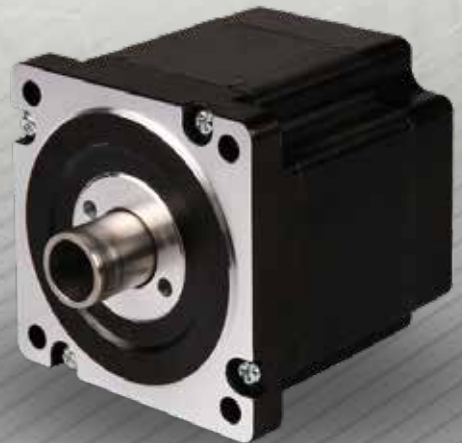


**DINGS'**  
Precision Motion Specialist

# HOLLOW SHAFT STEPPER MOTOR PRODUCT CATALOG



DINGS' provides 8 different sizes of Hollow shaft stepper motors from 14mm to 86mm.

Each size has multiple stack lengths. Single or dual shaft is standard but customized shaft options are also available. In addition hollow shaft encoders are available.

Customers are able to use hollow shaft motor to let something go thru hollow shaft like suction valve, cables or pumps especially pick & place application, electronics picker module or other applications.

Hollow shaft motor enables customers to design this kind of pick-up module in very compact design and small size of hollow steppers for example NEMA 6, NEMA8 or NEMA11, it can reduce total weight of picker module since light weight of motors.

For better positioning, lots of customers require closed loop function of hollow shaft motors and DINGS' has various hollow shaft type of encoders so it can be very helpful to realize light weight of motor and encoder package for higher accuracy of positioning.



# Hollow Shaft Stepper M

# CONTENTS

Part number construction

Product overview

Size 6 · 14 mm

Size 8 · 20 mm

Size 11 · 28 mm

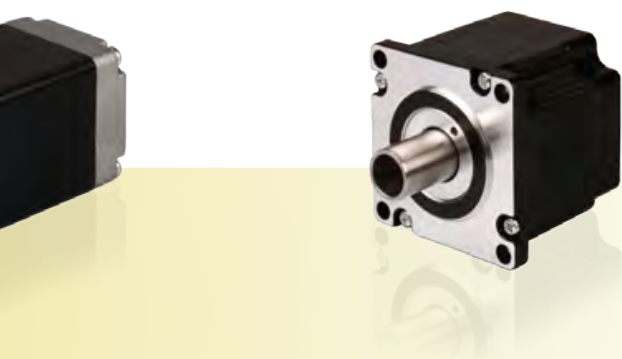
Size 14 · 35 mm

Size 17 · 42 mm

Size 23 · 57 mm

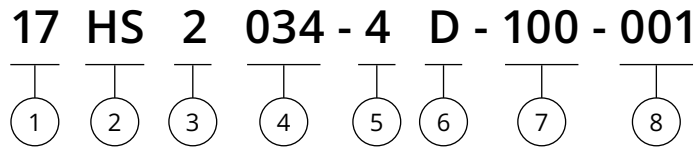
Size 24 · 60 mm

Size 34 · 86 mm



# Motor

# Part Number Construction



① Motor Size

Motor Size (mm)	14	20	28	35	42	57	60	86
Motor Size (NEMA)	6	8	11	14	17	23	24	34

② Motor Type

HS = Hollow Shaft Step

③ Motor Step Angle

2 = 2 phase with 1.8°

4 = 2 phase with 0.9°

④ Motor Length

034 = 34mm

⑤ Number of Lead Wires

4 = Bi-Polar (4 flying leads)

6 = Uni-Polar (6 flying leads)

⑥ Shaft Configuration

D = Double Shaft

S = Single Shaft

\*For shaft customization, please contact DINGS'

⑦ Rated Current

XXX = Rated current ×100 (A)

⑧ Customer Sequence Number

Example

Naming code                    17HS2034-4D-100-001

Description                    Size 42 mm  
    Hollow shaft stepper motor  
    Step angle 1.8°  
    Motor length 34 mm  
    4 Flying leads  
    Dual shaft  
    Rated current 1.0A  
    Customization sequence 001

## Product Overview

Size (mm)	Motor length (mm)	Holding torque (N·m)	Inner holes (mm)	Power consumption (W)
6 (14*14)	32	0.005	2.5	2
8 (20*20)	28	0.014	3	2.4
	38	0.02	3	4
11 (28*28)	33	0.053	5	4.2
	45	0.1	5	7.5
14 (35*35)	33.6	0.15	8	5.7
	45.6	0.32	8	9.1
17 (42*42)	34.1	0.25	8	7
	48.1	0.48	8	13
23 (57*57)	45	0.8	12	13
	65	1.6	12	25
24 (60*60)	47	0.9	12	16.2
	68	1.9	12	19.2
34 (86*86)	76	4.5	16	31

## Size 6 (14mm) Series

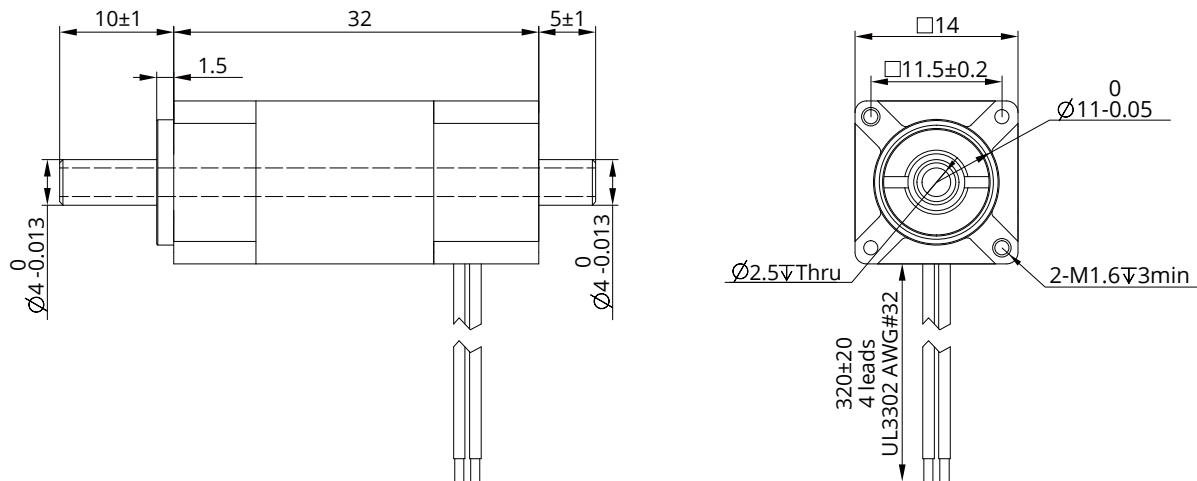
The size 6 [14mm] Hollow Shaft Stepper Motor is the smallest hollow shaft motor from DINGS'. It has Max. 0.005N·m of holding torque. For special windings or customization of shaft, please contact DINGS' for further information.



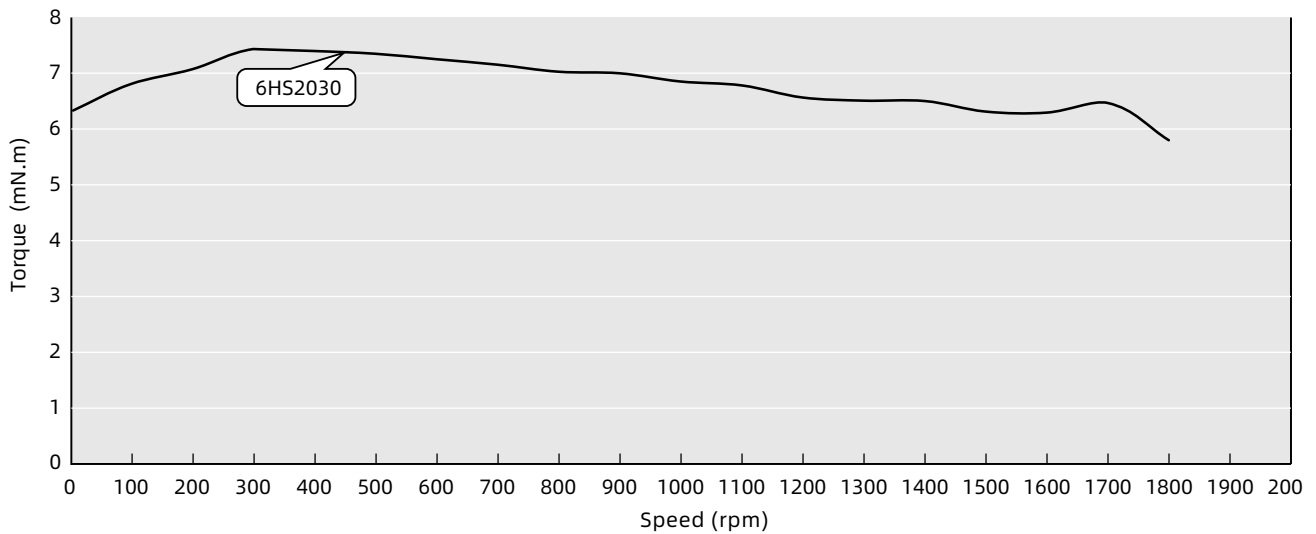
### Motor Characteristics

Motor No.	Rated voltage (V)	Current (A <sub>RMS</sub> )	Resistance (Ω)	Inductance (mH)	Holding torque (N·m)	Detent torque (N·m)	Motor length (mm)
06HS2030	6.6	0.3	23	4.0	0.005	0.001	32

### Dimensional Drawings



### Torque Performance Curves



### TEST CONDITION

Testing Voltage: 24Vdc, Driver Model: DS-OLS8-FRS4 bipolar, chopper driver at rated current (rms). Motor's thrust will be changed with different voltage and driver. 50% thrust margin is recommended.

## Size 8 (20mm) Series

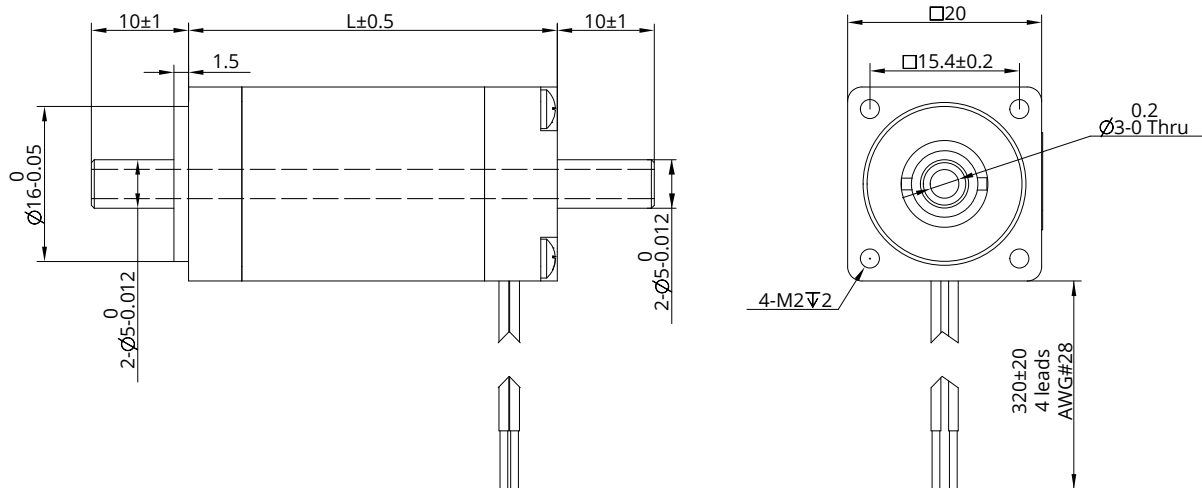
The size 8 [20mm] Hollow Shaft Stepper Motor has Max. 0.02N·m of holding torque.  
For special windings or customization of shaft,  
also hollow type of encoder assembly,  
Please contact DINGS' for further information.



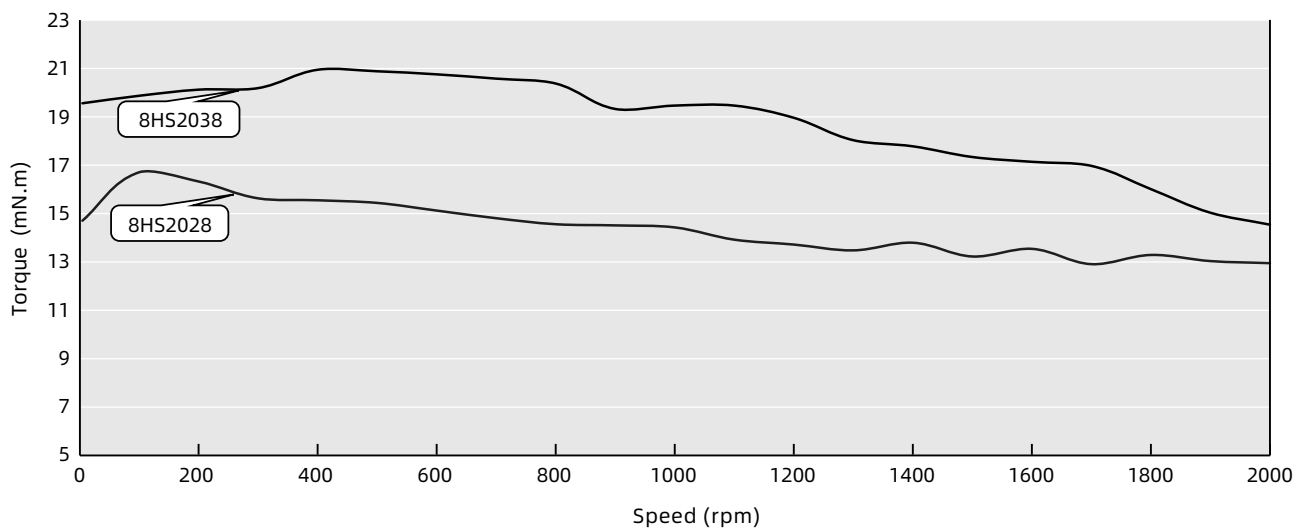
### Motor Characteristics

Motor No.	Rated voltage (V)	Current (A <sub>(RMS)</sub> )	Resistance (Ω)	Inductance (mH)	Holding torque (N·m)	Detent torque (N·m)	Motor length (mm)
8HS2028	2.55	0.5	5.1	1.5	0.014	0.002	28
8HS2038	4.4	0.5	8.8	2.7	0.020	0.004	38

### Dimensional Drawings



### Torque Performance Curves



### TEST CONDITION

Testing Voltage: 24Vdc, Driver Model: DS-OLS8-FRS4 bipolar, chopper driver at rated current (rms).  
Motor's thrust will be changed with different voltage and driver. 50% thrust margin is recommended.

## Size 11 (28mm) Series

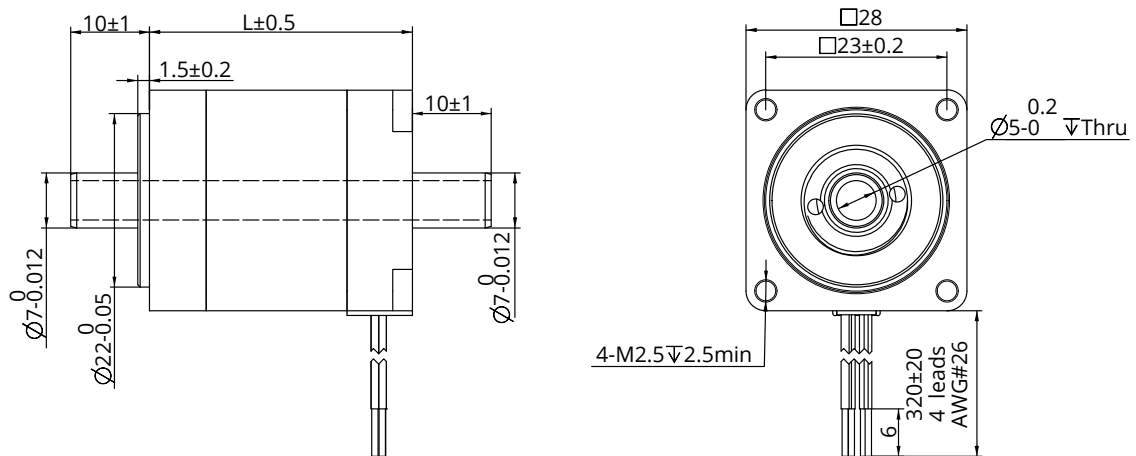
The size 11 [28mm] Hollow Shaft Stepper Motor has Max. 0.1N·m of holding torque. For special windings or customization of shaft, also hollow type of encoder assembly, Please contact DINGS' for further information.



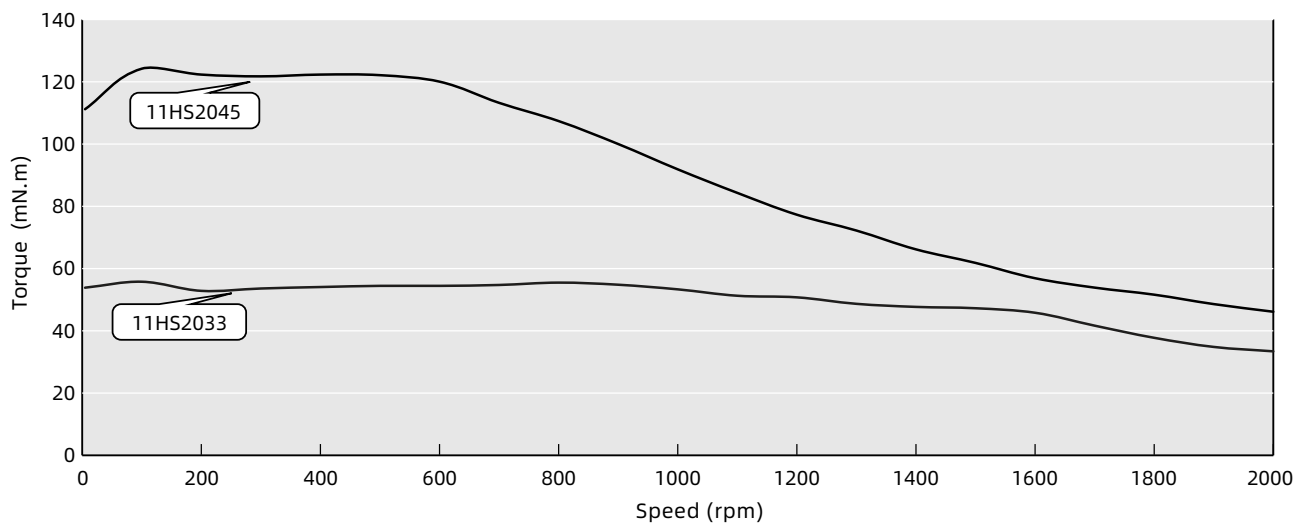
### Motor Characteristics

Motor No.	Rated voltage (V)	Current (A <sub>RMS</sub> )	Resistance (Ω)	Inductance (mH)	Holding torque (N·m)	Detent torque (N·m)	Motor length (mm)
11HS2033	2.1	1	2.1	1.5	0.053	0.003	33
11HS2045	4.1	1	4.1	4	0.1	0.004	45

### Dimensional Drawings



### Torque Performance Curves



### TEST CONDITION

Testing Voltage: 24Vdc, Driver Model: DS-OLS8-FRS4 bipolar, chopper driver at rated current (rms). Motor's thrust will be changed with different voltage and driver. 50% thrust margin is recommended.



## Size 14 (35mm) Series

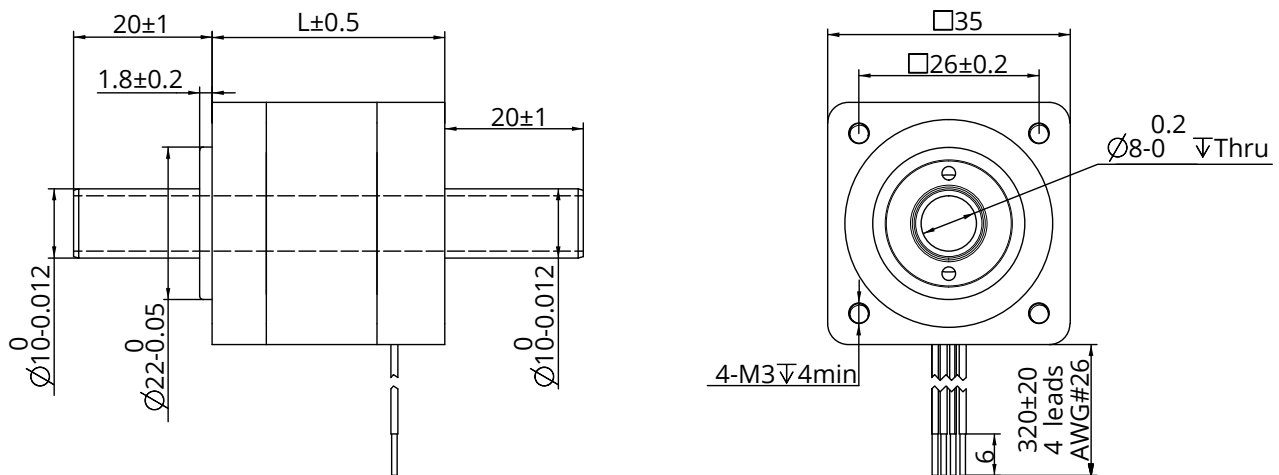
The size 14 [35mm] Hollow Shaft Stepper Motor has Max. 0.32N·m of holding torque.  
For special windings or customization of shaft,  
also hollow type of encoder assembly,  
Please contact DINGS' for further information.



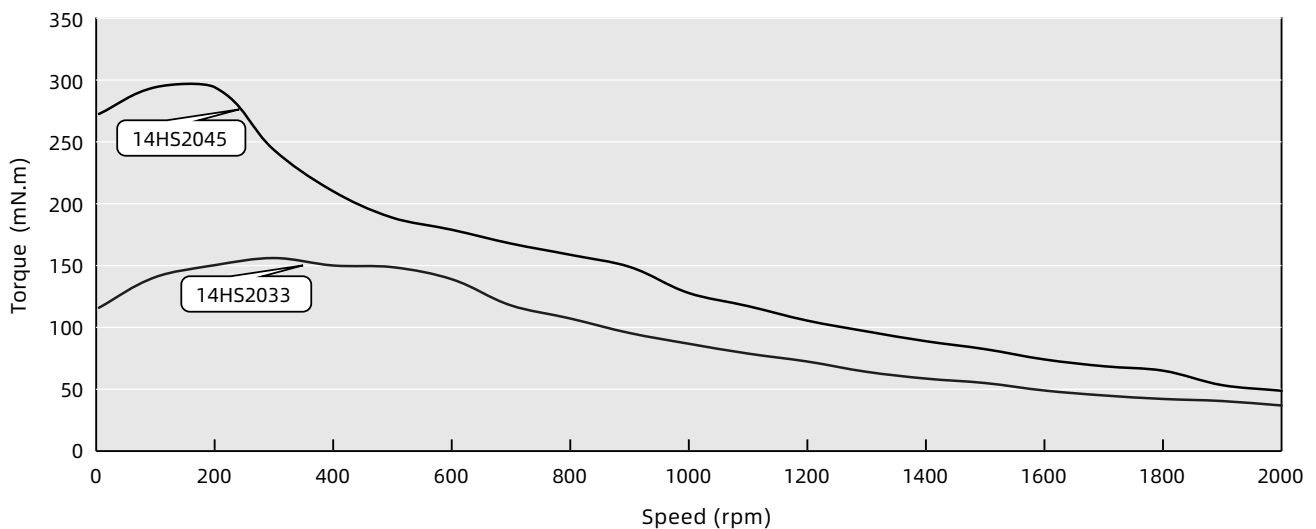
### Motor Characteristics

Motor No.	Rated voltage (V)	Current (A <sub>(RMS)</sub> )	Resistance (Ω)	Inductance (mH)	Holding torque (N·m)	Detent torque (N·m)	Motor length (mm)
14HS2033	3.5	1	3.5	3.6	0.15	0.006	33.6
14HS2045	6	1	6	7.8	0.32	0.01	45.6

### Dimensional Drawings



### Torque Performance Curves



### TEST CONDITION

Testing Voltage: 24Vdc, Driver Model: DS-OLS8-FRS4 bipolar, chopper driver at rated current (rms).  
Motor's thrust will be changed with different voltage and driver. 50% thrust margin is recommended.

## Size 17 (42mm) Series

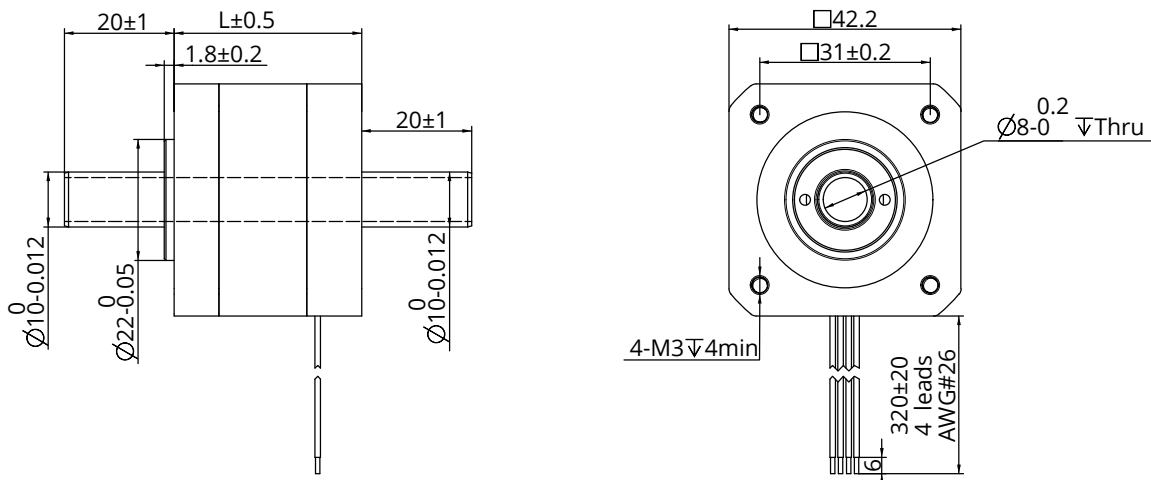
The size 17 [42mm] Hollow Shaft Stepper Motor has Max. 0.48N·m of holding torque. For special windings or customization of shaft, also hollow type of encoder assembly, Please contact DINGS' for further information.



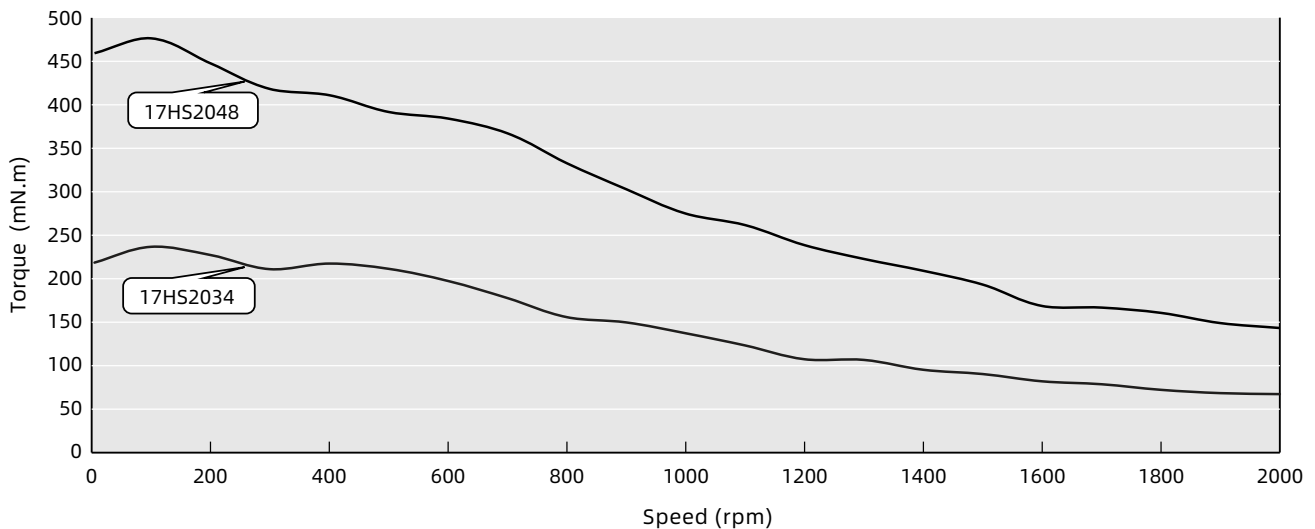
### Motor Characteristics

Motor No.	Rated voltage (V)	Current (A <sub>RMS</sub> )	Resistance (Ω)	Inductance (mH)	Holding torque (N·m)	Detent torque (N·m)	Motor length (mm)
17HS2034	3.8	1	3.6	4.5	0.25	0.014	34.1
17HS2048	2.25	2.5	1	1.8	0.48	0.02D	48.1

### Dimensional Drawings



### Torque Performance Curves



### TEST CONDITION

Testing Voltage: 24Vdc, Driver Model: DS-OLS8-FRS4 bipolar, chopper driver at rated current (rms). Motor's thrust will be changed with different voltage and driver. 50% thrust margin is recommended.

## Size 23 (57mm) Series

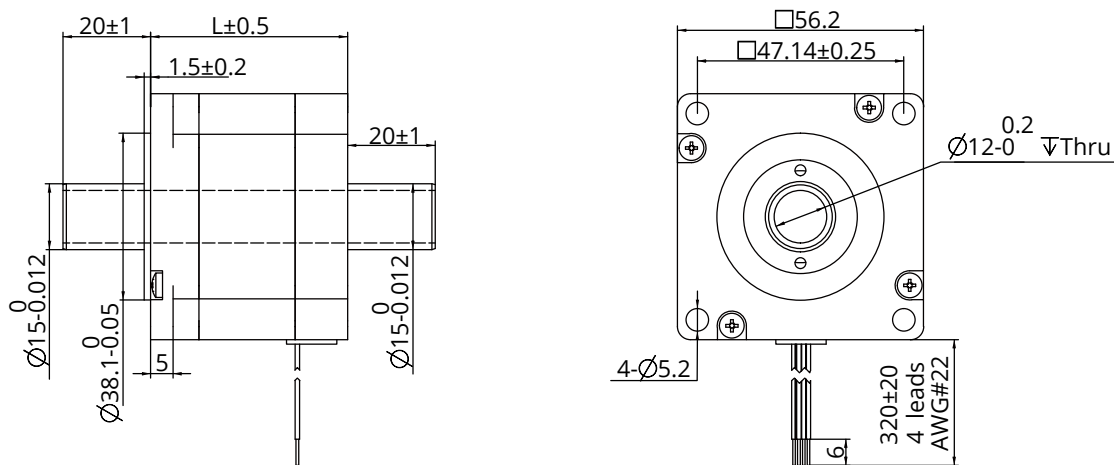
The size 23 [57mm] Hollow Shaft Stepper Motor has Max. 1.5N·m of holding torque.  
For special windings or customization of shaft,  
also hollow type of encoder assembly,  
Please contact DINGS' for further information.



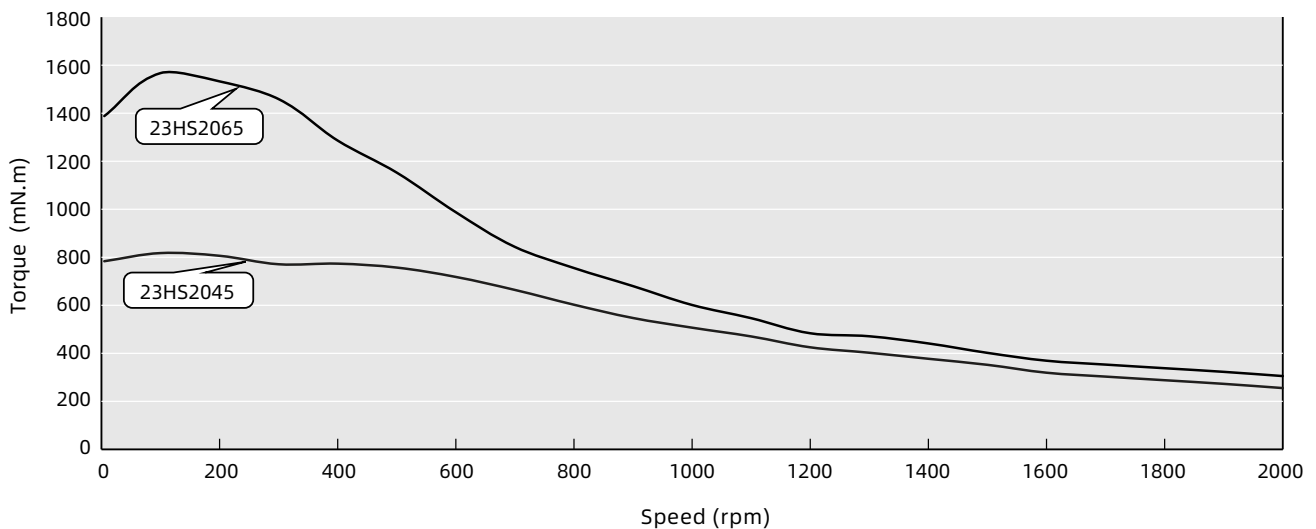
### Motor Characteristics

Motor No.	Rated voltage (V)	Current (A (RMS))	Resistance (Ω)	Inductance (mH)	Holding torque (N·m)	Detent torque (N·m)	Motor length (mm)
23HS2045	3.5	2	1.75	4.1	0.8	0.03	45
23HS2065	5	2.5	1.9	5.5	1.5	0.06	65

### Dimensional Drawings



### Torque Performance Curves



### TEST CONDITION

Testing Voltage: 48Vdc, Driver Model: DS-OLS8-FRS4 bipolar, chopper driver at rated current (rms).  
Motor's thrust will be changed with different voltage and driver. 50% thrust margin is recommended.

## Size 24 (60mm) Series

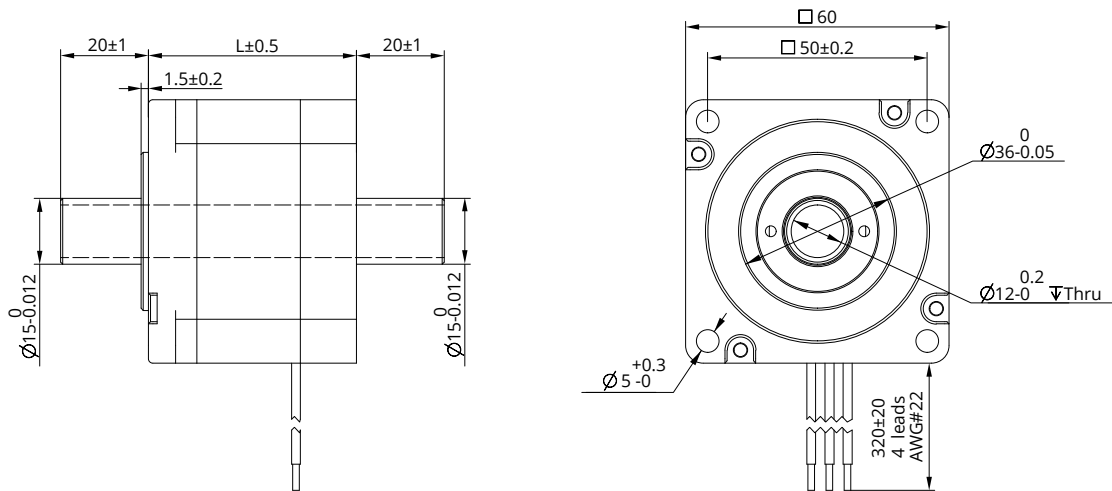
The size 24 [60mm] Hollow Shaft Stepper Motor has Max. 1.8N·m of holding torque. For special windings or customization of shaft, also hollow type of encoder assembly, Please contact DINGS' for further information.



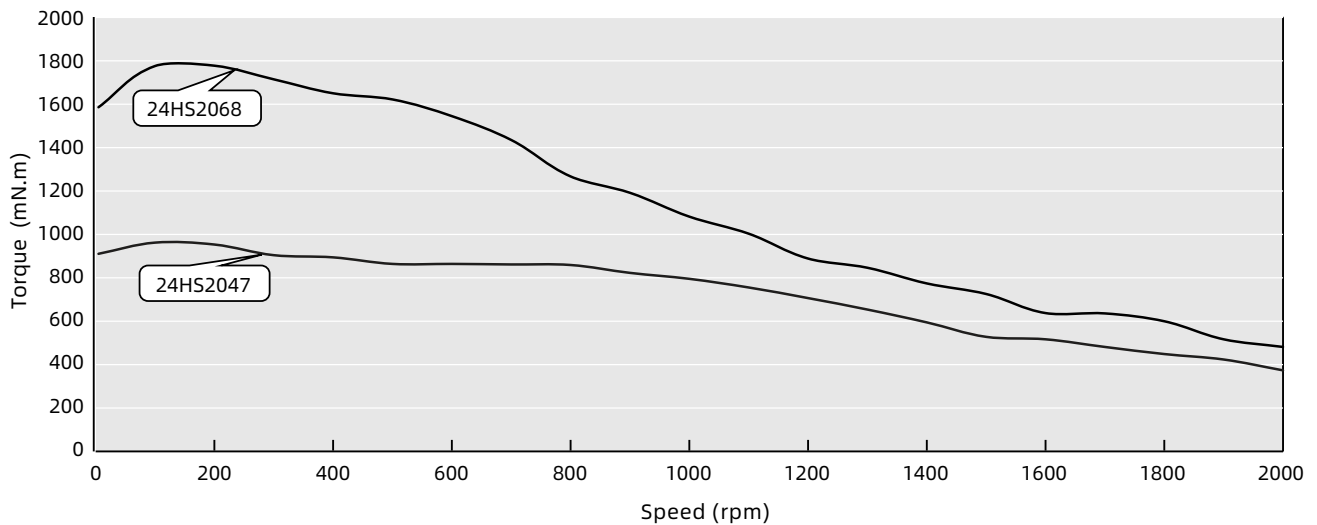
### Motor Characteristics

Motor No.	Rated voltage (V)	Current (A <sub>RMS</sub> )	Resistance (Ω)	Inductance (mH)	Holding torque (N·m)	Detent torque (N·m)	Motor length (mm)
24HS2047	1.52	4	0.4	0.9	0.9	0.03	47
24HS2068	2.4	4	0.6	1.9	1.8	0.06	68

### Dimensional Drawings



### Torque Performance Curves



### TEST CONDITION

Testing Voltage: 24Vdc, Driver Model: DS-OLS8-FRS4 bipolar, chopper driver at rated current (rms). Motor's thrust will be changed with different voltage and driver. 50% thrust margin is recommended.

## Size 34 (86mm) Series

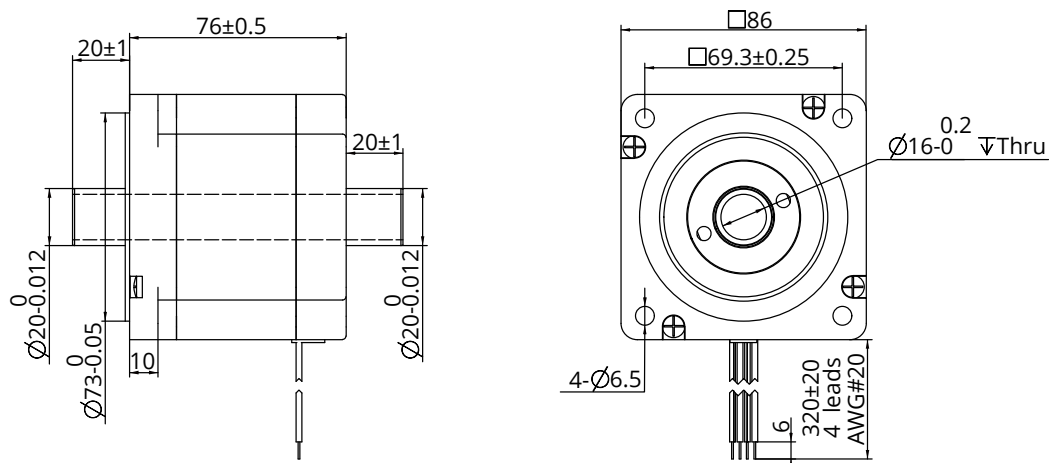
The size 34 [86mm] Hollow Shaft Stepper Motor has Max. 4.5N·m of holding torque.  
For special windings or customization of shaft,  
also hollow type of encoder assembly,  
Please contact DINGS' for further information.



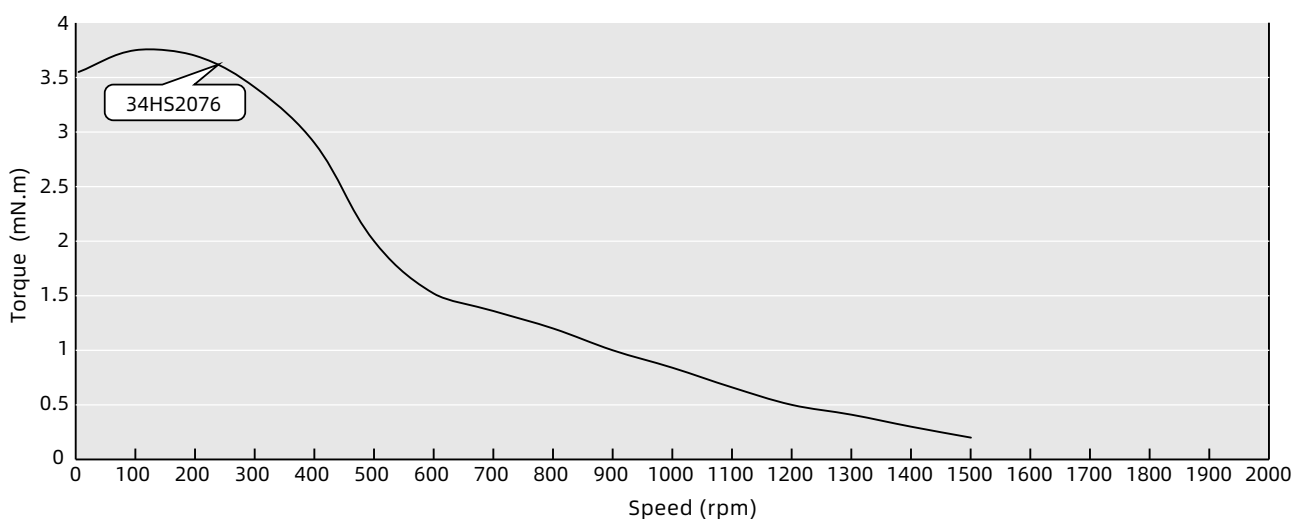
### Motor Characteristics

Motor No.	Rated voltage (V)	Current (A (RMS))	Resistance (Ω)	Inductance (mH)	Holding torque (N·m)	Detent torque (N·m)	Motor length (mm)
34HS2076	5.7	3	1.9	15	4.5	0.095	76

### Dimensional Drawings



### Torque Performance Curves



### TEST CONDITION

Testing Voltage: 48Vdc, Driver Model: DS-OLS8-FPD bipolar, chopper driver at rated current (rms).  
Motor's thrust will be changed with different voltage and driver. 50% thrust margin is recommended.

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