

**January - March 2021 Results**  
**Production and Shipments of Manipulators and Robots by Applications**  
**[JARA Member Companies]**

Number of units, ( ) : million yen

	January - March 2020	January - March 2021	Change from 2020
<b>Orders</b>	43,105 (171,803)	66,905 (245,994)	55.2% (43.2%)
<b>Production</b>	45,587 (169,847)	59,081 (207,421)	29.6% (22.1%)

Shipments Applications	January - March 2020			January - March 2021			Change from 2020			January - March 2020 (percentage distribution)			January - March 2021 (percentage distribution)		
	Domestic shipments	Exports	Total	Domestic shipments	Exports	Total	Domestic shipments	Exports	Total	Domestic shipments	Exports	Total	Domestic shipments	Exports	Total
<b>Plastic moulding</b>	698	816	1,514	758	992	1,750	8.6%	21.6%	15.6%	6.5%	2.2%	3.2%	7.4%	2.0%	2.9%
Arc welding	960	3,838	4,798	899	6,231	7,130	-6.4%	62.4%	48.6%	9.0%	10.6%	10.2%	8.8%	12.3%	11.8%
Spot welding	811	3,283	4,094	796	4,088	4,884	-1.8%	24.5%	19.3%	7.6%	9.0%	8.7%	7.8%	8.1%	8.1%
Laser welding	14	60	74	2	72	74	-85.7%	20.0%		0.1%	0.2%	0.2%	0.0%	0.1%	0.1%
Others	10	17	27	19	45	64	90.0%	164.7%	137.0%	0.1%	0.0%	0.1%	0.2%	0.1%	0.1%
<b>Welding</b> Units	1,795	7,198	8,993	1,716	10,436	12,152	-4.4%	45.0%	35.1%	16.8%	19.8%	19.1%	16.9%	20.7%	20.0%
(million yen)	(10,078)	(15,448)	(25,526)	(9,218)	(21,774)	(30,992)	(-8.5%)	(40.9%)	(21.4%)	(19.1%)	(13.0%)	(14.8%)	(18.3%)	(13.3%)	(14.5%)
<b>Painting</b>	229	272	501	294	304	598	28.4%	11.8%	19.4%	2.1%	0.7%	1.1%	2.9%	0.6%	1.0%
Loading/unloading	482	2,047	2,529	392	1,310	1,702	-18.7%	-36.0%	-32.7%	4.5%	5.6%	5.4%	3.9%	2.6%	2.8%
Mechanical cutting	5	7	12	6		6	20.0%	-100.0%	-50.0%	0.0%	0.0%	0.0%	0.1%		0.0%
Grinding/deburring	22	100	122	42	342	384	90.9%	242.0%	214.8%	0.2%	0.3%	0.3%	0.4%	0.7%	0.6%
Others	13	15	28	6	5	11	-53.8%	-66.7%	-60.7%	0.1%	0.0%	0.1%	0.1%	0.0%	0.0%
<b>Machining</b> Units	522	2,169	2,691	446	1,657	2,103	-14.6%	-23.6%	-21.9%	4.9%	6.0%	5.7%	4.4%	3.3%	3.5%
(million yen)	(1,912)	(4,410)	(6,323)	(1,391)	(2,440)	(3,831)	(-27.3%)	(-44.7%)	(-39.4%)	(3.6%)	(3.7%)	(3.7%)	(2.8%)	(1.5%)	(1.8%)
<b>Surface Mount Technology</b>	251	2,780	3,031	174	5,057	5,231	-30.7%	81.9%	72.6%	2.4%	7.7%	6.4%	1.7%	10.0%	8.6%
General Assembly	1,666	6,932	8,598	1,806	8,274	10,080	8.4%	19.4%	17.2%	15.6%	19.1%	18.3%	17.7%	16.4%	16.6%
Other Assembly	186	258	444	190	217	407	2.2%	-15.9%	-8.3%	1.7%	0.7%	0.9%	1.9%	0.4%	0.7%
Bonding				1		1							0.0%		0.0%
Soldering				2		2							0.0%		0.0%
Sealing/glueing	50	204	254	71	173	244	42.0%	-15.2%	-3.9%	0.5%	0.6%	0.5%	0.7%	0.3%	0.4%
Screwing	2		2	2		2				0.0%		0.0%	0.0%		0.0%
Others	134	54	188	114	44	158	-14.9%	-18.5%	-16.0%	1.3%	0.1%	0.4%	1.1%	0.1%	0.3%
<b>Assembly</b> Units	1,852	7,190	9,042	1,996	8,491	10,487	7.8%	18.1%	16.0%	17.3%	19.8%	19.2%	19.6%	16.8%	17.3%
(million yen)	(5,393)	(8,155)	(13,548)	(5,809)	(9,898)	(15,706)	(7.7%)	(21.4%)	(15.9%)	(10.2%)	(6.8%)	(7.9%)	(11.5%)	(6.0%)	(7.3%)
<b>Palletizing/depalletizing</b>	527	599	1,126	499	665	1,164	-5.3%	11.0%	3.4%	4.9%	1.6%	2.4%	4.9%	1.3%	1.9%
<b>Material handling</b>	2,377	8,358	10,735	1,989	16,911	18,900	-16.3%	102.3%	76.1%	22.3%	23.0%	22.8%	19.5%	33.5%	31.2%
FPD	35	63	98	33	59	92	-5.7%	-6.3%	-6.1%	0.3%	0.2%	0.2%	0.3%	0.1%	0.2%
Semiconductor	1,616	2,773	4,389	1,706	2,804	4,510	5.6%	1.1%	2.8%	15.1%	7.6%	9.3%	16.8%	5.6%	7.4%
Others		42	42	3	109	112		159.5%	166.7%		0.1%	0.1%	0.0%	0.2%	0.2%
<b>Cleanroom</b> Units	1,651	2,878	4,529	1,742	2,972	4,714	5.5%	3.3%	4.1%	15.5%	7.9%	9.6%	17.1%	5.9%	7.8%
(million yen)	(6,711)	(7,007)	(13,718)	(6,628)	(6,949)	(13,576)	(-1.2%)	(-0.8%)	(-1.0%)	(12.7%)	(5.9%)	(8.0%)	(13.2%)	(4.2%)	(6.3%)
<b>Other applications</b>	617	1,038	1,655	393	1,165	1,558	-36.3%	12.2%	-5.9%	5.8%	2.9%	3.5%	3.9%	2.3%	2.6%
<b>Unspecified</b>	158	3,035	3,193	168	1,840	2,008	6.3%	-39.4%	-37.1%	1.5%	8.4%	6.8%	1.7%	3.6%	3.3%
<b>Total</b> Units	10,677	36,333	47,010	10,175	50,490	60,665	-4.7%	39.0%	29.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
(million yen)	(52,776)	(119,153)	(171,929)	(50,340)	(164,036)	(214,376)	(-4.6%)	(37.7%)	(24.7%)	(100.0%)	(100.0%)	(100.0%)	(100.0%)	(100.0%)	(100.0%)

Note)

Data includes dedicated type (Surface Mount Technology / Bonding).

Data is collected in unit of 10,000 yen. However, the results are shown in unit of million yen by rounding the figures of 100,000 yen.

**January - March 2021 Results**  
**Shipments of Manipulators and Robots by Industries**  
**[JARA Member Companies]**

Number of units, ( ) : million yen

Industries	2020 Jan. - Mar.	2021 Jan. - Mar.	Change from 2020	Percentage distribution	
				2020	2021
<b>Metal products</b>	<b>694</b>	<b>561</b>	<b>-19.2%</b>	<b>6.5%</b>	<b>5.5%</b>
Construction and mining machinery	34	44	29.4%	0.3%	0.4%
Metalworking machinery	185	133	-28.1%	1.7%	1.3%
Other machinery and equipment	821	659	-19.7%	7.7%	6.5%
<b>Machinery and equipment</b> Units	<b>1,040</b>	<b>836</b>	<b>-19.6%</b>	<b>9.7%</b>	<b>8.2%</b>
(million yen)	<b>(4,761)</b>	<b>(3,727)</b>	<b>(-21.7%)</b>	<b>(9.0%)</b>	<b>(7.4%)</b>
Electronic computers	1	42	4100.0%	0.0%	0.4%
Consumer electrical machinery	345	286	-17.1%	3.2%	2.8%
Industrial electrical machinery	131	207	58.0%	1.2%	2.0%
Communication equipment	280	269	-3.9%	2.6%	2.6%
Video and audio equipment	3	10	233.3%	0.0%	0.1%
Electronic components/devices/circuits	1,429	1,397	-2.2%	13.4%	13.7%
Other electrical machinery	688	813	18.2%	6.4%	8.0%
<b>Electrical machinery</b> Units	<b>2,877</b>	<b>3,024</b>	<b>5.1%</b>	<b>26.9%</b>	<b>29.7%</b>
(million yen)	<b>(14,322)</b>	<b>(13,335)</b>	<b>(-6.9%)</b>	<b>(27.1%)</b>	<b>(26.5%)</b>
<b>Precision instruments</b>	<b>127</b>	<b>97</b>	<b>-23.6%</b>	<b>1.2%</b>	<b>1.0%</b>
Motor vehicles	1,419	1,271	-10.4%	13.3%	12.5%
Auto parts	2,227	2,207	-0.9%	20.9%	21.7%
<b>Motor vehicles and auto parts</b> Units	<b>3,646</b>	<b>3,478</b>	<b>-4.6%</b>	<b>34.1%</b>	<b>34.2%</b>
(million yen)	<b>(18,073)</b>	<b>(17,734)</b>	<b>(-1.9%)</b>	<b>(34.2%)</b>	<b>(35.2%)</b>
<b>Other transport equipment</b>	<b>40</b>	<b>47</b>	<b>17.5%</b>	<b>0.4%</b>	<b>0.5%</b>
<b>Food products, beverages, and tobacco products</b>	<b>289</b>	<b>186</b>	<b>-35.6%</b>	<b>2.7%</b>	<b>1.8%</b>
<b>Chemical products</b>	<b>98</b>	<b>103</b>	<b>5.1%</b>	<b>0.9%</b>	<b>1.0%</b>
<b>Plastic products</b>	<b>250</b>	<b>319</b>	<b>27.6%</b>	<b>2.3%</b>	<b>3.1%</b>
<b>Other industries</b>	<b>866</b>	<b>730</b>	<b>-15.7%</b>	<b>8.1%</b>	<b>7.2%</b>
<b>Non-manufacturing industry</b>	<b>119</b>	<b>92</b>	<b>-22.7%</b>	<b>1.1%</b>	<b>0.9%</b>
<b>Unspecified</b>	<b>631</b>	<b>702</b>	<b>11.3%</b>	<b>5.9%</b>	<b>6.9%</b>
<b>Total domestic shipments</b> Units	<b>10,677</b>	<b>10,175</b>	<b>-4.7%</b>	<b>100.0%</b>	<b>100.0%</b>
(million yen)	<b>(52,776)</b>	<b>(50,340)</b>	<b>(-4.6%)</b>	<b>(22.7%)</b>	<b>(16.8%)</b>
<b>Export</b> Units	<b>36,333</b>	<b>50,490</b>	<b>39.0%</b>	<b>(77.3%)</b>	<b>(83.2%)</b>
(million yen)	<b>(119,153)</b>	<b>(164,036)</b>	<b>(37.7%)</b>	<b>(69.3%)</b>	<b>(76.5%)</b>
<b>Grand total</b> Units	<b>47,010</b>	<b>60,665</b>	<b>29.0%</b>	<b>(100.0%)</b>	<b>(100.0%)</b>
(million yen)	<b>(171,929)</b>	<b>(214,376)</b>	<b>(24.7%)</b>	<b>(100.0%)</b>	<b>(100.0%)</b>

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