

**April - June 2014 Results**  
**Production and Shipments of Manipulators and Robots by Application Areas**  
**[JARA Member Companies]**

Number of units, ( ): million yen

| Production | April - June 2013 | April - June 2014   | Change from 2013    |
|------------|-------------------|---------------------|---------------------|
|            |                   | 24,125<br>(100,250) | 33,388<br>(121,842) |

| Shipments                        | April - June 2013 |                    |           | April - June 2014 |                    |           | Change from 2013 |                    |           | April - June 2013<br>(percentage distribution) |                    |          | April - June 2014<br>(percentage distribution) |                    |          |
|----------------------------------|-------------------|--------------------|-----------|-------------------|--------------------|-----------|------------------|--------------------|-----------|--|--------------------|----------|--|--------------------|----------|
|                                  | Application area  | Domestic shipments | Exports   | Total             | Domestic shipments | Exports   | Total            | Domestic shipments | Exports   | Total  | Domestic shipments | Exports  | Total  | Domestic shipments | Exports  |
| <b>Plastic moulding</b>          | 422               | 1,520              | 1,942     | 434               | 959                | 1,393     | +2.8%            | -36.9%             | -28.3%    | 9.0%   | 7.9%               | 8.1%     | 6.8%   | 3.5%               | 4.1%     |
| Arc welding                      | 594               | 3,703              | 4,297     | 766               | 4,745              | 5,511     | +29.0%           | +28.1%             | +28.3%    | 12.6%  | 19.3%              | 18.0%    | 12.0%  | 17.4%              | 16.4%    |
| Spot welding                     | 570               | 2,658              | 3,228     | 995               | 4,229              | 5,224     | +74.6%           | +59.1%             | +61.8%    | 12.1%  | 13.9%              | 13.5%    | 15.5%  | 15.5%              | 15.5%    |
| Laser welding                    | 10                | 3                  | 13        | 9                 | 49                 | 58        | -10.0%           | +1,533.3%          | +346.2%   | 0.2%   | 0.0%               | 0.1%     | 0.1%   | 0.2%               | 0.2%     |
| Others                           | 4                 | 1                  | 5         | 4                 | 2                  | 6         | +100.0%          | +20.0%             | +20.0%    | 0.1%   | 0.0%               | 0.0%     | 0.1%   | 0.0%               | 0.0%     |
| <b>Welding</b> Units             | 1,178             | 6,365              | 7,543     | 1,774             | 9,025              | 10,799    | +50.6%           | +41.8%             | +43.2%    | 25.1%  | 33.2%              | 31.6%    | 27.7%  | 33.2%              | 32.1%    |
| (million yen)                    | (5,483)           | (15,647)           | (21,130)  | (7,320)           | (22,259)           | (29,579)  | (+33.5%)         | (+42.3%)           | (+40.0%)  | (22.1%)  | (20.7%)            | (21.0%)  | (28.8%)  | (23.7%)            | (24.8%)  |
| <b>Painting</b>                  | 72                | 329                | 401       | 60                | 266                | 326       | -16.7%           | -19.1%             | -18.7%    | 1.5%   | 1.7%               | 1.7%     | 0.9%   | 1.0%               | 1.0%     |
| Loading/unloading                | 192               | 888                | 1,080     | 286               | 1,211              | 1,497     | +49.0%           | +36.4%             | +38.6%    | 4.1%   | 4.6%               | 4.5%     | 4.5%   | 4.4%               | 4.5%     |
| Mechanical cutting               | 1                 | 5                  | 6         |                   |                    |           | -100.0%          | -100.0%            | -100.0%   | 0.0%   | 0.0%               | 0.0%     | 0.0%   | 0.0%               | 0.0%     |
| Grinding/deburring               | 15                | 5                  | 20        | 32                | 15                 | 47        | +113.3%          | +200.0%            | +135.0%   | 0.3%   | 0.0%               | 0.1%     | 0.5%   | 0.1%               | 0.1%     |
| Others                           | 10                |                    | 10        | 10                | 4                  | 14        |                  |                    | +40.0%    | 0.2%   | 0.0%               | 0.0%     | 0.2%   | 0.0%               | 0.0%     |
| <b>Machining</b> Units           | 218               | 898                | 1,116     | 328               | 1,230              | 1,558     | +50.5%           | +37.0%             | +39.6%    | 4.6%   | 4.7%               | 4.7%     | 5.1%   | 4.5%               | 4.6%     |
| (million yen)                    | (733)             | (1,356)            | (2,089)   | (723)             | (1,855)            | (2,578)   | (-1.3%)          | (+36.8%)           | (+23.4%)  | (3.0%)   | (1.8%)             | (2.1%)   | (2.8%)   | (2.0%)             | (2.2%)   |
| <b>Surface Mount Technology</b>  | 224               | 2,379              | 2,603     | 219               | 2,386              | 2,605     | -2.2%            | +0.3%              | +0.1%     | 4.8%   | 12.4%              | 10.9%    | 3.4%   | 8.8%               | 7.7%     |
| General Assembly                 | 875               | 2,125              | 3,000     | 1,318             | 6,506              | 7,824     | +50.6%           | +206.2%            | +160.8%   | 18.6%  | 11.1%              | 12.6%    | 20.6%  | 23.9%              | 23.3%    |
| Other Assembly                   | 22                | 131                | 153       | 9                 | 43                 | 52        | -59.1%           | -67.2%             | -66.0%    | 0.5%   | 0.7%               | 0.6%     | 0.1%   | 0.2%               | 0.2%     |
| Bonding                          |                   | 6                  | 6         |                   |                    |           |                  | -100.0%            | -100.0%   |  | 0.0%               | 0.0%     |  |                    |          |
| Soldering                        |                   |                    |           |                   |                    |           |                  |                    |           |  |                    |          |  |                    |          |
| Sealing/glueing                  | 11                | 78                 | 89        | 5                 | 31                 | 36        | -54.5%           | -60.3%             | -59.6%    | 0.2%   | 0.4%               | 0.4%     | 0.1%   | 0.1%               | 0.1%     |
| Screwing                         | 5                 |                    | 5         |                   |                    |           | -100.0%          |                    | -100.0%   | 0.1%   |                    | 0.0%     |  |                    |          |
| Others                           | 6                 | 47                 | 53        | 4                 | 12                 | 16        | -33.3%           | -74.5%             | -69.8%    | 0.1%   | 0.2%               | 0.2%     | 0.1%   | 0.0%               | 0.0%     |
| <b>Assembly</b> Units            | 897               | 2,256              | 3,153     | 1,327             | 6,549              | 7,876     | +47.9%           | +190.3%            | +149.8%   | 19.1%  | 11.8%              | 13.2%    | 20.7%  | 24.1%              | 23.4%    |
| (million yen)                    | (1,691)           | (2,916)            | (4,607)   | (2,179)           | (8,755)            | (10,933)  | (+28.8%)         | (+200.2%)          | (+137.3%) | (6.8%)   | (3.9%)             | (4.6%)   | (8.6%)   | (9.3%)             | (9.2%)   |
| <b>Palletizing/depalletizing</b> | 150               | 433                | 583       | 146               | 358                | 504       | -2.7%            | -17.3%             | -13.6%    | 3.2%   | 2.3%               | 2.4%     | 2.3%   | 1.3%               | 1.5%     |
| <b>Material handling</b>         | 652               | 3,350              | 4,002     | 1,116             | 4,736              | 5,852     | +71.2%           | +41.4%             | +46.2%    | 13.9%  | 17.5%              | 16.8%    | 17.4%  | 17.4%              | 17.4%    |
| FPD                              | 67                | 298                | 365       | 49                | 82                 | 131       | -26.9%           | -72.5%             | -64.1%    | 1.4%   | 1.6%               | 1.5%     | 0.8%   | 0.3%               | 0.4%     |
| Semiconductor                    | 504               | 898                | 1,402     | 658               | 854                | 1,512     | +30.6%           | -4.9%              | +7.8%     | 10.7%  | 4.7%               | 5.9%     | 10.3%  | 3.1%               | 4.5%     |
| Others                           | 1                 |                    | 1         |                   |                    |           | -100.0%          |                    | -100.0%   | 0.0%   |                    | 0.0%     |  |                    |          |
| <b>Cleanroom</b> Units           | 572               | 1,196              | 1,768     | 707               | 936                | 1,643     | +23.6%           | -21.7%             | -7.1%     | 12.2%  | 6.2%               | 7.4%     | 11.0%  | 3.4%               | 4.9%     |
| (million yen)                    | (3,626)           | (4,178)            | (7,804)   | (3,725)           | (3,349)            | (7,074)   | (+2.7%)          | (-19.9%)           | (-9.4%)   | (14.6%)  | (5.5%)             | (7.8%)   | (14.6%)  | (3.6%)             | (5.9%)   |
| <b>Other applications</b>        | 315               | 430                | 745       | 290               | 770                | 1,060     | -7.9%            | +79.1%             | +42.3%    | 6.7%   | 2.2%               | 3.1%     | 4.5%   | 2.8%               | 3.2%     |
| <b>Total</b> Units               | 4,700             | 19,156             | 23,856    | 6,401             | 27,215             | 33,616    | +36.2%           | +42.1%             | +40.9%    | 100.0%   | 100.0%             | 100.0%   | 100.0%   | 100.0%             | 100.0%   |
| (million yen)                    | (24,823)          | (75,638)           | (100,460) | (25,462)          | (93,767)           | (119,229) | (+2.6%)          | (+24.0%)           | (+18.7%)  | (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 2014 Results**  
**Shipments of Manipulators and Robots by Industrial Branches**  
**[JARA Member Companies]**

Number of units, ( ): million yen

| Industrial branches                                   | 2013<br>Apr-Jun  | 2014<br>Apr-Jun  | Change<br>from 2013 | Percentage distribution |                 |
|---|------------------|------------------|---------------------|-------------------------|-----------------|
|   |                  |                  |                     | 2013                    | 2014            |
| <b>Metal products</b>                                 | <b>182</b>       | <b>253</b>       | <b>+39.0%</b>       | <b>3.9%</b>             | <b>4.0%</b>     |
| Construction machinery                                | 14               | 21               | +50.0%              | 0.3%                    | 0.3%            |
| Metalworking machinery                                | 84               | 138              | +64.3%              | 1.8%                    | 2.2%            |
| Other machinery and equipment                         | 62               | 182              | +193.5%             | 1.3%                    | 2.8%            |
| <b>Machinery and equipment</b>                        | <b>160</b>       | <b>341</b>       | <b>+113.1%</b>      | <b>3.4%</b>             | <b>5.3%</b>     |
| Units   |                  |                  |                     |                         |                 |
| (million yen)   | <b>(684)</b>     | <b>(1,075)</b>   | <b>(+57.2%)</b>     | <b>(2.8%)</b>           | <b>(4.2%)</b>   |
| Computers   | 5                | 8                | +60.0%              | 0.1%                    | 0.1%            |
| Consumer electrical machinery                         | 76               | 100              | +31.6%              | 1.6%                    | 1.6%            |
| Industrial electrical machinery                       | 136              | 49               | -64.0%              | 2.9%                    | 0.8%            |
| Info-communications equipment                         | 156              | 270              | +73.1%              | 3.3%                    | 4.2%            |
| VTR   |                  |                  |                     |                         |                 |
| Electronic components/devices                         | 578              | 696              | +20.4%              | 12.3%                   | 10.9%           |
| Other electrical machinery                            | 503              | 610              | +21.3%              | 10.7%                   | 9.5%            |
| <b>Electrical machinery</b>                           | <b>1,454</b>     | <b>1,733</b>     | <b>+19.2%</b>       | <b>30.9%</b>            | <b>27.1%</b>    |
| Units   |                  |                  |                     |                         |                 |
| (million yen)   | <b>(9,595)</b>   | <b>(8,098)</b>   | <b>(-15.6%)</b>     | <b>(38.7%)</b>          | <b>(31.8%)</b>  |
| <b>Precision and optical instruments</b>              | <b>78</b>        | <b>94</b>        | <b>+20.5%</b>       | <b>1.7%</b>             | <b>1.5%</b>     |
| Motor vehicles  | 549              | 1,004            | +82.9%              | 11.7%                   | 15.7%           |
| Auto parts  | 1,167            | 1,595            | +36.7%              | 24.8%                   | 24.9%           |
| <b>Motor vehicles and auto parts</b>                  | <b>1,716</b>     | <b>2,599</b>     | <b>+51.5%</b>       | <b>36.5%</b>            | <b>40.6%</b>    |
| Units   |                  |                  |                     |                         |                 |
| (million yen)   | <b>(7,926)</b>   | <b>(9,670)</b>   | <b>(+22.0%)</b>     | <b>(31.9%)</b>          | <b>(38.0%)</b>  |
| <b>Food products, beverages, and tobacco products</b> | <b>132</b>       | <b>124</b>       | <b>-6.1%</b>        | <b>2.8%</b>             | <b>1.9%</b>     |
| <b>Plastic products</b>                               | <b>427</b>       | <b>457</b>       | <b>+7.0%</b>        | <b>9.1%</b>             | <b>7.1%</b>     |
| <b>Chemical products</b>                              | <b>33</b>        | <b>83</b>        | <b>+151.5%</b>      | <b>0.7%</b>             | <b>1.3%</b>     |
| <b>Other industries</b>                               | <b>518</b>       | <b>717</b>       | <b>+38.4%</b>       | <b>11.0%</b>            | <b>11.2%</b>    |
| <b>Total domestic shipments</b>                       | <b>4,700</b>     | <b>6,401</b>     | <b>+36.2%</b>       | <b>100.0%</b>           | <b>100.0%</b>   |
| Units   |                  |                  |                     |                         |                 |
| (million yen)   | <b>(24,823)</b>  | <b>(25,462)</b>  | <b>(+2.6%)</b>      | <b>19.7%</b>            | <b>19.0%</b>    |
|   |                  |                  |                     | <b>(100.0%)</b>         | <b>(100.0%)</b> |
|   |                  |                  |                     | <b>(24.7%)</b>          | <b>(21.4%)</b>  |
| <b>Export</b>   | <b>19,156</b>    | <b>27,215</b>    | <b>+42.1%</b>       | <b>80.3%</b>            | <b>81.0%</b>    |
| Units   |                  |                  |                     |                         |                 |
| (million yen)   | <b>(75,638)</b>  | <b>(93,767)</b>  | <b>(+24.0%)</b>     | <b>(75.3%)</b>          | <b>(78.6%)</b>  |
| <b>Grand total</b>                                    | <b>23,856</b>    | <b>33,616</b>    | <b>+40.9%</b>       | <b>100.0%</b>           | <b>100.0%</b>   |
| Units   |                  |                  |                     |                         |                 |
| (million yen)   | <b>(100,460)</b> | <b>(119,229)</b> | <b>(+18.7%)</b>     | <b>(100.0%)</b>         | <b>(100.0%)</b> |

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