

**July - September 2020 Results**  
**Production and Shipments of Manipulators and Robots by Applications**  
**[JARA Member Companies]**

Number of units, ( ) : million yen

	July - September 2019	July - September 2020	Change from 2019
<b>Orders</b>	44,275 (170,563)	43,627 (171,551)	-1.5% (0.6%)
<b>Production</b>	45,148 (172,427)	40,135 (157,052)	-11.1% (-8.9%)

Shipments Applications	July - September 2019			July - September 2020			Change from 2019			July - September 2019 (percentage distribution)			July - September 2020 (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>	857	817	1,674	508	655	1,163	-40.7%	-19.8%	-30.5%	7.6%	2.3%	3.6%	6.5%	2.0%	2.9%
Arc welding	1,254	3,585	4,839	750	3,439	4,189	-40.2%	-4.1%	-13.4%	11.1%	10.3%	10.5%	9.6%	10.6%	10.4%
Spot welding	1,013	3,708	4,721	634	2,495	3,129	-37.4%	-32.7%	-33.7%	8.9%	10.6%	10.2%	8.1%	7.7%	7.7%
Laser welding	3	55	58	3	16	19		-70.9%	-67.2%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%
Others	40	64	104	9	14	23	-77.5%	-78.1%	-77.9%	0.4%	0.2%	0.2%	0.1%	0.0%	0.1%
<b>Welding</b> Units	2,310	7,412	9,722	1,396	5,964	7,360	-39.6%	-19.5%	-24.3%	20.4%	21.3%	21.1%	17.8%	18.3%	18.2%
(million yen)	(11,355)	(16,409)	(27,765)	(7,823)	(12,998)	(20,821)	(-31.1%)	(-20.8%)	(-25.0%)	(21.0%)	(13.5%)	(15.8%)	(19.7%)	(11.0%)	(13.2%)
<b>Painting</b>	166	513	679	129	349	478	-22.3%	-32.0%	-29.6%	1.5%	1.5%	1.5%	1.6%	1.1%	1.2%
Loading/unloading	539	2,483	3,022	324	1,247	1,571	-39.9%	-49.8%	-48.0%	4.8%	7.1%	6.5%	4.1%	3.8%	3.9%
Mechanical cutting		3	3	2	1	3			-66.7%		0.0%	0.0%	0.0%	0.0%	0.0%
Grinding/deburring	55	20	75	37	171	208	-32.7%	755.0%	177.3%	0.5%	0.1%	0.2%	0.5%	0.5%	0.5%
Others	13	17	30	11	4	15	-15.4%	-76.5%	-50.0%	0.1%	0.0%	0.1%	0.1%	0.0%	0.0%
<b>Machining</b> Units	607	2,523	3,130	374	1,423	1,797	-38.4%	-43.6%	-42.6%	5.4%	7.2%	6.8%	4.8%	4.4%	4.4%
(million yen)	(1,668)	(5,492)	(7,161)	(1,252)	(1,955)	(3,207)	(-25.0%)	(-64.4%)	(-55.2%)	(3.1%)	(4.5%)	(4.1%)	(3.1%)	(1.7%)	(2.0%)
<b>Surface Mount Technology</b>	313	3,075	3,388	240	3,598	3,838	-23.3%	17.0%	13.3%	2.8%	8.8%	7.3%	3.1%	11.0%	9.5%
General Assembly	1,843	7,939	9,781	1,302	5,282	6,584	-29.4%	-33.5%	-32.7%	16.3%	22.8%	21.2%	16.6%	16.2%	16.3%
Other Assembly	150	253	403	125	214	339	-16.7%	-15.4%	-15.9%	1.3%	0.7%	0.9%	1.6%	0.7%	0.8%
Bonding				2		2						0.0%			0.0%
Soldering	2		2	2		2				0.0%		0.0%	0.0%		0.0%
Sealing/glueing	25	106	131	24	125	149	-4.0%	17.9%	13.7%	0.2%	0.3%	0.3%	0.3%	0.4%	0.4%
Screwing	1		1	3	1	4	200.0%		300.0%	0.0%		0.0%	0.0%	0.0%	0.0%
Others	122	147	269	94	88	182	-23.0%	-40.1%	-32.4%	1.1%	0.4%	0.6%	1.2%	0.3%	0.5%
<b>Assembly</b> Units	1,993	8,192	10,185	1,427	5,496	6,923	-28.4%	-32.9%	-32.0%	17.6%	23.5%	22.1%	18.2%	16.9%	17.1%
(million yen)	(5,751)	(9,031)	(14,782)	(4,327)	(5,928)	(10,256)	(-24.8%)	(-34.4%)	(-30.6%)	(10.6%)	(7.4%)	(8.4%)	(10.9%)	(5.0%)	(6.5%)
<b>Palletizing/depalletizing</b>	475	532	1,006	369	608	977	-22.2%	14.4%	-2.9%	4.2%	1.5%	2.2%	4.7%	1.9%	2.4%
<b>Material handling</b>	2,652	7,074	9,726	1,629	9,398	11,027	-38.6%	32.9%	13.4%	23.4%	20.3%	21.1%	20.7%	28.9%	27.3%
FPD	34	54	88	38	83	121	11.8%	53.7%	37.5%	0.3%	0.2%	0.2%	0.5%	0.3%	0.3%
Semiconductor	1,173	1,173	2,346	1,228	2,188	3,416	4.7%	86.5%	45.6%	10.4%	3.4%	5.1%	15.6%	6.7%	8.5%
Others		60	60		142	142		136.7%	136.7%		0.2%	0.1%		0.4%	0.4%
<b>Cleanroom</b> Units	1,207	1,287	2,494	1,266	2,413	3,679	4.9%	87.5%	47.5%	10.7%	3.7%	5.4%	16.1%	7.4%	9.1%
(million yen)	(4,896)	(4,042)	(8,938)	(4,548)	(5,902)	(10,450)	(-7.1%)	(46.0%)	(16.9%)	(9.0%)	(3.3%)	(5.1%)	(11.4%)	(5.0%)	(6.6%)
<b>Other applications</b>	578	929	1,507	361	641	1,002	-37.6%	-31.0%	-33.5%	5.1%	2.7%	3.3%	4.6%	2.0%	2.5%
<b>Unspecified</b>	170	2,480	2,650	153	2,017	2,170	-10.0%	-18.7%	-18.1%	1.5%	7.1%	5.7%	1.9%	6.2%	5.4%
<b>Total</b> Units	11,328	34,833	46,161	7,852	32,562	40,414	-30.7%	-6.5%	-12.4%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
(million yen)	(54,116)	(121,815)	(175,931)	(39,769)	(117,920)	(157,689)	(-26.5%)	(-3.2%)	(-10.4%)	(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.

**July - September 2020 Results**  
**Shipments of Manipulators and Robots by Industries**  
**[JARA Member Companies]**

Number of units, ( ) : million yen

Industries	2019 Jul. - Sep.	2020 Jul. - Sep.	Change from 2019	Percentage distribution	
				2019	2020
<b>Metal products</b>	<b>952</b>	<b>443</b>	<b>-53.5%</b>	<b>8.4%</b>	<b>5.6%</b>
Construction and mining machinery	62	29	-53.2%	0.5%	0.4%
Metalworking machinery	214	128	-40.2%	1.9%	1.6%
Other machinery and equipment	627	451	-28.1%	5.5%	5.7%
<b>Machinery and equipment</b> Units	<b>903</b>	<b>608</b>	<b>-32.7%</b>	<b>8.0%</b>	<b>7.7%</b>
(million yen)	<b>(4,748)</b>	<b>(3,540)</b>	<b>(-25.4%)</b>	<b>(8.8%)</b>	<b>(8.9%)</b>
Electronic computers	8	5	-37.5%	0.1%	0.1%
Consumer electrical machinery	401	222	-44.6%	3.5%	2.8%
Industrial electrical machinery	165	231	40.0%	1.5%	2.9%
Communication equipment	380	257	-32.4%	3.4%	3.3%
Video and audio equipment	7	4	-42.9%	0.1%	0.1%
Electronic components/devices/circuits	1,072	1,033	-3.6%	9.5%	13.2%
Other electrical machinery	752	460	-38.8%	6.6%	5.9%
<b>Electrical machinery</b> Units	<b>2,785</b>	<b>2,212</b>	<b>-20.6%</b>	<b>24.6%</b>	<b>28.2%</b>
(million yen)	<b>(14,532)</b>	<b>(10,888)</b>	<b>(-25.1%)</b>	<b>(26.9%)</b>	<b>(27.4%)</b>
<b>Precision instruments</b>	<b>105</b>	<b>61</b>	<b>-41.9%</b>	<b>0.9%</b>	<b>0.8%</b>
Motor vehicles	1,116	940	-15.8%	9.9%	12.0%
Auto parts	3,031	1,651	-45.5%	26.8%	21.0%
<b>Motor vehicles and auto parts</b> Units	<b>4,147</b>	<b>2,591</b>	<b>-37.5%</b>	<b>36.6%</b>	<b>33.0%</b>
(million yen)	<b>(18,289)</b>	<b>(13,076)</b>	<b>(-28.5%)</b>	<b>(33.8%)</b>	<b>(32.9%)</b>
<b>Other transport equipment</b>	<b>84</b>	<b>44</b>	<b>-47.6%</b>	<b>0.7%</b>	<b>0.6%</b>
<b>Food products, beverages, and tobacco products</b>	<b>248</b>	<b>233</b>	<b>-6.0%</b>	<b>2.2%</b>	<b>3.0%</b>
<b>Chemical products</b>	<b>132</b>	<b>106</b>	<b>-19.7%</b>	<b>1.2%</b>	<b>1.3%</b>
<b>Plastic products</b>	<b>321</b>	<b>291</b>	<b>-9.3%</b>	<b>2.8%</b>	<b>3.7%</b>
<b>Other industries</b>	<b>912</b>	<b>608</b>	<b>-33.3%</b>	<b>8.0%</b>	<b>7.7%</b>
<b>Non-manufacturing industry</b>	<b>111</b>	<b>96</b>	<b>-13.5%</b>	<b>1.0%</b>	<b>1.2%</b>
<b>Unspecified</b>	<b>628</b>	<b>559</b>	<b>-11.0%</b>	<b>5.5%</b>	<b>7.1%</b>
<b>Total domestic shipments</b> Units	<b>11,328</b>	<b>7,852</b>	<b>-30.7%</b>	<b>100.0%</b>	<b>100.0%</b>
(million yen)	<b>(54,116)</b>	<b>(39,769)</b>	<b>(-26.5%)</b>	<b>(24.5%)</b>	<b>(19.4%)</b>
<b>Export</b> Units	<b>34,833</b>	<b>32,562</b>	<b>-6.5%</b>	<b>(75.5%)</b>	<b>(80.6%)</b>
(million yen)	<b>(121,815)</b>	<b>(117,920)</b>	<b>(-3.2%)</b>	<b>(30.8%)</b>	<b>(25.2%)</b>
<b>Grand total</b> Units	<b>46,161</b>	<b>40,414</b>	<b>-12.4%</b>	<b>(100.0%)</b>	<b>(100.0%)</b>
(million yen)	<b>(175,931)</b>	<b>(157,689)</b>	<b>(-10.4%)</b>	<b>(100.0%)</b>	<b>(100.0%)</b>

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