

July - September 2019 Results
Production and Shipments of Manipulators and Robots by Applications
[JARA Member Companies]

Number of units, () : million yen

	July - September 2018	July - September 2019	Change from 2018
Orders	51,180 (184,770)	44,275 (170,563)	-13.5% (-7.7%)
Production	53,108 (185,842)	45,148 (172,427)	-15.0% (-7.2%)

Shipments Applications	July - September 2018			July - September 2019			Change from 2018			July - September 2018 (percentage distribution)			July - September 2019 (percentage distribution)		
	Domestic shipments	Exports	Total	Domestic shipments	Exports	Total	Domestic shipments	Exports	Total	Domestic shipments	Exports	Total	Domestic shipments	Exports	Total
Plastic moulding	800	1,283	2,083	857	817	1,674	7.1%	-36.3%	-19.6%	7.0%	3.2%	4.0%	7.6%	2.3%	3.6%
Arc welding	1,061	4,861	5,922	1,254	3,585	4,839	18.2%	-26.2%	-18.3%	9.2%	12.1%	11.5%	11.1%	10.3%	10.5%
Spot welding	1,150	3,684	4,834	1,013	3,708	4,721	-11.9%	0.7%	-2.3%	10.0%	9.2%	9.4%	8.9%	10.6%	10.2%
Laser welding				3	55	58							0.0%	0.2%	0.1%
Others	14	7	21	40	64	104	185.7%	814.3%	395.2%	0.1%	0.0%	0.0%	0.4%	0.2%	0.2%
Welding Units	2,225	8,552	10,777	2,310	7,412	9,722	3.8%	-13.3%	-9.8%	19.3%	21.3%	20.9%	20.4%	21.3%	21.1%
(million yen)	(10,026)	(21,727)	(31,753)	(11,355)	(16,409)	(27,765)	(13.3%)	(-24.5%)	(-12.6%)	(20.9%)	(15.7%)	(17.1%)	(21.0%)	(13.5%)	(15.8%)
Painting	206	695	901	166	513	679	-19.4%	-26.2%	-24.6%	1.8%	1.7%	1.7%	1.5%	1.5%	1.5%
Loading/unloading	647	1,635	2,282	539	2,483	3,022	-16.7%	51.9%	32.4%	5.6%	4.1%	4.4%	4.8%	7.1%	6.5%
Mechanical cutting	2		2		3	3	-100.0%		50.0%	0.0%		0.0%		0.0%	0.0%
Grinding/deburring	86	8	94	55	20	75	-36.0%	150.0%	-20.2%	0.7%	0.0%	0.2%	0.5%	0.1%	0.2%
Others	6	8	14	13	17	30	116.7%	112.5%	114.3%	0.1%	0.0%	0.0%	0.1%	0.0%	0.1%
Machining Units	741	1,651	2,392	607	2,523	3,130	-18.1%	52.8%	30.9%	6.4%	4.1%	4.6%	5.4%	7.2%	6.8%
(million yen)	(1,821)	(2,326)	(4,147)	(1,668)	(5,492)	(7,161)	(-8.4%)	(136.1%)	(72.7%)	(3.8%)	(1.7%)	(2.2%)	(3.1%)	(4.5%)	(4.1%)
Surface Mount Technology	387	3,599	3,986	313	3,075	3,388	-19.1%	-14.6%	-15.0%	3.4%	9.0%	7.7%	2.8%	8.8%	7.3%
General Assembly	2,008	8,921	10,929	1,843	7,939	9,781	-8.2%	-11.0%	-10.5%	17.5%	22.2%	21.2%	16.3%	22.8%	21.2%
Other Assembly	44	142	186	150	253	403	241.1%	78.2%	116.7%	0.4%	0.4%	0.4%	1.3%	0.7%	0.9%
Bonding															
Soldering	1		1	2		2	100.0%		100.0%	0.0%		0.0%	0.0%		0.0%
Sealing/glueing	18	83	101	25	106	131	38.9%	27.7%	29.7%	0.2%	0.2%	0.2%	0.2%	0.3%	0.3%
Screwing	23		23	1		1	-95.7%		-95.7%	0.2%		0.0%	0.0%		0.0%
Others	2	59	61	122	147	269	6004.6%	149.2%	341.1%	0.0%	0.1%	0.1%	1.1%	0.4%	0.6%
Assembly Units	2,052	9,063	11,115	1,993	8,192	10,185	-2.9%	-9.6%	-8.4%	17.8%	22.6%	21.5%	17.6%	23.5%	22.1%
(million yen)	(4,027)	(9,697)	(13,723)	(5,751)	(9,031)	(14,782)	(42.8%)	(-6.9%)	(7.7%)	(8.4%)	(7.0%)	(7.4%)	(10.6%)	(7.4%)	(8.4%)
Palletizing/depalletizing	242	617	859	475	532	1,006	96.1%	-13.8%	17.1%	2.1%	1.5%	1.7%	4.2%	1.5%	2.2%
Material handling	2,282	10,946	13,228	2,652	7,074	9,726	16.2%	-35.4%	-26.5%	19.8%	27.3%	25.6%	23.4%	20.3%	21.1%
FPD	50	129	179	34	54	88	-32.0%	-58.1%	-50.8%	0.4%	0.3%	0.3%	0.3%	0.2%	0.2%
Semiconductor	1,530	2,112	3,642	1,173	1,173	2,346	-23.3%	-44.5%	-35.6%	13.3%	5.3%	7.1%	10.4%	3.4%	5.1%
Others	2		2		60	60	-100.0%		2900.0%	0.0%		0.0%		0.2%	0.1%
Cleanroom Units	1,582	2,241	3,823	1,207	1,287	2,494	-23.7%	-42.6%	-34.8%	13.7%	5.6%	7.4%	10.7%	3.7%	5.4%
(million yen)	(5,558)	(6,081)	(11,638)	(4,896)	(4,042)	(8,938)	(-11.9%)	(-33.5%)	(-23.2%)	(11.6%)	(4.4%)	(6.3%)	(9.0%)	(3.3%)	(5.1%)
Other applications	989	1,466	2,455	578	929	1,507	-41.5%	-36.6%	-38.6%	8.6%	3.7%	4.8%	5.1%	2.7%	3.3%
Unspecified				170	2,480	2,650							1.5%	7.1%	5.7%
Total Units	11,506	40,113	51,619	11,328	34,833	46,161	-1.5%	-13.2%	-10.6%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
(million yen)	(48,010)	(138,077)	(186,086)	(54,116)	(121,815)	(175,931)	(12.7%)	(-11.8%)	(-5.5%)	(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.

July - September 2019 Results
Shipments of Manipulators and Robots by Industries
[JARA Member Companies]

Number of units, () : million yen

Industries	2018 Jul. - Sep.	2019 Jul. - Sep.	Change from 2018	Percentage distribution	
				2018	2019
Metal products	962	952	-1.0%	8.4%	8.4%
Construction and mining machinery	31	62	100.0%	0.3%	0.5%
Metalworking machinery	193	214	10.9%	1.7%	1.9%
Other machinery and equipment	706	627	-11.2%	6.1%	5.5%
Machinery and equipment Units	930	903	-2.9%	8.1%	8.0%
(million yen)	(4,003)	(4,748)	(18.6%)	(8.3%)	(8.8%)
Electronic computers		8			0.1%
Consumer electrical machinery	336	401	19.2%	2.9%	3.5%
Industrial electrical machinery	217	165	-24.0%	1.9%	1.5%
Communication equipment	233	380	63.3%	2.0%	3.4%
Video and audio equipment	11	7	-36.4%	0.1%	0.1%
Electronic components/devices/circuits	1,437	1,072	-25.4%	12.5%	9.5%
Other electrical machinery	888	752	-15.3%	7.7%	6.6%
Electrical machinery Units	3,122	2,785	-10.8%	27.1%	24.6%
(million yen)	(14,142)	(14,532)	(2.8%)	(29.5%)	(26.9%)
Precision instruments	190	105	-44.7%	1.7%	0.9%
Motor vehicles	1,160	1,116	-3.8%	10.1%	9.9%
Auto parts	2,820	3,031	7.5%	24.5%	26.8%
Motor vehicles and auto parts Units	3,980	4,147	4.2%	34.6%	36.6%
(million yen)	(16,010)	(18,289)	(14.2%)	(33.3%)	(33.8%)
Other transport equipment	66	84	27.3%	0.6%	0.7%
Food products, beverages, and tobacco products	233	248	6.4%	2.0%	2.2%
Chemical products	125	132	5.6%	1.1%	1.2%
Plastic products	270	321	18.9%	2.3%	2.8%
Other industries	1,569	912	-41.9%	13.6%	8.0%
Non-manufacturing industry	59	111	88.1%	0.5%	1.0%
Unspecified		628			5.5%
Total domestic shipments Units	11,506	11,328	-1.5%	100.0%	100.0%
(million yen)	(48,010)	(54,116)	(12.7%)	(22.3%)	(24.5%)
				(100.0%)	(100.0%)
				(25.8%)	(30.8%)
Export Units	40,113	34,833	-13.2%	(77.7%)	(75.5%)
(million yen)	(138,077)	(121,815)	(-11.8%)	(74.2%)	(69.2%)
Grand total Units	51,619	46,161	-10.6%	(100.0%)	(100.0%)
(million yen)	(186,086)	(175,931)	(-5.5%)	(100.0%)	(100.0%)

Note)

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