



WOITOP



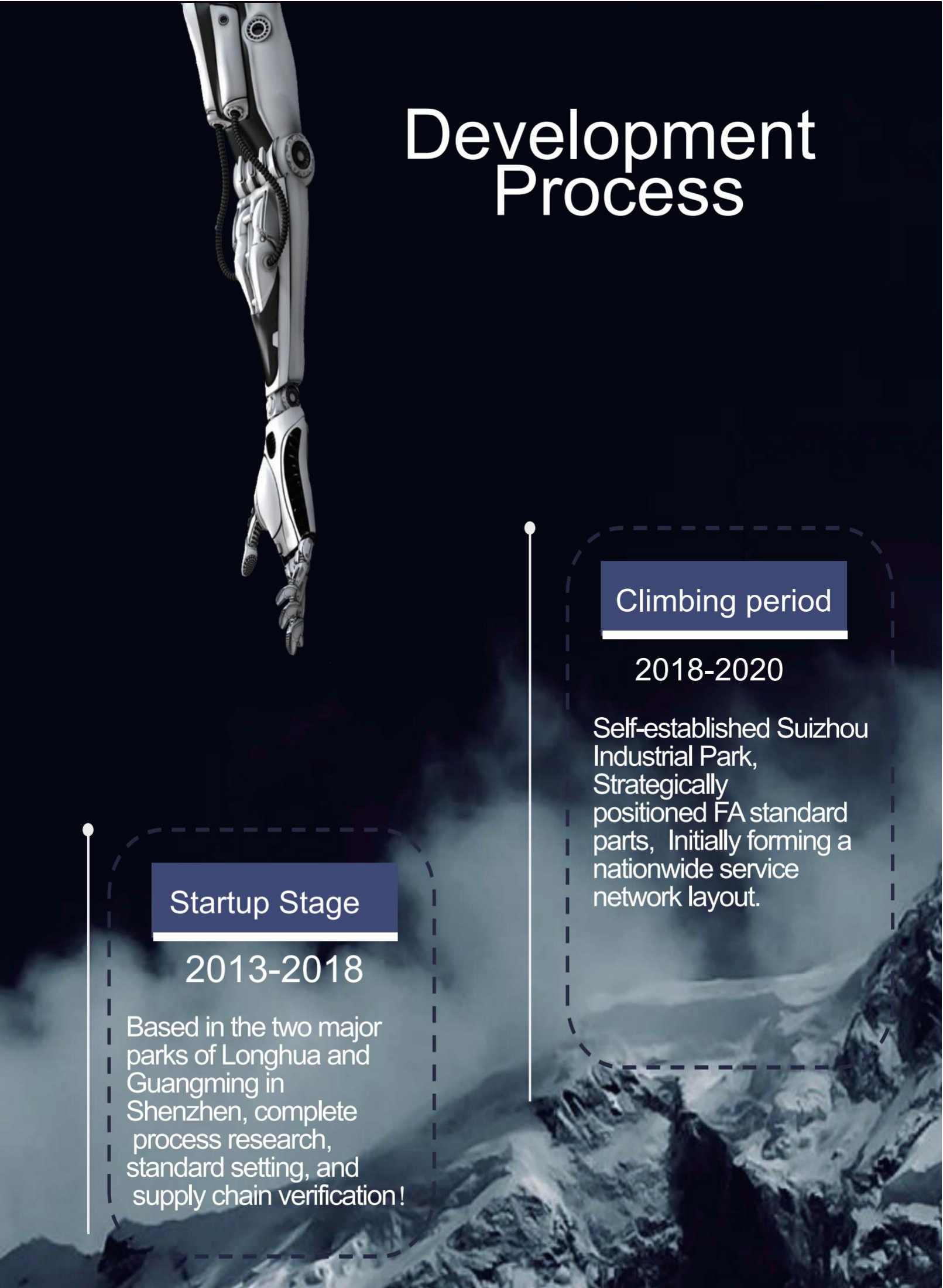
Linear motor

Company Profile





Shenzhen Tianyi Intelligent Technology Co., Ltd. was established in December 2013. It mainly engages in the research and development, production, sales and service of FA (Factory Automation) precision parts (such as pneumatic components, rolling functional components, high-precision adjustment platforms, four-axis robots, aluminum profiles, industrial robots, industrial control modules, transmitters and sensors), fixtures and automated equipment (lines) for tooling and inspection. By integrating technological innovation, the company's FA (Factory Automation) precision standard parts business helps customers achieve value through its products, making industries more automated and production sites more pleasant. Based on application scenarios, the company's current focus in the tooling and inspection fixtures and automated equipment business is on two major application fields: consumer electronics such as smart phones and wearable devices, and automotive electronics. The company plans to gradually expand its capabilities and serve more application fields in FA factory automation. With a strategic focus on FA precision standard parts and intelligent equipment, it aims to achieve scale through speed and become a leading brand in the industry, contributing to the upgrading of China's industry and the realization of the "Made in China 2025" and "Industry 4.0" blueprints.



Development Process

Startup Stage

2013-2018

Based in the two major parks of Longhua and Guangming in Shenzhen, complete process research, standard setting, and supply chain verification!

Climbing period

2018-2020

Self-established Suizhou Industrial Park, Strategically positioned FA standard parts, Initially forming a nationwide service network layout.



Growth Phase

2020-2022

Establish the Huizhou park, improve the business capability layout in South China, actively seek capital market empowerment, and strengthen the dual advantages of the company's FA precision components & intelligent equipment.

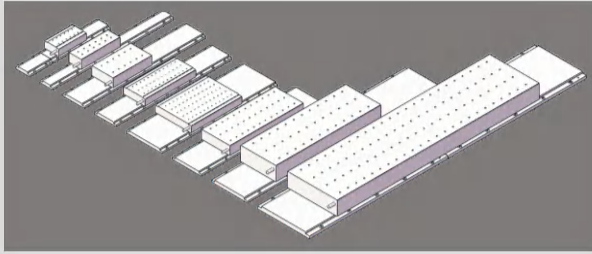
period of rapid
development

2023- . . .

Strategically focus on FA precision standard components & intelligent equipment, use speed to impact scale, become an industry-leading brand, and contribute to the realization of Made in China 2025 and the Industry 4.0 blueprint.

Introduction

Product Catalog

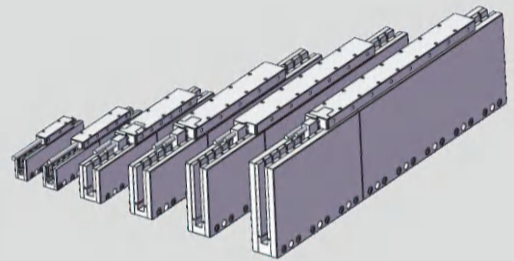


01 Iron-core Linear Motor

The iron-core linear motor is also called a flat motor. Due to its large size, large coil units, and built-in magnetic enhancement materials, it possesses greater thrust capability and heat dissipation capacity, making it well-suited for heavy loads, high acceleration and deceleration, high speed, and long-stroke motion. It is commonly used in point-to-point motion applications requiring high precision as well as general trajectory accuracy applications. Iron-core linear motors, benefiting from accumulated production technology and electromagnetic optimization, exhibit an ultra-low cogging effect, demonstrating excellent balance between thrust and stability. The continuous thrust range of existing standard products is approximately [18, 8922] N, nearly meeting all industrial automation motion application requirements. Additionally, for special customer applications, linear motor products can be flexibly customized.

Ironless linear motor 030

Based on the European advanced linear motor manufacturing standards, Cidian Electric has designed a series of ironless linear motors for ultra-high-speed and high-precision, high-end industrial motion applications. They are widely used in applications such as laser processing, electronic product manufacturing, optical product manufacturing, and gantry motion systems. They feature ultra-high-speed performance with medium-voltage drive and low back EMF, good thermal dissipation, high responsiveness, and smooth motion.

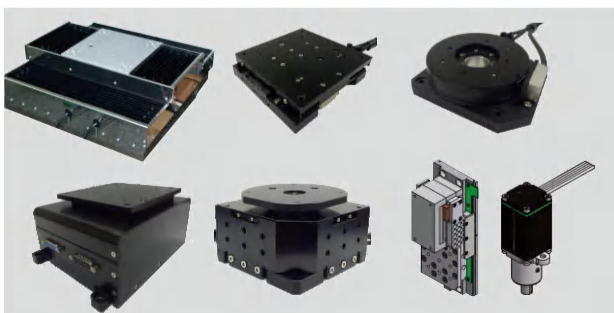
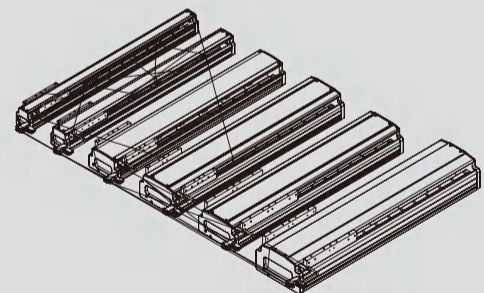


054 DDR motor products

Direct drive motors, also known as DD motors, feature industry-leading performance, zero maintenance requirements, simpler mechanical setup, higher precision, stronger torque output, greater reliability, and lower operating noise, meeting a variety of mechanical design needs. Mechanical transmission devices, such as gearboxes, synchronous belts, pulleys, or lead screws, can produce backlash, mechanical losses, and annoying noise, all of which can reduce machine performance and increase machine size and weight.

Linear Motor Module Aluminium profile Products 081

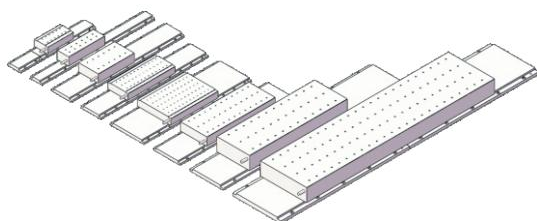
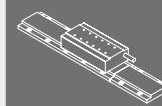
Aluminum profile linear motor modules are the most common motion system for linear motor applications. They excel in long-stroke movements, single-axis multiple-mover applications, high-speed and high-acceleration movements, and point-precision positioning, making them suitable for handling, positioning, and alignment tasks. They can also be directly and easily assembled into XY composite motion systems.



132 Professional products

After years of industry application accumulation, customized professional products have been developed for various specialized fields, mainly including ultra-high precision motion systems, voice coil motors for professional applications, high-speed nano-alignment products, and more. They can be used in processes such as PCB, optical lenses, fiber optic communication, and front-end semiconductor packaging.

Ironcore Linear Motor



The iron-core linear motor is also called a flat motor. Due to its large size, large coil units, and built-in magnetic enhancement materials, it possesses greater thrust capability and heat dissipation capacity. It is well-suited for heavy loads, high acceleration and deceleration, high speeds, and long-stroke motion, and is commonly used in point-to-point precision motion as well as general trajectory precision applications. Iron-core linear motors, benefiting from accumulated production experience and electromagnetic optimization, exhibit ultra-low cogging effects, demonstrating excellent balance between thrust and stability. The continuous thrust range of existing standard products is [18, 8922] N, meeting nearly all industrial automation motion application requirements. At the same time, for special customer applications, linear motor products can also be flexibly customized.

Product Features:

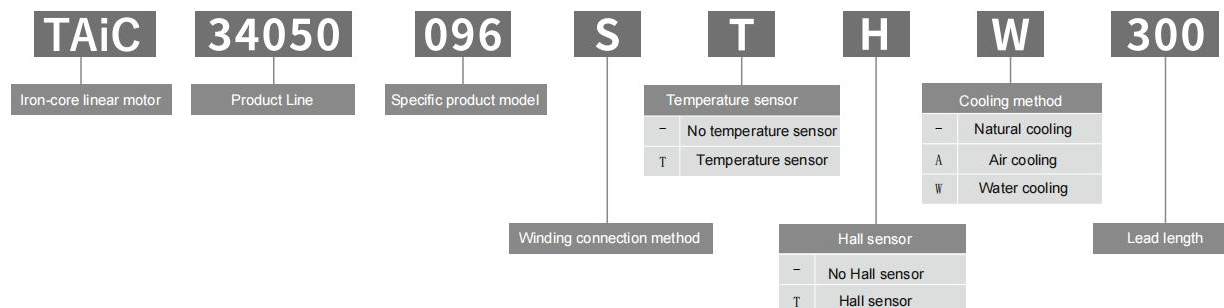
- > Low-vibration iron-core linear motor
- > Good heat dissipation performance
- > High thrust, high acceleration and deceleration, heavy load
- > Wide range of power coverage
- > Products can be flexibly customized

Application field:

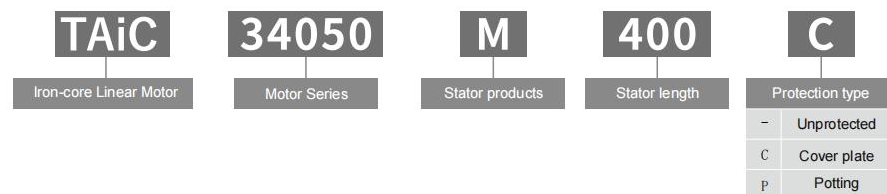
- > Non-standard Automation: LCM optoelectronics, lithium battery equipment, etc.
- > FPC processing Semiconductor equipment
- > Laser application equipment
- > SMT placement, PCB drilling
- > AOI visual applications

Naming rules

Name of the Motor Forcer



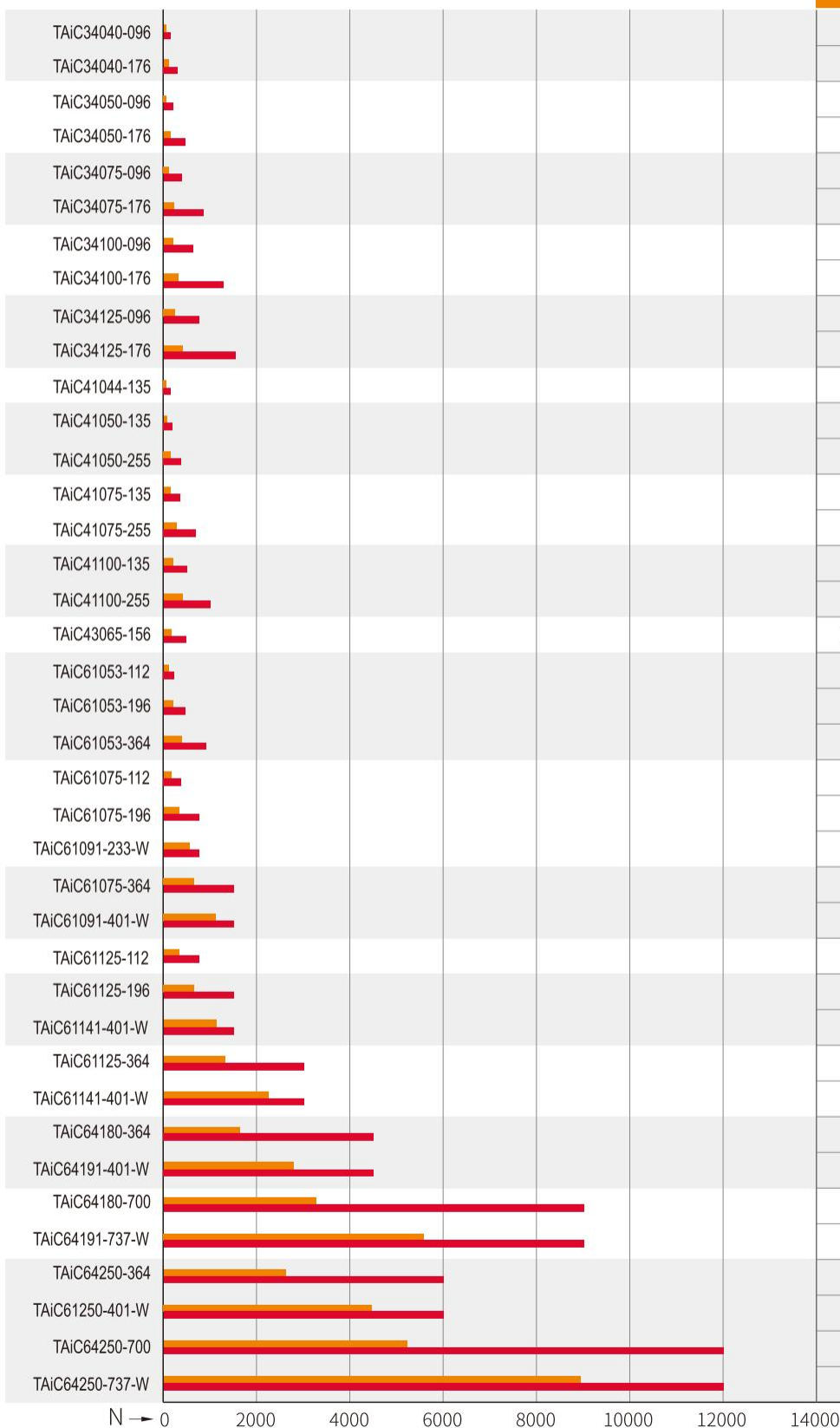
Name of the Motor Stator



Product thrust chart and page number

Continue Torque N Peak Torque N

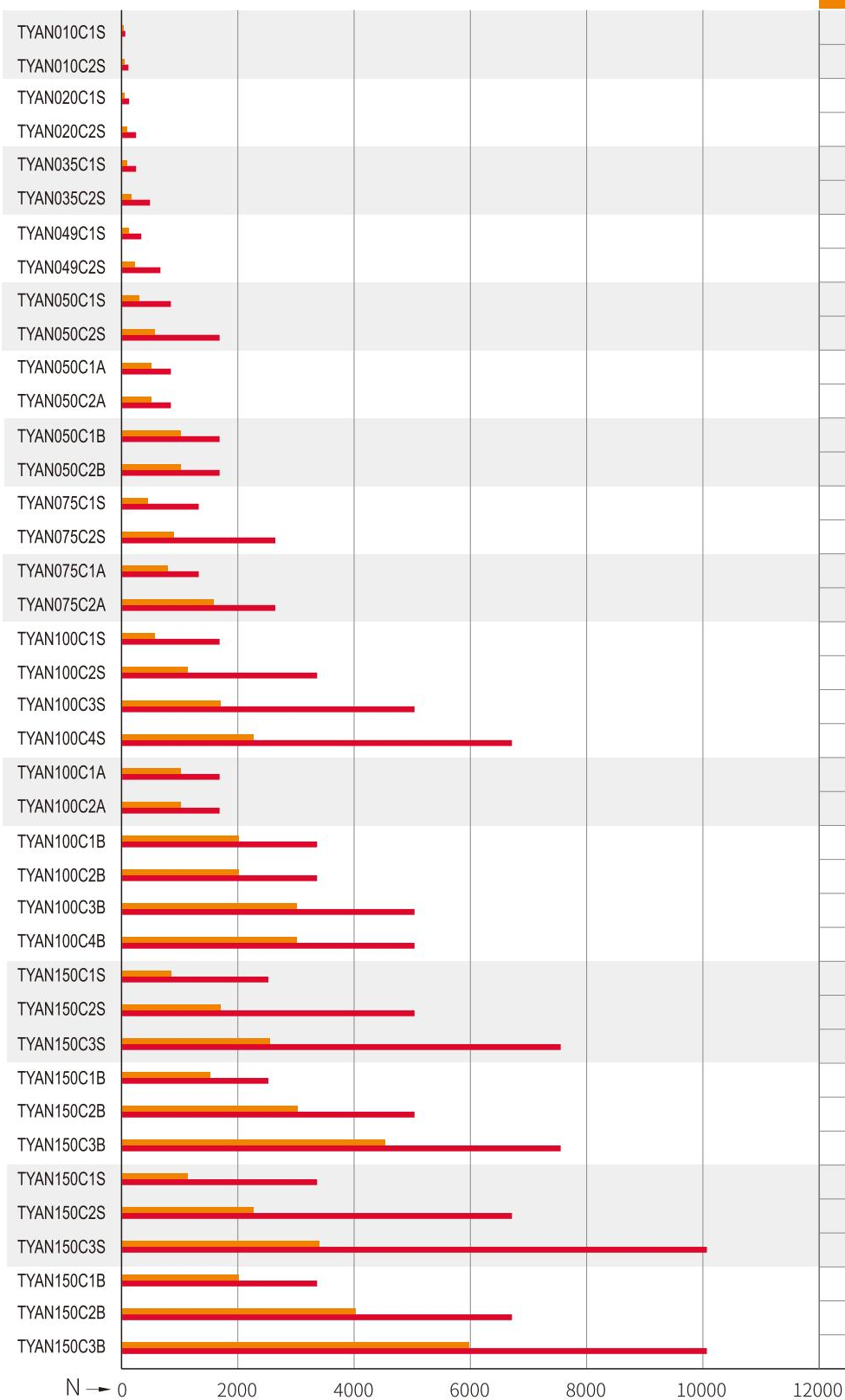
Continue Torque	Peak Torque	See the following page
N	N	
41.6	140.8	04
89.3	300.2	04
60	196.8	05
139.2	452.4	05
114.4	382.8	06
211.5	841.3	06
197.2	622.9	07
303.4	1272.8	07
245.3	760.4	08
394.8	1539.6	08
60	150	09
75	188	09
150	376	09
138	345	10
276	690	10
200	500	11
400	1000	11
156.59	466.88	12
98	225	13
196	450	13
392	900	13
163	375	14
326	750	14
558	750	14
653	1500	15
1115	1500	15
326	750	16
653	1500	16
1123	1500	16
1306	3000	17
2247	3000	17
1632	4500	18
2788	4500	18
3264	9000	19
5576	9000	19
2611	6000	20
4461	6000	20
5222	12000	21
8922	12000	21



YAN Series Motor thrust table and page number

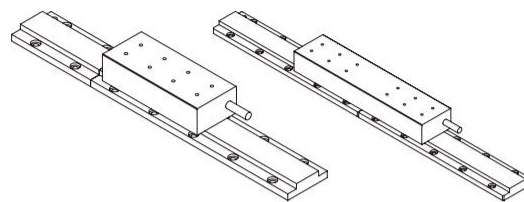
Continue Torque N PeakTorque N

ContinueTorque	PeakTorque	See the following page
N	N	
18	54	22
36	108	22
40	120	22
80	240	22
80	240	23
160	480	23
110	330	23
220	660	23
280	840	24
560	1680	24
500	840	24
1000	1680	24
500	840	25
1000	1680	25
440	1320	25
880	2640	25
780	1320	26
1560	2640	26
560	1680	26
1120	3360	26
1680	5040	26
2240	6720	26
995	1680	27
1990	1680	27
995	3360	27
1990	3360	27
2985	5040	27
3980	5040	27
840	2520	28
1680	5040	28
2520	7560	28
1495	2520	28
2990	5040	28
4485	7560	28
1120	3360	29
2240	6720	29
3360	10080	29
1990	3360	29
3980	6720	29
5970	10080	29



TAiC34 Series Motor model

TAiC34040



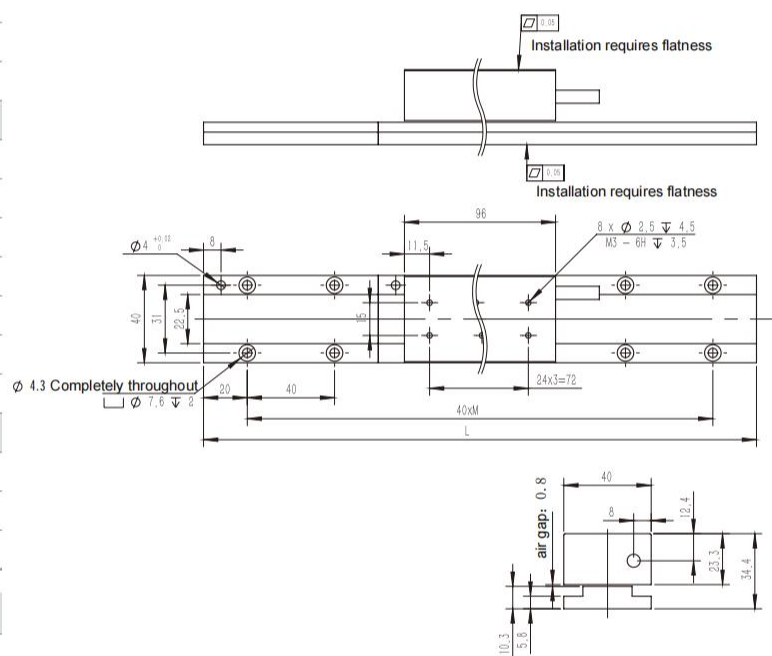
TAiC34040-096

TAiC34040-176

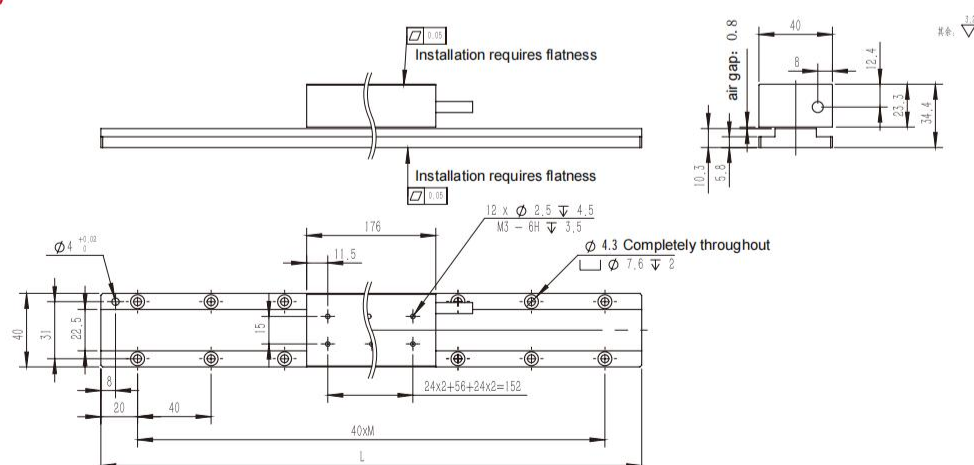
Parameters	Unit	TAiC34040-096	TAiC34040-176P
performance parameters			
Peak force@20°C/s increase	N	140.8	300.2
Continuous force	N	41.6	89.3
Motor Force Constant	N/Arms	16	19
Motor constant	N ² /W	4.5	6.18
Electrical performance parameters			
Peak current	Arms	8.8	15.8
Continuous current	Arms	2.6	4.7
Back EMF	v/m/s	14.47	16.43
Resistance Per Phase	Ω	3.2	2.4
Induction Per Phase	Mh	10.9	5.5
Electric time constant	Ms	3.4	2.3
Max. Continuous Power Loss	W	85.144	208.67
Mechanical parameters			
Coil Unit Weight	kg	0.5	0.8
Motor Attraction Force	N	253	505
Magnet Pitch	mm	20	

Stator Specification	L (mm)	M
TAiC34040M	-080	80
	-200	200
	-400	400

TAiC34040-096



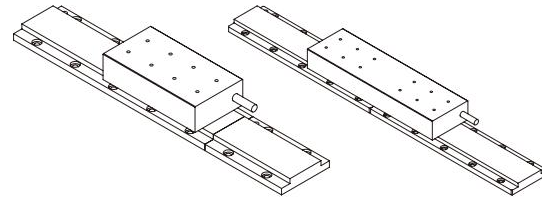
TAiC34040-176



TAiC34 Series

Motor model

■ TAiC34050



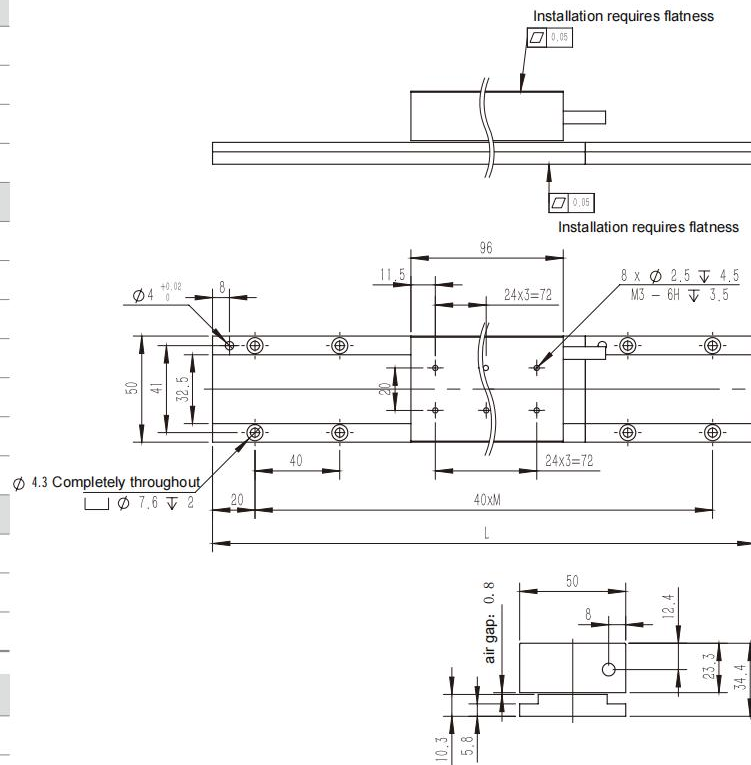
TAiC34050-96

TAiC34050-176

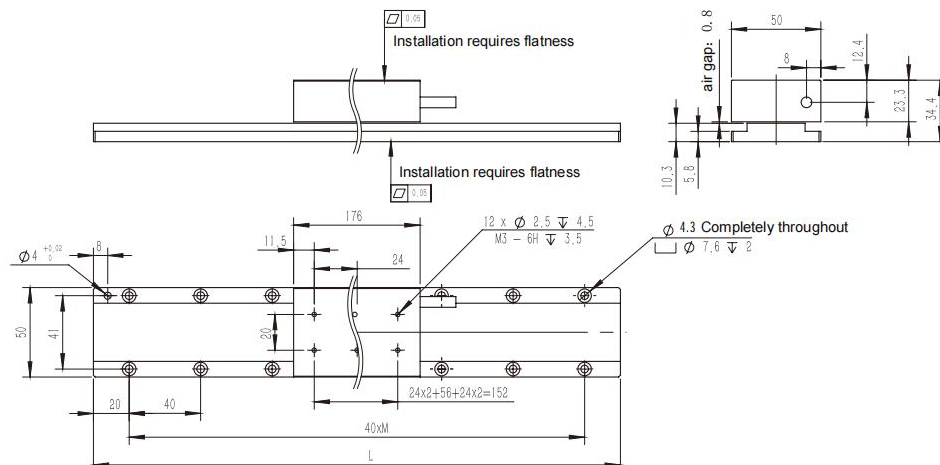
Parameters	Unit	TAiC34050-096	TAiC34050-176P
performance parameters			
Peak force@20°C/s increase	N	196.8	452.4
Continuous force	N	60	139.2
Motor Force Constant	N/Arms	24	29
Motor constant	N ² /W	5.8	9.24
Electrical performance parameters			
Peak current	Arms	8.2	15.6
Continuous current	Arms	2.5	4.8
Back EMF	v/m/s	21.16	22.04
Resistance Per Phase	Ω	4.3	2.5
Induction Per Phase	Mh	14.6	7.4
Electric time constant	Ms	3.4	3
Max. Continuous Power Loss	W	105.78	226.71
Mechanical parameters			
Coil Unit Weight	kg	0.6	1.1
Motor Attraction Force	N	378.8	757.6
Magnet Pitch	mm	20	

Stator Specification	L (mm)	M
TAiC34050M	-080	1
	-200	4
	-400	9

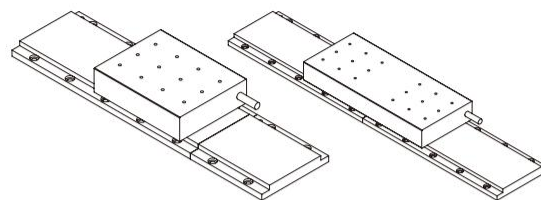
TAiC34050-096



TAiC34050-176



TAiC34 Series Motor model ■ TAiC34075

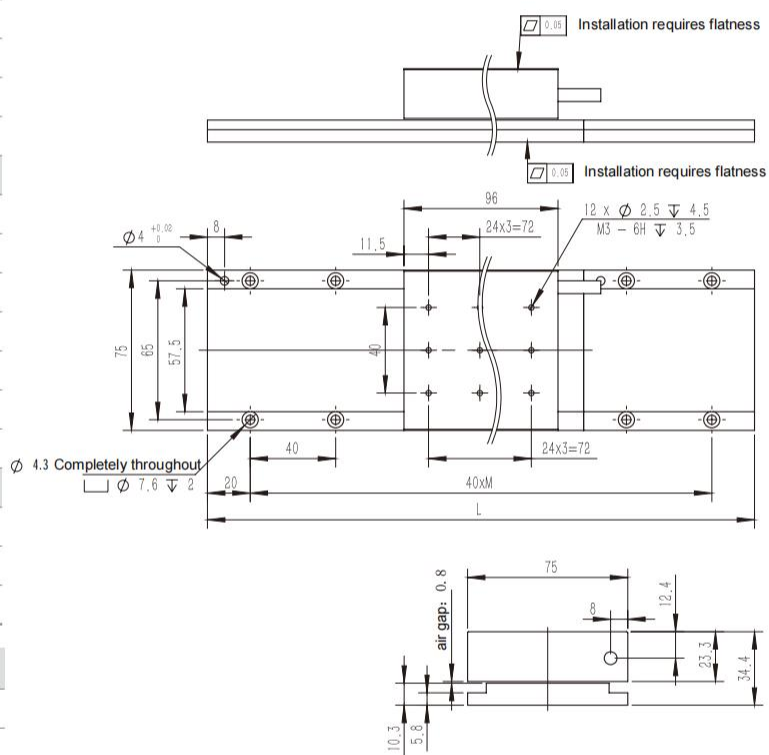


TAiC34075-096

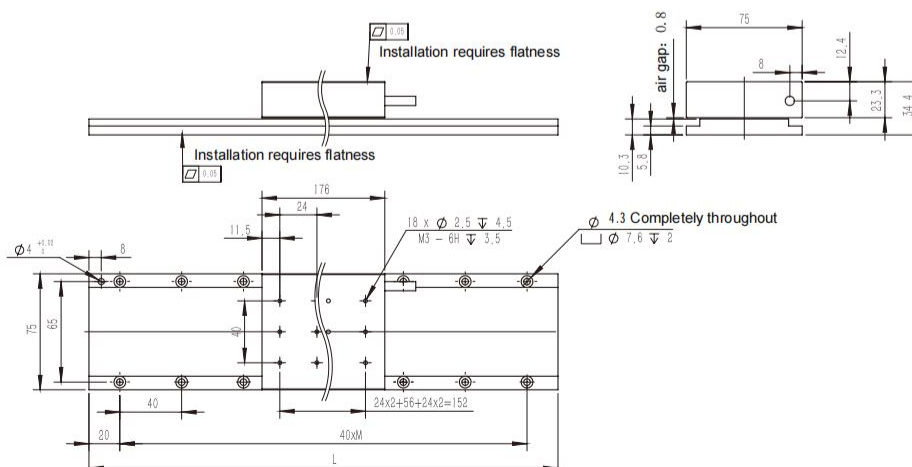
TAiC34075-176

Parameters	Unit	TAiC34075-096	TAiC34075-176P
performance parameters			
Peak force@20°C/s increase	N	382.8	841.3
Continuous force	N	114.4	211.5
Motor Force Constant	N/Arms	44	47
Motor constant	N ² /W	8.77	12.85
Electrical performance parameters			
Peak current	Arms	8.7	17.9
Continuous current	Arms	2.6	4.5
Back EMF	v/m/s	38.28	41.4
Resistance Per Phase	Ω	6.4	3.4
Induction Per Phase	Mh	24.7	12.3
Electric time constant	Ms	3.9	3.6
Max. Continuous Power Loss	W	170.29	270.99
Mechanical parameters			
Coil Unit Weight	kg	0.9	1.7
Motor Attraction Force	N	651.1	1302.1
Magnet Pitch	mm	20	
Stator Specification		L (mm)	M
TAiC34075M	-080	80	1
	-200	200	4
	-400	400	9

TAiC34075-096

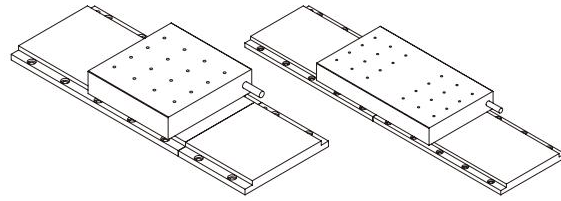


TAiC34075-176



TAiC34 Series
Motor model

■ TAiC34100



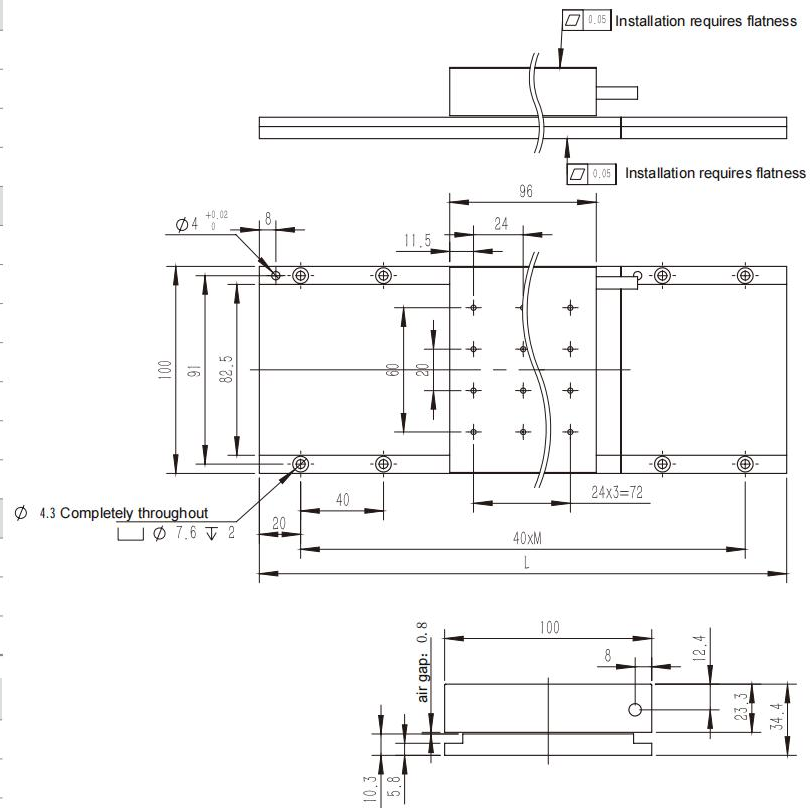
TAiC34100-96

TAiC34100-176

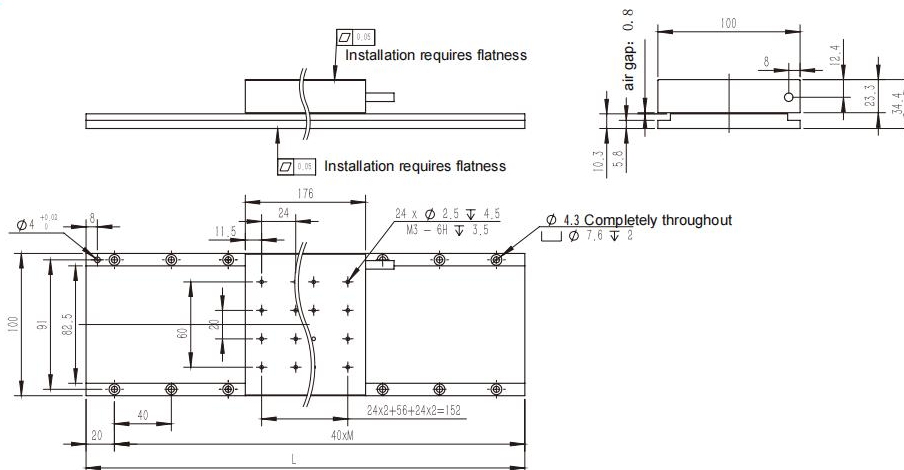
Parameters	Unit	TAiC34100-096	TAiC34100-176P
performance parameters			
Peak force@20°C/s increase	N	622.9	1272.8
Continuous force	N	197.2	303.4
Motor Force Constant	N/Arms	68	74
Motor constant	N ² /W	11.69	17.78
Electrical performance parameters			
Peak current	Arms	9.16	17.2
Continuous current	Arms	2.9	4.1
Back EMF	v/m/s	56.51	63.85
Resistance Per Phase	Ω	8.6	4.4
Induction Per Phase	Mh	34.6	17.6
Electric time constant	Ms	4	4
Max. Continuous Power Loss	W	284.68	291.12
Mechanical parameters			
Coil Unit Weight	kg	1.3	2.5
Motor Attraction Force	N	970.7	1941.4
Magnet Pitch	mm	20	

Stator Specification	L (mm)	M
TAiC34100M	-080	1
	-200	4
	-400	9

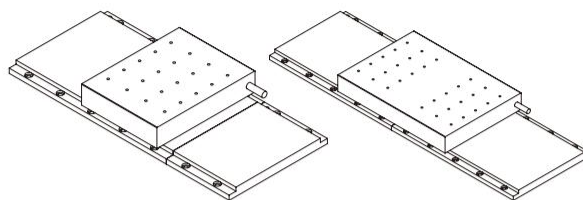
TAiC34100-096



TAiC34100-176



TAiC34 Series
Motor model
■ **TAiC34125**



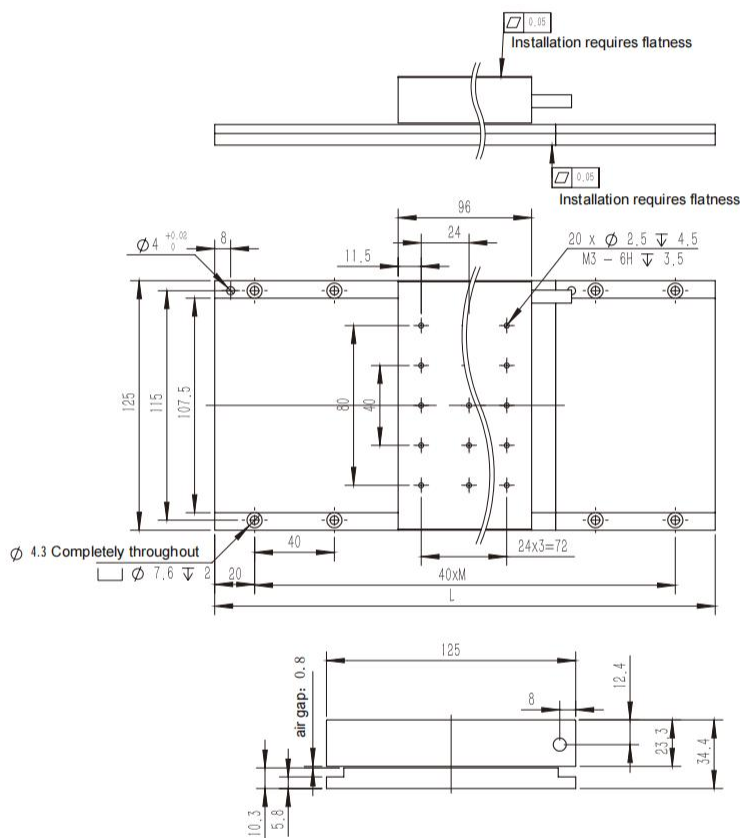
TAiC34125-096

TAiC34125-176

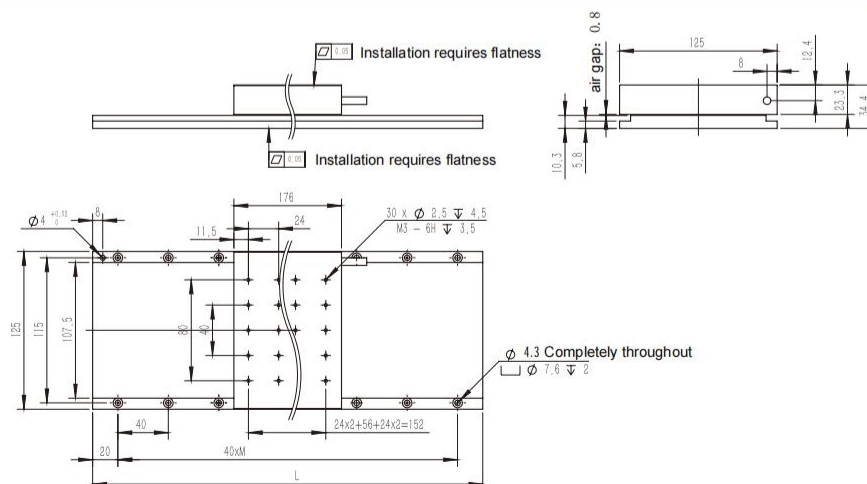
Parameters	Unit	TAIC34125-096	TAIC34125-176P
performance parameters			
Peak force@20°C/s increase	N	760.4	1539.6
Continuous force	N	245.3	394.8
Motor Force Constant	N/Arms	87	94
Motor constant	N ² /W	13.34	20.39
Electrical performance parameters			
Peak current	Arms	8.74	16.4
Continuous current	Arms	2.82	4.2
Back EMF	v/m/s	72.75	79.98
Resistance Per Phase	Ω	10.8	5.4
Induction Per Phase	Mh	44.6	22.6
Electric time constant	Ms	4.1	4.2
Max. Continuous Power Loss	W	338.05	374.93
Mechanical parameters			
Coil Unit Weight	kg	1.6	3
Motor Attraction Force	N	1242.9	2485.9
Magnet Pitch	mm	20	

Stator Specification	L (mm)	M
TAiC34125M	-080	1
	-200	4
	-400	9

TAiC34125-096



TAiC34125-176

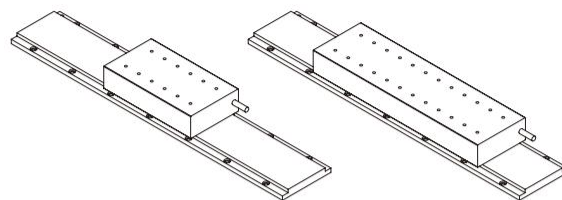




Stator Specification		L (mm)	M
TAiC41044M TAiC41050M	-180	180	2
	-300	300	4
	-420	420	6

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TAiC41 Series
Motor model
■ **TAiC41075**



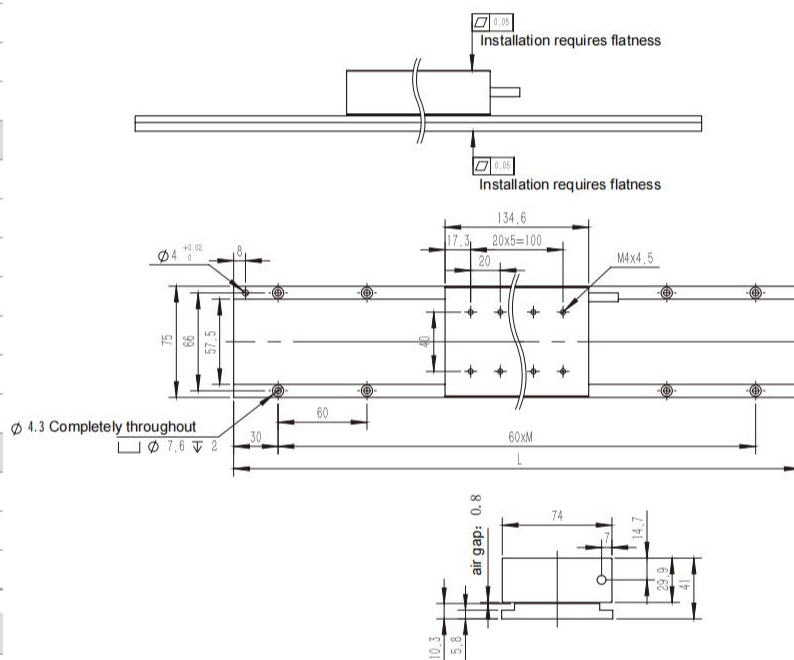
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TAiC41075-255

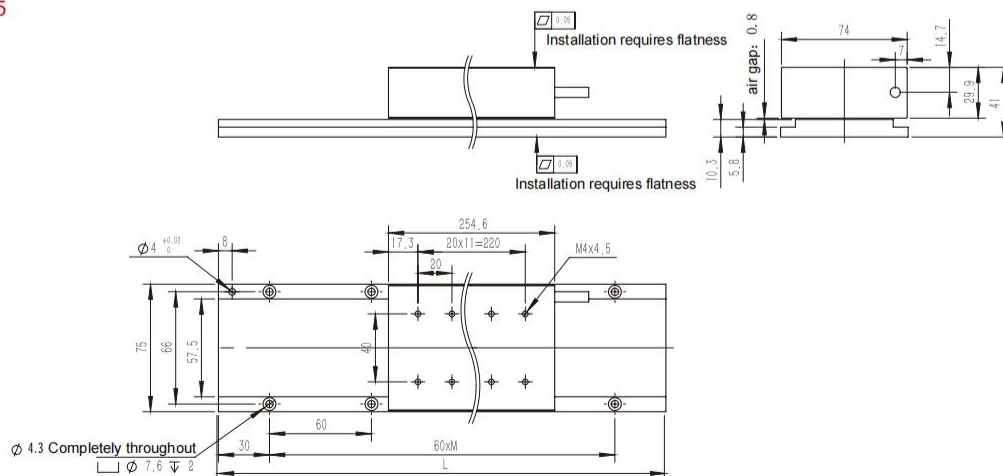
Parameters	Unit	TAIC41075-135	TAIC41075-255
performance parameters			
Peak force@20°C/s increase	N	345	690
Continuous force	N	138	276
Motor Force Constant	N/Arms	34.5	34.5
Motor constant	N ² /W	15.3	20.8
Electrical performance parameters			
Peak current	Arms	10	20
Continuous current	Arms	4	8
Back EMF	v/m/s	28.2	28.2
Resistance Per Phase	Ω	1.3	0.7
Induction Per Phase	Mh	21	10.5
Electric time constant	Ms	0.1	0.1
Max. Continuous Power Loss	W	82	176
Mechanical parameters			
Coil Unit Weight	kg	1.9	3.6
Motor Attraction Force	N	550	1100
Magnet Pitch	mm	30	

Stator Specification		L (mm)	M
TAiC41075M	-180	180	2
	-300	300	4
	-420	420	6

TAiC41075-135



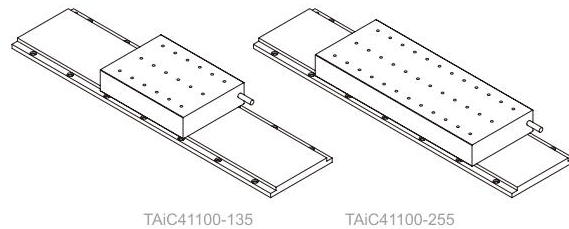
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TAiC41 Series

Motor model

TAiC41100



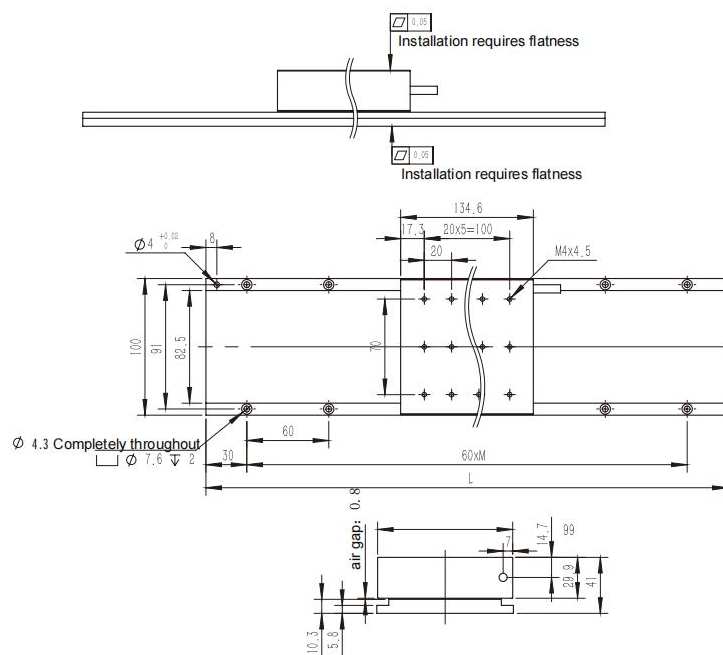
TAiC41100-135

TAiC41100-255

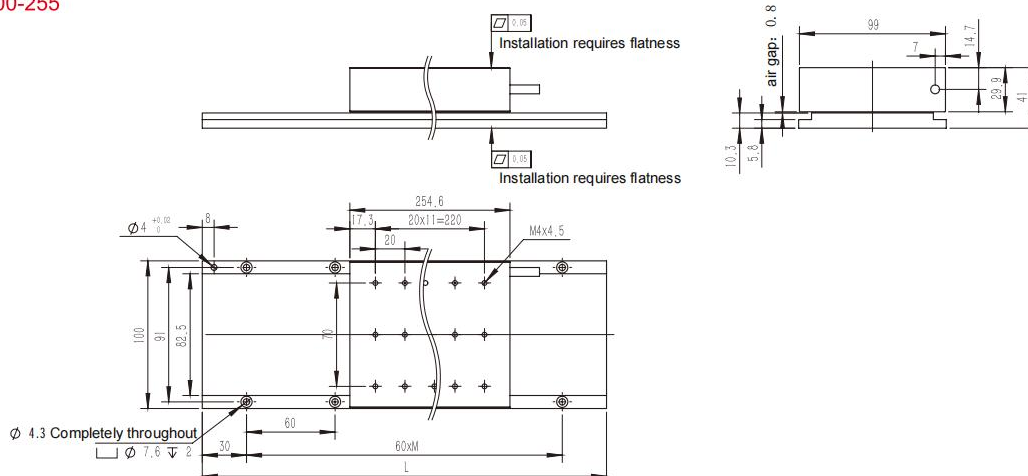
Parameters	单位 Unit	TAiC41100-135	TAiC41100-255
performance parameters			
Peak force@20°C/s increase	N	500	1000
Continuous force	N	200	400
Motor Force Constant	N/Arms	50	50
电机常数 Motor constant	N ² /W	38.6	25.2
Electrical performance parameters			
Peak current	Arms	10	20
Continuous current	Arms	4	8
Back EMF	v/m/s	40.8	40.8
Resistance Per Phase	Ω	1.9	1
Induction Per Phase	Mh	30	15
Electric time constant	Ms	0.1	0.1
Max. Continuous Power Loss	W	120	252
Mechanical parameters			
Coil Unit Weight	kg	2.6	5
Motor Attraction Force	N	750	1500
Magnet Pitch	mm	30	

Stator Specification	L (mm)	M
TAiC41100M	-180	2
	-300	4
	-420	6

TAiC41100-135



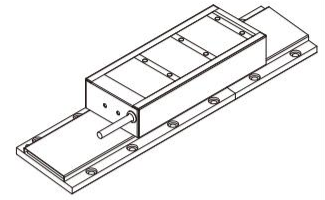
TAiC41100-255



TAiC41 Series

Motor model

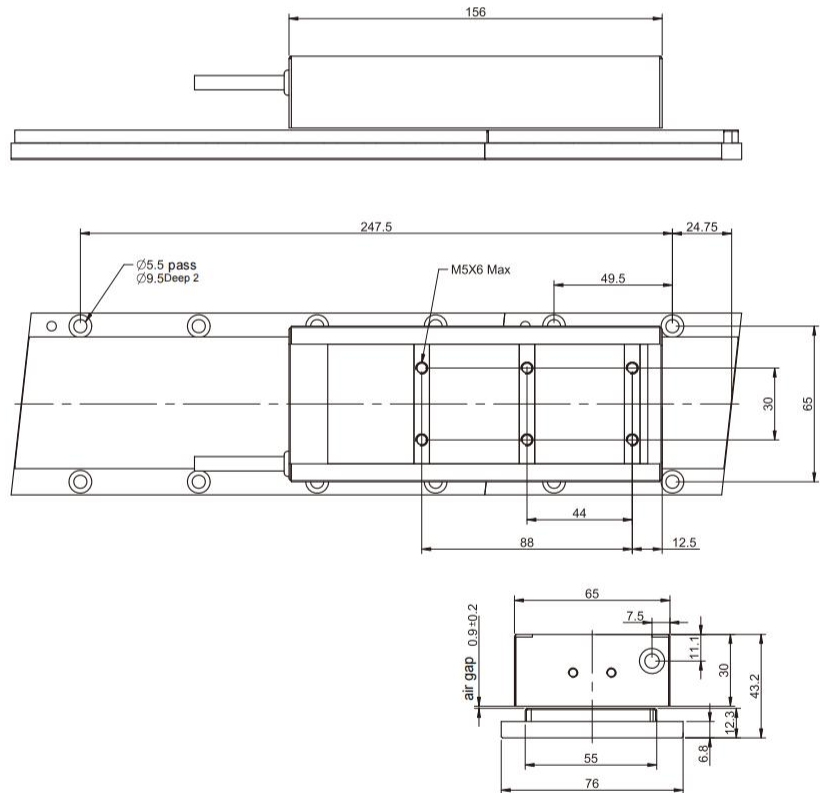
■ **TAiC43065-156**



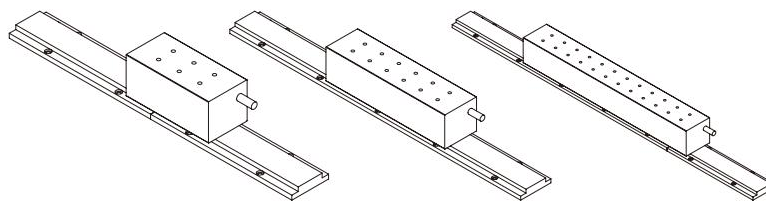
TAiC43065-156

Parameters	Unit	TAiC43065-156	
performance parameters			
Peak force@20°C/s increase	N	466.88	
Continuous force	N	156.59	
Motor Force Constant	N/Arms	41.32	
Motor constant	N ² /W	12.02	
Electrical performance parameters			
Peak current	Arms	11.3	
Continuous current	Arms	3.79	
Back EMF	v/m/s	33.6	
Resistance Per Phase	Ω	3	
Induction Per Phase	Mh	18.1	
Electric time constant	Ms	6.03	
Max. Continuous Power Loss	W	169.61	
Mechanical parameters			
Coil Unit Weight	kg	1.7	
Motor Attraction Force	N	690	
Magnet Pitch	mm	33	
Stator Specification		L (mm)	M
TAiC43065M	-99	99	1
	-198	198	3

TAiC43065-156



TAiC61 Series Motor model TAiC61053



TAiC61053-112

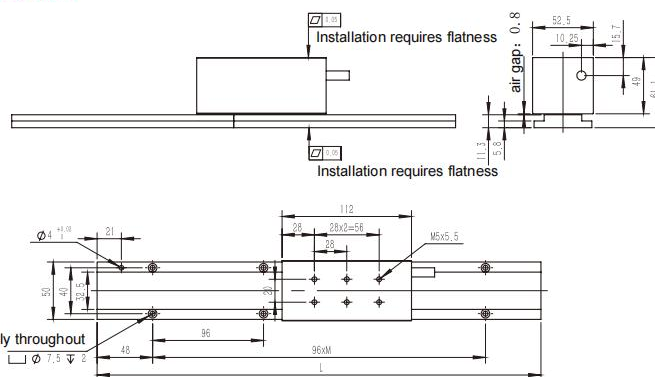
TAiC61053-196

TAiC61053-364

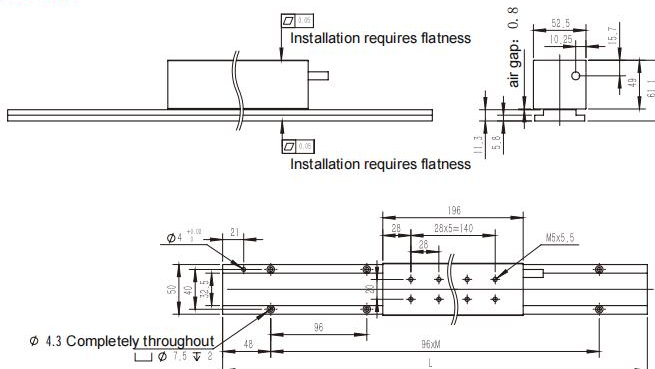
Parameters	Unit	TAiC61053-112	TAiC61053-196	TAiC61053-364
performance parameters				
Peak force@20°C/s increase	N	225	450	900
Continuous force	N	98	196	392
Motor Force Constant	N/Arms	20.4	40.8	40.8
Motor constant	N ² /W	10.8	18.3	25.9
Electrical performance parameters				
Peak current	Arms	14.4	14.4	28.8
Continuous current	Arms	4.8	4.8	9.6
Back EMF	v/m/s	16.7	33.3	33.3
Resistance Per Phase	Ω	0.9	1.8	0.9
Induction Per Phase	Mh	35	70	35
Electric time constant	Ms	0.03	0.03	0.03
Max. Continuous Power Loss	W	82	115	229
Mechanical parameters				
Coil Unit Weight	kg	1.4	2.8	4
Motor Attraction Force	N	450	900	1800
Magnet Pitch	mm	48		

Stator Specification	L (mm)	M
TAiC61053M	-192	192
	-480	480

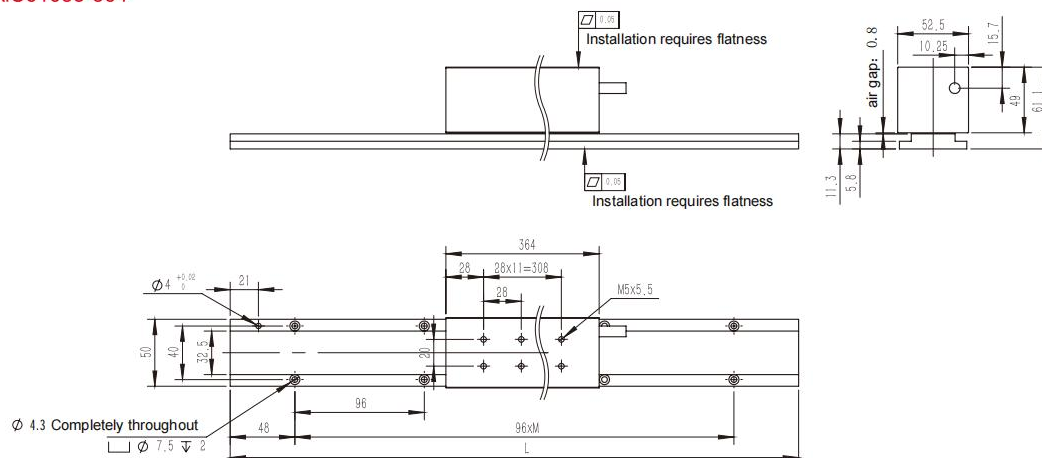
TAiC61053-112



TAiC61053-196



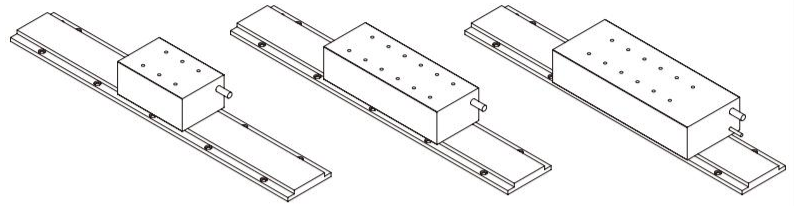
TAiC61053-364



TAiC61 Series

Motor model

■ TAI C61075-112
TAI C61075-196



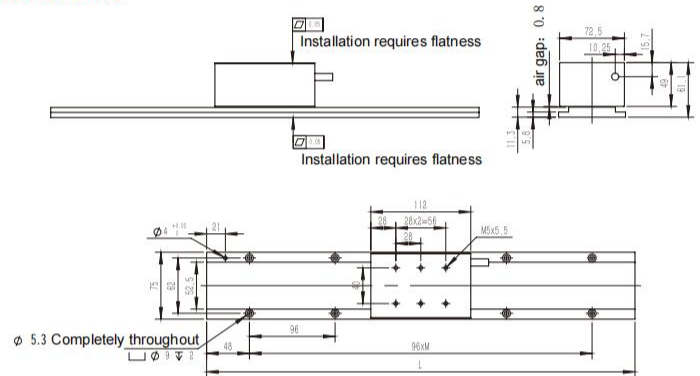
TAiC61075-112

TAiC61075-196

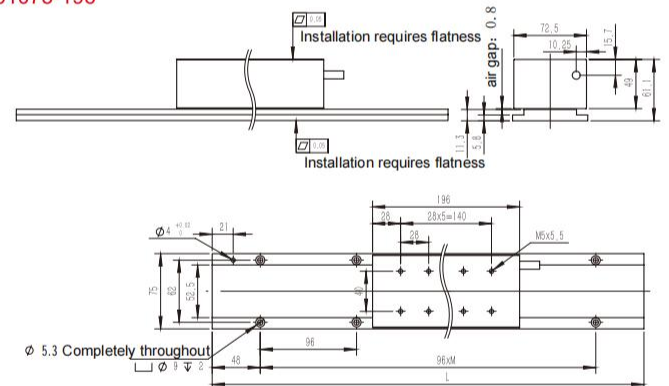
TAiC61091-233-W

Parameters	Unit	TaIC61075-112	TaIC61075-196	TaIC61091-233-W
performance parameters				
Peak force@20°C/s increase	N	375	750	750
Continuous force	N	163	326	558
Motor Force Constant	N/Arms	34	34	68
Motor constant	N ³ /W	15.6	26.4	26.4
Electrical performance parameters				
Peak current	Arms	14.4	14.4	14.4
Continuous current	Arms	4.8	4.8	8.2
Back EMF	v/m/s	27.8	27.8	55.5
Resistance Per Phase	Ω	1.2	2.4	2.4
Induction Per Phase	Mh	45	90	90
Electric time constant	Ms	0.03	0.03	0.03
Max. Continuous Power Loss	W	109	153	446
Mechanical parameters				
Coil Unit Weight	kg	2.1	4.1	5.2
Motor Attraction Force	N	750	1500	1500
Magnet Pitch	mm	48		
Stator Specification		L (mm)	M	
TaIC61075M	-192	192	1	
	-480	480	4	

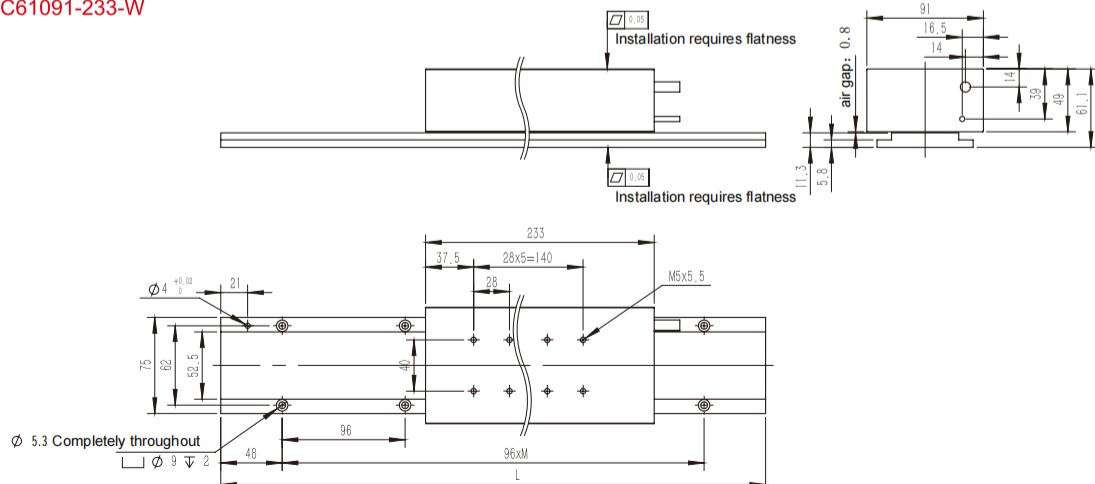
TAiC61075-112



TAiC61075-196

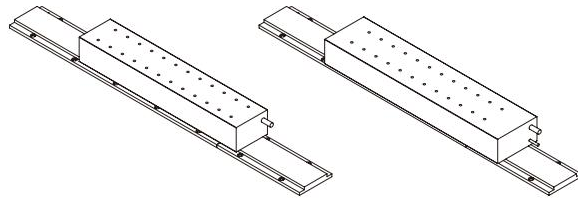


TAiC61091-233-W



TAiC61 Series
Motor model

■ TAiC61075-364



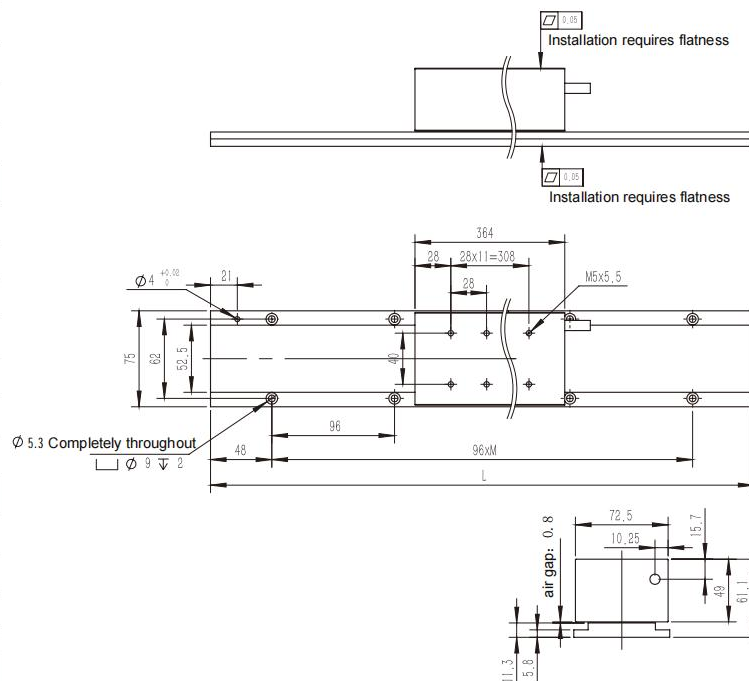
TAiC61075-364

TAiC61091-401-W

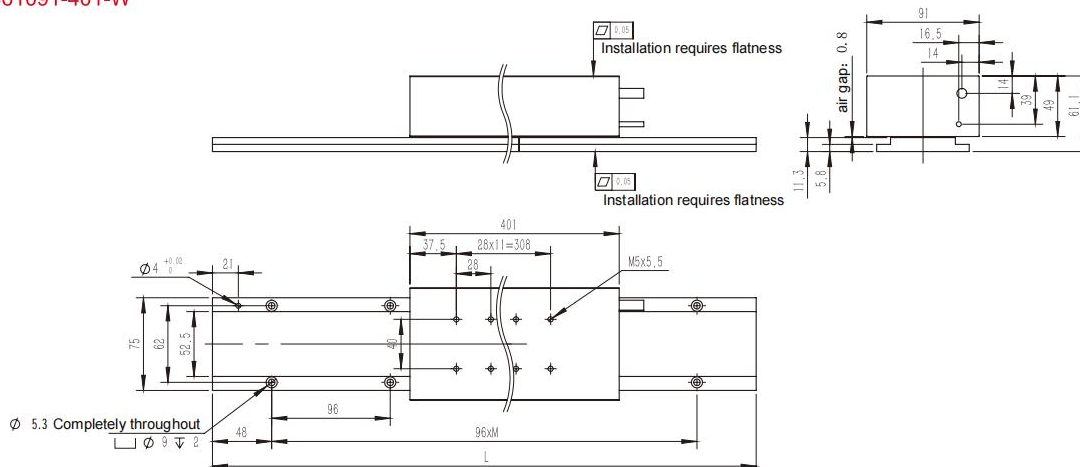
Parameters	Unit	TAiC61075-364	TAiC61091-401-W
performance parameters			
Peak force@20°C/s increase	N	1500	1500
Continuous force	N	653	1115
Motor Force Constant	N/Arms	68	68
Motor constant	N ² /W	37.3	37.3
Electrical performance parameters			
Peak current	Arms	28.8	28.8
Continuous current	Arms	9.6	16.4
Back EMF	v/m/s	55.5	55.5
Resistance Per Phase	Ω	1.2	1.2
Induction Per Phase	Mh	45	45
Electric time constant	Ms	0.03	0.03
Max. Continuous Power Loss	W	306	893
Mechanical parameters			
Coil Unit Weight	kg	7.9	9.6
Motor Attraction Force	N	3000	3000
Magnet Pitch	mm	48	

Stator Specification	L (mm)	M
TAiC61075M	-192	192
	-480	480

TAiC61075-364



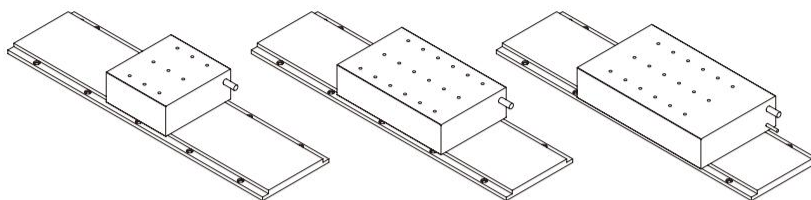
TAiC61091-401-W



TAiC61 Series

Motor model

■ **TAiC61125-112**
TAiC61125-196



TAiC61125-112

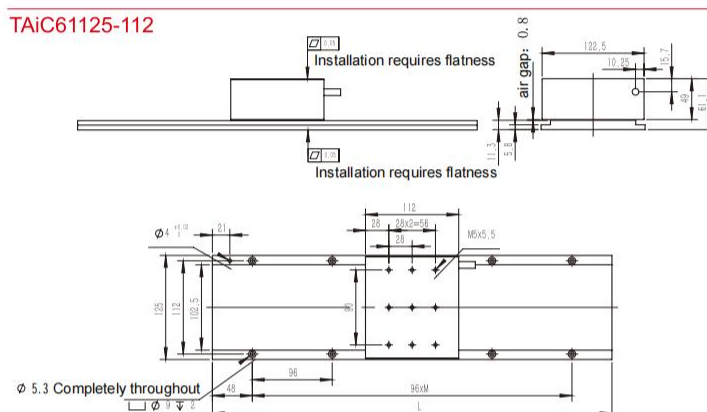
TAiC61125-196

TAiC61141-233-W

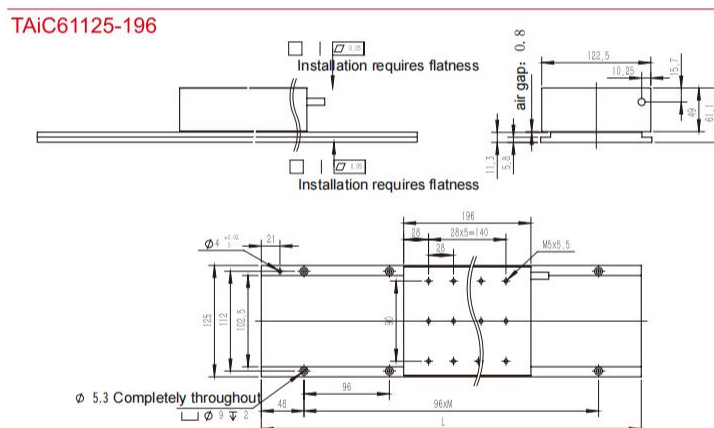
Parameters	Unit	TAiC61125-112	TAiC61125-196	TAiC61141-233-W
performance parameters				
Peak force@20°C/s increase	N	750	1500	1500
Continuous force	N	326	653	1123
Motor Force Constant	N/Arms	68	136	137
Motor constant	N ² /W	22.6	38.1	38.4
Electrical performance parameters				
Peak current	Arms	14.4	14.4	14.4
Continuous current	Arms	4.8	4.8	8.2
Back EMF	v/m/s	55.5	111	111.8
Resistance Per Phase	Ω	2.3	4.6	4.6
Induction Per Phase	Mh	90	180	180
Electric time constant	Ms	0.03	0.03	0.03
Max. Continuous Power Loss	W	209	293	856
Mechanical parameters				
Coil Unit Weight	kg	3.8	7.4	8.7
Motor Attraction Force	N	1350	2700	2700
Magnet Pitch	mm	48		

Stator Specification		L (mm)	M
TAiC61125M	-192	192	1
	-480	480	4

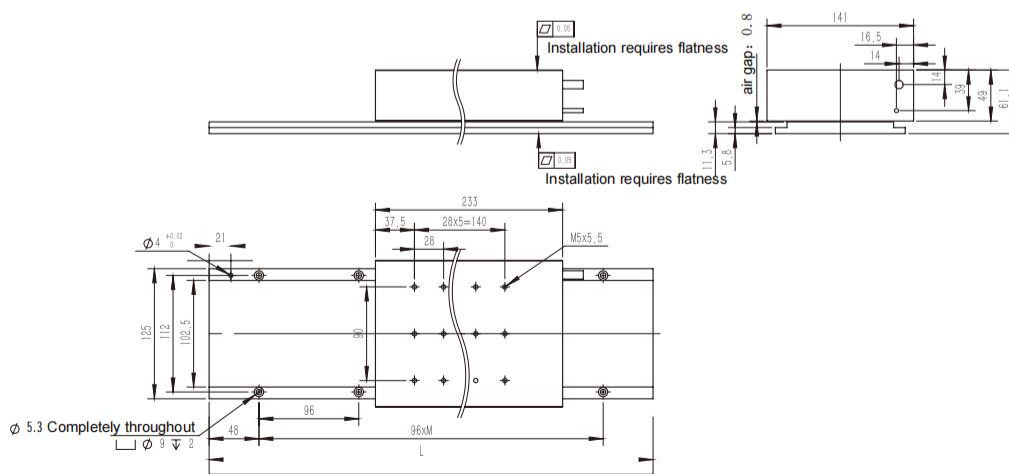
TAiC61125-112



TAiC61125-196



TAiC61141-233-W



TAiC61141-401-W

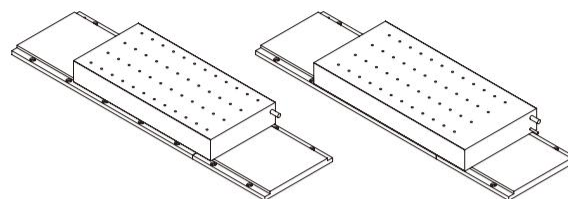
TAiC61125-364[illegible]TAiC61141-401-W

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TAiC64 Series

Motor model

■ **TAiC64180-364**

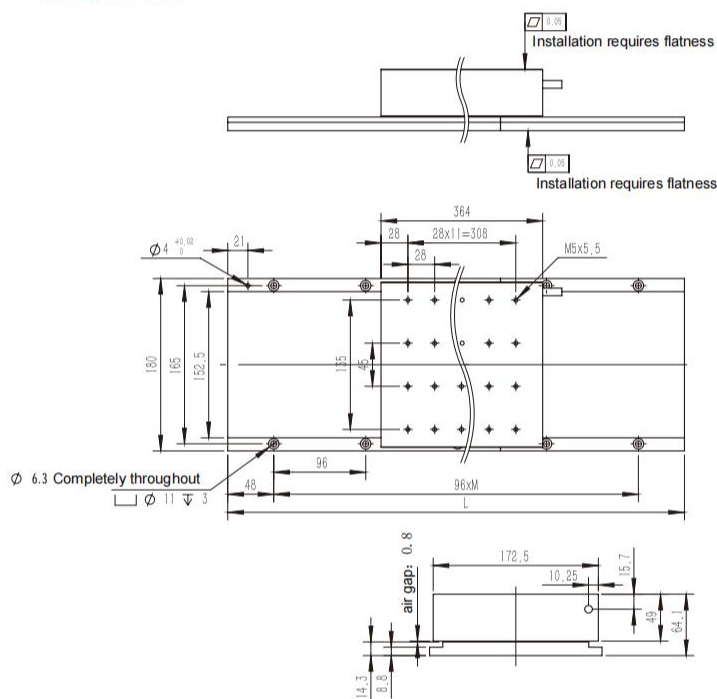


TAiC64180-364

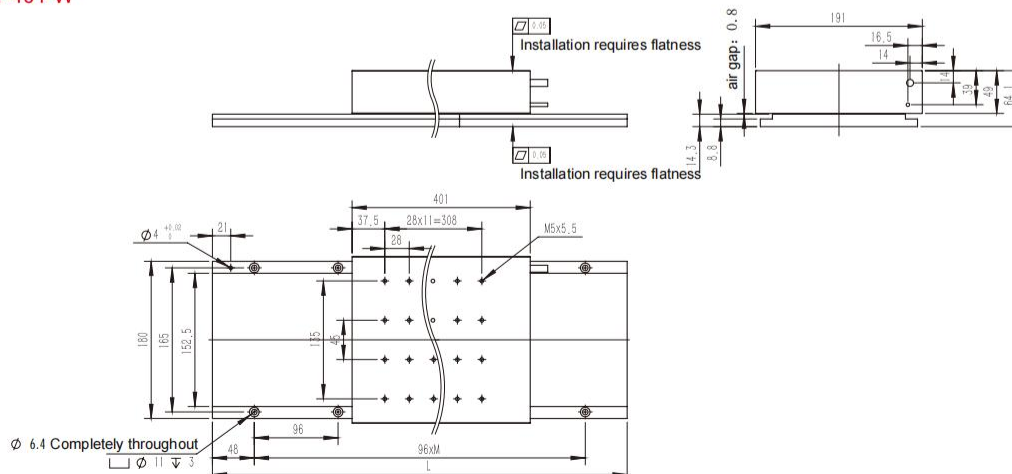
TAiC64191-401W

Parameters	Unit	TAiC64180-364	TAiC64191-401-W
performance parameters			
Peak force@20°C/s increase	N	4500	4500
Continuous force	N	1632	2788
Motor Force Constant	N/Arms	170	170
Motor constant	N ² /W	50.3	60
Electrical performance parameters			
Peak current	Arms	28.8	28.8
Continuous current	Arms	9.6	16.4
Back EMF	v/m/s	138.8	138.8
Resistance Per Phase	Ω	2.9	2.9
Induction Per Phase	Mh	115	115
Electric time constant	Ms	0.03	0.03
Max. Continuous Power Loss	W	1052	2157
Mechanical parameters			
Coil Unit Weight	kg	19.2	21.5
Motor Attraction Force	N	8.2	8.2
Magnet Pitch	mm	48	
Stator Specification		L (mm)	M
TAiC64180M	-192	192	1
	-480	480	4

TAiC64180-364

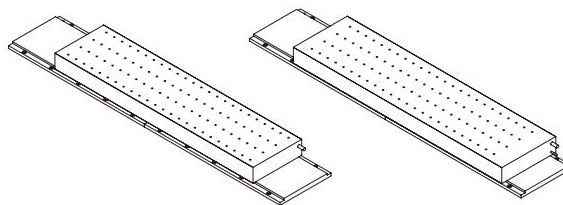


TAiC64191-401-W



TAiC64 Series
Motor model

■ TAiC64180-700



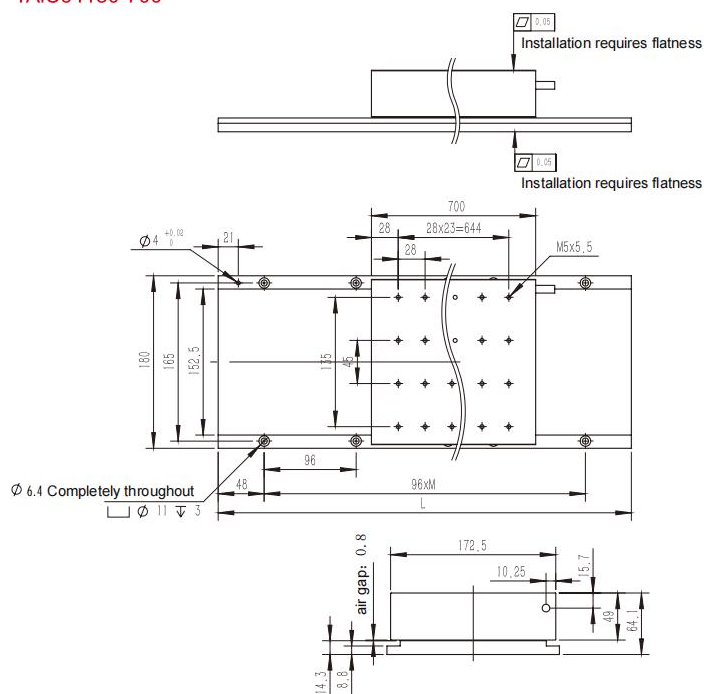
TAiC64180-700

TAiC64191-737-W

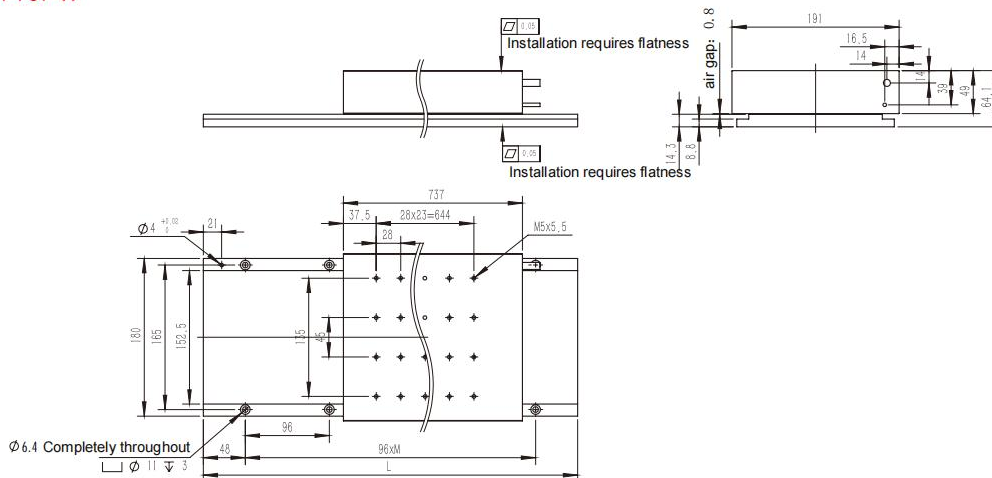
Parameters	Unit	TAiC64180-700	TAiC64191-737-W
performance parameters			
Peak force@20°C/s increase	N	9000	9000
Continuous force	N	3264	5576
Motor Force Constant	N/Arms	340	340
Motor constant	N ² /W	84.9	84.9
Electrical performance parameters			
Peak current	Arms	28.8	28.8
Continuous current	Arms	9.6	16.4
Back EMF	v/m/s	277.6	277.6
Resistance Per Phase	Ω	5.8	5.8
Induction Per Phase	Mh	230	230
Electric time constant	Ms	0.03	0.03
Max. Continuous Power Loss	W	1479	4315
Mechanical parameters			
Coil Unit Weight	kg	39.8	42.4
Motor Attraction Force	N	16.4	16.4
Magnet Pitch	mm	48	

Stator Specification	L (mm)	M
TAiC64180M	-192	192
	-480	480

TAiC64180-700



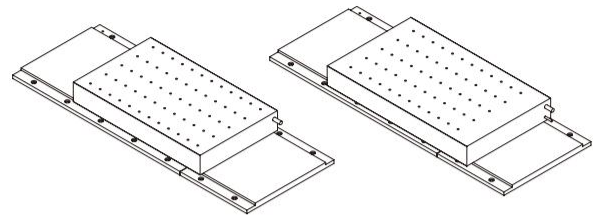
TAiC64191-737-W



TAiC64 Series

Motor model

■ **TAiC64250-364**

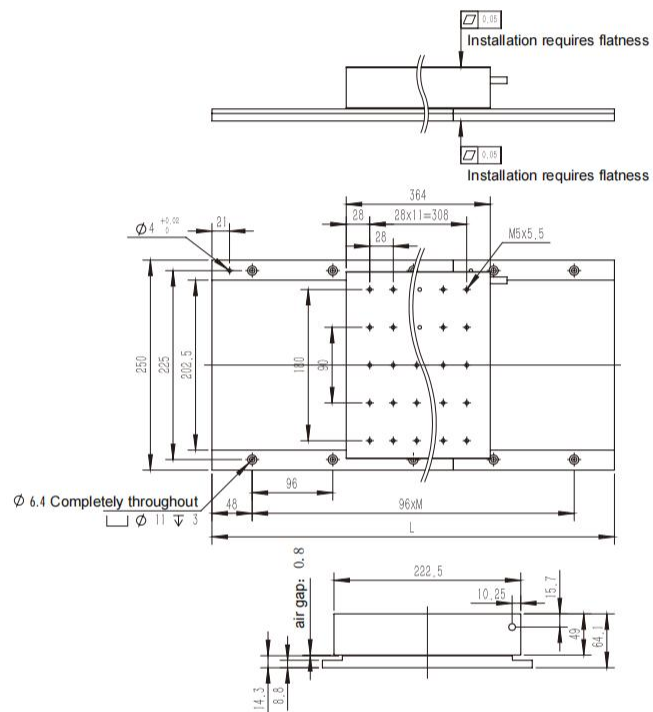


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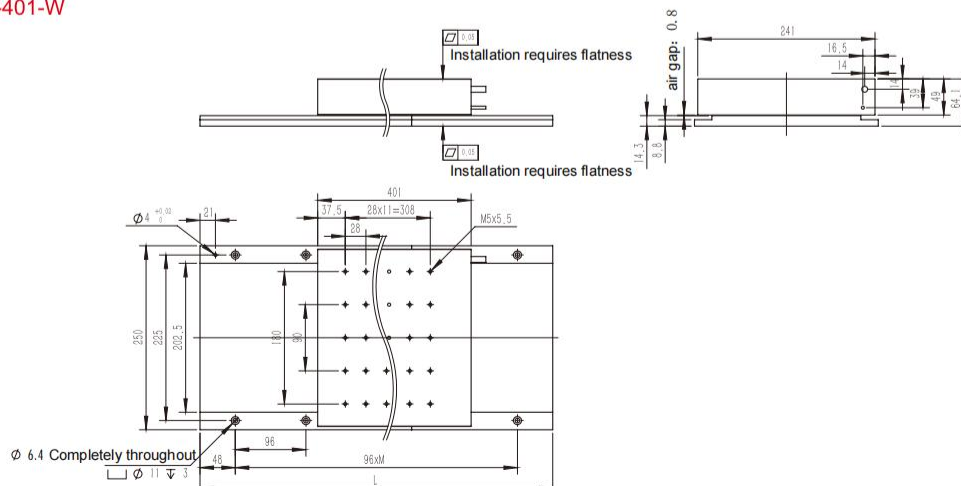
TAiC61250-401W

Parameters	Unit	TAIC64250-364	TAIC61250-401-W
performance parameters			
Peak force@20°C/s increase	N	6000	6000
Continuous force	N	2611	4461
Motor Force Constant	N/Arms	272	272
Motor constant	N ² /W	69.4	82.8
Electrical performance parameters			
Peak current	Arms	28.8	28.8
Continuous current	Arms	9.6	16.4
Back EMF	v/m/s	222.1	222.1
Resistance Per Phase	Ω	3.9	3.9
Induction Per Phase	Mh	160	160
Electric time constant	Ms	0.02	0.02
Max. Continuous Power Loss	W	1415	2901
Mechanical parameters			
Coil Unit Weight	kg	25.4	28.2
Motor Attraction Force	N	10.5	10.5
Magnet Pitch	mm	48	
Stator Specification		L (mm)	M
TAiC64250M	-192	192	1
	-480	480	4

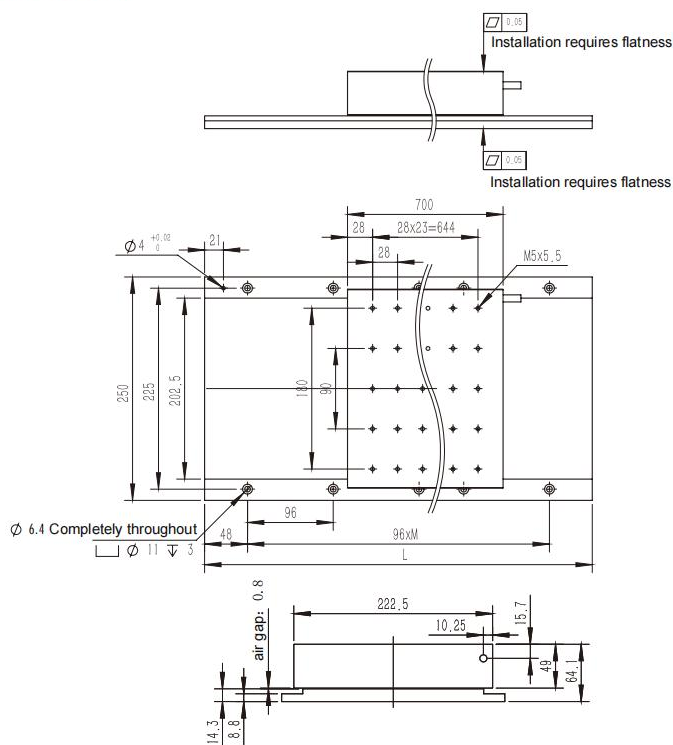
TAiC64250-364



TAiC61250-401-W



TAiC64250-700-W

TAiC60221-700

Stator Specification		L (mm)	M
TAiC64250M	-192	192	1
	-480	480	4

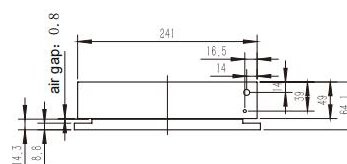
The drawing consists of two parts: a cross-section (top) and a plan view (bottom).

Cross-section (top): Shows a roof assembly with a concrete slab (thickness 100 mm) and a metal roof panel (thickness 0.63 mm). The panel is installed on a flat surface, with a note: "Installation requires flatness". The panel has a width of 737 mm and a height of 28 mm. The concrete slab has a width of 28x23=644 mm. The panel is secured with M5x5.5 screws.

Plan view (bottom): Shows the layout of the roof assembly. The total width is 737 mm. The panel width is 28 mm. The concrete slab width is 28x23=644 mm. The panel is secured with M5x5.5 screws. The panel is installed on a flat surface, with a note: "Installation requires flatness". The panel has a width of 737 mm and a height of 28 mm. The concrete slab has a width of 28x23=644 mm. The panel is secured with M5x5.5 screws.

Dimensions and Notes:

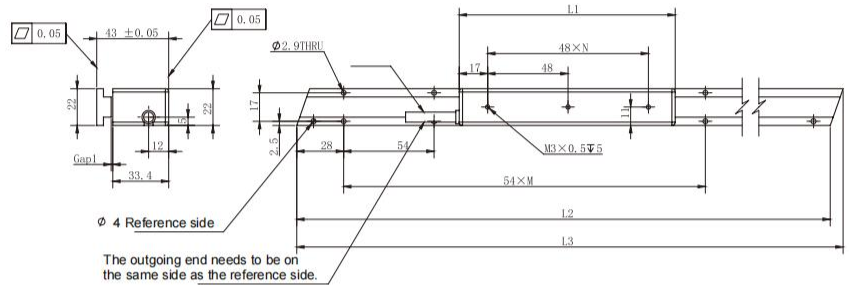
- Panel width: 737
- Panel height: 28
- Concrete slab width: 28x23=644
- Panel thickness: 0.63
- Concrete slab thickness: 100
- Screw: M5x5.5
- Panel width: 737
- Panel height: 28
- Concrete slab width: 28x23=644
- Panel thickness: 0.63
- Concrete slab thickness: 100
- Screw: M5x5.5



TYAN Series

TYAN010(S)

Parameters	Unit	TYAN010C1S	TYAN010C2S
performance parameters			
Peak force@20°C/s increase	N	54	108
Continuous force	N	18	36
Maximum Speed	m/s	5	5
Motor Force Constant	N/Arms	50.4	50.4
Electrical performance parameters			
Peak current	Arms	1.2	2.4
Continuous current	Arms	0.4	0.8
Back EMF	v/m/s	40.32	40.32
Resistance Per Phase	Ω	43.8	21.9
Induction Per Phase	Mh	122	61
Electric time constant	Ms	2.8	2.8
Max. Continuous Power Loss	W	3.6	7.2
Mechanical parameters			
Coil Unit Weight	kg	0.51	1
Coil Unit Length	mm	129	237
Motor Attraction Force	N	157	315
Magnet Pitch	mm	13.5	



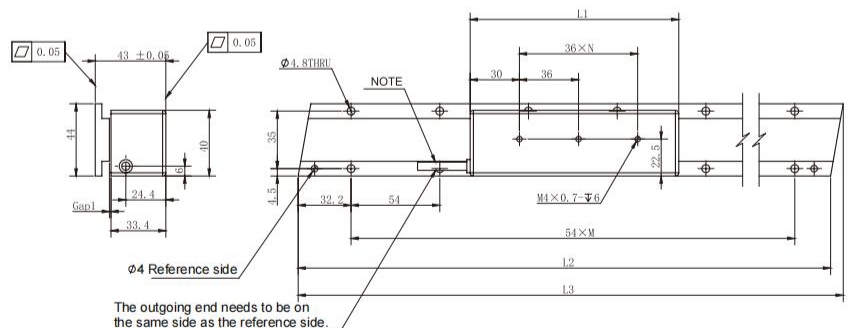
Coil model no.	Size	
	L1(mm)	N
TYAN010	C1S	129
	C2S	237

Magnet Track model no.	Size		
	L2(mm)	L3(mm)	M
TYAN010	M108	108	110
	M216	216	218
	M324	324	326

TYAN Series

TYAN020(S)

Parameters	Unit	TYAN020C1S	TYAN020C2S
performance parameters			
Peak force@20°C/s increase	N	120	240
Continuous force	N	40	80
Maximum Speed	m/s	5.3	5.3
Motor Force Constant	N/Arms	52.5	52.5
Electrical performance parameters			
Peak current	Arms	2.4	4.8
Continuous current	Arms	0.8	1.6
Back EMF	v/m/s	42	42
Resistance Per Phase	Ω	17.4	8.7
Induction Per Phase	Mh	66.1	33.1
Electric time constant	Ms	3.8	6.0
Max. Continuous Power Loss	W	7.5	15.1
Mechanical parameters			
Coil Unit Weight	kg	0.75	1.45
Coil Unit Length	mm	127	235
Motor Attraction Force	N	315	460
Magnet Pitch	mm	13.5	



Coil model no.	Size	
	L1(mm)	N
TYAN020	C1S	127
	C2S	235

Magnet Track model no.	Size		
	L2(mm)	L3(mm)	M
TYAN020	M108	108	115.7
	M216	216	223.7
	M324	324	331.7

TYAN035(S)

[illegible]

Magnet Track model no.		Size		
		L2(mm)	L3(mm)	M
TYAN035	M108	108	118.5	1
	M216	216	226.5	3
	M324	324	334.5	5

TYAN049(S)

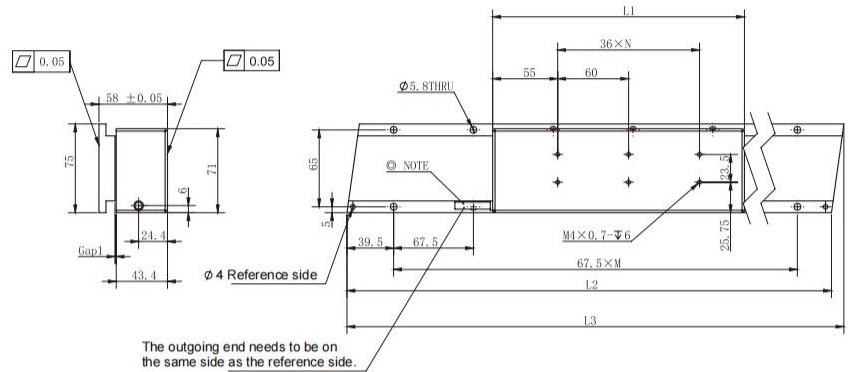
[illegible]

Magnet Track model no.		Size		
		L2(mm)	L3(mm)	M
TYAN049	M108	108	121.1	1
	M216	216	229.1	3
	M324	324	337.1	5

TYAN Series

TYAN050(S)

Parameters	Unit	TYAN050C1S	TYAN050C2S
performance parameters			
Peak force@20°C/s increase	N	840	1680
Continuous force	N	280	560
Maximum Speed	m/s	4.1	4.1
Motor Force Constant	N/Arms	67.6	67.6
Electrical performance parameters			
Peak current	Arms	12.6	25.2
Continuous current	Arms	4.2	8.4
Back EMF	v/m/s	54.08	54.08
Resistance Per Phase	Ω	3.2	1.6
Induction Per Phase	Mh	31.3	15.6
Electric time constant	Ms	9.8	9.8
Max. Continuous Power Loss	W	68.3	136.6
Mechanical parameters			
Coil Unit Weight	kg	3.2	6.2
Coil Unit Length	mm	213	393
Motor Attraction Force	N	1700	3300
Magnet Pitch	mm	22.5	



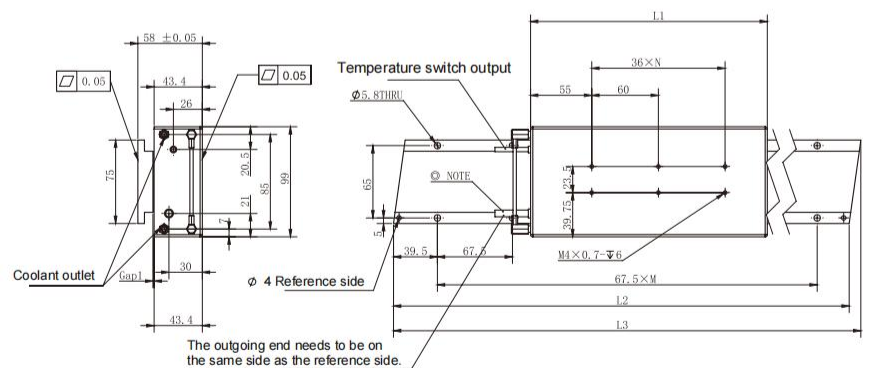
Coil model no.		Size	
		L1(mm)	N
TYAN050	C1S	213	2
	C2S	393	5

Magnet Track model no.		Size		
		L2(mm)	L3(mm)	M
TYAN050	M135	135	146.3	1
	M270	270	281.3	3
	M405	405	416.3	5

TYAN Series

TYAN050(A)

Parameters	Unit	TYAN050C1A	TYAN050C2A
performance parameters			
Peak force@20℃s increase	N	840	1680
Continuous force	N	500	1000
Maximum Speed	m/s	3.4	3.4
Motor Force Constant	N/Arms	67.6	67.6
Electrical performance parameters			
Peak current	Arms	12.6	25.2
Continuous current	Arms	7.5	15
Back EMF	v/m/s	54.08	54.08
Resistance Per Phase	Ω	3.2	1.6
Induction Per Phase	Mh	31.3	15.6
Electric time constant	Ms	9.8	9.8
Max. Continuous Power Loss	W	147.1	294.1
Mechanical parameters			
Coil Unit Weight	kg	3.8	7.4
Coil Unit Length	mm	213	227
Motor Attraction Force	N	1700	3300
Magnet Pitch	mm	22.5	



Coil model no.		Size	
		L1(mm)	N
TYAN050	C1A	213	2
	C2A	393	5

Magnet Track model no.		Size		
		L2(mm)	L3(mm)	M
TYAN050	M135	135	146.3	1
	M270	270	281.3	3
	M405	405	416.3	5

TYAN050(B)

Technical drawing of a temperature switch assembly, showing isometric, front, and side views with dimensions and labels.

Isometric View: Shows the assembly of the temperature switch onto the temperature switch output.

Front View (Left): Shows the temperature switch output with dimensions: 75 ± 0.05 , 48, 12.4, 75, 56, 80, 12, 18, 45, 60.4, 25 Datum edge deviation, 0.05, 0.05, $\phi 4$ Reference side, Coolant outlet, Coolant outlet.

Side View (Right): Shows the temperature switch output with dimensions: 65, 5, 89.5, 67.5, 1.2, 1.3, 50, 50 $\times$ N, 7, 109, 1.2, 67.5 $\times$ M, 0.8 $\times$ 1.25 ∇ 12.4, $\phi 5.8$ THRU, NOTE, Temperature switch output.

Notes:

- The outgoing end needs to be on the same side as the reference side.

Magnet Track model no.		Size		
		L2(mm)	L3(mm)	M
TYAN050	M135	135	146.3	1
	M270	270	281.3	3
	M405	405	416.3	5

TYAN075(S)

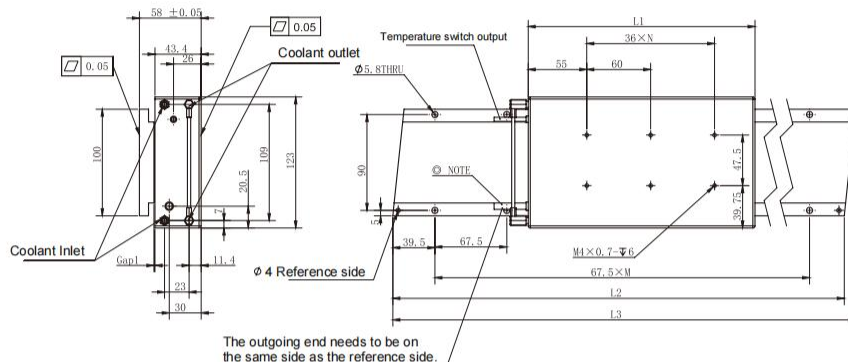
[illegible]

Magnet Track model no.		Size		
		L2(mm)	L3(mm)	M
TYAN075	M135	135	150.1	1
	M270	270	285.1	3
	M405	405	420.1	5

TYAN Series

TYAN075(A)

Parameters	Unit	TYAN075C1A	TYAN075C2A
performance parameters			
Peak force@20°C/s increase	N	1320	2640
Continuous force	N	780	1560
Maximum Speed	m/s	3.2	3.2
Motor Force Constant	N/Arms	77.2	77.2
Electrical performance parameters			
Peak current	Arms	17.4	34.8
Continuous current	Arms	10.3	20.6
Back EMF	v/m/s	61.76	61.76
Resistance Per Phase	Ω	2.2	1.1
Induction Per Phase	Mh	19.9	9.9
Electric time constant	Ms	9.0	9.0
Max. Continuous Power Loss	W	243.8	487.5
Mechanical parameters			
Coil Unit Weight	kg	5.7	11.2
Coil Unit Length	mm	213	393
Motor Attraction Force	N	2320	4300
Magnet Pitch	mm	22.5	



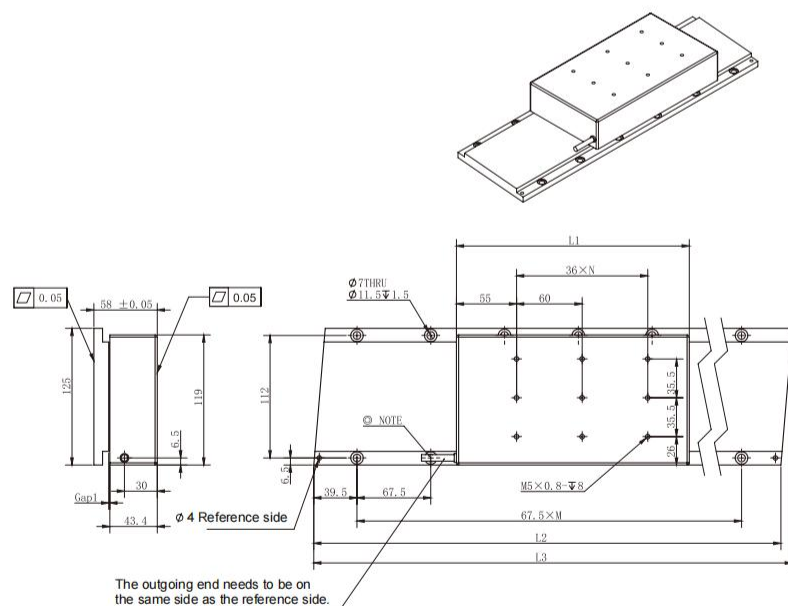
Coil model no.		Size	
		L1(mm)	N
TYAN075	C1A	213	3
	C2A	393	7

Magnet Track model no.		Size		
		L2(mm)	L3(mm)	M
TYAN075	M135	135	150.1	1
	M270	270	285.1	3
	M405	405	420.1	5

TYAN Series

TYAN100(S)

Parameters	Unit	100C1S	100C2S	100C3S	100C4S
performance parameters					
Peak force@20°C/s increase	N	1680	3360	5040	6720
Continuous force	N	560	1120	1680	2240
Maximum Speed	m/s	5.9	5.9	5.9	5.9
Motor Force Constant	N/Arms	47.7	47.7	47.7	47.7
Electrical performance parameters					
Peak current	Arms	35.4	70.8	106	141
Continuous current	Arms	11.8	23.6	35.4	47.2
Back EMF	v/m/s	38.16	38.16	38.16	38.16
Resistance Per Phase	Ω	0.72	0.36	0.24	0.18
Induction Per Phase	Mh	7.8	3.9	2.6	1.9
Electric time constant	Ms	10.8	10.8	10.8	10.6
Max. Continuous Power Loss	W	94.9	189.8	284.7	379.7
Mechanical parameters					
Coil Unit Weight	kg	5.1	9.8	14.5	19.2
Coil Unit Length	mm	213	393	573	753
Motor Attraction Force	N	3310	6520	9830	13100
Magnet Pitch	mm	22.5			



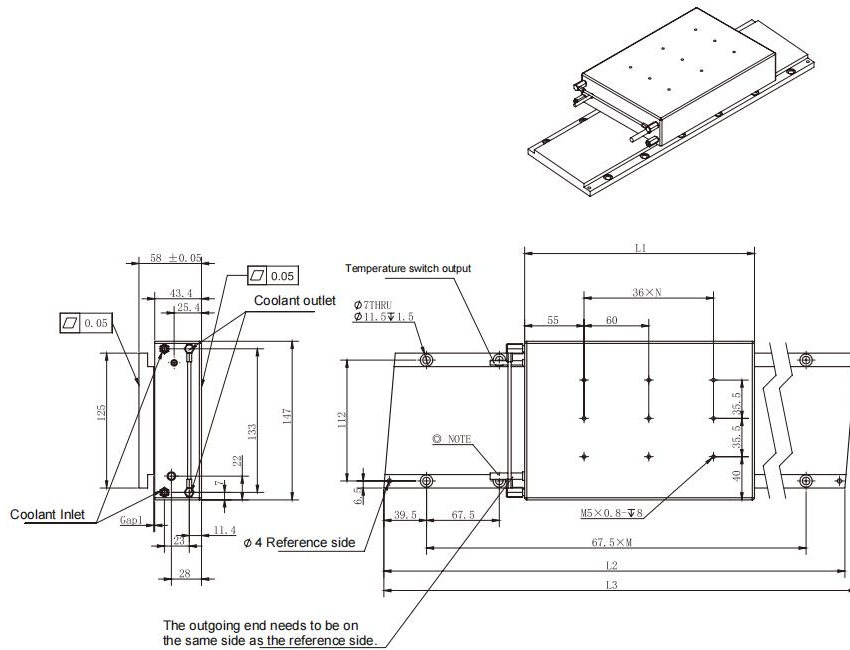
Coil model no.		Size	
		L1(mm)	N
TYAN100	C1S	213	2
	C2S	393	5
	C3S	573	8
	C4S	753	11

Magnet Track model no.		Size		
		L2(mm)	L3(mm)	M
TYAN100	M135	135	153.9	1
	M270	270	288.9	3
	M405	405	423.9	5

TYAN Series

TYAN100(A)

Parameters	Unit	TYAN100C1A	TYAN100C2A
performance parameters			
Peak force@20°C/s increase	N	1680	3360
Continuous force	N	995	1990
Maximum Speed	m/s	5	5
Motor Force Constant	N/Arms	47.7	47.7
Electrical performance parameters			
Peak current	Arms	35.4	70.8
Continuous current	Arms	21	42
Back EMF	v/m/s	38.16	38.16
Resistance Per Phase	Ω	0.72	0.36
Induction Per Phase	Mh	7.8	3.9
Electric time constant	Ms	10.8	10.8
Max. Continuous Power Loss	W	199.0	398.0
Mechanical parameters			
Coil Unit Weight	kg	7.2	12
Coil Unit Length	mm	213	393
Motor Attraction Force	N	3310	6520
Magnet Pitch	mm	22.5	



Coil model no.	Size	
	L1(mm)	N
TYAN100	C1A	213
	C2A	393

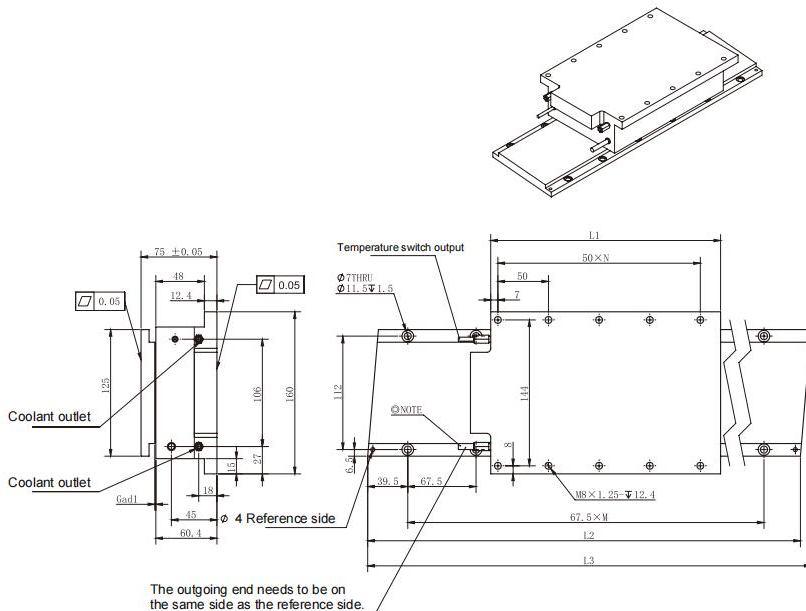
Magnet Track model no.	Size		
	L2(mm)	L3(mm)	M
TYAN100	M135	135	153.9
	M270	270	288.9
	M405	405	423.9

TYAN系列

TYAN Series

TYAN100(B)

Parameters	Unit	100C1B	100C2B	100C3B	100C4B
performance parameters					
Peak force@20°C/s increase	N	1680	3360	5040	5040
Continuous force	N	995	1990	2985	3980
Maximum Speed	m/s	5	5	5	5
Motor Force Constant	N/Arms	47.7	47.7	47.7	47.7
Electrical performance parameters					
Peak current	Arms	35.4	70.8	106	141
Continuous current	Arms	21	42	63	84
Back EMF	v/m/s	38.16	38.16	38.16	38.16
Resistance Per Phase	Ω	0.72	0.36	0.24	0.18
Induction Per Phase	Mh	7.8	3.9	2.6	1.9
Electric time constant	Ms	10.8	10.8	10.8	10.6
Max. Continuous Power Loss	W	199.0	398.0	597.0	597.0
Mechanical parameters					
Coil Unit Weight	kg	7.5	14.3	16.7	19.1
Coil Unit Length	mm	227	407	587	767
Motor Attraction Force	N	3310	6520	9830	13100
Magnet Pitch	mm	22.5			



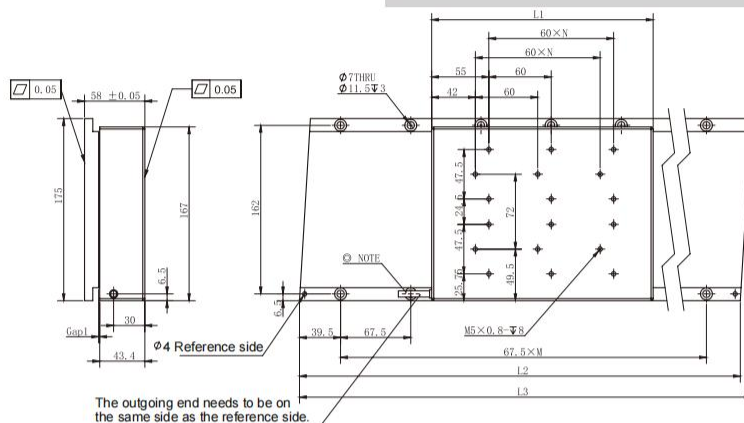
Coil model no.	Size	
	L1(mm)	N
TYAN100	C1B	227
	C2B	407
	C3B	587
	C4B	767

Magnet Track model no.	Size		
	L2(mm)	L3(mm)	M
TYAN100	M135	135	153.9
	M270	270	288.9
	M405	405	423.9

TYAN Series

TYAN150(S)

Parameters	Unit	150C1S	150C2S	150C3S
performance parameters				
Peak force@20°C/s increase	N	2520	5040	7560
Continuous force	N	840	1680	2520
Maximum Speed	m/s	4	4	4
Motor Force Constant	N/Arms	71.2	71.2	71.2
Electrical performance parameters				
Peak current	Arms	35.4	70.8	106
Continuous current	Arms	11.8	23.6	35.4
Back EMF	v/m/s	56.96	56.96	56.96
Resistance Per Phase	Ω	0.49	0.25	0.16
Induction Per Phase	Mh	11.6	5.8	3.9
Electric time constant	Ms	23.7	23.2	24.4
Max. Continuous Power Loss	W	210.0	420.0	630.0
Mechanical parameters				
Coil Unit Weight	kg	8.2	15.8	23.4
Coil Unit Length	mm	213	393	573
Motor Attraction Force	N	4640	8600	13320
Magnet Pitch	mm	22.5		



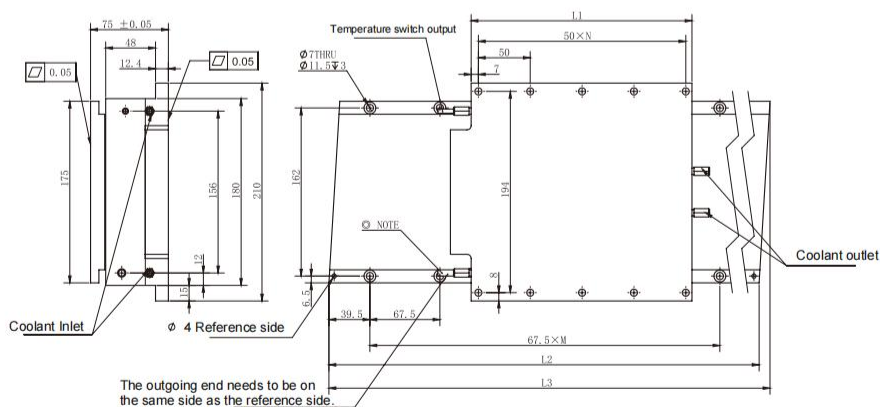
Coil model no.		Size	
		L1(mm)	N
TYAN150	C1S	213	2
	C2S	393	5
	C3S	573	8

Magnet Track model no.		Size		
		L2(mm)	L3(mm)	M
TYAN150	M135	135	150.1	1
	M270	270	285.1	3
	M405	405	420.1	5

TYAN Series

TYAN150(B)

Parameters	Unit	150C1B	150C2B	150C3B
performance parameters				
Peak force@20°C/s increase	N	2520	5040	7560
Continuous force	N	1495	2990	4485
Maximum Speed	m/s	3.5	3.5	3.5
Motor Force Constant	N/Arms	71.2	71.2	71.2
Electrical performance parameters				
Peak current	Arms	35.4	70.8	106
Continuous current	Arms	21	42	63
Back EMF	v/m/s	56.96	56.96	56.96
Resistance Per Phase	Ω	0.49	0.25	0.16
Induction Per Phase	Mh	11.6	5.8	3.9
Electric time constant	Ms	23.7	23.2	24.4
Max. Continuous Power Loss	W	427.1	854.3	1281.4
Mechanical parameters				
Coil Unit Weight	kg	10	20	30
Coil Unit Length	mm	227	407	587
Motor Attraction Force	N	4640	8600	13320
Magnet Pitch	mm	22.5		



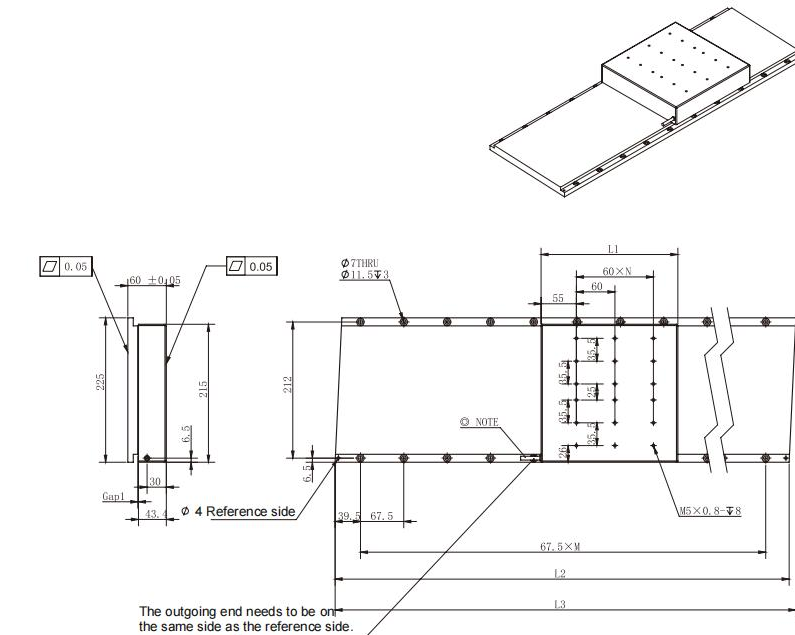
Coil model no.		Size	
		L1(mm)	N
TYAN150	C1B	227	3
	C2B	407	7
	C3B	587	11

Magnet Track model no.		Size		
		L2(mm)	L3(mm)	M
TYAN150	M135	135	150.1	1
	M270	270	285.1	3
	M405	405	420.1	5

TYAN Series

TYAN200(S)

Parameters	Unit	200C1S	200C2S	200C3S
performance parameters				
Peak force@20°C/s increase	N	3360	6720	10080
Continuous force	N	1120	2240	3360
Maximum Speed	m/s	3.1	3.1	3.1
Motor Force Constant	N/Arms	94.5	94.5	94.5
Electrical performance parameters				
Peak current	Arms	35.4	70.8	106
Continuous current	Arms	11.8	23.6	35.4
Back EMF	v/m/s	75.6	75.6	75.6
Resistance Per Phase	Ω	0.38	0.19	0.13
Induction Per Phase	Mh	15.5	7.7	5.1
Electric time constant	Ms	40.8	40.5	39.2
Max. Continuous Power Loss	W	361.3	722.6	1083.9
Mechanical parameters				
Coil Unit Weight	kg	10.1	20.7	30.4
Coil Unit Length	mm	213	393	573
Motor Attraction Force	N	6620	13040	19260
Magnet Pitch	mm		22.5	

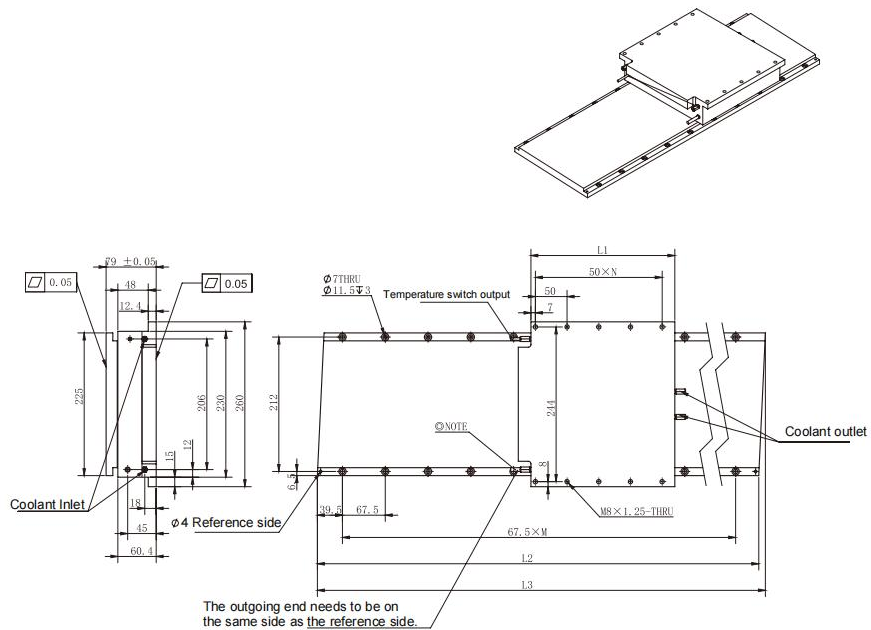


Coil model no.		Size		Magnet Track model no.		Size		
		L1(mm)	N			L2(mm)	L3(mm)	M
TYAN200	C1S	213	2	TYAN200	M135	135	288.9	1
	C2S	393	5		M270	270	423.9	3
	C3S	573	8		M405	405	693.9	5

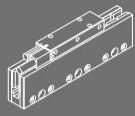
TYAN Series

TYAN200(B)

Parameters	Unit	200C1B	200C2B	200C3B
performance parameters				
Peak force@20°C/s increase	N	3360	6720	10080
Continuous force	N	1990	3980	5970
Maximum Speed	m/s	2.7	2.7	2.7
Motor Force Constant	N/Arms	94.5	94.5	94.5
Electrical performance parameters				
Peak current	Arms	35.4	70.8	106
Continuous current	Arms	21	42	63
Back EMF	v/m/s	75.6	75.6	75.6
Resistance Per Phase	Ω	0.38	0.19	0.13
Induction Per Phase	Mh	15.5	7.7	5.1
Electric time constant	Ms	40.8	40.5	39.2
Max. Continuous Power Loss	W	737.0	1474.1	2211.1
Mechanical parameters				
Coil Unit Weight	kg	12.9	23.6	33
Coil Unit Length	mm	227	407	587
Motor Attraction Force	N	6620	13040	19260
Magnet Pitch	mm		22.5	

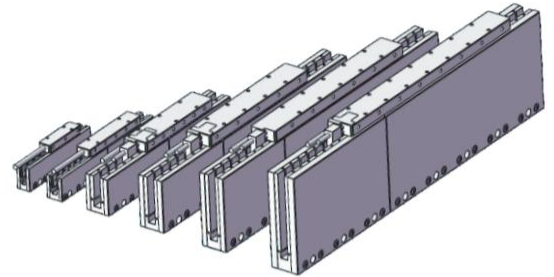


Coil model no.		Size		Magnet Track model no.		Size		
		L1(mm)	N			L2(mm)	L3(mm)	M
TYAN200	C1B	227	3	TYAN200	M135	135	288.9	1
	C2B	407	7		M270	270	423.9	3
	C3B	587	11		M405	405	693.9	5



Ironless Linear Motor

Magnetolectric has developed a series of ironless linear motors based on the advanced European-level linear motor manufacturing standards, designed for ultra-high-speed and high-precision high-end industrial motion applications. They are widely used in applications such as laser processing, electronic product manufacturing, optical product manufacturing, and gantry motion systems. These motors feature ultra-high-speed performance with medium-voltage drives that have low back electromotive force, good thermal dissipation, high responsiveness, and smooth motion.



Product Features:

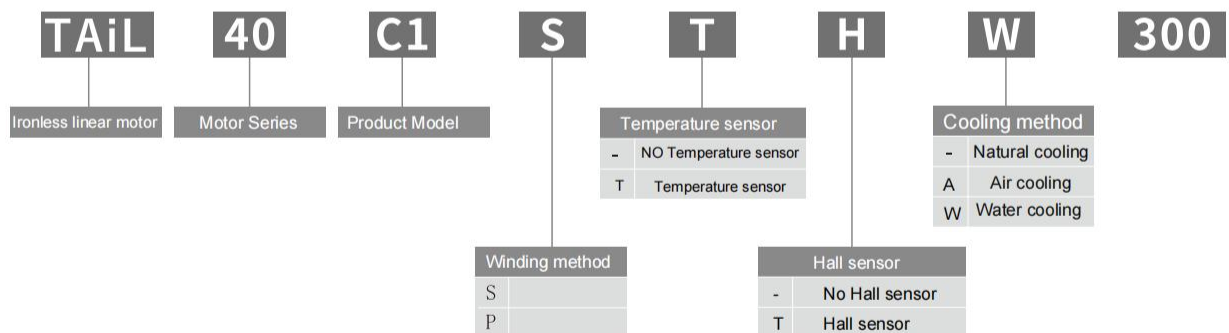
- > Motion with zero backlash and high stability.
- > Highly responsive movement.
- > High-trajectory precision movement.
- > Compact structure; the product is light, thin, and small.

Application field:

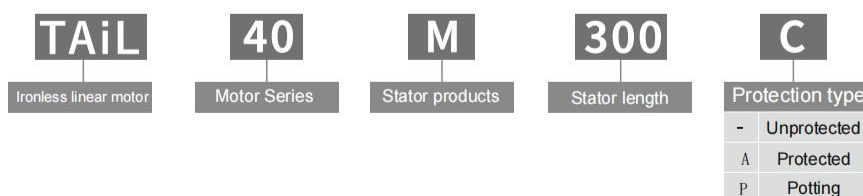
- > High-precision laser cutting and welding.
- > High-precision measuring equipment.
- > Medical equipment.
- > Semiconductor manufacturing process.

Naming rules

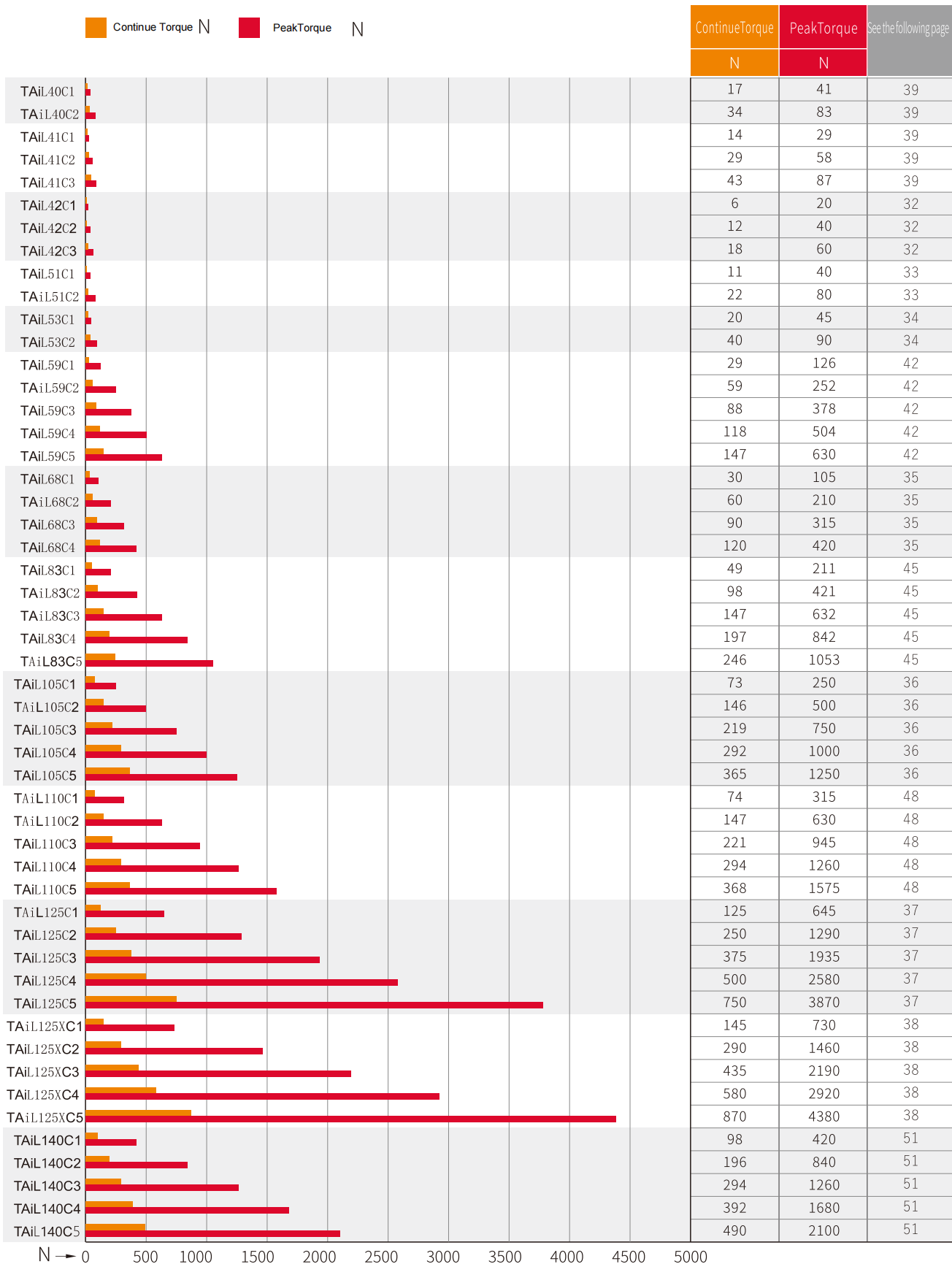
Name of the Motor Forcer



Name of the Motor Stator

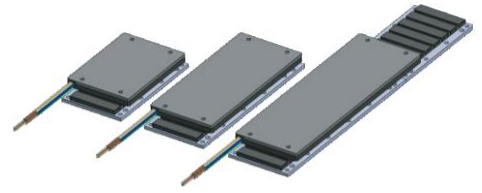


Product thrust table and page number



TAiL42 Series

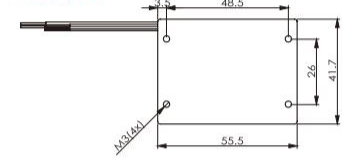
Motor model TAiL42



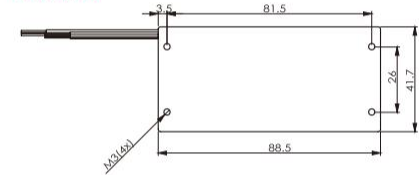
parameters	unit	TAiL42C1	TAiL42C2	TAiL42C3
Winding Type		S	S	S
Motor type		3 phases synchronous Ironless,45V/acrms (60Vdc)		
performance parameters				
Peak force	N	20	40	60
Continuous force	N	6	12	18
Maximum Speed	m/s	10	10	10
Motor Force Constant	N/Arms	6	6	6
Electrical performance parameters				
Peak current	Arms	3.3	6.7	10
Continuous current	Arms	1	2	3
Back EMF	v/m/s	5	5	5
Resistance Per Phase	Ω	4.75	2.375	1.58
Induction Per Phase	Mh	0.8	0.4	0.3
Electric time constant	Ms	0.16	0.16	0.16
Mechanical parameters				
Coil Unit Weight	kg	0.035	0.06	0.09
Coil Unit Length	mm	56	89	122
Magnet Weight	Kg/m	1.06		
Motor Attraction Force	N	0	0	0
Magnet Pitch	mm	16.5	16.5	16.5

Force size

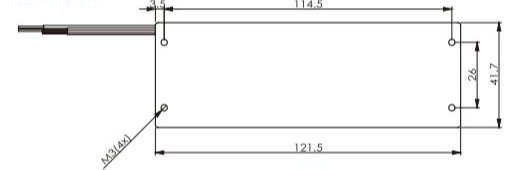
TAiL42C1



TAiL42C2

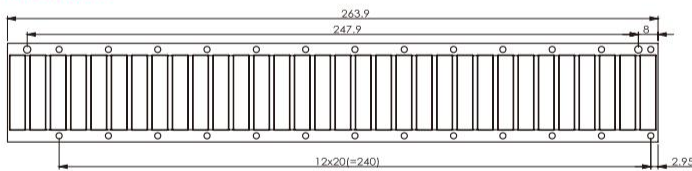


TAiL42C3

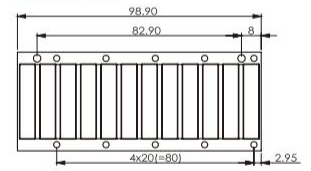


Stator size

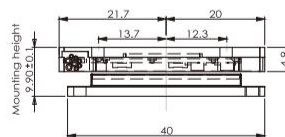
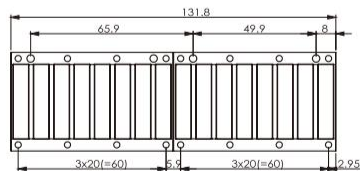
TAiL42M264



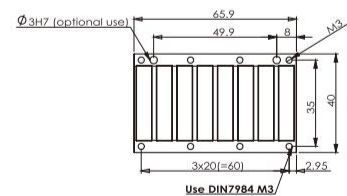
TAiL42M99



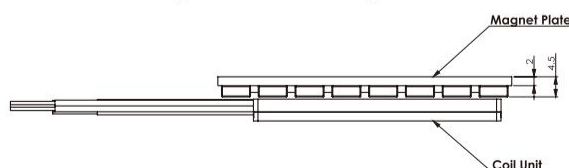
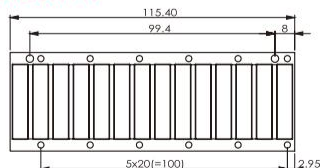
2xTAiL42M66



TAiL42M66



TAiL42M115



Digital Hall wiring diagram			Motor wiring diagram		
1	0V	Gray	1	Phase U	Black
2	5~28V	Brown	2	Phase V	Red
3	Hall A	Blue	3	Phase W	White
4	Hall B	Green	4	PE	Shell
5	Hall C	Yellow			

TAiL51 Series

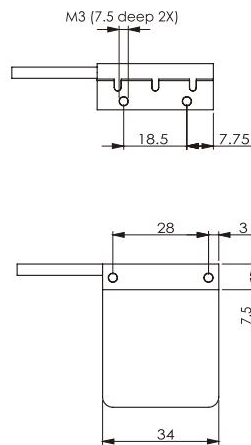
Motor model TAiL51



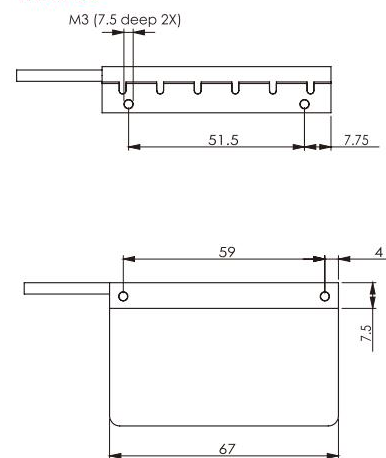
parameters	unit	TAiL51C1	TAiL51C2
Winding Type		S	S
Motor type		3 phases synchronous Ironless,45Vacrms (60Vdc)	
performance parameters			
Peak force	N	40	80
Continuous force	N	11	22
Maximum Speed	m/s	5.4	5.4
Motor Force Constant	N/Arms	11.5	11.5
Electrical performance parameters			
Peak current	Arms	3.5	7
Continuous current	Arms	1	1.9
Back EMF	v/m/s	9	9
Resistance Per Phase	Ω	4.75	2.375
Induction Per Phase	Mh	0.8	0.4
Electric time constant	Ms	0.16	0.16
Mechanical parameters			
Coil Unit Weight	kg	0.03	0.06
Coil Unit Length	mm	34	67
Magnet Weight	Kg/m	2.05	
Motor Attraction Force	N	0	0
Magnet Pitch	mm	16.5	16.5

Force size

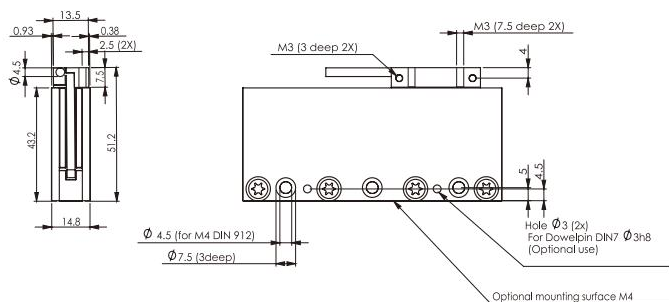
TAiL51C1



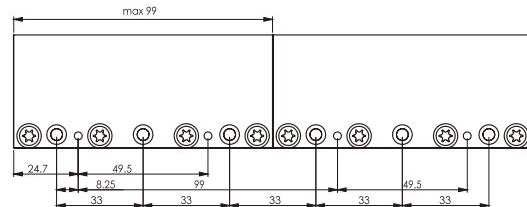
TAiL51C2



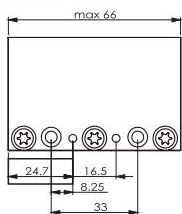
Stator size



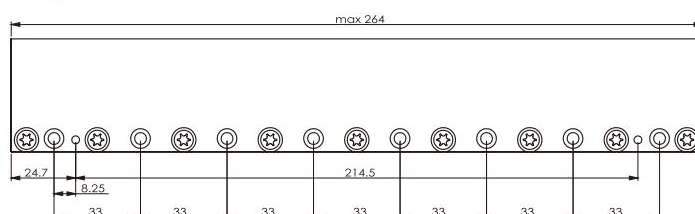
2xTAiL51M99



TAiL51M66



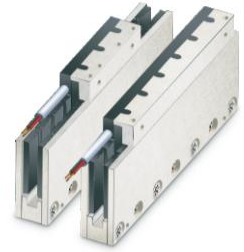
TAiL51M264



Digital Hall wiring diagram		Motor wiring diagram	
1	0V	Gray	1 Phase U
2	5~28V	Brown	2 Phase V
3	HallA	Blue	3 Phase W
4	HallB	Green	4 PE
5	HallC	Yellow	Block

TAiL53 Series

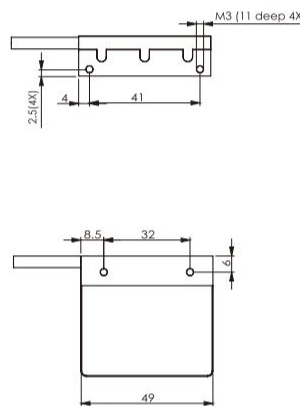
Motor model TAiL53



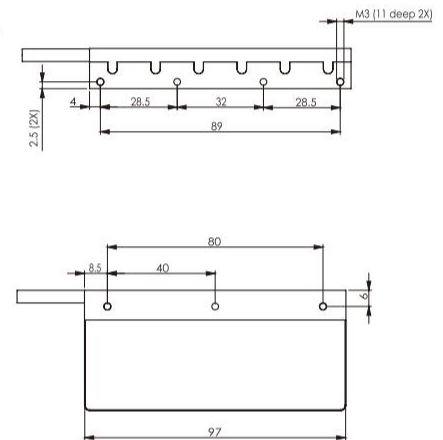
parameters	unit	TAiL53C1	TAiL53C2
Winding Type		S	S
Motor type		3 phases synchronous Ironless,45Vacrms (60Vdc)	
performance parameters			
Peak force	N	45	90
Continuous force	N	20	40
Maximum Speed	m/s	5	5
Motor Force Constant	N/Arms	12.4	12.4
Electrical performance parameters			
Peak current	Arms	3.6	7.3
Continuous current	Arms	1.6	3.2
Back EMF	v/m/s	10	10
Resistance Per Phase	Ω	3.5	1.75
Induction Per Phase	Mh	1.2	0.6
Electric time constant	Ms	0.355	0.355
Mechanical parameters			
Coil Unit Weight	kg	0.045	0.085
Coil Unit Length	mm	49	97
Magnet Weight	Kg/m	3.3	
Motor Attraction Force	N	0	0
Magnet Pitch	mm	24	24

Force size

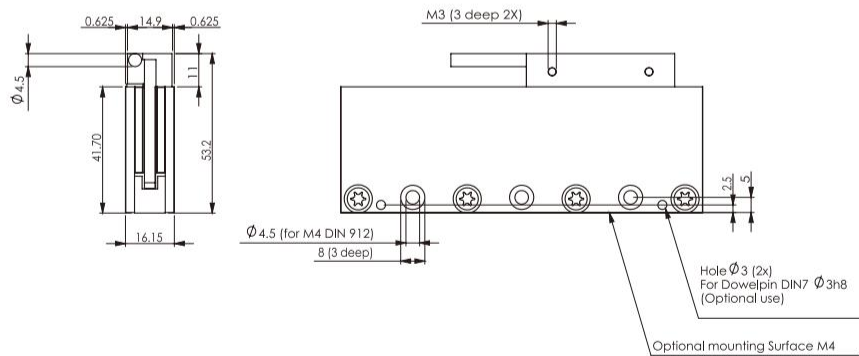
TAiL53C1



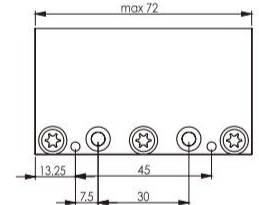
TAiL53C2



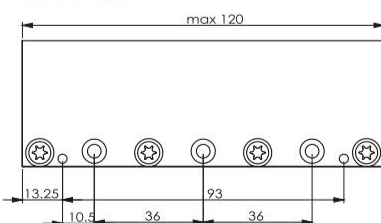
Stator size



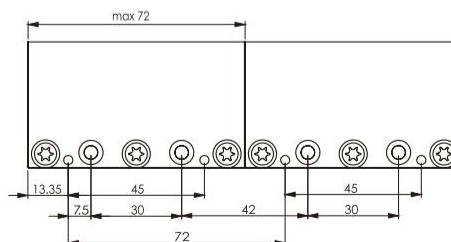
TAiL53M72



TAiL53M120



2xTAiL53M72



Digital Hall wiring diagram

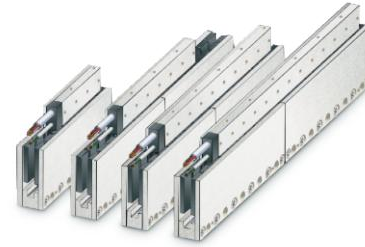
1	0V	白
2	5~28V	棕
3	HallA	绿
4	HallB	黄
5	HallC	红

Motor wiring diagram

1	Phase U	黑
2	Phase V	红
3	Phase W	白
4	PE	屏蔽

TAiL68 Series

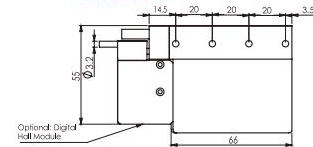
Motor model TAiL68



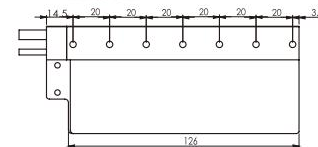
parameters	unit	TAiL68C1		TAiL68C2		TAiL68C3		TAiL68C4	
Winding Type		S	P	S	P	S	P	S	P
Motor type		3 phases synchronous Ironless,45Vacrms (60Vdc)							
performance parameters									
Peak force	N	105	105	210	210	315	315	420	420
Continuous force	N	30	30	60	60	90	90	120	120
Maximum Speed	m/s	9.2	16.7	9.2	16.7	9.2	16.7	9.2	16.7
Motor Force Constant	N/Arms	36.3	20	36.3	20	36.3	20	36.3	20
Electrical performance parameters									
Peak current	Arms	2.9	5.3	5.8	10.5	8.7	15.8	11.6	21
Continuous current	Arms	0.8	1.5	1.7	3	2.5	4.5	3.3	6
Back EMF	v/m/s	30	16	30	16	30	16	30	16
Resistance Per Phase	Ω	18.55	5.45	9.29	2.74	6.19	1.82	4.65	1.36
Induction Per Phase	Mh	6.5	1.9	3.3	1	2.2	0.6	1.6	0.5
Electric time constant	Ms	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
Mechanical parameters									
Coil Unit Weight	kg	0.082	0.082	0.16	0.16	0.24	0.24	0.32	0.32
Coil Unit Length	mm	78	78	138	138	198	198	258	258
Magnet Weight	Kg/m	4.85							
Motor Attraction Force	N	0	0	0	0	0	0	0	0
Magnet Pitch	mm	30	30	30	30	30	30	30	30

Force size

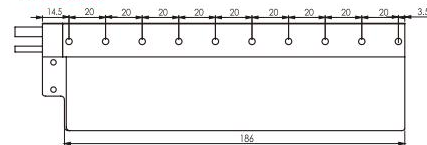
TAiL68C1



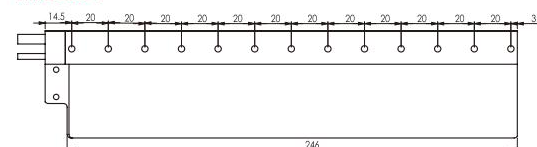
TAiL68C2



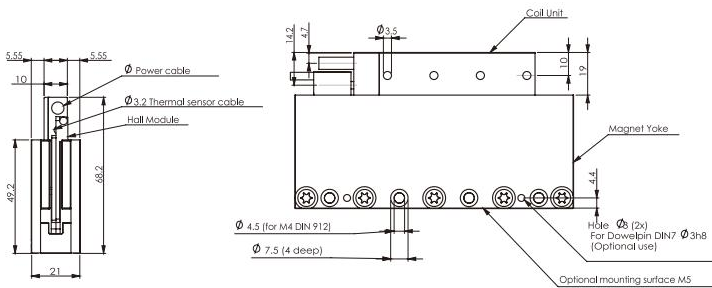
TAiL68C3



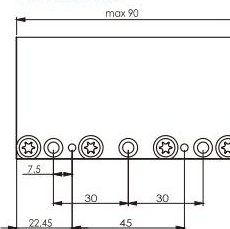
TAiL68C4



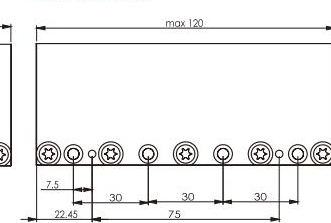
Stator size



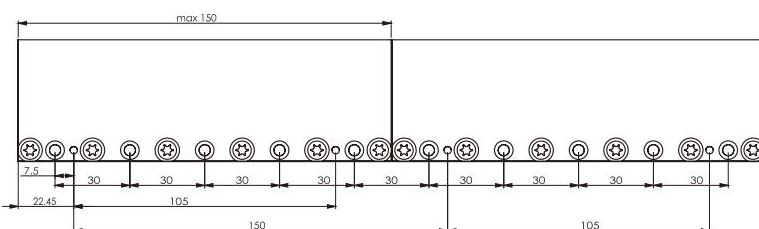
TAiL68M90



TAiL68M120



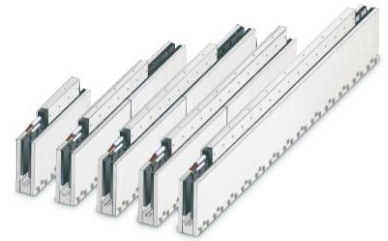
2xTAiL68M150



Digital Hall wiring diagram			Motor wiring diagram		Wiring diagram of temperature sensor	
1	0V	white	1	Phase U	Phase 11	PTC 1K Ω Brown
2	5~28V	Brown	2	Phase V	Phase 22	PTC 1K Ω white
3	Hall A	Green	3	Phase W	Phase 33	NTC Yellow
4	Hall B	Yellow	4	PE	Yellow-green	NTC Green
5	Hall C	Red				

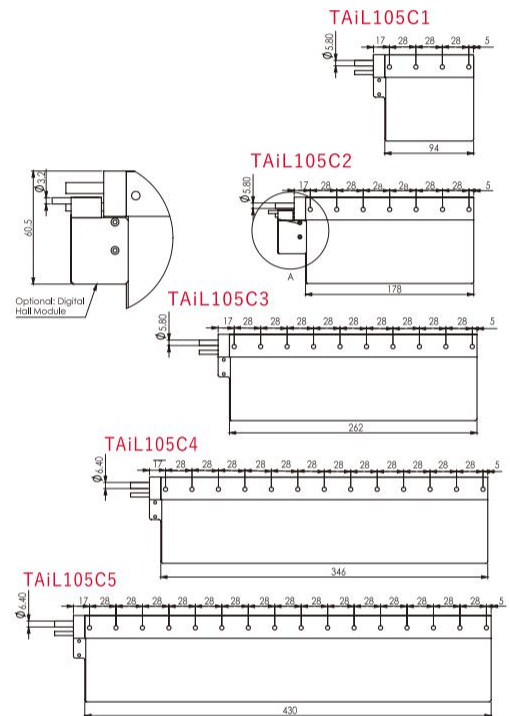
TAiL105 Series

Motor model TAiL105

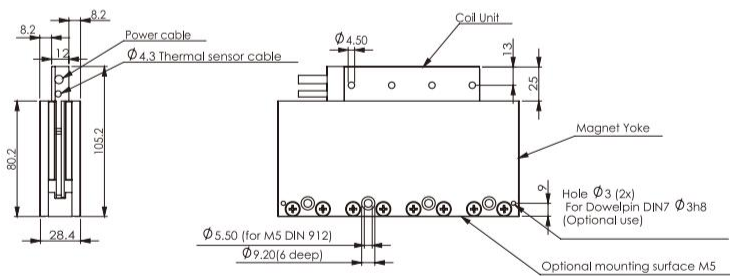


parameters	unit	TAiL105C1		TAiL105C2		TAiL105C3		TAiL105C4		TAiL105C5	
Winding Type		S	P	S	P	S	P	S	P	S	P
Motor type		3 phases synchronous Ironless,45Vacrms (60Vdc)									
performance parameters											
Peak force	N	250	250	500	500	750	750	1000	1000	1250	1250
Continuous force	N	73	73	146	146	219	219	292	292	365	365
Maximum Speed	m/s	5	12.3	5	12.3	5	12.3	5	12.3	5	12.3
Motor Force Constant	N/Arms	67.5	27.1	67.5	27.1	67.5	27.1	67.5	27.1	67.5	27.1
Electrical performance parameters											
Peak current	Arms	3.7	9.2	7.4	18.5	11.1	27.7	14.8	36.9	18.5	46.1
Continuous current	Arms	1.1	2.7	2.2	5.4	3.2	8.1	4.3	10.8	5.4	13.5
Back EMF	v/m/s	54.7	22.1	54.7	22.1	54.7	22.1	54.7	22.1	54.7	22.1
Resistance Per Phase	Ω	15.9	2.64	7.96	1.33	5.53	0.88	3.98	0.66	3.32	0.53
Inductance Per Phase	Mh	12.7	2.1	6.4	1.1	4.4	0.7	3.2	0.5	2.7	0.4
Electric time constant	Ms	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Mechanical parameters											
Coil Unit Weight	kg	0.23	0.23	0.46	0.46	0.68	0.68	0.9	0.9	1.12	1.12
Coil Unit Length	mm	106	106	190	190	274	274	358	358	442	442
Magnet Weight	Kg/m	11.25									
Motor Attraction Force	N	0	0	0	0	0	0	0	0	0	0
Magnet Pitch	mm	42	42	42	42	42	42	42	42	42	42

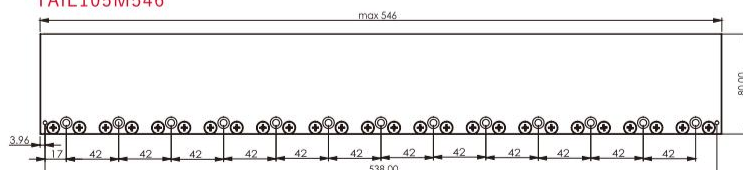
Force size



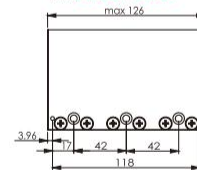
Stator Size



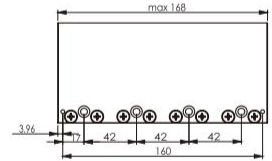
TAiL105M546



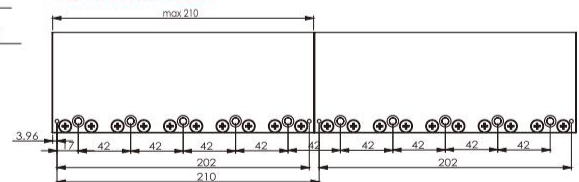
TAiL105M126



TAiL105M168



2xTAiL105M210



Digital Hall wiring diagram

1	0V	white
2	5~28V	Brown
3	HallA	Green
4	HallB	Red
5	HallC	Yellow

Motor wiring diagram

1	Phase U	Phase 11
2	Phase V	Phase 22
3	Phase W	Phase 33
4	PE	Yellow-green

Wiring diagram of temperature sensor

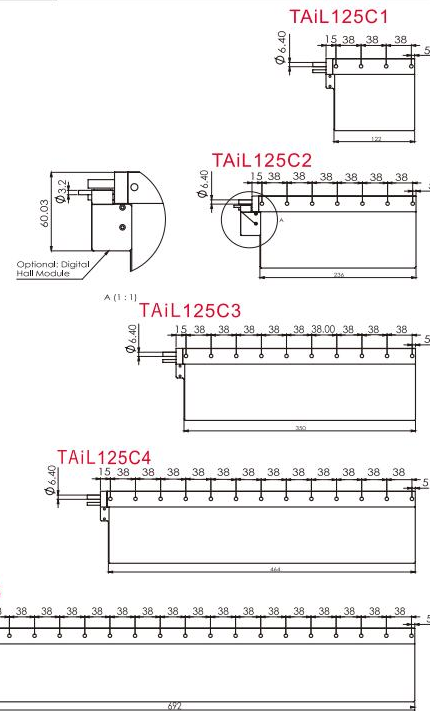
PTC 1K Ω	Brown
PTC 1K Ω	white
NTC	Yellow
NTC	Green

TAiL125 Series

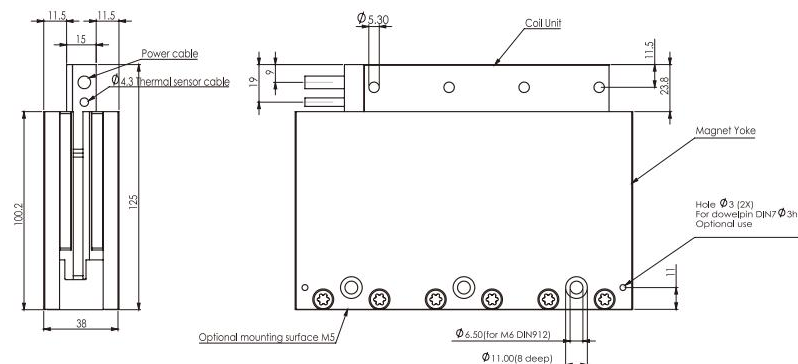
Motor model
TAiL125

parameters	unit	TAiL125C1		TAiL125C2		TAiL125C3		TAiL125C4		TAiL125C5	
Winding Type		S	P	S	P	S	P	S	P	S	P
Motor type		3 phases synchronous Ironless,45V(acrms (60V(dc)									
performance parameters											
Peak force	N	645	645	1290	1290	1935	1935	2580	2580	3870	3870
Continuous force	N	125	125	250	250	375	375	500	500	750	750
Maximum Speed	m/s	3.1	7.7	3.1	7.7	3.1	7.7	3.1	7.7	3.1	7.7
Motor Force Constant	N/Arms	107	43.4	107	43.4	107	43.4	107	43.4	107	43.4
Electrical performance parameters											
Peak current	Arms	6	14.9	12.1	29.7	18.1	44.6	24.1	59.4	36.2	89.2
Continuous current	Arms	1.2	2.9	2.3	5.8	3.5	8.6	4.7	11.5	7	17.3
Back EMF	v/m/s	87	35	87	35	87	35	87	35	87	35
Resistance Per Phase	Ω	15.8	2.6	7.9	1.29	5.3	0.86	3.95	0.65	2.6	0.43
Induction Per Phase	Mh	28.4	4.7	14.2	2.3	9.5	1.5	7.1	1.2	4.7	0.8
Electric time constant	Ms	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Mechanical parameters											
Coil Unit Weight	kg	0.54	0.54	0.94	0.94	1.34	1.34	1.74	1.74	2.54	2.54
Coil Unit Length	mm	134	134	248	248	362	362	476	476	704	704
Magnet Weight	Kg/m	19.1									
Motor Attraction Force	N	0	0	0	0	0	0	0	0	0	0
Magnet Pitch	mm	57	57	57	57	57	57	57	57	57	57

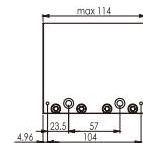
Force size



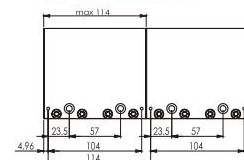
Stator size



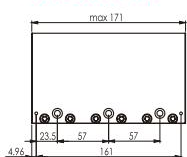
TAiL125M114



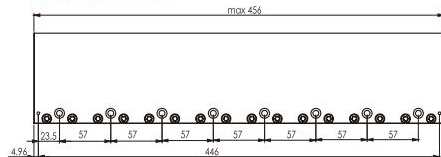
2xTAiL125M114



TAiL125M171



TAiL125M456



Digital Hall wiring diagram			Motor wiring diagram		Wiring diagram of temperature sensor			
1	0V	white	1	Phase U	Phase 11	PTC 1KΩ	Brown	
2	5~28V	Brown	2	Phase V	Phase 22	PTC 1KΩ	white	
3	HallA	Green	3	Phase W	Phase 33	NTC	Yellow	
4	HallB	Red	4	PE	Yellow-green	4	NTC	Green
5	HallC	Yellow						

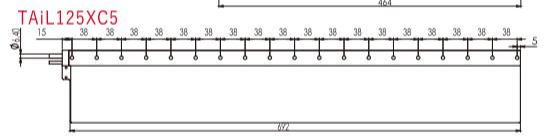
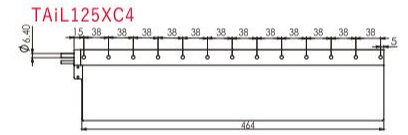
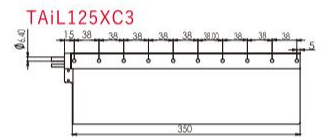
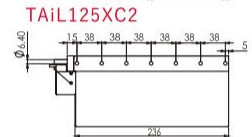
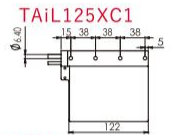
TAiL125X Series

Motor model TAiL125X

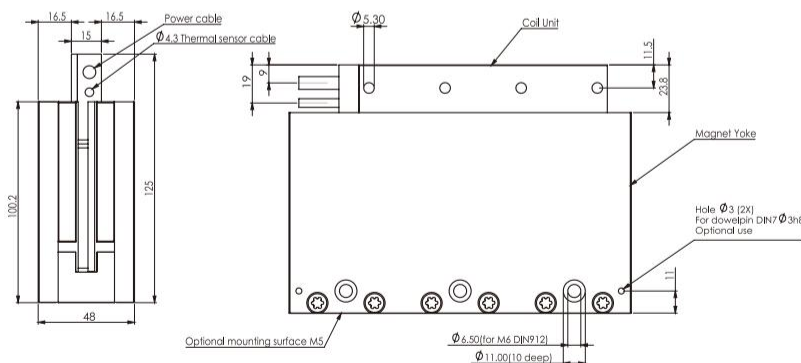


parameters	unit	TAiL125XC1		TAiL125XC2		TAiL125XC3		TAiL125XC4		TAiL125XC5	
Winding Type		S	P	S	P	S	P	S	P	S	P
Motor type		3 phases synchronous Ironless,45Vacrms (60Vdc)									
performance parameters											
Peak force	N	730	730	1460	1460	2190	2190	2920	2920	4380	4380
Continuous force	N	145	145	290	290	435	435	580	580	870	870
Maximum Speed	m/s	2.6	6.8	2.6	6.8	2.6	6.8	2.6	6.8	2.6	6.8
Motor Force Constant	N/Arms	127	49	127	49	127	49	127	49	127	49
Electrical performance parameters											
Peak current	Arms	5.7	14.9	11.5	29.8	17.2	44.7	23	59.6	34.5	89.4
Continuous current	Arms	1.1	3	2.3	5.9	3.4	8.9	4.6	11.8	6.9	17.8
Back EMF	v/m/s	104	40	104	40	104	40	104	40	104	40
Resistance Per Phase	Ω	15.82	2.6	7.9	1.29	5.3	0.86	3.95	0.65	2.6	0.43
Induction Per Phase	Mh	28.5	4.7	14.2	2.3	9.5	1.5	7.1	1.2	4.7	0.8
Electric time constant	Ms	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Mechanical parameters											
Coil Unit Weight	kg	0.54	0.54	0.94	0.94	1.34	1.34	1.74	1.74	2.54	2.54
Coil Unit Length	mm	134	134	248	248	362	362	476	476	704	704
Magnet Weight	Kg/m	24.5									
Motor Attraction Force	N	0	0	0	0	0	0	0	0	0	0
Magnet Pitch	mm	57	57	57	57	57	57	57	57	57	57

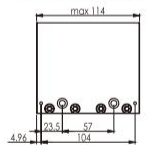
Force size



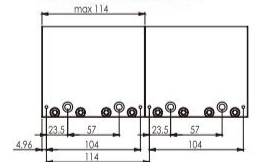
Stator size



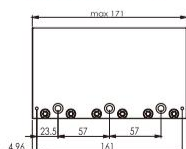
TAiL125XM114



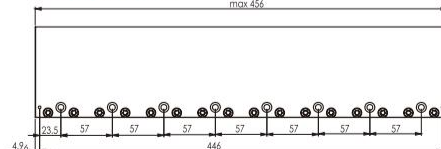
2xTAiL125XM114



TAiL125XM171



TAiL125XM456



Digital Hall wiring diagram

1	0V	white
2	5~28V	Brown
3	HallA	Green
4	HallB	Red
5	HallC	Yellow

Motor wiring diagram

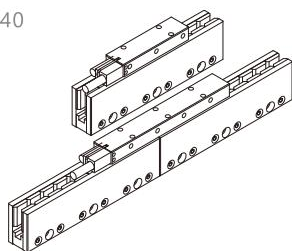
1	Phase U	Phase 11
2	Phase V	Phase 22
3	Phase W	Phase 33
4	PE	Yellow-green

Wiring diagram of temperature sensor

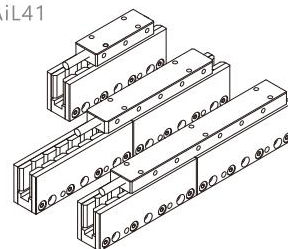
PTC 1K Ω	Brown
PTC 1K Ω	white
NTC	Yellow
NTC	Green

TAiL40/41 Series

TAiL40



TAiL41

Motor model
TAiL40/41

parameters	unit	TAiL40C1	TAiL40C2	TAiL41C1	TAiL41C2	TAiL41C3
performance parameters						
Peak force	N	41	83	29	58	87
Continuous force	N	17	34	14	29	43
Motor Force Constant	N/Arms	17.2	34.4	6.9	13.8	20.7
Electrical performance parameters						
Peak current	Arms	2.4	2.4	4.2	4.2	4.2
Continuous current	Arms	1	1	2.1	2.1	2.1
Back EMF	v/m/s	14	28.1	5.6	11.3	16.9
Resistance Per Phase	Ω	10.6	21.2	2.2	4.4	6.6
Induction Per Phase	Mh	7.6	14.2	1.6	3.2	4.7
Electric time constant	Ms	0.7	0.7	0.7	0.7	0.7
Mechanical parameters						
Coil Unit Weight	kg	0.1	0.16	0.1	0.14	0.18
Coil Unit Length	mm	60	108	55	100	145
Magnet Weight	Kg/m	3		3.3		
Motor Attraction Force	N	0	0	0	0	0
Magnet Pitch	mm	24	24	22.5	22.5	22.5

Motor power line wiring definition

Serial number	definition	colour
1	U	Brown
2	V	white
3	W	Green
4	GND	Yellow

Motor Hall pin definition

Serial number	definition	colour
1	5V	Yellow
2	0V	Green
3	HALL A	Blue
4	HALL B	Brown
5	HALL C	Gray
6	屏蔽	Block

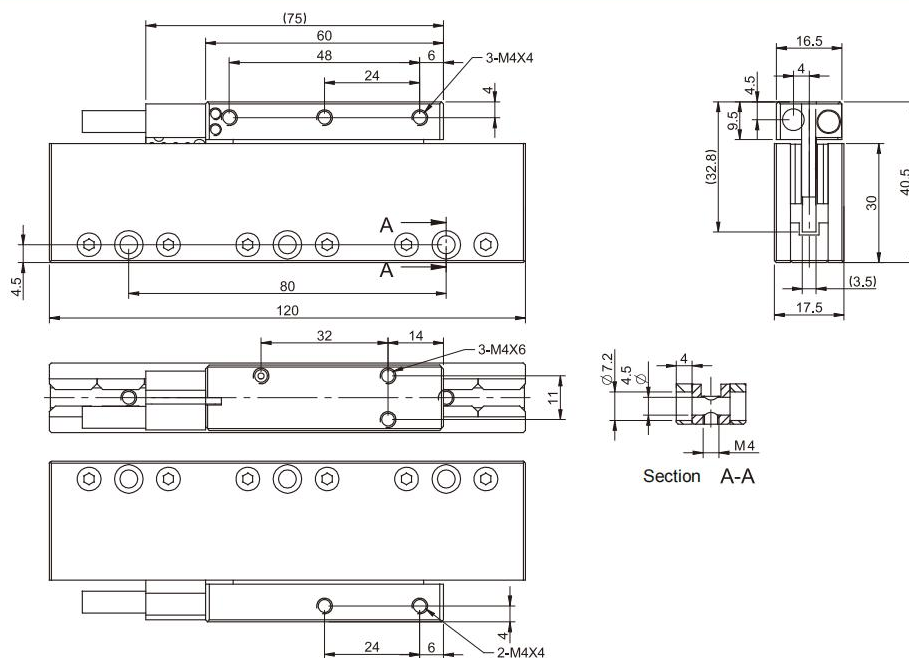
Notes:

1: Due to manufacturing processes, motor cable wires may have a tolerance of ± 0.3 between batches.

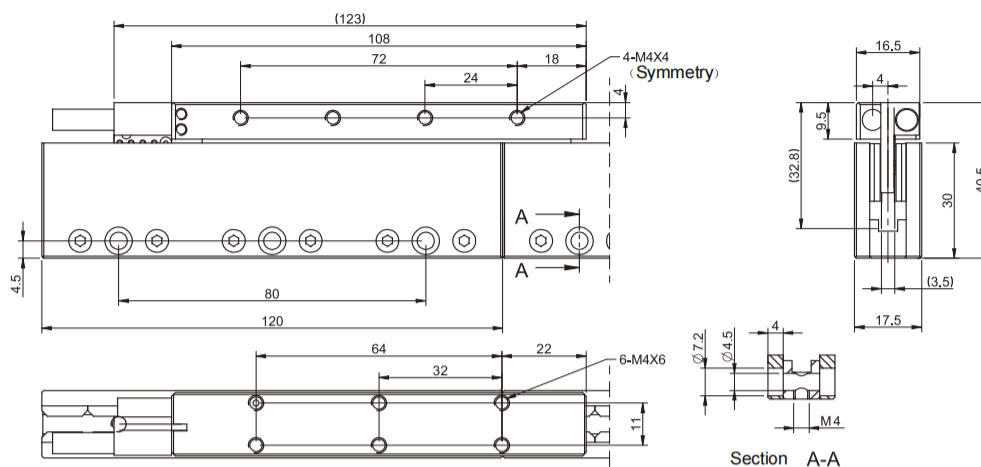
2: Motor Hall sensors are optional, and the rotor length varies depending on whether the Hall sensor is installed.

Force size

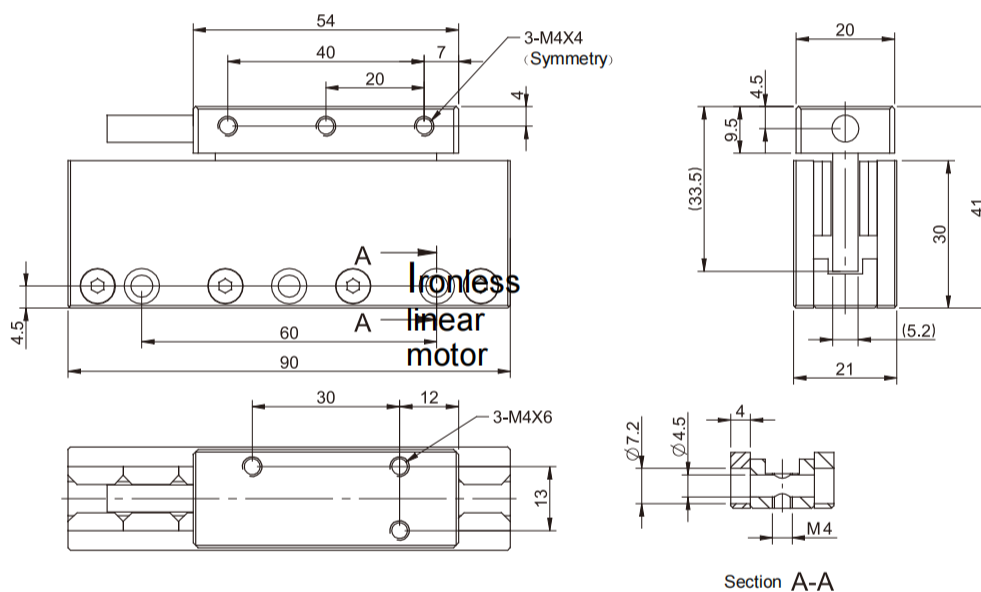
TAiL40C1



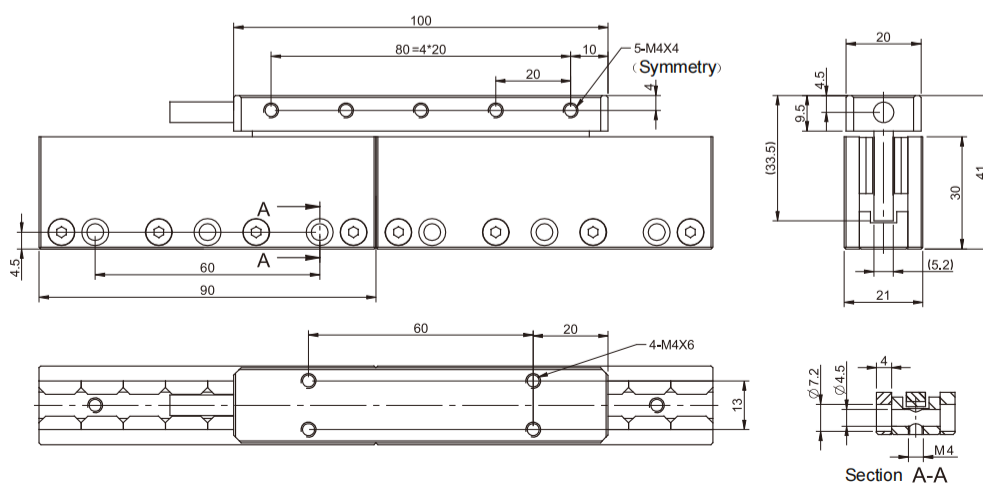
TAiL40C2



TAiL41C1



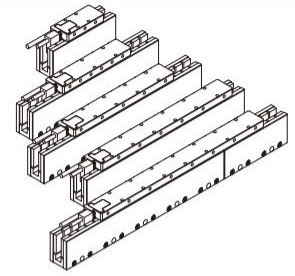
TAiL41C2



Ironless linear motor

Technical drawing of a 100mm x 100mm x 10mm plate with six holes. The top view shows a 90mm x 60mm hole pattern. The side view shows a 21mm wide hole with a 4mm offset and an M4 thread section.

TAiL59 Series

Motor model
TAiL59

parameters	unit	TAiL59C1	TAiL59C2	TAiL59C3	TAiL59C4	TAiL59C5
performance parameters						
Peak force	N	126	252	378	504	630
Continuous force	N	29	59	88	118	147
Motor Force Constant	N/Arms	8.4	16.8	25.2	33.6	42
Electrical performance parameters						
Peak current	Arms	15	15	15	15	15
Continuous current	Arms	3.5	3.5	3.5	3.5	3.5
Back EMF	v/m/s	6.9	13.7	20.6	27.4	34.3
Resistance Per Phase	Ω	2.1	3	4.5	6	7.5
Induction Per Phase	Mh	0.9	1.8	2.7	3.6	4.5
Electric time constant	Ms	0.4	0.6	0.6	0.6	0.6
Mechanical parameters						
Coil Unit Weight	kg	0.3	0.45	0.6	0.75	0.9
Coil Unit Length	mm	74	134	194	254	314
Magnet Weight	Kg/m	7.7				
Motor Attraction Force	N	0	0	0	0	0
Magnet Pitch	mm	30	30	30	30	30

Motor power line wiring definition		
Serial number	definition	colour
1	U	Brown
2	V	white
3	W	Green
4	GND	Yellow

Motor Hall pin definition		
Serial number	definition	colour
1	5V	Yellow
2	0V	Green
3	HALL A	Blue
4	HALL B	Brown
5	HALL C	Gray
6	屏蔽	Block

Notes:

1: The motor stator is modular, with lengths of 119.5mm, 179.5mm, 239.5mm, and 299.5mm. The distance between any two adjacent stators is 0.5mm, and the stators can be combined according to actual requirements.

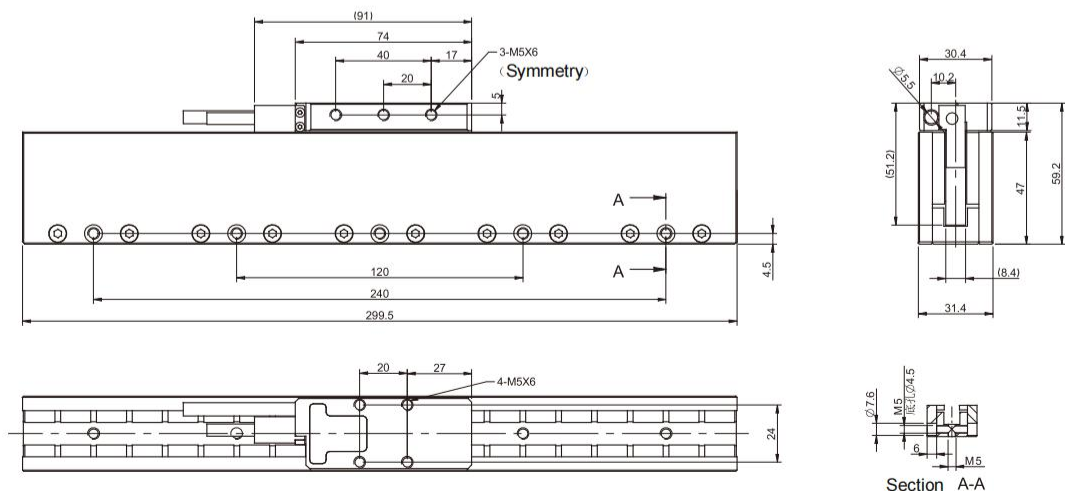
2: The distance between any two adjacent holes in the motor stator is 60mm.

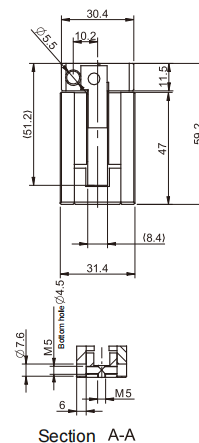
3: Due to manufacturing processes, there may be a tolerance of $\pm 0.3\text{mm}$ between batches of motor cables.

4: The motor Hall sensor is optional, and the length of the rotor varies depending on whether the Hall sensor is installed.

Force size

TAiL59C1



[illegible]

Section A-A

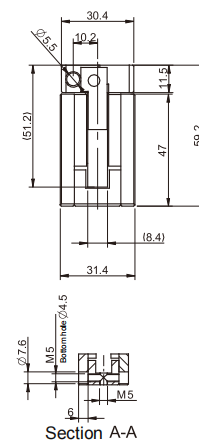
Technical drawing of a mechanical assembly, showing two views: a top view and a side view.

Top View Dimensions:

- Total length: 299.5
- Distance from left edge to start of holes: 194
- Distance between holes: 160 = 4*40
- Distance from last hole to right edge: 17
- Distance from center of hole to right edge: 40
- Distance from center of hole to right edge: 120
- Distance from center of hole to right edge: 240
- Distance from center of hole to right edge: 299.5
- Feature: 5-M5X6 (Symmetry)

Side View Dimensions:

- Total width: 24
- Distance from left edge to start of holes: 120 = 3*40
- Distance between holes: 40
- Distance from last hole to right edge: 37
- Feature: 8-M5X6



Section A-A

Technical drawing of a mechanical assembly, showing two views: a top view and a side view.

Top View Dimensions:

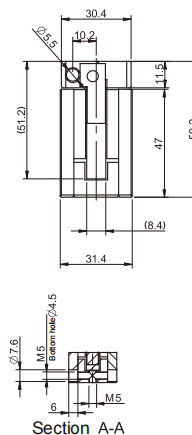
- Total length: 254
- Central slot length: 200
- Hole spacing: 40
- Distance from end to first hole: 17
- Distance from last hole to end: 17
- Label: 6-M5X6
- Label: Symmetry

Side View Dimensions:

- Plate thickness: 4.5
- Central slot width: 120
- Distance from end to first hole: 120
- Distance from last hole to end: 120
- Label: 6-M5X6

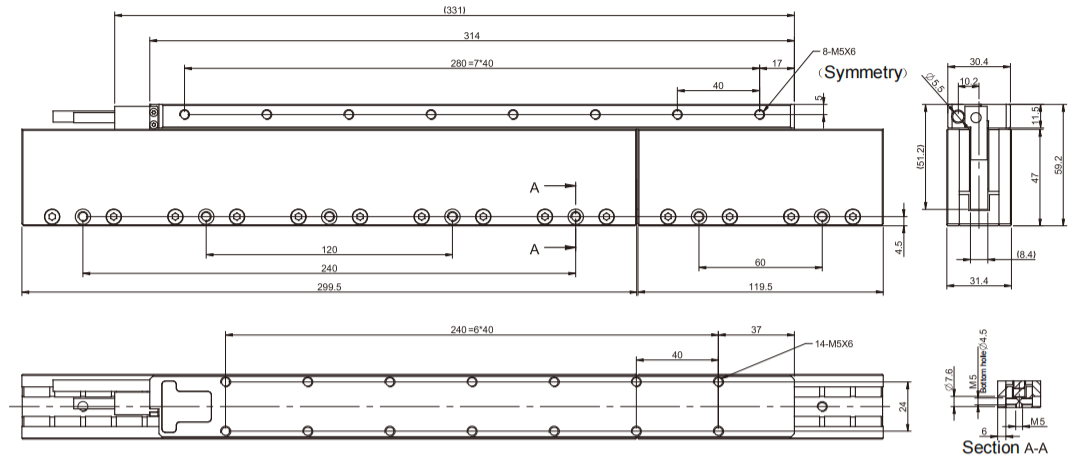
Bottom View Dimensions:

- Total length: 160
- Central slot length: 160
- Hole spacing: 40
- Distance from end to first hole: 37
- Distance from last hole to end: 37
- Label: 10-M5X6
- Label: 24



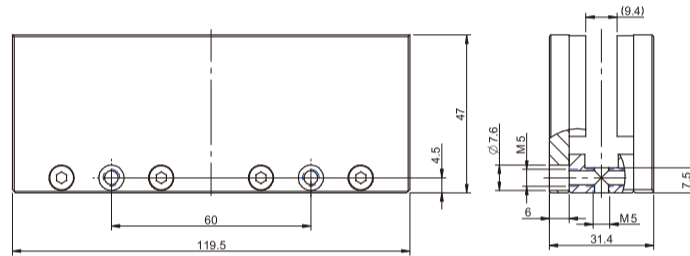
Section A-A

TAiL59C5

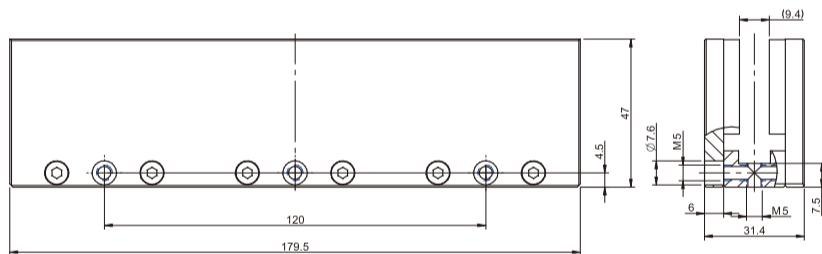


Stator size

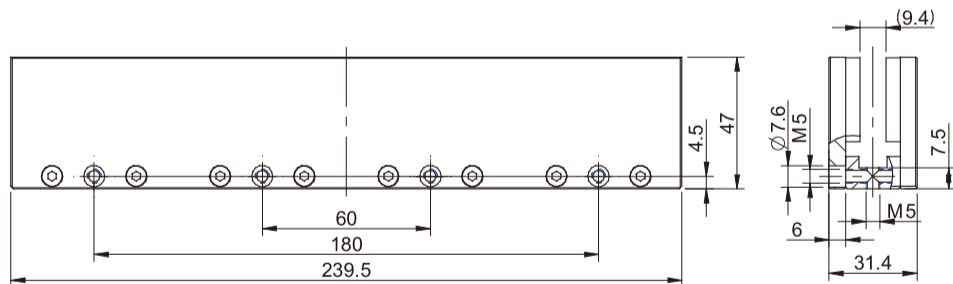
TAiL59M120



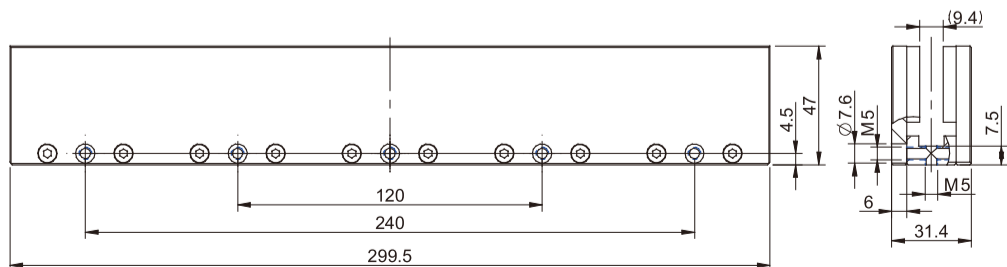
TAiL59M180



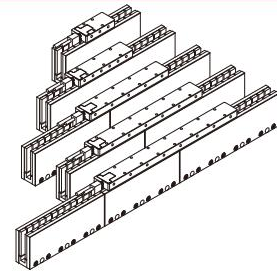
TAiL59M240



TAiL59M300



TAiL83 Series

Motor model
TAiL83

parameters	unit	TAiL83C1	TAiL83C2	TAiL83C3	TAiL83C4	TAiL83C5
performance parameters						
Peak force	N	211	421	632	842	1053
Continuous force	N	49	98	147	197	246
Motor Force Constant	N/Arms	14	28.1	42.1	56.2	70.2
Electrical performance parameters						
Peak current	Arms	15	15	15	15	15
Continuous current	Arms	3.5	3.5	3.5	3.5	3.5
Back EMF	v/m/s	11.5	22.9	34.4	45.9	57.3
Resistance Per Phase	Ω	2	4	6	8	10
Induction Per Phase	Mh	1.1	2.3	3.5	4.5	5.8
Electric time constant	Ms	0.6	0.6	0.6	0.6	0.6
Mechanical parameters						
Coil Unit Weight	kg	0.5	0.8	1	1.25	1.45
Coil Unit Length	mm	74	134	194	254	314
Magnet Weight	Kg/m	12				
Motor Attraction Force	N	0	0	0	0	0
Magnet Pitch	mm	30	30	30	30	30

Motor power line wiring definition		
Serial number	definition	colour
1	U	Brown
2	V	white
3	W	Green
4	GND	Yellow

Motor Hall pin definition		
Serial number	definition	colour
1	5V	Yellow
2	0V	Green
3	HALL A	Blue
4	HALL B	Brown
5	HALL C	Gray
6	屏蔽	Block

Notes:

1: The motor stator is modular, with lengths of 119.5mm, 179.5mm, 239.5mm, and 299.5mm.

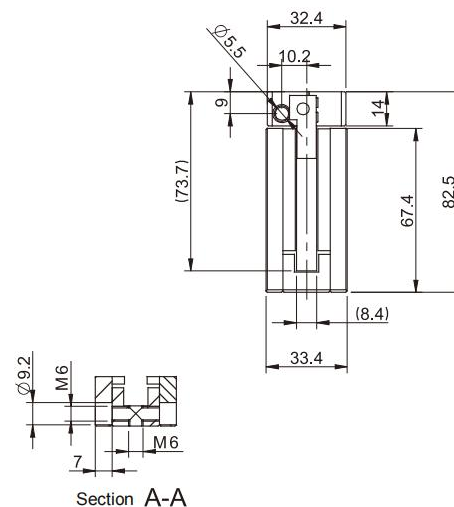
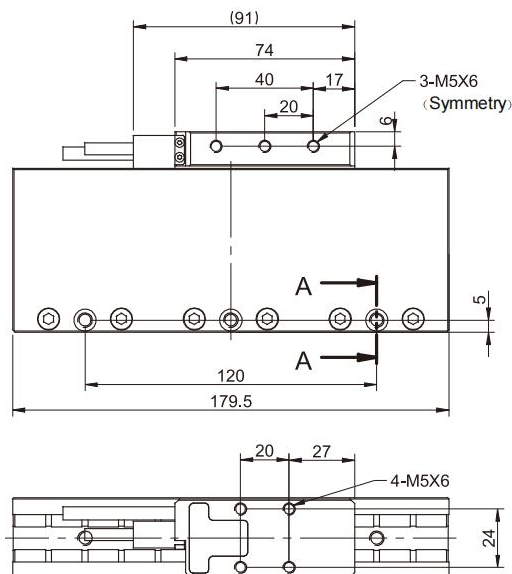
The gap between any two adjacent stators is 0.5mm, and the stators can be freely combined according to actual requirements.

2: The distance between any two adjacent holes of the motor stator is 60mm. Due to production processes, the motor cable may have a tolerance of ± 0.3 mm between batches.

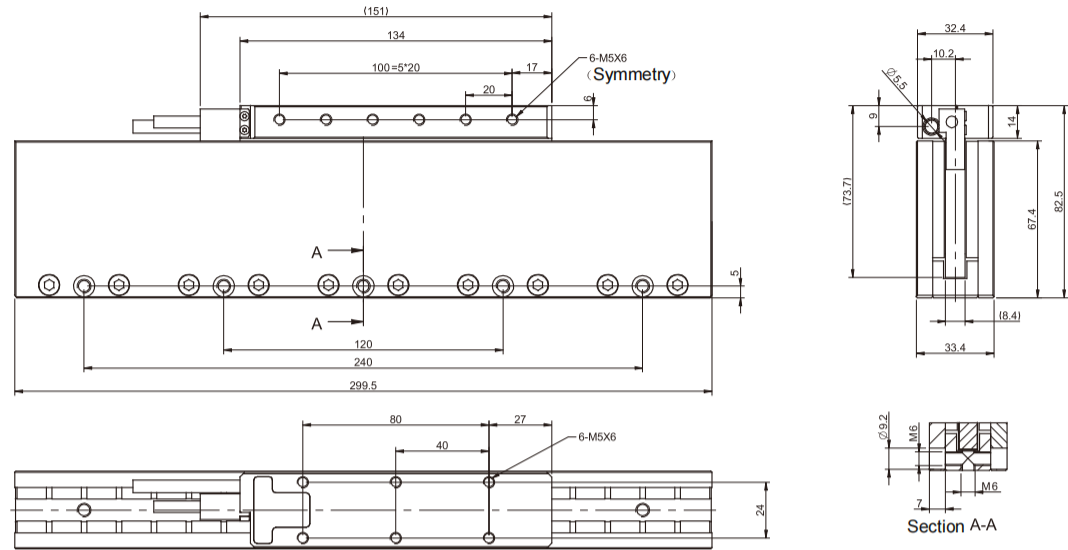
3: The motor Hall sensor is optional, and the length of the rotor varies depending on whether the Hall sensor is installed.

Force size

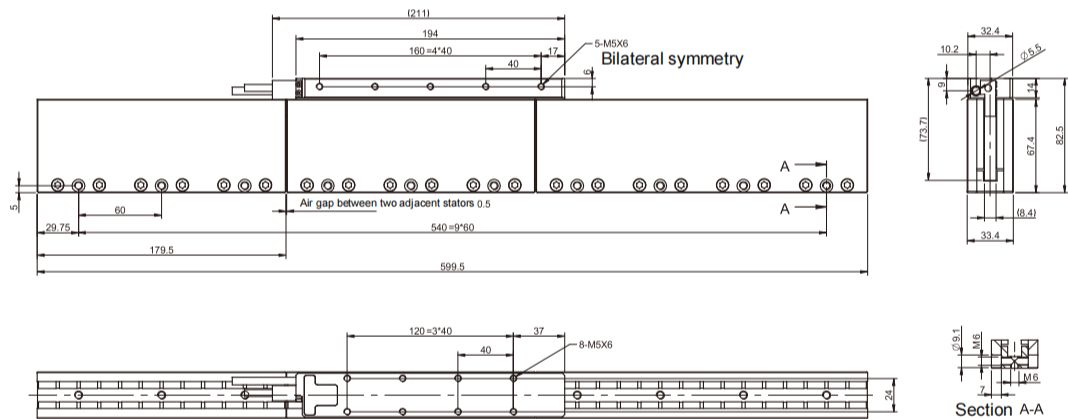
TAiL83C1



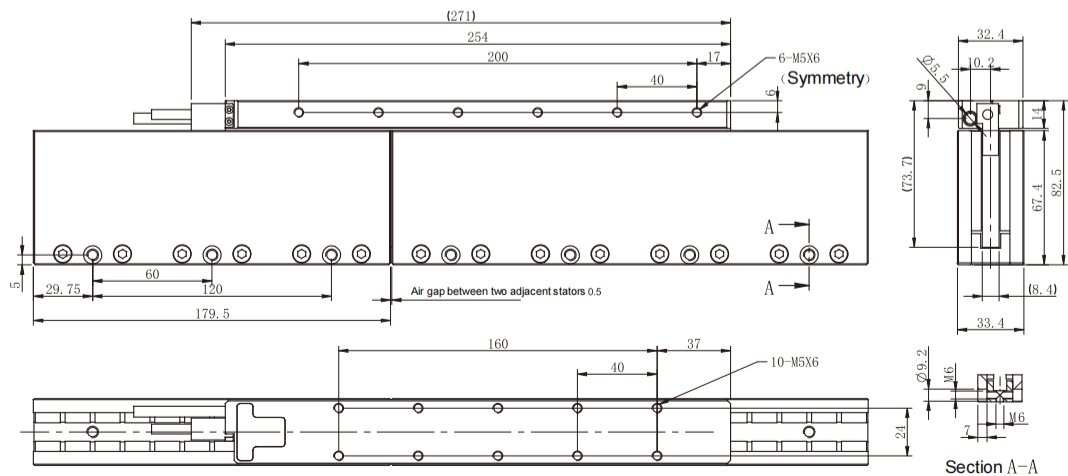
TAiL83C2



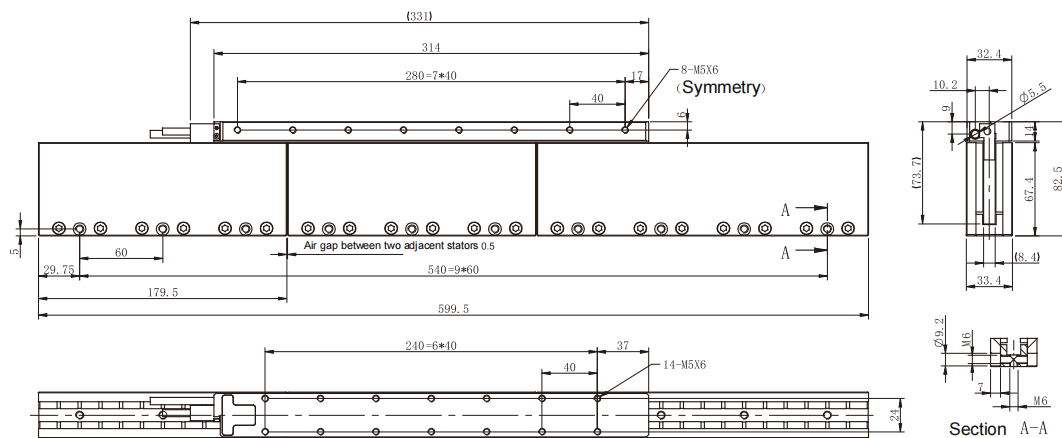
TAiL83C3



TAiL83C4

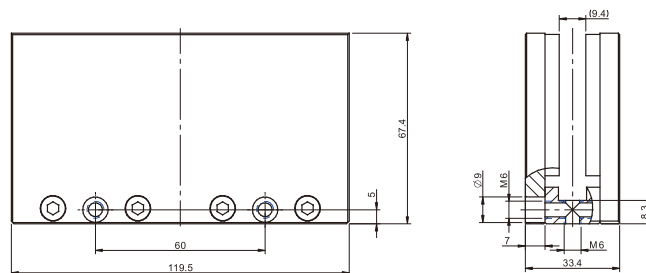


TAiL83C5

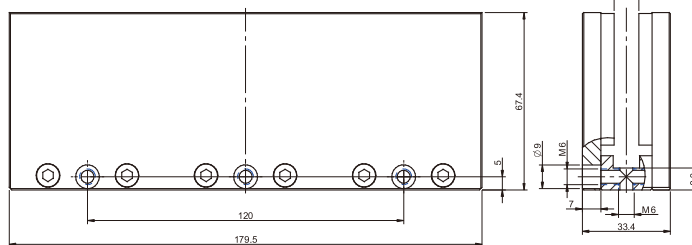


Stator size

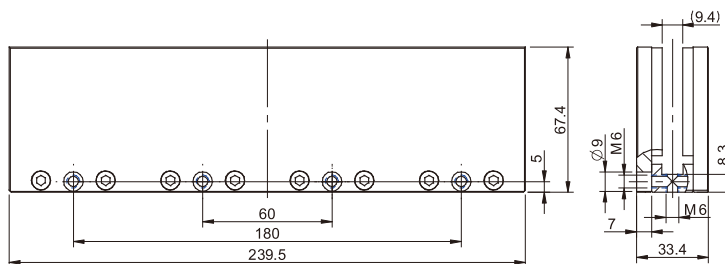
TAiL83M120



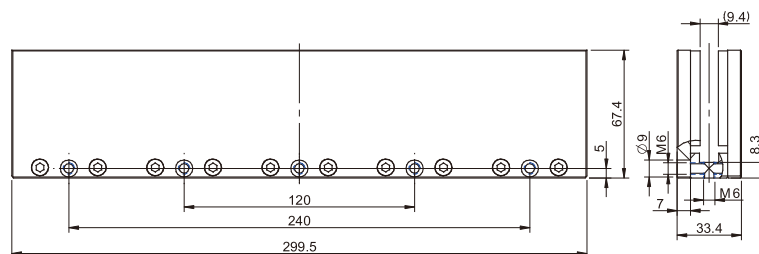
TAiL83M180



TAiL83M240

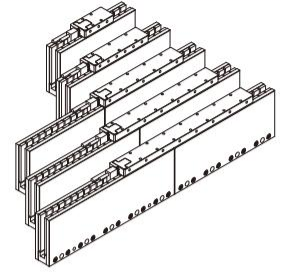


TAiL83M300



TAiL110 Series

Motor model TAiL110



parameters	unit	TAiL110C1	TAiL110C2	TAiL110C3	TAiL110C4	TAiL110C5
performance parameters						
Peak force	N	315	630	945	1260	1575
Continuous force	N	74	147	221	294	368
Motor Force Constant	N/Arms	21	42	63	84	105
Electrical performance parameters						
Peak current	Arms	15	15	15	15	15
Continuous current	Arms	3.5	3.5	3.5	3.5	3.5
Back EMF	v/m/s	17.1	34.3	51.4	68.6	85.7
Resistance Per Phase	Ω	3	6	9	12	15
Induction Per Phase	Mh	1.7	3.4	5.1	6.8	8.5
Electric time constant	Ms	0.6	0.6	0.6	0.6	0.6
Mechanical parameters						
Coil Unit Weight	kg	0.8	1.1	1.5	1.7	2
Coil Unit Length	mm	74	134	194	254	314
Magnet Weight	Kg/m	17.8				
Motor Attraction Force	N	0	0	0	0	0
Magnet Pitch	mm	30	30	30	30	30

Motor power line wiring definition		
Serial number	definition	colour
1	U	Brown
2	V	white
3	W	Green
4	GND	Yellow

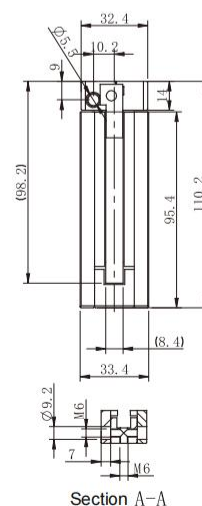
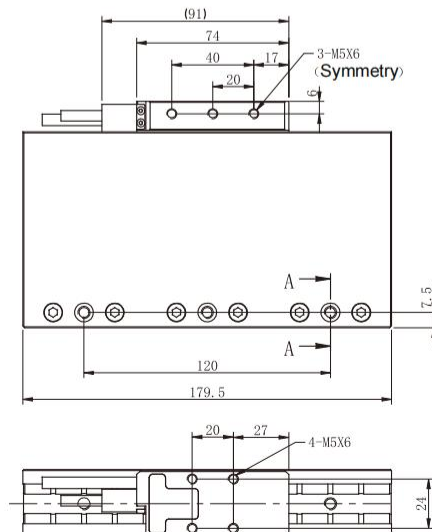
Motor Hall pin definition		
Serial number	definition	colour
1	5V	Yellow
2	0V	Green
3	HALL A	Blue
4	HALL B	Brown
5	HALL C	Gray
6	Block	Block

Notes:

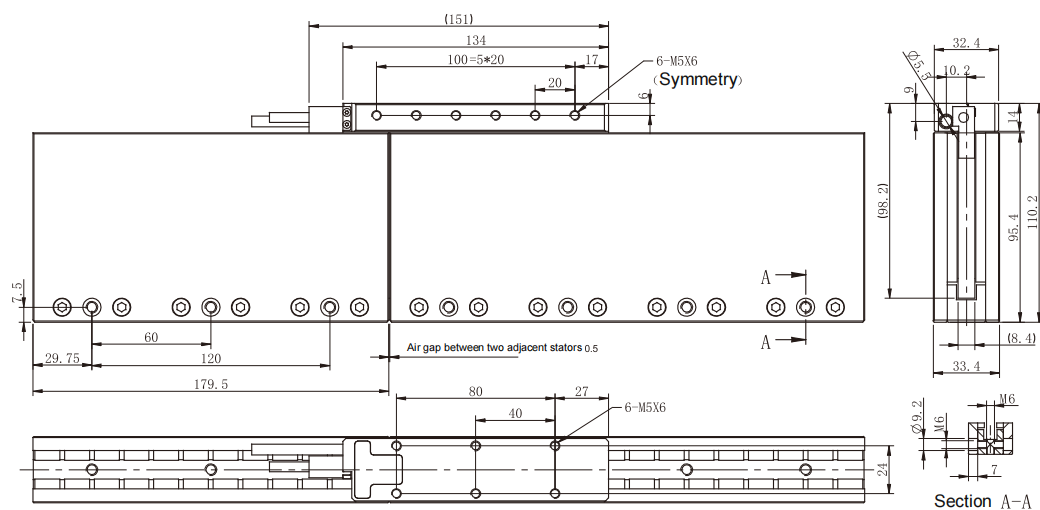
- 1: The motor stator is modular, with lengths of 119.5mm, 179.5mm, 239.5mm, and 299.5mm. The gap between any two adjacent stators is 0.5mm, and the stators can be freely combined according to actual requirements.
- 2: The distance between any two adjacent holes of the motor stator is 60mm.
- 3: Due to manufacturing processes, the motor cable may have a tolerance of ± 0.3 between batches.
- 4: The motor Hall sensor is optional, and the rotor length varies depending on whether the Hall sensor is installed.

Force size

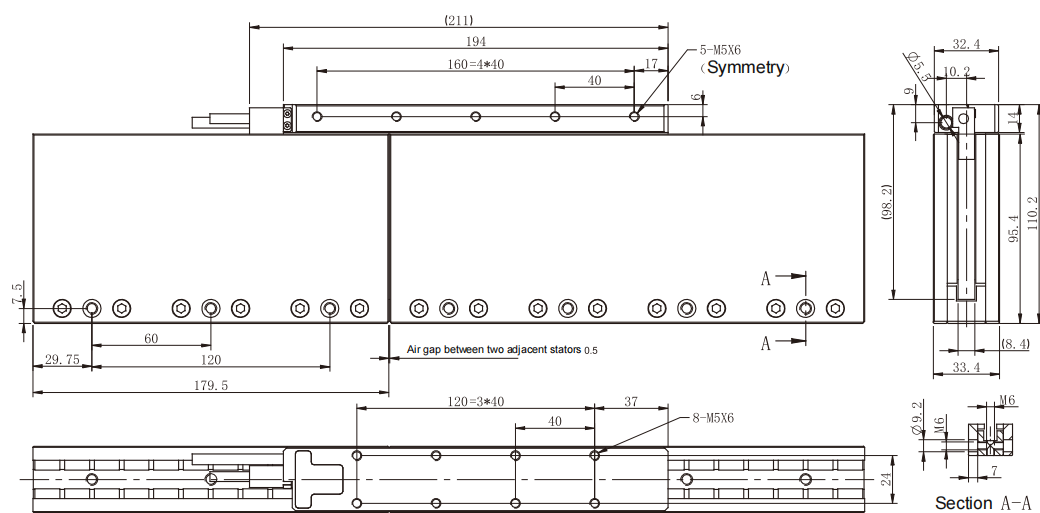
TAiL110C1



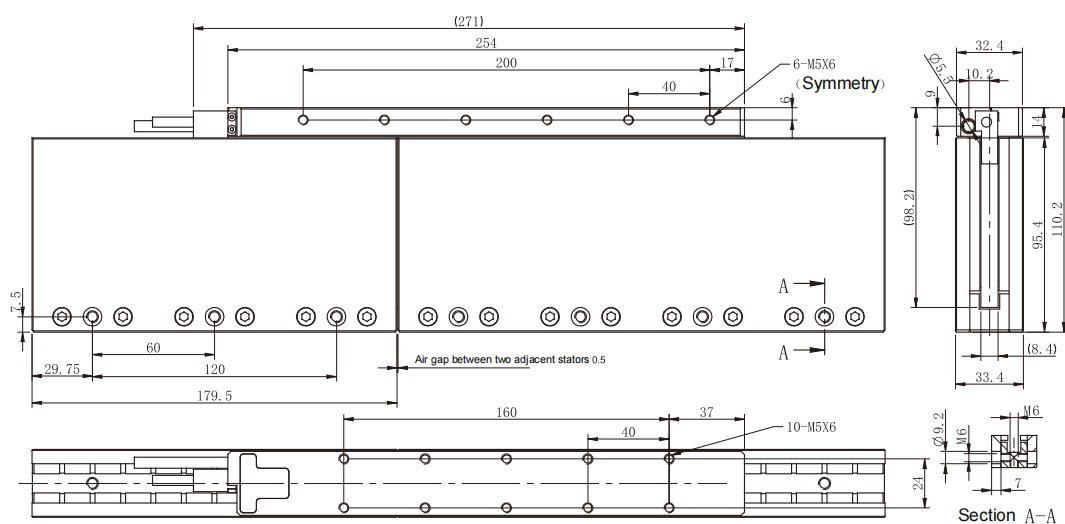
TAiL110C2

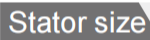


TAiL110C3

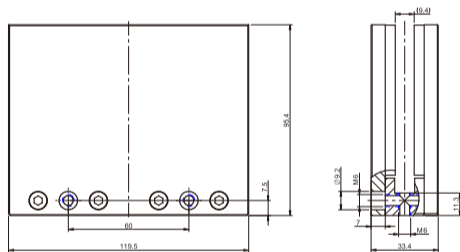


TAiL110C4

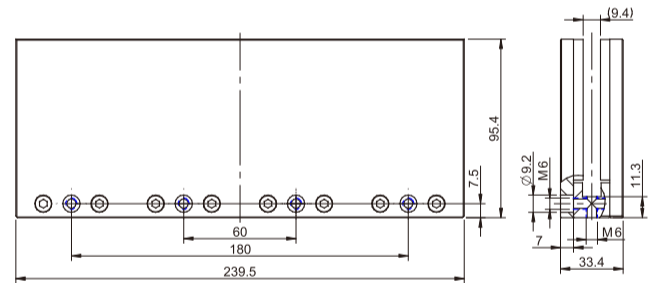




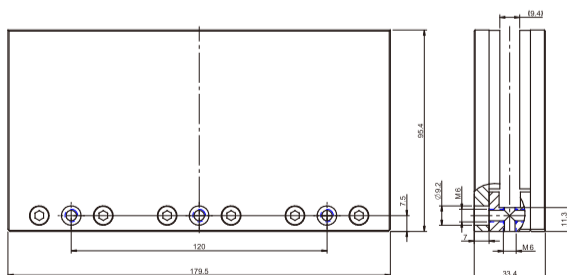
TAiL110M120



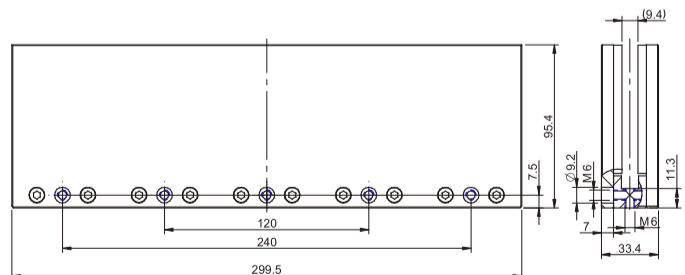
TAiL110M240



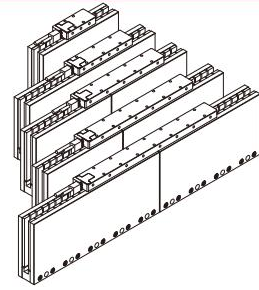
TAiL110M180



TAiL110M300



TAiL140 Series

Motor model
TAiL140

parameters	unit	TAiL140C1	TAiL140C2	TAiL140C3	TAiL140C4	TAiL140C5
performance parameters						
Peak force	N	420	840	1260	1680	2100
Continuous force	N	98	196	294	392	490
Motor Force Constant	N/Arms	28	56	84	112	140
Electrical performance parameters						
Peak current	Arms	15	15	15	15	15
Continuous current	Arms	3.5	3.5	3.5	3.5	3.5
Back EMF	v/m/s	22.9	45.7	68.6	91.4	114.3
Resistance Per Phase	Ω	3.8	7.6	11.4	15.2	19
Induction Per Phase	Mh	2.2	4.4	6.6	8.8	11
Electric time constant	Ms	0.6	0.6	0.6	0.6	0.6
Mechanical parameters						
Coil Unit Weight	kg	1	1.3	1.7	2	2.4
Coil Unit Length	mm	74	134	194	254	314
Magnet Weight	Kg/m	26.7				
Motor Attraction Force	N	0	0	0	0	0
Magnet Pitch	mm	30	30	30	30	30

Motor power line wiring definition		
Serial number	definition	colour
1	U	Brown
2	V	white
3	W	Green
4	GND	Yellow
Motor Hall pin definition		
Serial number	definition	colour
1	5V	Yellow
2	0V	Green
3	HALL A	Blue
4	HALL B	Brown
5	HALL C	Gray
6	屏蔽	Block

Notes:

1: The motor stator is modular, with lengths of 119.5mm, 179.5mm, 239.5mm, and 299.5mm. The distance between any two adjacent stators is 0.5mm, and the stators can be freely combined according to actual requirements.

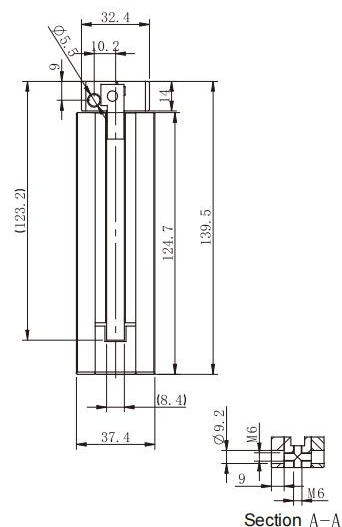
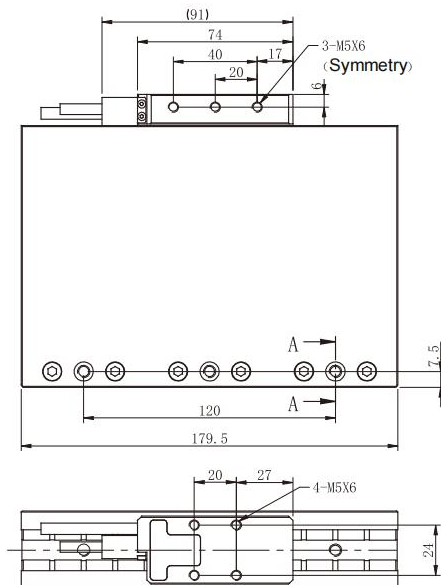
2: The distance between any two adjacent holes on the motor stator is 60mm.

3: Due to manufacturing processes, the motor cable may have a tolerance of ± 0.3 mm between batches.

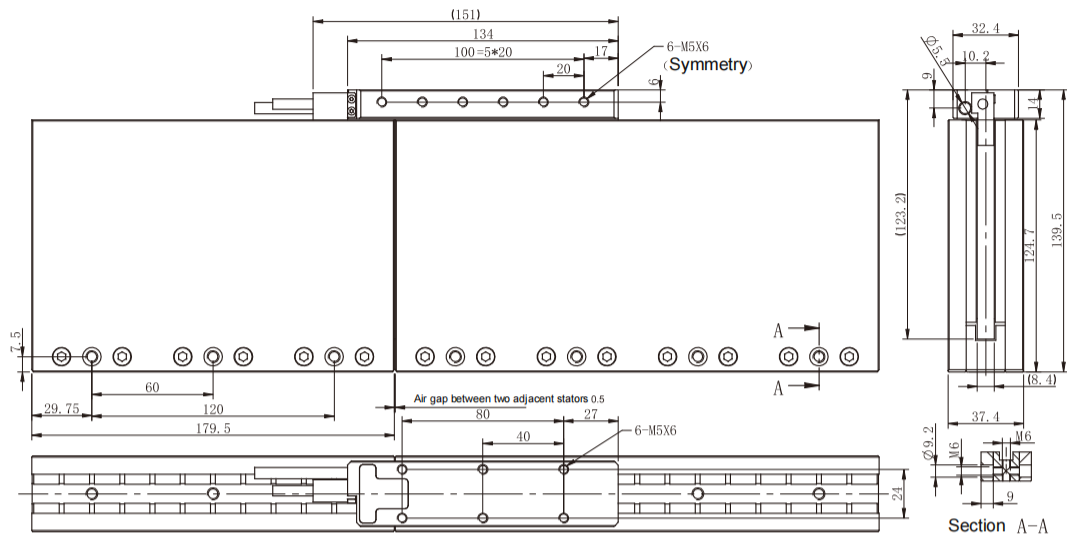
4: The motor Hall sensor is optional, and the length of the rotor varies depending on whether the Hall sensor is installed.

Force size

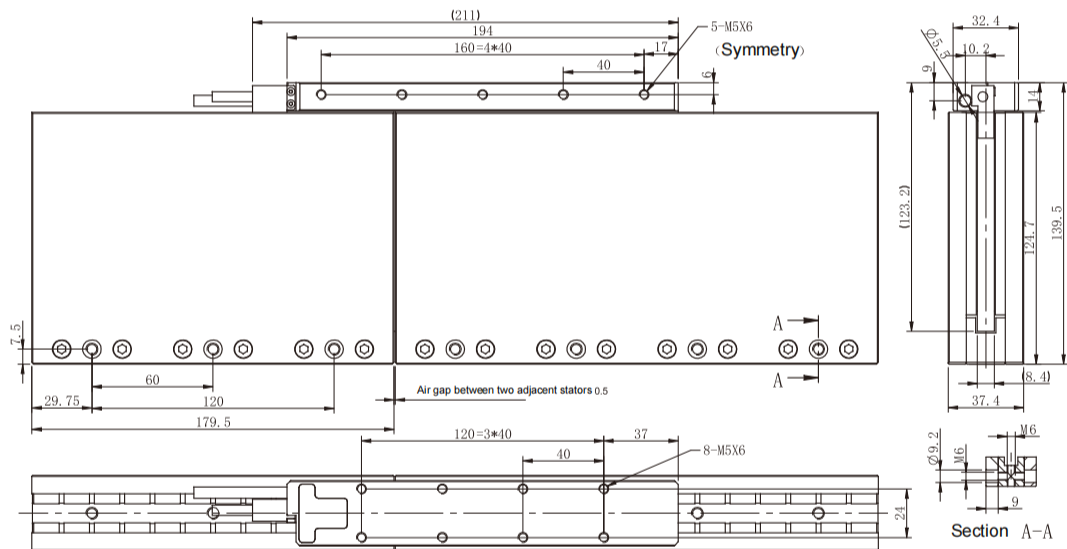
TAiL140C1



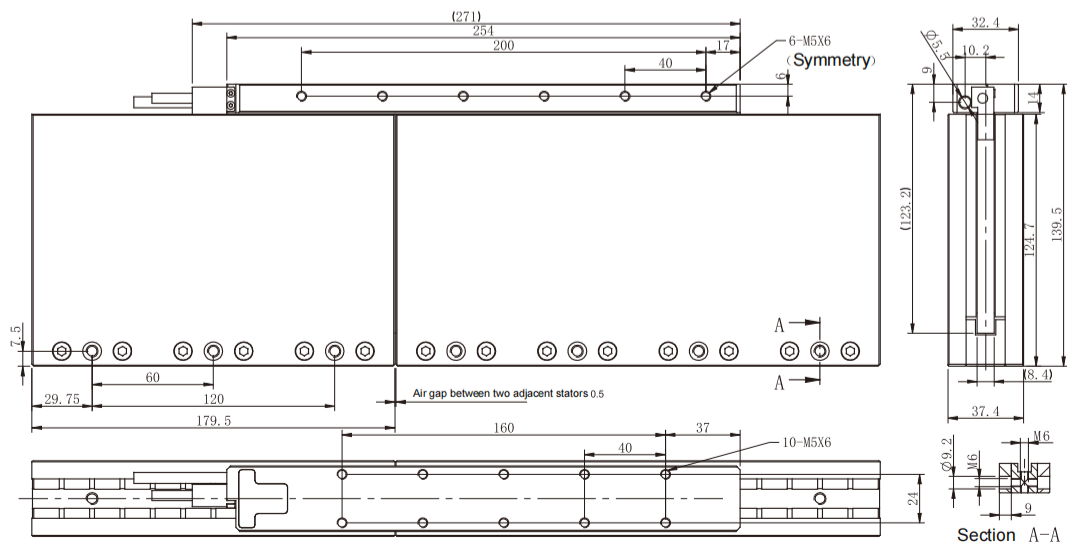
TAiL140C2



TAiL140C3



TAiL140C4



[illegible]

Technical drawing of a mechanical part, showing front and side views with dimensions.

Front View (Left):

- Overall width: 119.5
- Overall height: 128.7
- Distance between the first and last hole: 65
- Distance between adjacent holes: 12.5
- Bottom flange thickness: 7.6
- Holes are marked with circled numbers 1 through 6.

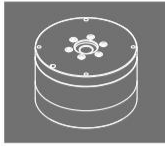
Side View (Right):

- Overall height: 128.7
- Top flange thickness: 9.41
- Distance from the bottom flange to the center of the first hole: 9
- Distance from the bottom flange to the center of the last hole: 37.4
- Bottom flange thickness: 15.6
- Internal features are labeled M6 and M16.

Technical drawing of a rectangular plate with 10 holes. The front view shows a plate with a total width of 239.5 and a total height of 124.7. The holes are arranged in a single row along the bottom edge, with a center-to-center distance of 60 between adjacent holes. The distance from the left edge to the first hole is 180. The distance from the last hole to the right edge is 7.5. The cross-section view shows a plate with a thickness of 9.2. The holes have a diameter of $\varnothing 9.2$. The distance from the front face to the first hole is 37.4. The distance from the last hole to the back face is 15.6. The distance between the two faces of the plate is 124.7. The distance from the front face to the center of the first hole is 180. The distance from the center of the last hole to the back face is 7.5. The distance between the centers of the first and last holes is 239.5. The distance from the front face to the center of the first hole is 180. The distance from the center of the last hole to the back face is 7.5. The distance between the centers of the first and last holes is 239.5. The distance from the front face to the center of the first hole is 180. The distance from the center of the last hole to the back face is 7.5. The distance between the centers of the first and last holes is 239.5.

[illegible]

The technical drawing shows a rectangular plate with overall dimensions of 299.5 mm by 124.7 mm. A vertical dashed centerline is shown. Along the bottom edge, there are two rows of holes. The first row has 8 holes with a pitch of 120 mm between them. The second row has 6 holes with a pitch of 240 mm between them. The distance from the left edge to the first hole in the first row is 29.5 mm. The distance from the right edge to the last hole in the first row is 29.5 mm. The thickness of the plate is 7.5 mm. A detailed view of the corner shows a fillet radius R9.2, a chamfer M6, and a slot width of 9 mm. The total width of the corner detail is 37.4 mm.



DDR motor products

Direct drive motors, also known as DD motors, feature industry-leading performance, zero maintenance requirements, simpler mechanical setup, higher precision, stronger torque output, greater reliability, and lower operating noise, meeting a variety of mechanical design needs. Mechanical transmission devices, such as gearboxes, synchronous belts, pulleys, or lead screws, can produce backlash, mechanical losses, and annoying noise, all of which can reduce machine performance and increase machine size and weight.

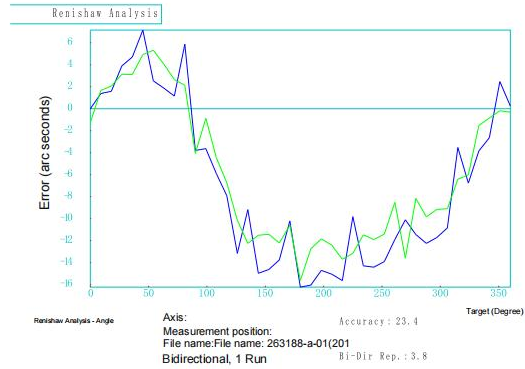
Product performance:

- >Continuous torque range: 0.6~600Nt/m
- >Repeatability: ± 1 arcsec
- >Absolute accuracy: ± 10 arcsec/360°
- >Runout: within 3 μ m (axial, radial, flatness, during motion)
- >High-rigidity motion

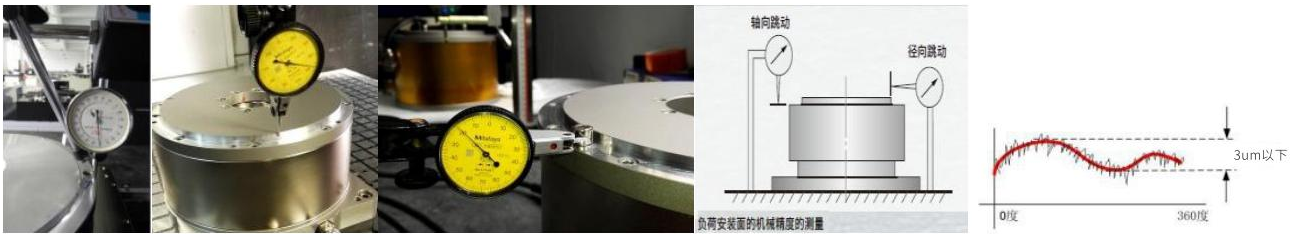


Performance diagram

> Laser interferometer testing of absolute positioning accuracy/repeatability



> Dial indicator test for axial runout, radial runout, and JIS repeatability:



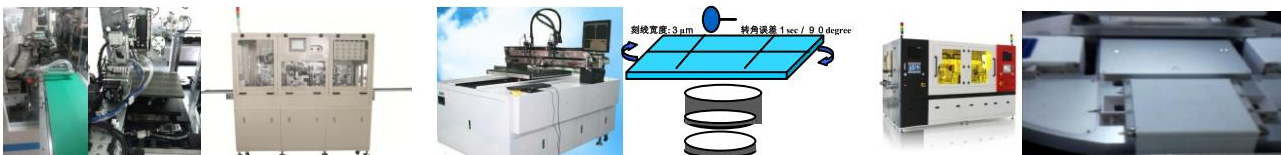
Application area



Backlight Module Assembly and Inspection

Lamination and film removal of LCM full lamination equipment

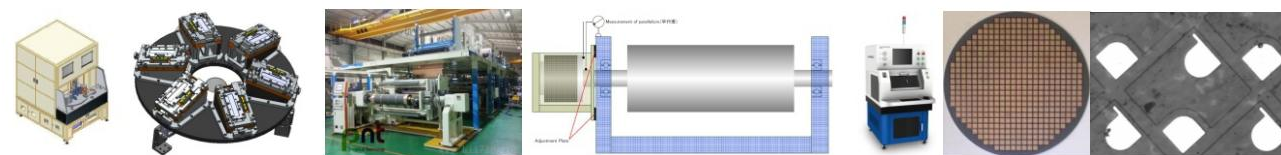
Backlight detection



COG/FOG product visual alignment inspection

Glass Cutting Tumbler

High-precision positioning printing of fully automatic glass screen printing machine



Multi-station laser welding

Lithium battery coating machine

Wafer dicing

Naming rules

TAiDN **i** **80/67** **O** **E** **H** **T** **C** **300**

N	Borderless
-	With border

No i for outer rotor
Has i as the inner rotor

Diameter/Height

Encoder Type	
O	Raster
M	magnetic grid

Position sensor type	
E	Encoder Z-phase signal
O	Photoelectric switch signal

The unit of length mm appears

Appearance method

C	
D	

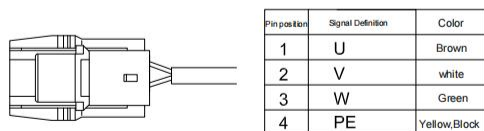
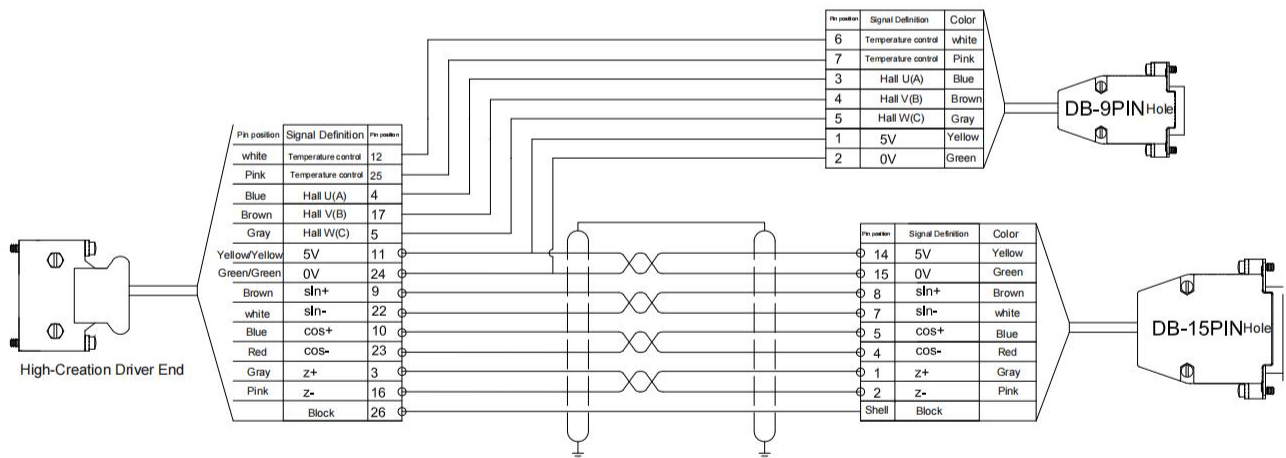
Temperature sensor

-	No temperature sensor
T1	PTC Temperature Sensor
T2	Switch-type temperature sensor
T3	NTC Temperature Sensor

Hall sensor

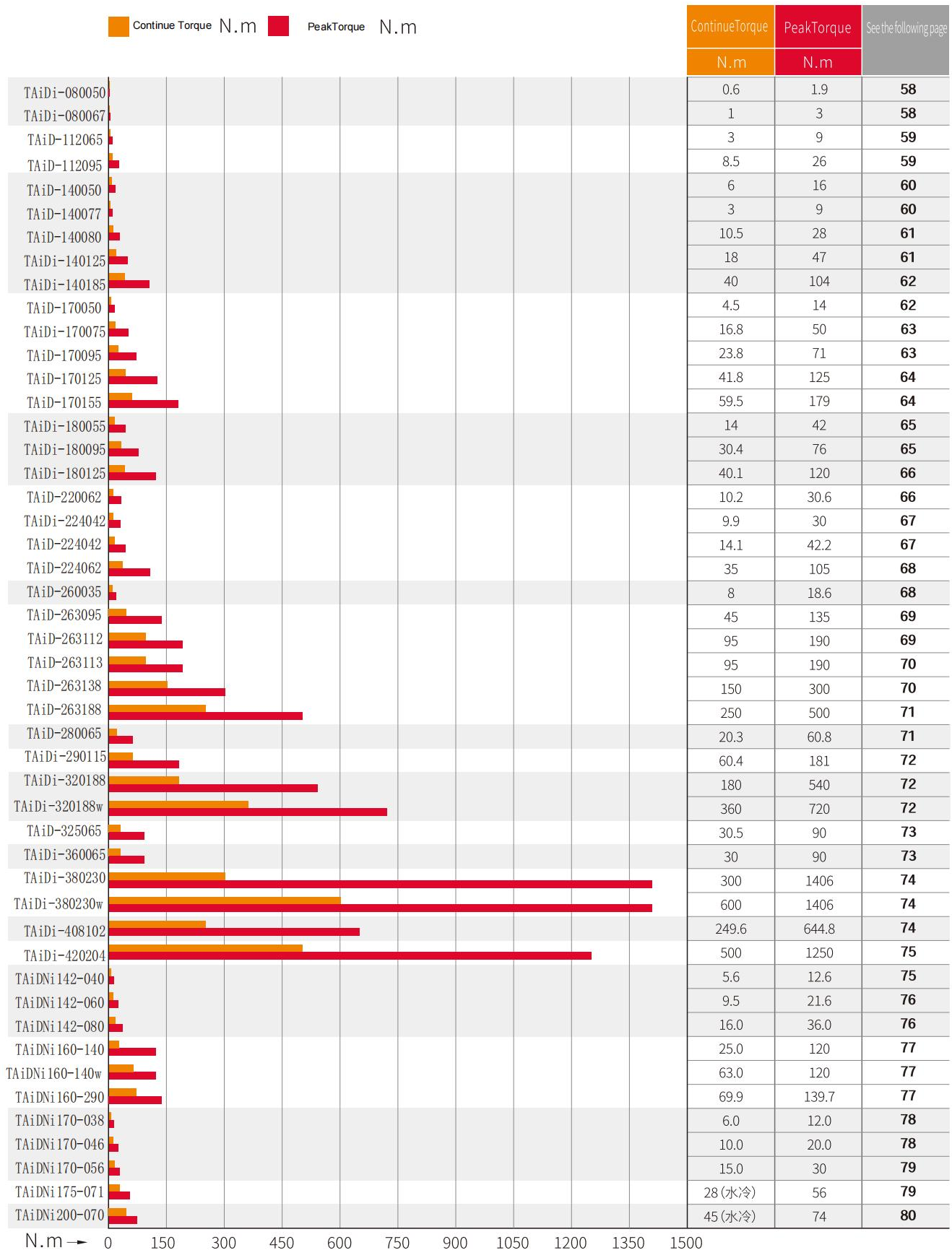
H	With HALL sensor
-	No HALL

Connection definition



Motor power line wiring definition		
Serial number	definition	colour
1	U	Brown
2	V	white
3	W	Green
4	PE	Yellow
5	Block	Block

DDR Product thrust chart and page number



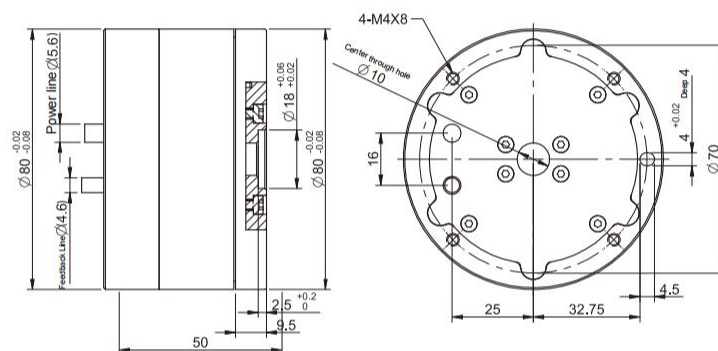
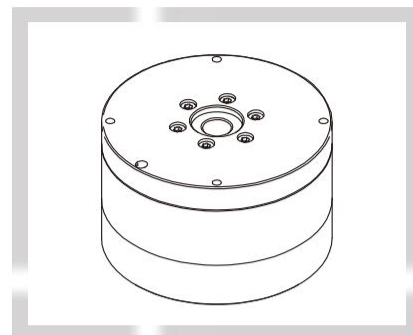
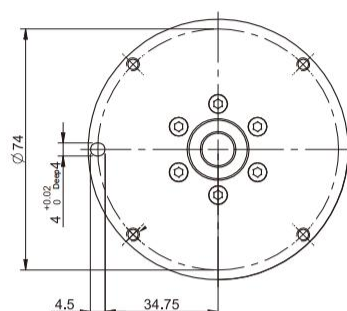
TAiDi-080

TAiDi-080 Series

Motor model

TAiDi-080050

Performance parameters	unit	TAiDi-080050
Continuous torque	N.m	0.6
Continuous current	Arms	3.2
Maximum torque	N.m	1.9
Maximum current	Arms	9.6
Torque constant	Nm/Arms	0.2
Resistance	$\Omega(25^{\circ}\text{C})$	1.2
Inductance	mH(25°C)	1
Force constant		10
EMF constant	Vrms/rad/s	0.2
Maximum rated power consumption	W(25°C)	23.5
Motor constant	Nm/ $\sqrt{\text{W}}$	0.1
Moment of inertia	Kg.m ²	1.5×10^{-4}
Motor weight	Kg	1.2
Highest speed	RPM	600
Positioning accuracy	Arc sec	± 50
Repeat accuracy	Arc sec	± 2.5
Resolution ratio	sin/cos	5000
Maximum axial load	N	50
Maximum radial load	N.m	/
Axial runout	mm	0.03
Radial beat	mm	0.03



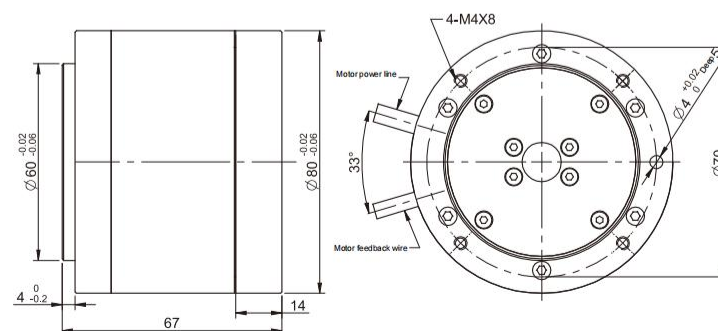
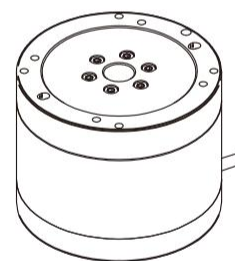
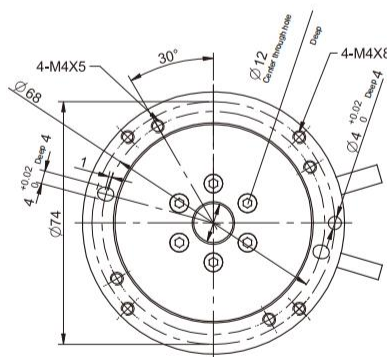
TAiDi-080

TAiDi-080 Series

Motor model

TAiDi-080067

Performance parameters	unit	TAiDi-080067
Continuous torque	N.m	1
Continuous current	Arms	3.2
Maximum torque	N.m	3
Maximum current	Arms	9.6
Torque constant	Nm/Arms	0.31
Resistance	$\Omega(25^{\circ}\text{C})$	1.5
Inductance	mH(25°C)	1.8
Force constant		10
EMF constant	Vrms/rad/s	0.26
Maximum rated power consumption	W(25°C)	29.3
Motor constant	Nm/ $\sqrt{\text{W}}$	0.21
Moment of inertia	Kg.m ²	3.7×10^{-4}
Motor weight	Kg	1.6
Highest speed	RPM	450
Positioning accuracy	Arc sec	± 50
Repeat accuracy	Arc sec	± 2.5
Resolution ratio	sin/cos	5000
Maximum axial load	N	200
Maximum radial load	N.m	10
Axial runout	mm	0.03
Radial beat	mm	0.03



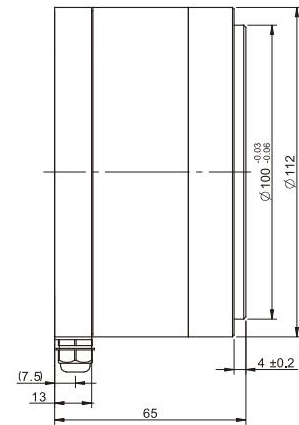
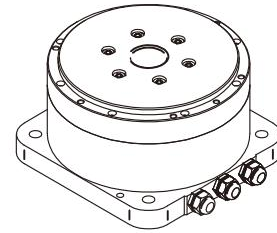
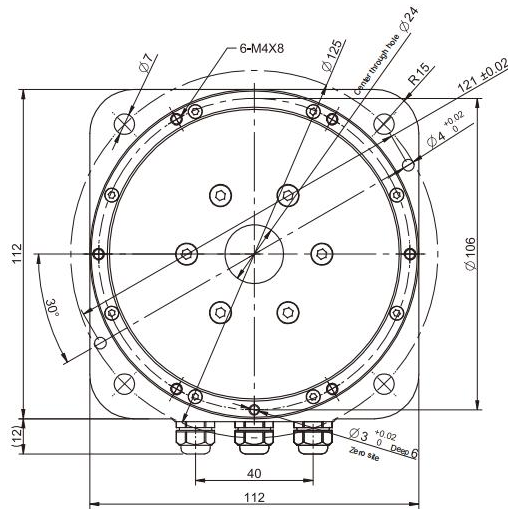
TAiD-112

TAiD-112 Series

Motor model

TAiD-112065

Performance parameters	unit	TAiD-112065
Continuous torque	N.m	3.0
Continuous current	Arms	2.5
Maximum torque	N.m	9
Maximum current	Arms	7.5
Torque constant	Nm/Arms	1.2
Resistance	$\Omega(25^{\circ}\text{C})$	2.2
Inductance	mH(25°C)	1.8
Force constant		28
EMF constant	Vrms/rad/s	1.0
Maximum rated power consumption	W(25°C)	26.3
Motor constant	Nm/ $\sqrt{\text{W}}$	0.6
Moment of inertia	Kg.m ²	0.0026
Motor weight	Kg	2.7
Highest speed	RPM	350
Positioning accuracy	Arc sec	± 30
Repeat accuracy	Arc sec	± 2.5
Resolution ratio	sin/cos	8192
Maximum axial load	N	2500
Maximum radial load	N.m	20
Axial runout	mm	0.005
Radial beat	mm	0.005



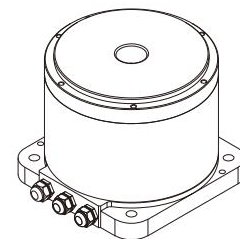
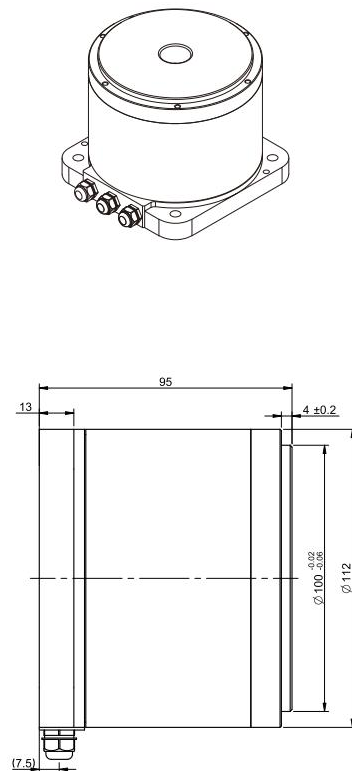
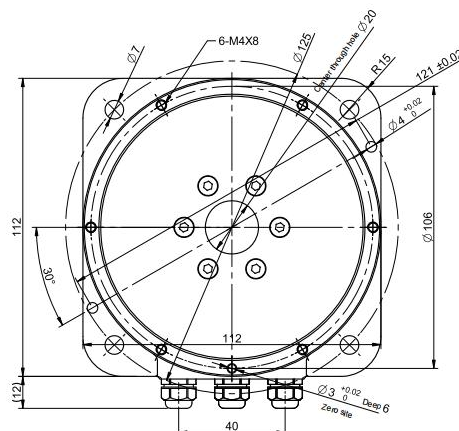
TAiD-112

TAiD-112 Series

Motor model

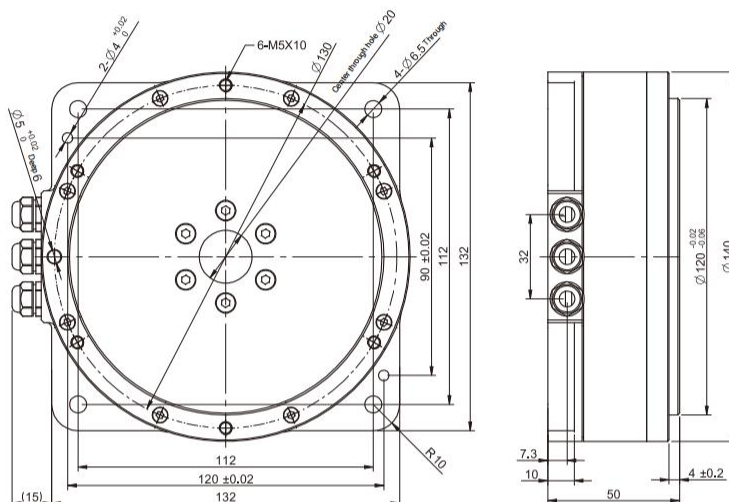
TAiD-112095

Performance parameters	unit	TAiD-112095
Continuous torque	N.m	8.5
Continuous current	Arms	2.5
Maximum torque	N.m	26
Maximum current	Arms	7.5
Torque constant	Nm/Arms	3.4
Resistance	$\Omega(25^{\circ}\text{C})$	4.6
Inductance	mH(25°C)	4.2
Force constant		28
EMF constant	Vrms/rad/s	2.8
Maximum rated power consumption	W(25°C)	54.9
Motor constant	Nm/ $\sqrt{\text{W}}$	1.1
Moment of inertia	Kg.m ²	0.0038
Motor weight	Kg	4.5
Highest speed	RPM	250
Positioning accuracy	Arc sec	± 20
Repeat accuracy	Arc sec	± 1.5
Resolution ratio	sin/cos	8192
Maximum axial load	N	2500
Maximum radial load	N.m	20
Axial runout	mm	0.005
Radial beat	mm	0.005



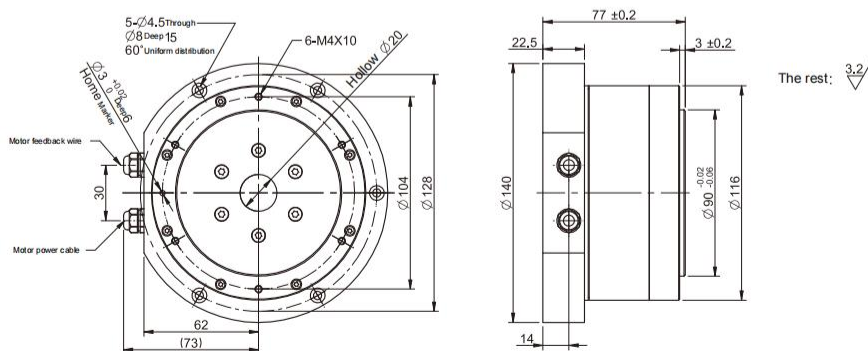
TAiD-140 Series

TAiD-140050



TAiD-140 Series

TAiD-140077

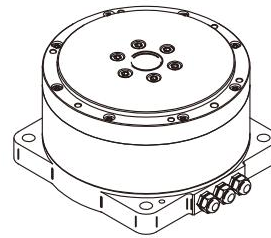
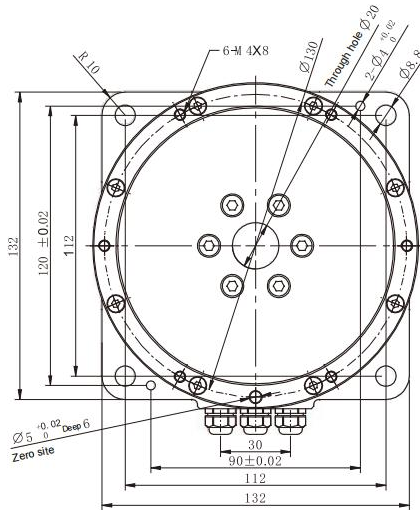


TAiD-140

TAiD-140 Series

Motor model TAiD-140080

Performance parameters	unit	TAiD-140080
Continuous torque	N.m	10.5
Continuous current	Arms	2.5
Maximum torque	N.m	28
Maximum current	Arms	7
Torque constant	Nm/Arms	4.2
Resistance	$\Omega(25^{\circ}\text{C})$	6.6
Inductance	mH(25°C)	9.5
Force constant		28
EMF constant	Vrms/rad/s	3.4
Maximum rated power consumption	W(25°C)	78.8
Motor constant	Nm/ $\sqrt{\text{W}}$	1.2
Moment of inertia	Kg.m ²	0.0076
Motor weight	Kg	5.6
Highest speed	RPM	350
Positioning accuracy	Arc sec	± 30
Repeat accuracy	Arc sec	± 2.5
Resolution ratio	sin/cos	8192
Maximum axial load	N	2500
Maximum radial load	N.m	20
Axial runout	mm	0.005
Radial beat	mm	0.005

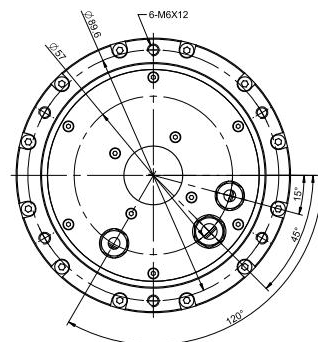
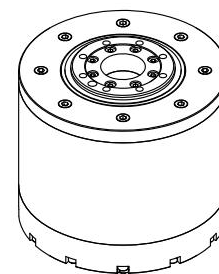
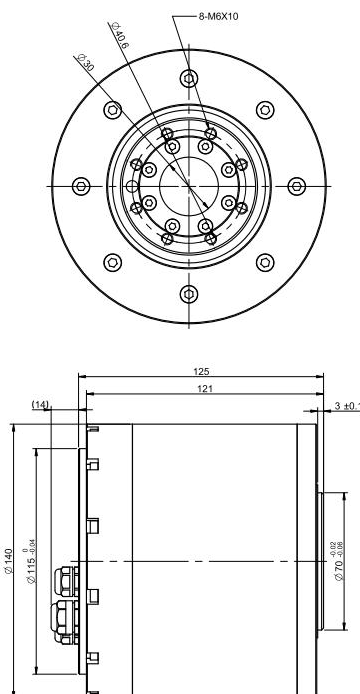


TAiDi-140

TAiDi-140 Series

Motor model TAiDi-140125

Performance parameters	unit	TAiDi-140125
Continuous torque	N.m	18.0
Continuous current	Arms	5
Maximum torque	N.m	47
Maximum current	Arms	13
Torque constant	Nm/Arms	3.6
Resistance	$\Omega(25^{\circ}\text{C})$	5.6
Inductance	mH(25°C)	12.2
Force constant		30
EMF constant	Vrms/rad/s	2.9
Maximum rated power consumption	W(25°C)	267.3
Motor constant	Nm/ $\sqrt{\text{W}}$	1.1
Moment of inertia	Kg.m ²	0.0027
Motor weight	Kg	7.3
Highest speed	RPM	250
Positioning accuracy	Arc sec	± 20
Repeat accuracy	Arc sec	± 1.5
Resolution ratio	sin/cos	11740
Maximum axial load	N	5000
Maximum radial load	N.m	50
Axial runout	mm	0.005
Radial beat	mm	0.005

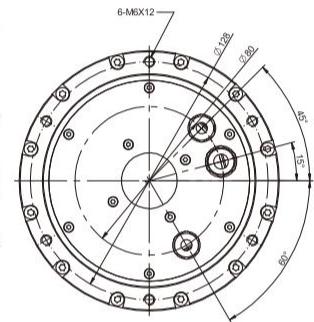
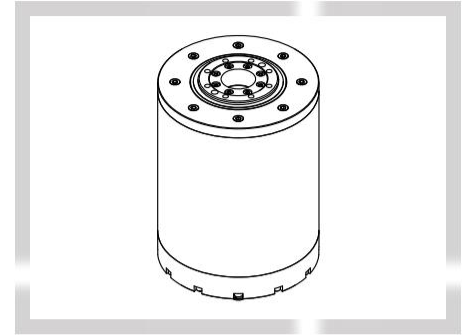
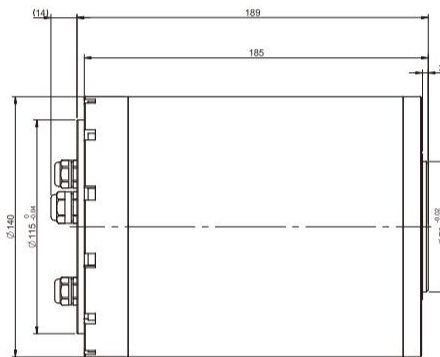
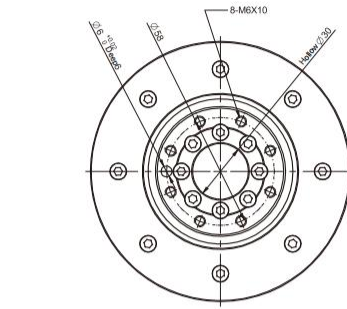


TAiDi-140

TAiDi-140 Series

Motor model TAiDi-140185

Performance parameters	unit	TAiDi-140185
Continuous torque	N.m	40.0
Continuous current	Arms	5
Maximum torque	N.m	104
Maximum current	Arms	13
Torque constant	Nm/Arms	8
Resistance	$\Omega(25^{\circ}\text{C})$	6.9
Inductance	mH(25°C)	22
Force constant		30
EMF constant	Vrms/rad/s	6.5
Maximum rated power consumption	W(25°C)	329.4
Motor constant	Nm/ $\sqrt{\text{W}}$	2.2
Moment of inertia	Kg.m ²	0.0043
Motor weight	Kg	10.8
Highest speed	RPM	250
Positioning accuracy	Arc sec	± 20
Repeat accuracy	Arc sec	± 1.5
Resolution ratio	sin/cos	11740
Maximum axial load	N	5000
Maximum radial load	N.m	50
Axial runout	mm	0.005
Radial beat	mm	0.005

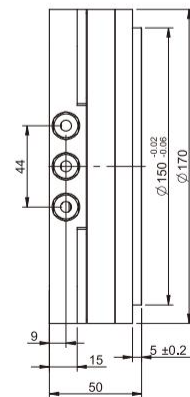
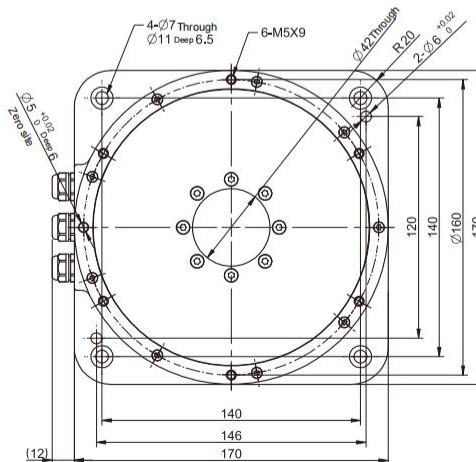


TAiD-170

TAiD-170 Series

Motor model TAiD-170050

Performance parameters	unit	TAiD-170050
Continuous torque	N.m	4.5
Continuous current	Arms	1.4
Maximum torque	N.m	14.0
Maximum current	Arms	4.2
Torque constant	Nm/Arms	3.4
Resistance	$\Omega(25^{\circ}\text{C})$	6.0
Inductance	mH(25°C)	7.6
Force constant		30
EMF constant	Vrms/rad/s	2.8
Maximum rated power consumption	W(25°C)	22.5
Motor constant	Nm/ $\sqrt{\text{W}}$	0.9
Moment of inertia	Kg.m ²	0.0068
Motor weight	Kg	3.9
Highest speed	RPM	450
Positioning accuracy	Arc sec	± 30
Repeat accuracy	Arc sec	± 2.5
Resolution ratio	sin/cos	11740
Maximum axial load	N	2500
Maximum radial load	N.m	20
Axial runout	mm	0.005
Radial beat	mm	0.005

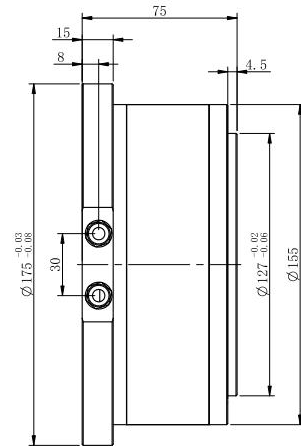
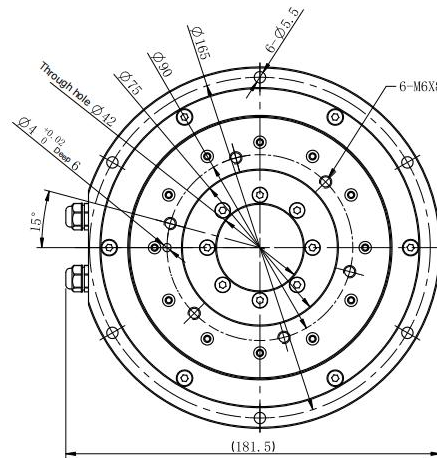
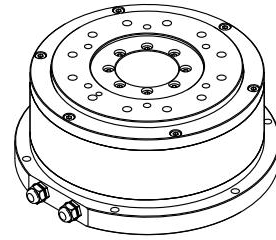


TAiDi-170

TAiDi-170 Series

Motor model
TAiDi-170075

Performance parameters	unit	TAiDi-170075
Continuous torque	N.m	16.8
Continuous current	Arms	3.5
Maximum torque	N.m	50
Maximum current	Arms	10.5
Torque constant	Nm/Arms	4.8
Resistance	$\Omega(25^{\circ}\text{C})$	11.7
Inductance	mH(25°C)	16.3
Force constant		32
EMF constant	Vrms/rad/s	3.9
Maximum rated power consumption	W(25°C)	273.7
Motor constant	Nm/ $\sqrt{\text{W}}$	1.0
Moment of inertia	Kg.m ²	0.004
Motor weight	Kg	5.2
Highest speed	RPM	500
Positioning accuracy	Arc sec	± 20
Repeat accuracy	Arc sec	± 1.5
Resolution ratio	sin/cos	11740
Maximum axial load	N	2500
Maximum radial load	N.m	20
Axial runout	mm	0.005
Radial beat	mm	0.005

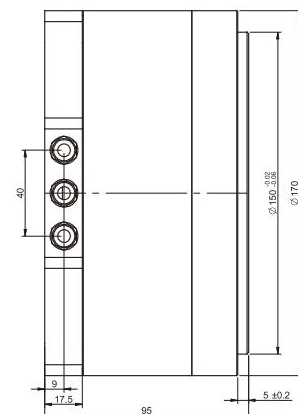
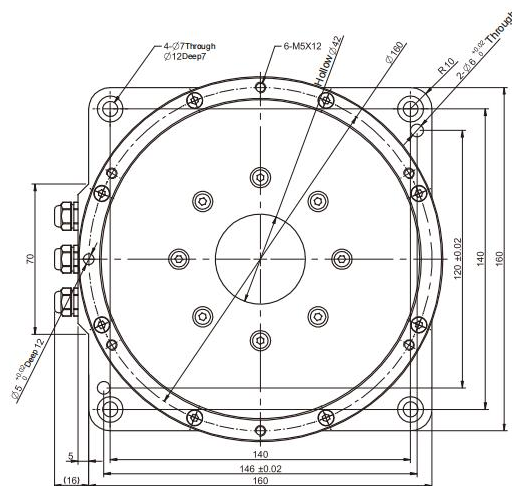
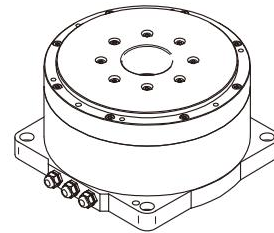


TAiD-170

TAiD-170 Series

Motor model
TAiD-170095

Performance parameters	unit	TAiD-170095
Continuous torque	N.m	23.8
Continuous current	Arms	2.5
Maximum torque	N.m	71
Maximum current	Arms	7.5
Torque constant	Nm/Arms	9.5
Resistance	$\Omega(25^{\circ}\text{C})$	2.52
Inductance	mH(25°C)	5.4
Force constant		30
EMF constant	Vrms/rad/s	7.8
Maximum rated power consumption	W(25°C)	30.1
Motor constant	Nm/ $\sqrt{\text{W}}$	4.3
Moment of inertia	Kg.m ²	0.018
Motor weight	Kg	9.5
Highest speed	RPM	190
Positioning accuracy	Arc sec	± 30
Repeat accuracy	Arc sec	± 2.5
Resolution ratio	sin/cos	11740
Maximum axial load	N	15000
Maximum radial load	N.m	150
Axial runout	mm	0.005
Radial beat	mm	0.005



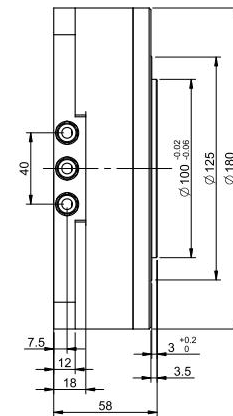
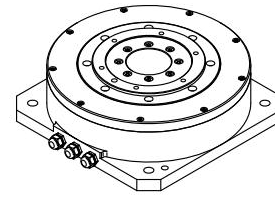
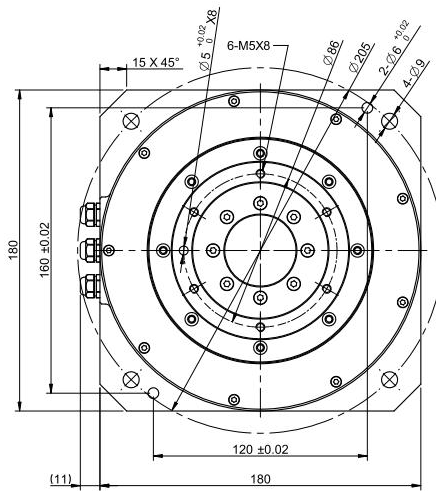
TAiDi-180

TAiDi-180 Series

Motor model

TAiDi-180055

Performance parameters	unit	TAiDi-180055
Continuous torque	N.m	14.0
Continuous current	Arms	4.5
Maximum torque	N.m	42
Maximum current	Arms	13.5
Torque constant	Nm/Arms	3.1
电阻 (ptp) Resistance	$\Omega(25^{\circ}\text{C})$	2.4
Inductance	mH(25°C)	7.6
Force constant		32
EMF constant	Vrms/rad/s	2.5
Maximum rated power consumption	W(25°C)	92.8
Motor constant	Nm/ $\sqrt{\text{W}}$	1.4
Moment of inertia	Kg.m ²	0.0039
Motor weight	Kg	5.4
Highest speed	RPM	250
Positioning accuracy	Arc sec	± 20
Repeat accuracy	Arc sec	± 1.5
Resolution ratio	sin/cos	11740
Maximum axial load	N	2500
Maximum radial load	N.m	20
Axial runout	mm	0.005
Radial beat	mm	0.005



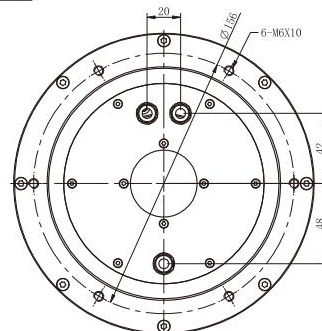
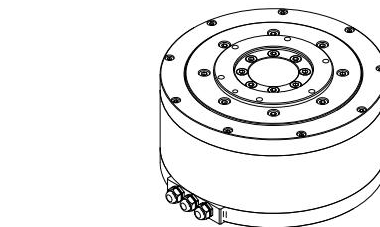
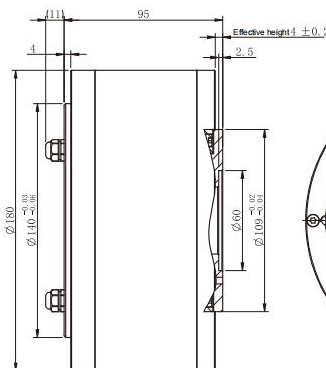
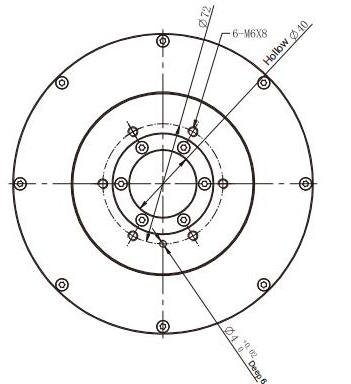
TAiDi-180

TAiDi-180 Series

Motor model

TAiDi-180095

Performance parameters	unit	TAiDi-180095
Continuous torque	N.m	30.4
Continuous current	Arms	2.6
Maximum torque	N.m	76
Maximum current	Arms	6.5
Torque constant	Nm/Arms	11.7
Resistance	$\Omega(25^{\circ}\text{C})$	7.8
Inductance	mH(25°C)	5.4
Force constant		24
EMF constant	Vrms/rad/s	9.6
Maximum rated power consumption	W(25°C)	100.7
Motor constant	Nm/ $\sqrt{\text{W}}$	3.0
Moment of inertia	Kg.m ²	0.0072
Motor weight	Kg	9.8
Highest speed	RPM	250
Positioning accuracy	Arc sec	± 30
Repeat accuracy	Arc sec	± 2.5
Resolution ratio	sin/cos	11740
Maximum axial load	N	2500
Maximum radial load	N.m	20
Axial runout	mm	0.005
Radial beat	mm	0.005

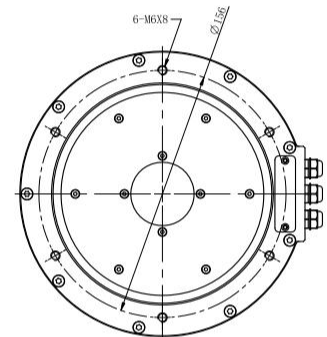
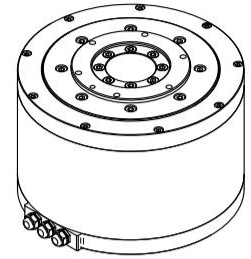
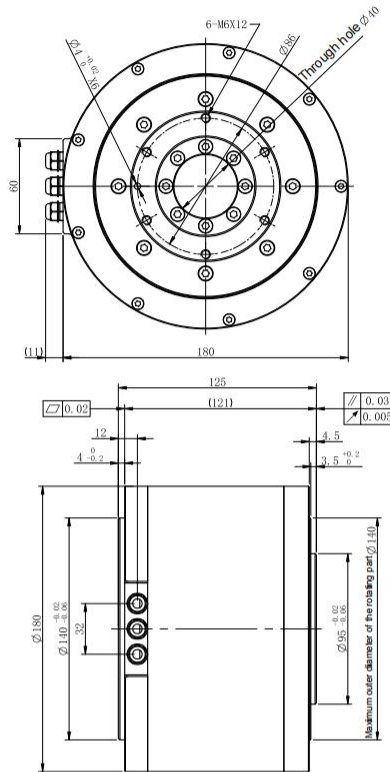


TAiDi-180

TAiDi-180 Series

Motor model TAiDi-180125

Performance parameters	unit	TAiDi-180125
Continuous torque	N.m	40.1
Continuous current	Arms	4.5
Maximum torque	N.m	120
Maximum current	Arms	13.5
Torque constant	Nm/Arms	8.9
Resistance	$\Omega(25^{\circ}\text{C})$	6.4
Inductance	mH(25°C)	20
Force constant		32
EMF constant	Vrms/rad/s	7.3
Maximum rated power consumption	W(25°C)	247.5
Motor constant	Nm/ $\sqrt{\text{W}}$	2.5
Moment of inertia	Kg.m ²	0.01
Motor weight	Kg	13
Highest speed	RPM	250
Positioning accuracy	Arc sec	± 30
Repeat accuracy	Arc sec	± 2.5
Resolution ratio	sin/cos	11740
Maximum axial load	N	2500
Maximum radial load	N.m	20
Axial runout	mm	0.005
Radial beat	mm	0.005

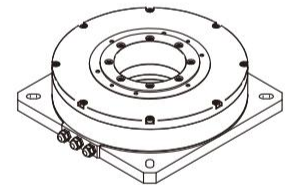
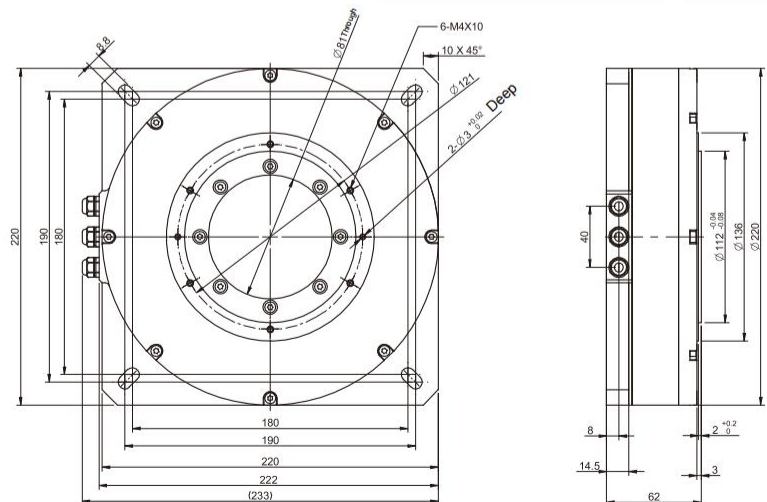


TAiD-220

TAiD-220 Series

Motor model TAiD-220062

Performance parameters	unit	TAiD-220062
Continuous torque	N.m	10.2
Continuous current	Arms	3.0
Maximum torque	N.m	30.6
Maximum current	Arms	9
Torque constant	Nm/Arms	3.4
Resistance	$\Omega(25^{\circ}\text{C})$	13.6
Inductance	mH(25°C)	7.8
Force constant		40
EMF constant	Vrms/rad/s	2.8
Maximum rated power consumption	W(25°C)	233.7
Motor constant	Nm/ $\sqrt{\text{W}}$	5.6
Moment of inertia	Kg.m ²	0.032
Motor weight	Kg	8.9
Highest speed	RPM	320
Positioning accuracy	Arc sec	± 30
Repeat accuracy	Arc sec	± 2.5
Resolution ratio	sin/cos	16384
Maximum axial load	N	20000
Maximum radial load	N.m	200
Axial runout	mm	0.005
Radial beat	mm	0.005

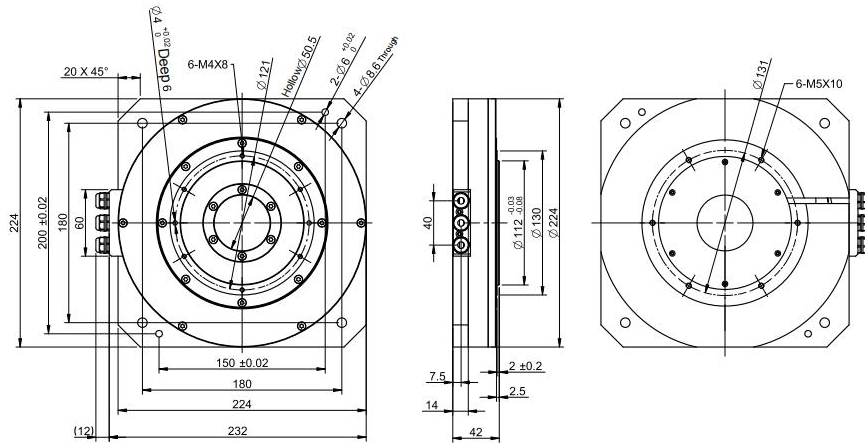


TAiDi-224

TAiDi-224 Series

Motor model TAiDi-224042

Performance parameters	unit	TAiDi-224042
Continuous torque	N.m	9.9
Continuous current	Arms	2.3
Maximum torque	N.m	30
Maximum current	Arms	7
Torque constant	Nm/Arms	4.3
Resistance	$\Omega(25^{\circ}\text{C})$	22.5
Inductance	mH(25°C)	12
Force constant		40
EMF constant	Vrms/rad/s	3.5
Maximum rated power consumption	W(25°C)	227.3
Motor constant	Nm/ $\sqrt{\text{W}}$	0.7
Moment of inertia	Kg.m ²	0.0072
Motor weight	Kg	6.2
Highest speed	RPM	250
Positioning accuracy	Arc sec	± 20
Repeat accuracy	Arc sec	± 1.5
Resolution ratio	sin/cos	11740
Maximum axial load	N	2500
Maximum radial load	N.m	20
Axial runout	mm	0.005
Radial beat	mm	0.005

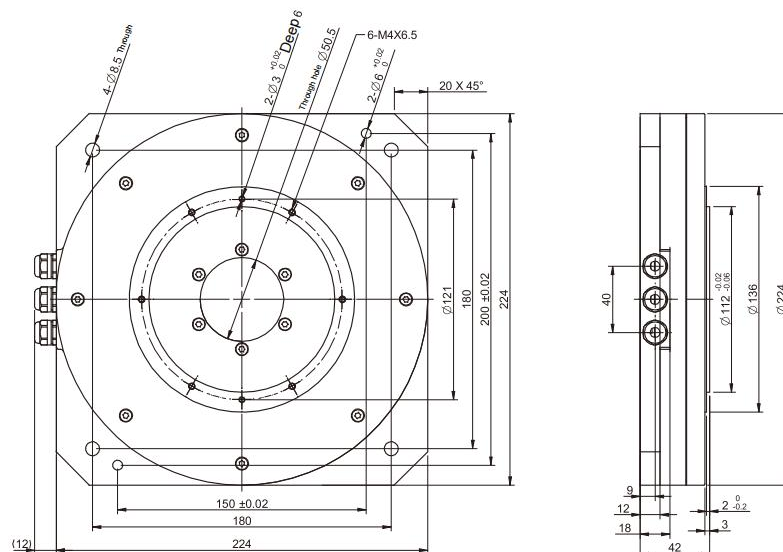


TAiD-224

TAiD-224 Series

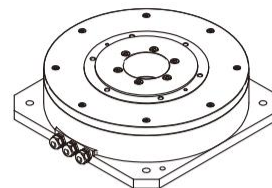
Motor model TAiD-224042

Performance parameters	unit	TAiD-224042
Continuous torque	N.m	14.1
Continuous current	Arms	2.2
Maximum torque	N.m	42.2
Maximum current	Arms	6.6
Torque constant	Nm/Arms	6.4
Resistance	$\Omega(25^{\circ}\text{C})$	8.4
Inductance	mH(25°C)	15.5
Force constant		40
EMF constant	Vrms/rad/s	5.2
Maximum rated power consumption	W(25°C)	77.6
Motor constant	Nm/ $\sqrt{\text{W}}$	2.6
Moment of inertia	Kg.m ²	0.012
Motor weight	Kg	5.5
Highest speed	RPM	380
Positioning accuracy	Arc sec	± 30
Repeat accuracy	Arc sec	± 2.5
Resolution ratio	sin/cos	11740
Maximum axial load	N	5000
Maximum radial load	N.m	50
Axial runout	mm	0.005
Radial beat	mm	0.005

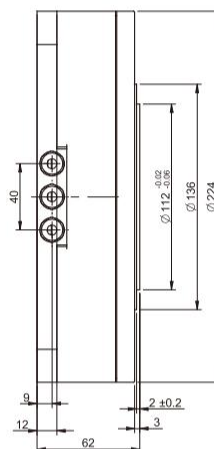
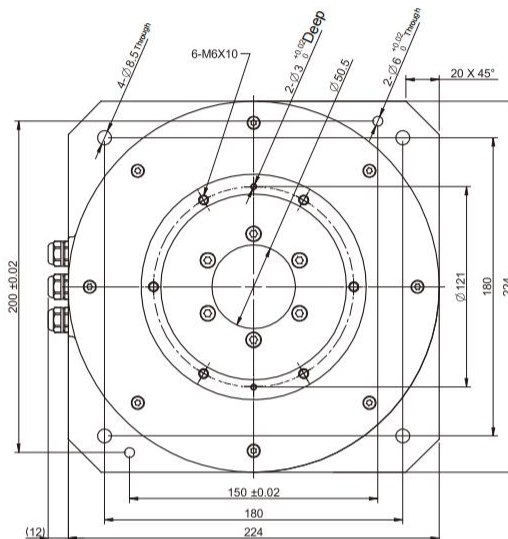


TAiD-224 Series

TAiD-224062



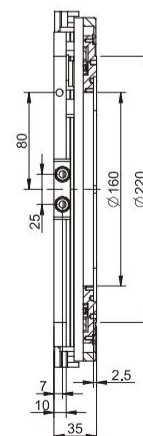
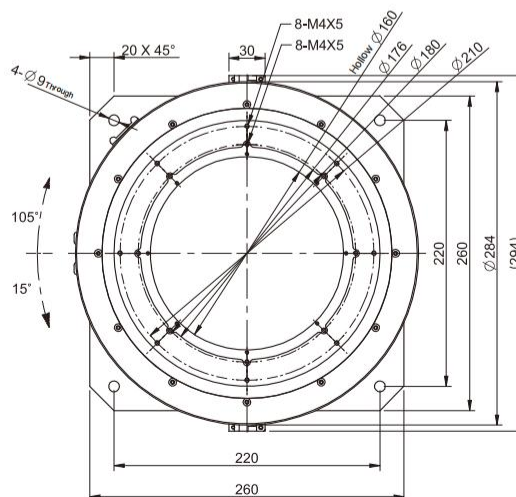
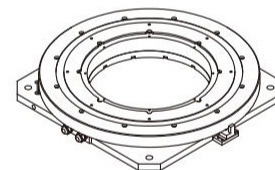
Performance parameters	unit	TaID-224062
Continuous torque	N.m	35.0
Continuous current	Arms	2.2
Maximum torque	N.m	105.0
Maximum current	Arms	6.6
Torque constant	Nm/Arms	15.7
Resistance	$\Omega(25^{\circ}\text{C})$	13.2
Inductance	mH(25°C)	36.5
Force constant		40
EMF constant	Vrms/rad/s	12.8
Maximum rated power consumption	W(25°C)	122.0
Motor constant	Nm/ $\sqrt{\text{W}}$	5.6
Moment of inertia	Kg.m ²	0.02
Motor weight	Kg	9.2
Highest speed	RPM	200
Positioning accuracy	Arc sec	± 30
Repeat accuracy	Arc sec	± 2.5
Resolution ratio	sin/cos	16384
Maximum axial load	N	10000
Maximum radial load	N.m	100
Axial runout	mm	0.005
Adial beat	mm	0.005



AiD-260 Series

TAiD-260035

Performance parameters	unit	TAiD-260035
Continuous torque	N.m	8.0
Continuous current	Arms	1.5
Maximum torque	N.m	18.6
Maximum current	Arms	3.5
Torque constant	Nm/Arms	5.3
Resistance	$\Omega(25^{\circ}\text{C})$	6.97
Inductance	mH(25°C)	8.0
Force constant		60
EMF constant	Vrms/rad/s	4.3
Maximum rated power consumption	W(25°C)	29.9
Motor constant	Nm/ $\sqrt{\text{W}}$	1.6
Moment of inertia	Kg.m ²	0.026
Motor weight	Kg	4.7
Positioning accuracy	Arc sec	± 30
Repeat accuracy	Arc sec	± 2.5
Effective stroke of motor		120°
Maximum axial load	N	2000
Maximum radial load	N.m	60
Axial runout	mm	0.005
Radial beat	mm	0.005



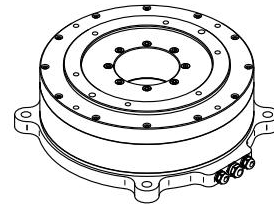
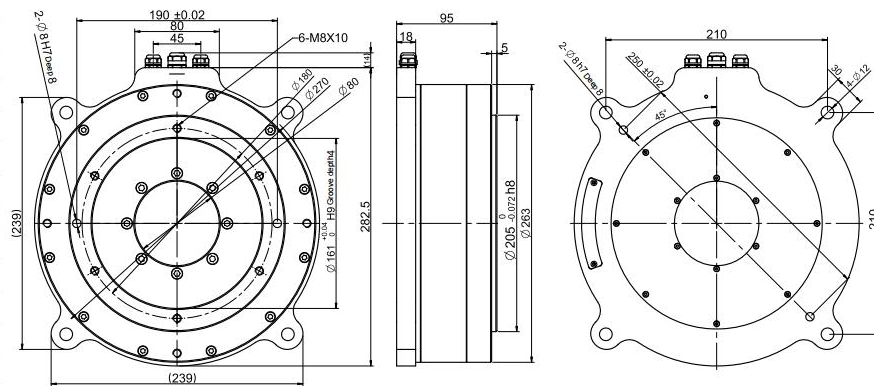
TaID-263

TaID-263 Series

Motor model

TaID-263095

Performance parameters	unit	TaID-263095
Continuous torque	N.m	45.0
Continuous current	Arms	7.1
Maximum torque	N.m	135
Maximum current	Arms	21.3
Torque constant	Nm/Arms	6.3
Resistance	$\Omega(25^{\circ}\text{C})$	2.3
Inductance	mH(25°C)	5.0
Force constant		40
EMF constant	Vrms/rad/s	5.2
Maximum rated power consumption	W(25°C)	221.4
Motor constant	Nm/ $\sqrt{\text{W}}$	7.9
Moment of inertia	Kg.m ²	0.076
Motor weight	Kg	18.5
Highest speed	RPM	200
Positioning accuracy	Arc sec	±30
Repeat accuracy	Arc sec	±2.5
Resolution ratio	sin/cos	16384
Maximum axial load	N	40000
Maximum radial load	N.m	400
Axial runout	mm	0.005
Radial beat	mm	0.005



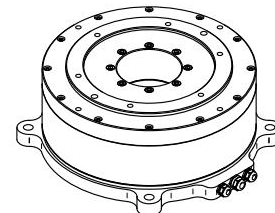
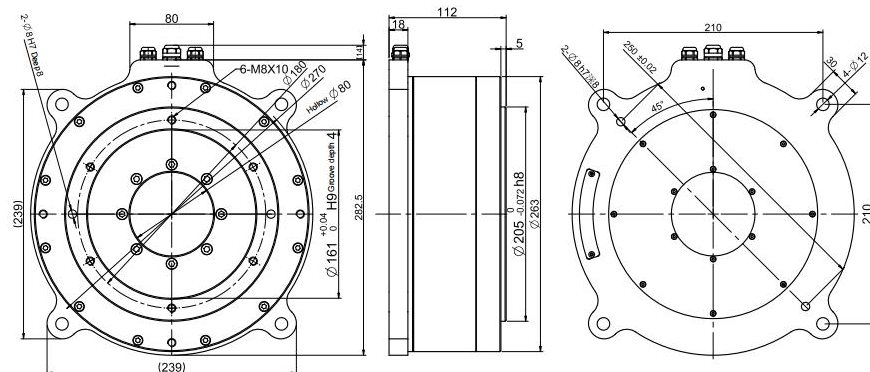
TaID-263

TaID-263 Series

Motor model

TaID-263112

Performance parameters	unit	TaID-263112
Continuous torque	N.m	95.0
Continuous current	Arms	7.1
Maximum torque	N.m	190
Maximum current	Arms	14.2
Torque constant	Nm/Arms	13.4
Resistance	$\Omega(25^{\circ}\text{C})$	3.4
Inductance	mH(25°C)	10.8
Force constant		40
EMF constant	Vrms/rad/s	10.9
Maximum rated power consumption	W(25°C)	327.3
Motor constant	Nm/ $\sqrt{\text{W}}$	3.0
Moment of inertia	Kg.m ²	0.22
Motor weight	Kg	28
Highest speed	RPM	150
Positioning accuracy	Arc sec	±30
Repeat accuracy	Arc sec	±2.5
Resolution ratio	sin/cos	2097152
Maximum axial load	N	40000
Maximum radial load	N.m	400
Axial runout	mm	0.008
Radial beat	mm	0.008



TAiD-263 Series

TAiD-263113

TAiD-263 Series

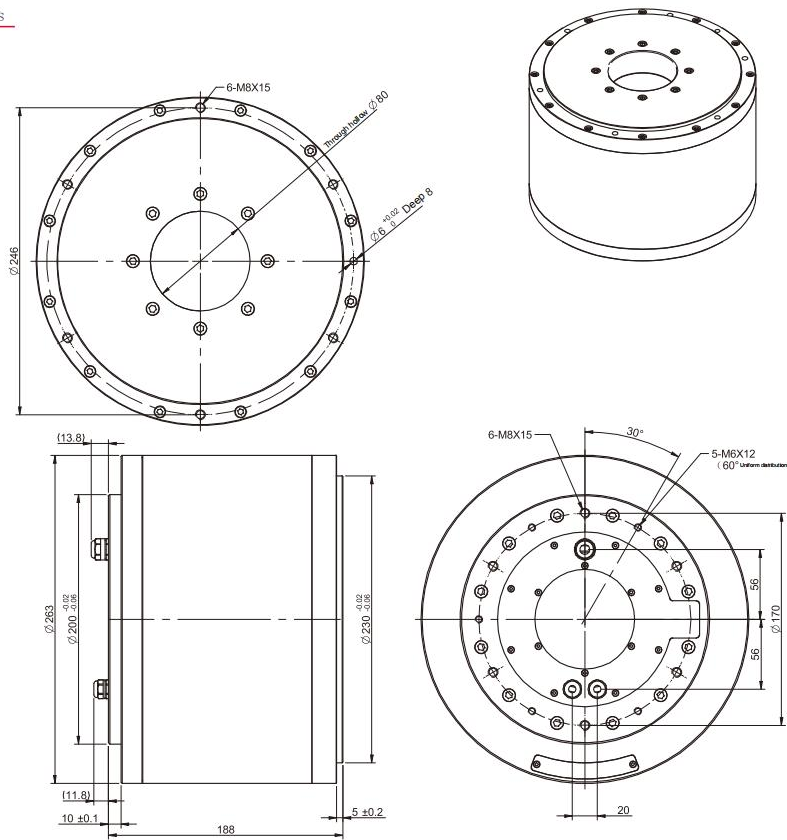
TAiD-263138

TAiD-263

TAiD-263 Series

Motor model
TAiD-263188

Performance parameters	unit	TAiD-263188
Continuous torque	N.m	250.0
Continuous current	Arms	7.1
Maximum torque	N.m	500
Maximum current	Arms	14.2
Torque constant	Nm/Arms	35.2
Resistance	$\Omega(25^{\circ}\text{C})$	6.7
Inductance	mH(25°C)	22.8
Force constant		40
EMF constant	Vrms/rad/s	28.7
Maximum rated power consumption	W(25°C)	644.9
Motor constant	Nm/ $\sqrt{\text{W}}$	7.9
Moment of inertia	Kg.m ²	0.21
Motor weight	Kg	48
Highest speed	RPM	100
Positioning accuracy	Arc sec	± 30
Repeat accuracy	Arc sec	± 2.5
Resolution ratio	sin/cos	16384
Maximum axial load	N	40000
Maximum radial load	N.m	400
Axial runout	mm	0.005
A radial beat	mm	0.005

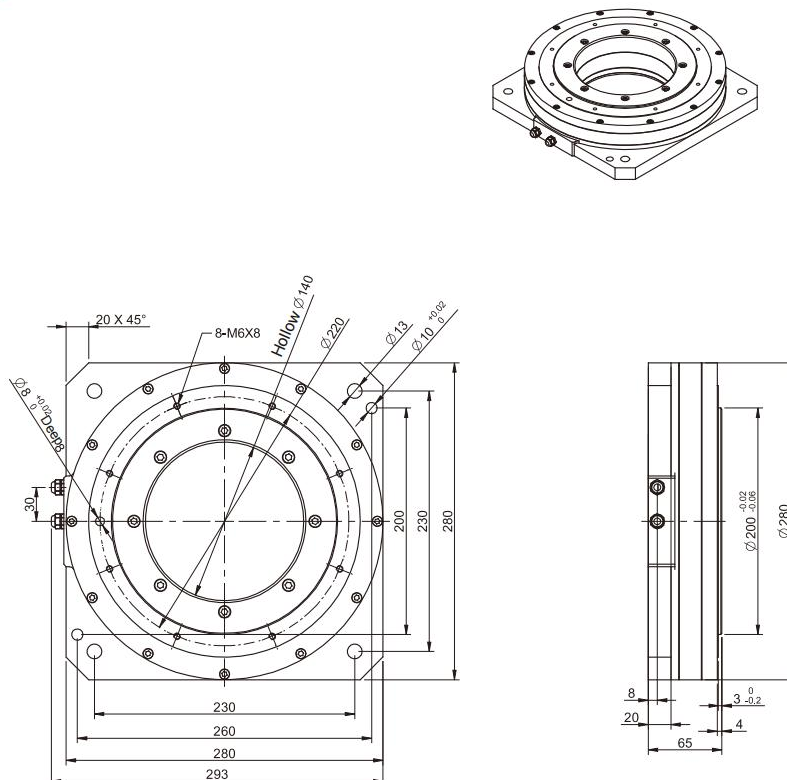


TAiD-280

TAiD-280 Series

Motor model
TAiD-280065

Performance parameters	unit	TAiD-280065
Continuous torque	N.m	20.3
Continuous current	Arms	1.5
Maximum torque	N.m	60.8
Maximum current	Arms	4.5
Torque constant	Nm/Arms	13.5
Resistance	$\Omega(25^{\circ}\text{C})$	6.97
Inductance	mH(25°C)	8.00
Force constant		60
EMF constant	Vrms/rad/s	11.0
Maximum rated power consumption	W(25°C)	29.9
Motor constant	Nm/ $\sqrt{\text{W}}$	1.6
Moment of inertia	Kg.m ²	0.06
Motor weight	Kg	11.2
Positioning accuracy	Arc sec	± 30
Repeat accuracy	Arc sec	± 2.5
Maximum no-load speed	Rpm	120
Maximum axial load	N	2000
Maximum radial load	N.m	60
Axial runout	mm	0.005
A radial beat	mm	0.005

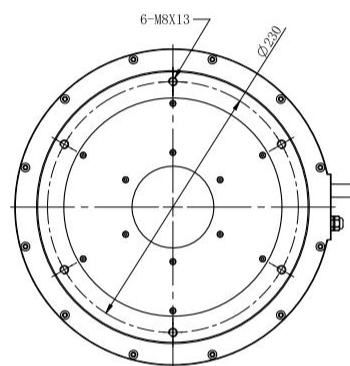
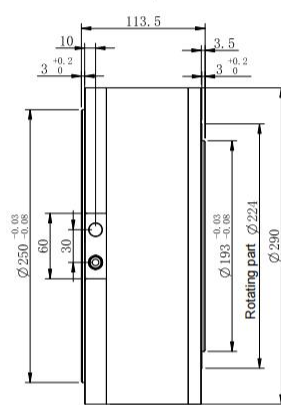
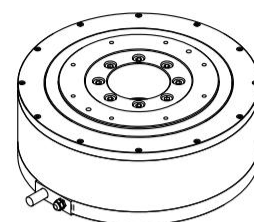
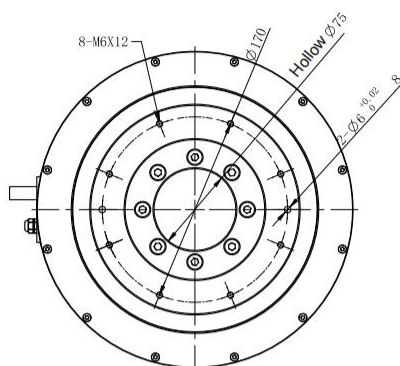


TAiDi-290

TAiDi-290 Series

Motor model TAiDi-290115

Performance parameters	unit	TAiDi-290115
Continuous torque	N.m	60.4
Continuous current	Arms	8.5
Maximum torque	N.m	181
Maximum current	Arms	25.5
Torque constant	Nm/Arms	7.1
Resistance	$\Omega(25^{\circ}\text{C})$	1.1
Inductance	mH(25°C)	3.5
Force constant		50
EMF constant	Vrms/rad/s	5.8
Maximum rated power consumption	W(25°C)	151.8
Motor constant	Nm/ $\sqrt{\text{W}}$	4.9
Moment of inertia	Kg.m ²	0.075
Motor weight	Kg	31.5
Highest speed	RPM	300
Positioning accuracy	Arc sec	± 15
Repeat accuracy	Arc sec	± 1.5
Resolution ratio	sin/cos	16384
Maximum axial load	N	20000
Maximum radial load	N.m	300
Axial runout	mm	0.005
Radial beat	mm	0.005

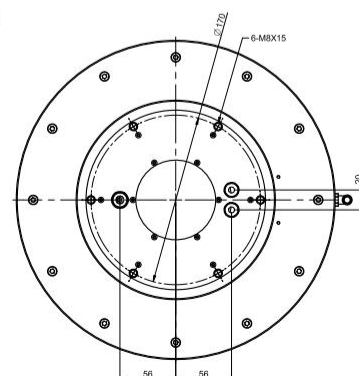
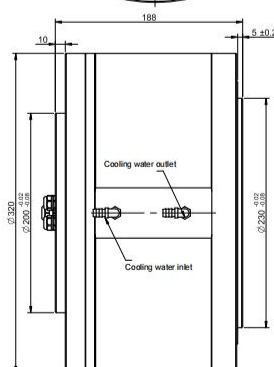
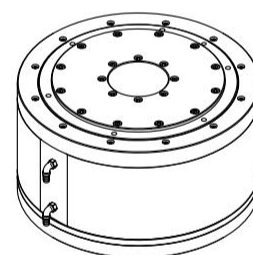
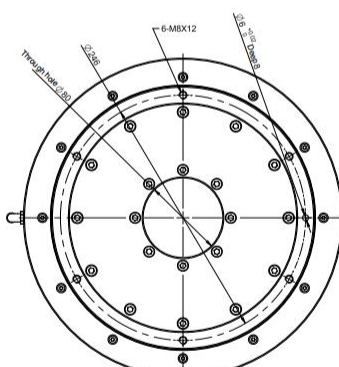


TAiDi-320

TAiDi-320 Series

Motor model TAiDi-320188

Performance parameters	unit	TAiDi-320188	
		自然冷却 Natural Cooling	水冷却 Water cooling
Continuous torque	N.m	180.0	360.0
Continuous current	Arms	9	18
Maximum torque	N.m	540	720
Maximum current	Arms	27	36
Torque constant	Nm/Arms	20	
Resistance	$\Omega(25^{\circ}\text{C})$	2.4	
Inductance	mH(25°C)	12	
Force constant		60	
EMF constant	Vrms/rad/s	16.3	
Maximum rated power consumption	W(25°C)	371.2	1484.8
Motor constant	Nm/ $\sqrt{\text{W}}$	9.3	9.3
Moment of inertia	Kg.m ²	0.15	
Motor weight	Kg	56	
Highest speed	RPM	150	
Positioning accuracy	Arc sec	± 25	
Repeat accuracy	Arc sec	± 1.5	
Resolution ratio	sin/cos	16384	
Maximum axial load	N	15000	
Maximum radial load	N.m	300	
Axial runout	mm	0.005	
Radial beat	mm	0.005	

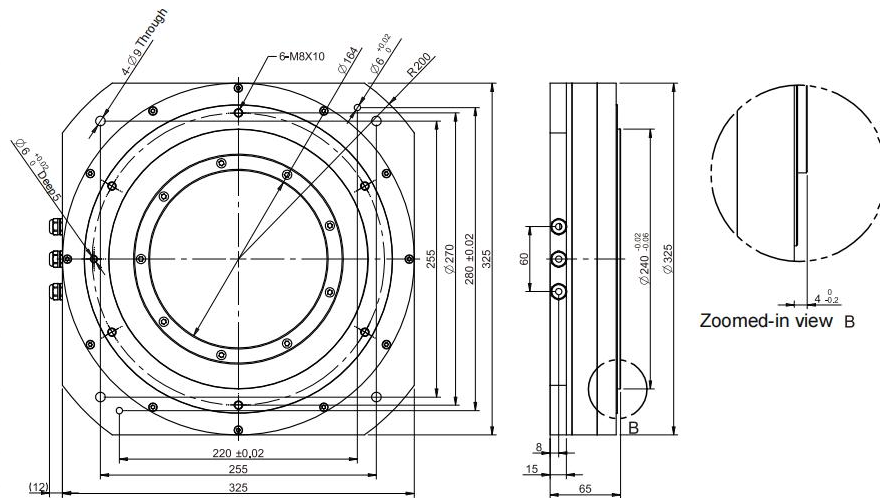


TAiD-325

TAiD-325 Series

Motor model TAiD-325065

Performance parameters	unit	TAiD-325065
Continuous torque	N.m	30.0
Continuous current	Arms	1.1
Maximum torque	N.m	90.0
Maximum current	Arms	3.4
Torque constant	Nm/Arms	27.3
Resistance	$\Omega(25^{\circ}\text{C})$	18.6
Inductance	mH(25°C)	42.4
Force constant		50
EMF constant	Vrms/rad/s	22.3
Maximum rated power consumption	W(25°C)	43.0
Motor constant	Nm/ $\sqrt{\text{W}}$	4.6
Moment of inertia	Kg.m ²	0.12
Motor weight	Kg	15.5
Highest speed	RPM	120
Positioning accuracy	Arc sec	± 30
Repeat accuracy	Arc sec	± 2.5
Resolution ratio	sin/cos	31488
Maximum axial load	N	50000
Maximum radial load	N.m	300
Axial runout	mm	0.008
A radial beat	mm	0.008

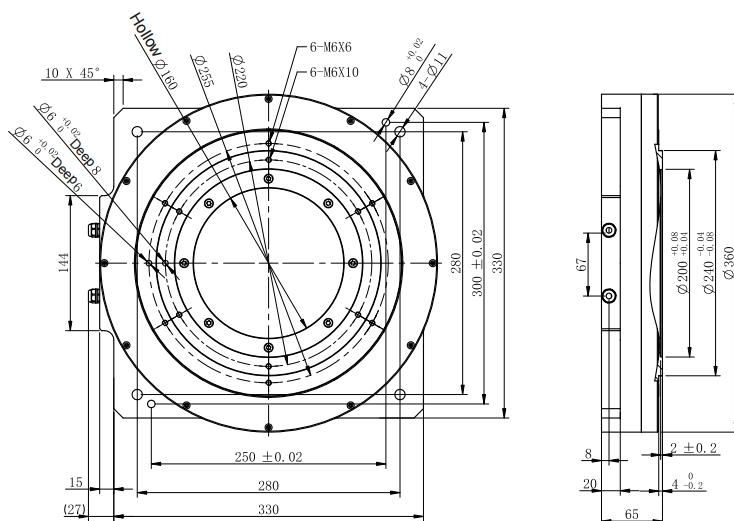


TAiDi-360

TAiDi-360 Series

Motor model TAiDi-360065

Performance parameters	unit	TAiDi-360065
Continuous torque	N.m	30.0
Continuous current	Arms	1.5
Maximum torque	N.m	90.0
Maximum current	Arms	4.5
Torque constant	Nm/Arms	20.0
Resistance	$\Omega(25^{\circ}\text{C})$	18.6
Inductance	mH(25°C)	42.4
Force constant		60
EMF constant	Vrms/rad/s	16.3
Maximum rated power consumption	W(25°C)	79.9
Motor constant	Nm/ $\sqrt{\text{W}}$	4.6
Moment of inertia	Kg.m ²	0.097
Motor weight	Kg	20.5
Highest speed	RPM	120
Positioning accuracy	Arc sec	± 30
Repeat accuracy	Arc sec	± 2.5
Resolution ratio	sin/cos	31488
Maximum axial load	N	50000
Maximum radial load	N.m	300
Axial runout	mm	0.008
A radial beat	mm	0.008

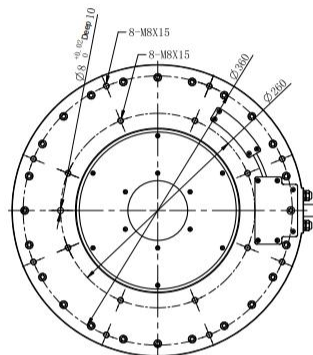
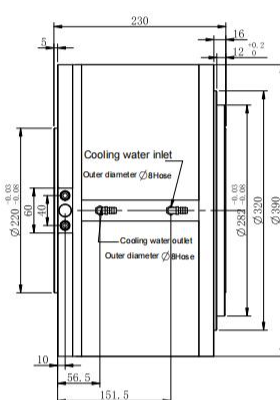
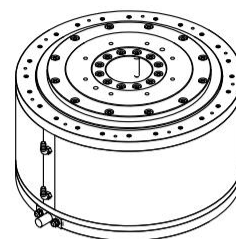
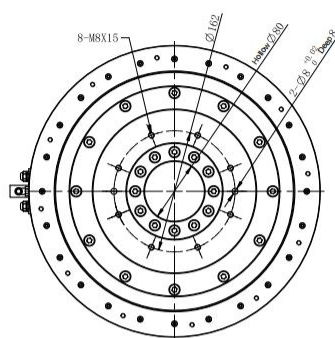


TAiDi-380

TAiDi-380 Series

Motor model TAiDi-380230

性能参数 Performance parameters	单位 unit	TAiDi-380230	
连续转矩 Continuous torque	N.m	300.0	600.0
连续电流 Continuous current	Arms	16	32
峰值转矩 Maximum torque	N.m	1406	1406
峰值电流 Maximum current	Arms	75	75
转矩常数 Torque constant	Nm/Arms	18.75	
电阻(otp) Resistance	$\Omega(25^{\circ}\text{C})$	1.1	
电感(otp) Inductance	mH(25 $^{\circ}$ C)	3.5	
极数 Force constant		60	
反电势常数(otp) EMF constant	Vrms/rad/s	15.3	
最大额定功耗 Maximum rated power consumption	W(25 $^{\circ}$ C)	537.7	2150.9
电机常数 Motor constant	Nm/ $\sqrt{\text{W}}$	12.9	12.9
转动惯量 Moment of inertia	Kg.m ²	0.53	
电机重量 Motor weight	Kg	81	
最高转速 Highest speed	RPM	150	
定位精度 Positioning accuracy	Arc sec	± 25	
重复精度 Repeat accuracy	Arc sec	± 1.5	
分辨率 Resolution ratio	sin/cos	18000	
最大轴向载荷 Maximum axial load	N	15000	
最大径向载荷 Maximum radial load	N.m	300	
轴向偏摆 Axial runout	mm	0.005	
径向偏摆 Radial beat	mm	0.005	

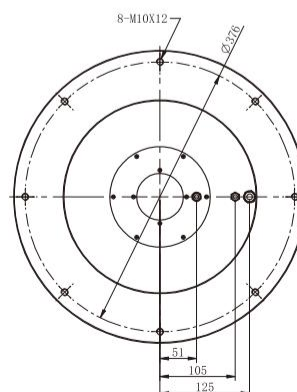
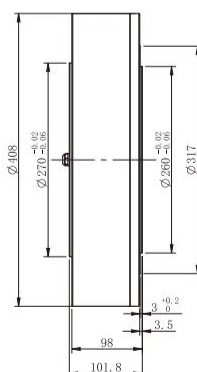
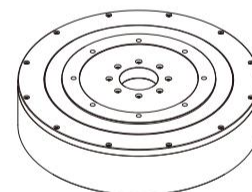
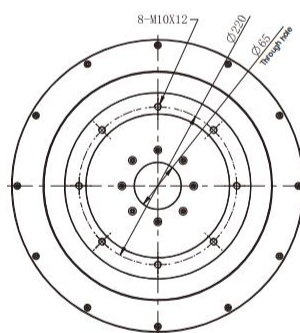


TAiDi-408

TAiDi-408 Series

Motor model TAiDi-408102

Performance parameters	unit	TAiDi-408102
Continuous torque	N.m	249.6
Continuous current	Arms	24.0
Maximum torque	N.m	644.8
Maximum current	Arms	62
Torque constant	Nm/Arms	10.4
Resistance	$\Omega(25^{\circ}\text{C})$	0.9
Inductance	mH(25 $^{\circ}$ C)	6.2
Force constant		40
EMF constant	Vrms/rad/s	8.5
Maximum rated power consumption	W(25 $^{\circ}$ C)	
Motor constant	Nm/ $\sqrt{\text{W}}$	17.6
Moment of inertia	Kg.m ²	0.24
Motor weight	Kg	42
Highest speed	RPM	120
Positioning accuracy	Arc sec	± 20
Repeat accuracy	Arc sec	± 1.5
Resolution ratio	sin/cos	16384
Maximum axial load	N	40000
Maximum radial load	N.m	400
轴向偏摆 Axial runout	mm	0.008
径向偏摆 Radial beat	mm	0.008

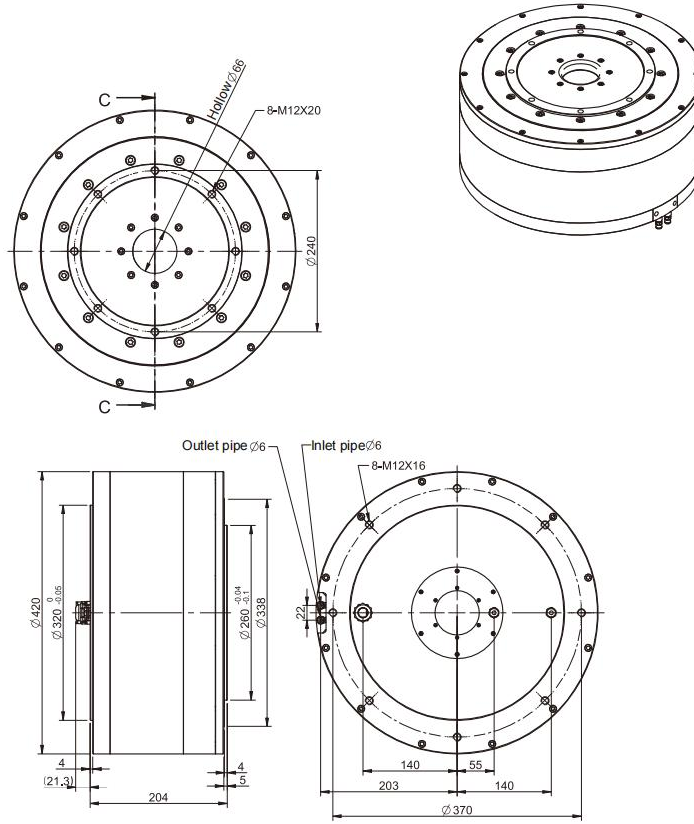


TAiDi-420

TAiDi-420 Series

Motor model TAiDi-420204

Performance parameters	unit	TAiDi-420204
Continuous torque	N.m	500.0
Continuous current	Arms	25.0
Maximum torque	N.m	1250.0
Maximum current	Arms	63.5
Torque constant	Nm/Arms	20.3
Resistance	$\Omega(25^{\circ}\text{C})$	0.9
Inductance	mH(25°C)	6.2
Force constant		40
EMF constant	Vrms/rad/s	16.6
Maximum rated power consumption	W(25°C)	1074.1
Motor constant	Nm/ $\sqrt{\text{W}}$	17.6
Moment of inertia	Kg.m ²	1.02
Motor weight	Kg	90
Highest speed	RPM	150
Positioning accuracy	Arc sec	± 30
Repeat accuracy	Arc sec	± 2.5
Resolution ratio	sin/cos	16384
Maximum axial load	N	80000
Maximum radial load	N.m	2500
Axial runout	mm	0.05
Radial beat	mm	0.05

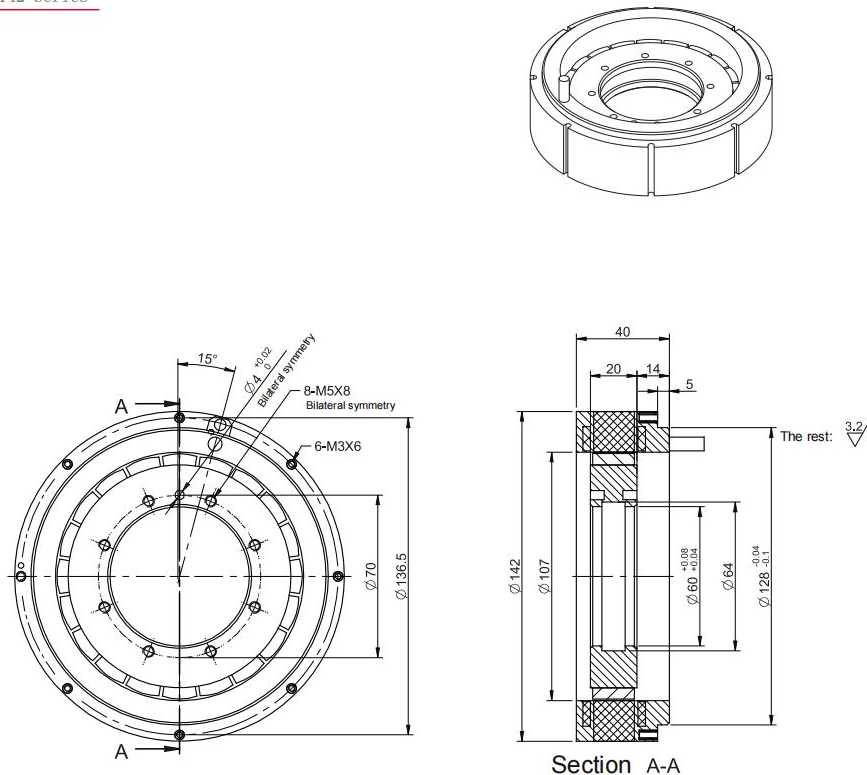


TAiDNi-142

TAiDNi-142 Series

Motor model TAiDNi142-040

Performance parameters	unit	TAiDNi142-040
Continuous torque	N.m	5.6
Continuous current	Arms	2.0
Maximum torque	N.m	12.6
Maximum current	Arms	4.5
Torque constant	Nm/Arms	2.8
Resistance	$\Omega(25^{\circ}\text{C})$	5.6
Inductance	mH(25°C)	16.8
Force constant		20
EMF constant	Vrms/rad/s	2.3
Maximum rated power consumption	W(25°C)	42.8
Motor constant	Nm/ $\sqrt{\text{W}}$	1.7
Moment of inertia	Kg.m ²	0.0017
Motor weight	Kg	2.3
Highest speed	RPM	380

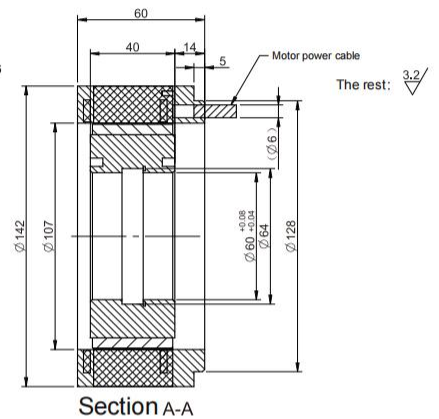
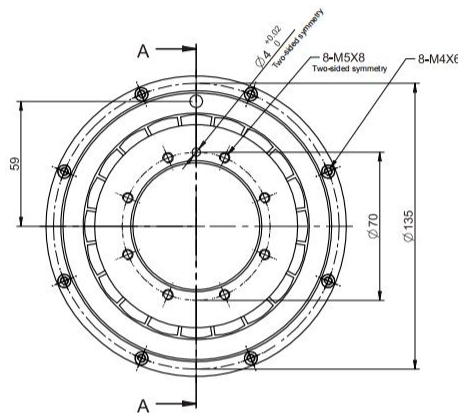


TAiDNI-142

TAiDNI-142 Series

Motor model TAiDNI142-060

Performance parameters	unit	TAiDNI142-060
Continuous torque	N.m	9.5
Continuous current	Arms	2.0
Maximum torque	N.m	21.6
Maximum current	Arms	4.5
Torque constant	Nm/Arms	4.8
Resistance	$\Omega(25^{\circ}\text{C})$	8.4
Inductance	mH(25°C)	25.2
Force constant		20
EMF constant	Vrms/rad/s	3.9
Maximum rated power consumption	W(25°C)	64.2
Motor constant	Nm/ $\sqrt{\text{W}}$	1.7
Moment of inertia	Kg.m ²	0.003
Motor weight	Kg	3.3
Highest speed	RPM	350

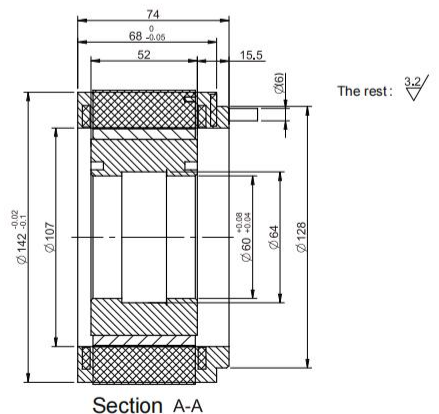
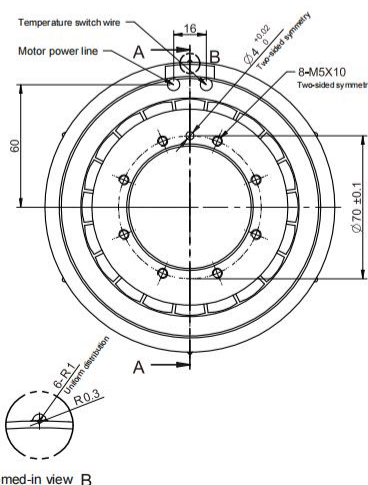


TAiDNI-142

TAiDNI-142 Series

Motor model TAiDNI142-080

Performance parameters	unit	TAiDNI142-080
Continuous torque	N.m	16.0
Continuous current	Arms	2.0
Maximum torque	N.m	36.0
Maximum current	Arms	4.5
Torque constant	Nm/Arms	8.0
Resistance	$\Omega(25^{\circ}\text{C})$	14.1
Inductance	mH(25°C)	42.0
Force constant		20
EMF constant	Vrms/rad/s	6.5
Maximum rated power consumption	W(25°C)	107.7
Motor constant	Nm/ $\sqrt{\text{W}}$	1.7
Moment of inertia	Kg.m ²	0.004
Motor weight	Kg	5.2
Highest speed	RPM	380
Temperature control switch (detection point)		90°C

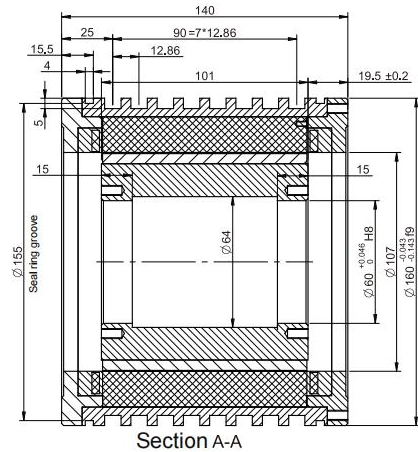
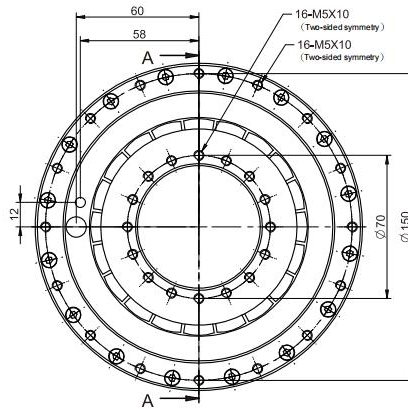


TAiDNI-160

TAiDNI-160 Series

Motor model
TAiDNI160-140

Performance parameters	unit	TAiDNI160-140	
		Natural Cooling	Water cooling
Continuous torque	N.m	25.0	63.0
Continuous current	Arms	4.6	11.5
Maximum torque	N.m	120.0	
Maximum current	Arms	27.0	
Torque constant	Nm/Arms	5.48	
Resistance	$\Omega(25^{\circ}\text{C})$	3.0	
Inductance	mH(25°C)	10.0	
Force constant		20	
EMF constant	Vrms/rad/s	4.5	
Maximum rated power consumption	W(25°C)	121.2	757.6
Motor constant	Nm/ $\sqrt{\text{W}}$	2.3	
Moment of inertia	Kg.m ²	0.0082	
Motor weight	Kg	11.9	
Highest speed	RPM	800	
Cooling water flow	l/min	/	4.6 Min
Cooling water pressure	bar	/	1 Max

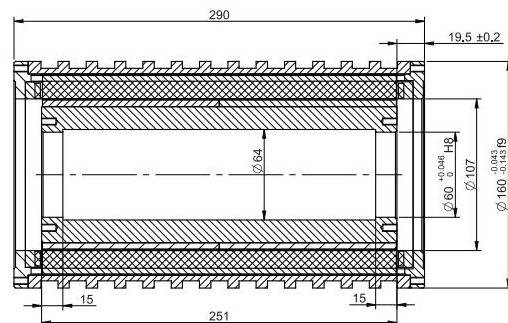
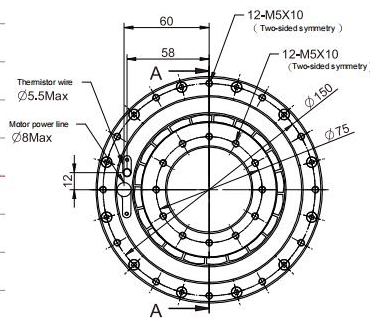


TAiDNI-160

TAiDNI-160 Series

Motor model
TAiDNI160-290

Performance parameters	unit	TAiDNI160-290
Continuous torque	N.m	69.9
Continuous current	Arms	5.1
Maximum torque	N.m	139.7
Maximum current	Arms	10.2
Torque constant	Nm/Arms	13.70
Resistance	$\Omega(25^{\circ}\text{C})$	7.5
Inductance	mH(25°C)	25.0
Force constant		20
EMF constant	Vrms/rad/s	11.2
Maximum rated power consumption	W(25°C)	372.5
Motor constant	Nm/ $\sqrt{\text{W}}$	3.6
Moment of inertia	Kg.m ²	0.02
Motor weight	Kg	27.5



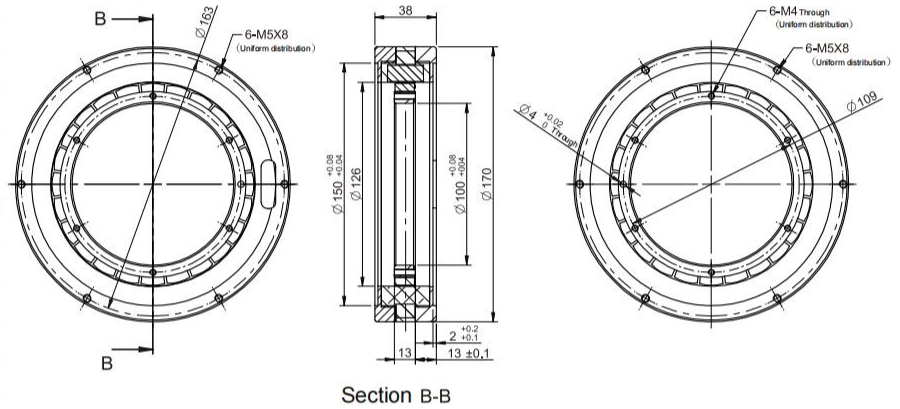
Section A-A

TAiDNI-170

TAiDNI-170 Series

Motor model TAiDNI170-038

Performance parameters	unit	TAiDNI170-038
Continuous torque	N.m	6.0
Continuous current	Arms	3.2
Maximum torque	N.m	12.0
Maximum current	Arms	6.5
Torque constant	Nm/Arms	1.8
Resistance	$\Omega(25^{\circ}\text{C})$	2.8
Inductance	mH(25°C)	-
Force constant		24
EMF constant	Vrms/rad/s	1.5
Maximum rated power consumption	W(25°C)	54.7
Motor constant	Nm/ $\sqrt{\text{W}}$	2.0
Moment of inertia	Kg.m ²	0.001
Motor weight	Kg	2
Highest speed	RPM	600

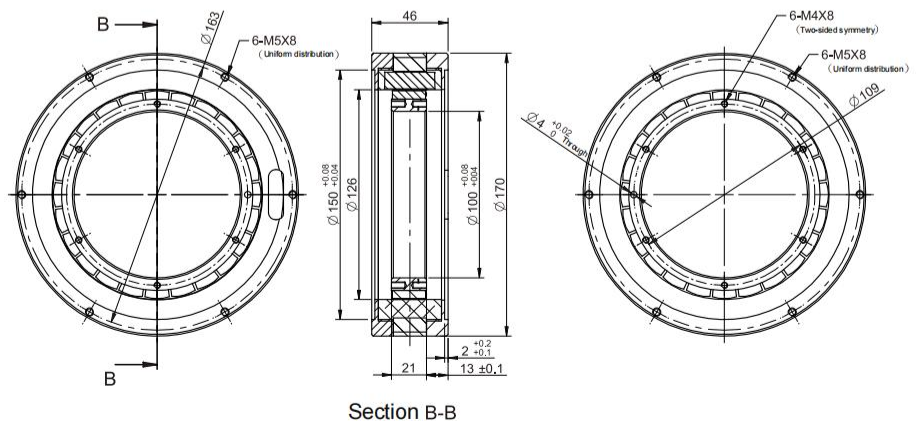


TAiDNI-170

TAiDNI-170 Series

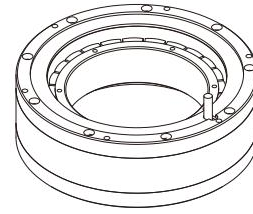
Motor model TAiDNI170-046

Performance parameters	unit	TAiDNI170-046
Continuous torque	N.m	10.0
Continuous current	Arms	3.2
Maximum torque	N.m	20.0
Maximum current	Arms	6.5
Torque constant	Nm/Arms	3.1
Resistance	$\Omega(25^{\circ}\text{C})$	4.6
Inductance	mH(25°C)	-
Force constant		24
EMF constant	Vrms/rad/s	2.5
Maximum rated power consumption	W(25°C)	89.9
Motor constant	Nm/ $\sqrt{\text{W}}$	2.0
Moment of inertia	Kg.m ²	0.002
Motor weight	Kg	2.9
Highest speed	RPM	450

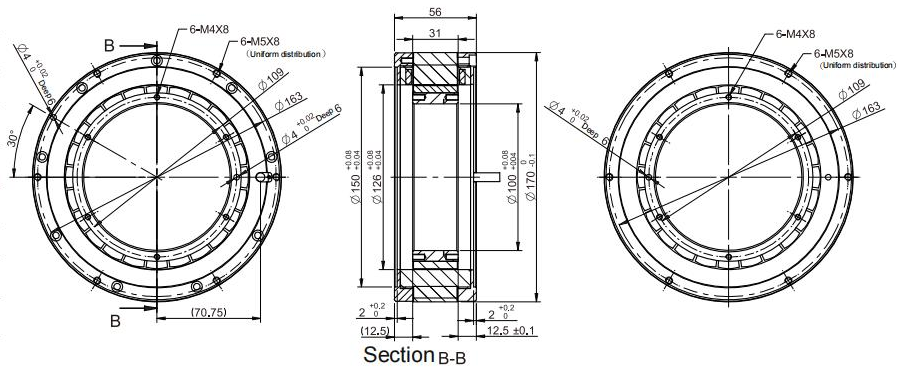


TAiDNI-170

TAiDNI-170 Series

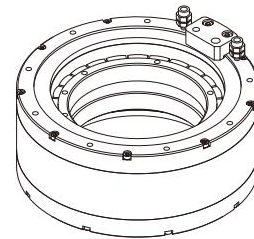
Motor model
TAiDNI170-056

Performance parameters	unit	TAiDNI170-056
Continuous torque	N.m	15.0
Continuous current	Arms	3.2
Maximum torque	N.m	30.0
Maximum current	Arms	6.5
Torque constant	Nm/Arms	4.6
Resistance	$\Omega(25^{\circ}\text{C})$	6.5
Inductance	mH(25°C)	-
Force constant		24
EMF constant	Vrms/rad/s	3.8
Maximum rated power consumption	W(25°C)	127.1
Motor constant	Nm/ $\sqrt{\text{W}}$	2.0
Moment of inertia	Kg.m ²	0.002
Motor weight	Kg	3.9
Highest speed	RPM	350

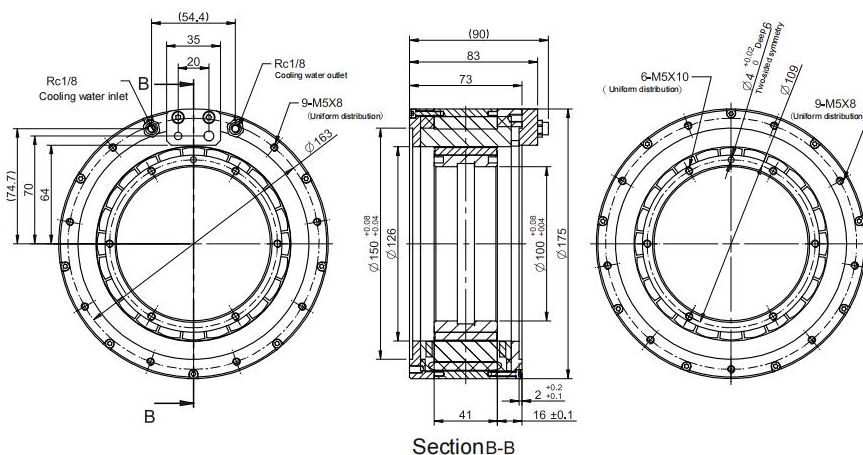


TAiDNI-175

TAiDNI-175 Series

Motor model
TAiDNI175-071

Performance parameters	unit	TAiDNI175-071
Continuous torque	N.m	28 (水冷)
Continuous current	Arms	3.2
Maximum torque	N.m	56.0
Maximum current	Arms	6.5
Torque constant	Nm/Arms	8.7
Resistance	$\Omega(25^{\circ}\text{C})$	12.8
Inductance	mH(25°C)	35.0
Force constant		24
EMF constant	Vrms/rad/s	7.1
Maximum rated power consumption	W(25°C)	250.3
Motor constant	Nm/ $\sqrt{\text{W}}$	2.0
Moment of inertia	Kg.m ²	0.004
Motor weight	Kg	5.6
Highest speed	RPM	200

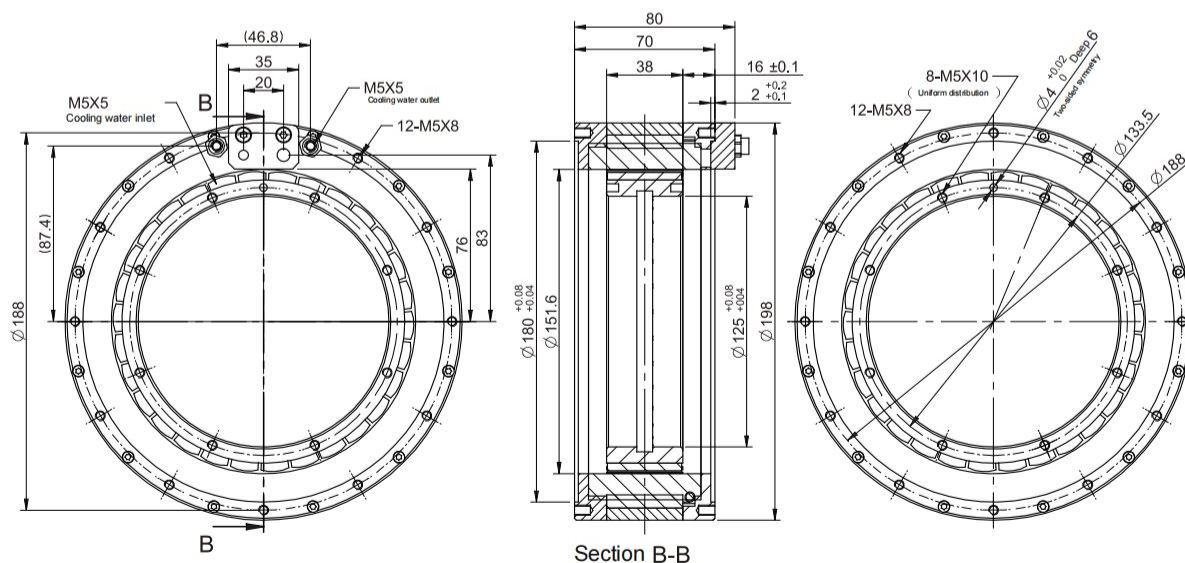
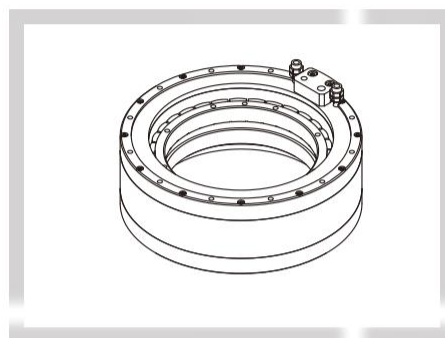


TAiDNI-200

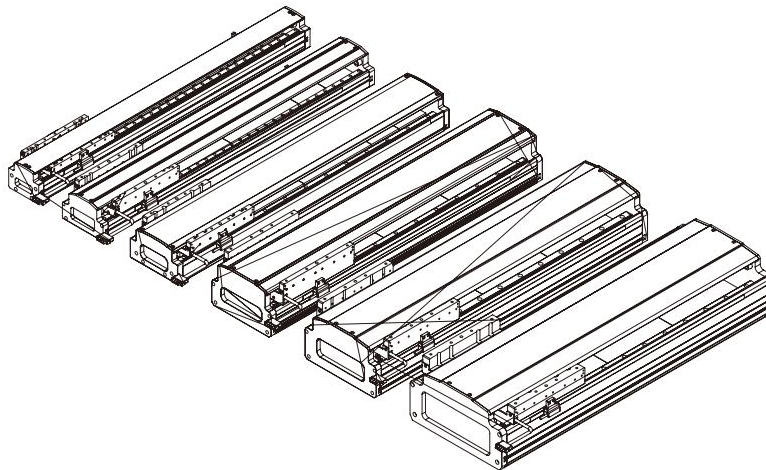
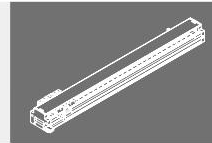
TAiDNI-200 Series

Motor model
TAiDNI200-070

Performance parameters	unit	TAiDNI200-070
Continuous torque	N.m	45 (水冷)
Continuous current	Arms	4.5
Maximum torque	N.m	74.0
Maximum current	Arms	7.4
Torque constant	Nm/Arms	10.0
Resistance	Ω (25°C)	12.9
Inductance	mH(25°C)	26.0
Force constant		30
EMF constant	Vrms/rad/s	8.2
Maximum rated power consumption	W(25°C)	498.8
Motor constant	Nm/ $\sqrt{W}$	2.3
Moment of inertia	Kg.m ²	0.0067
Motor weight	Kg	5.7
Highest speed	RPM	160



Linear Motor Module Aluminium profile Products



Aluminum profile linear motor modules are the most common motion system for linear motor applications. They excel in long-stroke movements, single-axis multiple-mover applications, high-speed and high-acceleration movements, and applications requiring positional accuracy, making them suitable for handling, positioning, and alignment tasks. They can also be directly and easily assembled into XY composite motion systems.

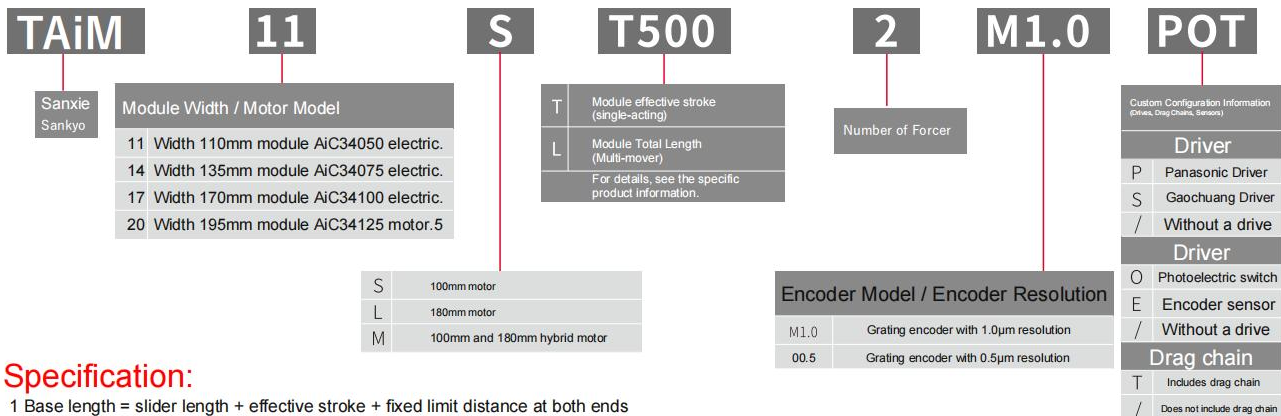
Product Features:

- > Repeatability: $\pm 0.5 - \pm 2 \mu\text{m}$.
- > Absolute accuracy: $\leq \pm 25 \mu\text{m}/500 \text{ mm}$.
- > High-speed motion: 3 m/s – 5 m/s, high acceleration $> 2\text{G}$.
- > Load capacity: 6 – 120 kg.
- > Standard products up to 4.5 – 6 m, custom lengths available.
- > Single-axis multi-actuator motion.
- > Combined XY composite motion system.

Application field:

- > Semiconductors, camera modules, optical components.
- > Laser marking, cutting, welding.
- > Non-standard automation: optoelectronic LCM, lithium batteries, photovoltaics.
- > PCB and FPC process applications.
- > Automobile, photovoltaic, and large-panel handling.

Module naming rules and specifications

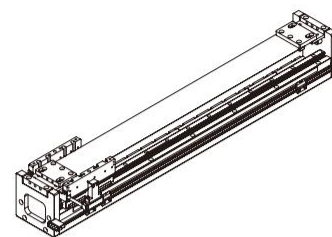


Specification:

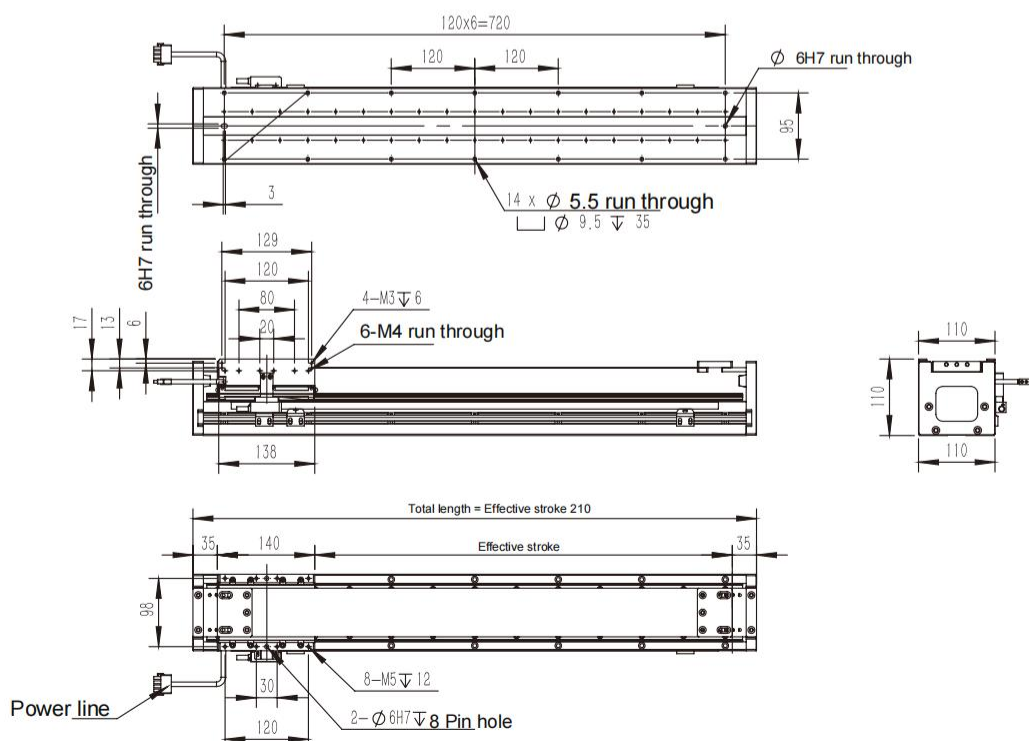
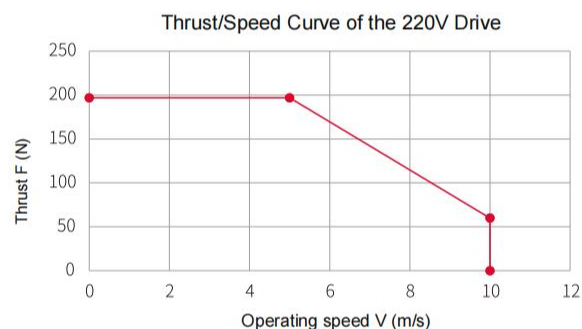
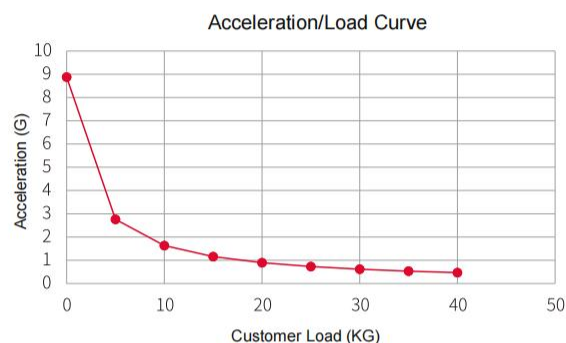
- 1 Base length = slider length + effective stroke + fixed limit distance at both ends
 2 Module total length = slider length + effective stroke + fixed limit distance at both ends + end cover plate length on both sides
 # Slider length = $N \times \text{slider length} + (N-1) \times \text{fixed limit distance between sliders}$
 # Fixed limit distance at both ends = 40mm
 # Fixed limit distance between sliders = 20mm

TAiM11-S

Motor model
■ TAiC34050-096



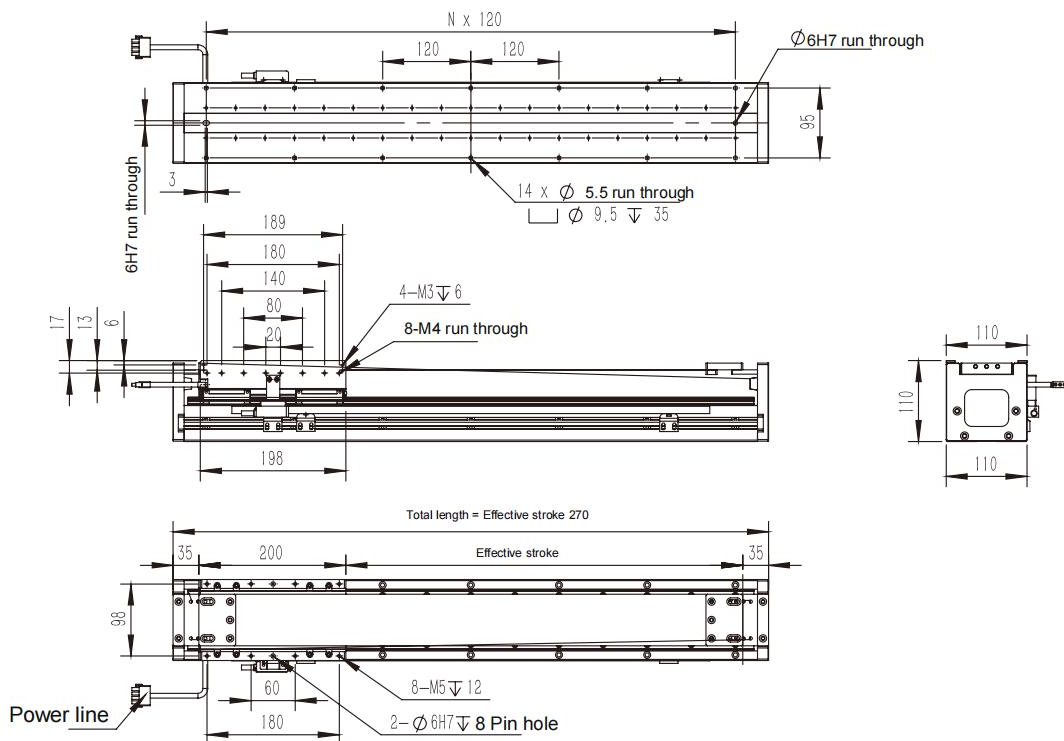
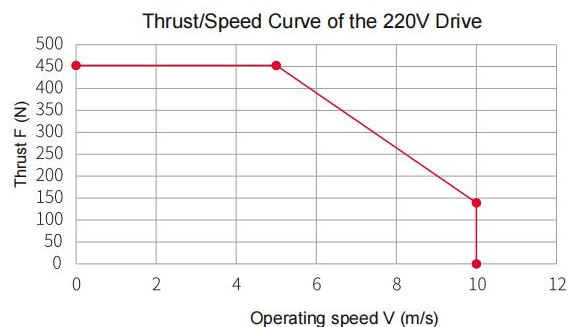
Performance parameters			
Fp/lp/Vc	196.8N	8.2Arms	5m/s
Fc/lp/Vmax	60N	2.5Arms	10m/s
Repeatability	±0.5-±2um		
Straightness	±20um/M		
Payload capability	40kg(Up to acceleration0.5G)		
Characteristics			
Module Base	Length	4-6M	
	Quality	7.7kg/m	
	Growth unit	40mm	
	Minimum value	260mm	
Moving table	Length	140mm	
	Quality	2.26kg	
safety distance definition	20mm		
Length of end cover	Length	15mm*2	
	Quality	0.33kg*2	
Configuration information			
Guide way	Standard THK SHS 15V / (other options available on request)		
Encoder	Standard 1.0um resolution magnetic scale (other requirements optional)		
Sensor	Standard magnetic grating encoder sensor (other options such as photoelectric switches are available)		



Motor model

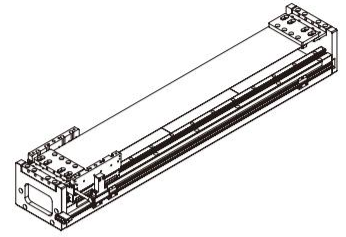
The graph, titled "Acceleration/Load Curve", plots Acceleration in G on the y-axis (0 to 16) against Customer Load in KG on the x-axis (0 to 100). The curve shows a rapid decrease in acceleration as load increases, starting at 14G for 0KG and leveling off near 0.5G for loads above 60KG.

Customer Load (KG)	Acceleration (G)
0	14.0
5	5.5
10	3.5
15	2.5
20	2.0
25	1.5
30	1.2
35	1.0
40	0.9
45	0.8
50	0.7
55	0.6
60	0.5
65	0.5
70	0.5
75	0.5
80	0.5
85	0.5
90	0.5

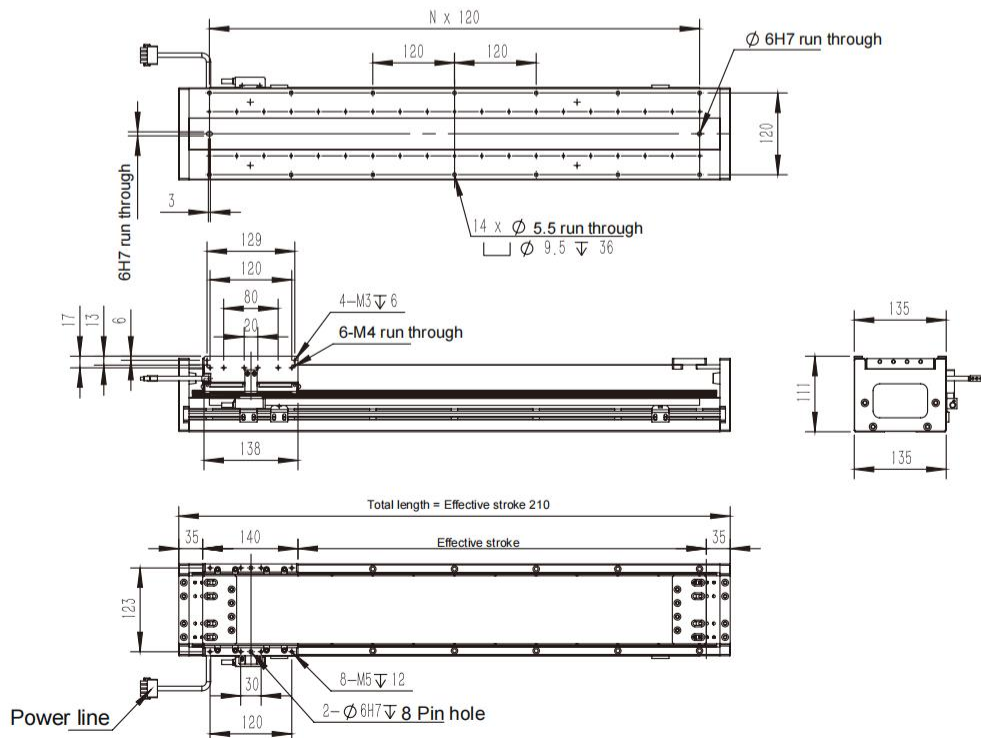
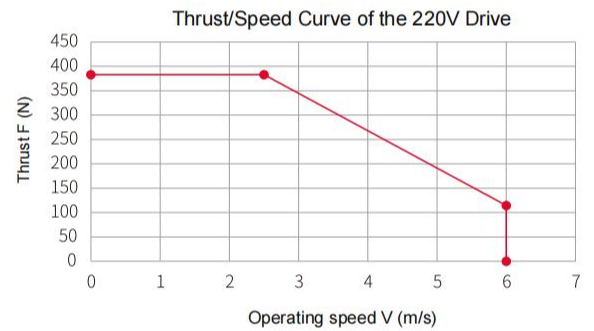
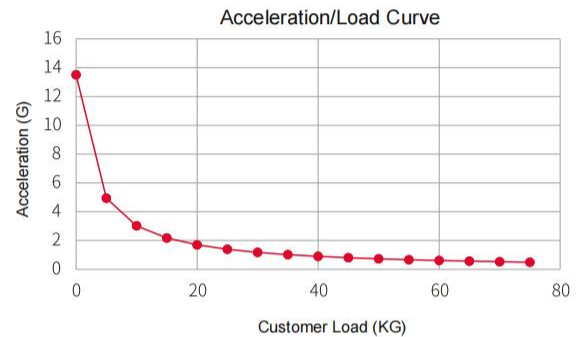


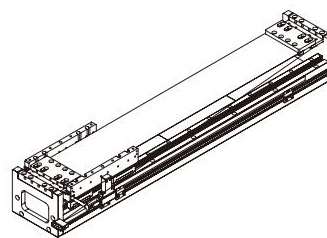
TAiM14-S

Motor model
■ TAiC34075-096



Performance parameters			
Fp/lp/Vc	382.8N	8.7Arms	2.5m/s
Fc/lp/Vmax	114.4N	2.6Arms	6m/s
Repeatability	±0.5-±2um		
Straightness	±20um/M		
Payload capability	50kg(Up to acceleration0.5G)		
Characteristics			
Module Base	Length	4-6M	
	Quality	9.1kg/m	
	Growth unit	40mm	
	Minimum value	260mm	
Moving table	Length	140mm	
	Quality	2.89kg	
safety distance definition	20mm		
Length of end cover	Length	15mm*2	
	Quality	0.4kg*2	
Configuration information			
Guide way	Standard THK SHS 15V / (other options available on request)		
Encoder	Standard 1.0um resolution magnetic scale (other requirements optional)		
Sensor	Standard magnetic grating encoder sensor (other options such as photoelectric switches are available)		





Acceleration/Load Curve

This graph shows the relationship between Customer Load (KG) on the x-axis and Acceleration (G) on the y-axis. The acceleration starts at approximately 24.5 G at 0 KG and decreases sharply, leveling off at about 0.5 G for loads greater than 100 KG.

Customer Load (KG)	Acceleration (G)
0	24.5
5	10.0
10	6.0
15	4.5
20	3.5
25	3.0
30	2.5
35	2.0
40	1.8
45	1.5
50	1.5
55	1.5
60	1.5
65	1.5
70	1.5
75	1.5
80	1.5
85	1.5
90	1.5
95	1.5
100	1.0
110	1.0
120	1.0
130	1.0
140	1.0
150	1.0
160	1.0
170	1.0

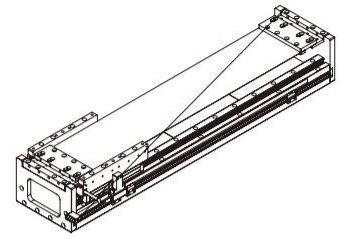
Thrust/Speed Curve of the 220V Drive

This graph shows the relationship between Operating speed V (m/s) on the x-axis and Thrust F (N) on the y-axis. The thrust is constant at approximately 830 N for speeds up to 2.5 m/s, then decreases linearly to about 200 N at 6 m/s, and finally drops to 0 N at 6 m/s.

Operating speed V (m/s)	Thrust F (N)
0	830
2.5	830
6	200
6	0

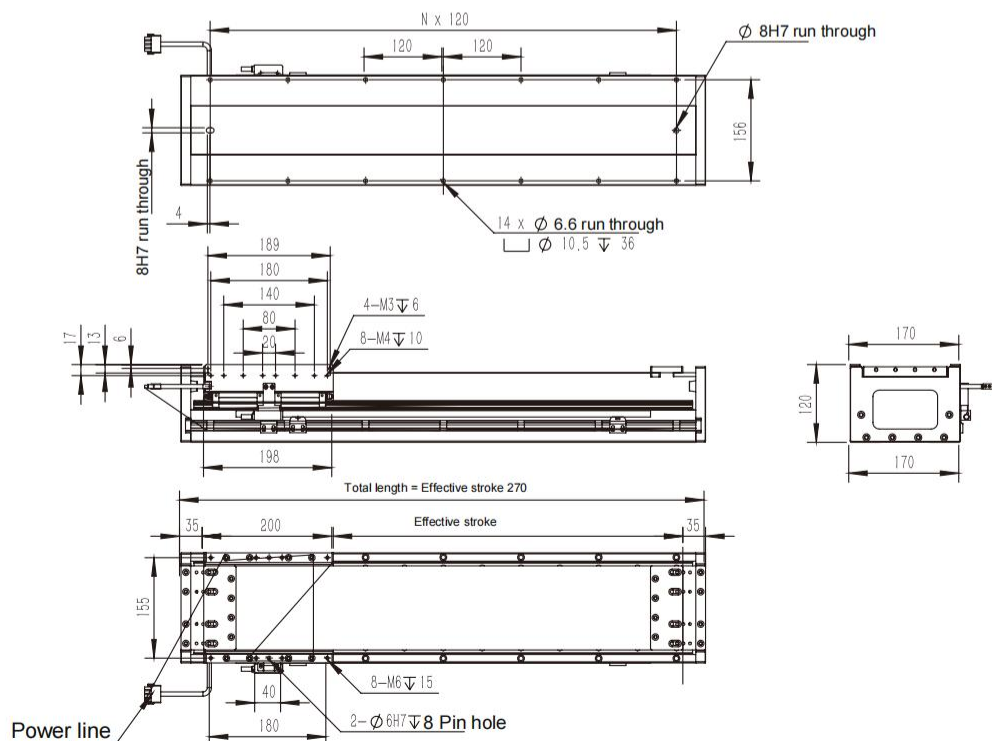


Motor model
■ TAI C34100-096



The graph shows the relationship between Thrust F (N) and Operating speed V (m/s) for a 220V drive. The thrust is constant at 620 N for speeds up to 1.8 m/s. Beyond 1.8 m/s, the thrust decreases linearly, reaching 200 N at 4.0 m/s. At 4.2 m/s, the thrust drops to 0 N.

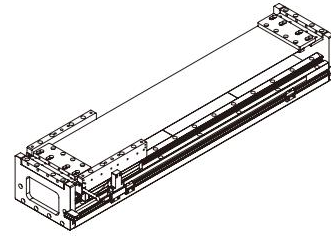
Operating speed V (m/s)	Thrust F (N)
0	620
1.8	620
4.0	200
4.2	0



TAiM17-L series

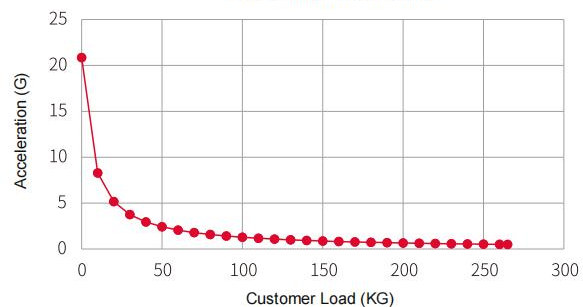
Motor model

TAiC34100-176

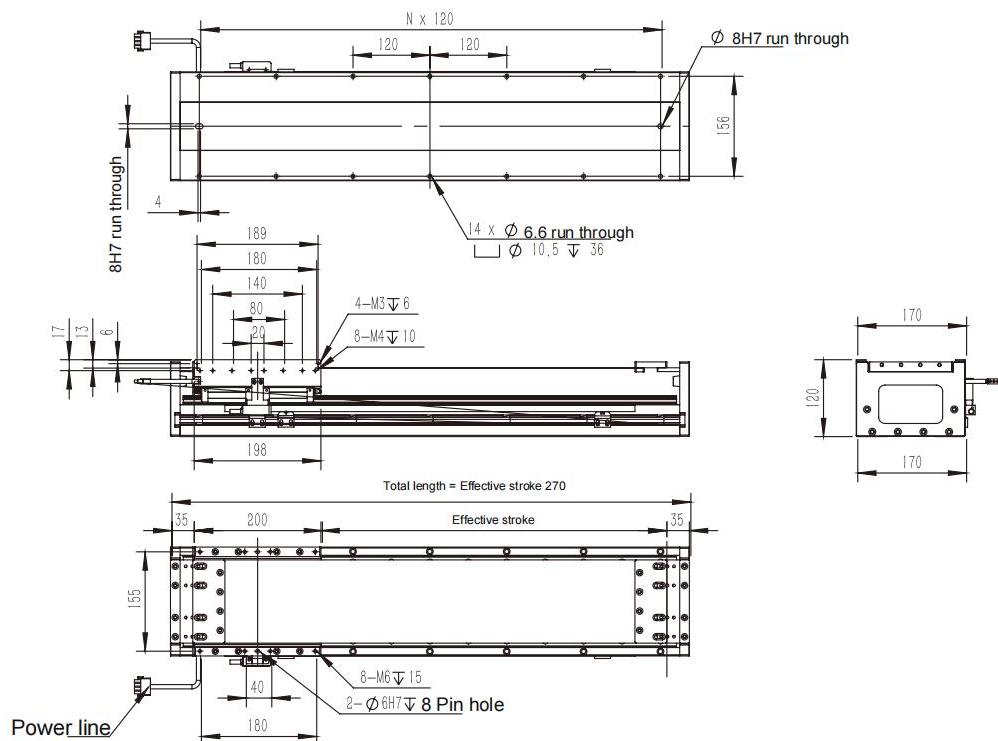
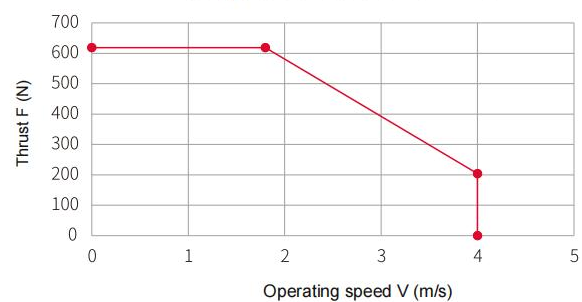
Linearmotor
module
product

Performance parameters			
Fp/lp/Vc	1349.4N	17.3Arms	1.8m/s
Fc/lp/Vmax	343.2N	4.4Arms	4m/s
Repeatability	± 0.5- ±2um		
Straightness	± 20um/M		
Payload capability	265kg(Up to acceleration0.5G)		
Characteristics			
Module Base	Length	4-6M	
	Quality	9.1kg/m	
	Growth unit	40mm	
	Minimum value	340mm	
Moving table	Length	200mm	
	Quality	6.6kg	
safety distance definition	20mm		
Length of end cover	Length	15mm*2	
	Quality	0.55kg*2	
Configuration information			
Guide way	Standard THK SHS 20V / (other options available on request)		
Encoder	Standard 1.0um resolution magnetic scale (other requirements optional)		
Sensor	Standard magnetic grating encoder sensor (other options such as photoelectric switches are available)		

Acceleration/Load Curve



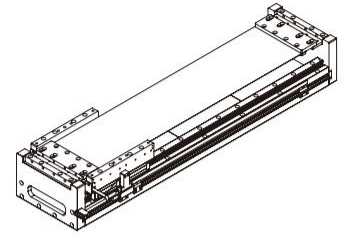
Thrust/Speed Curve of the 220V Drive



TAiM20-S series

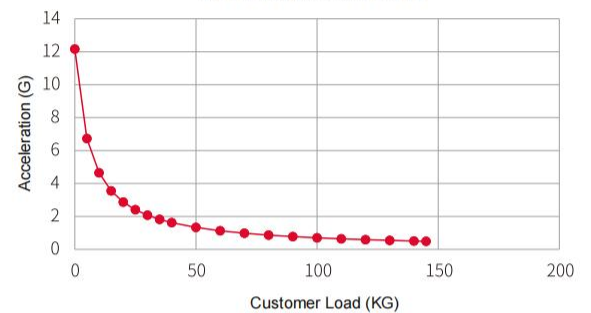
Motor model

TAiC34125-096

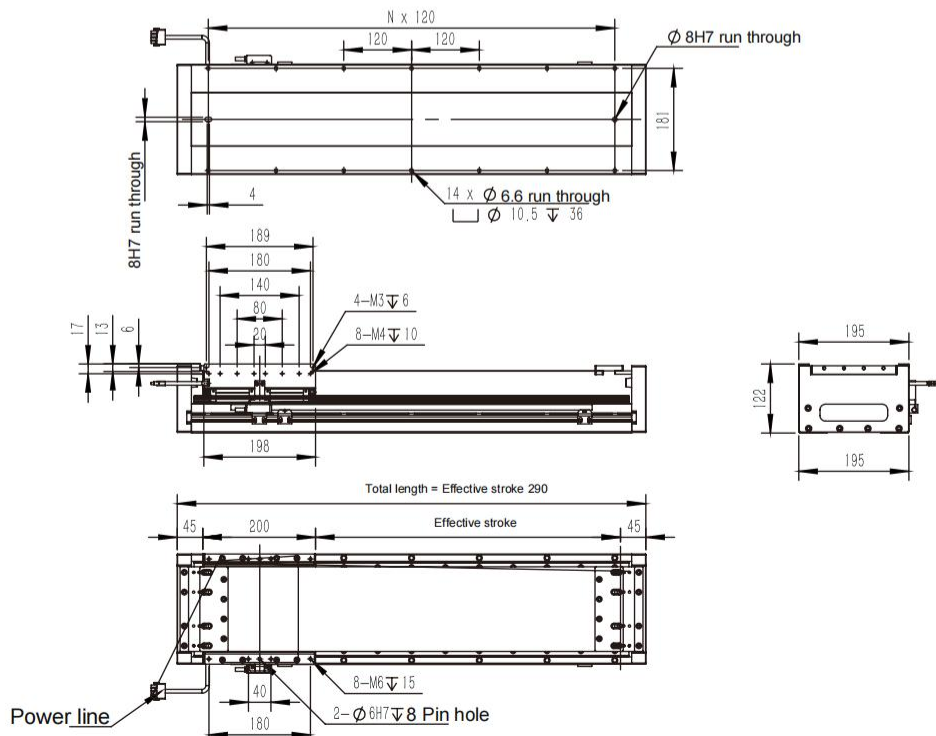
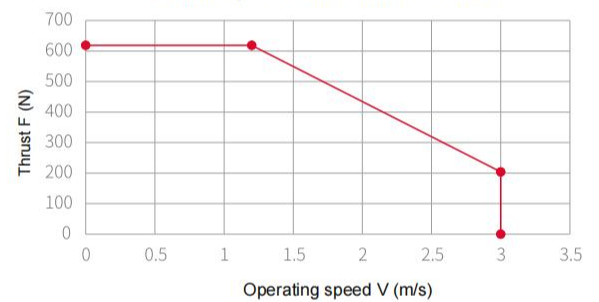


Performance parameters			
Fp/lp/Vc	739.5N	8.7Arms	1.2m/s
Fc/lp/Vmax	238N	2.8Arms	3m/s
Repeatability	±0.5-±2um		
Straightness	±20um/M		
Payload capability	145kg(Up to acceleration0.5G)		
Characteristics			
Module Base	Length	4-6M	
	Quality	13.3kg/m	
	Growth unit	40mm	
	Minimum value	340mm	
Moving table	Length	200mm	
	Quality	6.2kg	
safety distance definition	20mm		
Length of end cover	Length	25mm*2	
	Quality	1.3kg*2	
Configuration information			
Guide way	Standard THK SHS 20V / (other options available on request)		
Encoder	Standard 1.0um resolution magnetic scale (other requirements optional)		
Sensor	Standard magnetic grating encoder sensor (other options such as photoelectric switches are available)		

Acceleration/Load Curve



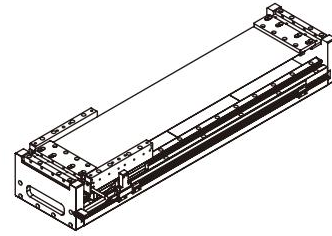
Thrust/Speed Curve of the 220V Drive



TAiM20-L series

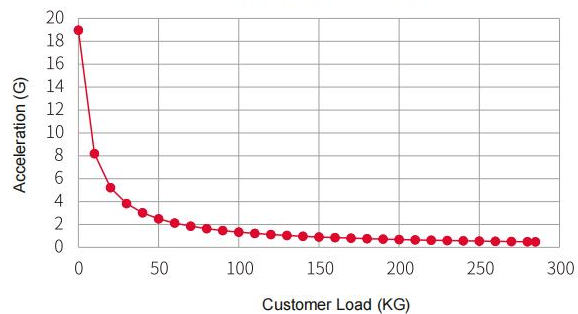
Motor model

TAiC34125-176

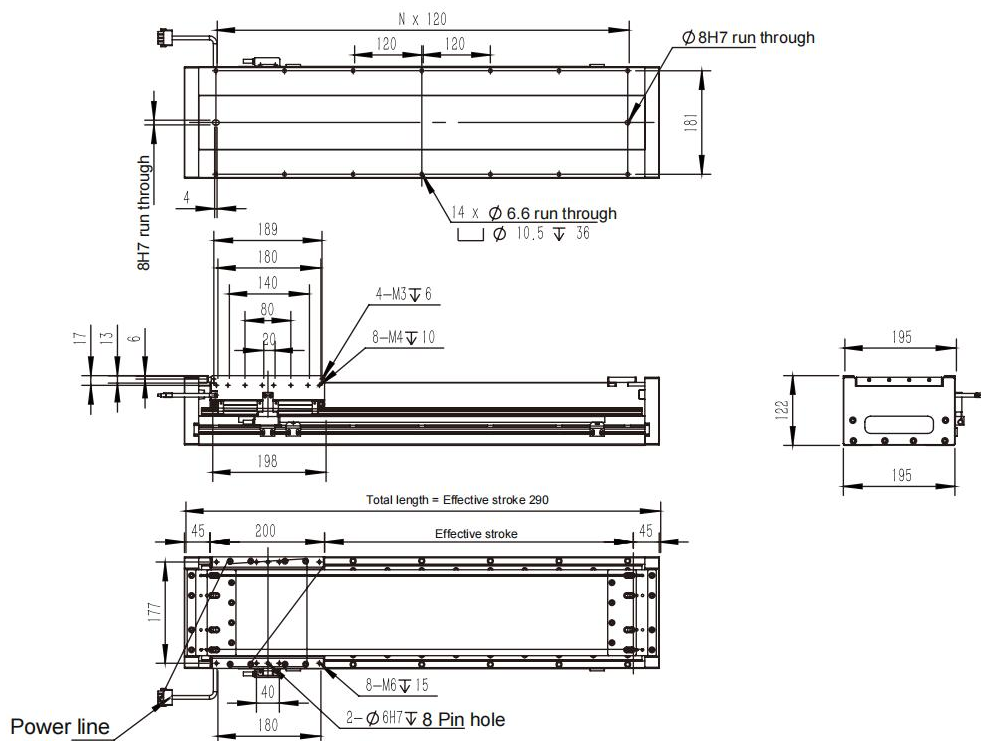
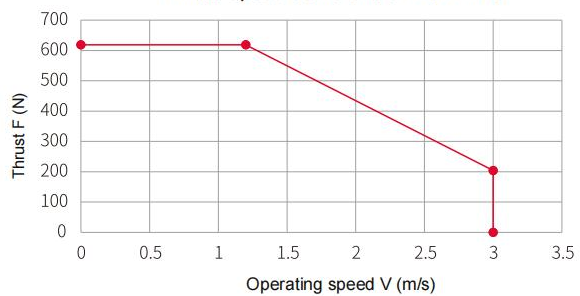
Linearmotor
module
product

Performance parameters			
Fp/lp/Vc	1413.6N	15.2Arms	1.2m/s
Fc/lp/Vmax	381.3N	4.1Arms	3m/s
Repeatability	± 0.5- ± 2um		
Straightness	± 20um/M		
Payload capability	280kg(Up to acceleration0.5G)		
Characteristics			
Module Base	Length	4-6M	
	Quality	9.1kg/m	
	Growth unit	40mm	
	Minimum value	340mm	
Moving table	Length	200mm	
	Quality	7.6kg	
safety distance definition	20mm		
Length of end cover	Length	25mm*2	
	Quality	1.3kg*2	
Configuration information			
Guide way	Standard THK SHS 20V / (other options available on request)		
Encoder	Standard 1.0um resolution magnetic scale (other requirements optional)		
Sensor	Standard magnetic grating encoder sensor (other options such as photoelectric switches are available)		

Acceleration/Load Curve



Thrust/Speed Curve of the 220V Drive



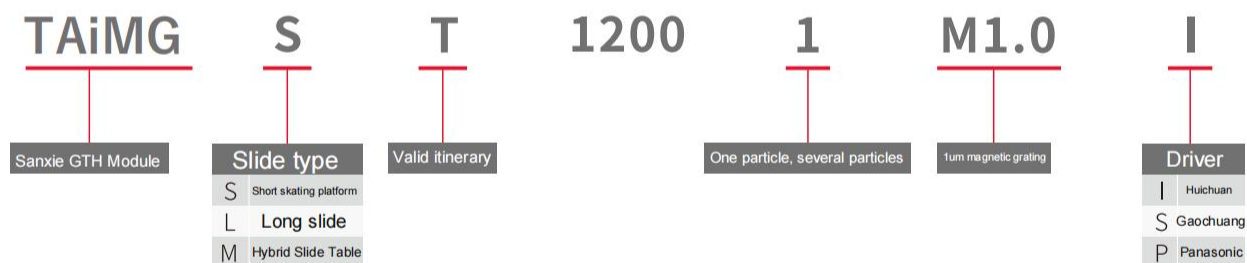
Embedded-Linear Motor Module TAiMG Series

Product performance

- Movement speed >3M/S
- The total length of the product reaches 1500mm.
- Acceleration >2G
- Repeatability < 4 μ m, positioning accuracy < ± 15 μ m/m
- Single-axis multi-actuator motion



Naming rules



Embedded Linear Motor Module VS Traditional GTH Module

- Higher operating speed
- Higher acceleration
- Higher accuracy
- Longer effective stroke
- Independent movement of a single-axis multi-actuator
- Reciprocating motion of short frequency blocks
- Easy to install, convenient to use, minimal maintenance, higher quality

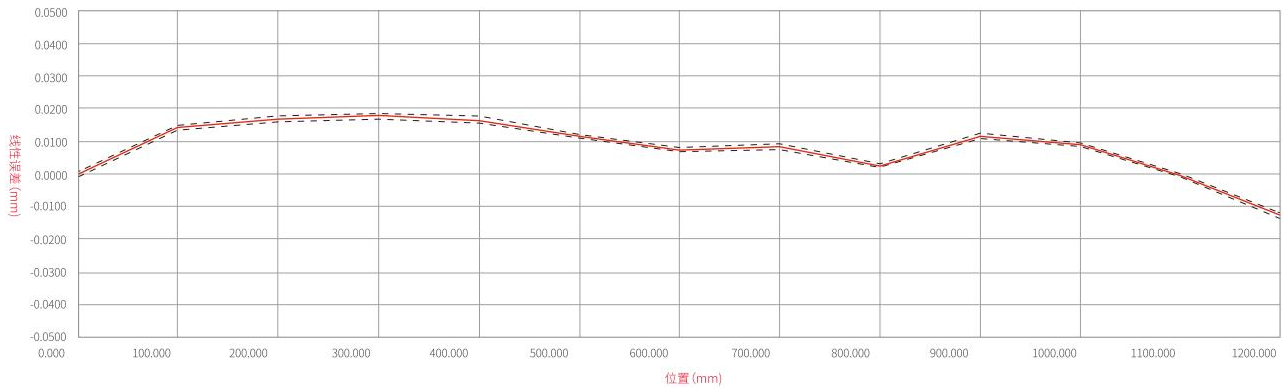
Embedded Linear Motor Module VS Traditional Linear Motor Module

- Higher load capacity under fine spatial conditions
- There are mature standard reference materials available.
- Higher cost-performance ratio, comparable to screw and even some belt modules

Laser interferometer test report

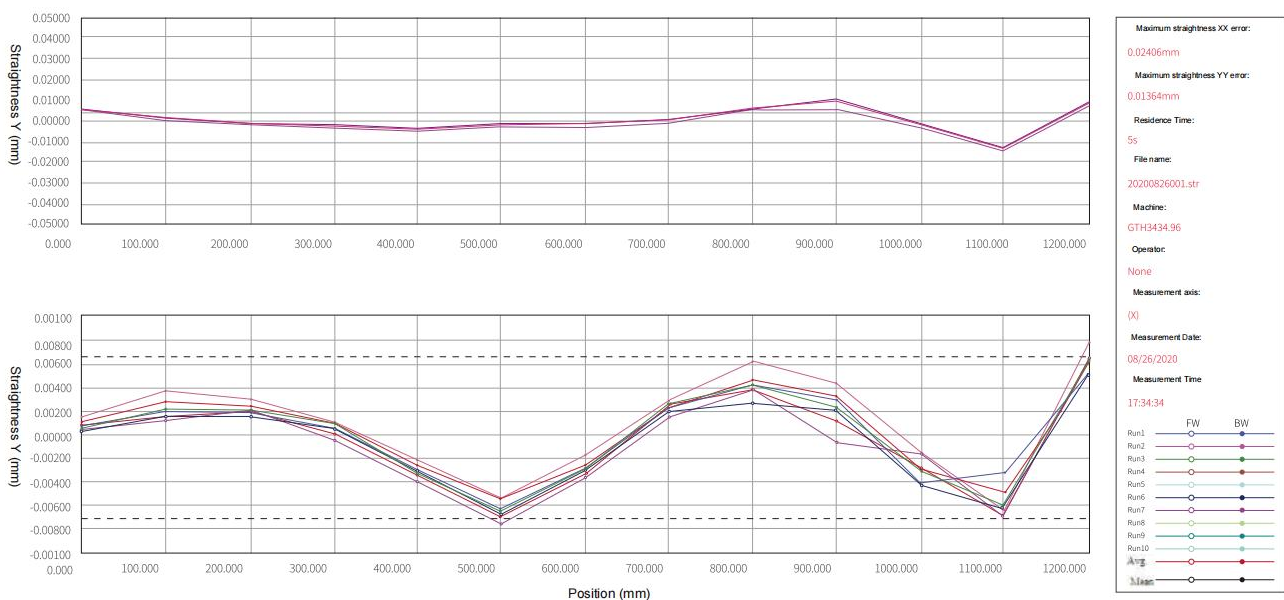
□□□□□□□□□□ISO 230-2:1997)

A two-way straightness error curve (Y)



File Name: 20200826001	Starting Temperature: 27.77°C	E (Systematic Error): 0.0308mm	A (Unidirectional Precision): 0.0300mm	FW BW
Machine: GTH3434-96	Ending temperature: 27.71°C	R (Repeitiveness): 0.0030mm	A _v (Unidirectional Precision): 0.0311mm	Average: —○—
Measuring shaft: [X]	Starting air pressure: 747.96mm Hg	A (Accuracy): 0.0322mm	M (Mean Deviation): 0.0305mm	2 Sigma (Forward) - - - -
Laser S/N:5371	End Pressure: 748.30mm Hg	Maximum B (Reverse Error): 0.0017mm		2 Sigma (Inverse) - - - -
Operator: None	Starting material temperature: 27.62°C	Average B (Reverse Error): 0.0003mm		
Measurement Date: 08/26/2020	Final material temperature: 27.58°C	E (Unidirectional Systematic Error): 0.0308mm		
Measurement Time: 17:34:34	Relative humidity: 50%	E-(Unidirectional Systematic Error): 0.0302mm		
	Coefficient of expansion: 12.1ppm/C	R (Unidirectional Repeatability): 0.0020mm		
	Number of measurements: 2	R-(Unidirectional Repeitiveness): 0.0016mm		
	Trigger window: 0.5000mm			

A two-way straightness error curve(Y)



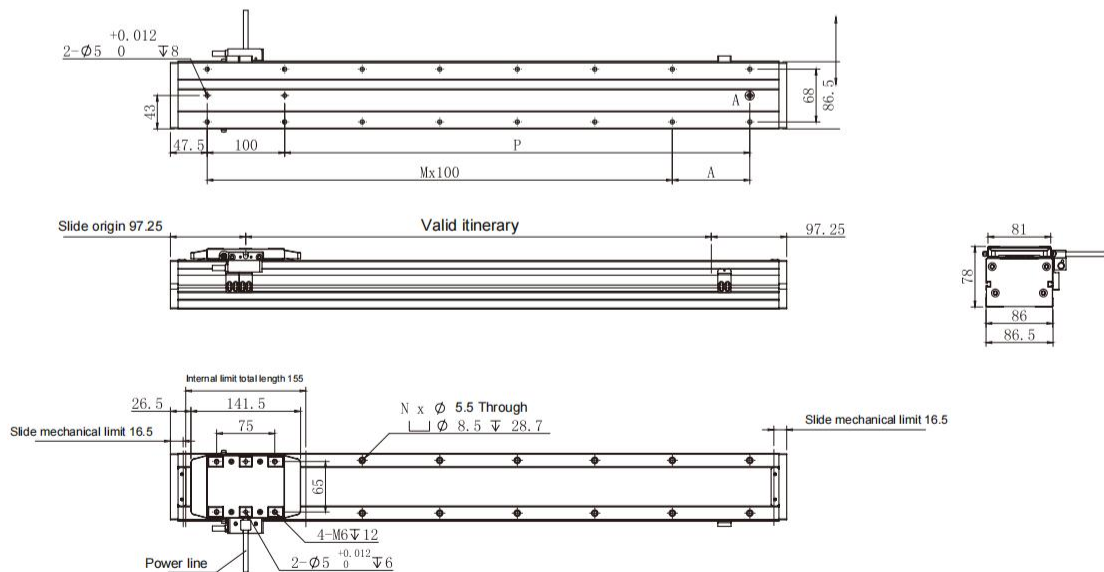
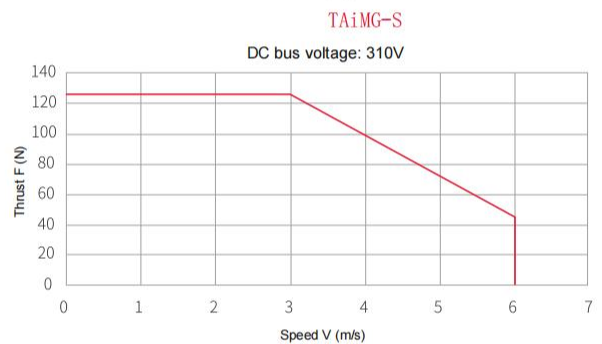
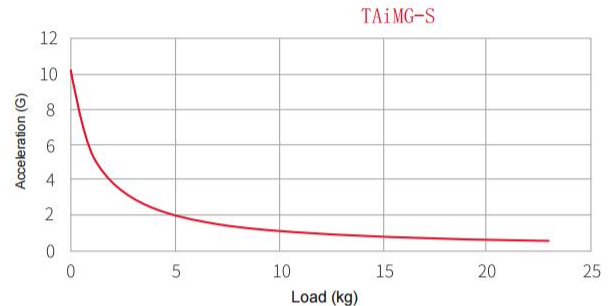
TAiMG series

Motor model

■ **TAiMG-S**



Performance parameters	Unit	TAiC34034-096
Load capacity	kg	30
Repeatability	μm	±2
Accuracy	μm/M	±10
Maximum travel	mm	1300
Motor stator parameter		
Parameters	N	125
Peak force	N	45.5
Peak current	Arms	8.9
Continuous current	Arms	3.25
Back EMF	v/m/s	12.7
Resistance per phase	Ω	3
Induction per phase	Mh	8.2
Motor force constant	N/Arms	14
Magnet pitch	mm	20
Accessory information		
Cable wire		OKI
Sensor		Aimega



Mechanical parameter																											
Length of base(mm)		225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375	1425	1475
Base weight(kg)		1.66	2.038	2.416	2.794	3.172	3.55	3.928	4.306	4.684	5.062	5.44	5.818	6.196	6.574	6.952	7.33	7.708	8.086	8.464	8.842	9.22	9.598	9.976	10.354	10.732	11.11
TAiMG-S	Length (mm)	155																									
	Weight (kg)	1.2																									

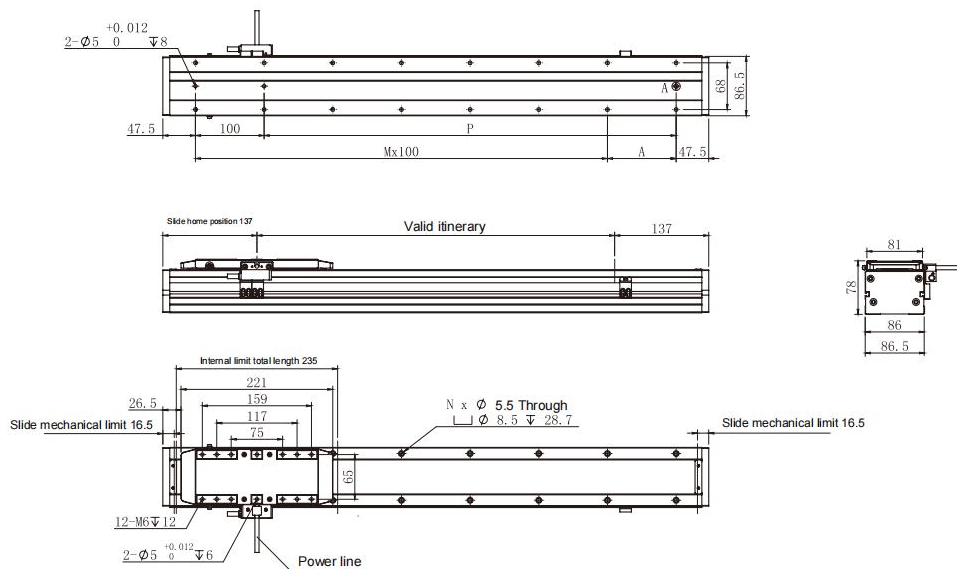
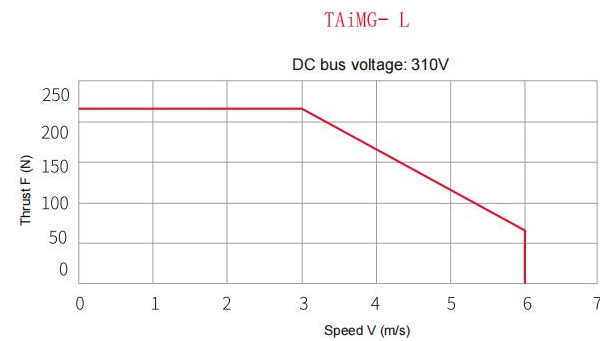
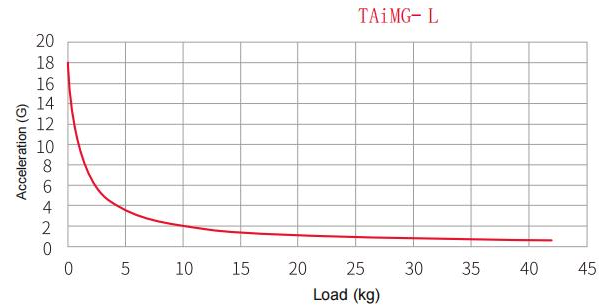
TAiMG series

Motor model

■ TAiMG-L

Linearmotor
module
product

Performance parameters	Unit	TAiC34034-176
Load capacity	kg	50
Repeatability	μm	± 2
Accuracy	$\mu\text{m}/\text{M}$	± 10
Maximum travel	mm	1220
Motor stator parameter		
Parameters	N	217
Peak force	N	68.3
Peak current	Arms	16
Continuous current	Arms	5
Back EMF	v/m/s	14
Resistance per phase	Ω	1.7
Induction per phase	Mh	4.2
Motor force constant	N/Arms	13.65
Magnet pitch	mm	20
Accessory information		
Cable wire	OKI	
Sensor	Aimega	

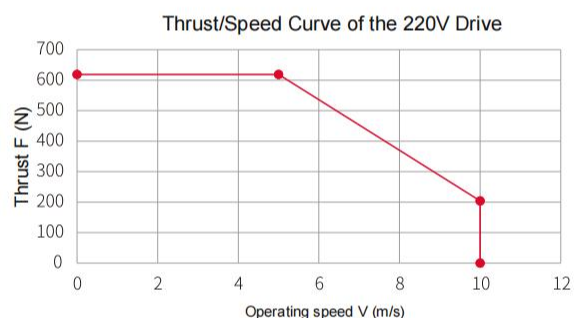


Mechanical parameter																					
TAiMG-L	Length of base(mm)	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275
	Base weight(kg)	2.416	2.794	3.172	3.55	3.928	4.306	4.684	5.062	5.44	5.818	6.196	6.574	6.952	7.33	7.708	8.086	8.464	8.842	9.22	9.598
	Length (mm)	235																			
	Weight (kg)	1.8																			

Motor model

Acceleration/Load Curve

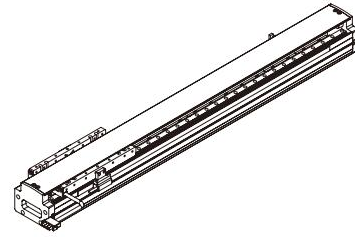
Customer Load (KG)	Acceleration (G)
0	14.2
5	2.2
10	1.3
15	0.9
20	0.7
25	0.6
30	0.5



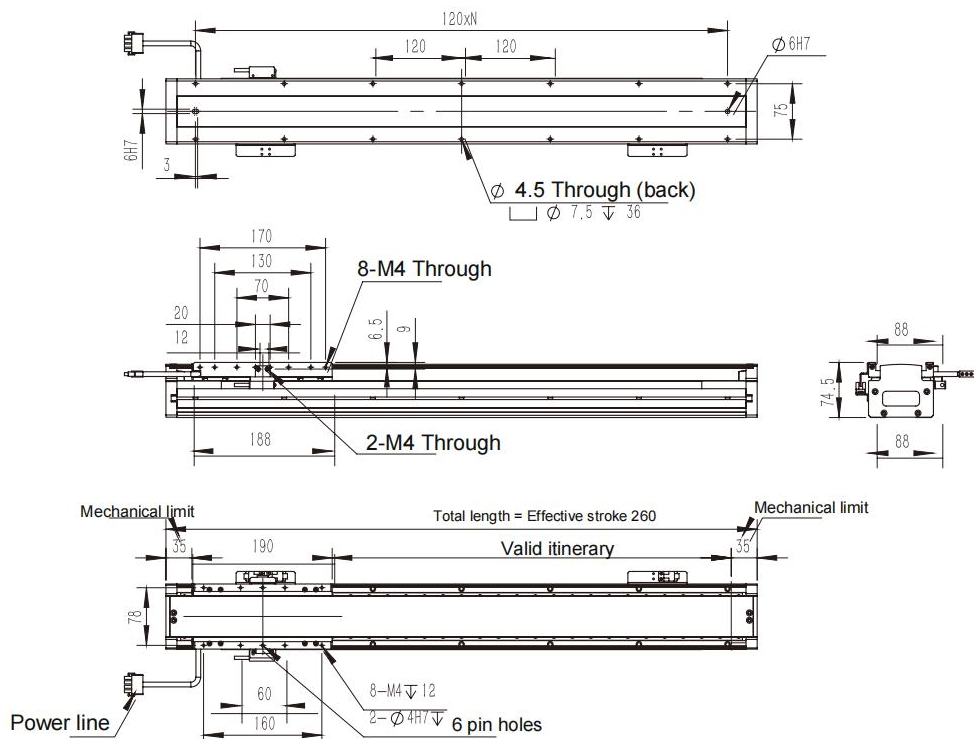
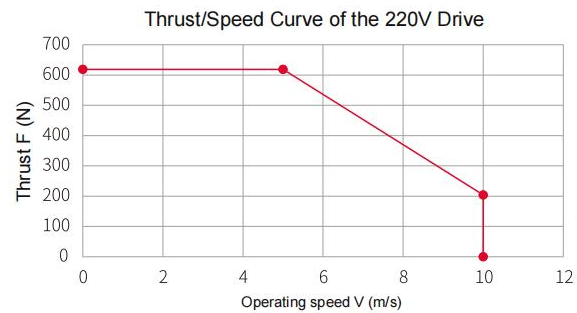
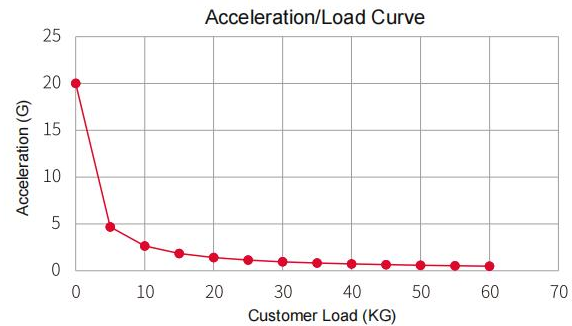
TAi08-34040series

Motor model

■ TAI08-34040-176

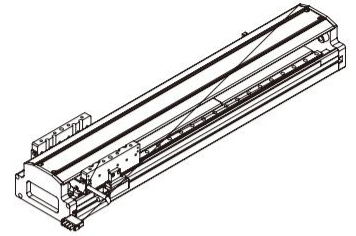
Linear motor
module
product

Performance parameters			
Fp/lp/Vc	300.2N	15.8Arms	5m/s
Fc/lp/Vmax	89.3N	4.7Arms	10m/s
Repeatability	± 0.5- ±2um		
Straightness	± 20um/M		
Payload capability	60kg (up to acceleration 0.5G)		
Characteristics			
Module Base	Length	4-6M	
	Quality	4.8kg/m	
	Growth unit	40mm	
	Minimum value	340mm	
Moving table	Length	190mm	
	Quality	1.53kg	
safety distance definition	20mm		
Length of end cover	Length	15mm*2	
	Quality	0.19kg*2	
Configuration information			
Guide way	Standard THK SHS 12M / (other options available on request)		
Encoder	Standard 1.0um resolution magnetic scale (other requirements optional)		
Sensor	Standard magnetic grating encoder sensor (other options such as photoelectric switches are available)		

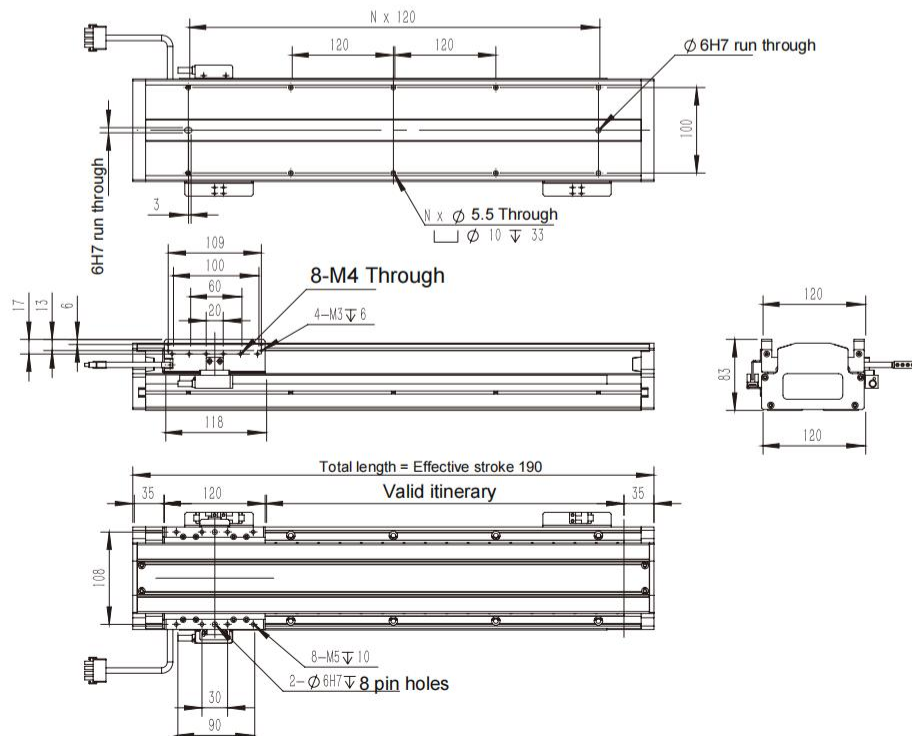
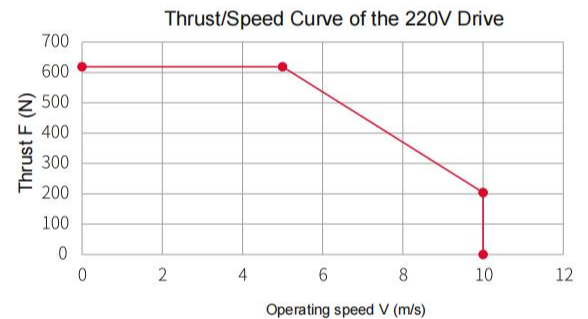
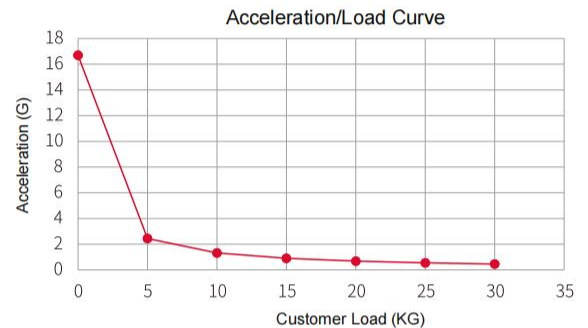


TAi12-34040 series

Motor model
TAi12-34040-096



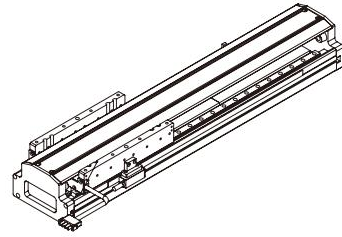
Performance parameters			
Fp/lp/Vc	140.8N	8.8Arms	5m/s
Fc/lp/Vmax	41.6N	2.6Arms	10m/s
Repeatability	±0.5-±2um		
Straightness	±20um/M		
Payload capability	30kg (up to acceleration 0.5G)		
Characteristics			
Module Base	Length	4-6M	
	Quality	5.5kg/m	
	Growth unit	40mm	
	Minimum value	260mm	
Moving table	Length	120mm	
	Quality	0.86kg	
safety distance definition	20mm		
Length of end cover	Length	15mm*2	
	Quality	0.25kg*2	
Configuration information			
Guide way	Standard THK SHS 12M / (other options available on request)		
Encoder	Standard 1.0um resolution magnetic scale (other requirements optional)		
Sensor	Standard magnetic grating encoder sensor (other options such as photoelectric switches are available)		



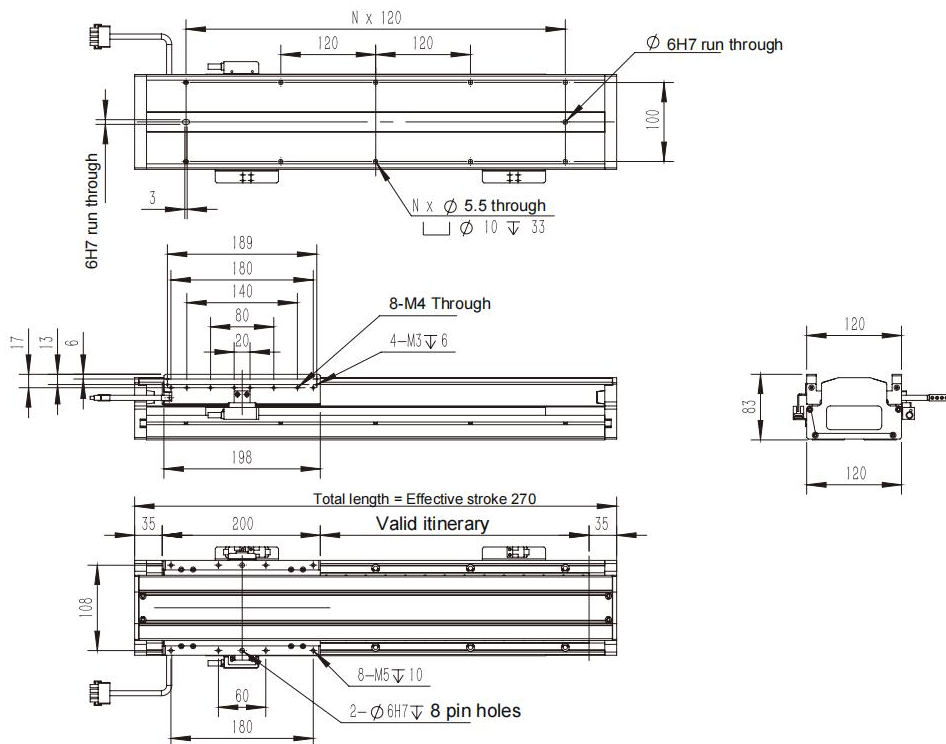
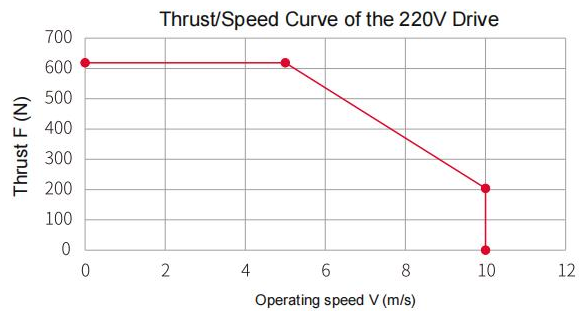
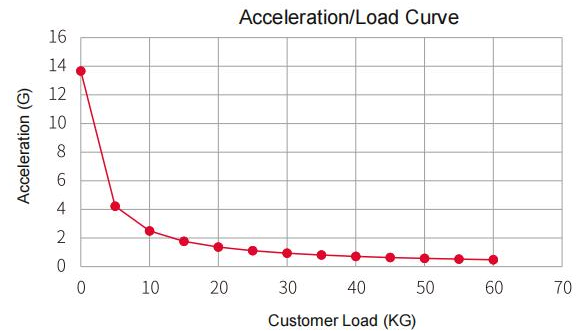
TAi12-34040 series

Motor model

■ TAI12-34040-176

Linearmotor
module
product

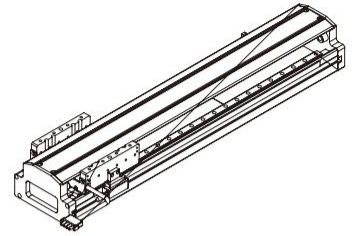
Performance parameters			
Fp/lp/Vc	300.2N	15.8Arms	5m/s
Fc/lp/Vmax	89.3N	4.7Arms	10m/s
Repeatability	± 0.5- ± 2um		
Straightness	± 20um/M		
Payload capability	60kg (up to acceleration 0.5G)		
Characteristics			
Module Base	Length	4-6M	
	Quality	5.5kg/m	
	Growth unit	40mm	
	Minimum value	340mm	
Moving table	Length	200mm	
	Quality	2.24kg	
safety distance definition	20mm		
Length of end cover	Length	15mm*2	
	Quality	0.25kg*2	
Configuration information			
Guide way	Standard THK SHS 12M / (other options available on request)		
Encoder	Standard 1.0um resolution magnetic scale (other requirements optional)		
Sensor	Standard magnetic grating encoder sensor (other options such as photoelectric switches are available)		



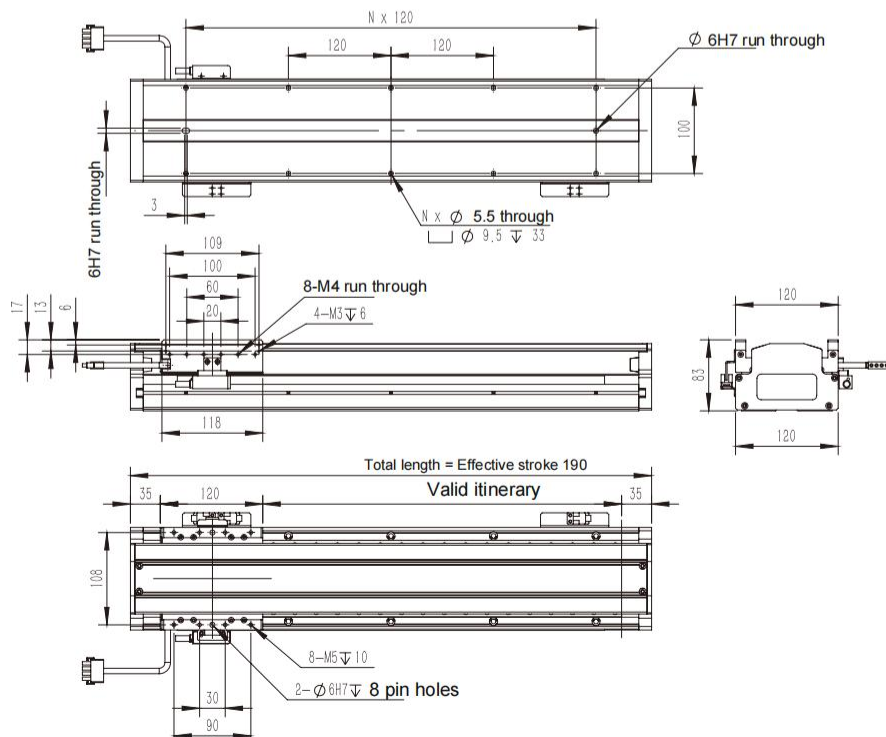
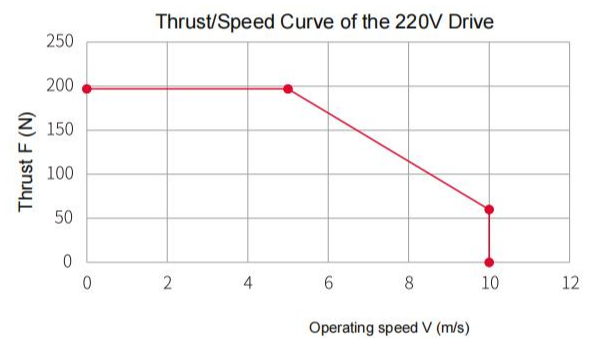
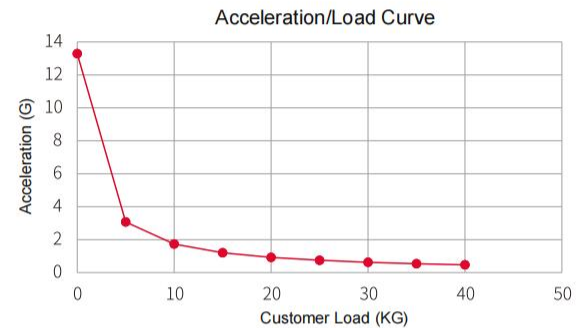
TAi12-34050 series

Motor model

TAi12-34050-096



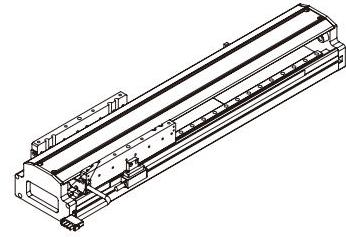
Performance parameters			
Fp/lp/Vc	196.8N	8.2Arms	5m/s
Fc/lp/Vmax	60N	2.5Arms	10m/s
Repeatability	±0.5-±2um		
Straightness	±20um/M		
Payload capability	40kg (up to acceleration 0.5G)		
Characteristics			
Module Base	Length	4-6M	
	Quality	5.5kg/m	
	Growth unit	40mm	
	Minimum value	260mm	
Moving table	Length	120mm	
	Quality	1.51kg	
safety distance definition	20mm		
Length of end cover	Length	15mm*2	
	Quality	0.25kg*2	
Configuration information			
Guide way	Standard THK SHS 12M / (other options available on request)		
Encoder	Standard 1.0um resolution magnetic scale (other requirements optional)		
Sensor	Standard magnetic grating encoder sensor (other options such as photoelectric switches are available)		



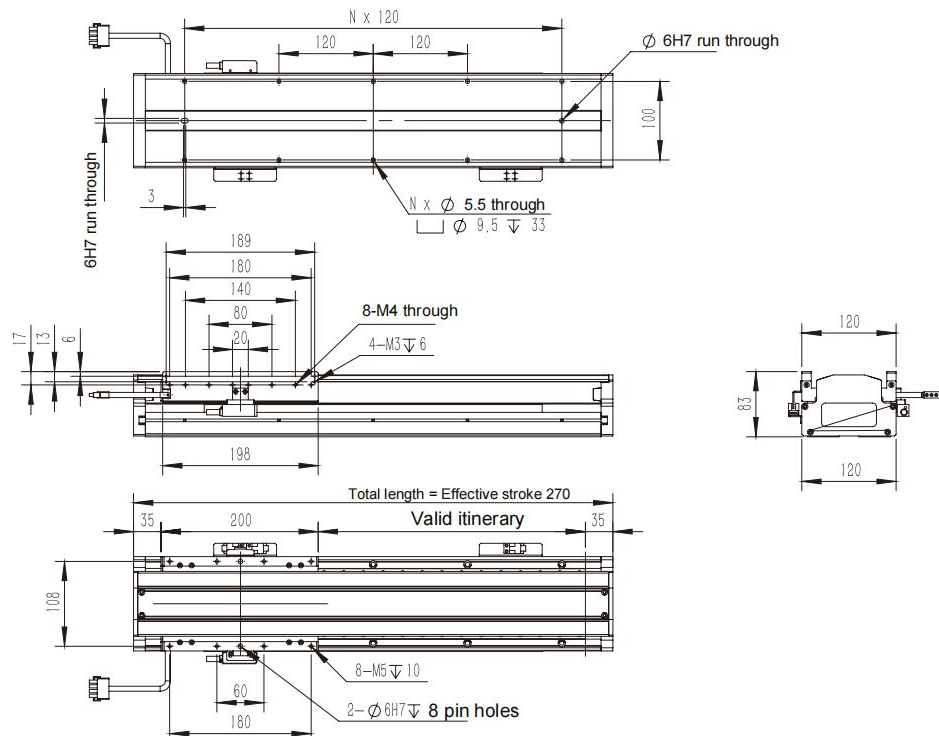
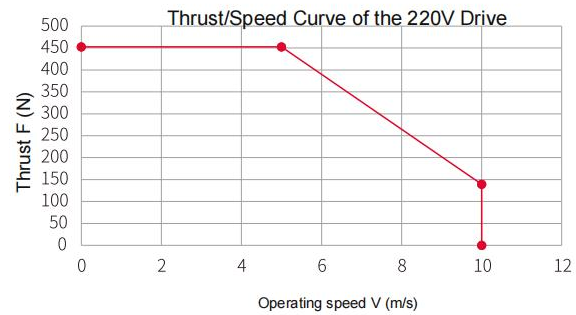
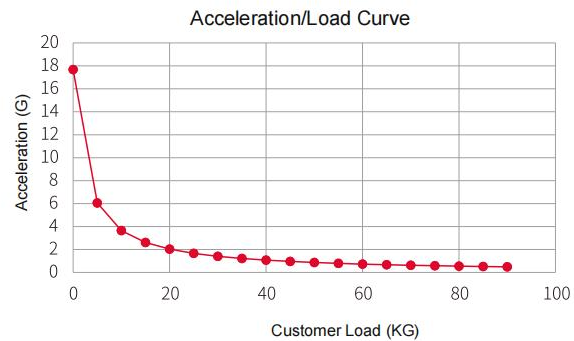
TAI12-34050 series

Motor model

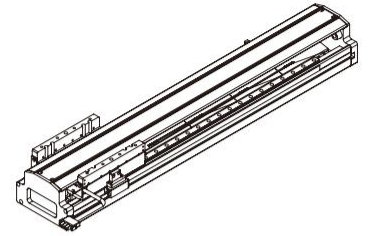
TAI12-34050-176



Performance parameters			
Fp/lp/Vc	452.4N	15.6Arms	5m/s
Fc/lp/Vmax	139.2N	4.8Arms	10m/s
Repeatability	±0.5-±2um		
Straightness	±20um/M		
带载能力 Payload capability	90kg (up to acceleration 0.5G)		
Characteristics			
Module Base	Length	4-6M	
	Quality	5.5kg/m	
	Growth unit	40mm	
	Minimum value	340mm	
Moving table	Length	200mm	
	Quality	2.61kg	
safety distance definition	20mm		
Length of end cover	Length	15mm*2	
	Quality	0.25kg*2	
Configuration information			
Guide way	Standard THK SHS 12M / (other options available on request)		
Encoder	Standard 1.0um resolution magnetic scale (other requirements optional)		
Sensor	Standard magnetic grating encoder sensor (other options such as photoelectric switches are available)		

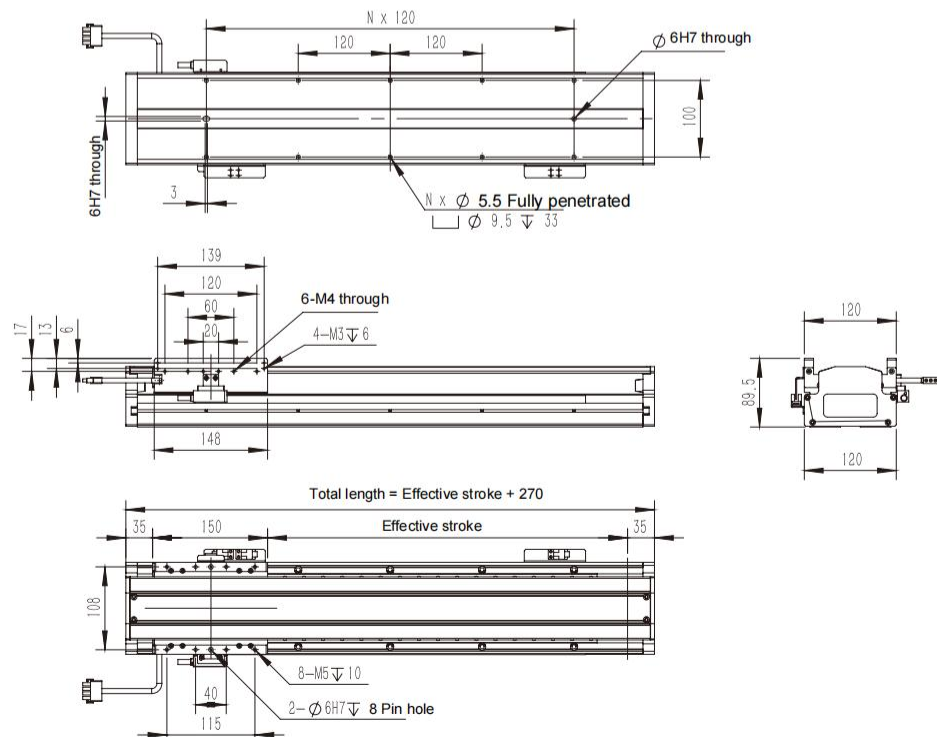


Motor model
TAi12-YAN020-C1



Thrust/Speed Curve of the 220V Drive

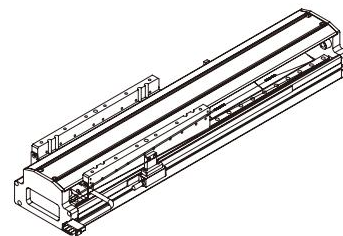
Operating speed V (m/s)	Thrust (N)
0	375
3.5	375
5.3	110
5.5	0



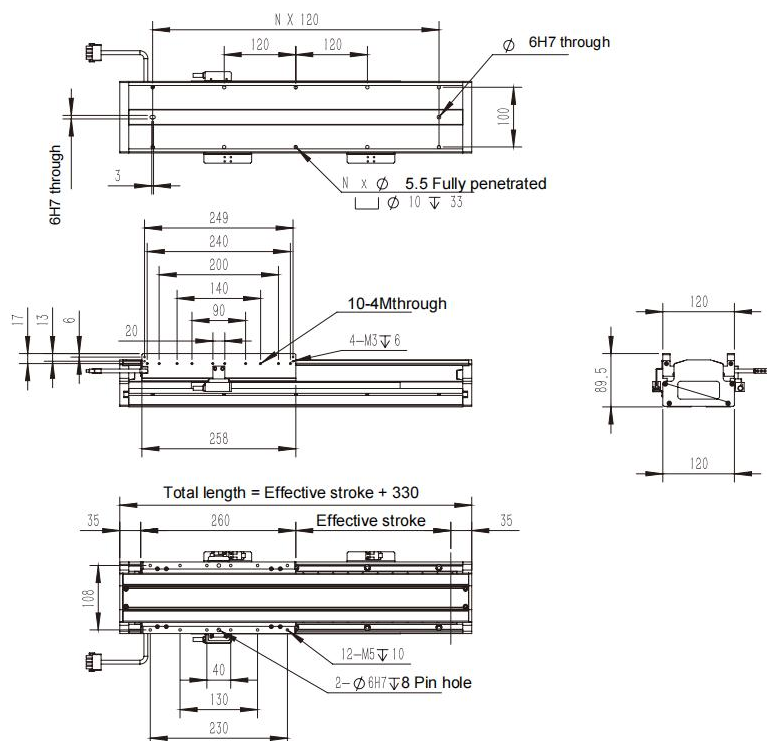
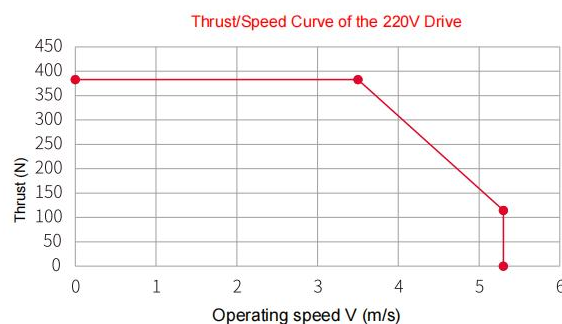
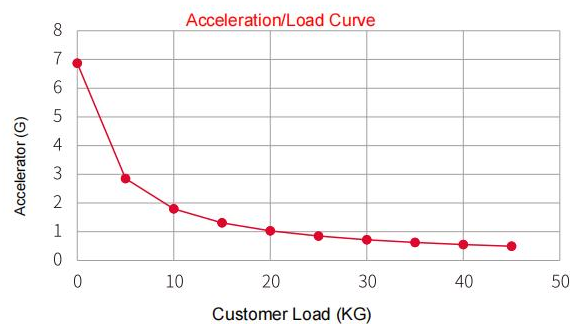
TAi12-YAN020 Series

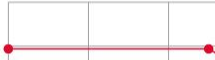
Motor model

■ TAI12-YAN020-C2



Performance parameters			
Fp/lp/Vc	240N	4.8Arms	3.5m/s
Fc/lp/Vmax	80N	1.6Arms	5.3m/s
Repeatability	±0.5-±2um		
Straightness	±20um/M		
Payload capability	45kg (截至加速度0.5G)		
Characteristics			
Module Base	Length	4-6M	
	Quality	5.3kg/m	
	Growth unit	108mm	
	Minimum value	445mm	
Moving table	Length	260mm	
	Quality	3.56kg	
safety distance definition	20mm		
Length of end cover	Length	15mm*2	
	Quality	0.25kg*2	
Configuration information			
Guide way	Standard configuration THK SRS 12M(other requirements optional)		
Encoder	Standard configuration with 1.0um resolution magnetic grid (other requirements optional)		
Sensor	Standard photoelectric switch (other options such as magnetic grating encoder sensor are available)		





Thrust/Speed Curve of the 220V Drive

The graph shows Thrust (N) on the Y-axis (0 to 250) versus Operating speed V (m/s) on the X-axis (0 to 12). The curve is a horizontal line at 200 N from 0 to 5 m/s, then a diagonal line down to 60 N at 10 m/s, and finally a vertical line down to 0 N at 10 m/s.

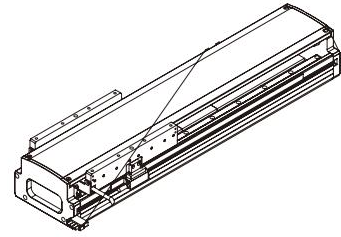
Operating speed V (m/s)	Thrust (N)
0	200
5	200
10	60
10	0



TAi14-34040 Series

Motor model

■ TAI14-34040-176



Performance parameters

Fp/lp/Vc	300.2N	15.8Arms	5m/s
Fc/lp/Vmax	89.3N	4.7Arms	10m/s
Repeatability	$\pm 0.5 - \pm 2\mu\text{m}$		
Straightness	$\pm 20\mu\text{m}/\text{M}$		
Payload capability	60 kg (p to an acceleration of 0.5G)		

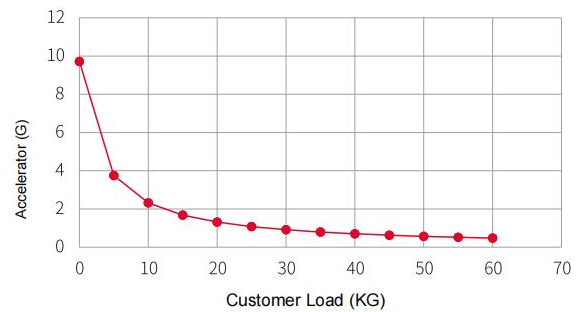
Characteristics

Module Base	Length	4-6M
	Quality	6.5kg/m
	Growth unit	40mm
	Minimum value	340mm
Moving table	Length	200mm
	Quality	3.15kg
safety distance definition	20mm	
Length of end cover	Length	15mm*2
	Quality	0.33kg*2

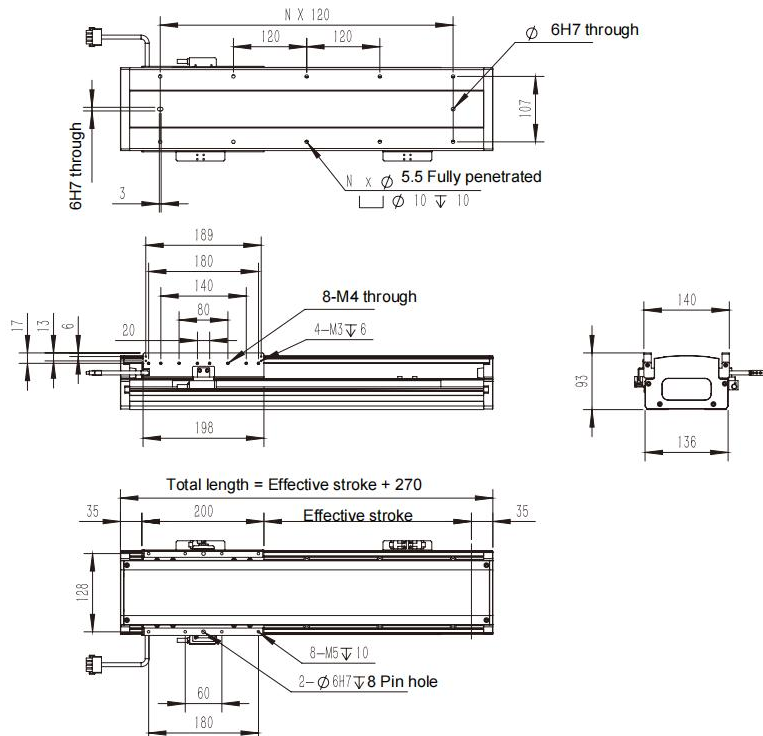
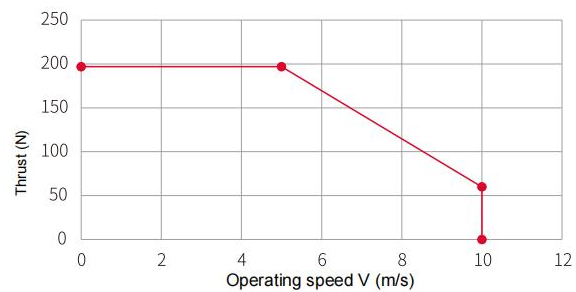
Configuration information

Guide way	Standard configuration THK SSR 15XW (other requirements optional)
Encoder	Standard configuration with 1.0um resolution magnetic grid (other requirements optional)
Sensor	Standard photoelectric switch (other options such as magnetic grating encoder sensor are available)

Acceleration/Load Curve



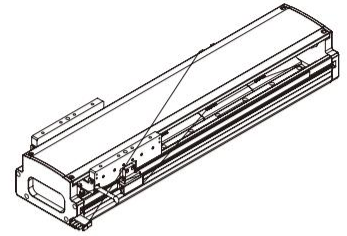
Thrust/Speed Curve of the 220V Drive



TAi14-YAN020 Series

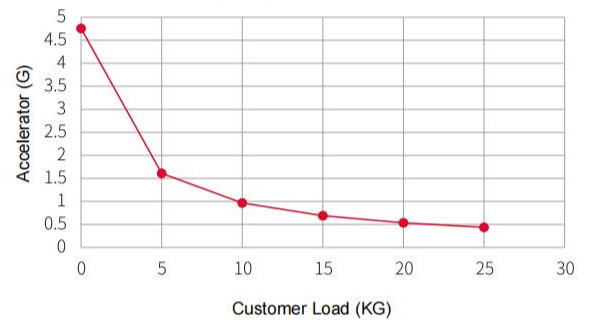
Motor model

■ TAI14-YAN020-C1

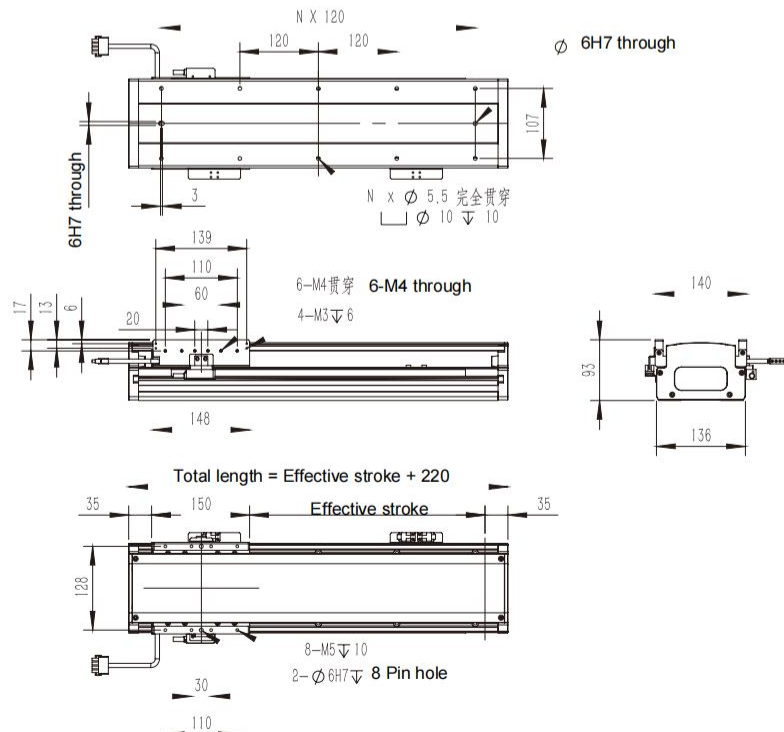
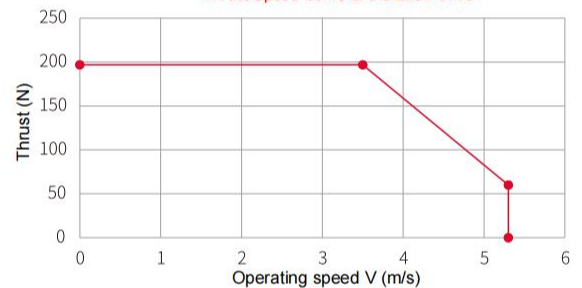


Performance parameters			
Fp/lp/Vc	120N	2.4Arms	3.5m/s
Fc/lp/Vmax	40N	0.8Arms	5.3m/s
Repeatability	±0.5-±2um		
Straightness	±20um/M		
Payload capability	25kg (截至加速度0.5G)		
Characteristics			
Module Base	Length	4-6M	
	Quality	6.5kg/m	
	Growth unit	108mm	
	Minimum value	335mm	
Moving table	Length	150mm	
	Quality	2.57kg	
safety distance definition	20mm		
Length of end cover	Length	15mm*2	
	Quality	0.33kg*2	
配置信息 Configuration information			
Guide way	Standard configuration THK SSR 15XW(other requirements optional)		
Encoder	Standard configuration with 1.0um resolution magnetic grid (other requirements optional)		
Sensor	Standard photoelectric switch (other options such as magnetic grating encoder sensor are available)		

Acceleration/Load Curve



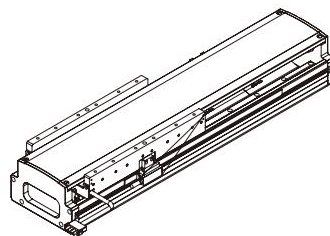
Thrust/Speed Curve of the 220V Drive



TAi14-YAN020 Series

Motor model

■ TAI14-YAN020-C2



Performance parameters

$F_p/I_p/V_c$	240N	4.8Arms	3.5m/s
$F_c/I_p/V_{max}$	80N	1.6Arms	5.3m/s
Repeatability	$\pm 0.5 - \pm 2\mu m$		
Straightness	$\pm 20\mu m/M$		
Payload capability	45 kg (p to an acceleration of 0.5G)		

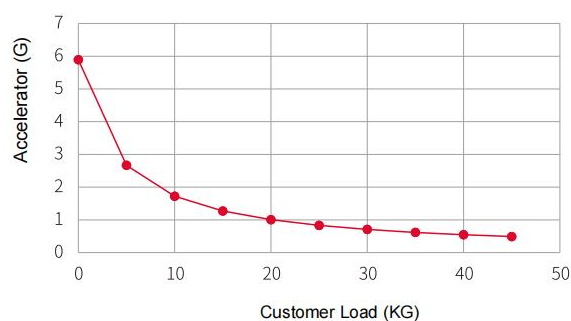
Characteristics

Module Base	Length	4-6M
	Quality	6.5kg/m
	Growth unit	108mm
	Minimum value	445mm
Moving table	Length	260mm
	Quality	4.15kg
safety distance definition	20mm	
Length of end cover	Length	15mm*2
	Quality	0.33kg*2

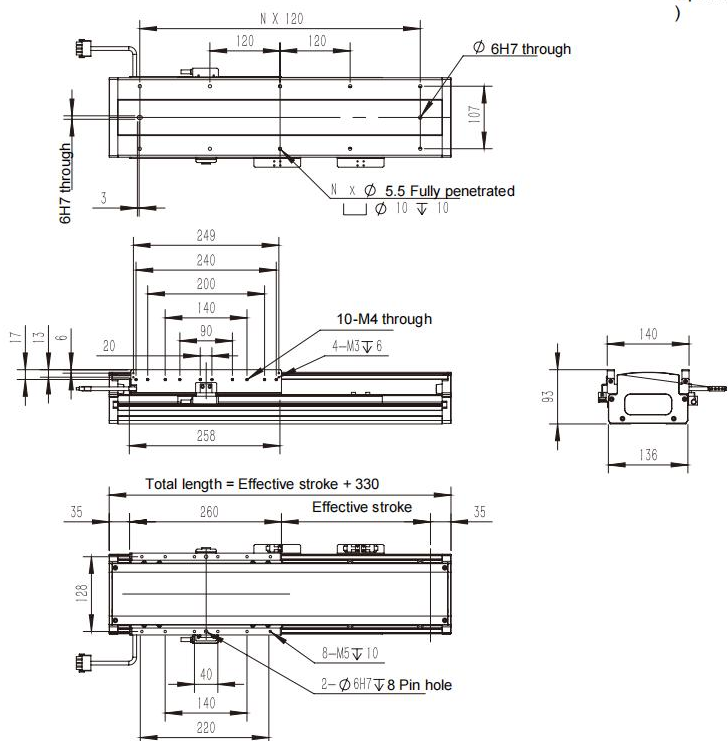
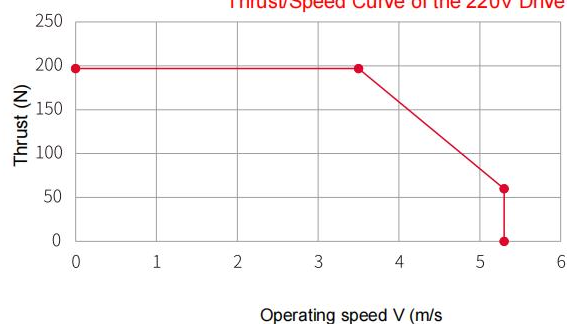
Configuration information

Guide way	Standard configuration THK SSR 15KW (other requirements optional)
Encoder	Standard configuration with 1.0um resolution magnetic grid (other requirements optional)
Sensor	Standard photoelectric switch (other options such as magnetic grating encoder sensor are available)

Acceleration/Load Curve



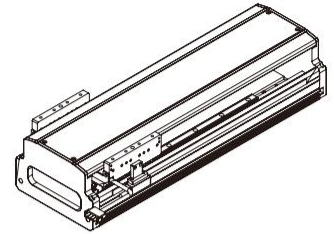
Thrust/Speed Curve of the 220V Drive



TAi17-60051 Series

Motor model

■ TAI17-60051-112



Performance parameters

Fp/lp/Vc	225N	14.4Arms	5m/s
Fc/lp/Vmax	98N	4.8Arms	10m/s
Repeatability	$\pm 0.5 - \pm 2\mu\text{m}$		
Straightness	$\pm 20\mu\text{m}/\text{M}$		
Payload capability	45 kg (p to an acceleration of 0.5G)		

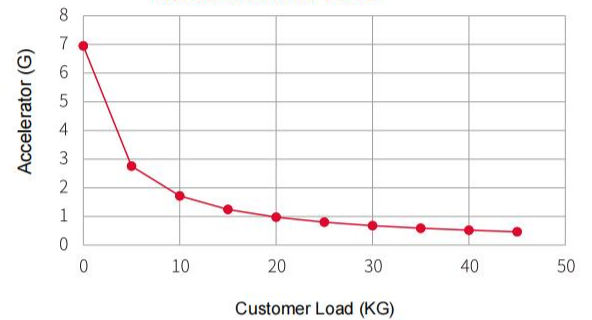
Characteristics

Module Base	Length	4-6M
	Quality	10kg/m
	Growth unit	192mm
	Minimum value	400mm
Moving table	Length	120mm
	Quality	3.3kg
safety distance definition	20mm	
Length of end cover	Length	15mm*2
	Quality	0.5kg*2

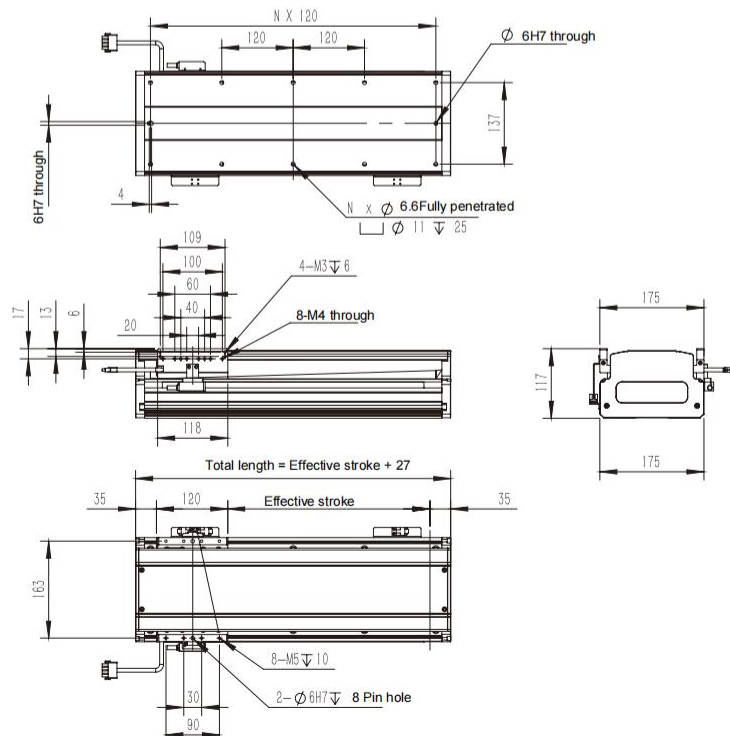
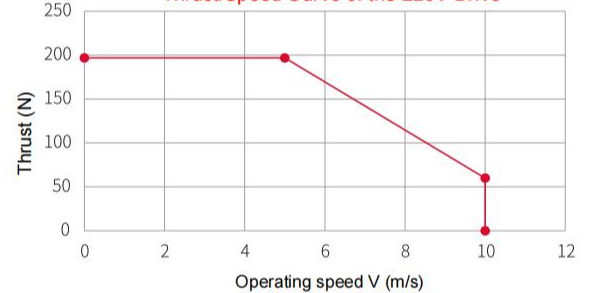
Configuration information

Guide way	Standard configuration THK SSR 15XW (other requirements optional)
Encoder	Standard configuration THK SRS 15XW (other requirements optional)
Sensor	Standard photoelectric switch (other options such as magnetic grating encoder sensor are available)

Acceleration/Load Curve



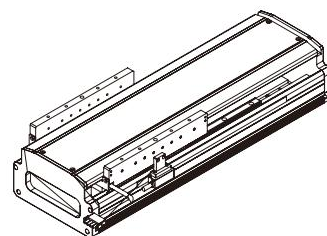
Thrust/Speed Curve of the 220V Drive



TAi17-60051 Series

Motor model

■ TAI17-60051-196



Performance parameters

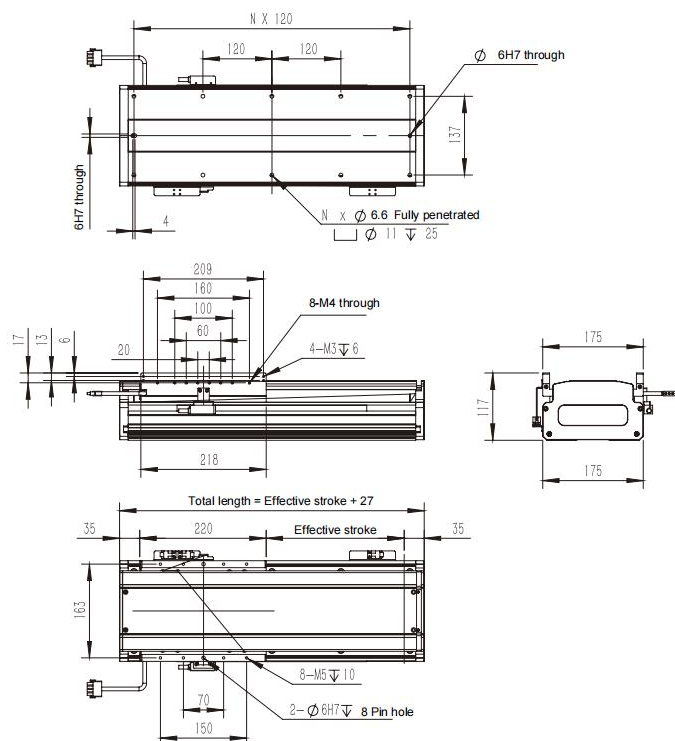
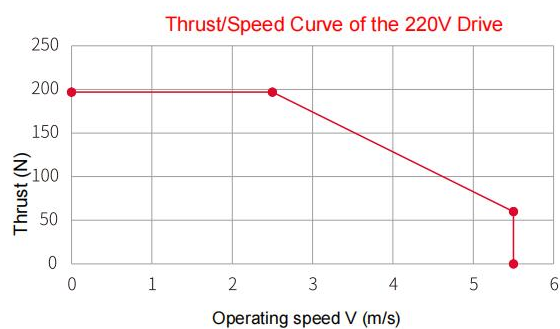
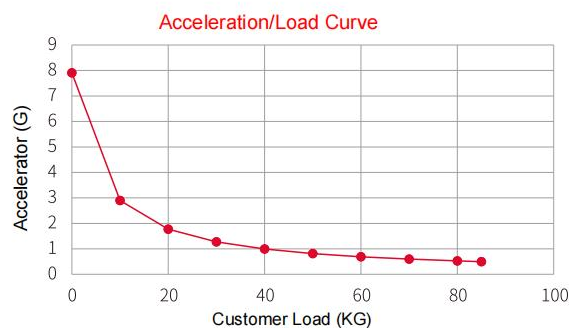
Fp/Ip/Vc	450N	14.4Arms	2.5m/s
Fc/Ip/Vmax	196N	4.8Arms	5.5m/s
Repeatability	$\pm 0.5 - \pm 2\mu\text{m}$		
Straightness	$\pm 20\mu\text{m/M}$		
Payload capability	85 kg (p to an acceleration of 0.5G)		

Characteristics

Module Base	Length	4-6M
	Quality	10kg/m
	Growth unit	192mm
	Minimum value	400mm
Moving table	Length	220mm
	Quality	5.8kg
safety distance definition	20mm	
Length of end cover	Length	15mm*2
	Quality	0.5kg*2

Configuration information

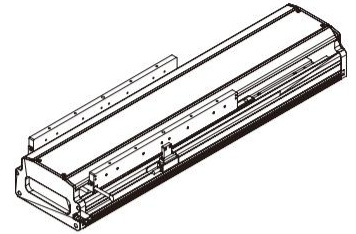
Guide way	Standard configuration THK SSR 15KW (other requirements optional)
Encoder	Standard configuration with 1.0um resolution magnetic grid (other requirements optional)
Sensor	Standard photoelectric switch (other options such as magnetic grating encoder sensor are available)



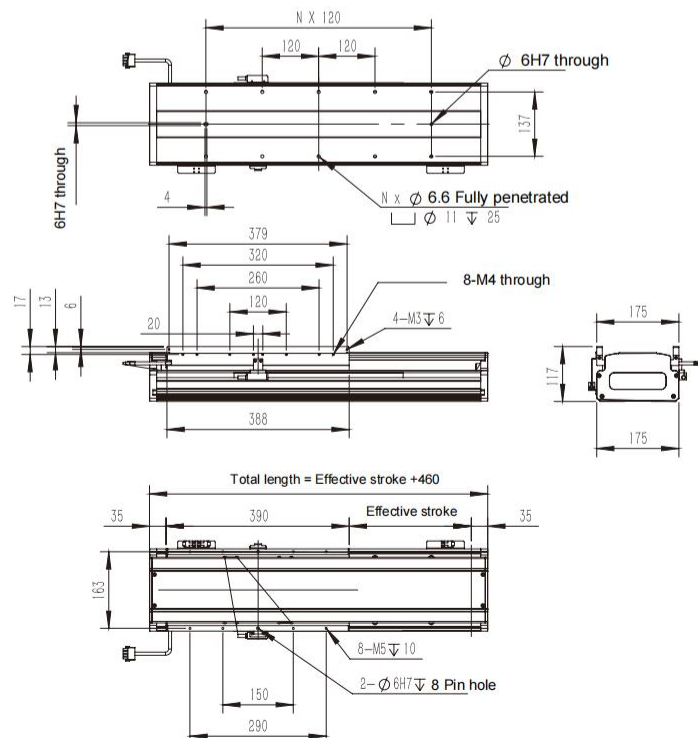
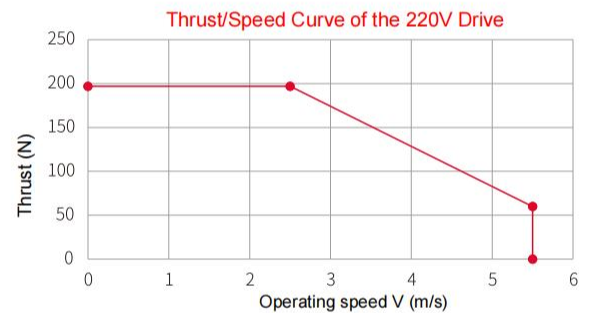
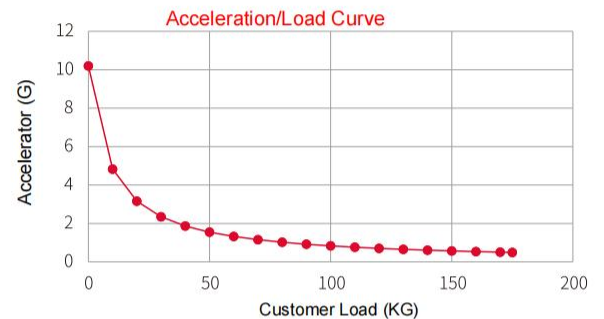
TAi17-60051 Series

Motor model

■ TAI17-60051-364



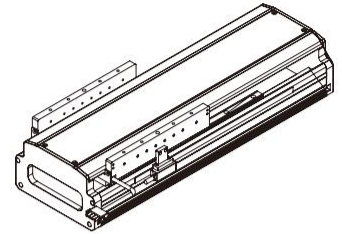
Performance parameters			
Fp/lp/Vc	900N	28.8Arms	2.5m/s
Fc/lp/Vmax	392N	9.6Arms	5.5m/s
Repeatability	±0.5-±2um		
Straightness	±20um/M		
Payload capability	175 kg (p to an acceleration of 0.5G)		
Characteristics			
Module Base	Length	4-6M	
	Quality	10kg/m	
	Growth unit	192mm	
	Minimum value	590mm	
Moving table	Length	390mm	
	Quality	9kg	
safety distance definition	20mm		
Length of end cover	Length	15mm*2	
	Quality	0.5kg*2	
Configuration information			
Guide way	Standard configuration THK SSR 15XW(other requirements optional)		
Encoder	Standard configuration with 1.0um resolution magnetic grid (other requirements optional)		
Sensor	Standard photoelectric switch (other options such as magnetic grating encoder sensor are available)		



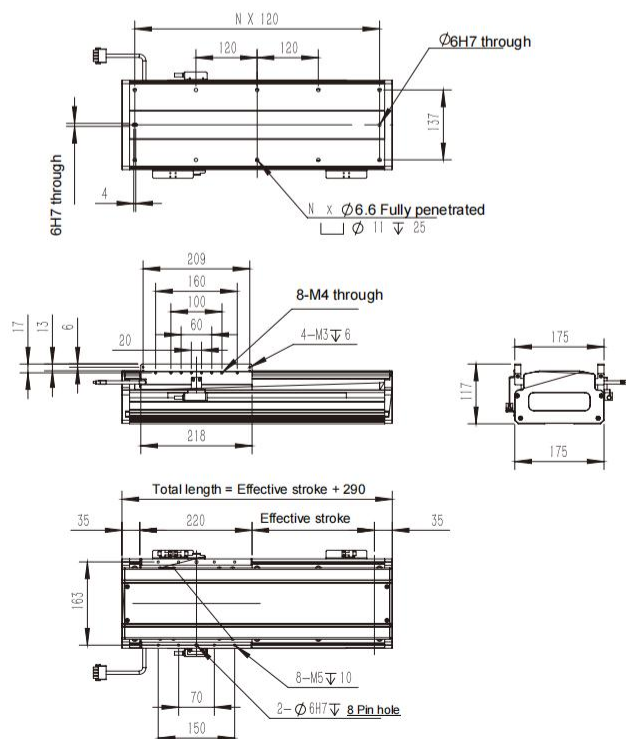
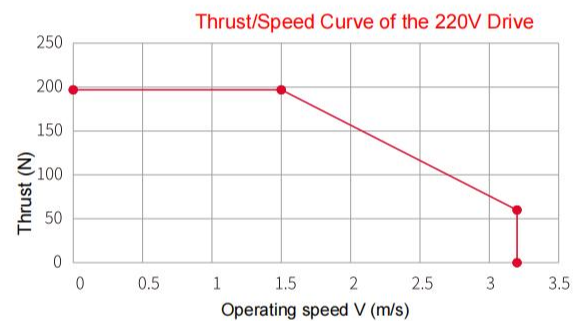
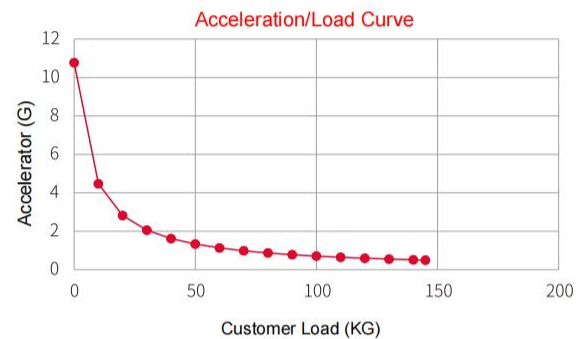
TAi17-60071 Series

Motor model

■ TAI17-60071-196



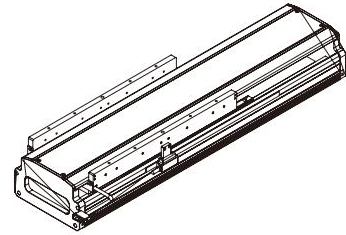
Performance parameters			
Fp/lp/Vc	750N	14.4Arms	1.5m/s
Fc/lp/Vmax	326N	4.8Arms	3.2m/s
Repeatability	±0.5-±2um		
Straightness	±20um/M		
Payload capability	145 kg (p to an acceleration of 0.5G)		
Characteristics			
Module Base	Length	4-6M	
	Quality	10kg/m	
	Growth unit	192mm	
	Minimum value	400mm	
Moving table	Length	220mm	
	Quality	7.1kg	
safety distance definition	20mm		
Length of end cover	Length	15mm*2	
	Quality	0.5kg*2	
Configuration information			
Guide way	Standard configuration THK SSR 15KW(other requirements optional)		
Encoder	Standard configuration with 1.0um resolution magnetic grid (other requirements optional)		
Sensor	Standard photoelectric switch (other options such as magnetic grating encoder sensor are available)		



TAi17-60071 Series

Motor model

■ TAI17-60071-364



Performance parameters

Fp/lp/Vc	1500N	28.8Arms	1.5m/s
Fc/lp/Vmax	653N	9.6Arms	3.2m/s
Repeatability	$\pm 0.5 - \pm 2\mu\text{m}$		
Straightness	$\pm 20\mu\text{m}/\text{M}$		
Payload capability	290 kg (p to an acceleration of 0.5G)		

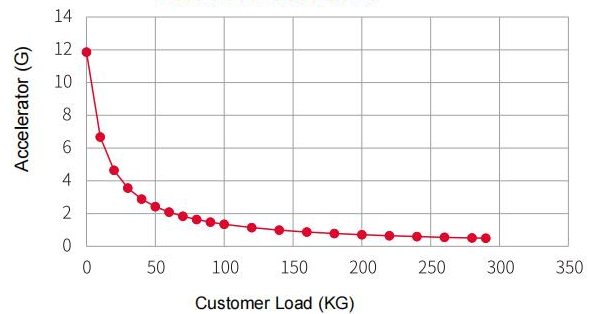
Characteristics

Module Base	Length	4-6M
	Quality	10kg/m
	Growth unit	192mm
	Minimum value	590mm
Moving table	Length	390mm
	Quality	12.9kg
safety distance definition	20mm	
Length of end cover	Length	15mm*2
	Quality	0.5kg*2

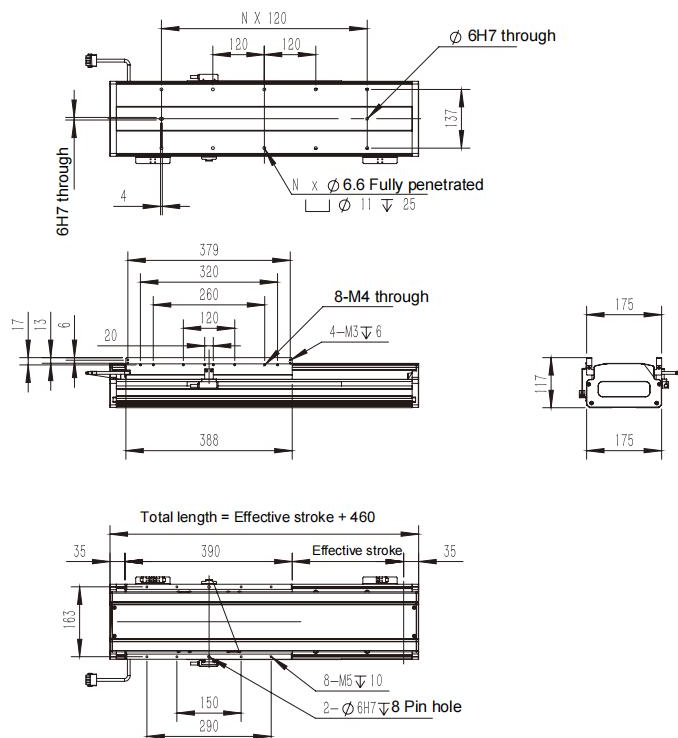
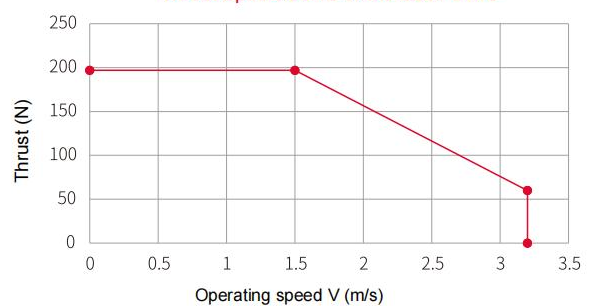
Configuration information

Guide way	Standard configuration THK SSR 15XV (other requirements optional)
Encoder	Standard configuration with 1.0um resolution magnetic grid (other requirements optional)
Sensor	Standard photoelectric switch (other options such as magnetic grating encoder sensor are available)

Acceleration/Load Curve



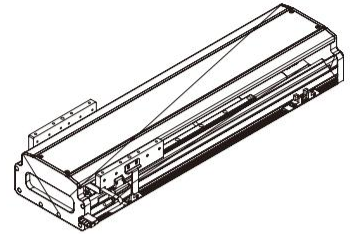
Thrust/Speed Curve of the 220V Drive



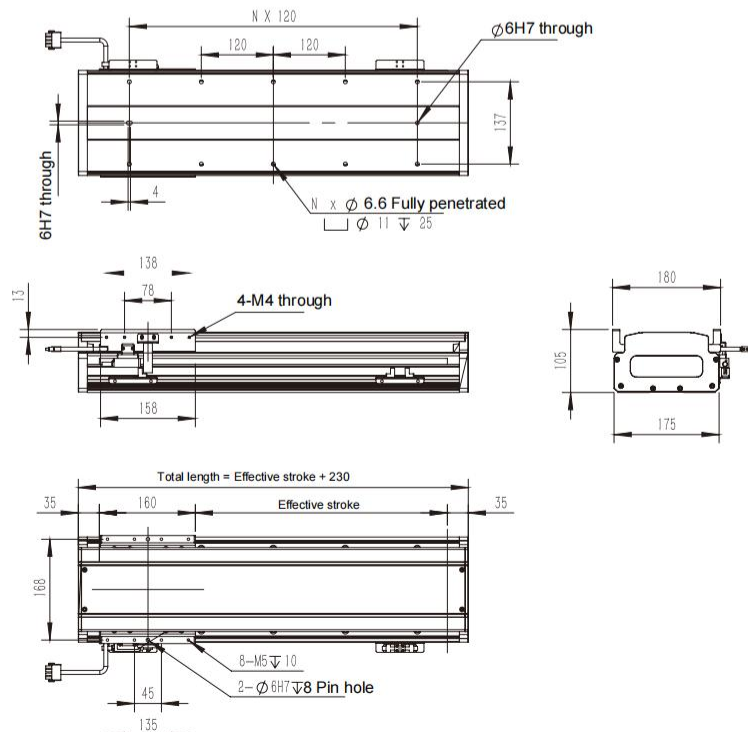
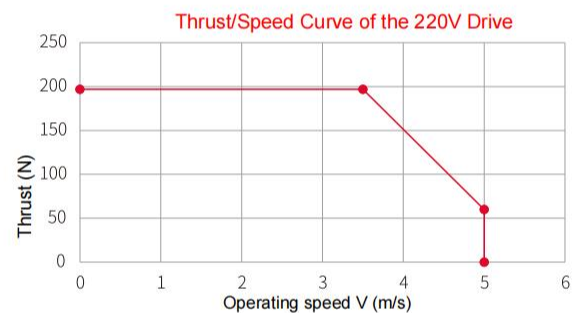
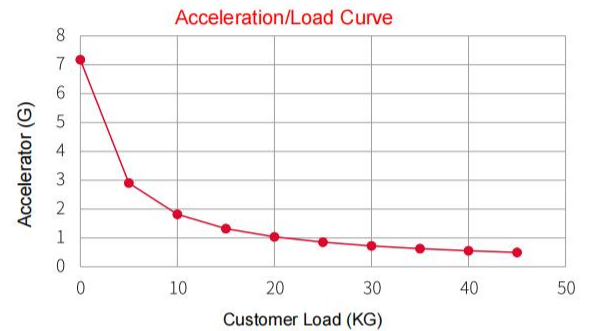
TAi17-YAN035 Series

Motor model

■ TAI17-YAN035-C1



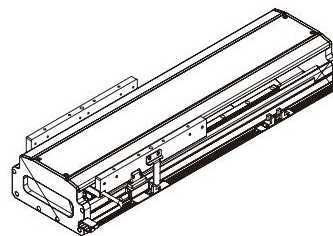
Performance parameters			
Fp/lp/Vc	240N	4.2Arms	3.5m/s
Fc/lp/Vmax	80N	1.4Arms	5m/s
Repeatability	±0.5-±2um		
Straightness	±20um/M		
Payload capability	45 kg (p to an acceleration of 0.5G)		
Characteristics			
Module Base	Length	4-6M	
	Quality	10kg/m	
	Growth unit	108mm	
	Minimum value	340mm	
Moving table	Length	160mm	
	Quality	3.41kg	
safety distance definition	20mm		
Length of end cover	Length	15mm*2	
	Quality	0.5kg*2	
Configuration information			
Guide way	Standard configuration THK SHS 15V(other requirements optional)		
Encoder	Standard configuration with 1.0um resolution magnetic grid (other requirements optional)		
Sensor	Standard photoelectric switch (other options such as magnetic grating encoder sensor are available)		



TAi17-YAN035 Series

Motor model

■ TAI17-YAN035-C2



Performance parameters

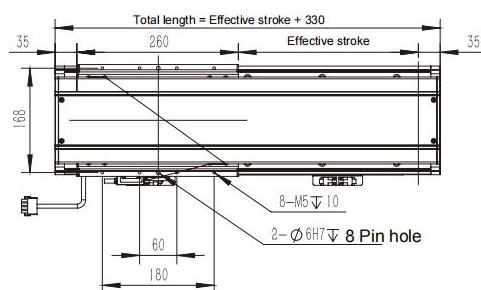
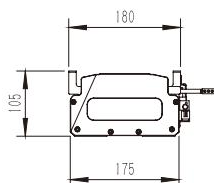
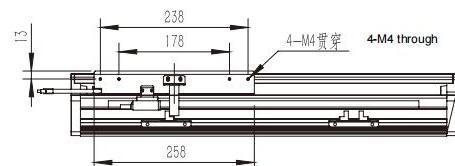
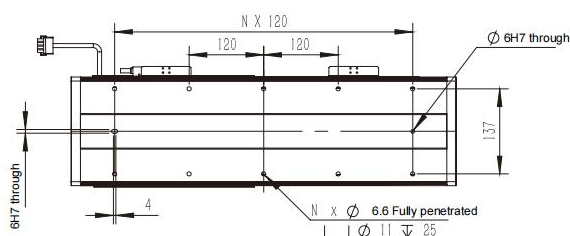
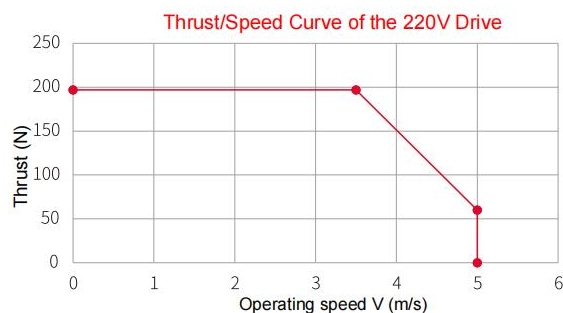
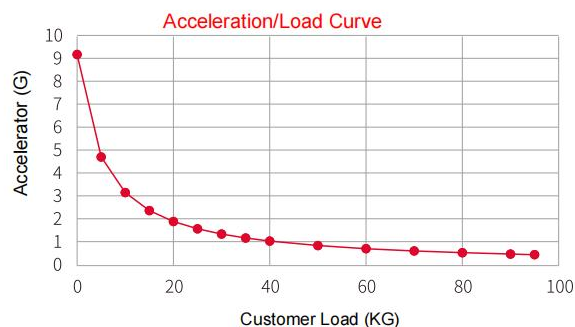
Fp/Ip/Vc	480N	8.4Arms	3.5m/s
Fc/Ip/Vmax	160N	2.8Arms	5m/s
Repeatability	$\pm 0.5 - \pm 2\mu\text{m}$		
Straightness	$\pm 20\mu\text{m/M}$		
Payload capability	95kg (截至加速度0.5G)		

Characteristics

Module Base	Length	4-6M
	Quality	10kg/m
	Growth unit	108mm
	Minimum vale	445mm
Moving table	Length	260mm
	Quality	5.31kg
safety distance definition	20mm	
Length of end cover	Length	15mm*2
	Quality	0.5kg*2

Configuration information

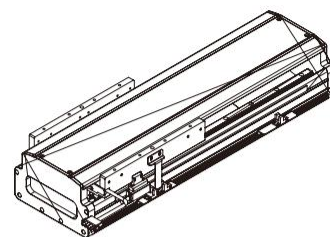
Guide way	Standard configuration THK SHS 15V (other requirements optional)
Encoder	Standard configuration with 1.0um resolution magnetic grid (other requirements optional)
Sensor	Standard photoelectric switch (other options such as magnetic grating encoder sensor are available)



TAi17-YAN050 Series

Motor model

■ TAI17-YAN050-C1



Performance parameters

Fp/Ip/Vc	840N	12.6Arms	2.6m/s
Fc/Ip/Vmax	280N	4.2Arms	4.1m/s
Repeatability	$\pm 0.5 - \pm 2\mu\text{m}$		
Straightness	$\pm 20\mu\text{m}/\text{M}$		
Payload capability	165kg (截至加速度0.5G)		

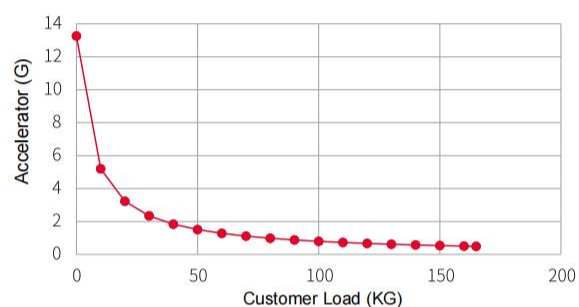
Characteristics

Module Base	Length	4-6M
	Quality	10kg/m
	Growth unit	135mm
	Minimum value	420mm
Moving table	Length	240mm
	Quality	6.46kg
safety distance definition	20mm	
Length of end cover	Length	15mm*2
	Quality	0.5kg*2

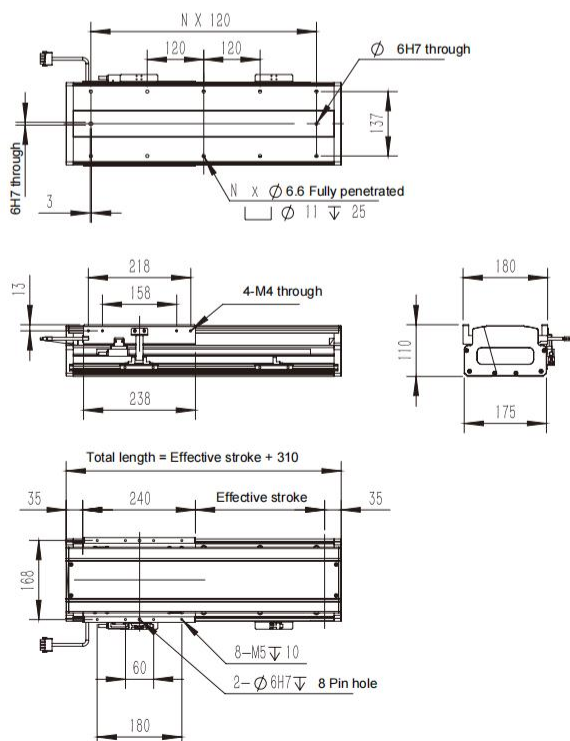
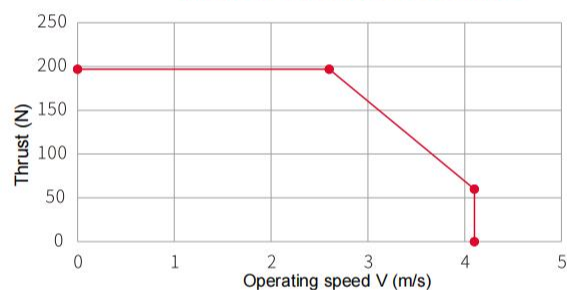
Configuration information

Guide way	Standard configuration THK SHS 15V (other requirements optional)
Encoder	Standard configuration with 1.0um resolution magnetic grid (other requirements optional)
Sensor	Standard photoelectric switch (other options such as magnetic grating encoder sensor are available)

Acceleration/Load Curve



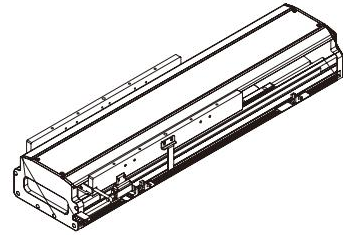
Thrust/Speed Curve of the 220V Drive



TAi17-YAN050 Series

Motor model

■ TAI17-YAN050-C2



Performance parameters

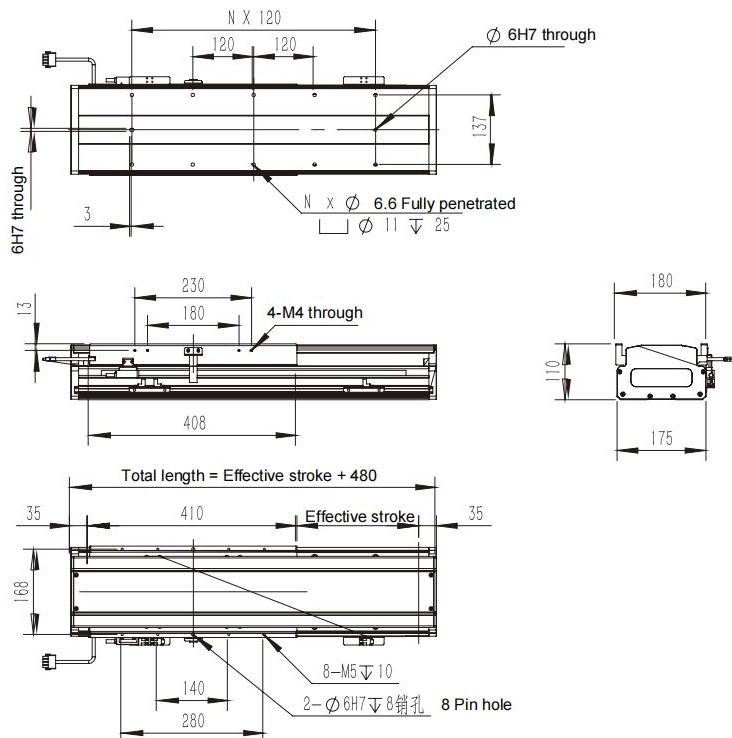
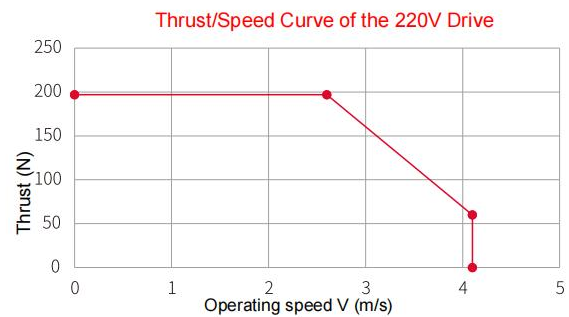
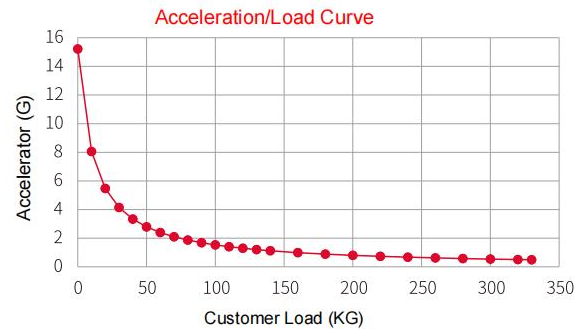
Fp/Ip/Vc	1680N	25.2Arms	2.6m/s
Fc/Ip/Vmax	560N	4.2Arms	4.1m/s
Repeatability	$\pm 0.5\text{-}\pm 2\mu\text{m}$		
Straightness	$\pm 20\mu\text{m/M}$		
Payload capability	330 kg (p to an acceleration of 0.5G)		

Characteristics

Module Base	Length	4-6M
	Quality	10kg/m
	Growth unit	135mm
	Minimum value	555mm
Moving table	Length	410mm
	Quality	11.26kg
safety distance definition	20mm	
Length of end cover	Length	15mm*2
	Quality	0.5kg*2

Configuration information

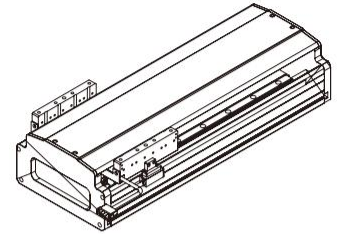
Guide way	Standard configuration THK SHS 15V (other requirements optional)
Encoder	Standard configuration with 1.0um resolution magnetic grid (other requirements optional)
Sensor	Standard photoelectric switch (other options such as magnetic grating encoder sensor are available)



TAi21-60071 Series

Motor model

■ TAI21-60071-112



Performance parameters

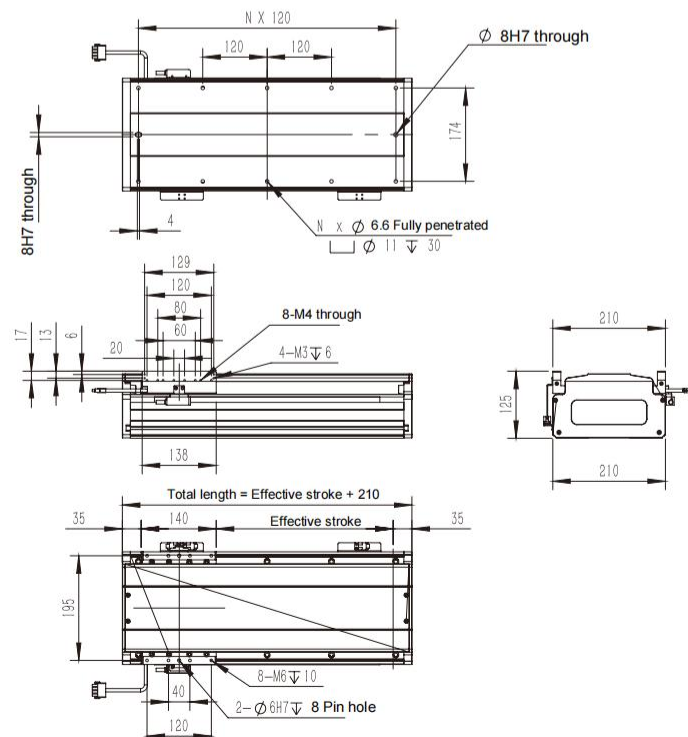
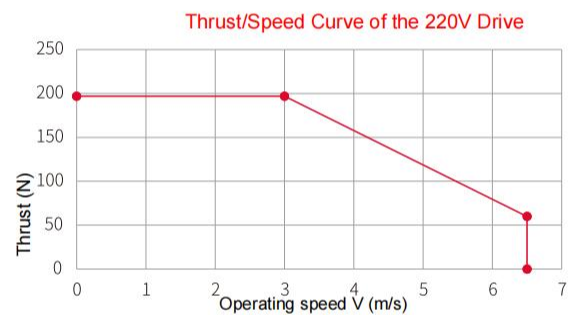
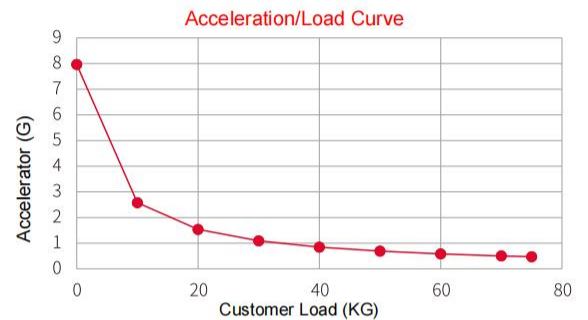
Fp/lp/Vc	375N	14.4Arms	3m/s
Fc/lp/Vmax	163N	4.8Arms	6.5m/s
Repeatability	$\pm 0.5 - \pm 2\mu\text{m}$		
Straightness	$\pm 20\mu\text{m}/\text{M}$		
Payload capability	75 kg (p to an acceleration of 0.5G)		

Characteristics

Module Base	Length	4-6M
	Quality	13.2kg/m
	Growth unit	192mm
	Minimum value	400mm
Moving table	Length	140mm
	Quality	4.8kg
safety distance definition	20mm	
Length of end cover	Length	15mm*2
	Quality	0.7kg*2

Configuration information

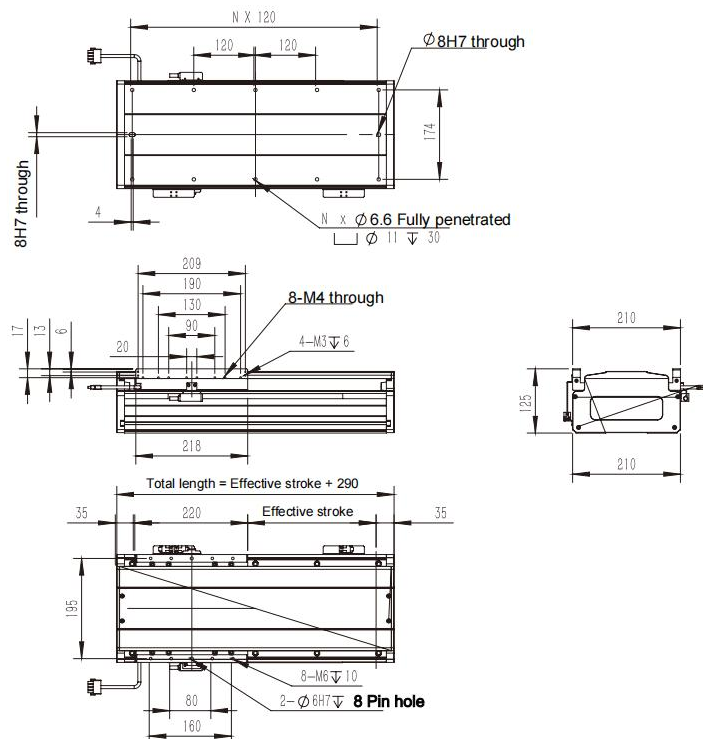
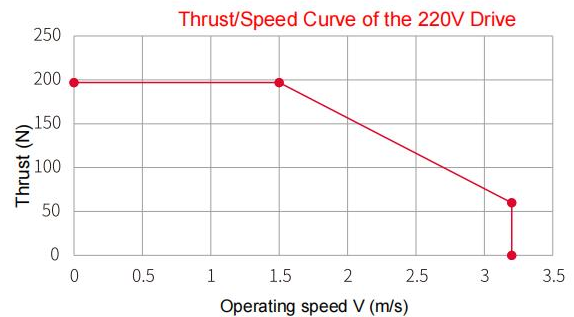
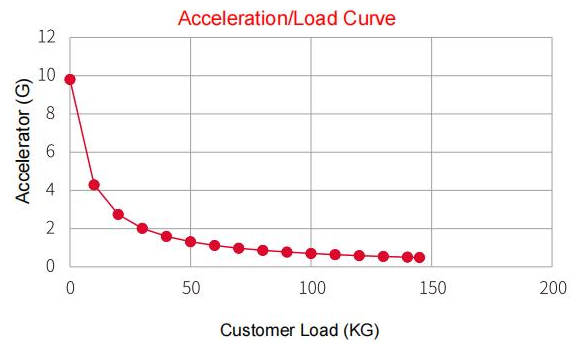
Guide way	Standard configuration THK SSR 20XW (other requirements optional)
Encoder	Standard configuration with 1.0um resolution magnetic grid (other requirements optional)
Sensor	Standard photoelectric switch (other options such as magnetic grating encoder sensor are available)



TAi21-60071 Series

■ TAI21-60071-196

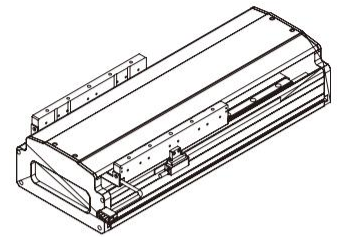
Performance parameters			
Fp/lp/Vc	750N	14.4Arms	1.5m/s
Fc/lp/Vmax	326N	4.8Arms	3.2m/s
Repeatability	±0.5-±2um		
Straightness	±20um/M		
Payload capability	145 kg (p to an acceleration of 0.5G)		
Characteristics			
Module Base	Length	4-6M	
	Quality	13.2kg/m	
	Growth unit	192mm	
	Minimum value	400mm	
Moving table	Length	220mm	
	Quality	7.8kg	
safety distance definition	20mm		
Length of end cover	Length	15mm*2	
	Quality	0.7kg*2	
Configuration information			
Guide way	Standard configuration THK SSR 20KW(other requirements optional)		
Encoder	Standard configuration with 1.0um resolution magnetic grid (other requirements optional)		
Sensor	Standard photoelectric switch (other options such as magnetic grating encoder sensor are available)		



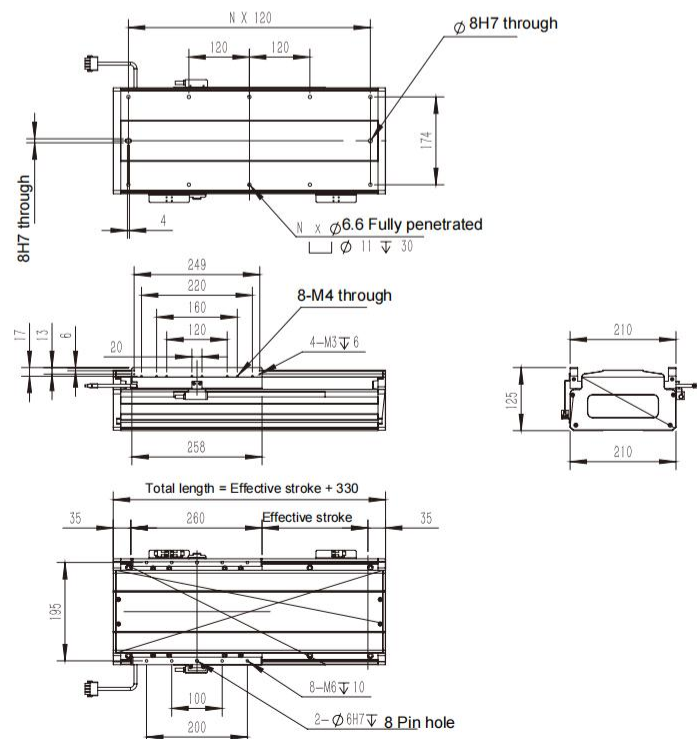
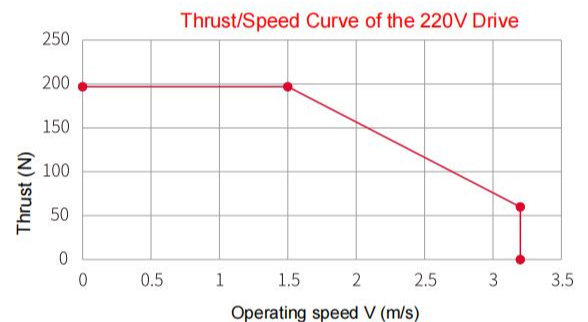
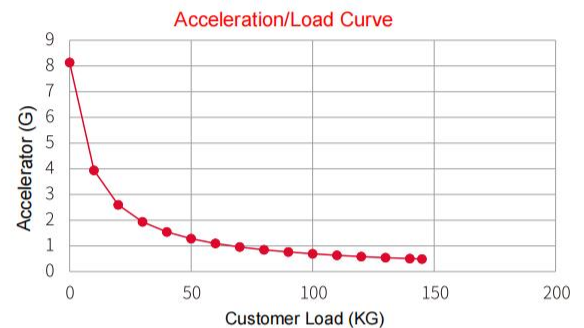
TAi21-60071 Series

Motor model

■ TAI21-60071-196-W

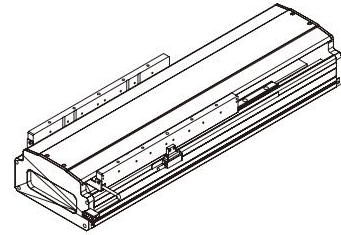


Performance parameters			
Fp/lp/Vc	750N	14.4Arms	1.5m/s
Fc/lp/Vmax	558N	8.2Arms	3.2m/s
Repeatability	±0.5-±2um		
Straightness	±20um/M		
Payload capability	145 kg (p to an acceleration of 0.5G)		
Characteristics			
Module Base	Length	4-6M	
	Quality	13.2kg/m	
	Growth unit	192mm	
	Minimum value	400mm	
Moving table	Length	260mm	
	Quality	9.4kg	
safety distance definition	20mm		
Length of end cover	Length	15mm*2	
	Quality	0.7kg*2	
Configuration information			
Guide way	Standard configuration THK SSR 20XW(other requirements optional)		
Encoder	Standard configuration with 1.0um resolution magnetic grid (other requirements optional)		
Sensor	Standard photoelectric switch (other options such as magnetic grating encoder sensor are available)		

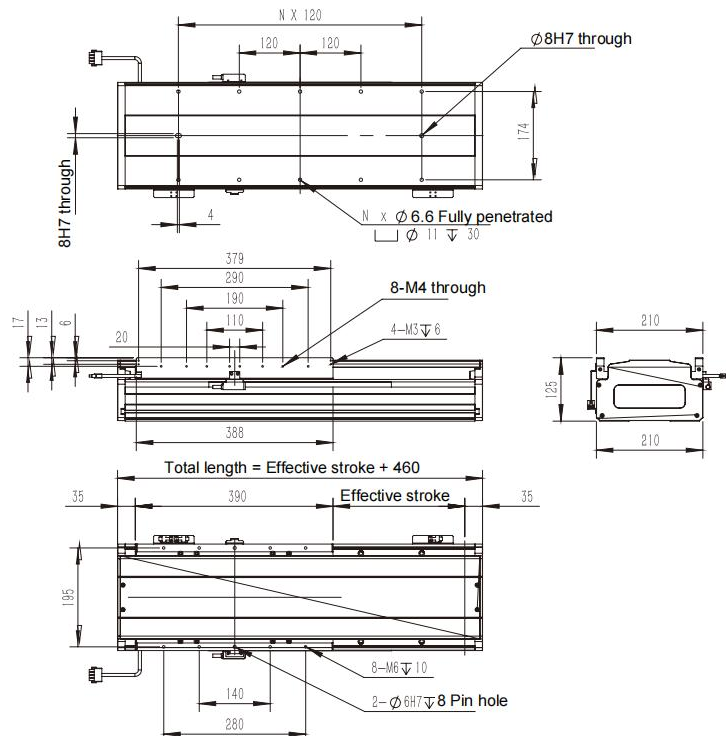
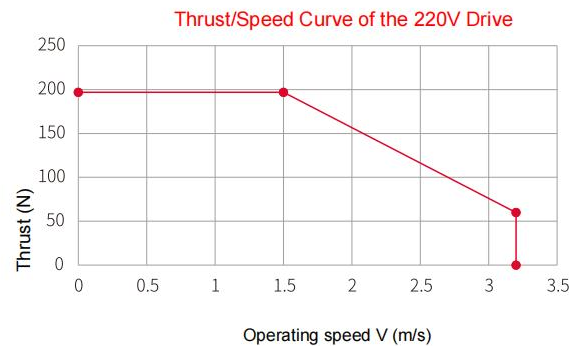
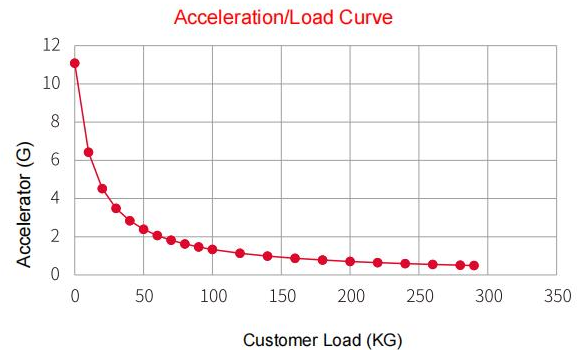


TAi21-60071 Series
Motor model

■ TAI17-60071-364



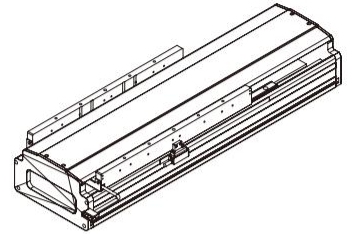
Performance parameters			
Fp/lp/Vc	1500N	28.8Arms	1.5m/s
Fc/lp/Vmax	653N	9.6Arms	3.2m/s
Repeatability	±0.5-±2um		
Straightness	±20um/M		
Payload capability	290 kg (p to an acceleration of 0.5G)		
Characteristics			
Module Base	Length	4-6M	
	Quality	13.2kg/m	
	Growth unit	192mm	
	Minimum value	590mm	
Moving table	Length	390mm	
	Quality	13.8kg	
safety distance definition	20mm		
Length of end cover	Length	15mm*2	
	Quality	0.7kg*2	
Configuration information			
Guide way	Standard configuration THK SSR 20XW(other requirements optional)		
Encoder	Standard configuration with 1.0um resolution magnetic grid (other requirements optional)		
Sensor	Standard photoelectric switch (other options such as magnetic grating encoder sensor are available)		



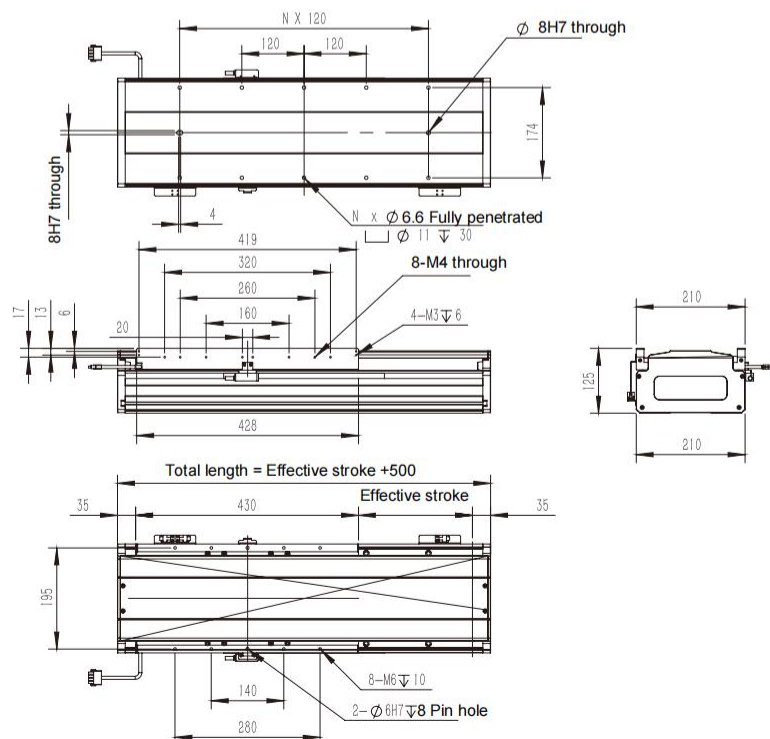
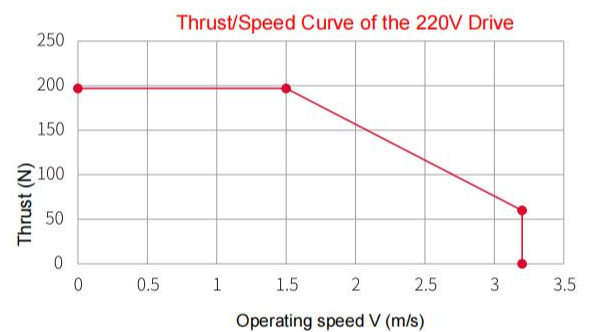
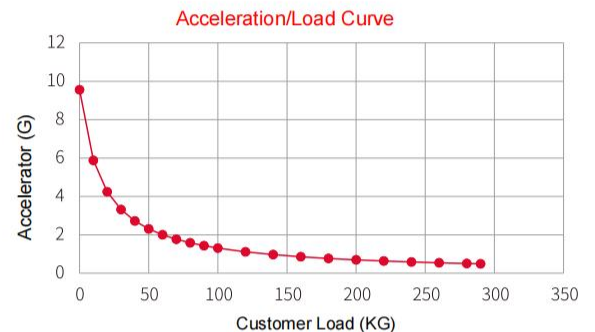
TAi21-60071 Series

Motor model

■ TAI21-60071-364-W



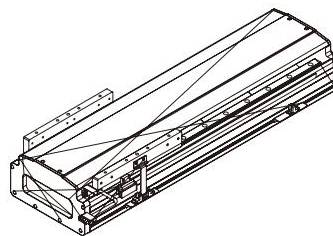
Performance parameters			
Fp/lp/Vc	1500N	28.8Arms	1.5m/s
Fc/lp/Vmax	1115N	16.4Arms	3.2m/s
Repeatability	±0.5-±2um		
Straightness	±20um/M		
Payload capability	290 kg (p to an acceleration of 0.5G)		
Characteristics			
Module Base	Length	4-6M	
	Quality	13.2kg/m	
	Growth unit	192mm	
	Minimum value	590mm	
Moving table	Length	430mm	
	Quality	16kg	
safety distance definition	20mm		
Length of end cover	Length	15mm*2	
	Quality	0.7kg*2	
Configuration information			
Guide way	Standard configuration THK SSR 20XV(other requirements optional)		
Encoder	Standard configuration with 1.0um resolution magnetic grid (other requirements optional)		
Sensor	Standard photoelectric switch (other options such as magnetic grating encoder sensor are available)		



TAi21-YAN050 Series

Motor model

■ TAI21-YAN050-C1



Performance parameters

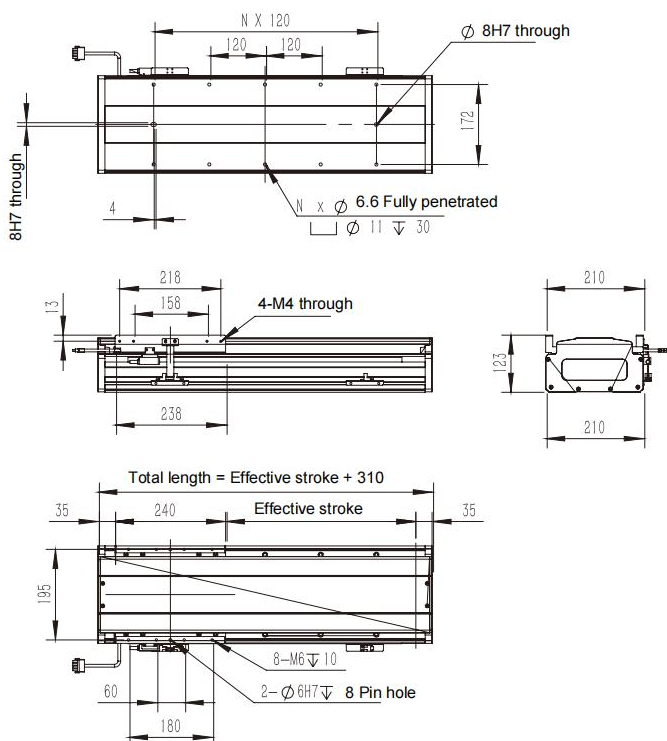
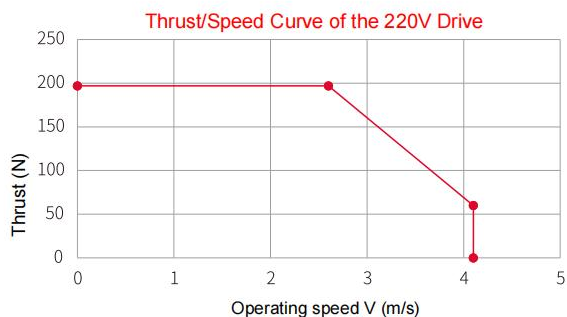
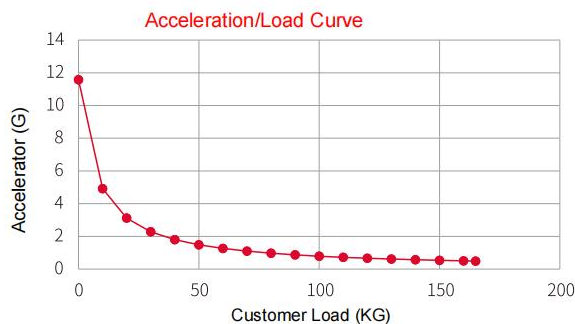
Fp/lp/Vc	840N	12.6Arms	2.6m/s
Fc/lp/Vmax	280N	4.2Arms	4.1m/s
Repeatability	$\pm 0.5 - \pm 2\mu\text{m}$		
Straightness	$\pm 20\mu\text{m}/\text{M}$		
Payload capability	165kg (截至加速度0.5G)		

Characteristics

Module Base	Length	4-6M
	Quality	13.2kg/m
	Growth unit	135mm
	Minimum value	420mm
Moving table	Length	240mm
	Quality	7.4kg
safety distance definition	20mm	
Length of end cover	Length	15mm*2
	Quality	0.7kg*2

Configuration information

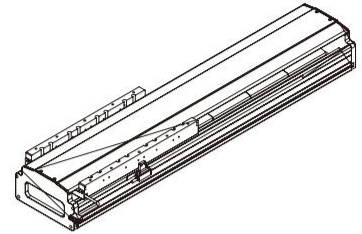
Guide way	Standard configuration THK SSR 20KW (other requirements optional)
Encoder	Standard configuration with 1.0um resolution magnetic grid (other requirements optional)
Sensor	Standard photoelectric switch (other options such as magnetic grating encoder sensor are available)



TAi21-YAN050 Series

Motor model

TAi21-YAN050-C2



Performance parameters

Fp/Ip/Vc	1680N	25.2Arms	2.6m/s
Fc/Ip/Vmax	560N	4.2Arms	4.1m/s
Repeatability	$\pm 0.5 - \pm 2\mu\text{m}$		
Straightness	$\pm 20\mu\text{m}/\text{M}$		
Payload capability	325 kg (p to an acceleration of 0.5G)		

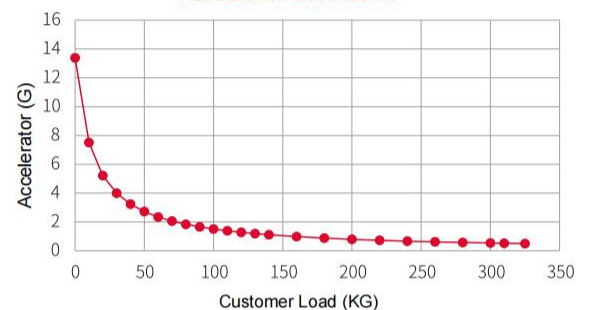
Characteristics

Module Base	Length	4-6M
	Quality	13.2kg/m
	Growth unit	135mm
	Minimum value	555mm
Moving table	Length	410mm
	Quality	12.8kg
safety distance definition	20mm	
Length of end cover	Length	15mm*2
	Quality	0.7kg*2

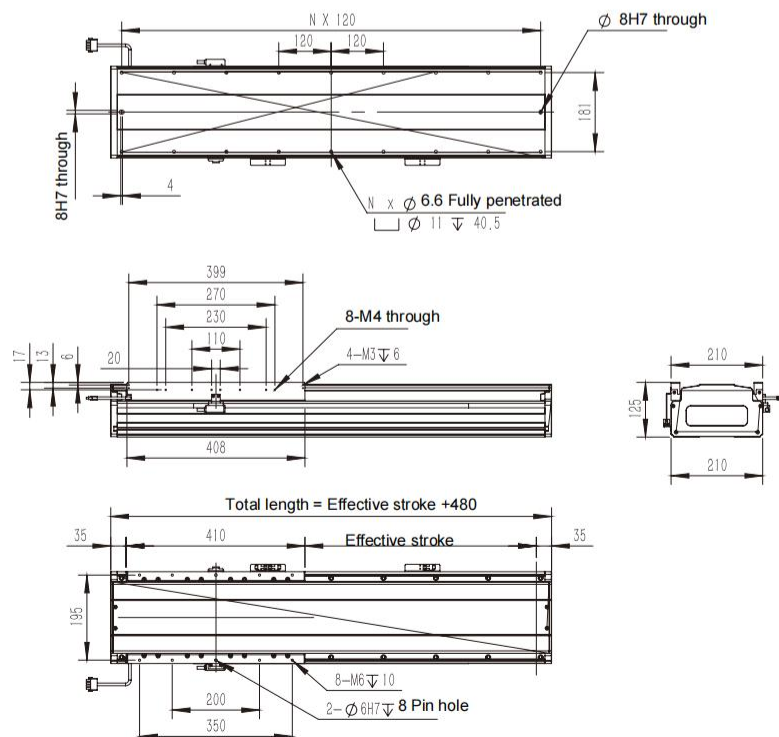
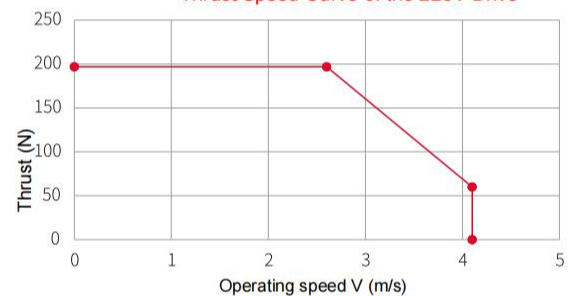
Configuration information

Guide way	Standard configuration THK SSR 20XV (other requirements optional)
Encoder	Standard configuration with 1.0um resolution magnetic grid (other requirements optional)
Sensor	Standard photoelectric switch (other options such as magnetic grating encoder sensor are available)

Acceleration/Load Curve



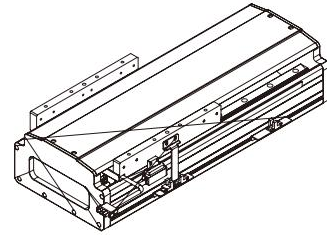
Thrust/Speed Curve of the 220V Drive



TAi21-YAN075 Series

Motor model

■ TAI21-YAN075-C1



Performance parameters

Fp/lp/Vc	1320N	17.4Arms	2.6m/s
Fc/lp/Vmax	440N	5.8Arms	3.7m/s
Repeatability	$\pm 0.5\text{--}\pm 2\mu\text{m}$		
Straightness	$\pm 20\mu\text{m/M}$		
Payload capability	260 kg (p to an acceleration of 0.5G)		

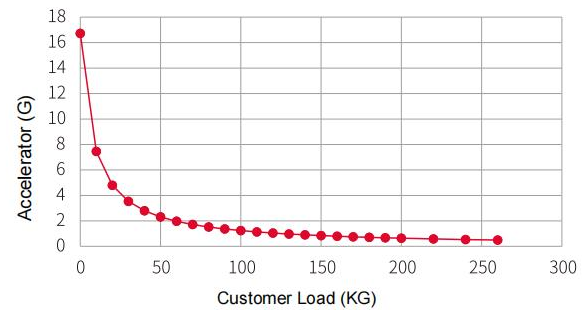
Characteristics

Module Base	Length	4-6M
	Quality	13.2kg/m
	Growth unit	135mm
	Minimum value	420mm
Moving table	Length	240mm
	Quality	8.05kg
safety distance definition	20mm	
Length of end cover	Length	15mm*2
	Quality	0.7kg*2

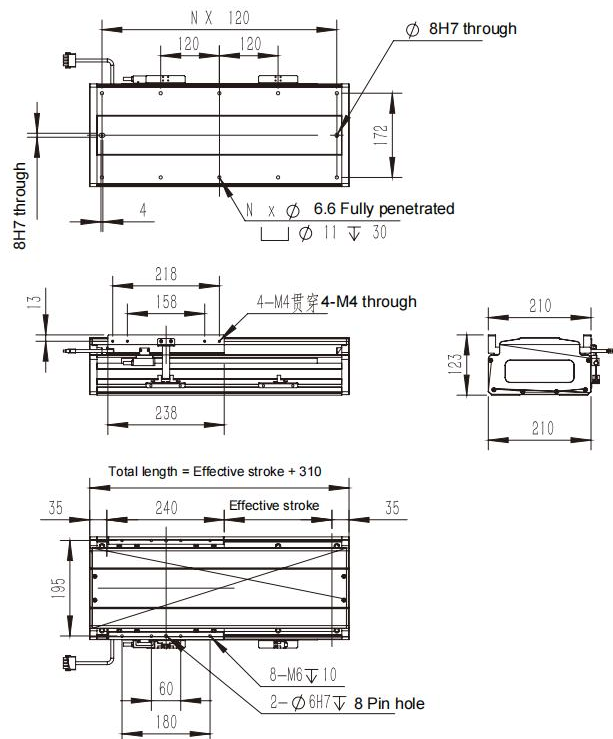
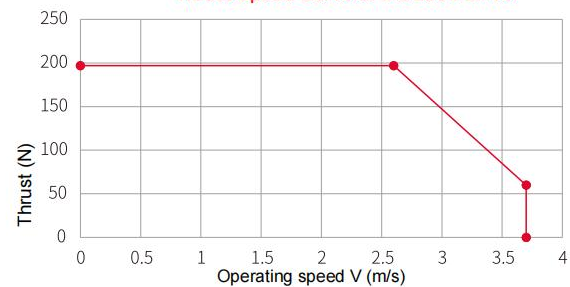
Configuration information

Guide way	Standard configuration THK SSR 20XW (other requirements optional)
Encoder	Standard configuration with 1.0um resolution magnetic grid (other requirements optional)
Sensor	Standard photoelectric switch (other options such as magnetic grating encoder sensor are available)

Acceleration/Load Curve



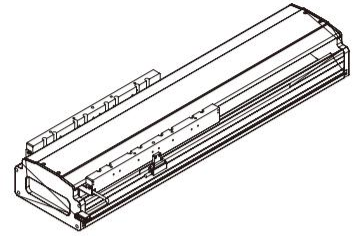
Thrust/Speed Curve of the 220V Drive



TAi21-YAN075 Series

Motor model

■ TAI21-YAN075-C2



Performance parameters

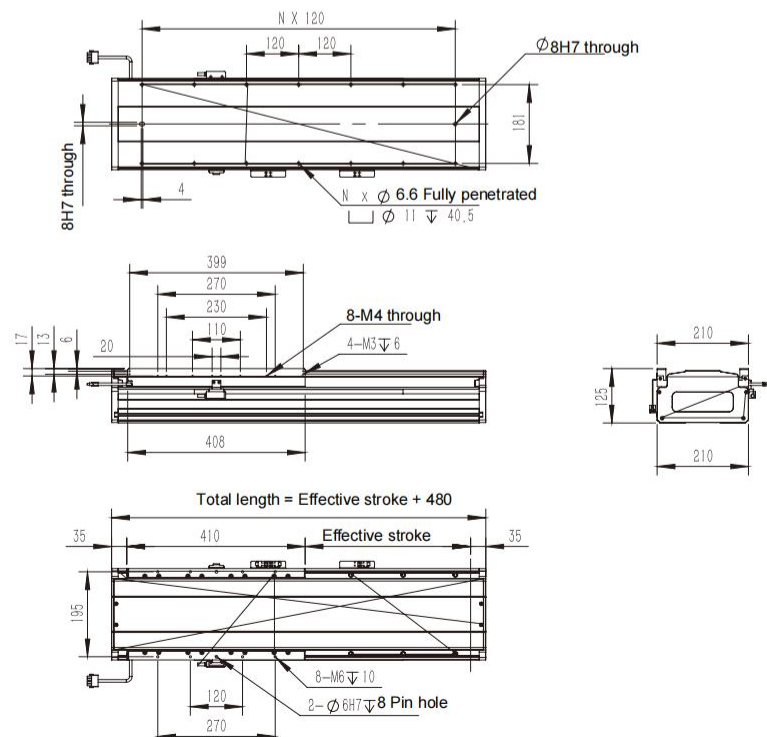
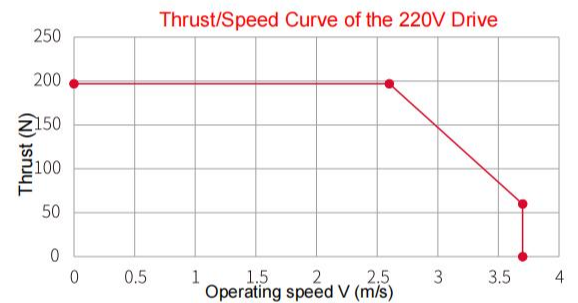
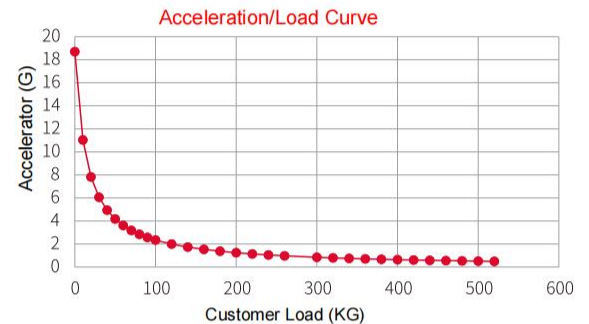
Fp/lp/Vc	2640N	34.8Arms	2.6m/s
Fc/lp/Vmax	880N	11.6Arms	3.7m/s
Repeatability	$\pm 0.5 - \pm 2\mu\text{m}$		
Straightness	$\pm 20\mu\text{m}/\text{M}$		
Payload capability	520 kg (p to an acceleration of 0.5G)		

Characteristics

Module Base	Length	4-6M
	Quality	13.2kg/m
	Growth unit	135mm
	Minimum value	540mm
Moving table	Length	410mm
	Quality	14.4kg
safety distance definition	20mm	
Length of end cover	Length	15mm*2
	Quality	0.7kg*2

Configuration information

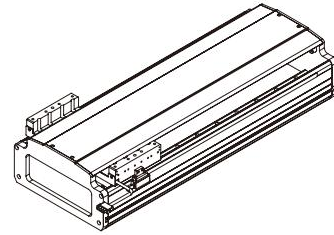
Guide way	Standard configuration THK SSR 20XW (other requirements optional)
Encoder	Standard configuration with 1.0um resolution magnetic grid (other requirements optional)
Sensor	Standard photoelectric switch (other options such as magnetic grating encoder sensor are available)



TAi27-60141 Series

Motor model

■ TAI27-60141-112



Performance parameters

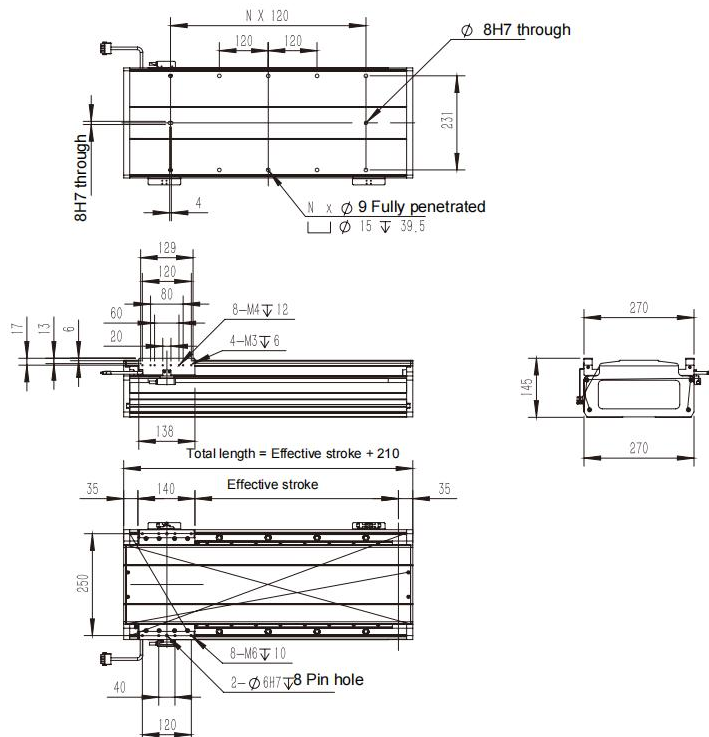
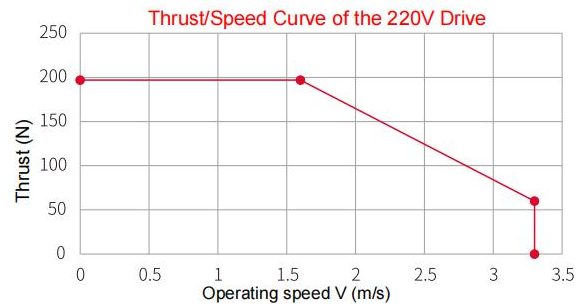
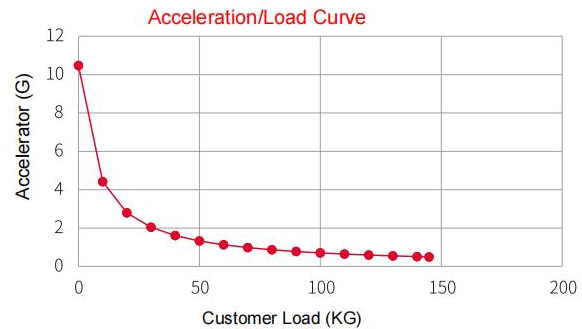
Fp/lp/Vc	750N	14.4Arms	1.6m/s
Fc/lp/Vmax	326N	4.8Arms	3.3m/s
Repeatability	$\pm 0.5\text{-}\pm 2\mu\text{m}$		
Straightness	$\pm 20\mu\text{m/M}$		
Payload capability	145 kg (p to an acceleration of 0.5G)		

Characteristics

Module Base	Length	4-6M
	Quality	23.8kg/m
	Growth unit	192mm
	Minimum value	400mm
Moving table	Length	140mm
	Quality	7.3Kg
safety distance definition	20mm	
Length of end cover	Length	15mm*2
	Quality	0.35kg*2

Configuration information

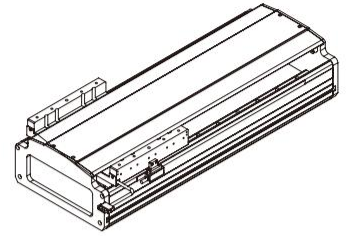
Guide way	Standard configuration THK SSR 20XW (other requirements optional)
Encoder	Standard configuration with 1.0um resolution magnetic grid (other requirements optional)
Sensor	Standard photoelectric switch (other options such as magnetic grating encoder sensor are available)



TAi27-60141 Series

Motor model

■ TAI27-60141-196



Performance parameters

Fp/lp/Vc	1500N	14.4Arms	0.7m/s
Fc/lp/Vmax	653N	4.8Arms	1.7m/s
Repeatability	$\pm 0.5 - \pm 2\mu\text{m}$		
Straightness	$\pm 20\mu\text{m}/\text{M}$		
Payload capability	290 kg (p to an acceleration of 0.5G)		

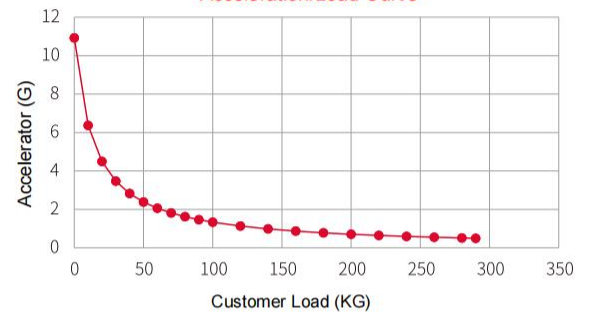
Characteristics

Module Base	Length	4-6M
	Quality	23.8kg/m
	Growth unit	192mm
	Minimum value	400mm
Moving table	Length	220mm
	Quality	14Kg
safety distance definition	20mm	
Length of end cover	Length	15mm*2
	Quality	0.35kg*2

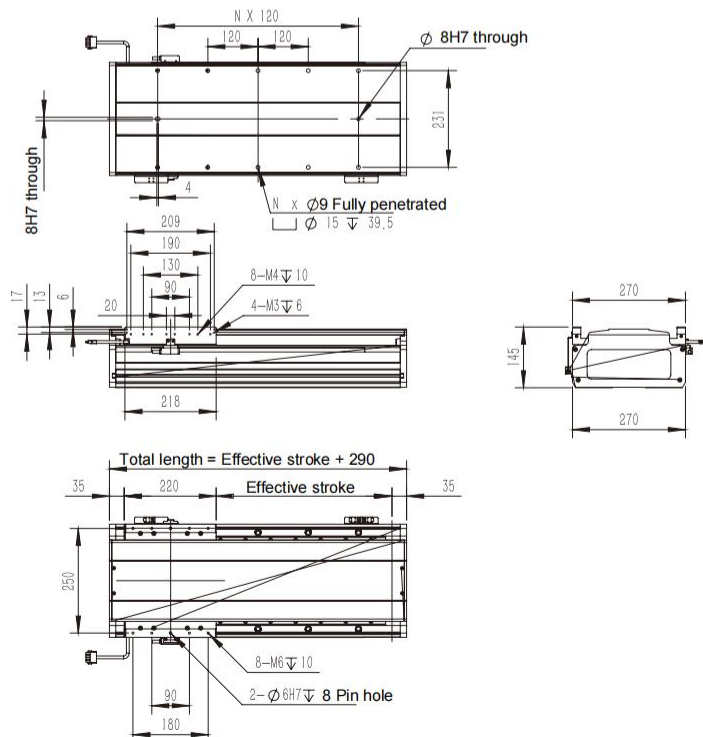
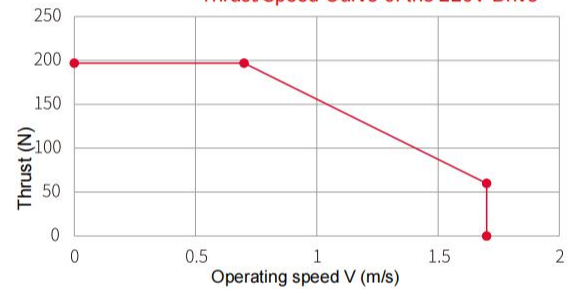
Configuration information

Guide way	Standard configuration THK SSR 20XW (other requirements optional)
Encoder	Standard configuration with 1.0um resolution magnetic grid (other requirements optional)
Sensor	Standard photoelectric switch (other options such as magnetic grating encoder sensor are available)

Acceleration/Load Curve



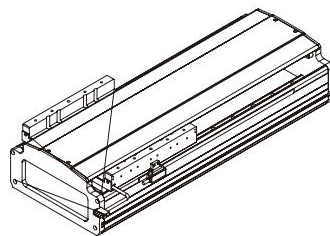
Thrust/Speed Curve of the 220V Drive



TAi27-60141 Series

Motor model

■ TAI27-60141-196-W



Performance parameters

Fp/lp/Vc	1500N	14.4Arms	0.7m/s
Fc/lp/Vmax	1123N	8.2Arms	1.7m/s
Repeatability	$\pm 0.5\text{-}\pm 2\mu\text{m}$		
Straightness	$\pm 20\mu\text{m}/\text{M}$		
Payload capability	285 kg (p to an acceleration of 0.5G)		

Characteristics

Module Base	Length	4-6M
	Quality	23.8kg/m
	Growth unit	192mm
	Minimum value	400mm
Moving table	Length	260mm
	Quality	16.3Kg
safety distance definition	20mm	
Length of end cover	Length	15mm*2
	Quality	0.35kg*2

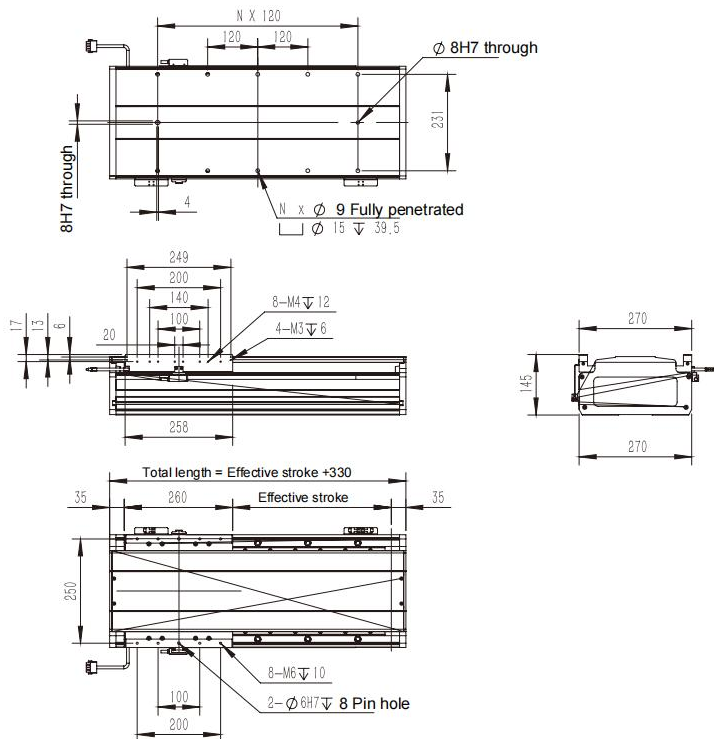
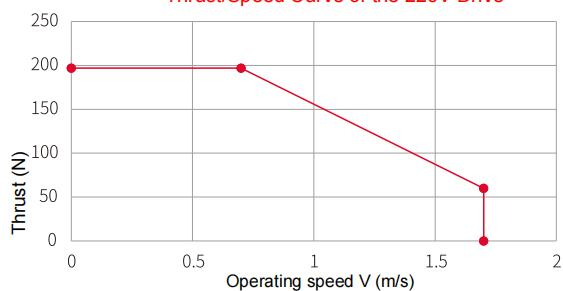
Configuration information

Guide way	Standard configuration THK SSR 20XW (other requirements optional)
Encoder	Standard configuration with 1.0um resolution magnetic grid (other requirements optional)
Sensor	Standard photoelectric switch (other options such as magnetic grating encoder sensor are available)

Acceleration/Load Curve



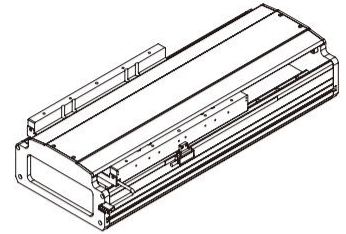
Thrust/Speed Curve of the 220V Drive



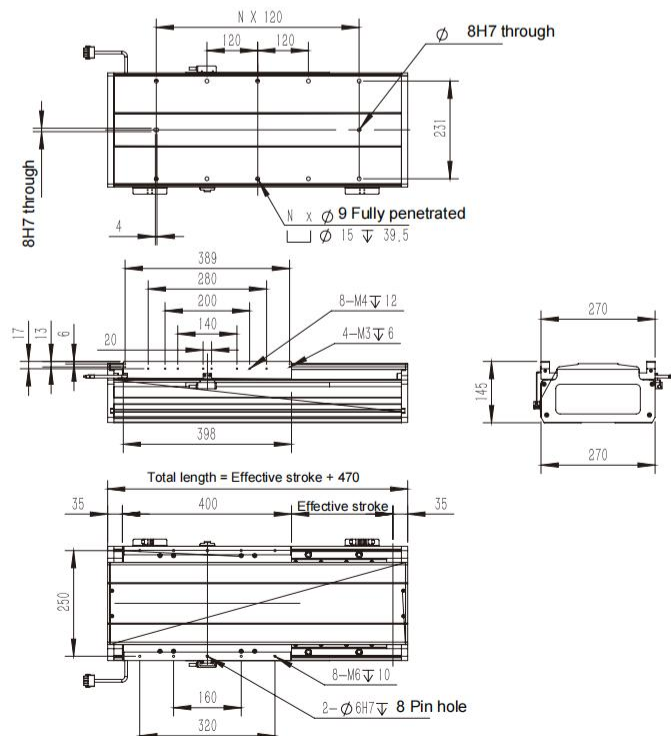
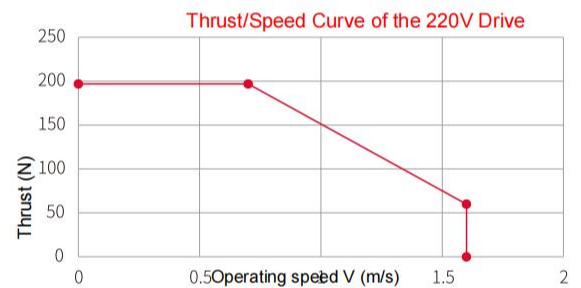
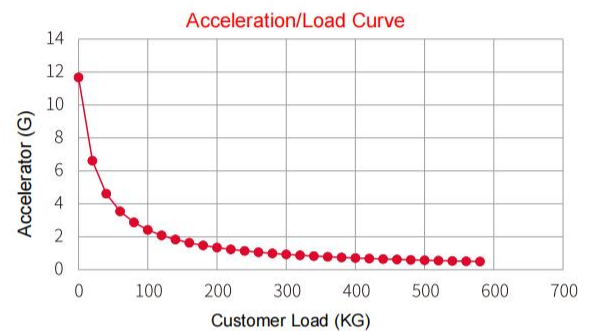
TAi27-60141 Series

Motor model

■ TAI27-60141-364



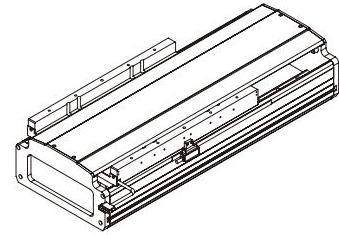
Performance parameters			
Fp/Ip/Vc	3000N	28.8Arms	0.7m/s
Fc/Ip/Vmax	1306N	9.6Arms	1.6m/s
Repeatability	±0.5-±2um		
Straightness	±20um/M		
Payload capability	580 kg (p to an acceleration of 0.5G)		
Characteristics			
Module Base	Length	4-6M	
	Quality	23.8kg/m	
	Growth unit	192mm	
	Minimum value	590mm	
Moving table	Length	400mm	
	Quality	26.2Kg	
safety distance definition	20mm		
Length of end cover	Length	15mm*2	
	Quality	0.35kg*2	
Configuration information			
Guide way	Standard configuration THK SSR 20XW(Other requirements optional)		
Encoder	Standard configuration with 1.0um resolution magnetic grid (other requirements optional)		
Sensor	Standard photoelectric switch (other options such as magnetic grating encoder sensor are available)		



TAi27-60141 Series

Motor model

■ TAI27-60141-364-W



Performance parameters

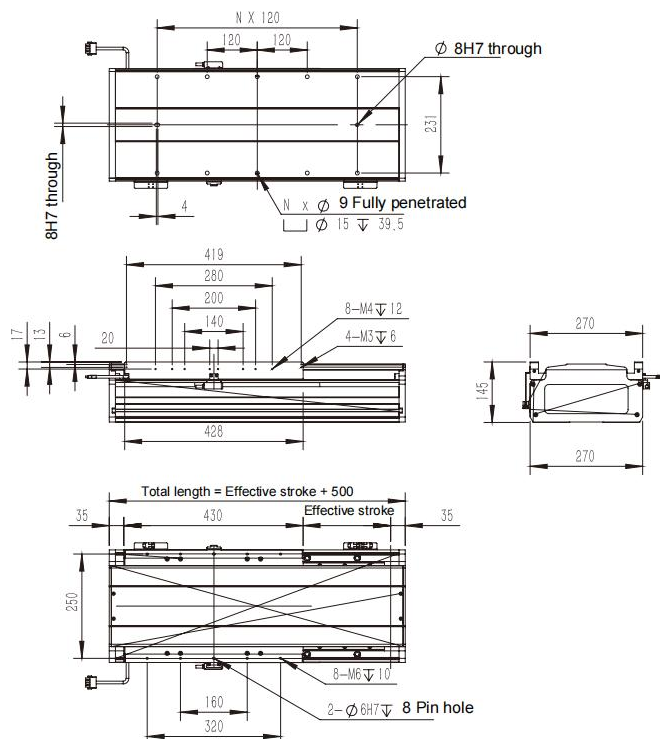
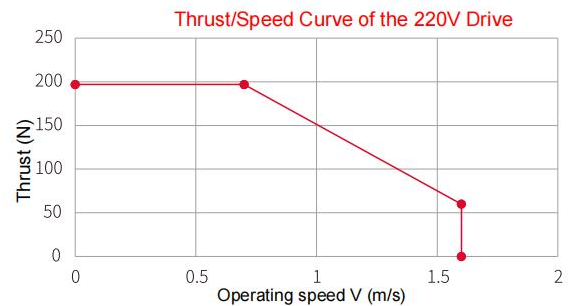
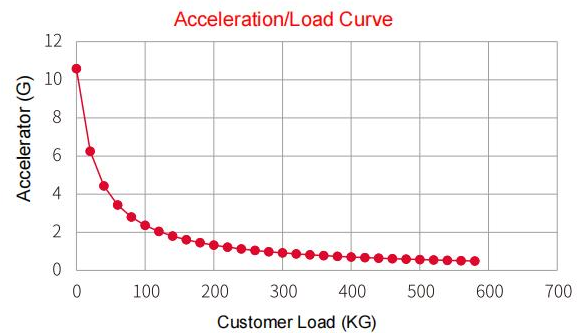
Fp/Ip/Vc	3000N	28.8Arms	0.7m/s
Fc/Ip/Vmax	2247N	16.4Arms	1.6m/s
Repeatability	$\pm 0.5 - \pm 2\mu\text{m}$		
Straightness	$\pm 20\mu\text{m/M}$		
Payload capability	580 kg (p to an acceleration of 0.5G)		

Characteristics

Module Base	Length	4-6M
	Quality	23.8kg/m
	Growth unit	192mm
	Minimum value	590mm
Moving table	Length	430mm
	Quality	28.9Kg
safety distance definition	20mm	
Length of end cover	Length	15mm*2
	Quality	0.35kg*2

Configuration information

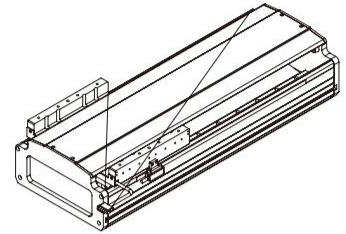
Guide way	Standard configuration THK SSR 20XV(other requirements optional)
Encoder	Standard configuration with 1.0um resolution magnetic grid (other requirements optional)
Sensor	Standard photoelectric switch (other options such as magnetic grating encoder sensor are available)



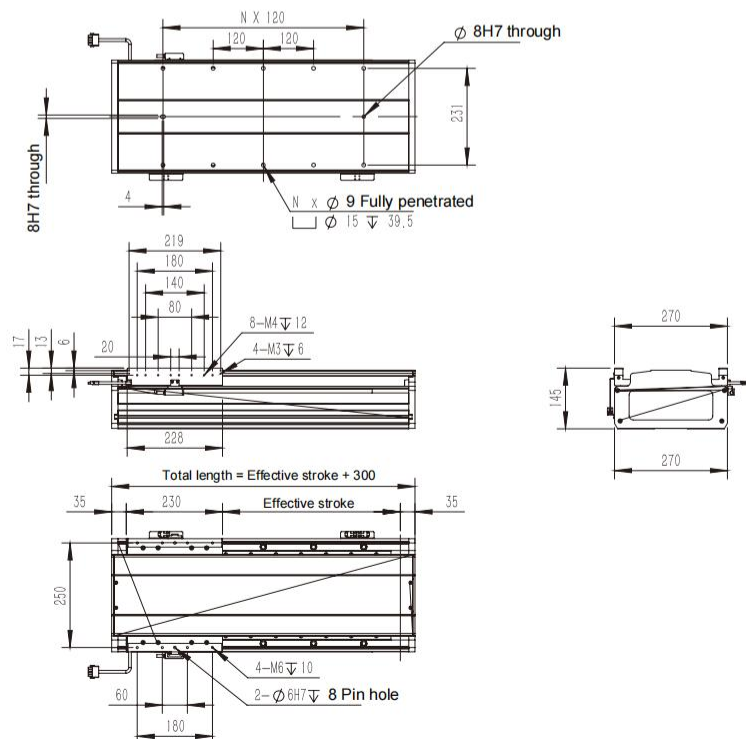
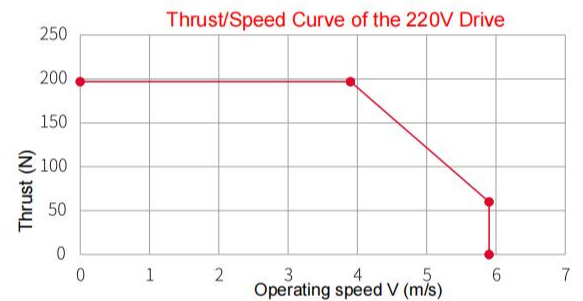
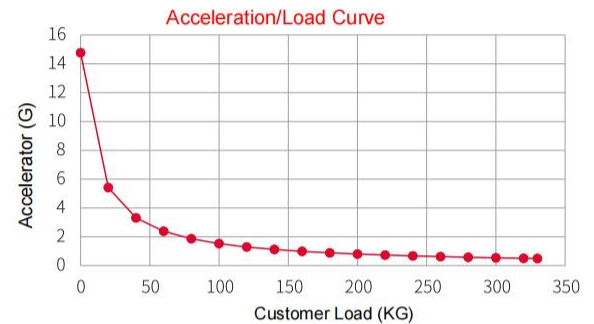
TAi27-YAN100 Series

Motor model

TAi27-YAN100-C1



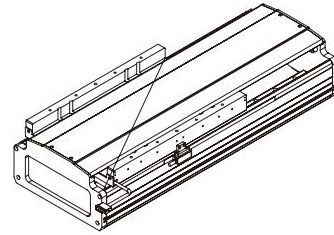
Performance parameters			
Fp/lp/Vc	1680N	35.4Arms	3.9m/s
Fc/lp/Vmax	560N	11.8Arms	5.9m/s
Repeatability	±0.5-±2um		
Straightness	±20um/M		
Payload capability	330 kg (p to an acceleration of 0.5G)		
Characteristics			
Module Base	Length	4-6M	
	Quality	23.8kg/m	
	Growth unit	270mm	
	Minimum value	420mm	
Moving table	Length	230mm	
	Quality	11.6kg	
safety distance definition	20mm		
Length of end cover	Length	15mm*2	
	Quality	0.35kg*2	
Configuration information			
Guide way	Standard configuration THK SHS 20V(other requirements optional)		
Encoder	Standard configuration with 1.0um resolution magnetic grid (other requirements optional)		
Sensor	Standard photoelectric switch (other options such as magnetic grating encoder sensor are available)		



TAi27-YAN100 Series

Motor model

■ TAI27-YAN100-C2



Performance parameters

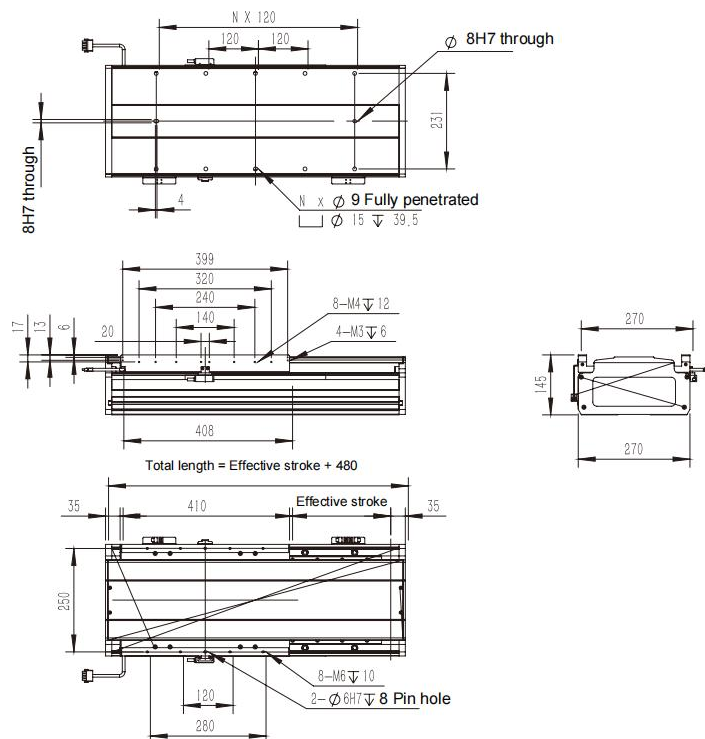
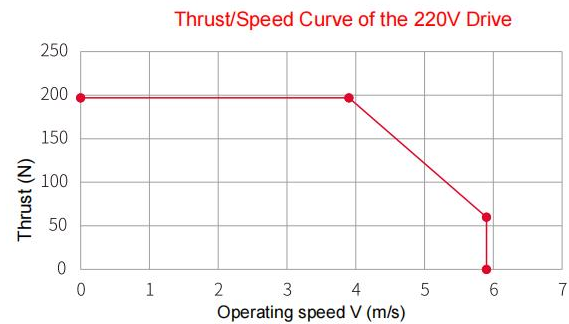
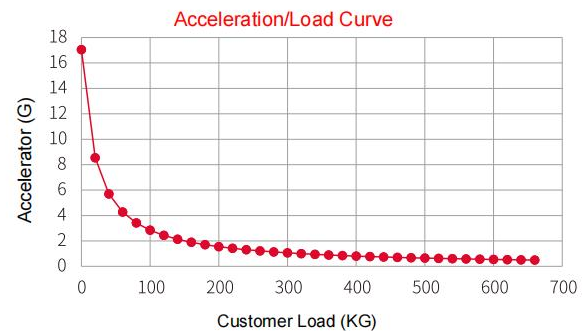
Fp/Ip/Vc	3360N	70.8Arms	3.9m/s
Fc/Ip/Vmax	1120N	23.6Arms	5.9m/s
Repeatability	$\pm 0.5\text{-}\pm 2\mu\text{m}$		
Straightness	$\pm 20\mu\text{m/M}$		
Payload capability	660 kg (p to an acceleration of 0.5G)		

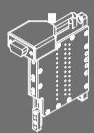
Characteristics

Module Base	Length	4-6M
	Quality	23.8kg/m
	Growth unit	270mm
	Minimum value	540mm
Moving table	Length	410mm
	Quality	20.1kg
safety distance definition	20mm	
Length of end cover	Length	15mm*2
	Quality	0.35kg*2

Configuration information

Guide way	Standard configuration THK THK SHS 20V (other requirements optional)
Encoder	Standard configuration with 1.0um resolution magnetic grid (other requirements optional)
Sensor	Standard photoelectric switch (other options such as magnetic grating encoder sensor are available)



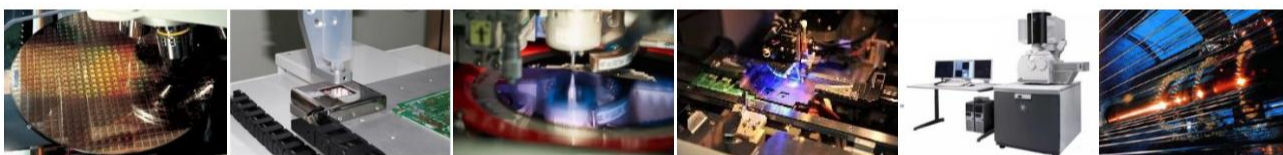


Professional products

After many years of serving various industries, Cidian has accumulated experience and developed customized products for multiple specialized applications. These products feature ultra-high precision at sub-micron and even nanometer levels, as well as ultra-high load movement exceeding 15G. They are commonly used in professional fields such as optical lens manufacturing, fiber optic communication processes, multiple pre-packaging semiconductor processes and inspections, research institutions, medical, and military industries.



Application area



Laser drill stage for back light module

- The up axis and down axis are stacked with a very low profile design. The distance between working surface of up axis and linear guide mounting surface of down axis is only 100 mm.
- Wide span design of down axis together with driven by dual linear motors eliminates resonance in yaw direction due to gravity center change of up axis.
- The stage employs a bottom base made of cast iron to absorb vibration.
- Ultra-low cogging force linear motors are employed.



ITEM		Unit	X axis (up)	Y axis (down)
Stroke travel	Effective	mm	310	310
	Maximal	mm	320	320
Resolution		μm	0.1	0.1
Straightness		μm	<1	<1
Flatness		μm	<5	<5
XYZ squareness		μm	<3	
Repeatability		μm	+/- 0.2	+/- 0.2
Accuracy (with laser calibration)		μm	< 1	< 1
Maximal speed		m/sec	0.8	0.8
Maximal Acc.		G	2	2

Gantry stage for cell phone PCB remounting

- Dual linear motors, dual linear scales and dual drivers are employed to realize high speed/acceleration gantry system.
- X axis uses composite material to reduce weight and increase rigidity.
- M-shape bottom base made of cast iron is used to absorb vibration.
- Ultra-low cogging force linear motors are employed.



ITEM	Unit	X axis (up)	Yaxis(down)
Stroke travel	Effective	mm	700
	Maximal	mm	750
Resolution	μm	0.5	0.5
Straightness	μm	<3	<3
Flatness	μm	<9	<9
XYZsquareness	μm	<5	
Repeatability	μm	+/- 1	+/- 1.5
Accuracy (with laser calibration)	μm	< 5	< 5
Maximal speed	m/sec	2.5	2.5
MaximalAcc	G	2.5	2.5

Ultra-precision Laser drill stage for Wafer Probe Card

- The up axis and down axis are stacked with a very low profile design. The distance between working surface of up axis and linear guide mounting surface of down axis is only 100 mm.
- Wide span design of down axis together with driven by dual linear motors eliminates resonance in yaw direction due to gravity center change of up axis.
- The stage employees a bottom base made of cast iron to absorb vibration.
- Built-in cable chain and fully covered bellow to improve protection grade.
- Ultra-low cogging force linear motors are employed.



Polymer Laser Drilling

Another application of laser processing in Probe Cards is ultraviolet laser drilling on polymer materials. Leveraging the characteristics of ultraviolet laser ablation, it features a processing process with high resolution and low thermal effect, enabling the production of finer hole diameters and smaller hole spacing. Currently, it is already in stable mass production.

Applicable materials: P1, Mylar, Kapton, Polyimide, etc.

Drilling thickness: 0.15mm or less

Processing hole diameter: 10μm or more

Taper angle: 5 degrees

Processing accuracy (hole diameter): ±1μm

Positional accuracy: within 5μm

Processing area: 150mm × 150mm



ITEM	Unit	X axis (up)	Yaxis(down)
Stroke travel	Effective	mm	100
	Maximal	mm	112
Resolution	μm	0.05	0.05
Straightness	μm	<1	<1
Flatness	μm	<5	<5
XYZsquareness	μm	<2	
Repeatability	μm	+/- 0.1	+/- 0.1
Accuracy (with laser calibration)	μm	< 1	< 1
Maximal speed	m/sec	0.8	0.8
MaximalAcc	G	2	2

XY high-speed stage for SMD steel plate laser cutting machine

- The linear guides of X and Y axes are arranged on the same plane to enhance fast settling and trajectory tracking.
- The up axis and down axis are stacked with a very low profile design. The distance between working surface of up axis and linear guide mounting surface of down axis is only 60 mm.
- The stage employs a bottom base made of cast iron to absorb vibration
- Built-in cable chain and fully covered bellow to improve protection grade.
- Ultra-low cogging force linear motors are employed.



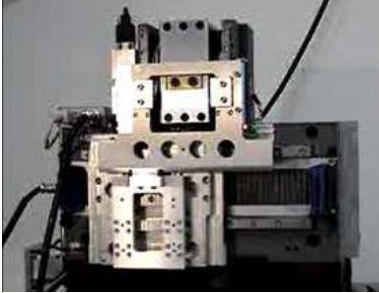
ITEM		Unit	X axis (up)	Y axis (down)
Stroke travel	Effective	mm	600	600
	Maximal	mm	620	620
	Resolution	μm	0.5	0.5
	Straightness	μm	<2	<2
	Flatness	μm	<9	<9
	XYZ squareness	μm	<5	
	Repeatability	μm	+/- 1.5	+/- 1.5
	Accuracy (with laser calibration)	μm	<5	<5
	Maximal speed	m/sec	2	2
	Maximal Acc	G	2	2

XY high-speed stage for wire bonder including bonding head



ITEM		Unit	X axis (up)	Y axis (down)	Z axis
Stroke travel	Effective	mm	60	60	10
	Maximal	mm	70	70	12
	Resolution	μm	0.2	0.2	1
	Straightness	μm	<1	<1	
	Flatness	μm	<5	<5	
	XYZ squareness	μm	<3		
	Repeatability	μm	+/- 0.5	+/- 0.5	+/- 2
	Accuracy (with laser calibration)	μm	<1	<1	<1
	Maximal speed	m/sec	2	2	2
	Maximal Acc	G	15	15	20

YZ high-speed stage for die bonder



ITEM		Unit	Yaxis(down)	Z axis
Stroke travel	Effective	mm	150	50
	Maximal	mm	160	58
Resolution		μm	1	1
Straightness		μm	<2	<2
Flatness		μm	<5	<5
XYZ squareness		μm	<5	
Repeatability		μm	+/- 2	+/- 2
Accuracy (with laser calibration)		μm	< 1	< 1
Maximal speed		m/sec	4	4
Maximal Acc.		G	7	7

XYZ precision stage for optical lens dispenser on LED wafer



ITEM		Unit	X axis (up)	Yaxis(down)	Z axis
Stroke travel	Effective	mm	150	150	50
	Maximal	mm	158	158	58
Resolution		μm	0.05	0.05	0.05
Straightness		μm	<2	<1	<1
Flatness		μm	<1	<2	<2
XYZ squareness		μm	<2	<2	
Repeatability		μm	+/- 0.1	+/- 0.1	+/- 0.1
Accuracy (with laser calibration)		μm	< 1	< 1	< 1
Maximal speed		m/sec	0.8	0.8	0.8
Maximal Acc.		G	2	2	2

Linear motor submicron stage for optical fiber alignment

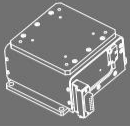


ITEM		Unit	X axis (up)	Yaxis(down)
Stroke travel	Effective	mm	15	15
	Maximal	mm	20	20
Resolution		m	0.02	0.02
Straightness		m	<1	<1
Flatness		m	<1	<1
XYZ squareness		m	<2	
Repeatability		μm	+/- 0.05	+/- 0.05
Accuracy (with laser calibration)		m	< 0.2	< 0.2
Maximal speed		m/sec	1	1
Maximal Acc.		G	1	1

Precision stage for submicron EDM



ITEM		Unit	X axis (up)	Yaxis(down)
Stroke travel	Effective	mm	150	150
	Maximal	mm	160	160
Resolution		μm	0.02	0.02
Straightness		μm	<1	<1
Flatness		μm	<5	<5
XYZ squareness		μm	<3	
Repeatability		μm	+/- 0.05	+/- 0.05
Accuracy (with laser calibration)		μm	< 0.5	< 0.5
Maximal speed		m/sec	1	1
Maximal Acc.		G	3	3



High-speed direct-drive nano-sports products



Ai series nano high-speed alignment platform products provide complete 6-degree-of-freedom high-precision alignment requirements at the nano to submicron level. The products are divided into four modules according to their motion forms, including: single-axis linear horizontal motion module, quasi-planar vertical lifting motion module, planar rotation motion module, and coplanar pitch and yaw angle motion module. Each module has various external dimensions for selection and can be combined into a composite motion platform according to specific needs. Additionally, customized special specification product services are available, such as corresponding solutions for use under ultra-high vacuum.

Naming rules

Tai

Samxle
Magnetolectric

SA

Motion Types	
SA	Linear Motion Axis
SZ	Vertical Motion Axis
PR	Pitch and Yaw Axis
RA	Rotary Motion Axis

060

Product Dimension Description	
060	
080	
100	
120	
150	
.....	

A

Wiring Method	
A	
B	
C	
D	

Applications

- > Ultra-precision Automated Assembly Equipment
- > Flexible Screen Precision Lamination Equipment
- > Camera Module Active Alignment (AA) Equipment
- > Semiconductor Wafer Inspection Equipment
- > Optical Fiber Precision Assembly and Alignment Equipment
- > Biomedical Inspection Equipment

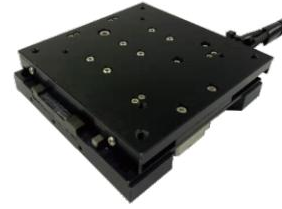
TAiSA

Motor model

TAiSA060

TAiSA080

TAiSA120

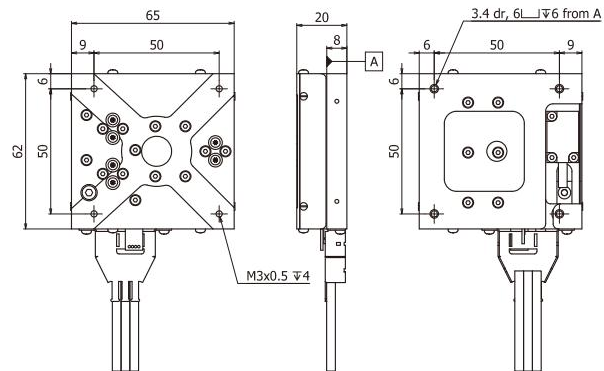


Product Characteristics

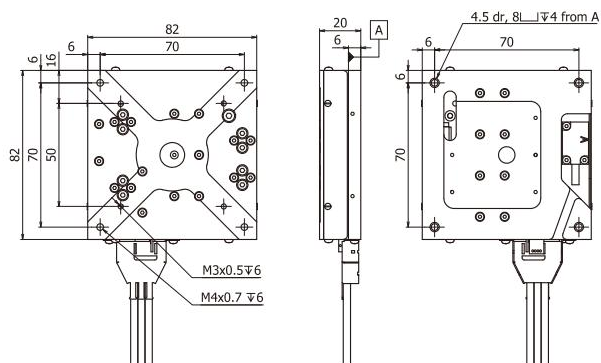
- > Direct drive by linear motor
- > Miniature precision ball slide rail
- > Minimum step motion of 20nm
- > Full-stroke repeatability: $\pm 0.1\mu\text{m}$
- > Digital output, analog miniature optical scale
- > Cost-effective, highly compatible compact design

Mechanical and performance parameters	unit	TAiSA060	TAiSA080	TAiSA120
Travel	mm	19	19	38
Effective travel	mm	16	16	36
Straightness	μm	<1	<1	<1
Planeness	μm	<3	<3	<3
Repeatability	μm	± 0.1	± 0.1	0.1
Accuracy	μm	<0.5	0.5	0.5
Moving Mass	g	177	190	640
Total Mass	g	275	377	1000
Motor and drive parameters				
Peak Force	Nt	8.1	16	30
Continue Force	Nt	2.7	4	10
Peak Current	A	0.75	2	3
Continue Current	A	0.25	0.5	1
Force Constant	Nt/Apeak	10.8	8.1	10.8
Back EMF	v/m/s	3.6	2.7	3.6
Resistance(line-to-line)	ohm	33	11	8.2
Inductance(line-to-line)	mH	1.3	0.44	0.3
Pole Pitch	Mm	9.6	9.6	9.6
Driver Voltage	V	24	24	24
Encoder Resolution	μm	0.02	0.02	0.02

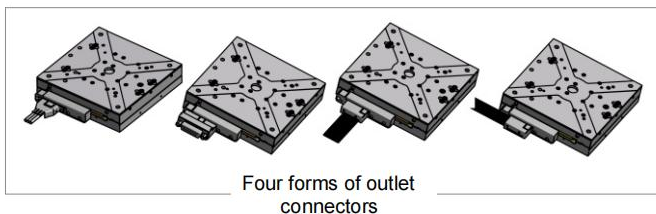
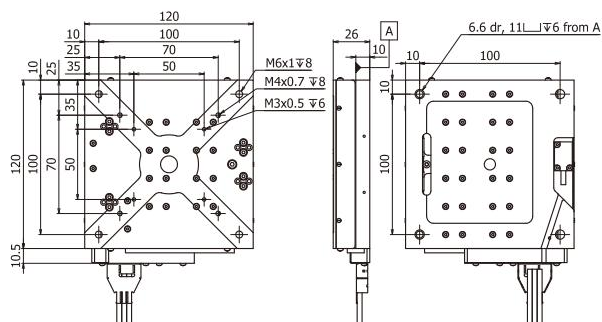
TAiSA060



TAiSA080



TAiSA120



TAiZA Motor model

TAiZA100 TAiZA150

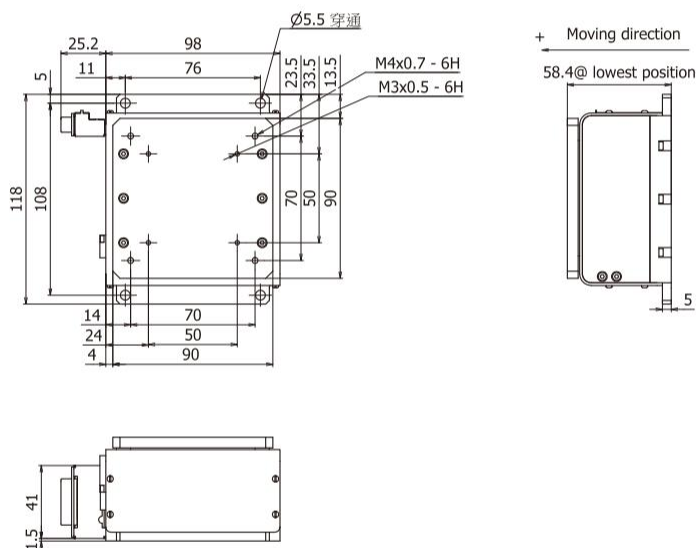


Product Characteristics

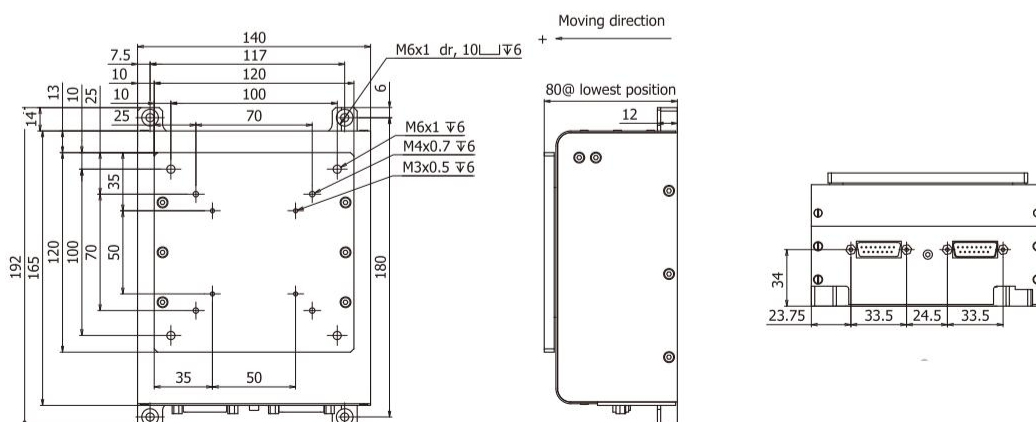
- > Adopting a quasi-planar lifting force-multiplying structure, with no load eccentricity and a stable center of gravity posture.
- > Direct drive by a zero-jerk linear motor, achieving backlash-free high-speed precision motion.
- > Capable of a minimum step motion of 20nm, with a full-stroke repeatability of $\pm 0.1\mu\text{m}$.
- > High-thrust design that can withstand heavy loads, usually used for the bottom axis.
- > The entire series uses analog miniature optical scales, which can be matched with digital differentiators of any resolution.

Mechanical and performance parameters	unit	TAiZA100	TAiZA150
Travel	mm	4	8
Effective travel	mm	3	7
Plane yaw	μm	<1	<2
Repeatability	μm	± 0.1	± 0.1
Accuracy	μm	<0.5	<0.5
Mover Mass	g	1920	3880
Total Mass	g	958	2500
Electrical			
Peak Force	Nt	160	288
Continue Force	Nt	40	72
Peak current	A	4	8
Continue current	A	1	2
Resistance(line-to-line)	ohm	5.5	2.75
Inductance(line-to-line)	mH	0.22	0.11
Force Constant	Nt/Apeak	40	33.7
Back EMF	v/m/s	13.3	11.2
Pole Pair	mm	1.6	1.6
Encoder Resolution	μm	0.02	0.02
Driver Voltage	V	24	24

TAiZA100



TAiZA150



TAiRA

Motor model

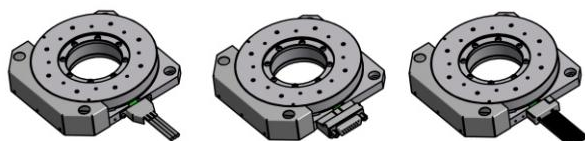
● TAiRA060 TAiRA080 TAiRA120



Product Characteristics

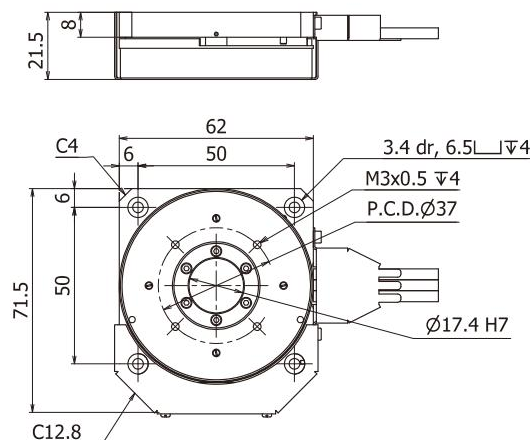
- > Direct drive by micro-pole pitch zero-jerk rotary motor
- > Thin special design, high rigidity, and high planar accuracy
- > Limited rotation angle design, with a maximum rotation angle of 270 degrees
- > Speed up to 600rpm when equipped with an incremental encoder of 0.0687 arcsec
- > The module features a hollow hole, facilitating optical design.
- > The entire series uses analog miniature optical scales, which can be matched with digital differentiators of any resolution.

Mechanical and performance parameters	unit	TAiRA060	TAiRA080	TAiRA120
Travel	度 (°)	100	100	100
Effective travel	度 (°)	90	90	90
Concentric yaw	um	< ±2	< ±2.5	< ±3.5
Plane yaw	um	< ±3	< ±3.5	< ±4.5
Repeatability	arcsec	< ±0.4	< ±0.3	< ±0.3
Accuracy	arcsec	< ±2.5	< ±2	< ±2
Rotary inertia	Kg-mm ²	49	181	850
Total mass	g	250	433	920
Rated Speed	rpm	600	600	600
Peak Speed	rpm	900	900	900
Electrical				
Peak Torque	Nt/m	0.45	0.78	1.71
Continue Torque	Nt/m	0.15	0.26	0.57
Peak Current	Amp	1.5	1.5	1.5
Continue Force	Amp	0.5	0.5	0.5
Force Constant	Nt/m/Amp	0.3	0.52	1.14
Back EMF	v/m/s	0.1	0.17	0.38
Resistance(line-to-line)	Ohm	7.1	9.4	14
number of pole pairs	/	12	16	24
Driver Voltage	V	24	24	24
Encoder Resolution	arcsec	0.13307	0.1006	0.0687

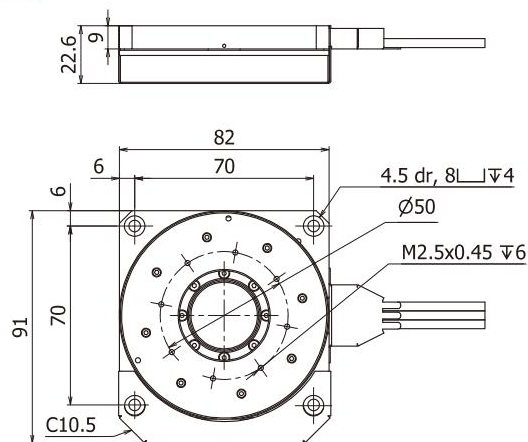


Four forms of outlet connectors

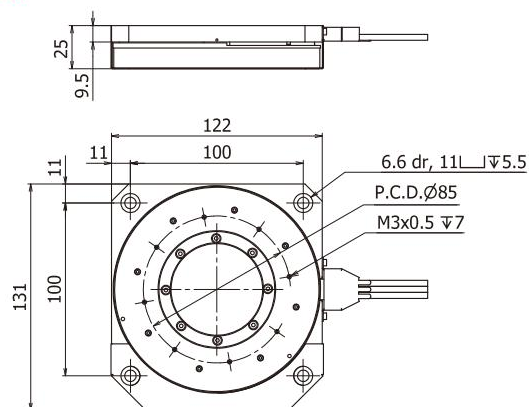
TAiRA060



TAiRA080



TAiRA120



TAiPR

Motor model

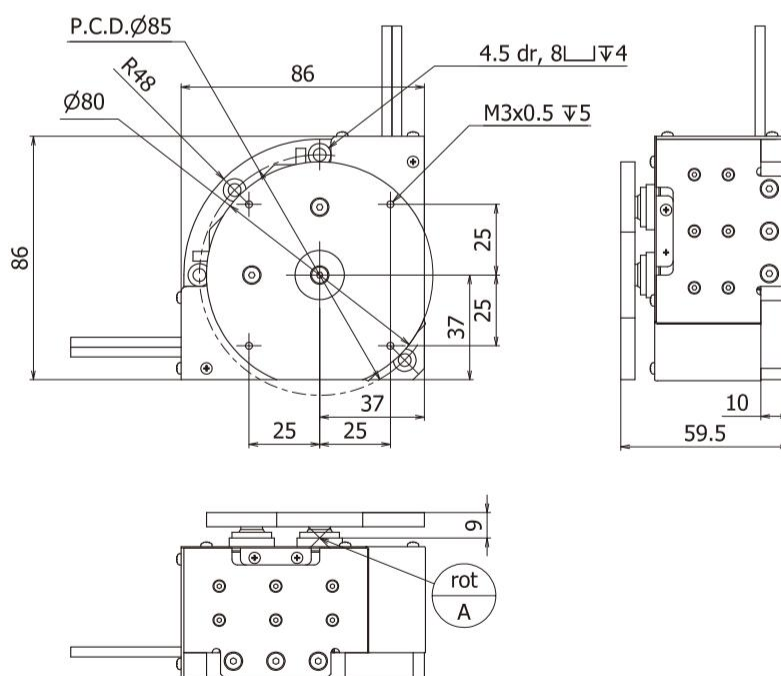
● TAiPR080



Product Characteristics

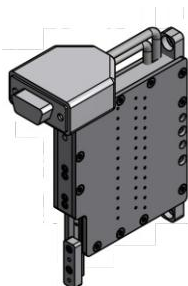
- > Coplanar swing angle structure, enabling the rotation centers of the pitch and yaw axes to be naturally concentric, simplifies the alignment and calibration procedures.
- > Zero-jerk linear motor direct drive, achieving backlash-free high-speed precision motion.
- > Effective swing angle: ± 5 degrees, with a resolution up to 0.1 arcsec
- > Adopting a lifting force-multiplying structure, it has no load eccentricity and is capable of withstanding heavy loads
- > The entire series uses analog miniature optical scales, which can be matched with digital differentiators of any resolution.

Mechanical and performance parameters	unit	TAiPR080
Travel	mm	$\pm 7^\circ$
Effective travel	mm	$\pm 6^\circ$
Repeatability	arcsec	± 0.3
Accuracy	arcsec	2
Rotor inertia	Kg-mm ²	26
Total Mass	g	640
Rated Speed	rpm	600
Peak Speed	rpm	900
Motor and drive parameters		
Peak Force	Nt	0.52
Continue Force	Nt	0.13
Peak Current	A	2
Continue Current	A	0.5
Resistance(line-to-line)	ohm	33
Inductance(line-to-line)	mH	1.3
Torque Constant	Nt-m/Apeak	0.26
Back EMF	v/m/s	0.08
Encoder Resolution	arcsec	0.0987
Driver Voltage	V	24



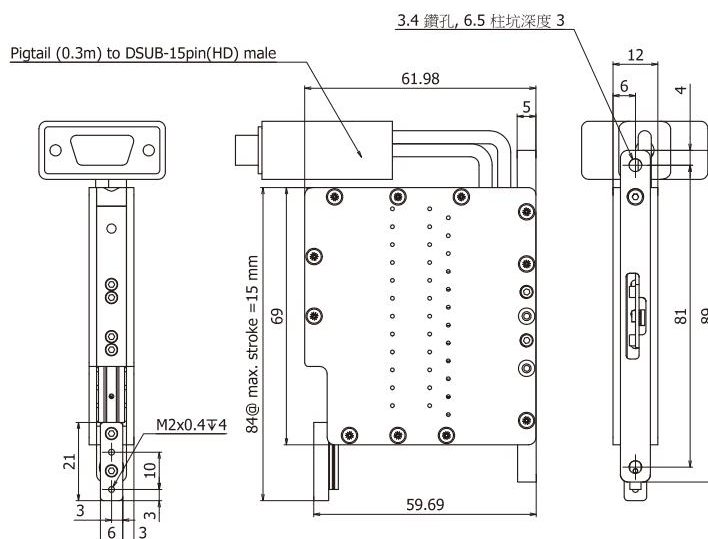
Voice coil motor for pick and place and test

TMTSL IC Programming and Testing



Specification

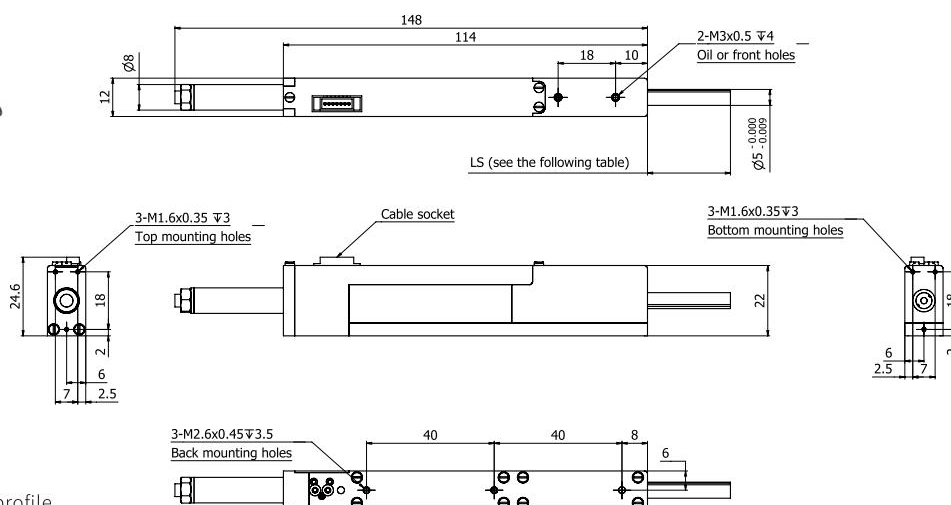
Stroke	15 mm
Encoder Res.	5 μ m
Rated Force	1.5 Nt
Peak Force	6 Nt
Rated Current	0.25 A
Peak Current	1 A
Driver Voltage	24 V
Moving mass	25 g
Total mass	200 g



DSUB-15pin(HD) male pin def.

PIN	Signal	PIN	Signal	Pin	Signal
1	U	6	V	11	W
2		7		12	
3	+5VDC	8	Signal GND	13	Frame GND
4	Encoder X\	9	Encoder A\	14	Encoder B\
5	Encoder X	10	Encoder A	15	Encoder B

TSLIMS Narrow profile TVCM for multi-axis application



Features:

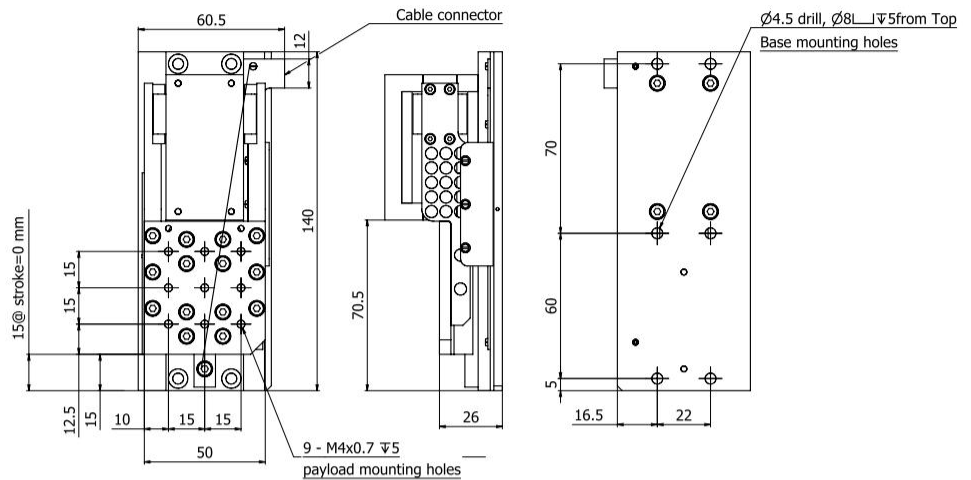
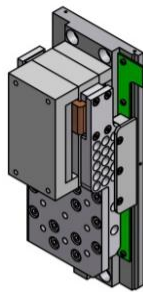
- > Space saving: extremely narrow profile.
- > High reliability: no internal moving wires.
- > Excellent rigidity: Two ball splines used.
- > Safety mechanism: moving to upper limit when servo or power off.
- > Flexible control interface: RS232, DI/O, Pulse/Dir.
- > Intelligent contact control: see the specific driver manual for detail.

Specification of TSLIMS series

Model	Stroke (mm)	Rated force (N)	Peak force (N)	Rated current (A)	Peak current (A)	Driver Voltage (V)	LS_min	LS_max
SLIMS-10-600	10	1.2	6.0	0.2	1.0	24~36	46	57
SLIMS-20-450	20	0.9	4.5	0.2	1.0	24~36	36	57
SLIMS-30-300	30	0.6	3.0	0.2	1.0	24~36	26	57

Position resolution is (Stroke/12800)

TSVC TVCM for Touch Panel testing



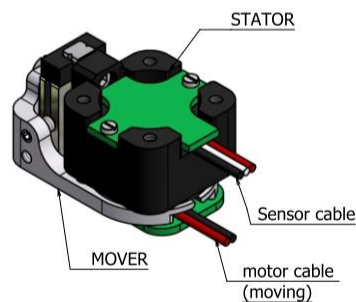
Specification	
Stroke	28 mm
Resolution	2.2 μ m
Rated Force	15 Nt
Peak Force	37 Nt
Rated Current	2 A
Peak Current	5 A
Driver Voltage	12V
Moving mass	140 g
Total mass	900 g

Features:

- > Special linear guide for extremely low friction.
- > Low slide profile to reduce payload moment.
- > Straightness < 4 μ m, flatness < 6 μ m.
- > Magnetic park mechanism for safety.
- > Linear scale of 0.1 μ m can be included for higher resolution.

TVCK TVCM for chip sorter

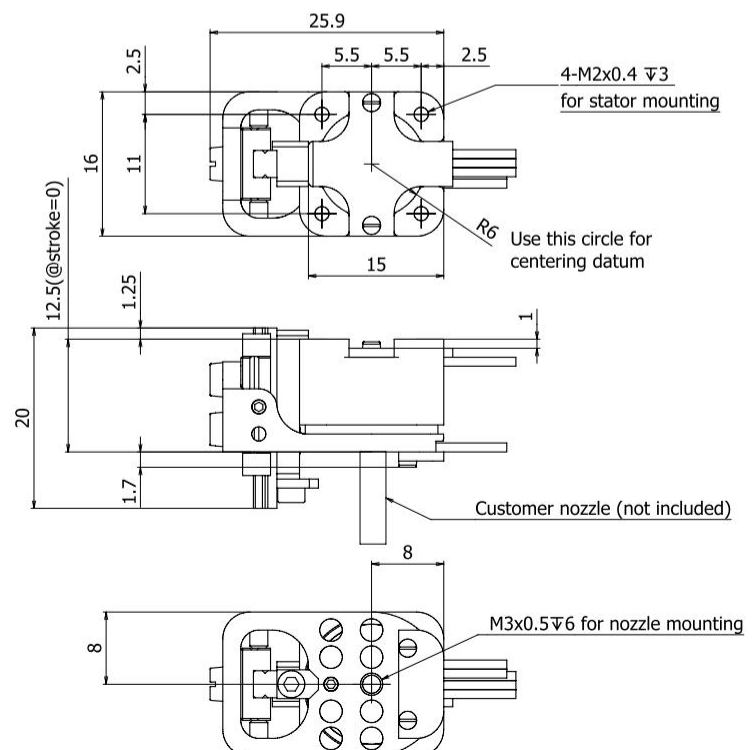
Die picking (with swing arm)



Specification	
Stroke	3 mm
Resolution	0.25 μ m
Rated Force	0.3 Nt
Peak Force	1.5 Nt
Rated Current	0.2 A
Peak Current	1 A
Driver Voltage	12 V
Moving mass	5.6 g
Total mass	20 g

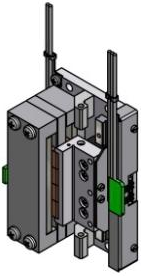
Features:

- > Extremely small size with high force.
- > Precision linear guide employed.
- > For chip pick & place.



TVCM1 TVCM for LED chip sorter

LED wafer blue tape picking (with linear axis)

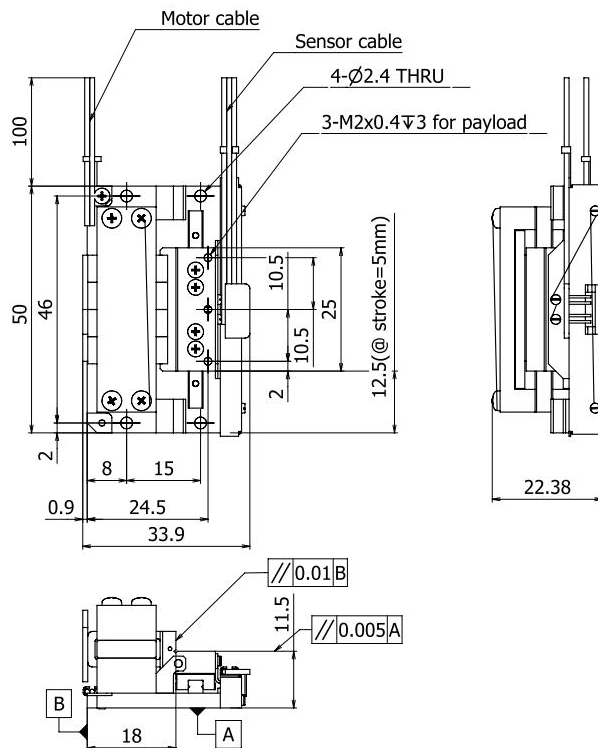


Specification

Stroke	10 mm
Resolution	0.8 μ m
Rated Force	1 Nt
Peak Force	5 Nt
Rated Current	0.2 A
Peak Current	1 A
Driver Voltage	24V
Moving mass	16 g
Total mass	87 g

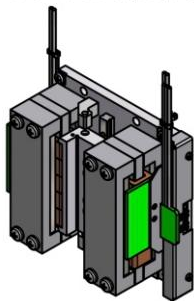
Features:

- > Space saving: extremely small profile.
- > Excellent rigidity: precision linear guide with 2 slides.
- > Safety mechanism: moving to upper limit when servo or power off.



TVCM2 TVCM for LED chip sorter

LED wafer blue tape picking (with linear axis)



Specification

Stroke	4.5 mm
Resolution	0.4 μ m
Rated Force	2 Nt
Peak Force	10 Nt
Rated Current	0.2 A
Peak Current	1 A
Driver Voltage	24V
Moving mass	35 g
Total mass	170 g

Features:

- > High force with small profile.
- > Excellent rigidity: precision linear guide with 2 slides.
- > Safety mechanism: moving to upper limit when servo off.

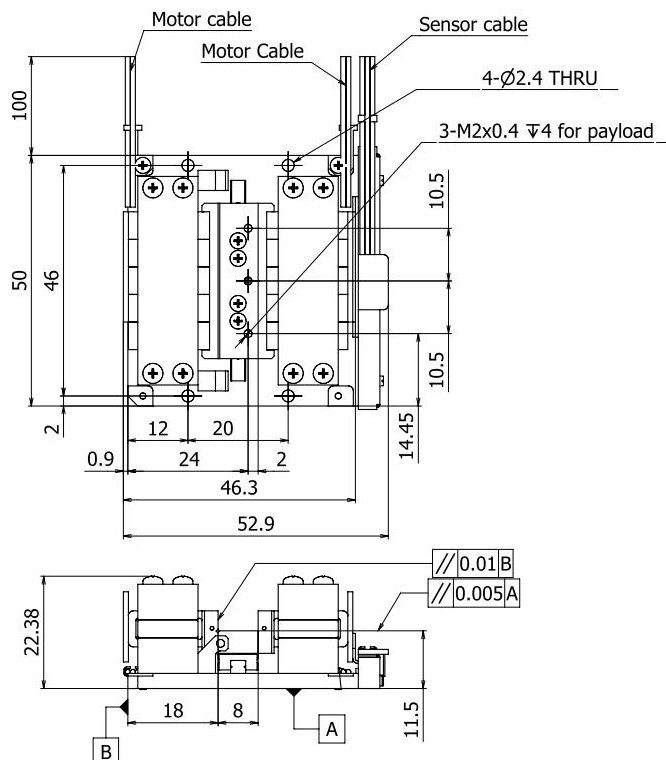


Fig. 10. Motor with cooling fan

Technical drawing of the motor assembly showing side and front views with dimensions:

- Side view dimensions:
 - Total height: 91.5
 - Top section height: 24
 - Bottom section height: 25.8
 - Base diameter: $\varnothing 5$
 - Base width: 27
- Front view dimensions:
 - Width: 36
 - Height: 35
- Motor fixing holes: M3x0.5 ∇ 6

Technical drawing of a motor with a shaft. The motor is shown in a perspective view, with a black upper housing and a silver lower housing. A shaft extends from the bottom of the motor, and a label 'Shaft' points to it.

Technical drawing of the VCM assembly, showing front and top views with dimensions and tolerances.

Front View Dimensions:

- Overall width: 26
- Inner width: 16
- Height from base to top of main body: 27.4
- Base thickness: 2.7
- Height of base: 14
- Radius of base: R0.5
- Bottom hole diameter: $\varnothing 5 \begin{smallmatrix} -0.000 \\ -0.009 \end{smallmatrix}$
- Surface texture symbol: $\sqrt{\text{ }}$ 0.01 A
- Feature A: A

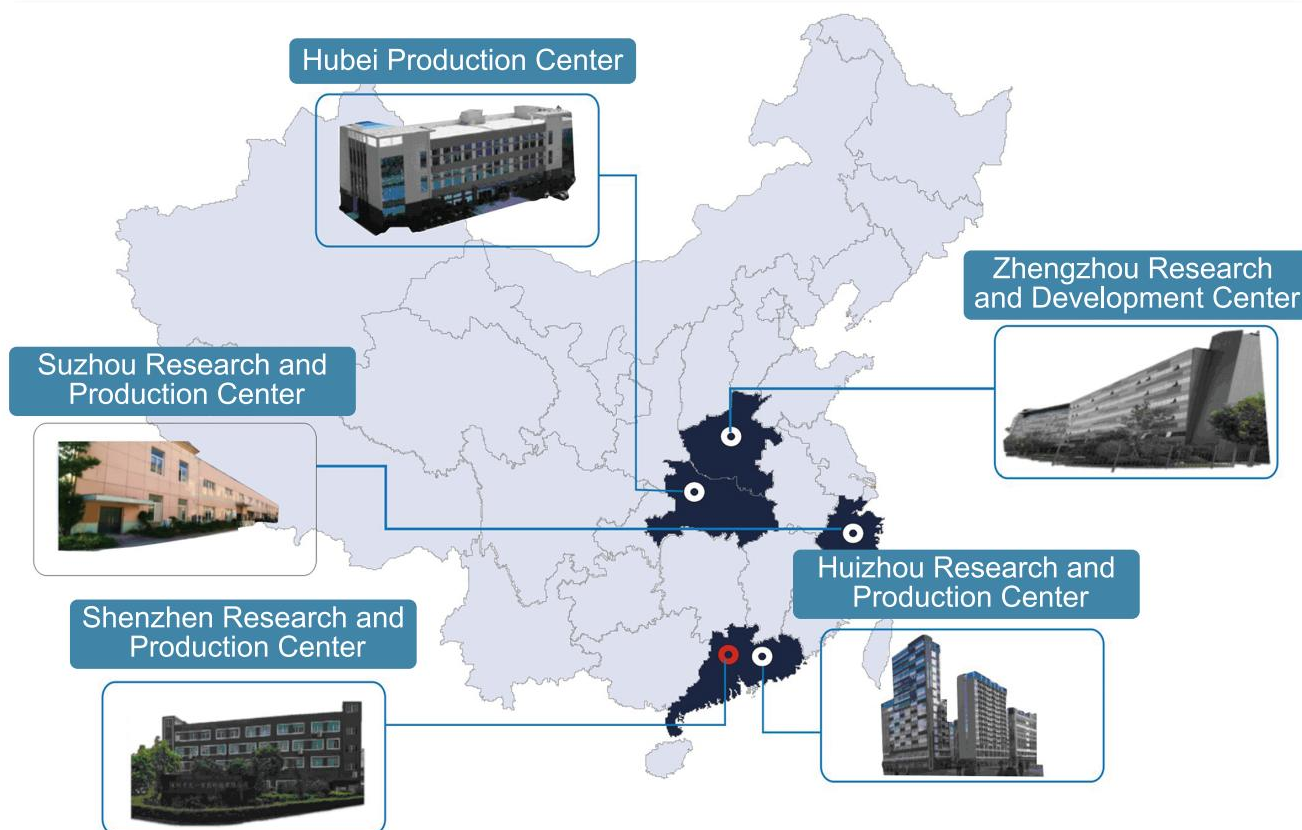
Top View Dimensions:

- Overall width: 16
- Overall height: 16
- Distance from center to mounting holes: 10
- Distance from center to motor cable: 2
- Motor cable diameter: $\varnothing 13(h7)$
- Mounting holes: M3x0.5 for VCM mounting
- Centering datum: $\varnothing 13(h7)$

Motor Cable:

- Length: 150

www.wodtop.com



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