



FUJI ROBOTICS

The Worlds leading Robotic Palletizer



Fuji Yusoki Kogyo Co., Ltd.

DEVELOPED BY THE PALLETIZER MAKER

ROBOTIC PALLETIZER FUJI-ACE

A varied lineup with 4 types of products
Responding to all kinds of needs for palletizers
From small-lot production to multi-product
or large-lot production!!



According to concepts
narrowed down to palletizer applications

1 HIGH-SPEED AND ENERGY SAVINGS ACHIEVED SIMULTANEOUSLY

As a robotic palletizer, FUJI-ACE enables the world's fastest 1800 cycles and a maximum load capacity of 320 kg with the world's smallest power consumption of 1.6kW

2 SIMPLE HMI EASILY OPERATED BY ANYONE

Simple and compact teaching pendant focusing on manual operation of robots.
The touch panel and its software design operate as easily as a bank ATM.

3 TEACHINGLESS SYSTEM STANDARD EQUIPPED

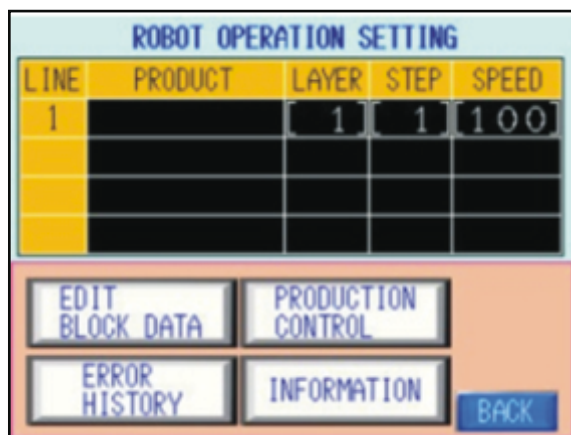
The System containing know-how as a palletizer manufacturer including automatic calculation of optimum orbits.



ECO & TECHNOLOGY

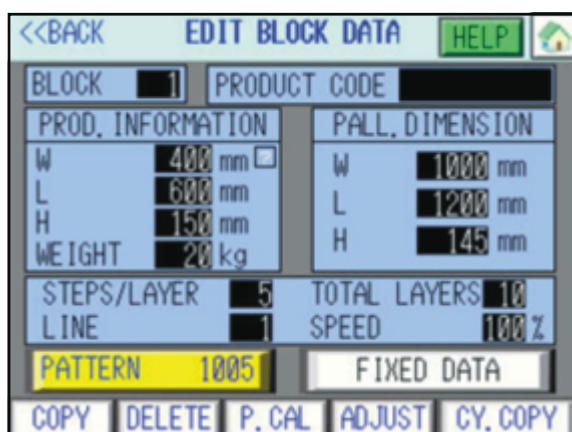
Now more than ever, industrial products need to be compatible with the global environment. Compared to other general multi-purpose industrial robots the FUJI-ACE Robotic Palletizer's weight has been slimmed down to one-half while power consumption has been cut to one-fourth.

Approximately 17,000 FUJI-ACE units are operated around the world contributing to CO₂ reduction equivalent to 0.4 million tons per year. Without question, FUJI-ACE is an energy saving type of industrial product.



User friendly touch screen (HMI) with software that is specific for Palletizing.

With over **17,000** Robotic Palletizers installed worldwide **FUJI ROBOTICS** is unmatched in "Palletizing" technology. Experience, sharp focus, and dedication to the palletizing industry have enabled **FUJI ROBOTICS** to provide the best possible solution to your palletizing needs.

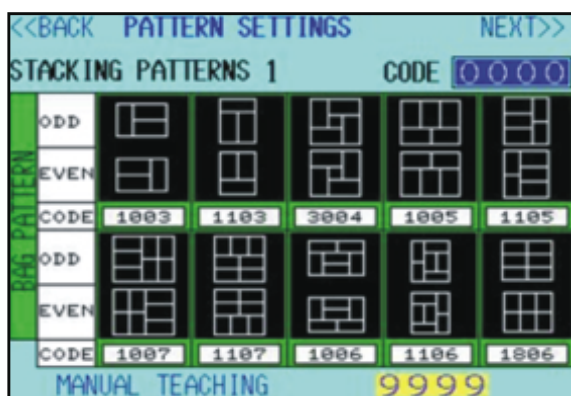


On-Screen simplified Pattern adjustment

Cutting Edge Control Package

Every Fuji Robot is equipped with touch screen control complete with:

- High level programming software offering complete onboard control and pattern editing without the need of a Laptop or PC
- Pre-Programmed pallet patterns embedded in the HMI to meet your exact specifications
- Inventory monitoring that corresponds with specific patterns
- Diagnostics designed to identify errors instantaneously
- Onboard automatic lubrication schedule system
- Real time I/O monitoring
- Error history log

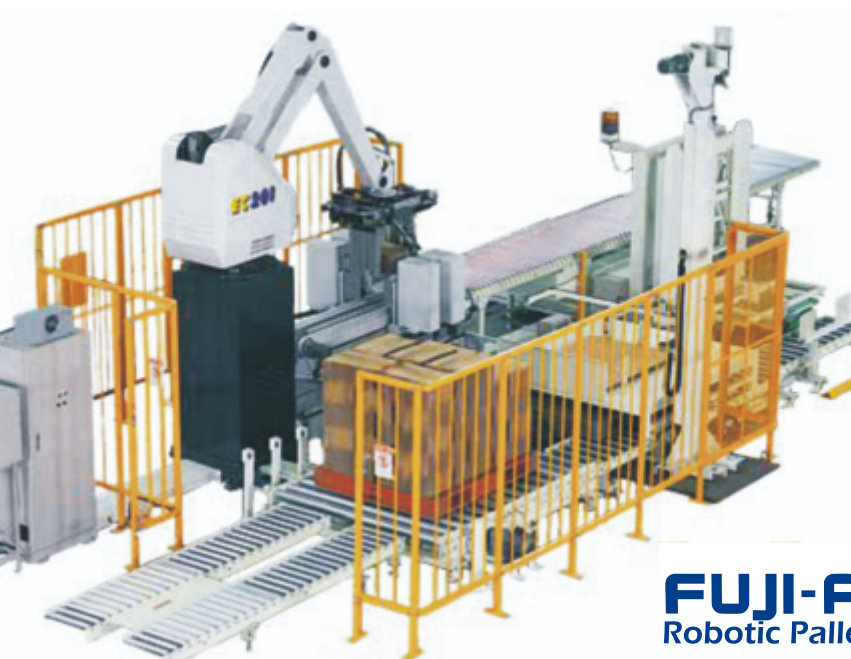


Use one of the pre-loaded product patterns or simply make your own. All without the use of a Laptop/PC.

PLC/Ethernet Communication

- Auto pattern change
- Product count sent externally
- Alarm codes to external PLC
- Product count from external PLC to Robot
- Height adjustment for product placement from external PLC to Robot

*A color HMI is available for all models as an option.



FUJI-ACE
Robotic Palletizers

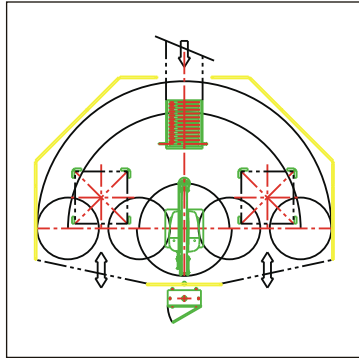
Teaching Pendant

Every Fuji Robot comes with a "user friendly" teaching pendant.



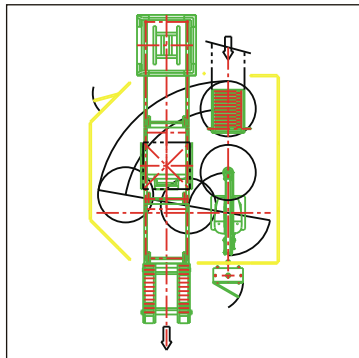
SENSIBLE LAYOUT SOLUTIONS

Fuji knows every layout may not fit an exact mold. Because of this we understand the need for total flexibility and innovative thinking to meet our customer needs. We have provided a few standard layouts that may assist in the beginning phase of your layout design.



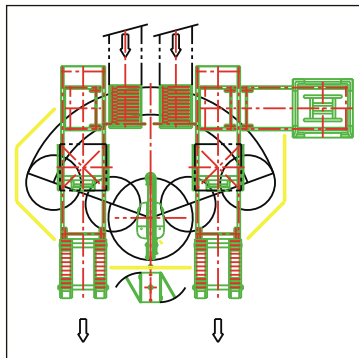
2-2 Layout

Product is palletized on two pallet locations. This design allows three pallets to be placed on the floor on each side. This will minimize changeover time.



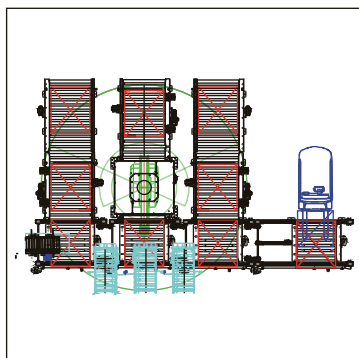
3-I Layout

For high speed applications, we decrease the pallet transfer time by using a pallet conveyor to automatically transfer pallets while maintaining nonstop productions.



3-LW Layout

One pallet magazine delivers empty pallets automatically onto two individual stacking lines simultaneously.



3-S Layout

3 In-Feed & 3 Stacking locations allow for a higher palletizing capacity while Maintaining a smaller overall footprint. Also included in this design is a Pallet Dispenser & Powered Stacking Conveyors for uninterrupted production.

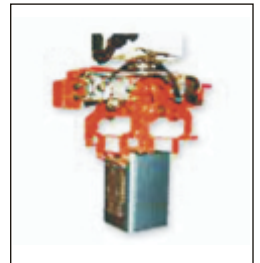
EXPERIENCE COUNTS

We understand how End Effectors play an intricate role in successful robotic palletizing applications. Given this critical point, we have spent years developing and refining high quality and cost effective End Effectors. Below is a small sample of our End Effector designs:

End Effectors To Suit Your Requirements



Box End Effector



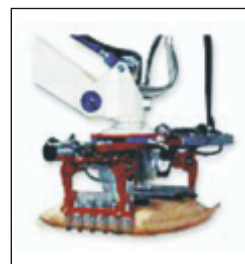
Can End Effector



Bag Depalletize



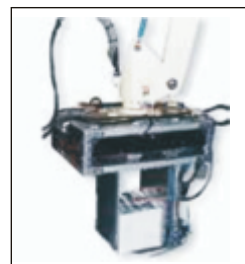
Case Depalletize



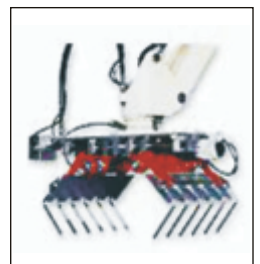
Bag End Effector



Case End Effector



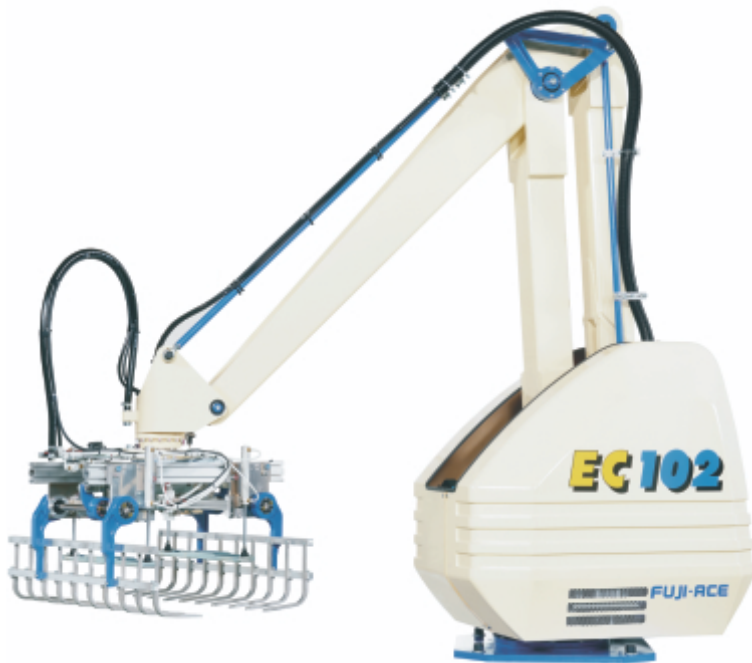
Book End Effector



Bag End Effector

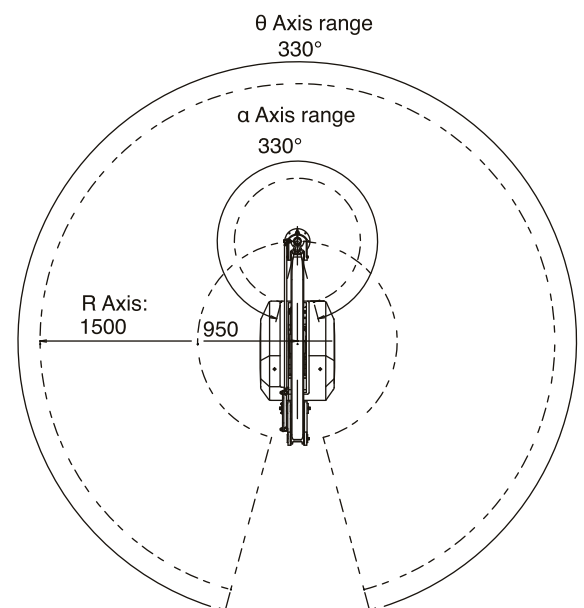
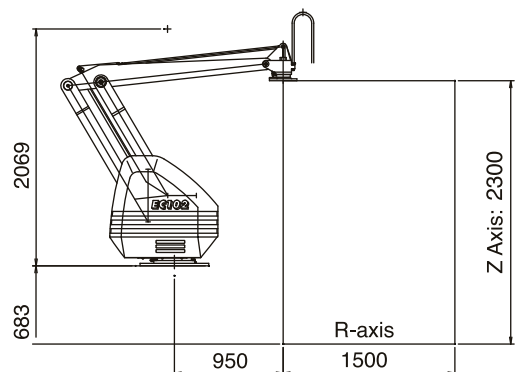
EC-102

ROBOTIC PALLETIZER



The **EC-102** model is one of our most energy-efficient robotic palletizers, as it uses only 3.5 KVA. Given the cycle rate-to-power ratio, it provides the most cost-effective, technically capable solution for moderate production throughput lines.

EC-102 Operating Range



Specifications Summary of 102 Model		
Load Capacity (Including End Effector)		160kg (350 lbs.)
Speed Capacity (cycles/hour)		1200
Degree of Freedom		4-axis (5th optional on End Effector)
Operating Area	Z axis (vertical)	2300mm (90.50")
	R axis (longitudinal)	1500mm (59.00")
	Theta axis (rotation)	330°
	Alpha axis (wrist)	330°
Memory		120 to 400 Programming Locations Available
Power Requirements		200 / 220V, 3-phase, 50 /60 Hz
Power Consumption (Without Peripheral Equipment Load)		3.5 Kva
Robot Weight (without End Effector)		700kg (1544 lbs.)
Pneumatic Consumption (*Using Standard Fuji Case or Bag End Effector)		*5.7 SCFM@70psi (0.5MPa)
Note: Specifications are subject to change without notice. Capacities as stated above are the maximum that may be achieved by the robot under ideal conditions. Capacity rates can be significantly affected by layouts, product types, and can be confirmed after a detailed analysis of an application. *Pneumatic consumption may vary with use a third-party End Effector.		

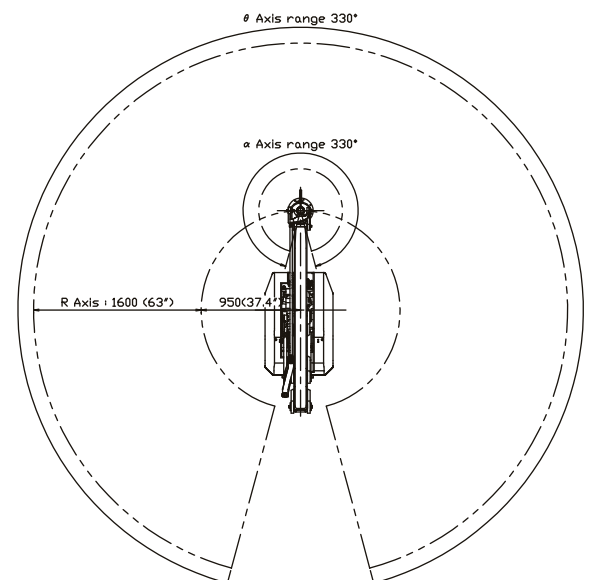
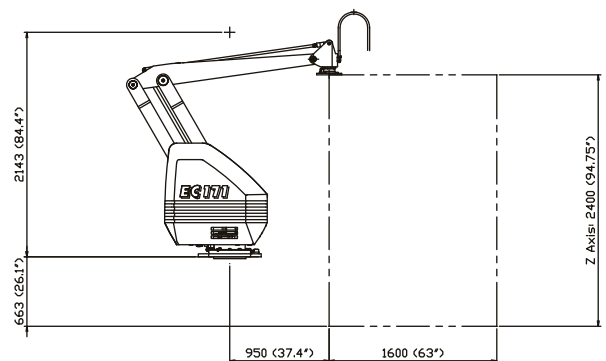
EC-171

ROBOTIC PALLETIZER



The most popular in the FUJI-ACE line, the **EC-171** robot has the largest working envelope, while maintaining the smallest rotation radius. Energy-efficient, as it uses only 4KVA, able to operate in tight spaces while still accomplishing high palletizing rates, it is ideal in most palletizing applications.

EC-171 Operating Range



Specifications Summary of 171 Model

Load Capacity (Including End Effector)		160kg (350 lbs.)
Speed Capacity (cycles/hour)		1500
Degree of Freedom		4-axis (5th optional on End Effector)
Operating Area	Z axis (vertical)	2400mm (94.75")
	R axis (longitudinal)	1600mm (63.12")
	Theta axis (rotation)	330°
	Alpha axis (wrist)	330°
Memory		120 to 400 Programming Locations Available
Power Requirements		200 / 220V, 3-phase, 50 / 60 Hz
Power Consumption (Without Peripheral Equipment Load)		4.0 Kva
Robot Weight (without End Effector)		750kg (1654 lbs.)
Pneumatic Consumption (*Using Standard Fuji Case or Bag End Effector)		*5.7 SCFM@70psi(0.5MPa)

Note: Specifications are subject to change without notice. Capacities as stated above are the maximum that may be achieved by the robot under ideal conditions. Capacity rates can be significantly affected by layouts, product types, and can be confirmed after a detailed analysis of an application. *Pneumatic consumption may vary with use a third-party End Effector.

EC-201

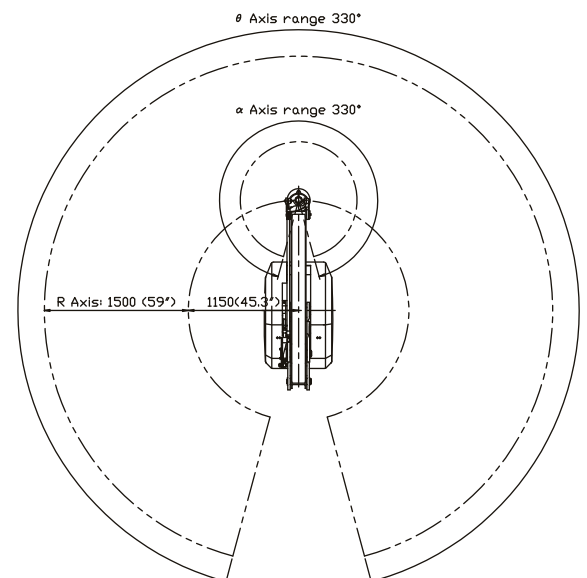
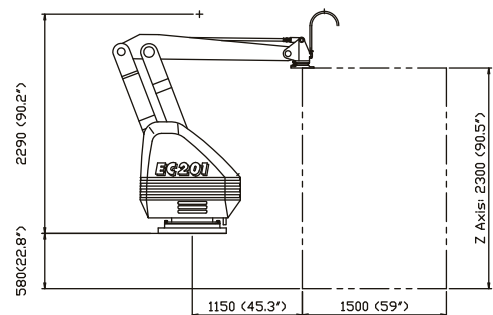
ROBOTIC PALLETIZER



The award-winning **EC-201** model is the top-of-the-line robot in the FUJI-ACE line and one of the highest-performance, most technologically advanced, robotic palletizer on the market today. It is particularly well-suited to high-speed sack or beverage case palletizing lines.

EC-201 Operating Range

Specifications Summary of 201 Model		
Load Capacity (Including End Effector)		200kg (440 lbs.)
Speed Capacity (cycles/hour)		1800
Degree of Freedom		4-axis (5th optional on End Effector)
Operating Area	Z axis (vertical)	2300mm (90.50")
	R axis (longitudinal)	1500mm (59.00")
	Theta axis (rotation)	330°
	Alpha axis (wrist)	330°
Memory		120 to 400 Programming Locations Available
Power Requirements		200 / 220V, 3-phase, 50 /60 Hz
Power Consumption (Without Peripheral Equipment Load)		6.5 Kva
Robot Weight (without End Effector)		1150kg (2536 lbs.)
Pneumatic Consumption (*Using Standard Fuji Case or Bag End Effector)		*5.7 SCFM@70psi (0.5MPa)
Note: Specifications are subject to change without notice. Capacities as stated above are the maximum that may be achieved by the robot under ideal conditions. Capacity rates can be significantly affected by layouts, product types, and can be confirmed after a detailed analysis of an application. *Pneumatic consumption may vary with use a third-party End Effector.		



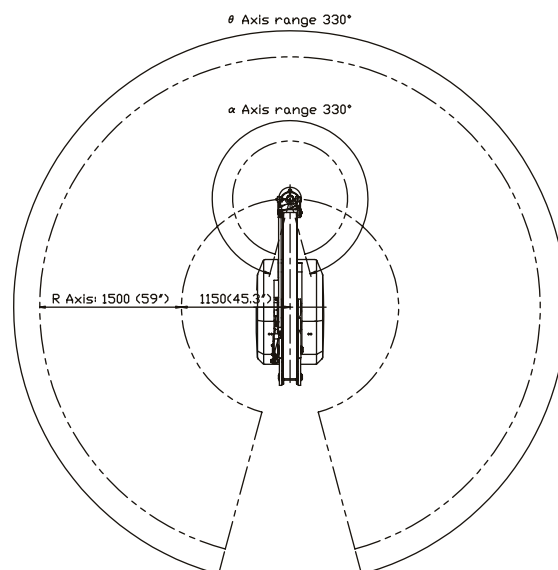
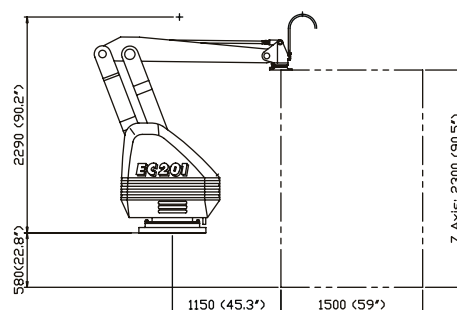
EC-201W

ROBOTIC PALLETIZER



The **EC-201W** model is a special adaption of the EC-201 for super heavy-weight applications, in which full layer pick-up is recommended, such as on drum production lines in the petrochemical, food, beverage industries.

EC-201W Operating Range



Specifications Summary of 201W Model		
Load Capacity (Including End Effector)		320kg (700 lbs.)
Speed Capacity (cycles/hour)		600
Degree of Freedom		4-axis (5th optional on End Effector)
Operating Area	Z axis (vertical)	2300mm (90.50")
	R axis (longitudinal)	1500mm (59.00")
	Theta axis (rotation)	330°
	Alpha axis (wrist)	330°
Memory		120 to 400 Programming Locations Available
Power Requirements		200 / 220V, 3-phase, 50 / 60 Hz
Power Consumption (Without Peripheral Equipment Load)		7.0 Kva
Robot Weight (without End Effector)		1150kg (2536 lbs.)
Pneumatic Consumption (*Using Standard Fuji Case or Bag End Effector)		*5.7 SCFM@70psi (0.5MPa)
Note: Specifications are subject to change without notice. Capacities as stated above are the maximum that may be achieved by the robot under ideal conditions. Capacity rates can be significantly affected by layouts, product types, and can be confirmed after a detailed analysis of an application. *Pneumatic consumption may vary with use a third-party End Effector.		



JAPAN

★ **Overseas Business Division World Headquarters**
 2327-1 Higashitakatamari, Sanyo-Onoda, Yamaguchi,
 756-0080, Japan
 Tel +81-(0)836-83-4365 Fax +81-(0)836-83-7272
 E-mail : osbjapan@fujiyusoki.com

● **Tokyo Office**
 4-22-1 Kandasakuma-Cho, Chiyoda-Ku, Tokyo,
 101-0025, Japan
 Tel +81-(0)3-6682-6511 Fax +81-(0)3-3863-8236
 E-mail : osbjapan@fujiyusoki.com

KOREA

★ **Fuji Robotics Korea**
 #406 Venture Changeop Building, 464, Gyeongsudae-Ro,
 Paldal-Gu, Suwon-Si, Gyeonggi-Do, 442-833, Korea
 Tel +82-(0)31-526-0551 Fax +82-(0)31-526-0553
 E-mail : osbkorea@fujiyusoki.com

SOUTH EAST ASIA / OCEA

★ **Fuji Robotics Hong Kong**
 Unit C08, 30/Floor, TML Tower,
 Tsuen Wan, New Territories,
 Tel +852-2345-7673 Fax +852
 E-mail : osbhk@fujiyusoki.com

● **Fuji Robotics India**
 Gohel Plaza, Opp. Cheharmata
 Changodhar, 382213, Ahmedabad,
 Tel: +91-89800-11981
 E-mail : info@fujiroboticsindia.com

● **Fuji Yusoki Singapore (SA Di**
 JTC Summit 8 Jurong Town Hall
 Tel +65-68180896 Fax +65-6818
 E-mail : fuji.singapore@fujiyusoki.



ROBOTICS

NIA / INDIA / MIDDLE EAST

No.3 Hoi Shing Road
Hong Kong
-2560-8011

Mandir Sarkhej - Bavla Highway,
India

vision)
Road,Lebel 24-05,609434, Singapore
0801
com

EUROPE

★ **Fuji Robotics Europe**
Heinrichstr. 73 40239, Dusseldorf, Germany
Tel +49-(0)211-863-240-92 Fax +49-(0)211-863-240-93
E-mail : info@fujirobotics.de

AMERICA

★ **Fuji Robotics Americas**
1220 Landmeier Road Elk Grove Village, Illinois, 60007, USA
Tel +1-847-264-8409 Fax +1-847-378-8899
E-mail : info@fujirobotics.com

● **California Office**
17900 Skypark Circle, Suite 100 Irvine, CA 92614, USA
Tel +1-949-679-9916
E-mail : info@fujirobotics.com

GROUP COMPANY

■ **Fuji Yusoki Trade (Shanghai) Co., Ltd.**
Room 103, Block B, Oulaiya Building, No.8923
Zhongchun Rd, Minhang District, 201101, Shanghai, China
Tel +86(0)21-6443-5521 Fax +86(0)21-6443-5796
E-mail : osbshanghai@sh-fujiyusoki.com

Fuji Ace Technical Specifications

Fuji ACE Model		EC-102	EC-171HS/HD	EC-201HS/HD	EC-201W
Type of Motion		Multi-Articulated			
Action Mode		Cylindrical			
Load Capacity (Including End Effector)		160kg(340lbs)	80kg(170lbs)/ 160kg(340lbs)	70kg(150lbs)/ 200kg(400lbs)	320kg(700lbs)
Palletizing Capacity (cycles / hour)		1200	1500/1000	1800/1600	600
Degree of freedom		4 axis			
Operating Area	Z axis (vertical)	2300mm (90.5")	2400mm (94.75")	2300mm (90.5")	
	R axis (longitudinal)	1500mm (59")	1600mm (63.12")	1500mm (59")	
	Theta axis (rotation)	330°			
	Alpha axis (wrist)	330°			
Repeatability		±0.5mm	±0.5mm		
Memory		120-400programming locations available			
Teaching method		Teaching playback / Teaching Support			
Power Requirements		(200/220V, 3phase, 50/60 Hz)			
Power Consumption (Without Peripheral Equipment Load)		3.5Kva / 9.2 amps	4Kva / 10.5 amps	6.5Kva / 17 amps	7Kva / 18.4 amps
Robot Weight(Without End Effector)		700kg (1544lbs)	750kg (1654lbs)	1150kg (2536lbs)	
Pneumatic Consumption (*Using Standard Fuji Case or Bag End Effector		*5.7SCFM @ 70psi(0.5MPa)			

Note: Specifications are subject to change without notice. Capacities as stated above are the maximum that may be achieved by the robot under ideal conditions. Capacity rates can be significantly affected by layouts, product types, and can be confirmed after a detailed analysis of an application. *Pneumatic consumption may vary with use of a third party End Effector.



Concerns about the natural state of our planet have never been higher. Some manufacturers have not yet recognized the role that robotics can play in energy conservation. Robots make the palletizing process more efficient and we think smart players in the industry will adapt this reality sooner than later. With all this in mind **FUJI** offers energy conscious robots-(EC-Series).

THINK GREEN



FUJI ROBOTICS

The Worlds leading Robotic Palletizer

Fuji Yusoki Kogyo Co, Ltd.