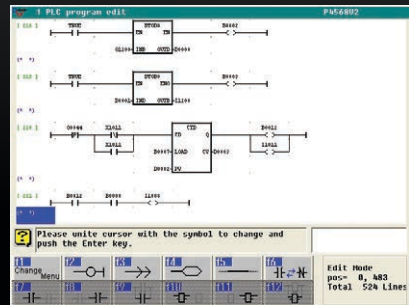


User-Friendly Software and Hardware Solutions

Software PLC (Standard)

- Built-in-software PLC is fully programmable to communicate with other robots, machines, and peripheral equipment and manage internal robot operations.
- Hundreds of included functions allow the Nachi Software PLC to perform complex tasks and replace external PLC devices, controlling entire work cells without added hardware.



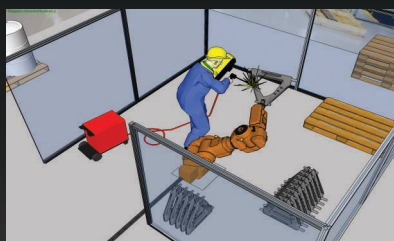
User Task Functions (Standard)

- User Tasks are "macro" programs that allow the robot to perform processes and calculations simultaneously with robot program playback to increase functionality and reduce cycle time.
- Generate custom text-based messages on monitor screens prompting cell operators with key process information, faults, troubleshooting data and operational instructions.
- Allows Ethernet socket communication to external vision systems and other equipment.

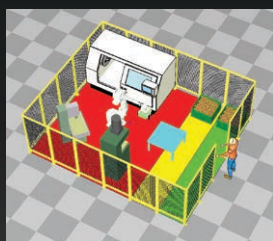
Robot Monitoring Unit (Optional)

- Robot Monitoring Unit (RMU) uses functional safety technology that allows for reduction of cell footprint and introduction of close human-to-robot process application support.
- Robot Monitoring Unit is compliant with International Standards IEC 61508 SIL3, ISO 13849-1 PL e cat. 4, and ISO10218-1:2011 5.10.4.

Rated to ISO10218-1:2011 5.10.4



Safety-rated monitored stop



Speed and Separation monitoring

Direct Teach (Optional)

- Select MZ Series Robots incorporate optional Direct Teach technology that allows operators to physically move the robot arm and record or modify programs.
- Quick connect hardware allows Direct Teach to be used on multiple robots.



Graphical User Interface FlexGui (Optional)

- The FlexGui family of innovative technology solutions includes FlexGui Toolbox on the PC, FlexGui Anywhere on Smart Phones and Tablets, FlexGui Remote, and FlexGui Reporting.

- FlexGui Toolbox allows offline programming of interactive teach pendant operator screens using a PC.
- FlexGui Anywhere enables you to monitor and control your robots as well as assist your robot operators from your smart phone, tablet or browser.

- FlexGui Remote is an advanced operation solution component of the FlexGui Toolbox allowing remote maintenance access to the robot controller by Nachi technicians or maintenance personnel.



- FlexGui Reporting is a management solution allowing robots to report their production progress, process parameters and errors, allowing users to produce statistical analysis reports and graphs.

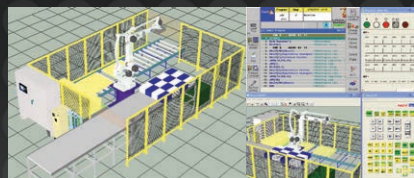
Fieldbus Communication Protocols (Optional)

- Easily connect using a variety of industry-standard fieldbus communication protocols allowing you to expand signal capacity and simplify integration of Nachi Robots to peripheral equipment, devices and PLC units.

- DeviceNet
- Ethernet IP
- CC-Link
- Profibus
- Profinet
- Interbus
- FL-Net

FD On Desk Robot Simulator (Optional)

- FD On Desk is Nachi's proprietary robot simulation software tool that runs on laptop or desktop computers.
- FD On Desk simulates all critical components of the Nachi FD Robot Control Platform and also provides a 3D environment (Robview) for creating accurate and realistic-looking work cells.
- FD On Desk has a wide variety of uses including offline programming, application setup, personnel training, problem diagnosis, and engineering (Reach and Cycle Time Verification).
- Use CAD drawings to simplify creation of complex paths with CAD to Path Utility



Safe Robot Operation without Fences Nachi MZ(E) Series Robots

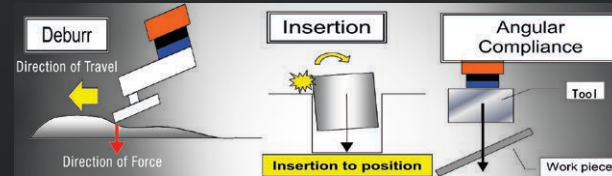
- Nachi MZ(E) robots can use Safe Robot torque-limiting technology. All motors have a rated output of 80w or less on each of their axes. MZ(E) robots can be used without safety fences* and operators can work adjacent to the robot. (*Risk assessment required)



Advanced Process Technologies

Force Control Functions (Optional)

Force Control allows Nachi Robots to apply constant force along a contoured path. Uses "feel" to insert parts with tight tolerances. Trace or match angled surfaces for assembly.



Integrated Vision (Optional)

(Maximize efficiency and control of your process with Nachi Vision Technologies)*

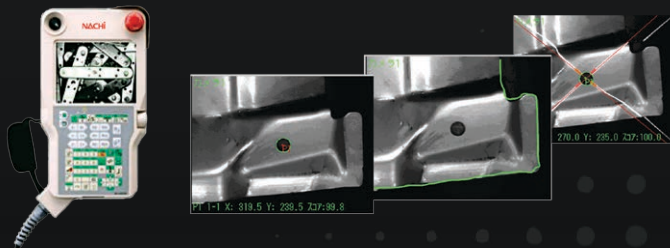
NV-Pro Vision System:

- Nachi NV-Pro advanced vision system supports 2D, 3D, and laser vision technologies offering high-speed image acquisition and measurements.

- Expandable up to four cameras on a single system for maximum flexibility.

- NV-Pro supports conveyor synchronization (Line Tracking) technology for on-the-fly handling capability.

- NV-Pro is a fully integrated vision solution with image display on the teach pendant for simplified setup and operation.

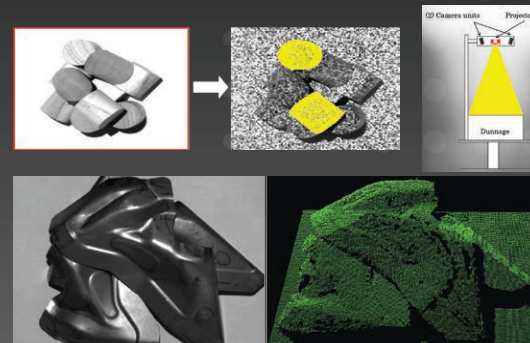


*Ethernet socket communication and User Task functions allow Nachi Robots to also communicate with third-party vision systems.

NV-Pro EX — 3D Surface Matching Vision System:

- Nachi NV-Pro EX vision system uses advanced dot cloud projection technology to match surface contour images to known CAD or library image part geometry.

- Using Nachi NV-Pro EX dot cloud vision technology, components lacking easily identifiable features such as holes or defined edges can be selected based upon surface contour and picked from bins of randomly arranged parts; this technology also saves cycle time as multiple parts queue from single image process sequence.



NACHI

Please feel free to contact us with any questions that you may have.

Nachi Robotic Systems Inc. (NRS)
North American Headquarters

42775 W. 9 Mile Rd.
Novi, MI 48375
Tel: 248-305-6545
Fax: 248-305-6542

Indiana Service Center

Greenwood, IN
Tel: 248-305-6545

South Carolina Service Center

Greenville, SC
Tel: 248-305-6545

Ohio Service Center

Dayton, OH
Tel: 248-305-6545

Toronto Branch Office

89 Courtland Ave. #2
Vaughn, ONT Canada L4K 3T4
Tel: 905-760-9542
Fax: 905-760-9477

Mexico Branch Office

Urbina #54
Parque Industrial Naucalpan
Naucalpan de Juarez 53489
Estado de Mexico, Mexico
Tel: 011-52-55-5312-6556
Fax: 011-52-55-5312-7248

www.nachirobotics.com

NACHI

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- Easy Integration with Sensor Technology
 - Vision Systems
 - Laser Scanner
 - Safety
 - Force Feedback
 - Conveyor Synchronization

MC350



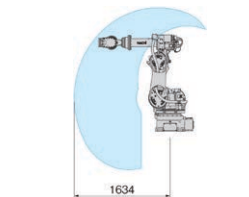
SRA133HL



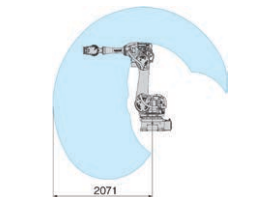
SRA Series



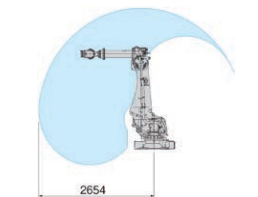
SRA100J
Reach (mm): 1634
Payload: 100kg
Axes: 6
Repeatability: ±0.1mm



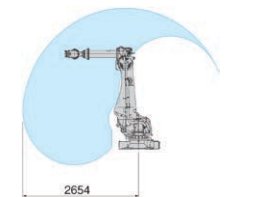
SRA100B
Reach (mm): 2071
Payload: 100kg
Axes: 6
Repeatability: ±0.1mm



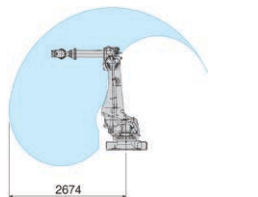
SRA Standard Reach



SRA100
Reach (mm): 2654
Payload: 100kg
Axes: 6
Repeatability: ±0.1mm

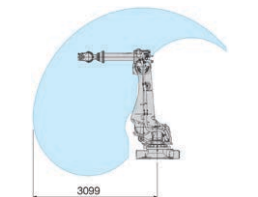


SRA166
Reach (mm): 2654
Payload: 166kg
Axes: 6
Repeatability: ±0.1mm

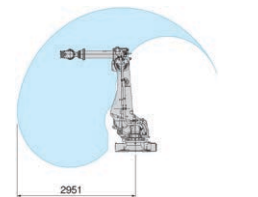


SRA210(D)(V)*
Reach (mm): 2674
Payload: 210kg
Axes: 6
Repeatability: ±0.15mm

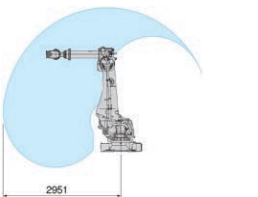
SRA Long Reach



SRA120EL
Reach (mm): 3099
Payload: 120kg
Axes: 6
Repeatability: ±0.15mm

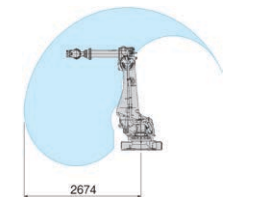


SRA133L
Reach (mm): 2951
Payload: 133kg
Axes: 6
Repeatability: ±0.15mm

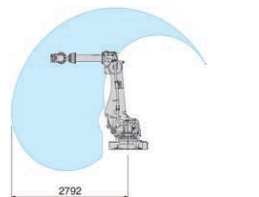


SRA166L
Reach (mm): 2951
Payload: 166kg
Axes: 6
Repeatability: ±0.15mm

SRA Heavy Payload

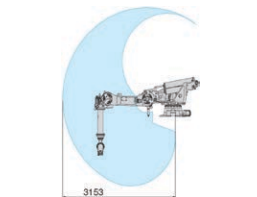


SRA240
Reach (mm): 2674
Payload: 240kg
Axes: 6
Repeatability: ±0.2mm

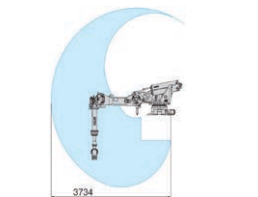


SRA250
Reach (mm): 2792
Payload: 250kg
Axes: 6
Repeatability: ±0.2mm

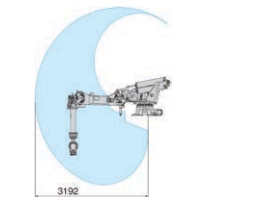
SRA Shelf Mount



SRA166T (Shelf Mount)
Reach (mm): 3153
Payload: 166kg
Axes: 6
Repeatability: ±0.1mm



SRA166TL (Shelf Mount)
Reach (mm): 3734
Payload: 166kg
Axes: 6
Repeatability: ±0.15mm

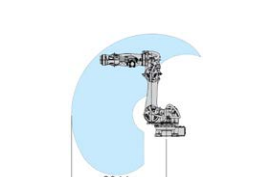


SRA210T (Shelf Mount)
Reach (mm): 3192
Payload: 210kg
Axes: 6
Repeatability: ±0.15mm

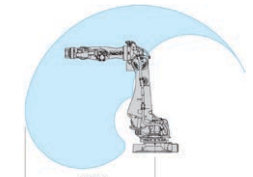
SRA-H Series (Hollow Arm Robots)



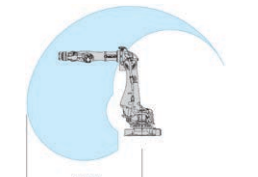
SRA100HB
Reach (mm): 2044
Payload: 100kg
Axes: 6
Repeatability: ±0.1mm



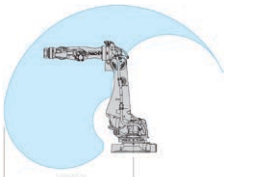
SRA100H
Reach (mm): 2654
Payload: 100kg
Axes: 6
Repeatability: ±0.1mm



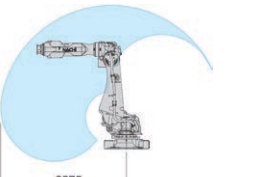
SRA133HL
Reach (mm): 2951
Payload: 133kg
Axes: 6
Repeatability: ±0.15mm



SRA210H
Reach (mm): 2654
Payload: 210kg
Axes: 6
Repeatability: ±0.15mm



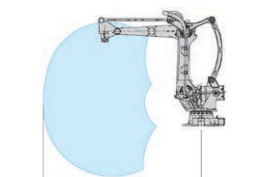
SRA220H/SRA220HV*
Reach (mm): 2575
Payload: 220kg
Axes: 6
Repeatability: ±0.15mm



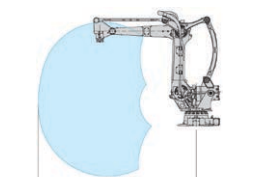
LP Series (Palletizing Robots)



LP130
Reach (mm): 3210
Payload: 130kg
Axes: 4
Repeatability: ±0.3mm



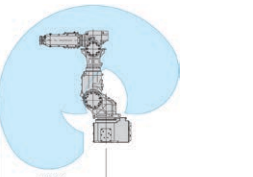
LP180/LP210
Reach (mm): 3210
Payload: 180/210kg
Axes: 4
Repeatability: ±0.4mm



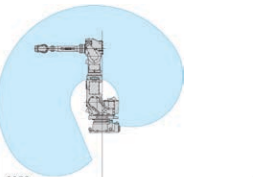
MR Series (Flexible 7-Axis Robots)



MR20/MR20L
Reach (mm): 1260/1398
Payload: 20kg
Axes: 7
Repeatability: ±0.06mm



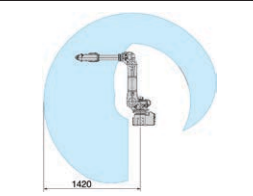
MR35/MR50
Reach (mm): 2050
Payload: 35/50kg
Axes: 7
Repeatability: ±0.07mm



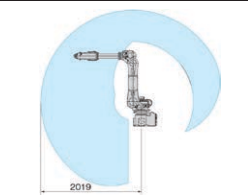
MC Series (Medium Payload Robots)



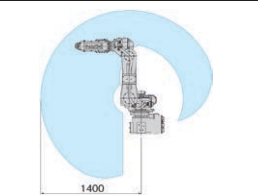
MC10S
Reach (mm): 1420
Payload: 10kg
Axes: 6
Repeatability: ±0.06mm



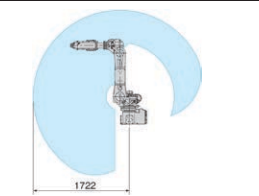
MC10L
Reach (mm): 2019
Payload: 10kg
Axes: 6
Repeatability: ±0.06mm



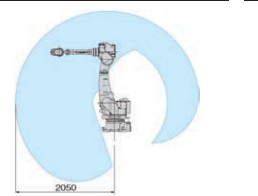
MC12S
Reach (mm): 1400
Payload: 12kg
Axes: 6
Repeatability: ±0.06mm



MC20
Reach (mm): 1722
Payload: 20kg
Axes: 6
Repeatability: ±0.06mm



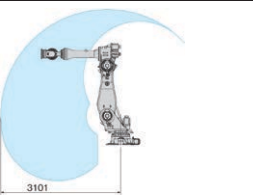
MC35/50/70
Reach (mm): 2050
Payload: 35/50/70kg
Axes: 6
Repeatability: ±0.07mm



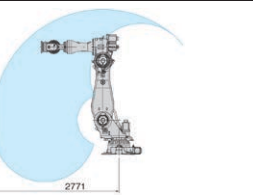
MC Series (Heavy Payload Robots)



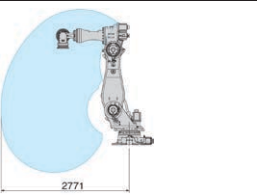
MC280L
Reach (mm): 3101
Payload: 280kg
Axes: 6
Repeatability: ±0.2mm



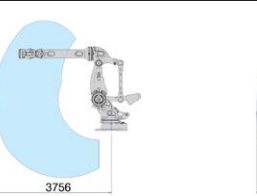
MC350
Reach (mm): 2771
Payload: 350kg
Axes: 6
Repeatability: ±0.2mm



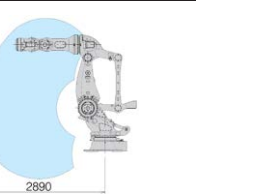
MC470P
Reach (mm): 2771
Payload: 470kg
Axes: 6
Repeatability: ±0.2mm



MC400L
Reach (mm): 3756
Payload: 400kg
Axes: 6
Repeatability: ±0.5mm



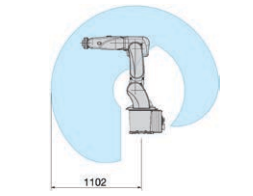
MC600
Reach (mm): 2890
Payload: 600kg
Axes: 6
Repeatability: ±0.3mm



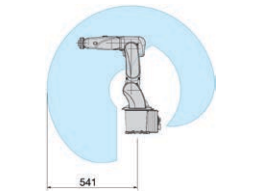
MZ Series (Ultra High-Speed Robots)



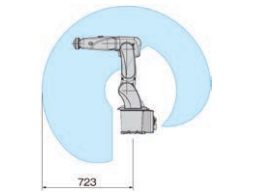
MZ03EL
Reach (mm): 1102
Payload: 3kg
Axes: 6
Repeatability: ±0.03mm



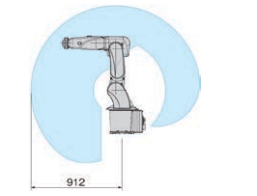
MZ04/MZ04E
Reach (mm): 541
Payload: 4kg
Axes: 6
Repeatability: ±0.02mm



MZ07P/MZ07
Reach (mm): 723
Payload: 7kg
Axes: 5/6
Repeatability: ±0.02mm



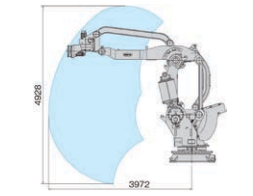
MZ07LP/MZ07L
Reach (mm): 912
Payload: 7kg
Axes: 5/6
Repeatability: ±0.03mm



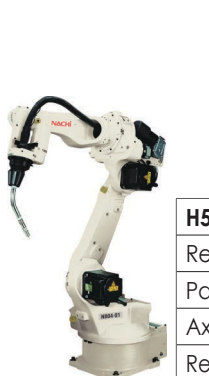
SC Series (Heavy Payload Robots)



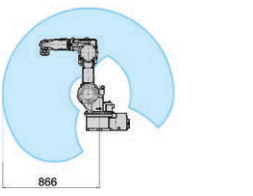
SC700
Reach (mm): 3972
Payload: 700kg
Axes: 6
Repeatability: ±0.5mm



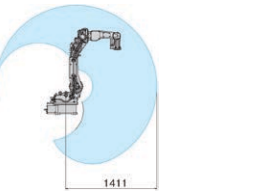
NB/NV/H Series (Arc Welding Robots)



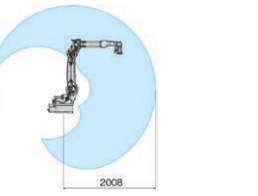
H5
Reach (mm): 866
Payload: 5kg
Axes: 6
Repeatability: ±0.05mm



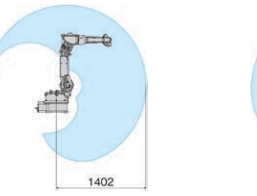
NB4
Reach (mm): 1411
Payload: 4kg
Axes: 6
Repeatability: ±0.08mm



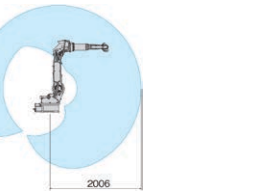
NB4L
Reach (mm): 2008
Payload: 4kg
Axes: 6
Repeatability: ±0.08mm



NV6
Reach (mm): 1402
Payload: 6kg
Axes: 6
Repeatability: ±0.08mm



NV6L
Reach (mm): 2006
Payload: 6kg
Axes: 6
Repeatability: ±0.08mm



FD11 Controller & CFD Controller



FD11 Controller
AC 200/220/380/400/420/440/460/480/580/600 +/-10% 3-Phase 50/60Hz
Dimensions: 580 W x 542 D x 1240 H mm



CFD Controller
AC 200/230 +/-10% Single or 3-Phase 50/60Hz
Dimensions: 369 W x 490 D x 173 H mm

Please Note: Robot specifications are subject to change without notice, contact Nachi to verify current specifications.