

**First Quarter (January - March) 2005 Results**  
**Production and Shipments of Manipulators and Robots by Application Areas (based on Value)**  
**(JARA Member Companies)**

(Unit: million yen)

Production	January - March 2004	January - March 2005	Change from 2004
	116,223	120,451	3.6%

Shipments	January - March 2004			January - March 2005			Change from 2004			January - March 2004 (percentage distribution)			January - March 2005 (percentage distribution)		
	Application area	Domestic shipments	Exports	Total	Domestic shipments	Exports	Total	Domestic shipments	Exports	Total	Domestic shipments	Exports	Total	Domestic shipments	Exports
<b>Plastic moulding</b>	<b>3,084</b>	<b>4,456</b>	<b>7,540</b>	<b>2,538</b>	<b>2,076</b>	<b>4,614</b>	<b>-17.7%</b>	<b>-53.4%</b>	<b>-38.8%</b>	<b>6.7%</b>	<b>6.6%</b>	<b>6.6%</b>	<b>4.6%</b>	<b>2.8%</b>	<b>3.6%</b>
Arc welding	4,784	4,896	9,680	6,015	5,035	11,050	25.7%	2.8%	14.2%	10.3%	7.3%	8.5%	10.9%	6.8%	8.6%
Spot welding	4,596	5,816	10,411	8,088	6,987	15,075	76.0%	20.1%	44.8%	9.9%	8.6%	9.2%	14.7%	9.5%	11.7%
Gas welding	3		3												
Laser welding	18	1	19	46		46									
Others	15	2	17	35	9	44									
<b>Welding</b>	<b>9,416</b>	<b>10,715</b>	<b>20,130</b>	<b>14,185</b>	<b>12,031</b>	<b>26,216</b>	<b>50.7%</b>	<b>12.3%</b>	<b>30.2%</b>	<b>20.4%</b>	<b>15.9%</b>	<b>17.7%</b>	<b>25.7%</b>	<b>16.3%</b>	<b>20.3%</b>
Loading/unloading	1,811	975	2,786	1,585	888	2,473									
Mechanical cutting	3		3	20		20									
Grinding/deburring	127	5	132	166	32	198									
Others	534	19	553	84		84									
<b>Machining</b>	<b>2,475</b>	<b>999</b>	<b>3,474</b>	<b>1,854</b>	<b>920</b>	<b>2,774</b>	<b>-25.1%</b>	<b>-8.0%</b>	<b>-20.2%</b>	<b>5.4%</b>	<b>1.5%</b>	<b>3.1%</b>	<b>3.4%</b>	<b>1.2%</b>	<b>2.2%</b>
General Assembly	2,699	1,001	3,701	3,177	1,785	4,962	17.7%	78.3%	34.1%	5.8%	1.5%	3.3%	5.8%	2.4%	3.8%
Surface Mount Technology	11,717	32,877	44,594	13,305	29,671	42,976	13.6%	-9.8%	-3.6%	25.3%	48.9%	39.3%	24.1%	40.2%	33.3%
Other Assembly	783	2,068	2,851	499	452	951	-36.3%	-78.1%	-66.6%	1.7%	3.1%	2.5%	0.9%	0.6%	0.7%
(Bonding)	(221)	(1,888)	(2,109)	(285)	(381)	(666)									
(Soldering)	(23)	(31)	(54)												
(Sealing/glueing)	(465)	(149)	(614)	(192)	(71)	(263)									
(Screwing)	(58)		(58)	(20)		(20)									
(Others)	(16)		(16)	(2)		(2)									
<b>Assembly</b>	<b>15,199</b>	<b>35,946</b>	<b>51,145</b>	<b>16,981</b>	<b>31,908</b>	<b>48,889</b>	<b>11.7%</b>	<b>-11.2%</b>	<b>-4.4%</b>	<b>32.9%</b>	<b>53.4%</b>	<b>45.1%</b>	<b>30.8%</b>	<b>43.3%</b>	<b>37.9%</b>
<b>Material handling</b>	<b>2,985</b>	<b>2,825</b>	<b>5,810</b>	<b>4,597</b>	<b>4,569</b>	<b>9,166</b>	<b>54.0%</b>	<b>61.8%</b>	<b>57.8%</b>	<b>6.5%</b>	<b>4.2%</b>	<b>5.1%</b>	<b>8.3%</b>	<b>6.2%</b>	<b>7.1%</b>
<b>Painting</b>	<b>2,172</b>	<b>2,517</b>	<b>4,688</b>	<b>2,627</b>	<b>2,207</b>	<b>4,833</b>	<b>20.9%</b>	<b>-12.3%</b>	<b>3.1%</b>	<b>4.7%</b>	<b>3.7%</b>	<b>4.1%</b>	<b>4.8%</b>	<b>3.0%</b>	<b>3.7%</b>
<b>Clean room</b>	<b>6,548</b>	<b>7,708</b>	<b>14,256</b>	<b>7,144</b>	<b>17,039</b>	<b>24,183</b>	<b>9.1%</b>	<b>121.1%</b>	<b>69.6%</b>	<b>14.2%</b>	<b>11.5%</b>	<b>12.6%</b>	<b>12.9%</b>	<b>23.1%</b>	<b>18.8%</b>
(FPD)	(4,902)	(5,977)	(10,879)	(6,181)	(15,649)	(21,830)	26.1%	161.8%	100.7%	10.6%	8.9%	9.6%	11.2%	21.2%	16.9%
(Semiconductor)	(1,600)	(1,723)	(3,323)	(960)	(1,390)	(2,350)	-40.0%	-19.3%	-29.3%	3.5%	2.6%	2.9%	1.7%	1.9%	1.8%
(Others)	(47)	(8)	(55)	(3)		(3)									
<b>Other applications</b>	<b>4,379</b>	<b>2,092</b>	<b>6,471</b>	<b>5,263</b>	<b>3,009</b>	<b>8,272</b>	<b>20.2%</b>	<b>43.8%</b>	<b>27.8%</b>	<b>9.5%</b>	<b>3.1%</b>	<b>5.7%</b>	<b>9.5%</b>	<b>4.1%</b>	<b>6.4%</b>
<b>Total</b>	<b>46,257</b>	<b>67,257</b>	<b>113,514</b>	<b>55,188</b>	<b>73,759</b>	<b>128,947</b>	<b>19.3%</b>	<b>9.7%</b>	<b>13.6%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Note)

These statistics include dedicated type (Surface Mount Technology / Bonding).

These statistics are 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.

**First Quarter (January - March) 2005 Results**  
**Shipments of Manipulators and Robots by Industrial Branches (based on Value)**  
**(JARA Member Companies)**

Industrial branches	2004	2005	Change from 2004	Percentage distribution	
	million yen	million yen		2004	2005
<b>Metal products</b>	<b>1,310</b>	<b>1,223</b>	<b>-6.6%</b>	<b>2.8%</b>	<b>2.2%</b>
Construction Machinery	399	502	25.6%	0.9%	<b>0.9%</b>
Metalworking machinery	109	292	168.1%	0.2%	0.5%
Other machinery and equipment	901	1,459	62.0%	1.9%	2.6%
<b>Machinery and equipment</b>	<b>1,409</b>	<b>2,252</b>	<b>59.9%</b>	<b>3.0%</b>	<b>4.1%</b>
Computers	321	507	58.0%	0.7%	0.9%
Consumer electrical machinery	291	156	-46.3%	0.6%	0.3%
Industrial electrical machinery	3,804	2,586	-32.0%	8.2%	4.7%
Info-communications equipment	2,149	7,533	250.6%	4.6%	13.7%
VTR	1,202	67	-94.4%	2.6%	0.1%
Electronic components/devices	5,519	6,344	15.0%	11.9%	11.5%
Other electrical machinery	6,032	3,036	-49.7%	13.0%	5.5%
<b>Electrical machinery</b>	<b>19,318</b>	<b>20,229</b>	<b>4.7%</b>	<b>41.8%</b>	<b>36.7%</b>
<b>Precision and optical instruments</b>	<b>473</b>	<b>711</b>	<b>50.2%</b>	<b>1.0%</b>	<b>1.3%</b>
Motor vehicles	6,600	11,816	79.0%	14.3%	21.4%
Auto parts	9,376	10,189	8.7%	20.3%	18.5%
<b>Motor vehicles and auto parts</b>	<b>15,976</b>	<b>22,004</b>	<b>37.7%</b>	<b>34.5%</b>	<b>39.9%</b>
<b>Food products, beverages, and tobacco products</b>	<b>724</b>	<b>1,020</b>	<b>40.9%</b>	<b>1.6%</b>	<b>1.8%</b>
<b>Plastic products</b>	<b>2,864</b>	<b>2,468</b>	<b>-13.8%</b>	<b>6.2%</b>	<b>4.5%</b>
<b>EMS companies (Subconstructors)</b>	<b>517</b>	<b>294</b>	<b>-43.2%</b>	<b>-</b>	<b>0.5%</b>
<b>Non-manufacturing</b>	<b>533</b>	<b>725</b>	<b>36.1%</b>	<b>1.2%</b>	<b>1.3%</b>
<b>Other industries</b>	<b>3,134</b>	<b>4,261</b>	<b>36.0%</b>	<b>6.8%</b>	<b>7.7%</b>
<b>Total domestic shipments</b>	<b>46,257</b>	<b>55,188</b>	<b>19.3%</b>	<b>100.0%</b>	<b>100.0%</b>
				<b>(40.8%)</b>	<b>(42.8%)</b>
<b>Export</b>	<b>67,257</b>	<b>73,759</b>	<b>9.7%</b>	<b>(59.2%)</b>	<b>(57.2%)</b>
<b>Grand total</b>	<b>113,514</b>	<b>128,947</b>	<b>13.6%</b>	<b>(100.0%)</b>	<b>(100.0%)</b>

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