

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

Number of units, () : million yen

Production	October - December 2016		October - December 2017		Change from 2016	
		40,139 (137,542)		53,918 (179,551)		34.3% (30.5%)

Shipments Applications	October - December 2016			October - December 2017			Change from 2016			October - December 2016 (percentage distribution)			October - December 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	808	934	1,742	926	1,211	2,137	14.6%	29.7%	22.7%	9.4%	2.8%	4.2%	8.9%	2.9%	4.1%
Arc welding	955	3,484	4,439	1,092	4,730	5,822	14.3%	35.8%	31.2%	11.2%	10.6%	10.7%	10.5%	11.2%	11.0%
Spot welding	966	4,728	5,694	879	6,174	7,053	-9.0%	30.6%	23.9%	11.3%	14.4%	13.8%	8.4%	14.6%	13.4%
Laser welding	11	6	17	3	33	36									
Others	12	4	16	13	36	49									
Welding Units	1,944	8,222	10,166	1,987	10,973	12,960	2.2%	33.5%	27.5%	22.7%	25.1%	24.6%	19.1%	26.0%	24.6%
(million yen)	(10,213)	(21,677)	(31,890)	(9,522)	(27,455)	(36,978)	(-6.8%)	(26.7%)	(16.0%)	(25.6%)	(20.8%)	(22.2%)	(20.4%)	(20.6%)	(20.6%)
Painting	55	324	379	78	524	602	41.8%	61.7%	58.8%	0.6%	1.0%	0.9%	0.7%	1.2%	1.1%
Loading/unloading	309	970	1,279	571	1,550	2,121	84.8%	59.8%	65.8%	3.6%	3.0%	3.1%	5.5%	3.7%	4.0%
Mechanical cutting	1		1	1	8	9									
Grinding/deburring	92	253	345	70	206	276									
Others	11	1	12	20	1	21									
Machining Units	413	1,224	1,637	662	1,765	2,427	60.3%	44.2%	48.3%	4.8%	3.7%	4.0%	6.3%	4.2%	4.6%
(million yen)	(1,156)	(1,957)	(3,113)	(1,819)	(2,533)	(4,352)	(57.3%)	(29.4%)	(39.8%)	(2.9%)	(1.9%)	(2.2%)	(3.9%)	(1.9%)	(2.4%)
Surface Mount Technology	285	2,092	2,377	404	2,902	3,306	41.8%	38.7%	39.1%	3.3%	6.4%	5.7%	3.9%	6.9%	6.3%
General Assembly	1,386	4,550	5,936	1,791	7,039	8,830	29.2%	54.7%	48.8%	16.2%	13.9%	14.4%	17.2%	16.7%	16.8%
Other Assembly	52	172	224	9	264	273	-82.7%	53.5%	21.9%	0.6%	0.5%	0.5%	0.1%	0.6%	0.5%
Bonding															
Soldering	2		2												
Sealing/glueing	7	118	125	3	151	154									
Screwing				2		2									
Others	43	54	97	4	113	117									
Assembly Units	1,438	4,722	6,160	1,800	7,303	9,103	25.2%	54.7%	47.8%	16.8%	14.4%	14.9%	17.3%	17.3%	17.3%
(million yen)	(2,941)	(5,512)	(8,453)	(3,477)	(8,107)	(11,584)	(18.2%)	(47.1%)	(37.0%)	(7.4%)	(5.3%)	(5.9%)	(7.5%)	(6.1%)	(6.4%)
Palletizing/depalletizing	231	716	947	214	370	584	-7.4%	-48.3%	-38.3%	2.7%	2.2%	2.3%	2.1%	0.9%	1.1%
Material handling	1,641	11,549	13,190	2,186	13,569	15,755	33.2%	17.5%	19.4%	19.2%	35.2%	31.9%	21.0%	32.1%	29.9%
FPD	60	326	386	22	429	451	-63.3%	31.6%	16.8%	0.7%	1.0%	0.9%	0.2%	1.0%	0.9%
Semiconductor	1,145	2,112	3,257	1,439	2,307	3,746	25.7%	9.2%	15.0%	13.4%	6.4%	7.9%	13.8%	5.5%	7.1%
Others				1	2	3									
Cleanroom Units	1,205	2,438	3,643	1,462	2,738	4,200	21.3%	12.3%	15.3%	14.1%	7.4%	8.8%	14.0%	6.5%	8.0%
(million yen)	(6,164)	(8,049)	(14,213)	(5,831)	(7,784)	(13,615)	(-5.4%)	(-3.3%)	(-4.2%)	(15.5%)	(7.7%)	(9.9%)	(12.5%)	(5.9%)	(7.6%)
Other applications	545	571	1,116	710	908	1,618	30.3%	59.0%	45.0%	6.4%	1.7%	2.7%	6.8%	2.1%	3.1%
Total Units	8,565	32,792	41,357	10,429	42,263	52,692	21.8%	28.9%	27.4%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
(million yen)	(39,878)	(103,974)	(143,852)	(46,600)	(133,010)	(179,611)	(16.9%)	(27.9%)	(24.9%)	(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.

October - December 2017 Results
Shipments of Manipulators and Robots by Industries
[JARA Member Companies]

Number of units, () : million yen

Industries	2016 Oct. - Dec.	2017 Oct. - Dec.	Change from 2016	Percentage distribution	
				2016	2017
Metal products	540	714	32.2%	6.3%	6.8%
Construction and mining machinery	33	21	-36.4%	0.4%	0.2%
Metalworking machinery	119	202	69.7%	1.4%	1.9%
Other machinery and equipment	515	830	61.2%	6.0%	8.0%
Machinery and equipment Units	667	1,053	57.9%	7.8%	10.1%
(million yen)	(3,251)	(4,314)	(32.7%)	(8.2%)	(9.3%)
Electronic computers	19		-100.0%	0.2%	
Consumer electrical machinery	431	337	-21.8%	5.0%	3.2%
Industrial electrical machinery	134	300	123.9%	1.6%	2.9%
Communication equipment	134	342	155.2%	1.6%	3.3%
Video and audio equipment		1			0.0%
Electronic components/devices/circuits	965	1,283	33.0%	11.3%	12.3%
Other electrical machinery	747	868	16.2%	8.7%	8.3%
Electrical machinery Units	2,430	3,131	28.8%	28.4%	30.0%
(million yen)	(12,067)	(16,060)	(33.1%)	(30.3%)	(34.5%)
Precision instruments	134	103	-23.1%	1.6%	1.0%
Motor vehicles	1,314	1,133	-13.8%	15.3%	10.9%
Auto parts	1,769	2,345	32.6%	20.7%	22.5%
Motor vehicles and auto parts Units	3,083	3,478	12.8%	36.0%	33.3%
(million yen)	(13,394)	(13,495)	(0.8%)	(33.6%)	(29.0%)
Other transport equipment	71	46	-35.2%	0.8%	0.4%
Food products, beverages, and tobacco products	201	166	-17.4%	2.3%	1.6%
Chemical products	91	73	-19.8%	1.1%	0.7%
Plastic products	321	370	15.3%	3.7%	3.5%
Other industries	960	1,210	26.0%	11.2%	11.6%
Non-manufacturing industry	67	85		0.8%	0.8%
Total domestic shipments Units	8,565	10,429	21.8%	100.0%	100.0%
(million yen)	(39,878)	(46,600)	(16.9%)	(20.7%)	(19.8%)
				(100.0%)	(100.0%)
				(27.7%)	(25.9%)
Export Units	32,792	42,263	28.9%	(79.3%)	(80.2%)
(million yen)	(103,974)	(133,010)	(27.9%)	(72.3%)	(74.1%)
Grand total Units	41,357	52,692	27.4%	(100.0%)	(100.0%)
(million yen)	(143,852)	(179,611)	(24.9%)	(100.0%)	(100.0%)

Note)

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