

# Articulated Robots

# Viper 850

EtherCAT (NJ501-R) version

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



- EtherCAT connectivity to the Omron NJ501-R controller and programming through the familiar IEC 61131-3 programming language or scripting (ev+).
- 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.
- Max Reach: 855mm
- Max Payload: 5kg
- Weight: 36kg

## Specifications

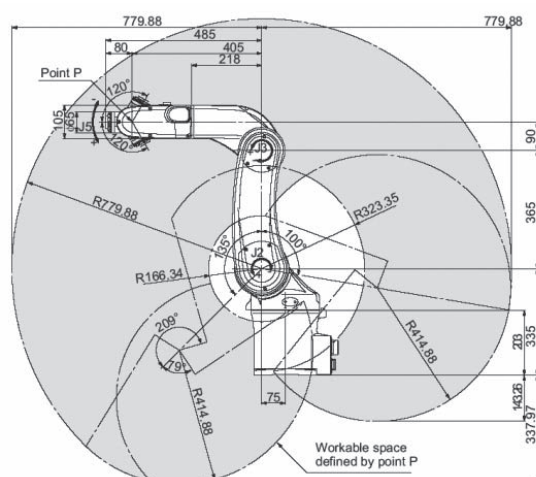
Product name		Viper		
		850		
		Standard	Cleanroom	IP54/65
Part Number	Size	RL6-2068000	RL6-2068020	RL6-2068010
Mounting	Cleanroom/IP	Table/Floor/Inverted		
Number of axes		6		
Reach		855 mm		
Maximum Payload		5 kg		
Repeatability	XYZ	±0.03 mm		
Joint Range	Joint 1	±170°		
	Joint 2	-190°, +45°		
	Joint 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	250°/s		
	Joint 2	250°/s		
	Joint 3	250°/s		
	Joint 4	375°/s		
	Joint 5	375°/s		
	Joint 6	600°/s		

Product name		Viper		
		850		
		Standard	Cleanroom	IP54/65
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		36 kg		
Basic configuration	Controller	eCS-ECAT		
	On-board I/O (Input/Output)	12/8		
	Conveyor tracking input	2		
	RS-232C serial communications port	1		
	Programming environment	Sysmac Studio 64-bit		
	ACE Sight	Yes		
	ePLC Connect	No		
	ePLC I/O	No		
Connectable controller		Omron NJ501-R Series		

## Dimensions

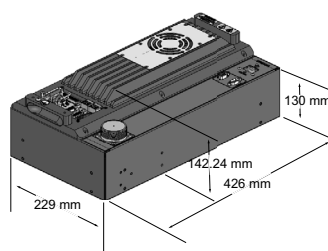
**(Unit: mm)**

## Viper 850

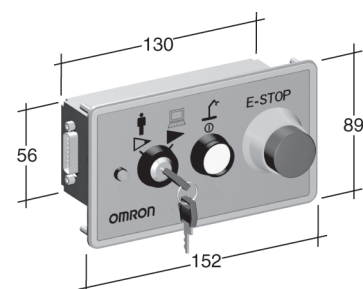


**eCS-ECAT**

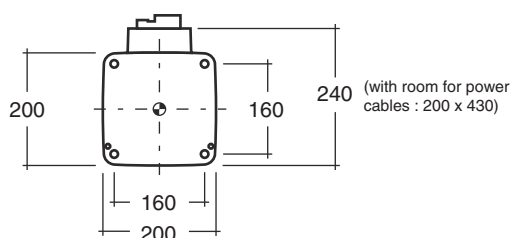
Weight: 8.57 kg



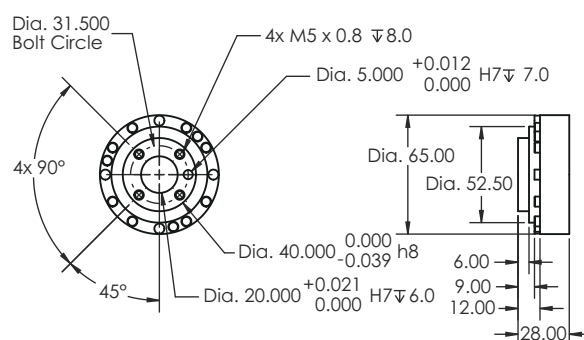
### Front panel



## Footprint



## Flange



## Robot Parts Code and Bundled Accessories

Type	Viper		
Cleanroom/IP	Standard	Cleanroom	IP54/65
Viper 850	RL6-2068000	RL6-2068020	RL6-2068010
Overview	Robot + eCS-ECAT Robot Controller		
Purpose	To be used in conjunction with NJ501-R Series controller, which can connect up to 8 robots via EtherCAT		
Bundled Accessories	<ul style="list-style-type: none"> <li>• XSYSTEM cable with jumpers and Ethernet Management port, 1, 8m/6ft (13323-100)</li> <li>• Front panel kit (90356-10358)</li> <li>• Arm power/signal cable, 4 m/13 ft               <ul style="list-style-type: none"> <li>-Standard Model: 05020-000</li> <li>-Cleanroom &amp; IP54/65 Models: 05463-000</li> </ul> </li> </ul>		