

January - March 2016 Results
Production and Shipments of Manipulators and Robots by Applications
[JARA Member Companies]

Number of units, (): million yen

Production	January - March 2015	January - March 2016	Change from 2015
		34,601 (135,222)	36,920 (138,955)

Shipments	January - March 2015			January - March 2016			Change from 2015			January - March 2015 (percentage distribution)			January - March 2016 (percentage distribution)			
	Applications	Domestic shipments	Exports	Total	Domestic shipments	Exports	Total	Domestic shipments	Exports	Total	Domestic shipments	Exports	Total	Domestic shipments	Exports	Total
Plastic moulding		843	1,534	2,377	864	1,322	2,186	+2.5%	-13.8%	-8.0%	9.6%	6.1%	7.0%	8.4%	4.9%	5.9%
Arc welding	1,078	4,118	5,196	996	3,748	4,744	-7.6%	-9.0%	-8.7%	12.3%	16.4%	15.3%	9.6%	14.0%	12.8%	12.8%
Spot welding	898	4,153	5,051	1,671	4,273	5,944	+86.1%	+2.9%	+17.7%	10.2%	16.5%	14.9%	16.2%	16.0%	16.0%	16.0%
Laser welding	7	7	7	5	32	37										
Others	11	6	17	11	1	12										
Welding	Units	1,994	8,277	10,271	2,683	8,054	10,737	+34.6%	-2.7%	+4.5%	22.7%	32.9%	30.3%	26.0%	30.1%	29.0%
	(million yen)	(9,464)	(21,021)	(30,485)	(12,573)	(20,881)	(33,454)	(+32.9%)	(-0.7%)	(+9.7%)	(23.0%)	(23.6%)	(23.4%)	(26.2%)	(23.2%)	(24.2%)
Painting		215	343	558	256	339	595	+19.1%	-1.2%	+6.6%	2.4%	1.4%	1.6%	2.5%	1.3%	1.6%
Loading/unloading	438	1,220	1,658	525	1,079	1,604	+19.9%	-11.6%	-3.3%	5.0%	4.9%	4.9%	5.1%	4.0%	4.3%	4.3%
Mechanical cutting	1	1	2	1	1	1										
Grinding/deburring	49	73	122	56	7	63										
Others	8	4	12	39	39	39										
Machining	Units	496	1,298	1,794	620	1,087	1,707	+25.0%	-16.3%	-4.8%	5.6%	5.2%	5.3%	6.0%	4.1%	4.6%
	(million yen)	(1,223)	(1,887)	(3,110)	(1,800)	(2,108)	(3,908)	(+47.2%)	(+11.7%)	(+25.7%)	(3.0%)	(2.1%)	(2.4%)	(3.7%)	(2.3%)	(2.8%)
Surface Mount Technology		333	1,973	2,306	338	1,859	2,197	+1.5%	-5.8%	-4.7%	3.8%	7.8%	6.8%	3.3%	7.0%	5.9%
General Assembly	1,493	3,078	4,571	1,786	4,102	5,888	+19.6%	+33.3%	+28.8%	17.0%	12.2%	13.5%	17.3%	15.4%	15.9%	15.9%
Other Assembly	14	38	52	88	141	229	+528.6%	+271.1%	+340.4%	0.2%	0.2%	0.2%	0.9%	0.5%	0.6%	0.6%
Bonding				2		2										
Soldering	1		1													
Sealing/glueing	8	10	18	61	31	92										
Screwing				3		3										
Others	5	28	33	22	110	132										
Assembly	Units	1,507	3,116	4,623	1,874	4,243	6,117	+24.4%	+36.2%	+32.3%	17.1%	12.4%	13.6%	18.1%	15.9%	16.5%
	(million yen)	(9,505)	(36,096)	(45,601)	(9,903)	(34,804)	(44,707)	(+4.2%)	(-3.6%)	(-2.0%)	(23.1%)	(40.5%)	(35.0%)	(20.6%)	(38.6%)	(32.4%)
Palletizing/depalletizing		227	596	823	250	436	686	+10.1%	-26.8%	-16.6%	2.6%	2.4%	2.4%	2.4%	1.6%	1.9%
Material handling		1,631	5,552	7,183	1,857	6,765	8,622	+13.9%	+21.8%	+20.0%	18.5%	22.1%	21.2%	18.0%	25.3%	23.3%
FPD	30	99	129	89	87	176	+196.7%	-12.1%	+36.4%	0.3%	0.4%	0.4%	0.9%	0.3%	0.5%	0.5%
Semiconductor	968	1,401	2,369	898	1,623	2,521	-7.2%	+15.8%	+6.4%	11.0%	5.6%	7.0%	8.7%	6.1%	6.8%	6.8%
Others																
Cleanroom	Units	998	1,500	2,498	987	1,710	2,697	-1.1%	+14.0%	+8.0%	11.3%	6.0%	7.4%	9.6%	6.4%	7.3%
	(million yen)	(4,546)	(5,297)	(9,843)	(5,828)	(5,242)	(11,070)	(+28.2%)	(-1.0%)	(+12.5%)	(11.1%)	(5.9%)	(7.6%)	(12.1%)	(5.8%)	(8.0%)
Other applications		556	959	1,515	599	905	1,504	+7.7%	-5.6%	-0.7%	6.3%	3.8%	4.5%	5.8%	3.4%	4.1%
Total	Units	8,800	25,148	33,948	10,328	26,720	37,048	+17.4%	+6.3%	+9.1%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	(million yen)	(41,087)	(89,092)	(130,179)	(48,052)	(90,059)	(138,111)	(+17.0%)	(+1.1%)	(+6.1%)	(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.

January - March 2016 Results
Shipments of Manipulators and Robots by Industries
[JARA Member Companies]

Number of units, (): million yen

Industries	2015 Jan.-Mar.	2016 Jan.-Mar.	Change from 2015	Percentage distribution	
				2015	2016
Metal products	465	472	+1.5%	5.3%	4.6%
Construction and mining machinery	43	38	-11.6%	0.5%	0.4%
Metalworking machinery	168	156	-7.1%	1.9%	1.5%
Other machinery and equipment	427	557	+30.4%	4.9%	5.4%
Machinery and equipment	638	751	+17.7%	7.3%	7.3%
Units (million yen)	(2,786)	(3,606)	(+29.4%)	(6.8%)	(7.5%)
Electronic computers	10	12	+20.0%	0.1%	0.1%
Consumer electrical machinery	369	536	+45.3%	4.2%	5.2%
Industrial electrical machinery	285	179	-37.2%	3.2%	1.7%
Communication equipment	170	163	-4.1%	1.9%	1.6%
Video and audio equipment	1	1		0.0%	0.0%
Electronic components/devices/circuits	937	674	-28.1%	10.6%	6.5%
Other electrical machinery	965	881	-8.7%	11.0%	8.5%
Electrical machinery	2,737	2,446	-10.6%	31.1%	23.7%
Units (million yen)	(12,868)	(12,605)	(-2.0%)	(31.3%)	(26.2%)
Precision instruments	162	119	-26.5%	1.8%	1.2%
Motor vehicles	1,219	1,904	+56.2%	13.9%	18.4%
Auto parts	1,859	2,244	+20.7%	21.1%	21.7%
Motor vehicles and auto parts	3,078	4,148	+34.8%	35.0%	40.2%
Units (million yen)	(13,813)	(17,536)	(+27.0%)	(33.6%)	(36.5%)
Other transport equipment	(73)	(64)	(-12.3%)	(0.8%)	(0.6%)
Food products, beverages, and tobacco products	140	144	+2.9%	1.6%	1.4%
Chemical products	87	109	+25.3%	1.0%	1.1%
Plastic products	302	381	+26.2%	3.4%	3.7%
Other industries	1,093	1,624	+48.6%	12.4%	15.7%
Non-manufacturing industry	25	70		0.3%	0.7%
Total domestic shipments	8,800	10,328	+17.4%	100.0%	100.0%
Units (million yen)	(41,087)	(48,052)	(+17.0%)	25.9%	27.9%
				(100.0%)	(100.0%)
				(31.6%)	(34.8%)
Export	25,148	26,720	+6.3%	74.1%	72.1%
Units (million yen)	(89,092)	(90,059)	(+1.1%)	(68.4%)	(65.2%)
Grand total	33,948	37,048	+9.1%	100.0%	100.0%
Units (million yen)	(130,179)	(138,111)	(+6.1%)	(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.