

Innovation Matrix

Product Catalog

Introducing



Bridging the Pacific with Automation Technology

AdeptThree-XL Direct Drive Robot



The AdeptThree-XL Direct Drive SCARA robot is designed for assembly and part-handling tasks that are too big for most SCARAs. Its precision, strength, and speed allow it to outperform many large articulated robots.

The AdeptThree-XL does not compromise performance for size. With a two meter diameter reach and a 356 mm Z-axis stroke, the AdeptThree-XL has the largest work envelope in its class. The Adept-Three-XL achieves 0.04 mm

repeatability with a 25 kg maximum payload capacity and excellent cycle times. In addition, the AdeptThree-XL's strength and rigidity allow it to handle large tooling and multiple-head grippers for increased workcell throughput.

Direct Drive design gives the AdeptThree-XL a unique combination of strength, speed, precision, and size. Utilizing the benefits of direct drive, Adept's robots offer proven cycle time and long life reliability advantages over gear-driven robots. Because there are no gears to wear out, performance is preserved throughout the 120 million Production Cycles life of the arm (12 years at two shifts per day) and maintenance requirements are minimal.

Adept's powerful AWC controller and V+ software allows system integrators to maximize robot and workcell performance with minimal software effort. Adept's control architecture and language provide seamless integration of options such as vision guidance, conveyor tracking and force sensing.

Adept HyperDrive is a standard feature for the AdeptThree-XL. Adept HyperDrive is a hardware and software package that increases the robot's speed and acceleration; yielding significant improvement in production throughput.

The AdeptThree-XL is the ideal robot for high-payload or large work envelope applications that require the dexterity and speed commonly associated only with smaller robots.

The AdeptThree-XL continues the tradition of quality and excellence established by the Adept robot family over the last decade and is proven in more than 5,000 direct drive robot installations worldwide.

Specifications:

• Payload:	Burst:	Sustained:
0kg	0.62sec	0.73sec
9kg	0.69sec	0.89sec
25kg	0.99sec	1.24sec

- Reach: 1067mm
- Joint 4 Inertia (Max): 14,660kg-cm² (5000 lb-in²)
- Downward Force: 45kg (100lbs.)
- Robot Brakes: Joints 1, 2, 3, 4: Pneumatic brakes (4.8-7.6 Bar required)
- Repeatability:
 - (x,y): ±0.038 mm (±0.0015")
 - (z): ±0.038 mm (±0.0015")
 - Theta: ±0.05°
- Joint Range:
 - Joint 1: ±150°
 - Joint 2: ±150°
 - Joint 3
 - Standard: 356 mm
 - Joint 4: ±270°
- Maximum Joint Speed:
 - Joint 1: 540°/sec
 - Joint 2: 820°/sec
 - Joint 3: 1,200mm/sec
 - Joint 4: 1955°/sec
- Design Life: 120 Million Production Cycles
- Options:
 - AdeptForce
 - AdeptVision AVI
 - Solenoid valve kit (4)
 - Robot-mounted camera bracket
 - Extended length cables: (8 m & 15 m)
 - Cleanroom Class 10 Upgrade Package
 - IP-54 Sealing Package
- User Connections
 - Electrical:
 - Group one-7 pair
 - Group two-4 pair
 - Fieldbus: 2 pair w/MircoDIN
 - Pneumatic: 2 @ 6 mm
- Robot/Controller cables: 5 m (16.4') is standard
- Weight: 266 kg (585 lbs)
- Operating Environment: Robot: 5-50°C (41-122°F)
- Available Controllers : 540; 1060; 1060+
- Power Consumption: 3.4 kW sustained mode 1kW robot only

Specifications subject to change without notice. 12/11/01

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