

2017 Results
Production and Shipments of Manipulators and Robots by Applications
[JARA Member Companies]

Number of units, () : million yen

Production	2016		2017		Change from 2016	
		152,702 (546,624)		212,826 (699,930)		39.4% (28.0%)

Shipments Applications	2016			2017			Change from 2016			2016 (percentage distribution)			2017 (percentage distribution)		
	Domestic shipments	Exports	Total	Domestic shipments	Exports	Total	Domestic shipments	Exports	Total	Domestic shipments	Exports	Total	Domestic shipments	Exports	Total
Plastic moulding	3,072	4,370	7,442	3,354	5,536	8,890	9.2%	26.7%	19.5%	8.6%	3.7%	4.9%	8.4%	3.2%	4.2%
Arc welding	3,681	14,430	18,111	3,916	17,507	21,423	6.4%	21.3%	18.3%	10.3%	12.4%	11.9%	9.8%	10.2%	10.2%
Spot welding	4,746	17,259	22,005	3,928	23,296	27,224	-17.2%	35.0%	23.7%	13.3%	14.8%	14.4%	9.9%	13.6%	12.9%
Laser welding	31	110	141	26	37	63									
Others	36	11	47	45	354	399									
Welding Units	8,494	31,810	40,304	7,915	41,194	49,109	-6.8%	29.5%	21.8%	23.7%	27.2%	26.4%	19.9%	24.1%	23.3%
(million yen)	(41,887)	(82,005)	(123,892)	(39,130)	(102,270)	(141,400)	(-6.6%)	(24.7%)	(14.1%)	(25.1%)	(21.1%)	(22.3%)	(21.2%)	(19.4%)	(19.8%)
Painting	593	1,569	2,162	716	2,042	2,758	20.7%	30.1%	27.6%	1.7%	1.3%	1.4%	1.8%	1.2%	1.3%
Loading/unloading	1,528	4,343	5,871	2,023	9,194	11,217	32.4%	111.7%	91.1%	4.3%	3.7%	3.8%	5.1%	5.4%	5.3%
Mechanical cutting	6	1	7	14	10	24									
Grinding/deburring	246	284	530	308	891	1,199									
Others	70	8	78	50	16	66									
Machining Units	1,850	4,636	6,486	2,395	10,111	12,506	29.5%	118.1%	92.8%	5.2%	4.0%	4.3%	6.0%	5.9%	5.9%
(million yen)	(5,316)	(7,625)	(12,941)	(7,103)	(13,209)	(20,312)	(33.6%)	(73.2%)	(57.0%)	(3.2%)	(2.0%)	(2.3%)	(3.9%)	(2.5%)	(2.9%)
Surface Mount Technology	1,224	8,364	9,588	1,647	12,378	14,025	34.6%	48.0%	46.3%	3.4%	7.2%	6.3%	4.1%	7.2%	6.6%
General Assembly	6,167	18,283	24,450	6,476	32,275	38,751	5.0%	76.5%	58.5%	17.2%	15.7%	16.0%	16.3%	18.9%	18.4%
Other Assembly	166	499	665	118	1,241	1,359	-28.9%	148.7%	104.4%	0.5%	0.4%	0.4%	0.3%	0.7%	0.6%
Bonding	2		2												
Soldering	2		2	2		2									
Sealing/glueing	80	232	312	87	725	812									
Screwing	8	1	9	7	14	21									
Others	74	266	340	22	502	524									
Assembly Units	6,333	18,782	25,115	6,594	33,516	40,110	4.1%	78.4%	59.7%	17.7%	16.1%	16.5%	16.6%	19.6%	19.0%
(million yen)	(12,191)	(22,527)	(34,718)	(13,418)	(34,963)	(48,381)	(10.1%)	(55.2%)	(39.4%)	(7.3%)	(5.8%)	(6.3%)	(7.3%)	(6.6%)	(6.8%)
Palletizing/depalletizing	857	2,312	3,169	910	1,886	2,796	6.2%	-18.4%	-11.8%	2.4%	2.0%	2.1%	2.3%	1.1%	1.3%
Material handling	6,891	34,362	41,253	8,103	50,578	58,681	17.6%	47.2%	42.2%	19.2%	29.4%	27.0%	20.3%	29.5%	27.8%
FPD	321	847	1,168	149	972	1,121	-53.6%	14.8%	-4.0%	0.9%	0.7%	0.8%	0.4%	0.6%	0.5%
Semiconductor	3,905	7,018	10,923	5,398	9,829	15,227	38.2%	40.1%	39.4%	10.9%	6.0%	7.2%	13.6%	5.7%	7.2%
Others				6	4	10									
Cleanroom Units	4,226	7,865	12,091	5,553	10,805	16,358	31.4%	37.4%	35.3%	11.8%	6.7%	7.9%	13.9%	6.3%	7.8%
(million yen)	(23,920)	(25,292)	(49,212)	(25,313)	(31,617)	(56,930)	(5.8%)	(25.0%)	(15.7%)	(14.4%)	(6.5%)	(8.9%)	(13.7%)	(6.0%)	(8.0%)
Other applications	2,275	2,685	4,960	2,645	3,164	5,809	16.3%	17.8%	17.1%	6.4%	2.3%	3.3%	6.6%	1.8%	2.8%
Total Units	35,815	116,755	152,570	39,832	171,210	211,042	11.2%	46.6%	38.3%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
(million yen)	(166,599)	(387,972)	(554,572)	(184,214)	(528,419)	(712,633)	(10.6%)	(36.2%)	(28.5%)	(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.

