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MATERIAL FACT SHEET

313097 RV-13FRM-D

General Data

Product Hierarchy	IAG25401
	ROBOT
	RV-13FR-D
Ext. Material Group	10 STANDARD ITEM
ABC Indicator	A (Available from Stock)

e-shop: https://mitsubishi-electric-eshop.mee.com/mee/FA_IA/EUR/en/p/000000000000313097

FA-Robot: Robotsystem

Series	RV-FR SERIES
Type	VERTICAL
Payload (kg)	13
Max. Reach Radius (mm)	1094
Environment specification	OIL MIST
Controller Type	CR800-D
Cycle Time (s)	0,53
Speed (mm/s)	10450
Repeatability (mm)	0,05
Installation Method	FLOOR, CEILING, WALL
Protection Class	IP67
Power Supply 1 Phase (VAC)	230
Power Supply 3 Phase (VAC)	200-230
Power Consumption (VA)	3000
Operating Range J1 (deg)	380
Operating Range J2 (deg)	240
Operating Range J3 (deg)	167,5
Operating Range J4 (deg)	400
Operating Range J5 (deg)	240
Operating Range J6 (deg)	720

Product Dimensions & Weight

Width (mm)	347
Height (mm)	997
Depth (mm)	1088
Weight (kg)	120

Logistic Dimensions & Gross Weight

Length (cm)	162,0
Width (cm)	82,0
Height (cm)	126,0
Gross Weight (kg)	225,000
Volume (cdm)	1.673,784

Stock Data

Planned Delivery Time (Days)	134

Life Cycle

Sales Start	01.07.2017
Predecessor	268488 / RV-13FM-D1-S15

Additional Product Information

Binding Tariff Information	DEBTI-10891/21-1
BTI validity date	27.06.2024
Battery included	YES - CHECK SPARE PART LIST

Export Data

Legal Control (Dual Use List)	Not Listed
Country of Origin	Japan (JP)
Preference Status (Supplier Declaration)	Non EU

Environmental

REACH Limit Exceeded	YES
REACH Substance CAS Number	12060-00-3
REACH Substance CAS Number (2)	1303-86-2
REACH Substance CAS Number (3)	7439-92-1
REACH Substance CAS Number (4)	80-05-7
Dangerous Goods Class	9
Dangerous Goods Identifier	UN3091
RoHS Compliance	NOT IN SCOPE
WEEE	B2B

Conformity

CE	COMPLIANT
UKCA	COMPLIANT

Documentation & Media Data

Manual URL Indicator	https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&doc-cats=bltdae25c2bd5f2ff94&q=RV-13FRM-D&doc-lang=en
Certificates URL Indicator	https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&doc-cats=blt8050dd1408c11cc2&q=RV-13FRM-D&doc-lang=en
CAD URL Indicator	https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&doc-cats=blt26ecc97a31a841c1&q=RV-13FRM-D&doc-lang=en

Product Packaging

Cardboard (g)	26926
Other paper (g)	120
Aluminum (g)	0
Steel (g)	70
Styrofoam (g)	0
Other plastic (g)	1302
Wood (g)	36900
Glass (g)	0
Others (g)	500

Spare parts

Material	Description	Quantity	Unit
589480	RV-7FRLL/13FR/FRL/20FR MOTOR J3	1	PC
502664	RV-4F/7F MOTOR HG-KR43BK-S920052(400W)	1	PC
598367	RV-4F/7F MOTOR HG-KR13D-S920061	1	PC
278290	RV-13FR DECELERATOR J1	1	PC
278291	RV-13FRL/7FRLL DECELERATOR J1 (13FR J2)	1	PC
278293	RV-13FR DECELERATOR J3	1	PC
278295	RV-7FR/13FR/13FRL HARMONIC DRIVE J4	1	PC
278297	RV-13FR/13FRL HARMONIC DRIVE J5	1	PC
278299	RV-13FR(L)/20FR HARMONIC DRIVE J6	1	PC
278302	RV-13FR(L)/20FR CROSS ROLLER BEARING J5	1	PC
278303	RV-13FR(L)/20FR CROSS ROLLER BEARING J6	1	PC
278305	RV-13FR(L)/20FR GEAR R	1	PC
278306	RV-13FR(L)/20FR GEAR L	1	PC
278307	RV-7FRLL/13FR(L)/20FR BUSH 02	1	PC
278308	RV-7FRLL/13FR(L)/20FR BUSH 03	1	PC
265210	RH-3CH/6CH/6CRH BALL BEARING 6805DDU	1	PC
278309	RV-7FRLL/13FR(L)/20FR BALL BEARING 6808	1	PC
164946	RH-13/20/7FL(L) BALL BEARING 6809DD	1	PC
278311	RV-13FR(L)/20FR BALL BEARING EA7L	1	PC
278312	RV-13FR(L)/20FR BALL BEARING F698DD	1	PC
265209	RV-5AS-D BALL BEARING F608ZZ	1	PC
237507	RH-13F/20F/7FLL BALL BEARING 6905DDU	1	PC
164945	RV-3SB/3SJB BALL BEARING 687MC3	1	PC
265209	RV-5AS-D BALL BEARING F608ZZ	1	PC
278315	RV-7FRLL/13FR(L)/20FR TIMING PULLEY J4A	2	PC
278316	RV-7FRLL/13FR(L)/20FR TIMING PULLEY J4B	1	PC
265219	RV-4/7FR(L)/M TIMING PULLEY J4AJ5A	1	PC
278318	RV-13FR(L)/20FR TIMING PULLEY J5	1	PC
265222	RV-7/13/20 FRL(L)/M TIMING PULLEY J5B	1	PC

Material	Description	Quantity	Unit
415613	RV-13/20FR/7FRLL TIMING BELT J4	1	PC
415614	RV-13/20FR TIMING BELT J5	1	PC
415615	RV-13/20FR TIMING BELT J6	1	PC
278325	RV-7FRLL/13FR(L)/20FR OILSEAL 230 M-TYPE	1	PC
278326	RV-7FRLL/13FR(L)/20FR OILSEAL 8(FKM)	4	PC
278327	RV-7FRLL/13FR(L)/20FR OILSEAL 15(FKM)	2	PC
265239	RV-7/13/20FRL(L)/M OILSEAL TC175X190	2	PC
278328	RV-7FRLL/13FR(L)/20FR OILSEAL AD25	1	PC
278329	RV-7FRLL/13FR(L)/20FR OILSEAL AD36	1	PC
265241	RV-4/7/13/20FRL/M OILSEAL M-110	1	PC
265242	RV-4/13/20FRL/M OILSEAL M-84	1	PC
278330	RV-13FR(L)/20FR OILSEAL AD12	1	PC
265234	RV-4/7/13/20FRL(L) OILSEAL AD 10 20 5	1	PC
278331	RV-13FR(L)/20FR OILSEAL AD30 M-TYPE	1	PC
265245	RV-4/7FR(L)/M O RING CO0522A	1	PC
278333	RV-7FRLL/13FR(L)/20FR O RING 55 M&C TYPE	1	PC
278334	RV-13FR(L)/20FR O-RING CO02A	1	PC
278405	RV-7FRLL/13FR(L)/20FR FELT J4A	1	PC
278406	RV-7FRLL/13FR(L)/20FR FELT J4B	1	PC
415320	RV-FR INTERNAL PCB DQ392	1	PC
415321	RV-FR INTERNAL PCB DQ006	1	PC
415452	RV-FR BATTERY HOLDER	4	PC
278335	RV-7FRLL/13FR(L)/20FR CARD SPACER	2	PC
262558	RH-12/20FRH CONNECTOR IL-2S-S3L(N)	1	PC
237583	RH-12/20FRH GREASE NIPPLE WA610 NYLON	4	PC
278336	RV-7FRLL/13FR(L)/20FR GREASE NIPPLE 1	3	PC
249985	RH-13F/20F/7FLL TAPER SCREW SUS ANA R1/8	7	PC
262557	RH-13F/20F/7FLL PIN H7-6x12	7	PC
164975	RH-12/20FRH PARALLEL PIN H74x8	3	PC
164974	RV-13/20FR/7FRLL KEY	2	PC
237579	RH-6CRHK KEY IPPAN W-MARU 3X3X6	1	PC
278337	RV-7FRLL/13FR(L)/20FR KEY 4X4	1	PC
237540	RV-5AS-D SEAL WASHER(M6)	5	PC
265268	RV-4/7/13/20FRL/M SEAL WASHER 4X7.2	9	PC
249980	RH-13F/20F/7FLL AIR JOINT UKB6	2	PC
265259	RV-4/7/13/20FRL/M UNION AIR JOINT UKB8	1	PC
278338	RV-7FRLL/13FR(L)/20FR PLUG UP6	4	PC
243688	RH-12/20FRH PLUG UP8	1	PC
265260	RV-4/7/13/20FRL(L)/M CABLE CLAMP -WS10M	2	PC
237585	RV-8CRL LOW HEAD CAP SCREW SSH-EL-M6	5	PC
249976	RH-13F/20F/7FLL SNAP RING ANA-C37	1	PC
164987	RH-13F/20F/7FLL RUBBER SHEET 300x30	2	PC
278340	RV-7FRLL/13FR(L)/20FR RUBBER SHEET 6	5	PC
278341	RV-7FRLL/13FR(L)/20FR RUBBER SHEET 7	1	PC
278342	RV-13FR(L)/20FR RUBBER SHEET 8	1	PC
278343	RV-7FRLL/13FR(L)/20FR RUBBER SHEET 9	1	PC
237596	RH-13F/20F/7FLL RUBBER SHEET	1	PC
164971	RH-13/20/7FL(L) SILICONE TUBE	1	PC
317013	RH-3/6CH/CRH CABLE CLAMP AL6	1	PC
164984	RH-13F/20F/7FLL CABLE CLAMP AL4	2	PC
278344	RV-13FR(L)/20FR SHIM J6 T0.1	2	PC
278345	RV-13FR(L)/20FR SHIM J6 T0.3	1	PC
278346	RV-13FR(L)/20FR SHIM J6 T0.5	1	PC
415616	RV-13/20FR INTERNAL HARNESS	1	PC
410994	RH-12/20FH POWER CABLE 1F-05UCBL-41	1	PC
415319	RV-2FR/L/B INTERNAL HARNESS 1	1	PC
278350	RV-7FRLL/13FR(L)/20FR CONBOX WIRING ASSY	1	PC
278351	RV-13FR(L)/20FR BRAKE CABLE ASSY J6	1	PC
278355	RV-13FR(L)/20FR HEAT CONDUCTION SEAT J6	1	PC
278356	RV-13FR(L)/20FR HEAT CONDUCTION J6B	2	PC
278358	RV-7FRLL/13FR(L)/20FR STOPPER B	2	PC
265241	RV-4/7/13/20FRL/M OILSEAL M-110	1	PC
278414	RV-7FRLL/13FR(L)/20FR FELT J4D	1	PC
278415	RV-7FRLL/13FR(L)/20FR FELT J4E	2	PC
278359	RV-8CRL STOPPER A	4	PC
278362	RV-7FRLL/13FR(L)/20FR COVER SHOULDER STD	1	PC
278364	RV-7FRLL/13FR(L)/20FR CVR SHOULDER R STD	1	PC
278366	RV-7FRLL/13FR(L)/20FR COVER ARM NO1 STD	1	PC
278368	RV-7FRLL/13FR(L)/20FR COVER ELBOW U STD	1	PC
278370	RV-13FR(L)/20FR COVER ARM NO2	2	PC

Material	Description	Quantity	Unit
265282	RV-4/7/13/20FRL(L)/M COVER CONBOX	1	PC
265309	RV-4/7FRL/M COVER CONBOX R2	1	PC
278377	RV-13FR(L)/20FR COVER CONBOX R C&M-TYPE	1	PC
278383	RV-13FR(L)/20FR COVER CONBOX R C&M-TYPE	1	PC
278384	RV-13FR(L)/20FR COVER WRIST	1	PC
278391	RV-13FR(L)/20FR PACKING C&M-TYPE	1	PC
278392	RV-13FR(L)/20FR FIXED BRACKET	1	PC
278394	RV-7FRLL/13FR(L)/20FR TRANSPORT TOOL L	1	PC
278395	RV-7FRLL/13FR(L)/20FR TRANSPORT TOOL R	1	PC
237636	RV-5AS-D DIRECTION MARK	1	PC
237602	RH-3CH/6CH/6CRH ALIGNMENT MARK (MINI)	12	PC
237606	RH-12/20FRH EARTH NAMEPLATE	1	PC
237607	RH-12/20FRH CHARGING PART CAUTIONS NAMEP	1	PC
134304	ROBOT SILICONE GREASEG501 1KG	1	PC
237604	RH-12/20FRH COORDINATES DIRECTION MARK a	1	PC
237605	RH-12/20FRH COORDINATES DIRECTION MARK b	1	PC
265338	RV-4/7FRL/M AIR PURGE MARK	1	PC
278414	RV-7FRLL/13FR(L)/20FR FELT J4D	1	PC
278401	RV-13FR(L)/20FR ORIGIN JIG J6A	1	PC
134302	GLUE 242 LOCTITE 250ml	1	PC
134305	LIQUID GASKET WHITE THREE BOND 1212	1	PC
278415	RV-7FRLL/13FR(L)/20FR FELT J4E	2	PC
278402	RV-13FR(L)/20FR ORIGIN JIG J6B	1	PC
278396	RV-7FRLL/13FR(L)/20FR CABLE CLAMP AL3	2	PC
278400	RV-13FR(L)/20FR ORIGIN JIG SET J6	1	PC
262557	RH-13F/20F/7FLL PIN H7-6x12	1	PC
405788	CR800 PCB SERVO CPU DQ865B	1	PC
278398	RV-13FR(L)/20FR HEAT CONDUCTION SEAT	1	PC
278399	RV-5AS EJECTOR PIN	1	PC
278403	RV-5AS SAFETY SOCKET M4	2	PC
278404	RV-8CRL SAFETY SOCKET M6	4	PC
405789	CR800 PCB SYSTEM IO DQ331B	1	PC
602876	CR800 PCB CPU DQ171D	1	PC
405790	CR800 PCB OPTIONAL SLOT DQ332A	1	PC
405791	CR800 PCB CONVERTER DQ801A	1	PC
405801	CR800 POWER SUPPLY UNTIL RV-7FR/RH20FR	1	PC
405795	CR800 PCB INV. DQ881A 7FRLL/13FR/20FR	1	PC
405802	CR800 POWER SUPPLY 1FRHR/7FRLL/13FR/20FR	1	PC
405804	CR800 NOISE FILTER FOR RV-7FR/13FR/20FR	1	PC
405805	CR800 FUSE 500SF-20UL	3	PC
405806	CR800 FUSE HOLDER	3	PC
220184	CR2D CR2Q OPTION COVER	2	PC
405807	CR800 OPTION CASE	1	PC
220273	CR800 TB CONNECTOR	1	PC
262774	NARC 750 FILTER DUST	1	PC
405809	CR800 CABLE BKOFA1078H02	1	PC
262774	NARC 750 FILTER DUST	1	PC
405808	CR800 CABLE BKOFA1078H01	1	PC
405810	CR800 CABLE BKOFA1078H03	1	PC
405811	CR800 CABLE BKOFA1078H04	3	PC
262786	NARC 750/751 LOCK EDGING SADDLE	1	PC
220314	CR2D CR2Q CABLE GUIDE WS-1NS	8	PC
220243	CR800 RUBBER MOUNT KG-010	7	PC
220304	CR800 SPACER MPS-08-0	1	PC
237852	CR800 SEAL ATT. (ELECTRIFIC.) 114-406	1	PC
405812	CR800 CONNECTOR U794D030G51	1	PC
405813	CR800 CONNECTOR U794D030G52	1	PC
64687	FUSE 1,6A	1	PC
405814	CR800 ACIN CABLE BKOFA1006H53	1	PC
405815	CR800 ACIN CABLE BKOFA1006H03	1	PC
405817	CR800 FAN 1	1	PC
405818	CR800 FAN 2	1	PC
248692	MR-BAT6V1	4	PC
589542	RH-6FRH MOTOR J3 (200W)	1	PC
604699	RV-7FRLL/13FR/FRL/20FR MOTOR J1	2	PC

Compatible products

Material	Description / Price List Text / Classification
124658	2A-RZ371 Robot option I/O-Interface: 32 inputs /32 Outputs (decentral I/O´s) Class 100100604: FA-Robot: Interface Card
214968	R32TB Robot Teaching Box; Narc controller (standard version) Class 100100602: FA-Robot: Teachingbox
218862	2D-TZ378 Robot option I/O-Interface: 32 inputs /32 Outputs (internal I/O´s expansion) Class 100100604: FA-Robot: Interface Card
219063	2D-TZ576 Robot option CC-Link-Interface-card Class 100100604: FA-Robot: Interface Card
225756	R32TB-15 Teaching box R32TB with 7 lines display and 15m cable length Class 100100602: FA-Robot: Teachingbox
232808	2D-TZ368 Robot option E/A-Interface: 32 inputs /32 Outputs SINK (internal I/O´s) Class 100100604: FA-Robot: Interface Card
255285	1F-GR35S-02 RV-4F/RV-7F Hand output cable Class 100100605: FA-Robot: Cable
255286	1F-HC35S-02 RV-4F/RV-7F Hand input cable Class 100100605: FA-Robot: Cable
257935	1F-HA01S-01 RV-F External wiring set 1 for the robot base Class 100100605: FA-Robot: Cable
257936	1F-HB01S-01 RV-F External wiring set 1 for the forearm Class 100100605: FA-Robot: Cable
259885	2D-TZ535 Network Interface for CompactCom module Class 100100604: FA-Robot: Interface Card
268039	RV-F / RV-FR Connector Set RV-4/7/13/20F(R) Connector Set Class 100100607: FA-Robot: Other Option
268829	1F-VD01E-03 RV-13F/RV-20F Pneumatic single valve set incl. noise-inferior Class 100100603: FA-Robot: Valve
268830	1F-VD02E-03 RV-13F/RV-20F Pneumatic double valve set incl. noise-inferior Class 100100603: FA-Robot: Valve
268831	1F-VD03E-03 RV-13F/RV-20F Pneumatic triple valve set incl. noise-inferior Class 100100603: FA-Robot: Valve
268832	1F-VD04E-03 RV-13F/RV-20F Pneumatic quadruple valve set incl. noise-inferior Class 100100603: FA-Robot: Valve
269546	2D-TZ535-PN-SET Robot Network Interface Profinet IO Class 100100604: FA-Robot: Interface Card
269555	2D-TZ535-PN Network Interface for CompactCom Modul Profinet Class 100100604: FA-Robot: Interface Card
271212	2F-YZ581 Encoder Distribution Unit for robot controller Class 100100604: FA-Robot: Interface Card
271513	1F-HA02S-01 RV-F External wiring set 2 for the robot base Class 100100605: FA-Robot: Cable
271514	1F-HB02S-01 RV-F External wiring set 2 for the forearm Class 100100605: FA-Robot: Cable
273788	1F-DH-05J1 RV-13/20F J1 Stopper Class 100100607: FA-Robot: Other Option
282409	2D-TZ535-EIP-SET Robot Network Interface EtherNet/IP Class 100100604: FA-Robot: Interface Card

Material	Description / Price List Text / Classification
313061	4F-SF002-01 Safety option unit MELFA SafePlus for CR800 Controller Class 100100604: FA-Robot: Interface Card
313062	CR800-MB Protection Box IP54 for CR800 Controller Class 100100607: FA-Robot: Other Option
313063	2F-DQ535 Network Interface for CompactCom module CC-Link IE Filed AB6709 Class 100100604: FA-Robot: Interface Card
313064	4F-FS002H-W200 Force Sensor Set 200N incl. Interface unit (2F-DQ561) for FR Series Class 100100607: FA-Robot: Other Option
313105	4F-FS002H-W1000 Force Sensor Set 1000N incl. Interface unit (2F-DQ561) for FR Series Class 100100607: FA-Robot: Other Option
313106	1F-10UCBL-41 Machine cable for CR800 controller, standard, 10m Class 100100605: FA-Robot: Cable
313107	1F-15UCBL-41 Machine cable for CR800 controller, standard, 15m Class 100100605: FA-Robot: Cable
313108	1F-10LUCBL-41 Machine cable for CR800 controller, high flexible, 10m Class 100100605: FA-Robot: Cable
313109	1F-15LUCBL-41 Machine cable for CR800 controller, high flexible, 15m Class 100100605: FA-Robot: Cable
324579	RT ToolBox3 Standard Robot programming and simulation Software, Windows 10/11; USB Class 100101206: FA-Software: Software Robot
324580	RT ToolBox3 Pro Robot programming and simulation Software incl. MELFA-Works, Windows 10/11 Class 100101206: FA-Software: Software Robot
325728	2F-DQ510 MELFA Smart Plus Card Pack A-Type Class 100100604: FA-Robot: Interface Card
325729	2F-DQ511 MELFA Smart Plus Card A-Type Class 100100604: FA-Robot: Interface Card
325730	1F-02UCBL-41 Machine cable for CR800 controller, standard, 2m Class 100100605: FA-Robot: Cable
327863	1F-20UCBL-41 Machine cable for CR800 controller, standard, 20m Class 100100605: FA-Robot: Cable
327864	1F-20LUCBL-41 Machine cable for CR800 controller, high flexible, 20m Class 100100605: FA-Robot: Cable
334232	RT ToolBox3 Standard UPGRADE Robot programming and simulation Software, Windows 10/11, Upgrade; USB Class 100101206: FA-Software: Software Robot
603944	4F-SF003-05 Safety option unit MELFA SafePlus II Slim for CR800 Controller Class 100100604: FA-Robot: Interface Card
687249	R86TB Robot Teaching Box with 10,1" (Colour / Touch version) Class 100100602: FA-Robot: Teachingbox