

YUSHIN

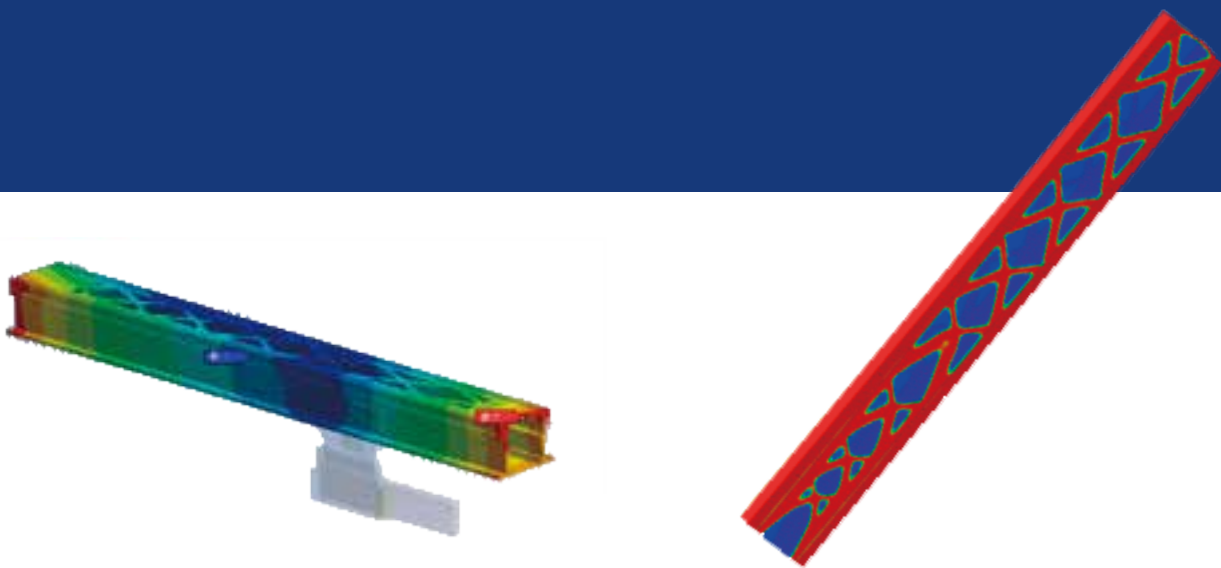
TSXA series

Super High-Speed Side-Entry Take-out Robot



YUSHIN PRECISION EQUIPMENT CO., LTD.

The TSXA is an all-new side-entry robot, developed around the concept of achieving the world's fastest cycle time.



CAE(Computer-Aided Engineering)

Introducing the *TSXA Series*
of High-Speed Take-Out Robots



Design Optimization is what Yushin calls the practice of applying CAE (Computer-Aided Engineering) to seek the most theoretically optimal form for a robot based on its mechanism and motions.

Recently, this new approach is beginning to be used in order to design lighter weight and higher reliability into automobiles and aircraft.

It is remarkable to see that in many cases, optimized designs resemble natural structures such as trees and plants.

A revolutionary design which shatters the conventions of traditional side-entry robots.



Speed

Robot design optimized for achieving the world's fastest cycle times

With its telescopic design that accelerates motion along the main axis by simultaneously powering two motors, the TSXA attains a high-speed take-out time of only 0.21 sec*, or 25% faster than Yushin's previous SX-21-HS robot.

Stroke

Novel mechanical design fits a variety of shop floor layouts

The revolutionary design of the TSXA shatters the limitations of conventional side-entry robots. Operators may order the TSXA with a traverse stroke length of anywhere from 1,500mm up to 4,000mm to suit their needs – the best stroke range in the industry.

Squat

Side-entry design is optimal for clean-room molding and low-clearance ceilings

Without a single moving part located above the mold area, side-entry robots are ideally suited to clean-room molding. The TSXA retains this merit while having a much lower profile to better suit low-clearance areas. Measured from its mounting base, the TSXA's height is 60% lower than Yushin's previous SX-21-HS robot.



Slim

Thinner EOAT is optimally-designed for minimal mold openings

During take-out, the end-of-arm tool (EOAT) enters the mold to grip and remove parts. Custom EOATs available for the TSXA are developed with design optimization to have a slimmer cross-section without sacrificing rigidity. These thinner tools accelerate the molding cycle by allowing operators to set shorter mold openings.

Smart

High-performance controller incorporates ease-of-use and study design

The TSXA features the E-touch II-K** which allows operators total control merely by touching icons on its large 10.4inc full-color touch screen. The E-touch II-K also satisfies an international IP 44 rating*** for superior resistance to moisture and debris.



Sensible

Robot controller integrates control of hand-off station or other downstream equipment

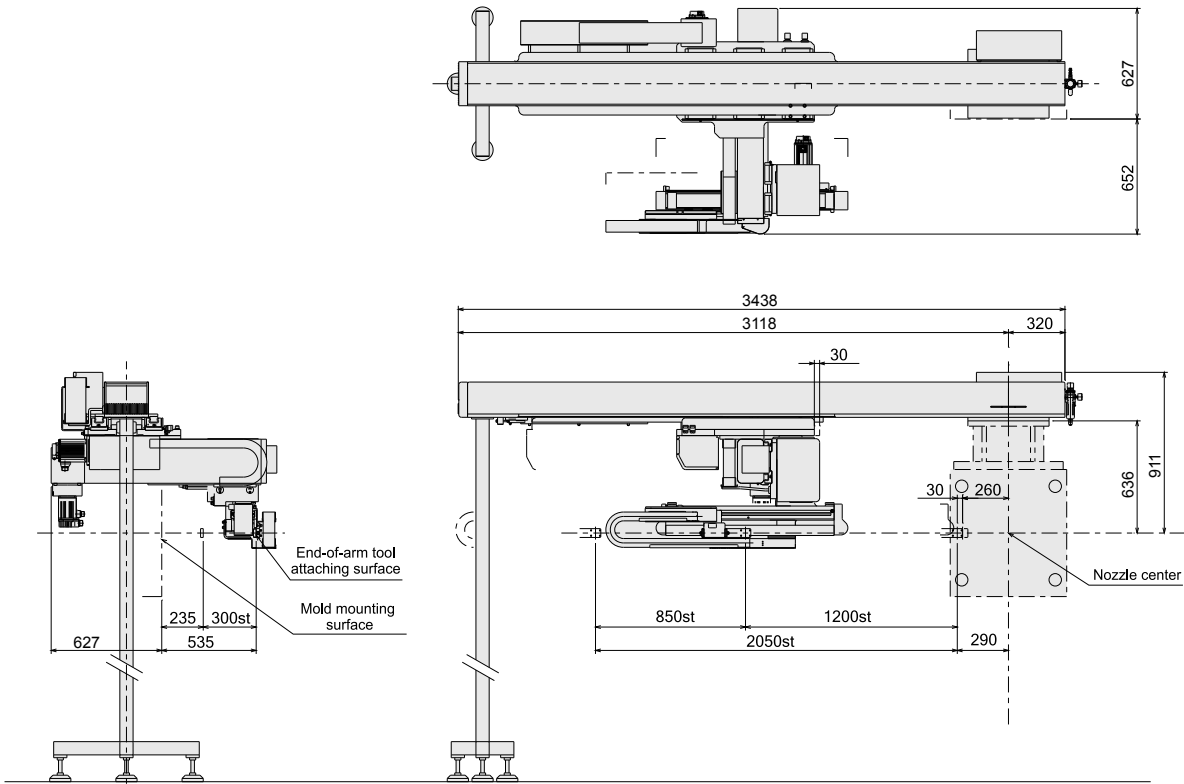
The TSXA's controller also accommodates control of the (optional) hand-off station. This versatility helps reduce equipment costs and shorten teaching times.



* Dry-cycle time at Yushin standard settings.
 ** Smaller E-touch Compact II also available.
 *** Rating applies to E-touch II-K only.

Power source	Driving method	Control method	Air pressure	Maximum allowable air pressure (factory)
3 Phase AC200V 50/60Hz	Digital servo motor 3-axis	Micro computer control	0.49MPa	0.79MPa

Model	Power consumption	Traverse stroke (mm)	Kick stroke (mm)	Air consumption (NL/cycle)	Payload	Clamping Force (tf)
TSXA	3 Phase AC200V 21.7A Max.	2050	300	4.5	3	100~300



- These products are industrial robots as defined in the labor safety rules. Always take great care when operating any robots.
- To improve visual clarity, these robots may be shown without the safety guards that are identified in the safety rules. Never operate the robots without all safety guards in place.
- Before using any product introduced in this literature, all operators must read and understand the instruction manual and other related documents for proper and safe equipment operation.

Quality Control



◆ ATTACHMENT PARTS

Yushin-Approved Robot Tooling and Accessories

Yushin offers a wide range of parts to help users easily build their own end-of-arm tools.

◆ Please contact your local Yushin sales representative for tooling or tool component inquiries, orders, and catalog requests.



Safety Warning

- The parts appearing in this catalog are for industrial robots defined by Japan's Ordinance on Industrial Safety and Health. Use them as stipulated in the safety provisions of that same ordinance.
- The photographs appearing in this catalog were taken without safety enclosures and other safety devices and equipment required by the aforementioned ordinance, in order to make product explanations easier to understand.
- Before using the product, prepare and install all required safety devices and equipment. Before using the products appearing in this catalog, carefully read all instruction manuals and other documentation provided with the product, to ensure proper use.

* The content of this catalog is subject to change without notice for improvement purposes.

Yushin seeks a healthy coexistence with the planet throughout all of our business activities, including developing, employing, and promoting ergonomic and environmentally-friendly technologies.

YUSHIN

YUSHIN PRECISION EQUIPMENT CO., LTD.

please visit yushin.com
www.yushin.com

Headquarters / 555 Kuzetonoshiro-cho, Minami-ku, Kyoto, 601-8205 JAPAN TEL(81)75-933-9555 FAX(81)75-934-4033

2017.10(1) 1300_TD

YUSHIN