

# Articulated Robots

# Viper 650

## Articulated robot for machining, assembly, and material handling

- Ethernet capability to control the robot through the familiar programming language (IEC 61131-3) of Machine Automation Controller NJ/NX/NY Series
- Diagnostics display enables faster trouble shooting
- High-resolution, absolute encoders to provide high accuracy, superior slow-speed following, and easy calibration
- High-efficiency, low-inertia Harmonic Drives and a lightweight arm to deliver maximum acceleration
- Reach 653 mm
- Maximum payload 5 kg
- Weight 34 kg



## Specifications

Product name		Viper		
		650		
		Size	Standard	Cleanroom
Part Number		1720[ ]-36000	1720[ ]-36020	1720[ ]-36010
Mounting		Table/Floor/Inverted		
Number of axes		6		
Reach		653 mm		
Maximum Payload		5 kg		
Repeatability		±0.02 mm		
Joint Range	Joint 1	±170°		
	Joint 2	-190°, +45°		
	Joint 3	-29°, +256°		
	Joint 4	±190°		
	Joint 5	±120°		
	Joint 6	±360°		
Inertia Moment (Max.)	Joint 4	0.295 kgm <sup>2</sup>		
	Joint 5	0.295 kgm <sup>2</sup>		
	Joint 6	0.045 kgm <sup>2</sup>		
Joint Speeds	Joint 1	328°/s		
	Joint 2	300°/s		
	Joint 3	375°/s		
	Joint 4	375°/s		
	Joint 5	375°/s		
	Joint 6	600°/s		

Product name		Viper		
		650		
		Size	Standard	Cleanroom
Power Requirements		24 VDC: 6 A 200 to 240 VAC: 10 A, single-phase		
Protection	Base	IP40	IP40	IP54
	Robot Joints (J4, J5, J6)	IP40	IP40	IP65
Clean Class		---	Class10	---
Environment Requirements	Ambient Temperature	5 to 40°C		
	Humidity Range	5 to 90% (non-condensing)		
Weight		34 kg		
cULus Compliant		(Yes) *1		
Basic configuration	Controller	eMotionBlox-60R		
	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		
Connectable controller *2		eMotionBlox-60R, SmartController EX, NJ/NX/NY Series *3		

\*1. cULus option

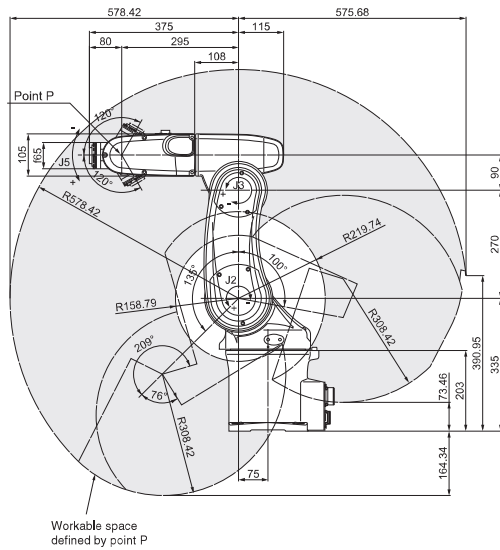
\*2. Choose a controller to suit your application.

\*3. The robot version 2.3.C or later is required to connect with the NJ/NX/NY Series.

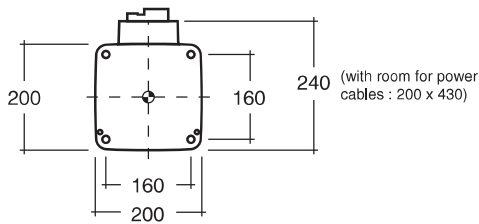
# Dimensions

(Unit: mm)

## Viper 650



## Footprint

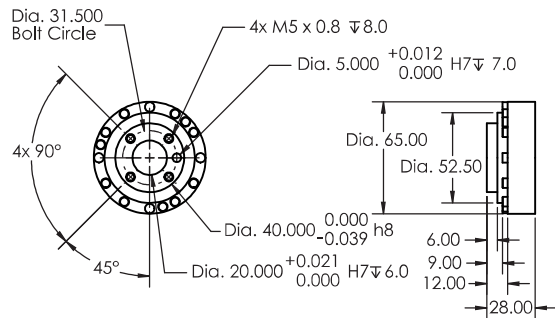


## eMotionBlox-60R

Weight : 9.3 kg



## Flange



## Front panel



# Robot Parts Code and Bundled Accessories

Type	Viper			Viper Add-On			
	Cleanroom/IP	Standard	Cleanroom	IP54/65	Standard	Cleanroom	IP54/65
<b>Viper 650</b>		17201-36000	17201-36020	17201-36010	17203-36000	17203-36020	17203-36010
<b>Overview</b>	Robot + eMotionBlox-60R amplifier with fully integrated controls				Robot + eMotionBlox-60R + required connection cables		
<b>Purpose</b>	Typical for use in single robot system				Typically added to systems with an existing SmartController EX to create multi-robot systems		
<b>Bundled Accessories</b>	<ul style="list-style-type: none"> <li>XSYSTEM cable with jumpers, 1.8 m/6 ft (13323-000)</li> <li>Front panel kit (90356-10358)</li> <li>Arm power/signal cable, 4 m/13 ft (05020-000)</li> </ul>				<ul style="list-style-type: none"> <li>XSYSTEM cable with jumpers, 1.8 m/6 ft (13323-000)</li> <li>XSYS cable, 4.5 m/15 ft (11585-000)</li> <li>DB9 splitter (00411-000)</li> <li>1394 latch cable, 4.5 m/15 ft (13632-045)</li> <li>eV+ license to connect to controller (14529-103)</li> </ul>		