

2023

WODTOP

Electric Cylinder



<http://www.wodtop.com>



Company Profile

Tianyi Intelligent mainly engages in

FA factory automation parts one-stop procurement service platform; research and development, design, production, sales, and service of assembly and testing jigs, fixtures, carriers, and automation equipment (lines).

Corporate Culture:

Mission: Through technological innovation, make factories and human life better.

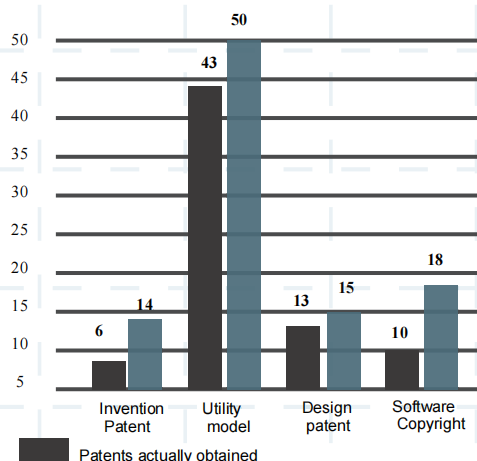
Vision: To become the leading brand of a one-stop procurement service platform for services and help enterprises take off.

FA factory automation parts; to provide intelligent equipment contract manufacturing

Values: People-oriented, consider the benefits to others; start with the end in mind,
take responsibility and strive; adapt to changes, innovate with technology.

Research and Patents for Competitive Advantage

Our technology: industry-leading research and development, process development, and technical service capabilities.



01

Full-time R&D personnel:170

Bachelor's degree or above: 35 people

Practical R&D Type: 135 people

Ability to resolve technical issues on-site within 2-6 hours

02

R&D system

Two types of platforms: standard parts and non-standard automation equipment

A system: three-dimensional R&D framework

Three directions: parts, product process, non-standard equipment

03

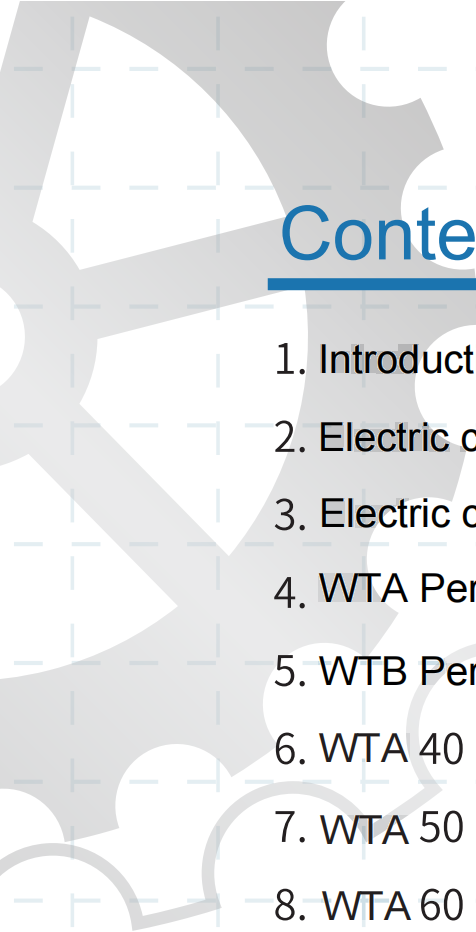
Patent Protection System

Invention Patents: 6

Utility model patents: 43

Design patents: 13; software copyrights: 10.





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Product introduction



The principle of the servo electric cylinder

Servo electric cylinders are modular products that integrate servo motors with ball screws. They convert the rotational motion of the servo motor into linear motion while transforming the servo motor's optimal advantages—precise speed control, precise rotation control, and precise torque control—into precise speed control, precise position control, and precise thrust control. They represent a revolutionary product series for achieving high-precision linear motion. They are widely used in material handling, high-precision mechanical manufacturing fields, such as aerospace testing equipment, six-degree-of-freedom simulators, robots, injection molding machines, mold control, valve control, precision machine tools, and automobile manufacturing equipment.



High-Performance Products: Features of Servo Electric Cylinders

The servo electric cylinder can operate reliably for long periods in harsh environments, achieving high-intensity, high-speed, and high-precision motion. It ensures smooth movement with low noise, and its unique anti-rotation feature guarantees high-precision position control and enhanced safety for the equipment.

The Optimal Alternatives to Hydraulic and Pneumatic Cylinders

Servo electric cylinders can completely replace hydraulic and pneumatic cylinders, offering advantages such as a more environmentally friendly, energy-efficient, and cleaner operation. They can easily connect with control systems such as PLCs, enabling high-precision motion control.

Harsh environment

The protection level of the servo electric actuator can reach IP55 and IP66, allowing it to operate normally in harsh outdoor environments. Therefore, it can be widely applied in industries such as paper manufacturing, chemical processing, and welding.

WT Features of the Series Servo Electric Actuators

Thrust range: 10kg to 50 tons
Stroke can reach 3m, 100% duty cycle
Speed up to 1000mm/s
Imported precision-grade ground ball screw, high efficiency, non-locking.
Equipped with imported servo motors and stepper motors from various brands.
Linear scales can be added to achieve closed-loop servo control, with positional accuracy reaching 0.01mm and precise thrust control, the thrust accuracy is 5%, and with the addition of pressure sensors, the control accuracy is 1%.
It enables precise speed control, with high performance at both high and low speeds.
Stable thrust can be maintained at any position.
High dynamic response time, high acceleration.
High rigidity, impact resistance.
Ultra-long service life, simple operation and maintenance, low noise.

Low-Cost Maintenance

The servo electric cylinder requires only periodic lubrication in complex environments and has no easily worn parts that need maintenance or replacement, significantly reducing after-sales service costs compared to hydraulic systems.

Flexibility

It provides highly flexible installation configurations and a complete range of installation components: front flanges, rear flanges, side flanges, rear hinges, trunnion mounts, guide modules, and more; it can be installed directly with a servo motor either in a linear configuration or in parallel; various accessories can be added, such as limit switches, planetary gear reducers, and preloaded nuts; drive options include AC brake motors, DC motors, stepper motors, and servo motors from various manufacturers.



Overview of Servo Electric Cylinder Specifications (Quick Selection)

WTA Series of Aluminum-Based Electric Cylinders

Servo Electric Actuator Series	Cylinder block external dimensions (mm)	Bore Diameter	Recommended Maximum Thrust (kN)	Maximum Speed (mm/s)	Maximum travel (mm)	Lead of the Screw (mm)
WTA 40 (Aluminum-based)	Square: 44.5*44.5, Circle: Customizable	32	0.2	100	300	2
			0.7	200	600	4
WTA 50 (Aluminum-based)	Square: 53*53, Round: Customizable	40	1.5	250	600	5
			1.5	500	600	10
WTA 60 (Aluminum-based)	Square: 61*61, Circle: Customizable	50	5.0	250	800	5
			4.0	500	800	10
			0.5	800	800	16
WTA 75 (Aluminum-based)	Square: 75*75, Circular: Customizable	63	8.0	250	1050	5
			8.0	500	1050	10
			2.0	1000	1050	20
WTA 80 (Aluminum-based)	Square: 80*80, Circular: Customizable	65	10.0	250	1500	5
			15.0	500	1500	10
			2.0	1250	1500	25
WTA 94 (Aluminum-based)	Square: 94*94, Circular: Customizable	80	12.0	166	1800	5
			30.0	333	1800	10
			8.0	666	1800	20
WTA 110 (Aluminum-based)	Square: 110*110, Circular: Customizable	100	40.0	250	1800	10
			10.0	500	1800	20
WTA 132 (Aluminum-based)	Square: 132*132, Circle: Customizable	125	50.0	250	2000	10
			70.0	250	2000	20

WTB Series Steel-Based Electric Cylinder

Servo Electric Actuator Series	Cylinder Block Section Overall Dimensions (mm)	Bore Diameter	Recommended Maximum Thrust (kN)	Maximum Speed (mm/s)	Maximum Travel (mm)	Lead of the Screw (mm)
WTB 120 (Steel-based)	Circle:Φ120	100	40	250	1000	10
			20	250	1000	20
WTB 140 (Steel-based)	Circle:Φ140	120	50	250	1000	10
			70	250	1000	20
WTB 160 (Steel-based)	Circle:Φ168	140	60	125	1000	10
			120	125	1000	20
WTB 220 (Steel-based)	Circle:Φ220	200	200	50	1000	20

WTT Series of Heavy-Duty Electric Cylinders

Servo Electric Actuator Series	Cylinder Block Section Overall Dimensions (mm)	Bore Diameter	Recommended Maximum Thrust (kN)	Maximum Speed (mm/s)	Maximum Travel (mm)	Lead of the Screw (mm)
WTT 160 (Steel-based)	Circle:Φ180	140	150	40	1000	16
			200	50	1000	20
WTT 220 (Steel-based)	Circle:Φ235	200	250	40	1000	16
			300	50	1000	20
WTT 270 (Steel-based)	Circle:Φ275	220	400	40	1000	16
			500	50	1000	20

WTD Series of Electric Actuators

Model	Input Voltage(V _{DC})	Outer Diameter	Maximum Thrust (kN)	Maximum Speed (mm/s)	Maximum Travel (mm)	Lead of the Screw (mm)
WTDS 60B	12/24	60*60	2.6	40	1000	5
			4.5	24	1000	5
			6.8	18	1000	5
			10.0	11	1000	5
WTDC 60A	12/24/36	Φ60	1.1	54	1000	5
			2.25	30	1000	5
WTDC 60B	12/24/36	Φ60	2.25	61	1000	5
			4.5	30	1000	5
			6.8	15	1000	5
WTDN 60B	12/24	60*60	2.6	40	1000	5
			4.5	24	1000	5
			6.8	18	1000	5
			10.0	11	1000	5

Note: 1. For special operating conditions, such as extremely harsh environments, ultra-high frequencies, extended service life, or excessive loads, please consult our technical engineering staff. 2. Maximum thrust and maximum speed cannot be achieved simultaneously.

Electric Cylinder Model Description

Description of Servo Electric Cylinder Models

WTA	60	5	200	BC	FA	A	WT	4	AC		P2	Yi3	AR
Series	Guidance			Motor Installation Method	Electric Cylinder Installation Method		Motor Brand		Voltage	Brake		Speed Ratio	Others
—WTA: Aluminum-based —WTB: Steel-based —WTP: Precision —WTX: Planetary —WTT: Heavy-duty	None: Not marked D: Guide Rod G: Guide Rail			BC: Direct Connection BR: Fold BM: Vertical	F:Flangeless FA:Front Flange FB: Rear Flange LB: Side Flange CA: Single-piece tail hinge CB: Two-piece tail hinge TC: Side Trunnion		—WT:WODTOP —OM:Omron —HC:Inovance		AC38: High Voltage 380V AC22: High Voltage 220V DC12: Low Voltage 12V DC24: Low Voltage 24V DC36: Low Voltage 36V DC12: Low Voltage 12V	None: Blank Has: S		I: Decelerate A: Acceleration (Y: Our company provides gear reducers)	AR: Anti-Transmission PF: Preload PB: Dust-proof SU: Anti-corrosion LT: Low temperature HT: High temperature EP: Explosion-proof WP: Waterproof
	Model	Lead	Itinerary		Front-end Connection Method			Motor Power				Limit Switch	
	— 40 — 50 — 60 — 75 — 80 — 95 — 110 — 132 — 140 — 160 — 202 — 220	— 2 — 4 — 5 — 10 — 16 — 20 — 25 — 32 — 40 — 50	— 30 — 50 — 80 — 100 — 150 — 200 — 250 — 300 — 400 — 500 — 600 — 800 — 1000 — 1500 ... — 2300		— A: External Thread — B: Internal Thread — G: Fish-eye Joint — Q: Ball Joint — Y: Y-Type Joint — I: I-Type Joint — F: Flange — R: Pin Hole End			— 100W: 1 — 200W: 2 — 400W: 4 — 750W: 7 — 1.0KW: 10 — 1.5KW: 15 — 2.0KW: 20 — 3.0KW: 30 — 4.0KW: 40 — 5.0KW: 50 — 5.5KW: 55 — 7.5KW: 75 — 10KW: 100 — 15KW: 150 — 42:Stepping — 57:Stepping — 86:Stepping			— Not marked: None — P1: 1 PNP — P2: 2 PNP — P3: 3 PNP — N1: 1 NPN — N2: 2 NPN — N3: 3 NPN		

WTA Performance Specification Sheet

Performance Specification Table of Aluminum Servo Electric Cylinder:

Product Series	WTA40		WTA50		WTA60		WTA75		WTA80			WTA94			WTA110		WTA132	
Ball Screw Lead (mm)	2	4	5	10	5	10	5	10	5	10	20	5	10	20	10	20	10	20
Rated Thrust (kN)	0.2	0.7	1.5	1.5	5	4	8	8	10	15	2	12	30	8	40	10	50	70
Rated Speed (mm/s)	100	200	250	500	250	500	250	500	166	333	666	208	417	833	283	500	225	500
Rated Thrust Ball Screw Input Torque (Nm)	0.28	0.28	0.54	0.54	5.52	10.7	5.52	10.7	9.4	28.75	23.4	12.4	37.2	49.7	61.92	66.34	98.4	131.3
Ball Screw Basic Dynamic Load (kN)	4.7	4.7	7.6	7.5	13.8	11	13.8	11	15.5	29.5	13.8	19.2	48	19	53.9	39.5	60	71
Rotational Inertia of Parallel Cylinder (kg·m²·10⁴)	0.0215	0.0415	0.0435	0.0435	0.1	0.18	0.1	0.18	1.388	2.409	2.209	3.563	5.698	6.036	14.61	14.913	78.913	79.609
Rotational Inertia of Linear Cylinder Block (kg·m²·10²)	0.0145	0.0245	0.0265	0.0265	0.08	0.09	0.08	0.09	0.763	0.784	0.584	3.006	4.569	5.874	5.418	5.721	32.793	33.489
Rotational Inertia per 100 min (kg·m²·10⁴)	0.0095	0.0165	0.0185	0.0185	0.052	0.056	0.052	0.056	0.303	0.309	0.203	1.023	1.069	1.127	1.989	2.041	4.83	4.83
Maximum Stroke (mm)	400	400	600	600	800		1050		1500			1500			1800		1800	
Maximum Input Speed (rpm)	5000	5000	3000		3000		3000		2750			2500			1500		1500	
Cylinder Block Weight (without Motor) (kg)	0.9	1	1.43		2.32	2.32	3.2	3.2	6.42	6.54	6.32	9.9	10.9	9.9	15.63	15.63	65	65
Cylinder Block Folded Weight (without Motor) (kg)	1.1	1.2	1.9		2.51	2.51	2.51	2.51	6.65	7.54	6.35	10.6	11.6	10.6	16.93	16.93	71	71
Weight per 100mm Stroke (kg)	0.4	0.45	0.68		0.98	0.98	0.98	0.98	1.13	1.13	1.13	2	2	2	2.9	2.9	4.8	4.8
Internal Mechanical Mechanism	WTA/B: Ball Screw																	
	WTT:Heavy-Duty Screw																	
	WTX:Planetary Roller Screw																	
Maximum Idle Rotation Angle of Power Tube (°)	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1
Class P5 Steering Clearance (mm)	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02
Class P7 Steering Clearance (mm)	0.02-0.04	0.02-0.04	0.02-0.04	0.02-0.04	0.02-0.04	0.02-0.04	0.02-0.04	0.02-0.04	0.02-0.04	0.02-0.04	0.02-0.04	0.02-0.04	0.02-0.04	0.02-0.04	0.02-0.04	0.02-0.04	0.02-0.04	0.02-0.04
Class P7 300mm Lead Error (mm)	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Class P5 300mm Lead Error (mm)	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023
Class P7 Repeat Positioning Accuracy	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Class P5 Repeat Positioning Accuracy	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

WTB Performance Parameter Table

Performance Parameter Table of Steel Servo Electric Cylinder

Product Series	WTB120		WTB140		WTB160		WTB220	WTT160		WTT220		WTT 270	
Ball Screw Lead (mm)	10	20	10	20	10	20	20	16	20	16	20	16	20
Rated Thrust (kN)	40	20	50	70	60	100	200	150	200	250	300	400	500
Rated Speed (mm/s)	333	666	283	500	250	50	50	57	50	57	50	57	50
Rated Thrust Ball Screw Input Torque (Nm)	28.75	108.06	90.05	144.09	108.06	360.23	891.3	665	891.3	1114.1	1337	1559.8	1782.6
Ball Screw Basic Dynamic Load (kN)	50.3	39.3	60	57.4	67.1	114.4	224.2	368.00	388.00	426.00	456.00	550.00	557.00
Rotational Inertia of Parallel Cylinder ($\text{kg} \cdot \text{m}^2 \cdot 10^{-4}$)	14.61	14.913	78.913	79.609	195.56	205.24	250.69	195.56	205.24	220.36	250.69	420.36	450.69
Rotational Inertia of Linear Cylinder Block ($\text{kg} \cdot \text{m}^2 \cdot 10^{-4}$)	5.418	5.721	32.793	33.489	150.53	164.63	220.45	150.53	164.63	210.58	220.45	410.58	420.45
Rotational Inertia per 100 min ($\text{kg} \cdot \text{m}^2 \cdot 10^{-4}$)	1.989	2.041	12.21	12.21	21.74	21.85	45.32	31.74	31.74	45.32	45.32	65.32	65.25
Maximum Stroke (mm)	1000		1000		1000		1000	1000		1000		1000	
Maximum Input Speed (rpm)	2000		1500		750	150	150	214	150	214	150	214	150
Cylinder Block Weight (without Motor) (kg)	32.5	32.5	65.4	65.4	112	112	258	132	132	278	278	381	381
Cylinder Block Folded Weight (without Motor) (kg)	31.2	31.2	66.6	66.6	136	136	295	156	156	315	315	406	406
Weight per 100mm Stroke (kg)	4.3	4.3	7.5	7.5	10.2	10.2	18	10.2	10.2	18	18	26	26
Internal Mechanical Mechanism	WTB: Ball Screw												
	WTT: Heavy-Duty Screw												
	WTTX: Planetary Roller Screw												
Maximum Idle Rotation Angle of Power Tube (°)	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1
Class P5 Steering Clearance (mm)	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02
Class P7 Steering Clearance (mm)	0.02-0.04	0.02-0.04	0.02-0.04	0.02-0.04	0.02-0.04	0.02-0.04	0.02-0.04	0.02-0.04	0.02-0.04	0.02-0.04	0.02-0.04	0.02-0.04	0.02-0.04
Class P7 300mm Lead Error (mm)	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Class P5 300mm Lead Error (mm)	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023
Class P7 Repeat Positioning Accuracy	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Class P5 Repeat Positioning Accuracy	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

WTA 40 Series Servo Electric Cylinder

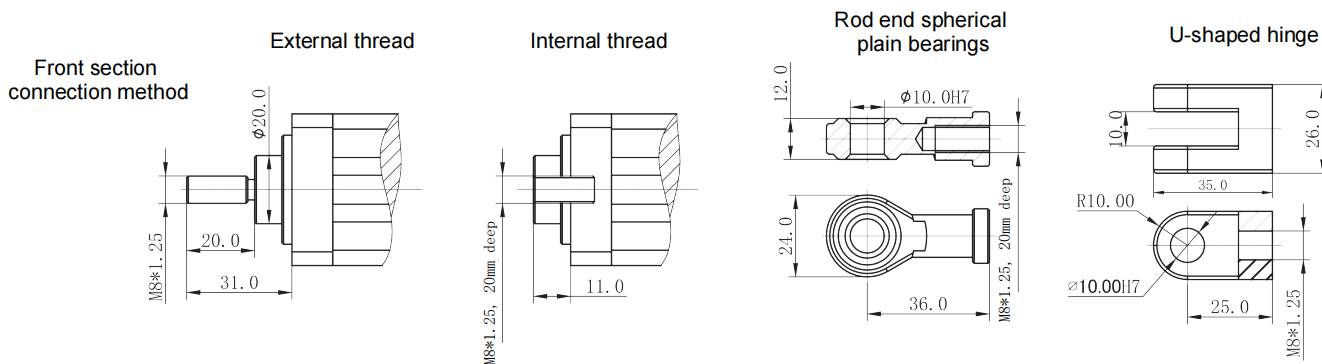


Selection Parameters Table for Servo Electric Cylinders

Specification	Series and Model	WTA40								
	Lead of Lead Screw (mm)	2			2.5			4		
	Electric Cylinder Thrust Range (kN)	0.01 ~ 0.4								
	Selectable Stroke of Electric Cylinder (mm)	20、30、50、80、100、150、200、250、300、350、400、450、500、600								
Indicator Input	Type	Direct Connection Type, Folding Type								
	Reduction Ratio (i)	1:1								
	Rated Dynamic Load of Lead Screw (kN)	2.22			2.21			16.49		
	Motor Rated Power (kW)	0.1	0.2	0.4	0.1	0.2	0.4	0.1	0.2	0.4
	Motor Rated Torque (N·m)	0.32	0.64	1.27	0.32	0.64	1.27	0.32	0.64	1.27
	Motor Rated Speed (rpm)	3000								
Output Indicator	Electric Cylinder Rated Thrust (kN)	0.9	1.8	3.5	0.7	1.4	2.8	0.4	0.9	1.8
	Electric Cylinder Rated Speed (mm/s)	100	100	100	125	125	125	200	200	200
	Recommended Maximum Load (kN)	0.2			0.3			0.7		

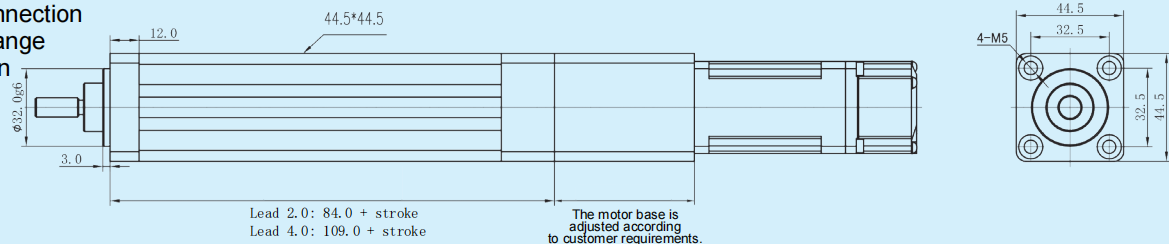
1、 If a reduction ratio needs to be added, the above output parameters shall be directly converted by the reduction ratio multiple.

2、 For the specific usage of the WTA40 Electric Cylinder, please consult with our company's engineers.

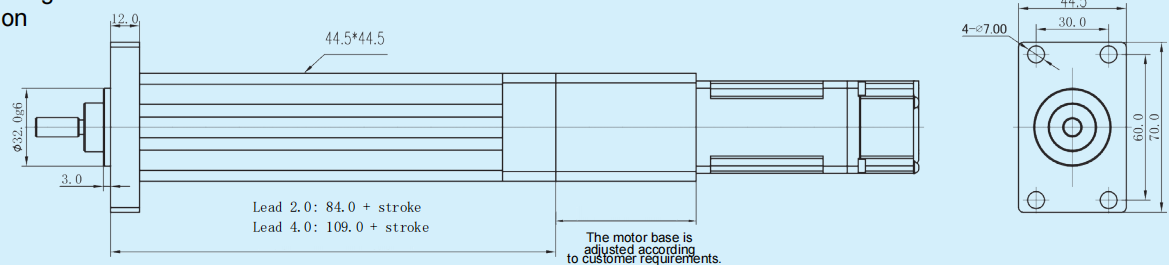


Electric Cylinder and Motor Mounting Method

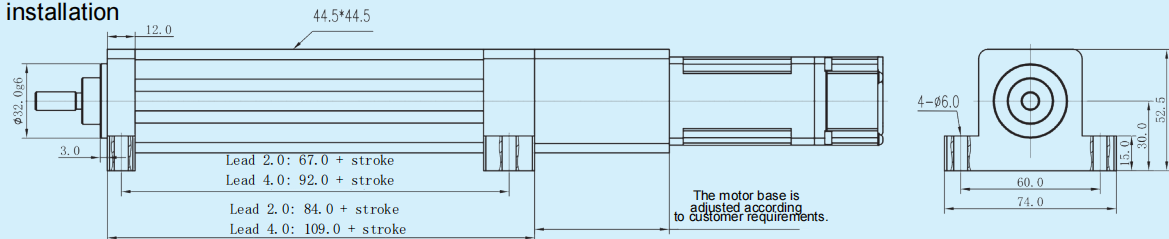
Direct connection
without flange
installation



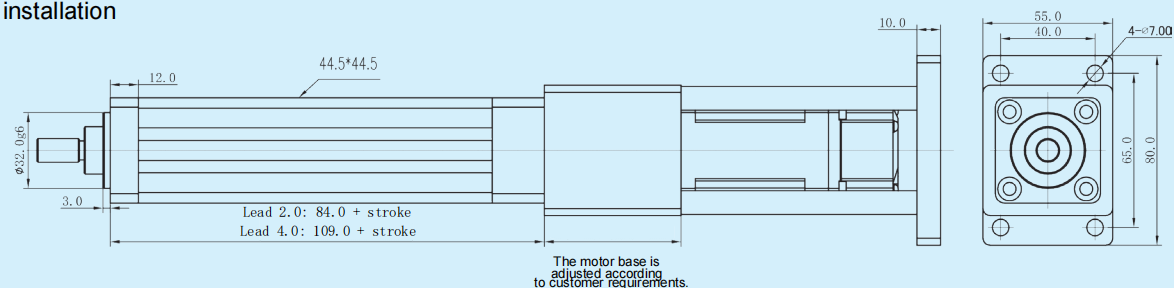
Direct connection to
the front flange
installation



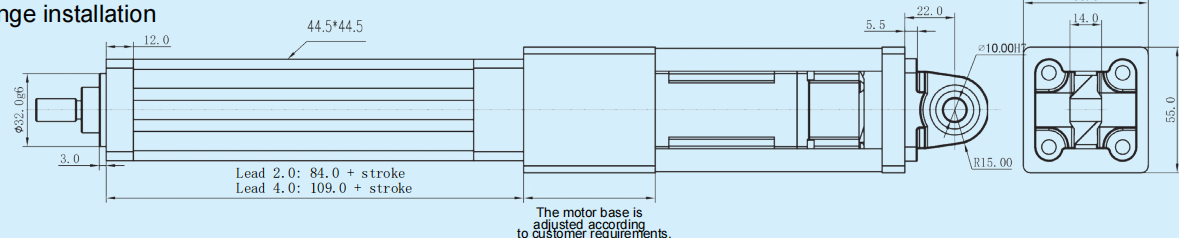
Direct connection side
flange installation



Direct connection
flange installation

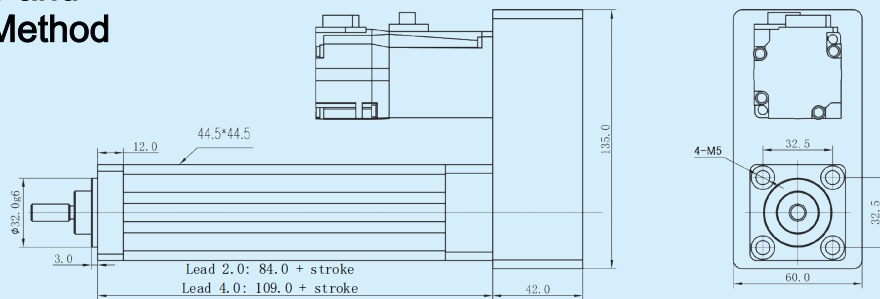


Direct connection
Tail hinge installation

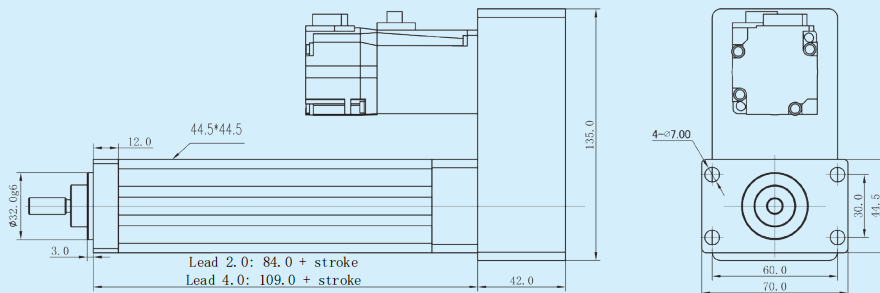


Electric Cylinder and Motor Mounting Method

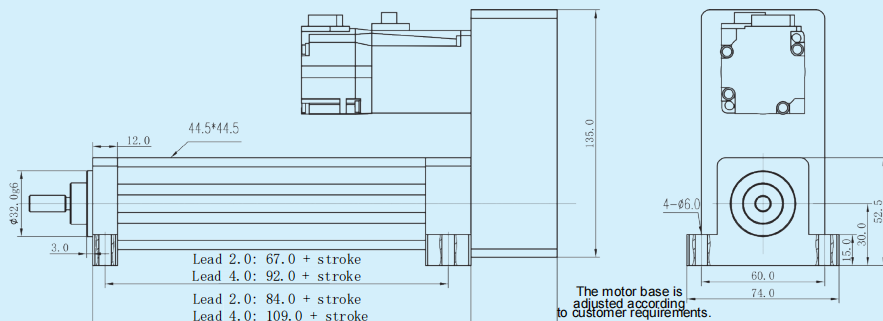
Flangedless folding installation



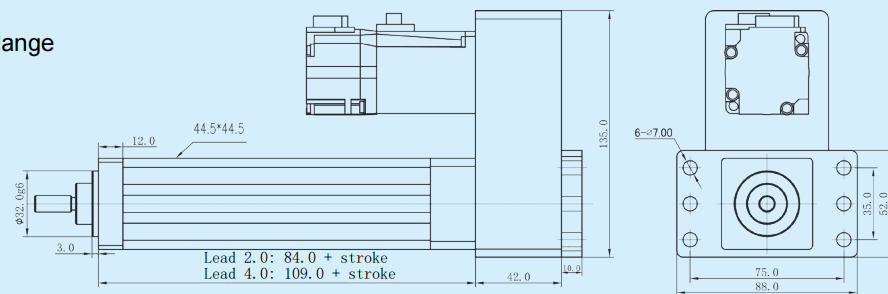
Installation of the flange before folding



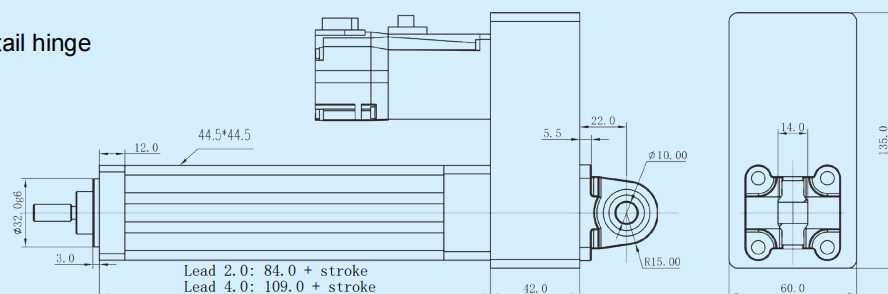
Installation of folding side flange



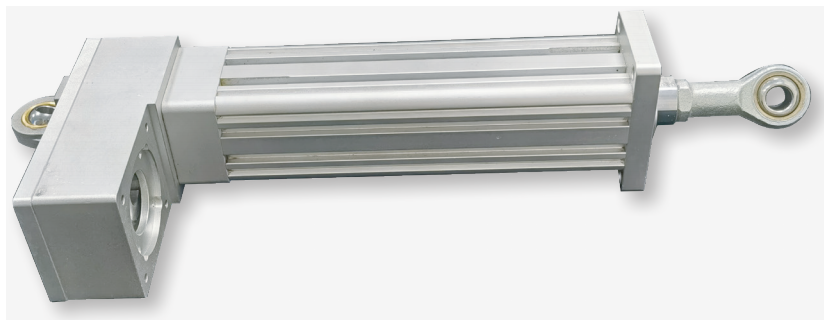
Installation of folded flange



Installation of folding tail hinge



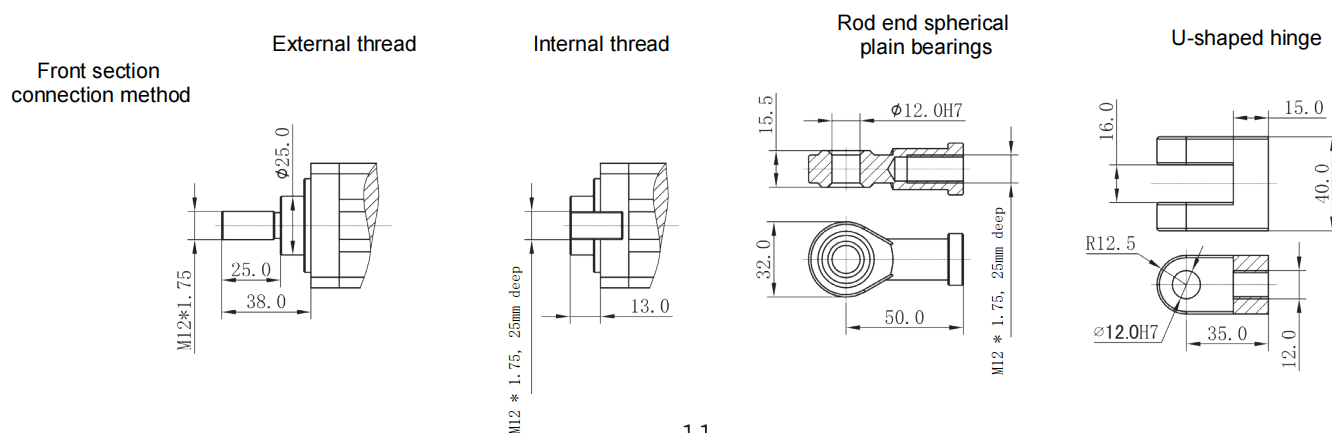
WTA 50 Series Servo Electric Cylinder



Selection Parameters Table for Servo Electric Cylinders

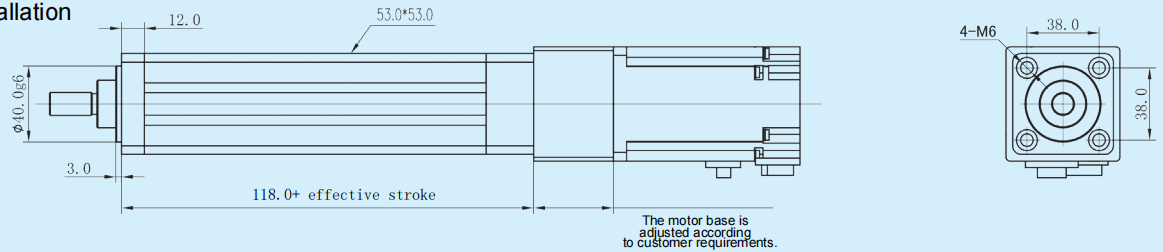
Series and Model					WTA 50					
Specification	Lead of Lead Screw (mm)	4			5			10		
	Electric Cylinder Thrust Range (kN)	0.01 ~ 1								
	Electric Cylinder Selectable Stroke (mm)	20、30、50、80、100、150、200、250、300、350、400、450、500、600								
Indicator Input	Type	Direct Connection Type, Folding Type								
	Reduction Ratio (i)	1:1								
	Basic Dynamic Axial Load Rating (kN)	9.02			6.61			6.42		
	Rated Power (kW)	0.1	0.2	0.4	0.1	0.2	0.4	0.1	0.2	0.4
	Motor Rated Torque (N·m)	0.32	0.64	1.27	0.32	0.64	1.27	0.32	0.64	1.27
	Motor Rated Speed (rpm)	3000								
Output Indicators	Electric Cylinder Rated Thrust (kN)	0.4	0.9	1.8	0.4	0.7	1.4	0.2	0.4	0.7
	Electric Cylinder Rated Speed (mm/s)	200	200	200	250	250	250	500	500	500
	Recommended Maximum Load (kN)	1.5			1.5			1.5		

1.If a reduction ratio is required, the above output parameters shall be directly converted by the reduction ratio multiple.
2.For the specific usage of the WTA50 Electric Cylinder, please consult with our company's engineers.

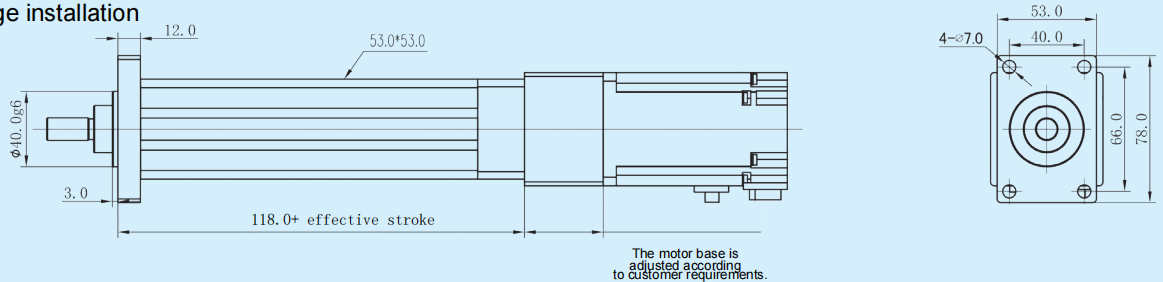


Electric Cylinder and Motor Mounting Method

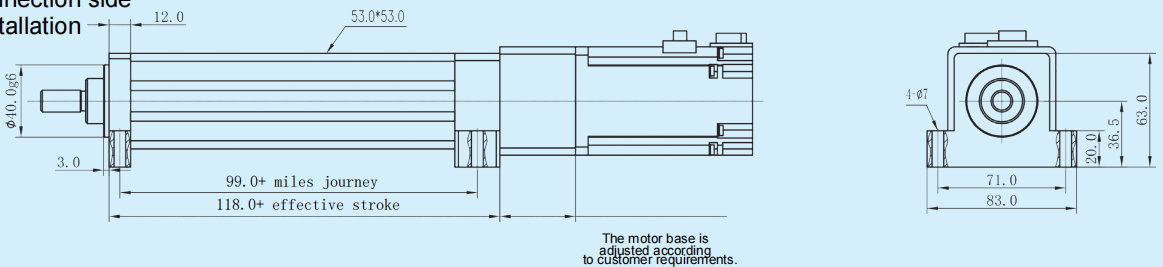
Direct connection without flange installation



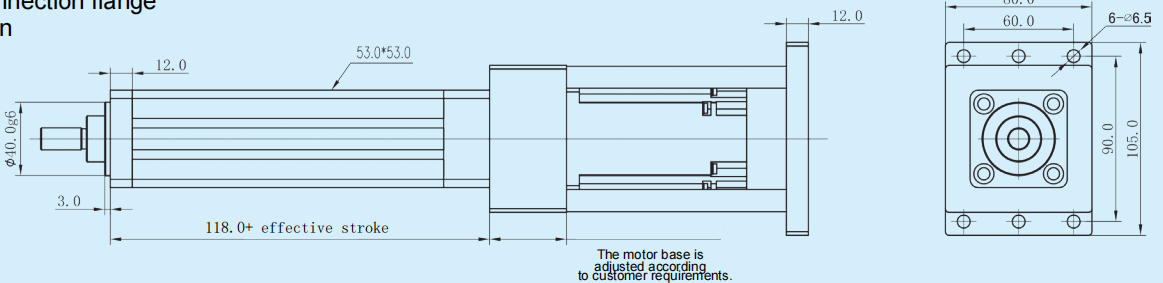
Direct connection to the front flange installation



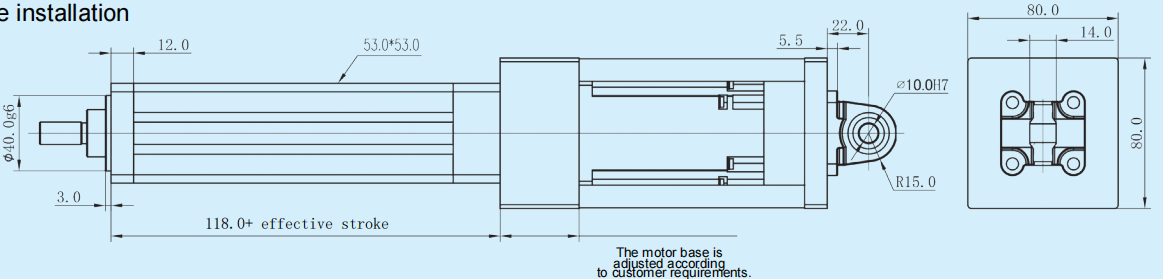
Direct connection side flange installation



Direct connection flange installation

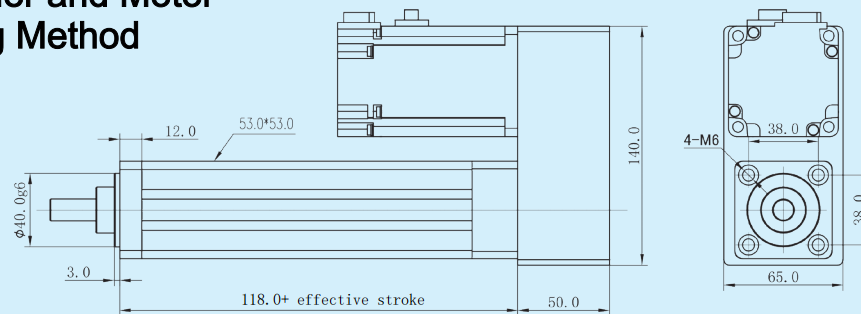


Direct connection Tail hinge installation

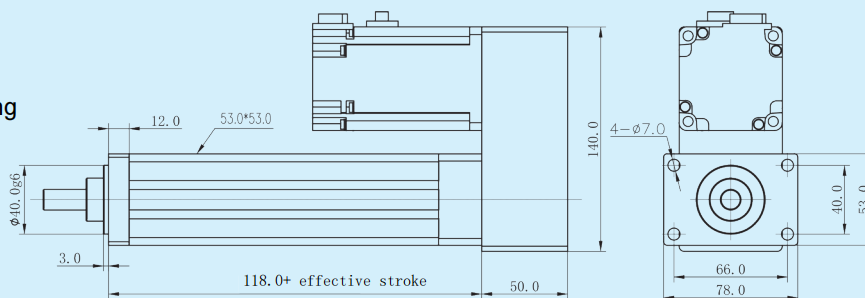


Electric Cylinder and Motor Mounting Method

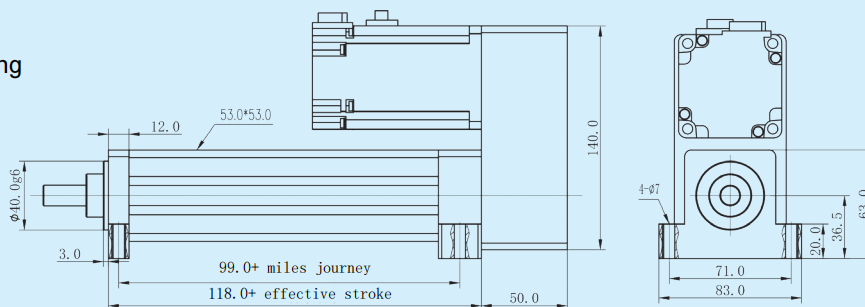
Flangedless folding
installation



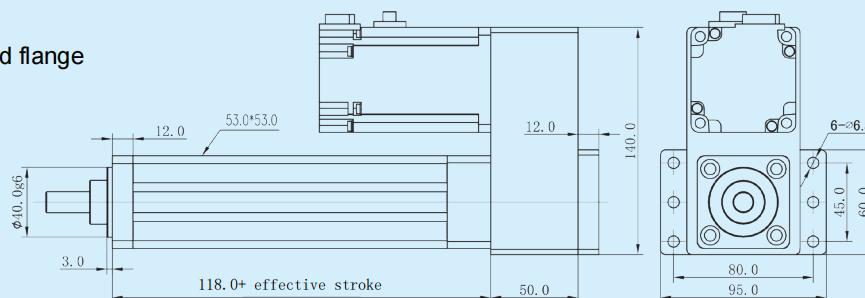
Installation of the
flange before folding



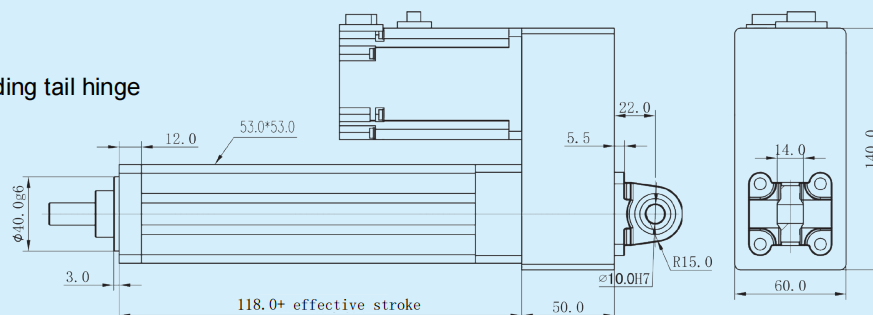
Installation of folding
side flange



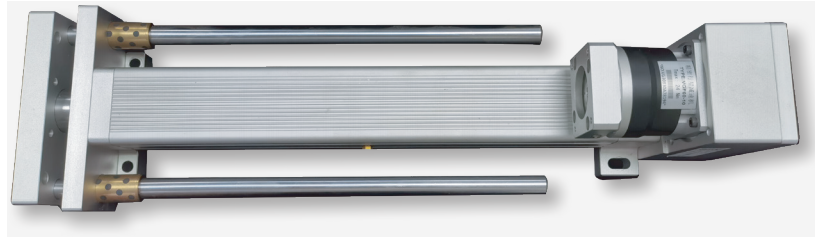
Installation of folded flange



Installation of folding tail hinge

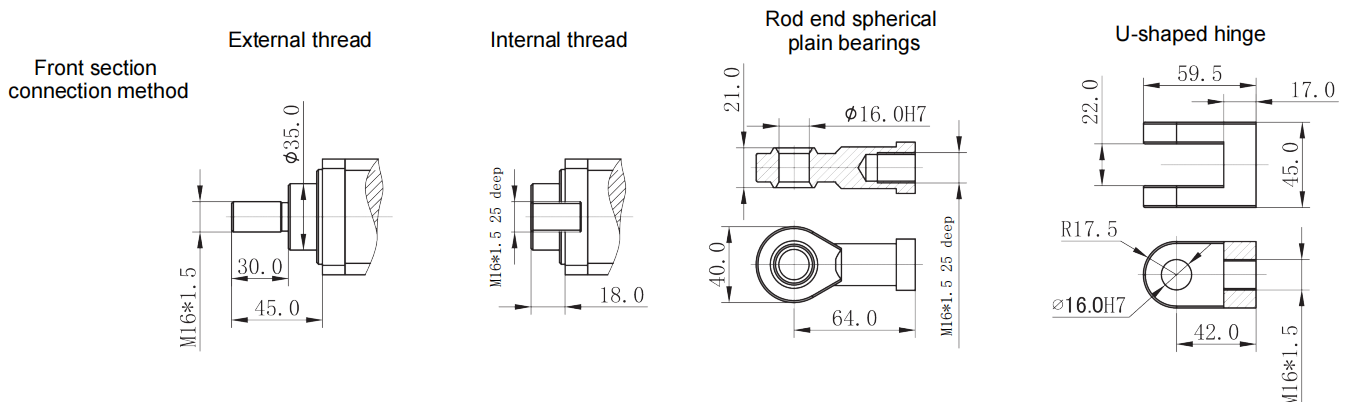


WTA 60 Series Servo Electric Cylinder



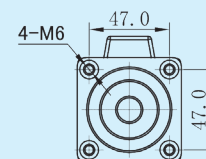
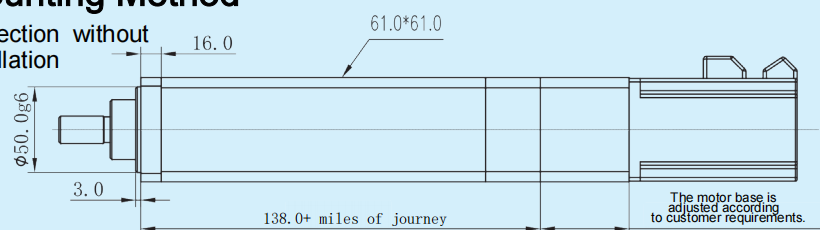
Selection Parameters Table for Servo Electric Cylinders

	Series and Model	WTA60											
Specification	Lead of Lead Screw (mm)	5				10				16			
	Electric Cylinder Thrust Range (kN)	0.01 ~ 4.49											
	Electric Cylinder Selectable Stroke (mm)	10、20、30、50、80、100、150、200、250、300、350、400、450、500、600、700、800											
Indicator Input	Type	Direct Connection Type, Folding Type											
	Reduction Ratio (i)	1:1											
	Basic Dynamic Axial Load Rating (kN)	13.8				11.03				10.73			
	Rated Power (kW)	0.2	0.4	0.75	1	0.2	0.4	0.75	1	0.2	0.4	0.75	1
	Motor Rated Torque (N·m)	0.64	1.27	2.39	3.18	0.64	1.27	2.39	2.18	0.64	1.27	2.39	3.18
	Motor Rated Speed (rpm)	3000											
Output Indicators	Electric Cylinder Rated Thrust (kN)	0.7	1.4	2.7	3.5	0.4	0.7	1.3	1.8	0.2	0.4	0.8	1.1
	Electric Cylinder Rated Speed (mm/s)	250	250	250	250	500	500	500	500	800	800	800	800
	Recommended Maximum Load (kN)	5				4				0.5			
1.If a reduction ratio is required, the above output parameters shall be directly converted by the reduction ratio multiple. 2.For the specific usage of the WTA60 Electric Cylinder, please consult with our company's engineers.													

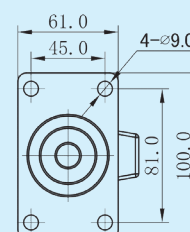
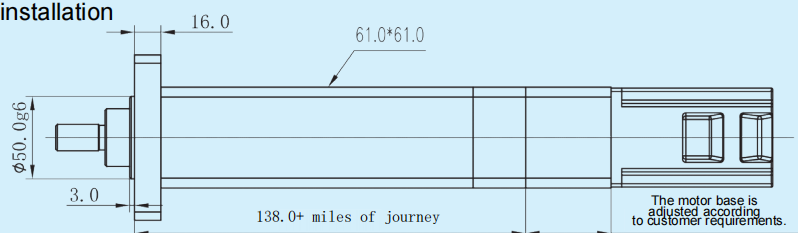


Electric Cylinder and Motor Mounting Method

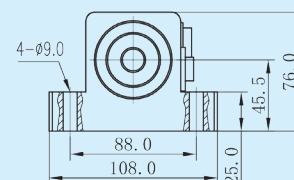
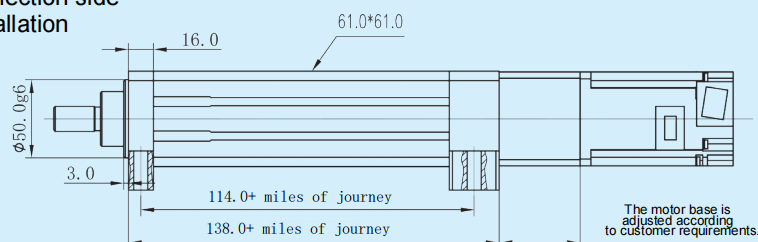
Direct connection without flange installation



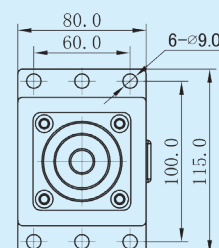
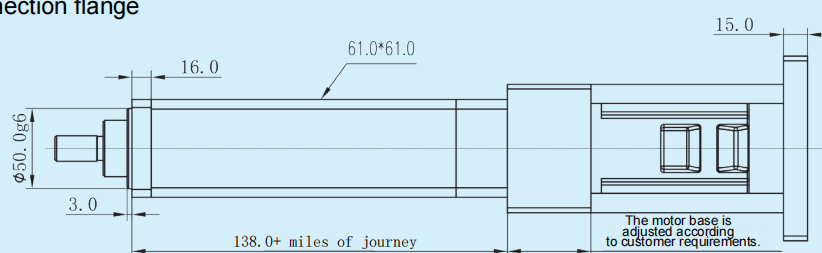
Direct connection to the front flange installation



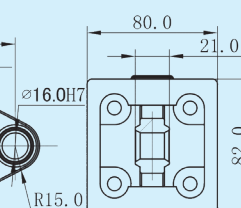
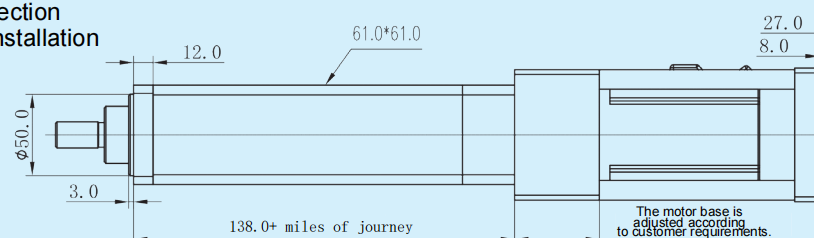
Direct connection side flange installation



Direct connection flange installation

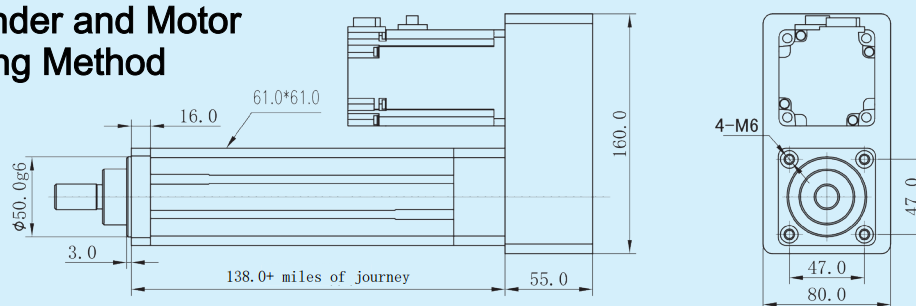


Direct connection Tail hinge installation

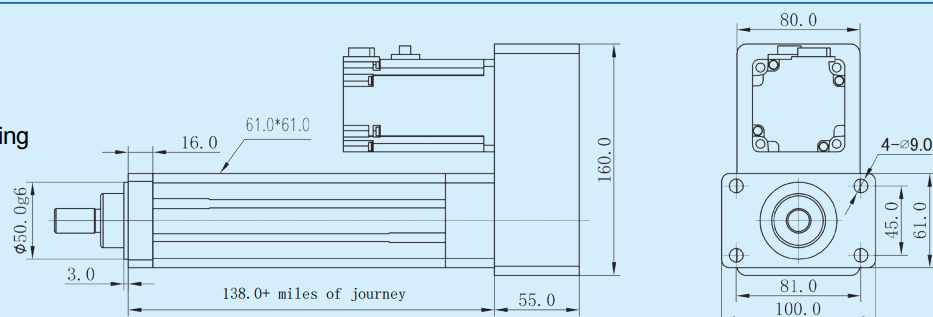


Electric Cylinder and Motor Mounting Method

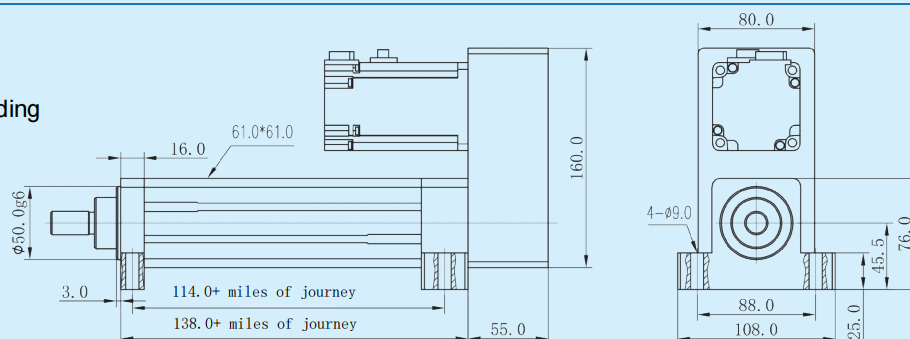
Flangedless folding installation



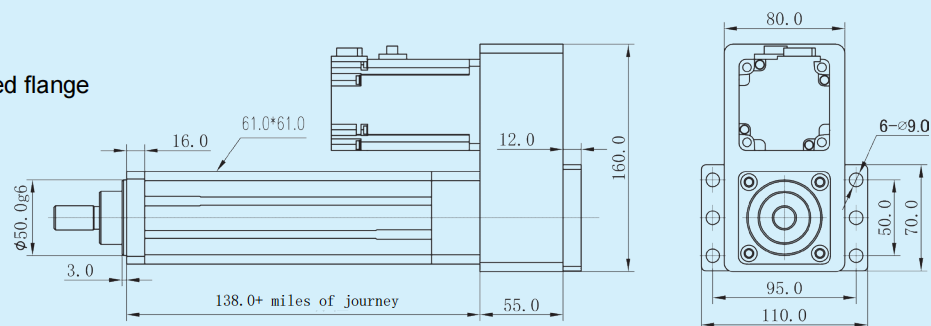
Installation of the flange before folding



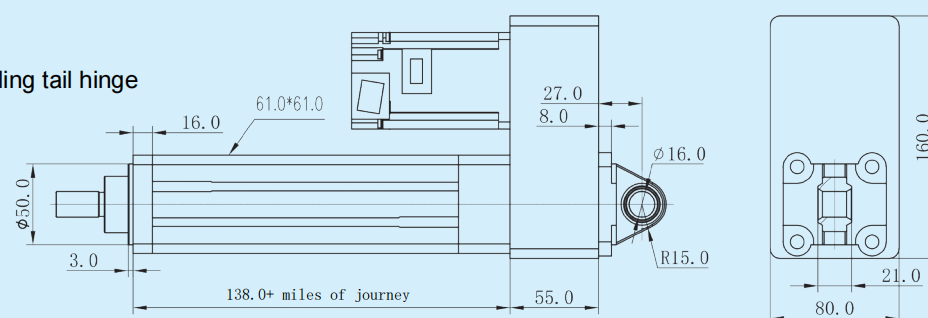
Installation of folding side flange



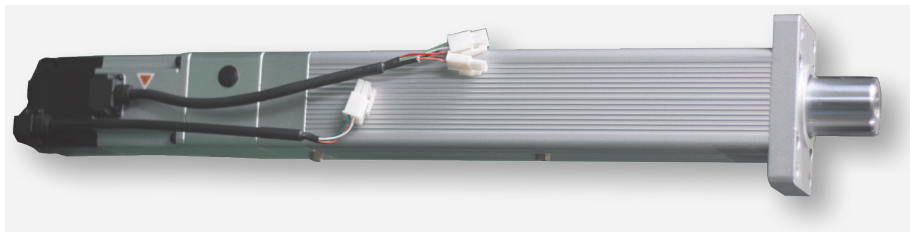
Installation of folded flange



Installation of folding tail hinge

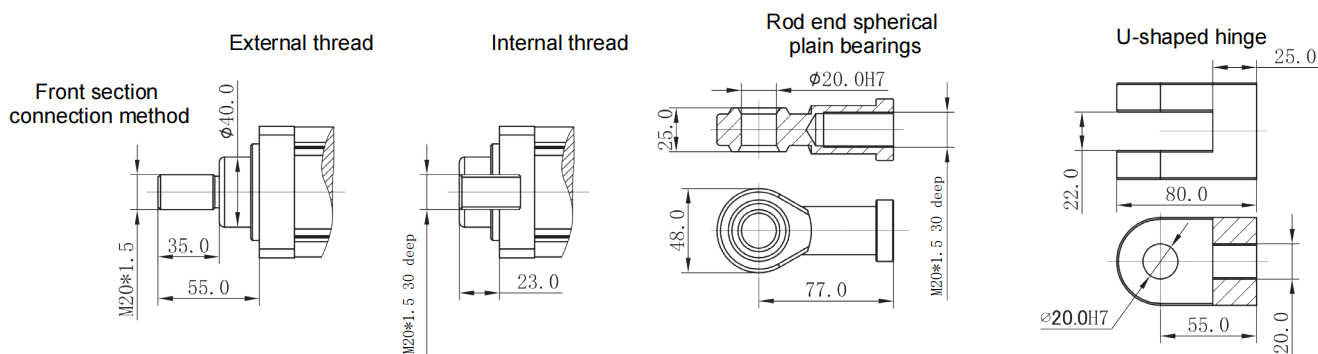


WTA75 Series Servo Electric Cylinder



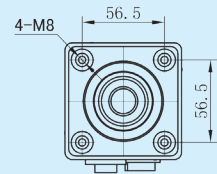
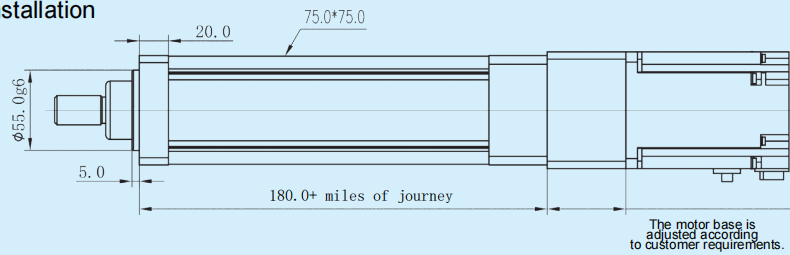
Selection Parameters Table for Servo Electric Cylinders

Specification	Series and Model	WTA75											
	Lead of Lead Screw (mm)	5				10				20			
	Electric Cylinder Thrust Range (kN)	0.01 ~ 10											
	Electric Cylinder Selectable Stroke (mm)	20、30、50、80、100、150、200、250、300、350、400、450、500、600、700、800、900、1000											
Indicator Input	Type	Direct Connection Type, Folding Type											
	Reduction Ratio (i)	1:1											
	Basic Dynamic Axial Load Rating (kN)	1.5				1.5				1.38			
	Rated Power (kW)	0.4	0.75	1	1.5	0.4	0.75	1	1.5	0.4	0.75	1	1.5
	Motor Rated Torque (N·m)	1.27	2.39	3.18	4.775	1.27	2.39	3.18	4.775	1.27	2.39	3.18	4.775
	Motor Rated Speed (rpm)	3000											
Output Indicators	Electric Cylinder Rated Thrust (kN)	1.4	2.7	3.5	5.3	0.7	1.3	1.8	2.7	0.4	0.7	0.9	1.3
	Electric Cylinder Rated Speed (mm/s)	250	250	250	250	500	500	500	500	1000	1000	1000	1000
	Recommended Maximum Load (kN)	8				8				2			
1.If a reduction ratio is required, the above output parameters shall be directly converted by the reduction ratio multiple. 2.For the specific usage of the WTA75 Electric Cylinder, please consult with our company's engineers.													

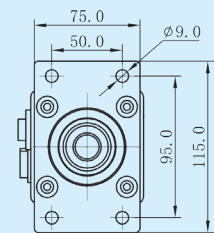
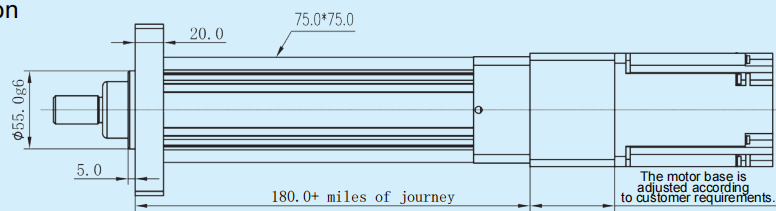


Electric Cylinder and Motor Mounting Method

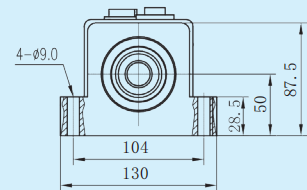
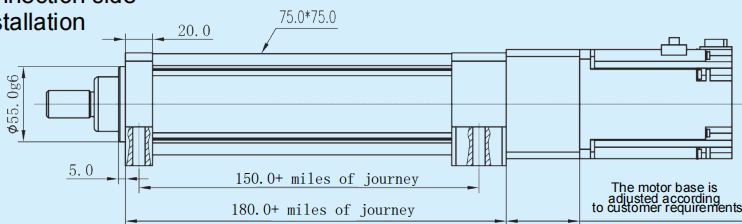
Direct connection without
flange installation



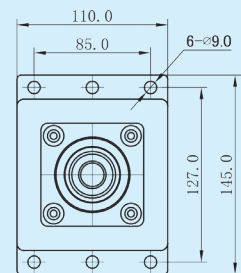
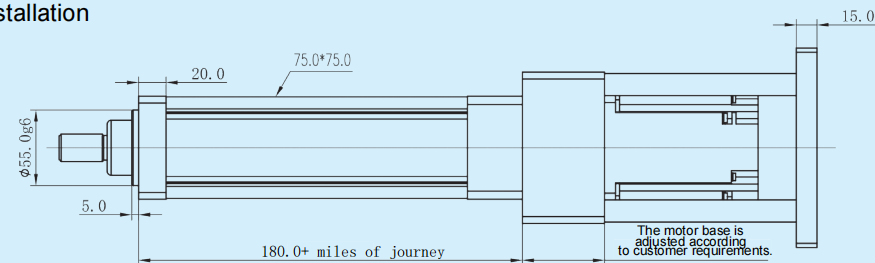
Direct connection to the
front flange
installation



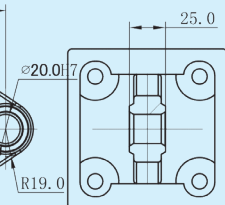
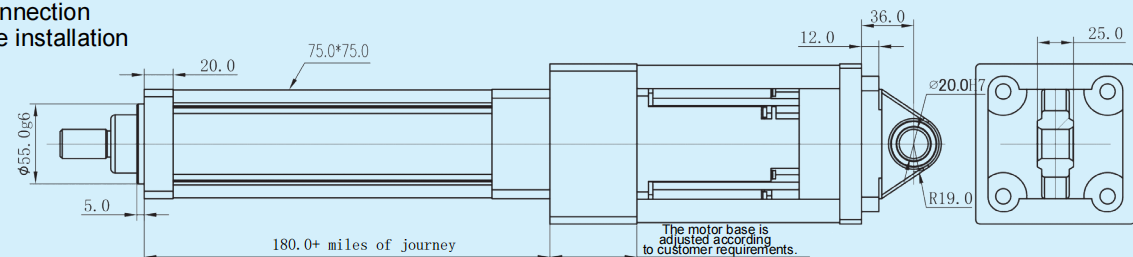
Direct connection side
flange installation



Direct connection
flange installation

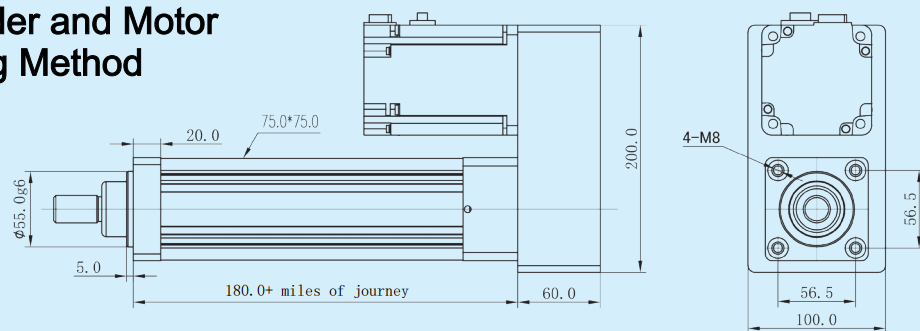


Direct connection
Tail hinge installation

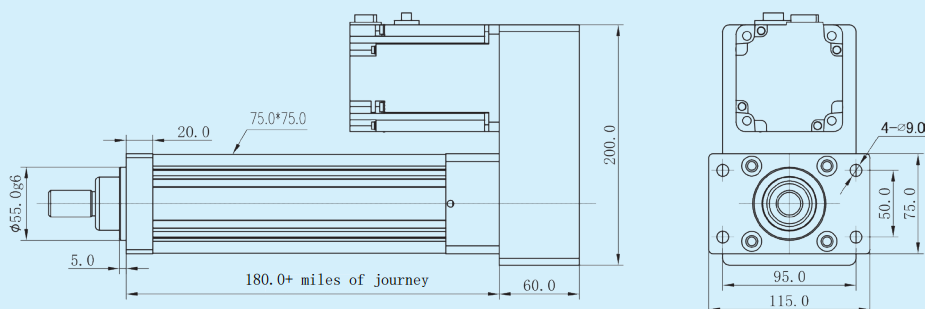


Electric Cylinder and Motor Mounting Method

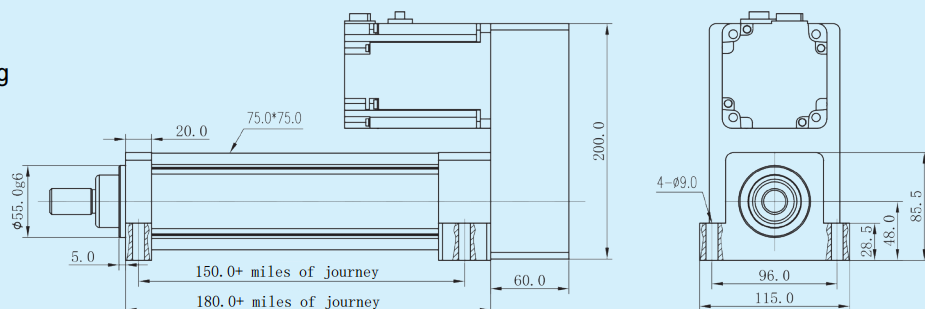
Flangedless folding installation



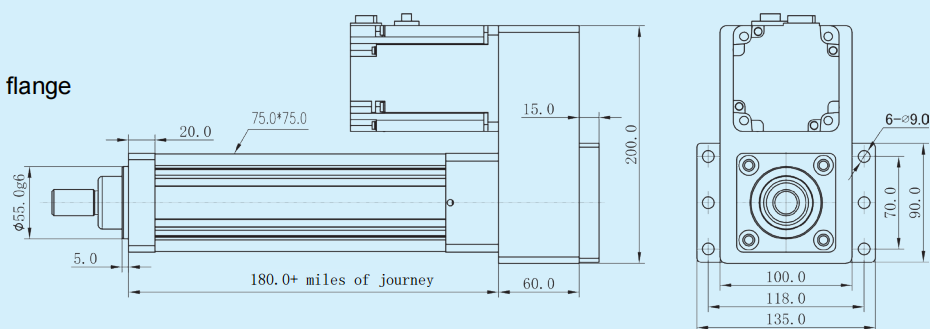
Installation of the flange before folding



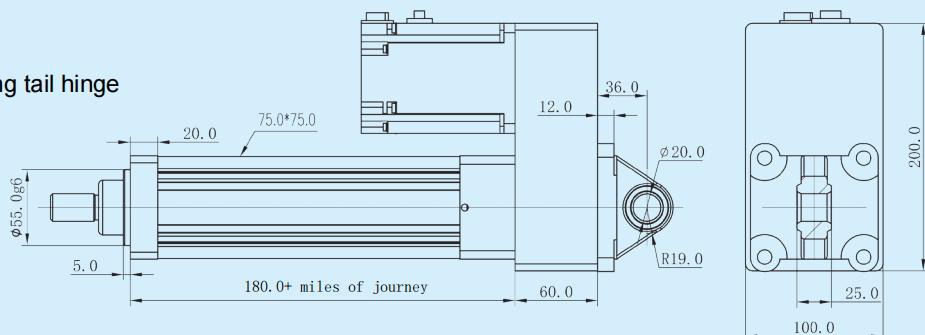
Installation of folding side flange



Installation of folded flange



Installation of folding tail hinge

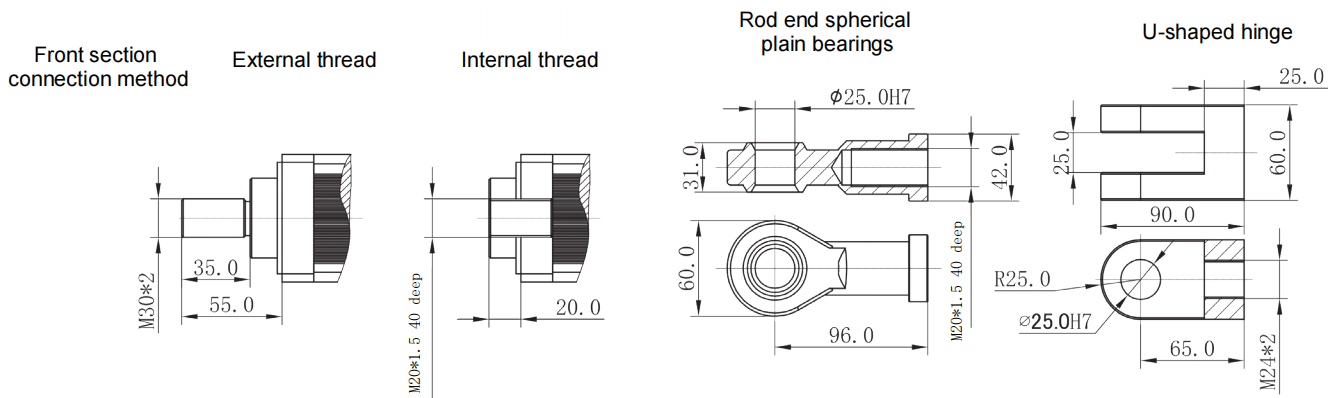


WTA 80 Series Servo Electric Cylinder



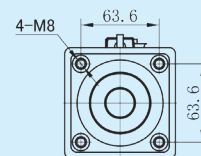
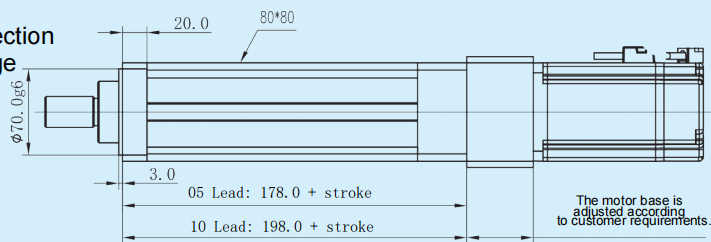
Selection Parameters Table for Servo Electric Cylinders

Specification	Series and Model	WTA80											
	Lead of Lead Screw (mm)	5				10				20			
	Electric Cylinder Thrust Range (kN)	0.01 ~ 15											
	Electric Cylinder Selectable Stroke (mm)	20、30、50、80、100、150、200、250、300、350、400、450、500、600、700、800、900、1000、1100、1200、1300、1400、1500											
Indicator Input	Type	Direct Connection Type, Folding Type											
	Reduction Ratio (i)	1:1											
	Basic Dynamic Axial Load Rating (kN)	17.24				29.54				0.843			
	Rated Power (kW)	0.75	1	1.5	2	0.75	1	1.5	2	0.75	1	1.5	2
	Motor Rated Torque (N·m)	2.39	3.18	7.16	9.55	2.39	3.18	7.16	9.55	2.39	3.18	7.16	9.55
	Motor Rated Speed (rpm)	3000		2000		3000		2000		3000		2000	
Output Indicators	Electric Cylinder Rated Thrust (kN)	2.7	3.5	8.0	10.6	1.3	1.8	4.0	5.3	0.7	0.9	2.0	2.7
	Electric Cylinder Rated Speed (mm/s)	250	250	166	166	500	500	333	333	1000	1000	666	666
	Recommended Maximum Load (kN)	10				15				2			
1.If a reduction ratio is required, the above output parameters shall be directly converted by the reduction ratio multiple. 2.For the specific usage of the WTA80 Electric Cylinder, please consult with our company's engineers.													

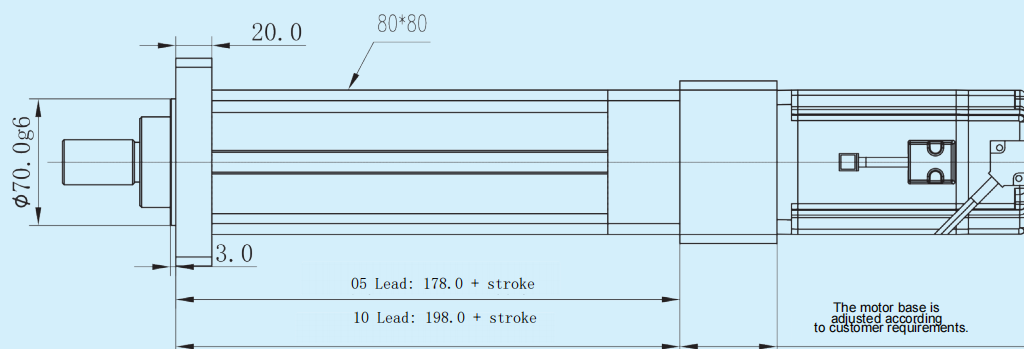


Electric Cylinder and Motor Mounting Method

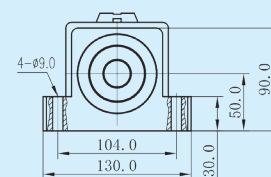
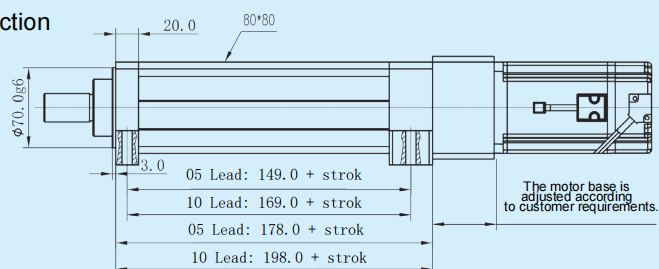
Direct connection
without flange
installation



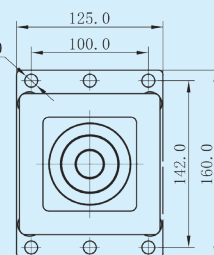
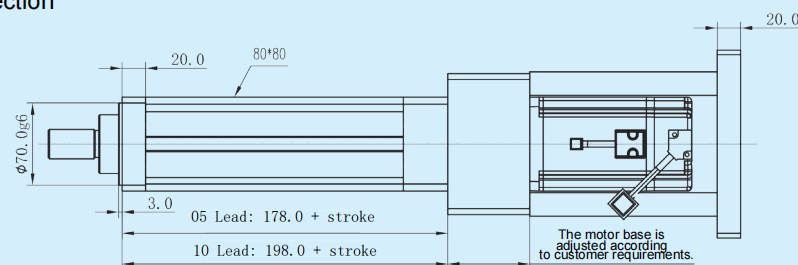
Direct connection
to the front flange
installation



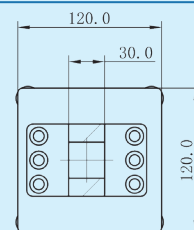
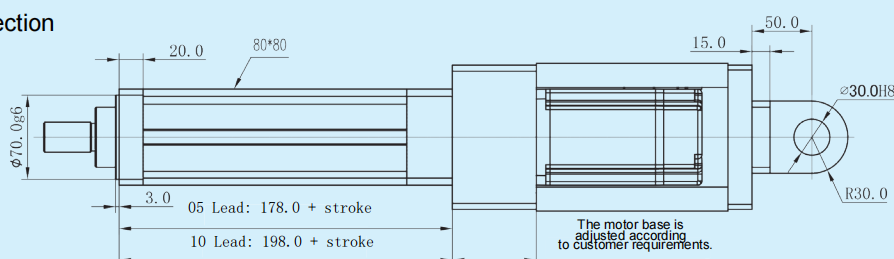
Direct connection
side flange
installation



Direct connection
flange
installation

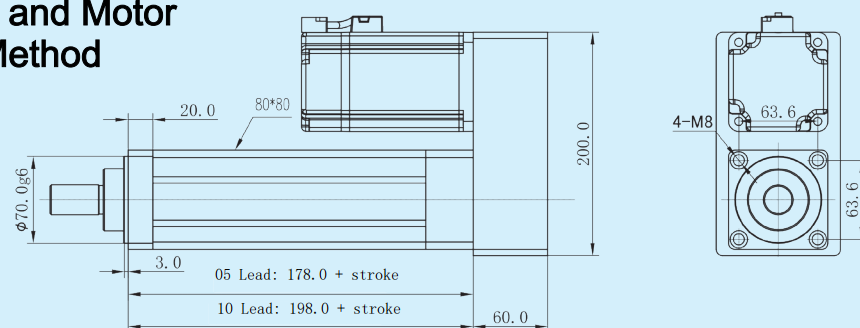


Direct connection
Tail hinge
installation

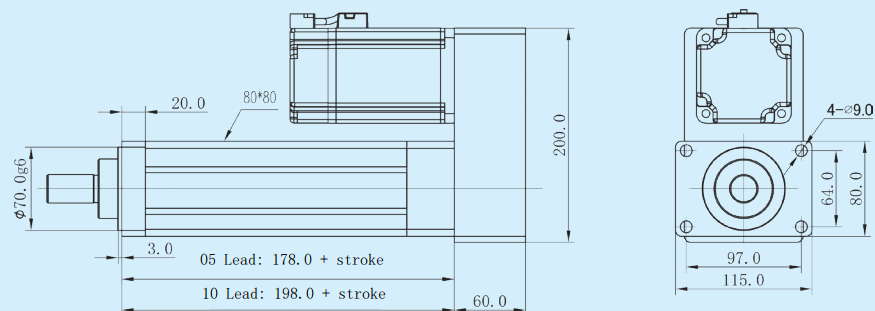


Electric Cylinder and Motor Mounting Method

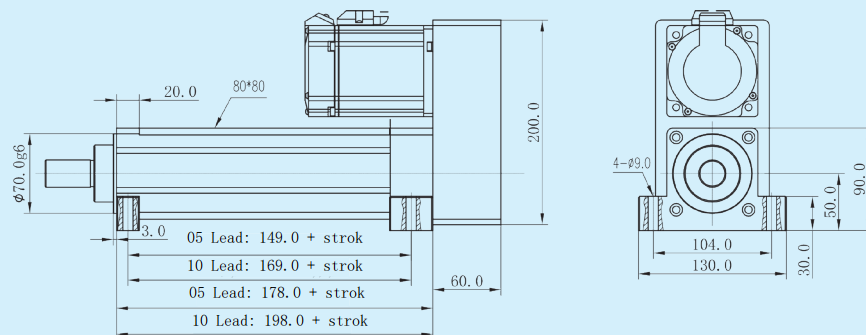
Flangedless folding installation



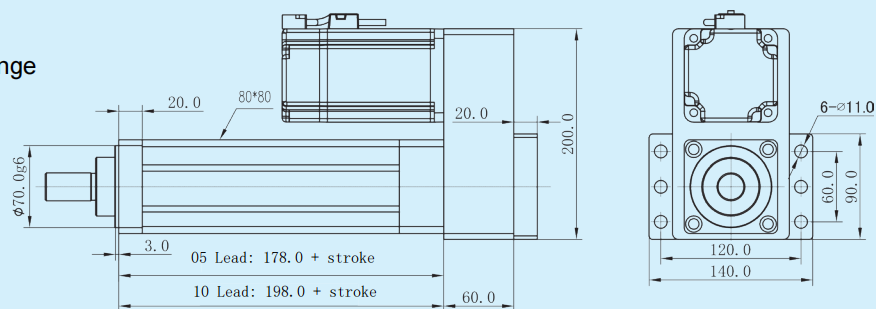
Installation of the flange before folding



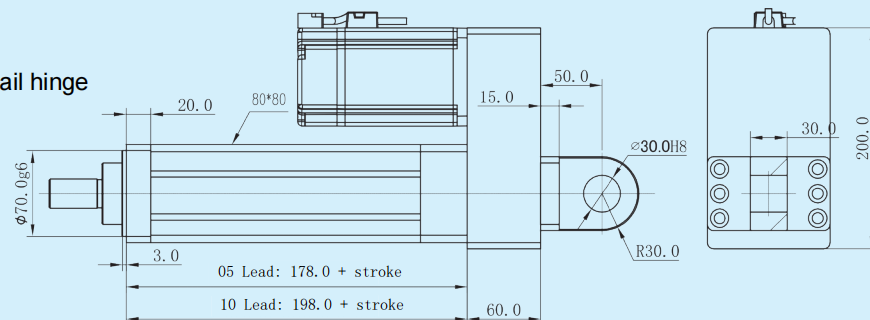
Installation of folding side flange



Installation of folded flange



Installation of folding tail hinge

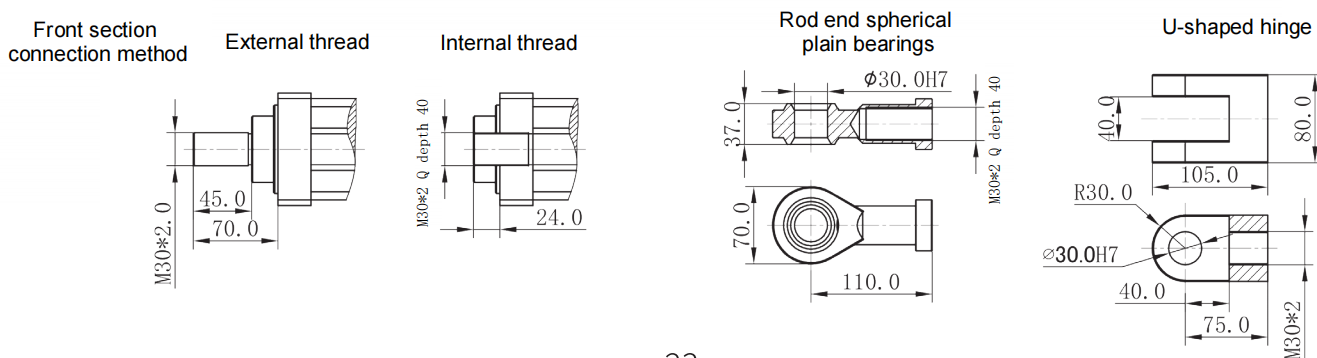


WTA 94 Series Servo Electric Cylinder



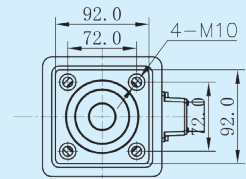
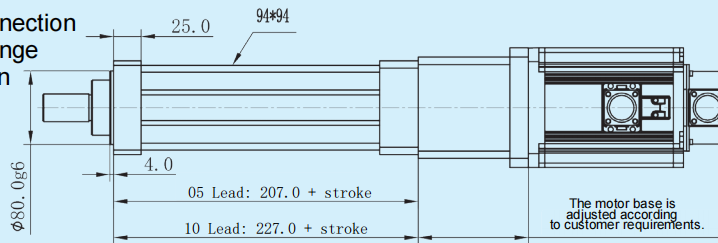
Selection Parameters Table for Servo Electric Cylinders

Specification	Series and Model	WTA94											
	Lead of Lead Screw (mm)	5				10				20			
	Electric Cylinder Thrust Range (kN)	0.01 ~ 25											
	Electric Cylinder Selectable Stroke (mm)	50、80、100、150、200、250、300、350、400、450、500、600、700、800、1000、1100、1200、1300、1400、1500											
Indicator Input	Type	Direct Connection Type, Folding Type											
	Reduction Ratio (i)	1:1											
	Basic Dynamic Axial Load Rating (kN)	19.22				48.05				19.07			
	Rated Power (kW)	1	1.5	2	3.5	1	1.5	2	3.5	1	1.5	2	3.5
	Motor Rated Torque (N·m)	4.77	7.16	9.55	16.71	3.18	7.16	9.55	16.71	3.18	7.16	9.55	16.71
	Motor Rated Speed (rpm)	2000											
Output Indicators	Electric Cylinder Rated Thrust (kN)	5.3	8.0	10.6	18.6	1.8	4.0	5.3	9.3	0.9	2.0	2.7	4.6
	Electric Cylinder Rated Speed (mm/s)	166	166	166	166	333	333	333	333	666	666	666	666
	Recommended Maximum Load (kN)	12				30				8			
1.If a reduction ratio is required, the above output parameters shall be directly converted by the reduction ratio multiple. 2.For the specific usage of the WTA94 Electric Cylinder, please consult with our company's engineers.													

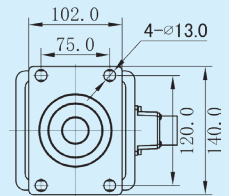
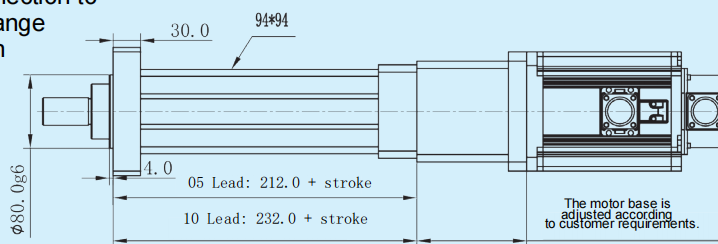


Electric Cylinder and Motor Mounting Method

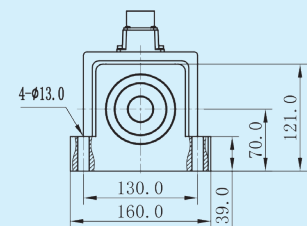
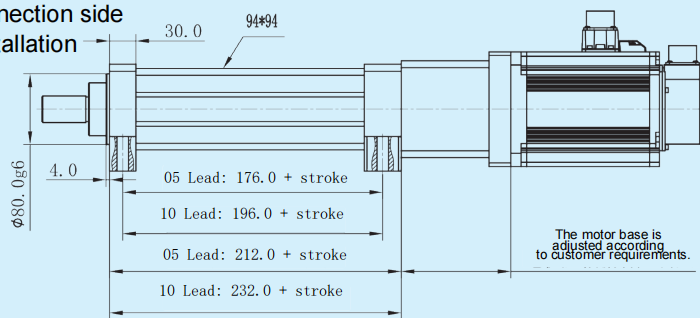
Direct connection
without flange
installation



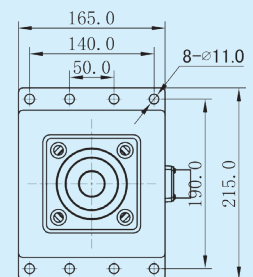
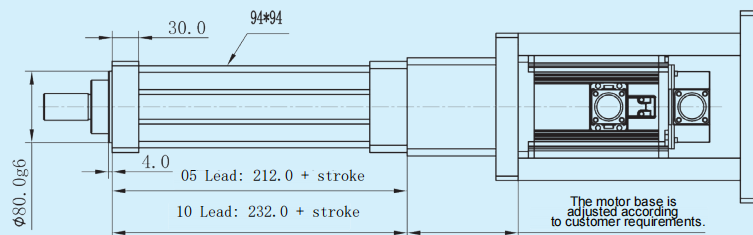
Direct connection to
the front flange
installation



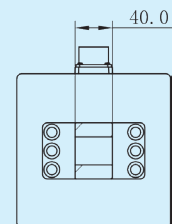
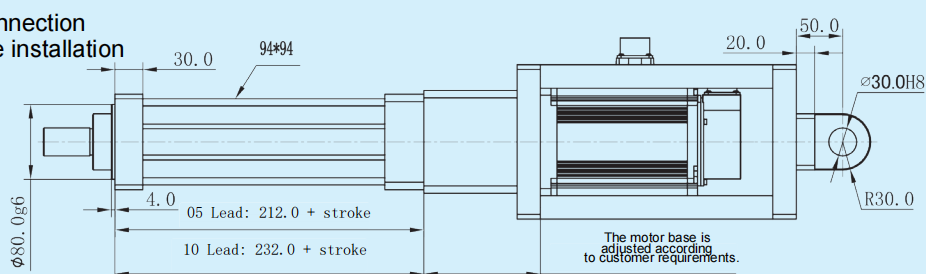
Direct connection side
flange installation



Direct connection
flange installation

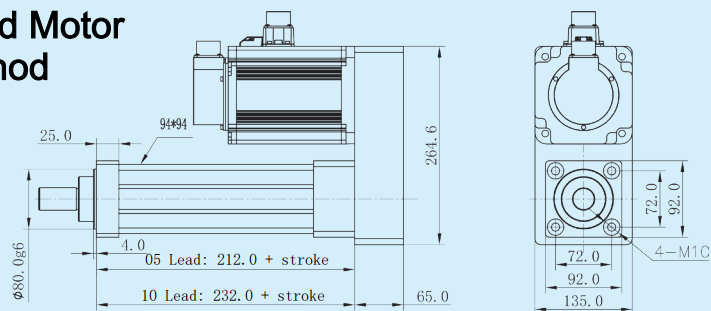


Direct connection
Tail hinge installation

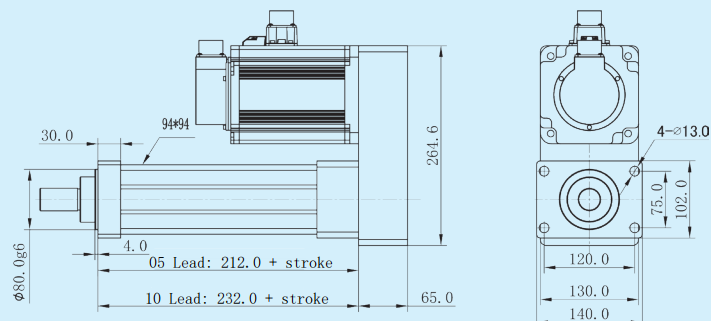


Electric Cylinder and Motor Mounting Method

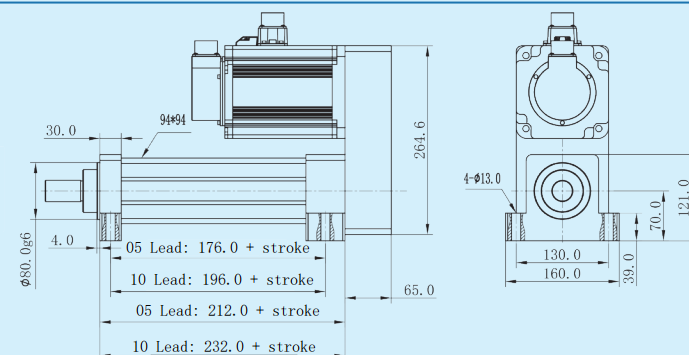
Flangedless folding installation



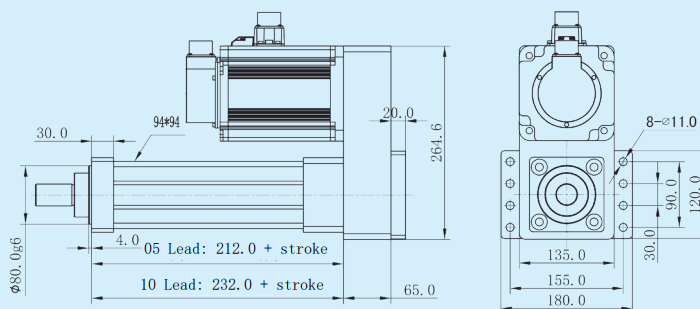
Installation of the flange before folding



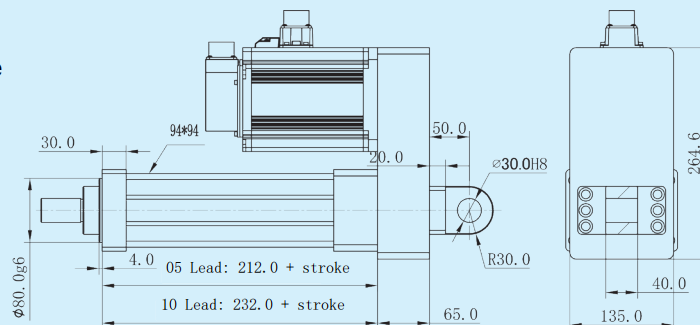
Installation of folding side flange



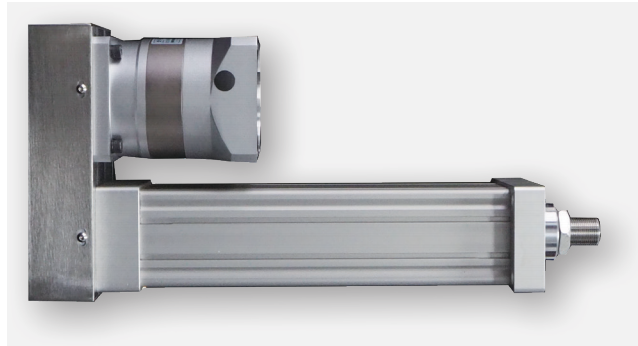
Installation of folded flange



Installation of folding tail hinge



WTA 110 Series Servo Electric Cylinder

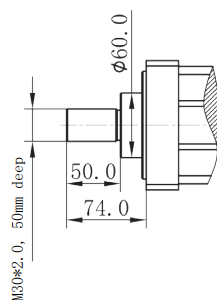


Selection Parameters Table for Servo Electric Cylinders

Specification	Series and Model	WTA110							
	Lead of Lead Screw (mm)	10				20			
	Electric Cylinder Thrust Range (kN)	0.01 ~ 40							
	Electric Cylinder Selectable Stroke (mm)	50、80、100、150、200、250、300、350、400、450、500、600、700、800、1000、1100、1200、1300、1400、1500							
Indicator Input	Type								
	Reduction Ratio (i)								
	Basic Dynamic Axial Load Rating (kN)	53.9				39.6			
	Rated Power (kW)	2	3	3.5	5.5	2	3	3.5	5.5
	Motor Rated Torque (N·m)	9.55	14.32	16.71	35.01	9.55	14.32	16.71	35.01
	Motor Rated Speed (rpm)	2000			1500	2000			1500
Output Indicators	Electric Cylinder Rated Thrust (kN)	5.3	8.0	9.3	19.4	2.7	4.0	4.6	9.7
	Electric Cylinder Rated Speed (mm/s)	333.33	333	333	250	666.66	667	667	500
	Recommended Maximum Load (kN)	40				10			

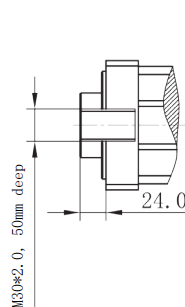
1.If a reduction ratio is required, the above output parameters shall be directly converted by the reduction ratio multiple.
2.For the specific usage of the WTA110 Electric Cylinder, please consult with our company's engineers.

Front section connection method

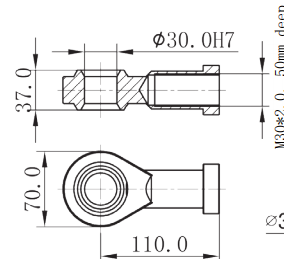


External thread

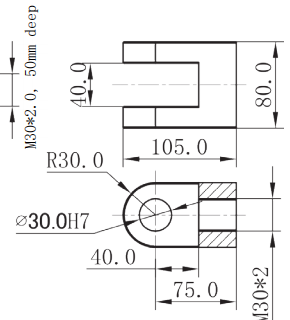
Internal thread



Rod end spherical plain bearings

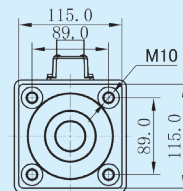
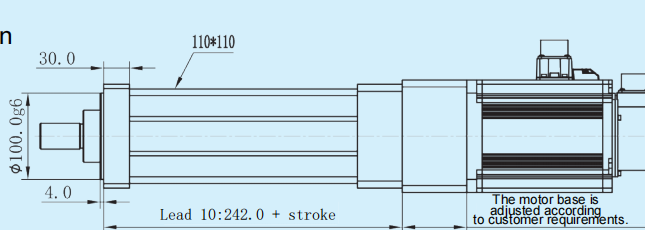


U-shaped hinge

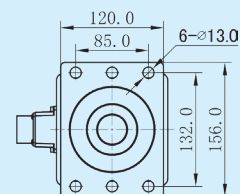
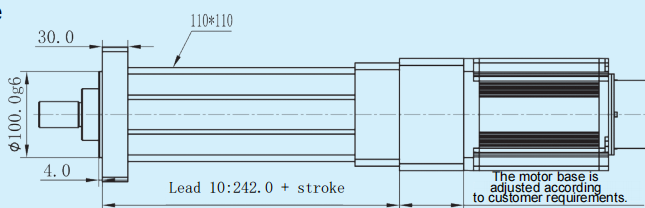


Electric Cylinder and Motor Mounting Method

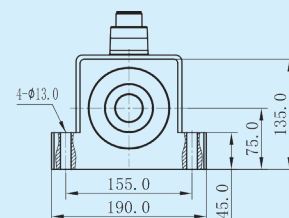
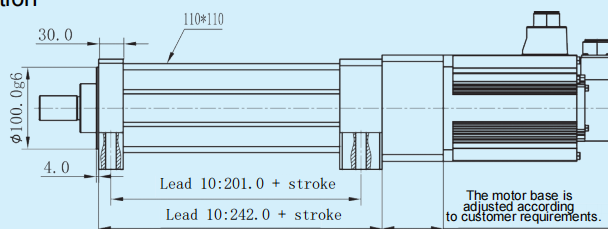
Direct connection
without flange
installation



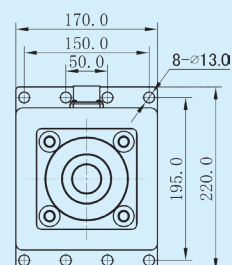
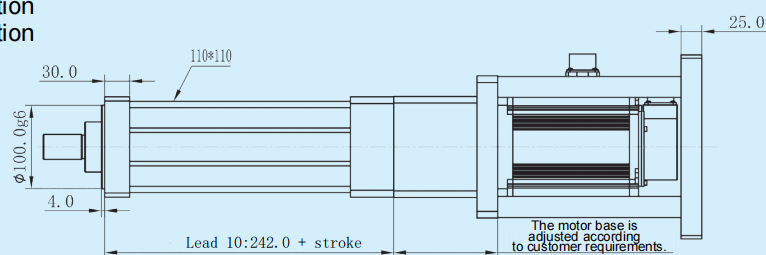
Direct connection to
the front flange
installation



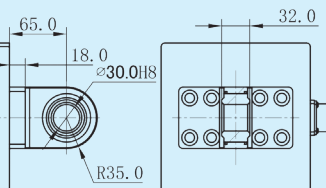
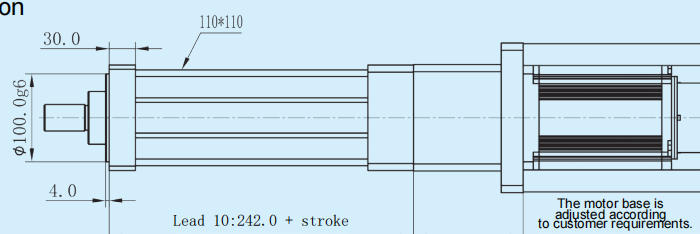
flange installation



Direct connection
flange installation

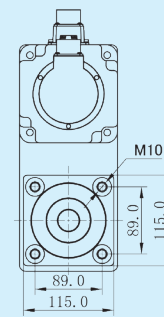
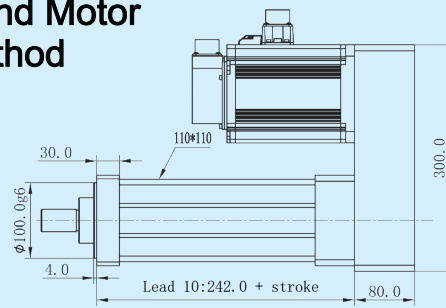


Direct connection
Tail hinge
installation

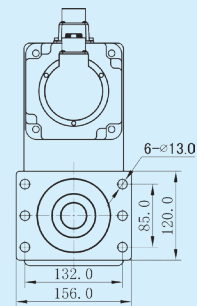
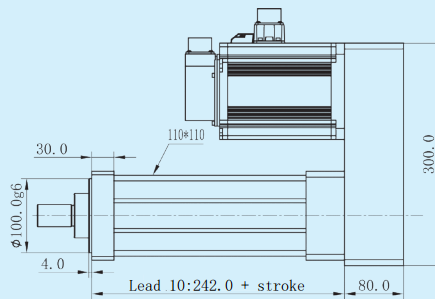


Electric Cylinder and Motor Mounting Method

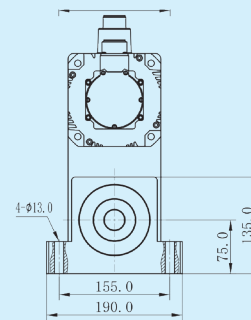
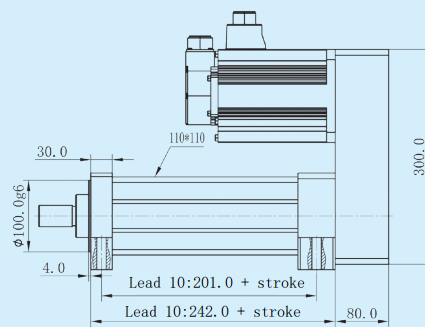
Flangedless folding
installation



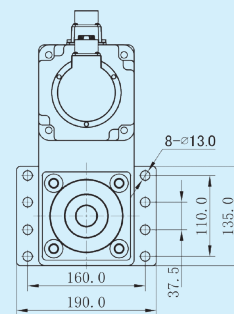
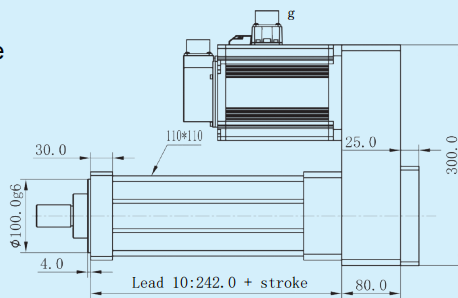
Installation of the
flange before folding



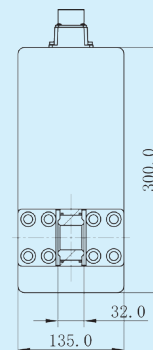
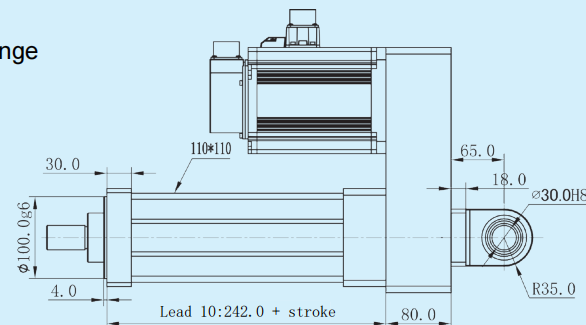
Installation of folding
side flange



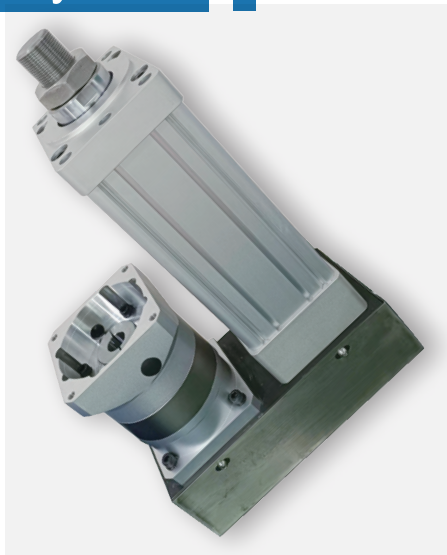
Installation of folded flange



Installation of folding tail hinge



WTA 132 Series Servo Electric Cylinder



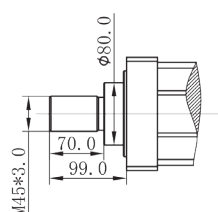
Selection Parameters Table for Servo Electric Cylinders

Specification	Series and Model	WTA132							
	Lead of Lead Screw (mm)	10				20			
	Electric Cylinder Thrust Range (kN)	0 ~ 50							
	Electric Cylinder Selectable Stroke (mm)	50、80、100、150、200、250、300、350、400、450、500、600、700、800、1000、1100、1200、1300、1400、1500、1800							
Indicator Input	Type	Direct Connection Type, Folding Type							
	Reduction Ratio (i)	1:1							
	Basic Dynamic Axial Load Rating (kN)	67.1				71.4			
	Rated Power (kW)	3	4.5	5.5	7.5	3	4.5	5.5	7.5
	Motor Rated Torque (N·m)	19.1	28.65	35.01	47.74	19.1	28.65	35.01	47.74
	Motor Rated Speed (rpm)	1500							
Output Indicators	Electric Cylinder Rated Thrust (kN)	10.6	15.9	19.4	26.5	10.6	15.9	19.4	26.5
	Electric Cylinder Rated Speed (mm/s)	250	250	250	250	500	500	500	500
	Recommended Maximum Load (kN)	50				70			

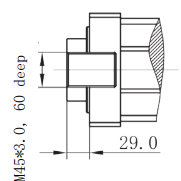
1.If a reduction ratio is required, the above output parameters shall be directly converted by the reduction ratio multiple.

2.For the specific usage of the WTA132 Electric Cylinder, please consult with our company's engineers.

Front section connection method

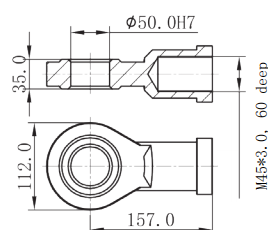


External thread

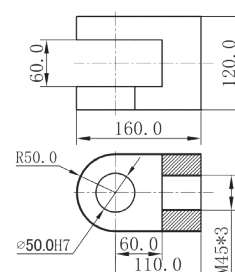


Internal thread

Rod end spherical plain bearings

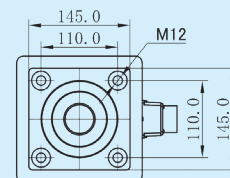
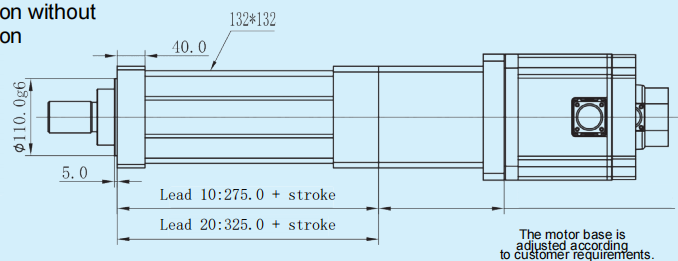


U-shaped hinge

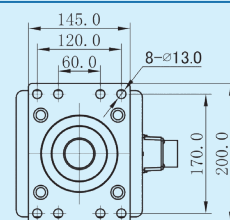
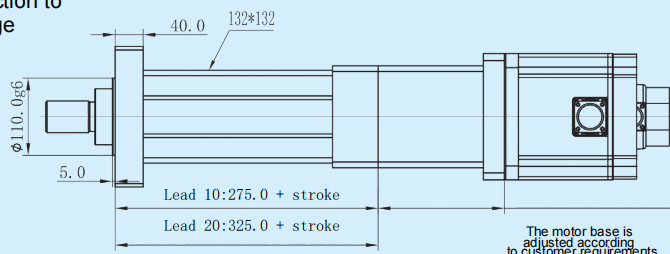


Electric Cylinder and Motor Mounting Method

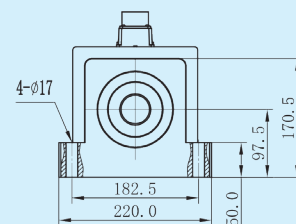
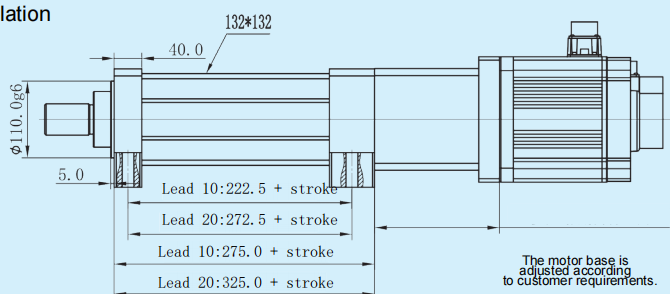
Direct connection without flange installation



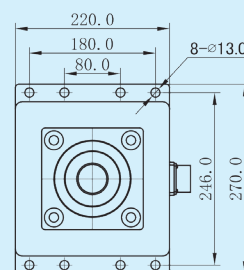
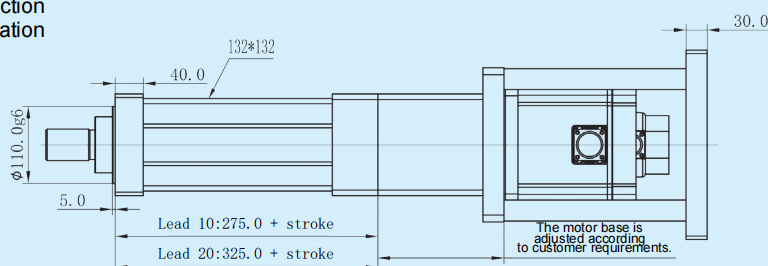
Direct connection to the front flange installation



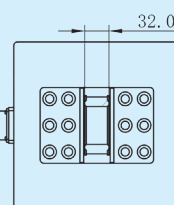
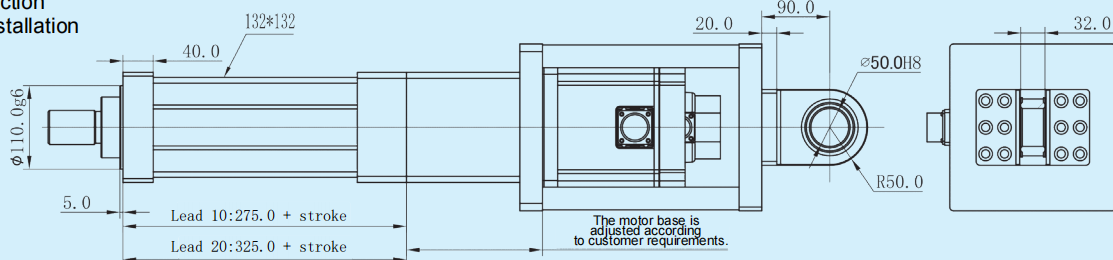
flange installation



Direct connection flange installation

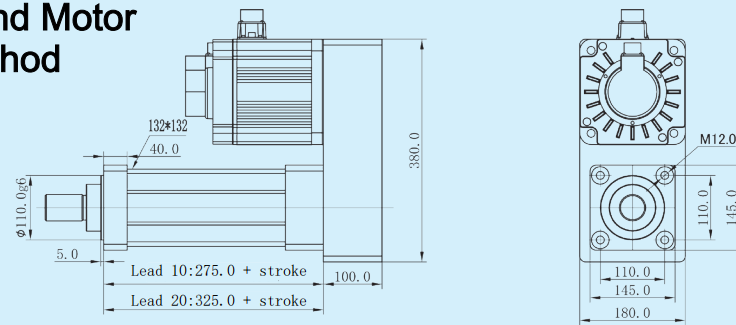


Direct connection Tail hinge installation

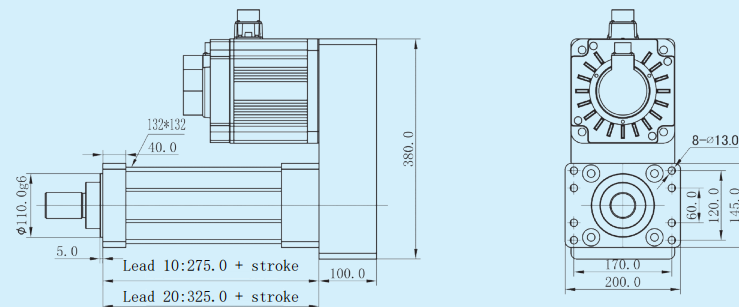


Electric Cylinder and Motor Mounting Method

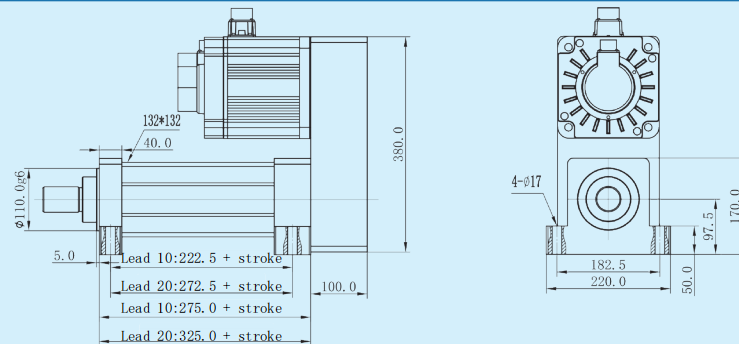
Flangedless folding installation



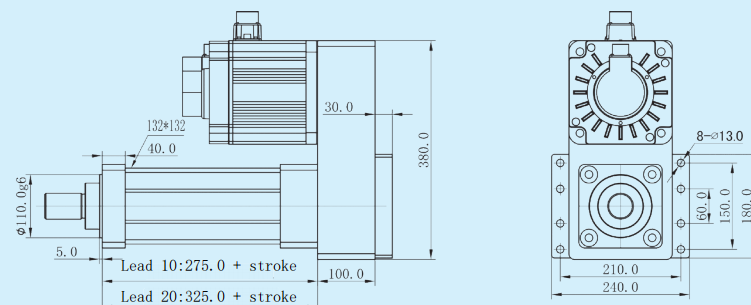
Installation of the flange before folding



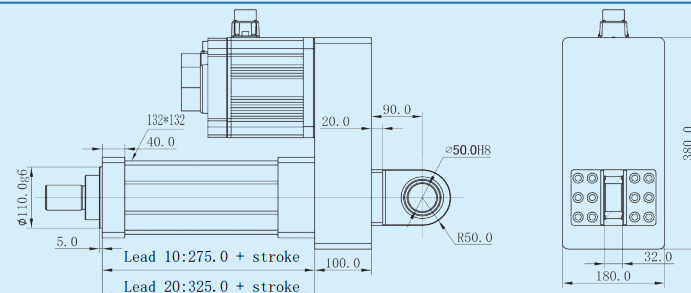
Installation of folding side flange



Installation of folded flange



Installation of folding tail hinge



WTB 120 Series Servo Electric Cylinder

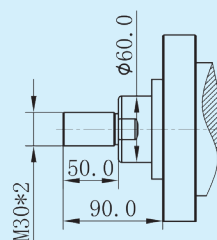


Selection Parameters Table for Servo Electric Cylinders

Specification	Series and Model	WTB120							
	Lead of Lead Screw (mm)	10				20			
	Electric Cylinder Thrust Range (kN)	0.01 ~ 40							
	Electric Cylinder Selectable Stroke (mm)	0 ~ 1000							
Indicator Input	Type	Direct Connection Type, Folding Type							
	Reduction Ratio (i)	1:1							
	Basic Dynamic Axial Load Rating (kN)	53.9				39.6			
	Rated Power (kW)	2	3	3.5	5.5	2	3	3.5	5.5
	Motor Rated Torque (N·m)	9.55	14.32	16.71	35.01	9.55	14.32	16.71	35.01
	Motor Rated Speed (rpm)	2000			1500	2000			1500
Output Indicators	Electric Cylinder Rated Thrust (kN)	5.3	8.0	9.3	19.4	2.7	4.0	4.6	9.7
	Electric Cylinder Rated Speed (mm/s)	333.33	333	333	250	666.66	667	667	500
	Recommended Maximum Load (kN)	40				20			
1.If a reduction ratio is required, the above output parameters shall be directly converted by the reduction ratio multiple. 2.For the specific usage of the WTB120 Electric Cylinder, please consult with our company's engineers.									

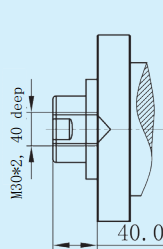
Electric Cylinder and Motor Mounting Method

Front section
connection method

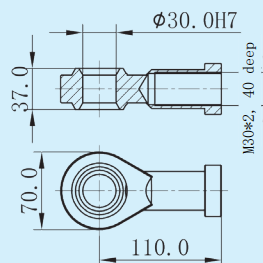


External thread

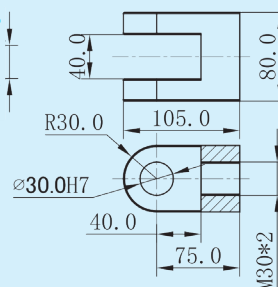
Internal thread



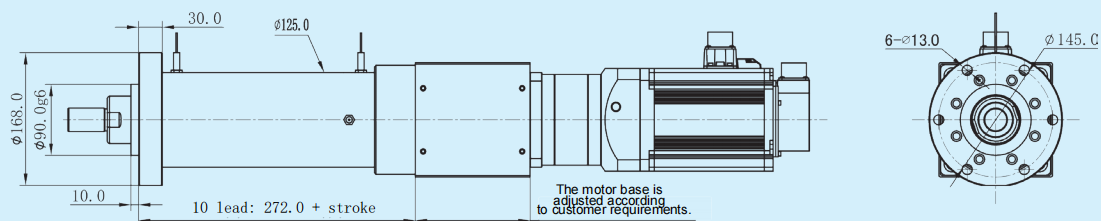
Rod end spherical
plain bearings



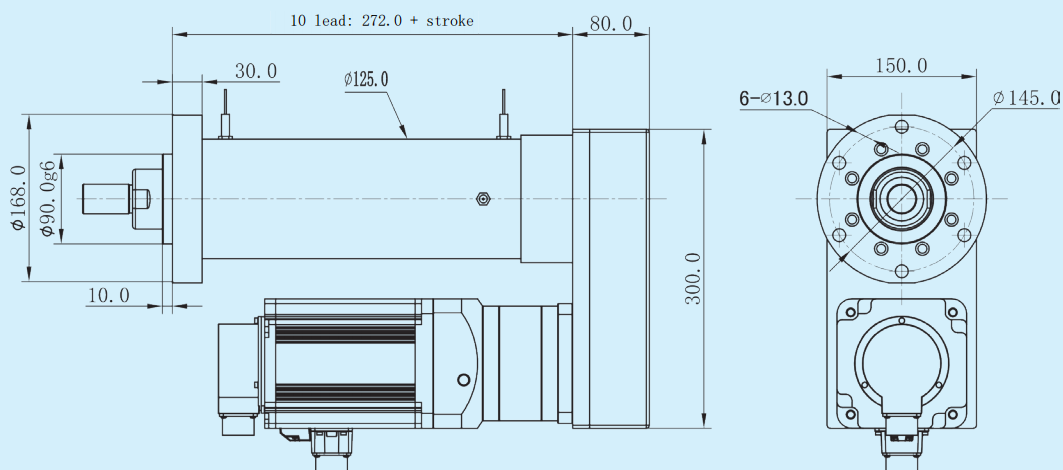
U-shaped hinge



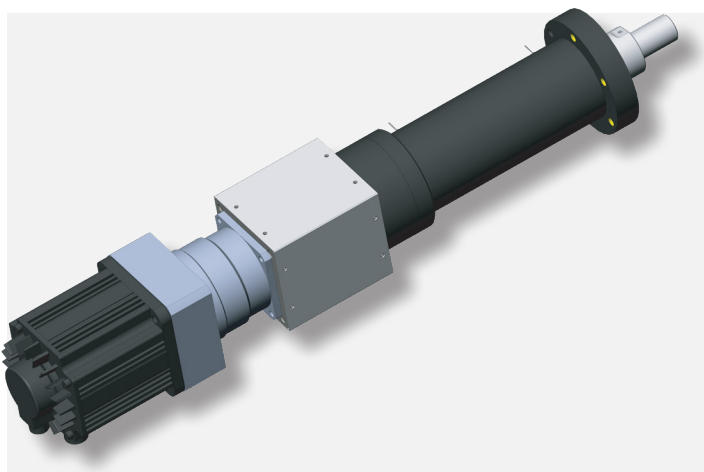
Straight-line
front flange installation



Folding type
Front flange installation



WTB 140 Series Servo Electric Cylinder

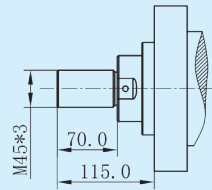


Selection Parameters Table for Servo Electric Cylinders

Specification	Series and Model	WTB140							
	Lead of Lead Screw (mm)	10				20			
	Electric Cylinder Thrust Range (kN)	0 ~ 60							
	Electric Cylinder Selectable Stroke (mm)	0 ~ 1000							
Indicator Input	Type	Direct Connection Type, Folding Type							
	Reduction Ratio (i)	1:1							
	Basic Dynamic Axial Load Rating (kN)	67.1				71.4			
	Rated Power (kW)	3	4.5	5.5	7.5	3	4.5	5.5	7.5
	Motor Rated Torque (N·m)	19.1	28.65	35.01	47.74	19.1	28.65	35.01	47.74
	Motor Rated Speed (rpm)	1500							
Output Indicators	Electric Cylinder Rated Thrust (kN)	10.6	15.9	19.4	26.5	5.3	8.0	9.7	13.3
	Electric Cylinder Rated Speed (mm/s)	250	250	250	250	0	500	500	500
	Recommended Maximum Load (kN)	50				70			
1.If a reduction ratio is required, the above output parameters shall be directly converted by the reduction ratio multiple. 2.For the specific usage of the WTB140 Electric Cylinder, please consult with our company's engineers.									

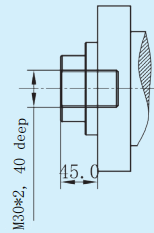
Electric Cylinder and Motor Mounting Method

Front section connection method

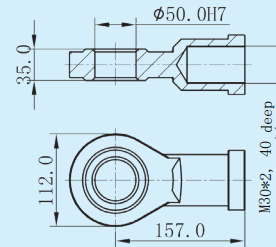


External thread

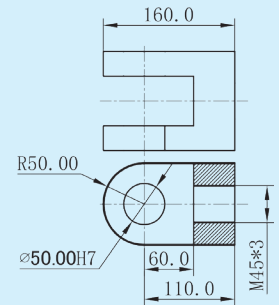
Internal thread



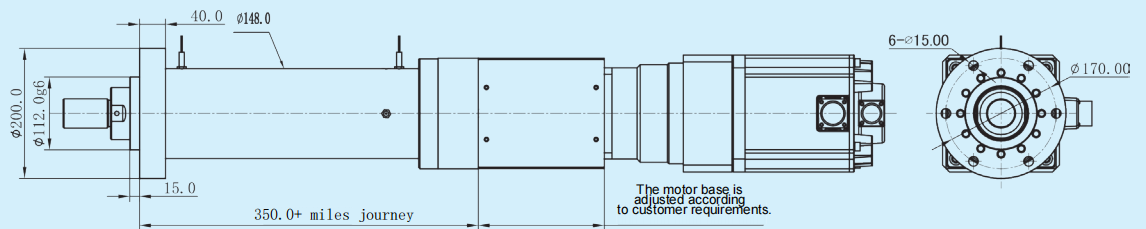
Rod end spherical plain bearings



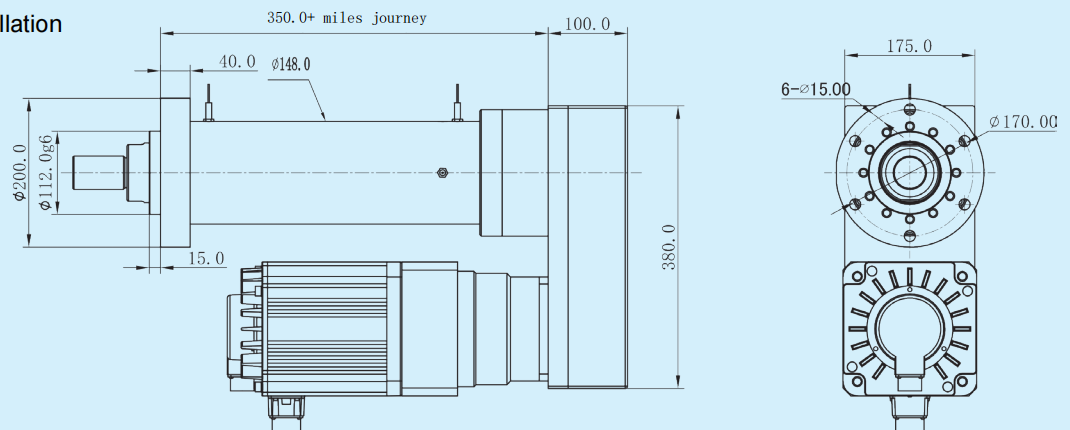
U-shaped hinge



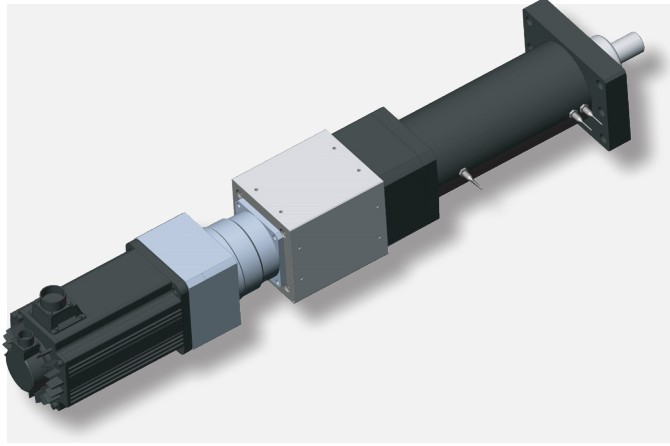
Straight-line front flange installation



Folding type Front flange installation



WTB 160 Series Servo Electric Cylinder

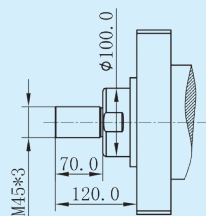


Selection Parameters Table for Servo Electric Cylinders

Specification	Series and Model	WTB 160							
	Lead of Lead Screw (mm)	10				20			
	Electric Cylinder Thrust Range (kN)	0.01 ~ 100							
	Electric Cylinder Selectable Stroke (mm)	50 ~ 1000							
Indicator Input	Type	Direct Connection Type, Folding Type							
	Reduction Ratio (i)	1:1							
	Basic Dynamic Axial Load Rating (kN)	67.19				114.44			
	Rated Power (kW)	5.5	7.5	11	15	5.5	7.5	11	15
	Motor Rated Torque (N·m)	35.01	47.74	70	95.4	35.01	47.74	70	95.4
	Motor Rated Speed (rpm)	1500							
Output Indicators	Electric Cylinder Rated Thrust (kN)	19.4	26.5	38.9	53.0	9.7	13.3	19.4	26.5
	Electric Cylinder Rated Speed (mm/s)	250	250	250	250	500	500	500	500
	Recommended Maximum Load (kN)	60				120			
1.If a reduction ratio is required, the above output parameters shall be directly converted by the reduction ratio multiple. 2.For the specific usage of the WTB160 Electric Cylinder, please consult with our company's engineers.									

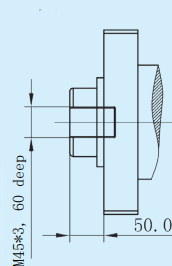
Electric Cylinder and Motor Mounting Method

Front section
connection method

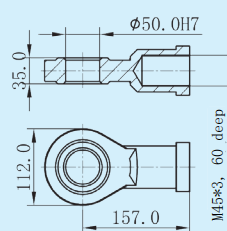


External thread

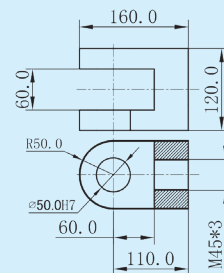
Internal thread



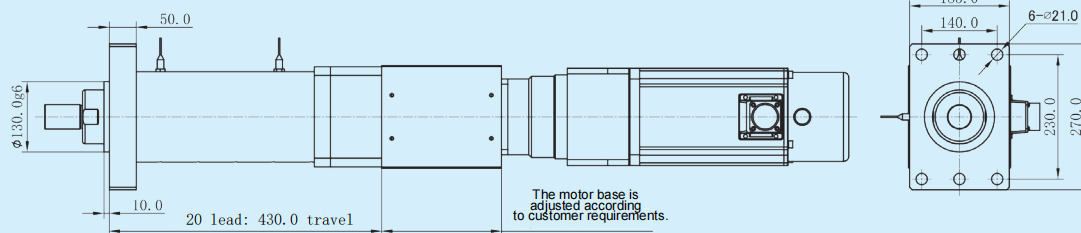
Rod end spherical
plain bearings



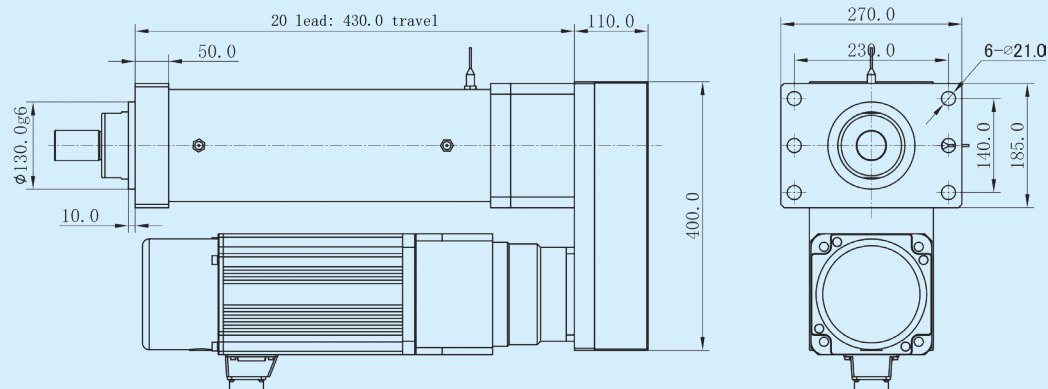
U-shaped hinge



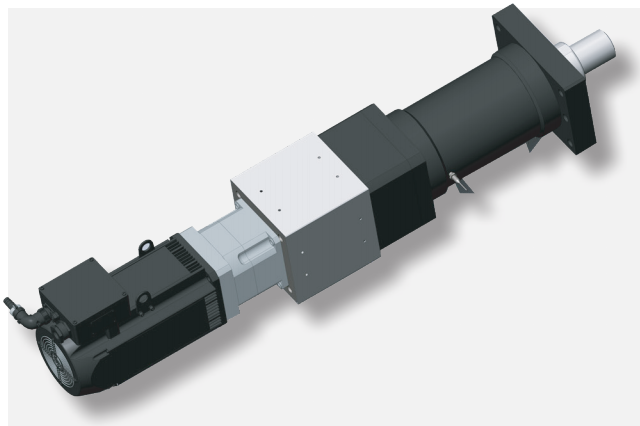
Straight-line
front flange installation



Folding type
Front flange installation



WTB 220 Series Servo Electric Cylinder

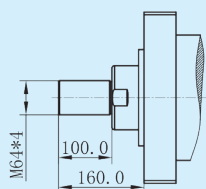


Selection Parameters Table for Servo Electric Cylinders

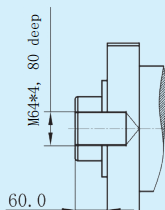
Specification	Series and Model	WTB220							
	Lead of Lead Screw (mm)	20				20			
	Electric Cylinder Thrust Range (kN)	0.01 ~ 200							
	Electric Cylinder Selectable Stroke (mm)	50 ~ 1000							
Indicator Input	Type	Direct Connection Type, Folding Type							
	Reduction Ratio (i)	1:1							
	Basic Dynamic Axial Load Rating (kN)	151.0				224.2			
	Rated Power (kW)	7.5	11	15	22	7.5	11	15	22
	Motor Rated Torque (N·m)	48	70	95.5	140	48	70	95.5	140
	Motor Rated Speed (rpm)	1500							
Output Indicators	Electric Cylinder Rated Thrust (kN)	13.3	19.4	26.5	38.9	13.3	19.4	26.5	38.9
	Electric Cylinder Rated Speed (mm/s)	500	500	500	500	500	500	500	500
	Recommended Maximum Load (kN)	150				200		0.4	
1.If a reduction ratio is required, the above output parameters shall be directly converted by the reduction ratio multiple. 2.For the specific usage of the WTB220 Electric Cylinder, please consult with our company's engineers.									

Electric Cylinder and Motor Mounting Method

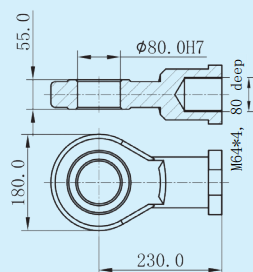
Front section connection method



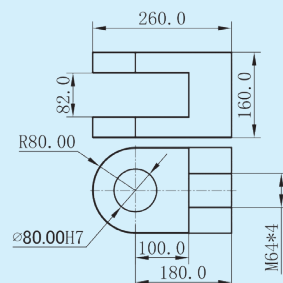
External thread



Internal thread

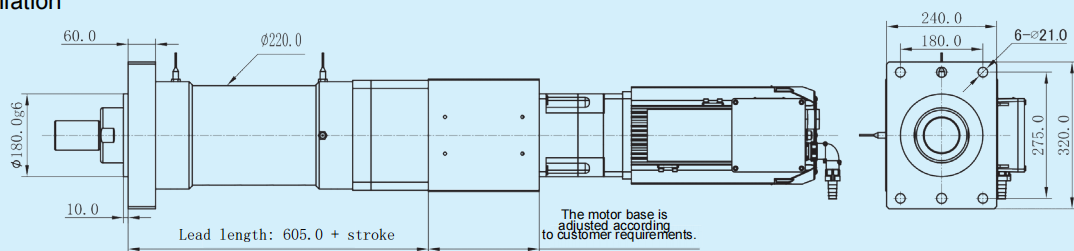


Rod end spherical plain bearings

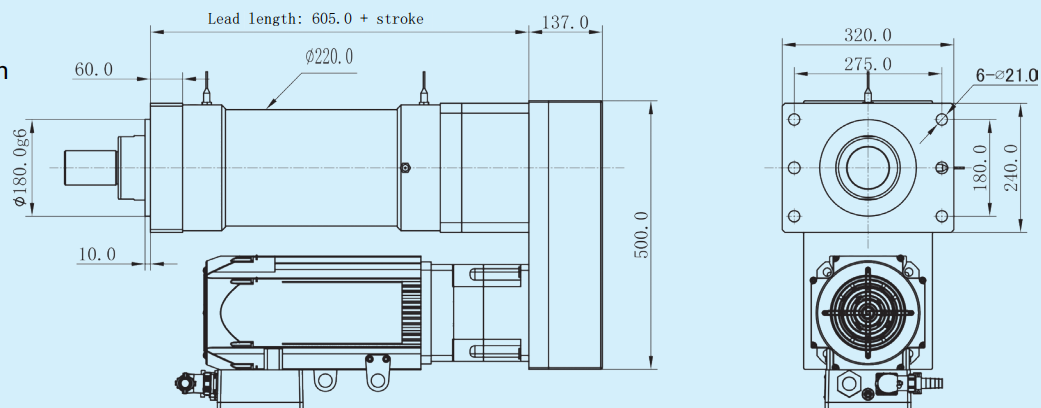


U-shaped hinge

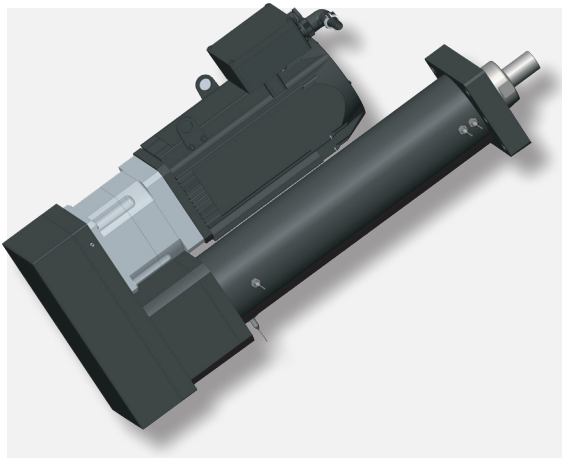
Straight-line front flange installation



Folding type
Front flange installation



WTT 160 Series Servo Electric Cylinder



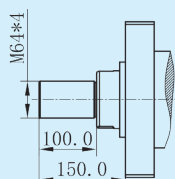
Selection Parameters Table for Servo Electric Cylinders

Specification	Series and Model	WTT160							
	Lead of Lead Screw (mm)	16				20			
	Electric Cylinder Thrust Range (kN)	0.01 ~ 200							
	Electric Cylinder Selectable Stroke (mm)	50 ~ 1000							
Indicator Input	Type	Direct Connection Type, Folding Type							
	Reduction Ratio (i)	1:1							
	Basic Dynamic Axial Load Rating (kN)	368.0				388.0			
	Rated Power (kW)	7.5	11	15	22	7.5	11	15	22
	Motor Rated Torque (N·m)	48	70	95.5	140	48	70	95.5	140
	Motor Rated Speed (rpm)	1500							
Output Indicators	Electric Cylinder Rated Thrust (kN)	16.5	24.3	33.1	48.6	13.2	19.4	26.5	38.8
	Electric Cylinder Rated Speed (mm/s)	400	400	400	400	500	500	500	500
	Recommended Maximum Load (kN)	150				200			
1.If a reduction ratio is required, the above output parameters shall be directly converted by the reduction ratio multiple. 2.For the specific usage of the WTT160 Electric Cylinder, please consult with our company's engineers.									

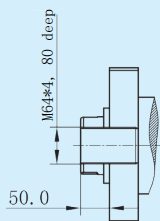
Electric Cylinder and Motor Mounting Method

Front section
connection method

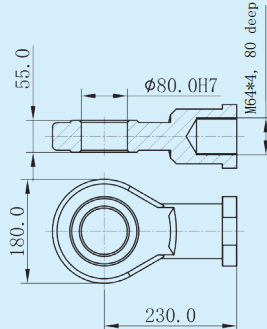
External thread



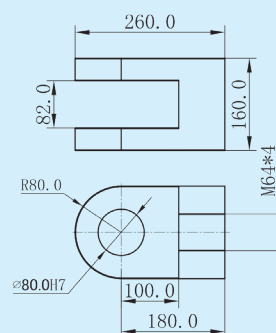
Internal thread



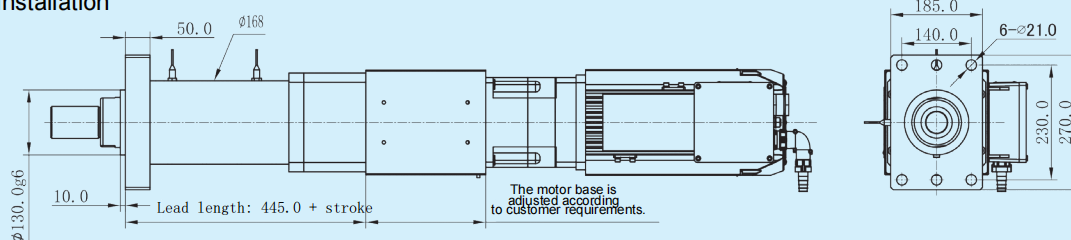
Rod end spherical
plain bearings



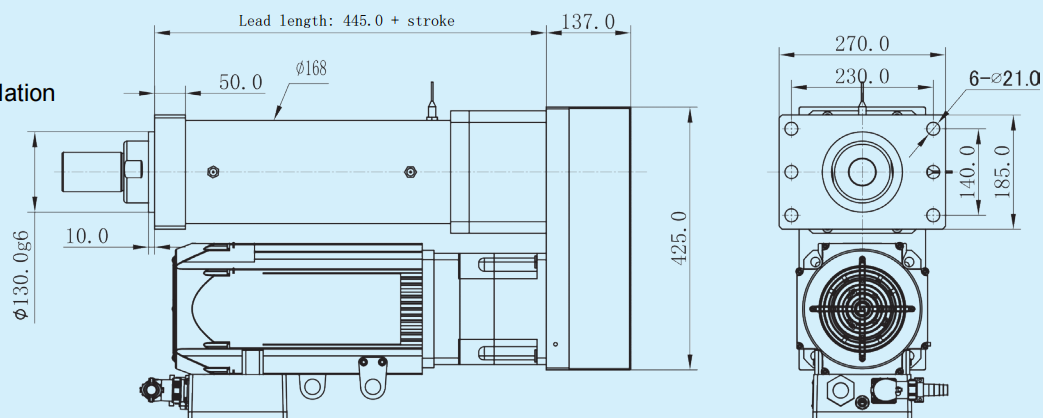
U-shaped hinge



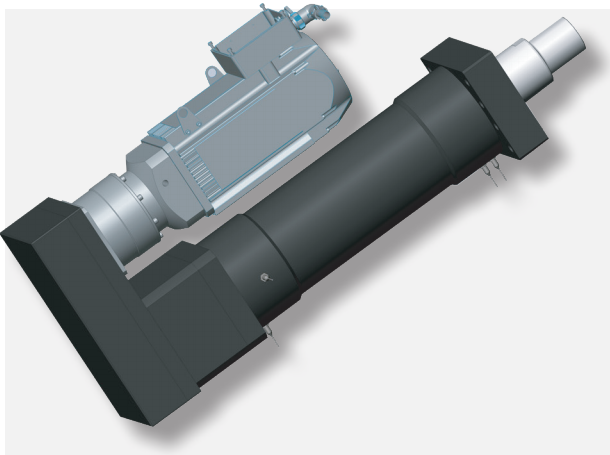
Straight-line
front flange installation



Folding type
Front flange installation



WTT 220 Series Servo Electric Cylinder



Selection Parameters Table for Servo Electric Cylinders

Specification	Series and Model	WTT220							
	Lead of Lead Screw (mm)	16				20			
	Electric Cylinder Thrust Range (kN)	0.01 ~ 300							
	Electric Cylinder Selectable Stroke (mm)	50 ~ 1000							
Indicator Input	Type	Direct Connection Type, Folding Type							
	Reduction Ratio (i)	1:1							
	Basic Dynamic Axial Load Rating (kN)	426				456			
	Rated Power (kW)	11	15	22	30	11	15	22	30
	Motor Rated Torque (N·m)	70	95.5	140	191	70	95.5	140	191
	Motor Rated Speed (rpm)	1500							
Output Indicators	Electric Cylinder Rated Thrust (kN)	24.3	33.1	48.6	66.2	19.4	26.5	38.8	53
	Electric Cylinder Rated Speed (mm/s)	400	400	400	400	500	500	500	500
	Recommended Maximum Load (kN)	250				300			
1.If a reduction ratio is required, the above output parameters shall be directly converted by the reduction ratio multiple. 2.For the specific usage of the WTT220 Electric Cylinder, please consult with our company's engineers.									

Electric Cylinder and Motor Mounting Method

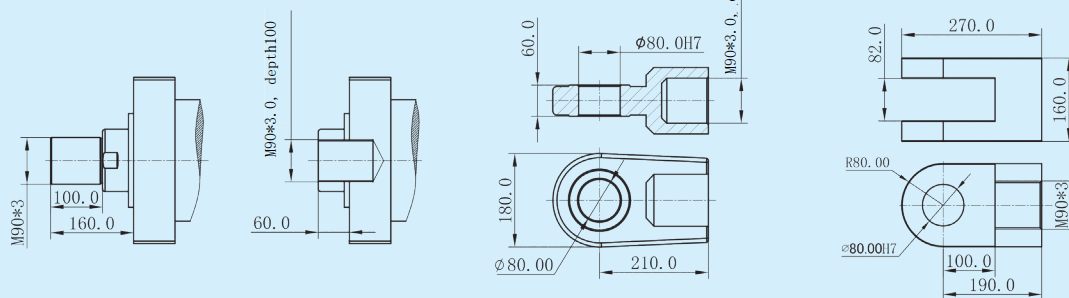
Front section connection method

External thread

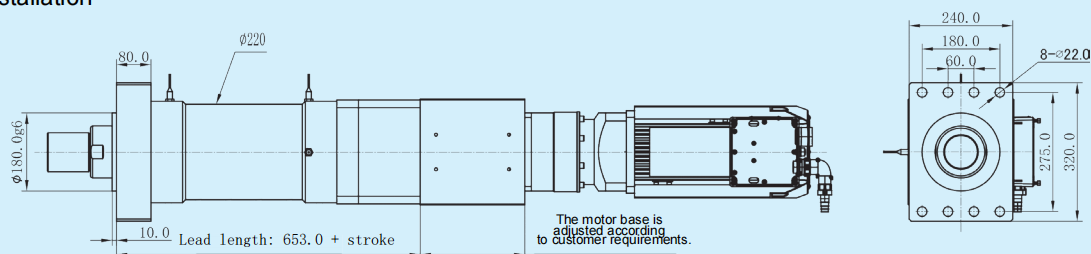
Internal thread

Rod end spherical plain bearings

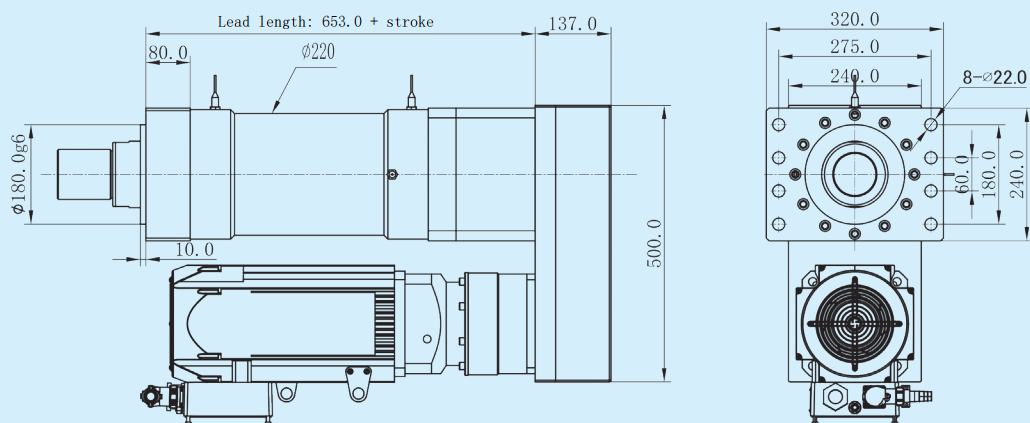
U-shaped hinge



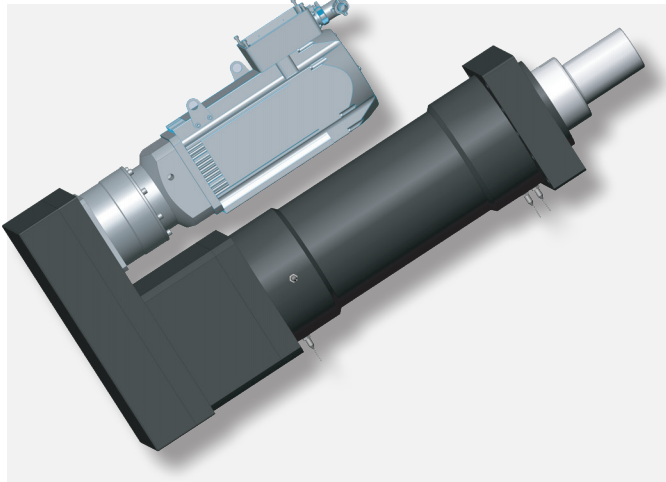
Straight-line front flange installation



Folding type Front flange installation



WTT 270 Series Servo Electric Cylinder

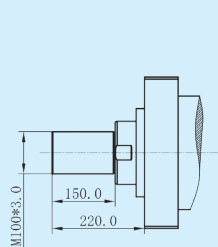


Selection Parameters Table for Servo Electric Cylinders

Specification	Series and Model	WTT270							
	Lead of Lead Screw (mm)	16				20			
	Electric Cylinder Thrust Range (kN)	0.01 ~ 500							
	Electric Cylinder Selectable Stroke (mm)	50 ~ 1000							
Indicator Input	Type	Direct Connection Type, Folding Type							
	Reduction Ratio (i)	1:1							
	Basic Dynamic Axial Load Rating (kN)	550				557			
	Rated Power (kW)	15	20	30	45	15	20	30	45
	Motor Rated Torque (N·m)	95.5	140	191	286	95.5	140	191	286
	Motor Rated Speed (rpm)	1500							
Output Indicators	Electric Cylinder Rated Thrust (kN)	24.3	33.1	48.6	99.4	26.5	38.8	53	99.4
	Electric Cylinder Rated Speed (mm/s)	400	400	400	400	500	500	500	500
	Recommended Maximum Load (kN)	400				500			
1.If a reduction ratio is required, the above output parameters shall be directly converted by the reduction ratio multiple. 2.For the specific usage of the WTT270 Electric Cylinder, please consult with our company's engineers.									

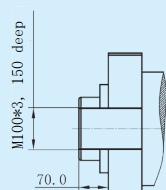
Electric Cylinder and Motor Mounting Method

Front section
connection method

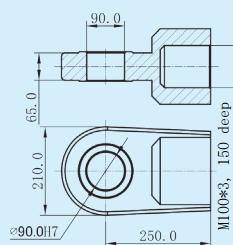


External thread

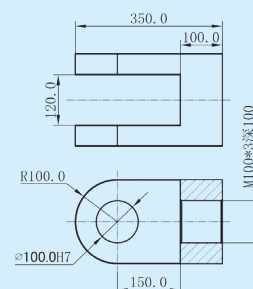
Internal thread



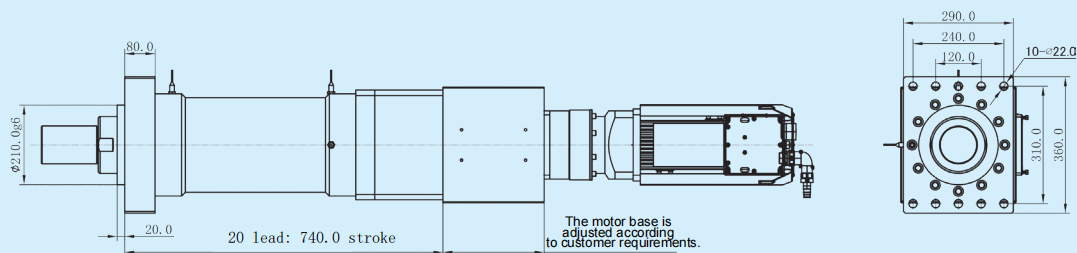
Rod end spherical
plain bearings



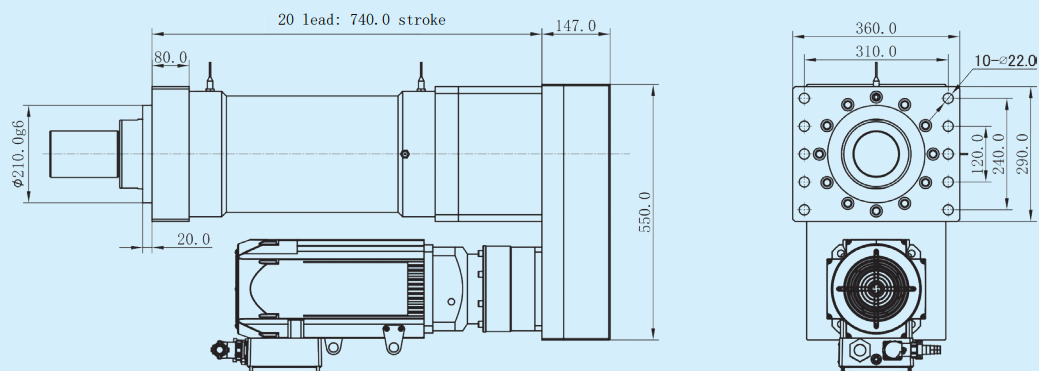
U-shaped hinge



Straight-line
front flange installation



Folding type
Front flange installation



Calculation Method for Selecting Servo Electric Cylinders

Calculation of Electric Cylinder Output Force

The Relationship between Motor Output Torque and Electric Cylinder Output Force

$$F = \frac{T \times \eta \times 2\pi \times R}{L}$$

F: Electric Cylinder Output Force (kN) T: Motor Output Torque (N·m) R: Reduction Ratio
L: Lead Screw Lead (mm) η : Mechanical Efficiency (The general recommended value is 85%, but the efficiency value is related to actual working conditions and may also change. Please make corresponding adjustments according to actual conditions during selection.)

Calculation of Electric Cylinder Service Life

The service life of an electric cylinder generally refers to the service life of the lead screw used inside the electric cylinder, which can be divided into three parts: a. Operational Service Life, It depends on the operating conditions of the electric cylinder, such as operating intensity, operating environment, type of lubrication, and frequency of post-operation maintenance, etc.; b. Accuracy Service Life, It refers to the accuracy deterioration caused by wear; c. Fatigue Life of the Lead Screw, It can be obtained through the calculation of the lead screw's fatigue life. The following is the calculation method for the fatigue life of the electric cylinder.

$$L_s = \left(\frac{C_a}{F_m \times f_w} \right)^3 \times L$$

Load Factor (fw)		
Vibration and Shock	Speed (V)	fw
Light	V<15 (m/min)	1.0~1.2
Medium	15<V<60 (m/min)	1.2~1.5
Heavy	V>60 (m/min)	1.5~3.0

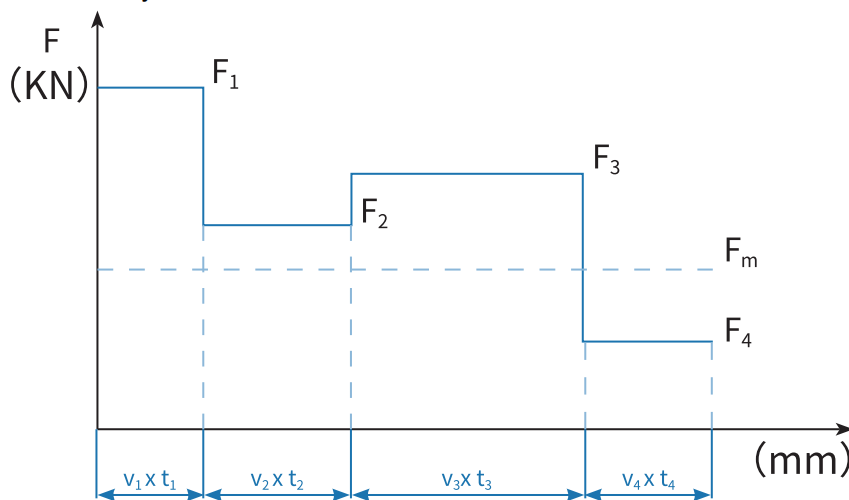
Ls: Electric Cylinder Service Life (km)

Fm: Axial Average Load Borne by Electric Cylinder (kN)

Ca: Basic Dynamic Load Rating of Lead Screw Nut (kN) <Please refer to the specific performance indicators of the lead screw>

Calculation of Average Axial Load for Electric Cylinder

When the axial load is constantly changing, to determine the fatigue life, it is necessary to first calculate the axial average load (Fm). For the electric cylinder, the force, speed, and time in different working sections within one working cycle are analyzed as follows:



The calculation formula for the axial average load of the electric cylinder is as follows:

$$F_m = \left(\frac{F_1^3 \times v_1 \times t_1 + F_2^3 \times v_2 \times t_2 + F_3^3 \times v_3 \times t_3 + F_4^3 \times v_4 \times t_4}{v_1 \times t_1 + v_2 \times t_2 + v_3 \times t_3 + v_4 \times t_4} \right)^{\frac{1}{3}}$$

Electric Cylinder Selection Table

Electric Cylinder Selection Table					
Serial Number	Customer Requirements	Customer Name (Customer Code):			Industry
NO.	Requirements	Selection	Code	Fill in the content	Notes
1	Electric Cylinder Stroke:	Lmax = mm			Stroke Requirements
2	Electric Cylinder Load:	mmax = kg			Maximum Load
3	Electric Cylinder Speed:	Vmax = mm/s			Maximum Speed
4	Electric Cylinder Precision:	± mm			Repeat Positioning Accuracy
5	Usage Frequency	f =			Operation Times per Day
6	Motor Mounting Method:	Direct Mounting	BC		
		Folding Installation	BR		
		Vertical Mounting	BM		
7	Electric Cylinder Mounting Method:	Flangeless	F		
		Front Flange	FA		
		Side Flange	LB		
		Rear Flange	FB		
		Rear Hinge	CA/CB		
		Rear Flange	TC/TB		
8	Front-End Mounting Methods of Electric Cylinders	External Thread	A		
		Internal Thread	B		
		Rod End Bearing	G		
		Y-Type Connector/Adapter	Y		
		I-Type Connector/Adapter	I		
		Ball Joint	Q		
		Flange	F		
		Pin Hole	R		
9	Motor Selection	Servo	AC/DC: SF		Fill in: Motor Type, Motor Brand, DC/AC, Motor Power, Motor Size
		Stepper	BJ		
		Brushless DC	ZL		
		AC Constant Speed	JL		
10	Speed Reducer	Model/Ratio			Brand, Spur Gear/Helical Gear
11	Limit Switch	Magnetic/Proximity	NPN/PNP		Brand
12	Others	Anti-Corrosion/High-Low Temperature (Resistant)/Explosion-Proof/Waterproof			
13	System Configuration	Basic/Standard/Advanced			

This image shows a full page of white paper with horizontal dashed lines, typical of primary-ruled notebook paper. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

WODTOP

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