

**2014 Results**  
**Orders, Production and Shipments of Manipulators and Robots by Applications**  
**[JARA Members and Non-members]**

Number of units, ( ) : million yen

CY	2013	2014	Change from 2013
Orders	119,542 (509,829)	140,125 (603,709)	17.2% (18.4%)
Production	108,725 (492,728)	136,917 (594,048)	25.9% (20.6%)

Shipments Applications	2013			2014			Change from 2013			2013 (percentage distribution)			2014 (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>	2,103	4,713	6,816	2,696	4,623	7,319	28.2%	-1.9%	7.4%	7.7%	5.6%	6.1%	8.4%	4.4%	5.3%
Arc welding	2,971	14,365	17,336	3,497	17,945	21,442	17.7%	24.9%	23.7%	10.9%	17.2%	15.6%	10.9%	17.1%	15.6%
Spot welding	2,528	12,303	14,831	3,471	17,259	20,730	37.3%	40.3%	39.8%	9.3%	14.7%	13.4%	10.8%	16.4%	15.1%
Laser welding	43	4	47	34	126	160	-20.9%	3050.0%	240.4%	0.2%	0.0%	0.0%	0.1%	0.1%	0.1%
Others	30	7	37	21	19	40	-30.0%	171.4%	8.1%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%
<b>Welding</b> Units	5,572	26,679	32,251	7,023	35,349	42,372	26.0%	32.5%	31.4%	20.4%	31.9%	29.1%	21.9%	33.6%	30.9%
(million yen)	(26,445)	(68,751)	(95,197)	(31,999)	(89,396)	(121,395)	(21.0%)	(30.0%)	(27.5%)	(17.4%)	(19.6%)	(18.9%)	(19.2%)	(21.1%)	(20.6%)
<b>Painting</b>	320	1,252	1,572	463	1,258	1,721	44.7%	0.5%	9.5%	1.2%	1.5%	1.4%	1.4%	1.2%	1.3%
Loading/unloading	1,191	4,182	5,373	1,855	4,297	6,152	55.8%	2.7%	14.5%	4.4%	5.0%	4.8%	5.8%	4.1%	4.5%
Mechanical cutting	8	28	36	8	29	37		3.6%	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Grinding/deburring	129	63	192	157	41	198	21.7%	-34.9%	3.1%	0.5%	0.1%	0.2%	0.5%	0.0%	0.1%
Others	41	10	51	52	21	73	26.8%	110.0%	43.1%	0.2%	0.0%	0.0%	0.2%	0.0%	0.1%
<b>Machining</b> Units	1,369	4,283	5,652	2,072	4,388	6,460	51.4%	2.5%	14.3%	5.0%	5.1%	5.1%	6.5%	4.2%	4.7%
(million yen)	(5,222)	(9,680)	(14,902)	(9,066)	(10,120)	(19,185)	(73.6%)	(4.5%)	(28.7%)	(3.4%)	(2.8%)	(3.0%)	(5.4%)	(2.4%)	(3.3%)
<b>Surface Mount Technology</b>	1,245	7,495	8,740	1,436	8,929	10,365	15.3%	19.1%	18.6%	4.6%	9.0%	7.9%	4.5%	8.5%	7.5%
General Assembly	4,401	7,954	12,355	5,634	15,729	21,363	28.0%	97.7%	72.9%	16.1%	9.5%	11.1%	17.5%	14.9%	15.6%
Other Assembly	1,134	5,106	6,240	1,196	3,433	4,629	5.5%	-32.8%	-25.8%	4.2%	6.1%	5.6%	3.7%	3.3%	3.4%
Bonding	854	4,512	5,366	820	3,250	4,070	-4.0%	-28.0%	-24.2%	3.1%	5.4%	4.8%	2.6%	3.1%	3.0%
Soldering	11	19	30	1		1	-90.9%	-100.0%	-96.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Sealing/glueing	46	234	280	37	135	172	-19.6%	-42.3%	-38.6%	0.2%	0.3%	0.3%	0.1%	0.1%	0.1%
Screwing	13	14	27	5		5	-61.5%	-100.0%	-81.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Others	210	327	537	333	48	381	58.6%	-85.3%	-29.1%	0.8%	0.4%	0.5%	1.0%	0.0%	0.3%
<b>Assembly</b> Units	5,535	13,060	18,595	6,830	19,162	25,992	23.4%	46.7%	39.8%	20.3%	15.6%	16.8%	21.3%	18.2%	18.9%
(million yen)	(18,298)	(49,172)	(67,470)	(22,797)	(48,824)	(71,621)	(24.6%)	(-0.7%)	(6.2%)	(12.0%)	(14.0%)	(13.4%)	(13.7%)	(11.5%)	(12.1%)
<b>Palletizing/depalletizing</b>	1,038	1,924	2,962	1,426	1,833	3,259	37.4%	-4.7%	10.0%	3.8%	2.3%	2.7%	4.4%	1.7%	2.4%
<b>Material handling</b>	3,602	15,234	18,836	5,058	20,688	25,746	40.4%	35.8%	36.7%	13.2%	18.2%	17.0%	15.7%	19.7%	18.7%
FPD	1,739	2,155	3,894	386	2,006	2,392	-77.8%	-6.9%	-38.6%	6.4%	2.6%	3.5%	1.2%	1.9%	1.7%
Semiconductor	3,080	3,924	7,004	3,075	3,999	7,074	-0.2%	1.9%	1.0%	11.3%	4.7%	6.3%	9.6%	3.8%	5.2%
Others	2		2	1		1	-50.0%		-50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Cleanroom</b> Units	4,821	6,079	10,900	3,462	6,005	9,467	-28.2%	-1.2%	-13.1%	17.7%	7.3%	9.8%	10.8%	5.7%	6.9%
(million yen)	(34,816)	(37,780)	(72,596)	(21,707)	(39,253)	(60,961)	(-37.7%)	(3.9%)	(-16.0%)	(22.9%)	(10.7%)	(14.4%)	(13.0%)	(9.3%)	(10.3%)
<b>Other applications</b>	1,670	2,895	4,565	1,653	2,980	4,633	-1.0%	2.9%	1.5%	6.1%	3.5%	4.1%	5.1%	2.8%	3.4%
<b>Total</b> Units	27,275	83,614	110,889	32,119	105,215	137,334	17.8%	25.8%	23.8%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
(million yen)	(152,169)	(351,533)	(503,702)	(166,739)	(423,341)	(590,079)	(9.6%)	(20.4%)	(17.1%)	(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.

**2014 Results**  
**Shipments of Manipulators and Robots by Industries**  
**[JARA Members and Non-members]**

Number of units, ( ) : million yen

Industries	2013	2014	Change from 2013	Percentage distribution	
				2013	2014
<b>Metal products</b>	<b>1,052</b>	<b>1,459</b>	<b>38.7%</b>	<b>3.9%</b>	<b>4.5%</b>
Construction and mining machinery	86	140	62.8%	0.3%	0.4%
Metalworking machinery	502	704	40.2%	1.8%	2.2%
Other machinery and equipment	422	707	67.5%	1.5%	2.2%
<b>Machinery and equipment</b> Units	<b>1,010</b>	<b>1,551</b>	<b>53.6%</b>	<b>3.7%</b>	<b>4.8%</b>
(million yen)	<b>(3,676)</b>	<b>(5,230)</b>	<b>(42.3%)</b>	<b>(2.4%)</b>	<b>(3.1%)</b>
Electronic computers	353	364	3.1%	1.3%	1.1%
Consumer electrical machinery	529	601	13.6%	1.9%	1.9%
Industrial electrical machinery	572	602	5.2%	2.1%	1.9%
Communication equipment	1,001	1,323	32.2%	3.7%	4.1%
Video and audio equipment	5	296	5820.0%	0.0%	0.9%
Electronic components/devices/circuits	5,856	4,411	-24.7%	21.5%	13.7%
Other electrical machinery	2,265	2,572	13.6%	8.3%	8.0%
<b>Electrical machinery</b> Units	<b>10,581</b>	<b>10,169</b>	<b>-3.9%</b>	<b>38.8%</b>	<b>31.7%</b>
(million yen)	<b>(73,261)</b>	<b>(66,954)</b>	<b>(-8.6%)</b>	<b>(48.1%)</b>	<b>(40.2%)</b>
<b>Precision instruments</b>	<b>417</b>	<b>361</b>	<b>-13.4%</b>	<b>1.5%</b>	<b>1.1%</b>
Motor vehicles	2,375	3,640	53.3%	8.7%	11.3%
Auto parts	5,666	7,026	24.0%	20.8%	21.9%
<b>Motor vehicles and auto parts</b> Units	<b>8,041</b>	<b>10,666</b>	<b>32.6%</b>	<b>29.5%</b>	<b>33.2%</b>
(million yen)	<b>(37,879)</b>	<b>(49,105)</b>	<b>(29.6%)</b>	<b>(24.9%)</b>	<b>(29.5%)</b>
<b>Other transport equipment</b>	<b>207</b>	<b>218</b>	<b>5.3%</b>	<b>0.8%</b>	<b>0.7%</b>
<b>Food products, beverages, and tobacco products</b>	<b>791</b>	<b>762</b>	<b>-3.7%</b>	<b>2.9%</b>	<b>2.4%</b>
<b>Chemical products</b>	<b>271</b>	<b>400</b>	<b>47.6%</b>	<b>1.0%</b>	<b>1.2%</b>
<b>Plastic products</b>	<b>2,146</b>	<b>2,786</b>	<b>29.8%</b>	<b>7.9%</b>	<b>8.7%</b>
<b>Other industries</b>	<b>2,759</b>	<b>3,747</b>	<b>35.8%</b>	<b>10.1%</b>	<b>11.7%</b>
<b>Non-manufacturing industry</b>		<b>155</b>			<b>0.4%</b>
<b>Total domestic shipments</b> Units	<b>27,275</b>	<b>32,119</b>	<b>17.8%</b>	<b>100.0%</b>	<b>100.0%</b>
(million yen)	<b>(152,169)</b>	<b>(166,739)</b>	<b>(9.6%)</b>	<b>24.6%</b>	<b>23.4%</b>
				<b>(100.0%)</b>	<b>(100.0%)</b>
				<b>(30.2%)</b>	<b>(28.3%)</b>
<b>Export</b> Units	<b>83,614</b>	<b>105,215</b>	<b>25.8%</b>	<b>75.4%</b>	<b>76.6%</b>
(million yen)	<b>(351,533)</b>	<b>(423,341)</b>	<b>(20.4%)</b>	<b>(69.8%)</b>	<b>(71.7%)</b>
<b>Grand total</b> Units	<b>110,889</b>	<b>137,334</b>	<b>23.8%</b>	<b>100.0%</b>	<b>100.0%</b>
(million yen)	<b>(503,702)</b>	<b>(590,079)</b>	<b>(17.1%)</b>	<b>(100.0%)</b>	<b>(100.0%)</b>

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