SCARA Robots
Cobra 450

Mid-size SCARA robot for material handling, assembly, precision machining and adhesive application

- Ethernet capability to control the robot through the familiar programming language (IEC 61131-3) of Machine Automation Controller NJ/NX/NY Series
- Good repeatability for precision assembly
- High Payload for using tools for screw-driving and adhesive application
- Minimum footprint with separate controller
- Robot with integral power and signal cables
- Reach 450 mm
- Maximum Payload 5 kg
- Weight 30 kg

Specifications

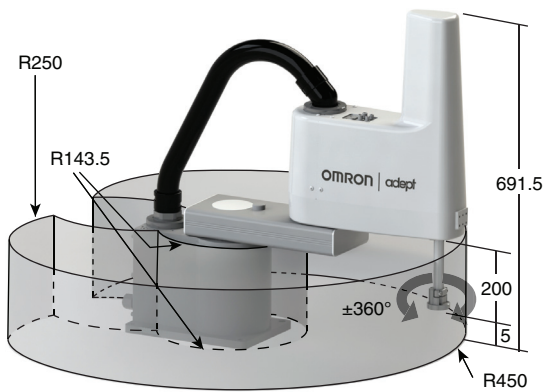| Product name		Cobra
	Size	450
Model		1720[ ]-14500
Number of axes		4
Mounting		table/floor
Reach		450 mm
Maximum Payload		5 kg
Repeatability	XY	±0.020 mm
	Z	±0.010 mm
	Theta	±0.020°
Joint Range	Joint 1	±125°
	Joint 2	±145°
	Joint 3	200 mm
	Joint 4	±360°
Joint Speeds	Joint 1	450°/s
	Joint 2	720°/s
	Joint 3	1100 mm/s
	Joint 4	1940°/s
Cycle times, (See *1) with 2.0 kg Payload	Burst	0.60 s
	Sustained	0.65 s
Power Requirements		24 VDC: 6 A 200 to 240 VAC: 10 A, single-phase
Clean Class		---
Protection		IP20
Environment Requirements	Ambient Temperature	5 to 40°C
	Humidity Range	35 to 90% (non-condensing)
Weight		30 kg
Basic configuration	Controller	eMB-40M
	On-board I/O (Input/Output)	12/8
	Conveyor tracking input	2
	RS-232C serial communications port	1
	Programming environment	ACE, PackXpert, ePLC
	ACE Sight	Yes
	ePLC Connect	Yes
	ePLC I/O	Yes
Connectable controller (See *2)		eMotionBlox-40M, SmartController EX, NJ/NX/NY Series

*1. Adept cycle, in mm 25/305/25 (seconds, at 20°C ambient)
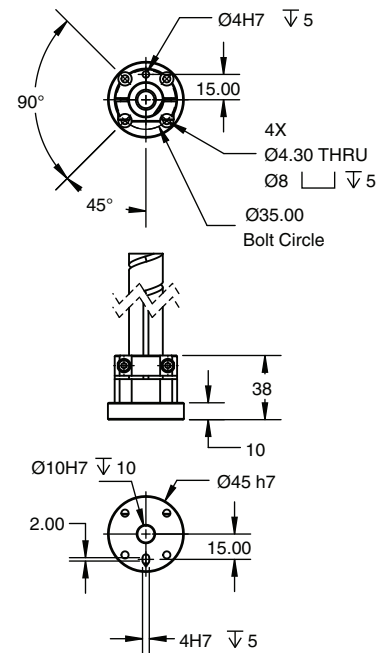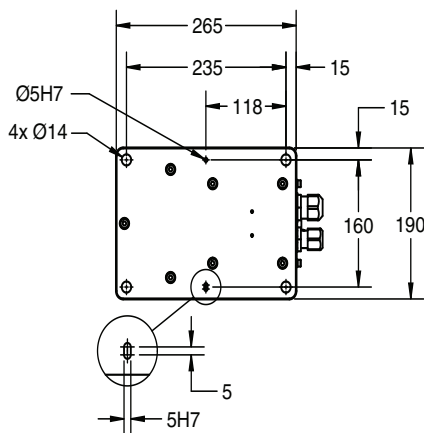*2. Choose a controller to suit your application.

OMRON

Dimensions

Cobra 450

R250
R143.5
691.5
±360°
200
5
R450

eMotionBlox-40M

426
229
130

Flange

Ø4H7 ⍖ 5
15.00
90°
4X
Ø4.30 THRU
Ø8 ⍖ 5
45°
Ø35.00
Bolt Circle

38
10

Ø10H7 ⍖ 10
Ø45 h7
2.00
15.00
4H7 ⍖ 5

Footprint

265
235
15
118
Ø5H7
15
4x Ø14
160
190
5
5H7

Front panel (option)

130
E-STOP
56
89
152
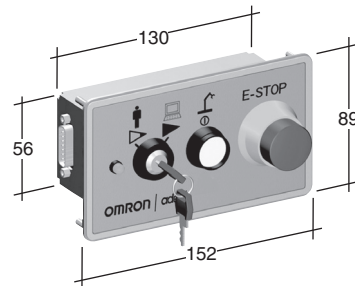
Robot Parts Code and Bundled Accessories

Type	Cobra 450	Cobra 450 Add-On
Cobra 450	17201-14500	17203-14500
Overview	Robot + Integral Power and Signal Cables + eMotionBlox-40M amplifier with fully-integrated controls	Robot + Integral Power and Signal Cables + eMotionBlox-40M amplifier + required connection cables
Purpose	Typical for use in single-robot system	Typically added to systems with an existing SmartController EX to create multi-robot systems
Bundled Cable/Accessories	• XSYSTEM cable with jumpers, 1.8 m/6 ft (13323-000)	• XSYSTEM cable with jumpers, 1.8 m/6 ft (13323-000) • XSYS cable, 5 m/15 ft (11585-000) • DB9 splitter (00411-000) • 1394 latch cable, 5 m/15 ft (13632-045) • eV+ license to connect to controller (14529-103)