

2017 Results
Orders, Production and Shipments of Manipulators and Robots by Applications
[JARA Members and Non-members]

Number of units, () : million yen

CY	2016	2017	Change from 2016
Orders	182,098 (739,298)	235,268 (944,702)	29.2% (27.8%)
Production	174,606 (703,387)	233,981 (877,657)	34.0% (24.8%)

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%	7.2%	3.3%	4.2%	6.8%	3.0%	3.8%
Arc welding	3,694	14,535	18,229	3,939	17,527	21,466	6.6%	20.6%	17.8%	8.7%	10.9%	10.4%	8.0%	9.5%	9.2%
Spot welding	4,750	17,309	22,059	3,985	23,403	27,388	-16.1%	35.2%	24.2%	11.2%	13.0%	12.6%	8.1%	12.7%	11.7%
Laser welding	31	110	141	26	37	63	-16.1%	-66.4%	-55.3%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%
Others	36	11	47	48	354	402	33.3%	3118.2%	755.3%	0.1%	0.0%	0.0%	0.1%	0.2%	0.2%
Welding Units	8,511	31,965	40,476	7,998	41,321	49,319	-6.0%	29.3%	21.8%	20.0%	24.0%	23.0%	16.3%	22.4%	21.1%
(million yen)	(42,304)	(83,105)	(125,409)	(39,702)	(103,125)	(142,827)	(-6.2%)	(24.1%)	(13.9%)	(19.2%)	(16.8%)	(17.5%)	(16.1%)	(15.9%)	(15.9%)
Painting	593	1,569	2,162	716	2,042	2,758	20.7%	30.1%	27.6%	1.4%	1.2%	1.2%	1.5%	1.1%	1.2%
Loading/unloading	1,869	4,541	6,410	2,589	9,318	11,907	38.5%	105.2%	85.8%	4.4%	3.4%	3.7%	5.3%	5.1%	5.1%
Mechanical cutting	6	1	7	14	10	24	133.3%	900.0%	242.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Grinding/deburring	250	285	535	311	891	1,202	24.4%	212.6%	124.7%	0.6%	0.2%	0.3%	0.6%	0.5%	0.5%
Others	80	10	90	50	16	66	-37.5%	60.0%	-26.7%	0.2%	0.0%	0.1%	0.1%	0.0%	0.0%
Machining Units	2,205	4,837	7,042	2,964	10,235	13,199	34.4%	111.6%	87.4%	5.2%	3.6%	4.0%	6.0%	5.6%	5.7%
(million yen)	(10,148)	(10,455)	(20,603)	(13,215)	(15,897)	(29,113)	(30.2%)	(52.1%)	(41.3%)	(4.6%)	(2.1%)	(2.9%)	(5.4%)	(2.4%)	(3.3%)
Surface Mount Technology	1,263	8,397	9,660	1,660	12,418	14,078	31.4%	47.9%	45.7%	3.0%	6.3%	5.5%	3.4%	6.7%	6.0%
General Assembly	6,747	18,401	25,148	7,153	32,415	39,567	6.0%	76.2%	57.3%	15.8%	13.8%	14.3%	14.5%	17.6%	17.0%
Other Assembly	2,954	9,557	12,511	903	4,473	5,376	-69.4%	-53.2%	-57.0%	6.9%	7.2%	7.1%	1.8%	2.4%	2.3%
Bonding	2,125	8,770	10,895	644	3,229	3,873	-69.7%	-63.2%	-64.5%	5.0%	6.6%	6.2%	1.3%	1.8%	1.7%
Soldering	244	283	527	2	2	2	-99.2%	-100.0%	-99.6%	0.6%	0.2%	0.3%	0.0%	0.0%	0.0%
Sealing/glueing	91	232	323	87	725	812	-4.4%	212.5%	151.4%	0.2%	0.2%	0.2%	0.2%	0.4%	0.3%
Screwing	23	6	29	7	17	24	-69.6%	183.3%	-17.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Others	471	266	737	163	502	665	-65.3%	88.7%	-9.7%	1.1%	0.2%	0.4%	0.3%	0.3%	0.3%
Assembly Units	9,701	27,958	37,659	8,056	36,888	44,944	-17.0%	31.9%	19.3%	22.8%	21.0%	21.4%	16.4%	20.0%	19.3%
(million yen)	(33,914)	(68,254)	(102,168)	(26,207)	(64,232)	(90,439)	(-22.7%)	(-5.9%)	(-11.5%)	(15.4%)	(13.8%)	(14.3%)	(10.6%)	(9.9%)	(10.1%)
Palletizing/depalletizing	1,577	2,428	4,005	1,747	2,026	3,772	10.8%	-16.6%	-5.8%	3.7%	1.8%	2.3%	3.6%	1.1%	1.6%
Material handling	6,900	34,362	41,262	8,109	50,578	58,687	17.5%	47.2%	42.2%	16.2%	25.8%	23.5%	16.5%	27.5%	25.1%
FPD	1,255	4,335	5,590	1,295	4,857	6,152	3.2%	12.0%	10.1%	2.9%	3.3%	3.2%	2.6%	2.6%	2.6%
Semiconductor	4,632	9,822	14,454	9,622	14,874	24,496	107.7%	51.4%	69.5%	10.9%	7.4%	8.2%	19.6%	8.1%	10.5%
Others	2	10	12	6	4	10	200.0%	-60.0%	-16.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cleanroom Units	5,889	14,167	20,056	10,923	19,735	30,658	85.5%	39.3%	52.9%	13.8%	10.7%	11.4%	22.2%	10.7%	13.1%
(million yen)	(36,723)	(73,013)	(109,736)	(53,260)	(112,606)	(165,866)	(45.0%)	(54.2%)	(51.2%)	(16.6%)	(14.7%)	(15.3%)	(21.6%)	(17.3%)	(18.5%)
Other applications	2,885	2,959	5,844	3,644	3,437	7,081	26.3%	16.2%	21.2%	6.8%	2.2%	3.3%	7.4%	1.9%	3.0%
Total Units	42,596	133,012	175,608	49,171	184,215	233,386	15.4%	38.5%	32.9%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
(million yen)	(220,618)	(495,404)	(716,022)	(246,222)	(649,381)	(895,603)	(11.6%)	(31.1%)	(25.1%)	(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.

2017 Results
Shipments of Manipulators and Robots by Industries
[JARA Members and Non-members]

Number of units, () : million yen

Industries	2016	2017	Change from 2016	Percentage distribution	
				2016	2017
Metal products	1,881	2,571	36.7%	4.4%	5.2%
Construction and mining machinery	126	79	-37.3%	0.3%	0.2%
Metalworking machinery	496	613	23.6%	1.2%	1.2%
Other machinery and equipment	2,665	3,203	20.2%	6.3%	6.5%
Machinery and equipment Units	3,287	3,895	18.5%	7.7%	7.9%
(million yen)	(17,936)	(18,582)	(3.6%)	(8.1%)	(7.5%)
Electronic computers	88	29	-67.0%	0.2%	0.1%
Consumer electrical machinery	1,916	1,759	-8.2%	4.5%	3.6%
Industrial electrical machinery	954	917	-3.9%	2.2%	1.9%
Communication equipment	1,104	1,964	77.9%	2.6%	4.0%
Video and audio equipment	21	6	-71.4%	0.0%	0.0%
Electronic components/devices/circuits	6,605	10,745	62.7%	15.5%	21.9%
Other electrical machinery	3,216	3,287	2.2%	7.6%	6.7%
Electrical machinery Units	13,904	18,707	34.5%	32.6%	38.0%
(million yen)	(76,847)	(97,710)	(27.1%)	(34.8%)	(39.7%)
Precision instruments	477	523	9.6%	1.1%	1.1%
Motor vehicles	5,977	5,275	-11.7%	14.0%	10.7%
Auto parts	8,521	9,375	10.0%	20.0%	19.1%
Motor vehicles and auto parts Units	14,498	14,650	1.0%	34.0%	29.8%
(million yen)	(65,078)	(65,376)	(0.5%)	(29.5%)	(26.6%)
Other transport equipment	305	236	-22.6%	0.7%	0.5%
Food products, beverages, and tobacco products	839	865	3.1%	2.0%	1.8%
Chemical products	411	319	-22.4%	1.0%	0.6%
Plastic products	1,247	1,264	1.4%	2.9%	2.6%
Other industries	5,533	5,854	5.8%	13.0%	11.9%
Non-manufacturing industry	214	287	34.1%	0.5%	0.6%
Total domestic shipments Units	42,596	49,171	15.4%	100.0%	100.0%
(million yen)	(220,618)	(246,222)	(11.6%)	24.3%	21.1%
				(100.0%)	(100.0%)
				(30.8%)	(27.5%)
Export Units	133,012	184,215	38.5%	75.7%	78.9%
(million yen)	(495,404)	(649,381)	(31.1%)	(69.2%)	(72.5%)
Grand total Units	175,608	233,386	32.9%	100.0%	100.0%
(million yen)	(716,022)	(895,603)	(25.1%)	(100.0%)	(100.0%)

Note)

Data includes dedicated type (Surface Mount Technology / Bonding).

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