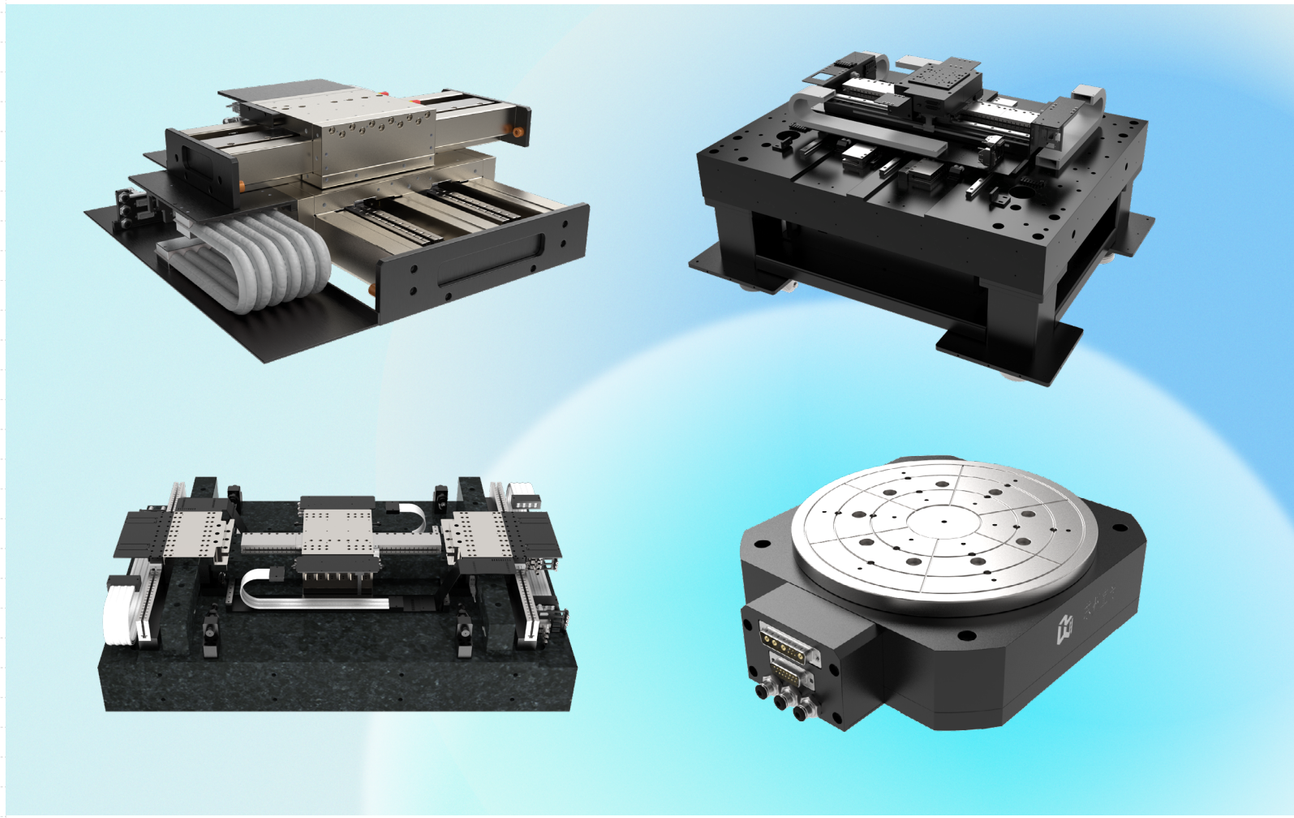
直为精驱 | MEGMEET 麦 米 电 气

High-Precision Positioning Stages

Customized Platform Product Catalogue



WeChat

WeChat applet

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Applicable to industries such as Semiconductor, Photovoltaic, Lithium Battery, Precision Machinery, Medical Devices, etc.

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CONTENTS.

COMPANY PROFILE

2017
Founding

50+
Patent

10+
National Scientific Research Projects

ISO 9001
Quality Management System Certification

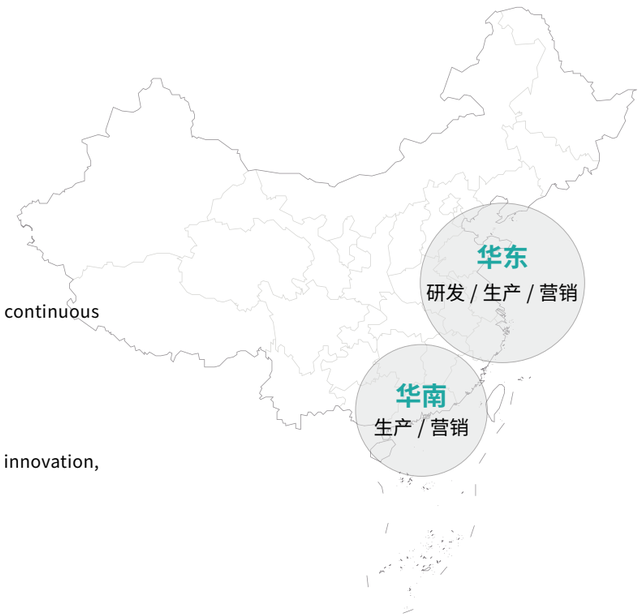
Suzhou Linear Precision Drive Control Technology Co., Ltd. was founded in Suzhou in February 2017, which is a holding subsidiary of Shenzhen MEGMEET Electrical Co., Ltd. (Listed on Shenzhen Stock Exchange, stock code: 002851). It is a national high-tech enterprise and a private science and technology enterprise in Jiangsu Province. Relying on the Institute of Robotics of Harbin Institute of Technology and Jiangsu Provincial Key Laboratory of Advanced Robotics located in Soochow University, we have led and participated in more than 10+ national scientific research projects. With the help of listed companies, we have achieved the industrialisation of high-end products.

It mainly develops, produces and sells various kinds of Linear Motors, Direct Drive Motors, Voice Coil Motors, Linear Modules, XY high precision positioning stages, aerostatic guideway and stages, which are widely used in semiconductor, photovoltaic, lithium electricity, precision machines, medical devices and other industries.

Corporate vision
Create a "core" of intelligent manufacturing

Corporate philosophy
High-quality products, customised services, continuous innovation, scientific management

Quality policy
Customer-oriented, quality first, continuous innovation, continuous improvement



DEVELOPMENT COURSE

2024 / **Industry Focus**
Focused on core processes and equipment such as semiconductor lithography, wafer dicing, AOI inspection, TGV packaging, display panel inspection and repair, perovskite coating, and lithium battery winding.

2020 / **Rapid Development**
Entered the semiconductor, lithium electricity and photovoltaic industries, and successfully developed high-precision positioning stages used for LDI, wafer dicing, laser cutting, vision inspection, etc.

2019 / **Financing and Development**
MEGMEET invests to quickly promote product series, standardisation and high quality.

2017 / **Industrialisation of Achievements**
The company was founded. Research and development, production and sales of linear motors, linear modules and DD motors.

2012 / **Technical Attack**
Relying on the Key Laboratory of Advanced Robot Technology of Soochow University, undertake the national "863 Plan" and the National Nature Fund projects, and focus on the research of high-speed and high-precision positioning technology.

2009 / **Demonstration Application**
Sewing machine motors, injection moulding machine motors, linear motors and drivers have been developed.

2002 / **Key Technologies**
Researched on key technologies such as AC permanent magnet synchronous motor, AC servo driver, magneto electric encoder, etc.

Single-axis precision linear stage

Model Numbering Rule

ZWM115LS - 100 - YT - SZ - L1

Stage Model	Travel	Table Options	Feedback Options	Cable Management
	Unit：mm	Factory Standard Mounting Holes YT	0.1 μm Resolution Digital Input SZ	Single-Side Drag Chain Plate L1
	50 100	Customer-Customized Table DT	Analog Input MN	Double-Side Drag Chain Plate L2
	150 200			
	250 300			
	400 500			
	600 800			
	1000			

Application

OLED Dicing / PCB Drilling / CNC Machining / Biotechnology / IC Packaging / Wafer Inspection …

Product Introduction

Product Features

- Direct-Drive Motor High-Precision Positioning Stage
- High-Performance, Cost-Effective Solution
- High-Rigidity Mechanical Structure
- Flexible Configuration Options (Various Travel Lengths and Widths Available)
- Excellent Cable Management

Structural Features

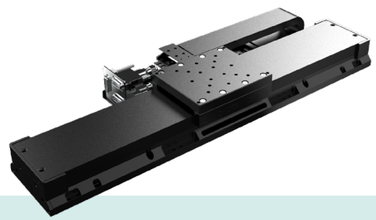
- Driven by Linear Motor
- High Speed
- Excellent Dynamic Performance
- Low Friction
- Easy to Achieve Precise Position Control
- Ideal for Applications Requiring Long Travel, High Precision, and High Speed

Customization

Longer Travel Lengths Available Upon Customization

Single-Axis Precision Linear Stage Series

ZWM115LS Specifications

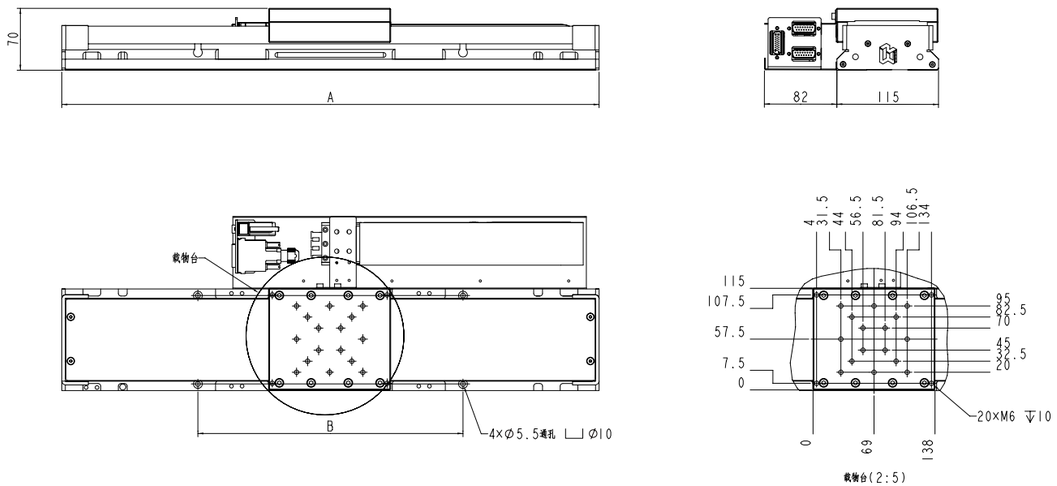


Parameter Table

Stage Model	ZWM115LS-50	ZWM115LS-100	ZWM115LS-150	ZWM115LS200	ZWM115LS-250	ZWM115LS-300
Effective Travel	50 mm	100 mm	150 mm	200 mm	250 mm	300 mm
Positioning Accuracy	±0.75 um	±1 um	± 1 um	±1.5 um	±1.5 um	±1.5 um
Repeatability	±0.4 um	±0.4 um	±0.4 um	±0.5 um	±0.5 um	±0.5 um
Pitch	4 arc sec	6 arc sec	8 arc sec	10 arc sec	11 arc sec	12 arc sec
Yaw	4 arc sec	6 arc sec	8 arc sec	10 arc sec	11 arc sec	12 arc sec
Roll	4 arc sec	6 arc sec	8 arc sec	10 arc sec	11 arc sec	12 arc sec
Straightness	±1.5 um	±2.5 um	±3 um	±4 um	±5 um	±6 um
Resolution	1 nm					
Maximum Acceleration	3 g					
Maximum Acceleration	2 m/s					
Maximum Horizontal Load	40 KG					
Maximum Radial Load	40 KG					
Continuous Force	26 N					
Peak Force	144 N					
Minimum Step Size	75 nm					
Stage Mass	5.1 kg	5.7 kg	6.2 kg	6.8 kg	7.4 kg	8.1 kg
Stage Material	Al					
MTBF	20000 Hours					

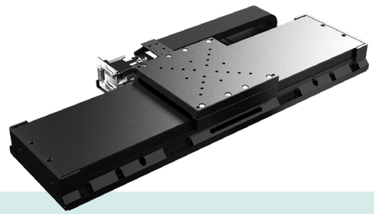
Note: The above test data were obtained in a laboratory environment. The measurement point was located 25 mm above the center point, and the results were derived using a linear amplifier.

Dimensio



Single-Axis Precision Linear Stage

ZWM165LS Specifications

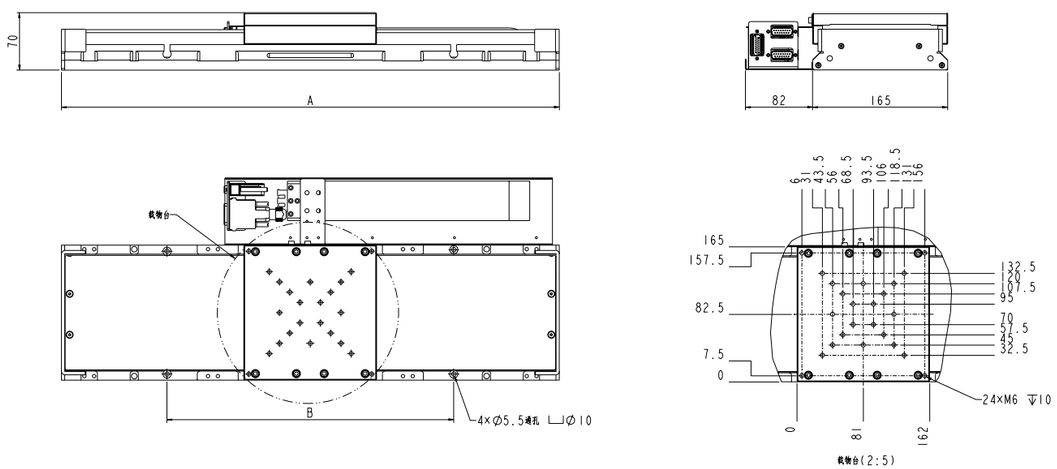


Parameter Table

Stage Model	ZWM165LS -100	ZWM165LS -200	ZWM165LS -300	ZWM165LS -400	ZWM165LS -500	ZWM165LS -600	ZWM165LS -800	ZWM165LS -1000
Effective Travel	100 mm	200 mm	300 mm	400 mm	500 mm	600 mm	800 mm	1000 mm
Positioning Accuracy	±1 um	±1.5 um	±1.5 um	±1.5 um	±2 um	±2 um	±2 um	±2 um
Repeatability	±0.4 um	±0.5 um	±0.5 um	±0.5 um	±0.5 um	±0.5 um	±0.5 um	±0.5 um
Pitch	6 arc sec	8.5 arc sec	12 arc sec	14.5 arc sec	16.5 arc sec	19 arc sec	21 arc sec	25 arc sec
Yaw	6 arc sec	8.5 arc sec	12 arc sec	14.5 arc sec	16.5 arc sec	19 arc sec	21 arc sec	25 arc sec
Roll	6 arc sec	8.5 arc sec	12 arc sec	14.5 arc sec	16.5 arc sec	19 arc sec	21 arc sec	25 arc sec
Straightness	±2.5 um	±4 um	±6 um	±8 um	±9 um	±10 um	±12 um	±14 um
Resolution	1 nm							
Maximum Acceleration	2 g							
Maximum Speed	2 m/s							
Maximum Horizontal Load	45 kg							
Maximum Radial Load	45 kg							
Continuous Force	104 N							
Peak Force	576 N							
Minimum Step Size	75 nm							
Stage Mass	8kg	9.7 kg	11.4 kg	13.1 kg	15.5 kg	18.1 kg	20.4 kg	22.7 kg
Stage Material	Al							
MTBF	20000 Hours							

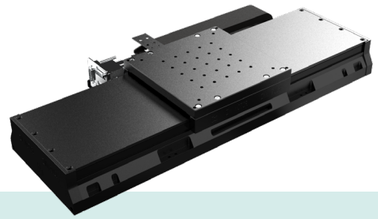
Note: The above test data were obtained in a laboratory environment. The measurement point was located 25 mm above the center point, and the results were derived using a linear amplifier.

Dimensio



Single-Axis Precision Linear Stage

ZWM190LS Specifications

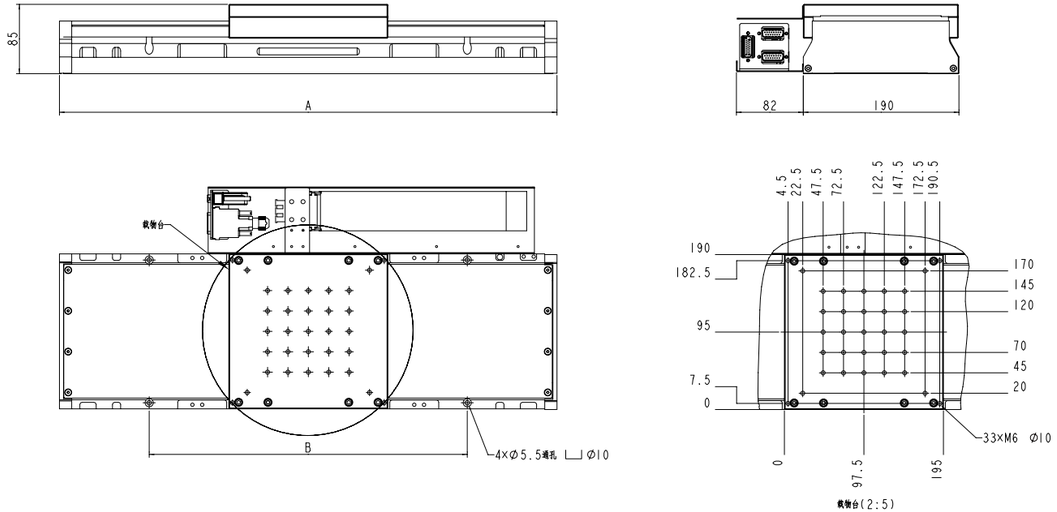


Parameter Table

Stage Model	ZWM190LS -100	ZWM190LS -200	ZWM190LS -300	ZWM190LS -400	ZWM190LS -500	ZWM190LS -600	ZWM190LS -800	ZWM190LS -1000
Effective Travel	100 mm	200 mm	300 mm	400 mm	500 mm	600 mm	800 mm	1000 mm
Positioning Accuracy	±1um	±1 um	±1 um	±1 um	±1 um	±1 um	±1.5 um	±1.5 um
Repeatability	±0.3um	±0.4 um	±0.4 um	±0.4 um	±0.4 um	±0.4 um	±0.5 um	±0.5 um
Pitch	6 arc sec	8 arc sec	10.5 arc sec	12 arc sec	14 arc sec	16 arc sec	20 arc sec	24 arc sec
Yaw	6 arc sec	8 arc sec	10.5 arc sec	12 arc sec	14 arc sec	16 arc sec	20 arc sec	24 arc sec
Roll	6 arc sec	8 arc sec	10.5 arc sec	12 arc sec	14 arc sec	16 arc sec	20 arc sec	24 arc sec
Straightness	±1.5um	±2.5 um	±3.5 um	±4.5 um	±5.5 um	±6.5 um	±8 um	±10 um
Resolution	1 nm							
Maximum Acceleration	2 g							
Maximum Speed	2 m/s							
Maximum Horizontal Load	45 kg							
Maximum Radial Load	45 kg							
Continuous Force	130 N							
Peak Force	720 N							
Minimum Step Size	75 nm							
Stage Mass	14.5 kg	16.8 kg	19.4 kg	21.8 kg	24.2 kg	26.6 kg	29.4 kg	32 kg
Stage Material	Al							
MTBF	27000 Hours							

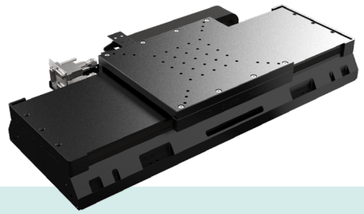
Note: The above test data were obtained in a laboratory environment. The measurement point was located 25 mm above the center point, and the results were derived using a linear amplifier.

Dimensio



Single-Axis Precision Linear Stage

ZWM225LS Specifications

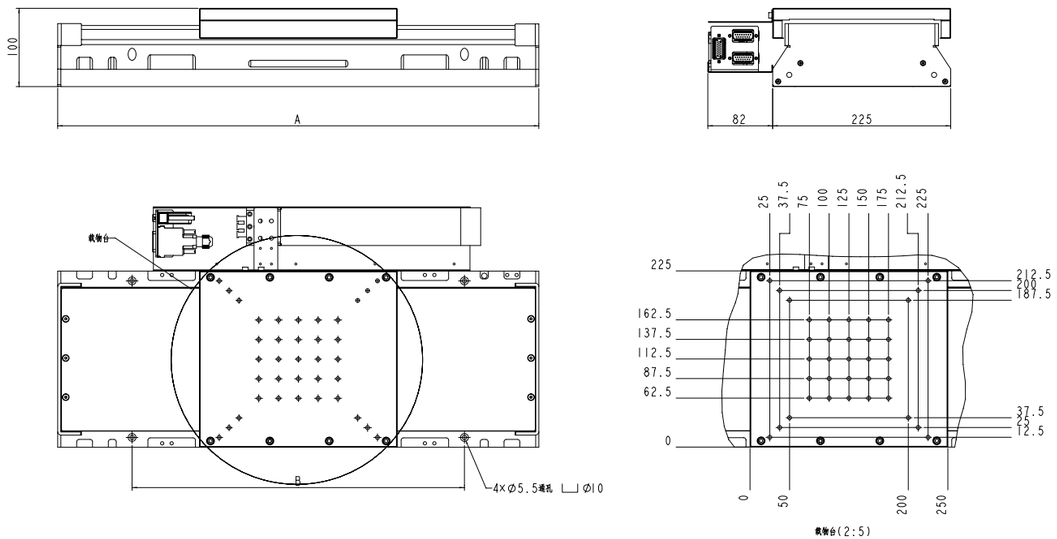


Parameter Table

Stage Model	ZWM225LS -100	ZWM225LS -200	ZWM225LS -300	ZWM225LS -400	ZWM225LS -500	ZWM225LS -600	ZWM225LS -800	ZWM225LS -1000
Effective Travel	100 mm	200 mm	300 mm	400 mm	500 mm	600 mm	800 mm	1000 mm
Positioning Accuracy	±1 um	±1 um	±1 um	±1 um	±1 um	±1 um	±1.5 um	±1.5 um
Repeatability	±0.4 um	±0.4 um	±0.4 um	±0.4 um	±0.5 um	±0.5 um	±0.75 um	±0.75 um
Pitch	6 arc sec	8 arc sec	10.5 arc sec	14 arc sec	15 arc sec	18 arc sec	20 arc sec	24 arc sec
Yaw	6 arc sec	8 arc sec	10.5 arc sec	14 arc sec	15 arc sec	18 arc sec	20 arc sec	24 arc sec
Roll	6 arc sec	8 arc sec	10.5 arc sec	14 arc sec	15 arc sec	18 arc sec	20 arc sec	24 arc sec
Straightness	±2.5 um	±4 um	±4.5 um	±7.5 um	±8 um	±9 um	±10 um	±12 um
Resolution	1 nm							
Maximum Acceleration	2 g							
Maximum Speed	2 m/s							
Maximum Horizontal Load	45 kg							
Maximum Radial Load	45 kg							
Continuous Force	204 N							
Peak Force	1152 N							
Minimum Step Size	100 nm							
Stage Mass	14.5 kg	16.8 kg	19.4 kg	21.8 kg	24.2 kg	26.6 kg	29.4 kg	32 kg
Stage Material	Al							
MTBF	27000 Hours							

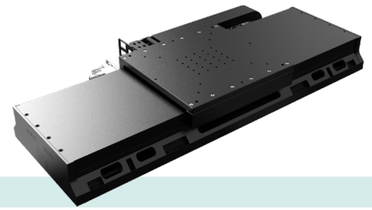
Note: The above test data were obtained in a laboratory environment. The measurement point was located 25 mm above the center point, and the results were derived using a linear amplifier.

Dimensio



Single-Axis Precision Linear Stage

ZWM280LS Specifications

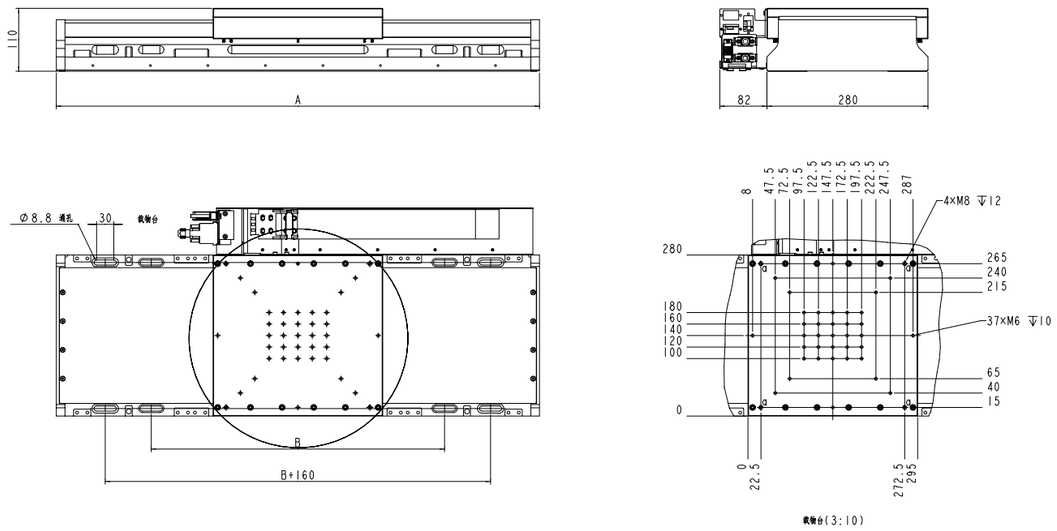


Parameter Table

Stage Model	ZWM280LS -300	ZWM280LS -400	ZWM280LS -500	ZWM280LS -600	ZWM280LS -700	ZWM280LS -800
Effective Travel	300 mm	400 mm	500 mm	600 mm	700 mm	800 mm
Positioning Accuracy	±1 um	±1 um	±2 um	±2 um	±2 um	±2 um
Repeatability	±0.5 um	±0.5 um	±0.6 um	±0.6 um	±0.6 um	±0.8 um
Pitch	12 arc sec	16 arc sec	18 arc sec	20 arc sec	22 arc sec	25 arc sec
Yaw	12 arc sec	16 arc sec	18 arc sec	20 arc sec	22 arc sec	25 arc sec
Roll	12 arc sec	16 arc sec	18 arc sec	20 arc sec	22 arc sec	25 arc sec
Straightness	±4 um	±4 um	±6 um	±6.5 um	±7 um	±8 um
Resolution	100 nm					
Maximum Acceleration	3 g					
Maximum Speed	2 m/s					
Maximum Horizontal Load	150 kg					
Maximum Radial Load	150 kg					
Continuous Force	255 N					
Peak Force	1440 N					
Minimum Step Size	200 nm					
Stage Mass	55 kg	60 kg	65 kg	71 kg	76 kg	81 kg
Stage Material	Al					
MTBF	27000 Hours					

Note: The above test data were obtained in a laboratory environment. The measurement point was located 25 mm above the center point, and the results were derived using a linear amplifier.

Dimensio



Plane XY cross roller stage

Model Numbering Rules

ZWLM-PlaneD-XY - 100 - YT - SZ - L1

Stage Model	Effective Travel	Table Options	Feedback Options	Cable Management
	unit：mm	Factory Standard Mounting Holes YT	0.1um Resolution Digital Input SZ	Drag Chain Wiring Box L1
	150 200	Customer-Customized Table DT	Analog Input MN	Non-Drag Chain Wiring BoxModel Numbering Rules /
	250 300			

Applications

Industrial and research projects requiring nanometer-level positioning accuracy, such as laser processing, flying-scan inspection, measurement inspection, surface roughness testing, and laser cutting

Product Introduction

Product Features

- Dual-Axis, Four-Motor Drive
- Excellent Dynamic Performance
- 1 nm Resolution
- ±100 nm Repeatability
- ±400 nm Positioning Accuracy
- 3 nm In-Position Stability
- Multiple Feedback Options

Structural Features

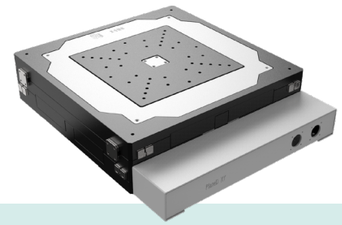
- Utilizes Cross-Roller Guides
- Compact Structure
- Low Profile Height
- Minimal Abbe Error

Customization

Longer Travel Lengths Available Upon Customization

Planar XY Cross-Roller Stage

PlaneD-XY Series Specifications

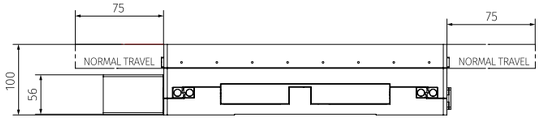


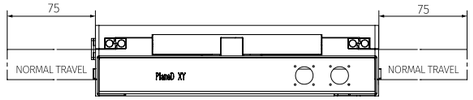
Parameter Table

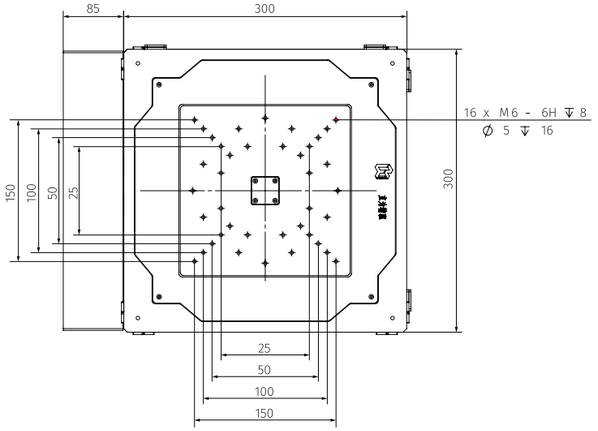
Stage Model	ZWLM-PlaneD-XY150×150	ZWLM-PlaneD-XY200×200	ZWLM-PlaneD-XY250×250	ZWLM-PlaneD-XY300×300
Effective Travel	150 mm×150 mm	150 mm×150 mm	200 mm×200 mm	300 mm×300 mm
Positioning Accuracy	±0.3 um	±0.4 um	±0.5 um	±0.6 um
Repeatability	±0.1 um	±0.15 um	±0.2 um	±0.25 um
Pitch	15 arc sec	16 are sec	18 are sec	20 are sec
Yaw	15 arc sec	16 are sec	18 are sec	20 are sec
Straightness	±1.5 um	±2 um	±2.5 um	±3 um
Resolution	1 nm			
Maximum Acceleration	1.5 g			
Maximum Speed	800 mm/s			
Maximum Horizontal Load	20 KG	20 KG	25 KG	30 KG
Continuous Force	73 N			292 N
Peak Force	250 N			1000 N
Minimum Step Size	5 nm			
Stage Mass	26 KG	29 KG	35 KG	50 KG
Stage Material	Al			
MTBF	27000 Hours			

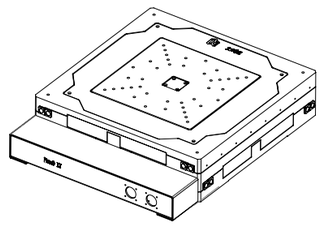
Note: The above test data were obtained in a laboratory environment. The measurement point was located 25 mm above the center point, and the results were derived using a linear amplifier.

ZWLM-PlaneD-XY150×150 Dimensio

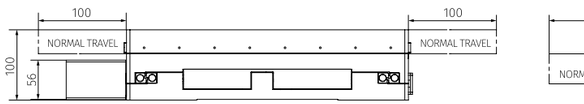


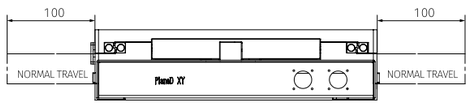


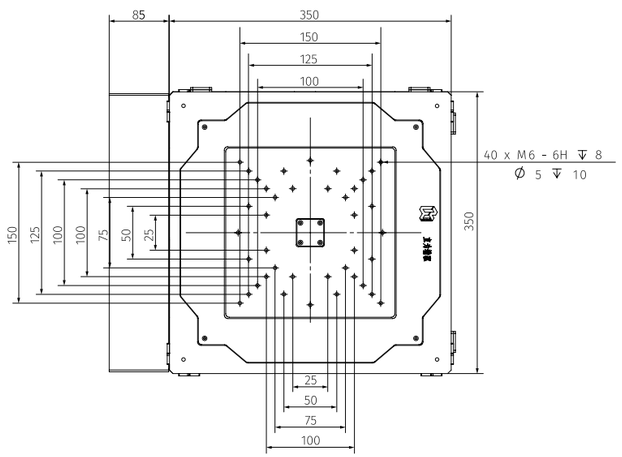


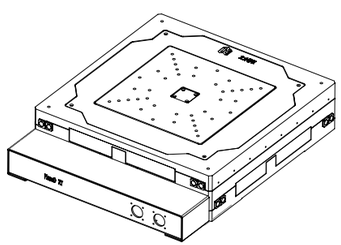


ZWLM-PlaneD-XY200×200 Dimensio

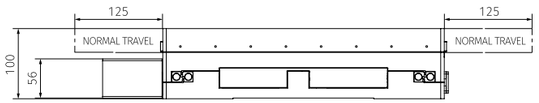


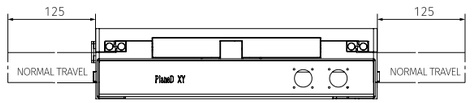


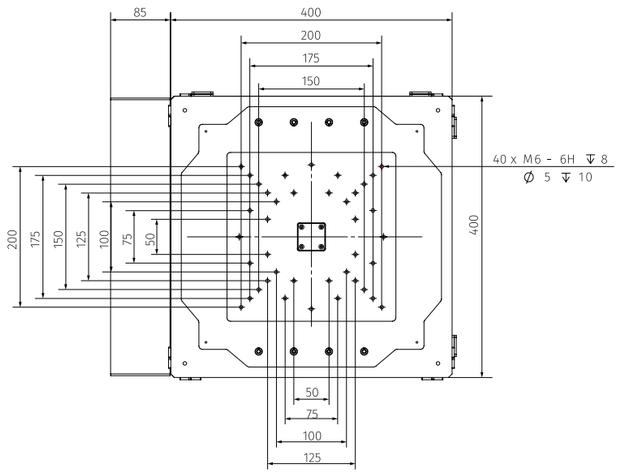


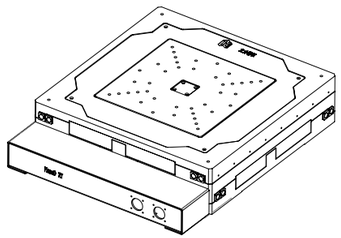


ZWLM-PlaneD-XY250×250 Dimensio

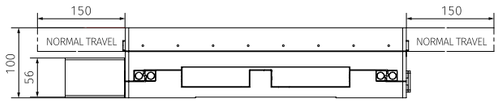


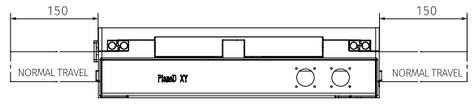


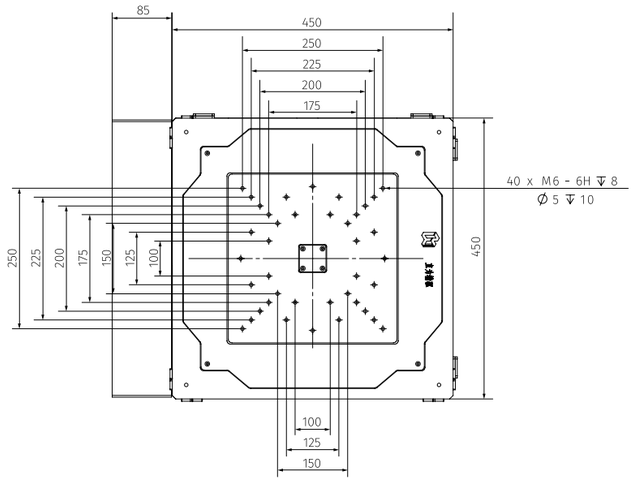


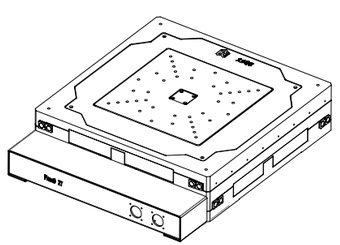


ZWLM-PlaneD-XY300×300 Dimensio









Plane linear rail XY stage

Model Numbering Rules

ZWLM - Plane - XY - 150 - YT - SZ

Stage Model	Effective Travel	Table Options	Feedback Options
	unit: mm	Factory Standard Mounting Holes: YT	Resolution With Digital Input: SZ
	150 250	Customer-Customized Table: DT	Analog Input: MN
	350		

Applications

Industrial and research applications requiring nanometer-level positioning accuracy, such as measurement, wafer inspection, surface roughness testing, and laser cutting

Product Introduction

Product Features

- Open-Structure Design
- XY Integrated Direct-Drive Platform
- Dual-Motor Drive on Base Axis
- Excellent Dynamic Performance
- Improved Geometric Accuracy and Higher Load Capacity
- Balances Long Travel, High Precision, Heavy Load, and Low Profile Height

Structural Features

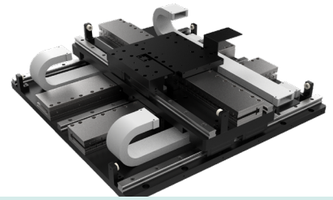
- Low Profile Height
- Minimal Abbe Error
- Compact Platform Structure with Strong Driving Capability
- Base Axis Driven by Dual Motors
- No-Load Maximum Speed of Both Axes Up to 2000 mm/s
- No-Load Acceleration up to 2 g, Electronic Resolution 1 nm
- Minimum Step Size Less Than 20 nm

Customization

Longer Travel Lengths Available Upon Customization

Planar XY Linear-Rail Stage

Plane-XY Series Specifications

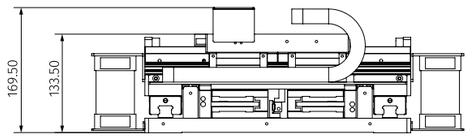


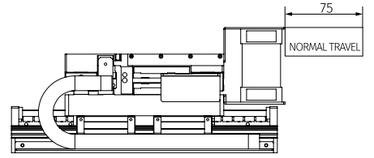
Parameter Table

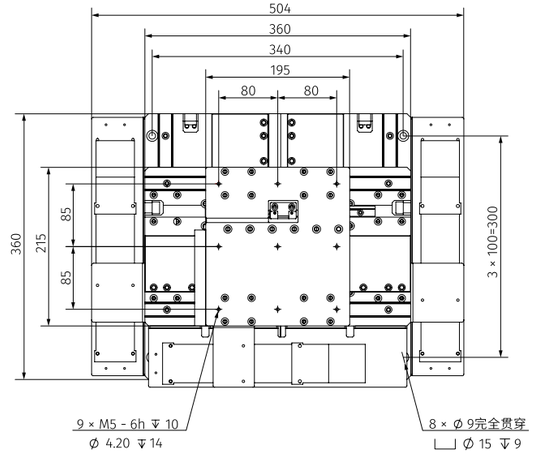
Stage Model	ZWLM-Plane-XY-150	ZWLM-Plane-XY-250	ZWLM-Plane-XY-350
Effective Travel	150 mm×150 mm	250 mm×250 mm	350 mm×350 mm
Positioning Accuracy	±0.3 um	±0.3 um	±0.3 um
Repeatability	±0.15 um	±0.15 um	±0.15 um
Pitch	7 arc sec	9 are sec	11 are sec
Yaw	7 arc sec	9 are sec	11 are sec
Straightness	±1.5 um	±2 um	±2.5 um
Resolution	1 nm		
Maximum Acceleration	2 g		
Maximum Speed	2000 mm/s		
Maximum Horizontal Load	45 KG	45 KG	45 KG
Continuous Force	Upper Axis: 153 N Lower Axis: 306 N		
Peak Force	Upper Axis: 864 N Lower Axis: 1728 N		
Minimum Step Size	20 nm		
Stage Mass	30 KG	40 KG	50 KG
Stage Material	Al		
MTBF	27000 Hours		

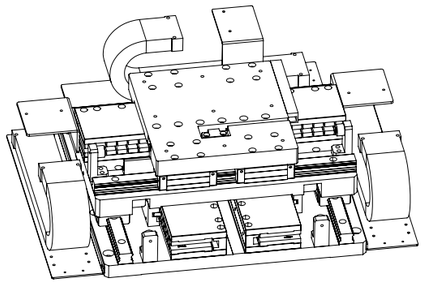
Note: The above test data were obtained in a laboratory environment. The measurement point was located 25 mm above the center point, and the results were derived using a linear amplifier.

ZWLM-Plane-XY150×150 Dimensio

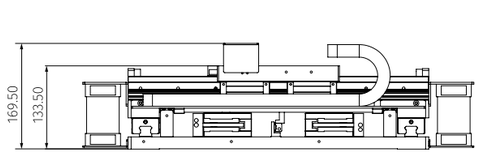


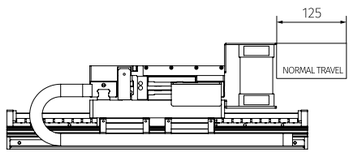


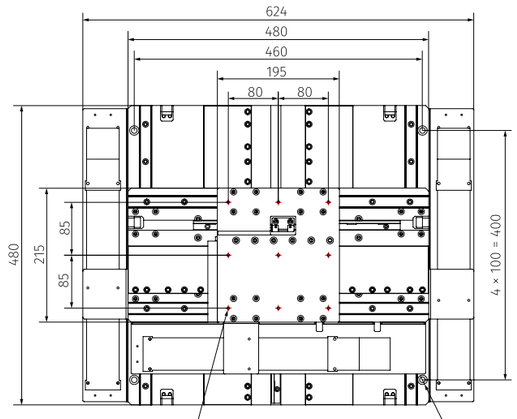


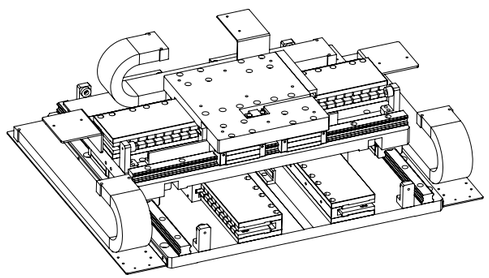


ZWLM-Plane-XY250×250 Dimensio

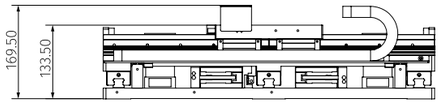


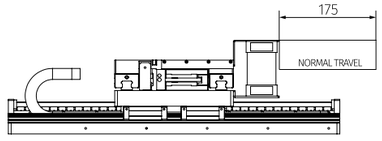


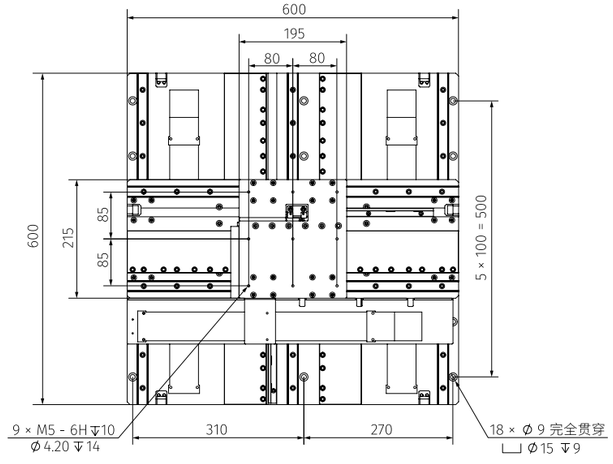


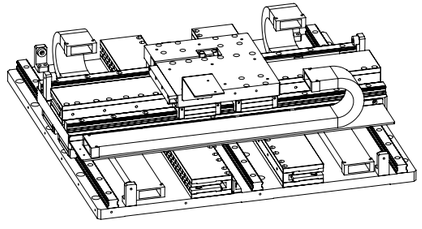


ZWLM-Plane-XY350×350 Dimensio









Panel Inspection stage

Applications

Designed for the panel inspection and repair industry

Product Introduction

Product Features

- Precision Linear Guideways
- Ironless Linear Motor
- Exceptional Speed Stability
- Supports Long Travel, High Precision, and Heavy Load Capacity
- Ultra-Large Inspection Area
- Customizable Models from Small to Large Generations

Structural Features

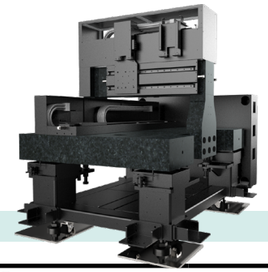
- Gantry Structure with High Stability
- Low Abbe Error
- Compact Platform Structure with Strong Driving Capability

Customization

Customizable based on customer requirements, including configuration, travel, load capacity, and special structural designs.

Panel Inspection Stage

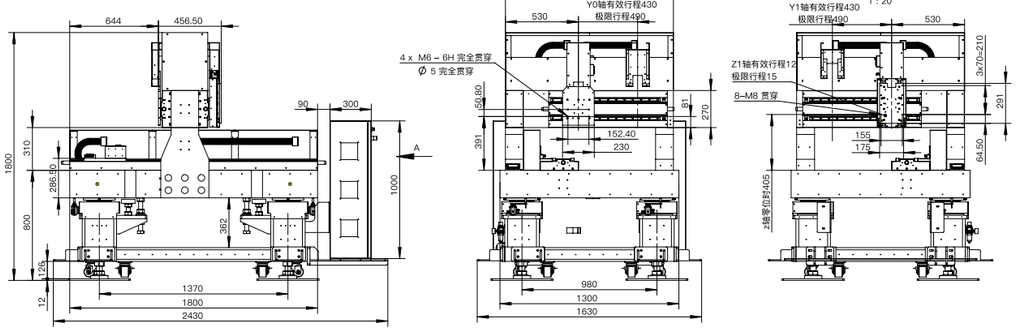
ZWDM-G25 Specifications

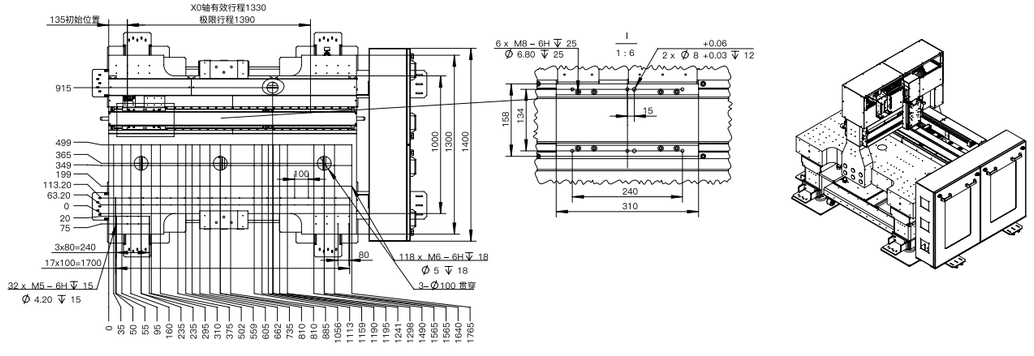


Parameter Table

Stage Model	ZWDM-G25			
Axial	15	12	20	20
Maximum Load (kg)	±(3+L/500)	±10	±10	N/A
Effective Travel (mm)	1330	430	430	12
Positioning Accuracy (μm)	0.005	0.1	0.1	0.2
Servo Resolution(μm)	0.5	0.5	0.25	50 mm/sec^2
Maximum Acceleration (g)	1000	1000	500	N/A
Maximum Speed (mm/s)	0.2% Max @ 200mm/s	N/A	N/A	N/A
Speed Ripple	±1	±1	±1	±1
Repeatability (μm)	±10	±10	±10	N/A
Flatness (μm)	±10	±10	±12	N/A
Straightness (μm)	200 msec	±10	±12	N/A
Settling Time	200 msec@ 0.2um p-p	200 msec@ 0.2um p-p	200 msec@ 0.2um p-p	N/A
Y0 X0 Axis Orthogonality (μm)	N/A	10	10	N/A

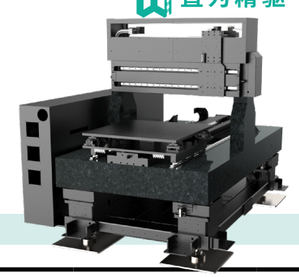
Dimensio





Panel Inspection Stage

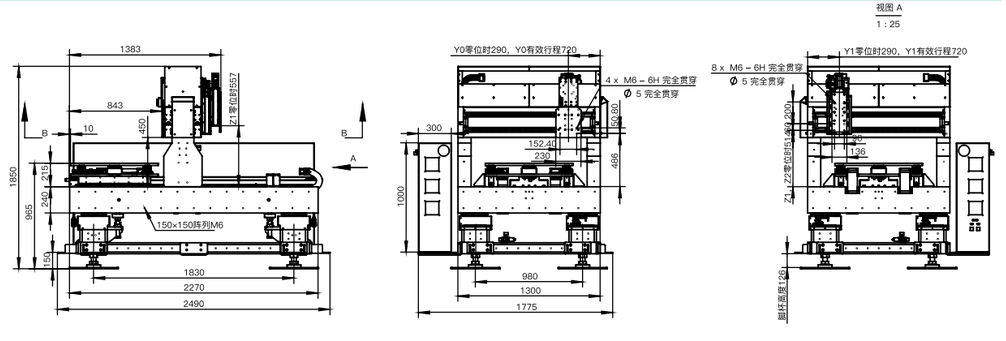
ZWDM-G3 Specifications

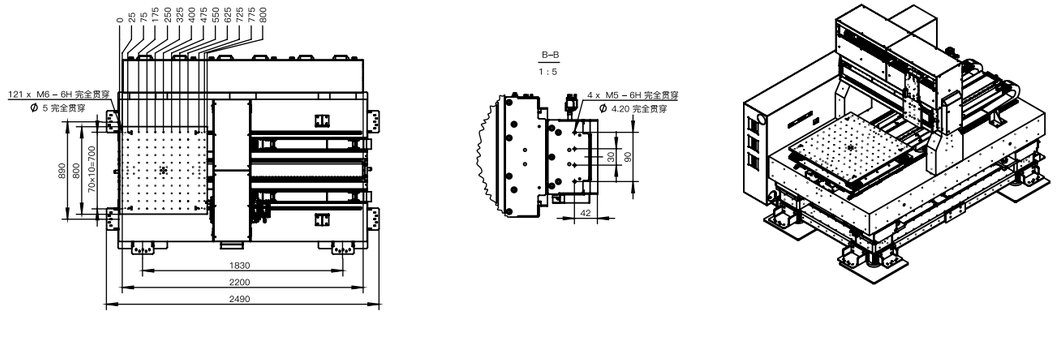


Parameter Table

Stage Model	ZWDM-G3				
Axial	Scan Axis(X0,X1)	Review Axis(Y0)	Step Axis (Y1)	Optical Heads(Z1-Z2)	θ Axis
Maximum Load (kg)	120	12	20	20	70
Positioning Accuracy (μm)	±(3+L/250)	±15	±10	N/A	N/A
Effective Travel (mm)	1450	720	720	12	6
Servo Resolution(μm)	0.005	0.1	0.1	0.2	0.2
Maximum Acceleration (g)	0.3	0.5	0.25	0.0051	0.0051
Maximum Speed (mm/s)	1000	1000	500	N/A	N/A
Speed Ripple	0.2% Max	N/A	N/A	N/A	N/A
Repeatability (μm)	±1	±1	±1	±1	±1
Flatness (μm)	±15	±10	±10	N/A	N/A
Straightness (μm)	±5	±10	±12	N/A	N/A
Settling Time	200 msec @ 0.2um p-p	200 msec @ 0.2um p-p	200 msec @ 0.2um p-p	N/A	N/A
Y0 X0 Axis Orthogonality (μm)	N/A	20um p-p	N/A	N/A	N/A

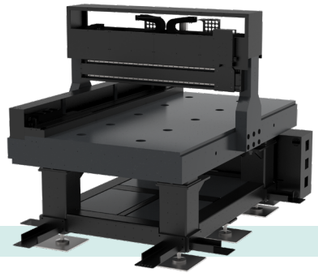
Dimensio





Panel Inspection Stage

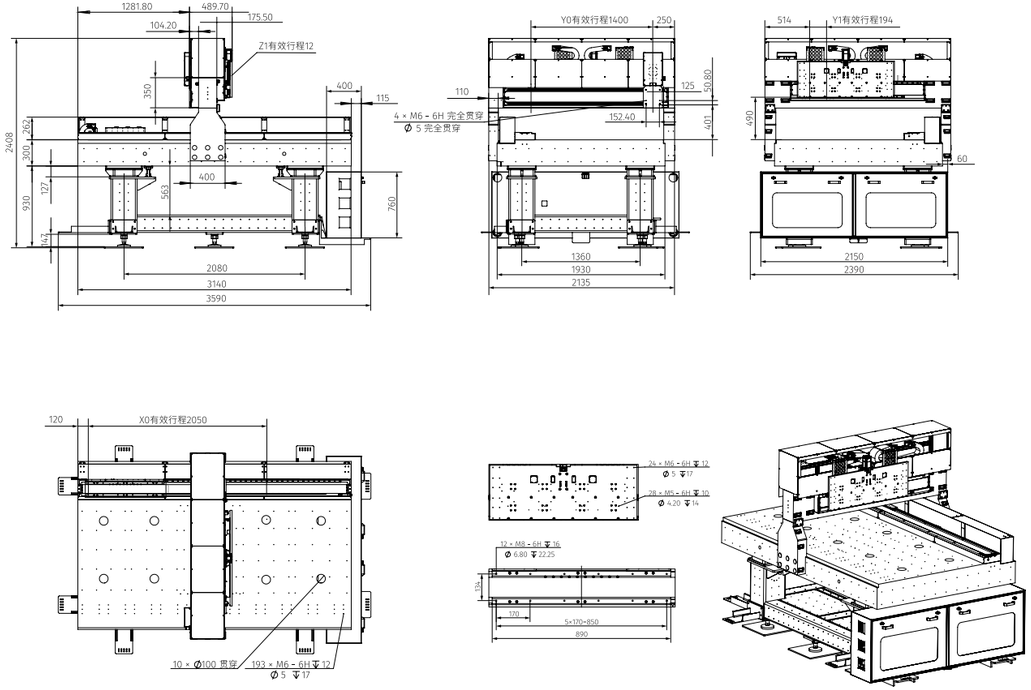
ZWDM-G5 Specifications



Parameter Table

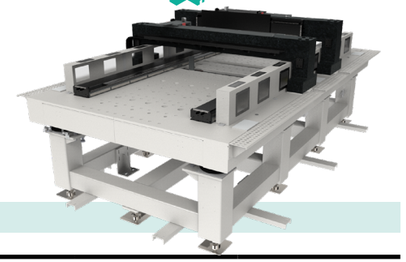
Stage Model	ZWDM-G5			
Axial	X0 Axis	Y0 Axis	Y1 Axis	Z0 Axis
Maximum Load (kg)	30	12	40	30
Positioning Accuracy (μm)	± (3+L/250)	±15	±10	12 mm
Effective Travel (mm)	2050	1400	194	N/A
Resolution (μm)	0.005	0.1	0.1	0.2
Maximum Acceleration (G)	0.5	0.5	0.25	50 mm/sec^2
Maximum Speed (mm/s)	1000	1000	500	N/A
Speed Ripple	0.2%@400mm/s	N/A	N/A	N/A
Repeatability (μm)	±1	±1	±1	±1
Vertical Straightness (μm)	±15	±10	±12	N/A
Horizontal Straightness (μm)	±15	±10	±10	N/A
Settling Time	200 msec @0.2um p-p	200 msec @0.2um p-p	200 msec @0.2um p-p	N/A
Orthogonality of Y0–X0 Axes	20um p-p		N/A	N/A

Dimensio



Panel Inspection Stage

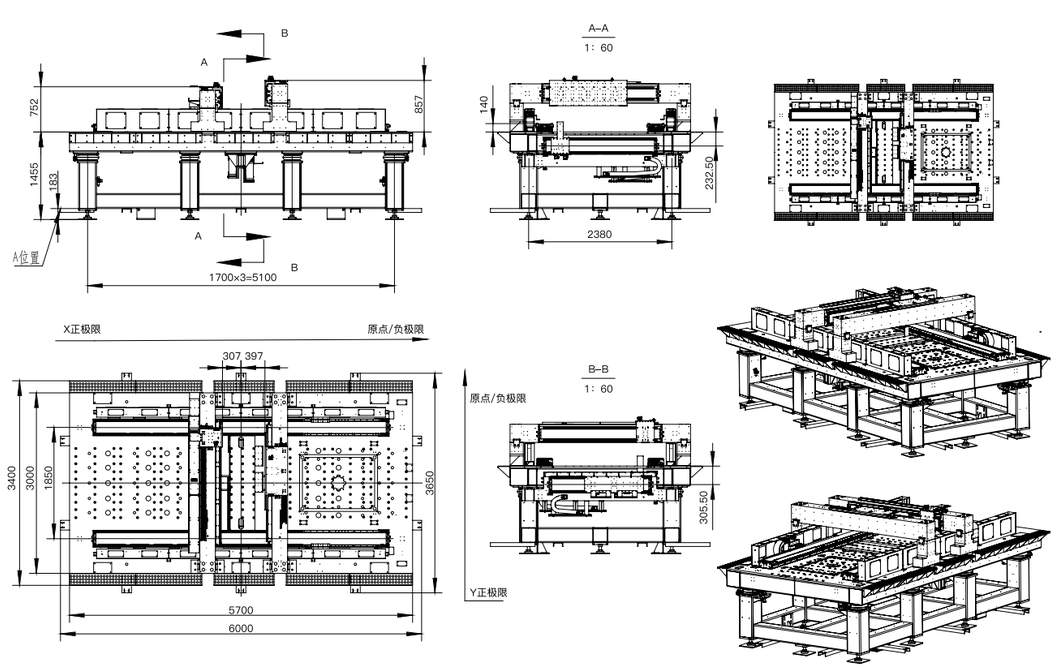
ZWDM-G86-225 Specifications



Parameter Table

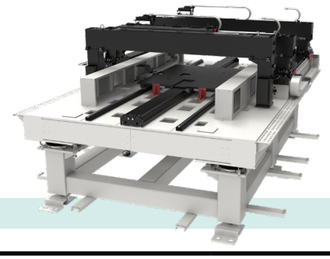
Stage Model	ZWDM-G86-225				
Axial	Scan Axis (X0,X1)	Review Axis (Y0,Y1,Y3,Y4)	Step Axis (Y2)	Optical Heads (Z1-Z6)	Review Scope (Z0)
Maximum Load (kg)	65	12	120	20	12
Positioning Accuracy (μm)	±(3+L/250)	±15	±10	N/A	N/A
Effective Travel (mm)	3325	2100	400	12	12
Servo Resolution(μm)	0.005	0.1	0.1	0.2	0.2
Maximum Acceleration (g)	0.3	0.5	0.25	50 mm/sec^2	50 mm/sec^2
Maximum Speed (mm/s)	1000	1000	500	N/A	N/A
Speed Ripple	0.2%@150 mm/s	N/A	N/A	N/A	N/A
Repeatability (μm)	±1	±1	±1	±1	±0.1
Flatness (μm)	±15	±10	±10	N/A	N/A
Straightness (μm)	±15	±10	±12	N/A	N/A
Settling Time	200 msec @ 0.2um p-p	200 msec @ 0.2um p-p	200 msec @ 0.2um p-p	N/A	N/A

Dimensio



Panel Inspection Stage

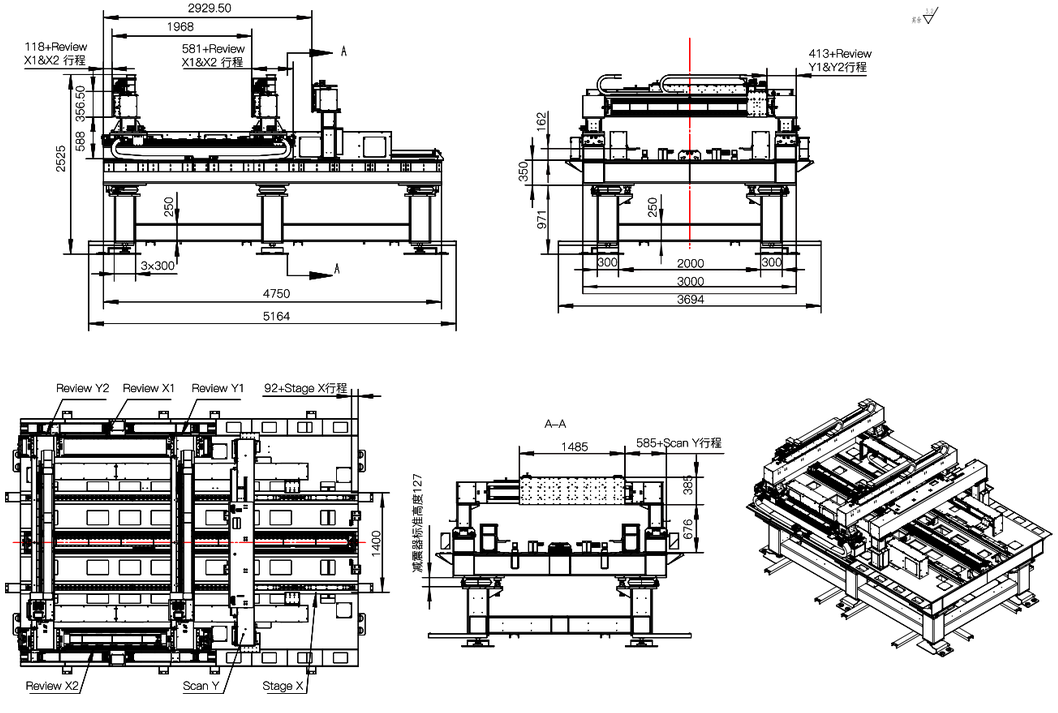
ZWDM-G86-186 Specifications



Parameter Table

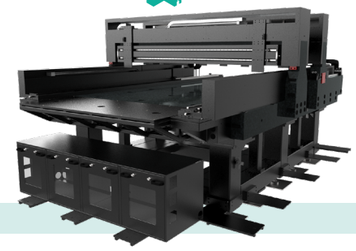
Stage Model	ZWDM-G86-186				
Axial	Scan X	Scan Y	Review X1&X2	Review Y1&Y2	Back Review Y1
Maximum Load (kg)	600	200	500	100	1330
Speed (mm/s)	800	500	600	600	30
Maximum Acceleration (m/s²)	6	5	6	6	0.7
Effective Travel (mm)	2820	250	1165	1835	0.6
Repeatability (μm)	±2	±1	±1	±1	±1
Positioning Accuracy (μm)	±10	±5	±5	±5	±5
Flatness (μm)	≤ 40	≤ 20	≤ 20	≤ 20	±20
Straightness (μm)	≤ 40	≤ 20	≤ 20	≤ 20	±20
Perpendicularity (μm/m)	N/A	N/A	N/A	N/A	±10
Pitch(μsec/m)	±8	±10	±8	±8	±10
Yaw(μsec/m)	±8	±10	±8	±8	2%@500mm/s
Speed Ripple (%)	≤ 0.3%@300mm/s	N/A	N/A	N/A	N/A
Attached Load Factor (%)	≤ 60%	≤ 60%	≤ 60%	≤ 60%	N/A
Mounting Method	Horizontal		N/A	N/A	N/A

Dimensio



Panel Inspection Stage

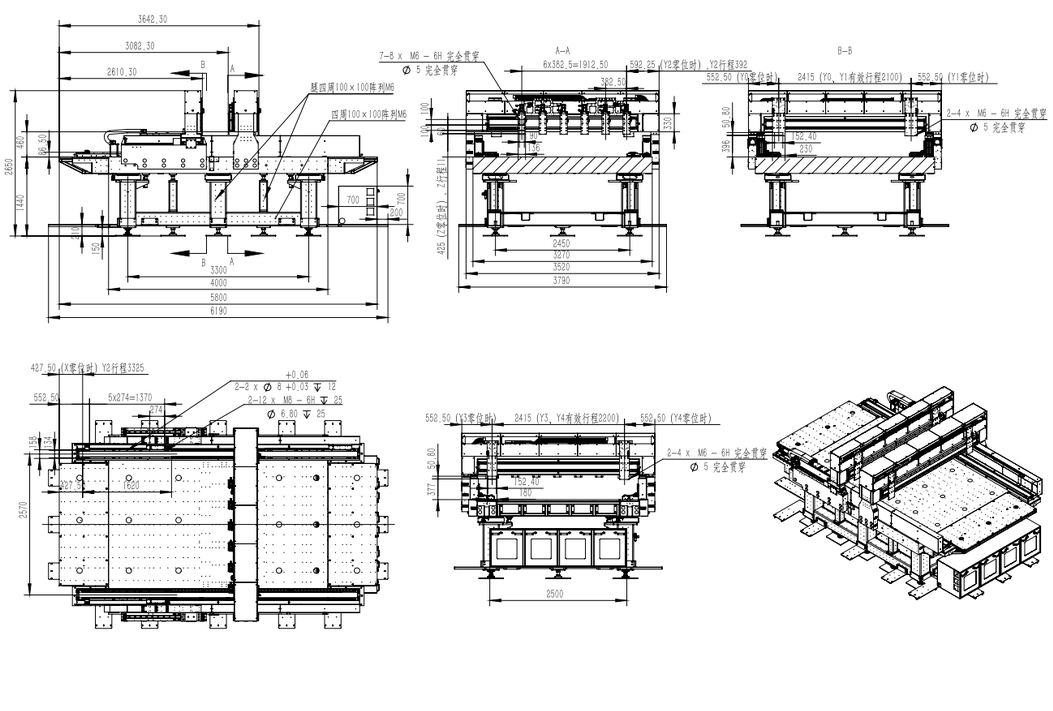
ZWDM-G87-277 Specifications



Parameter Table

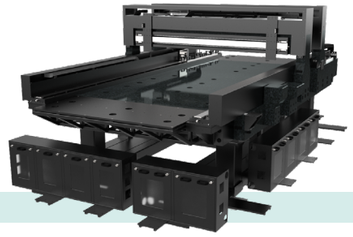
Stage Model	ZWDM-G87-277				
Axial	Scan X1/X2	Scan Y1	Back Scan Y1	Review Y1	Back Review Y1
Effective Travel (mm)	3350	400	460	1500	1330
Maximum Load (kg)	120	180	60	30	30
Maximum Speed (m/s)	0.7	0.6	0.6	0.7	0.7
Maximum Acceleration (g)	0.6	0.6	0.6	0.6	0.6
Repeatability (μm)	±1	±1	±1	±1	±1
Positioning Accuracy (μm)	±5	±5	±5	±5	±5
Horizontal Straightness (μm)	±20	±20	±20	±20	±20
Vertical Straightness (μm)	±20	±20	±20	±20	±20
Yaw (arc sec)	±20	±10	±10	±10	±10
Pitch(arc sec)	±20	±10	±10	±10	±10
Speed Ripple	0.3%@300mm/s	2%@500mm/s	2%@500mm/s	2%@500mm/s	2%@500mm/s
Horizontal Straightness (μm)	±15	±10	±10	N/A	N/A
Settling Time	200 msec @ 0.2um p-p	200 msec @0.2um p-p	200 msec @0.2um p-p	N/A	N/A
X0Y0 正交	20um p-p		N/A	N/A	N/A

Dimensio



Panel Inspection Stage

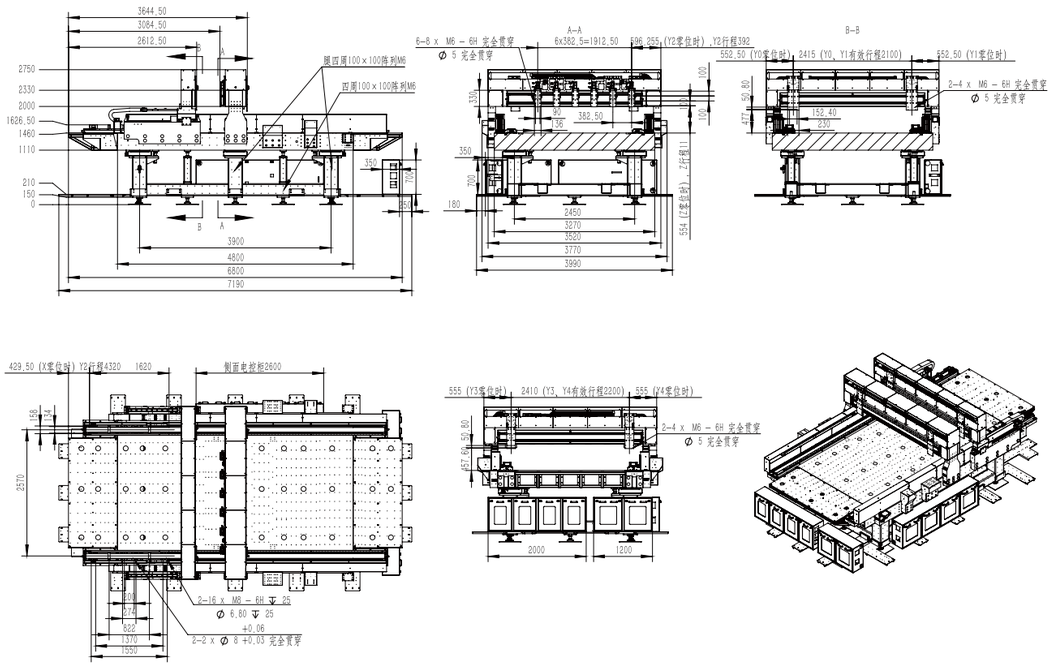
ZWDM-G87 Specifications



Parameter Table

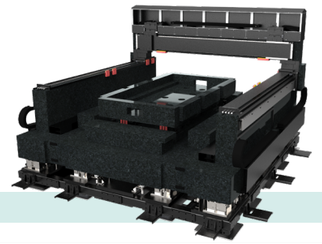
Stage Model	ZWDM-G87-309			
Axial	Scan X0,X1	Scan Y0,Y1,Y3,Y4	Step Axis Y2	Optical Z1-Z6
Effective Travel (mm)	4320	2100	400	12 mm Minimum
Maximum Load (kg)	65	12	120	20
Maximum Speed (m/s)	1	1	0.5	N/A
Maximum Acceleration (g)	0.3	0.5	0.25	50 mm/sec^2
Repeatability (μm)	±1	±1	±1	±1
Positioning Accuracy (μm)	± (3+L/250)	±15	±10	N/A
Horizontal Straightness (μm)	±15	±10	±12	N/A
Vertical Straightness (μm)	±15	±10	±10	N/A
Yaw (arc sec)	±20	±10	±10	±10
Pitch (arc sec)	±20	±10	±10	±10
Speed Ripple	0.2%@150 mm/s	N/A	N/A	N/A
Settling Time	200 msec @ 0.2um p-p	200 msec @ 0.2um p-p	200 msec @ 0.2um p-p	N/A

Dimensio



Panel Inspection Stage

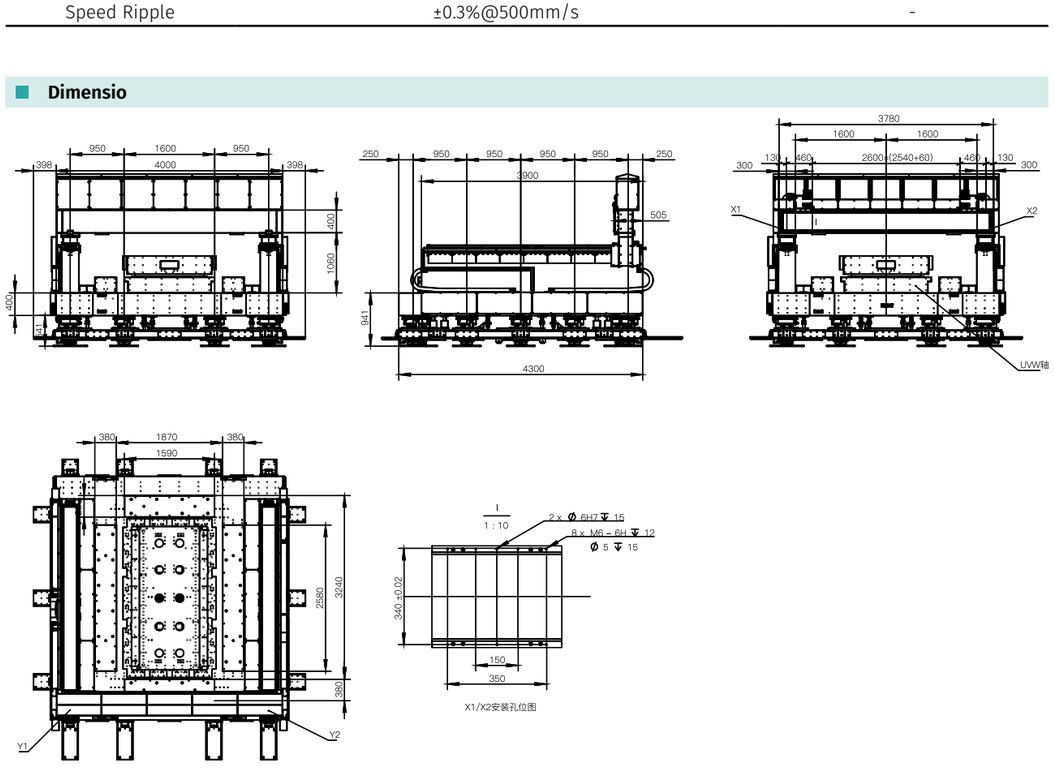
ZWDM-TX2540-Y3100 Specifications



Parameter Table

Stage Model	ZWDM-TX2540-Y3100		
Axial	Y1/Y2 Axis	X1/X2 Axis	UVW Axis
Continuous Force (N)	1592 N	414 N	680 N
Peak Force (N)	3380 N	1113 N	3400 N
Continuous Current (Arms)	9.68	3.23	4.1
Peak Current (Arms)	29.04	10.31	20.7
Effective Travel (mm)	3200	2540	±11mm/1°
Maximum Load (kg)	200kg+ X Axis	100kg	1200kg
Maximum Speed (m/s)	0.5	0.5	0.05
Maximum Acceleration (g)	0.3	0.3	0.05
Dwell Time (s)	1	1	1
Repeatability (um)	±1	±1	±0.5
Positioning Accuracy (um)	±2	±2	-
Straightness (um)	±7		-
Flatness (um)	±7		-
Yaw (arcsec)	±5		-
Pitch (arcsec)	±5		-
In-Position Stability (um)	±0.05		-
Settling Time	0.8s/±300nm	0.5s/±300nm	-
Speed Ripple	±0.3%@500mm/s		-

Dimensio



Plane Z axis lifting stage

Model Numbering Rules

ZWLM - Plane - Z - 10 - YT - SZ

Stage Model	Table Options		Feedback Options	
	Factory Standard Mounting Holes	YT	Resolution Digital Input	SZ
	Customer-Customized Table	DT	Analog Input	MN

Applications

Lithography, inspection, and packaging in the semiconductor industry; contour profiling; and gene sequencing in biomedical applications.

Product Introduction

Product Features

- Vertical Z-axis platform with nanometer-level positioning accuracy
- Driven by a linear motor
- Equipped with cross-roller bearings
- Delivers excellent dynamic performance and positioning accuracy
- Resolution: 1 nm
- Repeatability: ±100 nm
- Positioning accuracy: ±200 nm

Structural Features

- High-Precision Direct-Drive Lift Stage
- High Dynamic Performance (No-Load Cutoff Frequency > 120 Hz)
- Low Profile Height, Suitable for Space-Constrained Applications
- Optional Pneumatic Balancing, Maximum Load 15 kg
- In-Position Stability 5 nm (With Linear Actuator, in Vibration-Isolated Laboratory Environment)

Customization

Longer travel ranges available upon customization

Planar Z-Axis Lift Platform

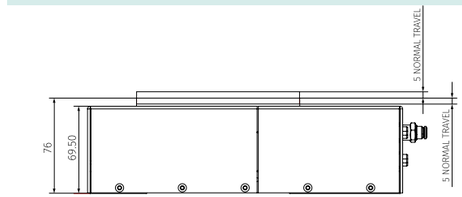
PlaneZ Series Specifications

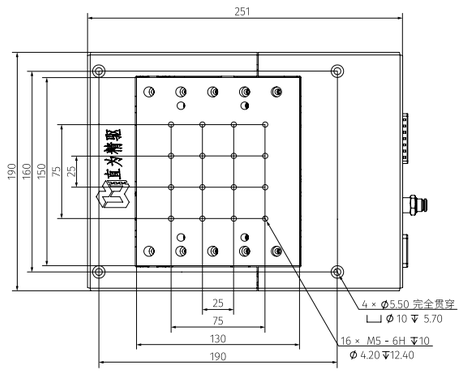
Parameter Table

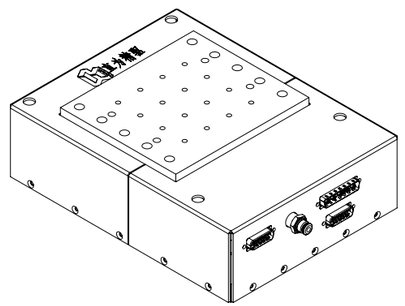
Stage Model	ZWLM-PlaneZ-10
Effective Travel	10 mm
Positioning Accuracy	±300 nm
Repeatability	±150 nm
Pitch	20 arc sec
Yaw	20 arc sec
Straightness	±2 μm
Maximum Load	8 kg
Resolution	1 nm
Minimum Step Size	5 nm
In-Position Stability	5 nm
Maximum Speed	5 mm/s
Maximum Acceleration	0.7 g
Continuous Force	20 N
Peak Force	45 N
Stage Mass	6.2 kg
Air Supply Requirements	80 psi ± 5 psi, with an air filter smaller than 0.25 μm
Stage Material	Al
MTBF	20000 Hours

NOTE:
(1) Measured parallel or perpendicular to the wedge block direction
(2) No-load testing
(3) Other travel ranges are customizable
(4) Default test point is 25 mm above the stage surface. Single-axis specifications; multi-axis system performance depends on actual load and working point location

Dimensio







Self-balancing Z direction motion stage

Model Numbering Rules

ZWLM - ART - Z - 40 - 1VPP

Stage Model	Effective Travel		Feedback Options	
	unit：mm		VPP 1 V Sine Analog Input	1VPP
	40	100	High-Precision VPP 1 V Sine Analog Input	1VPH
	160		1 nm Resolution Digital TTL Signal Input	TTLO01
			5 nm Resolution Digital TTL Signal Input	TTLO05
			10nm Resolution Digital TTL Signal Input	TTLO10
			20nm Resolution Digital TTL Signal Input	TTLO20
			50nm Resolution Digital TTL Signal Input	TTLO50

Applications

Applications in optical fiber coupling for communications, wafer defect inspection in the semiconductor industry, gene sequencing in biomedical fields, and laser micro/nano processing

Product Introduction

Product Features

- Nanometer-Level Positioning Accuracy
- Driven by Linear Motor, Equipped with Cross-Roller Bearings
- Delivers Excellent Dynamic Performance and Positioning Accuracy
- No-Load Cutoff Frequency up to Over 100 Hz
- Resolution: 1 nm
- Repeatability: ±100 nm
- Positioning Accuracy: ±250 nm

Structural Features

- Dual-Cylinder Counterbalance
- High Dynamic Performance (Cutoff Frequency > 100 Hz)
- Cross-Roller Bearings
- Flexible Configuration Options (Customizable Travel Lengths)
- In-Position Stability 3 nm (With Linear Actuator, in Vibration-Isolated Laboratory Environment)

Customization

Longer travel ranges available upon customization

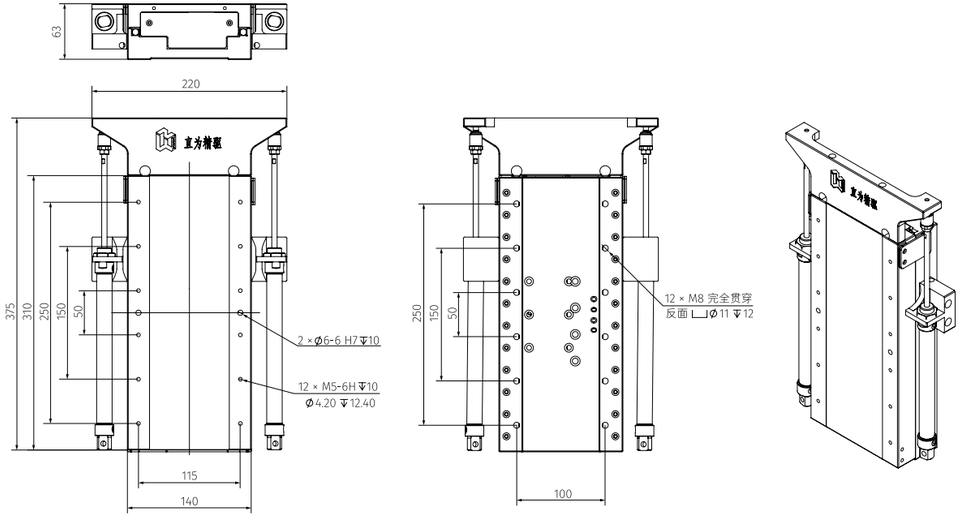
自平衡 Z 向运动台
Self-Balancing Z-Axis Motion Stage

Parameter Table

Stage Model	ZWLM-ART-Z-040	ZWLM-ART-Z-100	ZWLM-ART-Z-160
Effective Travel	40 mm	100 mm	160 mm
Positioning Accuracy	±0.3 um	±0.4 um	±0.5 um
Repeatability	±0.1 um	±0.2 um	±0.25 um
Pitch	10 arc sec	12 arc sec	12 arc sec
Yaw	10 arc sec	10 arc sec	10 arc sec
Roll	10 arc sec	10 arc sec	10 arc sec
Straightness	±2 um	±2 um	±2.5 um
Flatness	±2 um	±2 um	±2.5 um
Resolution		1 nm	
Minimum Step Size		5 nm	
In-Position Stability		3 nm	
Maximum Acceleration		500 m/s	
Maximum Speed		1 g	
Maximum Horizontal Load		12 KG	
Continuous Force		52 N	
Peak Force		288 N	
Stage Mass	2.7 kg	3.9 kg	5.2 kg
Stage Material		Al	
MTBF		20000 Hours	

NOTE:
(1) No-load; requires an appropriately powered amplifier
(2) Default test point is 25 mm above the stage surface. Single-axis specifications; multi-axis system performance depends on actual load and working point location
(3) Cylinder air supply must include a filter-regulator-lubricator unit; air must be clean, dry, and filtered to particles below 0.25 μm. Nitrogen with 99.9% purity is recommended. Air pressure can be adjusted according to the platform’s actual load.
(4) Other travel ranges are customizable

ZWLM-ART-Z-160Dimensio



Heavy-Load Z-Axis Lifting Stage

Model Numbering Rules

ZWLM - ZMS - 23 - YT - SZ

Stage Model	Travel:23MM	Table Options	Feedback Options

Table Options		Feedback Options	
Factory Standard Mounting Holes	YT	Resolution Digital Input	SZ
Customer-Customized Table	DT	Analog Input	MN

Applications

Provides precise Z-axis positioning for defect inspection in the semiconductor industry, optical lens testing, and precision machining applications

Product Introduction

Product Features

- High-Precision Linear Guideways
- Servo Motor Driven
- Grating Closed-Loop Feedback
- High-Reliability Drive Mechanism
- Equipped with Power-Off Brake to Prevent Load Drop
- Long Service Life

Structural Features

- Uses Wedge-Based Lifting Mechanism
- Direct Load Motion
- Maintains Minimal Height Over a Long Travel Range
- Optimized to Minimize System Error, Enhancing Overall Precision Performance

Customization

Longer travel ranges available upon customization

Heavy-Load Z-Axis Lift Stage

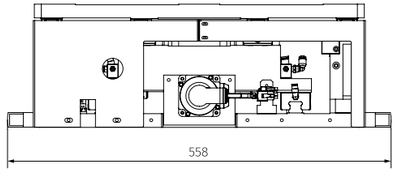
ZMS Series Specifications

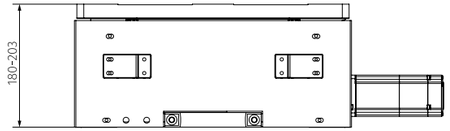
Parameter Table

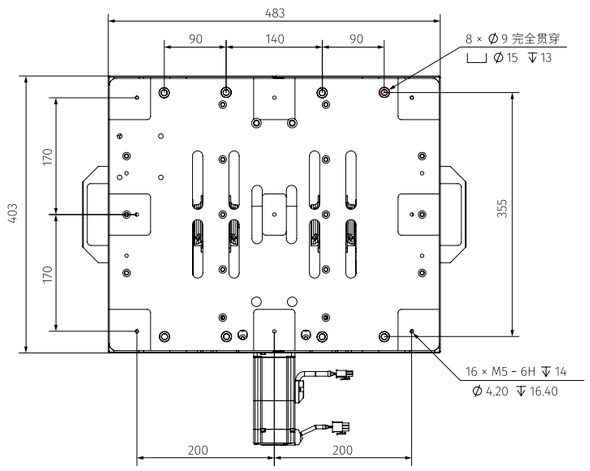
Stage Model	ZWLM-ZMS-23
Effective Travel	23 mm
Positioning Accuracy	±2 um
Repeatability	±1 um
Straightness	±2 um
Resolution	0.1 um
Maximum Acceleration	1 g
Maximum Speed	30mm/s
Maximum Horizontal Load	60KG
Stage Mass	50KG
Stage Material	Al
MTBF	27000 Hours

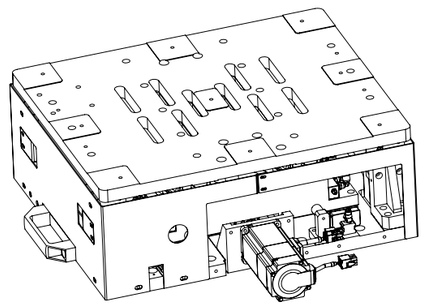
Note: The above test data were obtained in a laboratory environment. The measurement point was located 25 mm above the center point, and the results were derived using a linear amplifier.

Dimensio









Aerostatic Direct-Drive Rotary Stage

Applications

Industrial and research applications requiring arc-second level positioning accuracy, including measurement and inspection, biological sample processing and observation, synchrotron acceleration studies, precision manufacturing, optical alignment, and system calibration

Product Introduction

Product Features

- High-Precision Aerostatic Direct-Drive Rotary Stage
- Directly Driven by a Rotary Motor
- Delivers Excellent Dynamic Performance and Positioning Accuracy
- Market-Leading Axial, Radial, and Tilt Error Motion Performance
- Provides Outstanding Rotational Absolute Positioning Accuracy, Repeatability, and Load Capacity, Easily Integratable into Multi-Axis Motion Systems

Structural Features

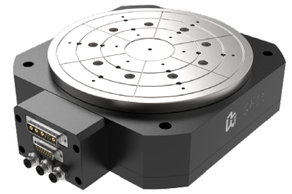
- Low-Profile, Compact Design
- Sub-Arc-Second Level Positioning Accuracy
- Axial and Radial Runout < 250 nm
- Slotless, Brushless Servo Direct-Drive Motor
- Minimizes Axial, Radial, and Tilt Error Motion
- Excellent Positioning Performance, Speed Stability, and High-Resolution Feedback
- Non-Contact Aerostatic Bearings for Ultra-Precise Motion Performance

Customization

Other sizes available upon customization

Aerostatic Direct-Drive Rotary Stage

ZWLM-QFML225-R Specifications

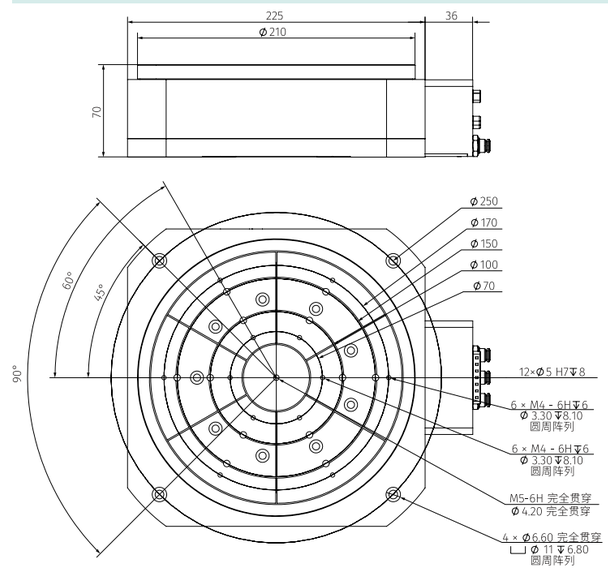


Parameter Table

Stage Model	ZWLM-QFML225-R
Rotation Range	360°
Table Diameter	210 mm
Height	70 mm
Angular Accuracy	±2 arc sec
Positioning Accuracy	±0.5 arc sec
Axial Runout	250 nm
Radial Runout	300 nm
Minimum Step Size	0.5 arc sec
In-Position Stability	0.5 arc sec
Continuous Torque	4 N.M
Peak Torque	12 N.M
Maximum Horizontal Load	100 KG
Maximum Radial Load	50 KG
Maximum Speed	600 rpm
Stage Mass	12.5 kg
Air Supply Requirement	with <0.25 μm air filter
Stage Material	Al
MTBF	20000 Hours

Notes:
(1) No-load; requires an appropriately powered amplifier
(2) Default test point is 25 mm above the stage surface. Single-axis specifications; multi-axis system performance depends on actual load and working point location
(3) Cylinder air supply must include a filter-regulator-lubricator unit; air must be clean, dry, and filtered to particles below 0.25 μm. Nitrogen with 99.9% purity is recommended. Air pressure can be adjusted according to the platform’s actual load.
(4) To prevent insufficient air bearing pressure, it is recommended to install a pressure switch, with its signal connected to the motion controller’s emergency stop (E-STOP) port.

Dimensio



Aerostatic Single-Axis Stage Series

Model Numbering Rules

ZWAM215LS - 100 - L1 - 1VPP

Stage Model

Effective Travel

unit: mm	
100	200
300	400
500	

Cable Management

Single-Side Drag Chain Plate + Single Drag Chain	L1
Double-Side Drag Chain Plate+Double Drag Chain	L2

Feedback Options

VPP 1 V Sine Analog Input	1VPP
High-Precision VPP 1 V Sine Analog Input	1VPH
1 nm Resolution Digital TTL Signal Input	TTLO01
5 nm Resolution Digital TTL Signal Input	TTLO05
10 nm Resolution Digital TTL Signal Input	TTLO10
20 nm Resolution Digital TTL Signal Input	TTLO20
50 nm Resolution Digital TTL Signal Input	TTLO50

Applications

Applications include large optical lens inspection, wafer defect inspection in the semiconductor industry, precision manufacturing, and packaging

Product Introduction

Product Features

- High-Performance Direct-Drive Aerostatic Stage with Superior Dynamic Performance
- Air-Surround Preload, Non-Contact Design
- Tailored for High-Performance Scanning and Inspection Applications
- Aerostatic Stage with Nanometer-Level Positioning Accuracy, Driven by Linear Motor
- Can Be Used as a Single Axis or Integrated into Multi-Axis Systems
- Ideal for Heavy-Load Applications

Structural Features

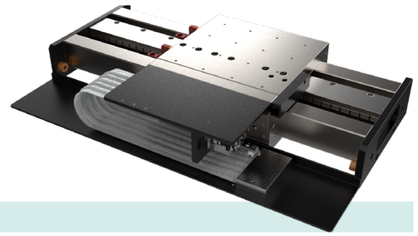
- Uses Air Elastic Potential as Support Guideway, Achieving Frictionless Motion Between Rail and Stage
- Excellent Dynamic Performance and Positioning Accuracy
- Positive and Negative Pressure Design for Aerostatic Stage
- Ensures Proper Air Film Gap for Applications with Large Loads and Uneven Weight Distribution on Aerostatic Guideways

Customization

Longer travel ranges available upon customization

Aerostatic Single-Axis Stage Series

ZWLAM215 Series Specifications

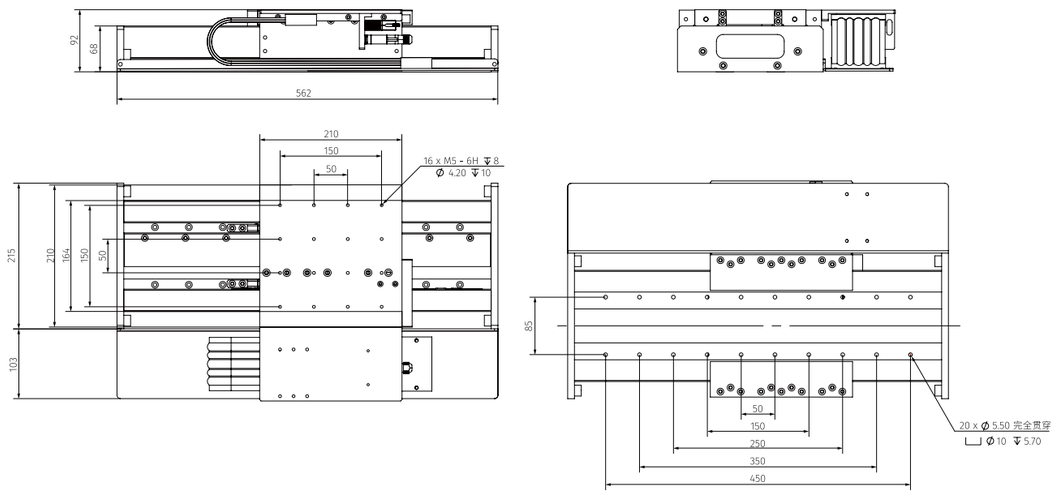


Parameter Table

Stage Model	ZWLAM215-100	ZWLAM215-200	ZWLAM215-300	ZWLAM215-400	ZWLAM215-500
Effective Travel	100mm	200mm	300mm	400mm	500mm
Positioning Accuracy	±0.2 μm	±0.3 μm	±0.3 μm	±0.4 μm	±0.5 μm
Repeatability	±0.1 μm	±0.1 μm	±0.2 μm	±0.25μm	±0.3 μm
Pitch	±1.5 arc sec	±2.5 arc sec	±3 arc sec	±4 arc sec	±5 arc sec
Yaw	±1.5 arc sec	±2.5 arc sec	±3 arc sec	±4 arc sec	±5 arc sec
Roll	±1.5 arc sec	±2.5 arc sec	±3 arc sec	±4 arc sec	±5 arc sec
Straightness	±0.5 μm	±0.6 μm	±0.75 μm	±1.5 μm	±2 μm
Flatness	±0.5 μm	±0.6 μm	±0.75 μm	±1.5 μm	±2 μm
Resolution	1nm				
Maximum Acceleration	2 g				
Maximum Speed	1000 mm/s				
Maximum Horizontal Load	35 kg				
Maximum Radial Load	20 kg				
Continuous Force	78 N				
Peak Force	432 N				
In-Position Stability	±10 nm				
Air Supply Requirement	5.5 bar (Dry air is recommended, with water, oil, and dust filtration to below 0.5 μm)				
Stage Mass	19.1kg	21.3kg	23.5kg	25.7kg	27.9kg
Stage Material	Al				
MTBF	25000Hours				

Note: The above test data were obtained in a laboratory environment. The measurement point was located 25 mm above the center point, and the results were derived using a linear amplifier.

Dimensio



Aerostatic Single-Axis Stage Series

■ Model Numbering Rules

ZWAM385LS - 100 - L1 - 1VPP

Stage Model	Effective Travel	Cable Management	Feedback Options

Effective Travel (unit: mm)

100	200
300	400
500	

Cable Management

Single-Side Drag Chain Plate+Single Drag Chain	L1
Double-Side Drag Chain Plate+Double Drag Chain	L2

Feedback Options

VPP 1 V Sine Analog Input	1VPP
High-Precision VPP 1 V Sine Analog Input	1VPH
1 nm Resolution Digital TTL Signal Input	TTLO01
5 nm Resolution Digital TTL Signal Input	TTLO05
10 nm Resolution Digital TTL Signal Input	TTLO10
20 nm Resolution Digital TTL Signal Input	TTLO20
50 nm Resolution Digital TTL Signal Input	TTLO50

■ Applications

Applications include large optical lens inspection, wafer defect inspection in the semiconductor industry, precision manufacturing, and packaging

■ Product Introduction

Product Features

・High-Performance Direct-Drive Aerostatic Stage with Superior Dynamic Performance
・Air-Surround Preload, Non-Contact Design
・Tailored for High-Performance Scanning and Inspection Applications
・Aerostatic Stage with Nanometer-Level Positioning Accuracy, Driven by Linear Motor
・Can Be Used as a Single Axis or Integrated into Multi-Axis Systems
・Ideal for Heavy-Load Applications

Structural Features

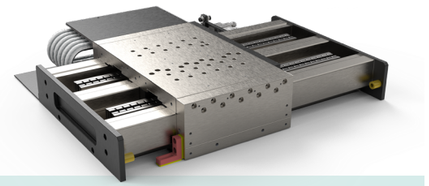
・Uses Air Elastic Potential as Support Guideway, Achieving Frictionless Motion Between Rail and Stage
・Excellent Dynamic Performance and Positioning Accuracy
・Positive and Negative Pressure Design for Aerostatic Stage
・Ensures Proper Air Film Gap for Applications with Large Loads and Uneven Weight Distribution on Aerostatic Guideways

Customization

Longer travel ranges available upon customization

Aerostatic Single-Axis Stage Series

ZWLAM385 Series Specifications

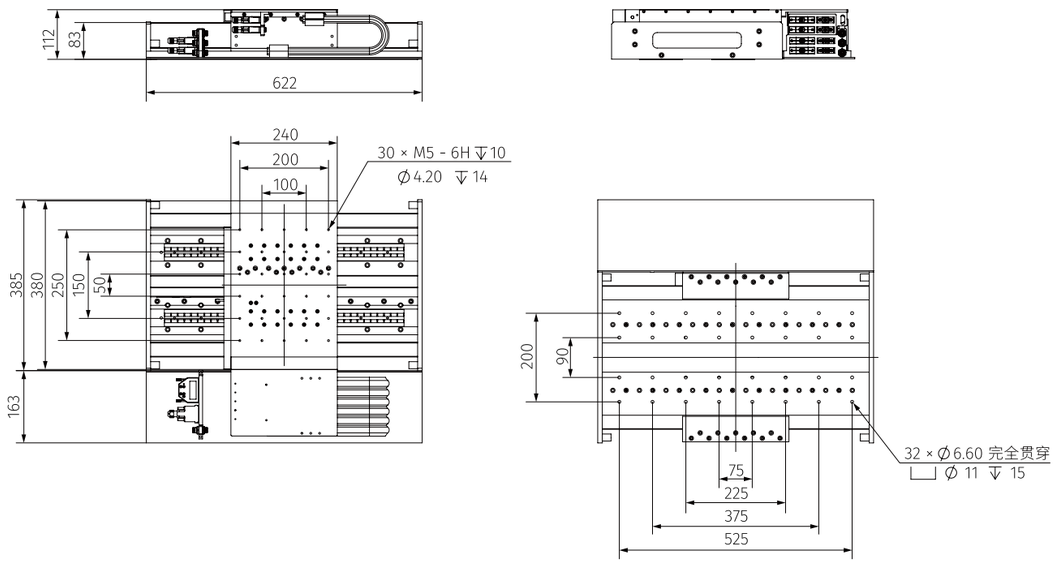


■ Parameter Table

Stage Model	ZWLAM385-100	ZWLAM385-200	ZWLAM385-300	ZWLAM385-400	ZWLAM385-500
Effective Travel	100mm	200mm	300mm	400mm	500mm
Positioning Accuracy	±0.2 μm	±0.3 μm	±0.3 μm	±0.4 μm	±0.5 μm
Repeatability	±0.1 μm	±0.1 μm	±0.2 μm	±0.25μm	±0.3 μm
Pitch	±1.5 arc sec	±2.5 arc sec	±3 arc sec	±4 arc sec	±5 arc sec
Yaw	±1.5 arc sec	±2.5 arc sec	±3 arc sec	±4 arc sec	±5 arc sec
Roll	±1.5 arc sec	±2.5 arc sec	±3 arc sec	±4 arc sec	±5 arc sec
Straightness	±0.5 μm	±0.6 μm	±0.75 μm	±1.5 μm	±2 μm
Flatness	±0.5 μm	±0.6 μm	±0.75 μm	±1.5 μm	±2 μm
Resolution	1nm				
Maximum Acceleration	2 g				
Maximum Speed	1000 mm/s				
Maximum Horizontal Load	60 kg				
Maximum Radial Load	30 kg				
Continuous Force	156 N				
Peak Force	864 N				
In-Position Stability	±10 nm				
Air Supply Requirement	5.5 bar (Dry air is recommended, with water, oil, and dust filtration to below 0.5 μm)				
Stage Mass	40.9kg	46.2kg	51.5kg	56.8kg	62.1kg
Stage Material	Al				
MTBF	25000Hours				

Note: The above test data were obtained in a laboratory environment. The measurement point was located 25 mm above the center point, and the results were derived using a linear amplifier.

■ Dimensio



Stacked Aerostatic Stage

Model Numbering Rules

ZWLAM - XY - 100 - L1 - 1VPP

Stage Model	Effective Travel	Cable Management	Feedback Options
	unit：mm	Single-Side Drag Chain Plate+Single Drag Chain L1	VPP 1 V Sine Analog Input 1VPP
	100 200		High-Precision VPP 1 V Sine Analog Input 1VPH
	300 400	Double-Side Drag Chain Plate+Double Drag Chain L2	1 nm Resolution Digital TTL Signal Input TTLO01
	500		5 nm Resolution Digital TTL Signal Input TTLO05
			10 nm Resolution Digital TTL Signal Input TTLO10
			20 nm Resolution Digital TTL Signal Input TTLO20
			50 nm Resolution Digital TTL Signal Input TTLO50

Applications

Applications include large optical lens inspection, wafer defect inspection in the semiconductor industry, precision manufacturing, and packaging

Product Introduction

Product Features

・High-Performance Direct-Drive Aerostatic Stage with Superior Dynamic Performance
・Air-Surround Preload, Non-Contact Design
・Tailored for High-Performance Scanning and Inspection Applications
・Aerostatic Stage with Nanometer-Level Positioning Accuracy, Driven by Linear Motor
・Can Be Used as a Single Axis or Integrated into Multi-Axis Systems
・Ideal for Heavy-Load Applications

Structural Features

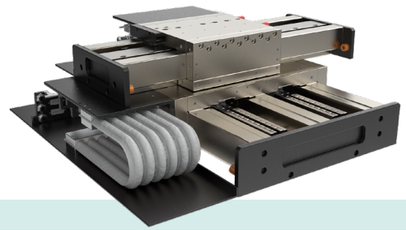
・Uses Air Elastic Potential as Support Guideway, Achieving Frictionless Motion Between Rail and Stage
・Excellent Dynamic Performance and Positioning Accuracy
・Positive and Negative Pressure Design for Aerostatic Stage
・Ensures Proper Air Film Gap for Applications with Large Loads and Uneven Weight Distribution on Aerostatic Guideways

Customization

Longer travel ranges available upon customization

Stacked Aerostatic Stage

ZWLAM-XY Series Specifications

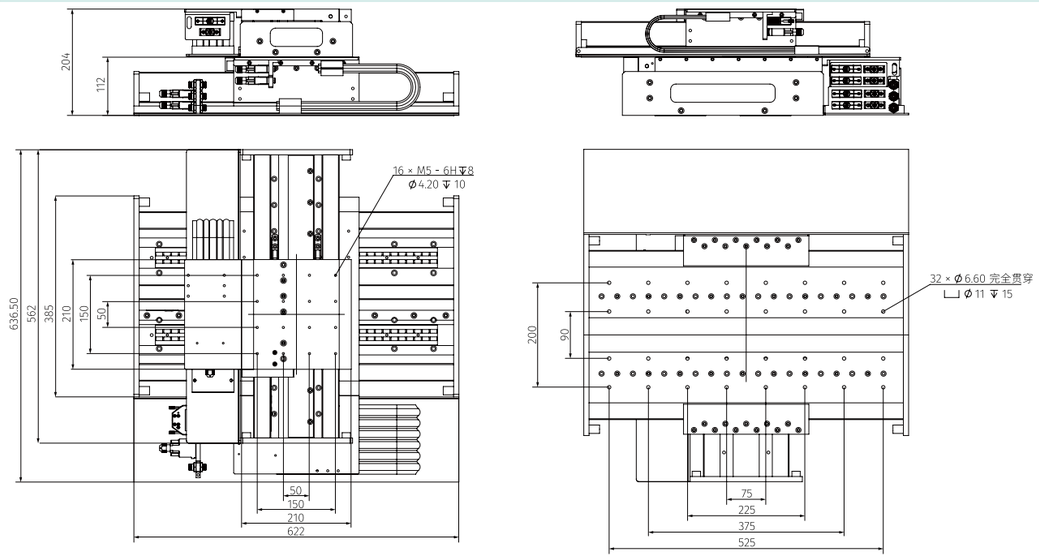


Parameter Table

Stage Model		ZWLAM-XY-300-300
Effective Travel		300mm*300mm
Positioning Accuracy		±0.3 μm
Repeatability		±0.2 μm
Pitch		±3 arc sec
Yaw		±3 arc sec
Roll		±3 arc sec
Straightness		±1 μm
Flatness		±1 μm
Resolution		1nm
Maximum Acceleration		2 g
Maximum Speed		1000 mm/s
Maximum Horizontal Load		60 kg
Maximum Radial Load		30 kg
Continuous Force	Upper Axis	78 N
	Lower Axis	156 N
Peak Force	Upper Axis	432 N
	Lower Axis	864 N
In-Position Stability		±10 nm
Air Supply Requirement		5.5 bar (Dry air is recommended, with water, oil, and dust filtration to below 0.5 μm)
Stage Mass		75kg
Stage Material		Al
MTBF		25000Hours

Note: The above test data were obtained in a laboratory environment. The measurement point was located 25 mm above the center point, and the results were derived using a linear amplifier.

Dimensio



H-type plane air floating stage

Model Numbering Rules

ZWLM - PlaneH - XY - 400 - YT - SZ

Stage Model	Effective Travel	Table Options	Feedback Options
	unit：mm	Factory Standard Mounting Holes YT	Resolution Digital Input SZ
	500 800	Customer-Customized Table DT	Analog Input MN

Applications

Suitable for Wafer Inspection Applications of Various Sizes and Processes

Product Introduction

Product Features

- High Dynamic Performance
- Frictionless, Vibration-Free Smooth Motion
- Grating Scale Resolution: 1 nm
- Low Thermal Expansion Coefficient

Structural Features

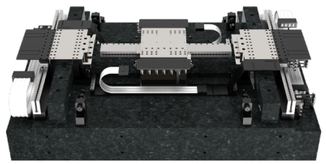
- Dual-Drive Beams with Air-Guide H-Bridge Structure
- Integrated XY Design
- Low Abbe Offset

Customization

Customizable based on customer requirements for configuration, travel, load, and special structures

H 型平面气浮平台

PlaneH Series Specifications

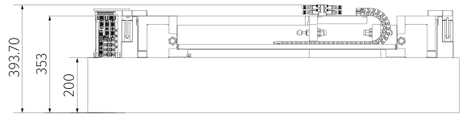


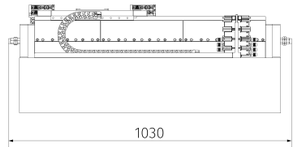
Parameter Table

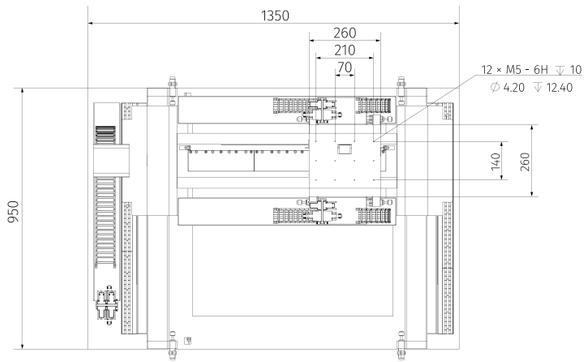
Stage Model	ZWLM-PlaneH-XY-400
Effective Travel	400 mm×400 mm
Positioning Accuracy	±0.3 um
Repeatability	±0.2 um
Pitch	2.5 arc sec
Yaw	2.5 arc sec
Straightness	±1.5 um
Flatness	±1.5 um
Resolution	1 nm
Maximum Acceleration	0.5 g
Maximum Speed	500 mm/s
Maximum Horizontal Load	30 KG
Continuous Force	Upper Axis：204 N Lower Axis：510 N
Peak Force	Upper Axis：1152 N Lower Axis：2880 N

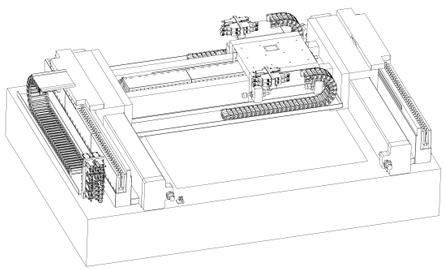
Note: The above test data were obtained in a laboratory environment. The measurement point was located 25 mm above the center point, and the results were derived using a linear amplifier.

Dimensio









ZTT plane fine-adjustment stage

Model Numbering Rules

ZWLM - ZTT	-	4
Stage Model		Travel:4MM

Applications

Applications such as Light Source Alignment and Wafer Inspection

Product Introduction

Product Features

- Multi-Axis Coordinated Control
- Voice Coil Motor Driven
- Grating Closed-Loop Feedback
- High-Reliability Drive Mechanism
- Excellent Fine Motion Accuracy and Dynamic Performance
- Long Service Life

Structural Features

- Compliant Mechanism
- Magnetic Load Balancing
- Enables Large-Angle Leveling
- Supports Leveling Under Heavy Loads
- Fast and Smooth Operation, Compact Structure

Customization

Longer travel ranges available upon customization

ZTT Planar Fine-Adjustment Stage

ZTT Series Specifications

Parameter Table

Stage Model	ZWLM-ZTT-4		
AxialAxial	Z	θX	θY
Effective Travel	4	2°	2°
Positioning Accuracy	±0.5 um	-	-
Repeatability	±0.25 um	±1.5 arc sec	±1.5 arc sec
Pitch	±10 arc sec	-	-
Yaw	±10 arc sec	-	-
Straightness	±1.5 um	-	-
Flatness	±1.5 um	-	-
Maximum Speed	1 g	-	-
Maximum Acceleration	200mm/s	-	-
Minimum Step Size	100nm	1arc sec	1 arc sec
Maximum Load		10Kg	
Stage Mass		6.5Kg	
Stage Material		Al	
MTBF		27000 Hours	

Note: The above test data were obtained in a laboratory environment. The measurement point was located 25 mm above the center point, and the results were derived using a linear amplifier.

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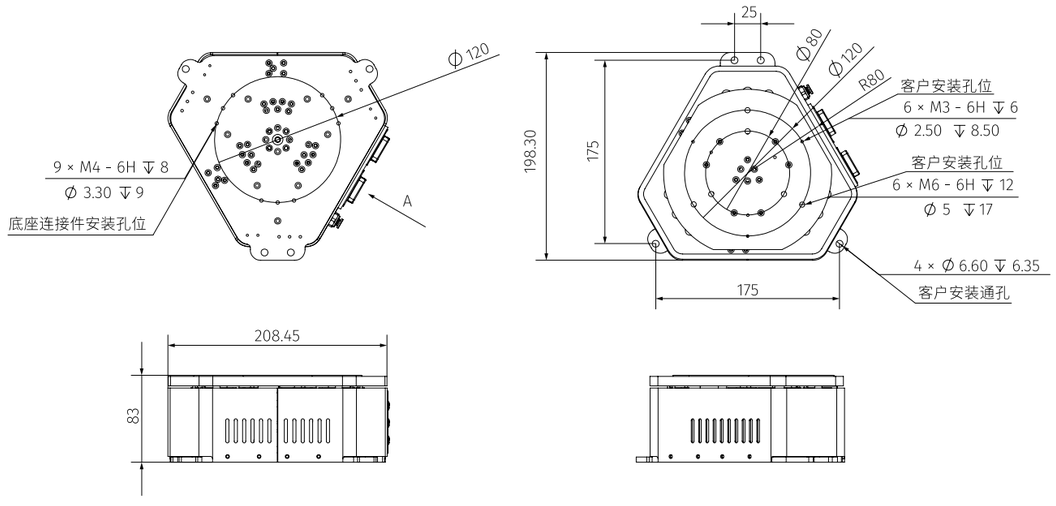

XY Cross Stage

Model Numbering Rules

ZWDM - DJXY - 500 - 500 - YT - SZ

Stage Model	Effective Travel	Table Options	Feedback Options
	unit：mm	Factory Standard Mounting Holes: YT	Resolution Digital Input: SZ
	500 800	Customer-Customized Table: DT	Analog Input: MN

Applications

Applications: OLED Cutting / PCB Drilling / CNC Machining / Biotechnology / IC Packaging / Wafer Inspection …

Product Introduction

Product Features

- High Precision, Low Cost, Modular Design
- Easy for Users to Install and Commission Quickly
- Flexible Configuration
- Travel Length Can Be Freely Selected According to Requirements (Customizable)

Structural Features

- Integrated XY Structure
- Lower Axis Dual-Drive: High Load, High Precision, Long Travel, High Rigidity
- Equipped with Centralized Lubrication, Metal Grounding, and Other Auxiliary Functions

Customization

Custom configurations—including travel, load capacity, and special structures—can be evaluated based on customer requirements.

XY Cross Stage

ZWDM-DJXY Series Specifications

Parameter Table

Stage Model		ZWDM-DJXY-500-500	ZWDM-DJXY-800-800
Effective Travel		500 mm*500 mm	800 mm*800 mm
Positioning Accuracy		±2 um	±2 um
Repeatability		±1 um	±1 um
Pitch		15 arc sec	20 arc sec
Yaw		15 arc sec	20 arc sec
Roll		15 arc sec	20 arc sec
Straightness		±3 um	±5 um
Resolution		100 nm	
Maximum Acceleration		1.5 g	
Maximum Speed		1.5 m/s	
Maximum Load		40 KG	
Continuous Force	X Axis	170 N	
	Y Axis	659 N	
Peak Force	X Axis	850 N	
	Y Axis	3298 N	
Minimum Step Size		500 nm	
Stage Mass		450 KG	720 KG
Stage Material		Marble	
MTBF		20000 Hours	

Note: The above test data were obtained in a laboratory environment. The measurement point was located 25 mm above the center point, and the results were derived using a linear amplifier.

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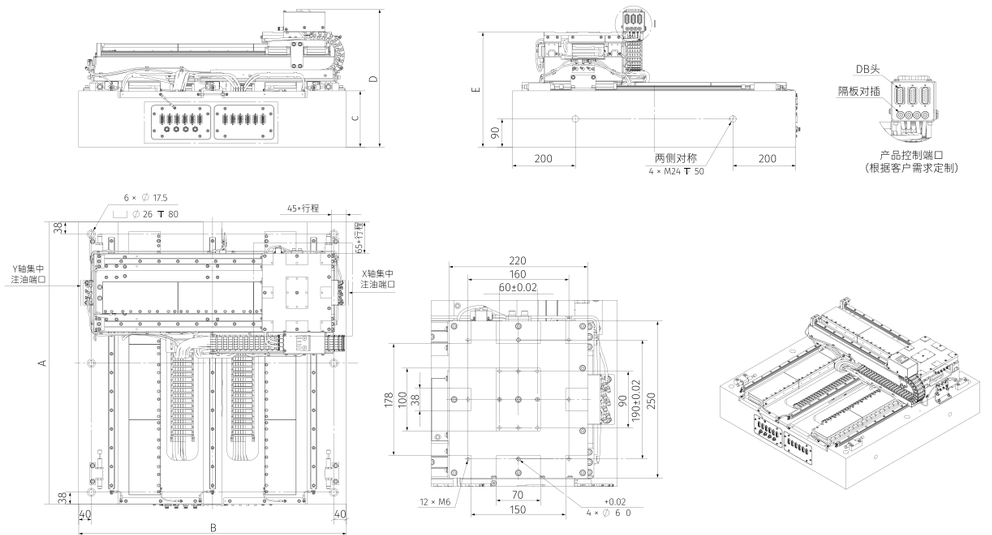


Stage Model	A	B	C	D	E
ZWDM-DJXY-500-500	900 mm	850 mm	180 mm	440 mm	367 mm
ZWDM-DJXY-800-800	1200 mm	1150 mm	200 mm	460 mm	387 mm

Wafer Cutting Stage

Parameter Table

Stage Model	ZWDM-X400-Y600	
Axial	X Axis	Y Axis
Effective Travel	400 mm	600 mm
Repeatability	≤ ±1 μm	
Positioning Accuracy	≤ ±1μm	
Horizontal Straightness	≤ ±1μm（1.5μm/中间 200Travel内）	≤ ±1μm
Vertical Straightness	≤ ±1.5μm	≤ ±1.5μm
XY Perpendicularity	≤ 5μm	
Maximum Speed	1000mm/s	300mm/s
Maximum Acceleration	2 G	0.5 G
Maximum Load	25kg	
Cable Length	Outside Drag Chain 3m	
Motor Parameters		
Cooling Method	Natural	Water Cooling
Continuous Force	722.6 N	1159.3 N
Peak Force	1610.5 N	
Force Constant ±10%	153.0 N/Arms	
Back EMF Constant ±10%	124.9 Vpeak/(m/s)	
Motor Constant @25℃	58.2 N/Sqrt（W）	
Phase-to-Phase Resistance@25℃	4.6 Ω	
Phase-to-Phase Inductance±30%	116.0 mH	
Continuous Current	4.8 Arms	8.2 Arms
Peak Current	14.4 Arms	
Continuous Thermal Power	204.9 W	597.9 W
Thermal Dissipation Constant	2.8 W/℃	8.0 W/℃

Product Introduction

Product Features

- Precision linear guideways
- Ultra-high straightness
- Open structure with low lateral height
- Improved geometric performance and higher load capacity

Structural Features

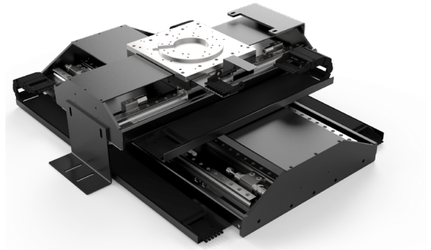
- Integrated XY direct-drive platform design
- Horizontal Straightness < ±1um
- Equipped with auxiliary features such as centralized lubrication and metal grounding

Customization

Custom configurations are available based on customer requirements, including travel range, load capacity, and special structural designs.

Wafer Cutting Stage

ZWDM-X400-Y600 Specifications



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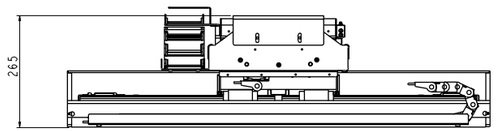
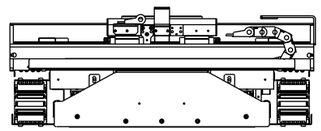
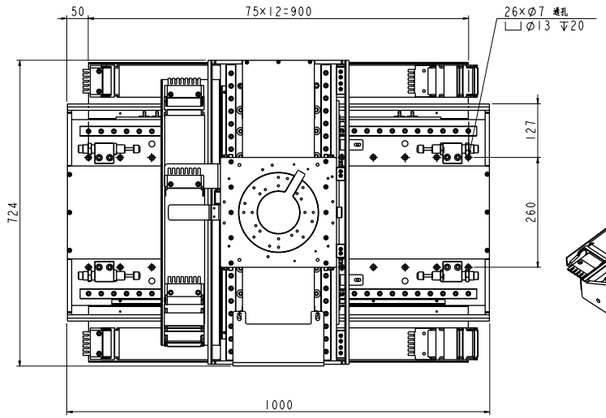
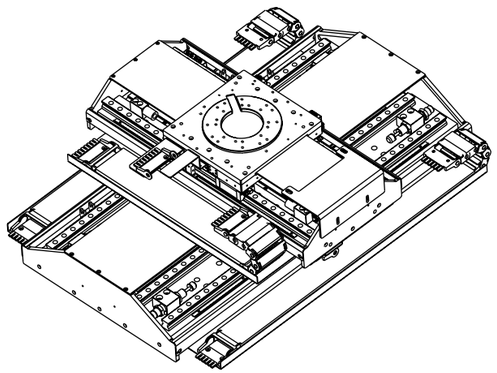








Applications

Suitable for various semiconductor processes such as wafer dicing and wafer inspection

Air-floating gantry marble stage

Parameter Table

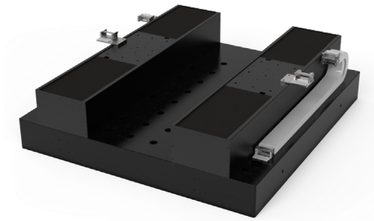
Stage Model	ZWDM-2Y800-SQ
Axial	Y Axis （Lower Axis）
Effective Travel	810 mm （Effective Travel770 mm）
Maximum Load	110Kg
Maximum Speed	0.5m/s
Maximum Acceleration	0.5g
Horizontal Straightness	±2.5 um
Vertical Straightness	±2.5 um
Repeatability	±2 μm
Positioning Accuracy	±5μm
Yaw	±3 arc sec
Pitch	±3arc sec
Motion Profile	300 mm Travel in 0.5 s, Dwell 1.5 s, Cyclic Motion
Motor Model	ZWU-30B-4
Winding Code	S
Peak Force	1152 N
Continuous Force	204 N
Peak Power	1728 W
Continuous Power	306 W
Attraction Force	0 N
Peak Current	14.3 Arms
Continuous Current	2.54 Arms
Force Constant	80.6 N/Arms
Back EMF Constant	6 Vpeak/m•s^-1
Resistance	13.2 Ohms
Inductance	4.28 mH
Time Constant	0.33 ms
Motor Constant	15.69 N/√W
Max. Coil Temperature	130 ° C
Max. Bus Voltage	310 VDC
Coil Length	241 mm
Coil Mass	0.8 kg
Track Mass	17.5 kg/m
Magnetic Pitch	30 mm

Applications

Suitable for the photovoltaic coating industry

Air-floating gantry marble stage

ZWDM-2Y800-SQ Specifications



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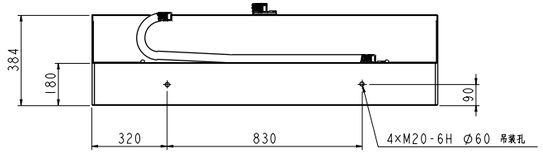
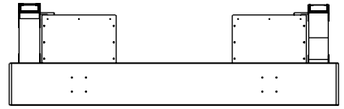
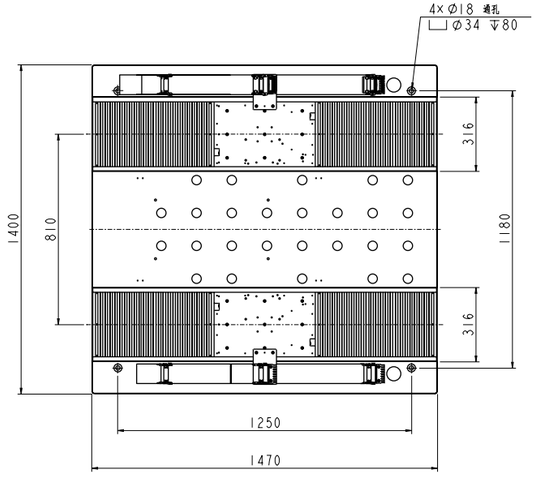
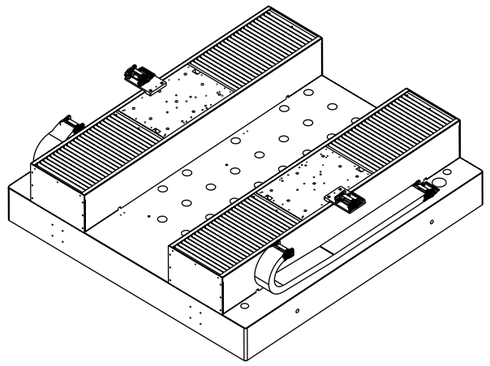








Product Introduction

Product Features

- Uses air-bearing guides
- Ultra-high straightness
- Speed fluctuation as low as 0.1% @ 40 mm/s

Structural Features

- Dual-drive layout compatible with dual-side Z-axis stages
- Compact stage structure with strong driving capability

Customization

Custom configurations are available based on customer requirements, including travel range, load capacity, and special structural designs.

fixation-girder stage

Model Numbering Rules

ZWDM - DLXY - 400 - 400 - YT - SZ

Stage Model	Effective Travel	Table Options	Feedback Options
	unit：mm	Factory Standard Mounting Holes YT	Resolution Digital Input SZ
	400 600	Customer-Customized Table DT	Analog Input MN
	800		

Applications

Applications: OLED Cutting / PCB Drilling / CNC Machining / Biotechnology / IC Packaging / Wafer Inspection …

Product Introduction

Product Features

- High-precision positioning stage
- High performance at low cost
- Modular design
- Flexible configuration
- Quick-connect design for fast installation and commissioning
- Travel length can be freely selected according to requirements (customizable)

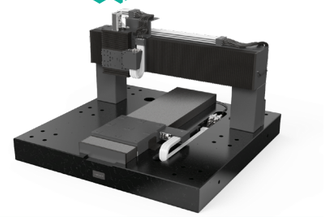
Structural Features

- Controlled by ironless linear motor
- High load, high precision, long travel, and high rigidity
- Precision stage with dust protection
- Equipped with centralized lubrication and metal grounding functions

Customization

Longer travel ranges available upon customization

直为精驱 麦米电气



Ixation-girder Stage

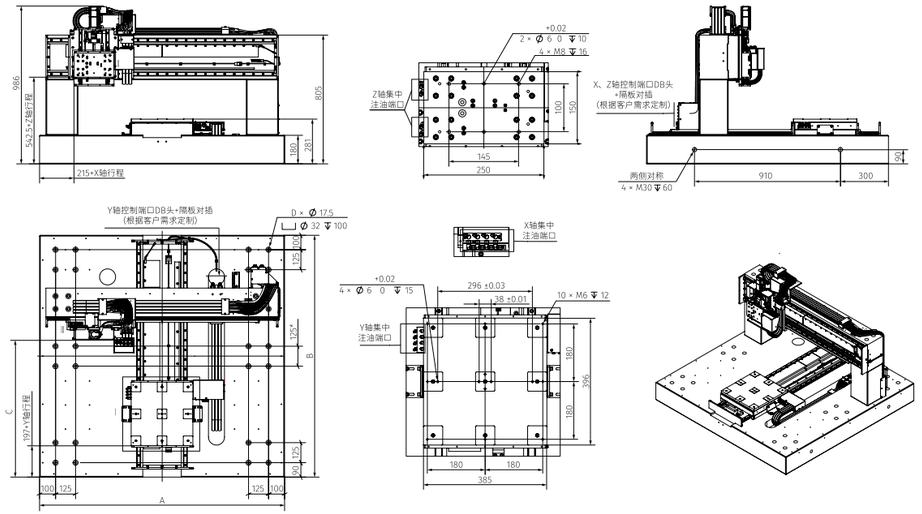
ZWDM-DLXY Series Specifications

Parameter Table

Stage Model		ZWDM-DLXY-400-400-100	ZWDM-DLXY-600-600-100	ZWDM-DLXY-800-800-100
Effective Travel		400*400*100	600*600*100	800*800*100
Positioning Accuracy		±2 um	±2 um	±2 um
Repeatability		±1 um	±1 um	±1 um
Pitch		15 arc sec	20 arc sec	25 arc sec
Yaw		15 arc sec	20 arc sec	25 arc sec
Roll		15 arc sec	20 arc sec	25 arc sec
Straightness		±3 um	±5 um	±8 um
Resolution		100 nm		
Maximum Acceleration		1 g		
Maximum Speed		1 m/s		
Y Axis Maximum Load		60 KG		
Z Axis Maximum Load		12 KG		
Continuous Force	X Axis	221 N		
	Y Axis	393 N		
Peak Force	X Axis	1248 N		
	Y Axis	2830 N		
Minimum Step Size		500 nm		
Stage Mass		1400 kg	1500 kg	1700 kg
Stage Material		Marble		
MTBF		20000 Hours		

Note: The above test data were obtained in a laboratory environment. The measurement point was located 25 mm above the center point, and the results were derived using a linear amplifier.

Dimensio



Stage Model	A	B	C	D
ZWDM-DLXY-400-400-100	1280 mm	1100 mm	605 mm	16 mm
ZWDM-DLXY-600-600-100	1280 mm	1360 mm	705 mm	16 mm
ZWDM-DLXY-800-800-100	1480 mm	1560 mm	905 mm	24 mm

Lithium battery welding stage

Parameter Table

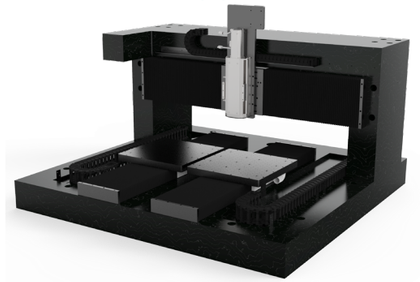
Stage Model		ZWM-X860-Y700-RB0.1
Mechanical Parameters		
Maximum Load	kg	X=Z+15 Y=35
Effective Travel	mm	X=860 Y=700
Resolution	um	0.1
Positioning Accuracy	um	±2
Repeatability	um	±1
Parallelism	um	±4
Vertical Straightness	um	±4
Motion Parameters		
Speed	m/s	0.8
Maximum Acceleration	mm/s²	10
Dwell Time	s	0.5
Accessories		
Driver	PCS	3
Encoder	PCS	3
Photoelectric Switch	PCS	9
Guideway	PCS	6
Motor Parameters		
Motor Model		ZW3-H55-2
Continuous Force	N	276
Peak Force	N	742
Continuous Current	Arms	3.23
Peak Current	Arms	8.68
Base Material		Marble

Applications

This stage is mainly used for lithium battery welding and laser cutting applications

Lithium battery welding stage

ZWM-X860-Y700-RB0.1 Specifications



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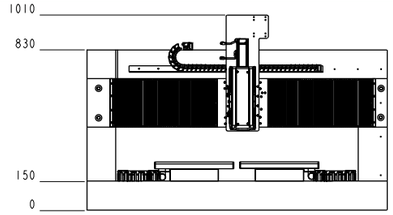
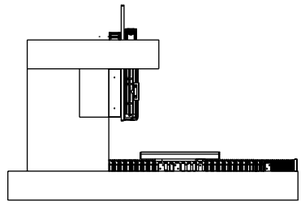
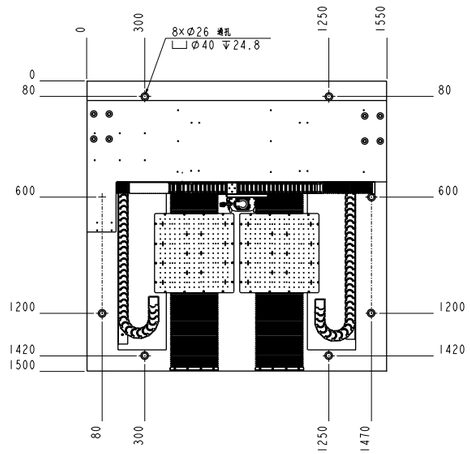
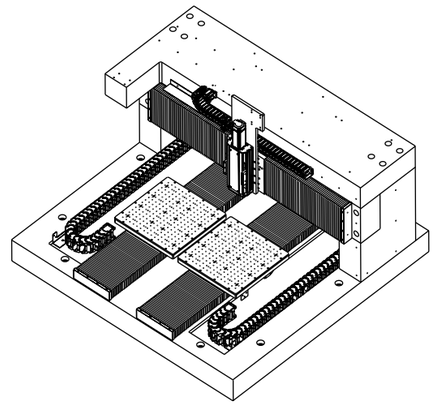








Product Introduction

Product Features

- Fixed-beam gantry structure
- Marble base
- Equipped with high-precision linear guideways
- High dynamic performance with high precision
- Multiple X and Y axes can be added
- Travel, dimensions, and cable management are customizable

Structural Features

- The X-dual-Y fixed gantry stage is a linear motor stage
- Gantry structure made of marble, offering high rigidity and excellent stability
- Multiple X axes can be added on the marble base
- The number of Y-axis travels on the gantry frame is customizable to improve operational efficiency

Customization

Custom configurations—including travel, load capacity, and special structures—can be evaluated according to customer requirements.

Gantry dual-drive precision dispensing stage

Parameter Table

Stage Model	ZWDM-X200-TY400-DN	
Motor Parameters		
Axial	X Axis	Y1Y2 Axis
Motor Model	ZWU-30A-4-S-5M-HALL	ZWU-30A-4-S-5M-HALL
Continuous Force	104 N	104 N
Peak Force	576 N	576 N
Continuous Current	2.54 Arms	2.54 Arms
Peak Current	14.3 Arms	14.3 Arms
Mechanical Parameters		
Axial	X Axis	Y1Y2 Axis
Effective Travel	200 mm	400 mm
Maximum Load	35 kg	35 kg+ X Axis
Speed	200mm/s	200 mm/s
Repeatability	±0.5 um	±0.5 um
Positioning Accuracy	±1 um	±1um

Applications

The dual-drive gantry stage is a high-precision dual-drive gantry system, offering superior performance for high-precision and high-efficiency industrial applications such as pick-and-place machines, scanning machining, automated assembly, and visual inspection.

Product Introduction

Product Features

- AC brushless dual-drive gantry structure
- High repeatability
- Maximum speed over 2 m/s, acceleration over 2G
- High dynamic performance with high precision
- Z-axis and rotary axis configurable according to customer requirements
- Travel, dimensions, and cabling customizable based on customer requirements

Structural Features

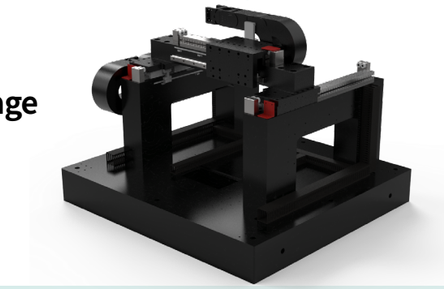
- Equipped with ironless linear motors and non-contact linear encoders
- Full-travel repeatability < ±0.5 μm
- Positioning accuracy < ±1 μm
- Offers excellent dynamic performance and positioning accuracy
- Gantry axis features a dual direct-drive structure with strong driving capability
- Crossbeam axis uses a single linear motor structure to achieve high-speed scanning

Customization

Custom configurations—including travel, load capacity, and special structures—can be evaluated according to customer requirements.

Gantry dual-drive precision dispensing stage

ZWDM-X200-TY400-DN Specifications



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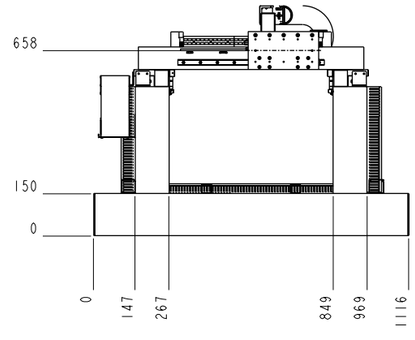
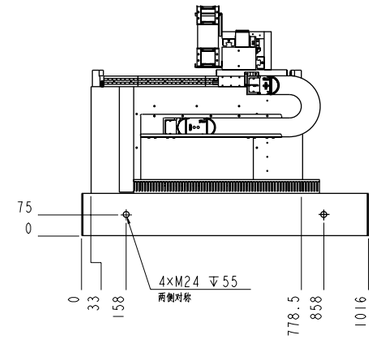
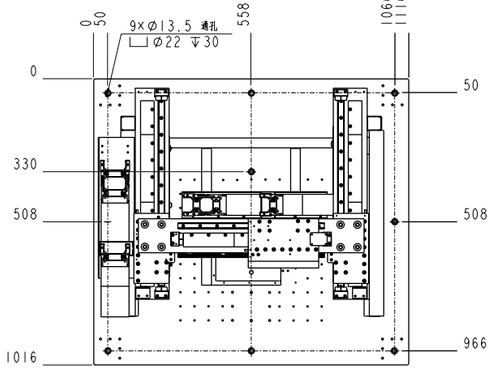
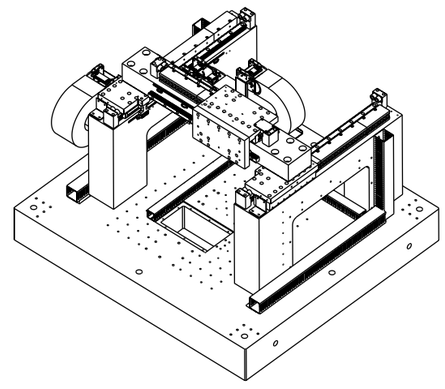








Laser film removal stage

Parameter Table

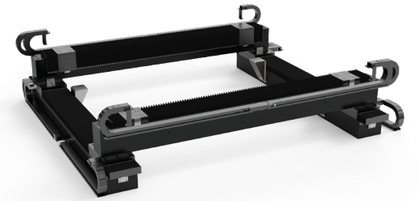
Stage Model	ZWDM-X2830-TY3104	
Axial	X Axis	Y Axis
Effective Travel	2830 mm	3104 mm
Maximum Load	Y Load + Self-weight	80Kg
Maximum Speed	1m/s	1m/s
Maximum Acceleration	0.5g	0.5g
Repeatability	±5μm	±5μm
Positioning Accuracy	±12μm	±12μm
Motion Profile	0.5 s move 300 mm, dwell 1.5 s, cyclic motion	0.5 s move 300 mm, dwell 1.5 s, cyclic motion
Motor Model	ZW8-H150-6	ZW3-H75-2
Winding Code	T	S
Peak Force	7605 N	1044 N
Continuous Force	3582 N	374 N
Peak Power	22815 W	1566 W
Continuous Power	10746 W	566 W
Attraction Force	11700 N	1746 N
Peak Current	43.56 Arms	10.3 Arms
Continuous Current	14.52 Arms	3.28 Arms
Force Constant	246.69 N/Arms	113.68 N/Arms
Back EMF Constant	101.57 Vpeak/m•s^-1	100.36 Vpeak/m•s^-1
Resistance	2.22 Ohms	8.58 Ohms
Inductance	66 mH	47.2 mH
Time Constant	29.73 ms	5.5 ms
Motor Constant	135.19 N/√W	32.12 N/√W
Max. Coil Temperature	130 ° C	130 ° C
Max. Bus Voltage	600 VDC	310 VDC
Coil Length	532 mm	193 mm
Coil Mass	30.3 kg	2.8 kg
Track Mass	15.1 kg/m	6.6 kg/m
Magnetic Pitch	42 mm	25 mm

Applications

Suitable for extra-large area laser film removal stages

Laser film removal stage

ZWDM-X2830-TY3104 Specifications



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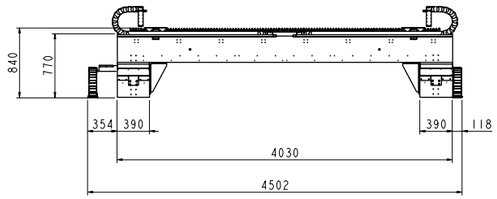
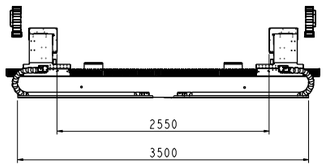
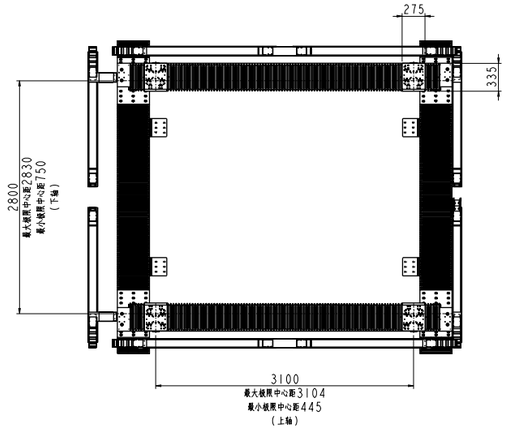
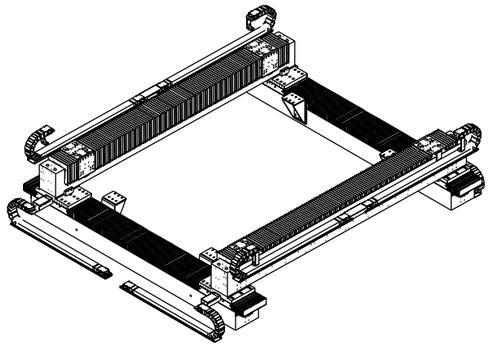








Product Introduction

Product Features

- High-thrust linear motor
- Solves deformation of ultra-long >3 m crossbeam span
- Maximum speed up to 1 m/s

Structural Features

- Extra-long crossbeam dual-drive stage
- Rectangular layout for a larger working area
- Moving gantry structure for enhanced stability

Customization

Custom configurations—including travel, load capacity, and special structures—can be evaluated according to customer requirement

Hollow precision bonding positioning stage

Parameter Table

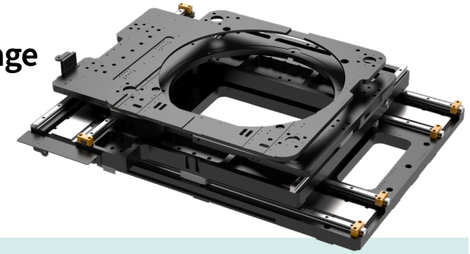
Stage Model		ZWM-X340-Y420-RB0.5
Mechanical Parameters		
Maximum Load	kg	30
Effective Travel	mm	X.340 Y.420
Resolution	um	0.5
Positioning Accuracy	um	10
Repeatability	um	±3
Horizontal Straightness	um	10
Vertical Straightness	um	10
Mounting Method		Horizontal
Motion Parameters		
Speed	m/s	1
Maximum Acceleration	mm/s²	20
Dwell Time	s	0.09
Accessories		
Encoder	PCS	2
Photoelectric Switch	PCS	2
Guideway	PCS	7
Drag Chain	PCS	2
Motor Parameters		
Motor Model		ZW3-H55-3
Continuous Force	N	413
Peak Force	N	1113
Continuous Current	Arms	3.23
Peak Current	Arms	8.68
Base Material		Al
Base Flatness		20 um

Applications

This stage is a precision motion stage with a hollow structure. Its large through-hole and high dynamic performance meet the requirements of wafer die bonding and inspection applications, and it is also suitable for other high-end manufacturing processes such as CCD imaging and LED packaging inspection.

Hollow precision bonding positioning stage

ZWM-X340-Y420-RB0.5 Specifications



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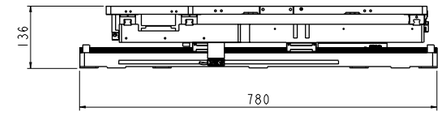
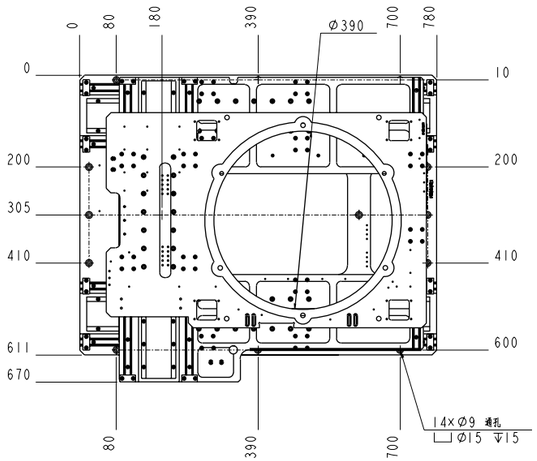
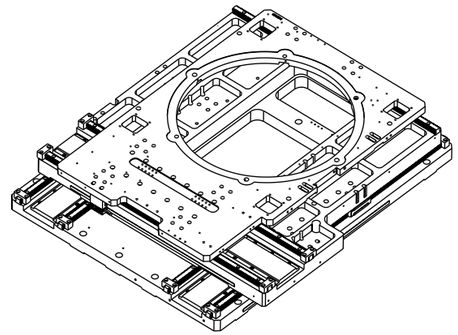






Product Introduction

Product Features

- Stacked layout
- Compact hollow structure
- Equipped with high-precision linear guideways
- High dynamic performance and high precision
- Y-axis driven by dual linear motors
- Travel, dimensions, and cable configurations can be customized

Structural Features

- Stacked compact hollow exterior structure
- Lowered working point with the encoder feedback position close to the work surface, which is critical for wafer inspection; Y-axis driven by dual linear motors
- Provides high thrust, 1 m/s speed, and precise positioning

Customization

Custom configurations—including travel, load capacity, and special structures—can be evaluated according to customer requirement

XYZ AOI inspection stage

Parameter Table

Stage Model	ZWDM-X500-Y400-Z10-ZKHY		
Axial	X Axis	Y Axis	Z Axis
Motor Model	ZWU-30B-3	ZWU-30B-3 (Dual mover)	-
Continuous Force	153 N	153 N	23 N
Peak Force	884 N	884 N	170 N
Continuous Current	2.54 Arms	2.54 Arms	-
Peak Current	8.84 Arms	8.84 Arms	-
Mechanical Parameters			
Effective Travel	500 mm	400 mm	10 mm
Maximum Load	Z Axis +5.5 kg	Z Axis + X Axis +5.5 kg	5.5 kg
Maximum Speed	600 mm/s	600 mm/s	100 mm/s
Speed	200 mm/s	100 mm/s	100 mm/s
Vertical Straightness	±2 um	±2 um	±2 um
Maximum Acceleration	0.6 g	0.6 g	0.3 g
Dwell Time	-	-	-
Repeatability	±1 um	±1 um	±1 um
Positioning Accuracy	±2 um	±2 um	±2 um
Horizontal Straightness	±2 um	±2 um	±2 um
PITCH	±5 arc sec	±5 arc sec	-
YAW	±5 arc sec	±5 arc sec	-
Orthogonality	±5 arc sec		-
Z-axis Response Frequency	3um@ 230nm@50Hz		
Mounting Method	Horizontal installation		

Applications

A high-precision three-axis motion stage featuring a stacked three-axis architecture, suitable for laser processing, optical manufacturing, inspection, and other industrial applications that demand exceptional precision and efficiency.

Product Introduction

Product Features

- Three-axis direct-drive structural design
- Z-axis direct-drive vertical-lift design
- Z-axis equipped with an internal pneumatic counterbalance, with a maximum load of 10 kg
- XY uses high-precision linear guides, and the Z-axis uses anti-creep cross-roller guides
- XY features a granite base, with travel specifications customizable according to customer requirements

Customization

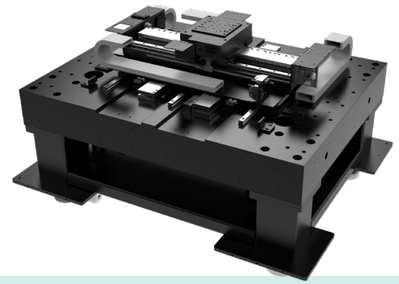
Custom configurations—including travel, load capacity, and special structures—can be evaluated according to customer requirement

Structural Features

- Uses an XYZ stacked structure with ironless linear motors for direct-drive control, providing zero cogging and smooth low-speed motion (minimal speed ripple)
- Equipped with non-contact high-precision linear encoders, delivering excellent dynamic performance, positioning accuracy, and repeatability, with smooth motion and stable force characteristics
- XY stacked structure with a granite base for high stability; Z-axis uses a direct-drive vertical-lift design to move the load directly, with a built-in balance cylinder and 10 mm travel

XYZ AOI inspection stage

ZWDM-X500-Y400-Z10-ZKHY Specifications



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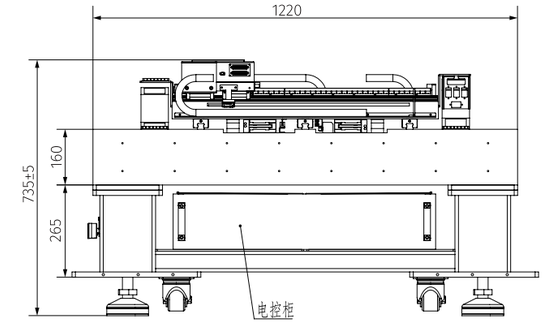
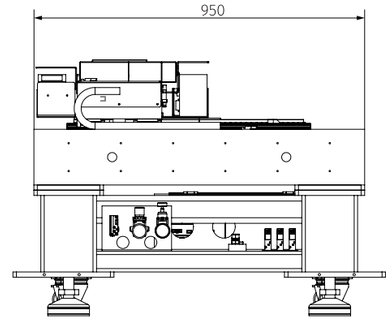
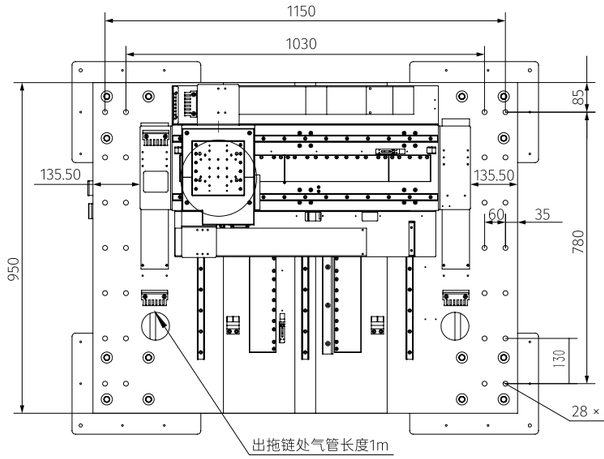
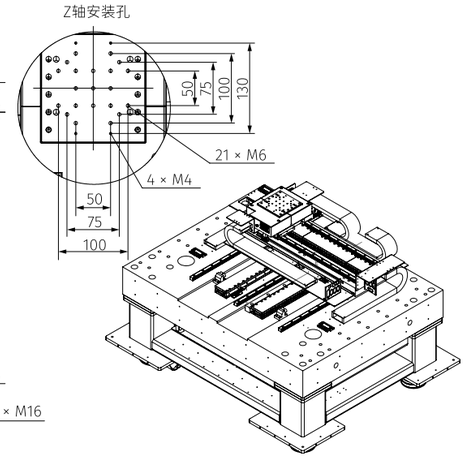








XYR AOI inspection stage

参数表

Stage Model		ZWDM-X160-Y160-R30-AOIMJ	
Axial	X Axis	Y Axis (Dual motors)	R Axis
Motor Model	ZWU-60A-1	ZWU-60A-2	ZWD170
Continuous Force	170N	326.8 N	5 N.m
Peak Force	850N	1649 N	14 N.m
Continuous Current	4.1 Arms	4.0 Arms	1.4 Arms
Peak Current	20.7 Arms	20.0 Arms	4.2 Arms
Mechanical Parameters			
Axial	X Axis	Y Axis	R Axis
Effective Travel	160	160	±15°
Maximum Load	DD+5kg	X+DD+5kg	5kg
Speed	1 m/s	1 m/s	120 rpm
Maximum Acceleration	1G	1G	-
Dwell Time	-	-	-
Repeatability	±1 um	±1 um	±1.5 arc sec
Positioning Accuracy	±2 um	±2 um	±3 arc sec
Straightness	±2 um	±2 um	-
Flatness	±2 um	±2 um	-
End-face Runout	-	-	±2 um
Overall Flatness		10 um	
Mounting Method		Horizontal	

Applications

Mainly used in automotive electronics, display inspection (digital tubes, LCD panels, LED displays), pharmaceuticals, food processing, precision parts machining, dimensional measurement, and product positioning.
It enables the product to move to the target position for measurement, counting, inspection, and intelligent evaluation.

Product Introduction

Product Features

- High-precision, high-stability direct-drive structure design
- Non-contact high-precision linear encoder
- High-precision linear guideways used on XY axes
- Travel range, dimensions, and cable routing can be customized per customer requirements
- Equipped with a non-contact high-precision linear encoder, delivering excellent dynamic performance, positioning accuracy, and repeatability

Structural Features

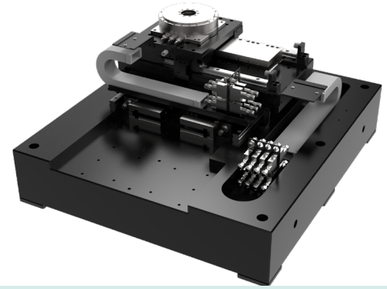
- Uses an XYR stacked structure with ironless linear motors for direct-drive control; no cogging effect, enabling smooth low-speed motion with minimal speed fluctuation
- DD axis end-face runout < 2 μm
- Overall stage flatness after assembly < 10 μm
- Full-travel repeatability < ±1 μm
- Positioning accuracy < ±2 μm

Customization

Custom configurations—including travel, load capacity, and special structures—can be evaluated according to customer requirement

XYR AOI inspection stage

ZWDM-X160-Y160-R30-AOIMJ Specifications



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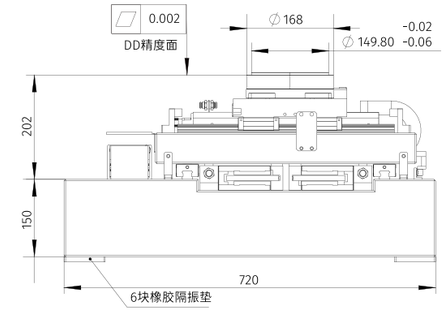

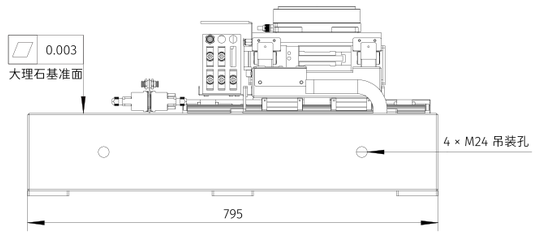

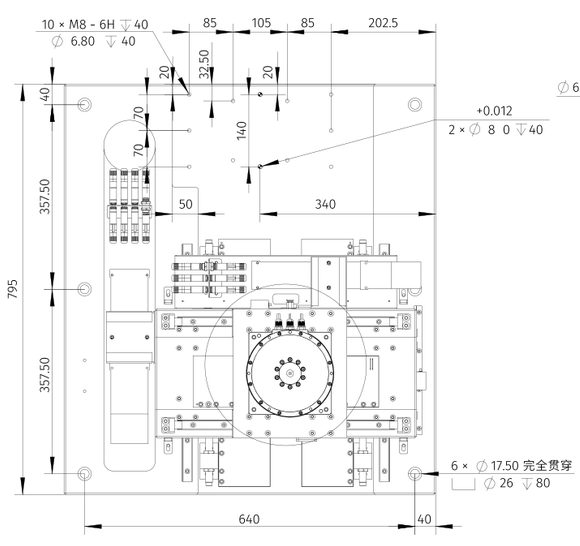

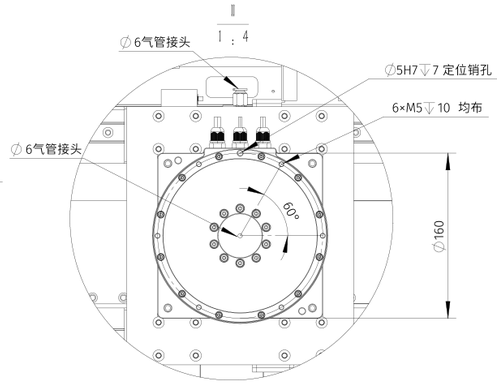

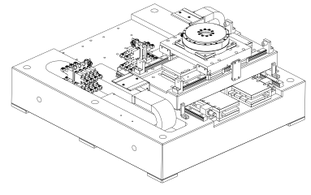

PCB board LDI exposure stage

参数表

Stage Model	ZWSW-K1195-X900-2Y1350-Z20			
Axial	X Axis	Y1/Y2 Axis	Z1/Z2 Axis	K Axis
Effective Travel	900 mm	1350 mm	20 mm	1195 mm
Maximum Load	120 KG	≥ 55 KG + Z Axis Load	≥ 55KG	3 KG
EncoderResolution	0.1 um	0.1 um	20 um	0.1 um
Min. Step	0.5 um	0.5 um		0.5 um
Positioning Accuracy	±2.5 um	±2.5 um	±15 um	±2.5 um
Repeatability	±1.5 um	±1.5 um	±8 um	±1.5 um
Horizontal Straightness	±8 um	±5 um	±5 um	±10 um
Vertical Straightness	±12 um	±12 um	±5 um	±10 um
yaw	5 arc sec	5 arc sec	20 arc sec	±15 um
pitch	10 arc sec	10 arc sec	Max Z-axis Error at 300mm from X/Y center during 20 mm Z travel：±30 μm	-
roll	10 arc sec	-	-	±10 um
yaw	±2.5 arc sec/50mm	-	-	-
Pitch	±5 arc sec/50mm	-	-	-
Y1 Y2 、 X Perpendicularity	4.1 arc sec (Converted to dial gauge runout 10 μm)	-	-	-
Y1、 Y2 Parallelism	-	±3 μm	-	-
Maximum Speed	500	500 mm/s	15 mm/s	500 mm/s
Maximum Acceleration	5000 mm/s²			
Settling time (s) for the position threshold of ±0.5 μm	<0.1/50mm <0.1/700mm at 500mm/s, 0.5G acceleration, 50000 jerk, under loaded conditions	<0.1S/1mm <0.1S/500mm	-	<0.1/50mm <0.1/700mm at 500mm/s, 0.5G acceleration, 50000 jerk, under loaded conditions
Speed Stability	-	<1% (50 ~500mm/s)	-	-
K Axis Y AxisPerpendicularity	-	-	-	4.1 arc sec (Converted to dial gauge runout 10 μm)

Applications

Main applications include semiconductor production lines, microelectronics manufacturing, LCD displays, PCB production, and other industrial projects requiring high precision and high efficiency.

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PCB board LDI exposure stage

ZWSW-K1195-X900-2Y1350-Z20 Specifications

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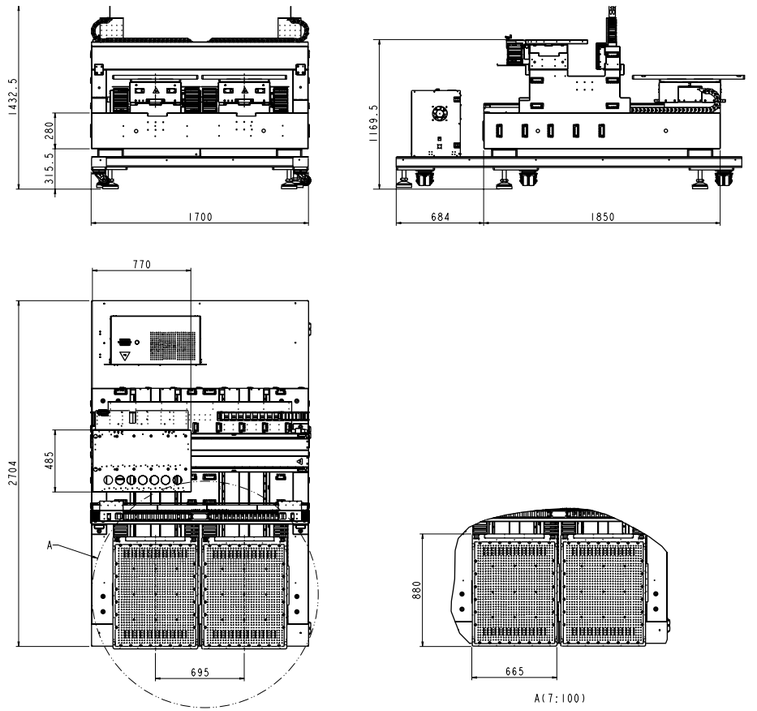


Product Introduction

Product Features

- High-precision, highly stable direct-drive structure design
- Non-contact high-precision linear encoder
- Equipped with high-precision linear guideways
- Travel, dimensions, and cables can be customized according to customer requirements

Customization

Custom configurations—including travel, load capacity, and special structures—can be evaluated according to customer requirement

Structural Features

- 7-axis LDI exposure stage, all driven by coreless linear motors with direct-drive control, no cogging effect, smooth operation at low speeds (minimal speed fluctuation)
- Equipped with non-contact high-precision linear encoders, providing excellent dynamic performance, positioning accuracy, and repeatability
- The 7-axis LDI exposure stage uses high-precision encoder position feedback
- Full travel repeatability less than ±1.5 μm
- Positioning accuracy less than ±2.5 μm
- Typically used in conjunction with high-precision Z-axis stages

IC carrier board LDI exposure air-floating stage

参数表

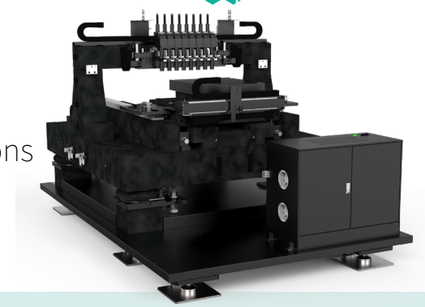
Stage Model	ZWDM-2K600-Z10-X160-Y1350-LDI						
Axial	X Axis	Y Axis	Z-axis on XY stage	Z-axis mounted on the crossbeam	Z-axis on K-axis gantry	K1/K2 axis	Small X-axis
Effective Travel	160mm	1350 mm	10 mm	10 mm	20 mm	800 mm	700 mm
Configuration	-	-	-	Dual motor with dual encoder	-	-	-
Maximum Load	≥ Z Axis +10Kg	≥ 10 Kg	≥ 10 KG	≥ 30 KG	≥ 3KG	3(side-mounted) +Small Z Axis	3 (side-mounted)
EncoderResolution	0.05um	0.05 um	-	0.1 um	20 um	0.1 um	0.1 um
Minimum Step	0.5 um	0.25 um	20 um	0.5 um	20 um	0.5um	0.5um
Positioning Accuracy	1 um	1 um	6 um	5 um	6 um	4 um	4 um
Bidirectional Repeatability	0.5 um	0.5 um	4 um	3 um	4 um	2 um	2um
Maximum Speed	300 mm/s	300 mm/s	15 mm/s	-	-	8 um	8um
Maximum Acceleration	0.2 mm/s^2	2000 mm/s2	-	-	-	8 um	8um
Speed Stability	-	<0.5% (30~300mm/s)	-	-	-	-	-
Controller PSO	-	Resolution 0.05 um	-	-	-	-	-
Pulse Output Frequency	-	≥ 2.4MHz	-	-	-	-	-
Bidirectional Straightness	-	-	-	3 um	-	-	-
Horizontal Straightness	-	-	8 um	8 um	8 um	-	-
Vertical Straightness	-	-	8 um	8 um	8 um	-	-
yaw	-	-	8 arc sec	2.5 arc sec	10 arc sec	6 arc sec	6 arc sec
pitch	-	-	8 arc sec	8 arc sec	10 arc sec	8 arc sec	8 arc sec
roll	-	-	-	-	-	8 arc sec	8 arc sec
Maximum Speed	-	-	15 mm/s	15 mm/s	15 mm/s	500 mm/s	500 mm/s
Maximum Acceleration	-	-	-	-	-	4000 mm/s^2	4000 mm/s^2
Orthogonality (K1/K2 vs Y)	-	-	-	-	-	3 arc sec	-
Settling time (s) for the position threshold of ±0.5 μm	<0.1S/1 mm <0.1S/150 mm	<0.1S/1 mm <0.1S/500 mm	-	-	-	<0.1/50mm <0.1/700mm at 500mm/s, 0.5G acceleration, 50000 jerk, under loaded conditions	
Orthogonality (Small X vs Y)	-	-	-	-	-	-	3 arcsec
Orthogonality (vs K-axis)	-	-	-	-	20 arc sec	-	-

Applications

Main applications: Semiconductor production lines, microelectronics manufacturing, LCD displays, PCB manufacturing, and other industrial projects requiring high precision and high efficiency.

IC carrier board LDI exposure air-floating stage

ZWDM-2K600-Z10-X160-Y1350-LDI Specifications



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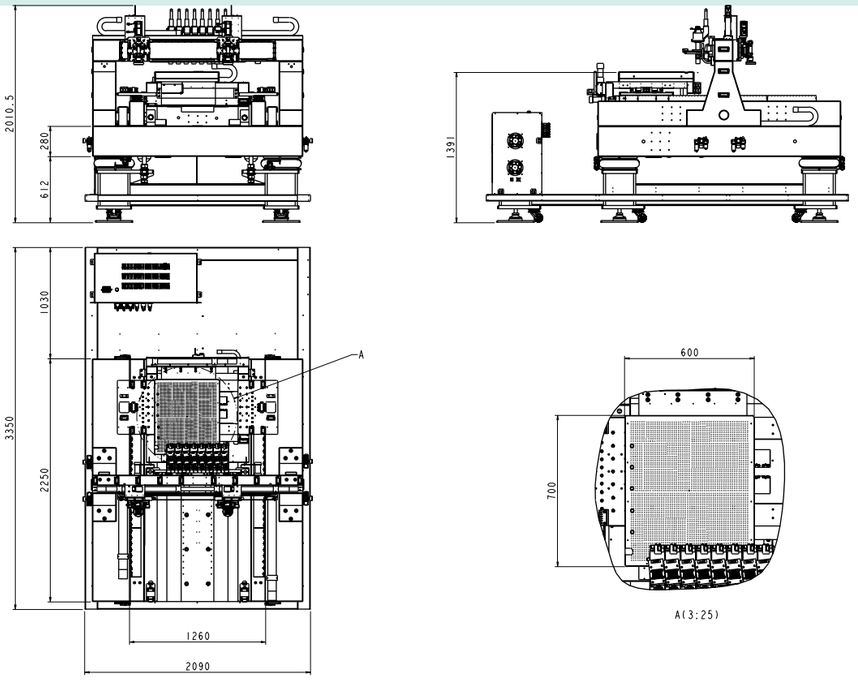

Product Introduction

Product Features

- High dynamic performance
- XY uses fully-enclosed air-floating guideways for excellent stability
- Equipped with high-precision zero-expansion grating feedback, featuring low thermal expansion and minimal impact from temperature drift
- Z-axis uses magnetic spring for load balancing, customizable
- Travel, dimensions, and cables can be customized according to customer requirements

Customization

Custom configurations—including travel, load capacity, and special structures—can be evaluated according to customer requirem

Structural Features

- Multi-axis air-floating stage with air-floating XY stacked structure
- Beam-mounted K-axis and Z-axis (mechanical guideways)
- Coreless linear motor direct-drive control, no cogging effect
- Smooth operation at low speed (minimal speed fluctuation)
- Equipped with non-contact high-precision grating, offering excellent dynamic performance, positioning accuracy, and repeatability
- Multi-axis air-floating stage uses high-precision grating position feedback
- Full-travel repeatability < 0.5 μm
- PPositioning accuracy < 1 μm