

# TOYO 2021 DESKTOP ROBOT / XY ROBOT JTHC / JTHD / JTHX / JTHS / JTL / XYCGT / XYSGT Series

Dispensing, Soldering, Screw-tightening,  
Automated Optical Inspection, Positioning, Assembly



# Toyo Product Lineup



10 days  
delivery time for  
standard products

10 days delivery time for standard products. Please contact your local sales representative for products with special requirements.

24 Taiwan : 0800-800-893  
24 China : 400-875-0009

## Motor-less Single-axis Systems

Compatible with motors manufactured by other brands

Integrated Linear Bearing Linear Actuator-Carriage-type

**GTH**  
Ball Screw Type

GTH3 GTH12  
GTH4 GTH5S  
GTH5 GTH8S  
GTH8 GTH12S



Integrated Linear Bearing Linear Actuator-Rod Type

**GTY**  
Ball Screw Type

GTY4  
GTY5  
GTY8  
GTY12



Standard Ball-screw-driven Linear Actuator

**ETH**  
Ball Screw Type

ETH13 ETH22  
ETH14 ETH17M  
ETH17 ETH22M



IP66-rated Waterproof Linear Actuator

**GPH**  
Ball Screw Type

GPH5  
GPH8  
GPH12



New  
Released

Standard Belt-driven Linear Actuator

**ETB**  
Belt Type

ETB5 ETB14M  
ETB6 ETB17M  
ETB10 ETB22M



European-style Belt-driven Linear Actuator

**M**  
Belt Type

MH65 MK65  
MH80 MK85  
MK110



Cleanroom-rated Ball-screw-driven Linear Actuator

**ECH**  
Ball Screw Type

ECH14 ECH17M  
ECH17 ECH22M  
ECH22



Class  
10

Cleanroom-rated Belt-driven Linear Actuator

**ECB**  
Belt Type

ECB5 ECB14  
ECB6 ECB17  
ECB10 ECB22



Class  
10

Cleanroom-rated, Ball-screw-driven, Carriage-type Linear Actuator Module

**GCH**  
Ball Screw Type

GCH4 GCH12  
GCH5 GCH5S  
GCH8 GCH8S



Class  
10

Cleanroom-rated, Ball-screw-driven, Rod-type Linear Actuator Module

**GCY**  
Ball Screw Type

GCY4  
GCY5  
GCY8  
GCY12



Class  
10

## Motor-less Multi-axis Systems

Combination of 2 axes / 3 axes, greatly reduce the assembly time

螺桿型直交模組

**XYTH**  
Ball Screw Type

XYTH650-A  
XYTH760-A  
XYTH870-A  
XYTH876-A



Arm Type (A)

XYTH760-G  
XYTH870-G  
XYTH876-G



Gantry Type (G)

XYTH650-P  
XYTH760-P  
XYTH880-P  
XYTH886-P



PoleType (P)

XYTH760-F



Cross Type (F)

皮帶型直交模組

**XYTB**  
Belt Type

XYTB650-A  
XYTB760-A  
XYTB870-A  
XYTB876-A



Arm Type (A)

XYTB870-G  
XYTB876-G



Gantry Type (G)

軌道內嵌螺桿式  
直交機械手

**XYGT**  
Ball Screw Type

XYGT210-A  
XYGT320-A  
XYGT430-A  
XYGT440-A  
XYGT321-A  
XYGT432-A



2 axes



3axes

Arm Type (A)

## Servo Cylinder

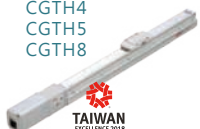
Best Choice for Pneumatic Replacements

### Closed-loop stepping motor built-in

Integrated Linear Bearing Servo Cylinder Carriage-type

**CGTH**

CGTH4  
CGTH5  
CGTH8



TAIWAN  
EXCELLENCE 2018

Integrated Linear Bearing Servo Cylinder Rod Type

**CGTY**

CGTY4  
CGTY5  
CGTY8



TAIWAN  
EXCELLENCE 2018

Integrated Linear Bearing Servo Cylinder Cleanroom Type

**CGCH**

CGCH4  
CGCH5



Class  
10

Miniature Cylinder

**CS**

CSH20  
CSF20  
CSS20



High Rigidity Miniature Cylinder

**CSG**

CSG25



New  
Released

Electric Gripper

**CH**

CHS2-S12  
CHS2-S20  
CHS2-S40  
CHS2-S68  
CHS2C  
CHB6-S11  
CHB6-S14  
CHB6T-S14



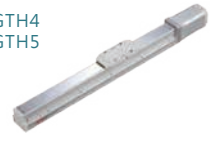
2nd  
Generation

### Servo Motor built-in

Integrated Linear Bearing Servo Cylinder Carriage-type

**DGTH**

DGTH4  
DGTH5



Integrated Linear Bearing Servo Cylinder Rod Type

**DGTY**

DGTY4  
DGTY5



Mini Cylinder

**DM**

DMG25  
DMG40  
DMH25  
DMH40



# Toyo Product Lineup

TOYOROBOT

Search

www.toyorobot.com

Free member  
registration2D/3D images  
downloadReal time model  
selection software

24 Taiwan : 0800-800-893

24 China : 400-875-0009

## Linear Motor Robot

High Speed, High Acceleration, Dual Carriages

Integrated Linear Bearing Linear motor robot

**LGW**  
Standard

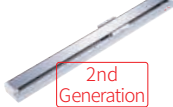
LGW17

New  
ReleasedClass  
100

Integrated Linear Bearing Linear motor robot

**LGF**  
StandardLGF5  
LGF15TAIWAN  
EXCELLENCE 2018Class  
100

Ironcore Linear Motor Series

**LTF2**  
Flat TypeLTF2-15  
LTF2-20  
LTF2-30  
LTF2-45  
LTF2-752nd  
Generation

Ironcore Linear Motor Series

**LNF2**  
Flat TypeLNF2-15  
LNF2-20  
LNF2-30  
LNF2-45  
LNF2-752nd  
Generation

Cleanroom-type Ironcore Linear Motor Series

**LCF2**  
Flat TypeLCF2-15  
LCF2-20  
LCF2-30  
LCF2-45  
LCF2-75Class  
12nd  
Generation

Ironcore Linear Motor Series

**LAF/LSF**  
Flat TypeLAF7/LSF7  
LAF15/LSF15  
LAF20/LSF20  
LAF30/LSF30

Ironless Linear Motor Series

**LAU**  
U TypeLAU3  
LAU5

Linear Motor Robot

**LMR**  
Shaft TypeLMR20  
LMR25  
LMR32

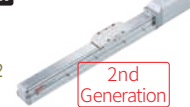
## Single Robot

Three Specifications, High-reliability

Integrated Linear Bearing Linear Actuator-Rod Type

**SGTY**  
Ball Screw TypeSGTY5  
SGTY8  
SGTY122nd  
Generation

Integrated Linear Bearing Linear Actuator-Carriage-type

**SGTH**  
Ball Screw TypeSGTH5  
SGTH8  
SGTH122nd  
Generation

Rotary Cylinder

**SNT**SNT85  
SNT130  
SNT200

## Cartesian Coordinates Robot

Gantry-, Cantilever-, Pole-, and Cross-type Multi-axis Systems

Ball-screw-driven  
Desktop Robot**JTHX**JTHX-200  
JTHX-300  
JTHX-400  
JTHX-500  
JTHX-500DBall-screw-driven  
Desktop Robot**JTHS**JTHS-300  
JTHS-400  
JTHS-500  
JTHS-500DBall-screw-driven  
Desktop Robot**JTHC**JTHC-200  
JTHC-300  
JTHC-400  
JTHC-500  
JTHC-500DBall-screw-driven  
Desktop Robot**JTHD**JTHD-200  
JTHD-300  
JTHD-400  
JTHD-500  
JTHD-500DLinear motor-driven  
Desktop Robot**JTL**

JTL-500

Ball Screw-driven  
Cartesian Robot**XYCGT**  
Stepping motorXYCGT320  
XYCGT321Ball Screw-driven  
Cartesian Robot**XYSGT**  
servo motorXYSGT430  
XYSGT432

## Robot controllers (1 ~ 4 axis)

High performance control system

Single axis controller

**TC/XC/LC**TC100  
XC100  
SC100TAIWAN  
EXCELLENCE 2018

TC100 XC100 LC100

Multi axis Controller

**TSC**

TSC400



TSC400

## Automatic Guided Vehicle

MES compatible to achieve industry 4.0

Economic Model

**UWR20B**

Standard Model

**UWR30B**

Economic Model

**SWR**

Standard Model

**AWR11**

Servo Controller-driver

**ABH3**

Economic Load Carrier Series

**Pickup-85D**

Standard Load Carrier Series

**Pickup-E64**

Lift Type AGV Cart

**Carry-K65**

Drive Kit

Automatic Guided Vehicle

## Company Introduction



Based on the foundation of (Integrity, Technology and Service), TOYO create the maximum value for the society and industry and strive for the goal of exceeding the need of the customer.

Since TOYO group has been set up at 2000 in Taiwan, with the support by partners in different business fields, TOYO has become the premium and preferred shining brand in industrial robot market of Taiwan and China. Recently, TOYO create a innovative situation by the combination of controller and transmission module to develop high CP value industrial single/multi axis and SCARA robot. No matter which industry you are in or what kind of difficulty you are facing, TOYO's high CP value industrial robot will fulfill your demand.

## 6 Major Products of Linear Drive

Electric Actuator



Servo Cylinder



Electric Gripper



Linear Motor Robots



Desktop Robots



Automated Guided Vehicle



- ⊕ High price-performance ratio
- ⊕ Flexible customization
- ⊕ Short delivery time
- ⊕ Stable quality
- ⊕ Versatile product line



## Service

### Free demo machine



Free

TOYO prepare standard unit for customer's demonstration and test. They are free rental for our customers. (15 days advanced notice / The longest rental period 30 days.) Please contact our sales and local agents.

### 24 hours online service



Free

Taiwan area toll-free No.0800-800893  
China area toll-free No.400-875-0009  
24hr on call service, please contact us for any questions or enquiries.

☎ TOLL-FREE TAIWAN 0800-800-893

☎ TOLL-FREE CHINA 400-875-0009

### Technical conference



Free

New product seminars and technical conferences are hold regularly to share our latest technology with free demo machine customers.

### Exhibitions



We participate in exhibitions frequently. Please contact us for more information.

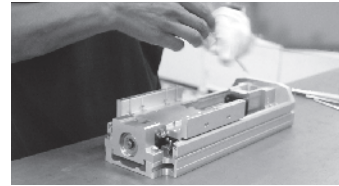
### Puncar Action



Free

For the purpose of letting the clients all over the island to have a chance to experience and be more familiar with the demonstrated product personally, we therefore build a mobile puncar cruising around the Taiwan island enable the clients to test it. For more details, please do not hesitate to contact us.

### Inspection and Maintenance



If the product has problem or out of order, you can send it back for inspection and maintenance. If the product is out of warranty, we still can repair it for certain charge.

### Quality Assurance Certification



ISO 9001 ISO 14001 OHSAS 18001

Passed ISO9001, ISO14001 and OHSAS18001 international certification.

### Awards



Got 9th Taiwan Business Startup Award



Got 19th Taiwan Business Rising Star Award

### Patented Technologies



#M398055 #M429543 #M440838 #M523013 #M523014 #M523015



#M523016 #M523017 #M534739 #M523019 #M523018 #I530627



Patent applications certified by the Intellectual Property Office of Ministry of Economic Affairs.



CGTH/CGTY Series Got 2018 Taiwan Excellence Awards



LGF Series Got 2021 Taiwan Excellence Awards

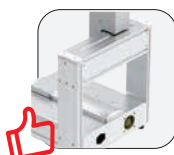


CHY Series Got 2021 Taiwan Excellence Awards

## JTHX/JTHS Structure

### Built-in Cable Tracks

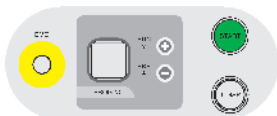
New built-in cable tracks improve safety and look.



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 | ○          | ×    |



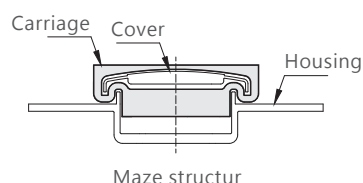
Ball-screw driven Z-axis

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

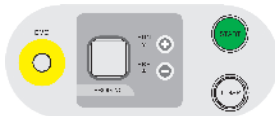
New built-in cable tracks improve safety and look.



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

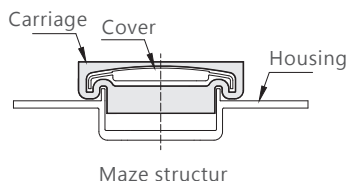
## Homemade linear motor adopted

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

↑  
Repeatability  
 $\pm 0.002$ 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  
 $\pm 0.05$ 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.

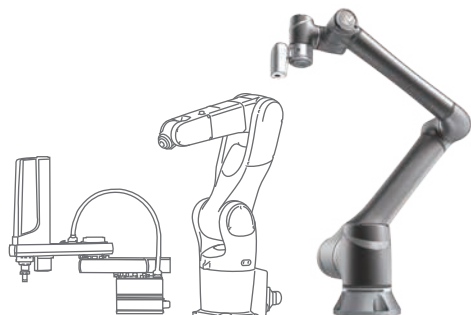
## Flexible choice of work area

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.

## 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

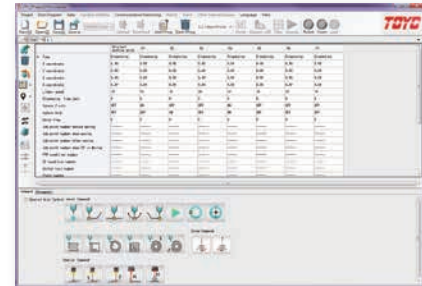
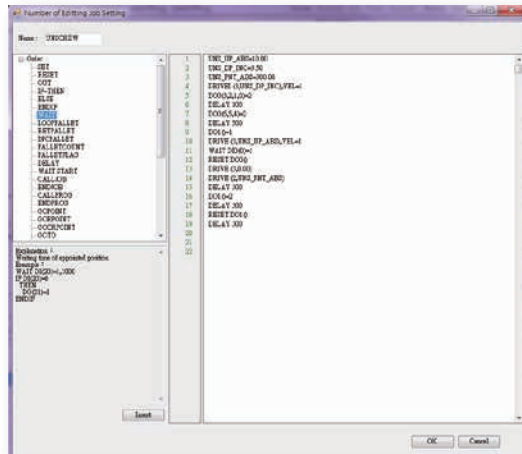


# Dispensing Software

## 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.

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 251 | 252 | 253 | 254 | 255 | 256 | 257 | 258 | 259 | 260 | 261 | 262 | 263 | 264 | 265 | 266 | 267 | 268 | 269 | 270 | 271 | 272 | 273 | 274 | 275 | 276 | 277 | 278 | 279 | 280 | 281 | 282 | 283 | 284 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | 325 | 326 | 327 | 328 | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 375 | 376 | 377 | 378 | 379 | 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 | 395 | 396 | 397 | 398 | 399 | 400 | 401 | 402 | 403 | 404 | 405 | 406 | 407 | 408 | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 427 | 428 | 429 | 430 | 431 | 432 | 433 | 434 | 435 | 436 | 437 | 438 | 439 | 440 | 441 | 442 | 443 | 444 | 445 | 446 | 447 | 448 | 449 | 450 | 451 | 452 | 453 | 454 | 455 | 456 | 457 | 458 | 459 | 460 | 461 | 462 | 463 | 464 | 465 | 466 | 467 | 468 | 469 | 470 | 471 | 472 | 473 | 474 | 475 | 476 | 477 | 478 | 479 | 480 | 481 | 482 | 483 | 484 | 485 | 486 | 487 | 488 | 489 | 490 | 491 | 492 | 493 | 494 | 495 | 496 | 497 | 498 | 499 | 500 | 501 | 502 | 503 | 504 | 505 | 506 | 507 | 508 | 509 | 510 | 511 | 512 | 513 | 514 | 515 | 516 | 517 | 518 | 519 | 520 | 521 | 522 | 523 | 524 | 525 | 526 | 527 | 528 | 529 | 530 | 531 | 532 | 533 | 534 | 535 | 536 | 537 | 538 | 539 | 540 | 541 | 542 | 543 | 544 | 545 | 546 | 547 | 548 | 549 | 550 | 551 | 552 | 553 | 554 | 555 | 556 | 557 | 558 | 559 | 560 | 561 | 562 | 563 | 564 | 565 | 566 | 567 | 568 | 569 | 570 | 571 | 572 | 573 | 574 | 575 | 576 | 577 | 578 | 579 | 580 | 581 | 582 | 583 | 584 | 585 | 586 | 587 | 588 | 589 | 590 | 591 | 592 | 593 | 594 | 595 | 596 | 597 | 598 | 599 | 600 | 601 | 602 | 603 | 604 | 605 | 606 | 607 | 608 | 609 | 610 | 611 | 612 | 613 | 614 | 615 | 616 | 617 | 618 | 619 | 620 | 621 | 622 | 623 | 624 | 625 | 626 | 627 | 628 | 629 | 630 | 631 | 632 | 633 | 634 | 635 | 636 | 637 | 638 | 639 | 640 | 641 | 642 | 643 | 644 | 645 | 646 | 647 | 648 | 649 | 650 | 651 | 652 | 653 | 654 | 655 | 656 | 657 | 658 | 659 | 660 | 661 | 662 | 663 | 664 | 665 | 666 | 667 | 668 | 669 | 670 | 671 | 672 | 673 | 674 | 675 | 676 | 677 | 678 | 679 | 680 | 681 | 682 | 683 | 684 | 685 | 686 | 687 | 688 | 689 | 690 | 691 | 692 | 693 | 694 | 695 | 696 | 697 | 698 | 699 | 700 | 701 | 702 | 703 | 704 | 705 | 706 | 707 | 708 | 709 | 710 | 711 | 712 | 713 | 714 | 715 | 716 | 717 | 718 | 719 | 720 | 721 | 722 | 723 | 724 | 725 | 726 | 727 | 728 | 729 | 730 | 731 | 732 | 733 | 734 | 735 | 736 | 737 | 738 | 739 | 740 | 741 | 742 | 743 | 744 | 745 | 746 | 747 | 748 | 749 | 750 | 751 | 752 | 753 | 754 | 755 | 756 | 757 | 758 | 759 | 760 | 761 | 762 | 763 | 764 | 765 | 766 | 767 | 768 | 769 | 770 | 771 | 772 | 773 | 774 | 775 | 776 | 777 | 778 | 779 | 780 | 781 | 782 | 783 | 784 | 785 | 786 | 787 | 788 | 789 | 790 | 791 | 792 | 793 | 794 | 795 | 796 | 797 | 798 | 799 | 800 | 801 | 802 | 803 | 804 | 805 | 806 | 807 | 808 | 809 | 810 | 811 | 812 | 813 | 814 | 815 | 816 | 817 | 818 | 819 | 820 | 821 | 822 | 823 | 824 | 825 | 826 | 827 | 828 | 829 | 830 | 831 | 832 | 833 | 834 | 835 | 836 | 837 | 838 | 839 | 840 | 841 | 842 | 843 | 844 | 845 | 846 | 847 | 848 | 849 | 850 | 851 | 852 | 853 | 854 | 855 | 856 | 857 | 858 | 859 | 860 | 861 | 862 | 863 | 864 | 865 | 866 | 867 | 868 | 869 | 870 | 871 | 872 | 873 | 874 | 875 | 876 | 877 | 878 | 879 | 880 | 881 | 882 | 883 | 884 | 885 | 886 | 887 | 888 | 889 | 890 | 891 | 892 | 893 | 894 | 895 | 896 | 897 | 898 | 899 | 900 | 901 | 902 | 903 | 904 | 905 | 906 | 907 | 908 | 909 | 910 | 911 | 912 | 913 | 914 | 915 | 916 | 917 | 918 | 919 | 920 | 921 | 922 | 923 | 924 | 925 | 926 | 927 | 928 | 929 | 930 | 931 | 932 | 933 | 934 | 935 | 936 | 937 | 938 | 939 | 940 | 941 | 942 | 943 | 944 | 945 | 946 | 947 | 948 | 949 | 950 | 951 | 952 | 953 | 954 | 955 | 956 | 957 | 958 | 959 | 960 | 961 | 962 | 963 | 964 | 965 | 966 | 967 | 968 | 969 | 970 | 971 | 972 | 973 | 974 | 975 | 976 | 977 | 978 | 979 | 980 | 981 | 982 | 983 | 984 | 985 | 986 | 987 | 988 | 989 | 990 | 991 | 992 | 993 | 994 | 995 | 996 | 997 | 998 | 999 | 1000 |
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# 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.

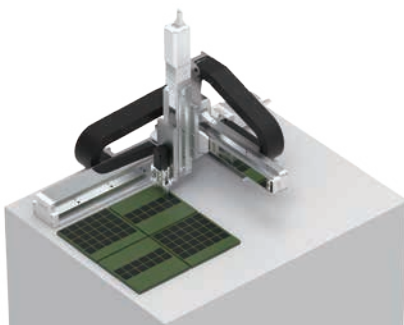


- Use Model  
XYCGT321-A

→ 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.

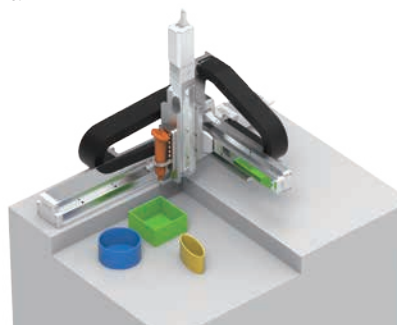


- Use Model  
XYCGT321-A

→ 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.

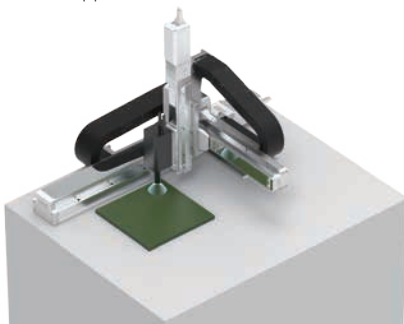


- Use Model  
XYSGT432-A

→ P037

## Surface Treatment

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

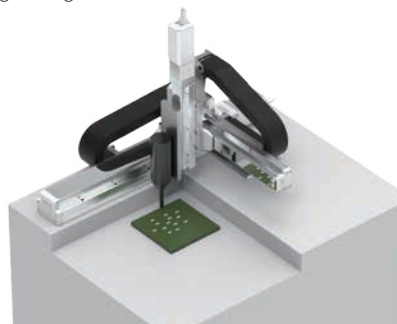


- Use Model  
XYSGT432-A

→ 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

# 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

## 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<br>Combined<br>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      | <ul style="list-style-type: none"> <li>Economic Model</li> <li>Entry-level Series</li> <li>Complete range of sizes</li> <li>Light to medium Payload</li> </ul> |
| 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      | <ul style="list-style-type: none"> <li>Economic Model</li> <li>Complete range of sizes</li> <li>Light to medium Payload</li> </ul>                             |
| 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      | <ul style="list-style-type: none"> <li>Complete range of sizes</li> <li>Light to medium Payload</li> <li>Sleek Design</li> </ul>                               |
| 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      | <ul style="list-style-type: none"> <li>Complete range of sizes</li> <li>Medium to heavy payloads</li> <li>Sleek Design</li> </ul>                              |
| 500                              | 400                               | 400    | 100    | 15                            | 8      |                                                                                                                                                                |
| 500                              | 500                               | 500    | 100    | 15                            | 8      |                                                                                                                                                                |
| 500                              | 500                               | 500    | 100    | 10(Single axis)               | 8      |                                                                                                                                                                |

| X*Y*Z<br>Combined Speed<br>(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      | <ul style="list-style-type: none"> <li>High speed, high precision</li> <li>Medium to heavy payloads</li> </ul> |

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

# 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

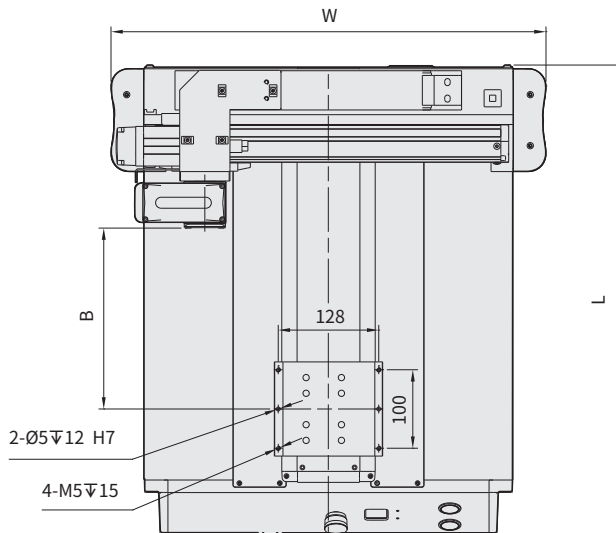
|      |
|------|
| CCDA |
|------|

※If no CCD, no description.

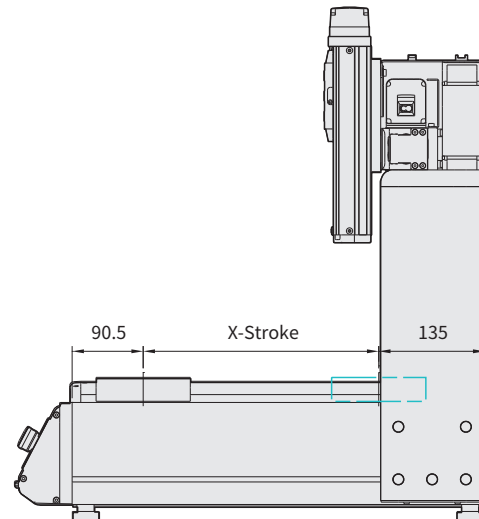
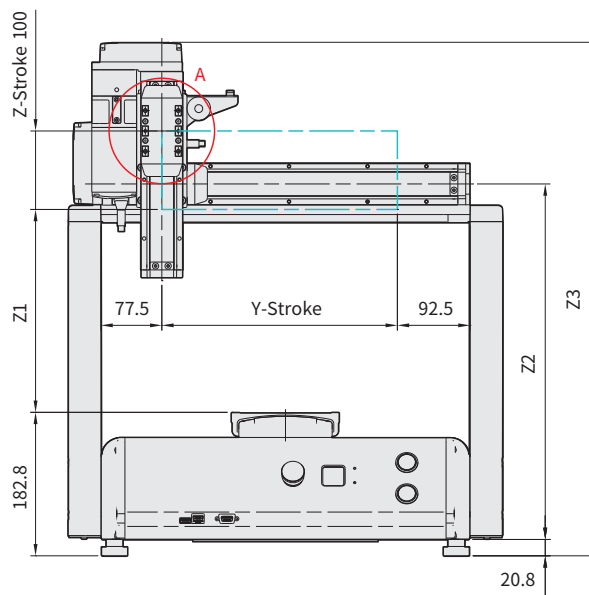
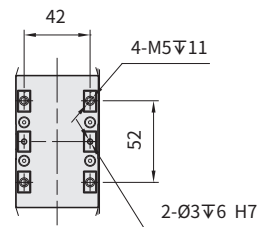
## JTHC200/300/400/500 Dimension Drawing


Download CAD data at [www.toyorobot.com](http://www.toyorobot.com)

Units : mm



A View



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

| Model Number      | Z-axis Height-related Dimensions |                |                 |                 |                 |
|-------------------|----------------------------------|----------------|-----------------|-----------------|-----------------|
| <b>Dimensions</b> | <b>Standard</b>                  | <b>H1(+50)</b> | <b>H2(+100)</b> | <b>H3(+200)</b> | <b>H4(+300)</b> |
| <b>Z1</b>         | 258.5                            | 308.5          | 358.5           | 458.5           | 558.5           |
| <b>Z2</b>         | 453                              | 503            | 553             | 653             | 753             |
| <b>Z3</b>         | 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

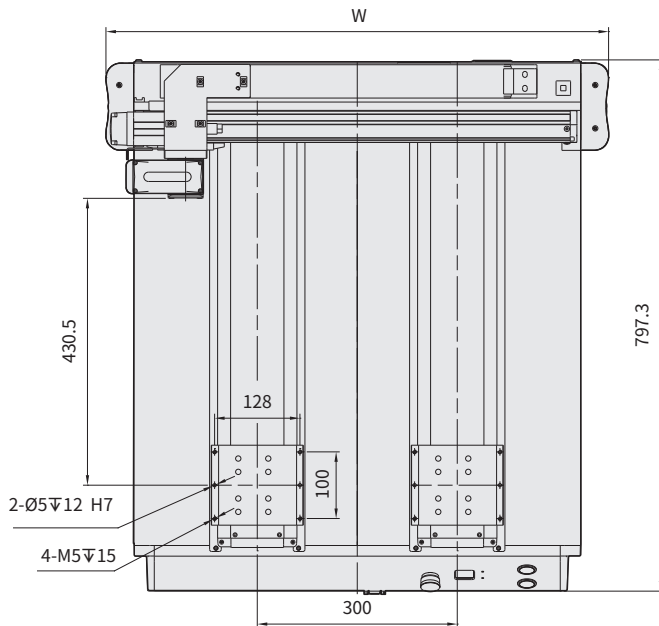
※If no CCD, no description.

## JTHC500D Dimension Drawing

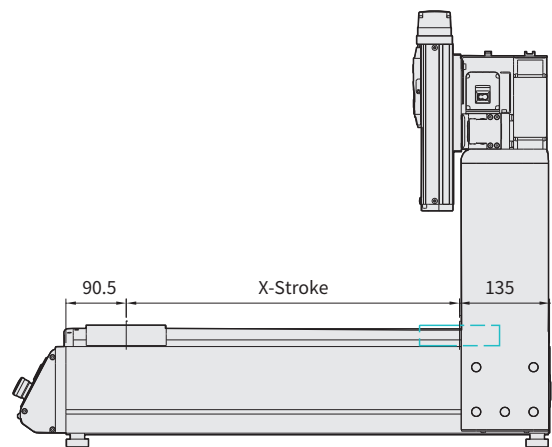
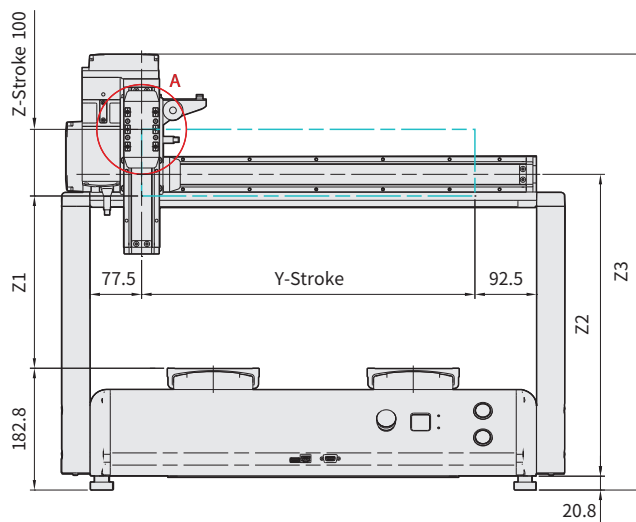
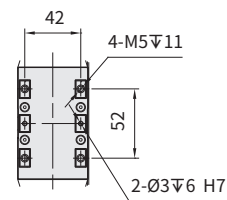


Download CAD data at [www.toyorobot.com](http://www.toyorobot.com)

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 |
|------|

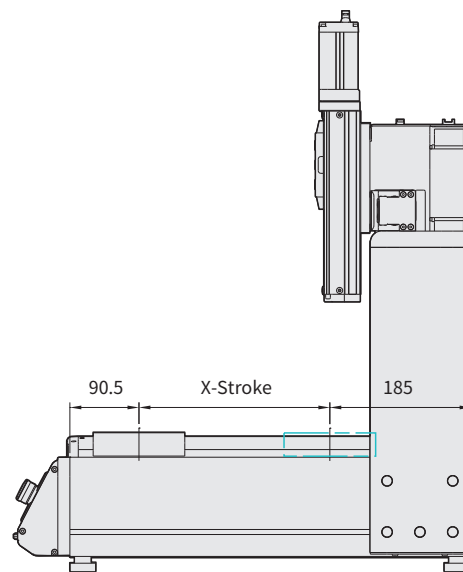
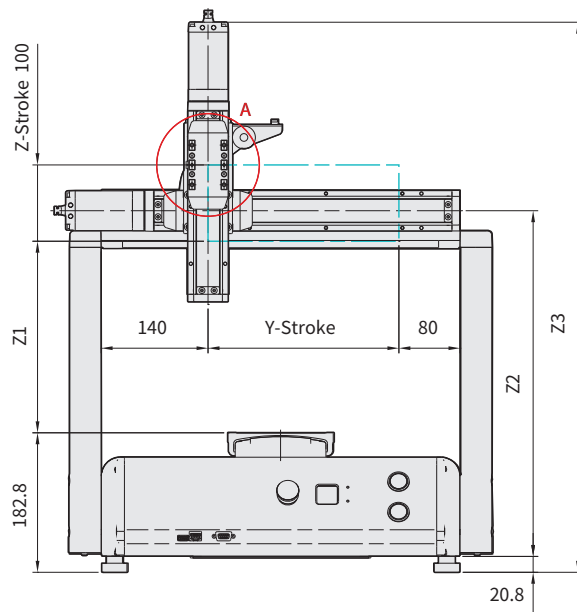
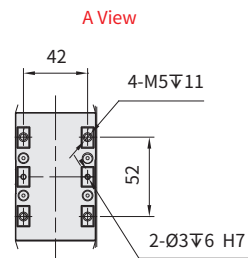
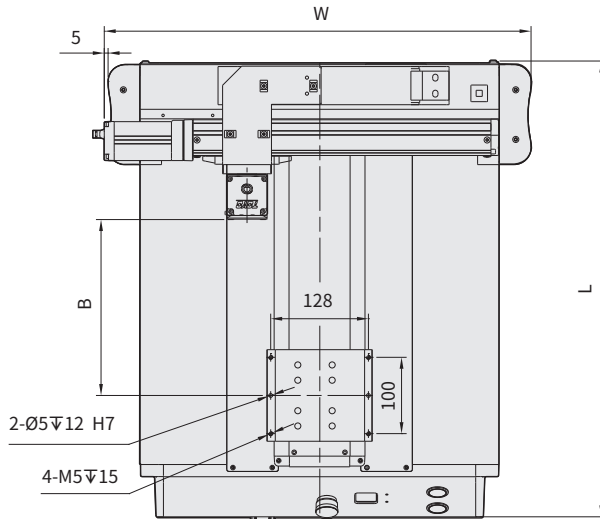
※If no CCD, no description.

# JTHD200/300/400/500 Dimension Drawing



Download CAD data at [www.toyorobot.com](http://www.toyorobot.com)

Units : mm



| Model Number         | JTHD200 | JTHD300 | JTHD400 | JTHD500 |
|----------------------|---------|---------|---------|---------|
| <b>Dimensions</b>    |         |         |         |         |
| <b>X*Y Work Area</b> | 150*150 | 250*250 | 350*350 | 450*450 |
| <b>L</b>             | 497.3   | 597.3   | 697.3   | 797.3   |
| <b>W</b>             | 459     | 559     | 659     | 759     |
| <b>B</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) |
| <b>Z1</b>    | 251                              | 301     | 351      | 451      | 551      |
| <b>Z2</b>    | 453                              | 503     | 553      | 653      | 753      |
| <b>Z3</b>    | 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

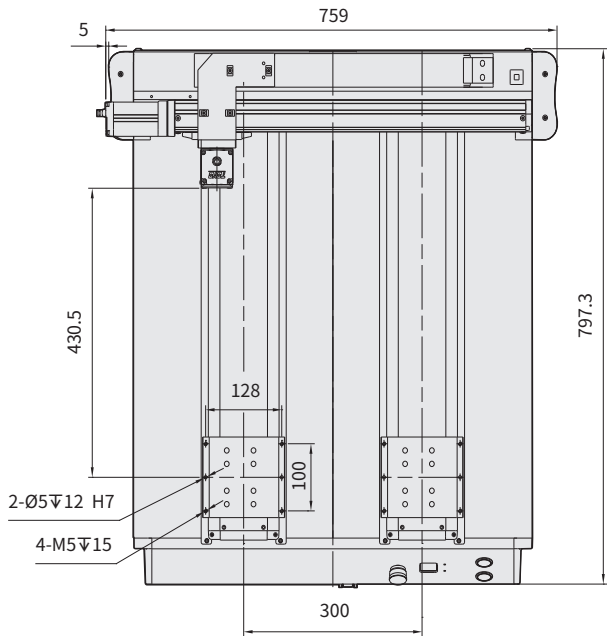
※If no CCD, no description.

# JTHD500D Dimension Drawing

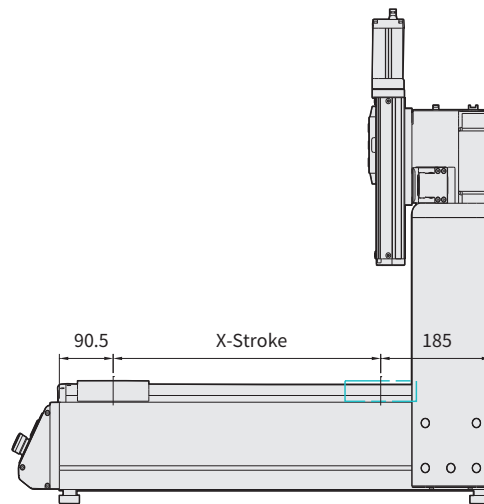
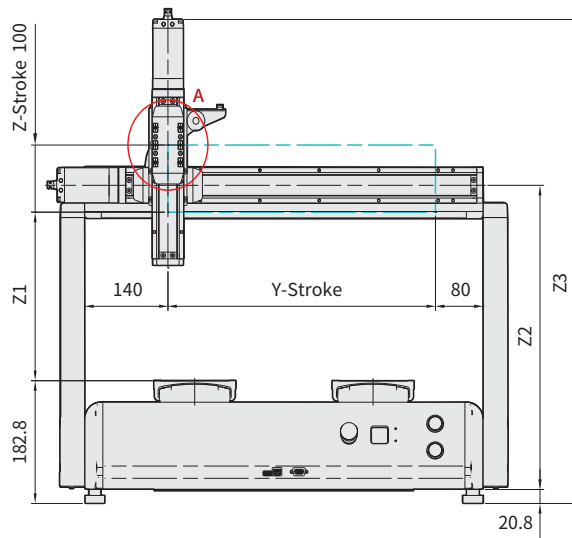
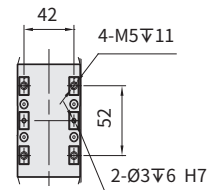


Download CAD data at [www.toyorobot.com](http://www.toyorobot.com)

Units : mm



A View



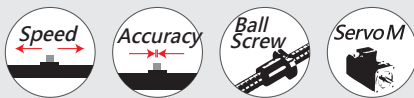
| Model Number  | JTHD500 |
|---------------|---------|
| Dimensions    |         |
| X*Y Work Area | 450*450 |

| 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 standsrd, no description.

### With CCD

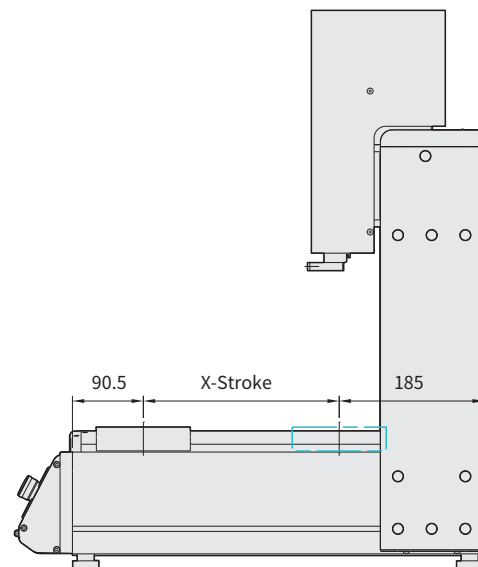
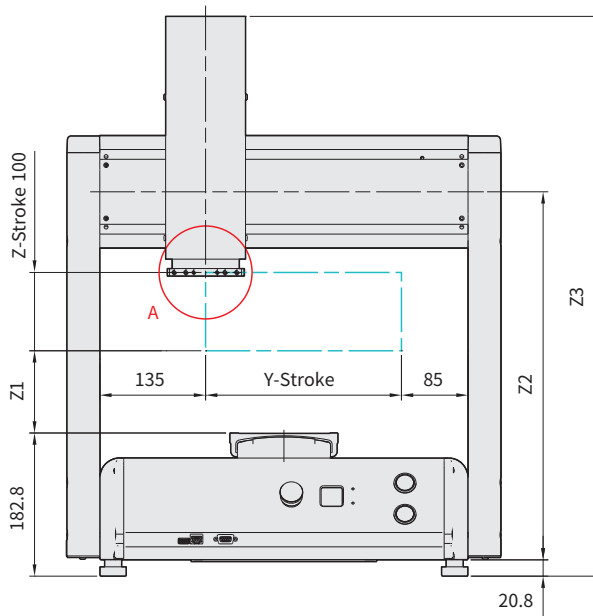
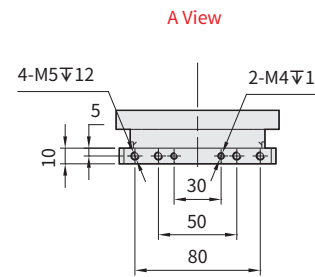
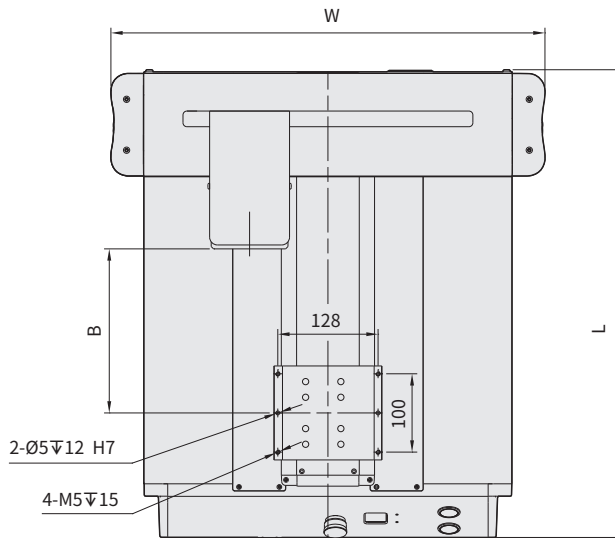
CCDA

※If no CCD, no description.

## JTHX200/300/400/500 Dimension Drawing


Download CAD data at [www.toyorobot.com](http://www.toyorobot.com)

Units : mm



| Model Number  | JTHX200 | JTHX300 | JTHX400 | JTHX500 |
|---------------|---------|---------|---------|---------|
| Dimensions    |         |         |         |         |
| X*Y Work Area | 150*150 | 250*250 | 350*350 | 450*450 |
| L             | 497.3   | 597.3   | 697.3   | 797.3   |
| W             | 454     | 554     | 654     | 754     |
| B             | 109.5   | 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           | 714.8                            | 764.8   | 814.8    | 914.8    | 1014.8   |

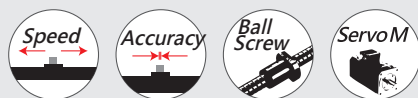


# JTHX

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

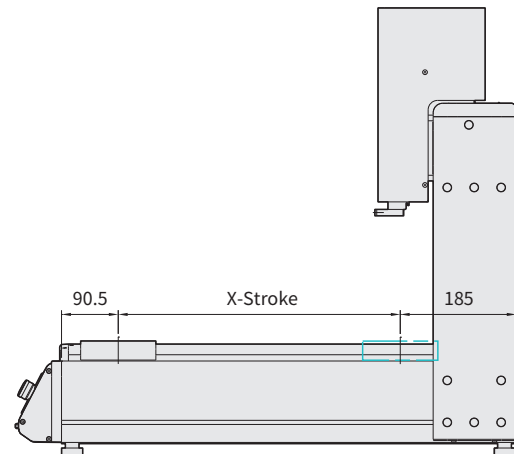
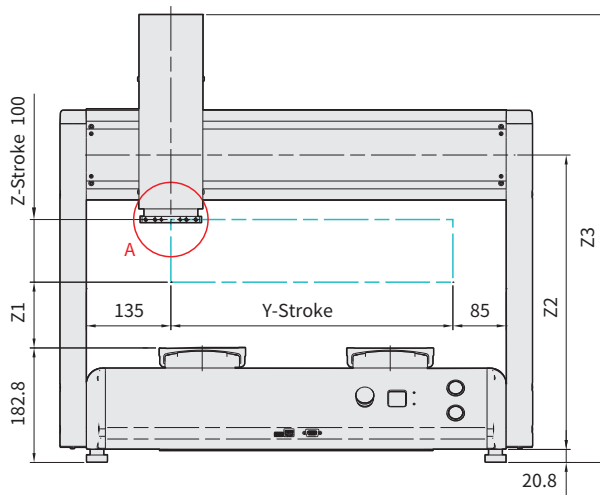
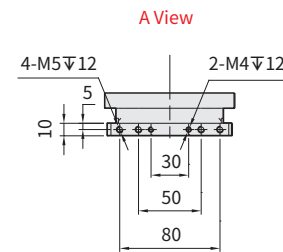
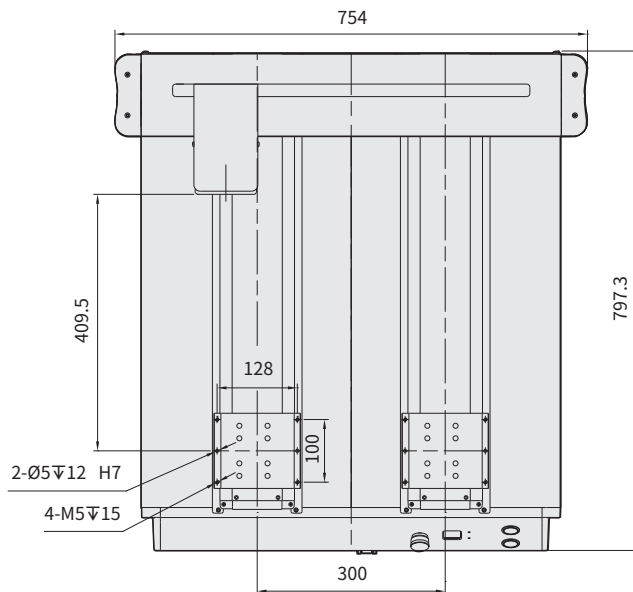
※If no CCD, no description.

# JTHX500D Dimension Drawing



Download CAD data at [www.toyorobot.com](http://www.toyorobot.com)

Units : mm



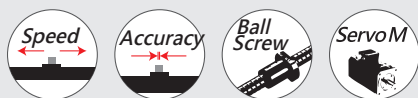
| Model Number  | JTHX500D |
|---------------|----------|
| Dimensions    |          |
| X*Y Work Area | 450*450  |

| 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 |
|------|

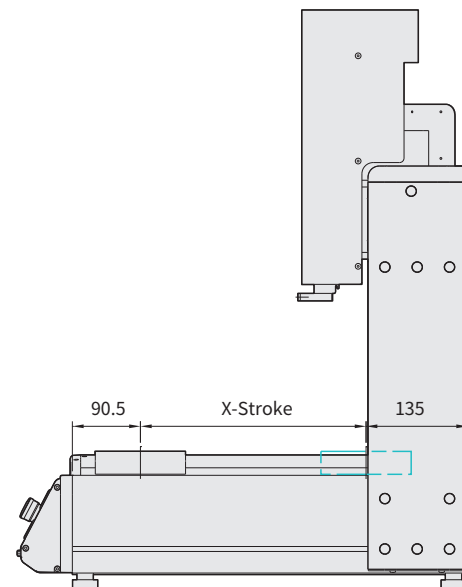
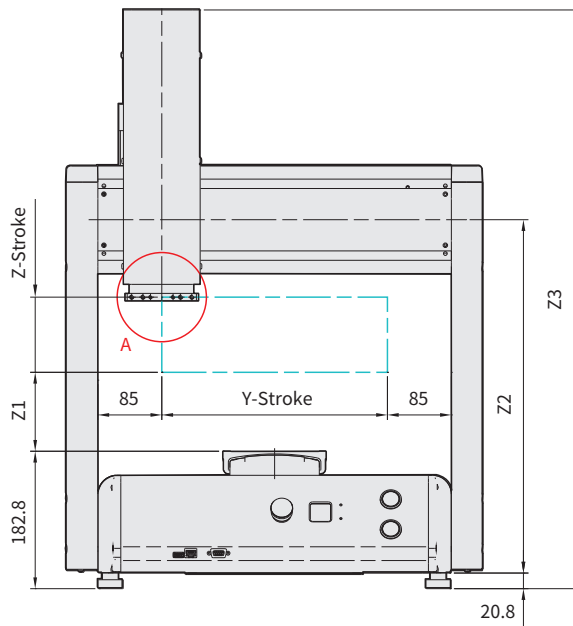
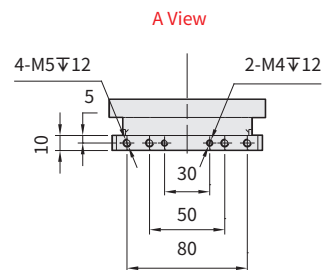
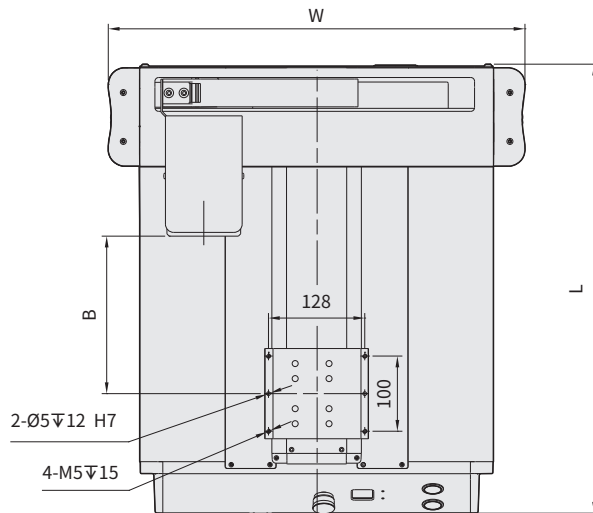
※If no CCD, no description.

## JTHS300/400/500 Dimension Drawing



Download CAD data at [www.toyorobot.com](http://www.toyorobot.com)

Units : mm



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

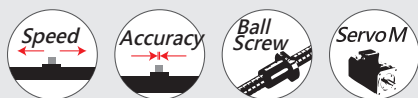
| Model Number | Z-axis Height-related Dimensions |         |          |          |          |
|--------------|----------------------------------|---------|----------|----------|----------|
| Dimensions   | Standard                         | H1(+50) | H2(+100) | H3(+200) | H4(+300) |
| <b>Z1</b>    | 105                              | 155     | 205      | 305      | 405      |
| <b>Z2</b>    | 470                              | 520     | 570      | 670      | 770      |
| <b>Z3</b>    | 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

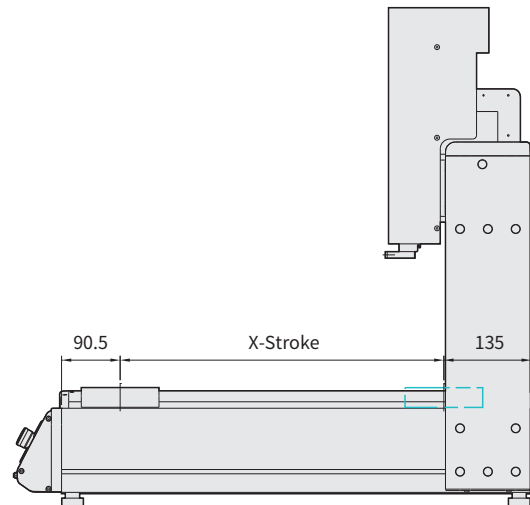
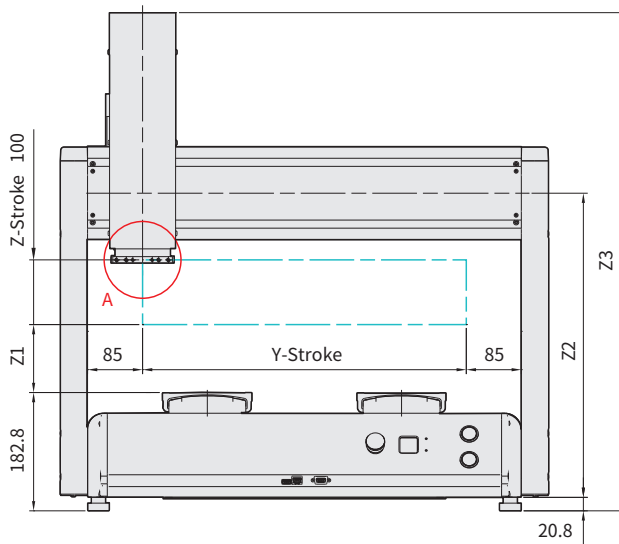
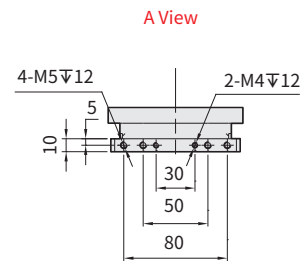
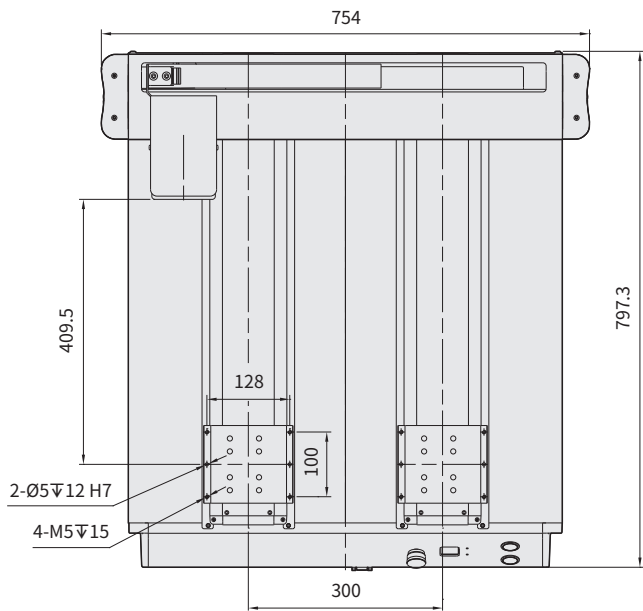
※If no CCD, no description.

# JTHS500D Dimension Drawing



Download CAD data at [www.toyorobot.com](http://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

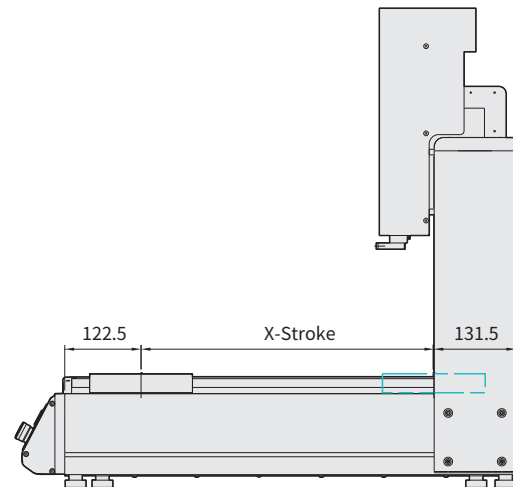
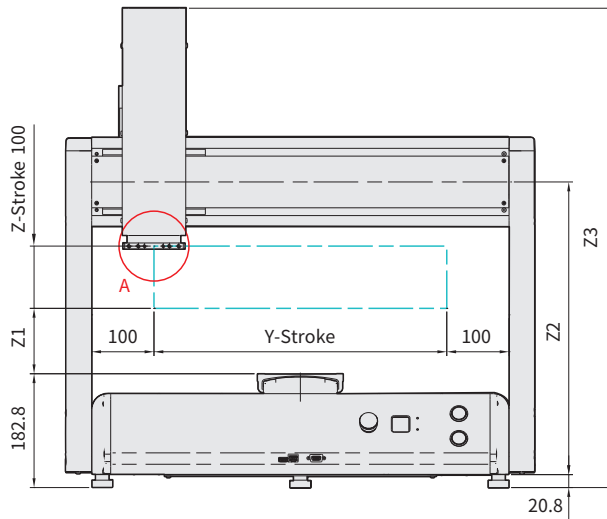
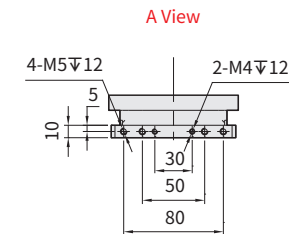
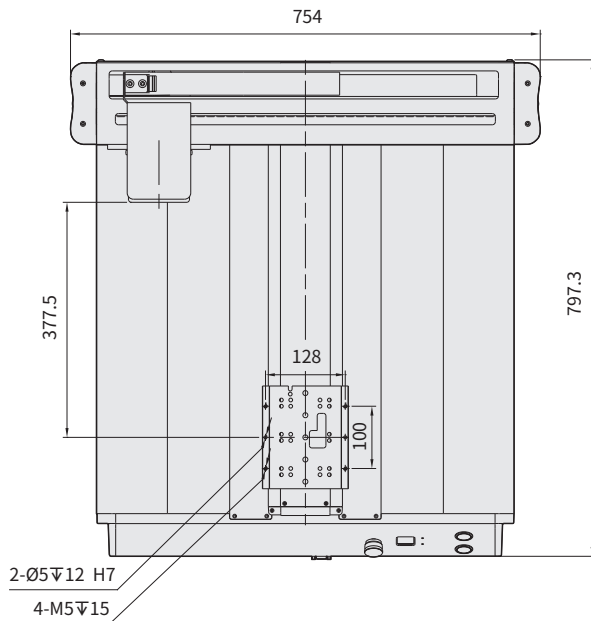
※If no CCD, no description.

# JTL500 Dimension Drawing



Download CAD data at [www.toyorobot.com](http://www.toyorobot.com)

Units : mm



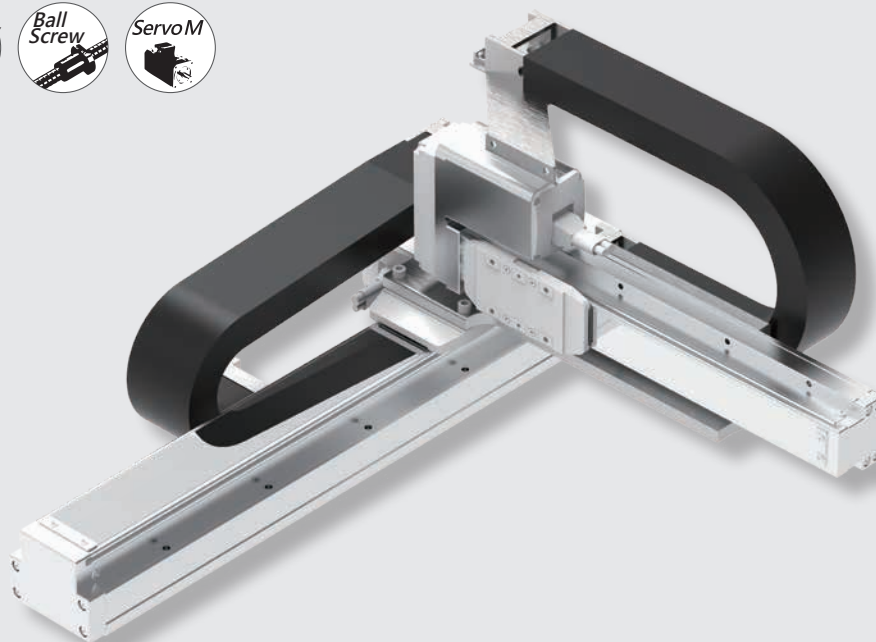
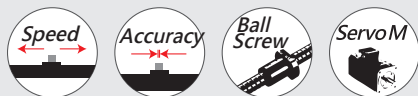
| Model Number  | JTL500  |
|---------------|---------|
| Dimensions    |         |
| X*Y Work Area | 470*470 |

| 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 servo 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

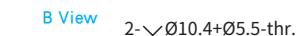
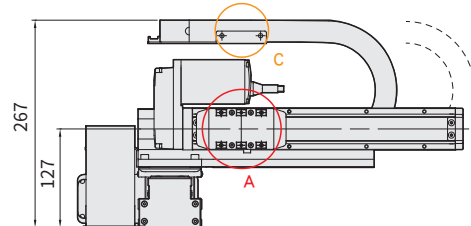
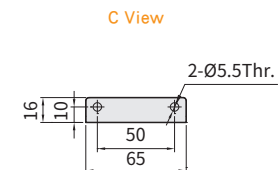
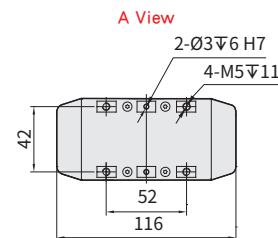
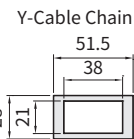
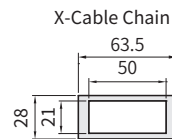
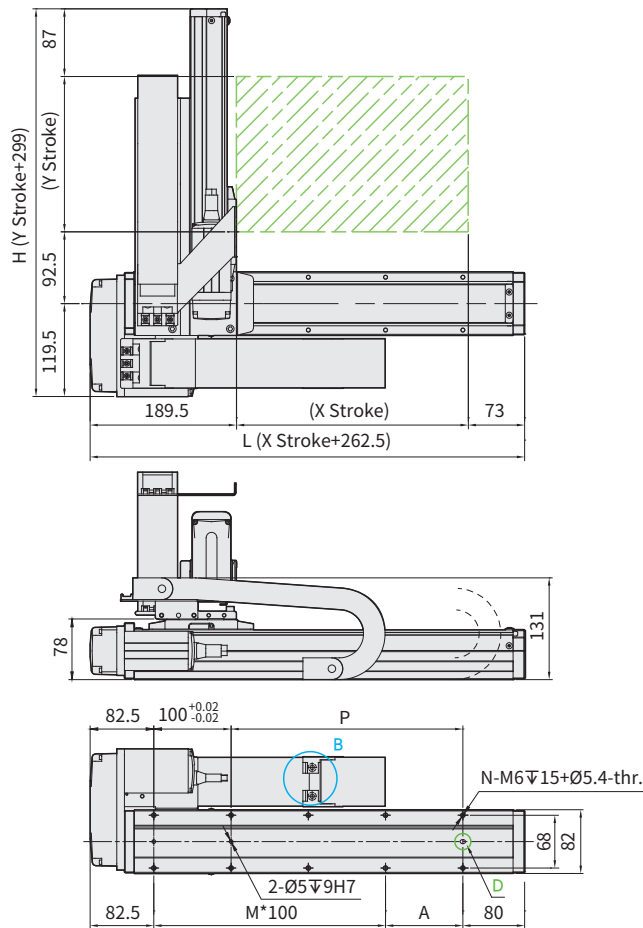
Delivery Method  
C By Set  
K By Kit

## XYCGT320-A1 Dimension Drawing

A1

Download CAD data at [www.toyorobot.com](http://www.toyorobot.com)

Units : mm



※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.

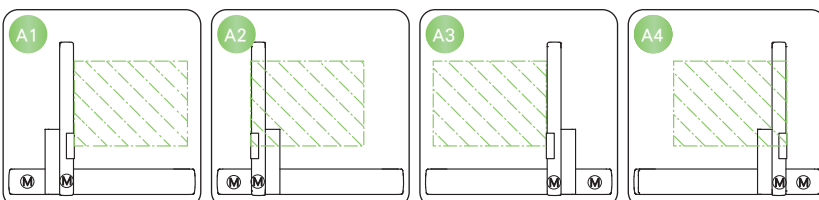
\* Fixing plate for X axis moving end of cable chain need to be assembled by customers.

\* 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    | 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 | 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



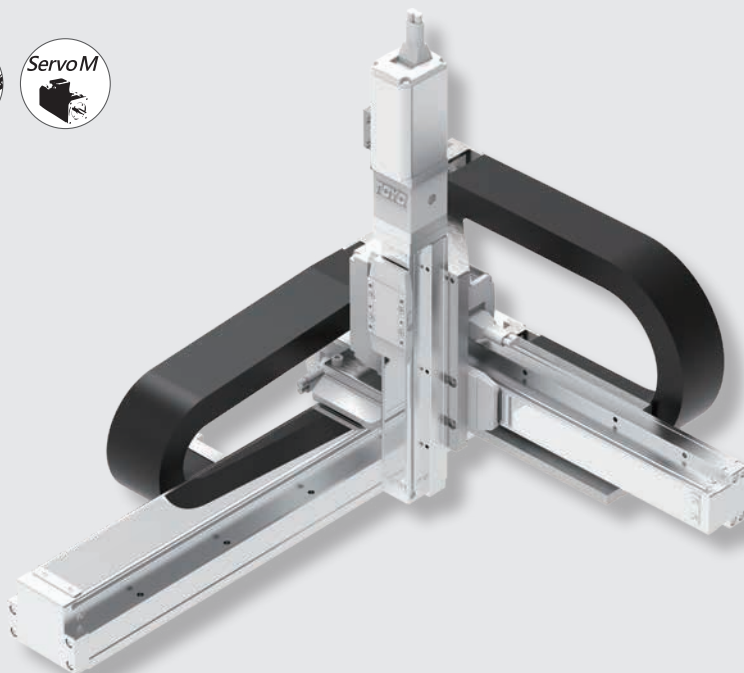
## Corresponding Controller

| 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           |
|-------------------------------|------|-----------------------|------------|------------------|
| <b>Model Type</b>             |      | CGTH8                 | CGTH5      | CGTH4            |
| <b>Repeatability</b>          | mm   | ±0.01                 | ±0.01      | ±0.01            |
| <b>Ball Screw Lead</b>        | mm   | 10                    | 10         | 6                |
| <b>Max. Speed ※1</b>          | mm/s | 350                   | 538        | 314              |
| <b>Stroke (50 increments)</b> | mm   | 50~1100               | 50~300     | 50~100           |
| <b>AC Servo Motor Output</b>  | W    | 42 □ (48V)            | 42 □ (48V) | 35 □ +Brake(48V) |
| <b>Environment</b>            |      | 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 |
|---------------------|-----|-----|-----|-----|-----|-----|
| <b>Z Stroke(mm)</b> |     |     |     |     |     |     |
| 50                  | 5kg |     |     |     |     |     |
| 100                 |     |     |     |     |     |     |

\*Only for horizontal installation.

## General Specifications

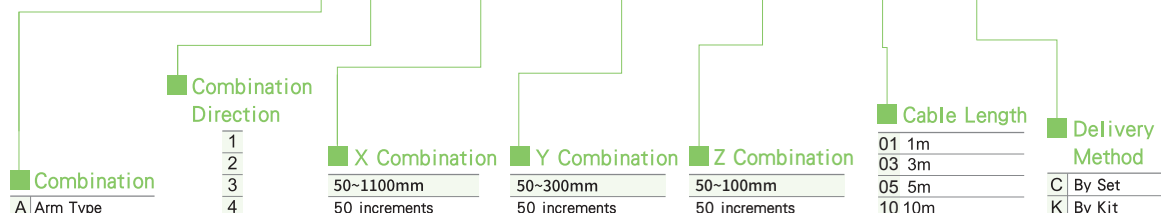
| Item                         | TSC400 Integrated Controller-driver Spec.                               |
|------------------------------|-------------------------------------------------------------------------|
| <b>Drive Method</b>          | Closed-loop stepper motor                                               |
| <b>Control Method</b>        | Point-to-point (PTP), Continuous Path (CP)                              |
| <b>Interpolation</b>         | 3-dimensional linear and arc interpolation                              |
| <b>Teaching Method</b>       | Remote teaching (JOG)/ Manual Data Input (MDI)                          |
| <b>Teaching System</b>       | PC-based UI: convert 2D CAD files to paths; import images for tracing.  |
|                              | PAD-based UI: teach position; edit programs.                            |
| <b>UI</b>                    | Languages Chinese (Traditional), English, Japanese                      |
|                              | Units mm                                                                |
| <b>Programs Capacity</b>     | 100 programs (1~100)                                                    |
| <b>Data Capacity</b>         | Up to 100,000 Points                                                    |
| <b>Simple PLC Function</b>   | 100 sets, Up to 1,000 steps                                             |
| <b>External Input/Output</b> | 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                           |
| <b>Power Source</b>          | AC 100~240, 5A                                                          |

## Order Number Format

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

Series Number

Customization Number

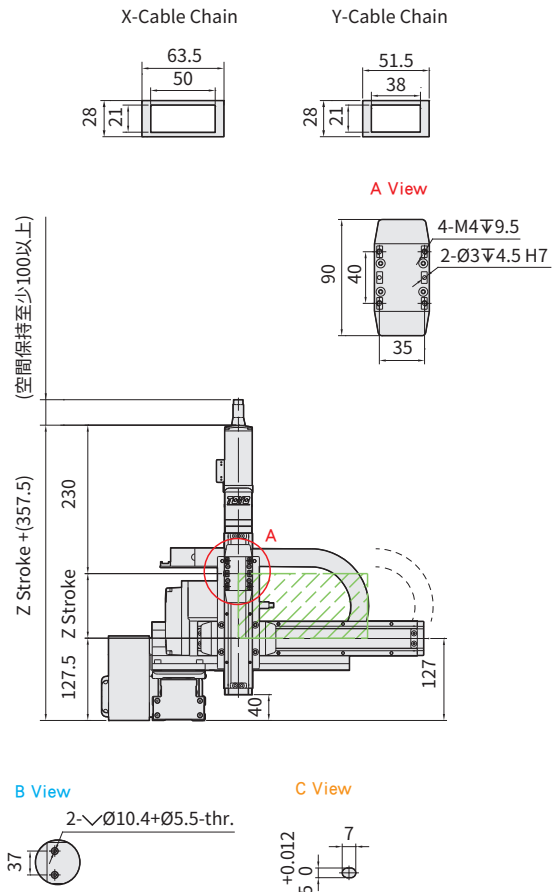
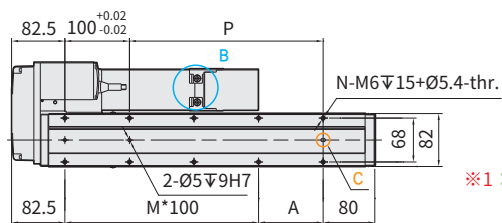
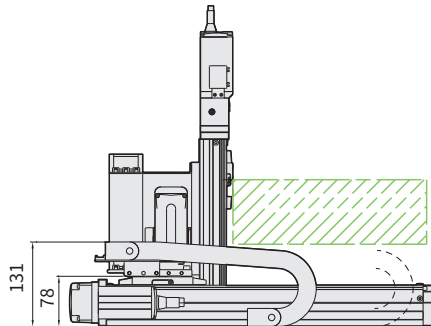
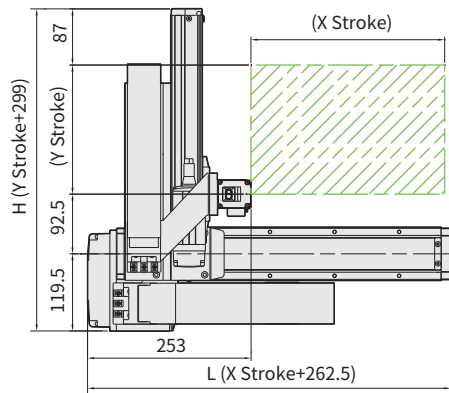


## XYCGT321-A1 Dimension Drawing

A1

Download CAD data at [www.toyorobot.com](http://www.toyorobot.com)

Units : mm

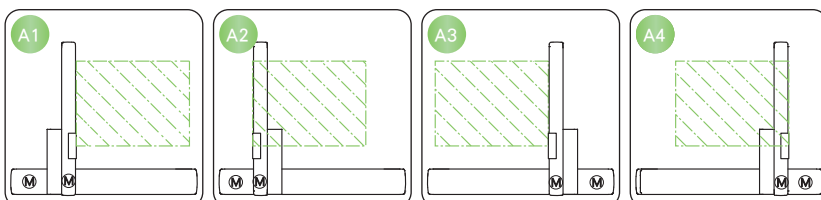


※1 : Maximum speed is refers to the highest safe speed that can be used in stroke, if more than the standard speed, it may occur serious resonance.  
 \* Fixing plate for X axis moving end of cable chain need to be assembled by customers.

| 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



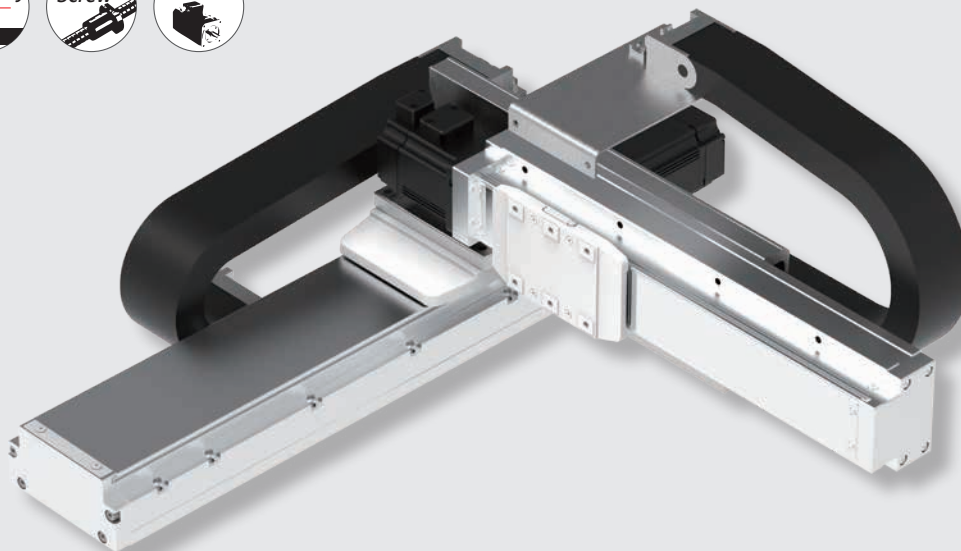
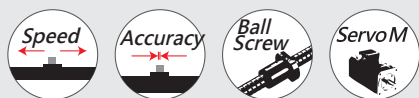
## Corresponding Controller

| 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

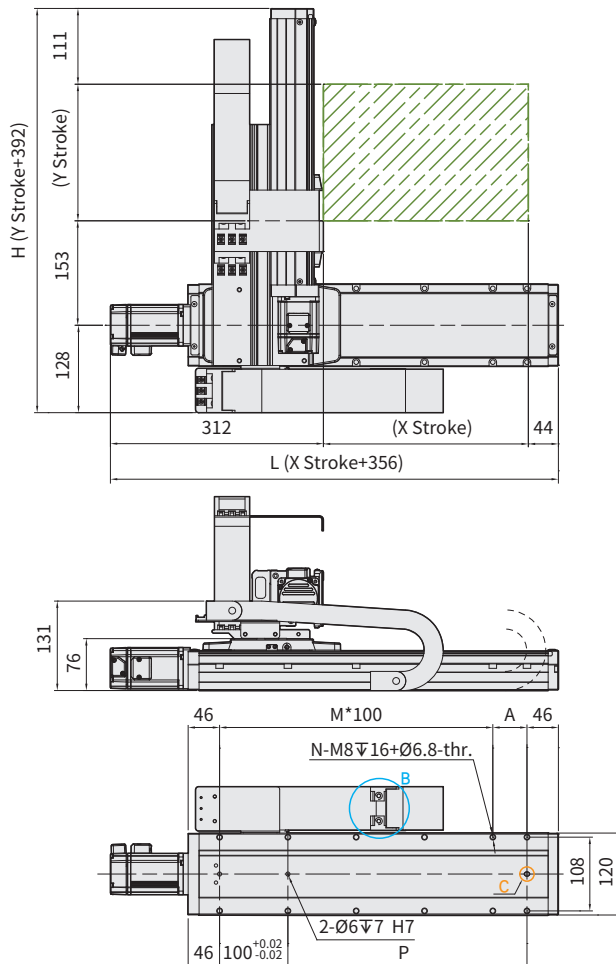


## XYSGT430-A1 Dimension Drawing

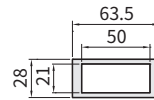
A1

Download CAD data at [www.toyorobot.com](http://www.toyorobot.com)

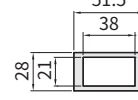
Units : mm



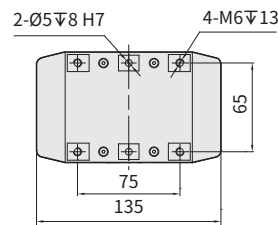
X-Cable Chain



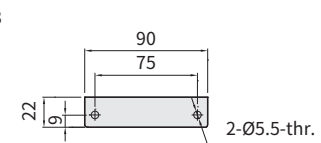
Y-Cable Chain



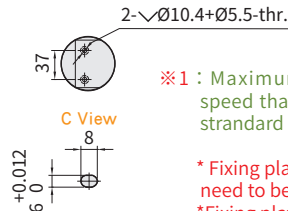
A View



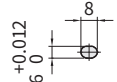
D View



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.

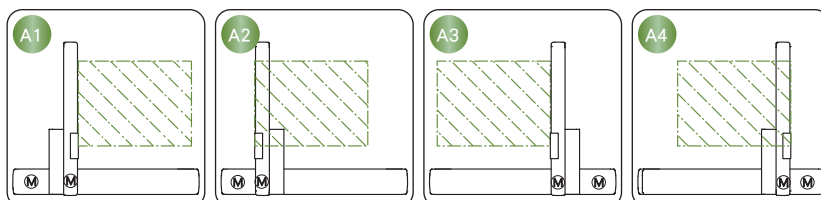
\* Fixing plate for X axis moving end of cable chain need to be assembled by customers.

\* 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



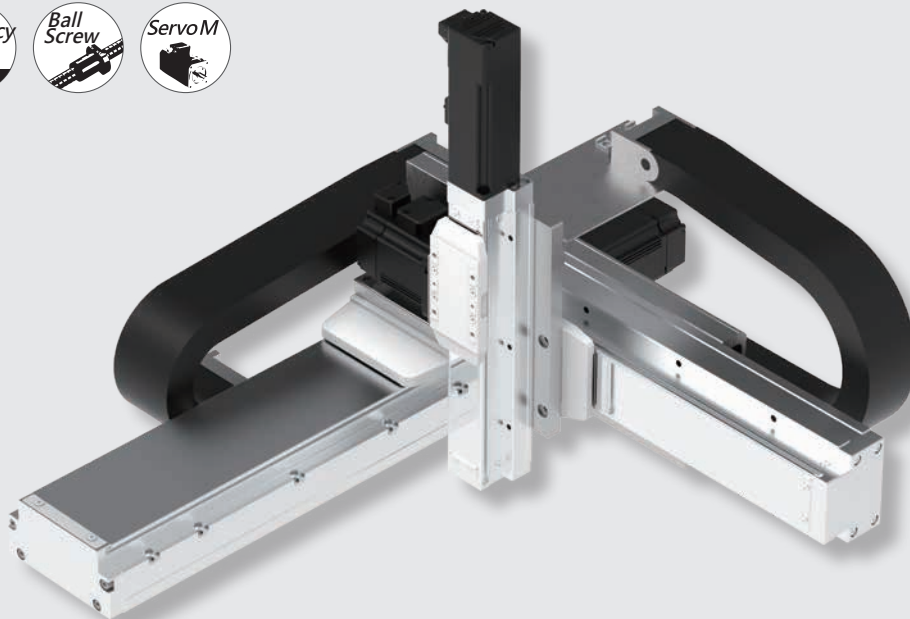
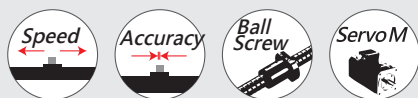
## Corresponding Controller

| 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     |
|-------------------------------|------|----------------------|--------|------------|
| <b>Model Type</b>             |      | SGTH12               | SGTH8  | SGTH5      |
| <b>Repeatability</b>          | mm   | ±0.005               | ±0.005 | ±0.005     |
| <b>Ball Screw Lead</b>        | mm   | 20                   | 20     | 5          |
| <b>Max. Speed ※1</b>          | mm/s | 1000                 | 1000   | 250        |
| <b>Stroke (50 increments)</b> | mm   | 50~1250              | 50~450 | 50~100     |
| <b>AC Servo Motor Output</b>  | W    | 400W                 | 200W   | 100W+Brake |
| <b>Environment</b>            |      | 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 |
|---------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| <b>Z Stroke(mm)</b> |      |     |     |     |     |     |     |     |     |
| 50                  | 10kg |     |     |     |     |     |     |     |     |
| 100                 |      |     |     |     |     |     |     |     |     |

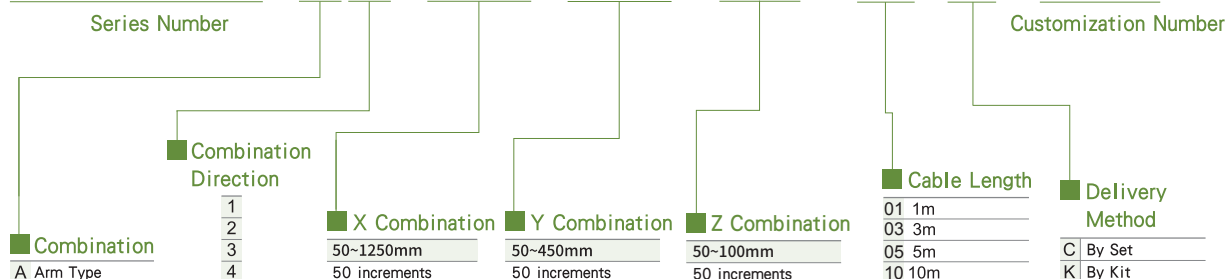
\*Only for horizontal installation.

## General Specifications

| Item                         | TSC400 Integrated Controller-driver Spec.                               |
|------------------------------|-------------------------------------------------------------------------|
| <b>Drive Method</b>          | Servo Motor                                                             |
| <b>Control Method</b>        | Point-to-point (PTP), Continuous Path (CP)                              |
| <b>Interpolation</b>         | 3-dimensional linear and arc interpolation                              |
| <b>Teaching Method</b>       | Remote teaching (JOG)/ Manual Data Input (MDI)                          |
| <b>Teaching System</b>       | PC-based UI: convert 2D CAD files to paths; import images for tracing.  |
|                              | PAD-based UI: teach position; edit programs.                            |
| <b>UI</b>                    | Languages Chinese (Traditional), English, Japanese                      |
|                              | Units mm                                                                |
| <b>Programs Capacity</b>     | 100 programs (1~100)                                                    |
| <b>Data Capacity</b>         | Up to 100,000 Points                                                    |
| <b>Simple PLC Function</b>   | 100 sets, Up to 1,000 steps                                             |
| <b>External Input/Output</b> | 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                           |
| <b>Power Source</b>          | AC 100~240, 5A                                                          |

## Order Number Format

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

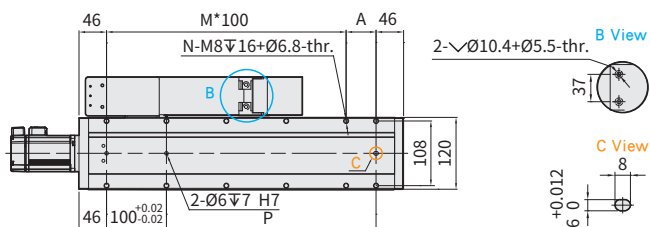
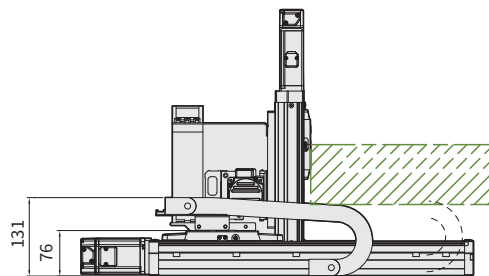
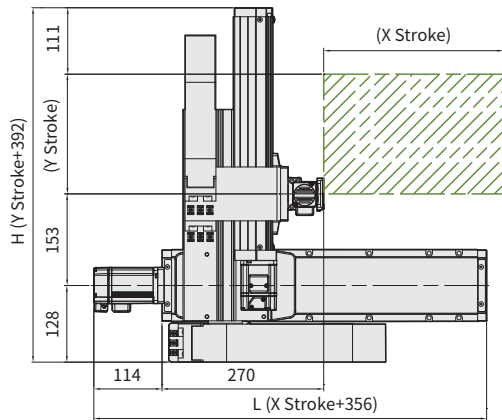


## XYSGT432-A1 Dimension Drawing

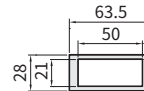
A1

Download CAD data at [www.toyorobot.com](http://www.toyorobot.com)

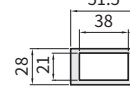
Units : mm



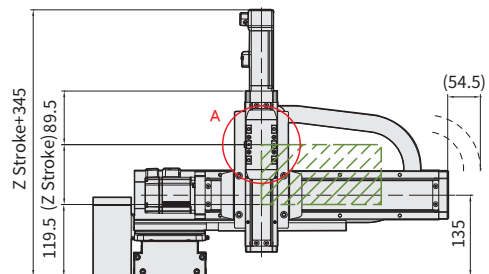
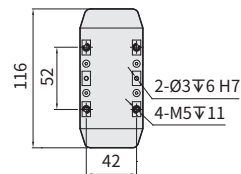
X-Cable Chain



Y-Cable Chain



A View



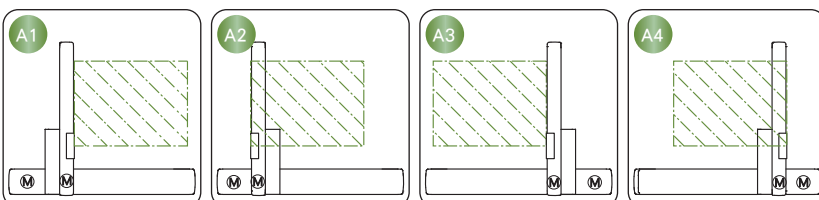
※1 : Maximum speed is refers to the highest safe speed that can be used in stroke, if more than the standard speed, it may occur serious resonance.

\* 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



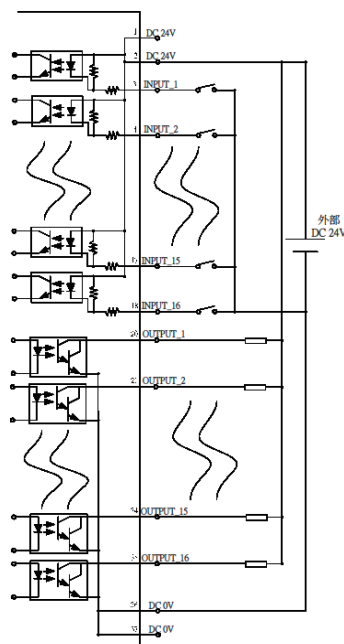
## ■ Controller Specification

| Item                         |           | TSC400 Integrated Controller-driver Spec.                              |
|------------------------------|-----------|------------------------------------------------------------------------|
| <b>Drive Method</b>          |           | Closed-loop stepper motor/Servo Motor                                  |
| <b>Control Method</b>        |           | Point-to-point (PTP), Continuous Path (CP)                             |
| <b>Interpolation</b>         |           | 3-dimensional linear and arc interpolation                             |
| <b>Teaching Method</b>       |           | Remote teaching (JOG)/ Manual Data Input (MDI)                         |
| <b>Teaching System</b>       |           | PC-based UI: convert 2D CAD files to paths; import images for tracing. |
|                              |           | PAD-based UI: teach position; edit programs.                           |
| <b>UI</b>                    | Languages | Chinese (Traditional), English, Japanese                               |
|                              | Units     | mm                                                                     |
| <b>Programs Capacity</b>     |           | 100 programs (1~100)                                                   |
| <b>Data Capacity</b>         |           | Up to 100,000 Points                                                   |
| <b>Simple PLC Function</b>   |           | 100 sets, Up to 1,000 steps                                            |
| <b>External Input/Output</b> | 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                              |
| <b>Power Source</b>          |           | 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

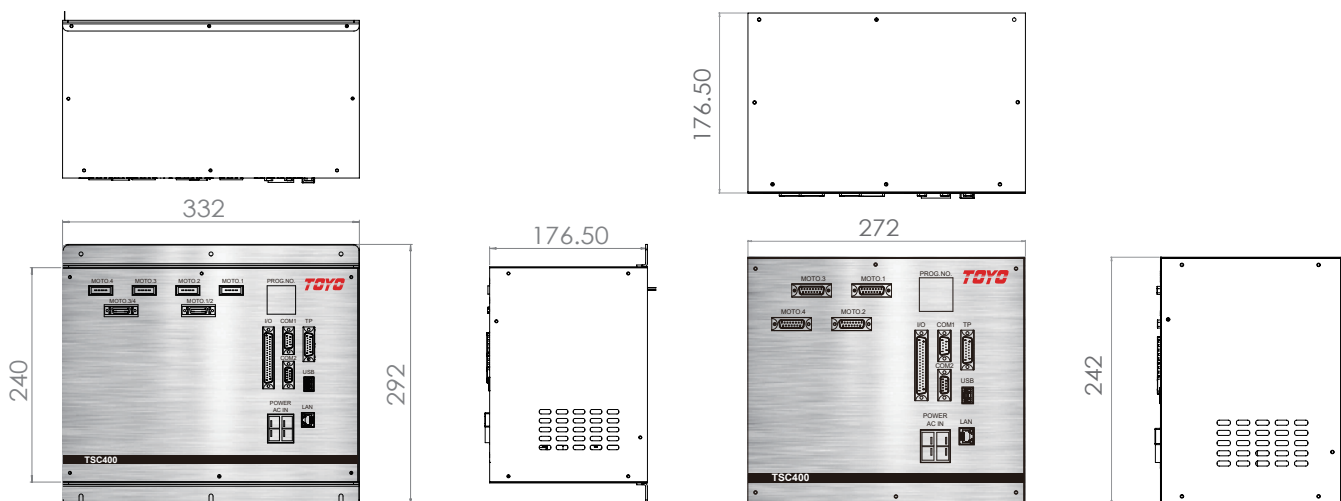
## Environment And Dimension

### ■ 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.DISP  
dispensing  
enforce

EMG  
enemergency  
stop

## Dispensing Command

Command Parameter

General Command



Convenient Command



Special Command



## Execute Page

Trail CCD

|                                    | 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



 Taiwan: 0800-800-893

 China: 400-875-0009



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