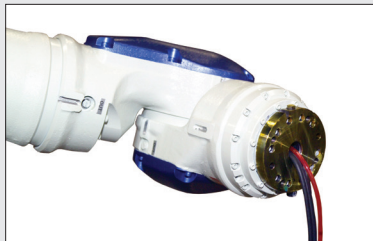
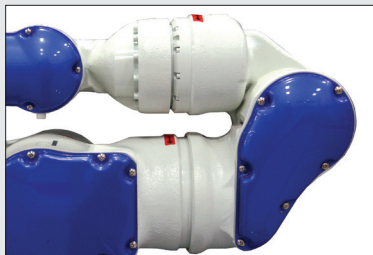


MACHINE TENDING



THRU-ARM CABLE AND HOSE ROUTING



OFFSET ELBOW EXPANDS WORK ENVELOPE



SDA5D

ASSEMBLY • PACKAGING • HANDLING • MACHINE TENDING • PART TRANSFER

Payload: 5 kg/arm

The SDA5D is a dual-arm, 15-axis robot designed for complex assembly and small part material handling applications. Both arms can work together dramatically simplifying end-of-arm tooling. Designed with patented servo actuators, all cables are routed through the arms.

Slim, Dual-Arm Robot with “Human-Like” Flexibility

- Powerful actuator-based design provides “human-like” flexibility and fast acceleration.
- Superior dexterity and best-in-class wrist characteristics make slim, dual-arm robot ideally suited for assembly, part transfer, machine tending, packaging and other handling tasks that formerly could only be done by people.
- Highly flexible; 15 axes of motion (7 axes per arm, plus a single axis for base rotation).
- Internally routed cables and hoses (6 - air, 12 - electric) reduce interference and maintenance, and also make programming easier.
- 5 kg payload per arm; 845 mm horizontal reach per arm; 1,118 mm vertical reach per arm; ±0.06 mm repeatability.
- Both robot arms can work together on one task to double the payload or handle heavy, unwieldy objects. Two arms can perform simultaneous independent operations.

- Ability to hold part with one arm while performing additional operations with other arm and to transfer a part from one arm to the other with no need to set part down.

DX100 Controller

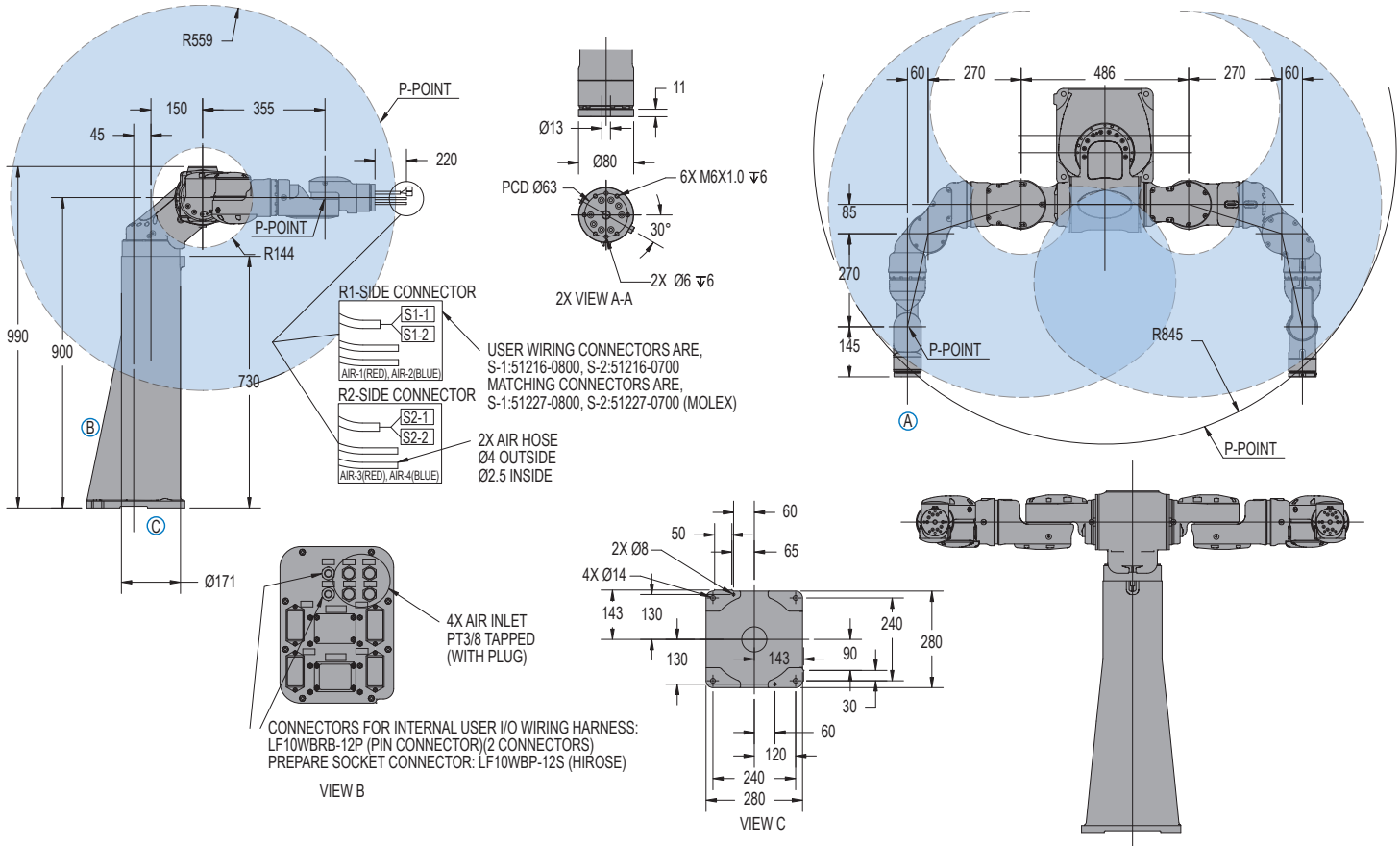
- Patented multiple robot control supports up to 8 robots/72 axes.
- Windows® CE programming pendant with color touch screen and USB interface.
- Faster processing speeds for smoother interpolation. Quicker I/O response. Accelerated Ethernet communication.
- Extensive I/O suite includes integral PLC and touch screen HMI, 2,048 I/O and graphical ladder editor.
- Supports all major fieldbus networks, including EtherNet/IP, DeviceNet, Profibus-DP and many others.
- Compliant to ANSI/RIA R15.06-1999 and other relevant ISO and CSA safety standards. Optional Category 3 functional safety unit.

TOP REASONS TO BUY

- Dexterity to perform complex tasks; dual 7-axis arms work together or independently
- Slim design optimizes space; provides “human-like” flexibility and range of motion, even in tight spaces
- Simplified tooling reduces cost
- Can be used in environments that are hazardous to humans
- Labor savings justifies capital investment

SDA5D ROBOT

All dimensions are metric (mm) and for reference only. Please request detail drawings for all design/engineering requirements.



SDA5D SPECIFICATIONS

| | | |
|--|--|--------------------------|
| Structure | Articulated | |
| Mounting | Floor* | |
| Controlled Axes | 15 (7 axes per arm plus base rotation) | |
| Payload | 5 kg (11 lbs)/arm | |
| Horizontal Reach per Arm | 845 mm (33.3") | |
| Horizontal Reach (P-point to P-point) | 1,690 mm (66.5") | |
| Vertical Reach | 1,118 mm (44") | |
| Repeatability | ±0.06 mm (±0.003") | |
| Maximum Motion Range | Rotation-Axis (Waist) | ±170° |
| | S-Axis (Lifting) | +270° / -90° |
| | L-Axis (Lower Arm) | ±110° |
| | E-Axis (Elbow) | ±170° |
| | U-Axis (Upper Arm) | +115° / -90° |
| | R-Axis (Upper Arm Twist) | ±180° |
| | B-Axis (Wrist Pitch/Yaw) | ±110° |
| T-Axis (Wrist Twist) | ±180° | |
| Maximum Speed | Rotation-Axis (Waist) | 180°/s |
| | S-Axis (Lifting) | 200°/s |
| | L-Axis (Lower Arm) | 200°/s |
| | E-Axis (Elbow) | 200°/s |
| | U-Axis (Upper Arm) | 200°/s |
| | R-Axis (Upper Arm Twist) | 200°/s |
| | B-Axis (Wrist Pitch/Yaw) | 230°/s |
| T-Axis (Wrist Twist) | 350°/s | |
| Approximate Mass | 110 kg (242.6 lbs) | |
| Power Rating | 2.0 kVA | |
| Allowable Moment | R-Axis | 14.7 N • m |
| | B-Axis | 14.7 N • m |
| | T-Axis | 7.35 N • m |
| Allowable Moment of Inertia | R-Axis | 0.45 kg • m ² |
| | B-Axis | 0.45 kg • m ² |
| | T-Axis | 0.11 kg • m ² |

* Ceiling mounting available with successful application review

DX100 CONTROLLER SPECIFICATIONS**

| | |
|-----------------------------------|--|
| Dimensions (mm) | 1,200 (w) x 1,000 (h) x 650 (d) 47.2" x 39.4" x 25.6" |
| Approximate Mass | 250 kg max. (551.3 lbs) |
| Cooling System | Indirect cooling |
| Ambient Temperature | During operation: 0° to 45° C (32° to 113° F) During transit and storage: -10° to 60° C (14° to 140° F) |
| Relative Humidity | 90% max. non-condensing |
| Primary Power Requirements | 3-phase, 240/480/575 VAC at 50/60 Hz |
| Digital I/O | NPN-Standard PNP-Optional |
| Position Feedback | By absolute encoder |
| Program Memory | JOB: 200,000 steps, 10,000 instructions CIO Ladder Standard: 15,000 steps Expanded: 20,000 steps |
| Pendant Dim. (mm) | 169 (w) x 314.5 (h) x 50 (d) (6.7" x 12.4" x 2") |
| Pendant Weight | .998 kg (2.2 lbs) |
| Interface | One Compact Flash slot; One USB Port (1.1) |
| Pendant Playback Buttons | Teach/Play/Remote Keyswitch selector Servo On, Start, Hold, and Emergency Stop Buttons |
| Programming Language | INFORM III, menu-driven programming |
| Maintenance Functions | Displays troubleshooting for alarms, predicts reducer wear |
| Number of Robots/Axes | Up to 8 robots, 72 axes |
| Multi Tasking | Up to 16 concurrent jobs, 4 system jobs |
| Fieldbus | DeviceNet Master/Slave, AB RIO, Profibus, Interbus-S, M-Net, CC Link, EtherNet IP/Slave |
| Ethernet | 10 Base T/100 Base TX |
| Safety | Dual-channel Emergency Stop Pushbuttons, 3-position Enable Switch, Manual Brake Release Meets ANSI/RIA R15.06-1999, ANSI/RIA/ISO 10218-1-2007 and CSA Z434-03 |

** See DX100 Controller data sheet (DS-399) for complete specifications

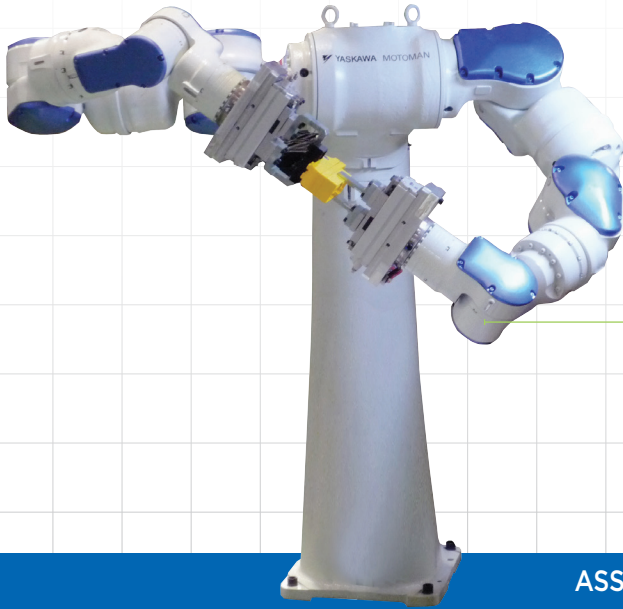
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YASKAWA

YASKAWA AMERICA, INC. ■ MOTOMAN ROBOTICS DIVISION
 100 AUTOMATION WAY, MIAMISBURG, OHIO 45342
 TEL: 937.847.6200 ■ FAX: 937.847.6277

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SDA5F

ASSEMBLY | HANDLING | MACHINE TENDING
PACKAGING | PART TRANSFER

KEY BENEFITS

Dexterity to perform complex tasks; dual 7-axis arms work together or independently

Slim design optimizes space; provides “human-like” flexibility and range of motion, even in tight spaces

Simplified tooling reduces cost

Can be used in environments that are hazardous to humans

Labor savings justifies capital investment

SPECIFICATIONS

5 kg payload per arm

1,118 mm vertical reach

845 mm horizontal reach per arm

±0.06 mm repeatability

CONTROLLERS



DX200



FS100



MLX200

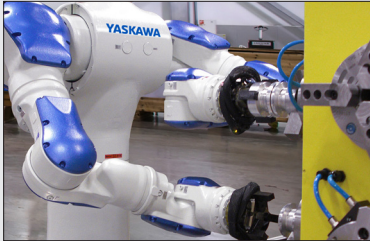
SLIM, DUAL-ARM ROBOT WITH “HUMAN-LIKE” FLEXIBILITY

- Powerful actuator-based design provides “human-like” flexibility and fast acceleration.
- Superior dexterity and best-in-class wrist characteristics make slim, dual-arm robot ideally suited for assembly, part transfer, machine tending, packaging and other handling tasks that formerly could only be done by people.
- Highly flexible; 15 axes of motion (7 axes per arm, plus a single axis for base rotation).
- Internally routed cables and hoses (6 - air, 12 - electric) reduce interference and maintenance, and also make programming easier.
- 5 kg payload per arm; 845 mm horizontal reach per arm; 1,118 mm vertical reach per arm; ±0.06 mm repeatability.
- Both robot arms can work together on one task to double the payload or handle heavy, unwieldy objects. Two arms can perform simultaneous independent operations.

- Ability to hold part with one arm while performing additional operations with other arm and to transfer a part from one arm to the other with no need to set part down.

FS100 CONTROLLER

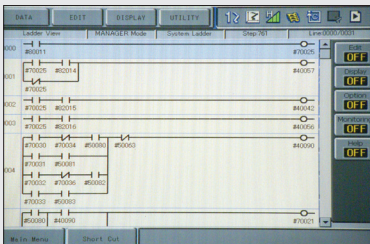
- Small, compact controller.
- 470 mm wide, 200 mm high, 420 mm deep.
- Designed for packaging and small parts handling robots with payloads of 20 kg and under.
- Compatible with integrated MotoSight™ 2D vision (optional).
- Improved communication speeds and functionality.
- High-speed I/O response and high-resolution timers.
- Open architecture enables software customization in widely accepted environments such as C, C++, C# and .NET.
- Uses similar programming pendant hardware as DX200 controller, providing a consistent programming interface.



MACHINE TENDING



THRU-ARM CABLE AND HOSE ROUTING



LADDER EDITOR

TOP REASONS TO BUY

- Dexterity to perform complex tasks; dual 7-axis arms work together or independently
- Slim design optimizes space; provides “human-like” flexibility and range of motion, even in tight spaces
- Simplified tooling reduces cost
- Can be used in environments that are hazardous to humans
- Labor savings justifies capital investment

SDA10D

ASSEMBLY • PACKAGING • HANDLING
MACHINE TENDING • PART TRANSFER • PRESS TENDING

Payload: 10 kg/arm



The SDA10D is a dual-arm, 15-axis robot with incredible dexterity, freedom of movement in a compact footprint. Both arms can work together dramatically simplifying end-of-arm tooling. Designed with patented servo actuators, all cables are routed through the arms.

Slim, Dual-Arm Robot with “Human-Like” Flexibility

- Powerful actuator-based design provides “human-like” flexibility and fast acceleration.
- Superior dexterity and best-in-class wrist characteristics make slim, dual-arm robot ideally suited for assembly, part transfer, machine tending, packaging and other handling tasks that formerly could only be done by people.
- Highly flexible; 15 axes of motion (7 axes per arm, plus a single axis for base rotation).
- Internally routed cables and hoses (6 - air, 12 - electric) reduce interference and maintenance, and also make programming easier.
- 10 kg payload per arm; 720 mm horizontal reach per arm; 1,440 mm vertical reach per arm; ±0.1 mm repeatability.
- Both robot arms can work together on one task to double the payload or handle heavy, unwieldy objects. Two arms can perform simultaneous independent operations.

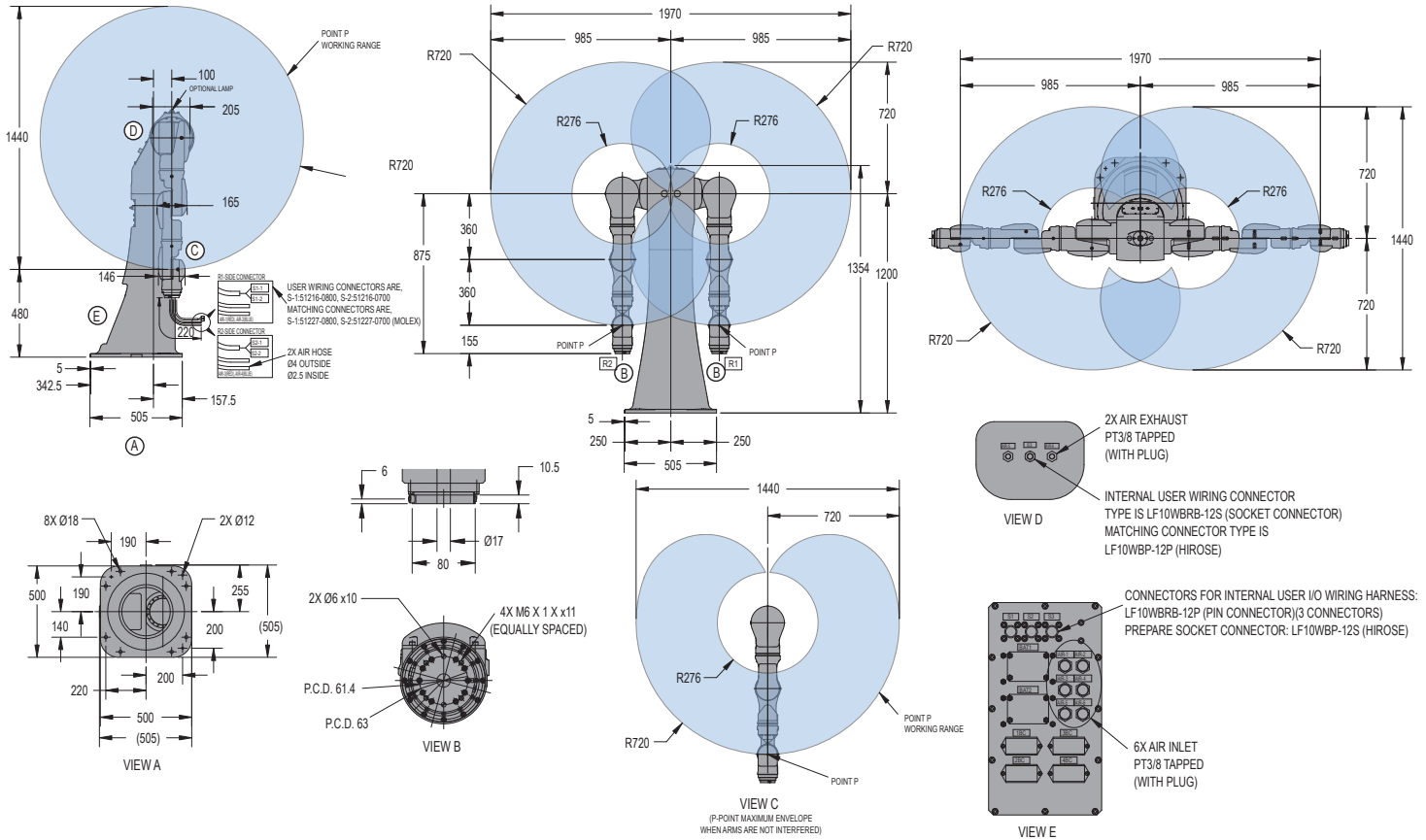
- Ability to hold part with one arm while performing additional operations with other arm and to transfer a part from one arm to the other with no need to set part down.

DX100 Controller

- Patented multiple robot control supports up to 8 robots/72 axes.
- Windows® CE programming pendant with color touch screen and USB interface.
- Faster processing speeds for smoother interpolation. Quicker I/O response. Accelerated Ethernet communication.
- Extensive I/O suite includes integral PLC and touch screen HMI, 2,048 I/O and graphical ladder editor.
- Supports all major fieldbus networks, including EtherNet/IP, DeviceNet, Profibus-DP and many others.
- Compliant to ANSI/RIA R15.06-1999 and other relevant ISO and CSA safety standards. Optional Category 3 functional safety unit.

SDA10D ROBOT

All dimensions are metric (mm) and for reference only. Please request detail drawings for all design/engineering requirements.



SDA10D SPECIFICATIONS

| | | |
|--|--|-------------------------|
| Structure | Articulated | |
| Mounting | Floor * | |
| Controlled Axes | 15 (7 axes per arm plus base rotation) | |
| Payload | 10 kg (22.1 lbs)/arm | |
| Horizontal Reach per Arm | 720 mm (28.3") | |
| Horizontal Reach (P-point to P-point) | 1,970 mm (77.6") | |
| Vertical Reach | 1,440 mm (56.7") | |
| Repeatability | ±0.1 mm (±0.004") | |
| Maximum Motion Range | Rotation-Axis (Waist) | ±170° |
| | S-Axis (Lifting) | ±180° |
| | L-Axis (Lower Arm) | ±110° |
| | E-Axis (Elbow) | ±170° |
| | U-Axis (Upper Arm) | ±135° |
| | R-Axis (Upper Arm Twist) | ±180° |
| | B-Axis (Wrist Pitch/Yaw) | ±110° |
| T-Axis (Wrist Twist) | ±180° | |
| Maximum Speed | Rotation-Axis (Waist) | 130°/s |
| | S-Axis (Lifting) | 170°/s |
| | L-Axis (Lower Arm) | 170°/s |
| | E-Axis (Elbow) | 170°/s |
| | U-Axis (Upper Arm) | 170°/s |
| | R-Axis (Upper Arm Twist) | 200°/s |
| | B-Axis (Wrist Pitch/Yaw) | 200°/s |
| T-Axis (Wrist Twist) | 400°/s | |
| Approximate Mass | 220 kg (485.1 lbs) | |
| Brakes | All axes | |
| Power Rating | 2.7 kVA | |
| Allowable Moment | R-Axis | 31.4 N • m |
| | B-Axis | 31.4 N • m |
| | T-Axis | 19.6 N • m |
| Allowable Moment of Inertia | R-Axis | 1 kg • m ² |
| | B-Axis | 1 kg • m ² |
| | T-Axis | 0.4 kg • m ² |

* Ceiling mounting available with successful application review

DX100 CONTROLLER SPECIFICATIONS**

| | |
|-----------------------------------|--|
| Dimensions (mm) | 1,200 (w) x 1,000 (h) x 650 (d) 47.2" x 39.4" x 25.6" |
| Approximate Mass | 250 kg max. (551.3 lbs) |
| Cooling System | Indirect cooling |
| Ambient Temperature | During operation: 0° to 45° C (32° to 113° F) During transit and storage: -10° to 60° C (14° to 140° F) |
| Relative Humidity | 90% max. non-condensing |
| Primary Power Requirements | 3-phase, 240/480/575 VAC at 50/60 Hz |
| Digital I/O | Standard I/O: 40 inputs/40 outputs consisting of 16 system inputs/16 system outputs, 24 user inputs/24 user outputs 32 Transistor Outputs; 8 Relay Outputs Max. I/O (optional): 2,048 inputs and 2,048 outputs |
| Position Feedback | By absolute encoder |
| Program Memory | JOB: 200,000 steps, 10,000 instructions CIO Ladder Standard: 15,000 steps Expanded: 20,000 steps |
| Pendant Dim. (mm) | 169 (w) x 314.5 (h) x 50 (d) (6.7" x 12.4" x 2") |
| Pendant Weight | .998 kg (2.2 lbs) |
| Interface | One Compact Flash slot; One USB Port (1.1) |
| Pendant Playback Buttons | Teach/Play/Remote Keyswitch selector Servo On, Start, Hold, and Emergency Stop Buttons |
| Programming Language | INFORM III, menu-driven programming |
| Maintenance Functions | Displays troubleshooting for alarms, predicts reducer wear |
| Number of Robots/Axes | Up to 8 robots, 72 axes |
| Multi Tasking | Up to 16 concurrent jobs, 4 system jobs |
| Fieldbus | DeviceNet Master/Slave, AB RIO, Profibus, Interbus-S, M-Net, CC Link, EtherNet/IP/Slave |
| Ethernet | 10 Base T/100 Base TX |
| Safety | Dual-channel Emergency Stop Pushbuttons, 3-position Enable Switch, Manual Brake Release Meets ANSI/RIA15.06-1999, ANSI/RIA/ISO 10218-1-2007 and CSA Z434-03 |

** See DX100 Controller data sheet (DS-399) for complete specifications

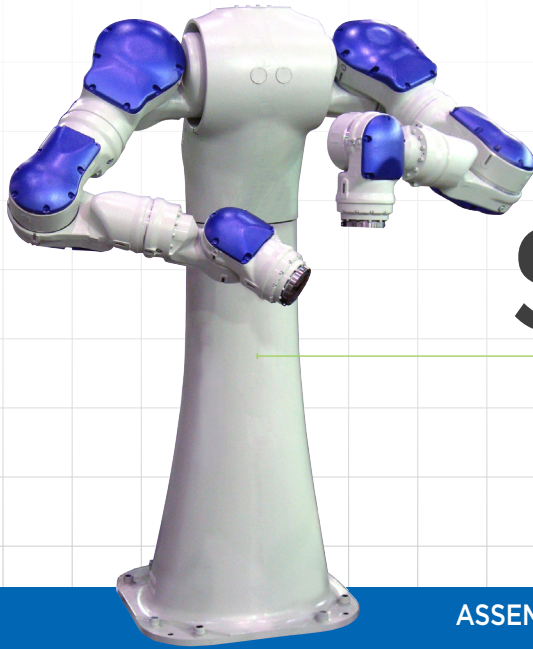
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100 AUTOMATION WAY, MIAMISBURG, OHIO 45342
TEL: 937.847.6200 ■ FAX: 937.847.6277

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SDA10F

ASSEMBLY | HANDLING | MACHINE TENDING
PACKAGING | PART TRANSFER

KEY BENEFITS

Dexterity to perform complex tasks; dual 7-axis arms work together or independently

Slim design optimizes space; provides “human-like” flexibility and range of motion, even in tight spaces

Simplified tooling reduces cost

Can be used in environments that are hazardous to humans

Labor savings justifies capital investment

SPECIFICATIONS

10 kg payload per arm

1,440 mm vertical reach

720 mm horizontal reach per arm

±0.1 mm repeatability

CONTROLLERS



DX200



FS100



MLX200

SLIM, DUAL-ARM ROBOT WITH “HUMAN-LIKE” FLEXIBILITY

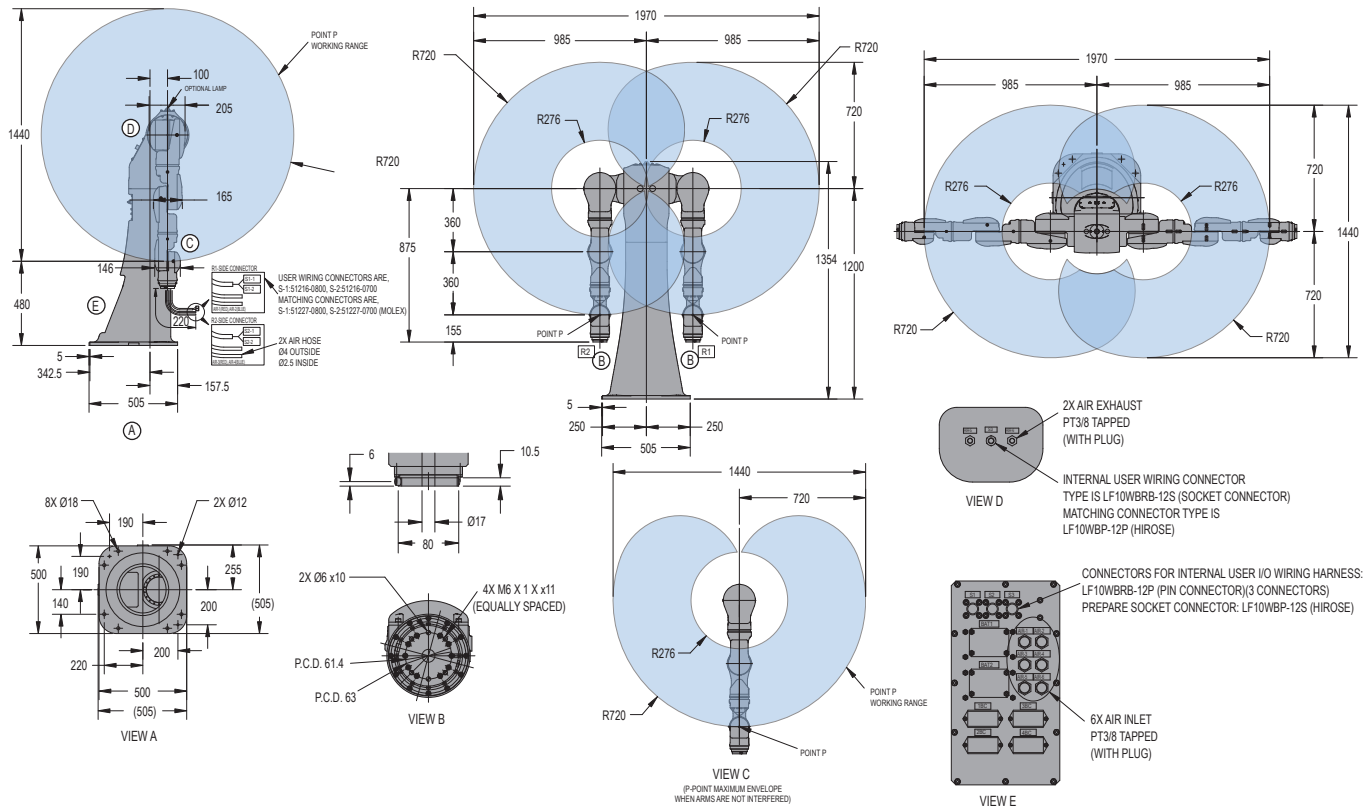
- Superior dexterity and best-in-class wrist characteristics make slim, dual-arm robot ideally suited for assembly, part transfer, machine tending, packaging and other handling tasks that formerly could only be done by people.
- Highly flexible; 15 axes of motion (7 axes per arm, plus a single axis for base rotation).
- Powerful actuator-based design provides “human-like” flexibility and fast acceleration.
- Internally routed cables and hoses (6 - air, 12 - electric) reduce interference and maintenance, and also make programming easier.
- 10 kg payload per arm; 720 mm horizontal reach per arm; 1,440 mm vertical reach per arm; ±0.1 mm repeatability.
- Both robot arms can work together on one task to double the payload or handle heavy, unwieldy objects. Two arms can perform simultaneous independent operations.

- Ability to hold part with one arm while performing additional operations with other arm and to transfer a part from one arm to the other with no need to set part down.

FS100 CONTROLLER

- Small, compact controller.
- 470 mm wide, 200 mm high, 420 mm deep.
- Designed for packaging and small parts handling robots with payloads of 20 kg and under.
- Compatible with integrated MotoSight™ 2D vision (optional).
- Improved communication speeds and functionality.
- High-speed I/O response and high-resolution timers.
- Open architecture enables software customization in widely accepted environments such as C, C++, C# and .NET.
- Uses similar programming pendant hardware as DX200 controller, providing a consistent programming interface.

SDA10F ROBOT



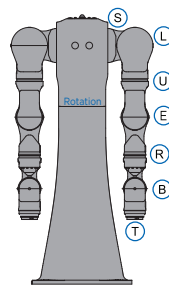
All dimensions are metric (mm) and for reference only.
Request detailed drawings for all design/engineering requirements.

SPECIFICATIONS

| Axes | Maximum motion range [°] | Maximum speed [°/sec.] | Allowable moment [N•m] | Allowable moment of inertia [kg•m ²] | Controlled axes | 15 |
|----------|--------------------------|------------------------|------------------------|--|---|---|
| Rotation | ±170 | 130 | | | Maximum payload (per arm) [kg] | 10 |
| S | ±180 | 170 | - | - | Repeatability [mm] | ±0.1 |
| L | ±110 | 170 | - | - | Horizontal reach (per arm) [mm] | 720 |
| E | ±170 | 170 | - | - | Horizontal reach (P-point to P-point) [mm] | 1,970 |
| U | ±135 | 170 | - | - | Vertical reach [mm] | 1,440 |
| R | ±180 | 200 | 31.4 | 1 | Protection - IP rating XP Package (optional) | IP54 Base; IP65 Body; IP67 Wrist |
| B | ±110 | 200 | 31.4 | 1 | Weight [kg] | 220 |
| T | ±180 | 400 | 19.6 | 0.4 | Power requirements | 1- or 3-phase; 200/230 VAC at 50/60 Hz |
| | | | | | Power rating [kVA] | 2.7 |

OPTIONS

- Wide variety of fieldbus cards
- Vision systems
- Robot base I/O cables
- External axis kit
- Material handling software package
- Conveyor tracking
- MotoFit™ force sensing package



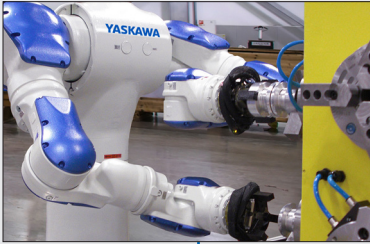
AXES LEGEND

- Rotation Axis: Waist
- S-Axis: Lifting
- L-Axis: Lower Arm
- E-Axis: Elbow
- U-Axis: Upper Arm
- R-Axis: Upper Arm Twist
- B-Axis: Wrist Pitch / Yaw
- T-Axis: Wrist Twist

Yaskawa America, Inc.
Motoman Robotics Division

100 Automation Way
Miamisburg, OH 45342
Tel: 937.847.6200
Fax: 937.847.6277

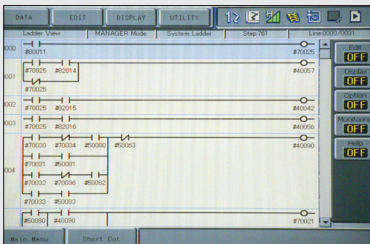
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MACHINE TENDING



THRU-ARM CABLE AND HOSE ROUTING



LADDER EDITOR

TOP REASONS TO BUY

- Dexterity to perform complex tasks; dual 7-axis arms work together or independently
- Slim design optimizes space; provides “human-like” flexibility and range of motion, even in tight spaces
- Simplified tooling reduces cost
- Can be used in environments that are hazardous to humans
- Labor savings justifies capital investment

SDA20D

ASSEMBLY • HANDLING • MACHINE TENDING
PACKAGING • PART TRANSFER • PRESS TENDING

Payload: 20 kg/arm

The SDA20D is a dual-arm, 15-axis robot designed for complex assembly and material handling applications. Both arms can work together dramatically simplifying end-of-arm tooling. Designed with patented servo actuators, all cables are routed through the arms.

Slim, Dual-Arm Robot with “Human-Like” Flexibility

- Powerful actuator-based design provides “human-like” flexibility and fast acceleration.
- Superior dexterity and best-in-class wrist characteristics make slim, dual-arm robot ideally suited for assembly, part transfer, machine tending, packaging and other handling tasks that formerly could only be done by people.
- Highly flexible; 15 axes of motion (7 axes per arm, plus a single axis for base rotation).
- Internally routed cables and hoses (6 - air, 12 - electric) reduce interference and maintenance, and also make programming easier.
- 20 kg payload per arm; 910 mm horizontal reach per arm; 1,820 mm vertical reach per arm; ± 0.1 mm repeatability.
- Both robot arms can work together on one task to double the payload or handle heavy, unwieldy objects. Two arms can perform simultaneous independent operations.

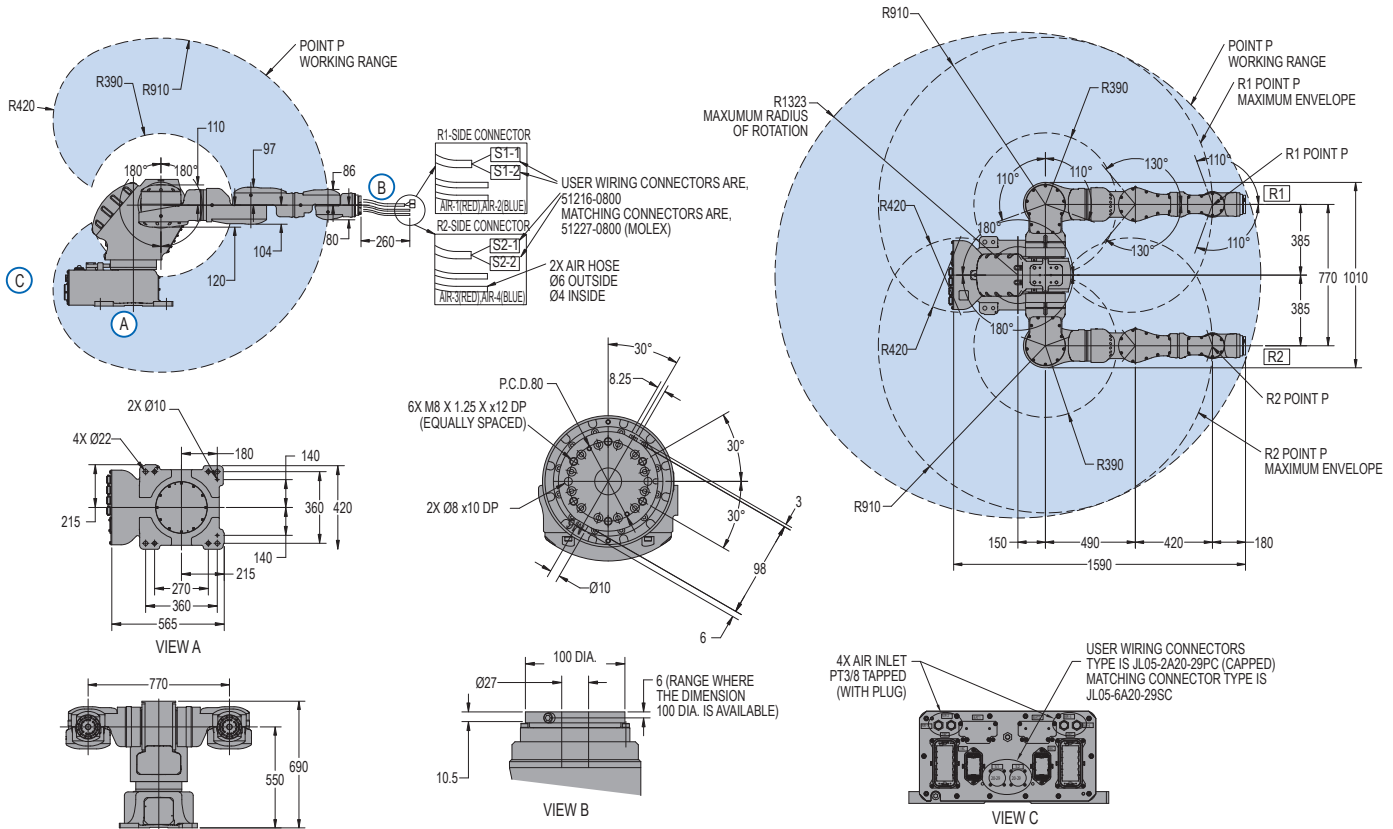
- Ability to hold part with one arm while performing additional operations with other arm and to transfer a part from one arm to the other with no need to set part down.

DX100 Controller

- Patented multiple robot control supports up to 8 robots/72 axes.
- Windows® CE programming pendant with color touch screen and USB interface.
- Faster processing speeds for smoother interpolation. Quicker I/O response. Accelerated Ethernet communication.
- Extensive I/O suite includes integral PLC and touch screen HMI, 2,048 I/O and graphical ladder editor.
- Supports all major fieldbus networks, including EtherNet/IP, DeviceNet, Profibus-DP and many others.
- Compliant to ANSI/RIA R15.06-1999 and other relevant ISO and CSA safety standards. Optional Category 3 functional safety unit.

SDA20D ROBOT

All dimensions are metric (mm) and for reference only. Please request detail drawings for all design/engineering requirements.



SDA20D SPECIFICATIONS

| | | |
|--|--|-----------------------|
| Structure | Articulated | |
| Mounting | Floor * | |
| Controlled Axes | 15 (7 axes per arm plus base rotation) | |
| Payload | 20 kg (44.1 lbs)/arm | |
| Horizontal Reach per Arm | 910 mm (35.8") | |
| Horizontal Reach (P-point to P-point) | 2,590 mm (102") | |
| Vertical Reach | 1,820 mm (71.7") | |
| Repeatability | ±0.1 mm (±0.004") | |
| Maximum Motion Range | Rotation-Axis (Waist) | ±180° |
| | S-Axis (Lifting) | ±180° |
| | L-Axis (Lower Arm) | ±110° |
| | E-Axis (Elbow) | ±170° |
| | U-Axis (Upper Arm) | ±130° |
| | R-Axis (Upper Arm Twist) | ±180° |
| | B-Axis (Wrist Pitch/Yaw) | ±110° |
| T-Axis (Wrist Twist) | ±180° | |
| Maximum Speed | Rotation-Axis (Waist) | 125°/s |
| | S-Axis (Lifting) | 130°/s |
| | L-Axis (Lower Arm) | 130°/s |
| | E-Axis (Elbow) | 170°/s |
| | U-Axis (Upper Arm) | 170°/s |
| | R-Axis (Upper Arm Twist) | 200°/s |
| | B-Axis (Wrist Pitch/Yaw) | 200°/s |
| T-Axis (Wrist Twist) | 400°/s | |
| Approximate Mass | 380 kg (837.9 lbs) | |
| Power Rating | 4.4 kVA | |
| Allowable Moment | R-Axis | 58.8 N · m |
| | B-Axis | 58.8 N · m |
| | T-Axis | 29.4 N · m |
| Allowable Moment of Inertia | R-Axis | 4 kg · m ² |
| | B-Axis | 4 kg · m ² |
| | T-Axis | 2 kg · m ² |

* Ceiling mounting available with successful application review

DX100 CONTROLLER SPECIFICATIONS**

| | |
|--|--|
| Dimensions (mm) | 1,200 (w) x 1,000 (h) x 650 (d) 47.2" x 39.4" x 25.6" |
| Approximate Mass | 250 kg max. (551.3 lbs) |
| Cooling System | Indirect cooling |
| Ambient Temperature | During operation: 0° to 45° C (32° to 113° F) During transit and storage: -10° to 60° C (14° to 140° F) |
| Relative Humidity | 90% max. non-condensing |
| Primary Power Requirements | 3-phase, 240/480/575 VAC at 50/60 Hz |
| Digital I/O NPN-Standard PNP-Optional | Standard I/O: 40 inputs/40 outputs consisting of 16 system inputs/ 16 system outputs, 24 user inputs/24 user outputs 32 Transistor Outputs; 8 Relay Outputs Max. I/O (optional): 2,048 inputs and 2,048 outputs |
| Position Feedback | By absolute encoder |
| Program Memory | JOB: 200,000 steps, 10,000 instructions CIO Ladder Standard: 15,000 steps Expanded: 20,000 steps |
| Pendant Dim. (mm) | 169 (w) x 314.5 (h) x 50 (d) (6.7" x 12.4" x 2") |
| Pendant Weight | .998 kg (2.2 lbs) |
| Interface | One Compact Flash slot; One USB Port (1.1) |
| Pendant Playback Buttons | Teach/Play/Remote Keypress selector Servo On, Start, Hold, and Emergency Stop Buttons |
| Programming Language | INFORM III, menu-driven programming |
| Maintenance Functions | Displays troubleshooting for alarms, predicts reducer wear |
| Number of Robots/Axes | Up to 8 robots, 72 axes |
| Multi Tasking | Up to 16 concurrent jobs, 4 system jobs |
| Fieldbus | DeviceNet Master/Slave, AB RIO, Profibus, Interbus-S, M-Net, CC Link, EtherNet IP/Slave |
| Ethernet | 10 Base T/100 Base TX |
| Safety | Dual-channel Emergency Stop Pushbuttons, 3-position Enable Switch, Manual Brake Release Meets ANSI/RIA R15.06-1999, ANSI/RIA/ISO 10218-1-2007 and CSA Z434-03 |

** See DX100 Controller data sheet (DS-399) for complete specifications

www.motoman.com

YASKAWA

YASKAWA AMERICA, INC. ■ MOTOMAN ROBOTICS DIVISION
 100 AUTOMATION WAY, MIAMISBURG, OHIO 45342
 TEL: 937.847.6200 ■ FAX: 937.847.6277

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SDA20F

ASSEMBLY | HANDLING | MACHINE TENDING
PACKAGING | PART TRANSFER

KEY BENEFITS

Dexterity to perform complex tasks; dual 7-axis arms work together or independently

Slim design optimizes space; provides “human-like” flexibility and range of motion, even in tight spaces

Simplified tooling reduces cost

Can be used in environments that are hazardous to humans

Labor savings justifies capital investment

SPECIFICATIONS

20 kg payload per arm

1,820 mm vertical reach

910 mm horizontal reach per arm

±0.1 mm repeatability

CONTROLLERS



DX200



FS100



MLX200

SLIM, DUAL-ARM ROBOT WITH “HUMAN-LIKE” FLEXIBILITY

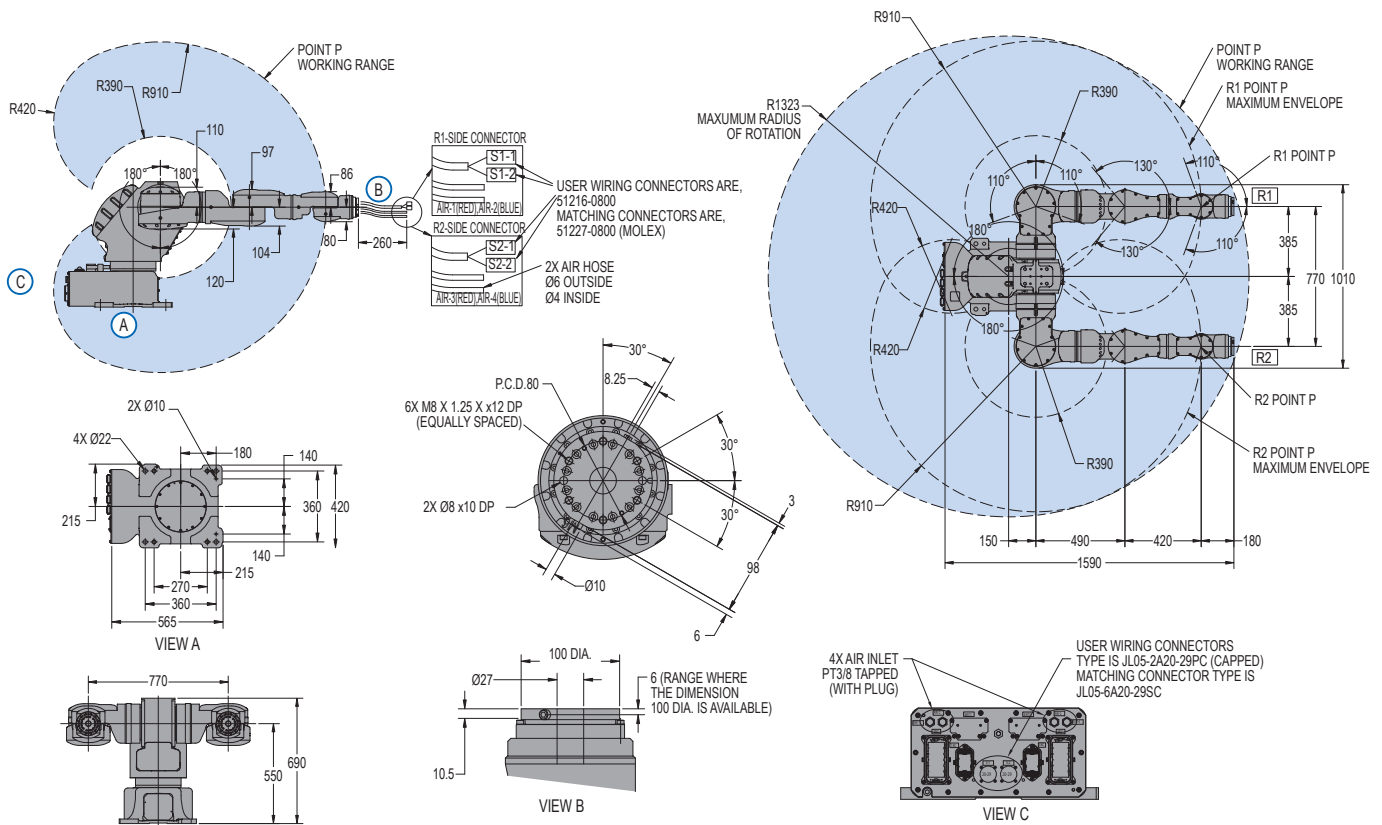
- Powerful actuator-based design provides “human-like” flexibility and fast acceleration.
- Superior dexterity and best-in-class wrist characteristics make slim, dual-arm robot ideally suited for assembly, part transfer, machine tending, packaging and other handling tasks that formerly could only be done by people.
- Highly flexible; 15 axes of motion (7 axes per arm, plus a single axis for base rotation).
- Internally routed cables and hoses (6 - air, 12 - electric) reduce interference and maintenance, and also make programming easier.
- 20 kg payload per arm; 910 mm horizontal reach per arm; 1,820 mm vertical reach per arm; ±0.1 mm repeatability.
- Both robot arms can work together on one task to double the payload or handle heavy, unwieldy objects. Two arms can perform simultaneous independent operations.

- Ability to hold part with one arm while performing additional operations with other arm and to transfer a part from one arm to the other with no need to set part down.

FS100 CONTROLLER

- Small, compact controller.
- 470 mm wide, 200 mm high, 420 mm deep.
- Designed for packaging and small parts handling robots with payloads of 20 kg and under.
- Compatible with integrated MotoSight™ 2D vision (optional).
- Improved communication speeds and functionality.
- High-speed I/O response and high-resolution timers.
- Open architecture enables software customization in widely accepted environments such as C, C++, C# and .NET.
- Uses similar programming pendant hardware as DX200 controller, providing a consistent programming interface.

SDA20F ROBOT



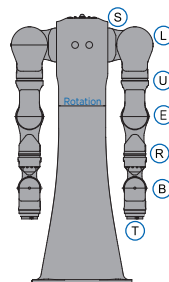
All dimensions are metric (mm) and for reference only.
 Request detailed drawings for all design/engineering requirements.

SPECIFICATIONS

| Axes | Maximum motion range [°] | Maximum speed [°/sec.] | Allowable moment [N•m] | Allowable moment of inertia [kg•m ²] | Controlled axes | 15 |
|----------|--------------------------|------------------------|------------------------|--|---|---|
| Rotation | ±180 | 125 | - | - | Maximum payload (per arm) [kg] | 20 |
| S | ±180 | 130 | - | - | Repeatability [mm] | ±0.1 |
| L | ±110 | 130 | - | - | Horizontal reach (per arm) [mm] | 910 |
| E | ±170 | 170 | - | - | Horizontal reach (P-point to P-point) [mm] | 2,590 |
| U | ±130 | 170 | - | - | Vertical reach [mm] | 1,820 |
| R | ±180 | 200 | 58.8 | 4 | Protection - IP rating XP Package (optional) | IP54 Base; IP65 Body; IP67 Wrist |
| B | ±110 | 200 | 58.8 | 4 | Weight [kg] | 380 |
| T | ±180 | 400 | 29.4 | 2 | Power requirements | 1- or 3-phase; 200/230 VAC at 50/60 Hz |
| | | | | | Power rating [kVA] | 4.4 |

OPTIONS

- Wide variety of fieldbus cards
- Vision systems
- Robot base I/O cables
- External axis kit
- Material handling software package
- Conveyor tracking
- MotoFit™ force sensing package



AXES LEGEND

- Rotation Axis: Waist
- S-Axis: Lifting
- L-Axis: Lower Arm
- E-Axis: Elbow
- U-Axis: Upper Arm
- R-Axis: Upper Arm Twist
- B-Axis: Wrist Pitch / Yaw
- T-Axis: Wrist Twist

Yaskawa America, Inc.
Motoman Robotics Division

100 Automation Way
 Miamisburg, OH 45342
 Tel: 937.847.6200
 Fax: 937.847.6277

motoman.com

YASKAWA