



Robot for Stacking Cardboard Boxes

Cartesian Robot Palletizer



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On Behalf of Humans

Improve stacking work without hassle.

Stacking Work Issues

Not enough workers

Want to mechanize but do not have enough space

The factory ceiling is too low to install robots

Cannot install a compressor

Do not have anyone skilled in machine operation



Handle issues like these



- ✓ Workplaces with many women and elderly people
- ✓ High-temperature or low-temperature environments
- ✓ Continuous work for long hours
- ✓ Stacking in specified quantities
- ✓ Trouble such as cargo collapse

Effect of Adoption

【Case Studies】

- Pallet transfer operation
- Two PXW-1535 installed



Personnel

Staff: 10 people → Staff: **1 person**

Nine staff members could be assigned to different tasks

Quantity processed

3,500 boxes/day → **7,200 boxes/day**

Improved productivity and work efficiency on the line

Labor costs

13.5 million yen/year → **3.24 million yen/year**

Significant reduction in labor costs

Note: Values are for reference only and may vary depending on conditions.

Easy to Deploy

Can be installed in spaces with low ceilings

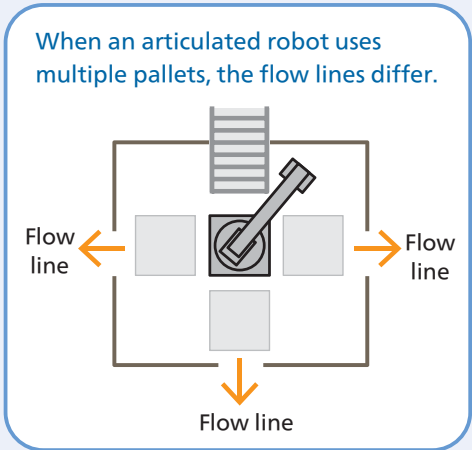
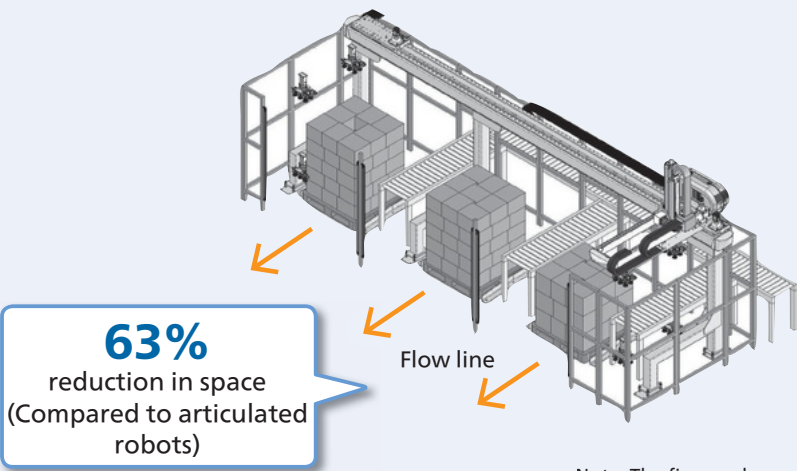
Can be installed in spaces where height is limited, such as a clean rooms

Example of palletizer installed in a space with low ceilings (electronics manufacturer/ ceiling height 2,400mm)



Flow line can be sed effectively on plant floor

The flow line is in the same direction, allowing for efficient operation even when using multiple pallets.



Note: The figures shown are for reference only and may vary depending on conditions.

Cost-Effective Installation

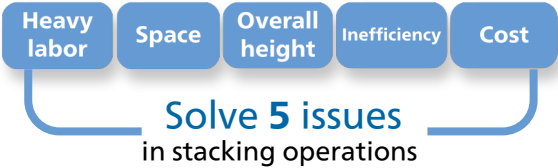


35%
of our customers use
(Based on our company records,
Apr.–Oct. 2023)

This product qualifies for tax incentive programs, helping reduce initial investment costs. In addition, manufacturing costs are minimized through the use of components commonly used in take-out robots.

*For eligibility requirements and regulations related to tax incentive and subsidy programs, please refer to the website of the Small and Medium Enterprise Agency (SMEA)

Easy to Operate



Reallocate human labor from rote work, to work only humans can do

Freeing valuable personnel from heavy labor allows them to be assigned to work that only humans can do. This allows limited human resources to be used more effectively.



Easy operation by touch panel

Touch panel operation makes the palletizer easy to operate.



7-inch wide screen

Practical safety measures

We use our experience with unloaders to implement practical safety measures. We can also provide individualized safety measures by customer request.



The emergency stop button mounted on the control pendant enables the machine to be stopped safely in the event of an emergency.

Operation stops instantly if someone enters the work area. (Equipped as standard on the PXT Series)



Examples of adoption

PXT-1220 : Food product company



PXW-1550 : Chemicals company



The effects will be easy to see

Make stacking work more efficient (reference)

Before adoption

360hrs

(3 workers handled stacking work)

After adoption

144 hrs

Approx. 60% reduction
(1 Palletizer + 1 supervisor)

Note: The figures shown are for reference only and may vary depending on conditions.

Examples of robot hands



2-box transport



Round can transport



Plastic container transport



Material bag transport

Palletizer Editor

Automatically generates palletizing data from product information and palletizing patterns, making teaching and setup easier than ever.

- **Check layouts on a PC while configuring settings**
- **Quick and easy setup using simple mouse operations**
- **Significantly reduces data creation time**

*Please contact our sales representative for details.

Robot Palletizer for low overall height

PXT Series

**PXT-1220A/PXT-1220+/
PXT-1235A**

PXT-1220A

Handles A3
size packages

Compact design under 2,000
mm in height for efficient
use of limited space.

(*The overall height of PXT-1235A
is 2,199mm)



Scan here for video

1,950mm(W)

2,385 mm

Can also be used
together with
pallets

**Load capacity and stacking height
can be individually adjusted.**

2,000mm
(*Signal light
not included)



► Payload

Supports
up to
20kg

**PXT-1220A/
PXT-1220+**

(Including robot hand weight)

Supports
up to
35kg

PXT-1235A

(Including robot hand weight)

► Processing capacity

10 boxes
/min

**PXT-1220A/
PXT-1220+**

10 boxes
/min

PXT-1235A

Maximum value based on our evaluation criteria
*Actual performance may vary depending on
machine specifications.

► Size (Standard)

PXT-1220A

2,385(L) × 1,950(W) × 2,000(H)mm

PXT-1220+

2,685(L) × 1,950(W) × 2,000(H)mm

PXT-1235A

2658(L) × 2,077(W) × 2,199(H)mm

► Stacking Height

PXT-1220A

1450mm

PXT-1220+

1450mm

PXT-1235A

1500mm

*Estimated values based on
specified conditions.

Supports Type T11 to T14 Pallets

Flexibly handles stacking work.

T11

1,100(L)
×
1,100(W)

T14

1,100(L)
×
1,400(W)

Flexible support for a wide range of pallet sizes across various industries.



(PXT-1220+ Standard equipment)

Casters for Easy Movement

The palletizer can be moved around freely to accommodate changes in plant layout or operating conditions.



Scan here for video



Handles A3 Size Packages

Can handle packages up to
450 (L) × 310 (W) mm.



Option

Pallet Feeder

Depalletizing Supported
(Removing packages from the pallet)

Robot Hand Suction

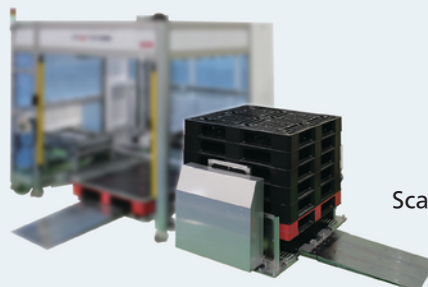
3D Vision

Example of a suction hand
(Sliding hand) PAT.



Patented Technology

Example of a pallet feeder



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Over 1,600 Parts Available

For robot hand parts,.

Please visit the **EINS Online Shop**

<https://www.eins1.jp/>



Multi-Palletizer for low overall height

PXL Series

PXL-1535

PXL-1535

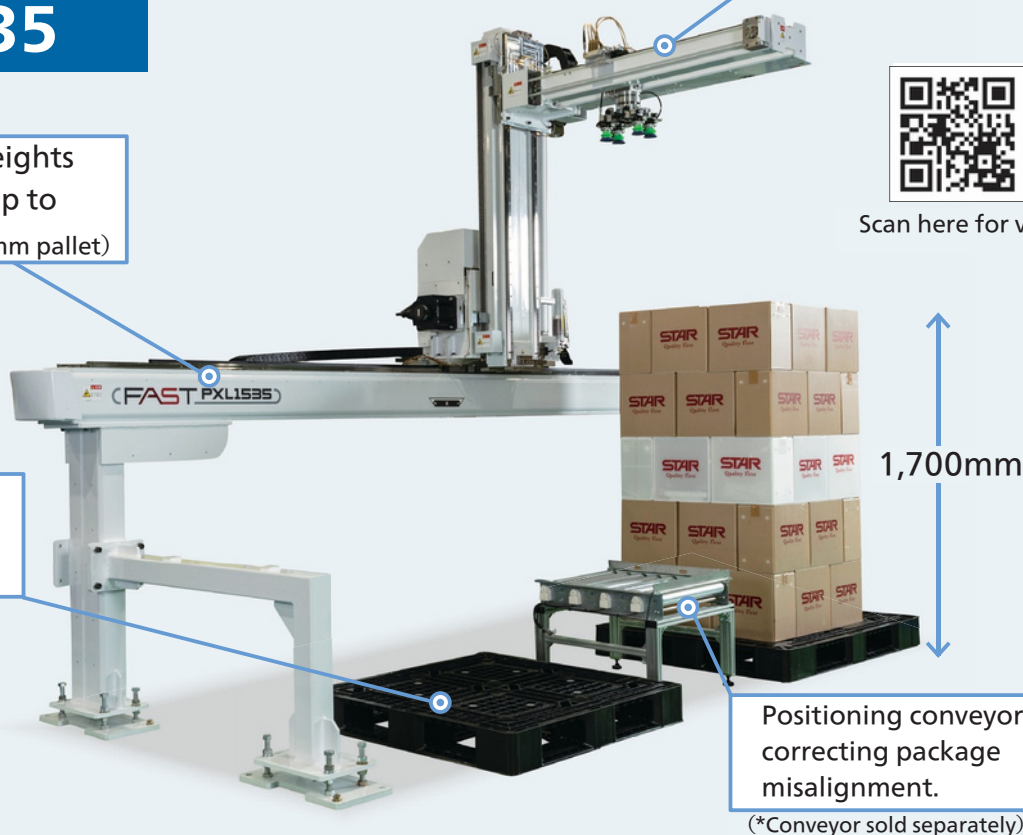
Supports stacking heights of 1,700mm, OP of up to 2,300mm (*150mm pallet)

Easily transfer between pallets. (T14 to T11)

Boast a low overall height of 2,421mm, despite being a multi-tier stacking machine.



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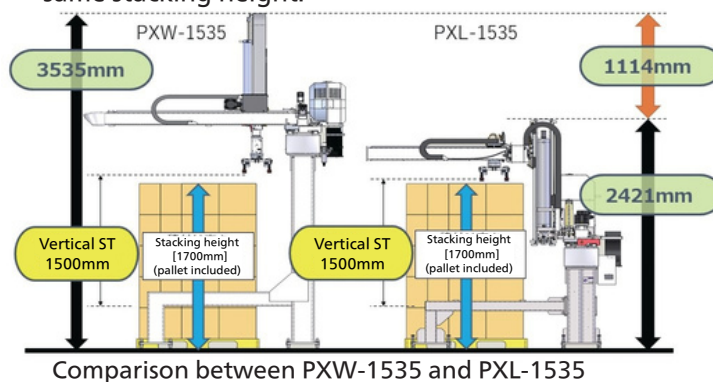
Easily transfer between pallets

It can correct the package misalignment that tends to occur with multi-tier stacking while transferring between pallets.



Capable of multi-tier stacking despite low overall height

Compared with the PXW-1535, the overall machine height is reduced by 1,114 mm while maintaining the same stacking height.



► Payload

Supports up to 35kg

PXL-1535

(Include robot hand weight)

► Processing Capacity

10 boxes /min

PXL-1535

Maximum value based on our evaluation criteria
*Actual performance may vary depending on machine specifications.

► Size (Standard type)

PXL-1535

4,913(L) × 2,323(W) × 2,421(H)mm

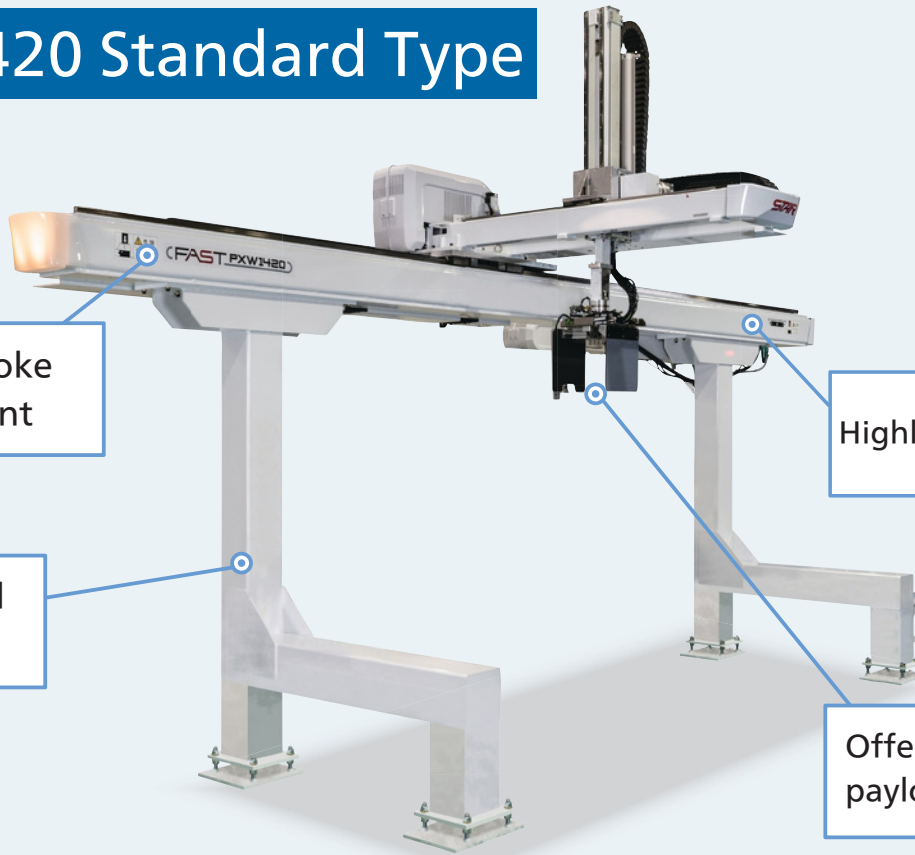
Multi-Stroke Palletizer PXW Series

PXW-1420/PXW-1535/
PXW-1550

PXW-1420 Standard Type



Scan here for video



Flexible stroke
arrangement

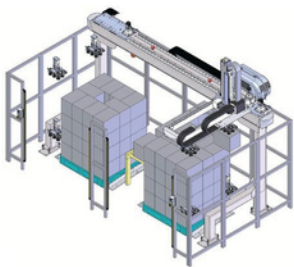
Fits in small
spaces

Highly cost-effective

Offers high
payload

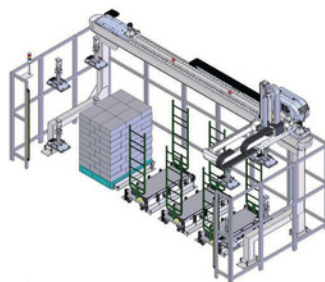
2-pallet spec (PXW-1420)

- Sort 2 types of pallets
- Standby for transfer pallet



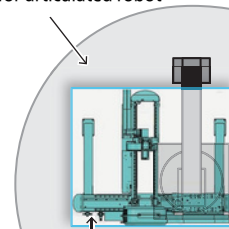
Depalletizing transfer spec (PXW-1420)

- Transfer to a six-wheel cart



Requires 63% less space than articulated robots

Installation space
for articulated robot



Installation space for PXW series

A palletizer
takes up
63%
less space

► Payload

Supports up to **20kg** PXW-1420
(Including robot hand weight)

Supports up to **35kg** PXW-1535
(Including robot hand weight)

Supports up to **50kg** PXW-1550
(Including robot hand weight)

► Processing capacity

10 boxes
/min
(Average)

PXW-1420/
PXW-1535/
PXW-1550

Maximum value based on our evaluation criteria
*Actual performance may vary depending on
machine specifications.

► Size (Standard type)

PXW-1420

4,748(L) × 2,390(W) × 3,486(H)mm

PXW-1535

4,748(L) × 2,390(W) × 3,567(H)mm

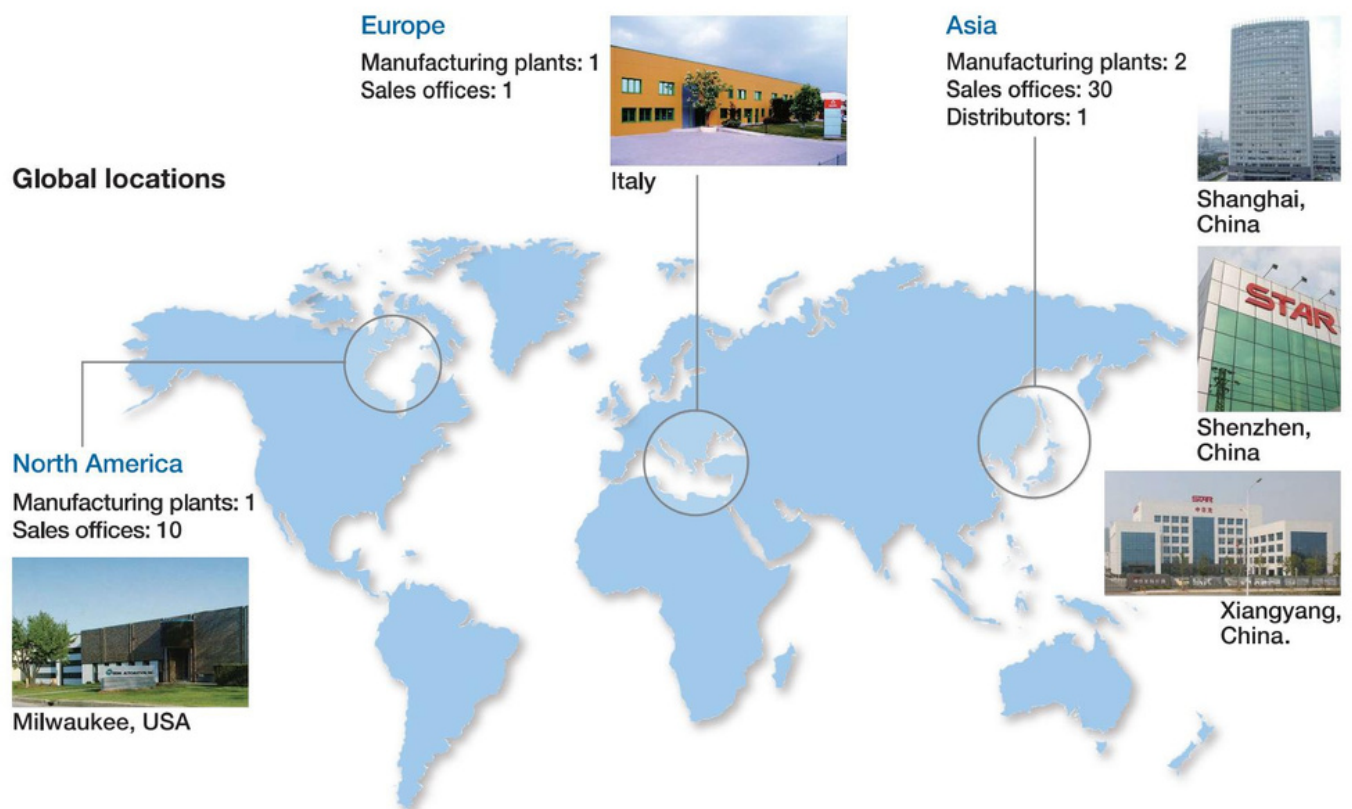
PXW-1550

4,671(L) × 2,668(W) × 3,748(H)mm

Service & Support

We offer compete support for your palletizers

In the unlikely event you have a problem, our nearest STAR GROUP service center will respond promptly.



You'll find the latest palletizers on display in our permanent exhibition room "STAR PLAZA."

Nagoya STAR PLAZA (Head Office)
Kanto STAR PLAZA
Osaka STAR PLAZA
STAR SEIKI THAILAND STAR PLAZA



Product Specifications

	PXT Series			PXW Series			PXL Series
	PXT-1220A	PXT-1220+	PXT-1235A	PXW-1420	PXW-1535	PXW-1550	PXL-1535
Max. Payload (Including chuck hand weight) [kg]	20	20	35	20	35	50	35
Vertical axis (JOP [mm])	1200 (1400) (1700)	1200 (1400) (1700)	1200 (1400) (1600)	1400 (1200) (1800)	1500 (1800)	1500 (1800) (2000)	1500 (1800) (2300)
Crosswise axis (JOP [mm])	900 (1000)	1000	940 (1060)	1000 (700)	1000 (1200)	1250 (1550)	1000 (1350)
Traverse axis (JOP [mm])	1500	1800	1560 (1860)	3500 (4500) (5500)	3500 (4500) (5500)	3500 (4500) (5500)	3500 (4500) (5500)
Swivel axis (JOP [degree])	± 160	± 160	± 160	320 (± 160)	320 (± 160)	320 (± 160)	320
Power supply capacity [KVA]	2.1	2.1	8.9	4.5	4.5	7.4	7.4
Max. power consumption [KW]	1.3	1.3	5.3	2.7	2.7	4.4	4.4
Circuit breaker rating [A]	15	15	30	20	20	30	30
Air consumption [L/min]	11.1	11.1	214.5	219	243.9	343.6	223
Unit Weight [kg]	487	518	1010.5	1093	1100	1287	1445
Operating air pressure [MPa]	0.5						
Power	AC200 - 220V ± 10% 50/60Hz						

*Not for use in environments with ambient temperatures below 0°C or above 40°C.

Robot Hand Section Air Consumption

Slide hand PAT.	Air ejector 4-part version	57L/min × 4 = 228L/min
	Air ejector 8-part version	57L/min × 8 = 456L/min
Sponge suction gripper	388 L/min	
Suction gripper for material bag PAT.P	388 L/min	

* Overall air consumption is the total sum of unit air consumption + robot hand air consumption.

Visit our permanent showroom, "STAR PLAZA," to experience our latest palletizers.

STAR PLAZA (Osaka Branch)

3-16-28, Furuichi, Jyoto-ku,
Osaka, Osaka

Business Hours:
9:00 a.m. – 5:00 p.m.
(Excluding company holidays)



STAR PLAZA (Head Office)

3-136-1 Akita, Ohguchi-cho,
Niwa-gun, Aichi

Business Hours:
9:00 a.m. – 5:00 p.m.
(Excluding company holidays)



STAR PLAZA (Kanto Branch)

3241 Ohashi-cho, Sano,
Tochigi

Business Hours:
9:00 a.m. – 5:00 p.m.
(Excluding company holidays)



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Safety Precautions ★To ensure the proper use of STAR SEIKI's products and specification

- Please read the instruction manual carefully before use to ensure proper operation of the product.
- Under the Ordinance of the Ministry of Health, Labor and welfare, employers are required to install safety fences outside the robot's operating range, implement contact-prevention measures, and provide special safety and health training to operators.

This regulation applies only when industrial robots are used in Japan.



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