

# 20 SERIES SIZE 8 STEPPER MOTOR LINEAR ACTUATOR

The THINKER 20 Series Screw stepper motor of high precision, good performance;Products have three designs are available, captive, non-captive and external linear versions;The Size 20 stepper motor based linear actuator delivers thrust of up to 8kg;The 20 Series is available in a wide variety of resolutions — from 0015 mm per step to 0.04 mm per step,The fastest can be up to 60 mm per second.

## 20 series of two-phase hybrid ACME screw linear stepper motor

Part No.	Non-Captive	20N230-XXX-0.5-4
	External Lin.	20E230-XXX-0.5-4
	Captive	20C230-XXX-0.5-4
Step angle		1.8°
Motor's phase		Bipolar 4 line
Current/phase		0.5A
Operating voltage		2.5V
Resistance/phase		5Ω
Inductance/phase		1.6mH
Power consumption		2.5W
Temperature rise		75℃
Weight		45g
Insulation class		B
Insulation resistance		20MΩ

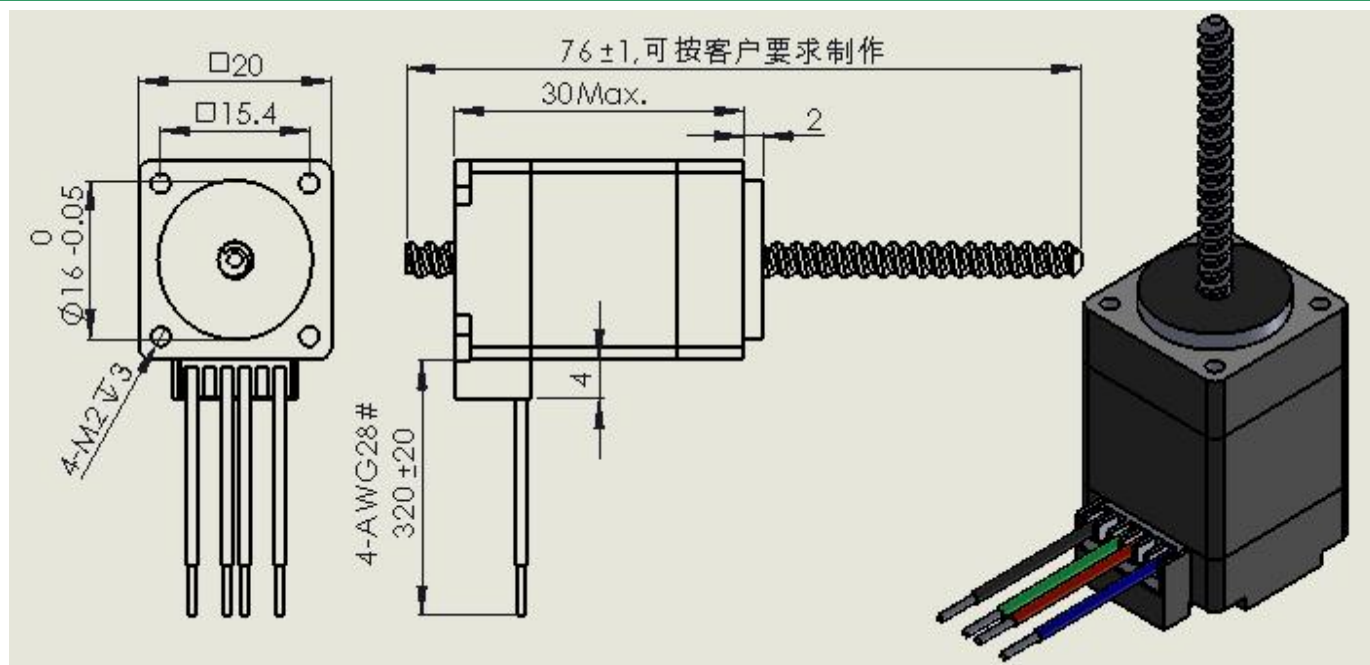
**Note: \* \* \* other rated current can customize according to customer's requirements.**

## 20 motor standard screw specification table

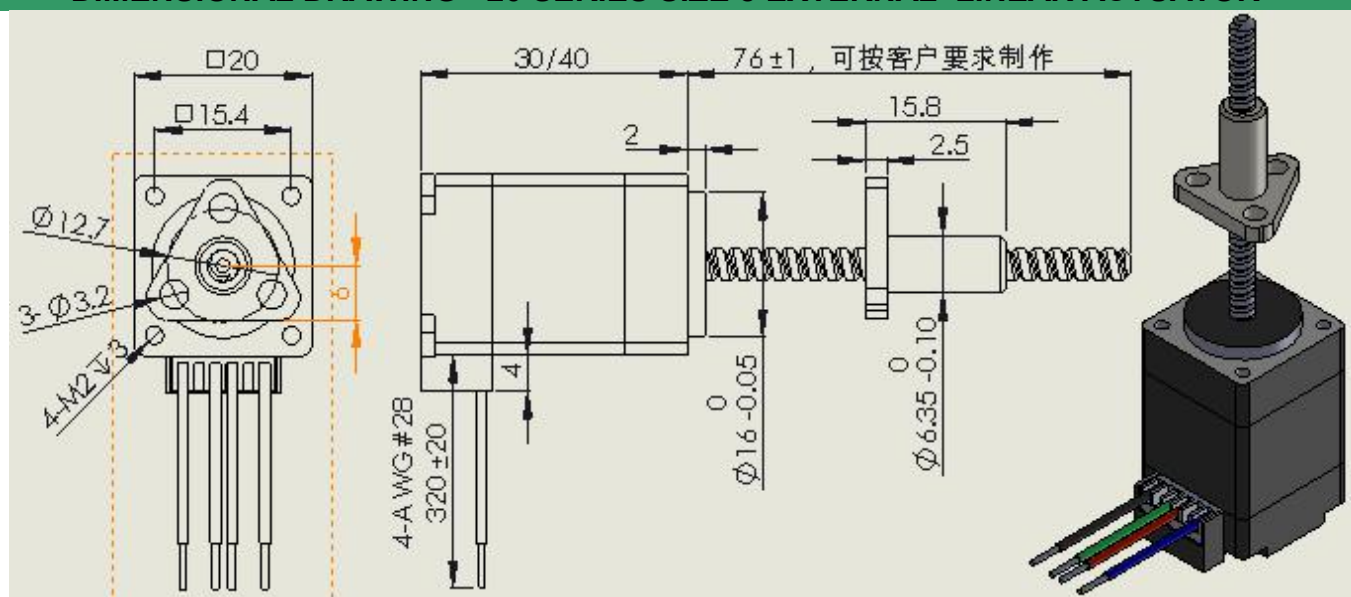
Screw Dia.(mm)	Lead(mm)	Travel Per Step (mm/Step)	Can match electrical category
3.5	0.6096	0.003048	captive, non-captive and external linear
	1.2192	0.006096	
	2	0.01	
4.76	0.635	0.003175	external linear
	1.27	0.00635	
	2.54	0.0127	

**Note: \* \* \* more screw specification consult THINKER sales engineer.**

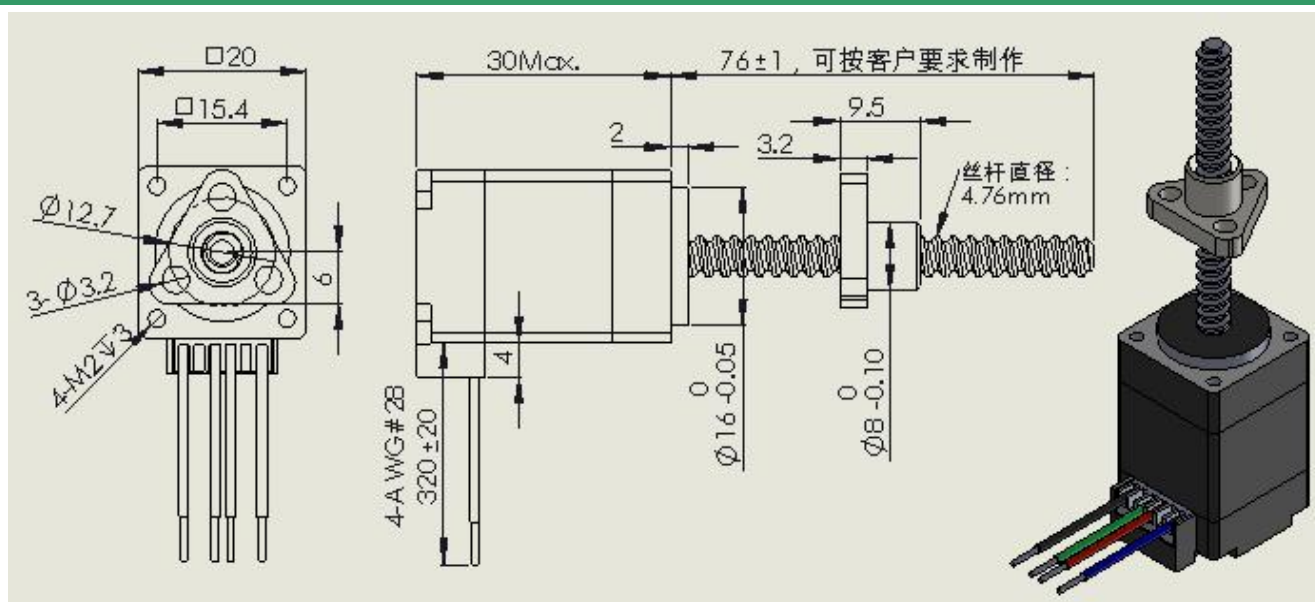
## DIMENSIONAL DRAWING - 20 SERIES SIZE 8 NON-CAPTIVE LINEAR ACTUATOR



## DIMENSIONAL DRAWING - 20 SERIES SIZE 8 EXTERNAL LINEAR ACTUATOR

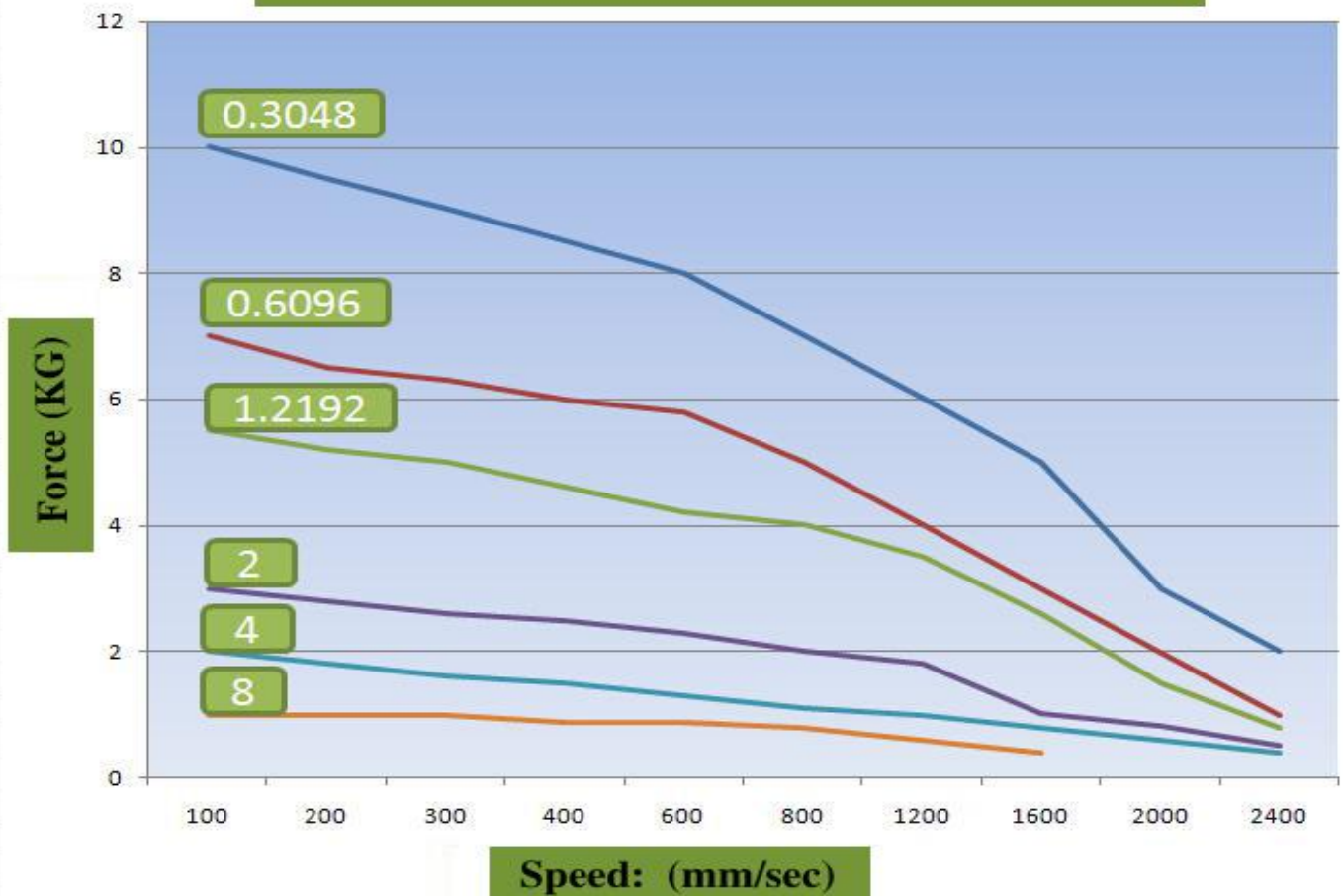


## DIMENSIONAL DRAWING - 20 SERIES SIZE 8 EXTERNAL STEPPER MOTOR LINEAR ACTUATOR (Screw Dia of 4.76mm)

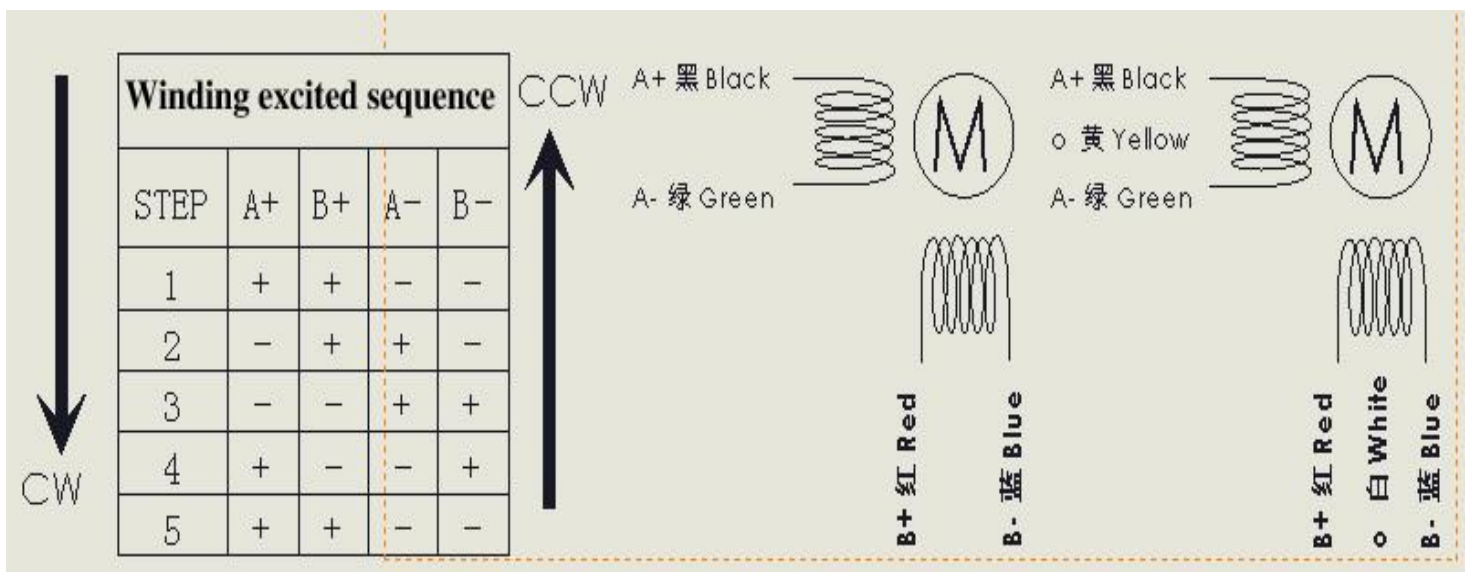


# PERFORMANCE CURVES - 20 SERIES Speed Thrust Curves

## 20 SERIES STEPPER MOTOR, 24VDC CHOPPER DRIVER



## LEAD WIRE CONFIGURATION



# 28 SERIES SIZE 11 STEPPER MOTOR LINEAR ACTUATOR

The THINKER 28 Series Screw stepper motor of high precision, good performance; Products have three designs are available, captive, non-captive and external linear versions; The Size 28 stepper motor based linear actuator delivers thrust of up to 12kg; The 28 Series is available in a wide variety of resolutions — from 0.003175 mm per step to 0.0508mm per step, The fastest can be up to 60 mm per second.

## 28series of two-phase hybrid ACME screw linear stepper motor

Part No.		Motor Length (34mm)	Motor Length (45mm)
	Non-Captive	28N234-XXX-1-4	28N245-XXX-1-4
	External Lin.	28E234-XXX-1-4	28E245-XXX-1-4
	Captive	28C234-XXX-1-4	28C245-XXX-1-4
Step angle		1.8°	
Motor's phase		Bipolar 4 line	
Current/phase		1 A	1 A
Operating voltage		2.2 V	4 V
Resistance/phase		2.2 Ω	4 Ω
Inductance/phase		1.6mH	4 mH
Power consumption		4.4 W	8 W
Temperature rise		75°C	75°C
Weight		120g	180g
Insulation class		B	B
Insulation resistance		20MΩ	20MΩ

**Note: \* \* \* Other rated current and the single polarity 6 line motor can**

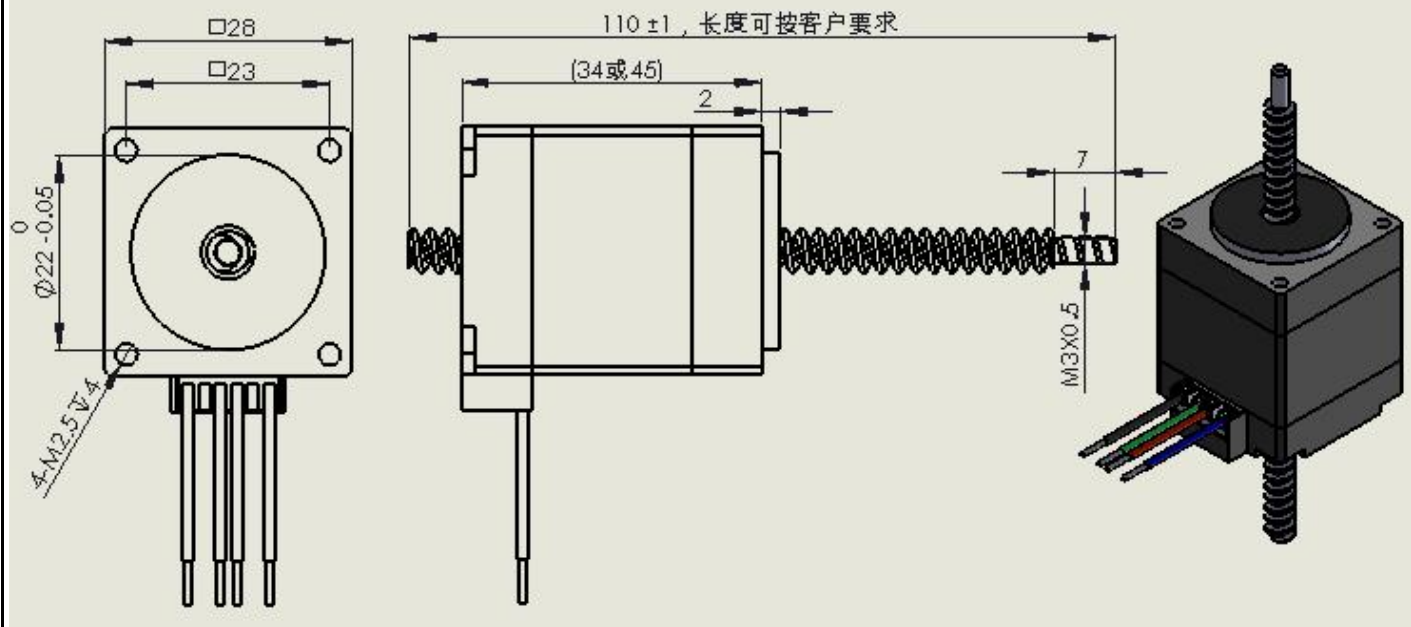
## 28 motor standard screw specification table

Screw Dia.(mm)	Lead(mm)	Can match electrical category
4.76	0.635	captive, non-captive and external linear
	1.27	
	2.54	
5.54	0.6096	
	4.8768	
6.35	1.27	external linear
	1.5875	
	2.4384	
	2.54	
	5.08	
	6.35	
	12.7	

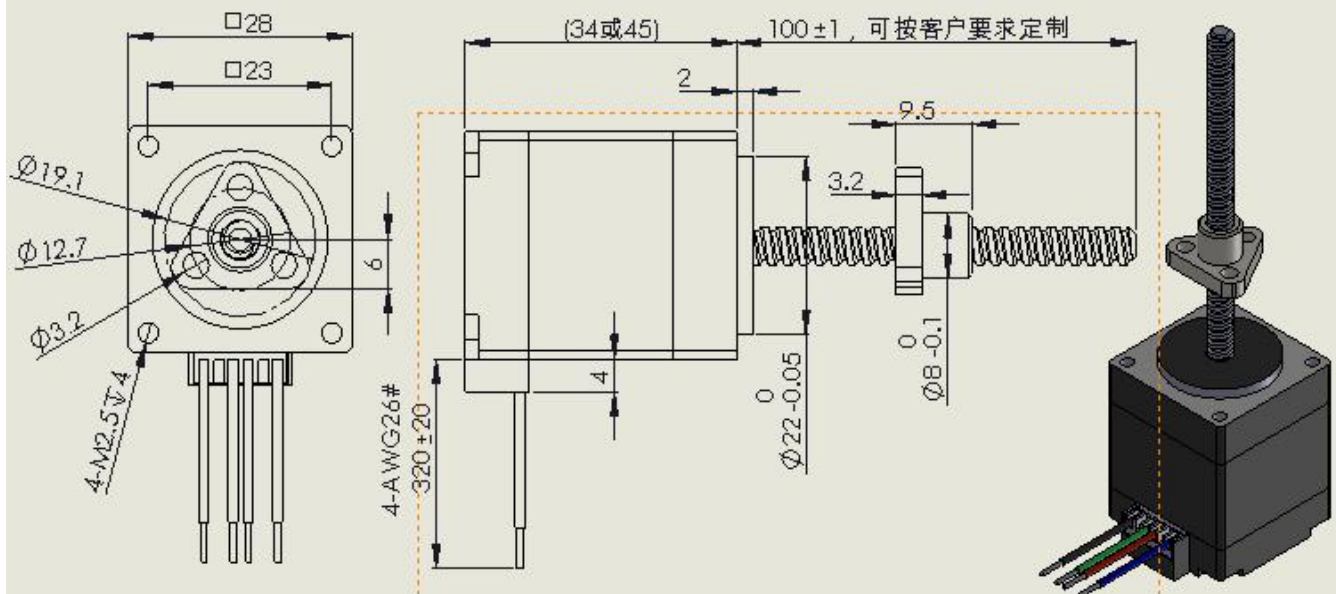
**Note: \* \* \* more screw specification consult THINKER sales engineer.**



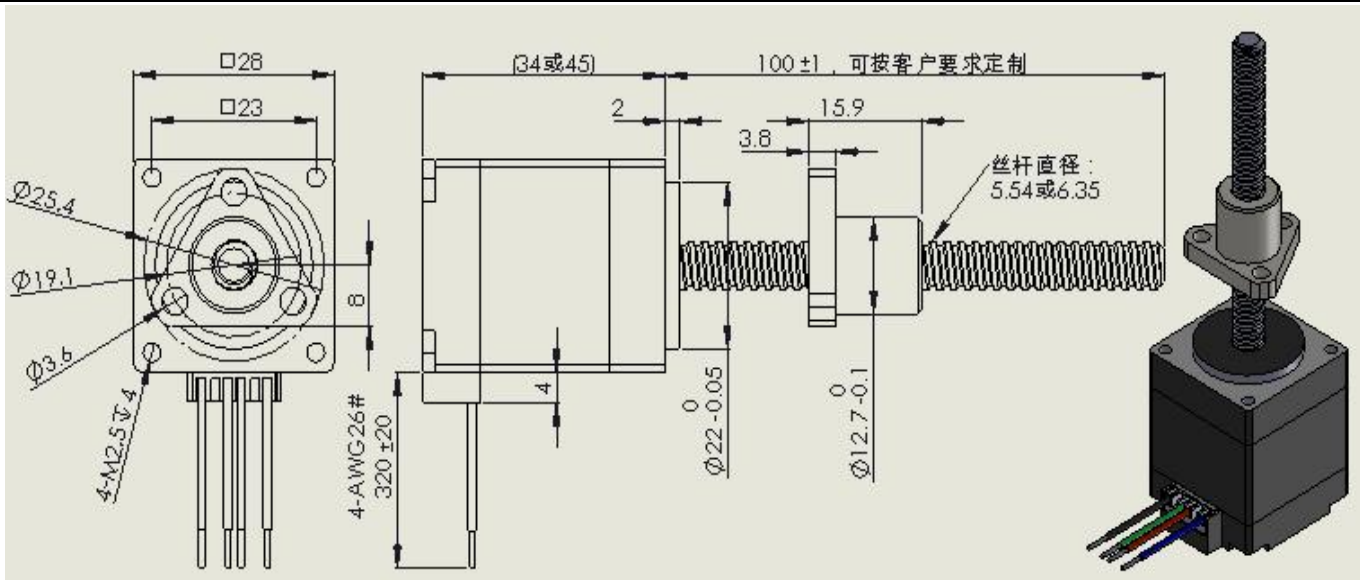
## DIMENSIONAL DRAWING - 28 SERIES SIZE 11 NON-CAPTIVE LINEAR ACTUATOR



## DIMENSIONAL DRAWING - 28 SERIES SIZE 11 EXTERNAL LINEAR ACTUATOR



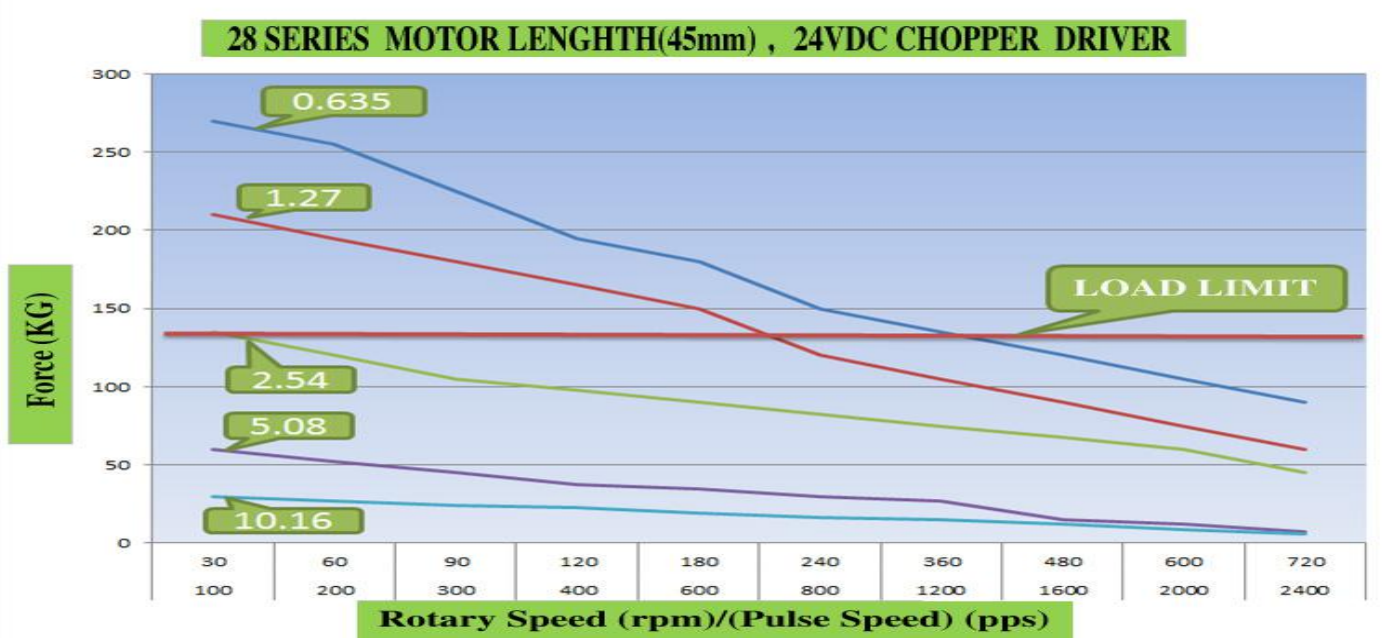
## DIMENSIONAL DRAWING - 28SERIES SIZE 11 EXTERNAL LINEAR ACTUATOR(Screw Dia of 5.54/6.35mm)



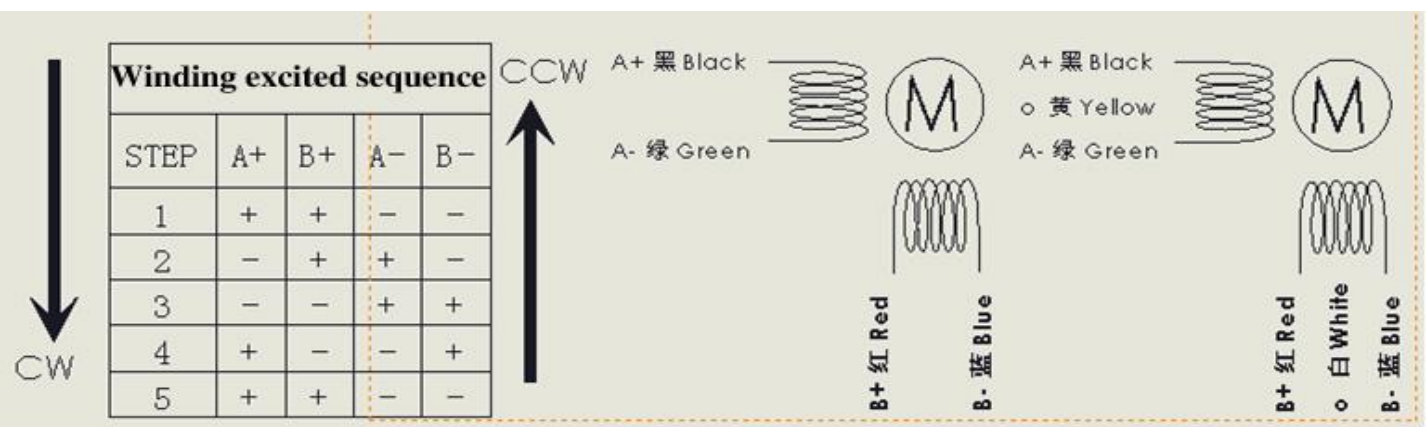
## PERFORMANCE CURVES - 28 SERIES Speed Thrust Curves Motor Length(34mm)



## PERFORMANCE CURVES - 28 SERIES Speed Thrust Curves Motor Length(45mm)



## LEAD WIRE CONFIGURATION



## 35 SERIES SIZE14 STEPPER MOTOR LINEAR ACTUATOR

The THINKER 35 Series Screw stepper motor of high precision, good performance; Products have three designs are available, captive, non-captive and external linear versions; The Size 35 stepper motor based linear actuator delivers thrust of up to 25kg; The 35 Series is available in a wide variety of resolutions — from 0.003048 mm per step to 0.127mm per step, The fastest can be up to 100 mm per second.

### 35 SERIES SIZE14 STEPPER MOTOR LINEAR ACTUATOR

Part No.		Motor Length (34mm)	Motor Length (48mm)
	Non-Captive	35N234-XXX-1.0-4	35N248-XXX-1.5-4
	External Lin.	35E234-XXX-1.0-4	35E248-XXX-1.5-4
	Captive	35C234-XXX-1.0-4	35C248-XXX-1.5-4
Step angle		1.8°	
Motor's phase		Bipolar 4 line	
Current/phase		1.0 A	1.5 A
Operating voltage		3.3 V	4 V
Resistance/phase		3.3 Ω	2.7 Ω
Inductance/phase		3.6 mH	1.9 mH
Power consumption		6.6 W	12 W
Temperature rise		75°C	75°C
Weight		160g	240g
Insulation class		B	B
Insulation resistance		20MΩ	20MΩ

**Note: \*\*\*Other rated current and the single polarity 6 line motor can**

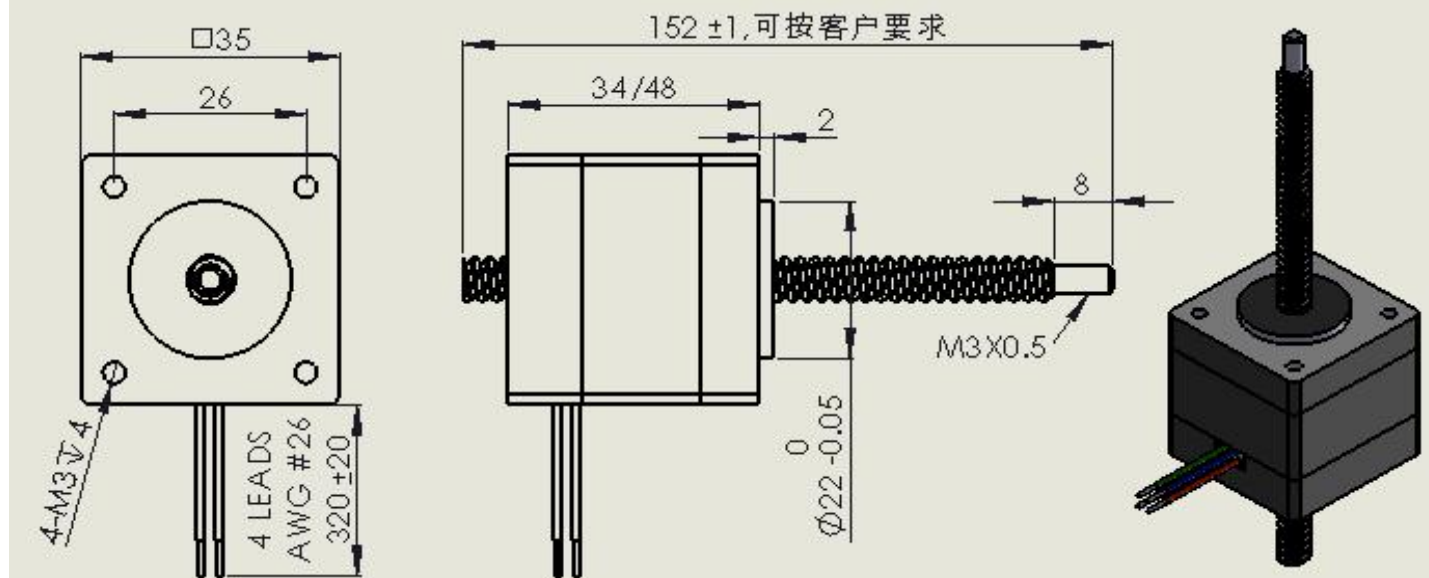
### 35 motor standard ACME screw specification table

Screw Dia.(mm)	Lead(mm)	Travel Per Step (mm/Step)	Can match electrical category
5.54	0.6096	0.003048	captive, non-captive and external
	4.8768	0.024384	
6.35	1.27	0.00635	
	1.5875	0.0079375	
	2.4384	0.012192	
	2.54	0.0127	
	5.08	0.0254	
	6.35	0.03175	
	12.7	0.0635	
8	8	0.04	
9.525	1.5875	0.0079375	external
	2.116	0.01058	
	4.322	0.02161	
	5.08	0.0254	
	6.35	0.03175	
	10.16	0.0508	
	12.7	0.0635	
	25.4	0.127	

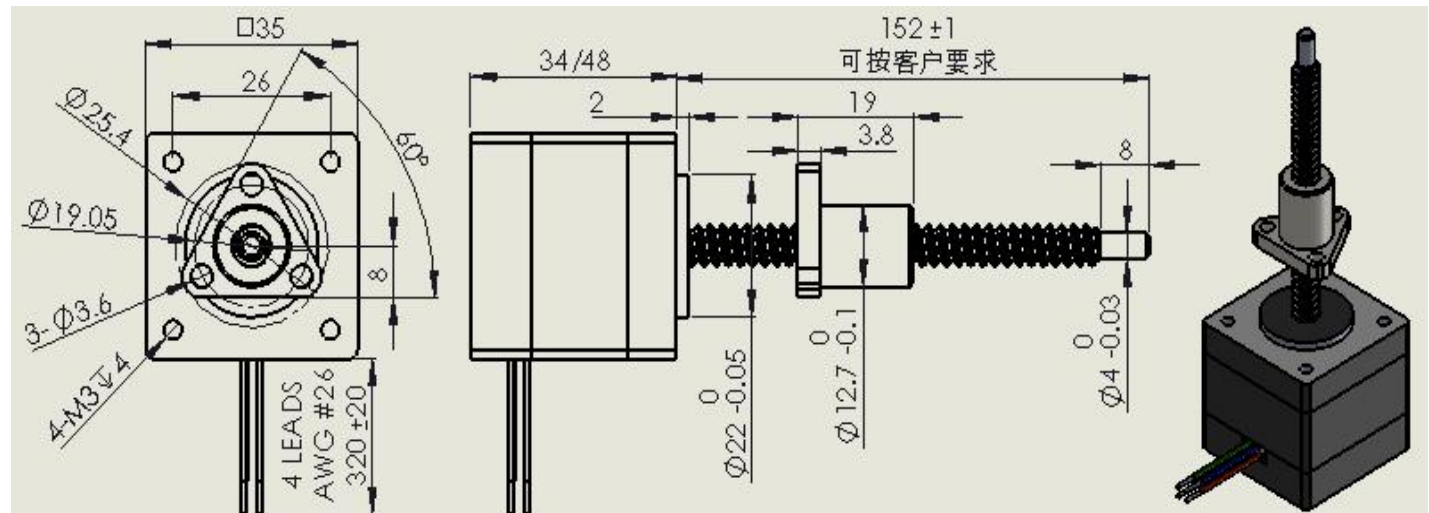
**Note: \* \* \* more screw specification consult THINKER sales engineer.**



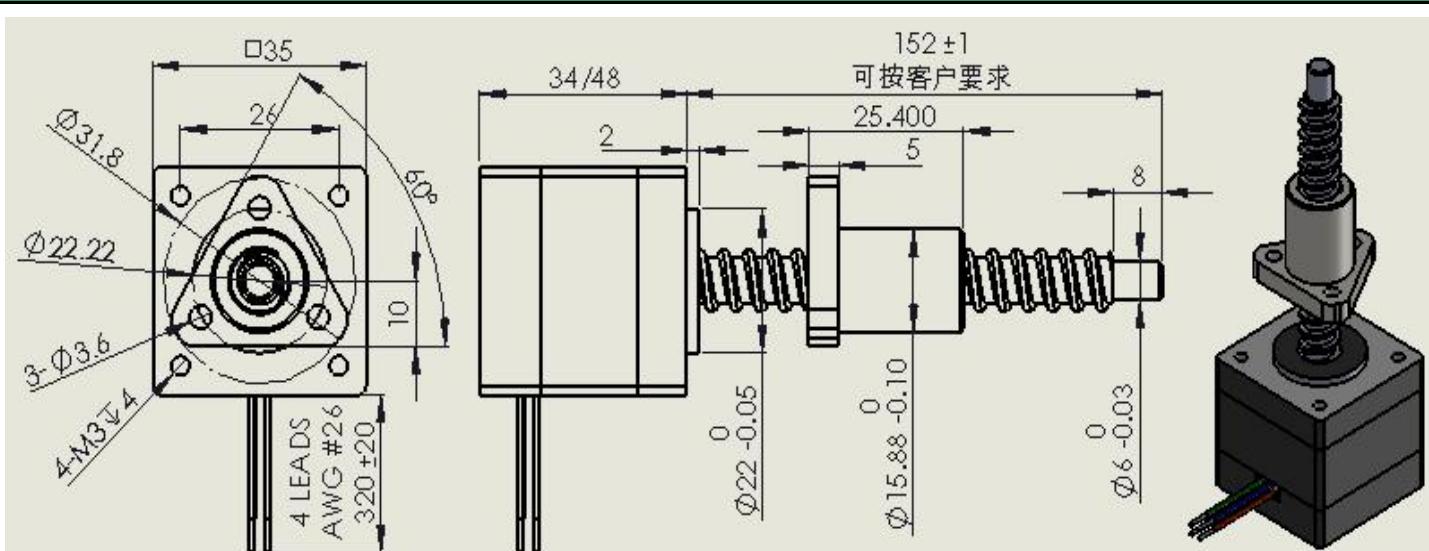
## DIMENSIONAL DRAWING - 35 SERIES SIZE 14 NON-CAPTIVE STEPPER MOTOR LINEAR ACTUATOR



## DIMENSIONAL DRAWING - 35 SERIES SIZE 14 EXTERNAL STEPPER MOTOR LINEAR ACTUATOR



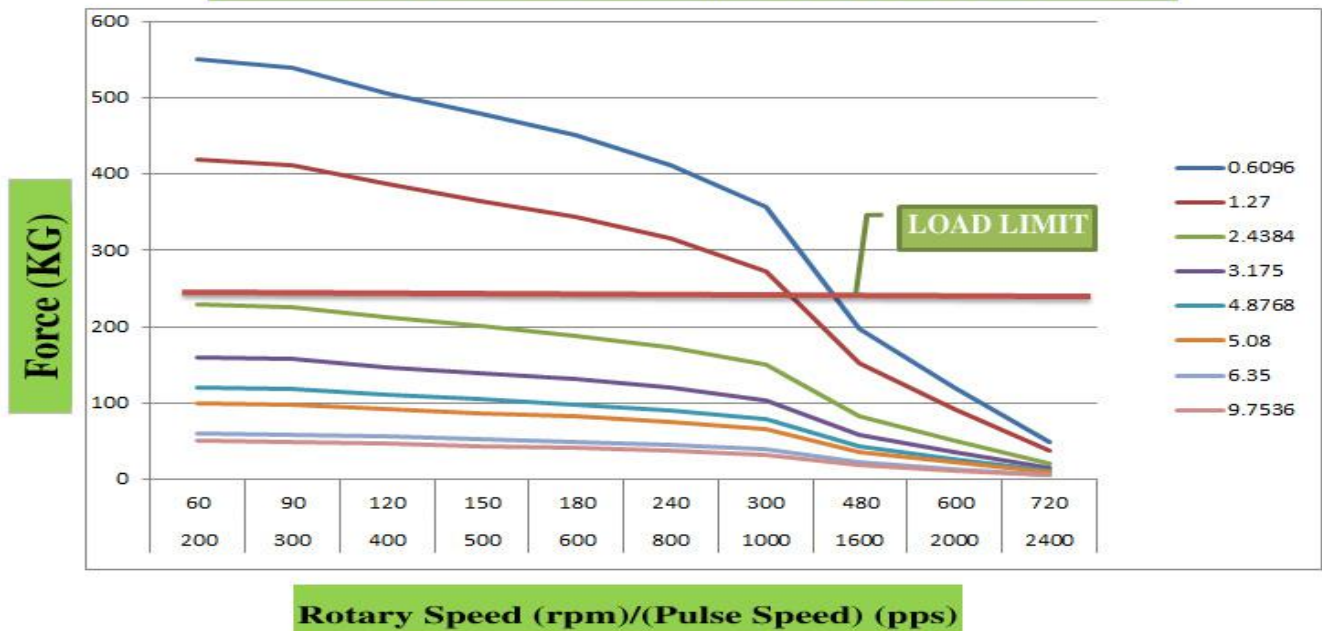
## DIMENSIONAL DRAWING - 35SERIES SIZE 14 EXTERNAL STEPPER MOTOR LINEAR ACTUATOR (Screw Dia of 9.525mm)





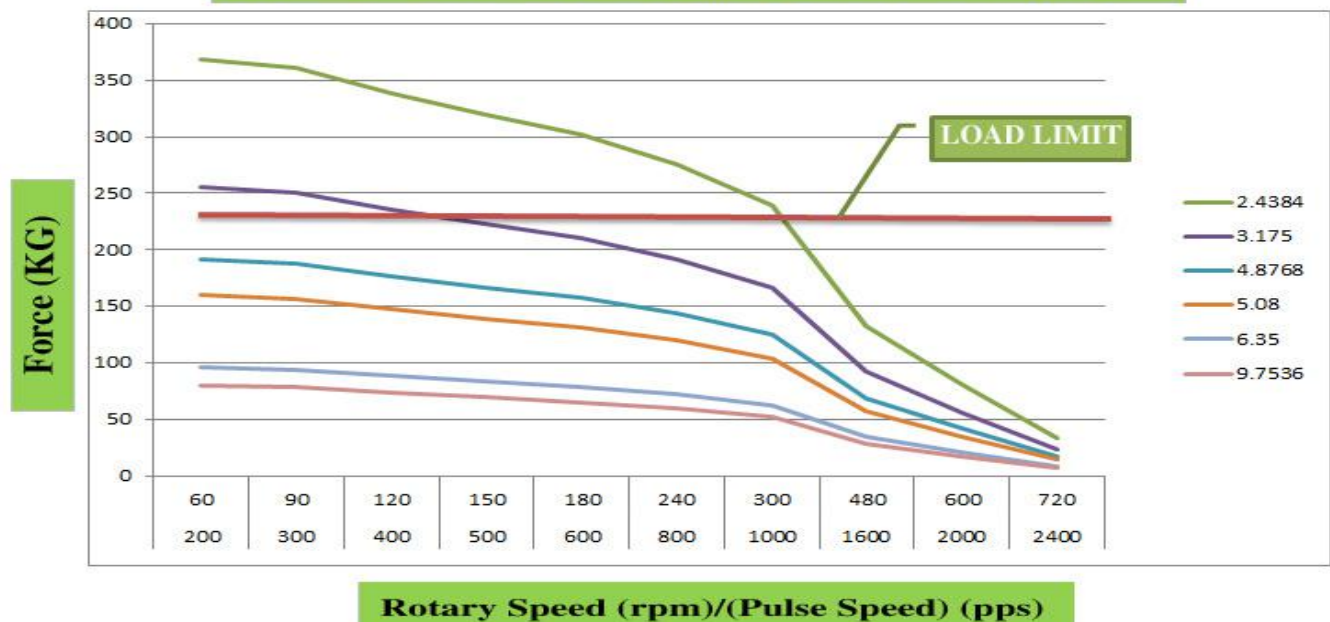
## PERFORMANCE CURVES - 35 SERIES Speed Thrust Curves Motor Length(34mm)

35 SERIES MOTOR LENGTH ( 34mm ), 24VDC CHOPPER DRIVER

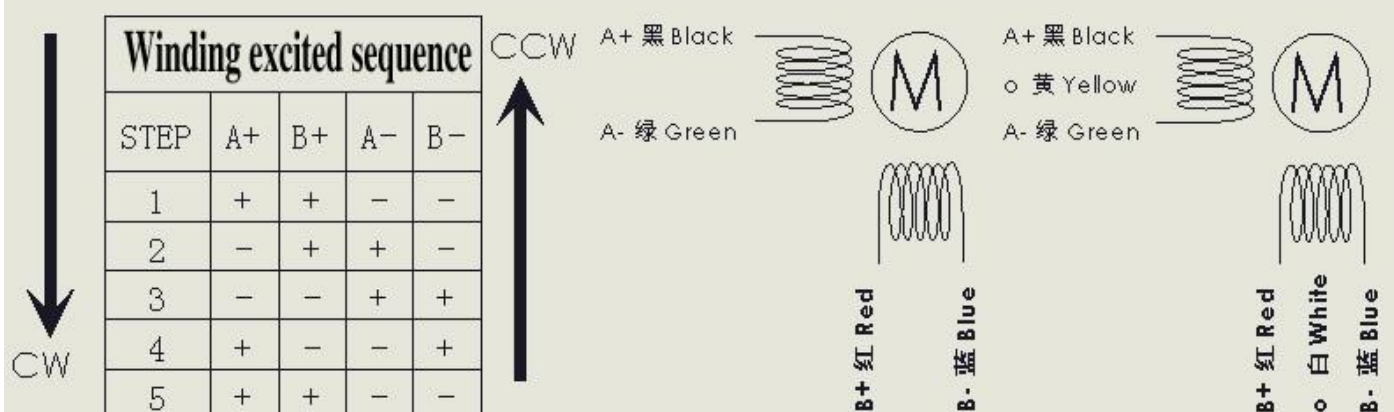


## PERFORMANCE CURVES - 28 SERIES Speed Thrust Curves Motor Length(45mm)

35 SERIES MOTOR LENGTH ( 48mm ), 24VDC CHOPPER DRIVER



## LEAD WIRE CONFIGURATION



## 42 SERIES SIZE 17 STEPPER MOTOR LINEAR ACTUATOR

The THINKER 42 Series Screw stepper motor of high precision, good performance; Products have three designs are available, captive, non-captive and external linear versions; The Size 42 stepper motor based linear actuator delivers thrust of up to 25kg; The 42 Series is available in a wide variety of resolutions — from 0.003048 mm per step to 0.127mm per step, The fastest can be up to 100 mm per second.

## 42 SERIES SIZE 17 STEPPER MOTOR LINEAR ACTUATOR

Part No.		Motor Length (34mm)	Motor Length (48mm)
	Non-Captive	42N234-XXX-1.5-4	42N248-XXX-2.5-4
	External Lin.	42E234-XXX-1.5-4	42E248-XXX-2.5-4
	Captive	42C234-XXX-1.5-4	42C248-XXX-2.5-4
Step angle		1.8°	
Motor's phase		Bipolar 4 line	
Current/phase		1.5 A	2.5 A
Operating voltage		2.33 V	2.5 V
Resistance/phase		1.6 Ω	1 Ω
Inductance/phase		2 mH	1.9 mH
Power consumption		7 W	12.5 W
Temperature rise		75°C	75°C
Weight		240g	350g
Insulation class		B	B
Insulation resistance		20MΩ	20MΩ

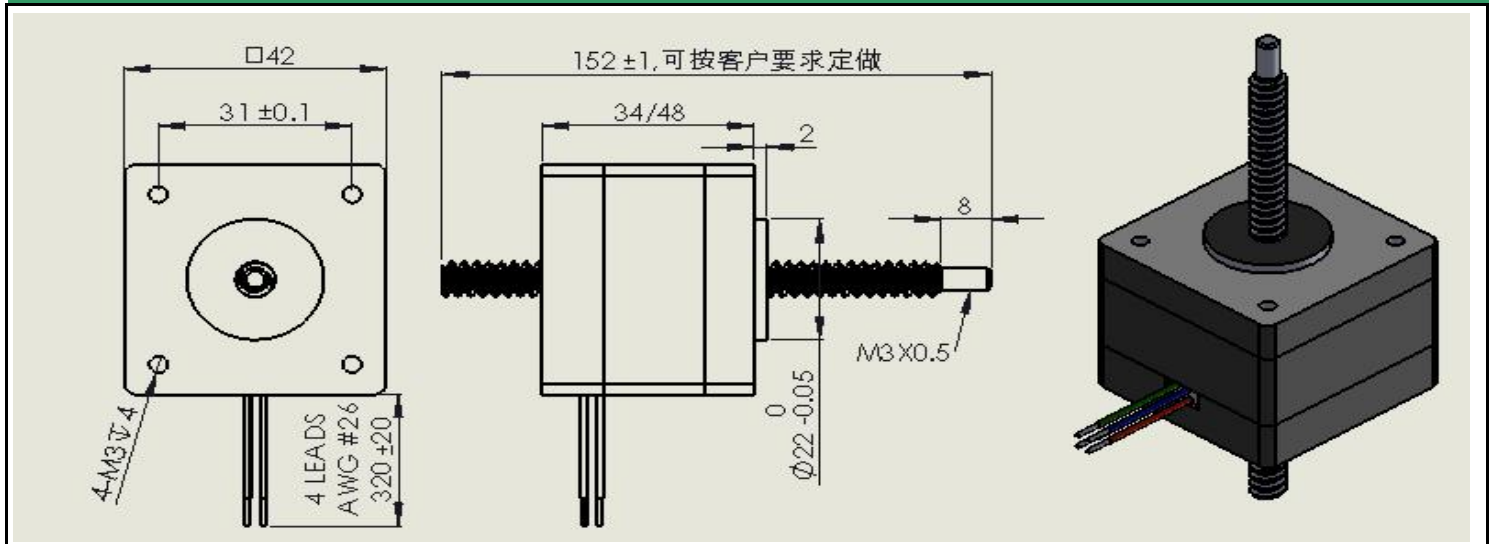
**Note: \*\*\*Other rated current and the single polarity 6 line motor can**

### 42 motor standard ACME screw specification table

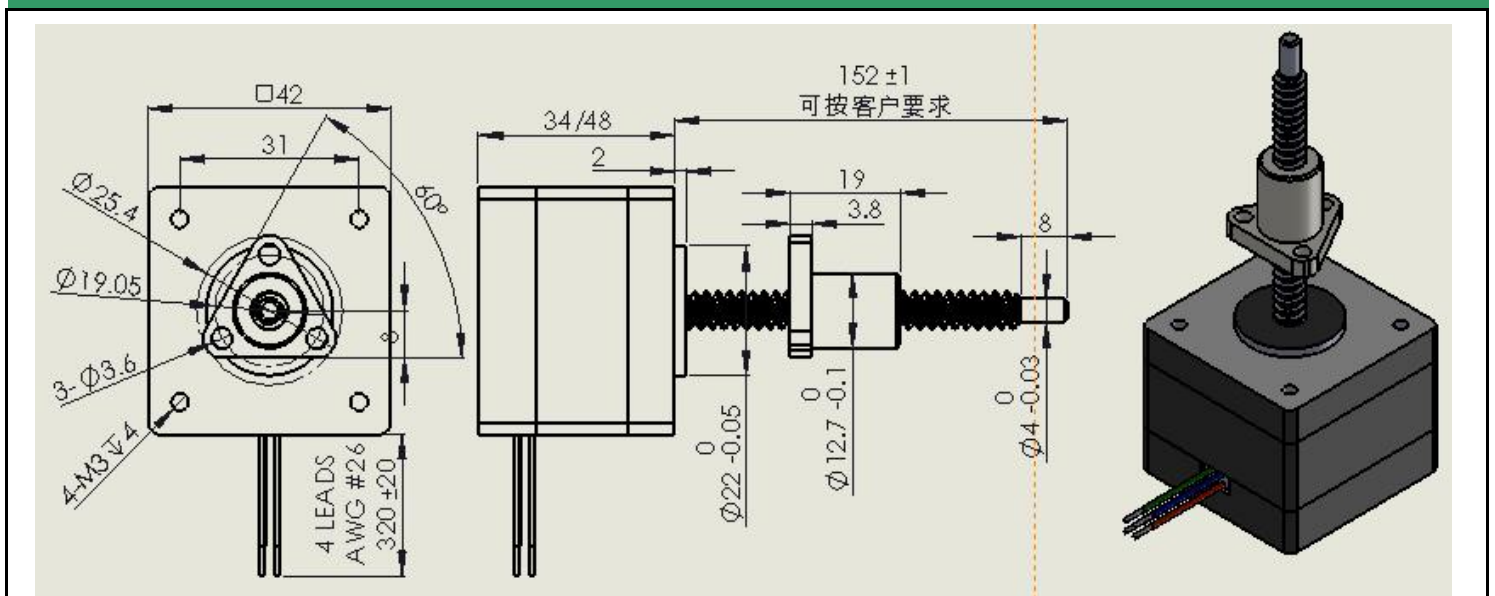
Screw Dia.(mm)	Lead(mm)	Travel Per Step (mm/Step)	Can match electrical category
5.54	0.6096	0.003048	captive, non-captive and external
	4.8768	0.024384	
6.35	1.27	0.00635	
	1.5875	0.0079375	
	2.4384	0.012192	
	2.54	0.0127	
	5.08	0.0254	
	6.35	0.03175	
	12.7	0.0635	
8	8	0.04	
9.525	1.5875	0.0079375	external
	2.116	0.01058	
	4.322	0.02161	
	5.08	0.0254	
	6.35	0.03175	
	10.16	0.0508	
	12.7	0.0635	
	25.4	0.127	

**Note: \* \* \* more screw specification consult THINKER sales engineer.**

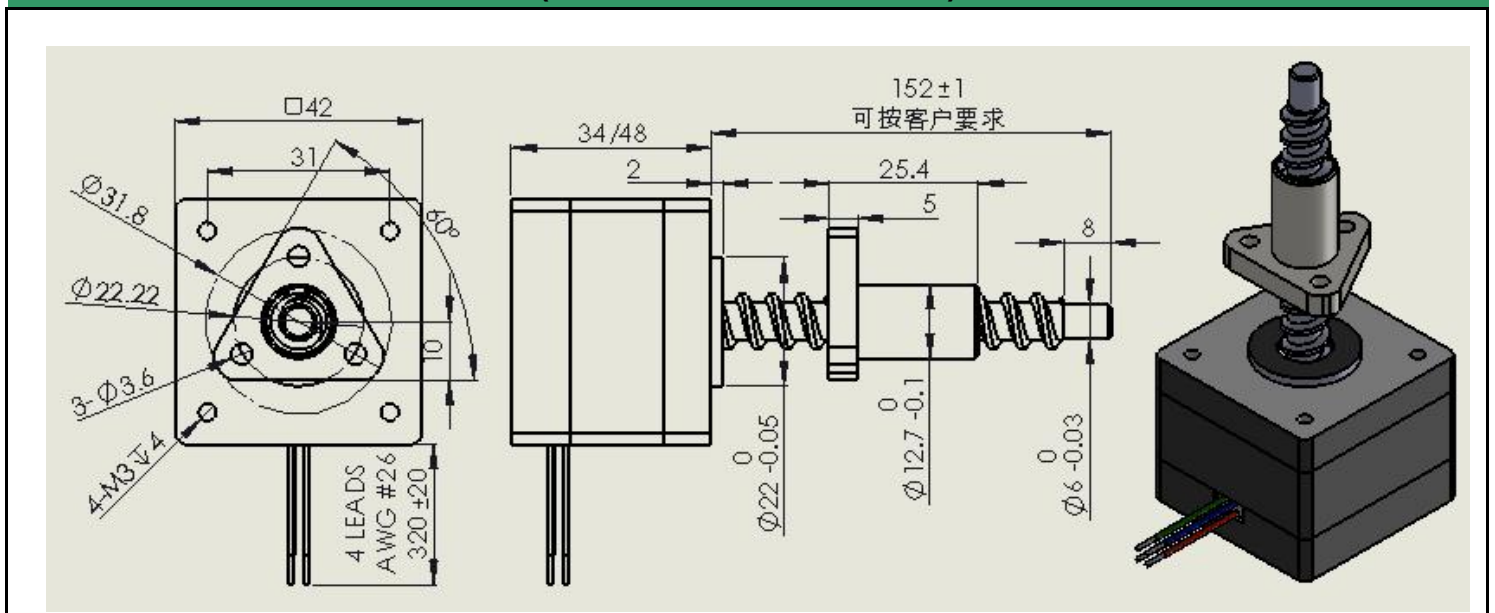
## DIMENSIONAL DRAWING - 42 SERIES SIZE 17 NON-CAPTIVE LINEAR ACTUATOR



## DIMENSIONAL DRAWING -42 SERIES SIZE 17 EXTERNAL STEPPER MOTOR LINEAR ACTUATOR



## DIMENSIONAL DRAWING - 42SERIES SIZE 17 EXTERNAL STEPPER MOTOR LINEAR ACTUATOR (Screw Dia of 9.525mm)





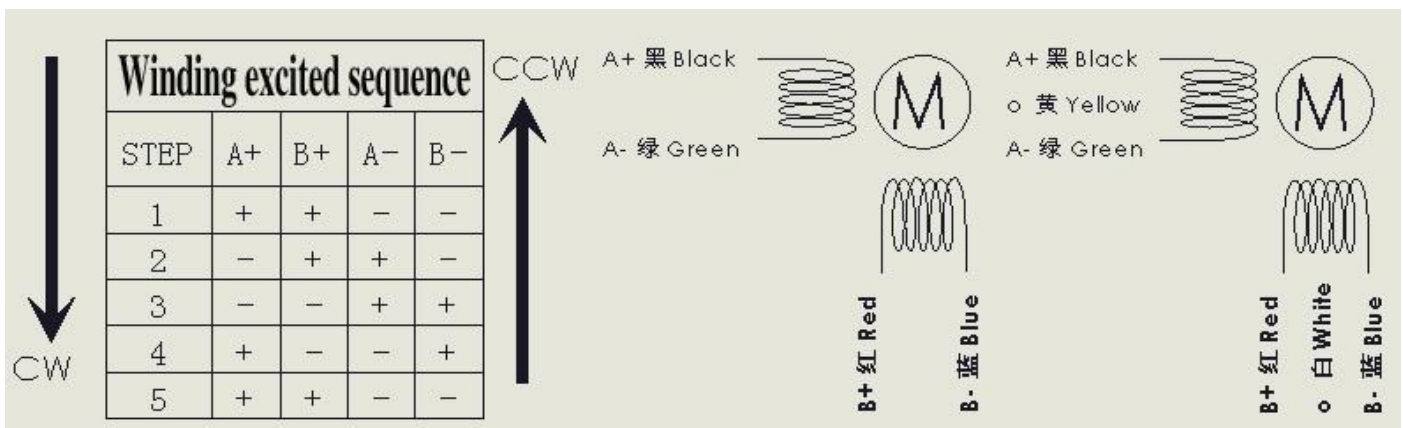
## PERFORMANCE CURVES - 42 SERIES Speed Thrust Curves Motor Length(34mm)



## PERFORMANCE CURVES - 42 SERIES Speed Thrust Curves Motor Length(48mm)



## LEAD WIRE CONFIGURATION





# 57 SERIES SIZE 23 STEPPER MOTOR LINEAR ACTUATOR

The THINKER 57 Series Screw stepper motor of high precision, good performance;Products have three designs are available, captive, non-captive and external linear versions;The Size 57 stepper motor based linear actuator delivers thrust of up to 100kg;The 57 Series is available in a wide variety of resolutions — from 0.0079375 mm per step to 0.325mm per step,The fastest can be up to 200 mm per second.

# 57 SERIES SIZE 23 STEPPER MOTOR LINEAR ACTUATOR

Part No.		Motor Length (45mm)	Motor Length (65mm)
	Non-Captive	57N245-XXX-2-4	57N265-XXX-4-4
	External Lin.	57E245-XXX-2-4	57E265-XXX-4-4
	Captive	57C245-XXX-2-4	57C265-XXX-4-4
Step angle		1.8°	
Motor's phase		Bipolar 4 line	
Current/phase		2 A	4 A
Operating voltage		3.2 V	3 V
Resistance/phase		1.6 Ω	0.75 Ω
Inductance/phase		4.2 mH	2 mH
Power consumption		12.8 W	24 W
Temperature rise		75℃	75℃
Weight		500g	1000g
Insulation class		B	B
Insulation resistance		20MΩ	20MΩ

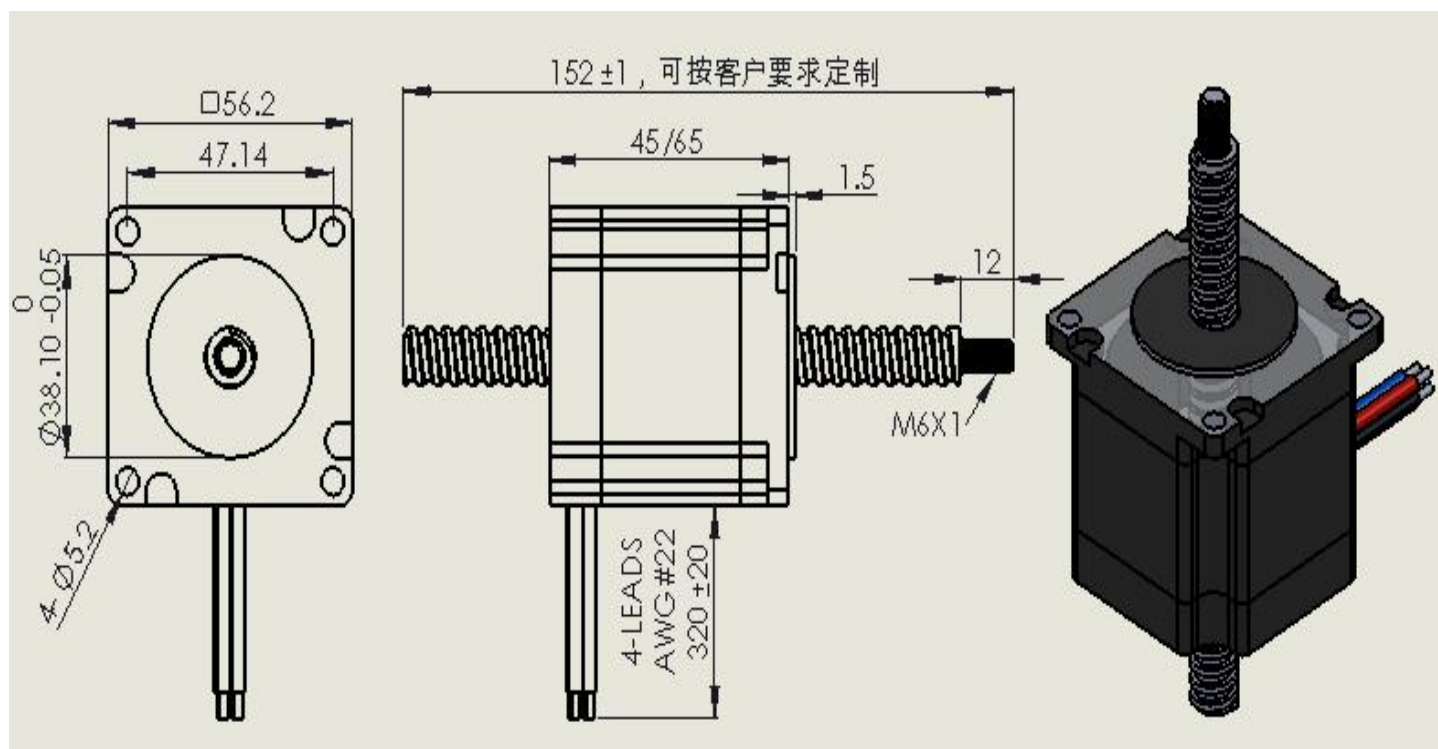
**Note: \*\*\*Other rated current and the single polarity 6 line motor can**

## 57 motor standard ACME screw specification table

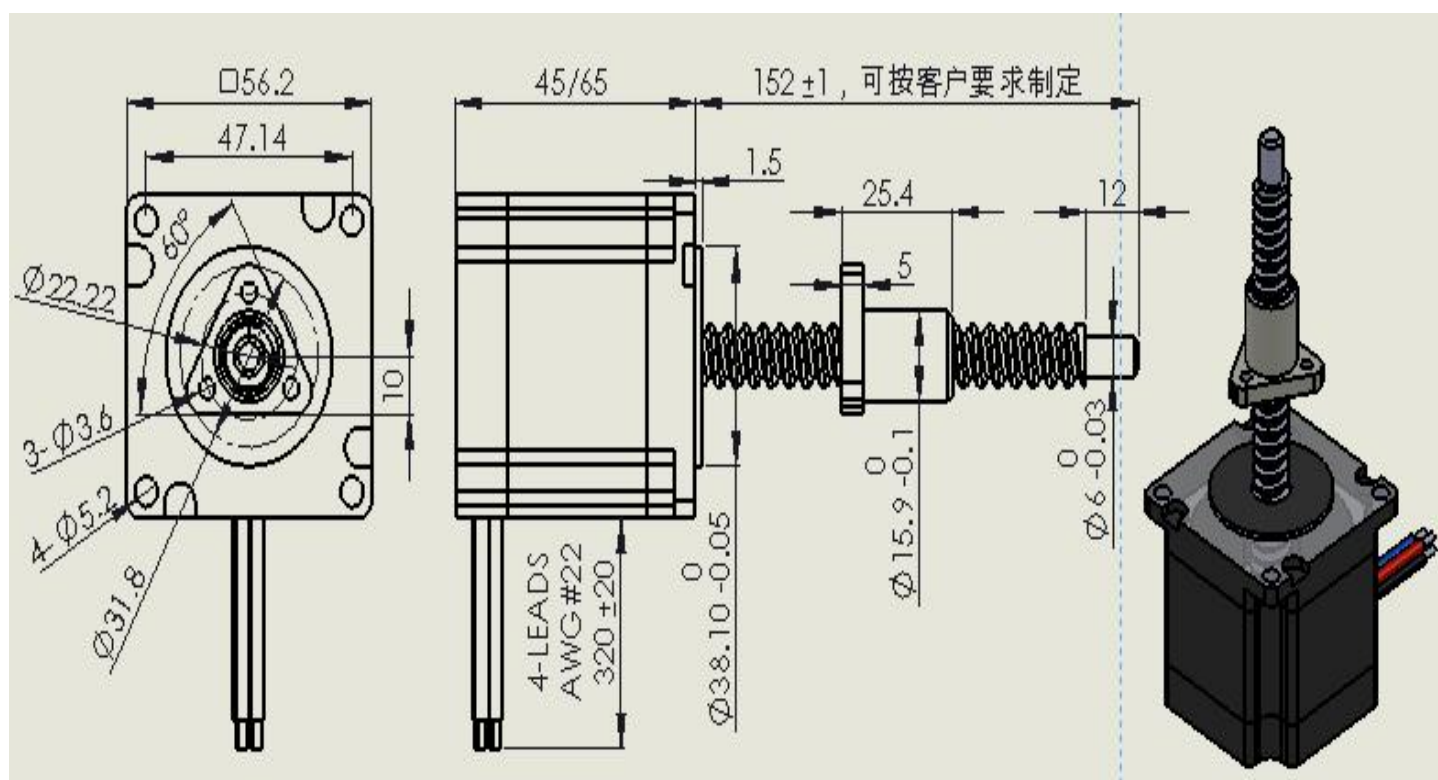
Screw Dia.(mm)	Lead(mm)	Travel Per Step (mm/Step)	Can match electrical category
9.525	1.5875	0.0079375	captive, non-captive and external linear
	2.116	0.01058	
	4.322	0.02161	
	5.08	0.0254	
	10.16	0.0508	
	12.7	0.0635	
	25.4	0.127	

**Note: \* \* \* more screw specification consult THINKER sales engineer.**

## DIMENSIONAL DRAWING - 57 SERIES SIZE 23 NON-CAPTIVE STEPPER MOTOR LINEAR ACTUATOR



## DIMENSIONAL DRAWING - 57 SERIES SIZE 23 EXTERNAL STEPPER MOTOR LINEAR ACTUATOR



## PERFORMANCE CURVES - 57 SERIES Speed Thrust Curves Motor Length(45mm)

57 SERIES MOTOR LENGTH ( 45mm),24VDC CHOPPER DRIVER

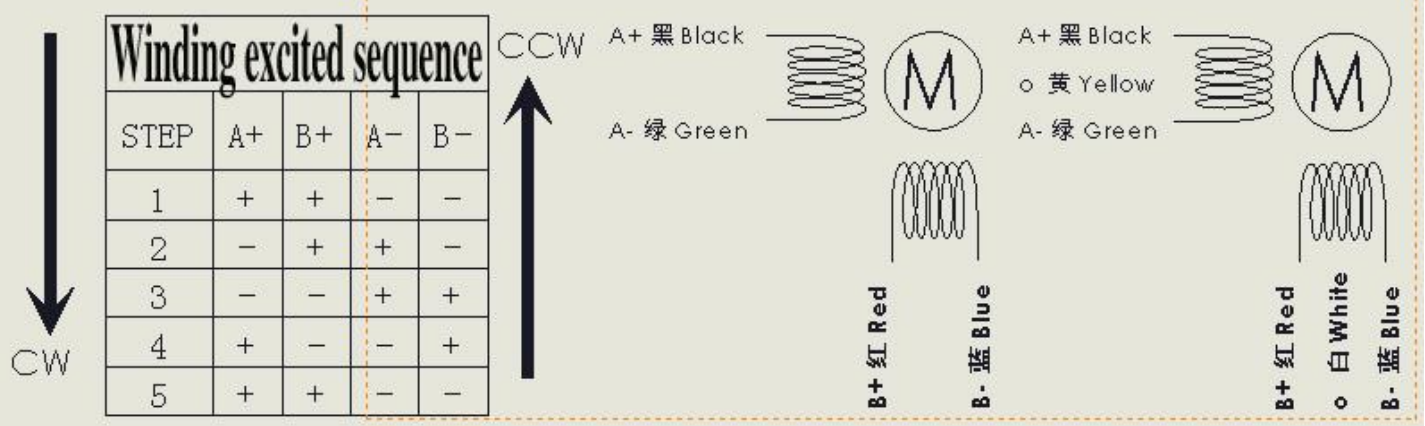


## PERFORMANCE CURVES - 57 SERIES Speed Thrust Curves Motor Length(65mm)

57 SERIES MOTOR LENGTH ( 65mm),24VDC CHOPPER DRIVER



## LEAD WIRE CONFIGURATION



## 87 SERIES SIZE 34 STEPPER MOTOR LINEAR ACTUATOR

The THINKER 87 Series Screw stepper motor of high precision, good performance; Products have three designs are available, captive, non-captive and external linear versions; The Size 87 stepper motor based linear actuator delivers thrust of up to 230kg; The 87 Series is available in a wide variety of resolutions — from 0.0127 mm per step to 0.4mm per step, The fastest can be up to 240 mm per second.

## 87 SERIES SIZE 34 STEPPER MOTOR LINEAR ACTUATOR

Part No.		Motor Length(45mm)
	Non-Captive	87N276-XXX-5.5-4
	External Lin.	87E276-XXX-5.5-4
	Captive	87C276-XXX-5.5-4
Step angle		1.8°
Motor's phase		Bipolar 4 line
Current/phase		5.5 A
Operating voltage		3 V
Resistance/phase		0.55 Ω
Inductance/phase		4 mH
Power consumption		33 W
Temperature rise		75°C
Weight		2300g
Insulation class		B
Insulation resistance		20MΩ

**Note: \*\*\*Other rated current and the single polarity 6 line motor can customize according to customer's requirements.**

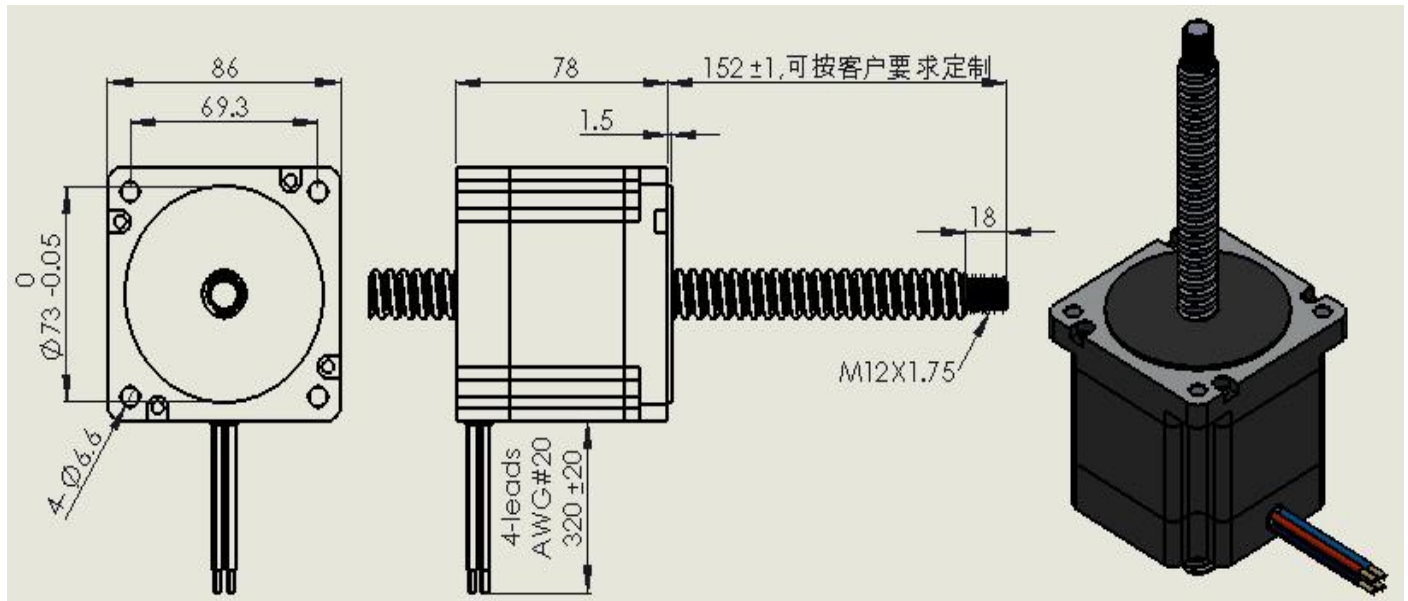
### 87 motor standard ACME screw specification table

Screw Dia.(mm)	Lead(mm)	Travel Per Step (mm/Step)
15.875	3.175	0.015875
	6.35	0.03175
	25.4	0.127

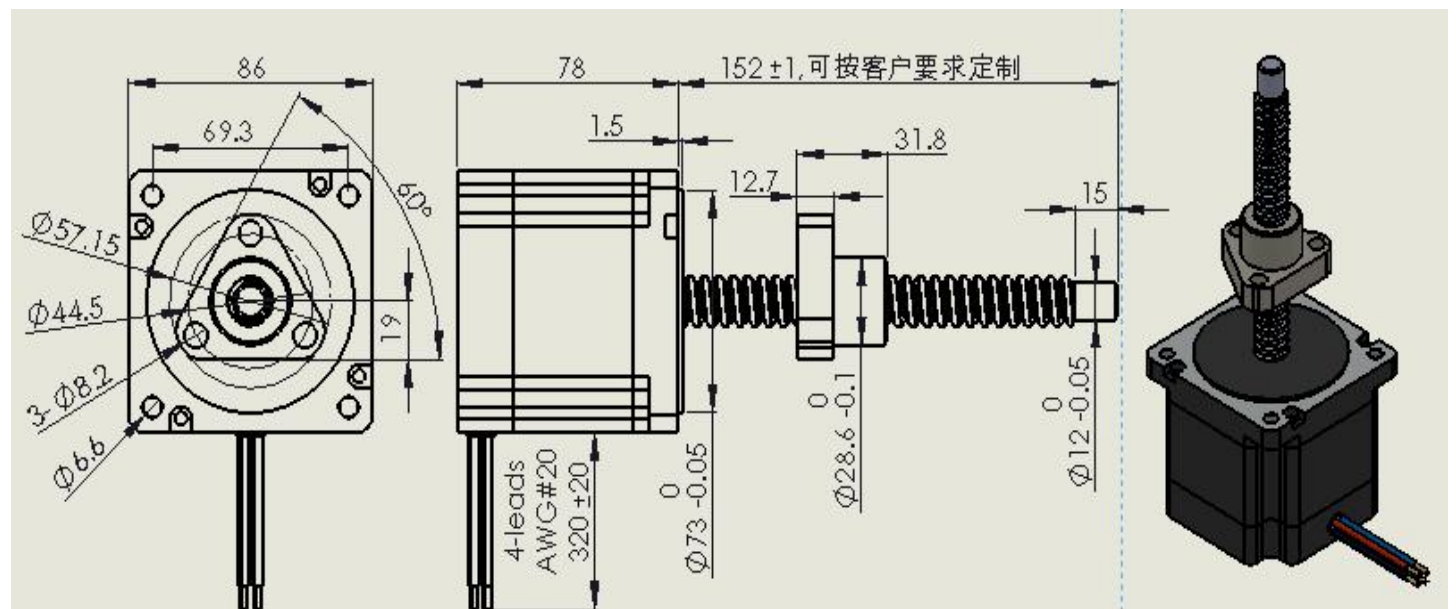
**Note: \* \* \* more screw specification consult THINKER sales engineer.**



## DIMENSIONAL DRAWING - 87 SERIES SIZE 34 NON-CAPTIVE STEPPER MOTOR LINEAR ACTUATOR

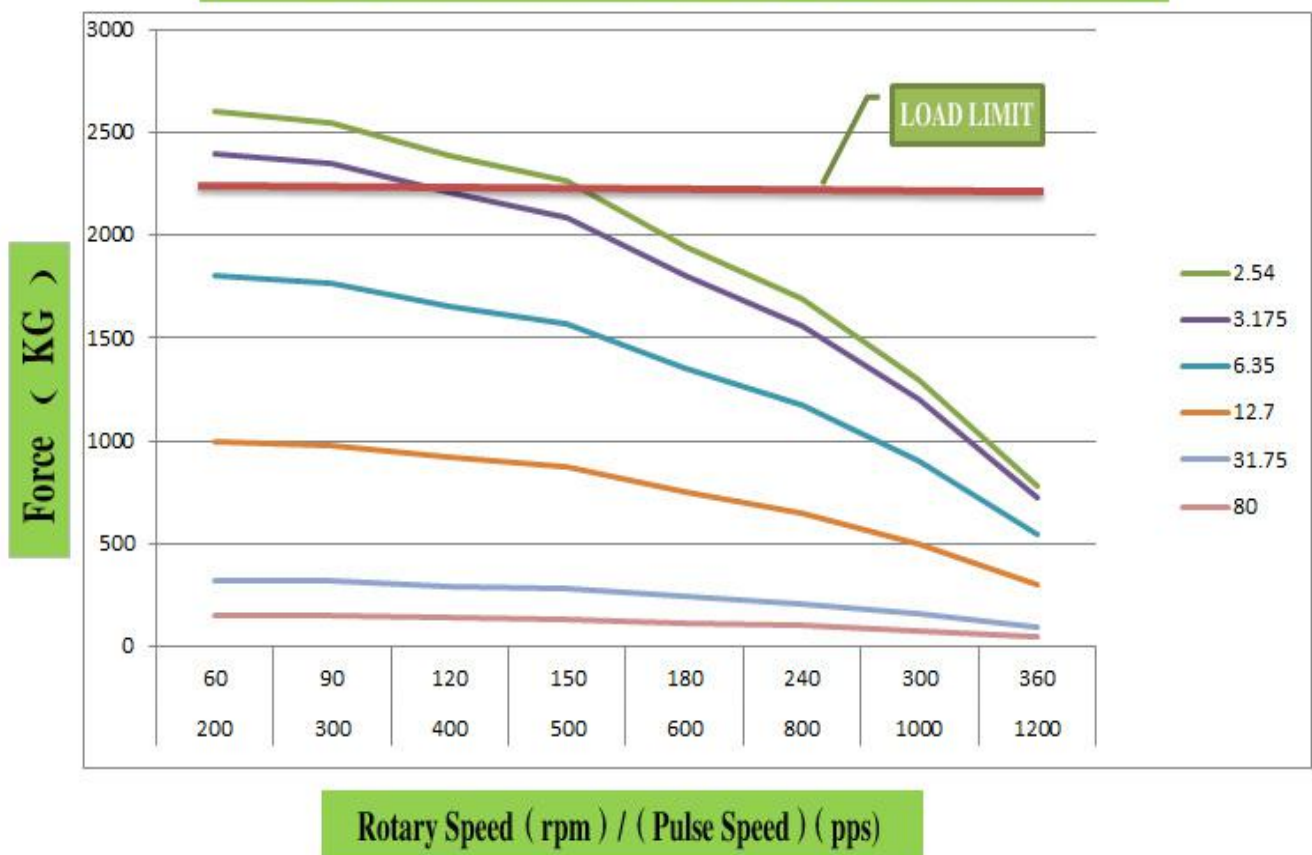


## DIMENSIONAL DRAWING - 87 SERIES SIZE 34 EXTERNAL STEPPER MOTOR LINEAR ACTUATOR



## PERFORMANCE CURVES - 87 SERIES Speed Thrust Curves Motor Length(76mm)

### 87 SERIES MOTOR LENGTH ( 76mm),24VDC CHOPPER DRIVER



## LEAD WIRE CONFIGURATION

