

MATERIAL HANDLING



DIECAST MACHINE TENDING



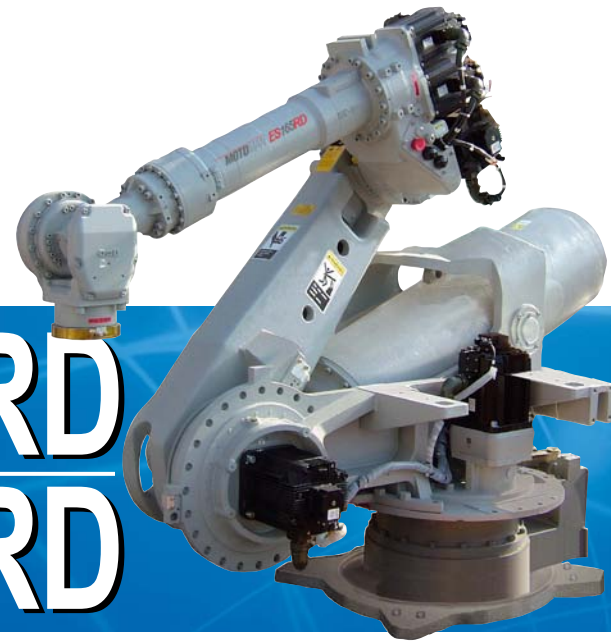
CONVENIENT UPPER ARM WIRING

TOP REASONS TO BUY

- Versatile, high-performance robot for heavy-payload machine or press tending and other handling tasks.
- Powerful DX100 controller provides fast Ethernet communication and can deliver significant cost savings by eliminating costly PLCs or HMIs for cell control.
- Windows® CE programming pendant with full-color touch screen and USB interface.

ES165RD ES200RD

MATERIAL HANDLING • MACHINE TENDING • PRESS TENDING



Payloads:
165 kg (ES165RD)
200 kg (ES200RD)

Fast, Flexible and Powerful

- High-speed six-axis ES165RD and ES200RD shelf-mounted robots set standard for versatility in large robot market.
- Provide superior performance in machine and press tending, and other heavy-payload applications.
- 165 kg (363.8 lb) payload (ES165RD) and 200 kg (441 lb) payload (ES200RD) versions. Both models feature 3,140 mm (123.6") horizontal reach; 4,782 mm (188.3") vertical reach: ± 0.2 mm (± 0.008 ") repeatability. Shelf-mounting saves floorspace, expands work envelope and improves access to parts.
- Fast axial speeds and acceleration reduce cycle times and increase production output.
- Large work envelope and high moment of inertia ratings accommodate a wide range of large, heavy parts.
- Compact, slim design allows robots to reduce cycle time and reach into confined spaces, improving system productivity.
- Pre-wired for servo gripper use, which allows a wider range of product handling.

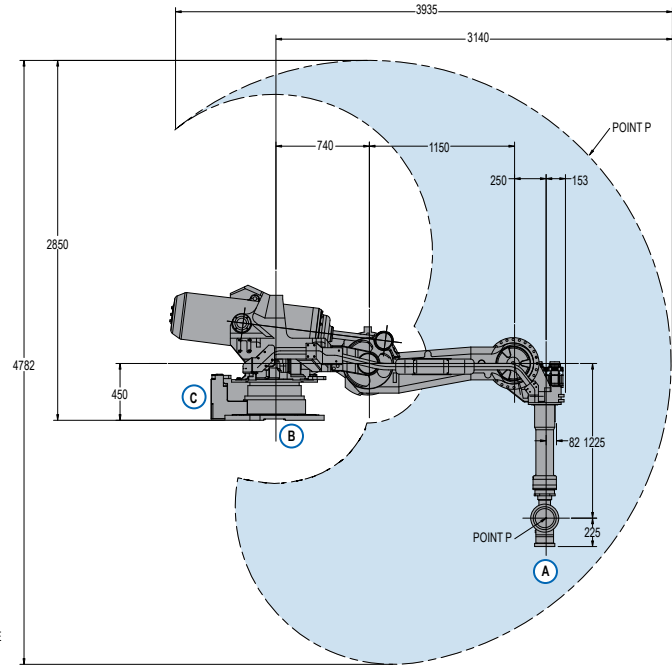
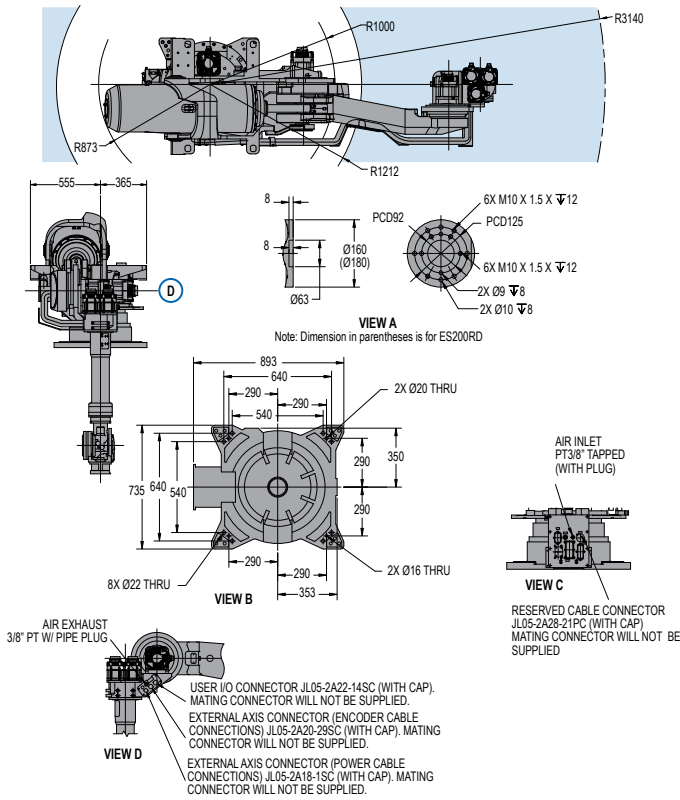
- Floor-mounted versions (ES165D and ES200D) available.

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.
- Interface panel function allows the programming pendant to be configured as a system HMI.

ES165RD/ES200RD ROBOTS

ES165RD robot shown. ES200RD dimensions are same as ES165RD. All dimensions are metric (mm) and for reference only. Please request detail drawings for all design/engineering requirements.



ROBOT SPECIFICATIONS

	ES165RD	ES200RD
Structure	Vertical jointed-arm type	Vertical jointed-arm type
Controlled Axes	6	6
Payload	165 kg (363.8 lbs)	200 kg (441 lbs)
Vertical Reach	4,782 mm (188.3")	4,782 mm (188.3")
Horizontal Reach	3,140 mm (123.6")	3,140 mm (123.6")
Repeatability	±0.2 mm (0.008")	±0.2 mm (0.008")
Maximum Motion Range	S-Axis (Turning/Sweep) ±180° L-Axis (Lower Arm) +80°/-130° U-Axis (Upper Arm) +208°/-112° R-Axis (Wrist Roll) ±360° B-Axis (Bend/Pitch/Yaw) ±130° T-Axis (Wrist Twist) ±360°	±180° +80°/-130° +280°/-107° ±360° ±125° ±360°
Maximum Speed	S-Axis 105°/s L-Axis 105°/s U-Axis 105°/s R-Axis 175°/s B-Axis 150°/s T-Axis 240°/s	90°/s 85°/s 85°/s 120°/s 120°/s 190°/s
Approximate Mass	1,540 kg (3,395.7 lbs)	1,570 kg (3,461.9 lbs)
Brakes	All axes	All axes
Power Consumption	10 kVA	10 kVA
Allowable Moment	R-Axis 921 N • m B-Axis 921 N • m T-Axis 490 N • m	1,344 N • m 1,344 N • m 715 N • m
Allowable Moment of Inertia	R-Axis 85 kg • m ² B-Axis 85 kg • m ² T-Axis 45 kg • m ²	143 kg • m ² 143 kg • m ² 80 kg • m ²
Internal User I/O Cable	18 conductors + ground	18 conductors + ground
Internal User Air Line	1 - 3/8" PT connection	1 - 3/8" PT connection

DX100 CONTROLLER SPECIFICATIONS**

Dimensions (mm)	800 (w) x 1,000 (h) x 650 (d) (31.5" 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 C/O 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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