

# Adept Cobra™ i800



The Adept Cobra i800 is an extended reach version of the Adept Cobra i600 robot, offering the same payload and performance at an affordable price. It is designed for mechanical assembly, material

handling, packaging, machine tending, screwdriving, and many other operations requiring fast and precise automation.

## Robot Specifications

Reach	800 mm
Payload	2 kg (rated) 5.5 kg (max)
Joint 4 inertia (max)	450 kg-cm <sup>2</sup>
Downward Push Force	30 kgf
Adept Cycle	
Burst Mode	0.54 sec (2 kg)
Sustained	0.54 sec (2 kg)
Joint Range	
Joint 1	±105°
Joint 2	±157.5°
Joint 3	210 mm
Joint 4	±360°
Joint Speeds	
Joint 1	386 °/sec
Joint 2	720 °/sec
Joint 3	1,100 mm/sec
Joint 4	1,200 °/sec
Repeatability	
XY	±0.017 mm
Z	±0.003 mm
Theta	±0.019°
Pass-Through User Connections	
Electrical	24 (12 twisted pairs)
Pneumatic	6 mm (x2) 4 mm (x3)
DeviceNet	
Digital I/O Channels	12 inputs 8 outputs (included)
Weight	43 kg

With no external electronics, the Adept Cobra i-series is the only line of self-contained, standalone SCARA robots. The amplifiers and motion controller are built into the robot, making the Adept Cobra i800 one of the easiest robots to design into workcells where space is critical.

Installation is easy. Simply supply power, attach the emergency stop, and plug in digital I/O cables to interface to other peripherals. Add tooling and vacuum lines, then connect a PC directly to the robot, and program the arm using the simple, yet powerful, MicroV+™ robot language. The PC can be removed for runtime.

## Key Features

- No external electronics - the amplifiers and motion controller are built into the robot arm, significantly reducing the size and number of cables, which dramatically simplifies system installation
- MicroV+ real-time operating system and easy-to-use programming language

## 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
- Temperature sensors on the motors and amplifiers maximize performance and reliability
- 8 kHz servo update for improved path following and control

## Reliability and Maintenance

- Integrated temperature sensors monitor heat in servo motors to prevent damage
- Diagnostics display on robot enables faster troubleshooting
- Easy replacement of electronic sub-assembly reduces MTTR

# Adept Cobra™ i800

## System Includes:

The Adept Cobra i800 system (p/n 90566-000) includes the following:

- Adept Cobra i800 Robot with MicroV+ installed
- Front Panel with E-Stop
- Adept DeskTop 2.0 software on CD-ROM
- RS-232 Null Modem Cable
- XPANEL Cable (for connecting E-Stop, Front Panel and MCP)
- User Documentation

## User Supplied Items

User must supply the following items:

- Power to robot (see power requirements)
- External Emergency Stop
- Power enable push-button (if Adept Front Panel not used)
- Windows™-based PC (not required at run-time)

## Environmental Requirements

Ambient temperature	5°C to 40°C
Humidity range (non-conducting)	5 to 90%
Altitude	Up to 2,000 m

See user's documentation for controller enclosure recommendations.

## Power Requirements for Cobra i800 Robot

24VDC (+/- 10%), 120W (6A), User-Supplied
200V to 240V AC, 1-phase, 50/60Hz (10A), User Supplied

## Downloads

Download CAD files from [www.adept.com](http://www.adept.com) using the following download ID's:

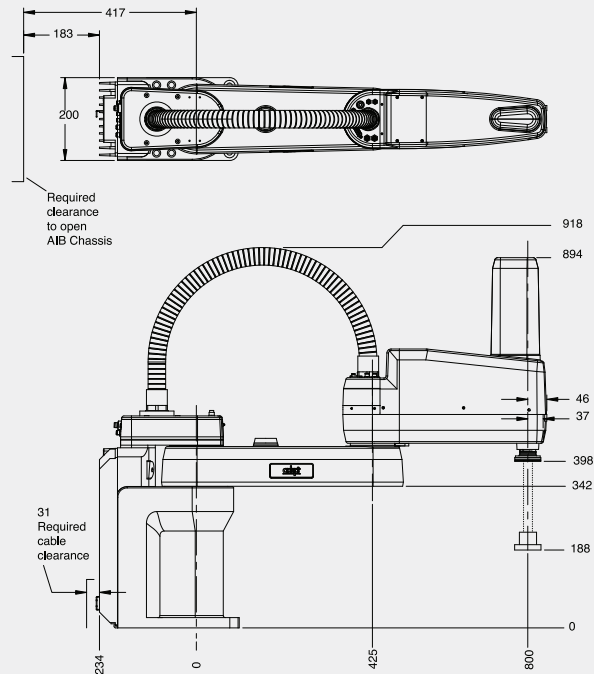
Adept Cobra i800 Robot	500008
Front Panel	135905

## Optional Peripherals

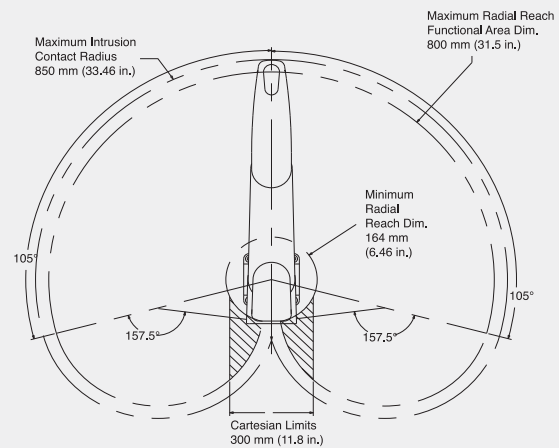
- T1 Pendant
- IO Blox (8 digital input & 8 digital output channels)
- Hardstop kit
- Solenoid kit

## For More Information

Call (763) 682-9548 or (800) 226-6385. The Adept Cobra i800 robot is available by ordering part number 90566-000.



Top and Side Dimensions



Work Envelope



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