

**October - December 2022 Results**  
**Production and Shipments of Manipulators and Robots by Applications**  
**[JARA Member Companies]**

Number of units, ( ) : million yen

	October - December 2021	October - December 2022	Change from 2021
<b>Orders</b>	68,243 (231,004)	60,631 (221,019)	-11.2% (-4.3%)
<b>Production</b>	61,405 (211,040)	63,853 (218,301)	4.0% (3.4%)

Shipments Applications	October - December 2021			October - December 2022			Change from 2021			October - December 2021 (percentage distribution)			July - September 2022 (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>	839	1,055	1,894	721	933	1,654	-14.1%	-11.6%	-12.7%	8.1%	2.1%	3.1%	6.4%	1.8%	2.6%
Arc welding	878	4,351	5,229	1,006	4,574	5,580	14.6%	5.1%	6.7%	8.4%	8.5%	8.5%	8.9%	8.6%	8.7%
Spot welding	738	4,757	5,495	569	5,432	6,001	-22.9%	14.2%	9.2%	7.1%	9.3%	8.9%	5.1%	10.2%	9.3%
Laser welding	1	199	200	3	131	134	200.0%	-34.2%	-33.0%	0.0%	0.4%	0.3%	0.0%	0.2%	0.2%
Others	12	13	25	15	11	26	25.0%	-15.4%	4.0%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%
<b>Welding</b> Units	1,629	9,320	10,949	1,593	10,148	11,741	-2.2%	8.9%	7.2%	15.6%	18.3%	17.8%	14.2%	19.1%	18.2%
(million yen)	(9,016)	(20,207)	(29,223)	(6,659)	(24,365)	(31,023)	(-26.1%)	(20.6%)	(6.2%)	(18.2%)	(12.2%)	(13.6%)	(14.3%)	(13.5%)	(13.6%)
<b>Painting</b>	121	303	424	69	628	697	-43.0%	107.3%	64.4%	1.2%	0.6%	0.7%	0.6%	1.2%	1.1%
Loading/unloading	505	1,754	2,259	599	3,663	4,262	18.6%	108.8%	88.7%	4.9%	3.4%	3.7%	5.3%	6.9%	6.6%
Mechanical cutting	4		4	6		6	50.0%		50.0%	0.0%		0.0%	0.1%		0.0%
Grinding/deburring	44	117	161	41	123	164	-6.8%	5.1%	1.9%	0.4%	0.2%	0.3%	0.4%	0.2%	0.3%
Others	27	3	30	15	21	36	-44.4%	600.0%	20.0%	0.3%	0.0%	0.0%	0.1%	0.0%	0.1%
<b>Machining</b> Units	580	1,874	2,454	661	3,807	4,468	14.0%	103.1%	82.1%	5.6%	3.7%	4.0%	5.9%	7.2%	6.9%
(million yen)	(1,776)	(2,899)	(4,674)	(2,124)	(6,047)	(8,172)	(19.6%)	(108.6%)	(74.8%)	(3.6%)	(1.7%)	(2.2%)	(4.6%)	(3.3%)	(3.6%)
<b>Surface Mount Technology</b>	285	3,875	4,160	257	3,104	3,361	-9.8%	-19.9%	-19.2%	2.7%	7.6%	6.8%	2.3%	5.8%	5.2%
General Assembly	1,758	8,175	9,933	1,983	4,664	6,647	12.8%	-42.9%	-33.1%	16.9%	16.0%	16.2%	17.6%	8.8%	10.3%
Other Assembly	136	125	261	193	613	806	41.9%	390.4%	208.8%	1.3%	0.2%	0.4%	1.7%	1.2%	1.3%
Bonding			3	4		4	33.3%		33.3%	0.0%		0.0%	0.0%		0.0%
Soldering	3									0.2%	0.2%	0.2%	0.5%	0.2%	0.3%
Sealing/glueing	22	116	138	52	123	175	136.4%	6.0%	26.8%	0.2%	0.2%	0.2%	0.5%	0.2%	0.3%
Screwing	10	1	11	30	6	36	200.0%	500.0%	227.3%	0.1%	0.0%	0.0%	0.3%	0.0%	0.1%
Others	101	8	109	107	484	591	5.9%	5950.0%	442.2%	1.0%	0.0%	0.2%	1.0%	0.9%	0.9%
<b>Assembly</b> Units	1,894	8,300	10,194	2,176	5,277	7,453	14.9%	-36.4%	-26.9%	18.2%	16.3%	16.6%	19.3%	9.9%	11.6%
(million yen)	(5,655)	(8,386)	(14,041)	(6,344)	(7,525)	(13,869)	(12.2%)	(-10.3%)	(-1.2%)	(11.4%)	(5.0%)	(6.5%)	(13.7%)	(4.2%)	(6.1%)
<b>Palletizing/depalletizing</b>	416	1,079	1,495	298	1,000	1,298	-28.4%	-7.3%	-13.2%	4.0%	2.1%	2.4%	2.6%	1.9%	2.0%
<b>Material handling</b>	1,921	18,002	19,923	2,069	21,201	23,270	7.7%	17.8%	16.8%	18.5%	35.3%	32.4%	18.4%	39.9%	36.1%
FPD	22	57	79	10	51	61	-54.5%	-10.5%	-22.8%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%
Semiconductor	2,016	3,910	5,926	2,580	2,748	5,328	28.0%	-29.7%	-10.1%	19.4%	7.7%	9.7%	22.9%	5.2%	8.3%
Others		140	140	1	202	203		44.3%	45.0%		0.3%	0.2%	0.0%	0.4%	0.3%
<b>Cleanroom</b> Units	2,038	4,107	6,145	2,591	3,001	5,592	27.1%	-26.9%	-9.0%	19.6%	8.1%	10.0%	23.0%	5.6%	8.7%
(million yen)	(6,836)	(9,173)	(16,010)	(8,202)	(8,604)	(16,806)	(20.0%)	(-6.2%)	(5.0%)	(13.8%)	(5.5%)	(7.4%)	(17.7%)	(4.8%)	(7.4%)
<b>Other applications</b>	504	904	1,408	653	1,415	2,068	29.6%	56.5%	46.9%	4.8%	1.8%	2.3%	5.8%	2.7%	3.2%
<b>Unspecified</b>	183	2,175	2,358	158	2,657	2,815	-13.7%	22.2%	19.4%	1.8%	4.3%	3.8%	1.4%	5.0%	4.4%
<b>Total</b> Units	10,410	50,994	61,404	11,246	53,171	64,417	8.0%	4.3%	4.9%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
(million yen)	(49,477)	(166,095)	(215,572)	(46,407)	(181,087)	(227,494)	(-6.2%)	(9.0%)	(5.5%)	(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.

**October - December 2022 Results**  
**Shipments of Manipulators and Robots by Industries**  
**[JARA Member Companies]**

Number of units, ( ) : million yen

Industries	2021 Oct. - Dec.	2022 Oct. - Dec.	Change from 2021	Percentage distribution	
				2021	2022
<b>Metal products</b>	<b>724</b>	<b>750</b>	<b>3.6%</b>	<b>7.0%</b>	<b>6.7%</b>
Construction and mining machinery	28	26	-7.1%	0.3%	0.2%
Metalworking machinery	185	151	-18.4%	1.8%	1.3%
Other machinery and equipment	820	815	-0.6%	7.9%	7.2%
<b>Machinery and equipment</b> Units	<b>1,033</b>	<b>992</b>	<b>-4.0%</b>	<b>9.9%</b>	<b>8.8%</b>
(million yen)	<b>(3,818)</b>	<b>(3,842)</b>	<b>(0.6%)</b>	<b>(7.7%)</b>	<b>(8.3%)</b>
Electronic computers	77	7	-90.9%	0.7%	0.1%
Consumer electrical machinery	205	261	27.3%	2.0%	2.3%
Industrial electrical machinery	334	447	33.8%	3.2%	4.0%
Communication equipment	303	286	-5.6%	2.9%	2.5%
Video and audio equipment	11	5	-54.5%	0.1%	0.0%
Electronic components/devices/circuits	1,589	2,153	35.5%	15.3%	19.1%
Other electrical machinery	730	662	-9.3%	7.0%	5.9%
<b>Electrical machinery</b> Units	<b>3,249</b>	<b>3,821</b>	<b>17.6%</b>	<b>31.2%</b>	<b>34.0%</b>
(million yen)	<b>(15,611)</b>	<b>(16,237)</b>	<b>(4.0%)</b>	<b>(31.6%)</b>	<b>(35.0%)</b>
<b>Precision instruments</b>	<b>84</b>	<b>65</b>	<b>-22.6%</b>	<b>0.8%</b>	<b>0.6%</b>
Motor vehicles	656	1,044	59.1%	6.3%	9.3%
Auto parts	2,369	2,141	-9.6%	22.8%	19.0%
<b>Motor vehicles and auto parts</b> Units	<b>3,025</b>	<b>3,185</b>	<b>5.3%</b>	<b>29.1%</b>	<b>28.3%</b>
(million yen)	<b>(14,124)</b>	<b>(12,422)</b>	<b>(-12.0%)</b>	<b>(28.5%)</b>	<b>(26.8%)</b>
<b>Other transport equipment</b>	<b>95</b>	<b>119</b>	<b>25.3%</b>	<b>0.9%</b>	<b>1.1%</b>
<b>Food products, beverages, and tobacco products</b>	<b>272</b>	<b>219</b>	<b>-19.5%</b>	<b>2.6%</b>	<b>1.9%</b>
<b>Chemical products</b>	<b>82</b>	<b>87</b>	<b>6.1%</b>	<b>0.8%</b>	<b>0.8%</b>
<b>Plastic products</b>	<b>340</b>	<b>280</b>	<b>-17.6%</b>	<b>3.3%</b>	<b>2.5%</b>
<b>Other industries</b>	<b>692</b>	<b>732</b>	<b>5.8%</b>	<b>6.6%</b>	<b>6.5%</b>
<b>Non-manufacturing industry</b>	<b>102</b>	<b>76</b>	<b>-25.5%</b>	<b>1.0%</b>	<b>0.7%</b>
<b>Unspecified</b>	<b>712</b>	<b>920</b>	<b>29.2%</b>	<b>6.8%</b>	<b>8.2%</b>
<b>Total domestic shipments</b> Units	<b>10,410</b>	<b>11,246</b>	<b>8.0%</b>	<b>100.0%</b>	<b>100.0%</b>
(million yen)	<b>(49,477)</b>	<b>(46,407)</b>	<b>(-6.2%)</b>	<b>17.0%</b>	<b>17.5%</b>
				<b>(100.0%)</b>	<b>(100.0%)</b>
				<b>(23.0%)</b>	<b>(20.4%)</b>
<b>Export</b> Units	<b>50,994</b>	<b>53,171</b>	<b>4.3%</b>	<b>83.0%</b>	<b>82.5%</b>
(million yen)	<b>(166,095)</b>	<b>(181,087)</b>	<b>(9.0%)</b>	<b>(77.0%)</b>	<b>(79.6%)</b>
<b>Grand total</b> Units	<b>61,404</b>	<b>64,417</b>	<b>4.9%</b>	<b>100.0%</b>	<b>100.0%</b>
(million yen)	<b>(215,572)</b>	<b>(227,494)</b>	<b>(5.5%)</b>	<b>(100.0%)</b>	<b>(100.0%)</b>

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