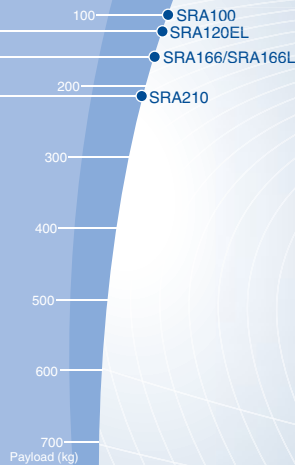


World class Speed Robot

SRA100/166/210/166L/120EL



World Class Speed Robot

- Robot motion makes minimum cycle times unbeatable. Light weight and high rigidity design makes high acceleration and minimum vibration. Maximum speed on all axes reduces cycle time. Improved productivity by these design.

Easy to use

- Improved motor drive controls for accurate positioning and repeatability.
- Slim and compact design allows closer installation in less floor space.
- Improved maintenance item. It can do easy parts replacement and inspection.

Energy saving

- Power consumption reduced 15% from existing model by reducing the robot's weight by 20% and using newest motor drive controls.

SRA100/166/210/166L/120EL

◆ Robot specifications

| Item | | Specifications | | | | | |
|---|---|--------------------------|------------------------------|------------------------------|------------------------------|------------|--|
| Robot model | | SRA100 | SRA166 | SRA210 | SRA166L | SRA120EL | |
| Structure | | Articulated construction | | | | | |
| Number of axes | | 6 | | | | | |
| Drive system | | AC servo system | | | | | |
| Max. operating area (rad/°) | Arm | J1 Swivel | ±3.14 [±180] | | | | |
| | | J2 Back & forth | +1.05~-1.40 [+60~-80] | | | | |
| | | J3 Up & down | +2.62~-2.56 [+150~-146.5] | +2.62~-2.33 [+150~-133.4] | +2.62~-2.23 [+150~-127.7] | | |
| | Wrist | J4 Rotation2 | ±6.28 [±360] | | | | |
| | | J5 Bend | ±2.36 [±135] | ±2.27 [±130] | ±2.36 [±135] | | |
| | | J6 Rotation1 | ±6.28 [±360] | | | | |
| Max. velocity (rad/s/°/s) | Arm | J1 Swivel | 2.37 [136] | 2.18 [125] | 2.01 [115] | | |
| | | J2 Back & forth | 2.36 [135] | 2.01 [115] | 1.83 [105] | | |
| | | J3 Up & down | 2.36 [135] | 2.11 [121] | 1.97 [113] | | |
| | Wrist | J4 Rotation2 | 4.19 [240] | 3.14 [180] | 2.44 [140] | | |
| | | J5 Bend | 4.07 [233] | 3.02 [173] | 2.32 [133] | 3.02 [173] | |
| | | J6 Rotation1 | 6.31 [351] | 4.54 [260] | 3.49 [200] | 4.54 [260] | |
| Payload (kg) | Wrist | 100 | 166 | 210 | 166 | 120 | |
| | Forearm*1 | 45 (maximum90) | | | | | |
| Allowable static load torque (N·m) | J4 Rotation2 | 580 | 951 | 1337 | 951 | 687 | |
| | J5 Bend | 580 | 951 | 1337 | 951 | 687 | |
| | J6 Rotation1 | 290 | 490 | 720 | 490 | 353 | |
| Max. allowable moment of inertia*2 (kg·m ²) | J4 Rotation2 | 60 | 88.9 | 141.1 | 88.9 | 60 | |
| | J5 Bend | 60 | 88.9 | 141.1 | 88.9 | 60 | |
| | J6 Rotation1 | 30 | 45 | 79 | 45 | 30 | |
| Max. reach (mm) | 2654 | | 2674 | 2951 | 3099 | | |
| Position repeatability*3 (mm) | ±0.06 | | | | | | |
| Installation | Floor mounted | | | | | | |
| Ambient conditions*4 | Temperature: 0~45°C Humidity: 20~85% RH (without condensation) Vibration of installation surface: 0.5 G (4.9 m/s ²) or less | | | | | | |
| Robot mass (kg) | 960 | 990 | 980 | 985 | | | |

1[rad] = 180/π[°], 1[N·m] = 1/9.8[kgf·m]

*1 : Load specification of number 1 arm varies according to wrist load conditions and installation position.

*2 : Note that the allowable moment of inertia of wrist varies with the wrist load conditions.

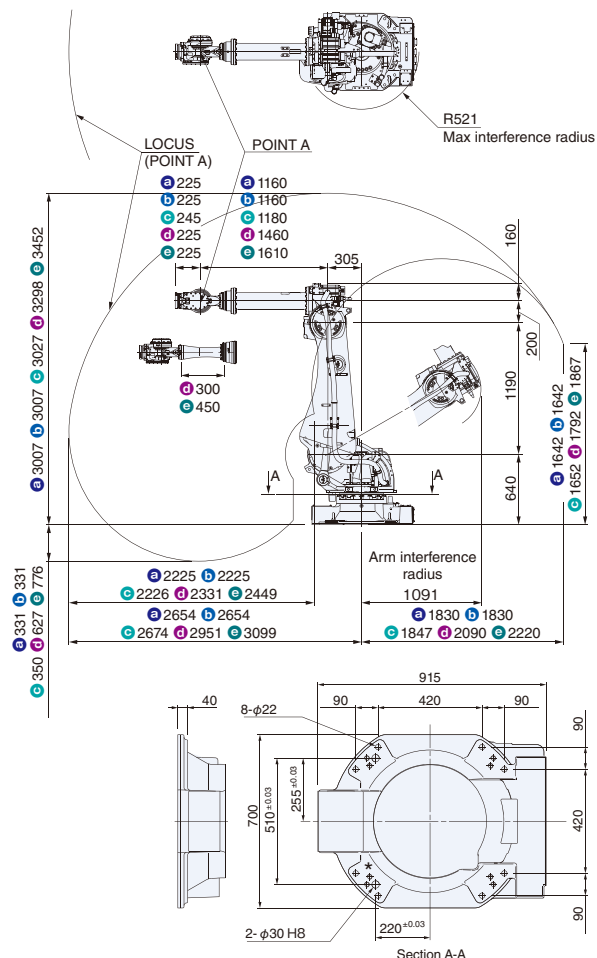
*3 : JIS B 8432 compliant.

*4 : Permitted height is not higher than 1,000m above sea level.

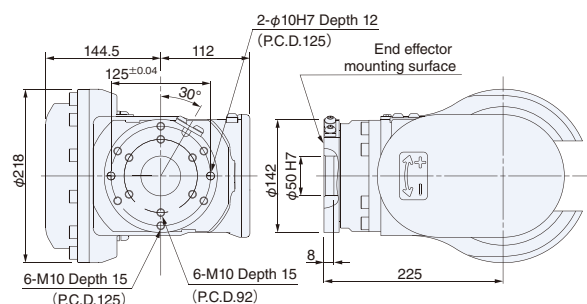
◆ Exterior dimensions and operating envelope

SRA100/166/210/166L/120EL

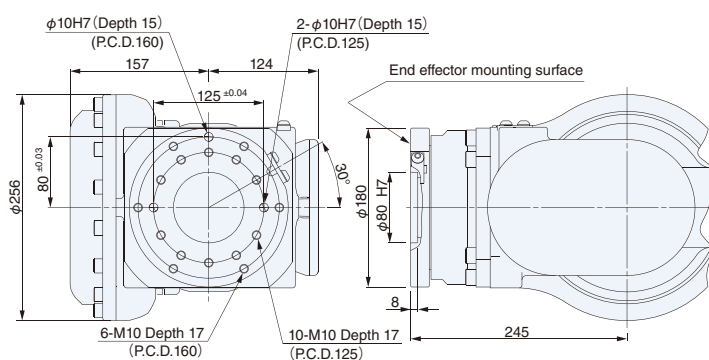
*Values in diagram indicated as a SRA100 b SRA166 c SRA210 d SRA166L e SRA120EL



SRA100/166/166L/120EL



SRA210



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●The specifications are subject to changes without notice.
●In case that an end user uses this product for military purpose or production of weapon, this product may be liable for the subject of export restriction stipulated in the Foreign Exchange and Foreign Trade Act. Please go through careful investigation and necessary formalities for export.

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