

## 2. STANDARD SPECIFICATIONS

### 2.1 Robot arm

The standard specifications of the robot arm are shown in Table 2.1.  
Table 2.1. Robot arm standard specifications

Specification item		Unit	Standard specifications						
Type			RV-E2	RV-E2M	RV-E2-SR	RV-E2-SW	RV-E3J	RV-E3JM	RV-E3J-SR
Installing posture			Floor mounted	Floor mounted	Ceiling mounted	Wall mounted	Floor mounted	Floor mounted	Ceiling mounted
Construction			Vertical articulated type						
Degree of freedom			6				5		
Drive method			AC servomotor						
Drive motor capacity			W, S, E joint: 80W (With brakes) T, P, R joint: 40W (Without brakes)						
Position detection method			Absolute encoder						
Arm length	Shoulder shift	mm	100		100		100		100
	Upper arm		250		250		250		250
	Fore arm		250		250		280		280
	Elbow shift		130		130		20		20
	Wrist length		85		85		85		85
Operation range (Max. speed)	Waist W	Degree (Degree /s)	±160(150)		±160(150)		±30(150)		±160(150)
	Shoulder S		180(150)		180(150)		180(150)		180(150)
	Elbow E		120(180)		120(180)		120(180)		135(180)
	Wrist twist T		±160(180)		±160(180)		±160(180)		—
	Wrist pitch P		±120(180)		±120(180)		±120(180)		±120(180)
	Wrist roll R		±200(250)		±200(250)		±200(250)		±200(250)
Max.imum composite speed	mm/S	3500				3500			
Rated load	N{kgf}	19.6{2}				29.4{3}			
Position repeatability	mm	±0.04				±0.04			
Ambient temperature	°C	0~40				0~40			
Weight	N{kgf}	353{36}	363{37}	353{36}		324{33}		334{34}	324{33}
Rated moment	Wrist twist T.	N·m {kgf·m}	3.6{0.37}		3.6{0.37}		—		—
	Wrist pitch P		3.6{0.37}		3.6{0.37}		5.4{0.55}		5.4{0.55}
	Wrist roll R		2.6{0.27}		2.6{0.27}		3.9{0.40}		3.9{0.40}
Tolerable inertia	Wrist twist T.	kg·m <sup>2</sup> {kgf·mm·S <sup>2</sup> }	1.1×10 <sup>-2</sup> {11.0}		1.1×10 <sup>-2</sup> {11.0}		—		—
	Wrist pitch P		1.1×10 <sup>-2</sup> {11.0}		1.1×10 <sup>-2</sup> {11.0}		1.1×10 <sup>-2</sup> {11.0}		1.1×10 <sup>-2</sup> {11.0}
	Wrist roll R		4.1×10 <sup>-3</sup> {4.1}		4.1×10 <sup>-3</sup> {4.1}		4.1×10 <sup>-3</sup> {4.1}		4.1×10 <sup>-3</sup> {4.1}
Reachable radius (Front P axis center point)	mm	621				630			
Tool wiring		6 lines hand check (including two for power supply used for four input points.) 4 spare lines (stored from base to end of forearm: size 0.3SQ)							
Tool air piping		Primary side: φ6×2 Secondary side: φ4×4	Primary side: φ6×2 Secondary side: φ4×6	Primary side : φ6×2 Secondary side: φ4×4		Primary side: φ6×2 Secondary side: φ4×4	Primary side: φ6×2 Secondary side: φ4×6	Primary side: φ6×2 Secondary side: φ4×4	
air supply pressure	kgf/cm <sup>2</sup>	5±10%							
Protection specification		IP30	IP54	IP30		IP30	IP54	IP30	

- Refer to section 2.5 for details on the protection specifications.
- Refer to chapter 3 for details on the changes in the motion range.