Adept Cobra™ s350 CR/ESD

The Adept Cobra s350 CR/ESD is the ISO 4 (Class 10 Clean Room) version of the s350, with electrostatically dissipative surfacing. It can be used in disk drive manufacturing including disk install application, screwdriving, head stack assembly, ramp install, certification, head gimbal assembly, and vision based assembly. The Adept Cobra s350 CR/ESD features a small motion envelope while maintaining high speed and payload. It has a 350 mm reach.

Robot Specifications

Reach	350 mm
Footprint	150 mm x 150 mm
Payload	5.5 kg (max)
Joint 4 inertia (max)	450 kg-cm²
Downward Push Force	10 kgf
Joint Range	
Joint 1	±155°
Joint 2	±145°
Joint 3	200 mm
Joint 4	±360°
Joint Speeds	
X/Y	7,200 mm/sec
Z	2,000 mm/sec
Theta	2,400 °/sec
Repeatability	
XY	±0.015 mm
Z	±0.01 mm
Theta	±0.005°
Pass-Through User Connections	
Electrical	19 conductor
Pneumatic	6 mm (x2), 4 mm (x2)
Weight	20 kg

Performance

- Absolute encoders make for easy calibration
- High-resolution encoders provide high-precision and superior slow-speed following
- High-efficiency motors deliver high performance with more torque per amp
- Low-inertia harmonic drives provide maximum acceleration
- 8 kHz servo update rate for improved path following and control
- Complete interchangeability between robots and controllers

Reliability and Maintenance

- Serviced worldwide by Adept Technology
- Proven design offers high relaibility and low MTTR
- Diagnostics display enables faster troubleshooting

Environment

- Electrostatic dissipative surfacing paint prevents static electricity from build-up during operation

System Includes

The Adept Cobra s350 system includes the following:

- Adept Cobra s350 Robot
- Adept SmartController CX (with software installed)
- MotionBlox-40R servo controller and amplifiers
- Front Panel with E-Stop
- 4-Meter Robot Cable
- AdeptWindows Software
- Network File Server (NFS) software
- Ethernet TCP/IP capability
- User Documentation

User Supplied Items

The user must supply the following items:

- Power to the SmartController CX and MotionBlox-40R
  (see power requirements on page 2)
- Cell-based emergency stop wiring
- Windows™-based PC (not required at run-time)

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Adept SmartController CX Specifications

SmartServo ports	2
IEEE 1394 (FireWire) ports	2
Ethernet ports (100 baseT)	1
DeviceNet ports	1
RS-232 ports	3
RS-422/485 ports	1
Digital I/O	
Inputs	12 (4 fast)
Outputs	8
Expansion available	(see optional peripherals)
Encoder Latching	8 edges (rise/fall)
Belt Encoder ports	2

Adept MotionBlox-40R Specifications

- Servo Controller and Amplifiers for Cobra s350
- Digital I/O Channels
  12 inputs, 8 outputs (included on MotionBlox-40R)
  Expansion available (see optional peripherals)
- External 26-pin I/O connector
- 14-Segment status display with bicolor LED

Environmental Requirements

Ambient temperature	5°C to 40°C
Humidity range (non-conducting)	5 to 90%
Altitude	Up to 2,000 m
Vacuum Supply	70 l/min

See user's documentation for controller enclosure recommendations.

Power Requirements for SmartController

24VDC (+/- 10%), 120W (5A), User-Supplied

Power Requirements for MotionBlox-40R

24VDC (+/- 10%), 150W (6A), User-Supplied
200V to 240V AC, 1-phase, 50/60Hz (10A), User-Supplied

Optional Peripherals

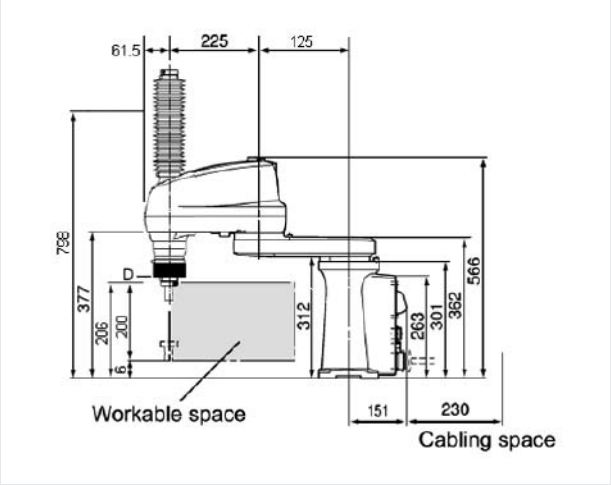
- T1 Pendant
- IO Blox (8 digital input & 8 digital output channels)
  connects to MotionBlox-40R
- sDIO (32 digital input & 32 digital output channels)
  connects to SmartController CX

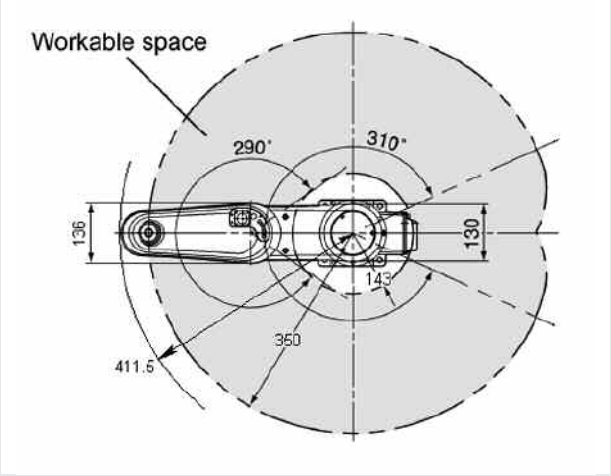
For More Information

Call (763) 682-9548 or (800) 226-6385. The Adept Cobra s350 CR/ESD robot is available by ordering part number 90582-000.

ADEPT SMARTCONTROLLER

MOTIONBLOX-40R





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Specifications subject to change without notice.

350CRDS 10051250