

3-Axis Series Automated Dispensing Robot



Desktop Robot Series JT Series

JT Series

For further information, please refer to the individual manual.

Max. Speed is up to 850 mm/s.

Repeatability ± 0.01 mm.

Transfer DXF to teaching points

Various Dispense Commands



Hit Product !

Increased Structural Rigidity

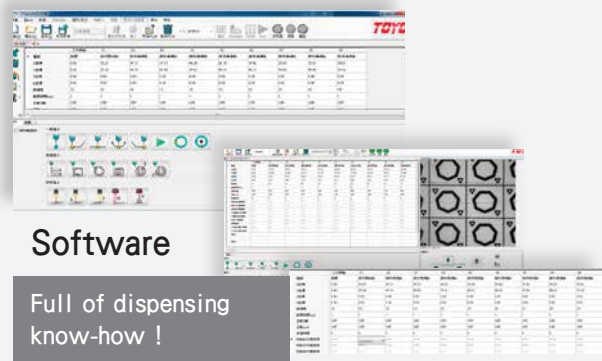
- Ball Screw is applied in Z axis
- Faster, more precise, with greater structural rigidity for long-term, dependable use; increased stability for high speed tracking function.

Communication Port

- input/output: 16/16
- USB port for programs backup and F/W upgrades
- Multifunction display
- COM1/COM2
- EMG、Start、Dispense Purge buttons

Increased Structural Rigidity

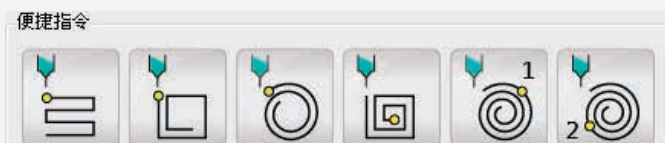
- Import image file into the software convert to a program is capable.
- Import DXF file into the software convert to a program is capable.
- CCD camera adjustment function. (option)
- Editing path and pallet by using software wizard.



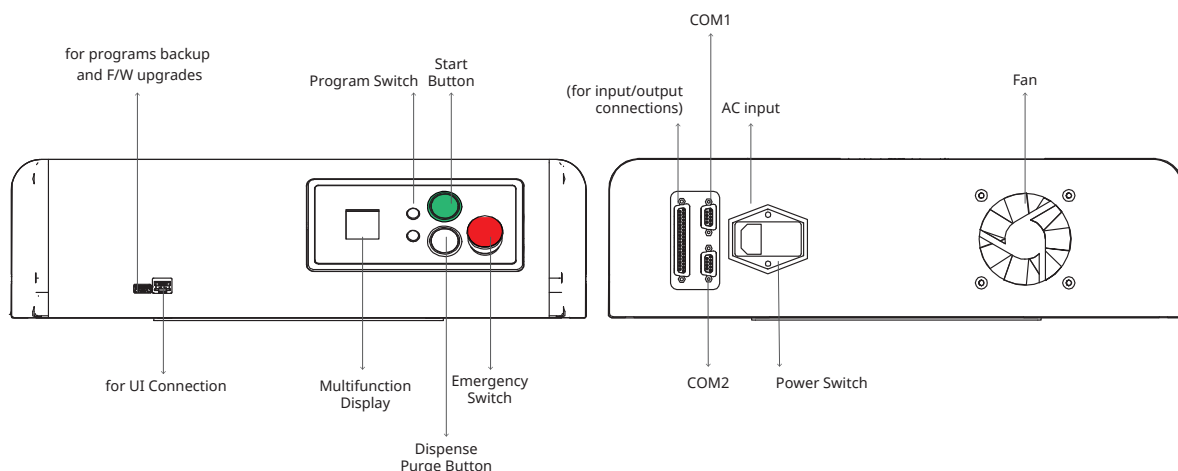
Various Dispense Commands

- Click the icon of dispensing command to enter the associated command at a numbered address in a program.

Convenient fill-in dispensing functions which allow you to dispense like drawing a picture using only 2 points for a rectangle and 3 points for a circle.



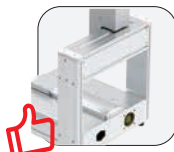
Operation Panel Diagram



JTHX/JTHS Structure

Built-in Cable Tracks

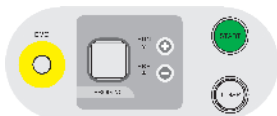
New built-in cable tracks improve safety and look.



Built-in Cable Tracks External Cable Tracks

Intuitive, Easy Control Panel

The intuitive control panel features system start, emergency stop, and dispense override buttons, as well as an LCD panel for easy recipe selection.



Ball-screw-driven X/Y/Z-axis

Compared with competitor's belt-driven models, our fully ball-screw-driven desktop robots improve single- and multi-axis positioning accuracy.

Item	Ball screw	Belt
Repeatability	○	×
Service life	○	△
Motion efficiency	○	×



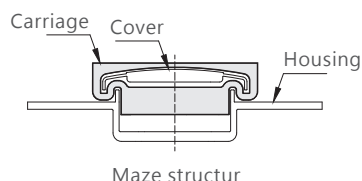
Ball-screw driven Z-axis

Ball-screw driven Y-axis

Ball-screw driven X-axis

High-rigidity Housing and Carriage Design

One-piece aluminum extrusion was designed with finite elemental analysis (FEA) to provide the best rigidity-to-weight ratio. XY-axis cover prevents unwanted foreign object inclusion.



All JTH models Use High-performance Servo Motors

No missed steps, high-speed, high-precision.

- JTHX light-payload, economic model
- JTHS high-payload, high-speed model

Flexible choice of work area

Aluminum extrusion design allows for work area size and overall system dimension customization.

Modularized Design

Modularization allows for easy installation, easier learning curves, shorter lead times, and more competitive pricing.

JTL Structure

Built-in Cable Tracks

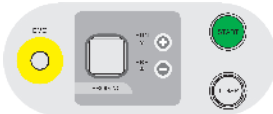
New built-in cable tracks improve safety and look.



Built-in Cable Tracks External Cable Tracks

Intuitive, Easy Control Panel

The intuitive control panel features system start, emergency stop, and dispense override buttons, as well as an LCD panel for easy recipe selection.



Ball-screw-driven Z-axis

The Z-axis ball-screw drive system improves overall system accuracy and reduces the chance of missed motor steps.

Item	Ball screw	Belt
Repeatability	○	×
Service life	○	△
Motion efficiency	○	×



Ball-screw driven
Z-axis

Ball-screw driven
Y-axis

Ball-screw driven
X-axis

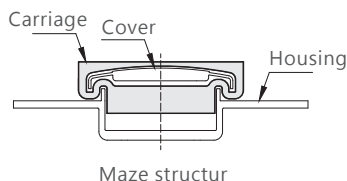
Homemade linear motor adopted

Achieve fast speeds, quick acceleration, and ± 0.002 mm precision with our linear-driven sliding table.

↑
Repeatability
 ± 0.002 mm

High-rigidity Housing and Carriage Design

One-piece aluminum extrusion was designed with finite elemental analysis (FEA) to provide the best rigidity-to-weight ratio. XY-axis cover prevents unwanted foreign object inclusion.



↑
Straightness
 ± 0.05 mm

Low Speed Ripple

The LMF15 features a speed ripple less than 1% at movement speeds less than or equal to 500 mm/s; making it a suitable choice for automated optical inspection (AOI) and laser-related applications.

Flexible choice of work area

Aluminum extrusion design allows for work area size and overall system dimension customization.

Modularized Design

Modularization allows for easy installation, easier learning curves, shorter lead times, and more competitive pricing.

Desktop Robot Applications

Cutting (Machining)

- Perform substrate cutting by place the printed circuit board (PCB) on the XY-axis moving table and matching tool on the Z-axis single-axis linear actuator.



- Use Model JTHC/JTHD

→ P013

Soldering

- Equipped with an automatic soldering tool, place the PCB on the sliding table for fully automated soldering.



- Use Model JTHC/JTHD

→ P013

Force Detection

- Perform various tests on small-sized workpieces with a z-axis-mounted pressure detector.



- Use Model JTHS/JTHX

→ P021

Dispensing

- Equipped with a glue dispenser, , can be perfusion package, then seal, dosing coating, micro volume foaming, perfusion and other process application requirements.



- Use Model JTHX/JTHC/JTHD

→ P021

Screw Tightening

- With the Z-axis automatic lock screw machine, you can carry out automatic screw feeding, locking and detection and other processes, can also be reverse removal of screws.



- Use Model JTL/JTHS

→ P029

Automated Optical Inspection (AOI)

- With the Z-axis vision system and light source, you can do a variety of small parts defects and NG detection to solve the problem of artificial eye examination.



- Use Model JTHS/JTHX

→ P021

Cartesian Coordinate Robot Applications

CCD Machine Vision Inspection

- Automated optical inspection (AOI) for printed circuit board (PCB) using an external CCD camera attached to the Z-axis.



- Use Model
XYCGT321-A

→ P033

PCB Laser Engraving

- High-speed, dual-drive laser engraving of LCD panels and other large-sized workpieces.

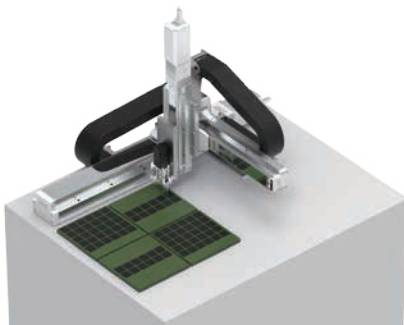


- Use Model
XYCGT321-A

→ P033

Pick-and-place for Small-sized Workpieces

- Pick-and-place of small parts using a single-axis sliding table with a 3-axis linear system.

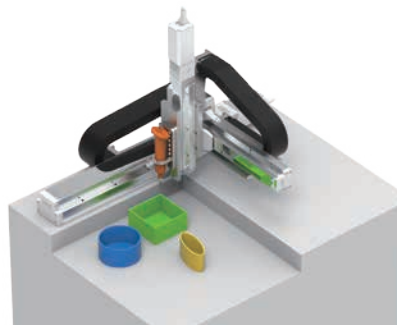


- Use Model
XYCGT321-A

→ P033

Dispensing for Small-sized Workpieces

- The 3-axis linear system provides a cost-competitive solution for dispensing applications both on and off the production line.

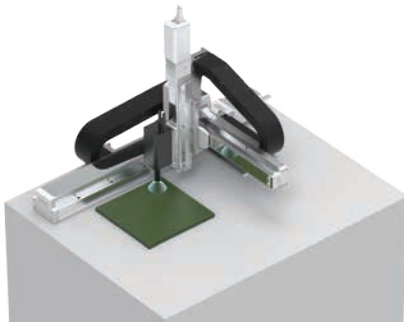


- Use Model
XYSGT432-A

→ P037

Surface Treatment

- The 3-axis linear system is suitable for cleaning and surface treatment applications.

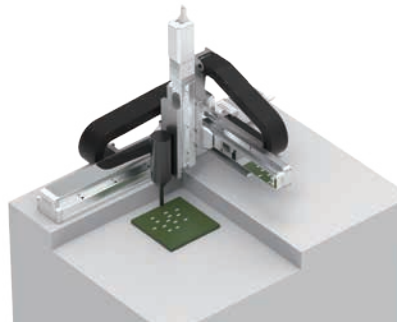


- Use Model
XYSGT432-A

→ P037

Screw-tightening

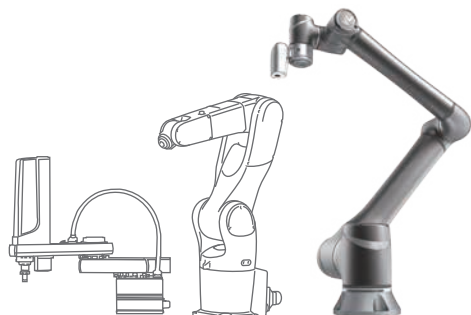
- The 3-axis linear system is suitable for pick-and-place and tightening of screw and bolts.



- Use Model
XYSGT432-A

→ P037

Control System Chart



Industrial Robots & Cobots

Easy Integration for External Devices



Dispensing Tool



Soldering Tool



Screw-tightening Tool



Industrial Cameras



Light Source



CCD Lens



Laser Altimeter

I/O RJ45 Modular Connection Cable

I/O
RJ45 Modular Connection Cable
RS485 Serial Communication Cable (COM2)

I/O Communication Control

Uses USB to edit system procedures
and parameters

RS232 (COM1)
RJ45 Modular Connection Port



PC Software



Material Handling Platform

JTH/XYGT Series



Teaching Pendant

JT 鎖螺絲機規格



規格表

主要規格			JTHX200	JTHS/X300	JTHS/X400	JTHS/X500	JTHS/X500D
工作範圍	X*Y軸	(mm)	200*200	300*300	400*400	500*500	500*500 (雙X軸)
	Z軸	(mm)	100	100	100	100	100
可搬運 最大荷重	X軸	(kg)	15	15	15	15	X1&X2各10KG
	Z軸	(kg)	8	8	8	8	8
點對點驅動 ^{*1} ()可設定範圍 %	X*Y軸	(mm/s)	800	800	800	800	800
	Z軸	(mm/s)	400	400	400	400	400
連續路徑驅動 ^{*1} ()可設定範圍	X*Y*Z 合成速度	(mm/s)	600	600	600	600	600
位置重複精度 ^{*2}	X*Y軸	(mm)	±0.005	±0.005	±0.005	±0.005	±0.005
	Z軸	(mm)	±0.005	±0.005	±0.005	±0.005	±0.005
外觀/重量	W*D*H	(mm)	497*454*715	597*554*770	697*654*770	797*754*770	797*754*770
	本體重量	(kg)	35	53	63	73	78

通用規格		
驅動方式		JTHX 步進驅動 / JTHS 伺服馬達
控制方式		點對點控制、連續路徑控制
補償功能		3D直線補償、3D圓弧補償
位置輸入方式		移動教點、座標輸入教點
教導操作方式		專用UI(PC)：使用專用UI可進行2D CAD路徑轉檔，可匯入圖片檔進行描點
		專用APP(PAD)：可進行教點工作及簡易程式編輯
顯示畫面	語系	中文、英文、日文 (陸續追加中)
	單位	mm
程式數量		100組 (1~100)
點記憶容量		10萬點
簡易步序控制		100組，1000 (步/組)
外部連接埠	IO	16 IN / 16 OUT (NPN/PNP共用)
	LAN	Ethernet供UI使用 (透過HUB，可對外連接其他週邊)
	COM	RS-232C (可供週邊系統連結)
	USB	韌體更新/ 程式備份
電源	(V)	AC 100~240, 5A
工作溫度	(°C)	0 ~ 40 °C
工作溼度	(%)	20 ~ 90 (無結露狀況)

*1、最高速會因外在條件不同而異。當設定在最大搬運荷重時，將無法達到最高速請注意。

*2、位置重複精度會因為溫溼度不同而有所差異，如需要請在恆溫、恆溼下使用。重複精度非絕對精度使用時請注意。

Spec Index

Desktop Robot Series

Env.	Drive Method	Motor	Image	Model Number	Assembly Method	Lead (mm)			Single-axis Max. Speed (mm/s)		
						X axis	Y axis	Z axis	X axis	Y axis	Z axis
Standard Environment	Recirculating Ball Screw	Closed-loop stepper motor		JTHC200	Desktop	10	10	5	500	500	200
				JTHC300		10	10	5	500	500	250
				JTHC400		10	10	5	500	500	250
				JTHC500		10	10	5	500	500	250
				JTHC500D		10	10	5	500	500	250
		Servo motor		JTHD200		20	20	5	500	500	200
				JTHD300		20	20	5	600	600	250
				JTHD400		20	20	5	600	600	250
				JTHD500		20	20	5	600	600	250
				JTHD500D		20	20	5	600	600	250
		Servo motor		JTHX200		10	10	5	500	500	200
				JTHX300		10	10	5	500	500	250
				JTHX400		10	10	5	500	500	250
				JTHX500		10	10	5	500	500	250
				JTX500D		10	10	5	500	500	250
		Servo motor		JTHS300		20	20	10	1000	1000	500
				JTHS400		20	20	10	1000	1000	500
				JTHS500		20	20	10	1000	1000	500
				JTHS500D		20	20	10	1000	1000	500

Linear-motor-driven Desktop Robot Series

Env.	Drive Method	Motor	Image	Model Number	Assembly Method	Rotor Specifications (mm)		Lead (mm)	Single-axis Max. Speed (mm/s)		
						X axis	Y axis		X axis	Y axis	Z axis
Standard Environment	Linear Motor	Linear Motor		JTL500	Desktop	LMF15		10	1200	1200	500

Cartesian Robot Series

Env.	Drive Method	Motor	Image	Model Number	Combination	Lead (mm)			Single-axis Max. Speed (mm/s)			Stroke (mm)		
						X axis	Y axis	Z axis	X axis	Y axis	Z axis	X axis	Y axis	Z axis
Standard Environment	Recirculating Ball Screw	Closed-loop stepper motor		XYCGT320-A	Perpendicular Cantilever (A)	10	10	-	350	538	-	50~1100	50~400	-
				XYCGT321-A		10	10	6	350	538	314	50~1100	50~300	50~100
		Servo motor		XYSGT430-A		20	20	-	1000	1000	-	50~1250	50~500	-
				XYSGT432-A		20	20	5	1000	1000	250	50~1250	50~450	50~100

X*Y*Z Combined Speed(mm/s)	Single-axis Effective Stroke (mm)			Single-axis Max. Payload (kg)		Remarks
	X axis	Y axis	Z axis	X axis	Z axis	
400	200	200	100	8	5	- Economic Model - Entry-level Series - Complete range of sizes - Light to medium Payload
400	300	300	100	12	6	
400	400	400	100	12	6	
400	500	500	100	12	6	
400	500	500	100	7(Single axis)	6	
400	150	150	100	8	4	- Economic Model - Complete range of sizes - Light to medium Payload
500	250	250	100	10	5	
500	350	350	100	10	5	
500	450	450	100	10	5	
500	450	450	100	6(Single axis)	5	
400	150	150	100	8	4	- Complete range of sizes - Light to medium Payload - Sleek Design
500	250	250	100	10	5	
500	350	350	100	10	5	
500	450	450	100	10	5	
500	450	450	100	6(Single axis)	5	
400	300	300	100	15	8	- Complete range of sizes - Medium to heavy payloads - Sleek Design
500	400	400	100	15	8	
500	500	500	100	15	8	
500	500	500	100	10(Single axis)	8	

X*Y*Z Combined Speed (mm/s)	Single-axis Effective Stroke (mm)			Single-axis Max. Payload (kg)		Remarks
	X axis	Y axis	Z axis	X axis	Z axis	
1100	470	470	100	15	8	- High speed, high precision - Medium to heavy payloads

Maximum Payload (kg)												Remarks
Stroke 50	100	150	200	250	300	350	400	450	500	550	600	
	5											▪ Light payloads
	5.5											
	10											▪ Medium payloads
	12											

JTHC

Economic

Ball-screw-driven



This picture is just for the reference. Please check the actual dimension drawing.

Main Specifications

Item			JTHC200	JTHC300	JTHC400	JTHC500
Work Area	X*Yaxis	mm	200*200	300*300	400*400	500*500
	Zaxis	mm	100	100	100	100
Max. Payload	Xaxis	kg	8	12	12	12
	Zaxis	kg	5	6	6	6
PTP Movement	X*Yaxis	mm/s	500	500	500	500
	Zaxis	mm/s	200	250	250	250
CP Movement	X*Y*Z Combined Speed	mm/s	400	400	400	400
Repeatability	X*Y axis	mm	±0.01	±0.01	±0.01	±0.01
	Zaxis	mm	±0.01	±0.01	±0.01	±0.01

General Specifications

Item		TSC400 Integrated Controller-driver Spec.
Drive Method		Closed-loop stepper motor
Control Method		Point-to-point (PTP), Continuous Path (CP)
Interpolation		3-dimensional linear and arc interpolation
Teaching Method		Remote teaching (JOG)/ Manual Data Input (MDI)
Teaching System		PC-based UI: convert 2D CAD files to paths; import images for tracing.
		PAD-based UI: teach position; edit programs.
UI	Languages	Chinese (Traditional), English, Japanese
	Units	mm
Programs Capacity		100 programs (1~100)
Data Capacity		Up to 100,000 Points
Simple PLC Function		100 sets, Up to 1,000 steps
External Input/Output	IO	16 IN/16 OUT (NPN/PNP)
	LAN	Ethernet need to use under TOYO UI (Through the HUB to the devices)
	COM	RS-232C (Supports peripheral device connections)
	USB	Firmware Updates, Procedure Import/Export
Power Source		AC 100~240, 5A

Order Number Format

JTHC 300 - 3 - H1 - CCDA - A001

Series Number Customization Number

Work Area(X*Y)

Single X-axis	200:200*200
	300:300*300
	400:400*400
	500:500*500

Number of Axes

2	X/Y
3	X/Y/Z
3R	X/Y/Z/R

Designated Z-axis Height

H1	Z-axis Height+50
H2	Z-axis Height+100
H3	Z-axis Height+200
H4	Z-axis Height+300

※If Z-axis height is standsrd, no description.

With CCD

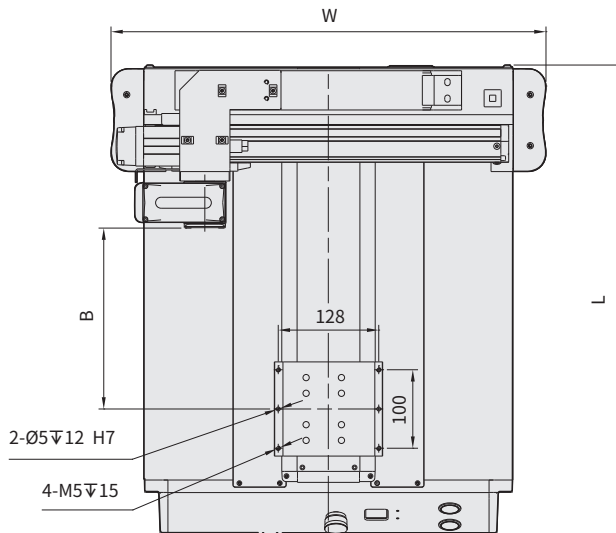
CCDA

※If no CCD, no description.

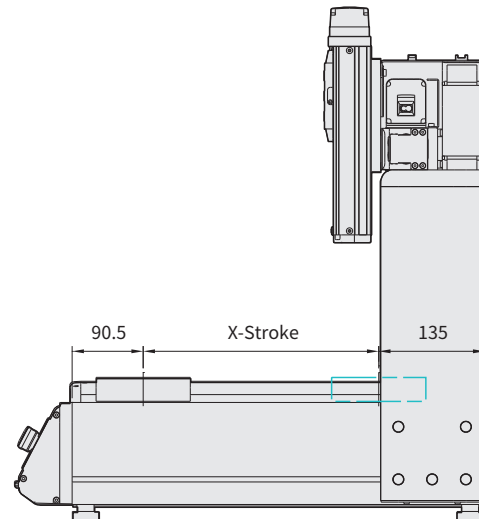
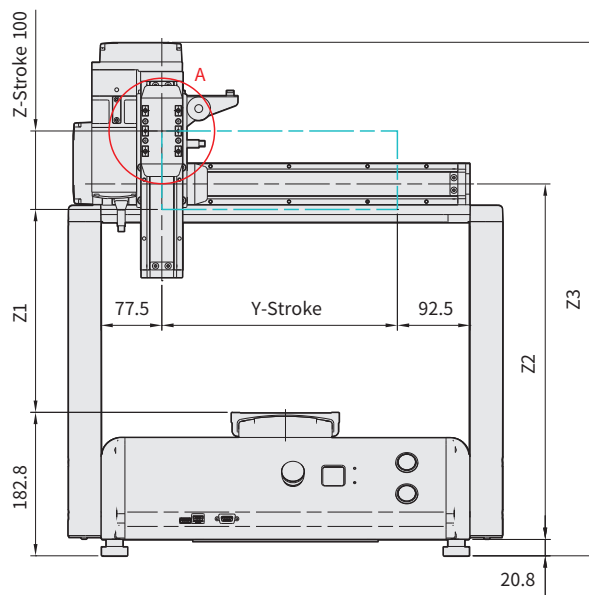
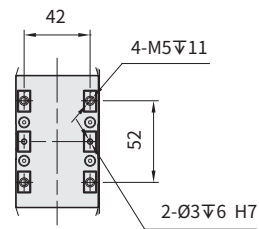
JTHC200/300/400/500 Dimension Drawing


Download CAD data at www.toyorobot.com

Units : mm



A View



Model Number	JTHC200	JTHC300	JTHC400	JTHC500
Dimensions				
X*Y Work Area	200*200	300*300	400*400	500*500
L	497.3	597.3	697.3	797.3
W	454	554	654	754
B	130.5	230.5	330.5	430.5

Model Number	Z-axis Height-related Dimensions				
Dimensions	Standard	H1(+50)	H2(+100)	H3(+200)	H4(+300)
Z1	258.5	308.5	358.5	458.5	558.5
Z2	453	503	553	653	753
Z3	654.3	704.3	754.3	854.3	954.3

JTHC

Economic

Double
X axis

Ball-screw-driven



This picture is just for the reference. Please check the actual dimension drawing.

Main Specifications

Item			JTHC500D
Work Area	X*Yaxis	mm	500*500 (Double X axis)
	Zaxis	mm	100
Max. Payload	Xaxis	kg	7 (Single axis)
	Zaxis	kg	6
PTP Movement	X*Yaxis	mm/s	500
	Zaxis	mm/s	250
CP Movement	X*Y*Z Combined Speed	mm/s	400
Repeatability	X*Yaxis	mm	±0.01
	Zaxis	mm	±0.01

General Specifications

Item		TSC400 Integrated Controller-driver Spec.
Drive Method		Closed-loop stepper motor
Control Method		Point-to-point (PTP), Continuous Path (CP)
Interpolation		3-dimensional linear and arc interpolation
Teaching Method		Remote teaching (JOG)/ Manual Data Input (MDI)
Teaching System		PC-based UI: convert 2D CAD files to paths; import images for tracing.
		PAD-based UI: teach position; edit programs.
UI	Languages	Chinese (Traditional), English, Japanese
	Units	mm
Programs Capacity		100 programs (1~100)
Data Capacity		Up to 100,000 Points
Simple PLC Function		100 sets, Up to 1,000 steps
External Input/Output	IO	16 IN/16 OUT (NPN/PNP)
	LAN	Ethernet need to use under TOYO UI (Through the HUB to the devices)
	COM	RS-232C(Supports peripheral device connections)
	USB	Firmware Updates, Procedure Import/Export
Power Source		AC 100~240, 5A

Order Number Format

JTHC 500D - 4 - H1 - CCDA - A001

Series Number

Customization Number

Work Area(X*Y)

Double X-axis 500D:500*500

Number of Axes

4 X1/X2/Y/Z

Designated Z-axis Height

H1 Z-axis Height+50
H2 Z-axis Height+100
H3 Z-axis Height+200
H4 Z-axis Height+300

※If Z-axis height is standsrd, no description.

With CCD

CCDA

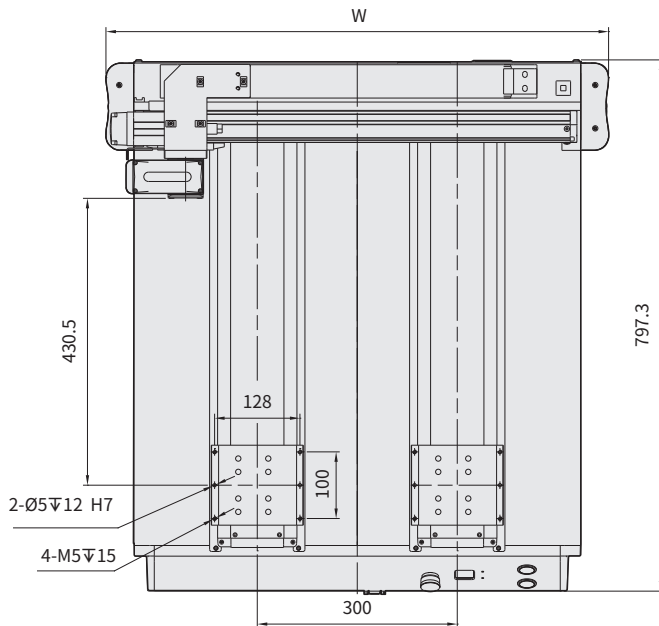
※If no CCD, no description.

JTHC500D Dimension Drawing

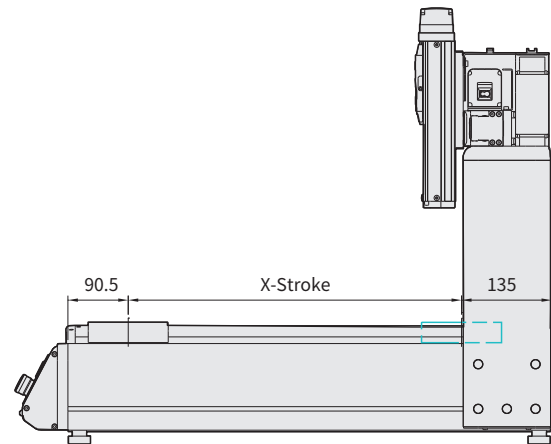
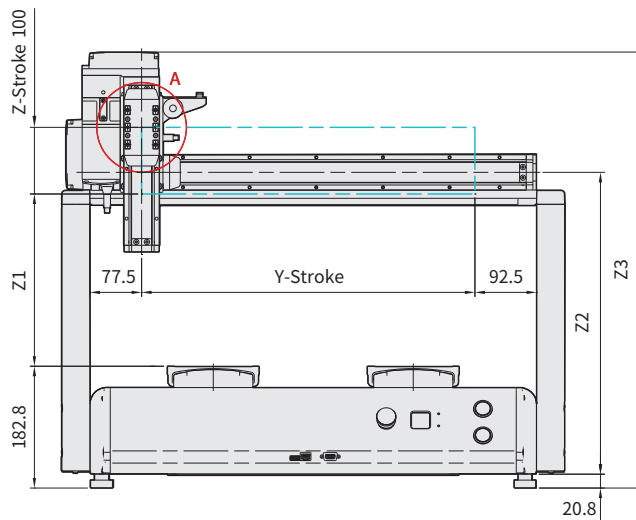
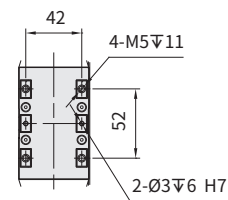


Download CAD data at www.toyorobot.com

Units : mm



A View



Model Number	JTHC500D
Dimensions	
X*Y Work Area	500*500

Model Number	Z-axis Height-related Dimensions				
Dimensions	Standard	H1(+50)	H2(+100)	H3(+200)	H4(+300)
Z1	258.5	308.5	358.5	458.5	558.5
Z2	453	503	553	653	753
Z3	654.3	704.3	754.3	854.3	954.3

JTHD

Economic

Ball-screw-driven



This picture is just for the reference. Please check the actual dimension drawing.

Main Specifications

Item			JTHD200	JTHD300	JTHD400	JTHD500
Work Area	X*Yaxis	mm	150*150	250*250	350*350	450*450
	Zaxis	mm	100	100	100	100
Max. Payload	Xaxis	kg	8	10	10	10
	Zaxis	kg	4	5	5	5
PTP Movement	X*Yaxis	mm/s	500	600	600	600
	Zaxis	mm/s	200	250	250	250
CP Movement	X*Y*Z Combined Speed	mm/s	400	500	500	500
Repeatability	X*Yaxis	mm	±0.01	±0.01	±0.01	±0.01
	Zaxis	mm	±0.01	±0.01	±0.01	±0.01

General Specifications

Item		TSC400 Integrated Controller-driver Spec.
Drive Method		DC Server motor
Control Method		Point-to-point (PTP), Continuous Path (CP)
Interpolation		3-dimensional linear and arc interpolation
Teaching Method		Remote teaching (JOG)/ Manual Data Input (MDI)
Teaching System		PC-based UI: convert 2D CAD files to paths; import images for tracing.
		PAD-based UI: teach position; edit programs.
UI	Languages	Chinese (Traditional), English, Japanese
	Units	mm
Programs Capacity		100 programs (1~100)
Data Capacity		Up to 100,000 Points
Simple PLC Function		100 sets, Up to 1,000 steps
External Input/Output	IO	16 IN/16 OUT (NPN/PNP)
	LAN	Ethernet need to use under TOYO UI (Through the HUB to the devices)
	COM	RS-232C(Supports peripheral device connections)
	USB	Firmware Updates, Procedure Import/Export
Power Source		AC 100~240, 5A

Order Number Format

JTHD 300 - 3 - H1 - CCDA - A001

Series Number

Customization Number

Work Area(X*Y)

Single X-axis	200:150*150
	300:250*250
	400:350*350
	500:450*450

Number of Axes

2	X/Y
3	X/Y/Z
3R	X/Y/Z/R

Designated Z-axis Height

H1	Z-axis Height+50
H2	Z-axis Height+100
H3	Z-axis Height+200
H4	Z-axis Height+300

※If Z-axis height is standsrd, no description.

With CCD

CCDA

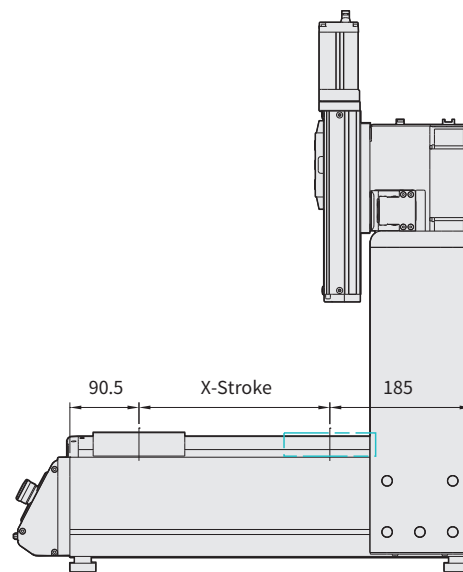
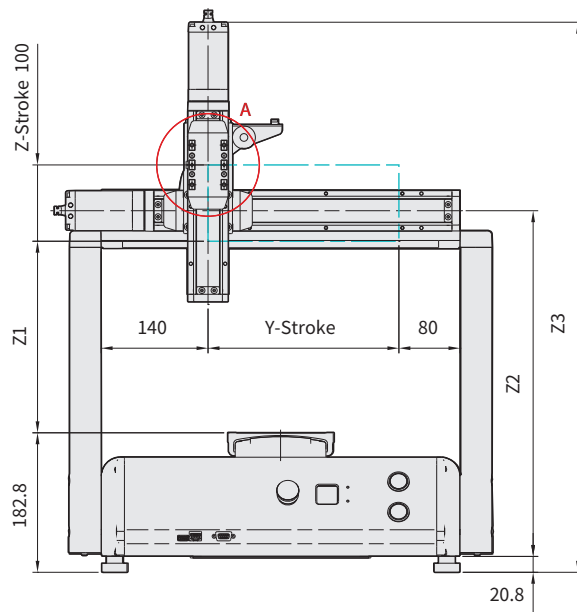
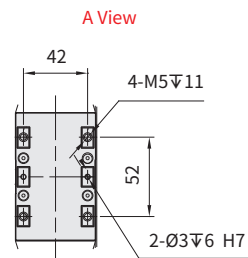
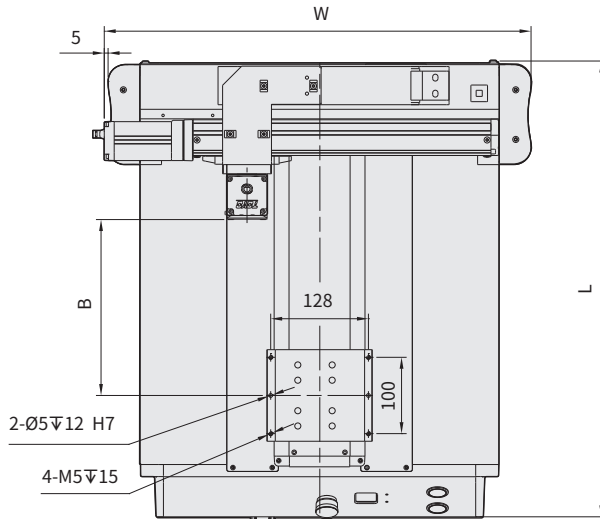
※If no CCD, no description.

JTHD200/300/400/500 Dimension Drawing



Download CAD data at www.toyorobot.com

Units : mm



Model Number	JTHD200	JTHD300	JTHD400	JTHD500
Dimensions				
X*Y Work Area	150*150	250*250	350*350	450*450
L	497.3	597.3	697.3	797.3
W	459	559	659	759
B	130.5	230.5	330.5	430.5

Model Number	Z-axis Height-related Dimensions				
Dimensions	Standard	H1(+50)	H2(+100)	H3(+200)	H4(+300)
Z1	251	301	351	451	551
Z2	453	503	553	653	753
Z3	720.8	770.8	820.8	920.8	1020.8

JTHD

Economic

Double
X axis

Ball-screw-driven



This picture is just for the reference. Please check the actual dimension drawing.

Main Specifications

Item			JTHD500D
Work Area	X*Yaxis	mm	450*450 (Double X axis)
	Zaxis	mm	100
Max. Payload	Xaxis	kg	6 (Single axis)
	Zaxis	kg	5
PTP Movement	X*Yaxis	mm/s	600
	Zaxis	mm/s	250
CP Movement	X*Y*Z Combined Speed	mm/s	500
Repeatability	X*Yaxis	mm	±0.01
	Zaxis	mm	±0.01

General Specifications

Item		TSC400 Integrated Controller-driver Spec.
Drive Method		DC Server motor
Control Method		Point-to-point (PTP), Continuous Path (CP)
Interpolation		3-dimensional linear and arc interpolation
Teaching Method		Remote teaching (JOG)/ Manual Data Input (MDI)
Teaching System		PC-based UI: convert 2D CAD files to paths; import images for tracing.
		PAD-based UI: teach position; edit programs.
UI	Languages	Chinese (Traditional), English, Japanese
	Units	mm
Programs Capacity		100 programs (1~100)
Data Capacity		Up to 100,000 Points
Simple PLC Function		100 sets, Up to 1,000 steps
External Input/Output	IO	16 IN/16 OUT (NPN/PNP)
	LAN	Ethernet need to use under TOYO UI (Through the HUB to the devices)
	COM	RS-232C(Supports peripheral device connections)
	USB	Firmware Updates, Procedure Import/Export
Power Source		AC 100~240, 5A

Order Number Format

JTHD 500D - 4 - H1 - CCDA - A001

Series Number

Customization Number

Work Area(X*Y)

Double X-axis 500D:450*450

Number of Axes

4 X1/X2/Y/Z

Designated Z-axis Height

H1 Z-axis Height+50
H2 Z-axis Height+100
H3 Z-axis Height+200
H4 Z-axis Height+300

※If Z-axis height is standard, no description.

With CCD

CCDA

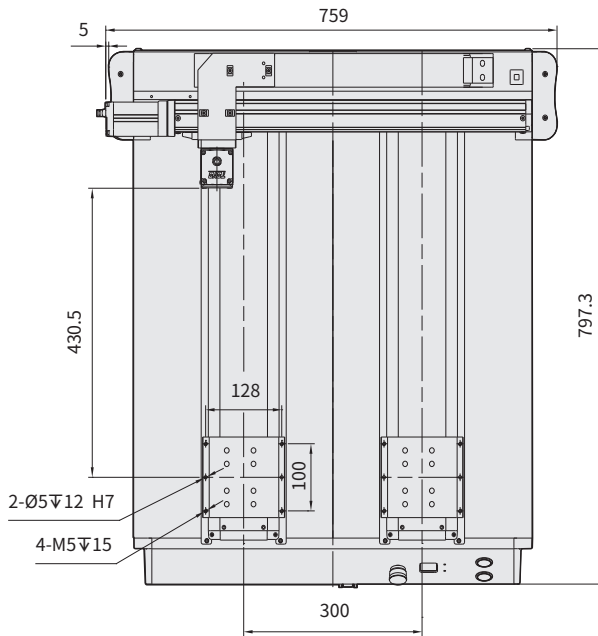
※If no CCD, no description.

JTHD500D Dimension Drawing

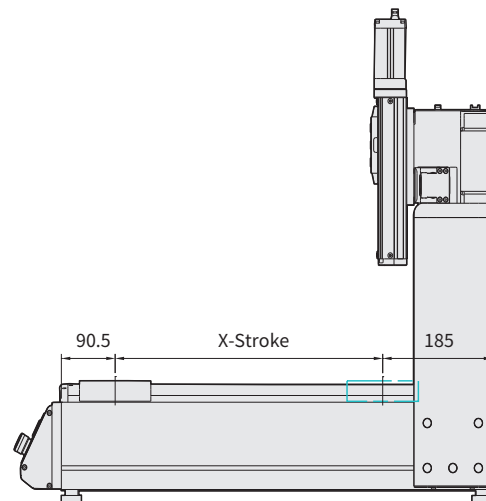
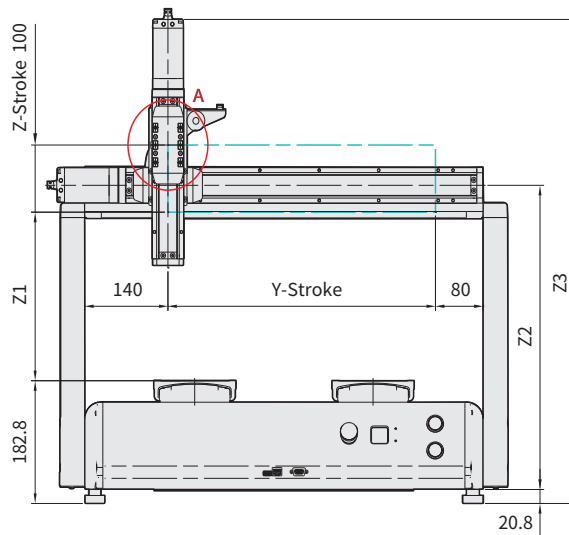
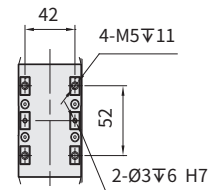


Download CAD data at www.toyorobot.com

Units : mm



A View



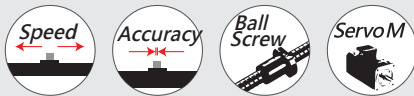
Model Number	JTHD500
Dimensions	
X*Y Work Area	450*450

Model Number	Z-axis Height-related Dimensions				
Dimensions	Standard	H1(+50)	H2(+100)	H3(+200)	H4(+300)
Z1	251	301	351	451	551
Z2	453	503	553	653	753
Z3	720.8	770.8	820.8	920.8	1020.8

JTHX

Standard

Ball-screw-driven



This picture is just for the reference. Please check the actual dimension drawing.

Main Specifications

Item			JTHX200	JTHX300	JTHX400	JTHX500
Work Area	X*Yaxis	mm	150*150	250*250	350*350	450*450
	Zaxis	mm	100	100	100	100
Max. Payload	Xaxis	kg	8	10	10	10
	Zaxis	kg	4	5	5	5
PTP Movement	X*Yaxis	mm/s	500	500	500	500
	Zaxis	mm/s	200	250	250	250
CP Movement	X*Y*Z Combined Speed	mm/s	400	500	500	500
Repeatability	X*Yaxis	mm	±0.01	±0.01	±0.01	±0.01
	Zaxis	mm	±0.01	±0.01	±0.01	±0.01

General Specifications

Item		TSC400 Integrated Controller-driver Spec.
Drive Method		DC Server motor
Control Method		Point-to-point (PTP), Continuous Path (CP)
Interpolation		3-dimensional linear and arc interpolation
Teaching Method		Remote teaching (JOG)/ Manual Data Input (MDI)
Teaching System		PC-based UI: convert 2D CAD files to paths; import images for tracing.
		PAD-based UI: teach position; edit programs.
UI	Languages	Chinese (Traditional), English, Japanese
	Units	mm
Programs Capacity		100 programs (1~100)
Data Capacity		Up to 100,000 Points
Simple PLC Function		100 sets, Up to 1,000 steps
External Input/Output	IO	16 IN/16 OUT (NPN/PNP)
	LAN	Ethernet need to use under TOYO UI (Through the HUB to the devices)
	COM	RS-232C(Supports peripheral device connections)
	USB	Firmware Updates, Procedure Import/Export
Power Source		AC 100~240, 5A

Order Number Format

JTHX 300 - 3 - H1 - CCDA - A001

Series Number Customization Number

Work Area(X*Y)

Single X-axis	200:150*150
	300:250*250
	400:350*350
	500:450*450

Number of Axes

2	X/Y
3	X/Y/Z
3R	X/Y/Z/R

Designated Z-axis Height

H1	Z-axis Height+50
H2	Z-axis Height+100
H3	Z-axis Height+200
H4	Z-axis Height+300

※If Z-axis height is standard, no description.

With CCD

CCDA

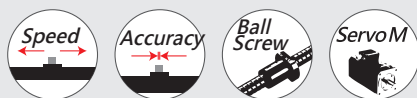
※If no CCD, no description.

JTHX

Standard

Double
X axis

Ball-screw-driven



This picture is just for the reference. Please check the actual dimension drawing.

Main Specifications

Item			JTHX500D
Work Area	X*Yaxis	mm	450*450 (Double X axis)
	Zaxis	mm	100
Max. Payload	Xaxis	kg	6 (Single axis)
	Zaxis	kg	5
PTP Movement	X*Yaxis	mm/s	500
	Zaxis	mm/s	250
CP Movement	X*Y*Z Combined Speed	mm/s	500
Repeatability	X*Yaxis	mm	±0.01
	Zaxis	mm	±0.01

General Specifications

Item		TSC400 Integrated Controller-driver Spec.
Drive Method		DC Server motor
Control Method		Point-to-point (PTP), Continuous Path (CP)
Interpolation		3-dimensional linear and arc interpolation
Teaching Method		Remote teaching (JOG)/ Manual Data Input (MDI)
Teaching System		PC-based UI: convert 2D CAD files to paths; import images for tracing.
		PAD-based UI: teach position; edit programs.
UI	Languages	Chinese (Traditional), English, Japanese
	Units	mm
Programs Capacity		100 programs (1~100)
Data Capacity		Up to 100,000 Points
Simple PLC Function		100 sets, Up to 1,000 steps
External Input/Output	IO	16 IN/16 OUT (NPN/PNP)
	LAN	Ethernet need to use under TOYO UI (Through the HUB to the devices)
	COM	RS-232C(Supports peripheral device connections)
	USB	Firmware Updates, Procedure Import/Export
Power Source		AC 100~240, 5A

Order Number Format

JTHX 500D - 4 - H1 - CCDA - A001

Series Number

Customization Number

Work Area(X*Y)

Double X-axis 500D:450*450

Number of Axes

4 X1/X2/Y/Z

Designated Z-axis Height

H1 Z-axis Height+50
H2 Z-axis Height+100
H3 Z-axis Height+200
H4 Z-axis Height+300

※If Z-axis height is standsrd, no description.

With CCD

CCDA

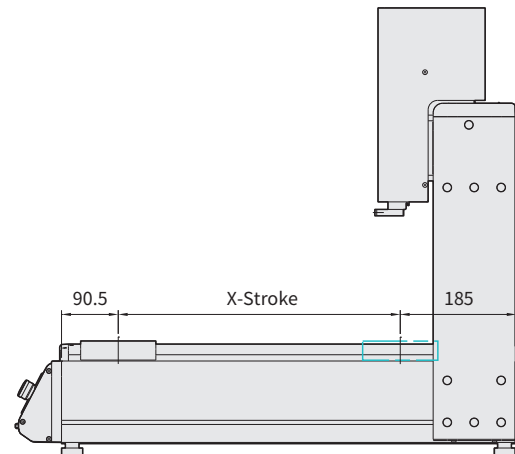
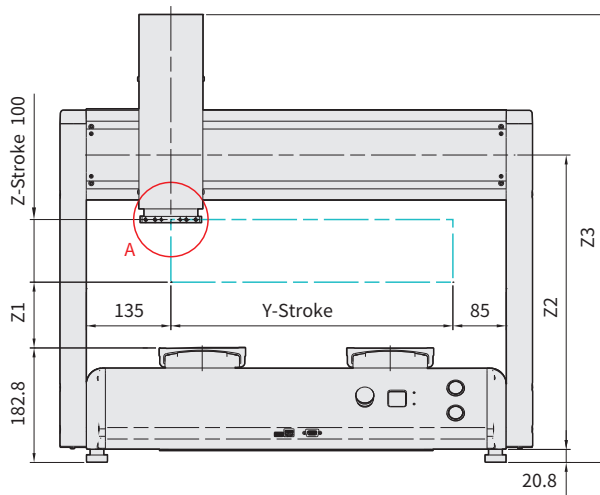
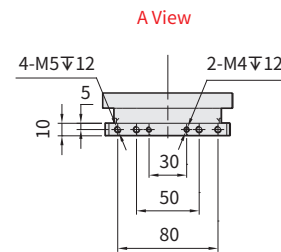
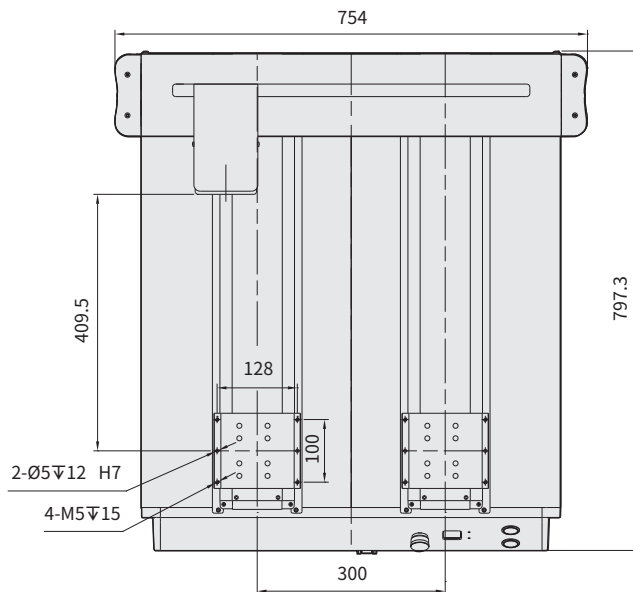
※If no CCD, no description.

JTHX500D Dimension Drawing



Download CAD data at www.toyorobot.com

Units : mm



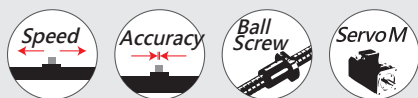
Model Number	JTHX500D
Dimensions	
X*Y Work Area	450*450

Model Number	Z-axis Height-related Dimensions				
Dimensions	Standard	H1(+50)	H2(+100)	H3(+200)	H4(+300)
Z1	105	155	205	305	405
Z2	470	520	570	670	770
Z3	714.8	764.8	814.8	914.8	1014.8

JTHS

Standard

Ball-screw-driven



This picture is just for the reference. Please check the actual dimension drawing.

Main Specifications

Item			JTHS300	JTHS400	JTHS500
Work Area	X*Yaxis	mm	300*300	400*400	500*500
	Zaxis	mm	100	100	100
Max. Payload	Xaxis	kg	15	15	15
	Zaxis	kg	8	8	8
PTP Movement	X*Yaxis	mm/s	1000	1000	1000
	Zaxis	mm/s	500	500	500
CP Movement	X*Y*Z Combined Speed	mm/s	900	900	900
Repeatability	X*Yaxis	mm	±0.005	±0.005	±0.005
	Zaxis	mm	±0.005	±0.005	±0.005

General Specifications

Item		TSC400 Integrated Controller-driver Spec.
Drive Method		AC Server motor
Control Method		Point-to-point (PTP), Continuous Path (CP)
Interpolation		3-dimensional linear and arc interpolation
Teaching Method		Remote teaching (JOG)/ Manual Data Input (MDI)
Teaching System		PC-based UI: convert 2D CAD files to paths; import images for tracing.
		PAD-based UI: teach position; edit programs.
UI	Languages	Chinese (Traditional), English, Japanese
	Units	mm
Programs Capacity		100 programs (1~100)
Data Capacity		Up to 100,000 Points
Simple PLC Function		100 sets, Up to 1,000 steps
External Input/Output	IO	16 IN/16 OUT (NPN/PNP)
	LAN	Ethernet need to use under TOYO UI (Through the HUB to the devices)
	COM	RS-232C(Supports peripheral device connections)
	USB	Firmware Updates, Procedure Import/Export
Power Source		AC 220~240, 15A

Order Number Format

JTHS 300 - 3 - H1 - CCDA - A001

Series Number Customization Number

Work Area(X*Y)

Single X-axis	300:300*300
	400:400*400
	500:500*500

Number of Axes

2	X/Y
3	X/Y/Z
3R	X/Y/Z/R

Designated Z-axis Height

H1	Z-axis Height+50
H2	Z-axis Height+100
H3	Z-axis Height+200
H4	Z-axis Height+300

※If Z-axis height is standsrd, no description.

With CCD

CCDA

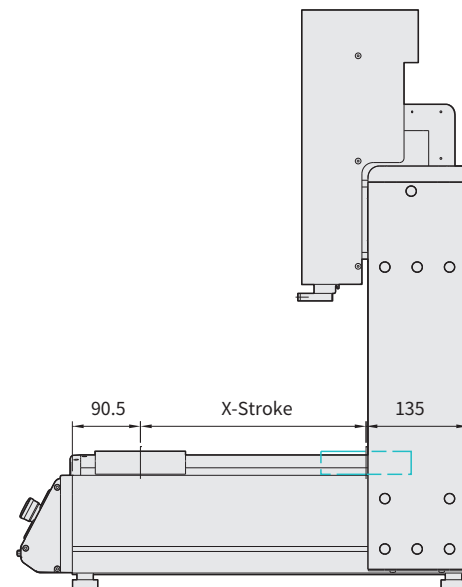
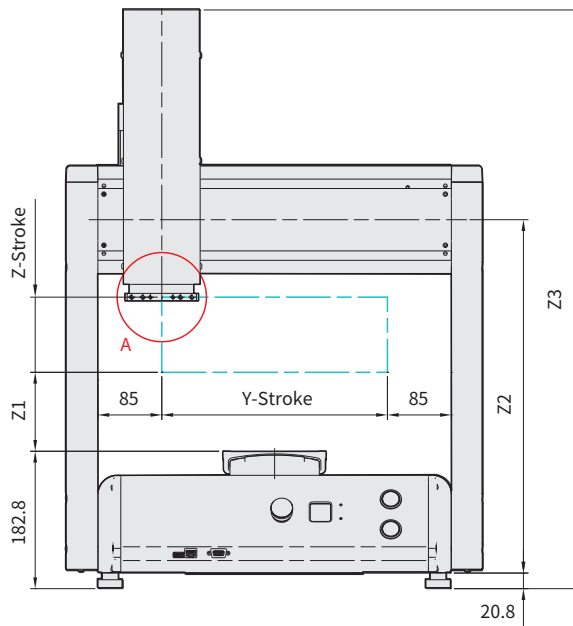
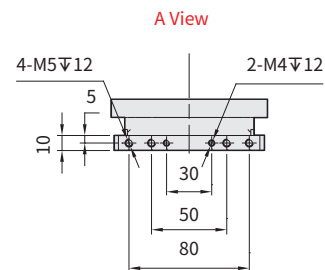
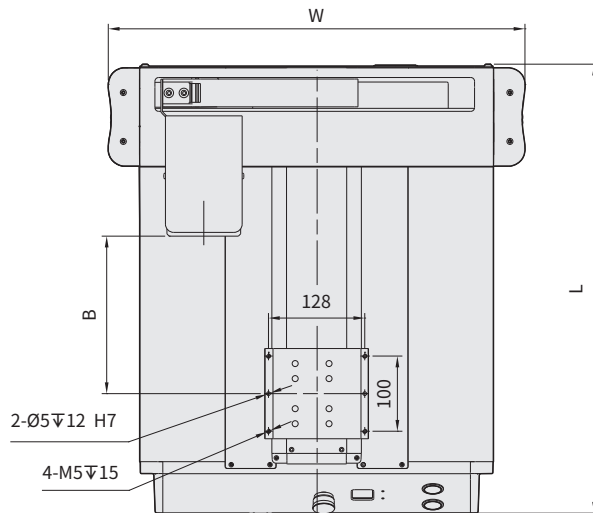
※If no CCD, no description.

JTHS300/400/500 Dimension Drawing



Download CAD data at www.toyorobot.com

Units : mm



Model Number	JTHS300	JTHS400	JTHS500
Dimensions			
X*Y Work Area	300*300	400*400	500*500
L	597.3	697.3	797.3
W	554	654	754
B	209.5	309.5	409.5

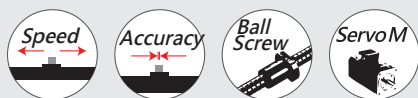
Model Number	Z-axis Height-related Dimensions				
Dimensions	Standard	H1(+50)	H2(+100)	H3(+200)	H4(+300)
Z1	105	155	205	305	405
Z2	470	520	570	670	770
Z3	769.8	819.8	869.8	969.8	1069.8

JTHS

Standard

Double
X axis

Ball-screw-driven



This picture is just for the reference. Please check the actual dimension drawing.

Main Specifications

Item			JTHS500D
Work Area	X*Yaxis	mm	500*500 (Double X axis)
	Zaxis	mm	100
Max. Payload	Xaxis	kg	10 (Single axis)
	Zaxis	kg	8
PTP Movement	X*Yaxis	mm/s	1000
	Zaxis	mm/s	500
CP Movement	X*Y*Z Combined Speed	mm/s	900
Repeatability	X*Yaxis	mm	±0.005
	Zaxis	mm	±0.005

General Specifications

Item		TSC400 Integrated Controller-driver Spec.
Drive Method		AC Server motor
Control Method		Point-to-point (PTP), Continuous Path (CP)
Interpolation		3-dimensional linear and arc interpolation
Teaching Method		Remote teaching (JOG)/ Manual Data Input (MDI)
Teaching System		PC-based UI: convert 2D CAD files to paths; import images for tracing.
		PAD-based UI: teach position; edit programs.
UI	Languages	Chinese (Traditional), English, Japanese
	Units	mm
Programs Capacity		100 programs (1~100)
Data Capacity		Up to 100,000 Points
Simple PLC Function		100 sets, Up to 1,000 steps
External Input/Output	IO	16 IN/16 OUT (NPN/PNP)
	LAN	Ethernet need to use under TOYO UI (Through the HUB to the devices)
	COM	RS-232C(Supports peripheral device connections)
	USB	Firmware Updates, Procedure Import/Export
Power Source		AC 220~240, 15A

Order Number Format

JTHS 500D - 4 - H1 - CCDA - A001

Series Number

Customization Number

Work Area(X*Y)

Double X-axis 500D:500*500

Number of Axes

4 X1/X2/Y/Z

Designated Z-axis Height

H1 Z-axis Height+50
H2 Z-axis Height+100
H3 Z-axis Height+200
H4 Z-axis Height+300

※If Z-axis height is standsrd, no description.

With CCD

CCDA

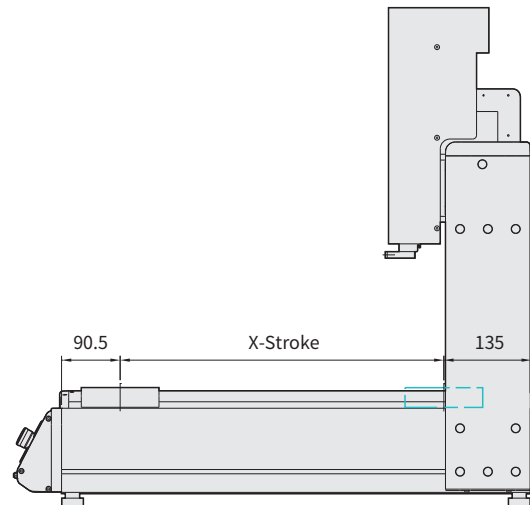
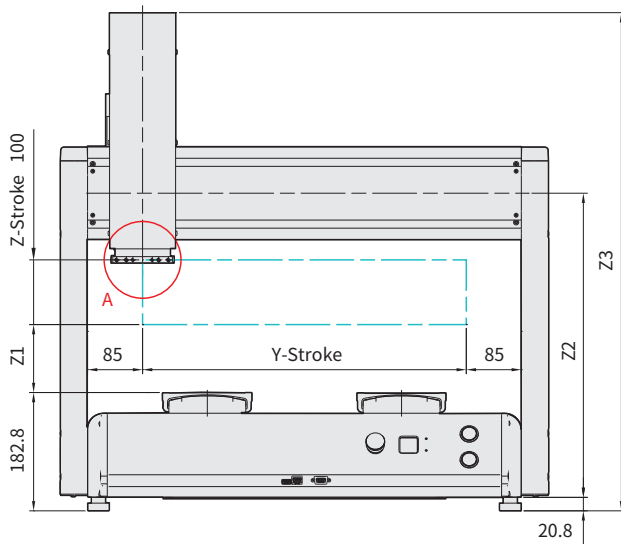
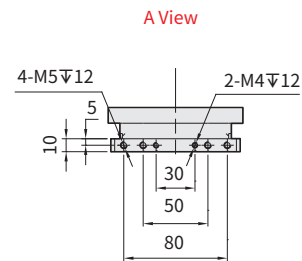
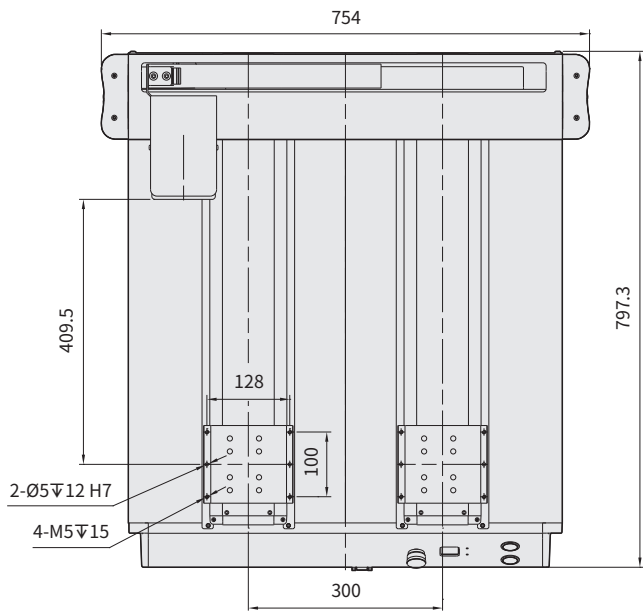
※If no CCD, no description.

JTHS500D Dimension Drawing



Download CAD data at www.toyorobot.com

Units : mm



Model Number	JTHS500D
Dimensions	
X*Y Work Area	500*500

Model Number	Z-axis Height-related Dimensions				
Dimensions	Standard	H1(+50)	H2(+100)	H3(+200)	H4(+300)
Z1	105	155	205	305	405
Z2	470	520	570	670	770
Z3	769.8	819.8	869.8	969.8	1069.8

JTL

High Speed

XY:Linear Motor-driven
Z:Ball-screw-driven



This picture is just for the reference. Please check the actual dimension drawing.

Main Specifications

Item			JTL500
Work Area	X*Yaxis	mm	470*470
	Zaxis	mm	100
Max. Payload	Xaxis	kg	15
	Zaxis	kg	8
PTP Movement	X*Yaxis	mm/s	1200
	Zaxis	mm/s	500
CP Movement	X*Y*Z Combined Speed	mm/s	1100
Repeatability	X*Yaxis	mm	±0.002
	Zaxis	mm	±0.005

General Specifications

Item		TSC400 Integrated Controller-driver Spec.
Drive Method		XY:Linear Motor Z:AC Server motor
Control Method		Point-to-point (PTP), Continuous Path (CP)
Interpolation		3-dimensional linear and arc interpolation
Teaching Method		Remote teaching (JOG)/ Manual Data Input (MDI)
Teaching System		PC-based UI: convert 2D CAD files to paths; import images for tracing.
		PAD-based UI: teach position; edit programs.
UI	Languages	Chinese (Traditional), English, Japanese
	Units	mm
Programs Capacity		100 programs (1~100)
Data Capacity		Up to 100,000 Points
Simple PLC Function		100 sets, Up to 1,000 steps
External Input/Output	IO	16 IN/16 OUT (NPN/PNP)
	LAN	Ethernet need to use under TOYO UI (Through the HUB to the devices)
	COM	RS-232C(Supports peripheral device connections)
	USB	Firmware Updates, Procedure Import/Export
Power Source		AC 100~240, 5A

Order Number Format

JTL 500 - 3 - H1 - CCDA - A001

Series Number Customization Number

Work Area(X*Y)

Single X-axis 500:470*470

Number of Axes

2	X/Y
3	X/Y/Z
3R	X/Y/Z/R

Designated Z-axis Height

H1	Z-axis Height+50
H2	Z-axis Height+100
H3	Z-axis Height+200
H4	Z-axis Height+300

※If Z-axis height is standsrd, no description.

With CCD

CCDA

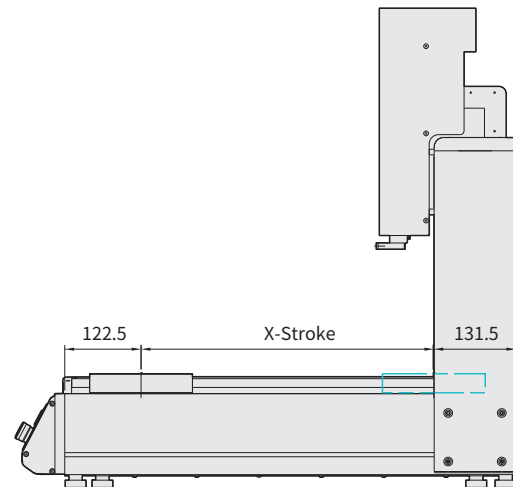
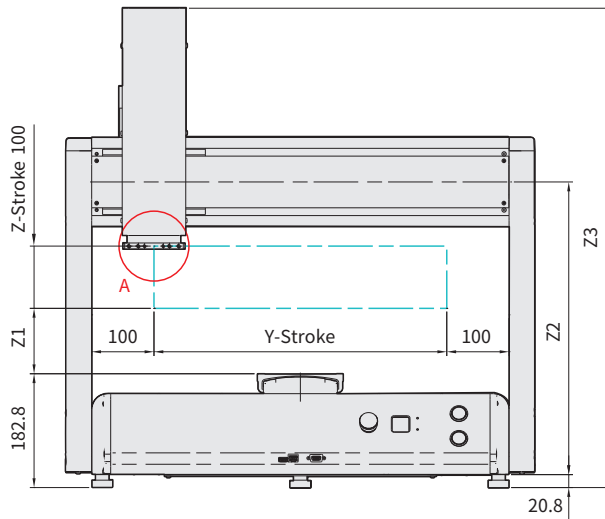
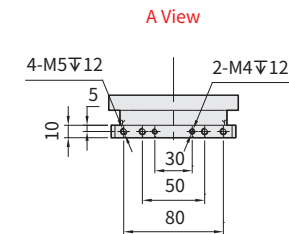
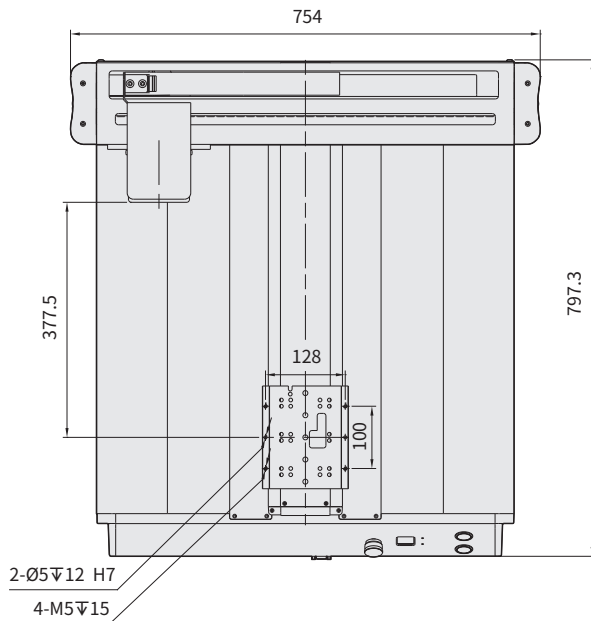
※If no CCD, no description.

JTL500 Dimension Drawing



Download CAD data at www.toyorobot.com

Units : mm



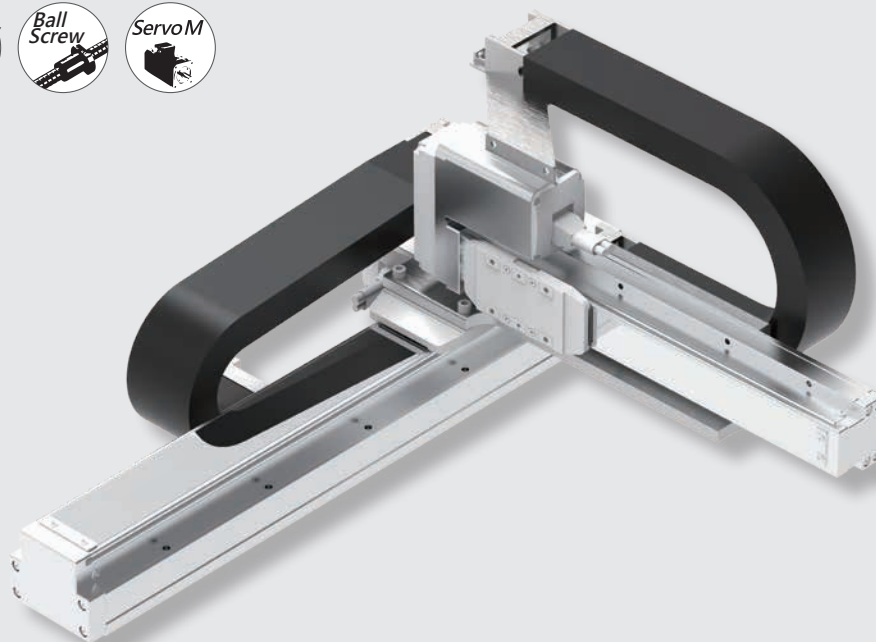
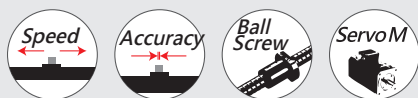
Model Number	JTL500
Dimensions	
X*Y Work Area	470*470

Model Number	Z-axis Height-related Dimensions				
Dimensions	Standard	H1(+50)	H2(+100)	H3(+200)	H4(+300)
Z1	105	155	205	305	405
Z2	470	520	570	670	770
Z3	769.8	819.8	869.8	969.8	1069.8

XYCGT320-A

2 Axes

Ball-screw-driven



This picture is just for the reference. Please check the actual dimension drawing.

*Assembly accuracy is not guaranteed for the standard multi-axis system.

Main Specifications

Item		X axis	Y axis
Model Type		CGTH8	CGTH5
Repeatability	mm	±0.01	±0.01
Ball Screw Lead	mm	10	10
Max. Speed ※1	mm/s	350	538
Stroke (50 increments)	mm	50~1100	50~400
AC Servo Motor Output	W	42 □ (48V)	42 □ (48V)
Environment		0~40° C, 85% RH Below	

※1 : Maximum speed is based on the AC scrvo motor's 3000RPM.

Maximum Payload

Y Stroke (mm)	50	100	150	200	250	300	350	400
Y Payload	5.5kg							

*Only for horizontal installation.

General Specifications

Item	TSC400 Integrated Controller-driver Spec.
Drive Method	Closed-loop stepper motor
Control Method	Point-to-point (PTP), Continuous Path (CP)
Interpolation	3-dimensional linear and arc interpolation
Teaching Method	Remote teaching (JOG)/ Manual Data Input (MDI)
Teaching System	PC-based UI: convert 2D CAD files to paths; import images for tracing.
	PAD-based UI: teach position; edit programs.
UI	Languages Chinese (Traditional), English, Japanese
	Units mm
Programs Capacity	100 programs (1~100)
Data Capacity	Up to 100,000 Points
Simple PLC Function	100 sets, Up to 1,000 steps
External Input/Output	IO 16 IN/16 OUT (NPN/PNP)
	LAN Ethernet need to use under TOYO UI (Through the HUB to the devices)
	COM RS-232C(Supports peripheral device connections)
	USB Firmware Updates, Procedure Import/Export
Power Source	AC 100~240, 5A

Order Number Format

XYCGT320 - A 1 - 300 - 300 - 03 - C - 0001

Series Number

Customization Number

Combination
A Arm Type

Combination Direction
1
2
3
4

X Combination
50~1100mm
50 increments

Y Combination
50~400mm
50 increments

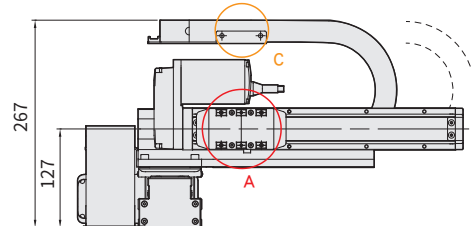
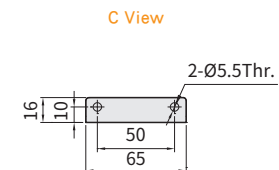
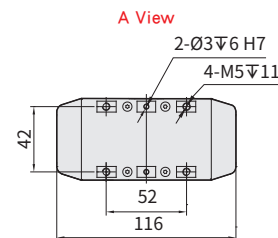
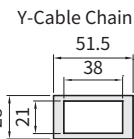
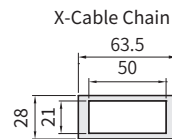
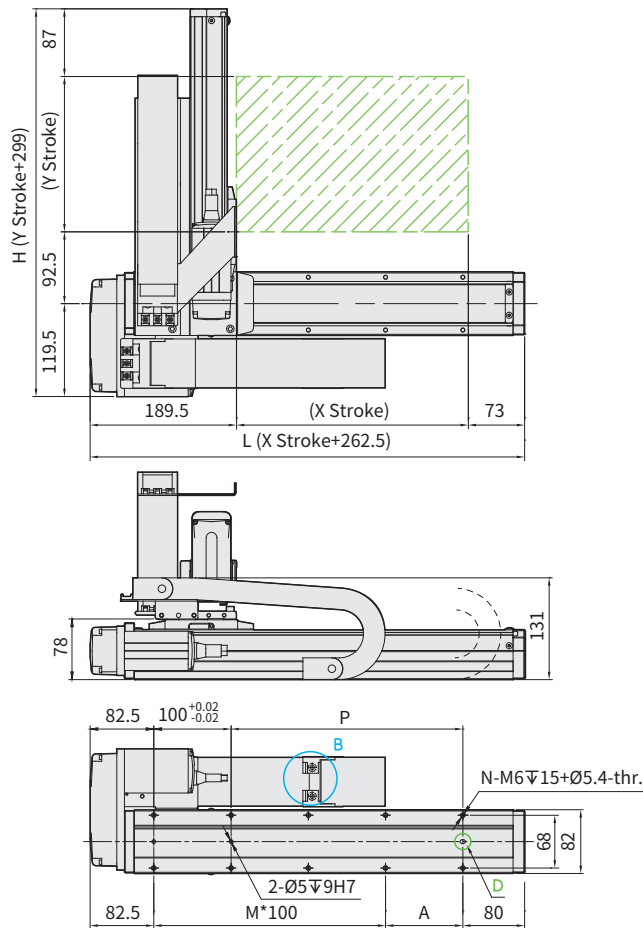
Cable Length
01 1m
03 3m
05 5m
10 10m

Delivery Method
C By Set
K By Kit

XYCGT320-A1 Dimension Drawing

Units : mm

A1

Download CAD data at www.toyorobot.com

B View 2-∇Ø10.4+Ø5.5-thr.



D View

※1 : Maximum speed is refers to the highest safe speed that can be used in stroke, if more than the standard speed, it may occur serious resonance.

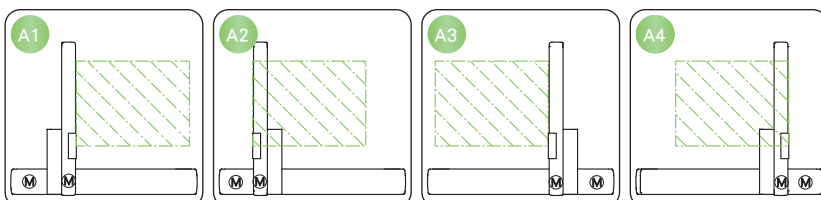
* Fixing plate for X axis moving end of cable chain need to be assembled by customers.

* Fixing plate for Y axis moving end of cable chain need to be assembled by customers.

X Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
L	312.5	362.5	412.5	462.5	512.5	562.5	612.5	662.5	712.5	762.5	812.5	862.5	912.5	962.5	1012.5	1062.5	1112.5	1162.5	1212.5	1262.5	1312.5	1362.5
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
Max Speed※1	350 mm/s																		300	250	200	150

Y Stroke	50	100	150	200	250	300
H	349	399	449	499	549	599
Max Speed	500 mm/s					

Combination Direction



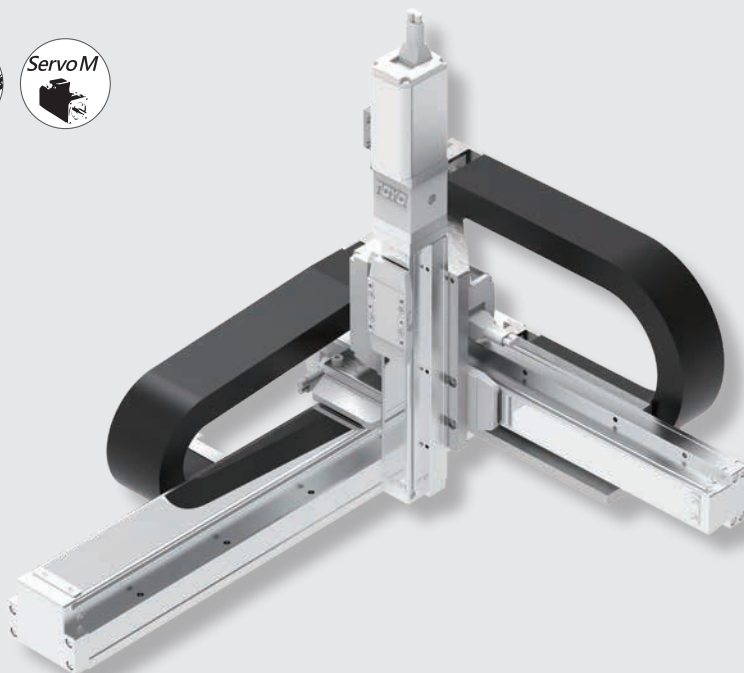
Corresponding Controller

Exterior	Model	Page
	TSC400	P.39

XYCGT321-A

3 Axes

Ball-screw-driven



This picture is just for the reference. Please check the actual dimension drawing.

*Assembly accuracy is not guaranteed for the standard multi-axis system.

Main Specifications

Item		X axis	Y axis	Z axis
Model Type		CGTH8	CGTH5	CGTH4
Repeatability	mm	±0.01	±0.01	±0.01
Ball Screw Lead	mm	10	10	6
Max. Speed ※1	mm/s	350	538	314
Stroke (50 increments)	mm	50~1100	50~300	50~100
AC Servo Motor Output	W	42 □ (48V)	42 □ (48V)	35 □ +Brake(48V)
Environment		0~40° C, 85% RH Below		

※1 : Maximum speed is based on the AC servo motor's 3000RPM.

Maximum Payload

Y Stroke(mm)	50	100	150	200	250	300
Z Stroke(mm)						
50	5kg					
100						

*Only for horizontal installation.

General Specifications

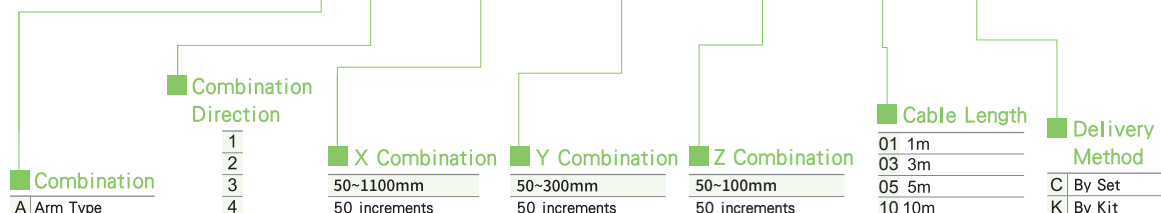
Item	TSC400 Integrated Controller-driver Spec.
Drive Method	Closed-loop stepper motor
Control Method	Point-to-point (PTP), Continuous Path (CP)
Interpolation	3-dimensional linear and arc interpolation
Teaching Method	Remote teaching (JOG)/ Manual Data Input (MDI)
Teaching System	PC-based UI: convert 2D CAD files to paths; import images for tracing.
	PAD-based UI: teach position; edit programs.
UI	Languages Chinese (Traditional), English, Japanese
	Units mm
Programs Capacity	100 programs (1~100)
Data Capacity	Up to 100,000 Points
Simple PLC Function	100 sets, Up to 1,000 steps
External Input/Output	IO 16 IN/16 OUT (NPN/PNP)
	LAN Ethernet need to use under TOYO UI (Through the HUB to the devices)
	COM RS-232C(Supports peripheral device connections)
	USB Firmware Updates, Procedure Import/Export
Power Source	AC 100~240, 5A

Order Number Format

XYCGT321-A 1 - 300 - 300 - 100 - 03 - C - 0001

Series Number

Customization Number

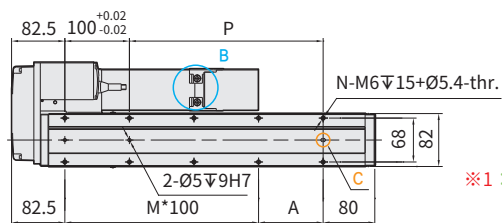
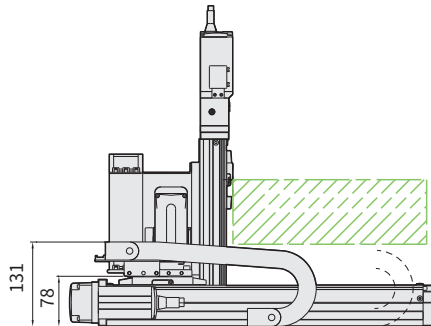
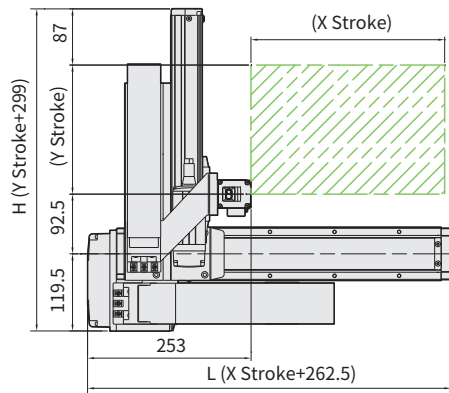


XYCGT321-A1 Dimension Drawing

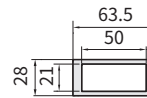
A1

Download CAD data at www.toyorobot.com

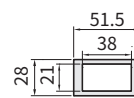
Units : mm



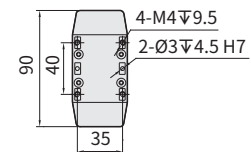
X-Cable Chain



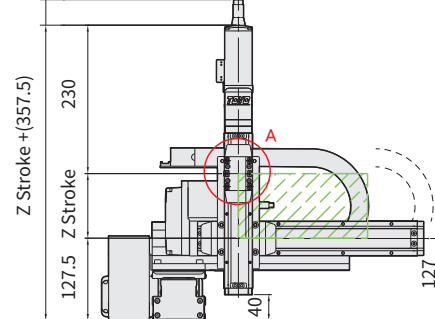
Y-Cable Chain



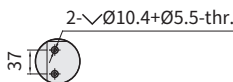
A View



(空間保持至少100以上)



B View



C View

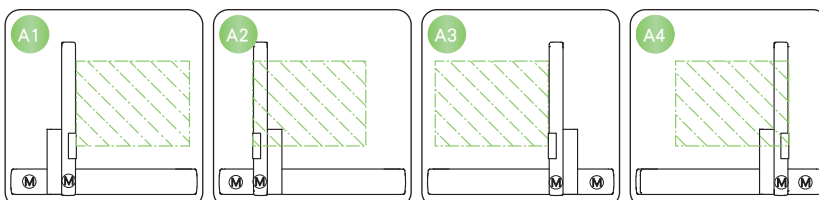


※1 : Maximum speed is refers to the highest safe speed that can be used in stroke, if more than the standard speed, it may occur serious resonance.
 * Fixing plate for X axis moving end of cable chain need to be assembled by customers.

X Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	100	1050	1100
L	312.5	362.5	412.5	462.5	512.5	562.5	612.5	662.5	712.5	762.5	812.5	862.5	912.5	962.5	1012.5	1062.5	1112.5	1162.5	1212.5	1262.5	1312.5	1362.5
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
Max Speed※1	1000 mm/s																		300	250	200	150

Y Stroke	50	100	150	200	250	300
H	349	399	449	499	549	599
Max Speed	500 mm/s					

Combination Direction



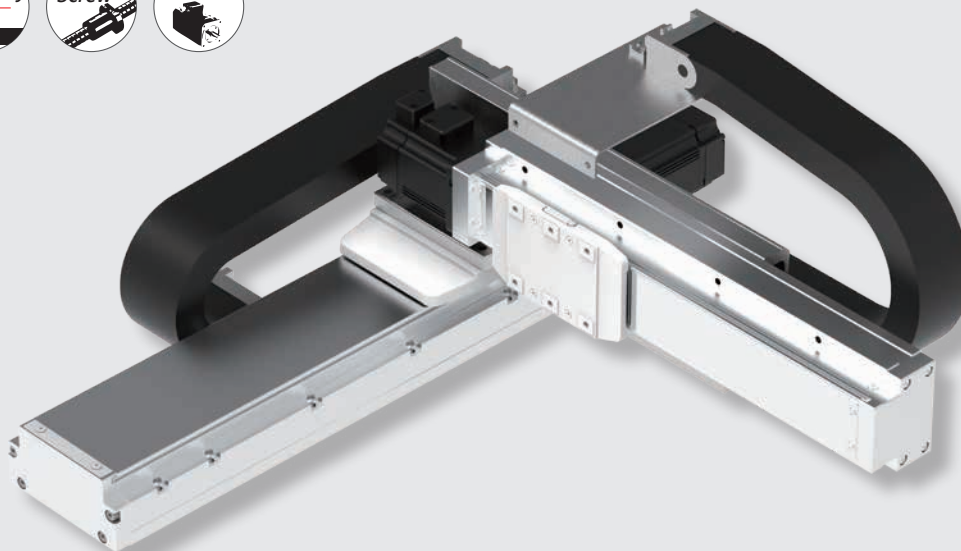
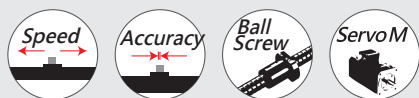
Corresponding Controller

Exterior	Model	Page
	TSC400	P.39

XYSGT430-A

2 Axes

Ball-screw-driven



This picture is just for the reference. Please check the actual dimension drawing.

*Assembly accuracy is not guaranteed for the standard multi-axis system.

Main Specifications

Item		X axis	Y axis
Model Type		SGTH12	SGTH8
Repeatability	mm	±0.005	±0.005
Ball Screw Lead	mm	20	20
Max. Speed ※1	mm/s	1000	1000
Stroke (50 increments)	mm	50~1250	50~500
AC Servo Motor Output	W	400W	200W
Environment		0~40° C, 85% RH Below	

※1 : Maximum speed is based on the AC scrvo motor's 3000RPM.

Maximum Payload

Y Stroke (mm)	50	100	150	200	250	300	350	400	450	500
Y Payload	12kg									

*Only for horizontal installation.

General Specifications

Item	TSC400 Integrated Controller-driver Spec.
Drive Method	Servo Motor
Control Method	Point-to-point (PTP), Continuous Path (CP)
Interpolation	3-dimensional linear and arc interpolation
Teaching Method	Remote teaching (JOG)/ Manual Data Input (MDI)
Teaching System	PC-based UI: convert 2D CAD files to paths; import images for tracing.
	PAD-based UI: teach position; edit programs.
UI	Languages Chinese (Traditional), English, Japanese
	Units mm
Programs Capacity	100 programs (1~100)
Data Capacity	Up to 100,000 Points
Simple PLC Function	100 sets, Up to 1,000 steps
External Input/Output	IO 16 IN/16 OUT (NPN/PNP)
	LAN Ethernet need to use under TOYO UI (Through the HUB to the devices)
	COM RS-232C(Supports peripheral device connections)
	USB Firmware Updates, Procedure Import/Export
Power Source	AC 100~240, 5A

Order Number Format

XYSGT430 - A 1 - 300 - 300 - 03- C - 0001

Series Number

Customization Number

Combination
A Arm Type

Combination
Direction

1
2
3
4

X Combination
50~1250mm
50 increments

Y Combination
50~500mm
50 increments

Cable Length
01 1m
03 3m
05 5m
10 10m

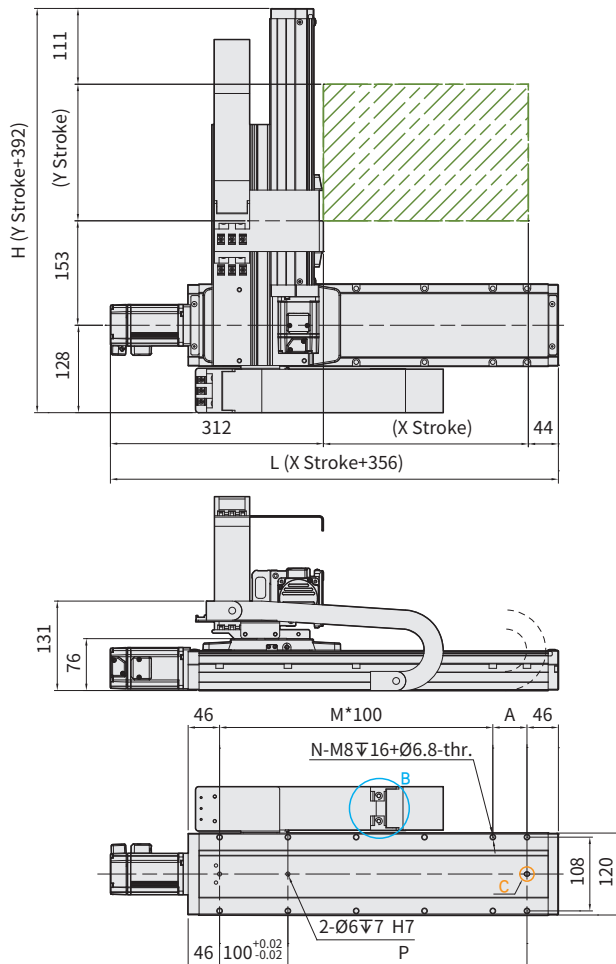
Delivery
Method
C By Set
K By Kit

XYSGT430-A1 Dimension Drawing

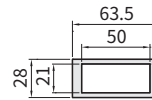
A1

Download CAD data at www.toyorobot.com

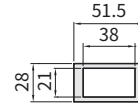
Units : mm



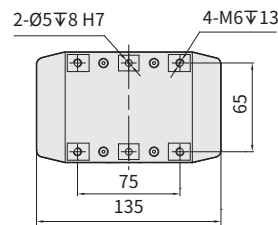
X-Cable Chain



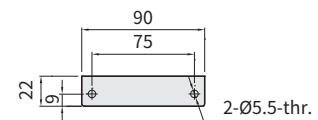
Y-Cable Chain



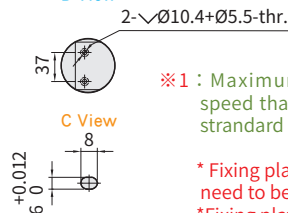
A View



D View



B View



C View

※1 : Maximum speed is refers to the highest safe speed that can be used in stroke, if more than the standard speed, it may occur serious resonance.

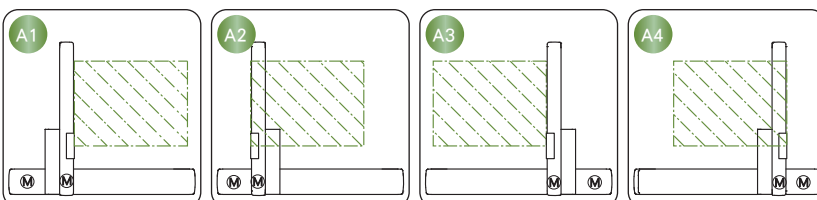
* Fixing plate for X axis moving end of cable chain need to be assembled by customers.

* Fixing plate for Y axis moving end of cable chain need to be assembled by customers.

X Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	
L	406	456	506	556	606	656	706	756	806	856	906	956	1006	1056	1106	1156	1206	1256	1306	1356	1406	1456	1506	1556	1606	
A	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	
M	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13	
N	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30	30	
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	
Max Speed※1	1000 mm/s																	900	800	700	667	663	600	533	500	467

Y Stroke	50	100	150	200	250	300	350	400	450
H	442	492	542	592	642	692	742	792	842
Max Speed	1000 mm/s								

Combination Direction



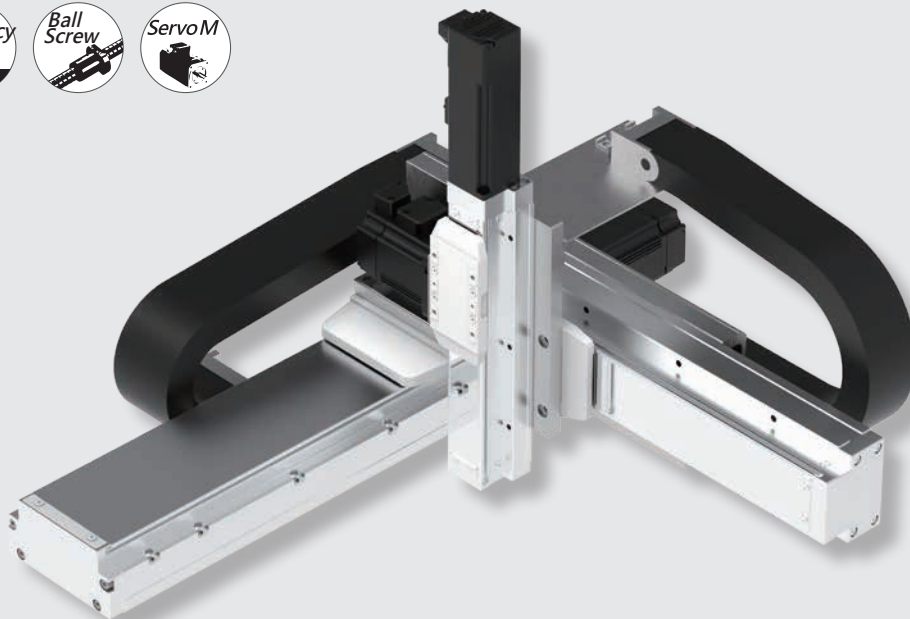
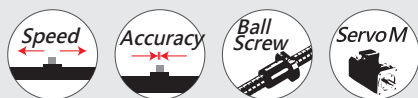
Corresponding Controller

Exterior	Model	Page
	TSC400	P.39

XYSGT432-A

3 Axes

Ball-screw-driven



This picture is just for the reference. Please check the actual dimension drawing.

*Assembly accuracy is not guaranteed for the standard multi-axis system.

Main Specifications

Item		X axis	Y axis	Z axis
Model Type		SGTH12	SGTH8	SGTH5
Repeatability	mm	±0.005	±0.005	±0.005
Ball Screw Lead	mm	20	20	5
Max. Speed ※1	mm/s	1000	1000	250
Stroke (50 increments)	mm	50~1250	50~450	50~100
AC Servo Motor Output	W	400W	200W	100W+Brake
Environment		0~40°C, 85% RH Below		

※1 : Maximum speed is based on the AC servo motor's 3000RPM.

Maximum Payload

Y Stroke(mm)	50	100	150	200	250	300	350	400	450
Z Stroke(mm)									
50	10kg								
100									

*Only for horizontal installation.

General Specifications

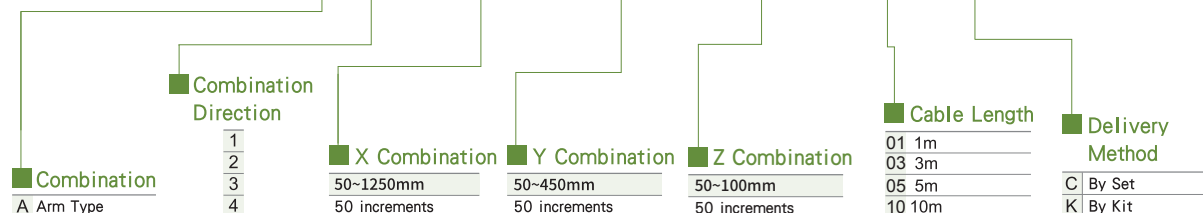
Item	TSC400 Integrated Controller-driver Spec.
Drive Method	Servo Motor
Control Method	Point-to-point (PTP), Continuous Path (CP)
Interpolation	3-dimensional linear and arc interpolation
Teaching Method	Remote teaching (JOG)/ Manual Data Input (MDI)
Teaching System	PC-based UI: convert 2D CAD files to paths; import images for tracing.
	PAD-based UI: teach position; edit programs.
UI	Languages Chinese (Traditional), English, Japanese
	Units mm
Programs Capacity	100 programs (1~100)
Data Capacity	Up to 100,000 Points
Simple PLC Function	100 sets, Up to 1,000 steps
External Input/Output	IO 16 IN/16 OUT (NPN/PNP)
	LAN Ethernet need to use under TOYO UI (Through the HUB to the devices)
	COM RS-232C(Supports peripheral device connections)
	USB Firmware Updates, Procedure Import/Export
Power Source	AC 100~240, 5A

Order Number Format

XYSGT432-A 1 - 500 - 300 - 100 - 03 - C - 0001

Series Number

Customization Number

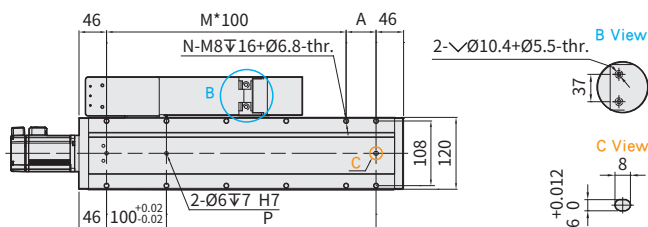
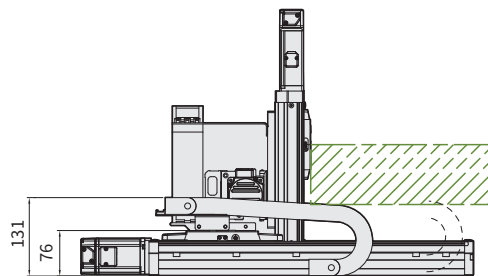
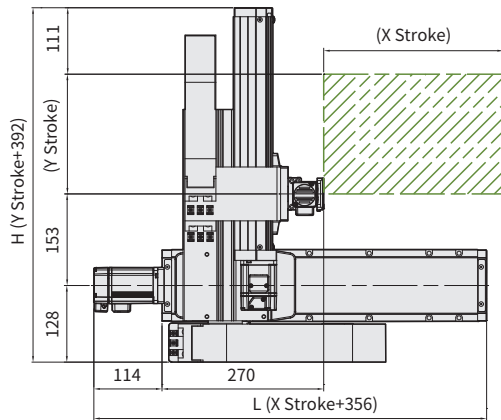


XYSGT432-A1 Dimension Drawing

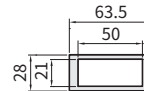
A1


Download CAD data at www.toyorobot.com

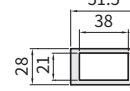
Units : mm



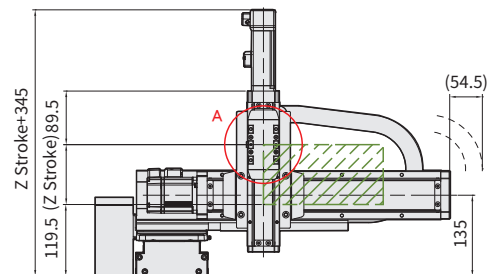
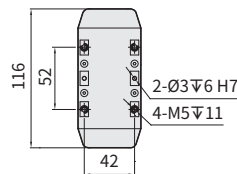
X-Cable Chain



Y-Cable Chain



A View



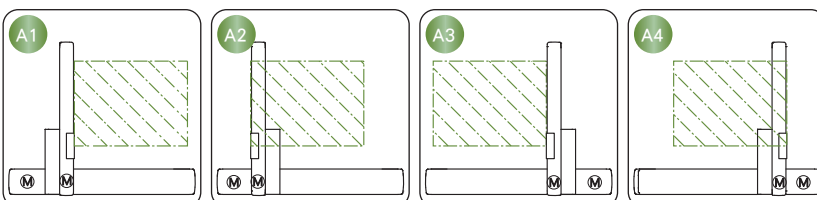
※1 : Maximum speed is refers to the highest safe speed that can be used in stroke, if more than the standard speed, it may occur serious resonance.

* Fixing plate for X axis moving end of cable chain need to be assembled by customers.

X Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	
L	406	456	506	556	606	656	706	756	806	856	906	956	1006	1056	1106	1156	1206	1256	1306	1356	1406	1456	1506	1556	1606	
A	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	
M	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13	
N	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30	30	
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	
Max Speed※1	1000 mm/s																	900	800	700	667	663	600	533	500	467

Y Stroke	50	100	150	200	250	300	350	400	450
H	442	492	542	592	642	692	742	792	842
Max Speed	1000 mm/s								

Combination Direction



Corresponding Controller

Exterior	Model	Page
	TSC400	P.39

TSC400 Controller

for JT、XYCGT、XYSGT Series

■ Features

- Small Size With High Quality
- Simple Interface Setting
- Simple Operate
- High Quality Control Of Multi-Axis Movement
- High Expandability



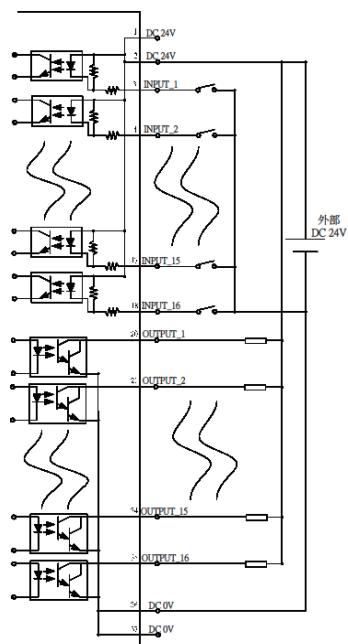
■ Controller Specification

Item		TSC400 Integrated Controller-driver Spec.
Drive Method		Closed-loop stepper motor/Servo Motor
Control Method		Point-to-point (PTP), Continuous Path (CP)
Interpolation		3-dimensional linear and arc interpolation
Teaching Method		Remote teaching (JOG)/ Manual Data Input (MDI)
Teaching System		PC-based UI: convert 2D CAD files to paths; import images for tracing.
		PAD-based UI: teach position; edit programs.
UI	Languages	Chinese (Traditional), English, Japanese
	Units	mm
Programs Capacity		100 programs (1~100)
Data Capacity		Up to 100,000 Points
Simple PLC Function		100 sets, Up to 1,000 steps
External Input/Output	IO	16 IN/16 OUT (NPN/PNP)
	LAN	Ethernet need to use under TOYO UI (Through the HUB to the devices)
	COM	RS-232C (Supports peripheral device connections)
	USB	Firmware Updates, Procedure Import/Export
Power Source		AC 100~240, 5A or AC 220~240, 15A

External I/O Define

D-SUB 37

Pin No.	Content Description		Pin No.	Content Description	
1	DC 24V	external DC24V power supply	20	OUTPUT_1	Ready
2	DC 24V	external DC24V power supply	21	OUTPUT_2	homing completed
3	INPUT_1	program starts	22	OUTPUT_3	locking
4	INPUT_2	lock	23	OUTPUT_4	program running
5	INPUT_3	program reset	24	OUTPUT_5	program select output_0
6	INPUT_4	program select confirm	25	OUTPUT_6	program select output_1
7	INPUT_5	program select_0	26	OUTPUT_7	program select output_2
8	INPUT_6	program select_1	27	OUTPUT_8	program select output_3
9	INPUT_7	program select_2	28	OUTPUT_9	program select output_4
10	INPUT_8	program select_3	29	OUTPUT_10	program select output_5
11	INPUT_9	program select_4	30	OUTPUT_11	program select output_6
12	INPUT_10	program select_5	31	OUTPUT_12	pan-use output_1
13	INPUT_11	program select_6	32	OUTPUT_13	pan-use output_2
14	INPUT_12	pan-use input_1	33	OUTPUT_14	pan-use output_3
15	INPUT_13	pan-use input_2	34	OUTPUT_15	pan-use output_4
16	INPUT_14	pan-use input_3	35	OUTPUT_16	pan-use output_5
17	INPUT_15	pan-use input_4	36	DC 0V	external DC 0V power supply
18	INPUT_16	pan-use input_5	37	DC 0V	external DC 0V power supply
19	—	—	38	—	—



I/O loop diagram

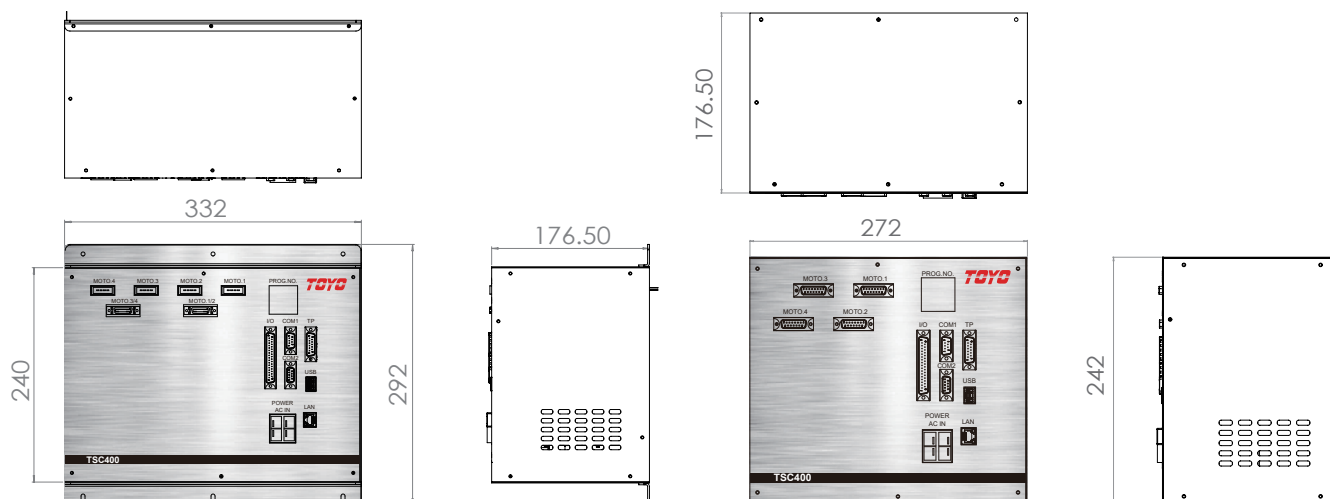
Environment And Dimension

■ Restricted Setting Condition

- Environment with corrosive, explosive and flammable gas and combustible liquids.
- Environment with heavy dust.
- Locations where can be polluted by other equipments' coolant.
- Locations with high vibrations(0.5G or above).
- Please locate the controller as shown on the right for correct installation position.

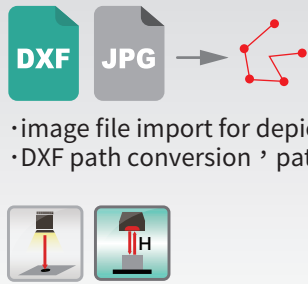


■ Controller Dimension



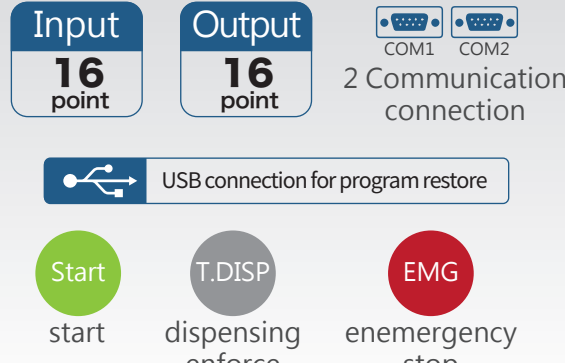
User Interface (UI) Description

Multi-Function Operate



- image file import for depict path
- DXF path conversion ' path editing
- CCD aid Teaching point (optional)
- laser altimeter (optional)

Communication Connection ' Lot Corresponding



Input 16 point

Output 16 point

COM1 COM2

2 Communication connection

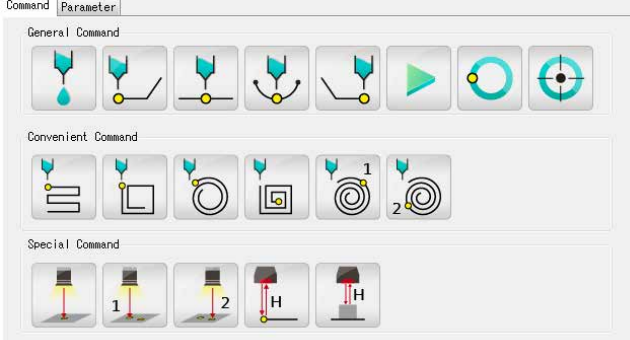
USB connection for program restore

Start start

T.DIS dispensing enforce

EMG enemergency stop

Dispensing Command



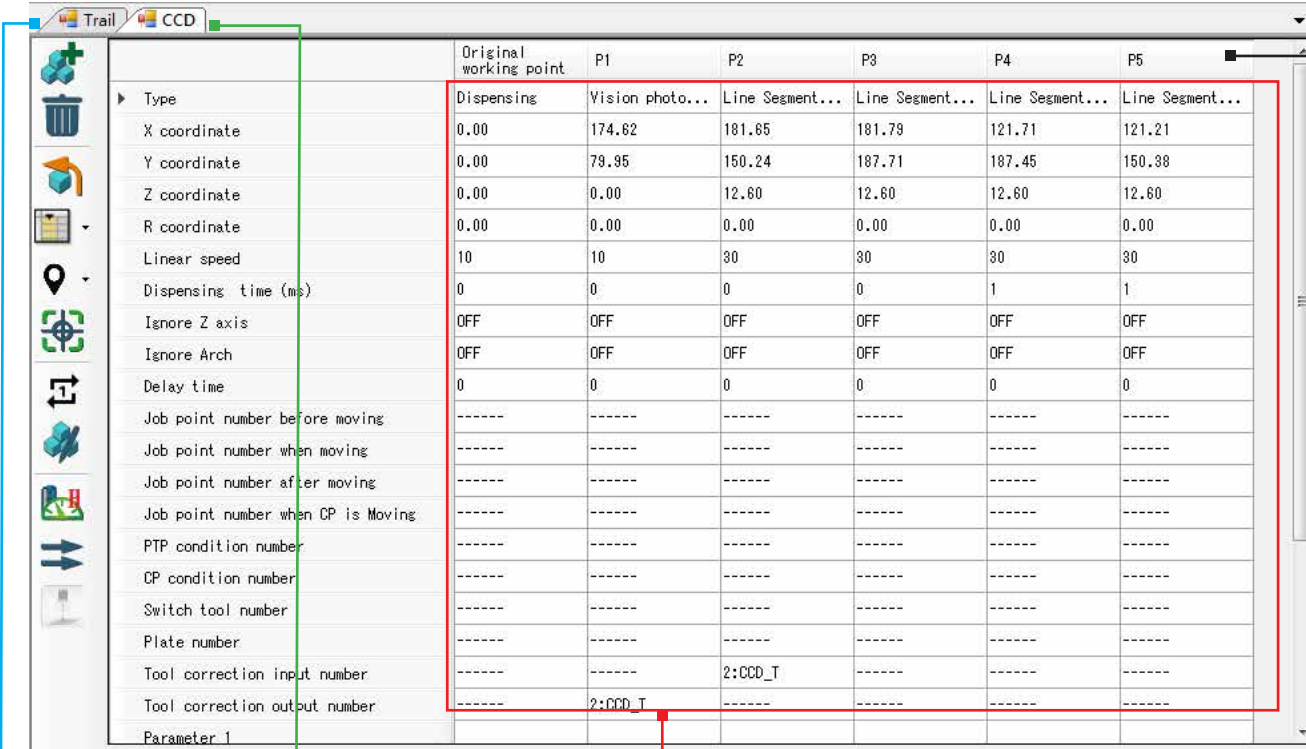
Command Parameter

General Command

Convenient Command

Special Command

Execute Page



	Original working point	P1	P2	P3	P4	P5
Type	Dispensing	Vision photo...	Line Segment...	Line Segment...	Line Segment...	Line Segment...
X coordinate	0.00	174.62	181.85	181.79	121.71	121.21
Y coordinate	0.00	79.95	150.24	187.71	187.45	150.38
Z coordinate	0.00	0.00	12.60	12.60	12.60	12.60
R coordinate	0.00	0.00	0.00	0.00	0.00	0.00
Linear speed	10	10	30	30	30	30
Dispensing time (ms)	0	0	0	0	1	1
Ignore Z axis	OFF	OFF	OFF	OFF	OFF	OFF
Ignore Arch	OFF	OFF	OFF	OFF	OFF	OFF
Delay time	0	0	0	0	0	0
Job point number before moving	-----	-----	-----	-----	-----	-----
Job point number when moving	-----	-----	-----	-----	-----	-----
Job point number after moving	-----	-----	-----	-----	-----	-----
Job point number when CP is Moving	-----	-----	-----	-----	-----	-----
PTP condition number	-----	-----	-----	-----	-----	-----
CP condition number	-----	-----	-----	-----	-----	-----
Switch tool number	-----	-----	-----	-----	-----	-----
Plate number	-----	-----	-----	-----	-----	-----
Tool correction input number	-----	-----	2:CCD_T	-----	-----	-----
Tool correction output number	-----	2:CCD_T	-----	-----	-----	-----
Parameter 1						

Currently opening point position program

Currently opening

Currently opening point data program

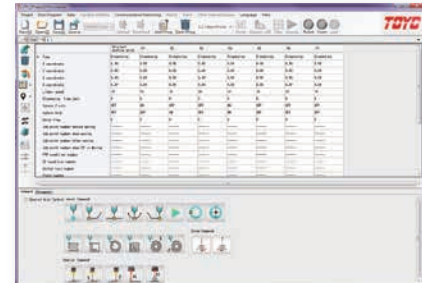
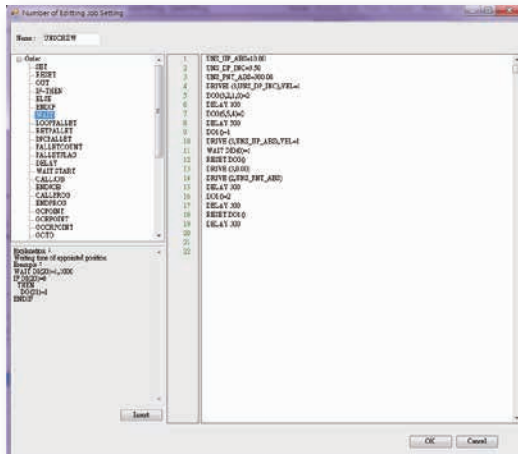
Currently opening point number 00 program

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2D CAD path conversion , efficiently point teaching

Our easy-to-learn multi-operation user interface allows users to perform 2D CAD drawings (DXF format) to point coordinates, as well as continuous paths.

The intuitive step-sequenced procedures allow users to easily communicate with external peripheral devices for dispensing operations and more.



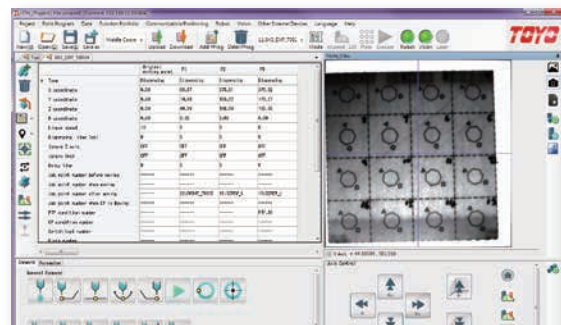
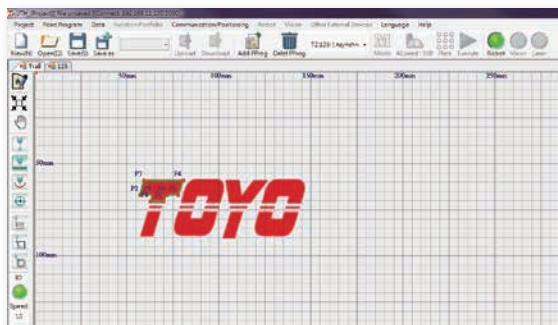
The procedure number item can be set to perform tool operations at any time during the movement process.

[illegible]

Automatic CCD & Laser Calibration

Complete point setting using background image data referencing off-line, and then upload once on-line.

Automatic calibration function allows for greater precision for CCD and laser-based applications.



Dispensing Functions

Use the convenient command interface to quickly and easily build dispensing functions.



Convenient fill-in dispensing functions which allow you to dispense like drawing a picture using only 2 points for a rectangle and 3 points for a circle.

