By:



Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

[www.electromate.com](http://www.electromate.com)

[sales@electromate.com](mailto:sales@electromate.com)

<b>Part Number:</b>	HH17-101
<b>Frame Size:</b>	NEMA 17
<b>Motor Type:</b>	High torque
<b>Motor Length:</b>	1.57 inches
<b>Number of Lead Wires:</b>	4
<b>Lead Wire Configuration:</b>	flying leads, no connector
<b>Lead Wire/Cable Length:</b>	11.8 inches inches
<b>Lead Wire Gauge:</b>	26 AWG
<b>Bipolar Holding Torque:</b>	63.7 oz-in
<b>Step Angle:</b>	1.8 deg
<b>Bipolar Series Current:</b>	2 A/phase
<b>Bipolar Series Resistance:</b>	1.04 Ohms/phase
<b>Bipolar Series Inductance:</b>	2.73 mH/phase
<b>Rotor Inertia:</b>	8.07E-04 oz-in-sec <sup>2</sup>
<b>Weight:</b>	0.62 lbs
<b>Storage Temperature:</b>	-30 to 70 °C
<b>Operating Temperature:</b>	-20 to 50 °C
<b>Insulation Class:</b>	B
<b>End Play:</b>	0.004 inch max w/ 22.5 lb load

Sold & Serviced By:



Toll Free Phone (877) SERV098



Toll Free Fax (877) SERV099

[www.electromate.com](http://www.electromate.com)

[sales@electromate.com](mailto:sales@electromate.com)

Datasheet:

2D Drawing:

 [HH17-101\\_RevB.pdf](#)  
 [3004-320\\_RevA.pdf](#)

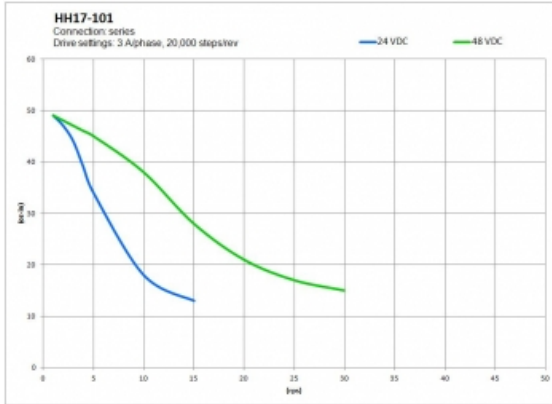
3D Drawing:

 [HH17-101.igs](#)

Speed-Torque Curves:

 [HH17-101 Torque Curve.pdf](#)

## Torque Curves



## Products in the Series *Hollow Shaft Step Motors*

Part Number	Frame Size	Length	Holding Torque	Series Current	Parallel Current	Rotor Inertia
<a href="#">HH17-101</a>	NEMA 17	1.57	63.7	2	NA	8.07E-04
<a href="#">HH17-103</a>	NEMA 17	1.90	89.2	2	NA	1.16E-03
<a href="#">HH17-105</a>	NEMA 17	2.47	104.8	2	NA	1.74E-03
<a href="#">HH23-101</a>	NEMA 23	2.24	212.4	2.2	NA	3.68E-03
<a href="#">HH23-103</a>	NEMA 23	3.11	325.7	3	NA	6.51E-03

Sold & Serviced By:

 **ELECTROMATE**

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

[www.electromate.com](http://www.electromate.com)

[sales@electromate.com](mailto:sales@electromate.com)

# HH17-103

Hollow Shaft, NEMA 17 High Torque Step Motor



## Product Features

- Hollow shaft for mounting custom shafts or lead screws
- High torque design
- NEMA 17 frame size
- 2-phase hybrid step motor
- 1.8 degree step angle
- Shipped with detachable lead/connector pigtail



## Description

### Product Description:

The HH17-103 two-phase stepper motor features a hollow shaft with a 5 mm bore. The hollow shaft allows for the attachment of lead screws and customized shafts without disassembling the motor.

This step motor is suitable for a wide range of motion control applications and is recommended for use with our popular [ST5 stepper drives](#).

Sold & Serviced By:



Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

[www.electromate.com](http://www.electromate.com)

[sales@electromate.com](mailto:sales@electromate.com)

<b>Part Number:</b>	HH17-103
<b>Frame Size:</b>	NEMA 17
<b>Motor Type:</b>	High torque
<b>Motor Length:</b>	1.90 inches
<b>Number of Lead Wires:</b>	4
<b>Lead Wire Configuration:</b>	flying leads, no connector
<b>Lead Wire/Cable Length:</b>	11.8 inches inches
<b>Lead Wire Gauge:</b>	26 AWG
<b>Bipolar Holding Torque:</b>	89.2 oz-in
<b>Step Angle:</b>	1.8 deg
<b>Bipolar Series Current:</b>	2 A/phase
<b>Bipolar Series Resistance:</b>	1.3 Ohms/phase
<b>Bipolar Series Inductance:</b>	3 mH/phase
<b>Rotor Inertia:</b>	1.16E-03 oz-in-sec <sup>2</sup>
<b>Weight:</b>	0.79 lbs
<b>Storage Temperature:</b>	-30 to 70 °C
<b>Operating Temperature:</b>	-20 to 50 °C
<b>Insulation Class:</b>	B
<b>End Play:</b>	0.004 inch max w/ 22.5 lb load

Sold & Serviced By:



Toll Free Phone (877) SERV098



Toll Free Fax (877) SERV099

[www.electromate.com](http://www.electromate.com)

[sales@electromate.com](mailto:sales@electromate.com)

Datasheet:

2D Drawing:

 [HH17-103\\_RevB.pdf](#)  
 [3004-320\\_RevA.pdf](#)

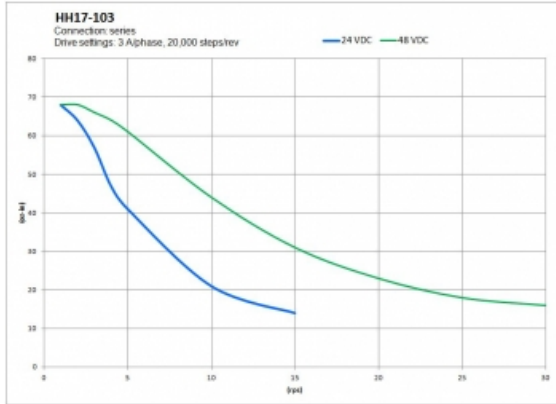
3D Drawing:

 [HH17-103.igs](#)

Speed-Torque Curves:

 [HH17-103 Torque Curve.pdf](#)

## Torque Curves



## Products in the Series *Hollow Shaft Step Motors*

Part Number	Frame Size	Length	Holding Torque	Series Current	Parallel Current	Rotor Inertia
<a href="#">HH17-101</a>	NEMA 17	1.57	63.7	2	NA	8.07E-04
<a href="#">HH17-103</a>	NEMA 17	1.90	89.2	2	NA	1.16E-03
<a href="#">HH17-105</a>	NEMA 17	2.47	104.8	2	NA	1.74E-03
<a href="#">HH23-101</a>	NEMA 23	2.24	212.4	2.2	NA	3.68E-03
<a href="#">HH23-103</a>	NEMA 23	3.11	325.7	3	NA	6.51E-03

Sold & Serviced By:

 **ELECTROMATE**

Toll Free Phone (877) SERV098

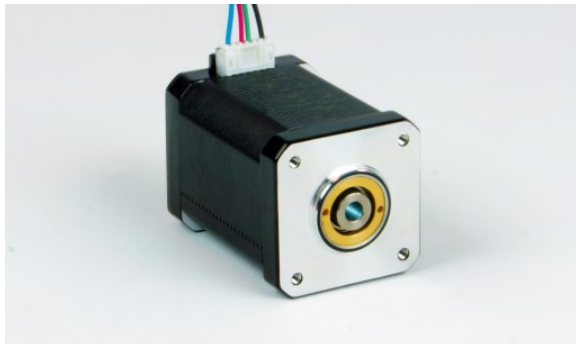
Toll Free Fax (877) SERV099

[www.electromate.com](http://www.electromate.com)

[sales@electromate.com](mailto:sales@electromate.com)

# HH17-105

Hollow Shaft, NEMA 17 High Torque Step Motor



## Product Features

- Hollow shaft for mounting custom shafts or lead screws
- High torque design
- NEMA 17 frame size
- 2-phase hybrid step motor
- 1.8 degree step angle
- Shipped with detachable lead/connector pigtail



## Description

### Product Description:

The HH17-105 two-phase stepper motor features a hollow shaft with a 5 mm bore. The hollow shaft allows for the attachment of lead screws and customized shafts without disassembling the motor.

This step motor is suitable for a wide range of motion control applications and is recommended for use with our popular [ST5 stepper drives](#).

Sold & Serviced By:



Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

[www.electromate.com](http://www.electromate.com)

[sales@electromate.com](mailto:sales@electromate.com)

<b>Part Number:</b>	HH17-105
<b>Frame Size:</b>	NEMA 17
<b>Motor Type:</b>	High torque
<b>Motor Length:</b>	2.47 inches
<b>Number of Lead Wires:</b>	4
<b>Lead Wire Configuration:</b>	flying leads, no connector
<b>Lead Wire/Cable Length:</b>	11.8 inches inches
<b>Lead Wire Gauge:</b>	26 AWG
<b>Bipolar Holding Torque:</b>	104.8 oz-in
<b>Step Angle:</b>	1.8 deg
<b>Bipolar Series Current:</b>	2 A/phase
<b>Bipolar Series Resistance:</b>	1.49 Ohms/phase
<b>Bipolar Series Inductance:</b>	4.4 mH/phase
<b>Rotor Inertia:</b>	1.74E-03 oz-in-sec <sup>2</sup>
<b>Weight:</b>	1.32 lbs
<b>Storage Temperature:</b>	-30 to 70 °C
<b>Operating Temperature:</b>	-20 to 50 °C
<b>Insulation Class:</b>	B
<b>End Play:</b>	0.004 inch max w/ 22.5 lb load

Sold & Serviced By:



Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099



[www.electromate.com](http://www.electromate.com)

[sales@electromate.com](mailto:sales@electromate.com)



Datasheet:

2D Drawing:

 [HH17-105\\_RevB.pdf](#)  
 [3004-320\\_RevA.pdf](#)

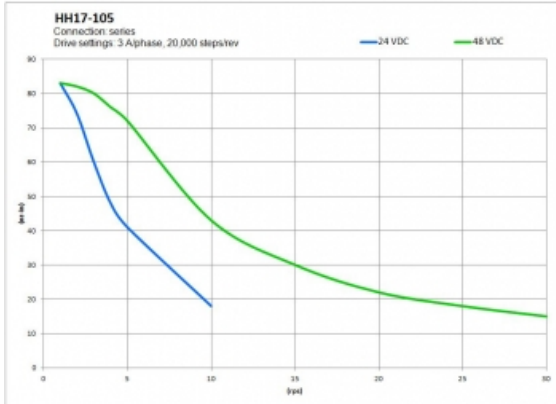
3D Drawing:

 [HH17-105.igs](#)

Speed-Torque Curves:

 [HH17-105 Torque Curve.pdf](#)

## Torque Curves



## Products in the Series *Hollow Shaft Step Motors*

Part Number	Frame Size	Length	Holding Torque	Series Current	Parallel Current	Rotor Inertia
<a href="#">HH17-101</a>	NEMA 17	1.57	63.7	2	NA	8.07E-04
<a href="#">HH17-103</a>	NEMA 17	1.90	89.2	2	NA	1.16E-03
<a href="#">HH17-105</a>	NEMA 17	2.47	104.8	2	NA	1.74E-03
<a href="#">HH23-101</a>	NEMA 23	2.24	212.4	2.2	NA	3.68E-03
<a href="#">HH23-103</a>	NEMA 23	3.11	325.7	3	NA	6.51E-03

Sold & Serviced By:

 **ELECTROMATE**

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

[www.electromate.com](http://www.electromate.com)

[sales@electromate.com](mailto:sales@electromate.com)

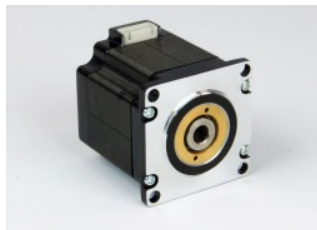
# HH23-101

Hollow Shaft, NEMA 23 High Torque Step Motor



## Product Features

- Hollow shaft for mounting custom shafts or lead screws
- High torque design
- NEMA 23 frame size
- 2-phase hybrid step motor
- 1.8 degree step angle
- Shipped with detachable lead/connector pigtail



## Description

### Product Description:

The HH23-101 two-phase stepper motor features a hollow shaft with an 8 mm bore. The hollow shaft allows for the attachment of lead screws and customized shafts without disassembling the motor.

This step motor is suitable for a wide range of motion control applications and is recommended for use with our popular [ST5 stepper drives](#).

Sold & Serviced By:



Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

[www.electromate.com](http://www.electromate.com)

[sales@electromate.com](mailto:sales@electromate.com)

<b>Part Number:</b>	HH23-101
<b>Frame Size:</b>	NEMA 23
<b>Motor Type:</b>	High torque
<b>Motor Length:</b>	2.24 inches
<b>Number of Lead Wires:</b>	4
<b>Lead Wire Configuration:</b>	flying leads, no connector
<b>Lead Wire/Cable Length:</b>	11.8 inches inches
<b>Lead Wire Gauge:</b>	22 AWG
<b>Bipolar Holding Torque:</b>	212.4 oz-in
<b>Step Angle:</b>	1.8 deg
<b>Bipolar Series Current:</b>	2.2 A/phase
<b>Bipolar Series Resistance:</b>	1.6 Ohms/phase
<b>Bipolar Series Inductance:</b>	6.9 mH/phase
<b>Rotor Inertia:</b>	3.68E-03 oz-in-sec <sup>2</sup>
<b>Weight:</b>	1.32 lbs
<b>Storage Temperature:</b>	-30 to 70 °C
<b>Operating Temperature:</b>	-20 to 50 °C
<b>Insulation Class:</b>	B
<b>End Play:</b>	0.004 inch max w/ 22.5 lb load

Sold & Serviced By:



Toll Free Phone (877) SERV098



Toll Free Fax (877) SERV099

[www.electromate.com](http://www.electromate.com)

[sales@electromate.com](mailto:sales@electromate.com)

Datasheet:

2D Drawing:

 [HH23-101\\_RevB.pdf](#)  
 [3004-321\\_RevA.pdf](#)

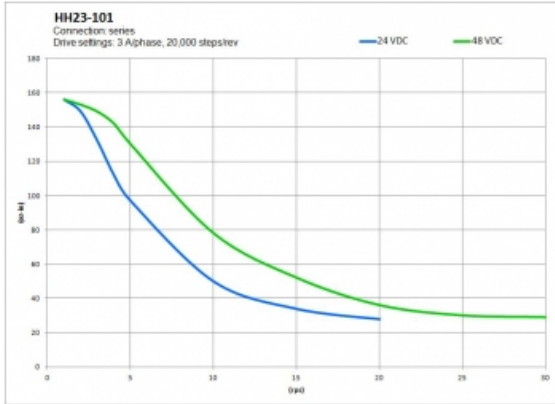
3D Drawing:

 [HH23-101.igs](#)

Speed-Torque Curves:

 [HH23-101 Torque Curve.pdf](#)

## Torque Curves



## Products in the Series *Hollow Shaft Step Motors*

Part Number	Frame Size	Length	Holding Torque	Series Current	Parallel Current	Rotor Inertia
<a href="#">HH17-101</a>	NEMA 17	1.57	63.7	2	NA	8.07E-04
<a href="#">HH17-103</a>	NEMA 17	1.90	89.2	2	NA	1.16E-03
<a href="#">HH17-105</a>	NEMA 17	2.47	104.8	2	NA	1.74E-03
<a href="#">HH23-101</a>	NEMA 23	2.24	212.4	2.2	NA	3.68E-03
<a href="#">HH23-103</a>	NEMA 23	3.11	325.7	3	NA	6.51E-03

Sold & Serviced By:

 **ELECTROMATE**

Toll Free Phone (877) SERV098

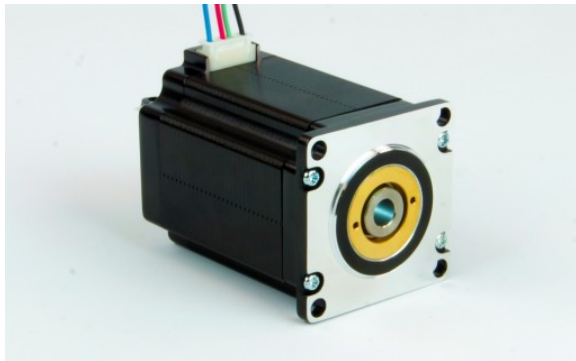
Toll Free Fax (877) SERV099

[www.electromate.com](http://www.electromate.com)

[sales@electromate.com](mailto:sales@electromate.com)

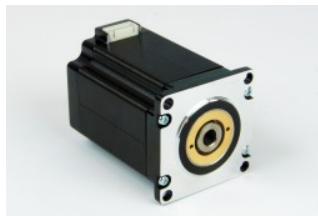
# HH23-103

Hollow Shaft, NEMA 23 High Torque Step Motor



## Product Features

- Hollow shaft for mounting custom shafts or lead screws
- High torque design
- NEMA 23 frame size
- 2-phase hybrid step motor
- 1.8 degree step angle
- Shipped with detachable lead/connector pigtail



## Description

### Product Description:

The HH23-103 two-phase stepper motor features a hollow shaft with an 8 mm bore. The hollow shaft allows for the attachment of lead screws and customized shafts without disassembling the motor.

This step motor is suitable for a wide range of motion control applications and is recommended for use with our popular [ST5 stepper drives](#).

Sold & Serviced By:



Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

[www.electromate.com](http://www.electromate.com)

[sales@electromate.com](mailto:sales@electromate.com)

<b>Part Number:</b>	HH23-103
<b>Frame Size:</b>	NEMA 23
<b>Motor Type:</b>	High torque
<b>Motor Length:</b>	3.11 inches
<b>Number of Lead Wires:</b>	4
<b>Lead Wire Configuration:</b>	flying leads, no connector
<b>Lead Wire/Cable Length:</b>	11.8 inches inches
<b>Lead Wire Gauge:</b>	22 AWG
<b>Bipolar Holding Torque:</b>	325.7 oz-in
<b>Step Angle:</b>	1.8 deg
<b>Bipolar Series Current:</b>	3 A/phase
<b>Bipolar Series Resistance:</b>	1.1 Ohms/phase
<b>Bipolar Series Inductance:</b>	4.5 mH/phase
<b>Rotor Inertia:</b>	6.51E-03 oz-in-sec <sup>2</sup>
<b>Weight:</b>	2.43 lbs
<b>Storage Temperature:</b>	-30 to 70 °C
<b>Operating Temperature:</b>	-20 to 50 °C
<b>Insulation Class:</b>	B
<b>End Play:</b>	0.004 inch max w/ 22.5 lb load

Sold & Serviced By:



Toll Free Phone (877) SERV098



Toll Free Fax (877) SERV099

[www.electromate.com](http://www.electromate.com)

[sales@electromate.com](mailto:sales@electromate.com)

Datasheet:

2D Drawing:

 [HH23-103\\_RevB.pdf](#)  
 [3004-321\\_RevA.pdf](#)

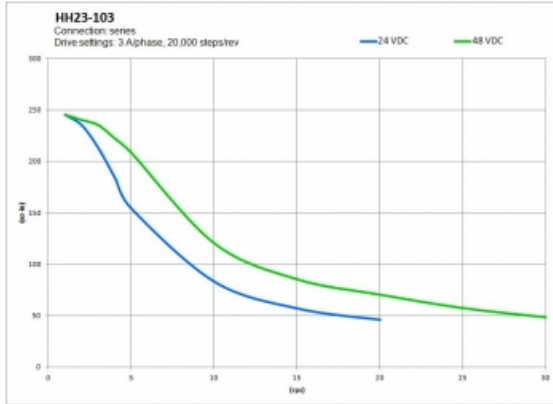
3D Drawing:

 [HH23-103.igs](#)

Speed-Torque Curves:

 [HH23-103 Torque Curve.pdf](#)

## Torque Curves



## Products in the Series *Hollow Shaft Step Motors*

Part Number	Frame Size	Length	Holding Torque	Series Current	Parallel Current	Rotor Inertia
<a href="#">HH17-101</a>	NEMA 17	1.57	63.7	2	NA	8.07E-04
<a href="#">HH17-103</a>	NEMA 17	1.90	89.2	2	NA	1.16E-03
<a href="#">HH17-105</a>	NEMA 17	2.47	104.8	2	NA	1.74E-03
<a href="#">HH23-101</a>	NEMA 23	2.24	212.4	2.2	NA	3.68E-03
<a href="#">HH23-103</a>	NEMA 23	3.11	325.7	3	NA	6.51E-03

Sold & Serviced By:

 **ELECTROMATE**

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

[www.electromate.com](http://www.electromate.com)

[sales@electromate.com](mailto:sales@electromate.com)