

Innovation Matrix

Product Catalog

Introducing



Bridging the Pacific with Automation Technology

Adept Viper™ s850



The Adept Viper 6-axis robot family is a high-performance line of robots designed specifically for assembly applications. The speed and precision of the Adept Viper robots also make them ideal for material handling, packaging, machine tending, and many other operations requiring fast and precise automation. The Adept Viper robot family is being introduced with the Adept Viper s650 and Adept Viper s850 robots.

Robot Specifications

Reach	854 mm
Payload	2.5 kg (rated) 5 kg (max)
Joint Range	
Joint 1	±170°
Joint 2	-190°, +45°
Joint 3	-29°, +259°
Joint 4	±190°
Joint 5	±120°
Joint 6	±360°
Inertia Moment (max)	
Joint 4	0.295 kgm ²
Joint 5	0.295 kgm ²
Joint 6	0.045 kgm ²
Composite Speed (max)	7,600 mm/sec
Joint Speeds	
Joint 1	250°/sec
Joint 2	250°/sec
Joint 3	250°/sec
Joint 4	375°/sec
Joint 5	375°/sec
Joint 6	600°/sec
Repeatability (XYZ)	±0.030 mm
Pass-Through User Connections (routed from robot base to outer link)	
Electrical	10
Pneumatic	1
Brakes	Joints 2 - 6
Internal Solenoids	Three 2-position solenoids (connected to controller by user)
Ingress Protection	IP40 (IP54/65 optional)
Mounting	Floor/Table and Ceiling
Weight	(approx) 29 kg

Performance

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

Reliability and Maintenance

- Proven design offers high reliability and low MTTR
- Diagnostics display enables faster troubleshooting

System Includes

The Adept Viper s850 system includes the following:

- Adept Viper 850 Robot
- Adept SmartController CX (with software installed)
- PA-4 Amplifier Chassis with 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 SmartController and PA-4 Amplifier Chassis (see power requirements)
- Cell-based emergency stop wiring
- Windows™-based PC (not required at run-time)

Adept Viper™ s850

ADEPT PA-4 AMPLIFIER CHASSIS

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
Encoder Latching	8 edges (rise/fall)
Conveyor Tracking Support	Requires V+ Extension License
Belt Encoder ports	2

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 SmartController

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

Power Requirements for PA-4 Amplifier Chassis

200V to 240V AC, 1-phase, 50/60Hz, User-Supplied	
200V to 240V AC, 3-phase, 50/60Hz, User-Supplied	
380V to 415V AC, 3-phase, 50/60Hz, User-Supplied	
Typical current requirements:	8.5A
Typical power consumption:	1.65 kW

Downloads

Download CAD files from www.adept.com using the following download ID's:

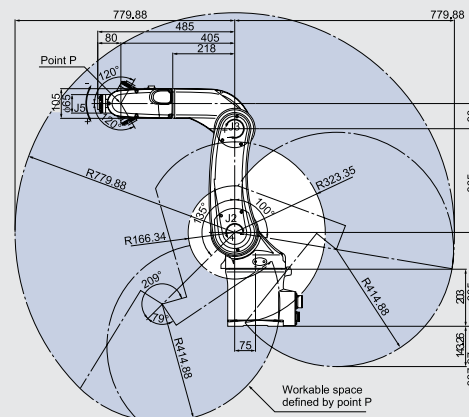
Adept Viper s850 Robot	500501
SmartController CX	136358
Front Panel	135905

For More Information

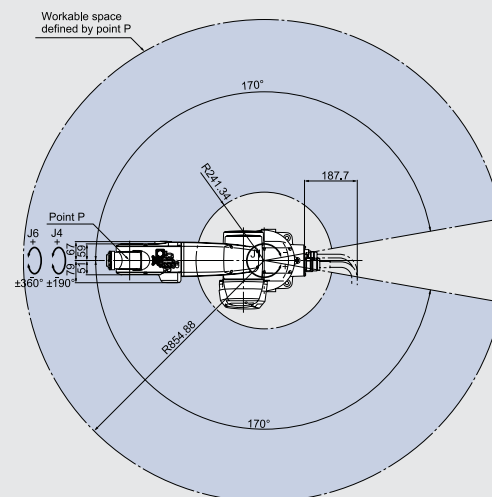
Call (763) 682-9548 or (800) 226-6385. The Adept Viper s850 robot is available by ordering part number 05265-000.



ADEPT
SMARTCONTROLLER



Side Dimensions and Work Envelope



Top Dimensions and Work Envelope



Adept Technology, Inc. 3011 Triad Drive, Livermore, CA 94551
Tel: 925-245-3400 Fax: 925-960-0452 Email: info@adept.com www.adept.com

Specifications subject to change without notice.

©2005 Adept Technology, Inc. All rights reserved. Adept and the Adept logo are registered trademarks, and Adept Viper is a trademark of Adept Technology, Inc. All other trademarks are the property of their respective holders. S850DS 10052500

www.innovation-matrix.com



Innovation Matrix, Inc.

1715 Junction Avenue, Suite B, San Jose, CA 95112 USA

TEL: 408-329-4422

FAX: 408-716-2553

sales@innovation-matrix.com

IM Japan: japan@innovation-matrix.com

IM Taiwan: taiwan@innovation-matrix.com

IM Beijing: beijing@innovation-matrix.com