

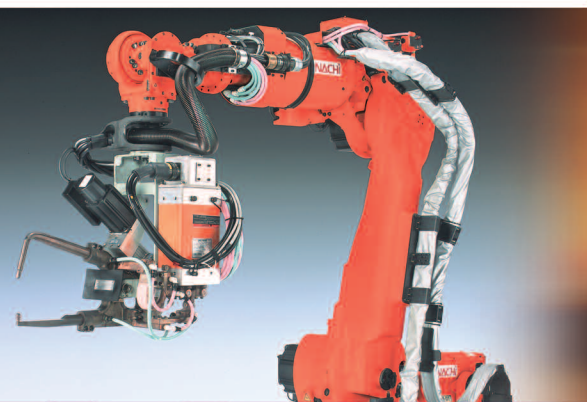
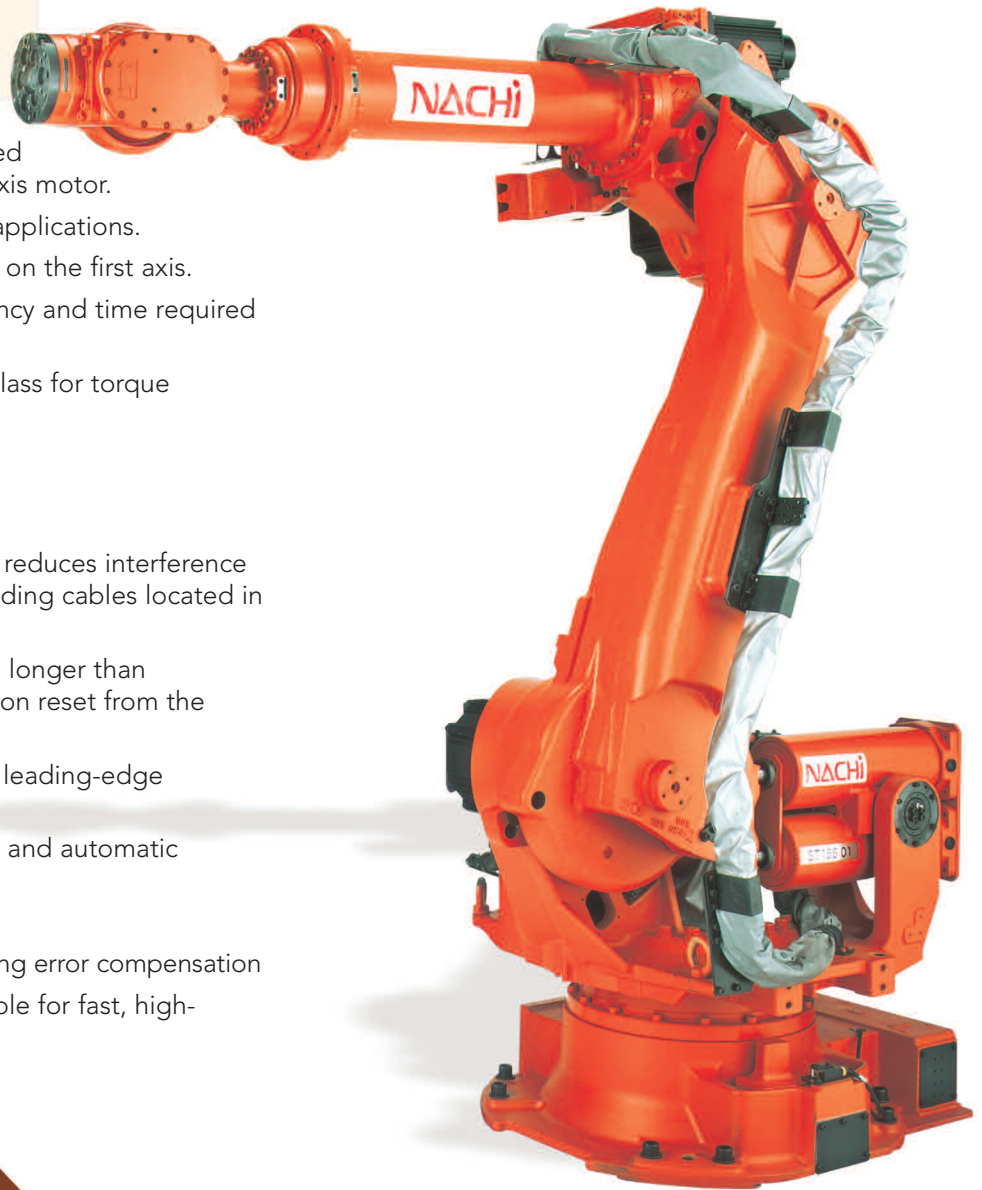
ST Series

ST166/200

- > Robot payload can be easily changed by replacing the wrist and second axis motor.
- > Versatile robot arm supports many applications.
- > Heavy auxiliary loads can be placed on the first axis.
- > Easy to maintain — reduced frequency and time required to perform maintenance.
- > Powerful, compact wrist — best in class for torque and stroke.

ST166-01A/200-01A The Ultimate Spot Welding Robot

- > Efficient cable management system reduces interference with peripheral devices (internal welding cables located in the robot arm).
- > Battery replacement cycle is 3 times longer than previous and features original position reset from the teach pendant.
 - > Spot welding functions support leading-edge technology
 - > Welding pressure monitoring and automatic adjustment
 - > Monitors welding in real time
 - > Highly accurate off-line teaching error compensation
 - > Optional Servo-Gun™ available for fast, high-quality welding



APPLICATIONS

Spot Welding

Sealing

Machine Loading

Material Handling

Press-to-Press
Handling

Die-Casting

Deburring

Assembly

Roller Hemming

Palletizing

Press Brake

ST Series

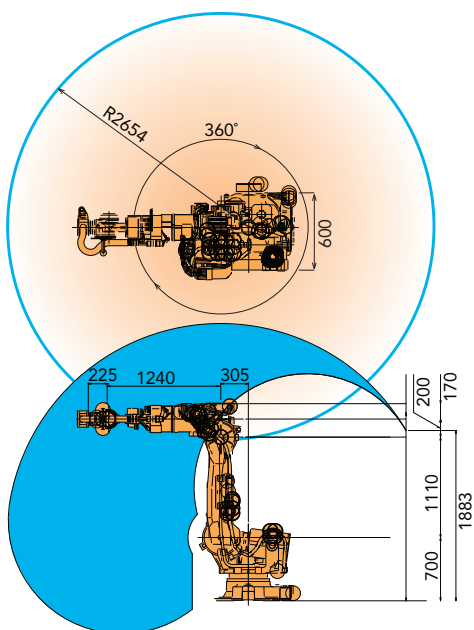


BASIC SPECIFICATIONS

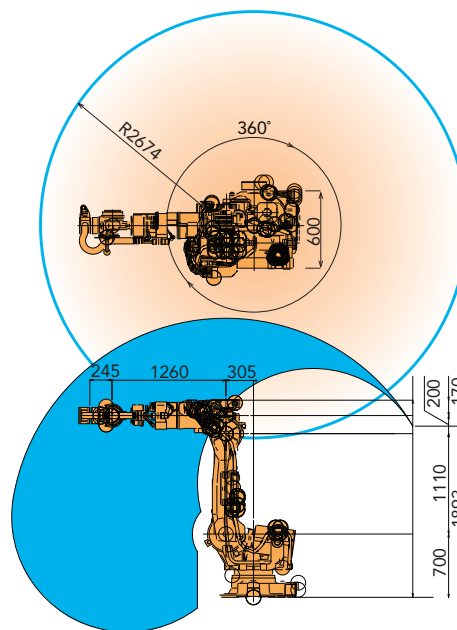
| | | ST166 | ST200 | ST166-01A | ST200-01A | |
|-----------------------------|------------------|--|--|---------------------------------------|---------------------------------------|------------------------------------|
| Robot Type | | 166kg payload | 200kg payload | 166kg payload | 200kg payload | |
| Construction | | Articulate | Articulate | Articulate | Articulate | |
| Number of Axes | | 6 | 6 | 6 | 6 | |
| Drive | | AC Servo Motor | AC Servo Motor | AC Servo Motor | AC Servo Motor | |
| Maximum Stroke | Arm | J1 Swivel J2 Back & Forth J3 Up & Down | ±180° +80° ~ -60° +240° ~ -136° | ±180° +80° ~ -60° +240° ~ -136° | ±180° +80° ~ -60° +240° ~ -136° | |
| | Wrist | J4 Rotation 2 J5 Bend J6 Rotation 1 | ±360° ±135° ±360° | ±360° ±130° ±360° | ±205° ±120° ±200° | |
| | Maximum Velocity | Arm | J1 Swivel J2 Back & Forth J3 Up & Down | 100°/sec 90°/sec 95°/sec | 100°/sec 90°/sec 95°/sec | 100°/sec 90°/sec 95°/sec |
| Loading Weight | Wrist | J4 Rotation 2 J5 Bend J6 Rotation 1 | 150°/sec 150°/sec 210°/sec | 120°/sec 120°/sec 190°/sec | 150°/sec 150°/sec 210°/sec | 120°/sec 120°/sec 190°/sec |
| | Upper Arm | 166kg Maximum 90kg | 200kg Maximum 90kg | 166kg Maximum 45kg | 200kg Maximum 45kg | |
| | Wrist Torque | J4 Rotation 2 J5 Bend J6 Rotation 1 | 97kg · m 97kg · m 50kg · m | 130kg · m 130kg · m 70kg · m | 97kg · m 97kg · m 50kg · m | 130kg · m 130kg · m 70kg · m |
| Allowable Moment of Inertia | J4 Rotation 2 | 9.1kg · m ² | 12kg · m ² | 9.1kg · m ² | 12kg · m ² | |
| | J5 Bend | 9.1kg · m ² | 12kg · m ² | 9.1kg · m ² | 12kg · m ² | |
| | J6 Rotation 1 | 4.5kg · m ² | 6.7kg · m ² | 4.5kg · m ² | 6.7kg · m ² | |
| Repeatability | | ±0.3mm | ±0.3mm | ±0.3mm | ±0.3mm | |
| Ambient Temperature | | 0~45°C (32~113°F) | 0~45°C (32~113°F) | 0~45°C (32~113°F) | 0~45°C (32~113°F) | |
| Installation | | Floor | Floor | Floor | Floor | |
| Robot Body Weight | | 1,170kg | 1,215kg | 1,200kg | 1,245kg | |
| Range of Motion/Surface | | 9.54m ² | 9.71m ² | 9.54m ² | 9.71m ² | |

OPERATING RANGES

ST166/166-01A



ST200/200-01A



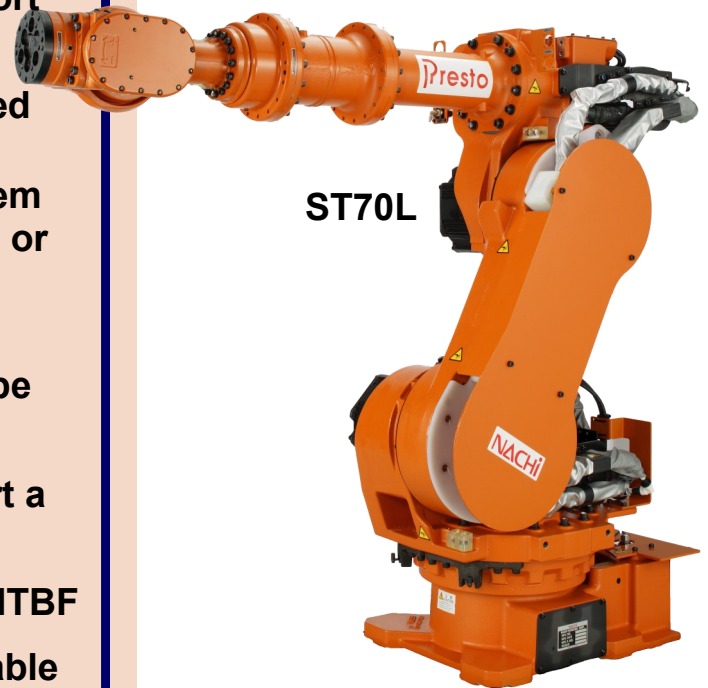
For more information and specifications, please visit www.nachirobotics.com

Presto ST “Slim” Robot



Compact, Multi-Purpose Robots

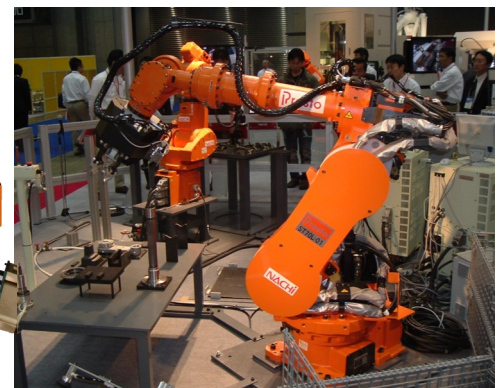
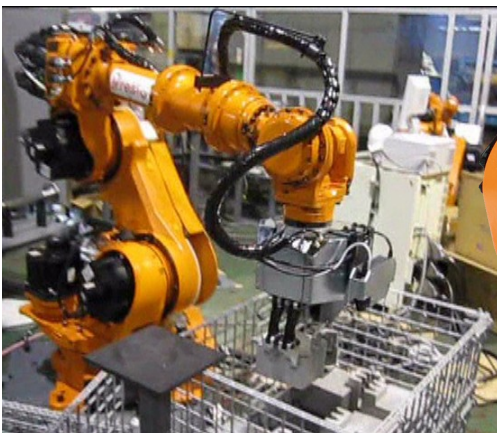
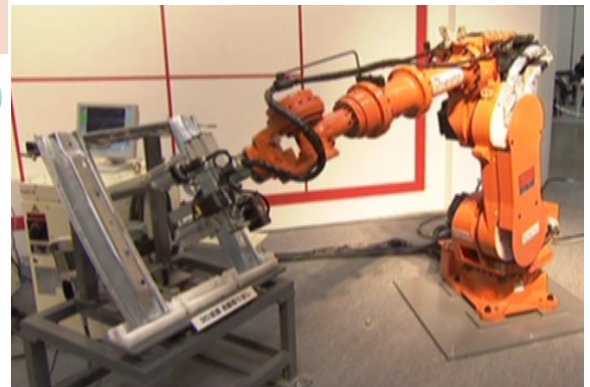
- Powerful load capacities that support a wide range of applications
- The ST70L and ST100 were designed with an advanced space-saving concept (500mm width), making them ideal for compact system solutions or high-density/multi-layered robotic installations
- Lightweight spot welding gun can be mounted on robot
- Significant wrist torque can support a large welding gun
- Highly reliable with a 60,000 hour MTBF
- Integrated dress package CMS—Cable Management System (optional)



ST70L

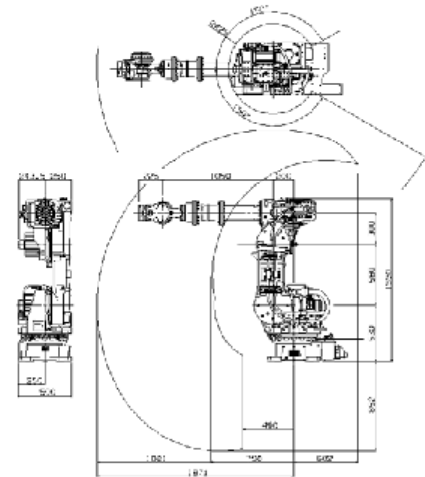


ST100

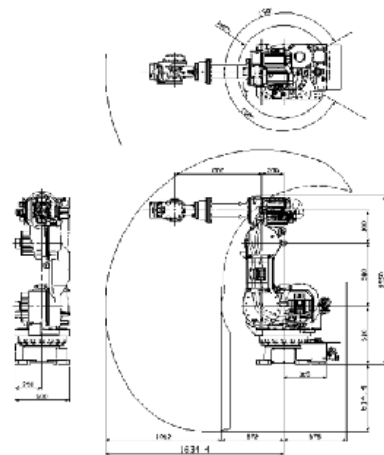
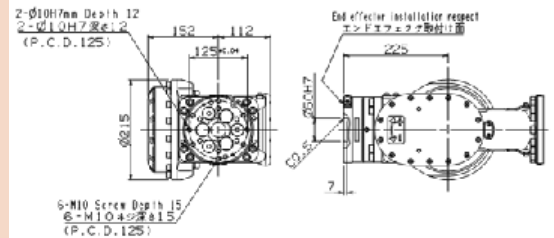


Presto ST "Slim" Robot

| Specifications | | | | | |
|-----------------------------|-----------|-----------------|-------------------------|-------------------------|--|
| ITEM | | | ST70L | ST100 | |
| Robot Type | | | 70kg Payload | 100kg Payload | |
| Construction | | | Articulate | Articulate | |
| Number of Axis | | | 6 | 6 | |
| Drive | | | AC servo motor | AC servo motor | |
| Maximum Stroke | Arm | J1 Swivel | +/- 150° | +/- 150° | |
| | | J2 Back & Forth | +120° ~ -60° | +120° ~ -60° | |
| | | J3 Up & Down | +90° ~ -117° | +90° ~ -125° | |
| | Wrist | J4 Rotation 2 | +/- 360° | +/- 360° | |
| | | J5 Bend | +/- 135° | +/- 135° | |
| | | J6 Rotation 1 | +/- 360° | +/- 360° | |
| Maximum Velocity | Arm | J1 Swivel | 90°/sec | 90°/sec | |
| | | J2 Back & Forth | 90°/sec | 90°/sec | |
| | | J3 Up & Down | 90°/sec | 90°/sec | |
| | Wrist | J4 Rotation 2 | 130°/sec | 130°/sec | |
| | | J5 Bend | 130°/sec | 130°/sec | |
| | | J6 Rotation 1 | 180°/sec | 180°/sec | |
| Loading Weight | Wrist | | 70kg | 100kg | |
| | Upper Arm | | Maximum 25kg | Maximum 25kg | |
| Wrist Torque | J4 | Rotation 2 | 59.6kg · m | 83.4kg · m | |
| | J5 | Bend | 59.6kg · m | 83.4kg · m | |
| | J6 | Rotation 1 | 30kg · m | 41.9kg · m | |
| Allowable Moment of Inertia | J4 | Rotation 2 | 85.1kg · m ² | 96.3kg · m ² | |
| | J5 | Bend | 85.1kg · m ² | 96.3kg · m ² | |
| | J6 | Rotation 1 | 36.7kg · m ² | 43.0kg · m ² | |
| Repeatability | | | +/- 0.3mm | +/- 0.3mm | |
| Ambient Temperature | | | 0~45°C (32~113°F) | 0~45°C (32~113°F) | |
| Installation | | | Floor | Floor | |
| Robot Body Weight | | | 790kg | 760kg | |



ST70L



ST100

