

## Global Network



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## SE-EV-A All-electric Small-sized Molding Machine



# SE-EV-A

## All-electric Small-sized Injection Molding Machine

### Technical Data

- SE30EV-A** (300kN)
- SE50EV-A** (500kN)
- SE75EV-A** (750kN)
- SE100EV-A** (1000kN)
- SE130EV-A** (1300kN)
- SE180EV-A** (1800kN)



Our products have acquired ISO9001 certification.

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Sumitomo Heavy Industries, Ltd.

## Main Specifications

|      |      |                 |
|------|------|-----------------|
| Item | Unit | <b>SE30EV-A</b> |
|------|------|-----------------|

### Clamp unit

|                                    |  |                             |
|------------------------------------|--|-----------------------------|
| Clamp system                       |  | Double toggle (5 points)    |
| Clamp force max.                   | kN   | 300                         |
| Clearance between tie bars (W x H) | mm   | 310 x 290                   |
| Platen size (W x H)                | mm   | 440 x 420                   |
| Daylight                           |  | 530                         |
|                                    | (When mold thickness extension 50 mm is selected)                    | (580)                       |
|                                    | (When mold thickness extension 100 mm is selected)                   | —                           |
| Mold opening stroke                | mm   | 230                         |
| Platen speed max.                  | mm/s   | 1200                        |
| Mold thickness (Min. - Max.)       |  | 130 - 300                   |
|                                    | (When mold thickness extension 50 mm is selected)                    | (130 - 350)                 |
|                                    | (When mold thickness extension 100 mm is selected)                   | —                           |
| Locating ring diameter             |  | ø60                         |
|                                    | (When the option is selected)  | (ø26)                       |
| Ejector system                     |  | Motor driven type (1 point) |
| Ejector force                      |  | 7.8                         |
|                                    | (When ejector compression device is selected)                        | —                           |
|                                    | (When ejector force power up is selected)                            | —                           |
| Ejector speed max.                 |  | 333                         |
|                                    | (When ejector compression device/ejector force power up is selected) | —                           |
| Ejector stroke                     |  | 50                          |
|                                    | (When ejector stroke extension is selected)                          | —                           |
|                                    | (When ejector compression device/ejector force power up is selected) | —                           |

### Injection unit

|  |  | C35       |       |       |       | C65       |       |       |       |
|--|--|-----------|-------|-------|-------|-----------|-------|-------|-------|
|  |  | MN        |       | S     |       | S         |       |       |       |
| Plasticizing capacity                                  |  |           |       |       |       |           |       |       |       |
| Screw diameter   | mm   | 14        | 16    | 18    | 20    | 18        | 20    | 22    | 25    |
| Injection pressure max. *1,*2                          | MPa  | 223       | 266   | 224   | 181   | 274       | 265   | 220   | 170   |
| Holding pressure max. *1,*2                            | MPa  | 223       | 266   | 224   | 181   | 274       | 265   | 220   | 170   |
|  |  | —         |       |       |       | —         |       |       |       |
| Theoretical injection capacity                         | cm <sup>3</sup>  | 6         | 11    | 14    | 18    | 19        | 24    | 29    | 38    |
| Injection mass (GPPS)                                  | g  | 5.8       | 11    | 13    | 17    | 18        | 23    | 28    | 36    |
| Plasticizing rate *3,*4                                | kg/h   | 5.1       | 9.5   | 11    | 14    | 10        | 13    | 18    | 26    |
| Injection rate   |  | 92        | 120   | 152   | 188   | 139       | 172   | 209   | 269   |
|  | (When high load filling specification is selected) *7  | (76)      | (100) | (127) | (157) | (139)     | (172) | (209) | (269) |
|  | (When high speed filling specification is selected) *7 | —         |       |       |       | —         |       |       |       |
| Screw stroke   | mm   | 40        | 58    |       |       | 78        |       |       |       |
| Injection speed max.                                   |  | 600       |       |       |       | 550       |       |       |       |
|  | (When high load filling specification is selected) *7  | (500)     |       |       |       | (550)     |       |       |       |
|  | (When high speed filling specification is selected) *7 | —         |       |       |       | —         |       |       |       |
| Screw rotating speed max.                              | min <sup>-1</sup>                                      | 460       | 430   |       |       | 400       |       |       |       |
| Number of temperature control zone                     |  | 5         |       | 4     |       | 4         |       | 5     |       |
| Heater capacity  | kW   | 2.2       | 2.6   | 3.2   | 3.6   | 3.2       | 3.6   | 3.9   | 4.3   |
| Nozzle contact force                                   |  | 7.8       |       |       |       | 14        |       |       |       |
|  | (When low nozzle contact force is selected)            | —         |       |       |       | —         |       |       |       |
| Injection unit moving stroke                           | mm   | 135 - 185 |       |       |       | 135 - 210 |       |       |       |
| Protrusion   | mm   | 30        |       |       |       | 30        |       |       |       |
| Hopper capacity (When the standard hopper is selected) | L  | (6)       |       | (15)  |       | (15)      |       |       |       |

### Machine dimensions and mass

|                                   |  |                      |     |
|-----------------------------------|--|----------------------|-----|
| Machine dimensions (L x W x H) *5 |  | 3185 x 958 x 1470    |     |
|                                   | (When high cycling specification is selected)      | (3205 x 1052 x 1470) |     |
|                                   | (When mold thickness extension 50 mm is selected)  | (3235 x 958 x 1470)  |     |
|                                   | (When mold thickness extension 100 mm is selected) | —                    |     |
| Machine mass                      | t  | 2.0                  | 2.2 |

\*1 The max. injection pressure and max. hold pressure are calculated values and represent machine output, not resin pressure.

\*2 The max. injection pressure and max. hold pressure are not sustained pressure levels.

\*3 The plasticizing rate is shown for a machine equipped with SD Screw. \*4 50% of the value in the table is the threshold value when the SL Screw is selected.

\*5 The total length of the machine is to the front end of the injection unit when mounting the screw of the smallest diameter.

The total height of the machine does not include the dimensions of leveling pads and hopper. \*6 SL Screw cannot be selected.

\*7 High load specification and high filling specification cannot be selected at the same time. \*8 Nozzle contact force control is available only for 14 kN spec. \*9 Only available for connector machine.

● Specifications are subject to change without notice for performance improvement.

|  |                 |                 |
|--|-----------------|-----------------|
|  | <b>SE50EV-A</b> | <b>SE75EV-A</b> |
|--|-----------------|-----------------|

|                              |                              |
|------------------------------|------------------------------|
| Double toggle (5 points)     | Double toggle (5 points)     |
| 500                          | 750                          |
| 360 x 360                    | 420 x 420                    |
| 500 x 500                    | 580 x 580                    |
| 600                          | 710                          |
| (650)                        | (760)                        |
| —                            | —                            |
| 250                          | 300                          |
| 1200                         | 1200                         |
| 160 - 350                    | 160 - 410                    |
| (160 - 400)                  | (160 - 460)                  |
| —                            | —                            |
| ø100                         | ø100                         |
| —                            | —                            |
| Motor driven type (5 points) | Motor driven type (5 points) |
| 21                           | 26                           |
| (49)                         | (49)                         |
| —                            | —                            |
| 333                          | 333                          |
| (250)                        | (250)                        |
| 70                           | 80                           |
| (100)                        | (100)                        |
| (60)                         | (70)                         |

| C65       |       |           |       |       | C110  |       |       |           |       | C160  |       |           |       |           | C110  |       |       |           |       | C160                      |       |       |       |           | C250  |           |       |       |       |       |       |       |       |       |
|-----------|-------|-----------|-------|-------|-------|-------|-------|-----------|-------|-------|-------|-----------|-------|-----------|-------|-------|-------|-----------|-------|---------------------------|-------|-------|-------|-----------|-------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|
| MN        |       | S         |       |       | MN    |       | S     |           |       | S     |       |           |       |           | MN    |       | S     |           |       | S                         |       |       |       |           | S     |           | M     |       |       |       |       |       |       |       |
| 14        | 16    | 18        | 20    | 22    | 25    | 16    | 18    | 20        | 22    | 25    | 28    | 18        | 20    | 22        | 25    | 28    | 32    | 16        | 18    | 20                        | 22    | 25    | 28    | 18        | 20    | 22        | 25    | 28    | 32    | 22    | 25    | 28    | 32    | 36    |
| *6        | *6    |           |       |       |       | *6    | *6    | *6        |       |       |       | *6,*8     | *6,*8 | *6,*8     |       |       |       | *6        | *6    | *6                        |       |       |       | *6,*8     | *6,*8 | *6,*8     |       |       |       | *6,*8 | *6    |       |       |       |
| 223       | 266   | 274       | 265   | 220   | 170   | 266   | 274   | 265       | 274   | 212   | 174   | 274       | 265   | 274       | 274   | 218   | 167   | 266       | 274   | 265                       | 274   | 212   | 174   | 274       | 265   | 274       | 274   | 218   | 167   | 274   | 274   | 284   | 217   | 171   |
| 223       | 266   | 274       | 265   | 220   | 170   | 266   | 274   | 265       | 274   | 212   | 174   | 274       | 265   | 274       | 274   | 218   | 167   | 266       | 274   | 265                       | 274   | 212   | 174   | 274       | 265   | 274       | 274   | 218   | 167   | 274   | 274   | 284   | 217   | 171   |
| —         |       |           |       |       | —     |       |       |           |       | —     |       |           |       |           | —     |       |       |           |       | (274)(274)(284)(217)(171) |       |       |       |           |       |           |       |       |       |       |       |       |       |       |
| 6         | 11    | 20        | 25    | 30    | 38    | 11    | 19    | 24        | 40    | 51    | 64    | 19        | 24    | 39        | 51    | 64    | 84    | 11        | 19    | 24                        | 40    | 51    | 64    | 19        | 24    | 39        | 51    | 64    | 84    | 39    | 51    | 86    | 113   | 143   |
| 5.8       | 11    | 19        | 24    | 28    | 37    | 11    | 18    | 23        | 38    | 49    | 61    | 18        | 23    | 37        | 49    | 61    | 80    | 11        | 18    | 23                        | 38    | 49    | 61    | 18        | 23    | 37        | 49    | 61    | 80    | 37    | 49    | 83    | 108   | 137   |
| 4.4       | 8.8   | 10        | 13    | 18    | 26    | 8.8   | 10    | 13        | 18    | 26    | 37    | 10        | 13    | 18        | 26    | 37    | 53    | 8.8       | 10    | 13                        | 18    | 26    | 37    | 10        | 13    | 18        | 26    | 37    | 53    | 18    | 26    | 37    | 53    | 76    |
| 84        | 110   | 140       | 173   | 209   | 270   | 100   | 127   | 157       | 190   | 245   | 308   | 101       | 125   | 152       | 196   | 246   | 322   | 100       | 127   | 157                       | 190   | 245   | 308   | 101       | 125   | 152       | 196   | 246   | 322   | 133   | 171   | 216   | 281   | 356   |
| (84)      | (110) | (140)     | (173) | (209) | (270) | (100) | (127) | (157)     | (190) | (245) | (308) | (89)      | (109) | (133)     | (171) | (215) | (281) | (100)     | (127) | (157)                     | (190) | (245) | (308) | (89)      | (109) | (133)     | (171) | (215) | (281) | (133) | (171) | (216) | (281) | (356) |
| —         |       |           |       |       | —     |       |       |           |       | —     |       |           |       |           | —     |       |       |           |       | (247)(319)(400)(522)(661) |       |       |       |           |       |           |       |       |       |       |       |       |       |       |
| 40        | 58    | 78        |       |       |       | 58    | 78    | 104       |       |       |       | 78        | 104   |           |       |       | 58    | 78        | 104   |                           |       |       | 78    | 104       |       |           |       | 104   | 140   |       |       |       |       |       |
| 550       |       | 500       |       |       |       | 400   |       | 500       |       |       |       | 400       |       | 500       |       |       |       | 400       |       | 500                       |       |       |       | 350       |       | 350       |       |       |       |       |       |       |       |       |
| (550)     |       | (500)     |       |       |       | (350) |       | (500)     |       |       |       | (350)     |       | (500)     |       |       |       | (350)     |       | (500)                     |       |       |       | (650)     |       | (650)     |       |       |       |       |       |       |       |       |
| —         |       | —         |       |       |       | —     |       | —         |       |       |       | —         |       | —         |       |       |       | —         |       | —                         |       |       |       | —         |       | —         |       |       |       |       |       |       |       |       |
| 400       |       | 400       |       |       |       | 400   |       | 400       |       |       |       | 400       |       | 400       |       |       |       | 400       |       | 400                       |       |       |       | 400       |       | 400       |       |       |       |       |       |       |       |       |
| 4         |       | 5         |       |       |       | 4     |       | 5         |       |       |       | 4         |       | 5         |       |       |       | 4         |       | 5                         |       |       |       | 5         |       | 5         |       |       |       |       |       |       |       |       |
| 2.3       | 2.7   | 3.1       | 3.5   | 3.8   | 4.2   | 2.7   | 3.1   | 3.5       | 3.8   | 4.2   | 4.8   | 3.1       | 3.5   | 3.8       | 4.2   | 4.8   | 5.4   | 2.7       | 3.1   | 3.5                       | 3.8   | 4.2   | 4.8   | 3.1       | 3.5   | 3.8       | 4.2   | 4.8   | 5.4   | 3.8   | 4.2   | 6.5   | 7.5   | 8.4   |
| 14        |       | 14        |       |       |       | 14    |       | 43        |       |       |       | 14        |       | 43        |       |       |       | 14        |       | 43                        |       |       |       | 14        |       | 43        |       |       |       |       |       |       |       |       |
| —         |       | —         |       |       |       | —     |       | (14)      |       |       |       | —         |       | —         |       |       |       | —         |       | —                         |       |       |       | —         |       | —         |       |       |       |       |       |       |       |       |
| 170 - 250 |       | 170 - 250 |       |       |       | 250   |       | 200 - 300 |       |       |       | 200 - 300 |       | 200 - 300 |       |       |       | 200 - 300 |       | 200 - 300                 |       |       |       | 200 - 300 |       | 200 - 300 |       |       |       |       |       |       |       |       |
| 30        |       | 30        |       |       |       | 30    |       | 30        |       |       |       | 30        |       | 30        |       |       |       | 30        |       | 30                        |       |       |       | 30        |       | 45        |       |       |       |       |       |       |       |       |
| (15)      |       | (15)      |       |       |       | (15)  |       | (15)      |       |       |       | (15)      |       | (15)      |       |       |       | (15)      |       | (15)                      |       |       |       | (30)      |       | (30)      |       |       |       |       |       |       |       |       |

|                      |                      |
|----------------------|----------------------|
| 3682 x 1113 x 1575   | 4260 x 1183 x 1575   |
| —                    | —                    |
| (3732 x 1113 x 1575) | (4310 x 1183 x 1575) |
| —                    | —                    |
| 2.7                  | 3.7                  |

## Main Specifications

|      |      |                  |
|------|------|------------------|
| Item | Unit | <b>SE100EV-A</b> |
|------|------|------------------|

### ■ Clamp unit

|                                    |                              |  |
|------------------------------------|------------------------------|--|
| Clamp system                       | Double toggle (5 points)     |  |
| Clamp force max.                   | kN                           | 1000   |
| Clearance between tie bars (W x H) | mm                           | 460 x 460  |
| Platen size (W x H)                | mm                           | 650 x 650  |
| Daylight                           | mm                           | 800  |
|                                    |                              | (When mold thickness extension 50 mm is selected)                    |
|                                    |                              | (When mold thickness extension 100 mm is selected)                   |
| Mold opening stroke                | mm                           | 350  |
| Platen speed max.                  | mm/s                         | 1200   |
| Mold thickness (Min. - Max.)       | mm                           | 180 - 450  |
|                                    |                              | (When mold thickness extension 50 mm is selected)                    |
|                                    |                              | (When mold thickness extension 100 mm is selected)                   |
| Locating ring diameter             | mm                           | ø100   |
|                                    |                              | (When the option is selected)  |
| Ejector system                     | Motor driven type (5 points) |  |
| Ejector force                      | kN                           | 32   |
|                                    |                              | (When ejector compression device is selected)                        |
|                                    |                              | (When ejector force power up is selected)                            |
| Ejector speed max.                 | mm/s                         | 333  |
|                                    |                              | (When ejector compression device/ejector force power up is selected) |
| Ejector stroke                     | mm                           | 100  |
|                                    |                              | (When ejector stroke extension is selected)                          |
|                                    |                              | (When ejector compression device/ejector force power up is selected) |

### ■ Injection unit

| Plasticizing capacity   | mm                 | C110   |       |       |       | C160      |       |       |      | C250                      |       |       |       | C360  |       |       |       |       |       |       |       |       |       |       |
|---|--------------------|--|-------|-------|-------|-----------|-------|-------|------|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|   |                    | MN   | S     |       |       | S         |       |       | S    | M                         | S     | M     |       |       | M     |       |       |       |       |       |       |       |       |       |
| Screw diameter  | mm                 | 16   | 18    | 20    | 22    | 25        | 28    | 18    | 20   | 22                        | 25    | 28    | 32    | 22    | 25    | 28    | 32    | 36    | 25    | 28    | 32    | 36    | 40    |       |
| Injection pressure max. *1,*2   | MPa                | 266  | 274   | 265   | 274   | 212       | 174   | 274   | 265  | 274                       | 274   | 218   | 167   | 274   | 274   | 284   | 217   | 171   | 274   | 284   | 273   | 215   | 175   |       |
| Holding pressure max. *1,*2<br>(When high speed filling specification is selected) *7 | MPa                | —  |       |       |       | —         |       |       |      | (274)(274)(284)(217)(171) |       |       |       | —     |       |       |       |       |       |       |       |       |       |       |
|   |                    | —  |       |       |       | —         |       |       |      | (274)(274)(284)(217)(171) |       |       |       | —     |       |       |       |       |       |       |       |       |       |       |
| Theoretical injection capacity  | cm <sup>3</sup>    | 11   | 19    | 24    | 40    | 51        | 64    | 19    | 24   | 39                        | 51    | 64    | 84    | 39    | 51    | 86    | 113   | 143   | 51    | 86    | 129   | 163   | 201   |       |
| Injection mass (GPPS)   | g                  | 11   | 18    | 23    | 38    | 49        | 61    | 18    | 23   | 37                        | 49    | 61    | 80    | 37    | 49    | 83    | 108   | 137   | 49    | 83    | 124   | 156   | 193   |       |
| Plasticizing rate *3,*4   | kg/h               | 8.8  | 10    | 13    | 18    | 26        | 37    | 10    | 13   | 18                        | 26    | 37    | 53    | 18    | 26    | 37    | 53    | 76    | 26    | 37    | 53    | 76    | 101   |       |
| Injection rate  | cm <sup>3</sup> /s | 100  | 127   | 157   | 190   | 245       | 308   | 101   | 125  | 152                       | 196   | 246   | 322   | 133   | 171   | 216   | 281   | 356   | 171   | 215   | 281   | 356   | 440   |       |
|   |                    | (When high load filling specification is selected) *7  | (100) | (127) | (157) | (190)     | (245) | (308) | (89) | (109)                     | (133) | (171) | (215) | (281) | (133) | (171) | (216) | (281) | (356) | (171) | (215) | (281) | (356) | (440) |
|   |                    | (When high speed filling specification is selected) *7 | —     | —     | —     | —         | —     | —     | —    | —                         | —     | —     | —     | —     | (247) | (319) | (400) | (522) | (661) | —     | —     | —     | —     | —     |
| Screw stroke  | mm                 | 58   | 78    | 104   | 78    | 104       | 104   | 140   | 104  | 140                       | 160   |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Injection speed max.  | mm/s               | 500  |       |       |       | 400       |       |       |      | 350                       |       |       |       | 350   |       |       |       |       |       |       |       |       |       |       |
|   |                    | (500)  |       |       |       | (350)     |       |       |      | (350)                     |       |       |       | (350) |       |       |       |       |       |       |       |       |       |       |
|   |                    | —  |       |       |       | —         |       |       |      | (650)                     |       |       |       | —     |       |       |       |       |       |       |       |       |       |       |
| Screw rotating speed max.   | min <sup>-1</sup>  | 400  |       |       |       | 400       |       |       |      | 400                       |       |       |       | 400   |       |       |       |       |       |       |       |       |       |       |
| Number of temperature control zone  |                    | 4  |       | 5     |       | 4         |       | 5     |      | 5                         |       |       |       | 5     |       |       |       |       |       |       |       |       |       |       |
| Heater capacity   | kW                 | 2.7  | 3.1   | 3.5   | 3.8   | 4.2       | 4.8   | 3.1   | 3.5  | 3.8                       | 4.2   | 4.8   | 5.4   | 3.8   | 4.2   | 6.5   | 7.5   | 8.4   | 4.2   | 6.5   | 7.5   | 8.4   | 10.3  |       |
| Nozzle contact force  | kN                 | 14   |       |       |       | 14        |       |       |      | 43                        |       |       |       | 43    |       |       |       |       |       |       |       |       |       |       |
|   |                    | —  |       |       |       | —         |       |       |      | —                         |       |       |       | —     |       |       |       |       |       |       |       |       |       |       |
| Injection unit moving stroke  | mm                 | 220 - 320  |       |       |       | 220 - 320 |       |       |      | 220 - 320                 |       |       |       | 320   |       |       |       |       |       |       |       |       |       |       |
| Protrusion  | mm                 | 30   |       |       |       | 30        |       |       |      | 30                        |       | 45    |       | 30    |       | 45    |       |       |       |       |       |       |       |       |
| Hopper capacity (When the standard hopper is selected)                                | L                  | (15)   |       |       |       | (15)      |       |       |      | (30)                      |       |       |       | (30)  |       |       |       |       |       |       |       |       |       |       |

### ■ Machine dimensions and mass

|                                   |    |                      |     |     |     |
|-----------------------------------|----|----------------------|-----|-----|-----|
| Machine dimensions (L x W x H) *5 | mm | 4568 x 1226 x 1691   |     |     |     |
|                                   |    | —                    |     |     |     |
|                                   |    | (4668 x 1226 x 1691) |     |     |     |
|                                   |    | (4668 x 1226 x 1691) |     |     |     |
| Machine mass                      | t  | 4.3                  | 4.4 | 4.5 | 4.6 |

\*1 The max. injection pressure and max. hold pressure are calculated values and represent machine output, not resin pressure.

\*2 The max. injection pressure and max. hold pressure are not sustained pressure levels.

\*3 The plasticizing rate is shown for a machine equipped with SD Screw. \*4 50% of the value in the table is the threshold value when the SL screw is selected.

\*5 The total length of the machine is to the front end of the injection unit when mounting the screw of the smallest diameter.

\*6 The total height of the machine does not include the dimensions of leveling pads and hopper. \*6 SL Screw cannot be selected.

\*7 High load specification and high filling specification cannot be selected at the same time. \*8 Nozzle contact force control is available only for 14 kN spec.

● Specifications are subject to change without notice for performance improvement.

|  |                  |                  |
|--|------------------|------------------|
|  | <b>SE130EV-A</b> | <b>SE180EV-A</b> |
|--|------------------|------------------|

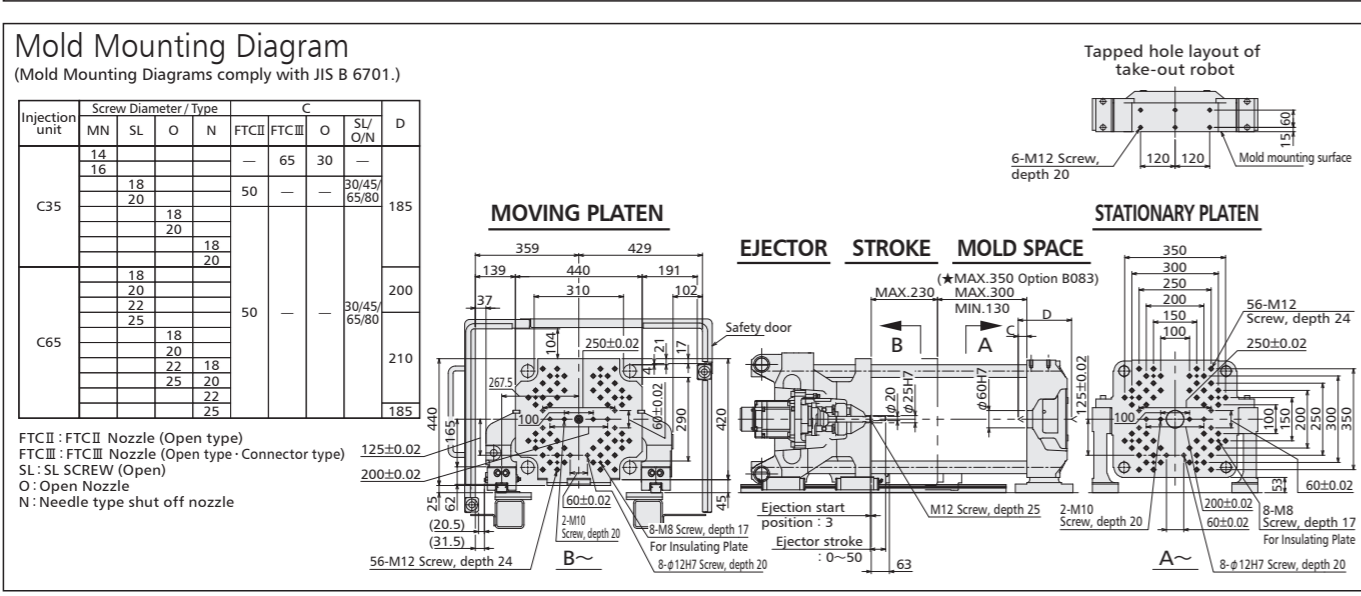
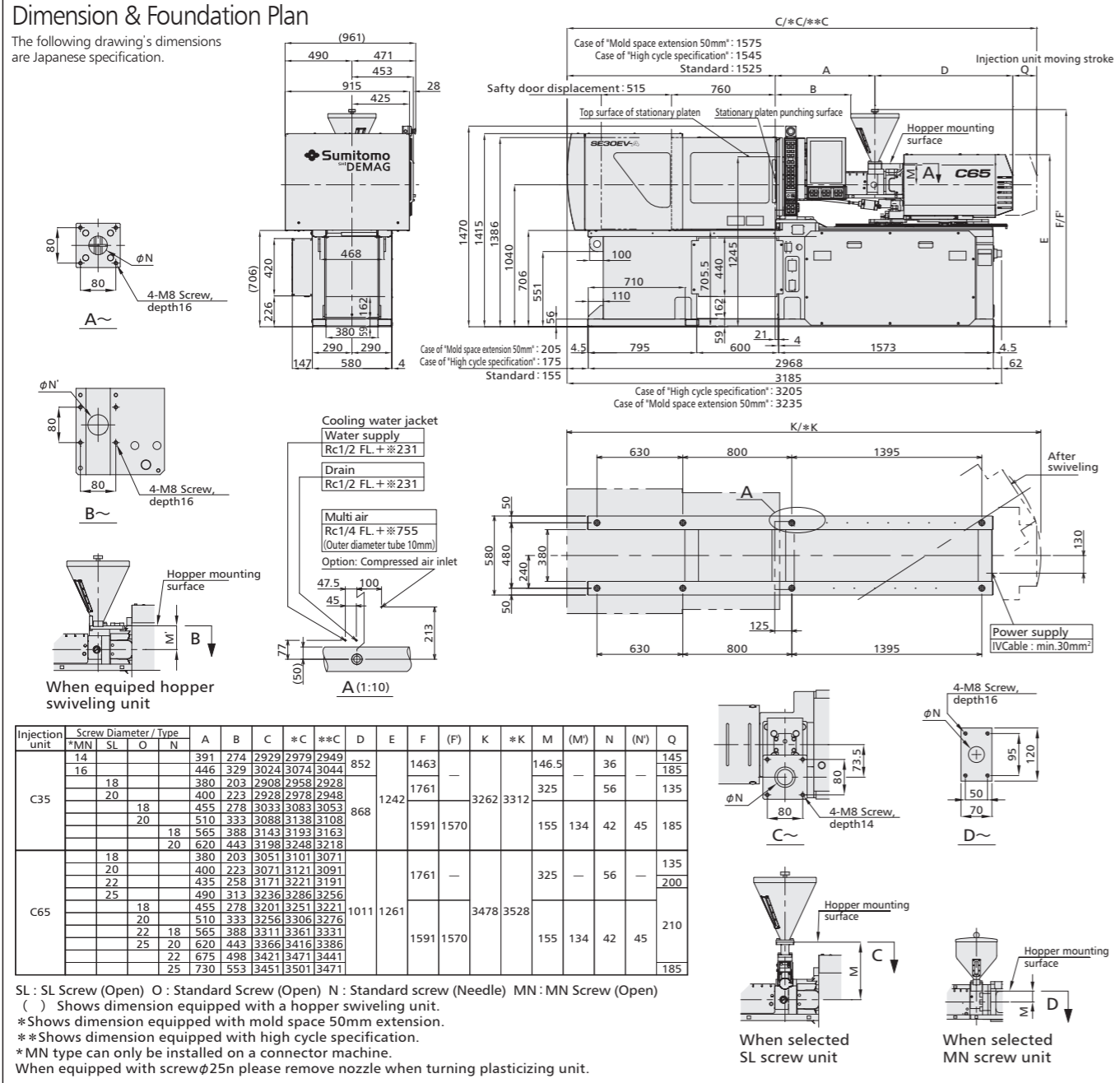
|                              |  |                              |  |
|------------------------------|--|------------------------------|--|
| Double toggle (5 points)     |  | Double toggle (5 points)     |  |
| 1300                         |  | 1800                         |  |
| 510 x 510                    |  | 560 x 560                    |  |
| 720 x 720                    |  | 800 x 795                    |  |
| 850                          |  | 950                          |  |
| (900)                        |  | (1000)                       |  |
| (950)                        |  | (1050)                       |  |
| 400                          |  | 450                          |  |
| 1200                         |  | 1200                         |  |
| 180 - 450                    |  | 200 - 500                    |  |
| (180 - 500)                  |  | (200 - 550)                  |  |
| (180 - 550)                  |  | (200 - 600)                  |  |
| ø100                         |  | ø120                         |  |
| —                            |  | (ø100 / ø110)                |  |
| Motor driven type (5 points) |  | Motor driven type (5 points) |  |
| 32                           |  | 45                           |  |
| (49)                         |  | (49)                         |  |
| (59)                         |  | (59)                         |  |
| 333                          |  | 333                          |  |
| (333)                        |  | (333)                        |  |
| 100                          |  | 120                          |  |
| (150)                        |  | (150)                        |  |
| (80)                         |  | (100)                        |  |

| C160      |           | C250      |       | C360      |           | C450      |           | C250      |           | C360      |           | C450      |           | C560      |           |       |       |       |       |
|-----------|-----------|-----------|-------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|-------|-------|-------|
| S         |           | S         | M     | S         | M         | M         |           | S         | M         | S         | M         | M         |           | M         |           |       |       |       |       |
| 18        | 20        | 22        | 25    | 28        | 32        | 22        | 25        | 28        | 32        | 36        | 25        | 28        | 32        | 36        | 40        |       |       |       |       |
| *6,*8     | *6,*8     | *6,*8     |       |           |           | *6,*8     | *6        |           |           | *6        | *6        |           |           | *6,*8     | *6        |       |       |       |       |
| 274       | 265       | 274       | 274   | 218       | 167       | 274       | 274       | 284       | 217       | 171       | 274       | 284       | 273       | 215       | 175       |       |       |       |       |
| 274       | 265       | 274       | 274   | 218       | 167       | 274       | 274       | 284       | 217       | 171       | 274       | 284       | 273       | 215       | 175       |       |       |       |       |
| 274       | 265       | 274       | 274   | 218       | 167       | 274       | 274       | 284       | 217       | 171       | 274       | 284       | 273       | 215       | 175       |       |       |       |       |
| —         | —         | —         | —     | —         | —         | (274)     | (274)     | (284)     | (217)     | (171)     | —         | —         | —         | —         | (218)     | (207) | (219) | (173) | (140) |
| 19        | 24        | 39        | 51    | 64        | 84        | 39        | 51        | 86        | 113       | 143       | 51        | 86        | 129       | 163       | 201       |       |       |       |       |
| 18        | 23        | 37        | 49    | 61        | 80        | 37        | 49        | 83        | 108       | 137       | 49        | 83        | 124       | 156       | 193       |       |       |       |       |
| 10        | 13        | 18        | 26    | 37        | 53        | 18        | 26        | 37        | 53        | 76        | 26        | 37        | 53        | 76        | 101       |       |       |       |       |
| 101       | 125       | 152       | 196   | 246       | 322       | 133       | 171       | 216       | 281       | 356       | 171       | 215       | 281       | 356       | 440       |       |       |       |       |
| (89)      | (109)     | (133)     | (171) | (215)     | (281)     | (133)     | (171)     | (216)     | (281)     | (356)     | (171)     | (215)     | (281)     | (356)     | (440)     |       |       |       |       |
| —         | —         | —         | —     | —         | —         | (247)     | (319)     | (400)     | (522)     | (661)     | —         | —         | —         | —         | (402)     | (508) | (628) | (795) | (981) |
| 78        | 104       | 104       | 140   | 104       | 140       | 160       | 140       | 160       | 104       | 140       | 104       | 140       | 160       | 140       | 160       |       |       |       |       |
| 400       | 350       | 350       | 350   | 350       | 350       | 350       | 350       | 350       | 350       | 350       | 350       | 350       | 350       | 350       | 350       |       |       |       |       |
| (350)     | (350)     | (350)     | (350) | (350)     | (350)     | (350)     | (350)     | (350)     | (350)     | (350)     | (350)     | (350)     | (350)     | (350)     | (350)     |       |       |       |       |
| —         | (650)     | —         | —     | —         | —         | (650)     | —         | —         | (650)     | —         | —         | —         | —         | (500)     | —         |       |       |       |       |
| 400       | 400       | 400       | 400   | 400       | 400       | 400       | 400       | 400       | 400       | 400       | 400       | 400       | 400       | 400       | 400       |       |       |       |       |
| 4         | 5         | 5         | 5     | 5         | 5         | 5         | 5         | 5         | 5         | 5         | 5         | 5         | 5         | 5         | 5         |       |       |       |       |
| 3.1       | 3.5       | 3.8       | 4.2   | 4.8       | 5.4       | 3.8       | 4.2       | 6.5       | 7.5       | 8.4       | 4.2       | 6.5       | 7.5       | 8.4       | 10.3      |       |       |       |       |
| 14        | 43        | 14        | 43    | 14        | 43        | 43        | 43        | 43        | 43        | 43        | 14        | 43        | 43        | 43        | 43        |       |       |       |       |
| —         | —         | —         | —     | —         | —         | —         | —         | —         | —         | —         | —         | —         | —         | —         | —         |       |       |       |       |
| 230 - 335 | 240 - 335 | 300 - 335 | 335   | 250 - 380 | 310 - 380 | 360 - 380 | 360 - 380 | 360 - 380 | 360 - 380 | 360 - 380 | 360 - 380 | 360 - 380 | 360 - 380 | 360 - 380 | 360 - 380 |       |       |       |       |
| 30        | 30        | 45        | 30    | 45        | 45        | 45        | 45        | 45        | 45        | 45        | 30        | 65        | 30        | 65        | 65        |       |       |       |       |
| (15)      | (15)      | (30)      | (15)  | (30)      | (50)      | (50)      | (50)      | (50)      | (50)      | (50)      | (30)      | (15)      | (30)      | (50)      | (50)      |       |       |       |       |

|                      |     |                      |     |
|----------------------|-----|----------------------|-----|
| 4793 x 1326 x 1750   |     | 5198 x 1396 x 1831   |     |
| —                    |     | —                    |     |
| (4893 x 1326 x 1750) |     | (5298 x 1396 x 1831) |     |
| (4893 x 1326 x 1750) |     | (5298 x 1396 x 1831) |     |
| 5.3                  | 5.4 | 5.5                  | 5.5 |
| 7.0                  | 7.1 | 7.1                  | 7.4 |

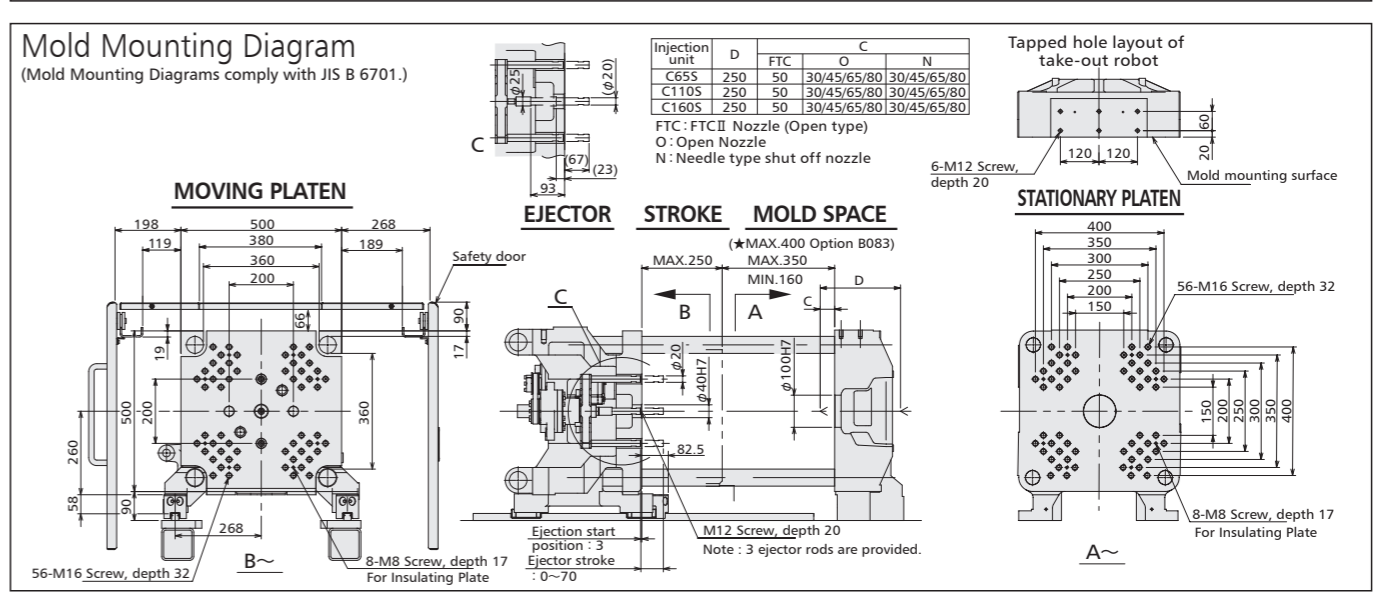
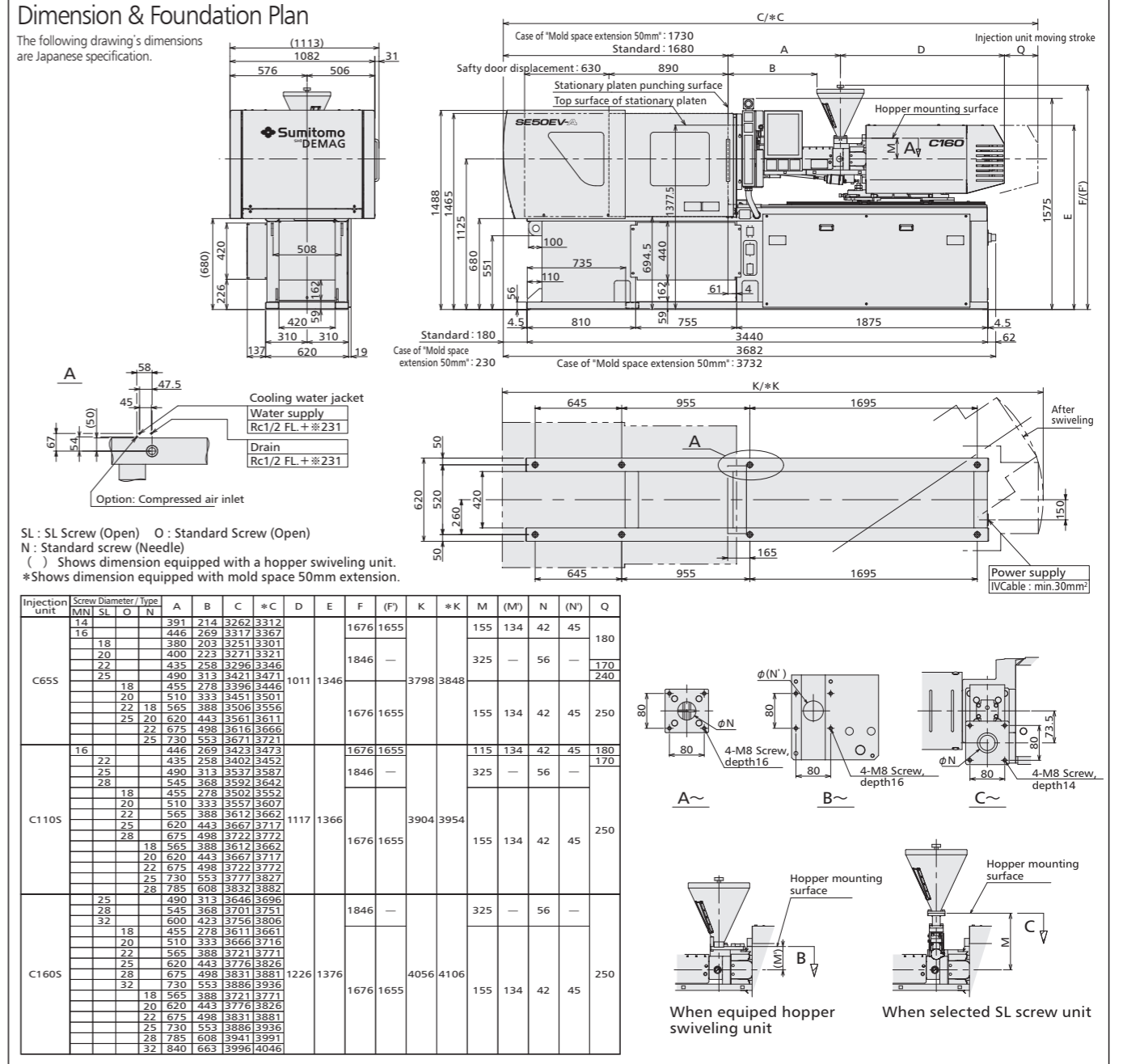
Dimension & Foundation Plan

The following drawing's dimensions are Japanese specification.



Dimension & Foundation Plan

The following drawing's dimensions are Japanese specification.





## Dimension & Foundation Plan

The following drawing's dimensions are Japanese specification.

| Injection unit | SL | O    | N    | A    | B    | C    | *C | D    | E    | F (F) | K    | *K   | M (M) | N (N) | Q   | R   |
|----------------|----|------|------|------|------|------|----|------|------|-------|------|------|-------|-------|-----|-----|
| C160S          | 25 | 490  | 313  | 4091 | 4191 |      |    |      |      | 1987  |      |      | 325   | 56    | 74  | 250 |
|                | 28 | 545  | 368  | 4146 | 4246 |      |    | 1226 |      |       |      |      |       |       |     |     |
|                | 32 | 600  | 423  | 4201 | 4301 |      |    |      | 1842 | 1821  |      |      | 180   | 159   |     | 230 |
|                | 18 | 455  | 278  | 4091 | 4191 | 1281 |    |      |      |       |      |      |       |       |     | 240 |
|                | 22 | 565  | 388  | 4156 | 4256 |      |    |      | 1517 |       | 4881 | 4981 |       |       |     |     |
|                | 25 | 620  | 443  | 4306 | 4406 |      |    |      |      |       |      |      |       | 155   | 134 |     |
| C250M          | 25 | 675  | 498  | 4361 | 4461 |      |    |      | 1817 | 1796  |      |      |       |       |     |     |
|                | 18 | 510  | 333  | 4101 | 4201 |      |    |      |      |       |      |      |       |       |     | 335 |
|                | 20 | 620  | 443  | 4306 | 4406 |      |    |      |      |       |      |      |       |       |     |     |
|                | 22 | 675  | 498  | 4361 | 4461 |      |    |      |      |       |      |      |       |       |     |     |
|                | 25 | 730  | 553  | 4416 | 4516 |      |    |      |      |       |      |      |       |       |     |     |
|                | 32 | 889  | 662  | 4571 | 4671 | 1397 |    |      |      |       |      |      |       |       |     |     |
| C360M          | 25 | 730  | 503  | 4571 | 4671 |      |    |      | 1882 | 1867  |      |      |       |       |     |     |
|                | 28 | 839  | 612  | 4626 | 4726 |      |    |      |      |       |      |      |       |       |     |     |
|                | 32 | 999  | 772  | 4781 | 4881 |      |    |      |      |       |      |      |       |       |     |     |
|                | 36 | 1109 | 882  | 4836 | 4936 |      |    |      |      |       |      |      |       |       |     |     |
|                | 40 | 1269 | 1042 | 4991 | 5091 |      |    |      |      |       |      |      |       |       |     |     |
|                | 45 | 1429 | 1202 | 5146 | 5246 |      |    |      |      |       |      |      |       |       |     |     |
| C450M          | 25 | 730  | 503  | 4571 | 4671 |      |    |      | 2052 |       |      |      |       |       |     |     |
|                | 28 | 839  | 612  | 4626 | 4726 |      |    |      |      |       |      |      |       |       |     |     |
|                | 32 | 999  | 772  | 4781 | 4881 |      |    |      |      |       |      |      |       |       |     |     |
|                | 36 | 1109 | 882  | 4836 | 4936 |      |    |      |      |       |      |      |       |       |     |     |
|                | 40 | 1269 | 1042 | 4991 | 5091 |      |    |      |      |       |      |      |       |       |     |     |
|                | 45 | 1429 | 1202 | 5146 | 5246 |      |    |      |      |       |      |      |       |       |     |     |

## Dimension & Foundation Plan

The following drawing's dimensions are Japanese specification.

| Injection unit | SL | O    | N   | A    | B    | C    | *C | D | E    | F (F) | K | *K | M (M) | N (N) | Q  | R   |
|----------------|----|------|-----|------|------|------|----|---|------|-------|---|----|-------|-------|----|-----|
| C250M          | 28 | 499  | 272 | 4531 | 4631 |      |    |   |      | 2093  |   |    | 325   | 56    | 74 | 250 |
|                | 32 | 589  | 362 | 4681 | 4781 |      |    |   | 2040 |       |   |    |       |       |    |     |
|                | 36 | 679  | 452 | 4831 | 4931 |      |    |   |      |       |   |    |       |       |    |     |
|                | 22 | 565  | 338 | 4617 | 4717 |      |    |   |      |       |   |    |       |       |    |     |
|                | 25 | 620  | 393 | 4767 | 4867 |      |    |   |      |       |   |    |       |       |    |     |
|                | 32 | 799  | 572 | 4921 | 5021 | 1397 |    |   |      |       |   |    |       |       |    |     |
| C360M          | 25 | 730  | 503 | 4571 | 4671 |      |    |   | 1923 | 1908  |   |    | 5205  | 5305  |    |     |
|                | 28 | 819  | 592 | 4626 | 4726 |      |    |   |      |       |   |    |       |       |    |     |
|                | 32 | 909  | 682 | 4681 | 4781 |      |    |   |      |       |   |    |       |       |    |     |
|                | 36 | 999  | 772 | 4736 | 4836 |      |    |   |      |       |   |    |       |       |    |     |
|                | 40 | 1089 | 862 | 4791 | 4891 |      |    |   |      |       |   |    |       |       |    |     |
|                | 45 | 1179 | 952 | 4846 | 4946 |      |    |   |      |       |   |    |       |       |    |     |
| C450M          | 25 | 730  | 503 | 4571 | 4671 |      |    |   | 2040 |       |   |    |       |       |    |     |
|                | 28 | 819  | 592 | 4626 | 4726 |      |    |   |      |       |   |    |       |       |    |     |
|                | 32 | 909  | 682 | 4681 | 4781 |      |    |   |      |       |   |    |       |       |    |     |
|                | 36 | 999  | 772 | 4736 | 4836 |      |    |   |      |       |   |    |       |       |    |     |
|                | 40 | 1089 | 862 | 4791 | 4891 |      |    |   |      |       |   |    |       |       |    |     |
|                | 45 | 1179 | 952 | 4846 | 4946 |      |    |   |      |       |   |    |       |       |    |     |
| C560M          | 25 | 730  | 503 | 4571 | 4671 |      |    |   | 2040 |       |   |    |       |       |    |     |
|                | 28 | 819  | 592 | 4626 | 4726 |      |    |   |      |       |   |    |       |       |    |     |
|                | 32 | 909  | 682 | 4681 | 4781 |      |    |   |      |       |   |    |       |       |    |     |
|                | 36 | 999  | 772 | 4736 | 4836 |      |    |   |      |       |   |    |       |       |    |     |
|                | 40 | 1089 | 862 | 4791 | 4891 |      |    |   |      |       |   |    |       |       |    |     |
|                | 45 | 1179 | 952 | 4846 | 4946 |      |    |   |      |       |   |    |       |       |    |     |

## Mold Mounting Diagram

(Mold Mounting Diagrams comply with JIS B 6701.)

| Injection unit | D   | FTC | O           | C           | N |
|----------------|-----|-----|-------------|-------------|---|
| C160S          | 335 | 50  | 30/45/65/80 | 30/45/65/80 |   |
| C250M          | 335 | 65  | 45/65/85    | 45/60/80    |   |
| C360M          | 335 | 65  | 45/65/85    | 45/60/80    |   |
| C450M          | 335 | 65  | 45/65/85    | 45/60/80    |   |

FTC: FTC II Nozzle (Open type)  
O: Open Nozzle N: Needle type shut off nozzle

## Mold Mounting Diagram

(Mold Mounting Diagrams comply with JIS B 6701.)

| Injection unit | D   | O         | C         | N |
|----------------|-----|-----------|-----------|---|
| C250M          | 380 | 65/85/100 | 65/80/100 |   |
| C360M          | 380 | 65/85/100 | 65/80/100 |   |
| C450M          | 380 | 65/85/100 | 65/80/100 |   |
| C560M          | 380 | 65/85/100 | 65/80/100 |   |

O: Open Nozzle  
N: Needle type shut off nozzle

## Standard Equipment

| Plasticizing and injection unit   |
|---|
| 1. Injection program control function (Multi-stage control)   |
| 2. Holding pressure program control function (Multi-stage control)  |
| 3. Screw pull back function (Before starting dosing/After dosing is completed)  |
| 4. Digital display function of screw position (0.01 mm setting)   |
| 5. Holding time 0.01 seconds setting function   |
| 6. V-P switchover function (Pressure/Position)  |
| 7. Filling delay timer function   |
| 8. Pursing device with interlock (Select the position where the interlock function is unused or the injection device is retracted)              |
| 9. Heating cylinder temperature control max. 5 zones *2   |
| 10. Heating cylinder temperature switching function (Molding/Lowered temperature/Pursing)   |
| 11. Standard capacity heater (More than C250)   |
| 12. Zone 1 high-capacity heater (Less than C160)  |
| 13. Screw cold start prevention function (With variable interlock timer)  |
| 14. Remote setting function for sprue break stroke (Reverse timing selection with delay timer, Nozzle contact detection, Movement time setting) |
| 15. Screw rotation speed digital display function   |
| 16. Purging cover device (With limit switch)  |
| 17. Injection unit swivel device (With nozzle alignment adjustment mechanism)   |
| 18. Remaining cooling time display function   |
| 19. Dosing start delay timer function   |
| 20. Injection speed/Holding pressure rise speed selection function (10 modes)   |
| 21. Screw forward speed setting function during holding pressure  |
| 22. Screw pull back delay control function  |
| 23. Synchro dosing function   |
| 24. Screw reverse rotation control function   |
| 25. Independent temperature control device of nozzle  |
| 26. Standard energy saving heating cylinder cover (Two-layer structure)   |
| 27. Water cooling jacket temperature control device   |
| 28. Mold open operation function during dosing (Shut off nozzle drive control)  |
| 29. Filling pressure multi-stage control function   |
| 30. Resin residence prevention function   |
| 31. One-touch manual dosing function  |
| 32. High-precision, high-pressure nozzle contact device (Nozzle contact force 3-step variable)  |
| 33. Stainless steel purge resin saucer  |
| 34. SL Screw: Auto-tuning function of synchronization rate (SL Screw is a selection specification)  |
| 35. Deceleration pattern of V/P switchover (Slow landing) (Only for SE30EV-A)   |

| Control unit   |
|--|
| 1. 15-inch TFT color LCD screen  |
| 2. Touch panel type setting input device   |
| 3. Molding condition storage function  |
| 4. Operation support function  |
| 5. Molding support function  |
| 6. Waveform display function (Waveform memory function, Display value reading function, Data storage by trigger, etc.) |
| 7. Screen hard copy function   |
| 8. Take-out robot connection circuit device *1   |
| 9. Screen switching function in up to 15 languages   |
| 10. Maintenance management function (Inspection time, Grease greasing time, Item, Operation method display)            |
| 11. Automatic start/stop function (Lowered temperature/Heater start/Molding machine stop) *1                           |
| 12. Process display function   |
| 13. SSR heater drive circuit device  |
| 14. Industrial unit input function (Speed, Position, Pressure and rotation speed)                                      |
| 15. Molding machine status output signal (5 CH) *1   |
| 16. USB connection circuit device (Memory)   |
| 17. Protection function of saved conditions  |
| 18. Abnormal processing selection function   |
| 19. Initial reject/Short stop reject function  |
| 20. Screen color change function   |
| 21. Numerical and character input keypad layout change function (Select from 2 types)                                  |
| 22. Take-out robot entry permission signal   |
| 23. Clean control cabinet (Only for SE30EV-A)  |

| Monitor unit   |
|--|
| 1. Actual value display function   |
| 2. Heater breakage monitoring device   |
| 3. Auxiliary equipment abnormality monitoring function (3 ch) *1   |
| 4. Abnormality monitoring function (Maximum cushion, Minimum cushion, Filling pressure, Mold protection, Cycle time, Dosing time)  |
| 5. Abnormality monitoring condition automatic setting function   |
| 6. Abnormal history display function (Abnormal item/Occurrence time display)   |
| 7. Quality control function (Statistical function of actual values, various graph functions, 100,000 shot storage and data confirmation function)                                    |
| 8. Production number management function (Molded product discrimination function, Automatic production completion, Stocker feed signal, Data logging, Production counter with reset) |
| 9. Auto start function (Heater, External output signal)  |
| 10. Heating cylinder temperature monitoring function (All zones)   |
| 11. Self diagnosis function  |
| 12. Abnormal alarm buzzer  |
| 13. Shot counter   |
| 14. Processing function when cycle monitoring is abnormal (Heater processing mode change)  |
| 15. All process display screen function  |
| 16. Monitoring function to prevent forgetting to set monitoring  |
| 17. Ejector protrusion torque monitoring function  |
| 18. Maintenance time notification function (Maintenance time notification based on the number of shots / Elapsed time)   |
| 19. Injection pressure monitoring function (5 points)  |
| 20. Cycle analysis function  |

| Clamp unit  |
|---|
| 1. Mold opening/closing position and speed program control function (5-stage/3-stage switching)                                 |
| 2. Mold protection function   |
| 3. Low pressure mold clamp function   |
| 4. Mold opening/closing pause function  |
| 5. Remote control function of clamp force   |
| 6. Remote control function of mold space  |
| 7. Ejector remote setting function (2-speed control, Pressure, Stroke, Delay timer, Multiple time protrusions)                  |
| 8. Current value input function (Ejector protrusion position)   |
| 9. Current value input function (Mold open limit position)  |
| 10. Clamp mode selection function (Lockup)  |
| 11. Ejector protrusion interlock function (Ejector can be operated only at the mold opening completion position in manual mode) |
| 12. Ejector protrusion function during mold opening   |
| 13. Ejector protrusion function during mold clamp   |
| 14. Mold plate return confirmation device (Input signal to molding machine) (Metal outlet connection) *1                        |
| 15. Mold opening/closing signal (Spear control signal) *1   |
| 16. Valve gate drive circuit device (Control circuit only) *1   |
| 17. Stand by mode function for mold installation (Low mold opening/closing speed)   |
| 18. Toggle cover with polycarbonate window  |
| 19. Emergency stop push button switch (Operation side/Non-operation side)   |
| 20. Safety door with polycarbonate window   |
| 21. Screw holes for mounting the take-out robot   |
| 22. Grease centralized greasing device for mold clamp/injection unit  |
| 23. Mold clamp safety device (Electric/Mechanical)  |
| 24. Mold opening/closing low vibration or high speed mode selection function  |
| 25. Movable platen support device (Linear guide type)   |
| 26. Center Press Platen mechanism   |
| 27. Product drop confirmation connection circuit *1   |
| 28. Multi-toggle function (Multi-stage clamp force setting)   |
| 29. Tie bar plating specification   |
| 30. Ejector motor device with brake   |
| 31. S-MOVE function (Low vibration control)   |
| 32. Ejector standby position function   |
| 33. Control device for mold installation space with servo motor   |
| 34. Dust-proof cover on top of toggle (Fixed type)  |
| 35. Dry cycle mode function   |

| Others  |
|---|
| 1. Auto grease supply unit (Cartridge grease type)                                    |
| 2. 3-way take-out frame   |
| 3. Mold cooling water block device (2 systems) (Flow indicator and valve are options) |
| 4. Standard spare parts (Fuses, Air filters)  |

## Standard Equipment

| Zero-molding features  |
|--|
| 1. Zero-molding main screen: Simple process setting  |
| 2. Zero-molding main screen : Production monitor (Production number/Process/Abnormality/Actual results)  |
| 3. Specifications/Function confirmation screen (Standard functions/Optional functions/Abnormality handling/Specification list/Monitoring device)                       |
| 4. Minimum mold clamp force detection function (Automatic measurement)   |
| 5. Setup support: Mold installation screen (Mold height, Mold contact, Clamp force, Mold open/close in preparations, Ejector setting)                                  |
| 6. Setup support: Mold condition setting screen (Open/close, Ejector multi-stage setting)  |
| 7. Setup support: Mold opening limit/Ejector protrusion position teaching function (Current value input)   |
| 8. Setup support: Protection setting screen (Mold protection, Ejector protection)  |
| 9. Setup support: Multi-purging function (Gate purging, Resin replacement purging, Slight time stop purging, Low-viscosity resin purging, Resin viscosity measurement) |
| 10. Setup support: Temperature condition reference/Calling function  |
| 11. Setup support: Resin residence alarm/Monitoring function   |
| 12. Setup support: Nozzle/Heating cylinder temperature rise mode function (Step/Nozzle delay/Process temperature control)  |
| 13. Zero-molding Molding condition setting screen: Z-Screen (Filling, Holding pressure, Dosing, time, Temperature, Mold clamp force)                                   |
| 14. Zero-molding: FFC control function   |
| 15. Zero-molding: FFC control, mode setting function   |
| 16. Zero-molding: Function to check the filling position and short shot position by flow front check   |
| 17. Screw reversal decompression control function  |
| 18. Zero-molding: Clamp force feed back function   |
| 19. Clamp force multi-stage control function (Cross-head position control)   |
| 20. Multi-toggle function (Gas vent function/Deformation prevention function)  |
| 21. Zero-molding: Molding condition support monitor function (Peak clamp force, Pack pressure, Status display)   |
| 22. Actual value monitor switching function (Actual/Process/Power/Waveform/Temperature graph)  |
| 23. Monitoring setting: Function to automatically set all at once  |
| 24. Molding condition access restriction function (Condition range, Screen display, Password function)   |
| 25. Automatic condition change function for molding start (By short shot method)   |
| 26. Protection: Screw protection function  |
| 27. Energy saving mode function of holding pressure  |
| 28. Waveform display function: Simple display by process (Injection, Holding pressure, Dosing, Mold opening, Mold closing, Ejector, Mold height)                       |
| 29. Waveform display function: Waveform save completion message  |
| 30. Waveform display function: Automatic waveform save function (Always/Trigger/Abnormal)  |
| 31. Quality control function: Waveform monitoring function   |
| 32. Quality control function: Molding process monitor logging function (Temperature, Temperature control output, Peak clamp force, Pack pressure)                      |
| 33. Production control function: Function to set the number of cavities and manage the number of products  |
| 34. Production control function: Operation status management function (Operating time, Motor load factor, Power consumption display)                                   |

\*1 All input and output signals are no-voltage contact signals. Power is not supplied with output signals.

\*2 The number of zone varies depending on the screw diameter and screw type.

● Specifications are subject to change without notice for performance improvement.

● Standard specification models of the SE-EV-A series comply with the safety standards of Japan, China and the nations of Southeast Asia.

They can also be modified to comply with the safety standards of Korea (KCs Mark), USA, Brazil, the nations of Oceania and Canada. For more information, contact us.

## Optional Equipment

| Plasticizing selection   |  |
|--|--|
| 1. Ion-nitride screw assembly                                      |  |
| 2. Hard chromium plating screw assembly                            |  |
| 3. Wear and corrosion resistant A screw assembly                   |  |
| 4. Wear and corrosion resistant B screw assembly                   |  |
| 5. Wear and corrosion resistant C screw assembly                   |  |
| 6. High-temperature screw assembly (Max. temp. 450 °C)             |  |
| 7. SD Screw  |  |
| 8. SM Screw  |  |
| 9. SL Screw  |  |
| 10. Screw tip set Rotation type                                    |  |
| 11. Screw tip set Rotation type TiN coating                        |  |
| 12. Screw tip Corrosion and wear resistant A Non-rotation type     |  |
| 13. Screw tip Corrosion and wear resistant B Non-rotation type     |  |
| 14. Screw tip Corrosion and wear resistant C Non-rotation type     |  |
| 15. Open nozzle  |  |
| 16. Needle nozzle (Needle is operated by pneumatic.)               |  |
| 17. FTCL nozzle (Open nozzle: ø18 mm- ø36 mm, Less than SE130EV-A) |  |
| 18. Cylinder nozzle  |  |
| 19. Zone 1 high capacity heater (More than C250)                   |  |
| 20. High capacity heater   |  |
| 21. Extension nozzle   |  |
| 22. High insulated cylinder cover                                  |  |

| Plasticizing and injection unit   |  |
|---|--|
| 1. Resin temperature finder (Only for needle nozzle type)                                   |  |
| 2. Standard type hopper   |  |
| 3. V/P switchover by mold cavity pressure   |  |
| 4. Needle valve nozzle drive circuit  |  |
| 5. FTC nozzle electric control circuit (Built-in)   |  |
| 6. High temperature heater control circuit (Up to 499 °C)                                   |  |
| 7. Hopper swivel mounting plate   |  |
| 8. Plating resin inlet of cooling water jacket  |  |
| 9. High efficiency nozzle control (Depression of nozzle contact force)                      |  |
| 10. High duty injection *3  |  |
| 11. GS Loader control circuit   |  |
| 12. Nozzle pressing force reduction (Nozzle pressing force: 14 kN) (Only for SE50EV-A C160) |  |

| Control and monitor unit   |  |
|--|--|
| 1. Leak circuit breaker (AC200V, 220V 3ø3W+E) (Japan and Asia only)  |  |
| 2. Mold temperature monitor (2 zones on movable platen, Without thermocouple, Type K)                                    |  |
| 3. Mold temperature monitor (1 zone on movable platen and 1 zone on fixed platen, Without thermocouple, Type K)          |  |
| 4. Mold temperature monitor (2 zones on movable platen and 2 zones on fixed platen, Without thermocouple, Type K)        |  |
| 5. Production control (2-directional rejection chute)  |  |
| 6. Mold temperature controller (K=CA, 2 zones on movable platen)   |  |
| 7. Mold temperature controller (K=CA, 1 zone on movable platen and 1 zone on fixed platen)                               |  |
| 8. Mold temperature controller (K=CA, 2 zones on movable platen and 2 zones on fixed platen) (Only for SE75EV - SE180EV) |  |
| 9. Automatic starting system (Heater+Water supply+External output signal) *1   |  |
| 10. Revolving alarm lamp   |  |
| 11. Multi function 3-color LED alarm lamp  |  |
| 12. 4-line closed circuit water connection lines (With flow detector, Stop valve, Cooling water stop valve, Filter)      |  |
| 13. 2-line closed circuit water connection lines (With flow detector, Stop valve, Cooling water stop valve, Filter)      |  |
| 14. Personal computer connection circuit, Ethernet   |  |
| 15. Spare power supply outlet selection  |  |

| Control and monitor unit                               |  |
|--|--|
| 16. Electric power supply receptacles (Operation side) |  |
| 17. Name plate: Blue                                   |  |
| 18. Name plate: Black                                  |  |
| 19. Motion07   |  |
| 20. MotionGB   |  |
| 21. Korea Certification Mark                           |  |
| 22. Addition of the motor breaker                      |  |
| 23. OPC UA   |  |

| Clamp unit   |  |
|--|--|
| 1. Core tractor control circuit 1 system (Control circuit+Piping) *4                               |  |
| 2. Core tractor drive circuit (No hydraulic pump) (Only for SE50EV-A - SE180EV-A)                  |  |
| 3. Core tractor drive circuit (The ie Hydraulic Pump is included.) (Only for SE50EV-A - SE180EV-A) |  |
| 4. Pneumatic core pull control circuit 1 system (Control circuit+Piping) *4                        |  |
| 5. Rotating core control circuit (Motor drive, Less than 1.5 kW)                                   |  |
| 6. SPI take-out robot connection circuit *1  |  |
| 7. SPI AN-146/EUROMAP67 take-out robot connection circuit  |  |
| 8. Product chute   |  |
| 9. High precision heat insulating plate (5 mm/10 mm, Cross type)                                   |  |
| 10. Mold clamp control unit *4   |  |
| 11. Valve gate drive circuit (Control circuit+Pneumatic circuit) *4                                |  |
| 12. Valve gate drive circuit (The ie Hydraulic Pump is included.)                                  |  |
| 13. Full metallic toggle cover   |  |
| 14. Ejector compression device (SE50EV-A - SE180EV-A: 49 kN) *6                                    |  |
| 15. Mold space extension 50 mm *7  |  |
| 16. Mold space extension 100 mm (Only for SE100EV - SE180EV) *8                                    |  |
| 17. Slide core return signal *1  |  |
| 18. Double Center Press Platens (Only for SE100EV - SE180EV) *9                                    |  |
| 19. Ejector force power up (SE100EV-A - SE180EV-A: 59 kN) *10                                      |  |
| 20. Ejector stroke extension (SE50EV-A, SE75EV-A: 100 mm, SE100EV-A - SE180EV-A: 150 mm)           |  |
| 21. Pneumatic control circuit *5   |  |
| 22. Signal for hoop molding (Only for SE30EV-A)  |  |
| 23. High cycle specification (Only for SE30EV-A)   |  |

| Spare parts and accessories  |  |
|--|--|
| 1. Spare parts A (Mechanical parts: Lub. parts)  |  |
| 2. Spare parts A (Electrical parts: Thermocouple)  |  |
| 3. Spare parts for export (Encoder, Limit switch, Inductive proximity sensors)                         |  |
| 4. Leveling pads (For one machine)   |  |
| 5. Anchor bolts (For one machine)  |  |
| 6. Locating ring (Transition fit) Inner diameter: ø26 mm/Outer diameter: ø60 mm (Only for SE30EV-A)    |  |
| 7. Locating ring (Transition fit) Inner diameter: ø100 mm/Outer diameter: ø120 mm (Only for SE180EV-A) |  |
| 8. Locating ring (Transition fit) Inner diameter: ø110 mm/Outer diameter: ø120 mm (Only for SE180EV-A) |  |
| 9. Mechanical parts and hooks for hosting machine  |  |
| 10. Tool A   |  |
| 11. Ejector rods   |  |
| 12. Grease gun   |  |
| 13. Grease cartridge for automatic lub (700 cc)  |  |
| 14. Grease cartridge for manual lub (400 cc)   |  |
| 15. High precision heat insulating plate (5 mm/10 mm, Cross type)                                      |  |
| 16. Mold clamp   |  |
| 17. Box end wrench for open nozzles  |  |
| 18. Offset wrench for shut-off nozzle  |  |

\*1 All input and output signals are no-voltage contact signals. Power is not supplied with output signals.  
 \*3 The injection duty is 50%. The maximum injection speed of C35 unit and C160 unit change as follows.  
 C35: 500 mm/s C160: 350 mm/s  
 \*4 All input signals are no-voltage contact signals. All output signals are 24 V DC signals.  
 \*5 All input and output signals are 24 V DC signals.  
 \*6 The ejector stroke will be shortened, and maximum ejector speed slows down.  
 \*7 The overall machine length is larger by 50 mm (SE100EV-A - SE180EV-A: 100 mm), and maximum mold thickness is larger by 50 mm.

\*8 The overall machine length and maximum mold thickness are larger by 100 mm.  
 \*9 You cannot choose this option with 100 mm mold thickness extension.  
 \*10 The compression time with listed compression force is less than 20% of cycle time, and the ejector stroke will be shortened.  
 ● Specifications are subject to change without notice for performance improvement.  
 ● Standard specification models of the SE-EV-A series comply with the safety standards of Japan, China and the nations of Southeast Asia. They can also be modified to comply with the safety standards of Korea (KCs Mark), USA, Brazil, the nations of Oceania and Canada. For more information, contact us.

## Screw Assembly

| Specifications       |                 | Nitrided                                 | Chrome Plated                                       | Wear and Corrosion resistant A                           | Wear and Corrosion resistant B   | Wear and Corrosion resistant C                           | High temperature   |
|----------------------|-----------------|--|---|--|--|--|--|
| Material             | Screw           | Nitride Coating                          | Chrome Plated                                       | Wear and Corrosion resistant A                           | Wear and Corrosion resistant B   | Wear and Corrosion resistant B                           | Wear and Corrosion resistant A                           |
|                      | Cylinder        | Nitride Coating                          | Nitride Coating                                     | Wear and Corrosion resistant A                           | Wear and Corrosion resistant B   | Wear and Corrosion resistant C                           | Wear and Corrosion resistant A                           |
|                      | Screw tip (set) | Rotating type                            | Rotating type                                       | Wear and Corrosion resistant A Non-rotating type headset | Wear and Corrosion resistant B Non-rotating type headset                 | Wear and Corrosion resistant C Non-rotating type headset | Wear and Corrosion resistant A Non-rotating type headset |
| Type                 | SD Screw        | ○  | ○   | ○  | ○  | ○  | ○  |
|                      | SM Screw        | ○  | ○   | ○  | ○  | ○  | ○  |
| Wear resistance      |                 | ★  | ★   | ★★   | ★★★  | ★★★  | ★★   |
| Corrosion resistance |                 | ★  | ★   | ★★   | ★★   | ★★★  | ★★   |
| Suitable resins      |                 | Non-abrasive (wear) and corrosive resins | Resins may burn, resins with poor thermal stability | Resins with less than 30% GF, flame retardant resins     | Resin with 30% - 40% GF, resins with large amount of filler (GB, CF, MR) | Resin with 40% - 60% GF, highly corrosive resins         | Resin with high melting temperatures                     |

★★★Most suitable ★★Suitable ★Usable

## List of Preparation Items

### Main breaker capacity

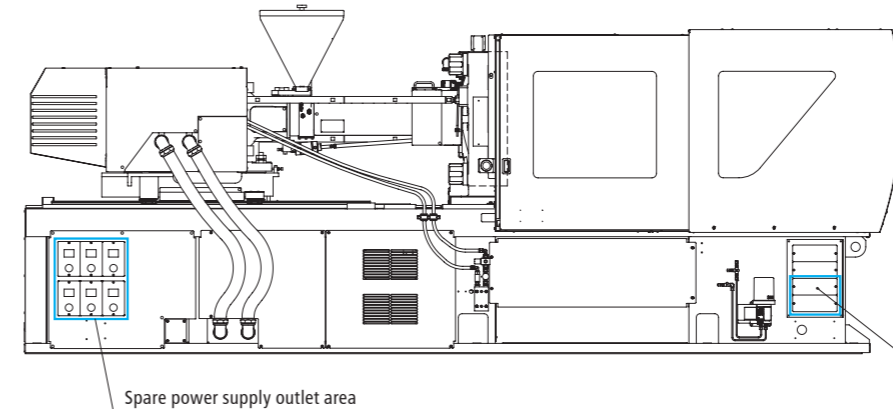
| Machine   | Main breaker capacity |
|-----------|-----------------------|
| SE30EV-A  | 100A                  |
| SE50EV-A  | 100A                  |
| SE75EV-A  | 125A                  |
| SE100EV-A | 125A                  |
| SE130EV-A | 150A                  |
| SE180EV-A | 175A                  |

- Voltage and frequency of main power source is applicable to the areas of AC200V-50Hz/AC200V-60Hz/AC220V-60Hz.
- Connect to the mating of 3-phases 3-wires, & grounding cable.

### Spare sockets (Optional)

The increased number of power sockets are available for auxiliary equipment such as auto loader and mold temperature controller to flexibly meet the requirement for customer's molding systems, to which a necessary number of sockets can be added to connect their peripheral equipment.

- A maximum of eight outlets can be selected.
- The capacities and installation positions of the outlets can be selected freely. One 10 A outlet, one 20 A outlet, one 30 A outlet, and one 60 A outlet are prepared.
- ※ Restrictions are placed on the installation position of the 60 A outlet.
- ※ The table shows the limit of total Amperage available at the same time when each type of molding machine runs.



| Machine   | Maximum Amperage |
|-----------|------------------|
| SE30EV-A  | 50A              |
| SE50EV-A  | 50A              |
| SE75EV-A  | 75A              |
| SE100EV-A | 75A              |
| SE130EV-A | 75A              |
| SE180EV-A | 100A             |

\* Contain Spare power supply outlet and power supply of mold temperature controller and rotating core.

### Primary side in-line size, grounding cable size

| Machine   | Primary side power cable size | Primary side power terminal screw size | Grounding cable size | Grounding cable terminal screw size |
|-----------|-------------------------------|--|----------------------|-------------------------------------|
| SE30EV-A  | 30mm <sup>2</sup>             | M8                                     | 22mm <sup>2</sup>    | M8                                  |
| SE50EV-A  | 30mm <sup>2</sup>             | M8                                     | 22mm <sup>2</sup>    | M8                                  |
| SE75EV-A  | 38mm <sup>2</sup>             | M8                                     | 22mm <sup>2</sup>    | M8                                  |
| SE100EV-A | 38mm <sup>2</sup>             | M8                                     | 22mm <sup>2</sup>    | M8                                  |
| SE130EV-A | 50mm <sup>2</sup>             | M8                                     | 30mm <sup>2</sup>    | M8                                  |
| SE180EV-A | 60mm <sup>2</sup>             | M8                                     | 30mm <sup>2</sup>    | M8                                  |

- The size of electric cables listed above is based on the allowable current when the ambient temperature of piping of a single core polyvinyl cable is 40°C.
- The values listed above are calculated base on the sum of load current listed in the item of main breaker capacity. When the power must be supplied in large quantities to auxiliary equipment from the molding machine, it is required to use a large size cable. However, there may be enough room for the size of the cable currently used depending on the selection of the options.
- Voltage fluctuation of the power source must be within ±10% of the rated voltage at the power source contact point (main breaker) on the molding machine side.
- Protection network against service interruption is not provided for the control circuit of the molding machine. When the instant interruption time exceeds one cycle, the molding machine may stop running in some cases. In an area where instant service interruptions are frequent due to thunderbolts, be sure to install an uninterruptive power supply system at the plant site.

### Calculated values (ref. values) of cooling water

#### ■ Cooling water line of water jacket

| Machine  | Band heater capacity | Required cooling water |
|----------|----------------------|------------------------|
| C35 ø20  | 3.5kW                | 0.8 ℓ/min              |
| C65 ø25  | 4.2kW                | 1.0 ℓ/min              |
| C110 ø28 | 4.8kW                | 1.1 ℓ/min              |
| C160 ø32 | 5.4kW                | 1.3 ℓ/min              |
| C250 ø36 | 8.4kW                | 2.0 ℓ/min              |
| C360 ø40 | 10.3kW               | 2.4 ℓ/min              |
| C450 ø45 | 11.5kW               | 2.7 ℓ/min              |
| C560 ø50 | 12.6kW               | 2.9 ℓ/min              |

#### ■ Mold cooling water line

| Machine                         | Total cooling water required for 2 lines. |
|---------------------------------|---|
| All models (SE30EV-A~SE180EV-A) | 10 ℓ/min                                  |

\* Cooling water required for 1 line is approx 5 ℓ/min.