

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

Number of units, () : million yen

	January - March 2018	January - March 2019	Change from 2018
Orders	63,551 (218,845)	41,075 (156,017)	-35.4% (-28.7%)
Production	55,807 (183,784)	42,185 (162,502)	-24.4% (-11.6%)

Shipments Applications	January - March 2018			January - March 2019			Change from 2018			January - March 2018 (percentage distribution)			January - March 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	976	1,397	2,373	1,071	1,142	2,213	9.7%	-18.3%	-6.7%	7.5%	3.2%	4.2%	8.1%	3.8%	5.1%
Arc welding	1,502	4,611	6,113	1,356	3,885	5,241	-9.7%	-15.7%	-14.3%	11.6%	10.5%	10.8%	10.2%	13.0%	12.2%
Spot welding	1,614	5,016	6,630	1,425	2,915	4,340	-11.7%	-41.9%	-34.5%	12.5%	11.4%	11.7%	10.8%	9.8%	10.1%
Laser welding	5	17	22	1	1	1	-80.0%		-95.5%	0.0%	0.0%	0.0%	0.0%		0.0%
Others	22	11	33	22	2	24		-81.8%	-27.3%	0.2%	0.0%	0.1%	0.2%	0.0%	0.1%
Welding Units	3,143	9,655	12,798	2,804	6,802	9,606	-10.8%	-29.5%	-24.9%	24.3%	22.0%	22.5%	21.2%	22.8%	22.3%
(million yen)	(13,566)	(24,228)	(37,794)	(12,018)	(18,027)	(30,045)	(-11.4%)	(-25.6%)	(-20.5%)	(24.3%)	(18.2%)	(20.0%)	(20.6%)	(16.5%)	(17.9%)
Painting	167	491	658	284	392	676	70.1%	-20.2%	2.7%	1.3%	1.1%	1.2%	2.1%	1.3%	1.6%
Loading/unloading	668	3,067	3,735	670	1,044	1,714	0.3%	-66.0%	-54.1%	5.2%	7.0%	6.6%	5.1%	3.5%	4.0%
Mechanical cutting	6		6	2		2	-66.7%		-66.7%	0.0%		0.0%	0.0%		0.0%
Grinding/deburring	121	89	210	67	22	89	-44.6%	-75.3%	-57.6%	0.9%	0.2%	0.4%	0.5%	0.1%	0.2%
Others	4	2	6	13		13	225.0%		116.7%	0.0%	0.0%	0.0%	0.1%		0.0%
Machining Units	799	3,158	3,957	752	1,066	1,818	-5.9%	-66.2%	-54.1%	6.2%	7.2%	7.0%	5.7%	3.6%	4.2%
(million yen)	(2,008)	(3,354)	(5,362)	(1,975)	(1,696)	(3,671)	(-1.7%)	(-49.4%)	(-31.5%)	(3.6%)	(2.5%)	(2.8%)	(3.4%)	(1.6%)	(2.2%)
Surface Mount Technology	405	2,881	3,286	353	2,388	2,741	-12.8%	-17.1%	-16.6%	3.1%	6.6%	5.8%	2.7%	8.0%	6.4%
General Assembly	1,770	9,669	11,439	1,992	5,443	7,435	12.5%	-43.7%	-35.0%	13.7%	22.0%	20.1%	15.1%	18.2%	17.3%
Other Assembly	40	336	376	38	139	177	-5.0%	-58.6%	-52.9%	0.3%	0.8%	0.7%	0.3%	0.5%	0.4%
Bonding	1		1							0.0%		0.0%			0.0%
Soldering				1		1							0.0%		0.0%
Sealing/glueing	22	138	160	23	90	113	4.5%	-34.8%	-29.4%	0.2%	0.3%	0.3%	0.2%	0.3%	0.3%
Screwing	8	2	10	3		3	-62.5%		-70.0%	0.1%	0.0%	0.0%	0.0%		0.0%
Others	9	196	205	11	49	60	22.2%	-75.0%	-70.7%	0.1%	0.4%	0.4%	0.1%	0.2%	0.1%
Assembly Units	1,810	10,005	11,815	2,030	5,582	7,612	12.2%	-44.2%	-35.6%	14.0%	22.8%	20.8%	15.3%	18.7%	17.7%
(million yen)	(3,717)	(10,263)	(13,980)	(3,722)	(6,844)	(10,566)	(0.1%)	(-33.3%)	(-24.4%)	(6.7%)	(7.7%)	(7.4%)	(6.4%)	(6.3%)	(6.3%)
Palletizing/depalletizing	291	471	762	322	404	726	10.7%	-14.2%	-4.7%	2.2%	1.1%	1.3%	2.4%	1.4%	1.7%
Material handling	2,618	11,321	13,939	2,916	9,358	12,274	11.4%	-17.3%	-11.9%	20.2%	25.8%	24.5%	22.0%	31.3%	28.5%
FPD	26	167	193	26	111	137		-33.5%	-29.0%	0.2%	0.4%	0.3%	0.2%	0.4%	0.3%
Semiconductor	1,645	3,324	4,969	1,743	1,305	3,048	6.0%	-60.7%	-38.7%	12.7%	7.6%	8.7%	13.2%	4.4%	7.1%
Others		1	1		4	4		300.0%	300.0%		0.0%	0.0%		0.0%	0.0%
Cleanroom Units	1,671	3,492	5,163	1,769	1,420	3,189	5.9%	-59.3%	-38.2%	12.9%	8.0%	9.1%	13.4%	4.8%	7.4%
(million yen)	(6,219)	(8,620)	(14,839)	(6,101)	(4,547)	(10,648)	(-1.9%)	(-47.3%)	(-28.2%)	(11.1%)	(6.5%)	(7.9%)	(10.5%)	(4.2%)	(6.4%)
Other applications	1,065	995	2,060	792	916	1,708	-25.6%	-7.9%	-17.1%	8.2%	2.3%	3.6%	6.0%	3.1%	4.0%
Unspecified				140	386	526							1.1%	1.3%	1.2%
Total Units	12,945	43,866	56,811	13,233	29,856	43,089	2.2%	-31.9%	-24.2%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
(million yen)	(55,842)	(133,151)	(188,993)	(58,239)	(109,367)	(167,606)	(4.3%)	(-17.9%)	(-11.3%)	(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 2019 Results
Shipments of Manipulators and Robots by Industries
[JARA Member Companies]

Number of units, () : million yen

Industries	2018 Jan. - Mar.	2019 Jan. - Mar.	Change from 2018	Percentage distribution	
				2018	2019
Metal products	822	901	9.6%	6.3%	6.8%
Construction and mining machinery	22	28	27.3%	0.2%	0.2%
Metalworking machinery	178	239	34.3%	1.4%	1.8%
Other machinery and equipment	1,065	745	-30.0%	8.2%	5.6%
Machinery and equipment Units	1,265	1,012	-20.0%	9.8%	7.6%
(million yen)	(5,235)	(4,178)	(-20.2%)	(9.4%)	(7.2%)
Electronic computers	1	4	300.0%	0.0%	0.0%
Consumer electrical machinery	435	454	4.4%	3.4%	3.4%
Industrial electrical machinery	508	294	-42.1%	3.9%	2.2%
Communication equipment	203	212	4.4%	1.6%	1.6%
Video and audio equipment	1	17	1600.0%	0.0%	0.1%
Electronic components/devices/circuits	1,345	1,715	27.5%	10.4%	13.0%
Other electrical machinery	833	904	8.5%	6.4%	6.8%
Electrical machinery Units	3,326	3,600	8.2%	25.7%	27.2%
(million yen)	(16,338)	(16,425)	(0.5%)	(29.3%)	(28.2%)
Precision instruments	176	195	10.8%	1.4%	1.5%
Motor vehicles	1,937	1,459	-24.7%	15.0%	11.0%
Auto parts	3,040	3,370	10.9%	23.5%	25.5%
Motor vehicles and auto parts Units	4,977	4,829	-3.0%	38.4%	36.5%
(million yen)	(20,222)	(20,478)	(1.3%)	(36.2%)	(35.2%)
Other transport equipment	62	91	46.8%	0.5%	0.7%
Food products, beverages, and tobacco products	271	345	27.3%	2.1%	2.6%
Chemical products	114	97	-14.9%	0.9%	0.7%
Plastic products	408	426	4.4%	3.2%	3.2%
Other industries	1,412	715	-49.4%	10.9%	5.4%
Non-manufacturing industry	112	139	24.1%	0.9%	1.1%
Unspecified		883			6.7%
Total domestic shipments Units	12,945	13,233	2.2%	100.0%	100.0%
(million yen)	(55,842)	(58,239)	(4.3%)	(22.8%)	(30.7%)
				(100.0%)	(100.0%)
				(29.5%)	(34.7%)
Export Units	43,866	29,856	-31.9%	(77.2%)	(69.3%)
(million yen)	(133,151)	(109,367)	(-17.9%)	(70.5%)	(65.3%)
Grand total Units	56,811	43,089	-24.2%	(100.0%)	(100.0%)
(million yen)	(188,993)	(167,606)	(-11.3%)	(100.0%)	(100.0%)

Note)

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