

Omron Adept Quattro s650HS



The Quattro™ s650HS is the only high-speed parallel robot in the world that has been USDA-accepted for meat and poultry processing. The patented four-arm design, advanced control algorithms, and large work envelope make the Adept Quattro the ideal overhead-mount robot for smooth motion, high-throughput applications. The Adept Quattro is powered by ultra-compact controls and embedded amplifiers, which reduces the cycle time and improves footprint efficiency.

Product Features and Benefits

- USDA-compliant materials are Generally Recognized As Safe (GRAS)
- Smooth surfaces eliminate areas that harbor bacteria growth
- A completely sealed mechanism prevents ingress/ egress of contaminants
- Tool-less removal of platform and outer arms reduces time required for cleaning
- Patented four-arm design delivers higher speeds for greater throughput
- Highly visible parts and surfaces simplifies inspections
- Compact controls and embedded amplifiers allow for easier installation with a decreased footprint
- Conveyor tracking with vision guidance ensures accurate part location for increased yields
- Adept ACE™ software simplifies development for faster time to market
- Ethernet TCP/IP and DeviceNet capabilities



The Omron Adept Quattro s650HS robot comes with the high-performance Adept SmartController™ motion controller, which is based on the Adept SmartServo architecture. It has a small footprint of 329w x 187d x 86h mm.

Specifications

Number of Axes	4
Payload	
Rated	2 kg
Max.	6 kg (Up to 15kg with P30)
Max Working Range (see diagram for details)	
Diameter	1300 mm
Height	500 mm
Rotation	0° (fixed) (P30)
(platform dependent)	± 46.25° (P31) ± 92.5° (P32) ± 185° (P34)
Repeatability	± 0.1 mm (Uni-directional) ± 0.2°, 0.6° (P31, P34)
Max. Speed	10 m/s 3600°/s
Max. Acceleration	150 m/s ²

Robot Cycle Times, sustained (seconds, at 20°C ambient)

Payload	Std. Cycle*	Extd. Cycle**
0.1 kg	0.30	0.46
1.0 kg	0.36	0.47
2.0 kg	0.37	0.52
4.0 kg	0.41	0.58
6.0 kg	0.43	0.61

* Adept Cycle, in mm (25/305/25)

** Extended Cycle, in mm (25/700/25)

Digital I/O Channels

eAIB: 12 inputs, 8 outputs

Power Requirements

24 VDC : 6A
200 - 240 VAC : 10A, single-phase

Ingress Protection

Base: IP-65/66 (optional)
Tooling Area: IP-67

Quattro ePLC650HS:

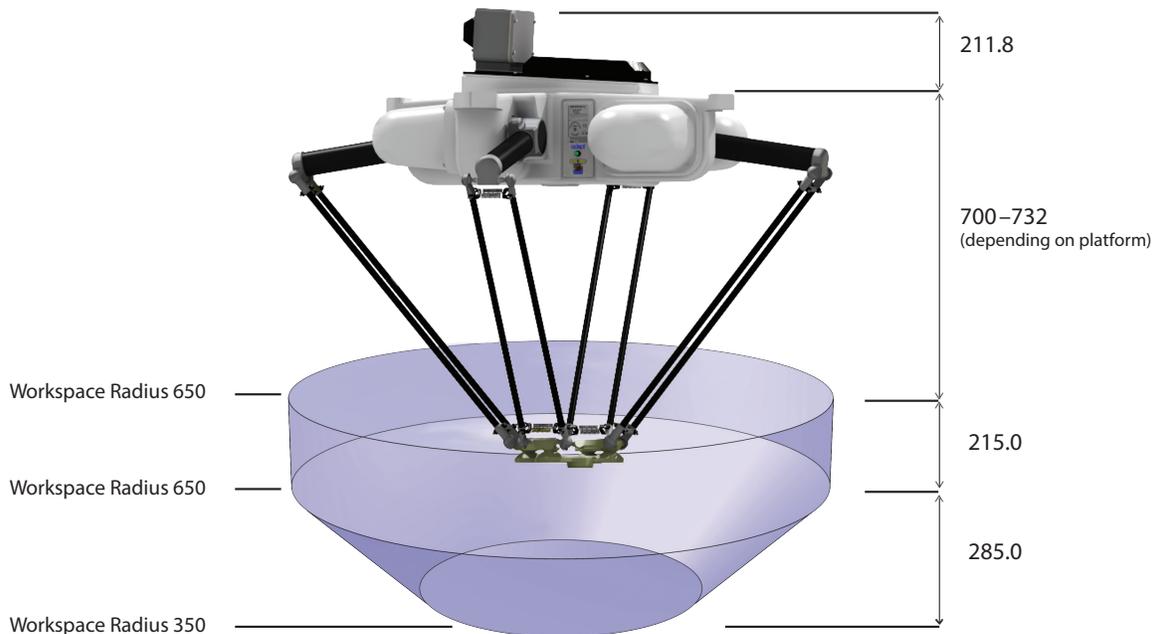
USDA-Accepted for meat and poultry processing



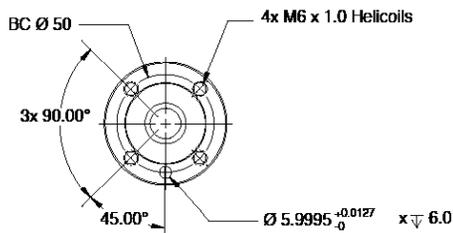
Mounting	Inverted
Environmental Requirements	
Ambient Temperature	1 - 40 °C
Humidity Range	5 - 90 % (non-condensing)
Weight	117 kg
CE Compliant	

OMRON ADEPT QUATTRO s650HS

Dimensions: Omron Adept Quattro s650HS (mm)



Dimensions: Flange (mm)



The Omron Adept Quattro s650HS system includes the following:

- Adept Quattro robot with eAIB (Amplifiers In Base)
- Adept SmartController™ motion controller (with V+ software installed)
- P30 (fixed), P31, P32, or P34 rotational platform
- Front Panel with E-Stop
- Adept ACE™ software
- User documentation

The Omron Adept Quattro s650HS robot was tested to withstand the following cleaning solutions at manufacturers' recommended concentrations:

- Dura Foam 263
- Chloro Clean 269
- Multiquat 455
- Liquid Fury
- Enrich 299

Downloads:

Download CAD files for the Adept Quattro s650HS Robot from <http://www.omron247.com>

The user must supply the following:

- Power to SmartController (DC)
- Power to eAIB (AC and DC)
- Emergency-stop wiring at each workcell
- End-effectors
- Frame and cable tray for mounting the robot

Options:

- Omron ACE PackXpert™ application development software
- AdeptSight™ 3 vision guidance and inspection system (requires a PC - Adept recommends the Adept SmartVision™ EX)
- Cameras for vision guidance
- V+ Extensions license for conveyor tracking
- T20 manual control pendant

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Specifications subject to change without notice.

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Pub Number R74I-E-01

09366-016 Rev. F