

TXR ROBOTICS

Total Solution Provider Compact Sortation & Factory Automation





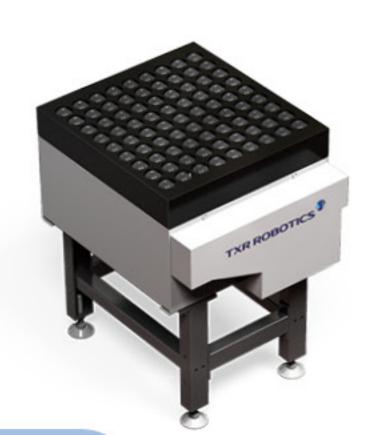
TXR Robotics strives to achieve innovation in the field of logistics and factory automation with a passionate pioneering spirit.

The systems we provide guarantee world-class quality. Our efficient and accurate systems enable our customers to achieve higher efficiency and do more with fewer people.



HISTORY

TXR Robotics provides innovative and compact sorting solutions and factory automation solutions to customers around the world, which is the culmination of our dedication, research and development on sorting system technology.



Foundation

Developed a wheel-sorting control system

Supplied a wheel-sorting system to TNT Express Singapore FedEx Korea Incheon International

Supplied of Wheel Sorter System(Export)

LAZADA Express:

Malaysia, Ho Chi Minh in Vietnam(2nd site) Hanoi in Vietnam, Indonesia, Vietnam Terminal

Eagle Foods(America)

Roadbull(Singapore)

SF Express(Singapore)

QEXPRESS(Qoo10, Singapore)

Wheel Sorter Supply

KT&G Sintanjin Factory GS Retail Gimpo Logistics Center GS Home Shopping Gunpo Terminal

Wheel Sorter Supply(Export)

LAZADA Express: Indonesia GORO Terminal, Marunda Terminal

Thailand, French e-commerce customers

Supplied of High-Speed Wheel Sorter Control System

CJ Logistics: Bang Na Hub Terminal, Thailand KL Hub Terminal, Malaysia

Supplied a high-speed wheel sorter/ Conveyor lines(turnkey)

CJ Logistics: Incheon, Paju, Gwangju in Gyeonggi, Suseong in Daegu, Bupyeong, Gimpo, Daejeon, Yeonsu Coupang: Yongin FC1, Yangji FC3

Supplied a high-speed wheel sorter/ Conveyor lines(turnkey)

Coupang: Changwon FC4, Daegu FC6, Gwangju FC4, Namyangju Camp, Gwangju FC3, Daegu FC3, Incheon FC18, Icheon FC4, Yangju Camp, Siheung Camp, Ilsan Camp, Incheon Camp etc.

Blue Express: Exported 7 lines (turnkey) to Chile

CJ Logistics: Seogu Sub

Wheel Sorter Supply

Mirae WellLife, Passto yong-in, Coupang Majang FC1, Mesh Korea

Wheel Sorter Supply(Export)

French E-Commerce, Singapore, IKEA Slovak Center, Tunisia, Philippines

Supply Of Tilt Tray Sorter System(Turnkey) SSG: Icheon EFC, Pyeongtaek EFC and Manchon EFC Supplied a High-speed wheel sorter / Conveyor lines(tunkey)

Coupang: KKW3, KKW5, CHW3, DAE2, INC16, INC23, SE1, PYT4, GWJ2, CHA2, INC7, SPA3, 4, USN1, BSN5, DJN3, ISN5, JJU1, JEJ1, AYG1,

BSN2, SPA1

CJ Logistics : GIMPO MP

Lotte Global logis: Sokcho Delivery Center Logen: Incheon, Bucheon Terminal

Wheel Sorter Supply

Donwon Home Food, Ottogi

Wheel Sorter (Export)

Norway, UK, Romania

Tilt Tray Sorter Line Supply(turnkey)

Coupang: NYJ4 Camp

Attend Amsterdam Parcel & Post Expo 2023

Compact Sorting Solution

Smart Factory **Total Solution**

02

2011-2015 ••• 2016-2017 ••• 2018 ••• 2019-2020 ••• 2021-2022 ••• 2023-2024

Company Established

Certified as a venture company

Certified with ISO 9001/2008

For Chosun Refractories

Developed an automated X-RAY inspection system

MES-based factory automation control - Developed a monitoring system

Machine vision for small-lots of various products - Developed an automated inspection system

Received an Outstanding Small and Medium Business Award from the Busan Chamber of Commerce & Industry

Received Busan Mayor's Award for Excellent IP Innovation

Received a Young Entrepreneur Award from the Minister of Education

Exported products to Indonesia

Received a commendation from the Minister of Commerce, Industry and Energy for technology innovation

Supplied the AGV control systems(ACS) to Samsung Electro-Mechanics and LG Electronics

Developed an IOT-based intelligent AGV and an AGV control system for Ministry of Trade, Industry and Energy

Developed an image recognition-based shipbuilding and marine process management system for the Ministry of Science and ICT

Delivered a thickness gauge to the POSCO Magnesium Smelting Plant

Acquired the Innobiz certification as a SME technology innovator

Relocated the head office to a larger facility with a factory size of 3,874 m2

Received an order for the development of robots and automatic loading systems for IP phone manufacturing automation

Exhibited AGV as a representative company in the Korean Joint Booth at the Automatica exhibition in Germany

Exported 1 AGV Descartes to company C in China and signed an MOU for technology development

Exported 5 AGV Onestar-M to Hwaseung Vina in Vietnam

Established an automated production facility for the KEPCO modem business of Nuri Telecom

Manufactured and installed an automatic packaging system. Automated a highstrength PRJ welding system for Korea Gangsun

Built a smart factory, and a robot system for standard process manufacturing in Jisa-dong for Busan Techno Park

Established an unmanned automated grain packaging facility using robots for Daegu Agriculture

Awarded the Prime Minister's Commendation for contributing to venture start-up and growth

Supplied an automatic casing assembly line for the Fursys **Smart Factory Expansion Project**

Delivered 20 AMRs to LG Innotek's Gumi Plant 2

for Autonics

Automated a lighthouse factory

Certified as a Busan-type Hidden Tech Company

Supplied an automatic CNC injection and discharge machine for Samsung Electronics Co.,Ltd.

Received an order for an AMR control system for transporting samples and goods from GC Biopharma

TM Robot

signing of an official partnership agreement

EcoPro HN

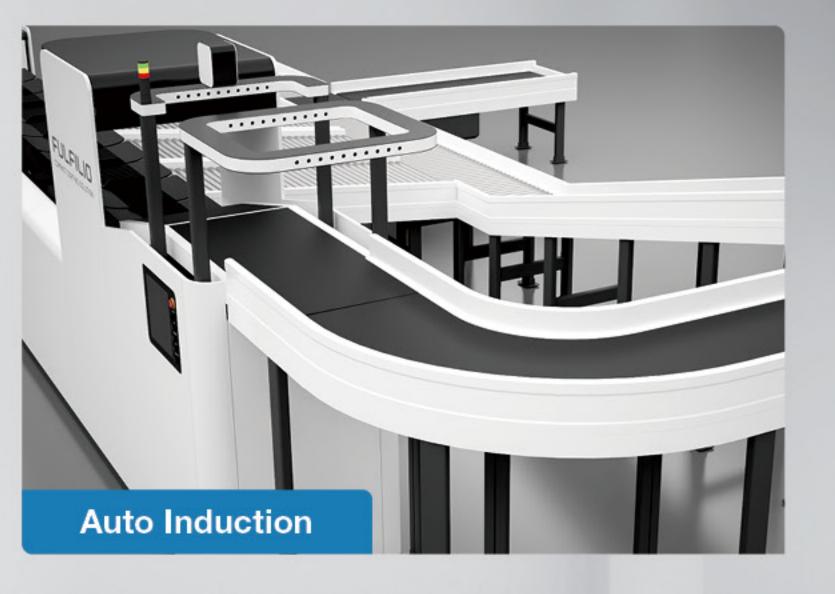
Order for S-PJT at Chopyeong 2 Campus



FULFILIO SERIES

Fulfilio is excellently convenient to install and transport due to its module configuration and has a high spatial efficiency due to its vertical-type installation. It can also reduce introduction and maintenance costs via domestic manufacturing.









Wave Wheel Sorter PIVOTLE SERIES

Small Wheel





Wheel Sorter









Model		Pivotle 90S	Pivotle 40S	
Cargo Specification	Maximum	31.5 x 47.25 x 23.62in / 66.1lb	31.5 x 47.25 x 23.62in / 66.1lb	
for Handling (W x L x H)	Minimum	4.72 x 5.9 x 0.03in / 0.22lb	4.72 x 4.72 x 0.03in / 0.22lb	
Wheel Roller Pitch(mn	n)	W 2.16 x L 2.75 W 2.16 x L 2.16		
Discharging Angle		90° 40° ~ 60°		
Cycle Time(sec)		≤ 0.263	≤ 0.174	
Classification Direction	n	2-WAY	2-WAY	
Speed		Max. 360ft / min	Max. 426ft / min	
Processing Performan	се	Max. 5,000ea/ h	Max. 7,000ea / h	
Coating		Low-friction powder coating	Low-friction powder coating	
Operating Temperature		-20℃ ~ 45℃	-20℃ ~ 45℃	
E.g.		LAZADA EXPRESS Marunda, Phase2, Indonesia	Coupang FC, LAZADA EXPRESS Goro, Phase2, Indonesia	

PIVOTLE SERIES Wheel Sorter System

Intelligent sorting solution

- A configuration that combined general conveyors with wheel sorters
- Functions that enable diverting, switching, and merging of parcel left to right
- Minimization of parcel damages
- Synchronized diverting processing by detecting conveyor speed and parcel length

Applying the world's smallest wheel pitch

- Easy processing of small goods and polybags (vinyl-packaged items)
- Small and compact wheels can handle large, medium, and small items

Easy to expand, transport & maintain the system

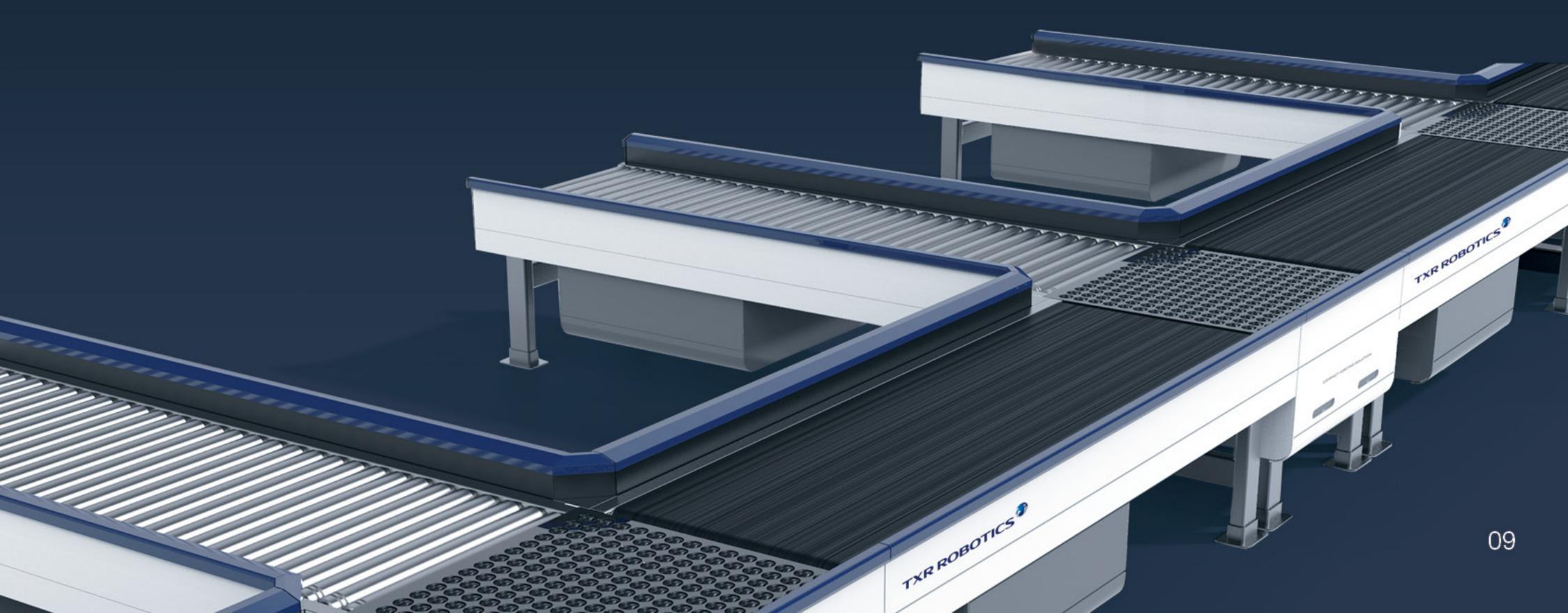
- Easy to expand and transport equipment with the module-type hardware and independent control device
- Easy hardware maintenance and replacement of major parts from the top

High level of quietness

 Minimized noise via o-ring belt operation (noise criteria: equal to or less than 70 dbA)

Simple layout configuration

- Minimized installation area
- The maximum number of chutes can be installed in the limited space



























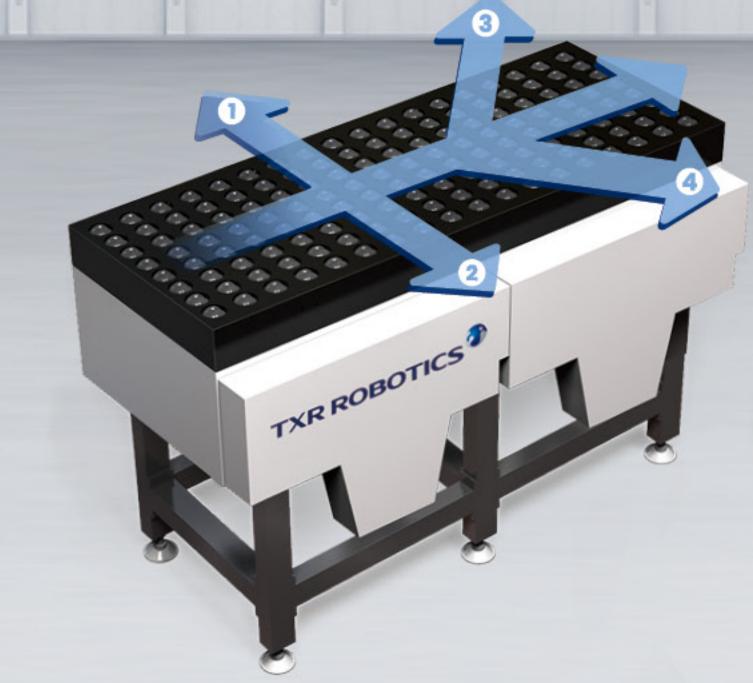




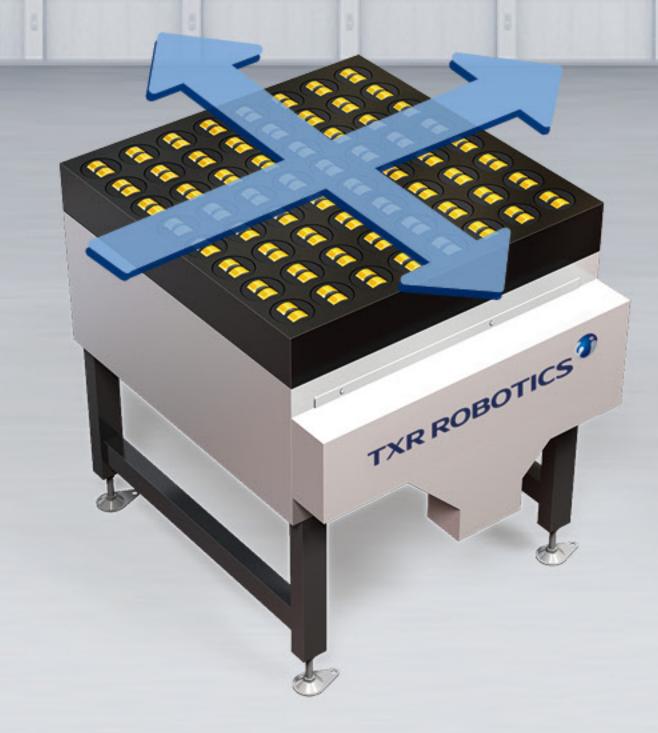


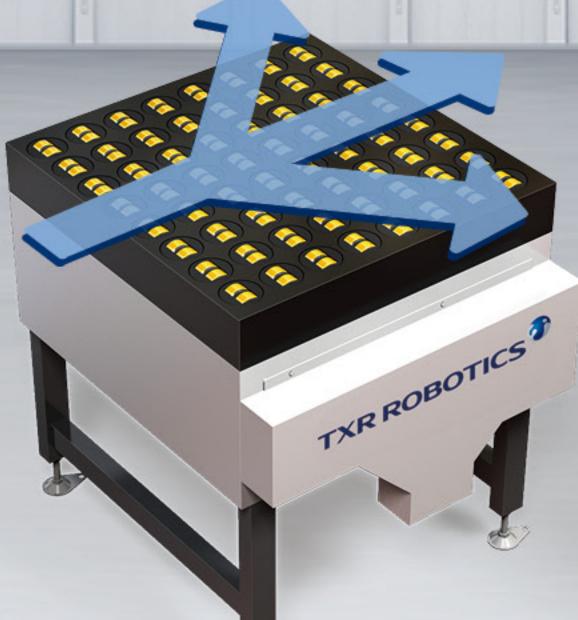


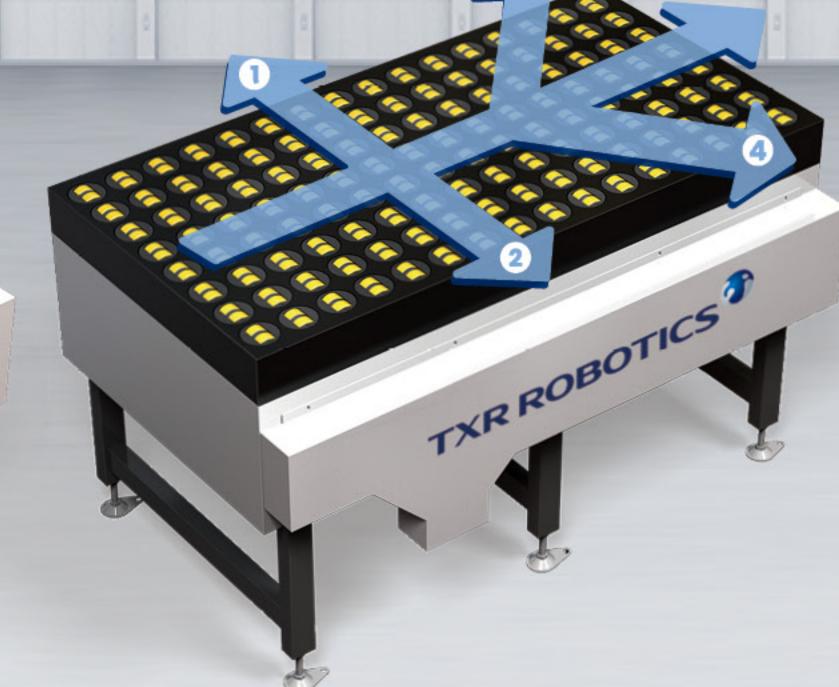








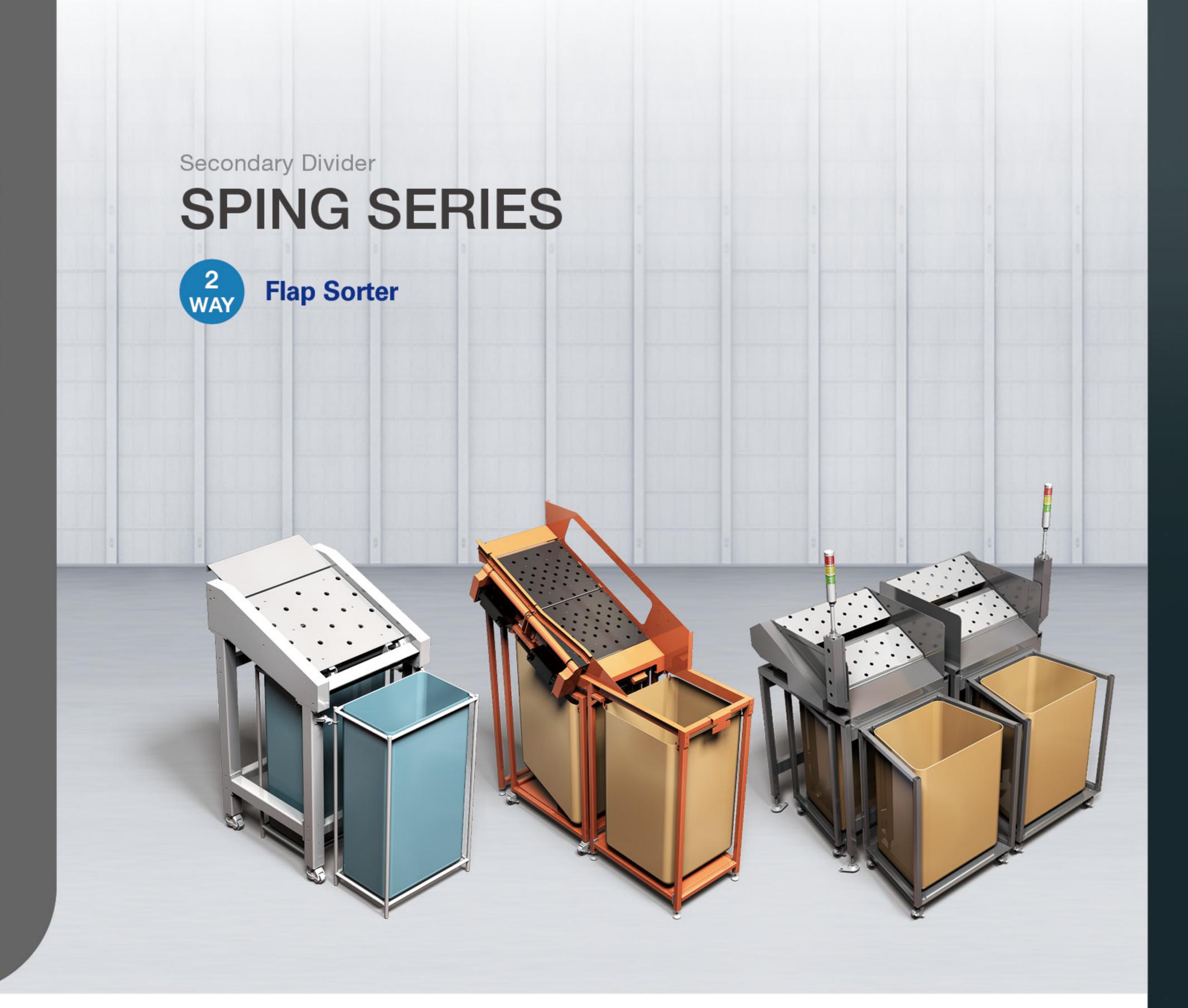




Model		Pivotle 90S	Pivotle 40S	
Cargo Specification	Maximum	31.5 x 47.25 x 23.62in / 66.1lb	31.5 x 47.25 x 23.62in / 66.1lb	
for Handling (W x L x H)	Minimum	4.72 x 5.9 x 0.03in / 0.22lb	4.72 x 4.72 x 0.03in / 0.22lb	
Wheel Roller Pitch(mn	n)	W 2.16 x L 2.75	W 2.16 x L 2.16	
Discharging Angle		90°	40° ~ 60°	
Cycle Time(sec)		≤ 0.263	≤ 0.174	
Classification Direction		2-WAY	2-WAY	
Speed		Max. 360ft / min	Max. 426ftm / min	
Processing Performan	се	Max. 5,000ea/ h	Max. 7,000ea / h	
Coating		Low-friction powder coating	Low-friction powder coating	
Operating Temperature		-20℃ ~ 45℃	-20℃ ~ 45℃	
E.g.		LAZADA EXPRESS Marunda, Phase2, Indonesia	Coupang FC, LAZADA EXPRESS Goro, Phase2, Indonesia	

Pivotle 9040S	Pivotle 90SMR	Pivotle 40SCV
31.5 x 47.25 x 23.62in / 66.1lb	31.5 x 47.25 x 23.62in / 33lb	31.5 x 47.25 x 23.62in / 66.1lb
4.72 x 5.9 x 0.03in / 0.22lb	4.72 x 4.72 x 0.03in / 0.22lb	4.72 x 4.72 x 0.03in / 0.22lb
W 2.16 x L 2.75	W 2.16 x L 2.75	W 2.16 x L 2.16
① ~ ② : 90° / ③ ~ ④ : 40°	90° Multi-Router	40° ~ 60°
≤ 0.263	≤ 0.263	≤ 0.174
4-WAY	4-WAY	6-WAY
Max.360ft / min	Max. 360ft / min	Max. 426ft / min
Max. 5,000ea / h	Max. 5,000ea / h	Max. 7,000ea / h
Low-friction powder coating	Low-friction powder coating	Low-friction powder coating
-20℃ ~ 45℃	-20℃ ~ 45℃	-20℃ ~ 45℃
LAZADA EXPRESS Goro, Phase2, Indonesia		CJ Logistics Daejeon Hub, Yeonsu in Incheon MP, Jung-gu in Incheon MP, Seo-gu in Incheon MP, Paju MP, Gyeonggi Gwangju MP, Daegu Suseong M

Pivotle 90L	Pivotle 40L	Pivotle 9040L
31.5 x 47.25 x 31.5in / 66.1lb	31.5 x 47.25 x 31.5in / 66.1lb	31.5 x 47.25 x 31.5in / 66.1lb
7.87 x 7.87 x 0.39in / 1.1lb	7.87 x 7.87 x 0.39in / 1.1lb	7.87 x 7.87 x 0.39in / 1.1lb
W 3.94 x L 3.94	W 3.94 x L 3.94	W 3.94 x L 3.94
90°	40°	① ~ ② : 90° / ③ ~ ④ : 40° ~ 60°
≤ 0.263	≤ 0.174	≤ 0.263
4-WAY	2-WAY	2-WAY
Max.360ft / min	Max. 426ft / min	Max.360ft / min
Max. 5,000ea / h	Max. 7,000ea / h	Max. 5,000ea / h
Low-friction powder coating	Low-friction powder coating	Low-friction powder coating
-20℃ ~ 45℃	-20℃ ~ 45℃	-20℃ ~ 45℃
KT&G Daejeon Factory, LAZADA EXPRESS in Thailand,GS Home Shopping Gunpo, Wonju Mail Center, Dongwon LOEX Yangsan	LAZADA EXPRESS in Hanoi, Ho Chi Minh, Malaysia, Indonesia PHASE1 & 2, Thailand, Hokusyo, GS Home Shopping Gunpo GSRetail Gimpo, Songpa, Wonju Mail Center	Roadbull, Qoo10, SF Express, Wonju Mail Center



Model		Sping 01	Sping 02	Sping 03
Cargo Specification	Maximum	11.8 x 11.8 x 5.9in / 8.8lb	15.74 x 15.74 x 7.87in / 11lb	11.8 x 11.8 x 5.9in / 8.8lb
for Handling (W x L x H)	Minimum	3.94 x 3.94 x 0.03in / 0.22lb	3.94 x 3.94 x 0.03in / 0.22lb	3.94 x 3.94 x 0.03in / 0.22lb
Classification I	Direction	2-WAY	2-WAY	2-WAY
Processing Per	formance	Max. 5,000ea / h	Max. 5,000ea / h	Max. 6,000ea / h
Coating		Low-friction powder coating	Low-friction powder coating	Low-friction powder coating
Operating Temperature		-20℃ ~ 45℃	-20°C ~ 45°C	-20℃ ~ 45℃

SMART FACTORY TOTAL SOLUTION

We supply the optimal technology-based automatic robot and logistics solutions that can provide a one-stop solution from consulting, design, manufacturing, delivery, commissioning to after-sales support.

R&D

- At the company-affiliated research institute (Robot Convergence Research Institute), our professional experts develop systematized and tailored technology
- Holding 20 smart factory related patents and 15 programs

Consulting

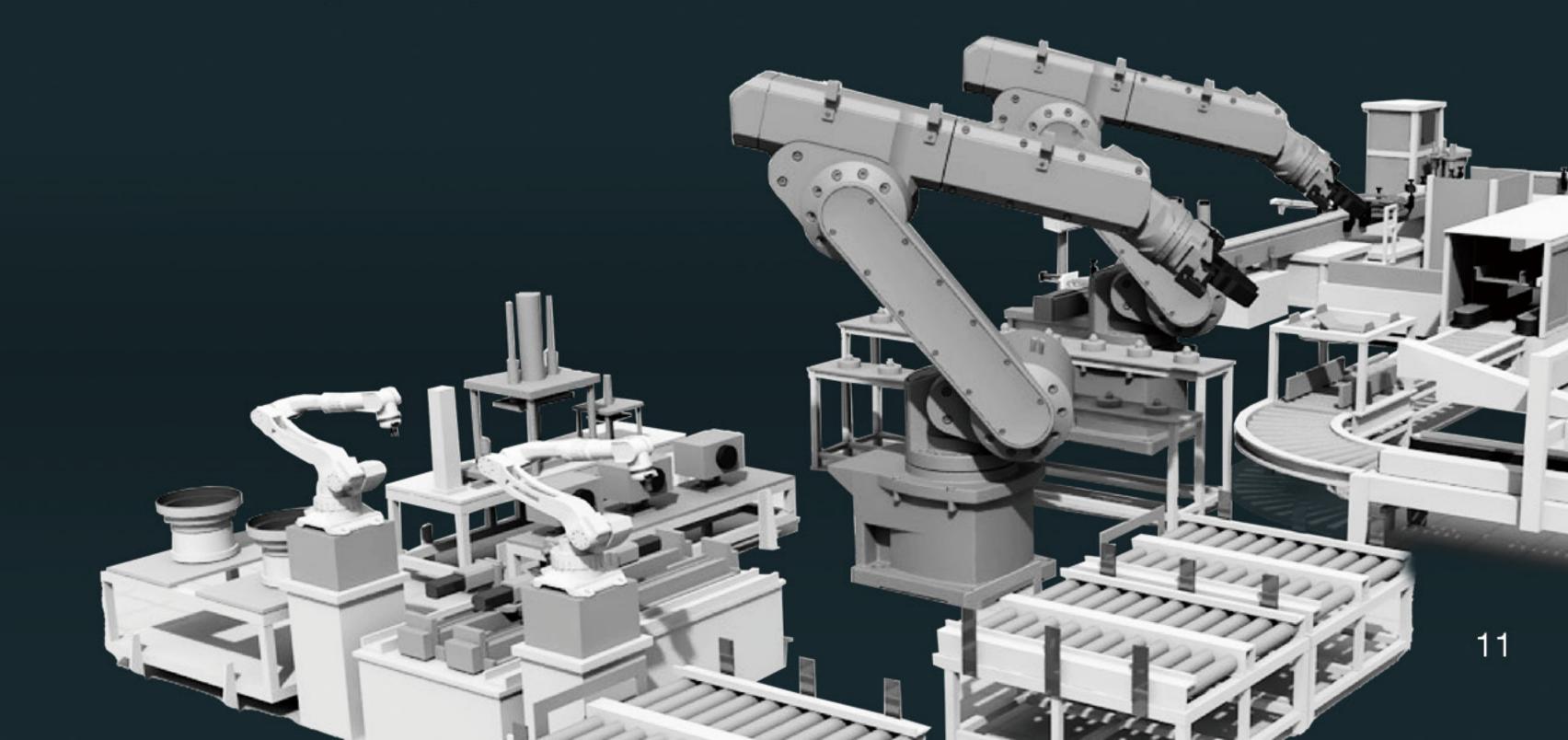
- Engineers with master's or doctoral degrees and at least 12 years of experience
- Automation consulting for optimization at the customer's site
- Simulation and consulting reports can be provided within 3 days

Design

- After analyzing the existing process based on a consultation a customized design is carried out
- About 40 smart factory projects completed directly without outsourcing.
 Keeping promises with our customers through systematic and thorough design by professional personnel

Production and Delivery

- Products are directly assembled and manufactured in a (3,967 m2) factory before delivery
- Customized installation for easy modification and change
- Performing on-site optimization until the customer is satisfied



Smart Factory & AMR

GongJang-Jang

This is a mobile robot that combines an AMR and co-bot. It has safety sensors and electric components required for certification by the Korea Institute for Robotics Industry Advancement, and is optimized for obtaining workplace safety certificates.

· Enhancing safety with the LiDAR sensors and flash lights

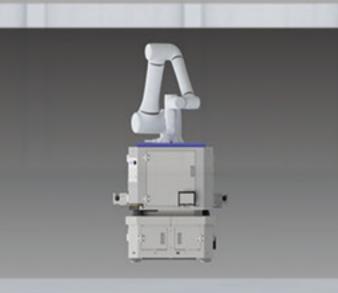


innovative technology-intensive products are customized to the customer's operating environment. With safety devices in triplicate (LiDAR, proximity laser and bumper) being built in.

 Our products are used in many domestic research institutes and semiconductor processes of large corporations.

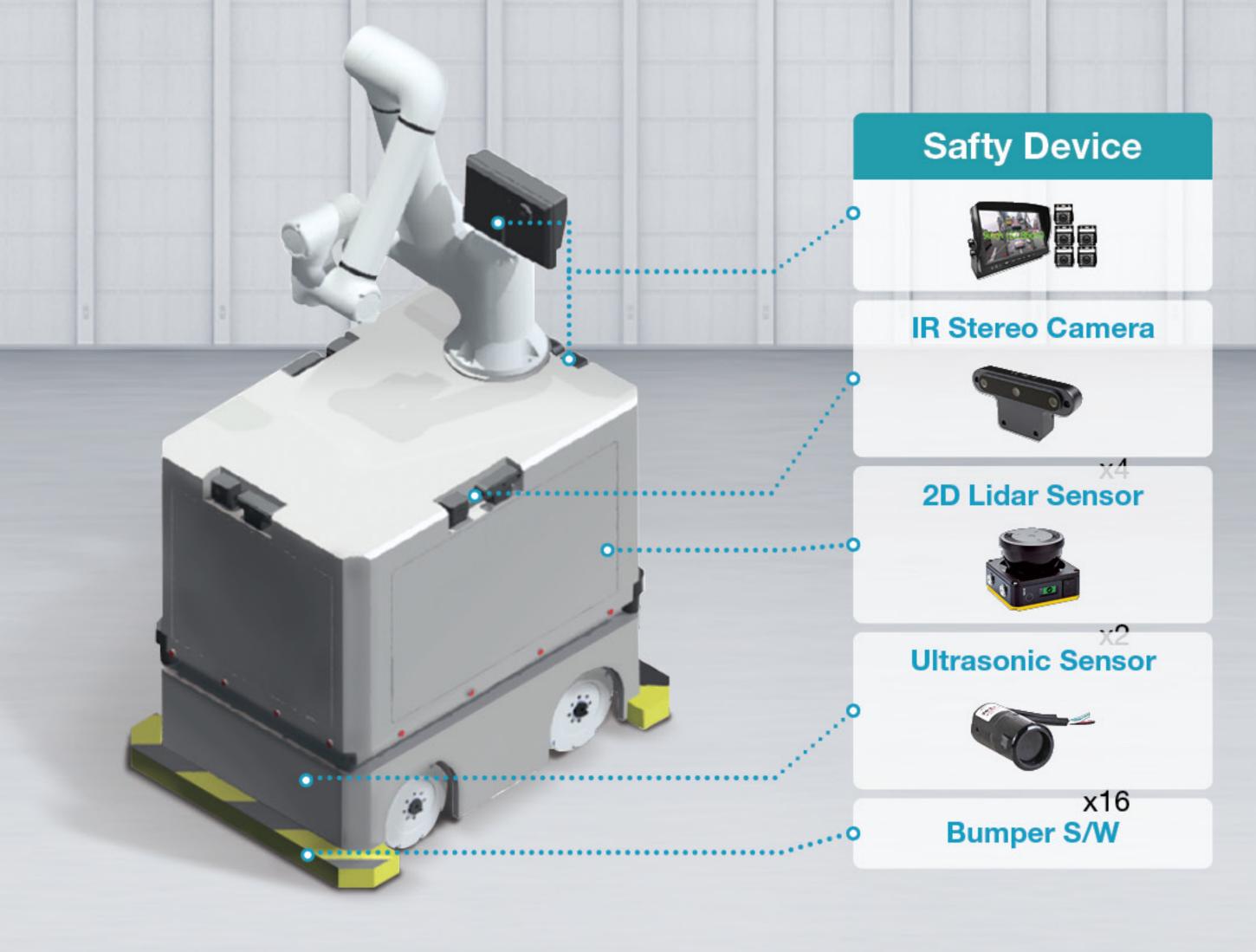












Model	GongJang-Jang
Loading capacity	661lb
Robot	TM 45.93ft (30.86lb robot) -OPTION
Specifications(W x L x H)	43.3 x 29.52 x 34.25in
Guide patch	Slam laser guide
Minimum touring radius	25.59in R-360° TURN
Power supply	48V DC
Velocity	Max 196.8ft / min
Safety device	Lidar Sensor, Bumper S/W, Black Box, E-stop, Ultrasonic Sensor, Depth Camera
How to control	PC CONTROL (ROS2 SOURCE apply)
Conditions of use	Indoor only, 0-40°C, 30~80% humidity - no dew point
Floor condition	Surface roughness 10mm or less between min.&max. height Slope 5% or less
Location accuracy	Using vision sensor : WITHIN ±3mm

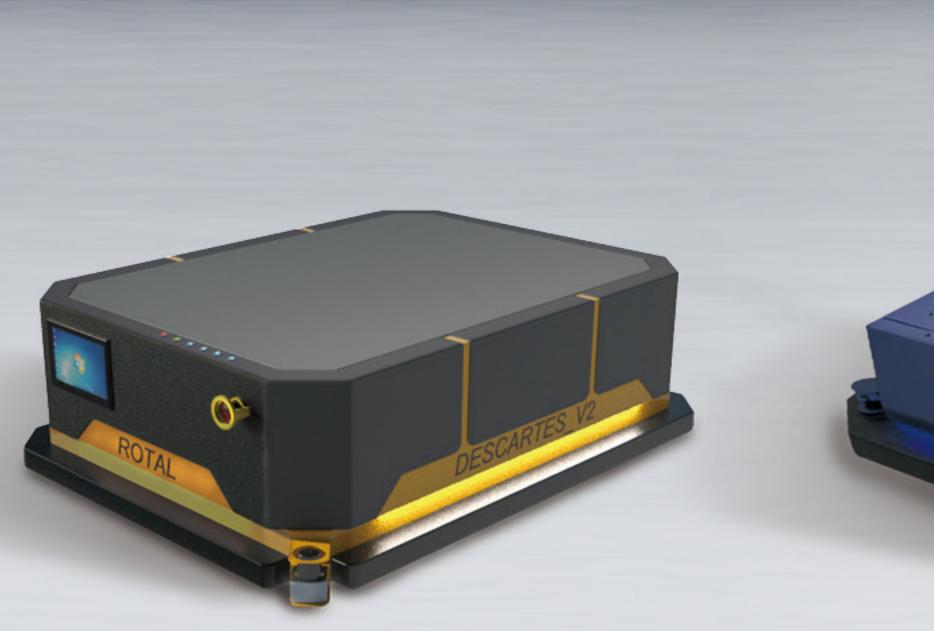
Model	RIEMANN	
Loading capacity	661lb	
Conveyor Spec	24.6ft / min	
Specifications(W x L x H)	RIEMANN	
Guide patch	Slam laser guide	
Minimum touring radius	32.87in R, 360° TURN	
Power supply	48V DC	
Velocity	Max 157.2ft / min	
Safety device	LiDar Sensor, E-stop, Bumper S/W	
How to control	PLC + PC CONTROL	
Conditions of use	Indoor only, 0-40℃, 30~80% humidity - no dew point	
Floor condition	Surface roughness 10mm or less between min.&max. height Slope 1% or 5%	
Location accuracy	Using vision sensor : WITHIN ±3mm	

TXR ROBOTICS

Smart Factory & AMR DESCARTES

As a solution combining the AMR and conveyor, it is suitable for a line that produces many kinds of products in small lot units. Repeatability within ±5 mm is achieved using our self-developed control program, vision sensor, and displacement sensor.

- Simultaneous control of more than 100 units at the same time is possible
- Product loading and unloading can be carried out independently
- Used in automobile manufacturing and semiconductor processes
- Safety standards of the Korea Robotics Industry Advancement are applied to autonomous driving
- Triple safety devices(LiDAR, proximity laser and bumper)











DESCARTES-15	DESCARTES-25	DESCARTES-40
3,306lb	5,512lb	8,819lb
	- 	### (Fig. 1)
59 x 39.37 x 15.74in	66.93 x 47.24 x 16.92in	70.86 x 47.24 x 19.68in
	Slam Laser guide	
	27.55in R, 360° TURN	
24V DC		
Max 147.6ft / min		
Lidar Sensor, Flashing light, E-stop, Bumper		
PLC Control		
Indoor only, 0-40℃, 30-80% humidity - no drew point		
-		
Surface roughness 10mm or less between min.&max. height Slope 5% or less		
	3,306lb - 59 x 39.37 x 15.74in Lidat	3,306lb 5,512lb

DESCARTES-C1	DESCARTES-C2	DESCARTES-L1			
661lb	661lb	661lb			
39.37ft / min (adjustable)	24.60ft / min (adjustable)	- /			
33.46 x 27.55 x 31.5in	37.4 x 37.4 x 78.35in	29.3 x 47.24 x 55.12in (cargo size : 25 x 30.9in)			
	Slam Laser guide				
21.26in R, 360° TURN	24.8in R, 360° TURN	26.18in R, 360° TURN			
	48V DC				
Max 196.8ft / min	Max 157.4ft / min	Max 157.4ft / min			
	Lidar Sensor, E-stop, Bumper S/W				
PLC + PC CONTROL	PLC + PC CONTROL Using vision sensor : WITHIN ±0.12in PLC + PC CONTROL				
Ind	oor only, 0-40℃, 30~80% humidity - no dew po	oint			
Surface roughn	ess 10mm or less between min.&max. height S	lope 5% or less			
	Using vision sensor : WITHIN ±0.12in				

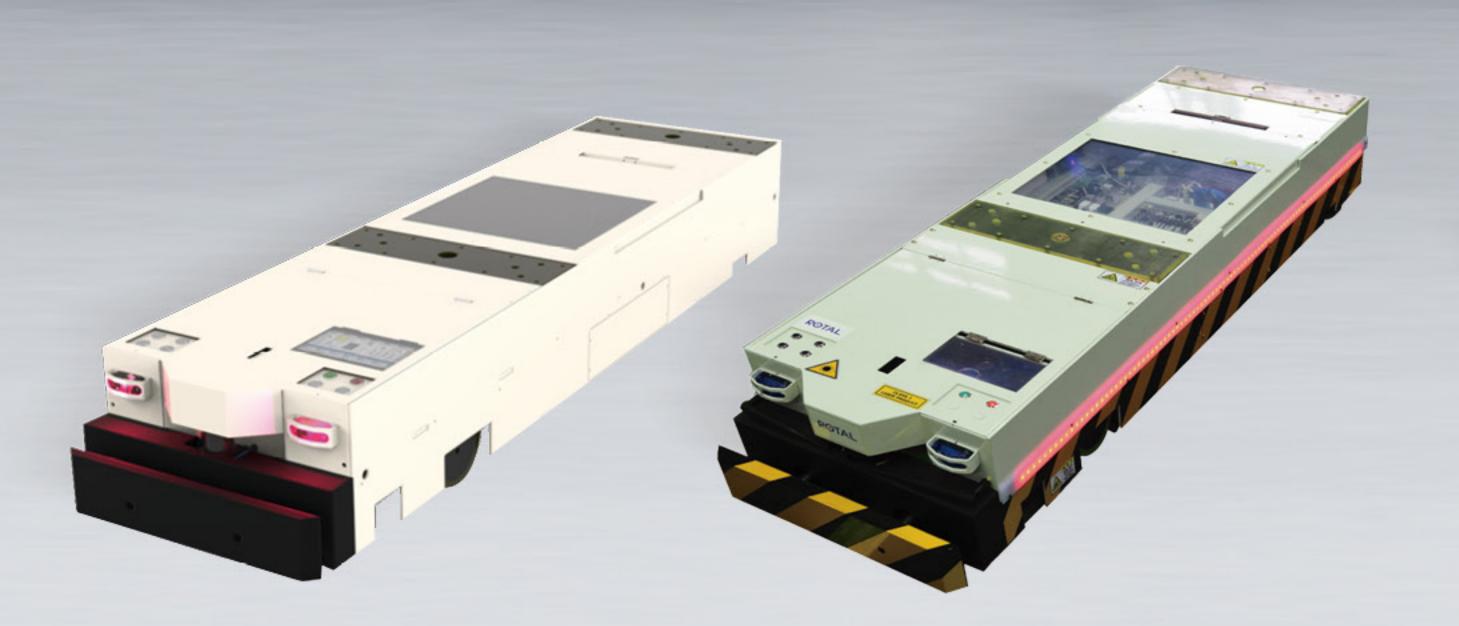
TXR ROBOTICS

Smart Factory & AMR

ONESTAR

- AGV for low floor loading
- Various payloads: 750 kg to 4 tons
- Magnetic tape guide

 A product with built-in function to measure real-time air quality (LNG, hydrogen, carbon monoxide, carbon dioxide, and fine dust). A self-driving robot on site monitors the systems in real-time with IP cameras.







Model	ONESTAR-07	ONESTAR-15	ONESTAR-25
Loading capacity	1653lb	3307lb	5512lb
Specifications(W x L x H)	66.93 x 17.32 x 6.69in	66.93 x 17.32 x 9.84in	66.93 x 17.32 x 11.81in
Guide patch	Magnetic	tape guide (Course search when A	GV starts)
Minimum touring radius	29.52in R, 180° TURN		
Power supply	24V DC		
Velocity	Max 147.6ft / min		
Safety device	Audible warning, Lidar sensor, Flashing light, E-stop, Bumper		
How to control	Magnetic command tapes		
Function			
Conditions of use	Indoor only, 0-40℃, 30-80% humidity - no drew point		
Floor condition	Surface roughness 10mm or less between min.&max. height Slope 5% or less		

ONESTAR-M-15	ONESTAR-M-25	ONESTAR-M-40	ONESTAR-L	
3307lb	8819lb	1654lb	661lb	
66.93 x 17.32 x 6.69in	66.93 x 17.32 x 9.84in	66.93 x 17.32 x 11.81in	35.43 x 26.77 x 47.24in	
Magnetic tape guide (Course search when AGV starts)			Slam laser guide	
19.68in R, 180° TURN			17.72in R, 360° TURN	
		24V DC		
Max 147.6ft / min			Max 131.2ft / min	
Audible warning, Lidar sensor, Flashing light, E-stop, Bumper			Lidar sensor, Flashing light, E-stop, Bumper	
Magnetic command tapes			PLC Control	
-			Air quality detection, Remote video surveillance, Remote sector patrol, Integrated control monitorin	
	Indoor only,	0-40℃, 30-80% humidity - r	no drew point	
	Surface roughness 10mi	n or less between min.&max	. height Slope 1% or less	

COMPACT SORTING SOLUTION

Yong-in FC1 Pivotle 40S











SMART FACTORY TOTAL SOLUTION



로 항 항

अंगर सम्बद्धार्थक क्रमन नम

산업 장반에 이하시한 근로가 크므로

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부산형 히든테크기업 인중서

영문에만 : 2001, 5, 11, ~ 2005, 12, 31,

3021년 7월 19일

귀 사출 무산광역사의 '무산형 비논테크

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기업,으로 인증합니다.

선업기술적인 명기단 정위원 확인시

원국산업기술평기관관설 회

Certificate





GLOBAL REFERENCES



Partners

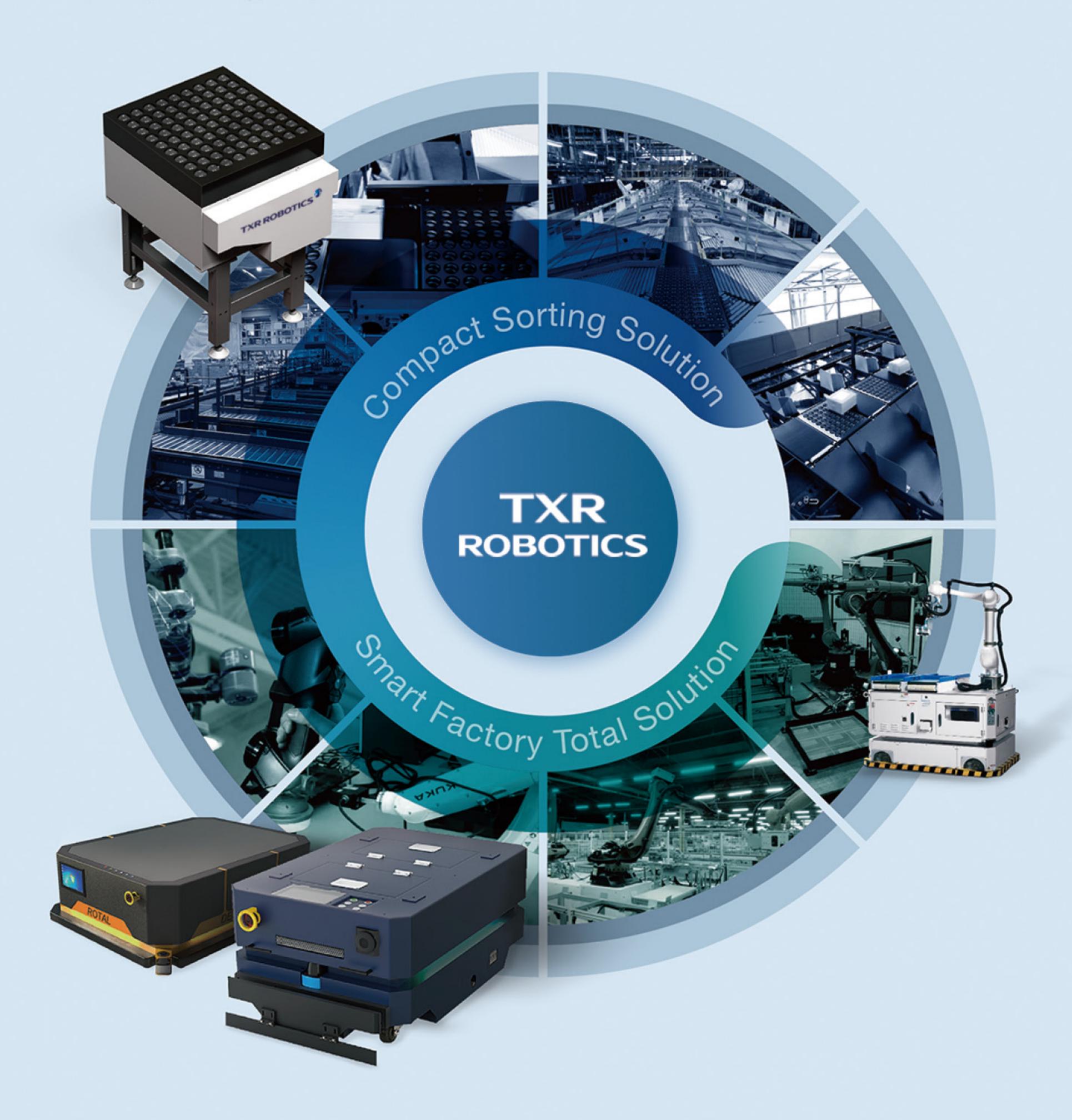
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INNOVATION · TECHNOLOGY · CUSTOMER

As the global logistics environment is changing daily, innovatin is essential for all customers. Therefore, at TXR Robotics, excellent talents and experts are exploring and developing technologies with a passionate pioneering spirit in various fields such as product planning, research and development, marketing, and production.





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