

			RV-2FR-D / RV-2FR-R	RV-2FRB-D-S25 / RV-2FRB-R-S25	RV-2FRL-D-S25 / RV-2FRL-R-S25	RV-2FRLB-D-S25 / RV-2FRLB-R-S25
Degrees of freedom (no. of axes)			6			
Installation posture			Floor, ceiling or wall mounting possible			
Structure			Vertical multiple-joint type			
Drive system			AC servo axes J1, J4, J6: no brake	AC servo (brakes on all axes)	AC servo axes J1, J4, J6: no brake	AC servo (brakes on all axes)
Position detection method			Absolute encoder			
Payload capacity	rated	kg	2			
	maximum		3			
Arm reachable radius (to the center point of the J5 axis)		mm	504	649		
Operating range	waist (J1)	degree	480 (-240–240)		480 (-240–240)	
	shoulder (J2)		240 (-120–120)		237 (-117–120)	
	elbow (J3)		160 (0–160)		160 (0–160)	
	wrist twist (J4)		400 (-200–200)		400 (-200–200)	
	wrist pitch (J5)		240 (-120–120)		240 (-120–120)	
	wrist roll (J6)		720 (-360–360)		720 (-360–360)	
Maximum speed	waist (J1)	degree/s	300		225	
	shoulder (J2)		150		105	
	elbow (J3)		300		165	
	wrist twist (J4)		450		412	
	wrist pitch (J5)		450		450	
	wrist roll (J6)		720		720	
Maximum composite speed		mm/s	4955		4200	
Cycle time (25x300x25 mm with 1 kg load)		sec	0.6		0.7	
Position repeatability		mm	±0.02			
Ambient temperature		°C	0–40			
Weight		kg	19		21	
Tolerable moment	wrist twist (J4)	Nm	4.17			
	wrist pitch (J5)		4.17			
	wrist roll (J6)		2.45			
Tolerable inertia	wrist twist (J4)	kgm ²	0.18 (0.27)			
	wrist pitch (J5)		0.18 (0.27)			
	wrist roll (J6)		0.04 (0.1)			
Tool wiring			Hand input 4 points/hand output 4 points			
Tool pneumatic pipes			Ø 4x4 (from the base level to the gripper hand area)			
Supply pneumatic pressure		MPa	0.5 ±10 %			
Gripper flange			ISO 9409-1-31.5			
Protection rating			IP30			
Robot controller			CR800-D/CR800-R + R16RTCPU			
Order information			Art. no.	313052 / 314029	313053 / 314030	313054 / 314031
						313085 / 314032

			RV-4FRLM-D	RV-4FRLM-R
Degrees of freedom (no. of axes)			6	
Installation posture			Floor, ceiling or wall mounting possible (wall mounting with limitations in the J1 axis)	
Structure			Vertical multiple-joint type	
Drive system			AC servo (brakes on all axes)	
Position detection method			Absolute encoder	
Payload capacity	maximum	kg	4	
Arm reachable radius (to the center point of the J5 axis)		mm	649	
Operating range	waist (J1)	degree	480 (±240)	
	shoulder (J2)		240 (-120–120)	
	elbow (J3)		164 (0–164)	
	wrist twist (J4)		400 (±200)	
	wrist pitch (J5)		240 (-120–120)	
	wrist roll (J6)		720 (±360)	
Maximum speed	waist (J1)	degree/s	420	
	shoulder (J2)		336	
	elbow (J3)		250	
	wrist twist (J4)		540	
	wrist pitch (J5)		623	
	wrist roll (J6)		720	
Maximum composite speed		mm/s	9048	
Cycle time (25x300x25 mm with 1 kg load)		sec	0.36	
Position repeatability		mm	±0.02	
Ambient temperature		°C	0–40	
Weight		kg	41	
Tolerable moment	wrist twist (J4)	Nm	6.66	
	wrist pitch (J5)		6.66	
	wrist roll (J6)		3.96	
Tolerable inertia	wrist twist (J4)	kgm ²	0.20	
	wrist pitch (J5)		0.20	
	wrist roll (J6)		0.10	
Tool wiring			Hand input 8 points/hand output 8 points	
Tool pneumatic pipes			Ø 6x2 for robot connection (Ø4x8 from base portion to forearm)	
Supply pneumatic pressure		MPa	0.54 (as overpressure if required)	
Gripper flange			ISO 9409-1-31.5	
Protection rating			IP67 (Optional clean room model available)	
Robot controller			CR800-D	CR800-R + R16RTCPU
Order information			Art. no.	
			313089	314056

Maximum speed	elbow (J2)	degree/s	700	800	210	
	wrist twist (J4)		337			375
	wrist pitch (J5)		450			
	wrist roll (J6)		720			
Maximum composite speed		mm/s	11,064	10,977	15,300	
Cycle time (25x300x25 mm with 1 kg load)		sec	0.32	0.35	0.63	
Position repeatability		mm	±0.02			
Ambient temperature		°C	0–40			
Weight		kg	65	67	130	
Tolerable moment	wrist twist (J4)	Nm	16.2			
	wrist pitch (J5)		16.2			
	wrist roll (J6)		6.86			
Tolerable inertia	wrist twist (J4)	kgm ²	0.45			
	wrist pitch (J5)		0.45			
	wrist roll (J6)		0.10			
Tool wiring		Hand input 8 points/hand output 8 points				
Tool pneumatic pipes		Ø 6x2 for robot connection (Ø4x8 from base portion to forearm)				
Supply pneumatic pressure		MPa	0.54 (as overpressure if required)			
Gripper flange		ISO 9409-1-31.5				
Protection rating		IP67 (Optional clean room model available)				
Robot controller		CR800-D/CR800-R + R16RTCPU				
Order information		Art. no.	313091 / 314058	313093 / 314060	313095 / 314062	

Characteristics/Functions			RV-13FRM-D / RV-13FRM-R	RV-13FRLM-D / RV-13FRLM-R	RV-20FRM-D / RV-20FRM-R
Degrees of freedom (no. of axes)			6		
Installation posture			Floor, ceiling or wall mounting possible (wall mounting with limitations in the J1 axis)		
Structure			Vertical multiple-joint type		
Drive system			AC servo (all axes with brakes)		
Position detection method			Absolute encoder		
Payload capacity	rated	kg	12		15
	maximum		13		20
Arm reachable radius (to the center point of the J5 axis)		mm	1094	1388	1094
Operating range	waist (J1)	degree	380(±190)		
	shoulder (J2)		240 (-90–150)		
	elbow (J3)		167.5 (-10–157.5)		
	wrist twist (J4)		400 (±200)		
	wrist pitch (J5)		240 (-120–120)		
	wrist roll (J6)		720 (±360)		
Maximum speed	waist (J1)	degree/s	290	234	110
	shoulder (J2)		234	184	110
	elbow (J3)		312	219	110
	wrist twist (J4)		375		124
	wrist pitch (J5)		375		125
	wrist roll (J6)		720		360
Maximum composite speed		mm/s	10450	9700	4200
Cycle time (25x300x25 mm with 1 kg load)		sec	0.53	0.68	0.70
Position repeatability		mm	±0.05		
Ambient temperature		°C	0–40		
Weight		kg	120	130	120
Tolerable moment	wrist twist (J4)	Nm	19.3		49.0
	wrist pitch (J5)		19.3		49.0
	wrist roll (J6)		11		
Tolerable inertia	wrist twist (J4)	kgm ²	0.47		1.40
	wrist pitch (J5)		0.47		1.40
	wrist roll (J6)		0.14		
Tool wiring			Hand input 8 points / hand output 8 points		
Tool pneumatic pipes			Primary: Ø 6x2, secondary: Ø 6x8		
Supply pneumatic pressure		MPa	0.54 (as overpressure if required)		
Gripper flange			ISO 9409-1-40		
Protection rating			IP67 (Optional clean room model available)		
Robot controller			CR800-D/CR800-R + R16RTCPU		
Order information		Art. no.	313097 / 314064	313099 / 314066	312863 / 314068