YASKAWA

GP4

SMALL, VERSATILE ROBOT

KEY BENEFITS

Compact, space-efficient design

Extremely fast axis speeds for maximum throughput

Engineered for easy installation, operation and maintenance

IP67 rating for use in a wide variety of applications

SPECIFICATIONS

4 kg payload

550 mm horizontal reach

1,008 mm vertical reach

0.01 mm repeatability

APPLICATION

Assembly

Inspection

Machine Tending

Material Handling

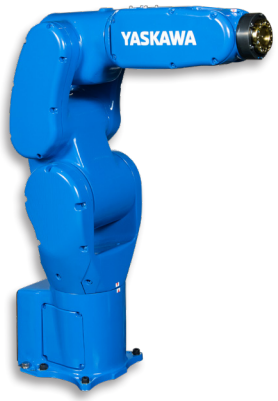
Packaging

Part Transfer

CONTROLLER

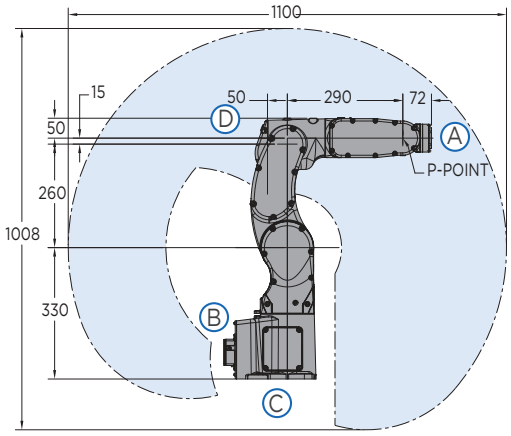
YRC1000

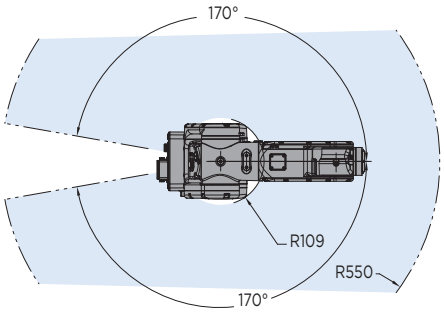
YRC1000micro

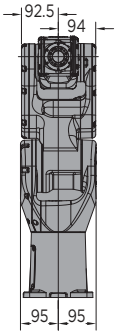


- Increase productivity of small component processing with the extremely fast and efficient six-axis GP4 robot.
- Highly precise, with axis speeds up to 1,000 degrees/s, the GP4 is ideal for high-volume assembly, handling and packaging applications.
- Small footprint, slim body design allows for minimum installation space.
- Highly flexible, the GP4 offers a large work envelop for its size; it is a viable six-axis alternative to SCARA-style robots typically used in the electronics, confectionery and small parcel sortation industries.
- IP67 rating and easy-to-clean surface for use in sanitary or harsh environments.
- Small interference radius allows close proximity placement of robots.
- Exceptionally fast acceleration/ deceleration capabilities reduce cycle time and increase production output.
- High wrist allowable moment allows for accurate and repeatable handling.
- Single power and control cable reduces wiring time and increases work efficiency.
- Modular robot harness design for improved diagnostics and maintenance.
- Home position data can be saved without battery connection for easy maintenance.
- Optional location (bottom) for manipulator cable connection reduces interference with walls.
- NSF-H1 certified food-grade lubricant option available for food or consumer product packaging environments.
- Utilizes the lightweight standard teach pendant with intuitive programming.

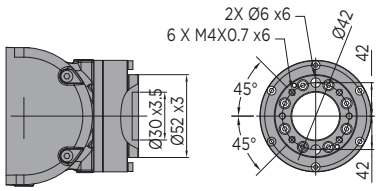
GP4 ROBOT







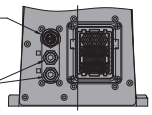
VIEW A



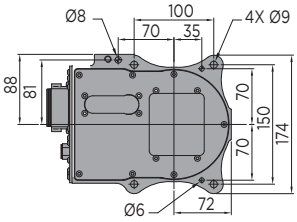
VIEW B

INTERNAL USER WIRING CONNECTOR (BASE SIDE)
TYPE IS LF13WBRB-20P (WITH CAP) MATING
CONNECTOR IS NOT SUPPLIED BUT
COMPLETE CABLES ARE AVAILABLE AS AN OPTION

INTERNAL USER AIR LINES
2X RC1/4 (WITH PLUG)

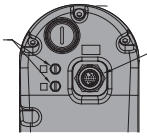


VIEW C



VIEW D

AIR EXHAUST
2X M5X0.8 x4.5
(WITH PLUG)



INTERNAL USER WIRING CONNECTOR (BASE SIDE) TYPE IS LF13WBRB-20S (WITH CAP) MATING CONNECTOR IS NOT SUPPLIED BUT COMPLETE CABLES ARE AVAILABLE AS AN OPTION

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

SPECIFICATIONS

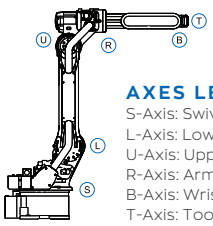
Axes	Maximum motion range	Maximum speed	Allowable moment	Allowable moment of inertia
	degrees	°/sec	N•m	kg•m²
S	±170	465	–	–
L	+130/-110	465	–	–
U	+200/-65	525	–	–
R	±200	565	8.86	0.2
B	±123	565	8.86	0.2
T	±455	1,000	4.9	0.07

Specifications for GP4 with XP package may be different.
Mounting Options: Floor, Wall, Tilt or Ceiling
* The MLX300 software option is not available for use with arc or spot welding applications. MLX300 fieldbus cards, I/O cards and vision equipment must be purchased separately from the supplier. All peripherals are programmed using a PLC.

Item	Unit	GP4
Controlled axes		6
Maximum payload	kg	4
Repeatability	mm	0.01
Horizontal reach	mm	550
Vertical reach	mm	1,008
Weight	kg	28
Internal user I/O cable		8 conductors (+ ground)
Internal user air line		(2) 1/4" connection
Power requirements YRC1000 YRC1000micro		 Three-phase 380-480 VAC 50/60 Hz Single-phase or three-phase 200-230 VAC 50/60 Hz
Power rating	kVA	1

OPTIONS

- Robot risers and base plates
- MotoSight™ 2D and 3D vision systems
- PLC integration via MLX300 software option*



AXES LEGEND

S-Axis: Swivel Base
L-Axis: Lower Arm
U-Axis: Upper Arm
R-Axis: Arm Roll
B-Axis: Wrist Bend
T-Axis: Tool Flange

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GP8L

FAST, COMPACT EXTENDED-REACH ROBOT

KEY BENEFITS

Extended reach and high speeds allow use in a variety of applications

Space-efficient design

Engineered for easy installation, operation and maintenance

Single robot-to-controller cable connection enables fast setup

SPECIFICATIONS

8 kg payload

1,636 mm horizontal reach

2,894 mm vertical reach

0.02 mm repeatability

APPLICATION

Assembly

Dispensing

Machine Tending

Material Handling

Packaging

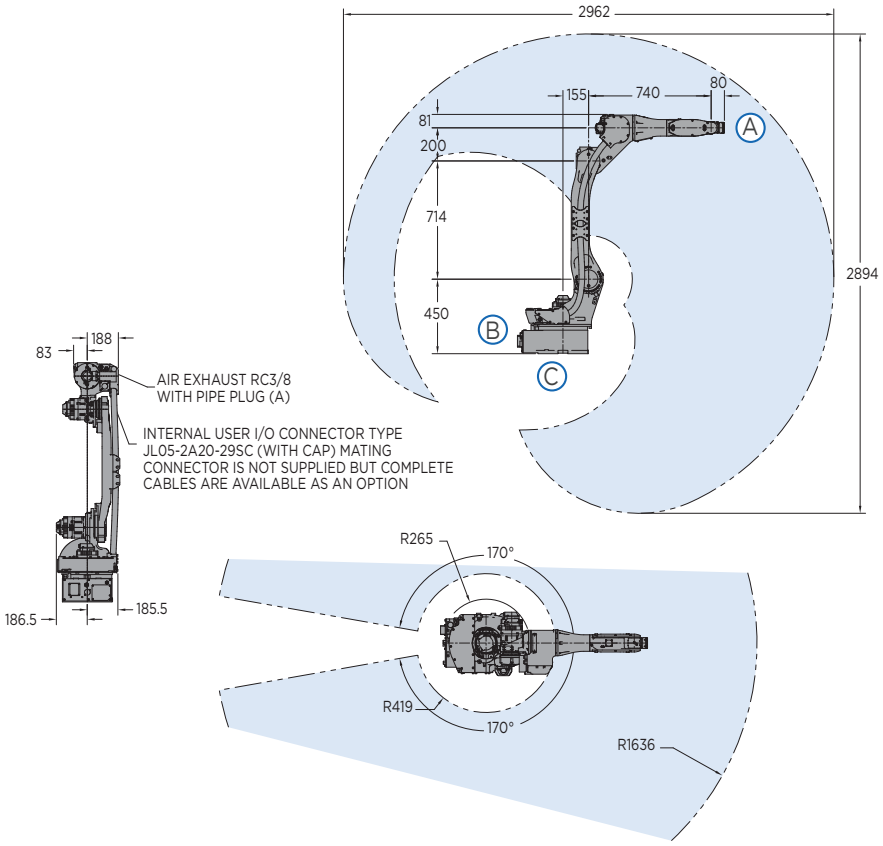
Part Transfer

CONTROLLER

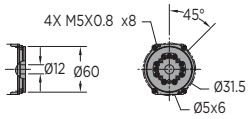
YRC1000

- Increase your productivity with the fast and efficient GP8L robot.
- Extended-reach, six-axis robot offers superior performance for a variety of applications.
- Compact footprint, slim body design allows for minimum installation space.
- Exceptionally fast axis speeds and acceleration capabilities reduce cycle time and increase production output.
- Reduced interference design allows close proximity placement of robots for high-density workcells.
- Wide wrist motion range eliminates interference and improves application flexibility.
- Mounting for peripheral equipment is provided in multiple locations to make integration easier.
- Cable installation tube facilitates fieldbus routing through the S-axis.
- Single power and control cable reduces wiring time and increases work efficiency.
- Modular robot harness design for improved diagnostics and maintenance.
- Home position data can be saved without battery connection for easy maintenance.
- The GP8L has an IP67-rated wrist and an IP54 body standard.
- The GP8L robot can be floor-, wall-, tilt- or ceiling mounted. Brakes are included on all axes.
- The GP8L is available with either the standard teach pendant or the Smart Pendant.
- Compact YRC controller utilizes the lightweight standard teach pendant with intuitive programming.

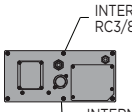
GP8L ROBOT



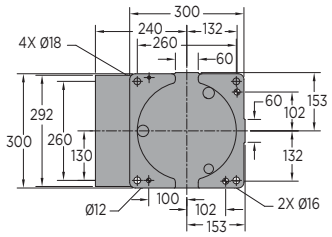
VIEW A



VIEW B



VIEW C



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

SPECIFICATIONS

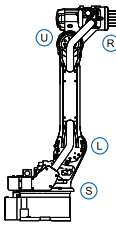
Axes	Maximum motion range	Maximum speed	Allowable moment	Allowable moment of inertia
	degrees	°/sec	N•m	kg•m²
S	±170	260	–	–
L	+155/-90	230	–	–
U	+150/-85	260	–	–
R	±200	470	17	0.5
B	±135	550	17	0.5
T	±360	1,000	10	0.2

Mounting Options: Floor, Wall, Tilt or Ceiling
* The MLX300 software option is not available for use with arc or spot welding applications. MLX300 fieldbus cards, I/O cards and vision equipment must be purchased separately from the supplier. All peripherals are programmed using a PLC.

Item	Unit	GP8L
Controlled axes		6
Maximum payload	kg	8
Repeatability	mm	0.02
Horizontal reach	mm	1,636
Vertical reach	mm	2,894
Weight	kg	155
Internal user I/O cable		16 conductors w/ ground
Internal user air line		(1) 3/8" connection
Power requirements		380-480 VAC
Power rating	kVA	1.5

OPTIONS

- Robot risers and base plates
- Extended length manipulator cables
- Wide variety of fieldbus cards
- External axes
- PLC integration via MLX300 software option*
- Functional Safety Unit (FSU)
- MotoSight™ 2D and 3D vision



6-AXIS ROBOT LEGEND
S-Axis: Swivel Base
L-Axis: Lower Arm
U-Axis: Upper Arm
R-Axis: Arm Roll
B-Axis: Wrist Bend
T-Axis: Tool Flange

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YASKAWA

GP35L

EFFICIENT, HIGH-SPEED ROBOT

KEY BENEFITS

Extended reach and high speeds allow use in a variety of applications

High wrist ratings provide higher handling capacity

Engineered for easy installation, operation and maintenance

Single robot-to-controller cable connection enables fast setup

SPECIFICATIONS

35 kg payload

2,538 mm horizontal reach

4,449 mm vertical reach

0.07 mm repeatability

APPLICATION

Dispensing

Machine Tending

Material Cutting

Material Handling

Palletizing

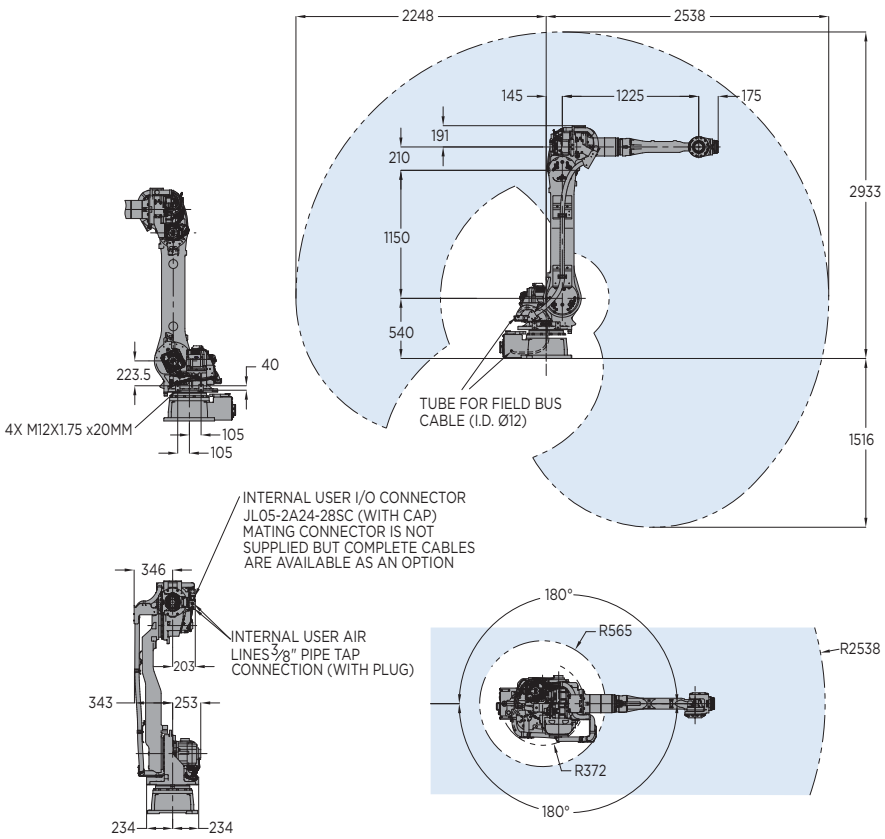
Press Tending

CONTROLLER

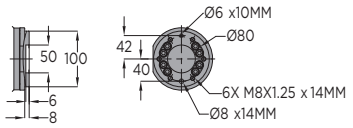
YRC1000

- Increase productivity with the powerful and efficient GP35L robot.
- Extended-reach, six-axis robot offers superior performance for a variety of applications.
- 35 kg payload supports a wide variety of tooling and sensors to fulfill diverse project needs.
- Exceptionally fast axis speeds and acceleration capabilities reduce cycle time and increase production output.
- Reduced interference design allows close proximity placement of robots for high-density workcells.
- Streamlined upper arm allows easy access to parts in tight spots and avoids potential interference with fixtures, improving application flexibility.
- Wide wrist motion range eliminates interference and improves application flexibility.
- High moment and inertia ratings allow handling of larger and heavier payloads.
- Cables and air lines are routed through robot base to upper arm to increase cable life, enhance safety and reduce teaching time.
- Cable installation tube facilitates fieldbus routing through the S-axis.
- Mounting for peripheral equipment is provided in multiple locations to make integration easier.
- Single power and control cable reduces wiring time and increases work efficiency.
- Modular robot harness design for improved diagnostics and maintenance.
- Home position data can be saved without battery connection for easy maintenance.
- The GP35L has an IP67-rated wrist and an IP54 body standard. An XP (eXtra Protection) package that increases the body protection rating to IP65 is available.
- The GP35L robot can be floor-, wall-, tilt- or ceiling-mounted. Brakes are included on all axes.
- Compact YRC controller utilizes the lightweight standard teach pendant with intuitive programming.

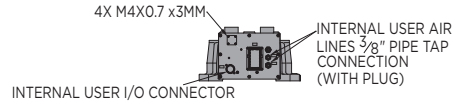
GP35L ROBOT



VIEW A

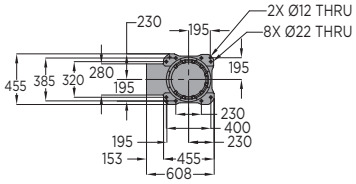


VIEW B

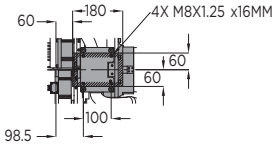


INTERNAL USER I/O CONNECTOR JL05-2A24-28PC (WITH CAP) MATING CONNECTOR IS NOT SUPPLIED BUT COMPLETE CABLES ARE AVAILABLE AS AN OPTION

VIEW C



VIEW D



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

SPECIFICATIONS

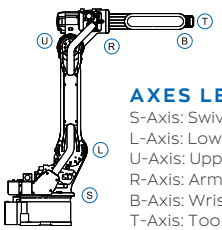
Axes	Maximum motion range	Maximum speed	Allowable moment	Allowable moment of inertia
	degrees	°/sec	N•m	kg•m²
S	±180	180	–	–
L	+135/-90	140	–	–
U	+206/-80	178	–	–
R	±360	250	147	10
B	±125	250	147	10
T	±360	360	78	4

Specifications for GP35L with XP package may be different.
Mounting Options: Floor, Wall, Tilt or Ceiling
* The MLX300 software option is not available for use with arc or spot welding applications. MLX300 fieldbus cards, I/O cards and vision equipment must be purchased separately from the supplier. All peripherals are programmed using a PLC.

Item	Unit	GP35L
Controlled axes		6
Maximum payload	kg	35
Repeatability	mm	0.07
Horizontal reach	mm	2,538
Vertical reach	mm	4,449
Weight	kg	600
Internal user I/O cable		24 conductors w/ ground
Internal user air line		(2) 3/8" connection
Power requirements		380-480 VAC
Power rating	kVA	4.5

OPTIONS

- Robot risers and base plates
- Extended length manipulator cables
- Wide variety of fieldbus cards
- External axes
- PLC integration via MLX300 software option*
- Functional Safety Unit (FSU)
- MotoSight™ 2D and 3D vision



AXES LEGEND

S-Axis: Swivel Base
L-Axis: Lower Arm
U-Axis: Upper Arm
R-Axis: Arm Roll
B-Axis: Wrist Bend
T-Axis: Tool Flange

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GP70L

HIGH-SPEED, EXTENDED-REACH ROBOT

KEY BENEFITS

Extended reach and high speeds allow use in a variety of applications

High wrist ratings provide higher handling capacity

Engineered for easy installation, operation and maintenance

Single robot-to-controller cable connection enables fast setup

SPECIFICATIONS

70 kg payload

2,732 mm horizontal reach

4,715 mm vertical reach

0.05 mm repeatability

APPLICATION

Dispensing

Machine Tending

Material Handling

Palletizing

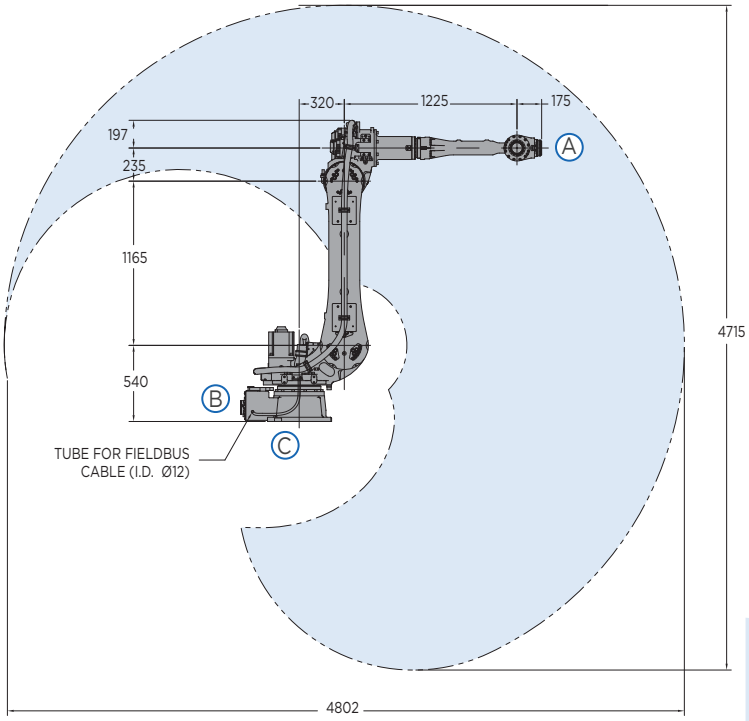
Press Tending

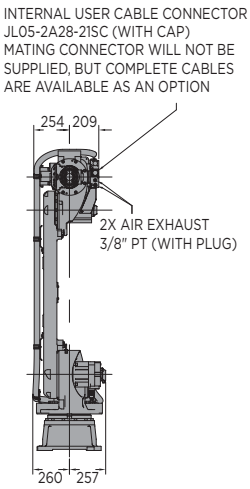
CONTROLLER

YRC1000

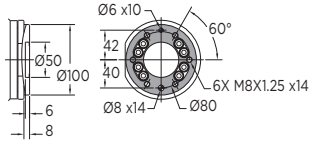
- Increase your productivity with the powerful and efficient GP70L robot.
- Extended-reach, six-axis robot offers superior performance for a variety of applications.
- 70 kg payload supports a wide variety of tooling and sensors to fulfill diverse project needs.
- Exceptionally fast axis speeds and acceleration capabilities reduce cycle time and increase production output.
- Reduced interference design allows close proximity placement of robots for high-density workcells.
- Wide wrist motion range eliminates interference and improves application flexibility.
- High moment and inertia ratings allow handling of larger and heavier payloads.
- Cables and air lines are routed through robot base to upper arm to increase cable life, enhance safety and reduce teaching time.
- Cable installation tube facilitates fieldbus routing through the S-axis.
- Mounting for peripheral equipment is provided in multiple locations to make integration easier.
- Single power and control cable reduces wiring time and increases work efficiency.
- Modular robot harness design for improved diagnostics and maintenance.
- Home position data can be saved without battery connection for easy maintenance.
- The GP70L has an IP67-rated wrist and an IP54 body standard.
- The GP70L robot is floor-mounted only. Brakes are included on all axes.
- Compact YRC controller utilizes the lightweight standard teach pendant with intuitive programming.

GP70L ROBOT

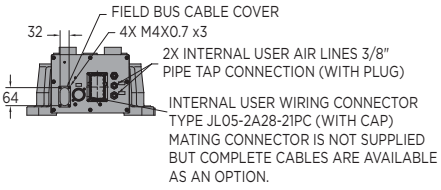




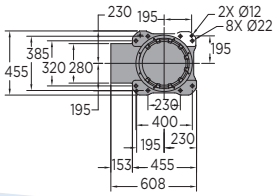
VIEW A

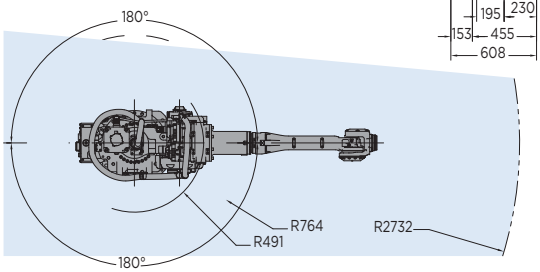


VIEW B



VIEW C





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

SPECIFICATIONS

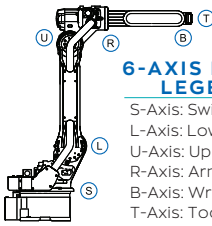
Axes	Maximum motion range	Maximum speed	Allowable moment	Allowable moment of inertia
	degrees	°/sec	N•m	kg•m²
S	±180	180	–	–
L	+155/-90	123	–	–
U	+90/-80	160	–	–
R	±360	230	392	28
B	±125	230	392	28
T	±360	350	196	11

Mounting Options: Floor
* The MLX300 software option is not available for use with arc or spot welding applications. MLX300 fieldbus cards, I/O cards and vision equipment must be purchased separately from the supplier. All peripherals are programmed using a PLC.

Item	Unit	GP70L
Controlled axes		6
Maximum payload	kg	70
Repeatability	mm	0.05
Horizontal reach	mm	2,732
Vertical reach	mm	4,715
Weight	kg	650
Internal user I/O cable		36 conductors w/ ground
Internal user air line		(2) 3/8" connection
Power requirements		380-480 VAC
Power rating	kVA	5

OPTIONS

- Robot risers and base plates
- Extended length manipulator cables
- Wide variety of fieldbus cards
- External axes
- PalletSolver® software
- PLC integration via MLX300 software option*
- Functional Safety Unit (FSU)
- MotoSight™ 2D and 3D vision



6-AXIS ROBOT LEGEND
S-Axis: Swivel Base
L-Axis: Lower Arm
U-Axis: Upper Arm
R-Axis: Arm Roll
B-Axis: Wrist Bend
T-Axis: Tool Flange

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YASKAWA

GP110

HIGH-SPEED, LOW-PROFILE ROBOT

KEY BENEFITS

High payload for heavy part processing

Engineered for easy installation, operation and maintenance

Single robot-to-controller cable connection enables fast setup

SPECIFICATIONS

110 kg payload

2,236 mm horizontal reach

3,751 mm vertical reach

0.03 mm repeatability

APPLICATION

Dispensing

Machine Tending

Material Handling

Material Removal

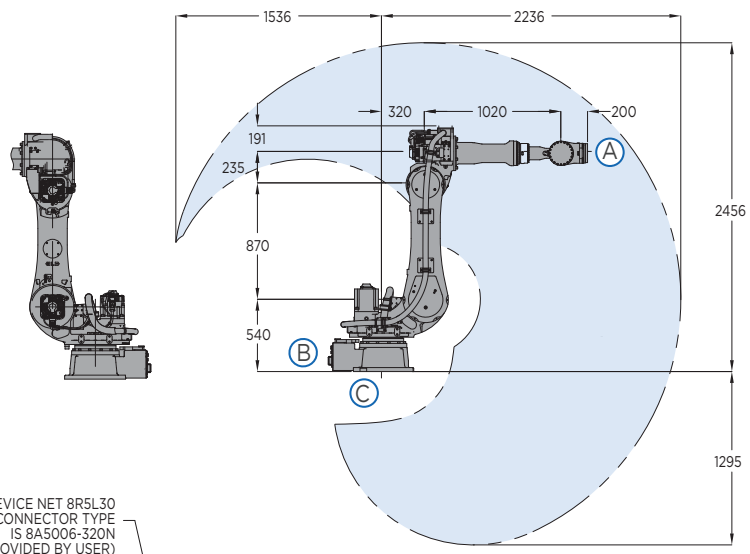
Press Tending

CONTROLLER

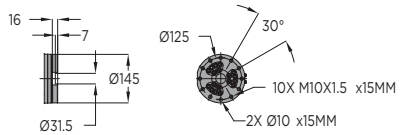
YRC1000

- Increase productivity with the powerful and efficient six-axis GP110 robot.
- 110 kg payload and high moment and inertia ratings provide superior performance for large and heavy handling applications.
- Exceptionally fast axis speeds and acceleration reduce cycle time and increase production output.
- Reduced interference design allows close proximity placement of robots for high-density workcells.
- Wide wrist motion range eliminates interference and improves application flexibility.
- Cables and air lines are routed through robot base to upper arm to increase cable life, enhance safety and reduce teaching time.
- Pre-wired for servo gripper which allows for a wide range of product handling.
- Cable installation tube facilitates fieldbus routing through the S-axis.
- Single power and control cable reduces wiring time and increases work efficiency.
- Modular robot harness design for improved diagnostics and maintenance.
- Home position data can be saved without battery connection for easy maintenance.
- The GP110 has an IP67-rated wrist and an IP54 body standard. An XP (eXtra Protection) package that increases the body protection rating to IP65 is available.
- The GP110 can be floor-mounted. Brakes are included on all axes.
- Compact YRC controller utilizes the lightweight standard teach pendant with intuitive programming.

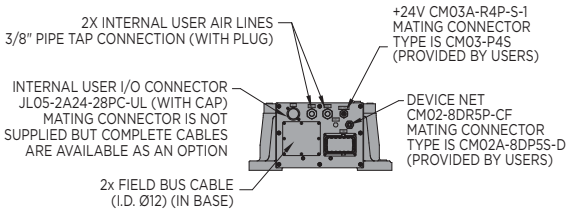
GP110 ROBOT

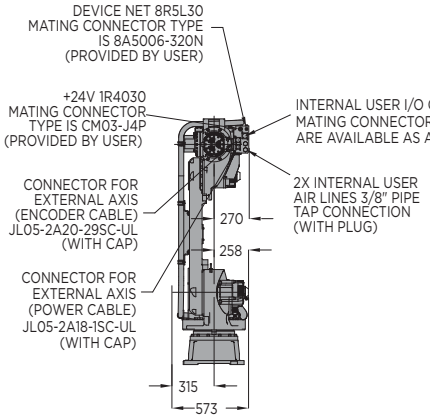


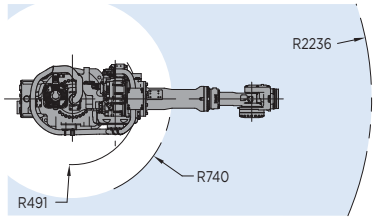
VIEW A



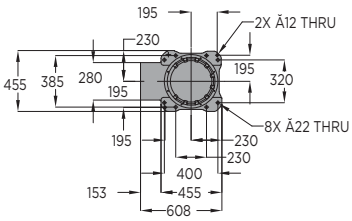
VIEW B







VIEW C



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

SPECIFICATIONS

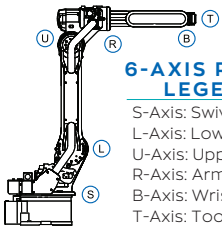
Axes	Maximum motion range	Maximum speed	Allowable moment	Allowable moment of inertia
	degrees	°/sec	N•m	kg•m²
S	±180	140	–	–
L	+155/-90	110	–	–
U	+90/-80	130	–	–
R	±360	175	721	60
B	±125	175	721	60
T	±360	255	294	33.7

Specifications for GP110 with XP package may be different.
Mounting Options: Floor
* The MLX300 software option is not available for use with arc or spot welding applications. MLX300 fieldbus cards, I/O cards and vision equipment must be purchased separately from the supplier. All peripherals are programmed using a PLC.

Item	Unit	GP110
Controlled axes		6
Maximum payload	kg	110
Repeatability	mm	0.03
Horizontal reach	mm	2,236
Vertical reach	mm	3,751
Weight	kg	660
Internal user I/O cable		24 conductors w/ ground
Internal user air line		(2) 3/8" connection
Power requirements		380-480 VAC
Power rating	kVA	5

OPTIONS

- Robot risers and base plates
- Extended length manipulator cables
- Wide variety of fieldbus cards
- External axes
- PLC integration via MLX300 software option*
- Functional Safety Unit (FSU)
- MotoSight™ 2D and 3D vision



6-AXIS ROBOT LEGEND

S-Axis: Swivel Base
L-Axis: Lower Arm
U-Axis: Upper Arm
R-Axis: Arm Roll
B-Axis: Wrist Bend
T-Axis: Tool Flange

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YASKAWA

GP280L

POWERFUL, EXTENDED-REACH ROBOT

KEY BENEFITS

Extended reach and high axis speeds allow use in a variety of applications

High payload for heavy part processing

Engineered for easy installation, operation and maintenance

Single robot-to-controller cable connection enables fast setup

SPECIFICATIONS

280 kg payload

3,114 mm horizontal reach

3,552 mm vertical reach

0.1 mm repeatability

APPLICATION

Dispensing

Material Cutting

Material Handling

Machine Tending

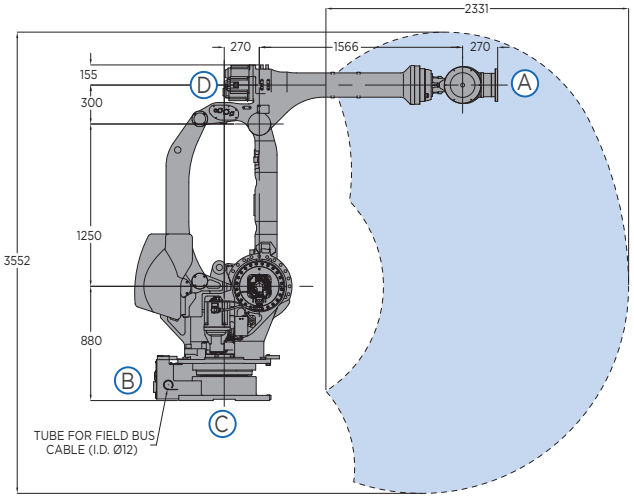
Press Tending

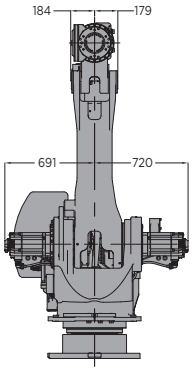
CONTROLLER

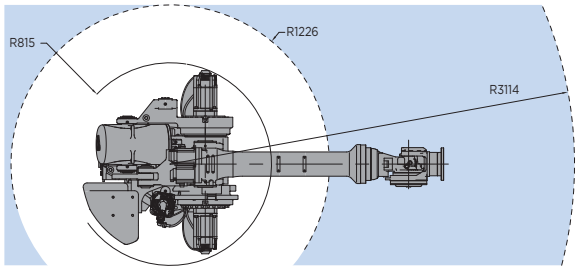
YRC1000

- Increase productivity with the extended-reach, six-axis GP280L robot.
- 280-kg payload capacity and high moment of inertia ratings provide superior performance for large part and heavy payload handling applications.
- Exceptionally fast axis speeds and acceleration capabilities reduce cycle time and increase production output.
- Streamlined upper arm allows easy access to parts in tight spots and avoids potential interference with fixtures, improving application flexibility.
- Wide wrist motion range eliminates interference and improves application flexibility.
- Reduced interference design allows close proximity placement of robots for high-density workcells.
- Ideal for “jigless” applications where robot positions part for processing by other robots or two robots handle a single part.
- Cables and air lines are routed through robot base to upper arm to increase cable life, enhance safety and reduce teaching time.
- Cable installation tube facilitates fieldbus routing through the S-axis.
- Mounting for peripheral equipment is provided in multiple locations to make integration easier.
- Single power and control cable reduces wiring time and increases work efficiency.
- Modular robot harness design for improved diagnostics and maintenance.
- Home position data can be saved without battery connection for easy maintenance.
- The GP280L has an IP67-rated wrist and an IP54 body standard.
- The GP280L can be floor-mounted. Brakes are included on all axes.
- Compact YRC controller utilizes a lightweight standard teach pendant with intuitive programming.

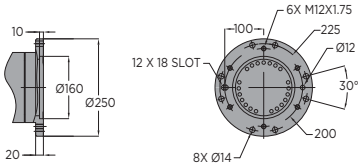
GP280L ROBOT



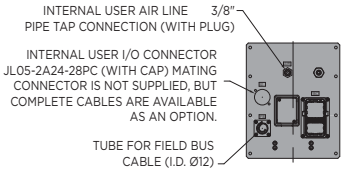




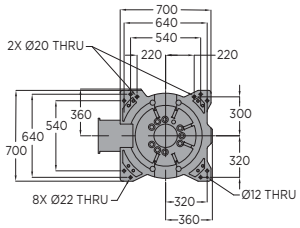
VIEW A



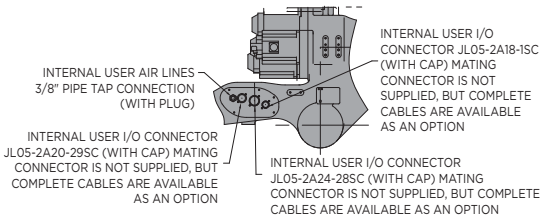
VIEW B



VIEW C



VIEW D



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

SPECIFICATIONS

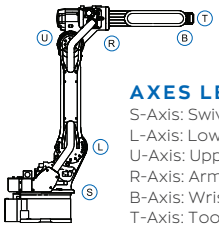
Axes	Maximum motion range	Maximum speed	Allowable moment	Allowable moment of inertia
	degrees	°/sec	N•m	kg•m²
S	±180	110	–	–
L	+90/-45	90	–	–
U	+15.5/-120	90	–	–
R	±360	125	1,960	220
B	±125	125	1,960	220
T	±360	205	950	140

Mounting Options: Floor
* The MLX300 software option is not available for use with arc or spot welding applications. MLX300 fieldbus cards, I/O cards and vision equipment must be purchased separately from the supplier. All peripherals are programmed using a PLC.

Item	Unit	GP280L
Controlled axes		6
Maximum payload	kg	280
Repeatability	mm	0.1
Horizontal reach	mm	3,114
Vertical reach	mm	3,552
Weight	kg	2,380
Internal user I/O cable		24 conductors w/ ground
Internal user air line		(1) 3/8" connection
Power requirements		380-480 VAC
Power rating	kVA	7.5

OPTIONS

- Robot risers and base plates
- Extended length manipulator cables
- Wide variety of fieldbus cards
- External axes
- PLC integration via MLX300 software option*
- Functional Safety Unit (FSU)
- MotoSight™ 2D and 3D vision



AXES LEGEND
S-Axis: Swivel Base
L-Axis: Lower Arm
U-Axis: Upper Arm
R-Axis: Arm Roll
B-Axis: Wrist Bend
T-Axis: Tool Flange

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YASKAWA

GP7 AND GP8

COMPACT, HIGH-SPEED ROBOTS

KEY BENEFITS

Highest payload, speeds and wrist allowable moment in its class

Compact, space-efficient design

Engineered for easy installation, operation and maintenance

IP67 rating for use in a wide variety of applications

SPECIFICATIONS

GP7
7 kg payload
927 mm horizontal reach
1,693 mm vertical reach
0.01 mm repeatability

GP8
8 kg payload
727 mm horizontal reach
1,312 mm vertical reach
0.01 mm repeatability

APPLICATION

Assembly

Material Handling

Packaging

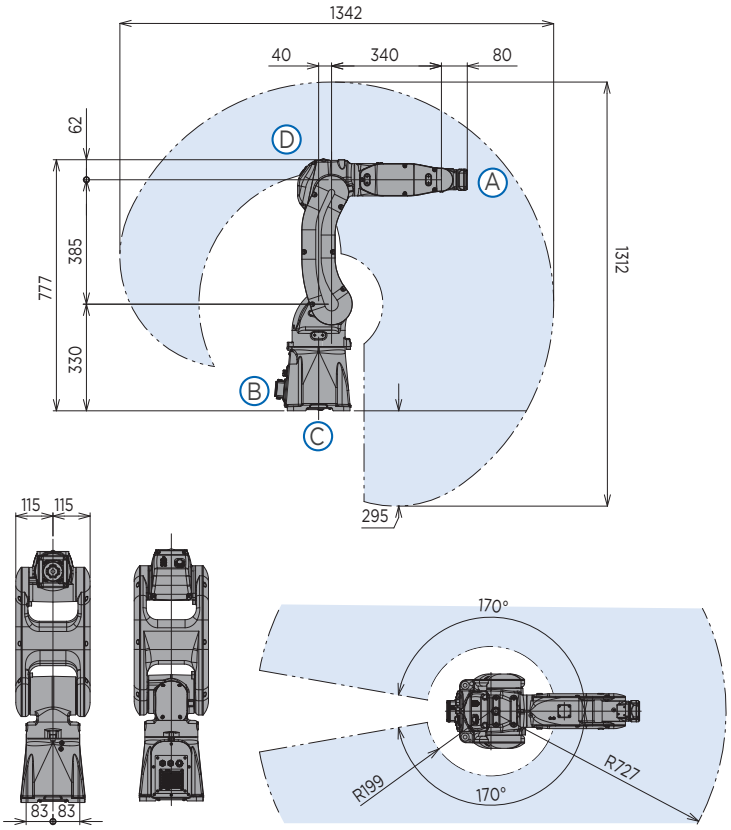
CONTROLLER

YRC1000

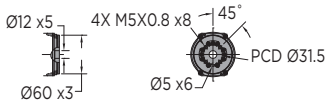
YRC1000micro

- Increase your productivity with the fast and efficient GP7 and GP8 robots.
- All axis speeds have been increased by up to 39% - surpassing other robots in its class.
- Small footprint, slim body design allows for minimum installation space.
- IP67 rating and easy-to-clean surface for use in sanitary or harsh environments. Anti-corrosive paint option available for further chemical resistance.
- Reduced interference design allows close proximity placement of robots.
- Increased reach enables wider work area.
- Maximum reduction of acceleration/deceleration times for all robot positions.
- Highest wrist allowable moment for accurate and repeatable handling.
- Single power and control cable reduces wiring time and increases work efficiency.
- Modular robot harness design for improved diagnostics and maintenance.
- Home position data can be saved without battery connection for easy maintenance.
- Optional location (bottom) for manipulator cable connection reduces interference with walls.
- Ideal for high-volume assembly, handling and packaging applications.
- NSF-H1 certified food-grade lubricant option available for food or consumer product packaging environments.
- The GP7 and GP8 robots are available with either the standard teach pendant or the Smart Pendant.

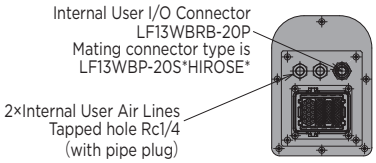
GP7 AND GP8 ROBOTS



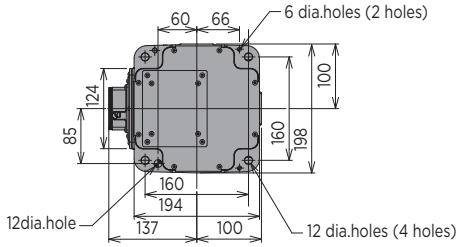
VIEW A



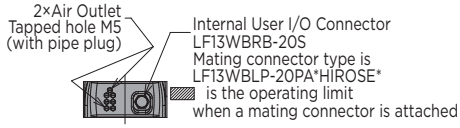
VIEW B



VIEW C



VIEW D



GP8 robot shown.
All dimensions are metric (mm) and for reference only.
Request detailed drawings for all design/engineering requirements.

SPECIFICATIONS

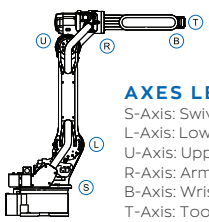
Axes	Maximum motion range		Maximum speed		Allowable moment		Allowable moment of inertia	
	degrees		°/sec		N•m		kg•m²	
	GP7	GP8	GP7	GP8	GP7	GP8	GP7	GP8
S	±170	±170	375	455	–	–	–	–
L	+145/-65	+145/-65	315	385	–	–	–	–
U	+190/-70	+190/-70	410	520	–	–	–	–
R	±190	±190	550	550	17	17	0.5	0.5
B	±135	±135	550	550	17	17	0.5	0.5
T	±360	±360	1000	1000	10	10	0.2	0.2

Mounting Options: Floor, Wall, Tilt or Ceiling
* The MLX300 software option is not available for use with arc or spot welding applications. MLX300 fieldbus cards, I/O cards and vision equipment must be purchased separately from the supplier. All peripherals are programmed using a PLC.

Item	Unit	GP7	GP8
Controlled axes		6	6
Maximum payload	kg	7	8
Repeatability	mm	0.01	0.01
Horizontal reach	mm	927	727
Vertical reach	mm	1,693	1,312
Weight	kg	34	32
Internal user I/O cable		17 conductors (+ ground)	
Internal user air line		(2) 1/4" connection	
Power requirements YRC1000 YRC1000micro		 Three-phase 380-480 VAC 50/60 Hz Single-phase or three-phase 200-230 VAC 50/60 Hz	
Power rating	kVA	1	1

OPTIONS

- Robot risers and base plates
- MotoSight™ 2D and 3D vision systems
- PLC integration via MLX300 software option*



AXES LEGEND

S-Axis: Swivel Base
L-Axis: Lower Arm
U-Axis: Upper Arm
R-Axis: Arm Roll
B-Axis: Wrist Bend
T-Axis: Tool Flange

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YASKAWA

GP7 AND GP8

COMPACT, HIGH-SPEED ROBOTS

KEY BENEFITS

Highest payload, speeds and wrist allowable moment in its class

Compact, space-efficient design

Engineered for easy installation, operation and maintenance

IP67 rating for use in a wide variety of applications

SPECIFICATIONS

GP7
7 kg payload
927 mm horizontal reach
1,693 mm vertical reach
0.01 mm repeatability

GP8
8 kg payload
727 mm horizontal reach
1,312 mm vertical reach
0.01 mm repeatability

APPLICATION

Assembly

Material Handling

Packaging

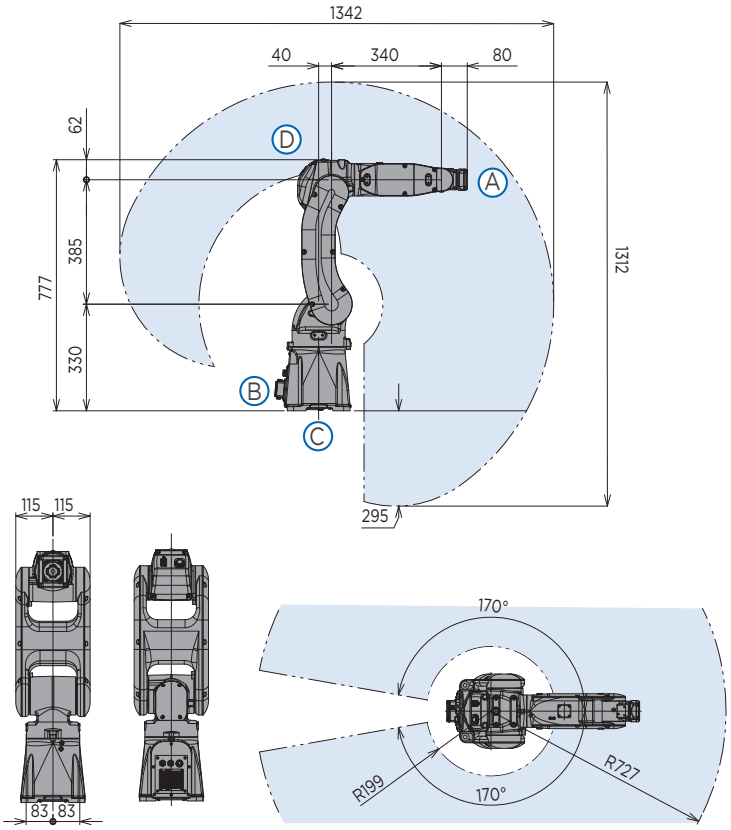
CONTROLLER

YRC1000

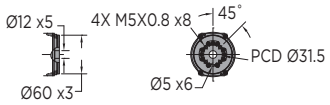
YRC1000micro

- Increase your productivity with the fast and efficient GP7 and GP8 robots.
- All axis speeds have been increased by up to 39% - surpassing other robots in its class.
- Small footprint, slim body design allows for minimum installation space.
- IP67 rating and easy-to-clean surface for use in sanitary or harsh environments. Anti-corrosive paint option available for further chemical resistance.
- Reduced interference design allows close proximity placement of robots.
- Increased reach enables wider work area.
- Maximum reduction of acceleration/deceleration times for all robot positions.
- Highest wrist allowable moment for accurate and repeatable handling.
- Single power and control cable reduces wiring time and increases work efficiency.
- Modular robot harness design for improved diagnostics and maintenance.
- Home position data can be saved without battery connection for easy maintenance.
- Optional location (bottom) for manipulator cable connection reduces interference with walls.
- Ideal for high-volume assembly, handling and packaging applications.
- NSF-H1 certified food-grade lubricant option available for food or consumer product packaging environments.
- The GP7 and GP8 robots are available with either the standard teach pendant or the Smart Pendant.

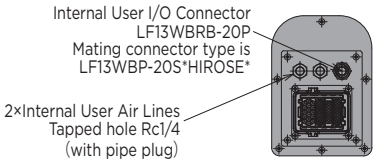
GP7 AND GP8 ROBOTS



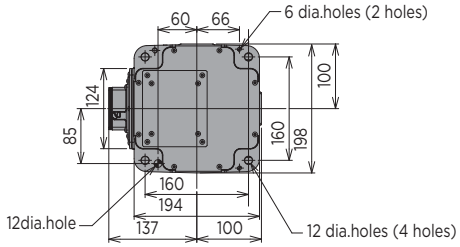
VIEW A



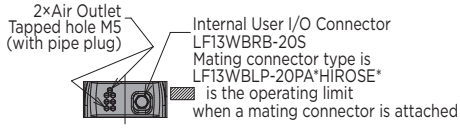
VIEW B



VIEW C



VIEW D



GP8 robot shown.
All dimensions are metric (mm) and for reference only.
Request detailed drawings for all design/engineering requirements.

SPECIFICATIONS

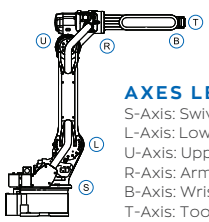
Axes	Maximum motion range		Maximum speed		Allowable moment		Allowable moment of inertia	
	degrees		°/sec		N•m		kg•m²	
	GP7	GP8	GP7	GP8	GP7	GP8	GP7	GP8
S	±170	±170	375	455	–	–	–	–
L	+145/-65	+145/-65	315	385	–	–	–	–
U	+190/-70	+190/-70	410	520	–	–	–	–
R	±190	±190	550	550	17	17	0.5	0.5
B	±135	±135	550	550	17	17	0.5	0.5
T	±360	±360	1000	1000	10	10	0.2	0.2

Mounting Options: Floor, Wall, Tilt or Ceiling
* The MLX300 software option is not available for use with arc or spot welding applications. MLX300 fieldbus cards, I/O cards and vision equipment must be purchased separately from the supplier. All peripherals are programmed using a PLC.

Item	Unit	GP7	GP8
Controlled axes		6	6
Maximum payload	kg	7	8
Repeatability	mm	0.01	0.01
Horizontal reach	mm	927	727
Vertical reach	mm	1,693	1,312
Weight	kg	34	32
Internal user I/O cable		17 conductors (+ ground)	
Internal user air line		(2) 1/4" connection	
Power requirements YRC1000 YRC1000micro		 Three-phase 380-480 VAC 50/60 Hz Single-phase or three-phase 200-230 VAC 50/60 Hz	
Power rating	kVA	1	1

OPTIONS

- Robot risers and base plates
- MotoSight™ 2D and 3D vision systems
- PLC integration via MLX300 software option*



AXES LEGEND

S-Axis: Swivel Base
L-Axis: Lower Arm
U-Axis: Upper Arm
R-Axis: Arm Roll
B-Axis: Wrist Bend
T-Axis: Tool Flange

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YASKAWA

GP12

EFFICIENT, HIGH-SPEED ROBOT

KEY BENEFITS

Highest payload, speeds and wrist allowable moment in its class

Space-efficient design

Engineered for easy installation, operation and maintenance

SPECIFICATIONS

12 kg payload

1,440 mm horizontal reach

2,511 mm vertical reach

0.02 mm repeatability

APPLICATION

Assembly

Material Handling

Packaging

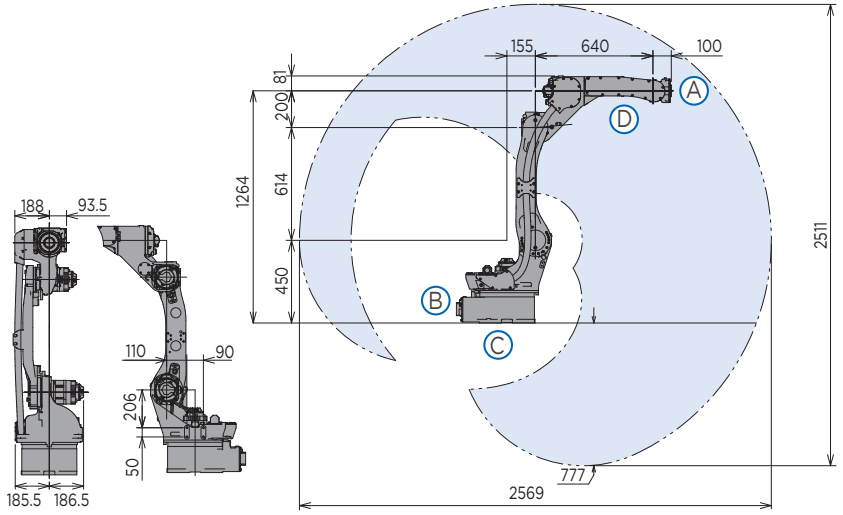
CONTROLLER

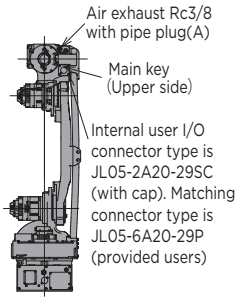
YRC1000

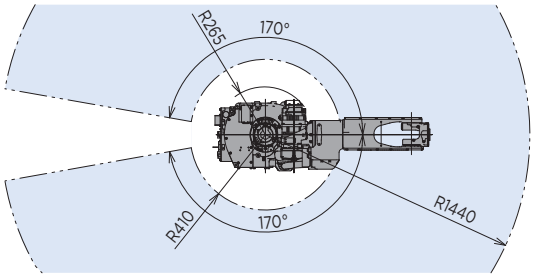
YRC1000micro

- Increase your productivity with the fast and efficient GP12 robot.
- All axis speeds have been increased by up to 15% - surpassing other robots in its class.
- Reduced interference design allows close proximity placement of robots.
- Maximum reduction of acceleration/deceleration times for all robot positions.
- Hollow arm structure eliminates cable interference.
- Highest wrist allowable moment for accurate and repeatable handling.
- Higher payload allows wider range of tooling integration such as double gripper for multi-handling operations.
- Single power and control cable reduces wiring time and increases work efficiency.
- Modular robot harness design for improved diagnostics and maintenance.
- Home position data can be saved without battery connection for easy maintenance.
- Ideal for high-volume assembly, handling and packaging applications.
- NSF-H1 certified food-grade lubricant option available for food or consumer product packaging environments.
- The GP12 has an IP67-rated wrist and an IP54 body standard. An XP (eXtra Protection) package that increases the body protection rating to IP65 is available.
- The GP12 can be floor-, wall-, tilt- or ceiling-mounted. Brakes are included on all axes.
- The GP12 robot is available with either the standard teach pendant or the Smart Pendant.

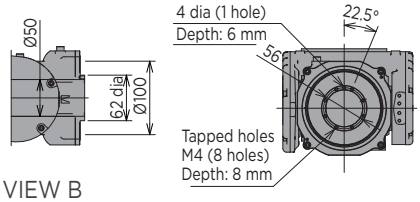
GP12 ROBOT



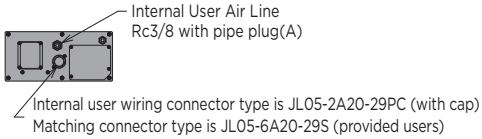




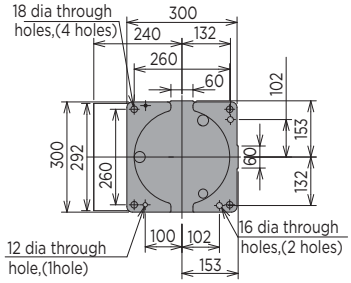
VIEW A



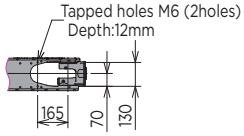
VIEW B



VIEW C



VIEW D



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

SPECIFICATIONS

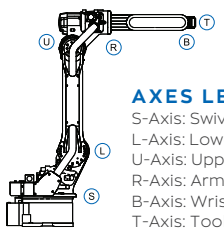
Axes	Maximum motion range	Maximum speed	Allowable moment	Allowable moment of inertia
	degrees	°/sec	N•m	kg•m²
S	±170	260	–	–
L	+155/-90	230	–	–
U	+150/-85	260	–	–
R	±200	470	22	0.65
B	±150	470	22	0.65
T	±455	700	9.8	0.17

Specifications for GP12 with XP package may be different.
Mounting Options: Floor, Wall, Tilt or Ceiling
* The MLX300 software option is not available for use with arc or spot welding applications. MLX300 fieldbus cards, I/O cards and vision equipment must be purchased separately from the supplier. All peripherals are programmed using a PLC.
** Food grade grease version includes (2) 3/8" internal user air line connections.

Item	Unit	GP12
Controlled axes		6
Maximum payload	kg	12
Repeatability	mm	0.02
Horizontal reach	mm	1,440
Vertical reach	mm	2,511
Weight	kg	150
Internal user I/O cable		17 conductors (+ ground)
Internal user air line		(1) 3/8" connection**
Power requirements YRC1000 YRC1000micro		 Three-phase 380-480 VAC 50/60 Hz Three-phase 200-230 VAC 50/60 Hz
Power rating	kVA	1.5

OPTIONS

- Robot risers and base plates
- MotoSight™ 2D and 3D vision systems
- PLC integration via MLX300 software option*



AXES LEGEND

S-Axis: Swivel Base
L-Axis: Lower Arm
U-Axis: Upper Arm
R-Axis: Arm Roll
B-Axis: Wrist Bend
T-Axis: Tool Flange

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YASKAWA

GP20HL

EXTENDED-REACH, HOLLOW ARM DESIGN

KEY BENEFITS

Extended reach and high speeds allow use in a variety of applications

High wrist ratings provide higher handling capacity

Engineered for easy installation, operation and maintenance

Single robot-to-controller cable connection enables fast setup

SPECIFICATIONS

20 kg payload

3,124 mm horizontal reach

5,622 mm vertical reach

0.07 mm repeatability

APPLICATION

Coating

Dispensing

Machine Tending

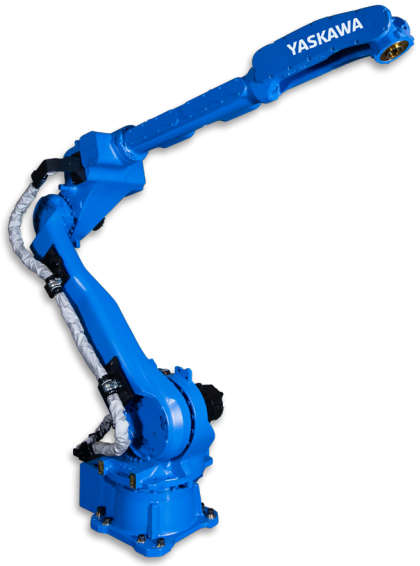
Material Cutting

Material Handling

Press Tending

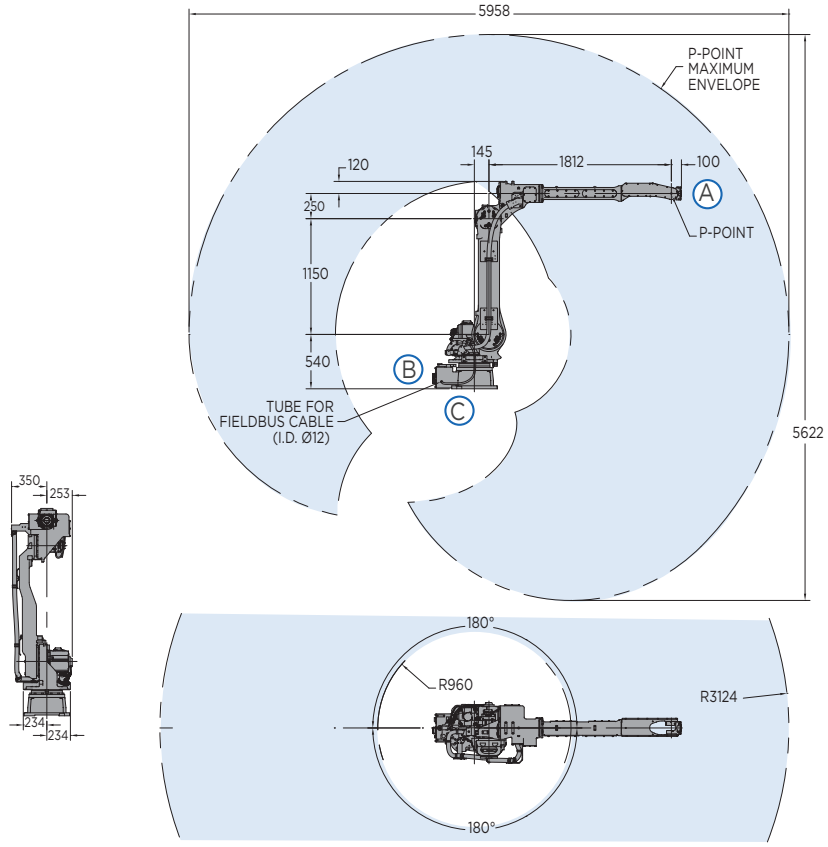
CONTROLLER

YRC1000

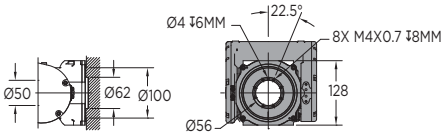


- Increase productivity with the powerful and efficient hollow-arm GP20HL robot.
- Extended reach six-axis robot offers superior performance for a variety of applications.
- Hollow upper arm provides optimal cable protection and longer life while simplifying programming. A 50 mm clearance through axes 4-6 encloses the cable and protects it from wear, interference or snagging.
- 20 kg payload supports a wide variety of tooling and sensors to fulfill diverse project needs.
- Exceptionally fast axis speeds and acceleration capabilities reduce cycle time and increase production output.
- Reduced interference design allows close proximity placement of robots for high-density workcells.
- Streamlined upper arm allows easy access to parts in tight spots and avoids potential interference with fixtures, improving application flexibility.
- Wide wrist motion range eliminates interference and improves application flexibility.
- High moment and inertia ratings allow handling of larger and heavier payloads.
- Cables and air lines are routed through robot base to upper arm to increase cable life, enhance safety and reduce teaching time.
- Cable installation tube facilitates fieldbus routing through the S-axis.
- Mounting for peripheral equipment is provided in multiple locations to make integration easier.
- Single power and control cable reduces wiring time and increases work efficiency.
- Modular robot harness design for improved diagnostics and maintenance.
- Home position data can be saved without battery connection for easy maintenance.
- The GP20HL has an IP67-rated wrist and an IP54 body standard.
- The GP20HL robot can be floor-, wall-, tilt- or ceiling-mounted. Brakes are included on all axes.
- Compact YRC controller utilizes a lightweight standard teach pendant with intuitive programming.

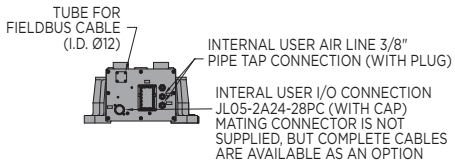
GP20HL ROBOT



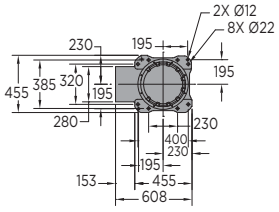
VIEW A



VIEW B



VIEW C



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

SPECIFICATIONS

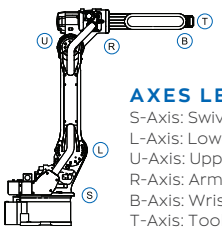
Axes	Maximum motion range	Maximum speed	Allowable moment	Allowable moment of inertia
	degrees	°/sec	N•m	kg•m²
S	±180	180	–	–
L	+135/-90	180	–	–
U	+206/-80	180	–	–
R	±200	400	39.2	1.05
B	±150	430	39.2	1.05
T	±455	630	19.6	.75

Mounting Options: Floor, Wall, Tilt or Ceiling
* The MLX300 software option is not available for use with arc or spot welding applications. MLX300 fieldbus cards, I/O cards and vision equipment must be purchased separately from the supplier. All peripherals are programmed using a PLC.

Item	Unit	GP20HL
Controlled axes		6
Maximum payload	kg	20
Repeatability	mm	0.07
Horizontal reach	mm	3,124
Vertical reach	mm	5,622
Weight	kg	560
Internal user I/O cable		24 conductors w/ ground
Internal user air line		(2) 3/8" connection
Power requirements		380-480 VAC
Power rating	kVA	4.0

OPTIONS

- Robot risers and base plates
- Extended length manipulator cables
- Wide variety of fieldbus cards
- External axes
- PLC integration via MLX300 software option*
- Functional Safety Unit (FSU)
- MotoSight™ 2D and 3D vision



AXES LEGEND

S-Axis: Swivel Base
L-Axis: Lower Arm
U-Axis: Upper Arm
R-Axis: Arm Roll
B-Axis: Wrist Bend
T-Axis: Tool Flange

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YASKAWA

GP25

EFFICIENT, HIGH-SPEED ROBOT

KEY BENEFITS

High payload, axis speed and wrist allowable moment ratings

Space-efficient design

Engineered for easy installation, operation and maintenance

SPECIFICATIONS

25 kg payload

1,730 mm horizontal reach

3,089 mm vertical reach

0.02 mm repeatability

APPLICATION

Assembly

Dispensing

Material Handling

Material Removal

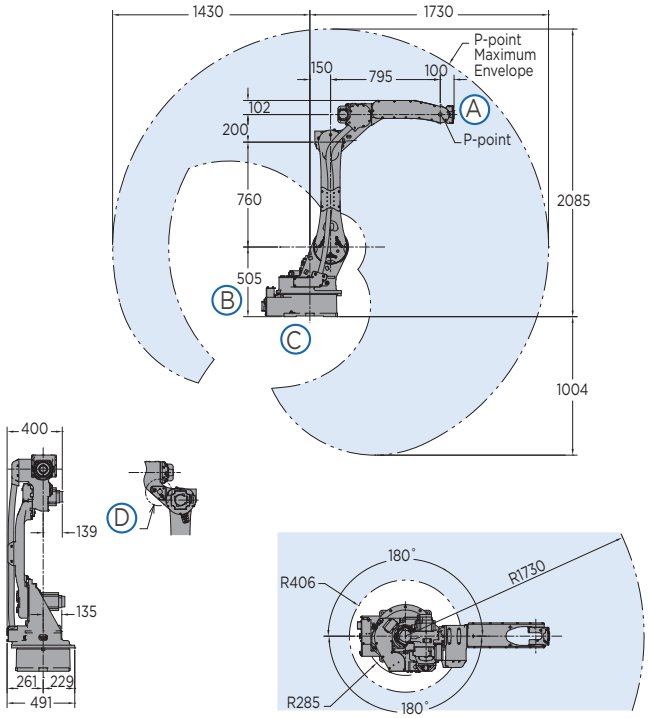
Packaging

CONTROLLER

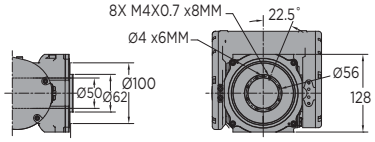
YRC1000

- Increase your productivity with the fast and efficient GP25 robot.
- All axis speeds have been increased, some over 40%, surpassing other robots in its class.
- Minimum acceleration/deceleration times provide high performance.
- Reduced interference design allows close proximity placement of robots.
- Hollow upper arm provides optimal cable protection and longer life while simplifying programming. A 50 mm clearance through axes 4-6 encloses the cable and protects it from wear, interference or snagging.
- Patented double yoke upper arm design provides additional strength if the robot is crashed. Much stronger than other six-axis integrated cable designs.
- High wrist allowable moment for accurate and repeatable handling.
- Increased 25 kg payload, as well as increased moment and inertia ratings over previous models, allow larger and heavier loads to be carried by the robot.
- Single power and control cable reduces wiring time and increases work efficiency.
- Modular robot harness design for improved diagnostics and maintenance.
- Home position data can be saved without battery connection for easy maintenance.
- NSF-H1 certified food-grade lubricant option available for food or consumer product packaging environments.
- The GP25 has an IP67-rated wrist and an IP54 body standard. An XP (eXtra Protection) package that increases the body protection rating to IP65 is available.
- The GP25 can be floor-, wall-, tilt- or ceiling-mounted. Brakes are included on all axes.
- Compact YRC controller utilizes the lightweight standard teach pendant with intuitive programming.

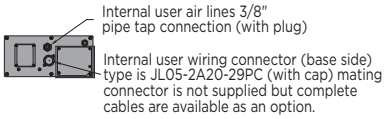
GP25 ROBOT



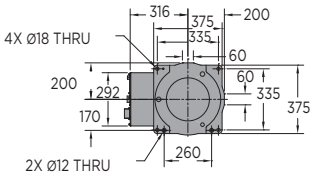
VIEW A



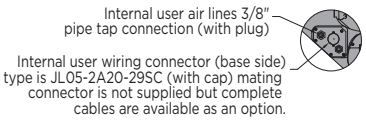
VIEW B



VIEW C



VIEW D



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

SPECIFICATIONS

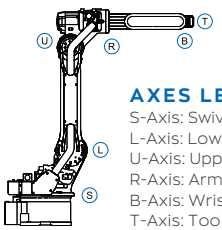
Axes	Maximum motion range	Maximum speed	Allowable moment	Allowable moment of inertia
	degrees	°/sec	N•m	kg•m²
S	±180	210	–	–
L	+155/-105	210	–	–
U	+160/-86	265	–	–
R	±200	420	52	2.3
B	±150	420	52	2.3
T	±455	885	32	1.2

Specifications for GP25 with XP package may be different.
Mounting Options: Floor, Wall, Tilt or Ceiling
* The MLX300 software option is not available for use with arc or spot welding applications. MLX300 fieldbus cards, I/O cards and vision equipment must be purchased separately from the supplier. All peripherals are programmed using a PLC.

Item	Unit	GP25
Controlled axes		6
Maximum payload	kg	25
Repeatability	mm	0.02
Horizontal reach	mm	1,730
Vertical reach	mm	3,089
Weight	kg	250
Internal user I/O cable		17 conductors w/ ground
Internal user air line		(1) 3/8" connection
Power requirements		380-480 VAC
Power rating	kVA	2.0

OPTIONS

- Robot risers and base plates
- Extended length manipulator cables
- Wide variety of fieldbus cards
- External axes
- PLC integration via MLX300 software option*
- Functional Safety Unit (FSU)
- MotoSight™ 2D and 3D vision



AXES LEGEND

S-Axis: Swivel Base
L-Axis: Lower Arm
U-Axis: Upper Arm
R-Axis: Arm Roll
B-Axis: Wrist Bend
T-Axis: Tool Flange

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GP25-12

EFFICIENT, HIGH-SPEED ROBOT

KEY BENEFITS

Extended reach for large part processing

Space-efficient design

Engineered for easy installation, operation and maintenance

SPECIFICATIONS

12 kg payload

2,010 mm horizontal reach

3,649 mm vertical reach

0.03 mm repeatability

APPLICATION

Assembly

Dispensing

Machine Tending

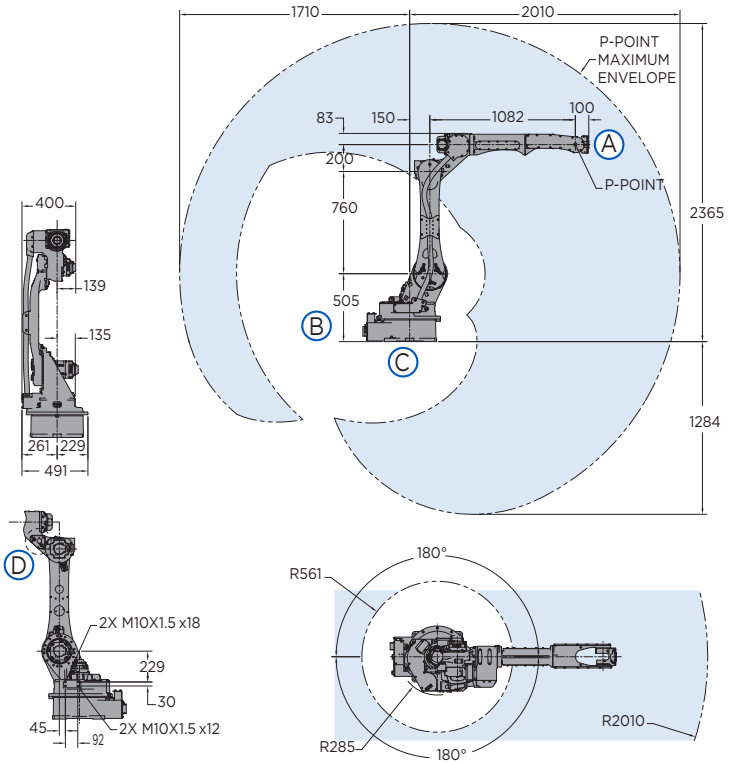
Material Handling

CONTROLLER

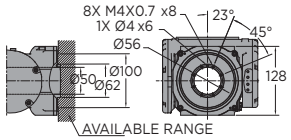
YRC1000

- Extended-reach GP25-12 robot offers a broad work envelope, increasing application flexibility.
- Exceptionally fast axis speeds and acceleration capabilities reduce cycle times and increase production output.
- Hollow upper arm structure provides optimal cable protection while simplifying programming. A 50 mm thru-hole, between axes 4-6, shields process utilities from wear, interference or snagging.
- Contoured arm design reduces interference with jigs and large parts.
- Symmetric wrist profile provides consistent motion and clearances regardless of robot approach.
- Mounting is available on the back side of the upper arm reducing interference with machines or other items in the workcell.
- Single power and control cable reduces wiring time and increases work efficiency.
- Modular robot harness design for improved diagnostics and maintenance.
- Home position data can be saved without battery connection for easy maintenance.
- Ideally suited for use in high-density workcells with multiple robots working in close proximity.
- Slim arm allows easy access to parts in tight spots and avoids potential interference with fixtures.
- The GP25-12 has an IP67-rated wrist and an IP54 body standard. An XP (eXtra Protection) package that increases the body protection rating to IP65 is available.
- The GP25-12 can be floor-, wall-, tilt- or ceiling-mounted. Brakes are included on all axes.
- Compact YRC controller utilizes the lightweight standard teach pendant with intuitive programming.

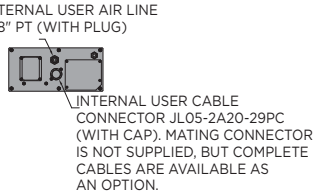
GP25-12 ROBOT



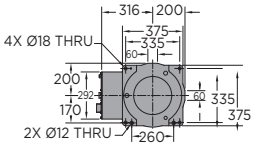
VIEW A



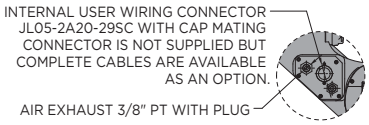
VIEW B



VIEW C



VIEW D



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

SPECIFICATIONS

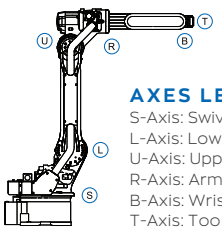
Axes	Maximum motion range	Maximum speed	Allowable moment	Allowable moment of inertia
	degrees	°/sec	N•m	kg•m²
S	±180	210	-	-
L	+155/-105	210	-	-
U	+160/-86	220	-	-
R	±200	435	22	0.65
B	±150	435	22	0.65
T	±455	700	9.8	0.17

Specifications for GP25-12 with XP package may be different.
Mounting Options: Floor, Wall, Tilt or Ceiling
* The MLX300 software option is not available for use with arc or spot welding applications. MLX300 fieldbus cards, I/O cards and vision equipment must be purchased separately from the supplier. All peripherals are programmed using a PLC.

Item	Unit	GP25-12
Controlled axes		6
Maximum payload	kg	12
Repeatability	mm	0.03
Horizontal reach	mm	2,010
Vertical reach	mm	3,649
Weight	kg	260
Internal user I/O cable		17 conductors w/ ground
Internal user air line		(1) 3/8" connection
Power requirements		380-480 VAC
Power rating	kVA	2.0

OPTIONS

- Robot risers and base plates
- Extended length manipulator cables
- Wide variety of fieldbus cards
- External axes
- PLC integration via MLX300 software option*
- Functional Safety Unit (FSU)
- MotoSight™ 2D and 3D vision



AXES LEGEND
S-Axis: Swivel Base
L-Axis: Lower Arm
U-Axis: Upper Arm
R-Axis: Arm Roll
B-Axis: Wrist Bend
T-Axis: Tool Flange

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YASKAWA

GP50

VERSATILE, HIGH-SPEED ROBOT

KEY BENEFITS

High speeds and mounting flexibility allow use in a variety of applications

High wrist ratings provide higher handling capacity

Engineered for easy installation, operation and maintenance

Single robot-to-controller cable connection enables fast setup

SPECIFICATIONS

50 kg payload

2,061 mm horizontal reach

3,578 mm vertical reach

0.03 mm repeatability

APPLICATION

Dispensing

Machine Tending

Material Cutting

Material Handling

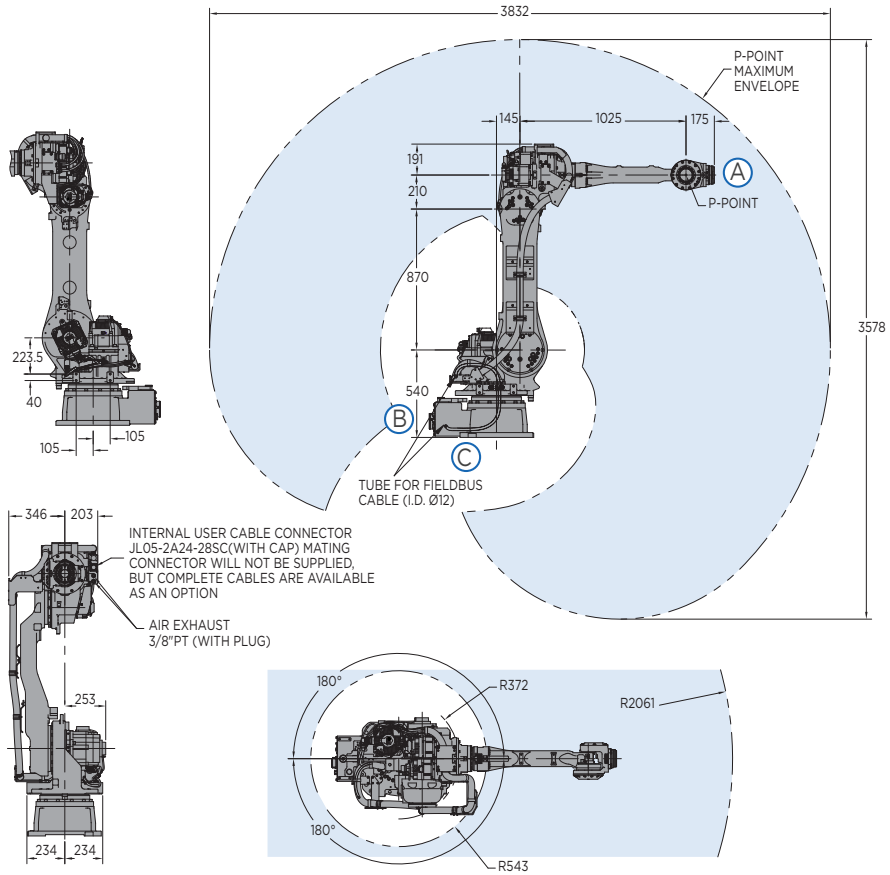
Press Tending

CONTROLLER

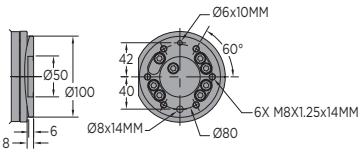
YRC1000

- Increase productivity with the powerful and efficient GP50 robot.
- Long reach six-axis robot offers superior performance for a variety of applications.
- Exceptionally fast axis speeds and acceleration capabilities reduce cycle time and increase production output.
- 50 kg payload supports a wide variety of tooling and sensors to fulfill diverse application needs.
- Reduced interference design allows close proximity placement of robots for high-density workcells.
- Wide wrist motion range eliminates interference and improves application flexibility.
- High moment and inertia ratings allow handling of larger and heavier payloads.
- Cable installation tube facilitates fieldbus routing through the S-axis.
- Single power and control cable reduces wiring time and increases work efficiency.
- Modular robot harness design for improved diagnostics and maintenance.
- Home position data can be saved without battery connection for easy maintenance.
- NSF-H1 certified food-grade lubricant option available for food or consumer product packaging environment.
- The GP50 has an IP67-rated wrist and an IP54 body standard. An XP (eXtra Protection) package that increases the body protection rating to IP65 is available.
- The GP50 can be floor-, wall-, tilt- or ceiling-mounted. Brakes are included on all axes.
- Compact YRC controller utilizes the lightweight standard teach pendant with intuitive programming.

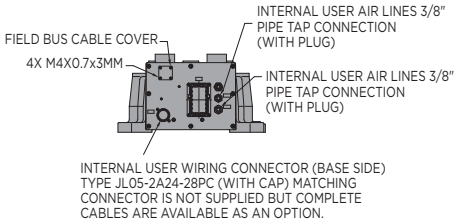
GP50 ROBOT



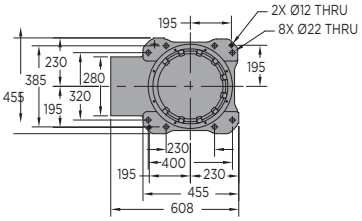
VIEW A



VIEW B



VIEW C



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

SPECIFICATIONS

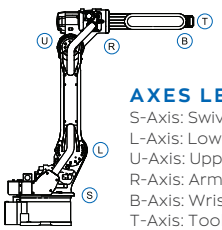
Axes	Maximum motion range	Maximum speed	Allowable moment	Allowable moment of inertia
	degrees	°/sec	N•m	kg•m²
S	±180	180	–	–
L	+135/-90	178	–	–
U	+206/-80	178	–	–
R	±360	250	216	28
B	±125	250	216	28
T	±360	360	147	11

Specifications for GP50 with XP package may be different.
Mounting Options: Floor, Wall, Tilt or Ceiling
* The MLX300 software option is not available for use with arc or spot welding applications. MLX300 fieldbus cards, I/O cards and vision equipment must be purchased separately from the supplier. All peripherals are programmed using a PLC.

Item	Unit	GP50
Controlled axes		6
Maximum payload	kg	50
Repeatability	mm	0.03
Horizontal reach	mm	2,061
Vertical reach	mm	3,578
Weight	kg	570
Internal user I/O cable		24 conductors w/ ground
Internal user air line		(2) 3/8" connection
Power requirements		380-480 VAC
Power rating	kVA	4.5

OPTIONS

- Robot risers and base plates
- Extended length manipulator cables
- Wide variety of fieldbus cards
- External axes
- PLC integration via MLX300 software option*
- Functional Safety Unit (FSU)
- MotoSight™ 2D and 3D vision



AXES LEGEND

S-Axis: Swivel Base
L-Axis: Lower Arm
U-Axis: Upper Arm
R-Axis: Arm Roll
B-Axis: Wrist Bend
T-Axis: Tool Flange

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YASKAWA

GP88

VERSATILE, HIGH-SPEED ROBOT

KEY BENEFITS

High speeds and mounting flexibility allow use in a variety of applications

High wrist ratings provide higher handling capacity

Engineered for easy installation, operation and maintenance

Single robot-to-controller cable connection enables fast setup

SPECIFICATIONS

88 kg payload

2,236 mm horizontal reach

3,751 mm vertical reach

0.03 mm repeatability

APPLICATION

Dispensing

Machine Tending

Material Cutting

Material Handling

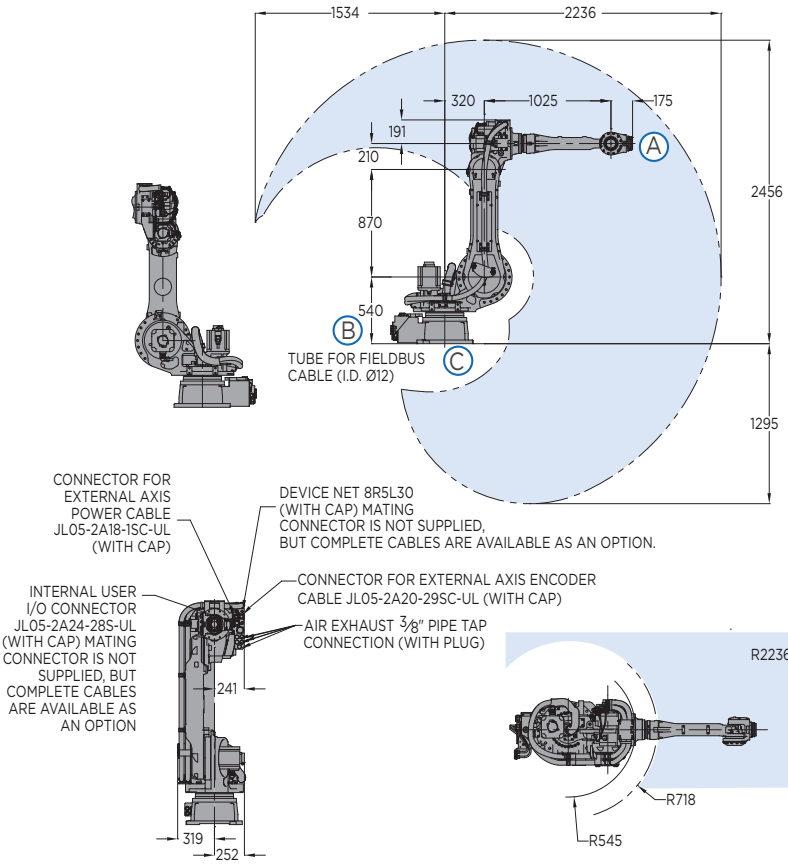
Press Tending

CONTROLLER

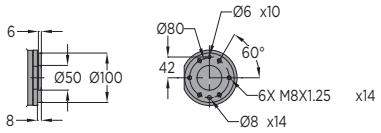
YRC1000

- Increase productivity with the powerful and efficient GP88 robot.
- Flexible six-axis robot offers superior performance for a variety of applications.
- Exceptionally fast axis speeds and acceleration capabilities reduce cycle time and increase production output.
- 88 kg payload supports a wide variety of tooling and sensors to fulfill diverse application needs.
- Reduced interference design allows close proximity placement of robots for high-density workcells.
- Wide wrist motion range eliminates interference and improves application flexibility.
- High moment and inertia ratings allow handling of larger and heavier payloads.
- Cable installation tube facilitates fieldbus routing through the S-axis.
- Single power and control cable reduces wiring time and increases work efficiency.
- Modular robot harness design for improved diagnostics and maintenance.
- Home position data can be saved without battery connection for easy maintenance.
- The GP88 has an IP67-rated wrist and an IP54 body standard. An XP (eXtra Protection) package that increases the body protection rating to IP65 is available.
- The GP88 can be floor-, wall-, tilt-or ceiling-mounted. Brakes on all axes.
- Compact YRC controller utilizes the lightweight standard teach pendant with intuitive programming.

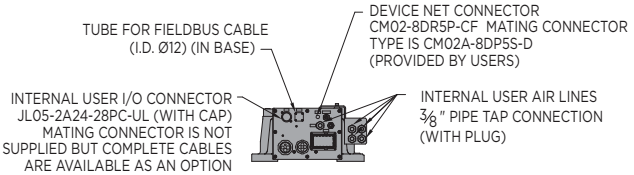
GP88 ROBOT



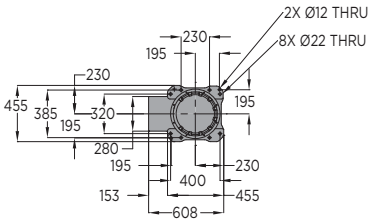
VIEW A



VIEW B



VIEW C



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

SPECIFICATIONS

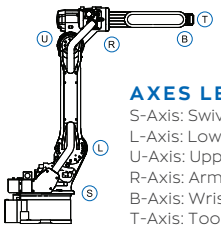
Axes	Maximum motion range	Maximum speed	Allowable moment	Allowable moment of inertia
	degrees	°/sec	N•m	kg•m²
S	±180	170	–	–
L	+155/-90	140	–	–
U	+90/-80	160	–	–
R	±360	230	408	30
B	±125	230	408	30
T	±360	350	206	11

Specifications for GP88 with XP package may be different.
Mounting Options: Floor, Wall, Tilt or Ceiling
* The MLX300 software option is not available for use with arc or spot welding applications. MLX300 fieldbus cards, I/O cards and vision equipment must be purchased separately from the supplier. All peripherals are programmed using a PLC.

Item	Unit	GP88
Controlled axes		6
Maximum payload	kg	88
Repeatability	mm	0.03
Horizontal reach	mm	2,236
Vertical reach	mm	3,751
Weight	kg	630
Internal user I/O cable		24 conductors w/ ground
Internal user air line		(5) 3/8" connection
Power requirements		380-480
Power rating	kVA	4

OPTIONS

- Robot risers and base plates
- Extended length manipulator cables
- Wide variety of fieldbus cards
- External axes
- PLC integration via MLX300 software option*
- Functional Safety Unit (FSU)
- MotoSight™ 2D and 3D vision



AXES LEGEND

S-Axis: Swivel Base
L-Axis: Lower Arm
U-Axis: Upper Arm
R-Axis: Arm Roll
B-Axis: Wrist Bend
T-Axis: Tool Flange

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YASKAWA

GP110B

HIGHLY-FLEXIBLE, 7-AXIS ROBOT

KEY BENEFITS

Additional E-axis creates variable length L arm

High payload for heavy part processing

Engineered for easy installation, operation and maintenance

Single robot-to-controller cable connection enables fast setup

SPECIFICATIONS

110 kg payload

2,236 mm horizontal reach

3,792 mm vertical reach

0.04 mm repeatability

APPLICATION

Dispensing

Machine Tending

Material Handling

Material Removal

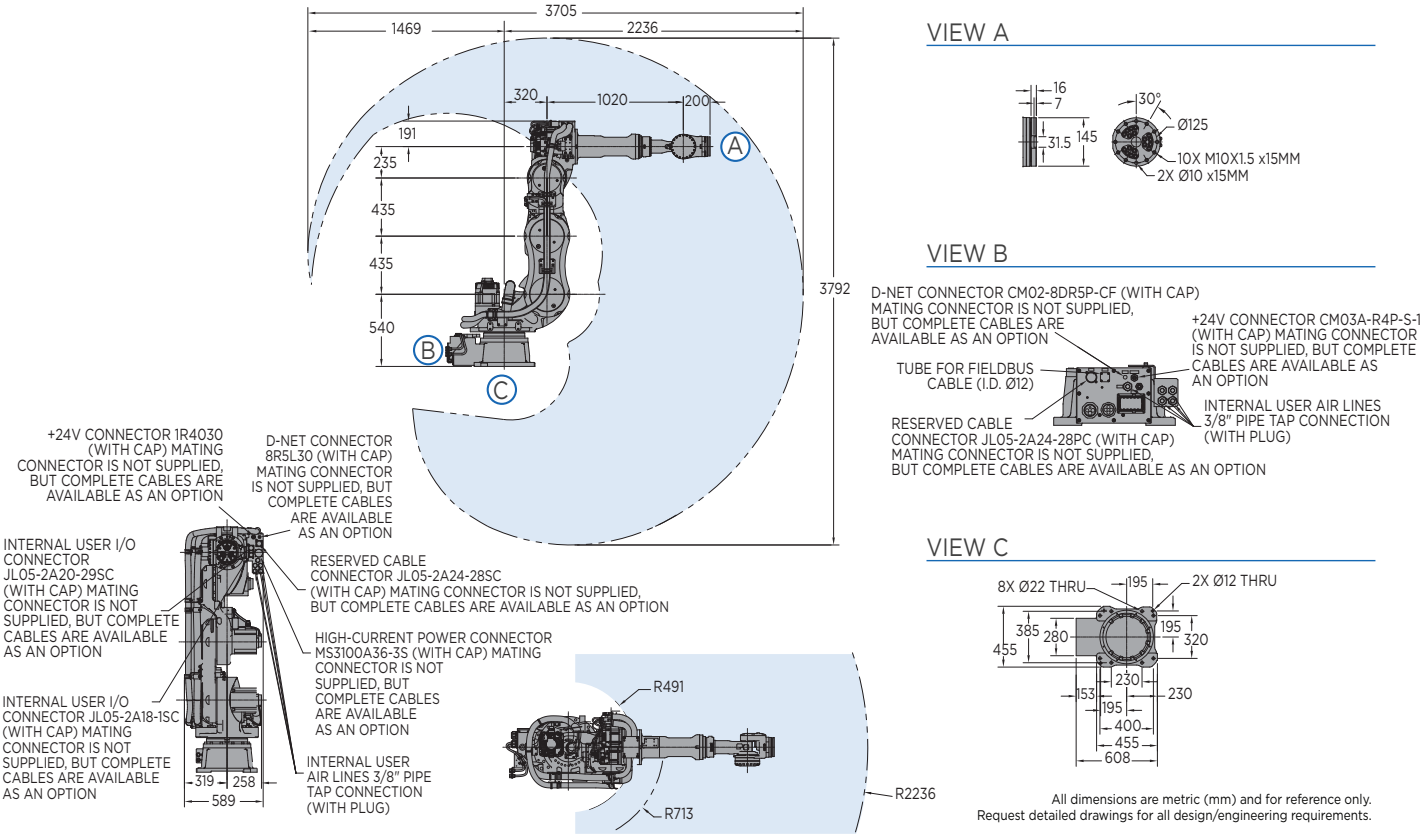
Press Tending

CONTROLLER

YRC1000

- Increase productivity with the powerful, efficient and highly-flexible GP110B seven-axis robot.
- 110 kg payload capacity and high moment and inertia ratings provide superior performance for large and heavy handling applications.
- Seven axes provide increased motion range and additional flexibility for obstacle avoidance and reaching difficult areas.
- Wide wrist motion range eliminates interference and improves application flexibility.
- Reduced interference design allows close proximity placement of robots for high-density workcells.
- Distance between the L-axis and U-axis can be changed by adjusting the angle of the E-axis, effectively creating a variable length L arm.
- Cables and air lines are routed through robot base to upper arm to increase cable life, enhance safety and reduce teaching time.
- Pre-wired for servo gripper which allows for a wide range of product handling.
- Cable installation tube facilitates fieldbus routing through the S-axis.
- Single power and control cable reduces wiring time and increases work efficiency.
- Modular robot harness design for improved diagnostics and maintenance.
- Home position data can be saved without battery connection for easy maintenance.
- The GP110B has an IP67-rated wrist and an IP54 body standard. An XP (eXtra Protection) package that increases the body protection rating to IP65 is available.
- The GP110B can be floor-mounted. Brakes are included on all axes.
- Compact YRC controller utilizes the lightweight standard teach pendant with intuitive programming.

GP110B ROBOT



VIEW A

VIEW B

VIEW C

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

SPECIFICATIONS

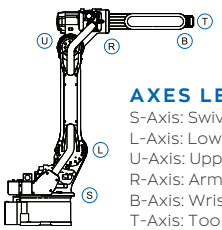
Axes	Maximum motion range	Maximum speed	Allowable moment	Allowable moment of inertia
	degrees	°/sec	N•m	kg•m²
S	±180	140	–	–
L	+155/-45	110	–	–
E	+120/-45	110	–	–
U	+90/-70	130	–	–
R	±360	175	721	60
B	±125	175	721	60
T	±360	255	294	33.7

Item	Unit	GP110B
Controlled axes		7
Maximum payload	kg	110
Repeatability	mm	0.04
Horizontal reach	mm	2,236
Vertical reach	mm	3,792
Weight	kg	790
Internal user I/O cable		24 conductors w/ ground
Internal user air line		(5) 3/8" connection
Power requirements		380-480 VAC
Power rating	kVA	5

Specifications for GP110B with XP package may be different.
Mounting Options: Floor
* The MLX300 software option is not available for use with arc or spot welding applications. MLX300 fieldbus cards, I/O cards and vision equipment must be purchased separately from the supplier. All peripherals are programmed using a PLC.

OPTIONS

- Robot risers and base plates
- Extended length manipulator cables
- Wide variety of fieldbus cards
- External axes
- PLC integration via MLX300 software option*
- Functional Safety Unit (FSU)
- MotoSight™ 2D and 3D vision



AXES LEGEND

S-Axis: Swivel Base
L-Axis: Lower Arm
U-Axis: Upper Arm
R-Axis: Arm Roll
B-Axis: Wrist Bend
T-Axis: Tool Flange

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GP165R

HIGH-SPEED, SHELF-MOUNTED ROBOT

KEY BENEFITS

Shelf mounting saves floorspace, expands work envelope and improves access to parts

High payload and inertia ratings for large, heavy part processing

Engineered for easy installation, operation and maintenance

Single robot-to-controller cable connection enables fast setup

SPECIFICATIONS

165 kg payload

3,140 mm horizontal reach

4,782 mm vertical reach

0.05 mm repeatability

APPLICATION

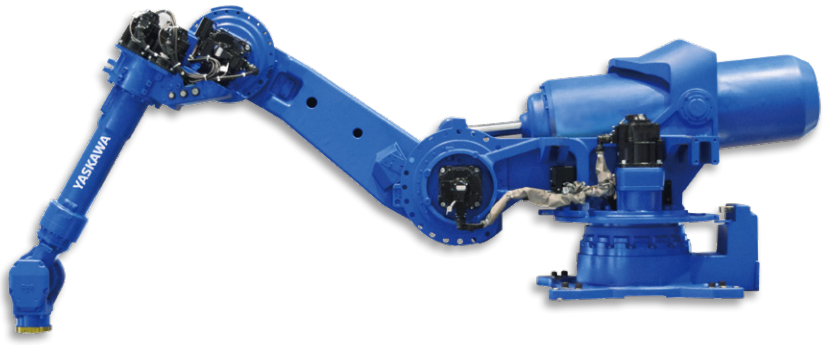
Machine Tending

Material Handling

Press Tending

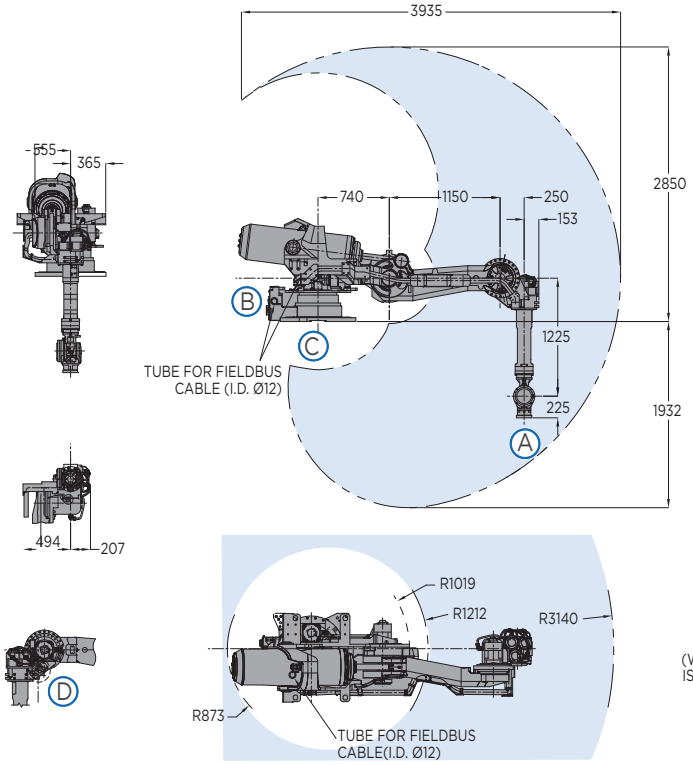
CONTROLLER

YRC1000

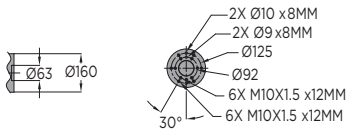


- Increase productivity with the powerful and efficient six-axis GP165R shelf-mounted robot.
- 165 kg payload capacity and wide working envelope provide superior performance in machine and press tending, and other heavy-payload applications.
- Exceptionally fast axis speeds and acceleration capabilities reduce cycle time and increase production output.
- Used for loading and unloading of parts, the GP165R can help to eliminate inconsistencies of a manual process for applications such as turning, milling and grinding.
- High moment and inertia ratings enable the robot to accommodate a wide range of large, heavy parts for all material types.
- Streamlined upper arm features a slim wrist profile and reduces robot width, allowing easier reach into confined spaces and improving application flexibility.
- Cables and air lines are routed through robot base to upper arm to increase cable life, enhance safety and reduce teaching time.
- Cable installation tube facilitates fieldbus routing through the S-axis.
- Single power and control cable reduces wiring time and increases work efficiency.
- Modular robot harness design for improved diagnostics and maintenance.
- Home position data can be saved without battery connection for easy maintenance.
- The GP165R has an IP67-rated wrist and an IP54 body standard. An XP (eXtra Protection) package that increases the body protection rating to IP65 is available.
- Compact YRC controller utilizes the lightweight teach pendant with intuitive programming.

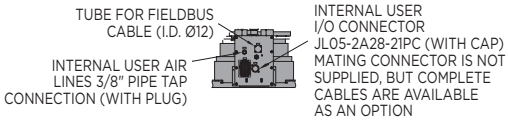
GP165R ROBOT



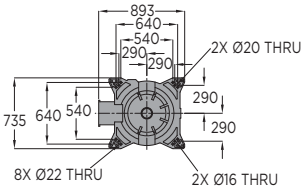
VIEW A



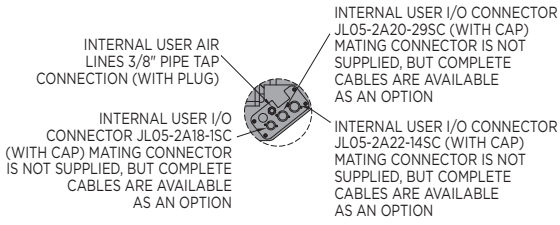
VIEW B



VIEW C



VIEW D



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

SPECIFICATIONS

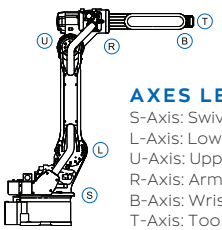
Axes	Maximum motion range	Maximum speed	Allowable moment	Allowable moment of inertia
	degrees	°/sec	N•m	kg•m²
S	±180	105	–	–
L	+80/-130	105	–	–
U	+78/-79.4	105	–	–
R	±360	175	921	85
B	±130	150	921	85
T	±360	240	490	45

Specifications for GP165R with XP package may be different.
Mounting Options: Shelf
* The MLX300 software option is not available for use with arc or spot welding applications. MLX300 fieldbus cards, I/O cards and vision equipment must be purchased separately from the supplier. All peripherals are programmed using a PLC.

Item	Unit	GP165R
Controlled axes		6
Maximum payload	kg	165
Repeatability	mm	0.05
Horizontal reach	mm	3,140
Vertical reach	mm	4,782
Weight	kg	1,760
Internal user I/O cable		24 conductors w/ ground
Internal user air line		(1) 3/8" connection
Power requirements		380-480 VAC
Power rating	kVA	5

OPTIONS

- Robot risers and base plates
- Extended length manipulator cables
- Wide variety of fieldbus cards
- External axes
- PLC integration via MLX300 software option*
- Functional Safety Unit (FSU)
- MotoSight™ 2D and 3D vision



AXES LEGEND

S-Axis: Swivel Base
L-Axis: Lower Arm
U-Axis: Upper Arm
R-Axis: Arm Roll
B-Axis: Wrist Bend
T-Axis: Tool Flange

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GP180

HIGH-SPEED, HIGH-PAYLOAD ROBOT

KEY BENEFITS

High payload for heavy part processing

Engineered for easy installation, operation and maintenance

Single robot-to-controller cable connection enables fast setup

SPECIFICATIONS

180 kg payload

2,702 mm horizontal reach

3,393 mm vertical reach

0.05 mm repeatability

APPLICATION

Machine Tending

Material Handling

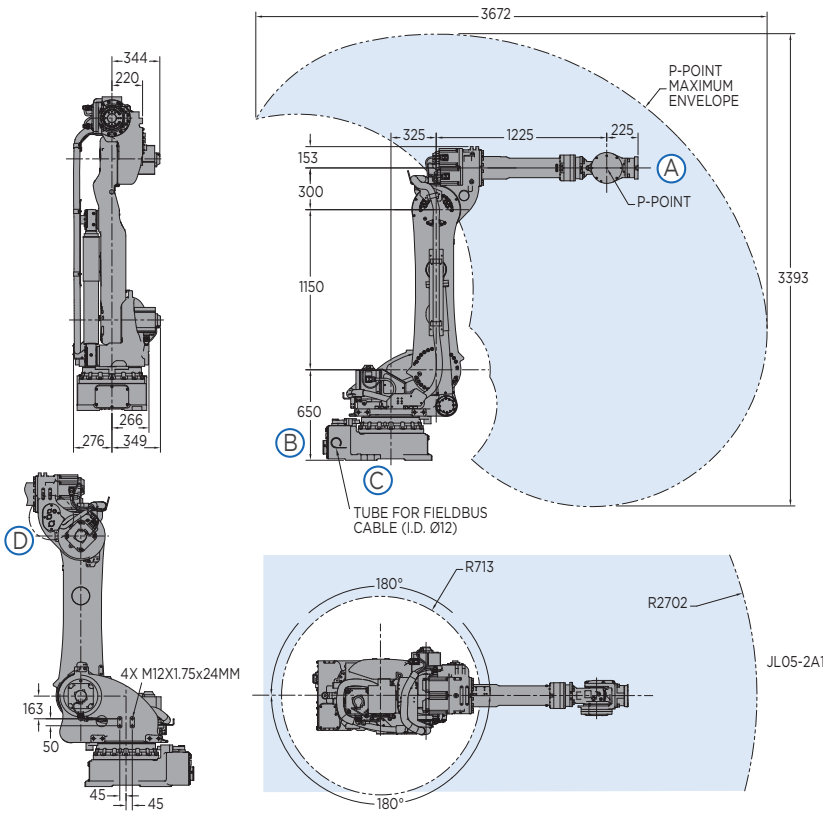
Press Tending

CONTROLLER

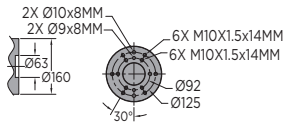
YRC1000

- Increase productivity with the powerful and efficient GP180 robot.
- 180-kg payload capacity and wide working envelope provide superior performance for handling applications.
- Exceptionally fast axis speeds and acceleration capabilities reduce cycle time and increase production output.
- Streamlined upper arm allows easy access to parts in tight spots and avoids potential interference with fixtures, improving application flexibility.
- Wide wrist motion range eliminates interference and improves application flexibility.
- Reduced interference design allows close proximity placement of robots for high-density workcells.
- High moment and inertia ratings allow handling of larger and heavier payloads.
- Cable installation tube facilitates fieldbus routing through the S-axis.
- Single power and control cable reduces wiring time and increases work efficiency.
- Modular robot harness design for improved diagnostics and maintenance.
- Home position data can be saved without battery connection for easy maintenance.
- The GP180 has an IP67-rated wrist and an IP54 body standard. An XP (eXtra Protection) package that increases the body protection rating to IP65 is available.
- The GP180 can be floor-mounted. Brakes are included on all axes.
- Pre-wired for servo gripper which allows a wider range of product handling.
- Compact YRC controller utilizes the lightweight standard teach pendant with intuitive programming.

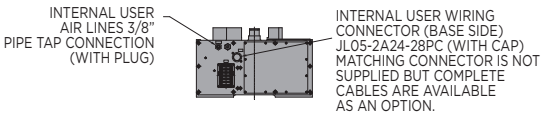
GP180 ROBOT



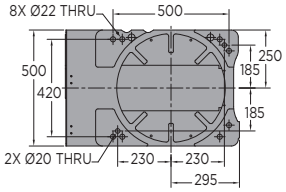
VIEW A



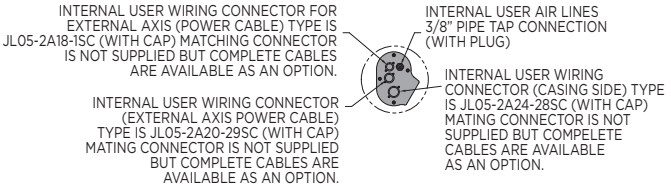
VIEW B



VIEW C



VIEW D



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

SPECIFICATIONS

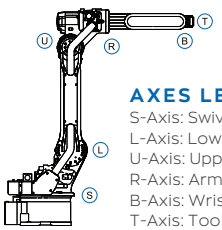
Axes	Maximum motion range	Maximum speed	Allowable moment	Allowable moment of inertia
	degrees	°/sec	N•m	kg•m²
S	±180	125	–	–
L	+76/-60	115	–	–
U	+90/-86	125	–	–
R	±360	182	1,000	90
B	±130	175	1,000	90
T	±360	265	618	46.3

Specifications for GP180 with XP package may be different.
Mounting Options: Floor
* The MLX300 software option is not available for use with arc or spot welding applications. MLX300 fieldbus cards, I/O cards and vision equipment must be purchased separately from the supplier. All peripherals are programmed using a PLC.

Item	Unit	GP180
Controlled axes		6
Maximum payload	kg	180
Repeatability	mm	0.05
Horizontal reach	mm	2,702
Vertical reach	mm	3,393
Weight	kg	1,020
Internal user I/O cable		24 conductors w/ ground
Internal user air line		(1) 3/8" connection
Power requirements		380-480 VAC
Power rating	kVA	5

OPTIONS

- Robot risers and base plates
- Extended length manipulator cables
- Wide variety of fieldbus cards
- External axes
- PLC integration via MLX300 software option*
- Functional Safety Unit (FSU)
- MotoSight™ 2D and 3D vision



AXES LEGEND

S-Axis: Swivel Base
L-Axis: Lower Arm
U-Axis: Upper Arm
R-Axis: Arm Roll
B-Axis: Wrist Bend
T-Axis: Tool Flange

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YASKAWA

GP180-120

EXTENDED-REACH, HIGH PAYLOAD ROBOT

KEY BENEFITS

Payload, moment and inertia ratings allow for a wide variety of applications

Engineered for easy installation, operation and maintenance

Single robot-to-controller cable connection enables fast setup

Slim profile design for high density spacing and for reaching into confined spaces

SPECIFICATIONS

120 kg payload

3,058 mm horizontal reach

4,105 mm vertical reach

0.05 mm repeatability

APPLICATION

Machine Tending

Material Handling

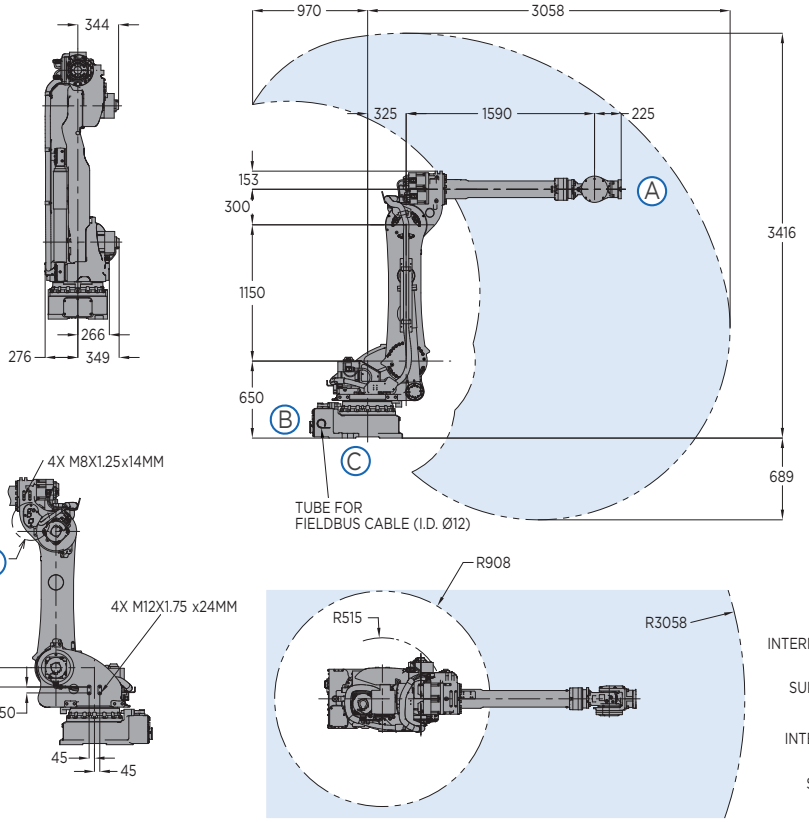
Press Tending

CONTROLLER

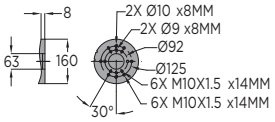
YRC1000

- Increase productivity with the powerful and efficient extended-reach GP180-120 robot.
- Ideal for processing large parts, the GP180-120 can eliminate the need for a linear track, reducing system cost and simplifying programming.
- High payload, moment and inertia ratings allow handling of larger and heavier payloads.
- Wide wrist motion range eliminates interference and improves application flexibility.
- Exceptionally fast axis speeds and acceleration capabilities reduce cycle time and increase production output.
- Streamlined upper arm allows easy access to parts in tight spots and avoids potential interference with fixtures, improving application flexibility.
- Reduced interference design allows close proximity placement of robots for high-density workcells.
- Robot base design is free from counterbalance, reducing the mass of the arm and enabling higher acceleration, deceleration and speed.
- Cables and air lines are routed through robot base to upper arm to increase cable life, enhance safety and reduce teaching time.
- Cable installation tube facilitates fieldbus routing through the S-axis.
- Single power and control cable reduces wiring time and increases work efficiency.
- Modular robot harness design for improved diagnostics and maintenance.
- Home position data can be saved without battery connection for easy maintenance.
- The GP180-120 has an IP67-rated wrist and an IP54 body standard. An XP (eXtra Protection) package that increases the body protection rating to IP65 is available.
- The GP180-120 can be floor-mounted. Brakes are included on all axes.
- Pre-wired for servo gripper which allows a wider range of product handling.
- Compact YRC controller utilizes the lightweight standard teach pendant with intuitive programming.

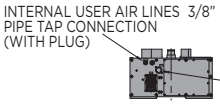
GP180-120 ROBOT



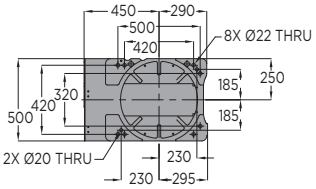
VIEW A



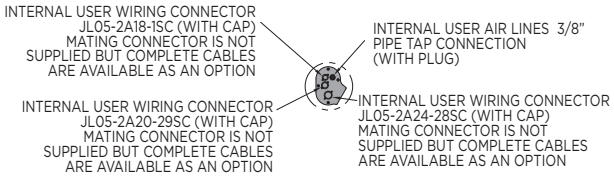
VIEW B



VIEW C



VIEW D



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

SPECIFICATIONS

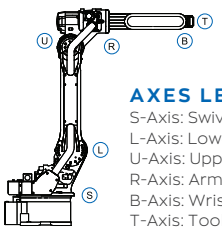
Axes	Maximum motion range	Maximum speed	Allowable moment	Allowable moment of inertia
	degrees	°/sec	N•m	kg•m²
S	±180	125	–	–
L	+76/-60	115	–	–
U	+90/-86	125	–	–
R	±360	182	883	79
B	±130	175	883	79
T	±360	265	520	40

Specifications for GP180-120 with XP package may be different.
Mounting Options: Floor
* The MLX300 software option is not available for use with arc or spot welding applications. MLX300 fieldbus cards, I/O cards and vision equipment must be purchased separately from the supplier. All peripherals are programmed using a PLC.

Item	Unit	GP180-120
Controlled axes		6
Maximum payload	kg	120
Repeatability	mm	0.05
Horizontal reach	mm	3,058
Vertical reach	mm	4,105
Weight	kg	1,090
Internal user I/O cable		24 conductors w/ ground
Internal user air line		(1) 3/8" connection
Power requirements		380-480 VAC
Power rating	kVA	5

OPTIONS

- Robot risers and base plates
- Extended length manipulator cables
- Wide variety of fieldbus cards
- External axes
- PLC integration via MLX300 software option*
- Functional Safety Unit (FSU)
- MotoSight™ 2D and 3D vision



AXES LEGEND

S-Axis: Swivel Base
L-Axis: Lower Arm
U-Axis: Upper Arm
R-Axis: Arm Roll
B-Axis: Wrist Bend
T-Axis: Tool Flange

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GP200R

HIGH-SPEED, SHELF-MOUNTED ROBOT

KEY BENEFITS

Shelf mounting saves floorspace, expands work envelope and improves access to parts

High payload and inertia ratings for large, heavy part processing

Engineered for easy installation, operation and maintenance

Single robot-to-controller cable connection enables fast setup

SPECIFICATIONS

200 kg payload

3,140 mm horizontal reach

4,782 mm vertical reach

0.05 mm repeatability

APPLICATION

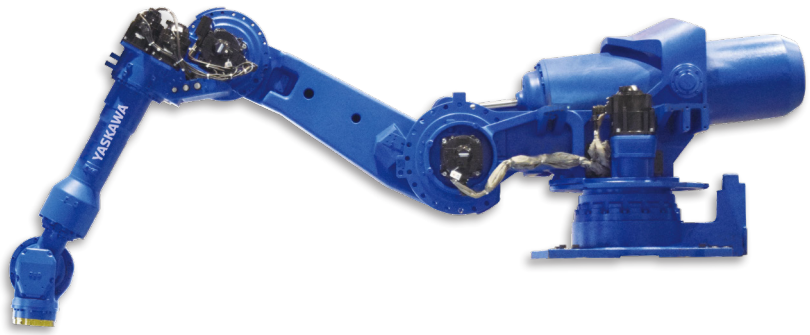
Material Handling

Machine Tending

Press Tending

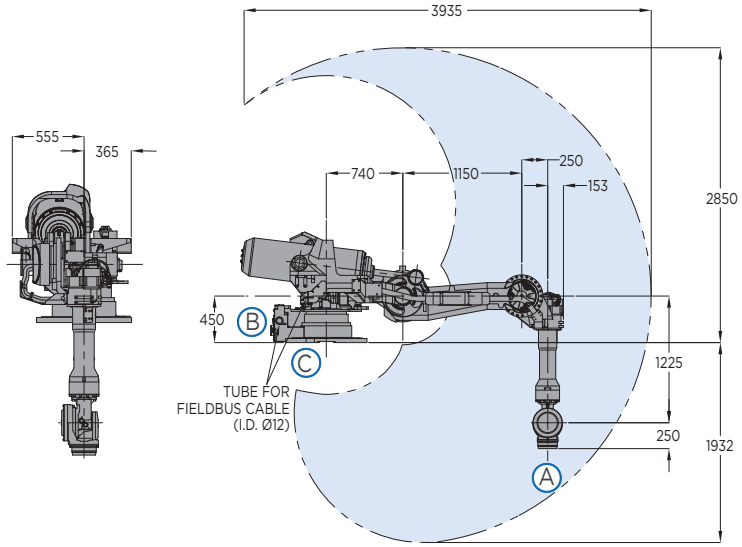
CONTROLLER

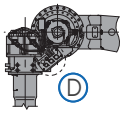
YRC1000

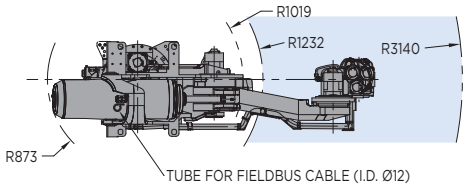


- Increase productivity with the powerful and efficient six-axis GP200R shelf-mounted robot.
- 200 kg payload capacity and wide working envelope provide superior performance in machine and press tending, and other heavy-payload applications.
- Exceptionally fast axis speeds and acceleration capabilities reduce cycle time and increase production output.
- Used for loading and unloading of parts, the GP200R can help to eliminate inconsistencies of a manual process for applications such as turning, milling and grinding.
- High moment and inertia ratings enable the robot to accommodate a wide range of large, heavy parts for all material types.
- Streamlined upper arm features a slim wrist profile and reduces robot width, allowing easier reach into confined spaces and improving application flexibility.
- Cables and air lines are routed through robot base to upper arm to increase cable life, enhance safety and reduce teaching time.
- Cable installation tube facilitates fieldbus routing through the S-axis.
- Single power and control cable reduces wiring time and increases work efficiency.
- Modular robot harness design for improved diagnostics and maintenance.
- Home position data can be saved without battery connection for easy maintenance.
- The GP200R has an IP67-rated wrist and an IP54 body standard. An XP (eXtra Protection) package that increases the body protection rating to IP65 is available.
- Compact YRC controller utilizes the lightweight teach pendant with intuitive programming.

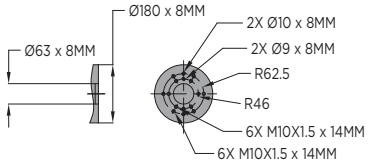
GP200R ROBOT



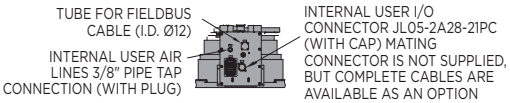




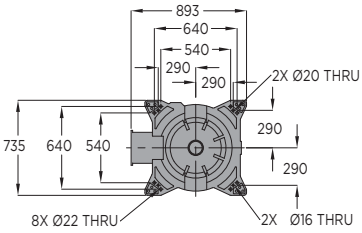
VIEW A



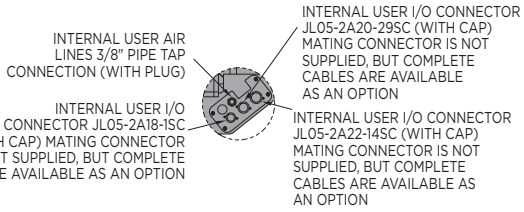
VIEW B



VIEW C



VIEW D



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

SPECIFICATIONS

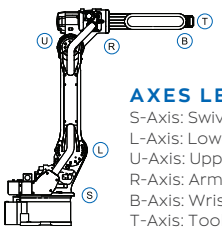
Axes	Maximum motion range	Maximum speed	Allowable moment	Allowable moment of inertia
	degrees	°/sec	N•m	kg•m²
S	±180	90	–	–
L	+80/-130	85	–	–
U	+78/-78.4	85	–	–
R	±360	120	1344	143
B	±125	120	1344	143
T	±360	190	715	80

Specifications for GP200R with XP package may be different.
Mounting Options: Shelf
* The MLX300 software option is not available for use with arc or spot welding applications. MLX300 fieldbus cards, I/O cards and vision equipment must be purchased separately from the supplier. All peripherals are programmed using a PLC.

Item	Unit	GP200R
Controlled axes		6
Maximum payload	kg	200
Repeatability	mm	0.05
Horizontal reach	mm	3,140
Vertical reach	mm	4,782
Weight	kg	1,830
Internal user I/O cable		24 conductors w/ ground
Internal user air line		(1) 3/8" connection
Power requirements		380-480 VAC
Power rating	kVA	5

OPTIONS

- Robot risers and base plates
- Extended length manipulator cables
- Wide variety of fieldbus cards
- External axes
- PLC integration via MLX300 software option*
- Functional Safety Unit (FSU)
- MotoSight™ 2D and 3D vision



AXES LEGEND

S-Axis: Swivel Base
L-Axis: Lower Arm
U-Axis: Upper Arm
R-Axis: Arm Roll
B-Axis: Wrist Bend
T-Axis: Tool Flange

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GP200S

HIGH-SPEED SHORT ARM DESIGN

KEY BENEFITS

Short arm design offers high flexibility and high payload capacity for heavy part processing

Engineered for easy installation, operation and maintenance

Single robot-to-controller cable connection enables fast setup

SPECIFICATIONS

200 kg payload

1,886 mm horizontal reach

2,295 mm vertical reach

0.05 mm repeatability

APPLICATION

Material Handling

Machine Tending

Part Transfer

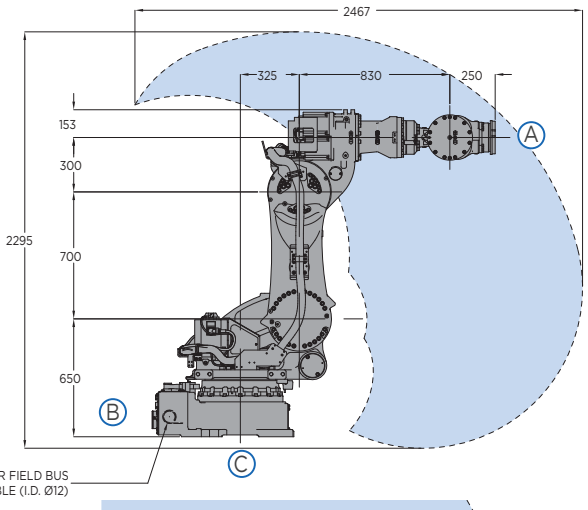
Press Tending

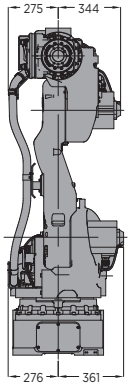
CONTROLLER

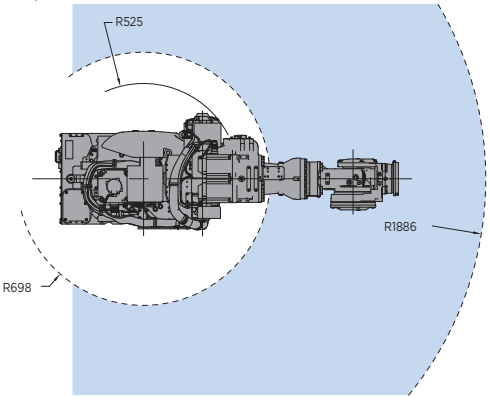
YRC1000

- Increase productivity with the powerful and efficient GP200S robot.
- Short arm, six-axis robot offers greater flexibility for high-payload handling applications.
- 200-kg payload capacity and high moment of inertia ratings provide superior performance for large and heavy handling applications.
- Exceptionally fast axis speeds and acceleration capabilities reduce cycle time and increase production output.
- Streamlined upper arm allows easy access to parts in tight spots and avoids potential interference with fixtures, improving application flexibility.
- Wide wrist motion range eliminates interference and improves application flexibility.
- Reduced interference design allows close proximity placement of robots for high-density workcells.
- Ideal for “jigless” applications where robot positions part for processing by other robots or two robots handle a single part.
- Cables and air lines are routed through robot base to upper arm to increase cable life, enhance safety and reduce teaching time.
- Cable installation tube facilitates fieldbus routing through the S-axis.
- Single power and control cable reduces wiring time and increases work efficiency.
- Modular robot harness design for improved diagnostics and maintenance.
- Home position data can be saved without battery connection for easy maintenance.
- The GP200S has an IP67-rated wrist and an IP54 body standard.
- The GP200S can be floor-mounted. Brakes are included on all axes.
- Compact YRC controller utilizes a lightweight standard teach pendant with intuitive programming.

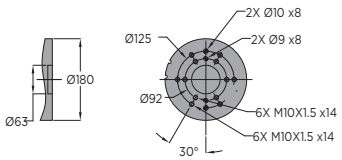
GP200S ROBOT



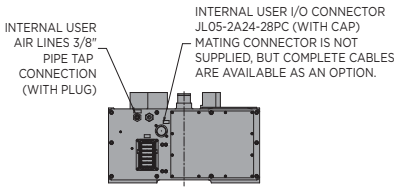




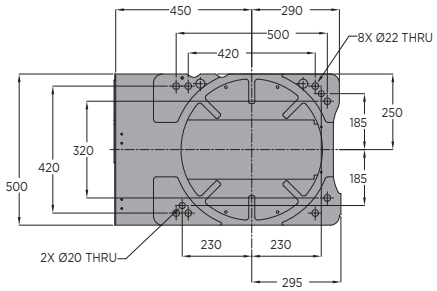
VIEW A



VIEW B



VIEW C



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

SPECIFICATIONS

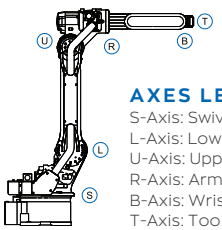
Axes	Maximum motion range	Maximum speed	Allowable moment	Allowable moment of inertia
	degrees	°/sec	N•m	kg•m²
S	±180	120	–	–
L	+76/-60	97	–	–
U	+90/-86	115	–	–
R	±360	145	1,372	145
B	±125	145	1,372	145
T	±360	220	735	84

Mounting Options: Floor
* The MLX300 software option is not available for use with arc or spot welding applications. MLX300 fieldbus cards, I/O cards and vision equipment must be purchased separately from the supplier. All peripherals are programmed using a PLC.

Item	Unit	GP200S
Controlled axes		6
Maximum payload	kg	200
Repeatability	mm	0.05
Horizontal reach	mm	1,886
Vertical reach	mm	2,295
Weight	kg	950
Internal user I/O cable		24 conductors w/ ground
Internal user air line		(1) 3/8" connection
Power requirements		380-480 VAC
Power rating	kVA	5

OPTIONS

- Robot risers and base plates
- Extended length manipulator cables
- Wide variety of fieldbus cards
- External axes
- PLC integration via MLX300 software option*
- Functional Safety Unit (FSU)
- MotoSight™ 2D and 3D vision



AXES LEGEND

S-Axis: Swivel Base
L-Axis: Lower Arm
U-Axis: Upper Arm
R-Axis: Arm Roll
B-Axis: Wrist Bend
T-Axis: Tool Flange

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GP215

POWERFUL HIGH-SPEED DESIGN

KEY BENEFITS

High payload for heavy part processing

Engineered for easy installation, operation and maintenance

Single robot-to-controller cable connection enables fast setup

SPECIFICATIONS

215 kg payload

2,912 mm horizontal reach

3,894 mm vertical reach

0.05 mm repeatability

APPLICATION

Material Handling

Machine Tending

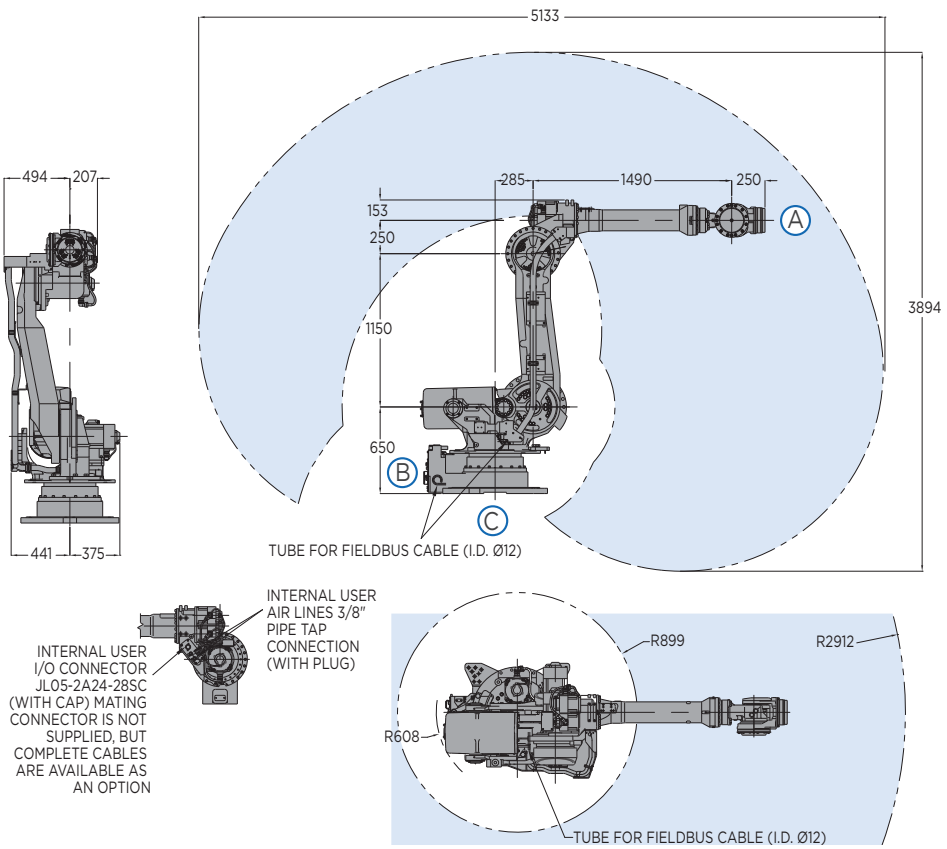
Press Tending

CONTROLLER

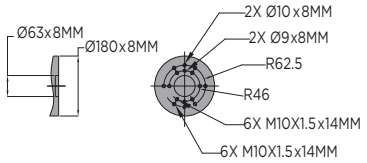
YRC1000

- Increase productivity with the powerful and efficient six-axis GP215 robot.
- 215-kg payload capacity and high moment of inertia ratings provide superior performance for large parts and heavy payload handling applications.
- Exceptionally fast axis speeds and acceleration capabilities reduce cycle time and increase production output.
- Streamlined upper arm allows easy access to parts in tight spots and avoids potential interference with fixtures, improving application flexibility.
- Large work envelope extends behind robot, allowing space for robot tool storage or maintenance.
- Wide wrist motion range eliminates interference and improves application flexibility.
- Reduced interference design allows close proximity placement of robots for high-density workcells.
- Ideal for “jigless” applications where robot positions part for processing by other robots or two robots handle a single part.
- Cables and air lines are routed through robot base to upper arm to increase cable life, enhance safety and reduce teaching time.
- Cable installation tube facilitates fieldbus routing through the S-axis.
- Single power and control cable reduces wiring time and increases work efficiency.
- Modular robot harness design for improved diagnostics and maintenance.
- Home position data can be saved without battery connection for easy maintenance.
- The GP215 has an IP67-rated wrist and an IP54 body standard. An XP (eXtra Protection) package that increases the body protection rating to IP65 is available.
- The GP215 can be floor-mounted. Brakes are included on all axes.
- Compact YRC controller utilizes a lightweight standard teach pendant with intuitive programming.

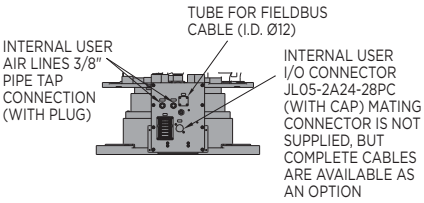
GP215 ROBOT



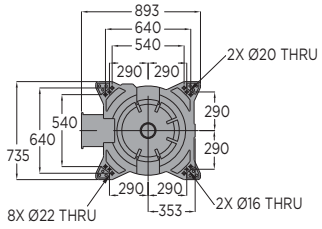
VIEW A



VIEW B



VIEW C



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

SPECIFICATIONS

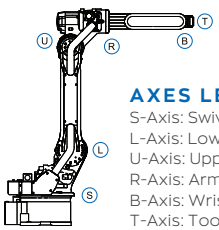
Axes	Maximum motion range	Maximum speed	Allowable moment	Allowable moment of inertia
	degrees	°/sec	N•m	kg•m²
S	±180	100	–	–
L	+76/-60	90	–	–
U	+197/-77.8	97	–	–
R	±360	120	1,176	317
B	±125	120	1,176	317
T	±360	190	710	200

Specifications for GP215 with XP package may be different.
Mounting Options: Floor
* The MLX300 software option is not available for use with arc or spot welding applications. MLX300 fieldbus cards, I/O cards and vision equipment must be purchased separately from the supplier. All peripherals are programmed using a PLC.

Item	Unit	GP215
Controlled axes		6
Maximum payload	kg	215
Repeatability	mm	0.05
Horizontal reach	mm	2,912
Vertical reach	mm	3,894
Weight	kg	1,340
Internal user I/O cable		24 conductors w/ ground
Internal user air line		(2) 3/8" connection
Power requirements		380-480 VAC
Power rating	kVA	5

OPTIONS

- Robot risers and base plates
- Extended length manipulator cables
- Wide variety of fieldbus cards
- External axes
- PLC integration via MLX300 software option*
- Functional Safety Unit (FSU)
- MotoSight™ 2D and 3D vision



AXES LEGEND

S-Axis: Swivel Base
L-Axis: Lower Arm
U-Axis: Upper Arm
R-Axis: Arm Roll
B-Axis: Wrist Bend
T-Axis: Tool Flange

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GP225

HIGH-SPEED, HEAVY-PAYLOAD ROBOT

KEY BENEFITS

High payload for heavy part processing

Engineered for easy installation, operation and maintenance

Single robot-to-controller cable connection enables fast setup

SPECIFICATIONS

225 kg payload

2,702 mm horizontal reach

3,393 mm vertical reach

0.05 mm repeatability

APPLICATION

Material Handling

Machine Tending

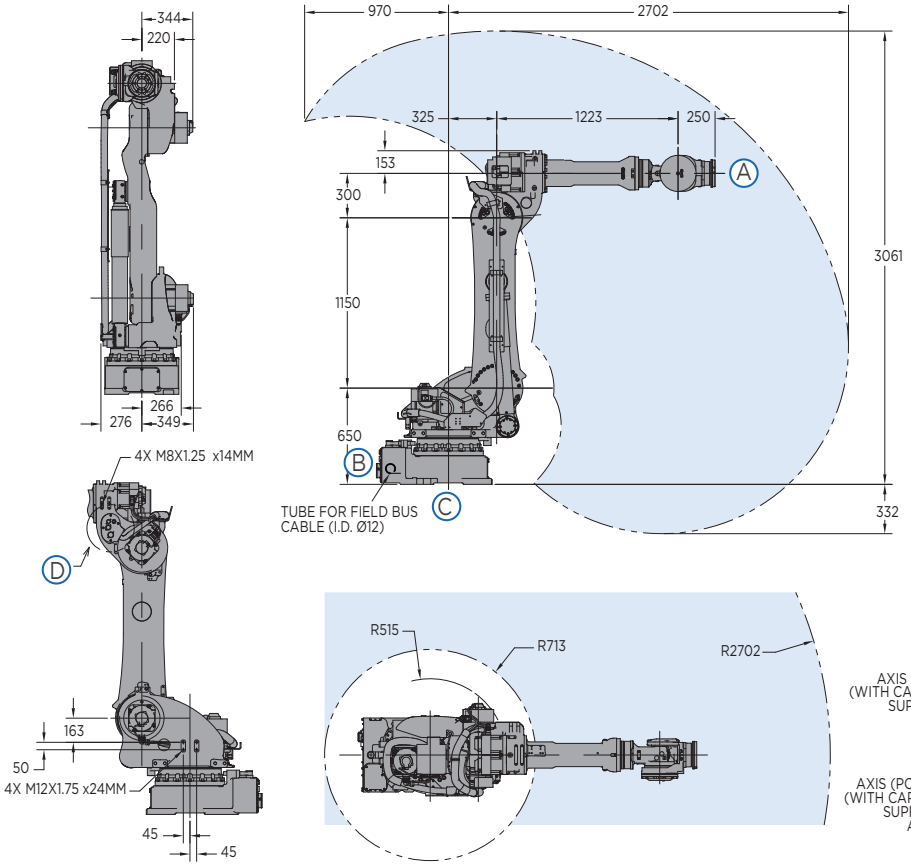
Press Tending

CONTROLLER

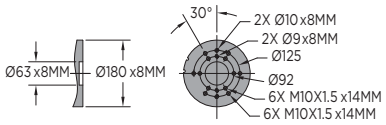
YRC1000

- Increase productivity with the powerful and efficient six-axis GP225 robot.
- 225-kg payload capacity and high moment and inertia ratings provide superior performance for large and heavy handling applications.
- Exceptionally fast axis speeds and acceleration capabilities reduce cycle time and increase production output.
- Streamlined upper arm features a slim wrist profile and reduces robot width, allowing easier reach into confined spaces and improving application flexibility.
- Reduced interference design allows the robot to be mounted closer to machines and fixtures, making best use of valuable floorspace.
- Cables and air lines are routed through robot base to upper arm to increase cable life, enhance safety and reduce teaching time.
- Cable installation tube facilitates fieldbus routing through the S-axis.
- Pre-wired for servo gripper which allows for a wide range of product handling.
- Single power and control cable reduces wiring time and increases work efficiency.
- Modular robot harness design for improved diagnostics and maintenance.
- Home position data can be saved without battery connection for easy maintenance.
- The GP225 has an IP67-rated wrist and an IP54 body standard. An XP (eXtra Protection) package that increases the body protection rating to IP65 is available.
- The GP225 can be floor-mounted. Brakes are included on all axes.
- Compact YRC controller utilizes the lightweight standard teach pendant with intuitive programming.

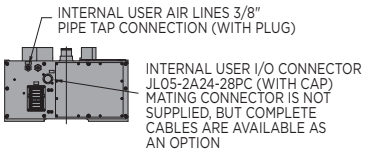
GP225 ROBOT



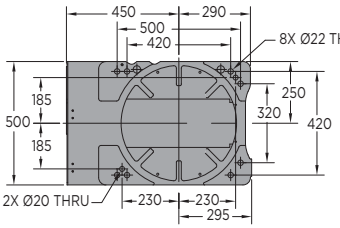
VIEW A



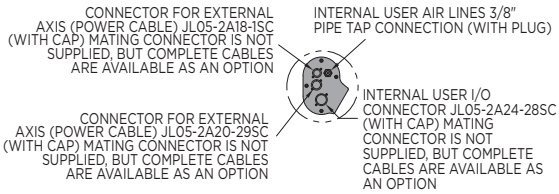
VIEW B



VIEW C



VIEW D



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

SPECIFICATIONS

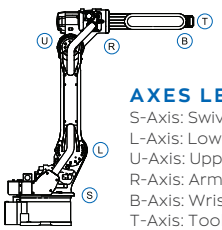
Axes	Maximum motion range	Maximum speed	Allowable moment	Allowable moment of inertia
	degrees	°/sec	N•m	kg•m²
S	±180	120	–	–
L	+76/-60	97	–	–
U	+90/-86	115	–	–
R	±360	145	1,372	145
B	±125	145	1,372	145
T	±360	220	735	84

Specifications for GP225 with XP package may be different.
Mounting Options: Floor
* The MLX300 software option is not available for use with arc or spot welding applications. MLX300 fieldbus cards, I/O cards and vision equipment must be purchased separately from the supplier. All peripherals are programmed using a PLC.

Item	Unit	GP225
Controlled axes		6
Maximum payload	kg	225
Repeatability	mm	0.05
Horizontal reach	mm	2,702
Vertical reach	mm	3,393
Weight	kg	1,080
Internal user I/O cable		24 conductors w/ ground
Internal user air line		(1) 3/8" connection
Power requirements		380-480 VAC
Power rating	kVA	5

OPTIONS

- Robot risers and base plates
- Extended length manipulator cables
- Wide variety of fieldbus cards
- External axes
- PLC integration via MLX300 software option*
- Functional Safety Unit (FSU)
- MotoSight™ 2D and 3D vision



AXES LEGEND

S-Axis: Swivel Base
L-Axis: Lower Arm
U-Axis: Upper Arm
R-Axis: Arm Roll
B-Axis: Wrist Bend
T-Axis: Tool Flange

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YASKAWA

GP250

POWERFUL HIGH-SPEED DESIGN

KEY BENEFITS

High payload for heavy part processing

Engineered for easy installation, operation and maintenance

Single robot-to-controller cable connection enables fast setup

SPECIFICATIONS

250 kg payload

2,710 mm horizontal reach

3,490 mm vertical reach

0.05 mm repeatability

APPLICATION

Material Handling

Machine Tending

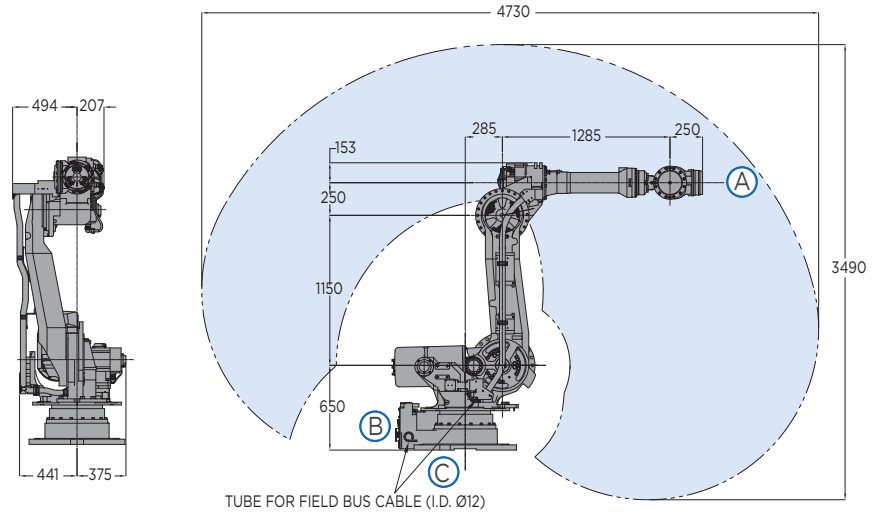
Press Tending

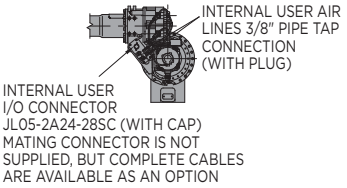
CONTROLLER

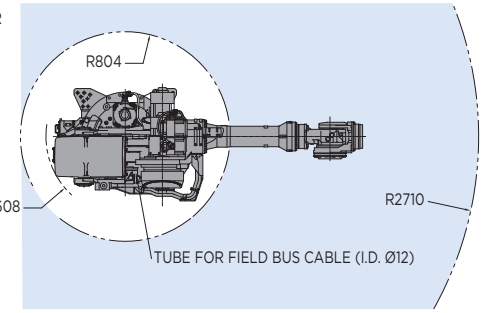
YRC1000

- Increase productivity with the powerful and efficient six-axis GP250 robot.
- 250-kg payload capacity and high moment of inertia ratings provide superior performance for large parts and heavy payload handling applications.
- Exceptionally fast axis speeds and acceleration capabilities reduce cycle time and increase production output.
- Streamlined upper arm allows easy access to parts in tight spots and avoids potential interference with fixtures, improving application flexibility.
- Large work envelope extends behind robot, allowing space for robot tool storage or maintenance.
- Wide wrist motion range eliminates interference and improves application flexibility.
- Reduced interference design allows close proximity placement of robots for high-density workcells.
- Ideal for “jigless” applications where robot positions part for processing by other robots or two robots handle a single part.
- Cables and air lines are routed through robot base to upper arm to increase cable life, enhance safety and reduce teaching time.
- Cable installation tube facilitates fieldbus routing through the S-axis.
- Single power and control cable reduces wiring time and increases work efficiency.
- Modular robot harness design for improved diagnostics and maintenance.
- Home position data can be saved without battery connection for easy maintenance.
- The GP250 has an IP67-rated wrist and an IP54 body standard. An XP (eXtra Protection) package that increases the body protection rating to IP65 is available.
- The GP250 can be floor-mounted. Brakes are included on all axes.
- Compact YRC controller utilizes a lightweight standard teach pendant with intuitive programming.

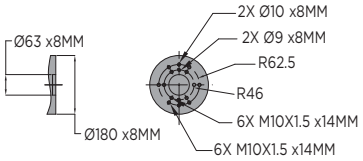
GP250 ROBOT



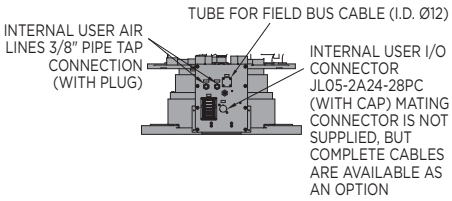




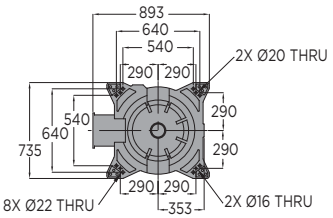
VIEW A



VIEW B



VIEW C



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

SPECIFICATIONS

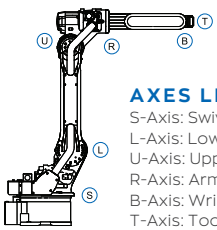
Axes	Maximum motion range	Maximum speed	Allowable moment	Allowable moment of inertia
	degrees	°/sec	N•m	kg•m²
S	±180	100	–	–
L	+76/-60	90	–	–
U	+197/-77.8	97	–	–
R	±360	120	1,385	317
B	±125	120	1,385	317
T	±360	190	735	200

Specifications for GP250 with XP package may be different.
Mounting Options: Floor
* The MLX300 software option is not available for use with arc or spot welding applications. MLX300 fieldbus cards, I/O cards and vision equipment must be purchased separately from the supplier. All peripherals are programmed using a PLC.

Item	Unit	GP250
Controlled axes		6
Maximum payload	kg	250
Repeatability	mm	0.05
Horizontal reach	mm	2,710
Vertical reach	mm	3,490
Weight	kg	1,345
Internal user I/O cable		24 conductors w/ ground
Internal user air line		(2) 3/8" connection
Power requirements		380-480 VAC
Power rating	kVA	5

OPTIONS

- Robot risers and base plates
- Extended length manipulator cables
- Wide variety of fieldbus cards
- External axes
- PLC integration via MLX300 software option*
- Functional Safety Unit (FSU)
- MotoSight™ 2D and 3D vision



AXES LEGEND

S-Axis: Swivel Base
L-Axis: Lower Arm
U-Axis: Upper Arm
R-Axis: Arm Roll
B-Axis: Wrist Bend
T-Axis: Tool Flange

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GP280

POWERFUL HIGH-SPEED ROBOT

KEY BENEFITS

High payload for heavy part processing

Engineered for easy installation, operation and maintenance

Single robot-to-controller cable connection enables fast setup

SPECIFICATIONS

280 kg payload

2,446 mm horizontal reach

2,962 mm vertical reach

0.05 mm repeatability

APPLICATION

Material Handling

Machine Tending

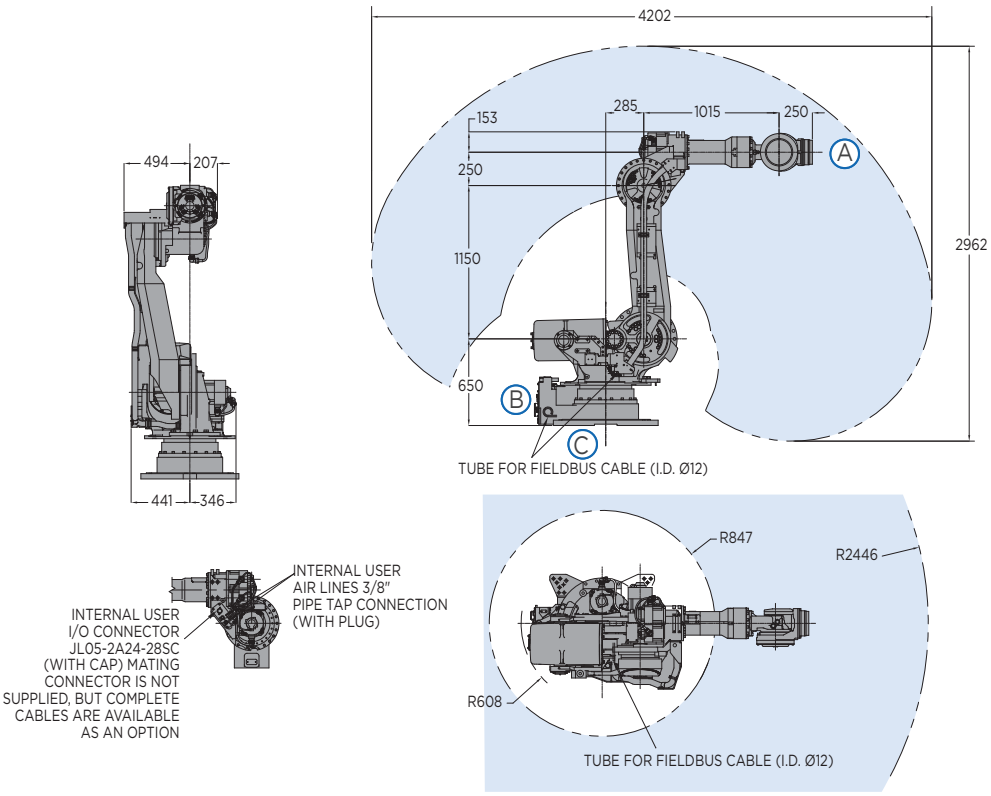
Press Tending

CONTROLLER

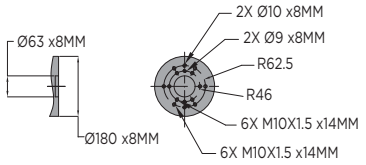
YRC1000

- Increase productivity with the powerful and efficient six-axis GP280 robot.
- 280-kg payload capacity and high moment of inertia ratings provide superior performance for large part and heavy payload handling applications.
- Exceptionally fast axis speeds and acceleration capabilities reduce cycle time and increase production output.
- Streamlined upper arm allows easy access to parts in tight spots and avoids potential interference with fixtures, improving application flexibility.
- Large work envelope extends behind robot, allowing space for robot tool storage or maintenance.
- Wide wrist motion range eliminates interference and improves application flexibility.
- Reduced interference design allows close proximity placement of robots for high-density workcells.
- Ideal for “jigless” applications where robot positions part for processing by other robots or two robots handle a single part.
- Cables and air lines are routed through robot base to upper arm to increase cable life, enhance safety and reduce teaching time.
- Cable installation tube facilitates fieldbus routing through the S-axis.
- Single power and control cable reduces wiring time and increases work efficiency.
- Modular robot harness design for improved diagnostics and maintenance.
- Home position data can be saved without battery connection for easy maintenance.
- The GP280 has an IP67-rated wrist and an IP54 body standard. An XP (eXtra Protection) package that increases the body protection rating to IP65 is available.
- The GP280 can be floor-mounted. Brakes are included on all axes.
- Compact YRC controller utilizes a lightweight standard teach pendant with intuitive programming.

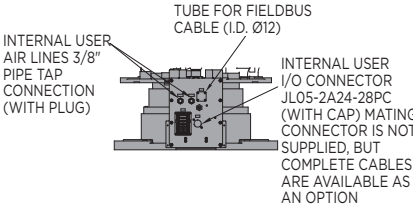
GP280 ROBOT



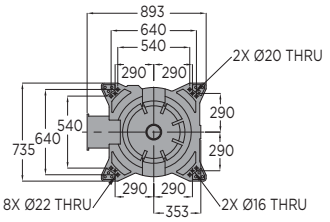
VIEW A



VIEW B



VIEW C



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

SPECIFICATIONS

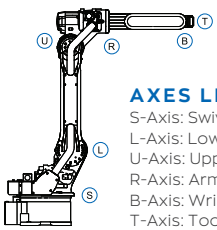
Axes	Maximum motion range	Maximum speed	Allowable moment	Allowable moment of inertia
	degrees	°/sec	N•m	kg•m²
S	±180	90	–	–
L	+76/-60	80	–	–
U	+197/-77.8	90	–	–
R	±360	115	1,333	142
B	±125	110	1,333	142
T	±360	190	706	79

Specifications for GP280 with XP package may be different.
Mounting Options: Floor
* The MLX300 software option is not available for use with arc or spot welding applications. MLX300 fieldbus cards, I/O cards and vision equipment must be purchased separately from the supplier. All peripherals are programmed using a PLC.

Item	Unit	GP280
Controlled axes		6
Maximum payload	kg	280
Repeatability	mm	0.05
Horizontal reach	mm	2,446
Vertical reach	mm	2,962
Weight	kg	1,300
Internal user I/O cable		24 conductors w/ ground
Internal user air line		(2) 3/8" connection
Power requirements		380-480 VAC
Power rating	kVA	5

OPTIONS

- Robot risers and base plates
- Extended length manipulator cables
- Wide variety of fieldbus cards
- External axes
- PLC integration via MLX300 software option*
- Functional Safety Unit (FSU)
- MotoSight™ 2D and 3D vision



AXES LEGEND

S-Axis: Swivel Base
L-Axis: Lower Arm
U-Axis: Upper Arm
R-Axis: Arm Roll
B-Axis: Wrist Bend
T-Axis: Tool Flange

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YASKAWA

GP400

HEAVY-PAYLOAD ROBOT

KEY BENEFITS

Versatile, high-performance robot for heavy-payload applications

High moment of inertia ratings accommodates a wide range of large heavy parts

Engineered for easy installation, operation and maintenance

Single robot-to-controller cable connection enables fast setup

SPECIFICATIONS

400 kg payload

2,942 mm horizontal reach

2,898 mm vertical reach

0.1 mm repeatability

APPLICATION

Machine Tending

Material Cutting

Material Handling

Material Removal

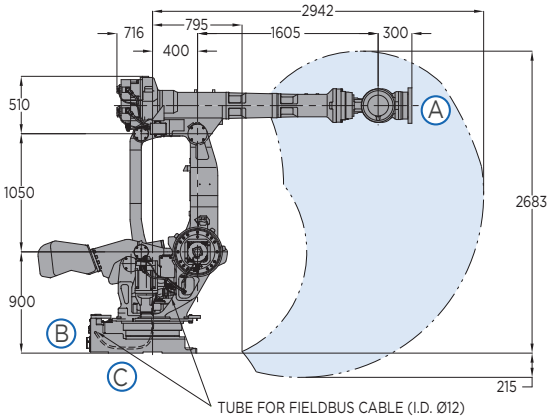
Press Tending

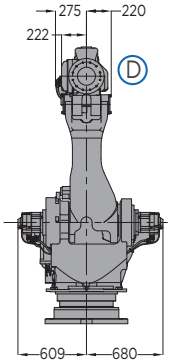
CONTROLLER

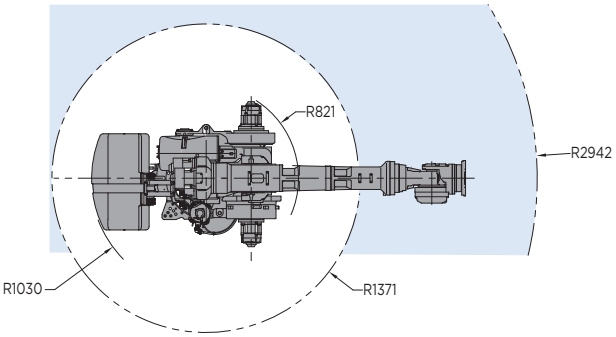
YRC1000

- Increase productivity with the powerful and efficient six-axis GP400 robot.
- 400 kg payload provides superior performance in machine and press tending, and other heavy-payload applications.
- Ideal for “jigless” applications where robot positions part for processing by other robots or two robots handle a single part.
- Capable of loading and unloading parts, the GP400 robot can help eliminate inconsistencies of a manual process for applications such as turning, milling and grinding.
- Large work envelope and high moment of inertia ratings accommodate a wide range of large, heavy parts.
- Exceptionally fast axis speeds and acceleration reduce cycle time and increase production output.
- Parallel-link design for strength, rigidity and stabilization of high moment/inertia loads. Heavy-duty bearings provide smooth arm rotation.
- Reduced interference design allows the robot to be mounted closer to machines and fixtures, making the best use of valuable floorspace.
- Streamlined upper arm features a slim wrist profile and reduces robot width, allowing easier reach into confined spaces and improving application flexibility.
- Cables and air lines are routed through robot base to upper arm to increase cable life, enhance safety and reduce teaching time.
- Cable installation tube facilitates fieldbus routing through the S-axis.
- Single power and control cable reduces wiring time and increases work efficiency.
- Modular robot harness design for improved diagnostics and maintenance.
- Home position data can be saved without battery connection for easy maintenance.
- The GP400 has an IP67-rated wrist and an IP30 body standard. An XP (eXtra Protection) package that increases the body protection rating to IP54 is available.
- The GP400 can be floor-mounted. Brakes are included on all axes.
- Compact YRC controller utilizes the lightweight standard teach pendant with intuitive programming.

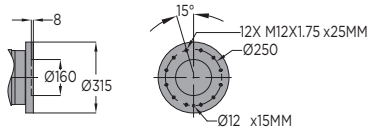
GP400 ROBOT



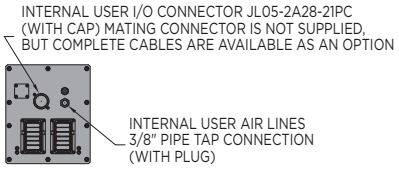




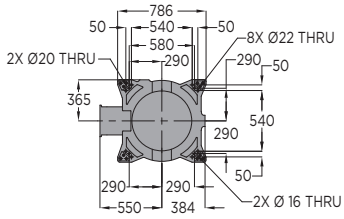
VIEW A



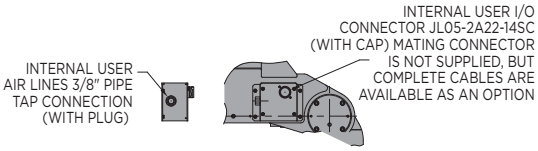
VIEW B



VIEW C



VIEW D



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

SPECIFICATIONS

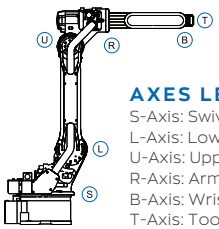
Axes	Maximum motion range	Maximum speed	Allowable moment	Allowable moment of inertia
	degrees	°/sec	N•m	kg•m²
S	±180	102	–	–
L	+61/-55	97	–	–
U	+18/-113	97	–	–
R	±360	80	2,989	500
B	±115	80	2,989	500
T	±360	172	1,343	315

Specifications for GP400 with XP package may be different.
Mounting Options: Floor
* The MLX300 software option is not available for use with arc or spot welding applications. MLX300 fieldbus cards, I/O cards and vision equipment must be purchased separately from the supplier. All peripherals are programmed using a PLC.

Item	Unit	GP400
Controlled axes		6
Maximum payload	kg	400
Repeatability	mm	0.1
Horizontal reach	mm	2,942
Vertical reach	mm	2,898
Weight	kg	2,840
Internal user I/O cable		19 conductors w/ ground
Internal user air line		(1) 3/8" connection
Power requirements		380-480 VAC
Power rating	kVA	7

OPTIONS

- Robot risers and base plates
- Extended length manipulator cables
- Wide variety of fieldbus cards
- External axes
- Endless T-axis rotation
- PLC integration via MLX300 software option*
- Functional Safety Unit (FSU)
- MotoSight™ 2D and 3D vision



AXES LEGEND
S-Axis: Swivel Base
L-Axis: Lower Arm
U-Axis: Upper Arm
R-Axis: Arm Roll
B-Axis: Wrist Bend
T-Axis: Tool Flange

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GP400R

HEAVY-PAYLOAD, SHELF-MOUNTED ROBOT

KEY BENEFITS

Shelf mounting saves floorspace, expands work envelope and improves access to parts

High payload and inertia ratings for large, heavy part processing

Engineered for easy installation, operation and maintenance

Single robot-to-controller cable connection enables fast setup

SPECIFICATIONS

400 kg payload

3,518 mm horizontal reach

4,908 mm vertical reach

0.1 mm repeatability

APPLICATION

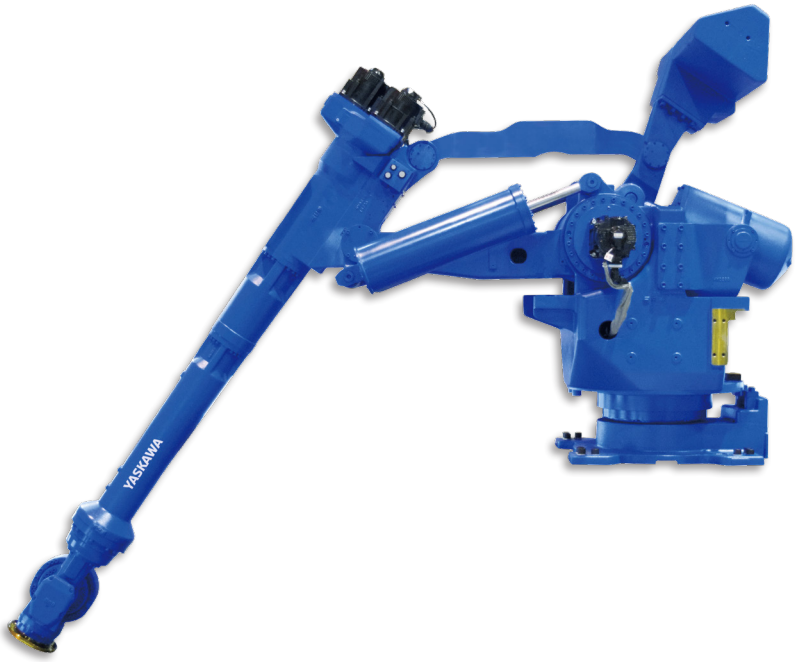
Material Handling

Machine Tending

Press Tending

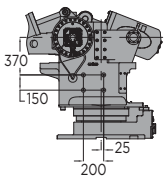
CONTROLLER

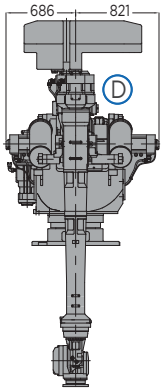
YRC1000

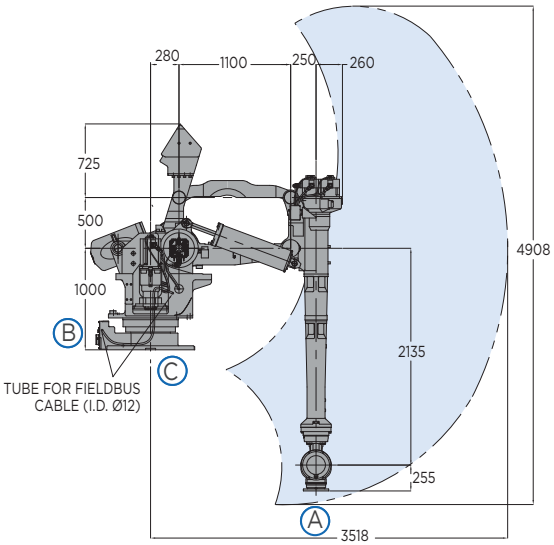


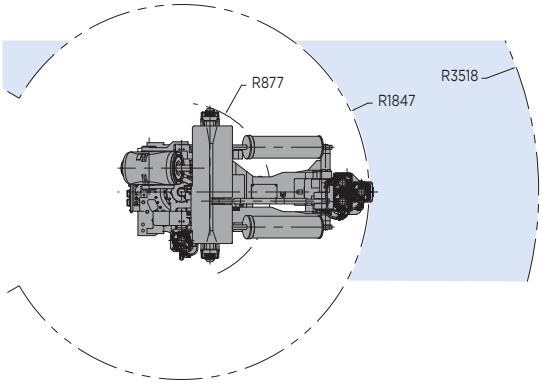
- Increase productivity with the powerful and efficient six-axis GP400R shelf-mounted robot.
- 400 kg payload capacity and wide working envelope provide superior performance in machine and press tending, and other heavy-payload applications.
- Exceptionally fast axis speeds and acceleration capabilities reduce cycle time and increase production output.
- Full six-axis capability with parallel-link construction for strength, rigidity and stabilization of high moment/inertia loads. Heavy-duty bearings provide smooth arm rotation.
- Used for loading and unloading of parts, the GP400R can help to eliminate inconsistencies of a manual process for applications such as turning, milling and grinding.
- High moment and inertia ratings enable the robot to accommodate a wide range of large, heavy parts for all material types.
- Streamlined upper arm allows easy access to parts in tight spots and avoids potential interference with fixtures, improving application flexibility.
- Cables and air lines are routed through robot base to upper arm to increase cable life, enhance safety and reduce teaching time.
- Cable installation tube facilitates fieldbus routing through the S-axis.
- Modular robot harness design for improved diagnostics and maintenance.
- Home position data can be saved without battery connection for easy maintenance.
- The GP400R has an IP67-rated wrist and an IP30 body standard.
- Compact YRC controller utilizes the lightweight teach pendant with intuitive programming.

GP400R ROBOT

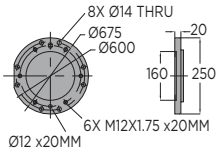




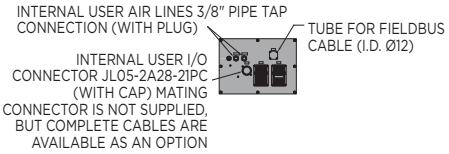




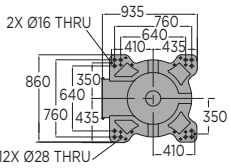
VIEW A



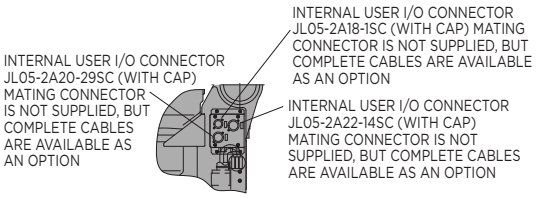
VIEW B



VIEW C



VIEW D



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

SPECIFICATIONS

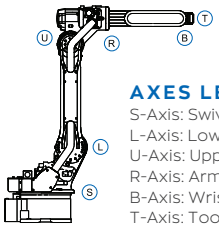
Axes	Maximum motion range	Maximum speed	Allowable moment	Allowable moment of inertia
	degrees	°/sec	N•m	kg•m²
S	±150	80	–	–
L	+20/-122	80	–	–
U	+120/-9	80	–	–
R	±360	80	1960	150
B	±120	80	1960	150
T	±360	160	833	50

Mounting Options: Shelf
* The MLX300 software option is not available for use with arc or spot welding applications. MLX300 fieldbus cards, I/O cards and vision equipment must be purchased separately from the supplier. All peripherals are programmed using a PLC.

Item	Unit	GP400R
Controlled axes		6
Maximum payload	kg	400
Repeatability	mm	0.1
Horizontal reach	mm	3,518
Vertical reach	mm	4,908
Weight	kg	3,560
Internal user I/O cable		21 conductors w/ ground
Internal user air line		(2) 3/8" connection
Power requirements		380-480 VAC
Power rating	kVA	7

OPTIONS

- Robot risers and base plates
- Extended length manipulator cables
- Wide variety of fieldbus cards
- External axes
- PLC integration via MLX300 software option*
- Functional Safety Unit (FSU)
- MotoSight™ 2D and 3D vision



AXES LEGEND

S-Axis: Swivel Base
L-Axis: Lower Arm
U-Axis: Upper Arm
R-Axis: Arm Roll
B-Axis: Wrist Bend
T-Axis: Tool Flange

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YASKAWA

GP600

HEAVY-PAYLOAD ROBOT

KEY BENEFITS

Versatile, high-performance robot for heavy-payload applications

High moment of inertia ratings accommodates a wide range of large heavy parts

Engineered for easy installation, operation and maintenance

Single robot-to-controller cable connection enables fast setup

SPECIFICATIONS

600 kg payload

2,942 mm horizontal reach

2,898 mm vertical reach

0.1 mm repeatability

APPLICATION

Machine Tending

Material Cutting

Material Handling

Material Removal

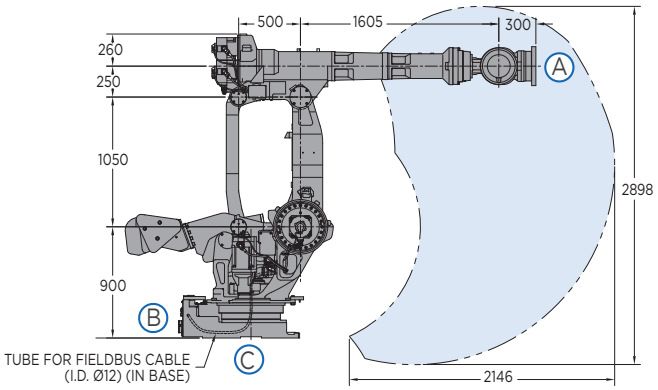
Press Tending

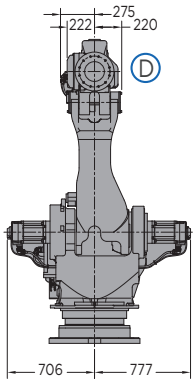
CONTROLLER

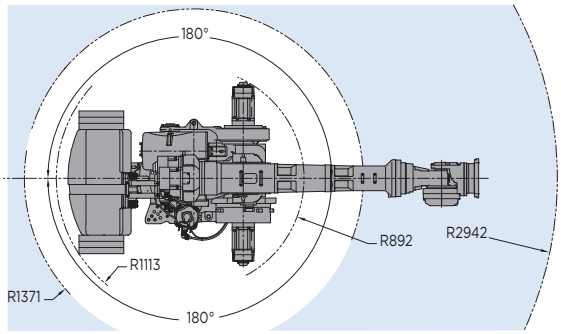
YRC1000

- Increase productivity with the powerful and efficient six-axis GP600 robot.
- 600-kg payload provides superior performance in machine and press tending, and other heavy-payload applications.
- Ideal for “jigless” applications where robot positions part for processing by other robots or two robots handle a single part.
- Capable of loading and unloading parts, the GP600 robot can help eliminate inconsistencies of a manual process for applications such as turning, milling and grinding.
- Large work envelope and high moment of inertia ratings accommodate a wide range of large, heavy parts.
- Exceptionally fast axis speeds and acceleration capabilities reduce cycle time and increase production output.
- Parallel-link design for strength, rigidity and stabilization of high moment/inertia loads. Heavy-duty bearings provide smooth arm rotation.
- Reduced interference design allows the robot to be mounted closer to machines and fixtures, making the best use of valuable floorspace.
- Streamlined upper arm features a slim wrist profile and reduces robot width, allowing easier reach into confined spaces and improving application flexibility.
- Cables and air lines are routed through robot base to upper arm to increase cable life, enhance safety and reduce teaching time.
- Cable installation tube facilitates fieldbus routing through the S-axis.
- Single power and control cable reduces wiring time and increases work efficiency.
- Modular robot harness design for improved diagnostics and maintenance.
- Home position data can be saved without battery connection for easy maintenance.
- The GP600 has an IP67-rated wrist and an IP30 body standard. An XP (eXtra Protection) package that increases the body protection rating to IP54 is available.
- The GP600 can be floor-mounted. Brakes are included on all axes.
- Compact YRC controller utilizes the lightweight standard teach pendant with intuitive programming.

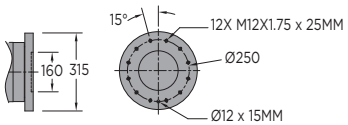
GP600 ROBOT



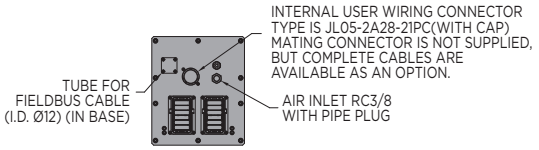




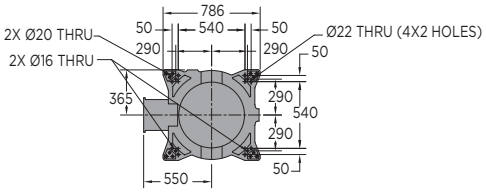
VIEW A



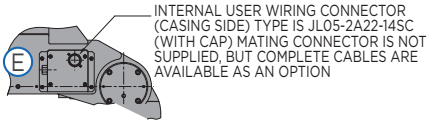
VIEW B



VIEW C



VIEW D



VIEW E

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

SPECIFICATIONS

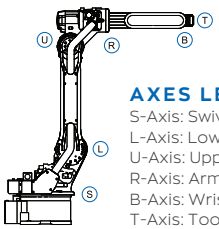
Axes	Maximum motion range	Maximum speed	Allowable moment	Allowable moment of inertia
	degrees	°/sec	N•m	kg•m²
S	±180	82	–	–
L	+61/-55	82	–	–
U	+18/-113	82	–	–
R	±360	80	3,430	520
B	±115	80	3,430	520
T	±360	162	1,764	350

Specifications for GP600 with XP package may be different.
Mounting Options: Floor
* The MLX300 software option is not available for use with arc or spot welding applications. MLX300 fieldbus cards, I/O cards and vision equipment must be purchased separately from the supplier. All peripherals are programmed using a PLC.

Item	Unit	GP600
Controlled axes		6
Maximum payload	kg	600
Repeatability	mm	0.1
Horizontal reach	mm	2,942
Vertical reach	mm	2,898
Weight	kg	3,035
Internal user I/O cable		19 conductors w/ ground
Internal user air line		(1) 3/8" connection
Power requirements		380-480 VAC
Power rating	kVA	7

OPTIONS

- Robot risers and base plates
- Extended length manipulator cables
- Wide variety of fieldbus cards
- External axes
- Endless T-axis rotation
- PLC integration via MLX300 software option*
- Functional Safety Unit (FSU)
- MotoSight™ 2D and 3D vision



AXES LEGEND

S-Axis: Swivel Base
L-Axis: Lower Arm
U-Axis: Upper Arm
R-Axis: Arm Roll
B-Axis: Wrist Bend
T-Axis: Tool Flange

YASKAWA

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