

Characteristics/Functions			RV-2F-D1-S16/ RV-2F-Q1-S16	RV-2FB-D1-S15/ RV-2FB-Q1-S15	RV-2FL-D1-S16/ RV-2FL-Q1-S16	RV-2FLB-D1-S15/ RV-2FLB-Q1-S15
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		4206	
Cycle time (25x300x25 mm with 1 kg load)		sec	0.6		0.7	
Position repeatability		mm	±0.02			
Ambient temperature		°C	0 to 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			CR750-D/CR750-Q + Q172DRCPU			
Order information	Art. no.	255212/ 255214	255211/ 255213	286641/ 286642	286651/ 286656	

Characteristics/Functions			RV-4FLM-D1-S15	RV-4FLM-Q1-S15
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	648
Operating range	waist (J1)	degree	480 (±240)	
	shoulder (J2)		240 (-120→+120)	
	elbow (J3)		164 (-0 to +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			CR750-D	CR750-Q + Q172DRCPU
Order information			Art. no.	255268
				255272

Characteristics/Functions			RV-7FM-D1-S15/ RV-7FM-Q1-S15	RV-7FLM-D1-S15/ RV-7FLM-Q1-S15	RV-7FLLM-D1-S15 RV-7FLLM-Q1-S15
Degrees of freedom (no. of axes)			6		6 (super long arm)
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	7	
Arm reachable radius (to the center point of the J5 axis)			mm	713	908 1503
Operating range	waist (J1)	degree	480 (±240)		380 (±190)
	shoulder (J2)		240 (-115→+125)	240 (-110→+130)	240 (-90→+150)
	elbow (J3)		156 (-0→+156)	162 (-0→+162)	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	360	288	234
	shoulder (J2)		401	321	164
	elbow (J3)		450	360	219
	wrist twist (J4)		337		
	wrist pitch (J5)		450		
	wrist roll (J6)		720		
Maximum composite speed			mm/s	11064	10977 15300
Cycle time (25x300x25 mm with 1 kg load)			sec	0.32	0.35 0.63
Position repeatability			mm	±0.02 ±0.06	
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)	kgm²	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			CR750-D/CR750-Q + Q172DRCPU	CR750-D/CR750-Q + Q172DRCPU	CR750-D/CR750-Q + Q172DRCPU
Order information			Art. no.	255275/ 255279	255276/ 255280 288460/ 288462

Characteristics/Functions		RV-13FM-D1-S15 RV-13FM-Q1-S15	RV-13FLM-D1-S15 RV-13FLM-Q1-S15	RV-20FM-D1-S15 RV-20FM-Q1-S15
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	12		15
	maximum	13		20
Arm reachable radius (to the center point of the J5 axis)		mm	1094	1388
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
	shoulder (J2)		234	164
	elbow (J3)		312	219
	wrist twist (J4)		375	124
	wrist pitch (J5)		375	125
	wrist roll (J6)		720	360
Maximum composite speed		mm/s	10450	9700
Cycle time (25x300x25 mm with 1 kg load)		sec	0.53	0.68
Position repeatability		mm	±0.05	
Ambient temperature		°C	0-40	
Weight		kg	120	130
Tolerable moment	wrist twist (J4)	Nm	19.3	
	wrist pitch (J5)		19.3	
	wrist roll (J6)		11	
Tolerable inertia	wrist twist (J4)	kgm ²	0.47	
	wrist pitch (J5)		0.47	
	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		CR750-D/CR750-Q + Q172DRCPU		
Order information		Art. no.	268488/ 268492	268490/ 268494
				268504/ 268506

Characteristics/Functions		RV-35FM-D1-S15 / RV-35FM-Q1-S15	RV-50FM-D1-S15 / RV-50FM-Q1-S15	RV-70FM-D1-S15 / RV-70FM-Q1-S15	
Degrees of freedom (no. of axes)		6			
Installation posture		Floor			
Structure		Vertical multiple-joint type			
Drive system		AC servo (all axes with brakes)			
Position detection method		Absolute encoder			
Payload capacity	kg	35	50	70	
Arm reachable radius (to the center point of the J5 axis)		mm			
Operating range	waist (J1)	330(±165)			
	shoulder (J2)	215 (-80–135)			
	elbow (J3)	261 (-90–171)			
	wrist twist (J4)	720 (±360)			
	wrist pitch (J5)	250 (±125)			
	wrist roll (J6)	900 (±450)			
Maximum speed	waist (J1)	185	180	175	
	shoulder (J2)	180	180	145	
	elbow (J3)	190	180	165	
	wrist twist (J4)	305	255	235	
	wrist pitch (J5)	305	255	235	
	wrist roll (J6)	420	370	350	
Maximum composite speed		mm/s	13,450	13,000	11,500
Position repeatability		mm	±0.07		
Ambient temperature		°C	0–40		
Weight		kg	640		
Tolerable moment	wrist twist (J4)	Nm	160	210	300
	wrist pitch (J5)		160	210	300
	wrist roll (J6)		90	130	150
Tolerable inertia	wrist twist (J4)	kgm ²	16	30	30
	wrist pitch (J5)		16	30	30
	wrist roll (J6)		5	12	12
Tool wiring		16 input points/16 output points			
Tool pneumatic pipes		∅ 10x2			
Supply pneumatic pressure		MPa	Max. 0.49		
Protection rating		IP67			
Robot controller		CR760-D/CR760-Q + Q172DRCPU			
Order information		Art. no.	On request	On request	On request