## **April - June 2018 Results** Production and Shipments of Manipulators and Robots by Applications [JARA Member Companies]

Number of units, (): million yen

	April - June 2017	April - June 2018	Change from 2017
Orders	56,795	60,577	6.7%
	(204,899)	(212,597)	(3.8%)
Production	55,472	57,162	3.0%
	(173,338)	(184,095)	(6.2%)

Shipments	Shipments April - June 2017		April - June 2018			Change from 2017		April - June 2017			April - June 2018				
		April - Julie 2017		•	April - June 2016		Change from 2017		(percentage distribution)		ution)	(percentage distribution)			
Applications	Domestic shipments	Exports	Total	Domestic shipments	Exports	Total	Domestic shipments	Exports	Total	Domestic shipments	Exports	Total	Domestic shipments	Exports	Total
Plastic moulding	738	1,416	2,154	838	1,625	2,463	13.6%	14.8%	14.3%	8.6%	3.0%	3.9%	8.3%	3.5%	4.3%
Arc welding	683	4,333	5,016	1,212	5,160	6,372	77.5%	19.1%	27.0%	7.9%	9.3%	9.1%	12.0%	11.0%	11.2%
Spot welding	681	6,031	6,712	592	4,705	5,297	-13.1%	-22.0%	-21.1%	7.9%	13.0%	12.2%	5.9%	10.1%	9.3%
Laser welding	2	1	3	1	4	5	-50.0%	300.0%	66.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Others	10	23	33	9	14	23	-10.0%	-39.1%	-30.3%	0.1%	0.0%	0.1%	0.1%	0.0%	0.0%
Welding Units	1,376	10,388	11,764	1,814	9,883	11,697	31.8%	-4.9%	-0.6%	16.0%	22.3%	21.3%	18.0%	21.2%	20.6%
(million yen)	(7,376)	(25,138)	(32,514)	(8,698)	(25,009)	(33,707)	(17.9%)	(-0.5%)	(3.7%)	(18.1%)	(18.5%)	(18.4%)	(20.1%)	(17.3%)	(17.9%)
Painting	198	415	613	78	479	557	-60.6%	15.4%	-9.1%	2.3%	0.9%	1.1%	0.8%	1.0%	1.0%
Loading/unloading	461	2,955	3,416	488	2,051	2,539	5.9%	-30.6%	-25.7%	5.4%	6.4%	6.2%	4.8%	4.4%	4.5%
Mechanical cutting	9	2	11							0.1%	0.0%	0.0%			
Grinding/deburring	80	209	289	37	14	51	-53.8%	-93.3%	-82.4%	0.9%	0.4%	0.5%	0.4%	0.0%	0.1%
Others	8	9	17	9	4	13	12.5%	-55.6%	-23.5%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%
Machining Units	558	3,175	3,733	534	2,069	2,603	-4.3%	-34.8%	-30.3%	6.5%	6.8%	6.8%	5.3%	4.4%	4.6%
(million yen)	(1,560)	(3,713)	(5,273)	(1,499)	(2,652)	(4,151)	(-3.9%)	(-28.6%)	(-21.3%)	(3.8%)	(2.7%)	(3.0%)	(3.5%)	(1.8%)	(2.2%)
Surface Mount Technology	434	3,354	3,788	369	3,891	4,260	-15.0%	16.0%	12.5%	5.0%	7.2%	6.9%	3.7%	8.3%	7.5%
General Assembly	1,617	9,599	11,216	1,723	11,633	13,356	6.6%	21.2%	19.1%	18.8%	20.6%	20.3%	17.1%	24.9%	23.5%
Other Assembly	10	352	362	17	199	216	70.0%	-43.5%	-40.3%	0.1%	0.8%	0.7%	0.2%	0.4%	0.4%
Bonding															
Soldering				2		2							0.0%		0.0%
Sealing/glueing	8	238	246	4	89	93	-50.0%	-62.6%	-62.2%	0.1%	0.5%	0.4%	0.0%	0.2%	0.2%
Screwing	1	3	4	5	2	7	400.0%	-33.3%	75.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Others	1	111	112	6	108	114	500.0%	-2.7%	1.8%	0.0%	0.2%	0.2%	0.1%	0.2%	0.2%
<b>Assembly</b> Units	1,627	9,951	11,578	1,740	11,832	13,572	6.9%	18.9%	17.2%	18.9%	21.4%	21.0%	17.3%	25.3%	23.9%
(million yen)	(3,308)	(9,948)	(13,255)	(3,464)	(11,384)	(14,848)	(4.7%)	(14.4%)	(12.0%)	(8.1%)	(7.3%)	(7.5%)	(8.0%)	(7.9%)	(7.9%)
Palletizing/depalletizing	178	533	711	212	514	726	19.1%	-3.6%	2.1%	2.1%	1.1%	1.3%	2.1%	1.1%	1.3%
Material handling	1,608	13,570	15,178	2,037	12,270	14,307	26.7%	-9.6%	-5.7%	18.7%	29.2%	27.5%	20.2%	26.3%	25.2%
FPD	37	167	204	50	216	266	35.1%	29.3%	30.4%	0.4%	0.4%	0.4%	0.5%	0.5%	0.5%
Semiconductor	1,313	2,730	4,043	1,502	2,631	4,133	14.4%	-3.6%	2.2%	15.2%	5.9%	7.3%	14.9%	5.6%	7.3%
Others	5		5							0.1%		0.0%			
<b>Cleanroom</b> Units	1,355	2,897	4,252	1,552	2,847	4,399	14.5%	-1.7%	3.5%	15.7%	6.2%	7.7%	15.4%	6.1%	7.7%
(million yen)	(6,502)	(8,256)	(14,759)	(5,701)	(6,797)	(12,497)	(-12.3%)	(-17.7%)	(-15.3%)	(15.9%)	(6.1%)	(8.4%)	(13.2%)	(4.7%)	(6.6%)
Other applications	541	828	1,369	893	1,301	2,194	65.1%	57.1%	60.3%	6.3%	1.8%	2.5%	8.9%	2.8%	3.9%
<b>Total</b> Units	8,613	46,527	55,140	10,067	46,711	56,778	16.9%	0.4%	3.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
(million yen)	(40,823)	(135,722)	(176,545)	(43,336)	(144,680)	(188,016)	(6.2%)	(6.6%)	(6.5%)	(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.

## April - June 2018 Results Shipments of Manipulators and Robots by Industries [JARA Member Companies]

Number of units, (): million yen

	2017	2018	Change	Percentage distribution			
Industries	Apr Jun.	Apr Jun.	from 2017	2017	2018		
Metal products	472	614	30.1%	5.5%	6.1%		
Construction and mining machin	18	22	22.2%	0.2%	0.2%		
Metalworking machinery	164	163	-0.6%	1.9%	1.6%		
Other machinery and equipment	668	900	34.7%	7.8%	8.9%		
Machinery and equipment	Units	850	1,085	27.6%	9.9%	10.8%	
	million yen)	(3,235)	(4,662)	(44.1%)	(7.9%)	(10.8%)	
Electronic computers		2	5	150.0%	0.0%	0.0%	
Consumer electrical machinery		369	276	-25.2%	4.3%	2.7%	
Industrial electrical machinery		130	296	127.7%	1.5%	2.9%	
Communication equipment		277	200	-27.8%	3.2%	2.0%	
Video and audio equipment	Video and audio equipment				0.0%	0.0%	
Electronic components/devices/	1,110	1,305	17.6%	12.9%	13.0%		
Other electrical machinery	<u> </u>			-0.4%	10.7%	9.1%	
Electrical machinery	Units	2,810	3,000	6.8%	32.6%	29.8%	
(r	million yen)	(14,029)	(14,438)	(2.9%)	(34.4%)	(33.3%)	
Precision instruments		119	122	2.5%	1.4%	1.2%	
Motor vehicles		883	788	-10.8%	10.3%	7.8%	
Auto parts		1,753	2,317	32.2%	20.4%	23.0%	
Motor vehicles and auto parts	Units	2,636	3,105	17.8%	30.6%	30.8%	
(r	million yen)	(11,931)	(12,923)	(8.3%)	(29.2%)	(29.8%)	
Other transport equpment	41	75	82.9%	0.5%	0.7%		
Food products, beverages, and tobacco	165	201	21.8%	1.9%	2.0%		
Chemical products		76	82	7.9%	0.9%	0.8%	
Plastic products		290	332	14.5%	3.4%	3.3%	
Other industries		1,112	1,403	26.2%	12.9%	13.9%	
Non-manufacturing industry	42	48	14.3%	0.5%	0.5%		
Total domestic shipments	Units	8,613	10,067	16.9%	100.0%	100.0%	
					(15.6%)	(17.7%)	
(r	million yen)	(40,823)	(43,336)	(6.2%)	(100.0%)	(100.0%)	
					(23.1%)	(23.0%)	
Export	Units	46,527	46,711	0.4%	(84.4%)	(82.3%)	
(r	million yen)	(135,722)	(144,680)	(6.6%)	(76.9%)	(77.0%)	
Grand total	Units	55,140	56,778	3.0%	(100.0%)	(100.0%)	
(r	million yen)	(176,545)	(188,016)	(6.5%)	(100.0%)	(100.0%)	
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