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∗ Materials and specifications are subject to change without notice.

Kawasaki Robotics website
https://kawasakirobotics.com/

Kawasaki Robotics brand site XYZ
https://robotics.kawasaki.com/ja1/xyz/en/

Kawasaki Robostage (showroom)
https://robotics.kawasaki.com/ja1/robostage/en.html

CAUTIONS TO BE TAKEN TO ENSURE SAFETY

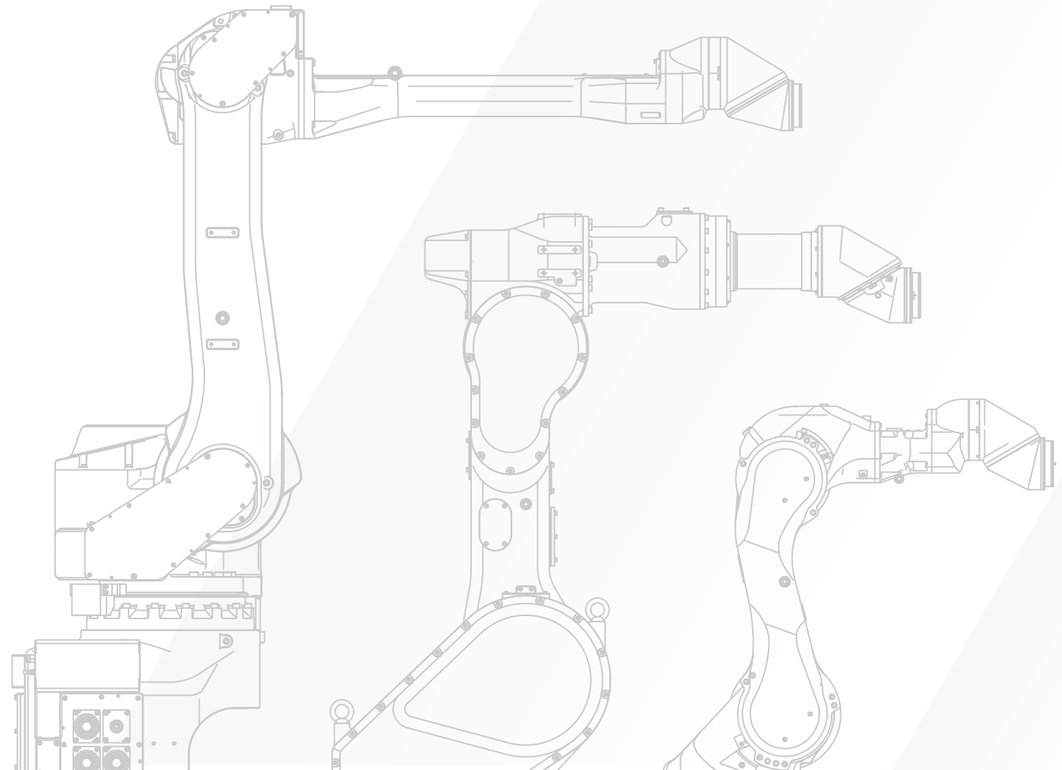
- For those persons involved with the operation / service of your system, including Kawasaki Robot, they must strictly observe all safety regulations at all times. They should carefully read the Manuals and other related safety documents.
- Products described in this catalogue are general industrial robots. Therefore, if a customer wishes to use the Robot for special purposes, which might endanger operators or if the Robot has any problems, please contact us. We will be pleased to help you.
- Be careful as Photographs illustrated in this catalogue are frequently taken after removing safety fences and other safety devices stipulated in the safety regulations from the Robot operation system.

Cat. No. 3L2241 May '22 Ⓜ

Kawasaki
Powering your potential

Kawasaki Robot

Explosion-proof Painting Robots



Explosion-proof Painting Robots

Kawasaki used decades of experience to drive the design of the K series line of explosion-proof paint robots, resulting top-of-the-line performance, usability and finishes. Our paint robots are packed with features for easier integration and operation, like hollow-wrists for internal hoses and a paint-specific control panel.

K series

KF121

KJ125

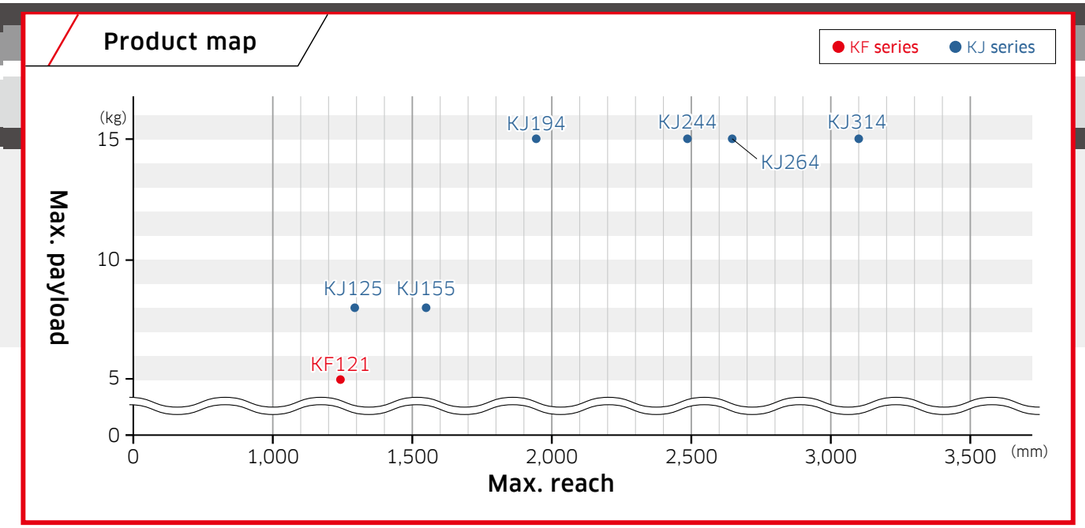
KJ155

KJ194

KJ244

KJ264

KJ314



[Applications]

Painting

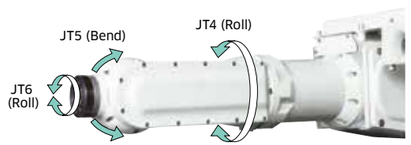
Features

- Full lineup of painting robots covers diverse workpieces from small parts to large vehicle bodies.
- Arms with a built-in hose prevent dust and dirt on painted parts (3R type only).
- Standardized painting package systems achieve quicker deployment (optional).

Variations of wrists

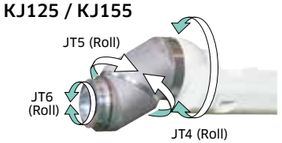
RBR

KF121



3R (Ø50mm*)

KJ125 / KJ155



*The shape of the tool mounting part of the wrist (flange surface) is same as that of the 3R (ø70mm)

3R (Ø70mm)

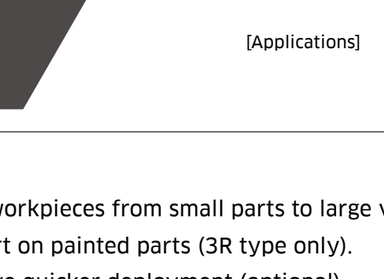
KJ194 / KJ244 / KJ264 / KJ314

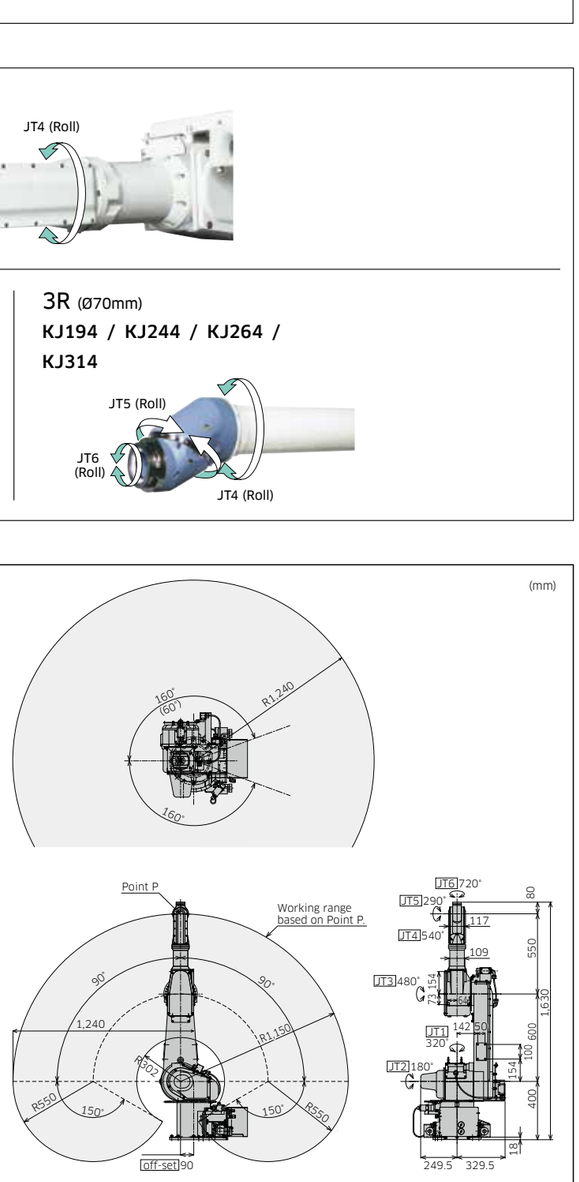
KF121 Standard Specifications

Type		Articulated robot
Degree of freedom (axes)		6
Payload (kg)		5
Max. reach*1 (mm)		1,240
Position repeatability*2 (mm)		±0.2
Motion range (°)	Arm rotation (JT1)	±160/±60 (Wall)
	Arm out-in (JT2)	±90
	Arm up-down (JT3)	±150
	Wrist swivel (JT4)	±270
	Wrist bend (JT5)	±145
	Wrist twist (JT6)	±360
Mass (kg)		140
Mounting		Floor, wall, ceiling*4
Power requirements*3 (kVA)		1.5
Explosion-proof construction	America	Combination of pressurized and intrinsically safe (CL I ZN 1 AEx ib pxb IIB T4 / AEx ib IIB T4 Gb)
	Canada	Combination of pressurized and intrinsically safe (Ex ib pxb IIB T4 Gb / Ex ib IIB T4 Gb)
	Europe	Combination of pressurized and intrinsically safe (II2 G Ex pxb ib IIB T4 / Ex ib IIB T4 Gb)
	Korea	Combination of pressurized and intrinsically safe (Ex ib pxb IIB T4 Gb / Ex ib IIB T4)
	China	Combination of pressurized and intrinsically safe (Ex ib px IIB T4 Gb / Ex ib IIB T4 Gb)
	Japan & Asia (except China & Korea)	Combination of pressurized and intrinsically safe (Expxib IIB T4 / Ex ib IIB T4 Gb)
Controller	America, Canada	E37
	Europe	E47
	Japan & Asia	E27

*1: Distance between centers of JT1 and JT5.
*2: Conforms to ISO9283.
*3: Depends on payload and motion patterns.
*4: For America and Canada, only floor and wall mount types are available.

(mm)





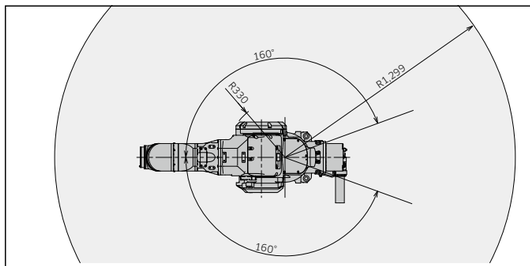
*Number in ( ) represents wall mount type.

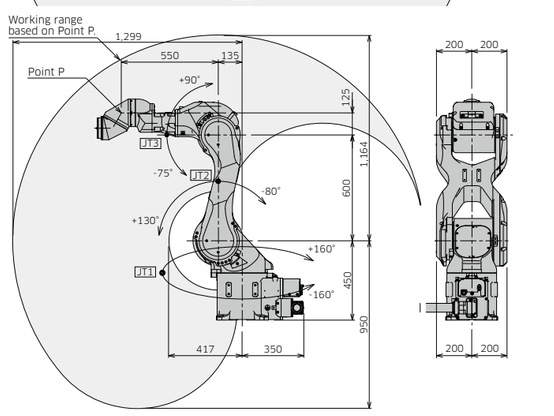
KJ125 Standard Specifications

Type		Articulated robot
Degree of freedom (axes)		6
Payload (kg)		Wrist: 8 Arm: 5
Max. reach*1 (mm)		1,299
Position repeatability*2 (mm)		±0.15
Motion range (°)	Arm rotation (JT1)	±160
	Arm out-in (JT2)	+130 - −80
	Arm up-down (JT3)	+90 - −75
	Wrist swivel (JT4)	±720
	Wrist bend (JT5)	±720
	Wrist twist (JT6)	±410
Painting speed (m/s)		1.5
Mass (kg)		190
Mounting		Floor, Wall
Power requirements*3 (kVA)		3
Explosion-proof construction	America	Combination of pressurized and intrinsically safe (CL I ZN 1 AEx ib pxb IIB T4 / AEx ib IIB T4 Gb)
	Canada	Combination of pressurized and intrinsically safe (Ex ib pxb IIB T4 Gb / Ex ib IIB T4 Gb)
	Europe	Combination of pressurized and intrinsically safe (II2 G Ex pxb ib IIB T4 / Ex ib IIB T4 Gb)
	Korea	Combination of pressurized and intrinsically safe (Ex ib pxb IIB T4 Gb / Ex ib IIB T4)
	China	Combination of pressurized and intrinsically safe (Ex ib px IIB T4 Gb / Ex ib IIB T4 Gb)
	Japan & Asia (except China & Korea)	Combination of pressurized and intrinsically safe (fG4 / Ex ib IIB T4 Gb)
Controller	America, Canada	E35
	Europe	E45
	Japan & Asia	E25

*1: Distance between centers of JT1 and JT5.
*2: Conforms to ISO9283.
*3: Depends on payload and motion patterns.

(mm)



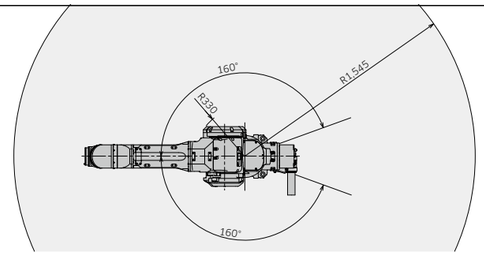


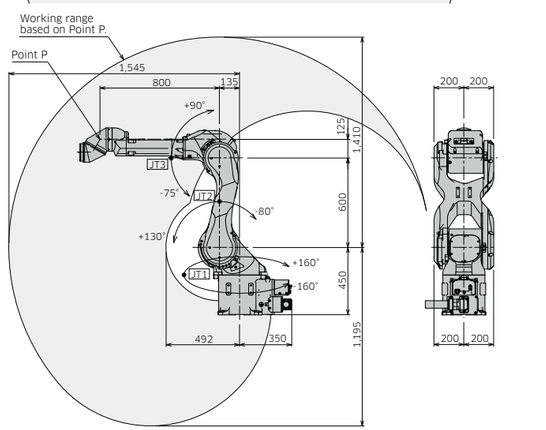
KJ155 Standard Specifications

Type		Articulated robot
Degree of freedom (axes)		6
Payload (kg)		Wrist:8 Arm:5
Max. reach*1 (mm)		1,545
Position repeatability*2 (mm)		±0.15
Motion range (°)	Arm rotation (JT1)	±160
	Arm out-in (JT2)	+130 - −80
	Arm up-down (JT3)	+90 - −75
	Wrist swivel (JT4)	±720
	Wrist bend (JT5)	±720
	Wrist twist (JT6)	±410
Painting speed (m/s)		1.5
Mass (kg)		195
Mounting		Floor, Wall
Power requirements*3 (kVA)		3
Explosion-proof construction	America	Combination of pressurized and intrinsically safe (CL I ZN 1 AEx ib pxb IIB T4 / AEx ib IIB T4 Gb)
	Canada	Combination of pressurized and intrinsically safe (Ex ib pxb IIB T4 Gb / Ex ib IIB T4 Gb)
	Europe	Combination of pressurized and intrinsically safe (II2 G Ex pxb ib IIB T4 / Ex ib IIB T4 Gb)
	Korea	Combination of pressurized and intrinsically safe (Ex ib pxb IIB T4 Gb / Ex ib IIB T4)
	China	Combination of pressurized and intrinsically safe (Ex ib px IIB T4 Gb / Ex ib IIB T4 Gb)
	Japan & Asia (except China & Korea)	Combination of pressurized and intrinsically safe (fG4 / Ex ib IIB T4 Gb)
Controller	America, Canada	E35
	Europe	E45
	Japan & Asia	E25

*1: Distance between centers of JT1 and JT5.
*2: Conforms to ISO9283.
*3: Depends on payload and motion patterns.

(mm)

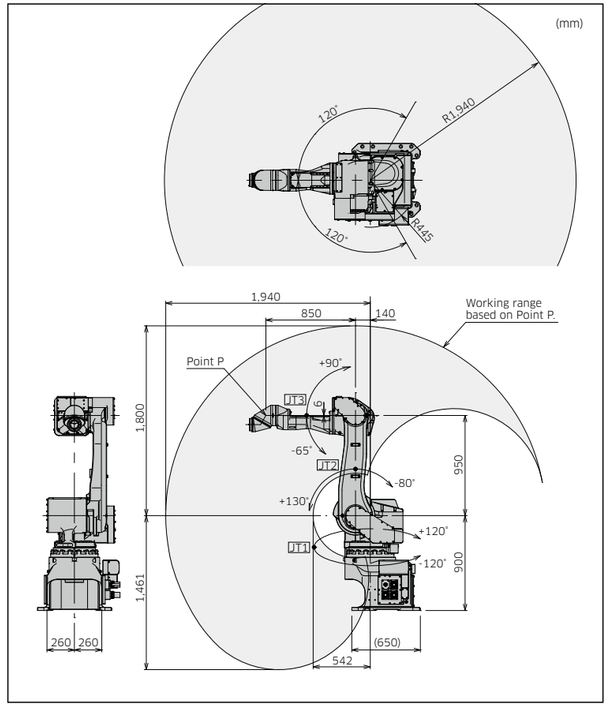




KJ194 (Floor) — Standard Specifications

Type		Articulated robot
Degree of freedom (axes)		6
Payload (kg)		Wrist : 15 Arm : 25
Max. reach*1 (mm)		1,940
Position repeatability*2 (mm)		±0.5
Motion range (°)	Arm rotation (JT1)	±120
	Arm out-in (JT2)	+130 - −80
	Arm up-down (JT3)	+90 - −65
	Wrist swivel (JT4)	±720
	Wrist bend (JT5)	±720
	Wrist twist (JT6)	±410
Painting speed (m/s)		1.5
Mass (kg)		530
Mounting		Floor
Power requirements*3 (kVA)		5
Explosion-proof construction	America	Combination of pressurized and intrinsically safe (CL I ZN 1 AEx ib pxb IIB T4 / AEx ib IIB T4 Gb)
	Canada	Combination of pressurized and intrinsically safe (Ex ib pxb IIB T4 Gb / Ex ib IIB T4 Gb)
	Europe	Combination of pressurized and intrinsically safe (II2 G Ex pxb ib IIB T4 / Ex ib IIB T4 Gb)
	Korea	Combination of pressurized and intrinsically safe (Ex ib pxb IIB T4 Gb / Ex ib IIB T4)
	China	Combination of pressurized and intrinsically safe (Ex ib px IIB T4 Gb / Ex ib IIB T4 Gb)
	Japan & Asia (except China & Korea)	Combination of pressurized and intrinsically safe (fG4 / Ex ib IIB T4 Gb)
Controller	America, Canada	E35
	Europe	E45
	Japan & Asia	E25

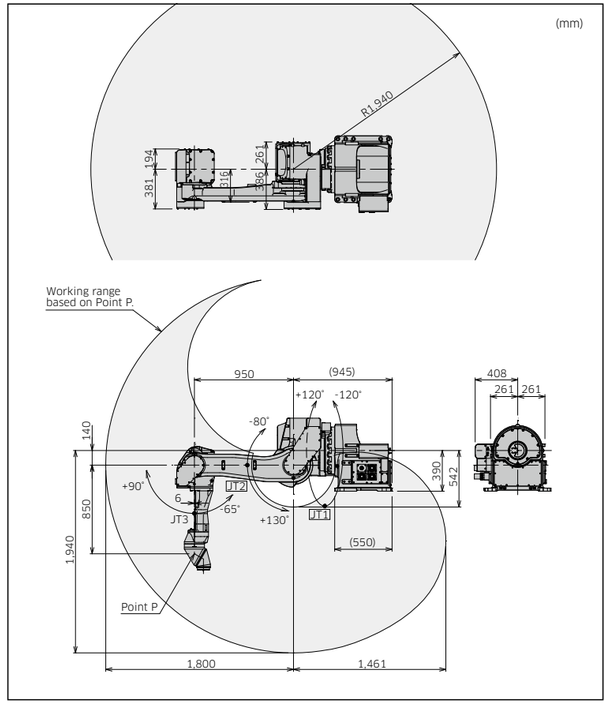
*1: Distance between centers of JT1 and JT5.
*2: Conforms to ISO9283.
*3: Depends on payload and motion patterns.



KJ194 (Shelf) — Standard Specifications

Type		Articulated robot
Degree of freedom (axes)		6
Payload (kg)		Wrist : 15 Arm : 25
Max. reach*1 (mm)		1,940
Position repeatability*2 (mm)		±0.5
Motion range (°)	Arm rotation (JT1)	±120
	Arm out-in (JT2)	+130 - −80
	Arm up-down (JT3)	+90 - −65
	Wrist swivel (JT4)	±720
	Wrist bend (JT5)	±720
	Wrist twist (JT6)	±410
Painting speed (m/s)		1.5
Mass (kg)		520
Mounting		Shelf
Power requirements*3 (kVA)		5
Explosion-proof construction	America	Combination of pressurized and intrinsically safe (CL I ZN 1 AEx ib pxb IIB T4 / AEx ib IIB T4 Gb)
	Canada	Combination of pressurized and intrinsically safe (Ex ib pxb IIB T4 Gb / Ex ib IIB T4 Gb)
	Europe	Combination of pressurized and intrinsically safe (II2 G Ex pxb ib IIB T4 / Ex ib IIB T4 Gb)
	Korea	Combination of pressurized and intrinsically safe (Ex ib pxb IIB T4 Gb / Ex ib IIB T4)
	China	Combination of pressurized and intrinsically safe (Ex ib px IIB T4 Gb / Ex ib IIB T4 Gb)
	Japan & Asia (except China & Korea)	Combination of pressurized and intrinsically safe (fG4 / Ex ib IIB T4 Gb)
Controller	America, Canada	E35
	Europe	E45
	Japan & Asia	E25

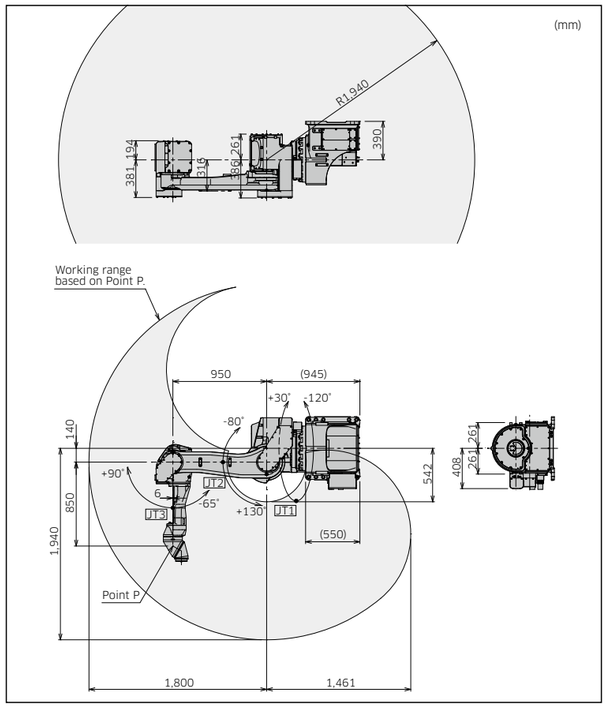
*1: Distance between centers of JT1 and JT5.
*2: Conforms to ISO9283.
*3: Depends on payload and motion patterns.



KJ194 (Wall) — Standard Specifications

Type		Articulated robot
Degree of freedom (axes)		6
Payload (kg)		Wrist : 15 Arm : 25
Max. reach*1 (mm)		1,940
Position repeatability*2 (mm)		±0.5
Motion range (°)	Arm rotation (JT1)	+30 - −120*3
	Arm out-in (JT2)	+130 - −80
	Arm up-down (JT3)	+90 - −65
	Wrist swivel (JT4)	±720
	Wrist bend (JT5)	±720
	Wrist twist (JT6)	±410
Painting speed (m/s)		1.5
Mass (kg)		520
Mounting		Wall
Power requirements*4 (kVA)		5
Explosion-proof construction	America	Combination of pressurized and intrinsically safe (CL I ZN 1 AEx ib pxb IIB T4 / AEx ib IIB T4 Gb)
	Canada	Combination of pressurized and intrinsically safe (Ex ib pxb IIB T4 Gb / Ex ib IIB T4 Gb)
	Europe	Combination of pressurized and intrinsically safe (II2 G Ex pxb ib IIB T4 / Ex ib IIB T4 Gb)
	Korea	Combination of pressurized and intrinsically safe (Ex ib pxb IIB T4 Gb / Ex ib IIB T4)
	China	Combination of pressurized and intrinsically safe (Ex ib px IIB T4 Gb / Ex ib IIB T4 Gb)
	Japan & Asia (except China & Korea)	Combination of pressurized and intrinsically safe (fG4 / Ex ib IIB T4 Gb)
Controller	America, Canada	E35
	Europe	E45
	Japan & Asia	E25

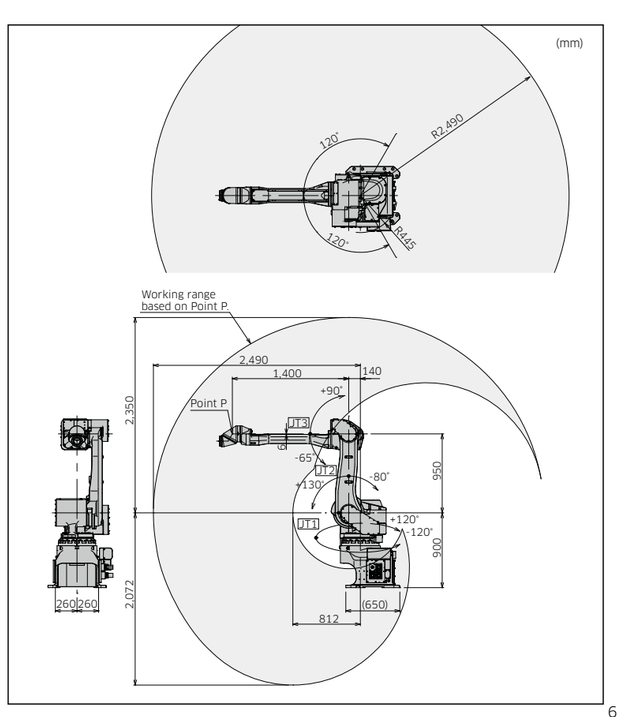
*1: Distance between centers of JT1 and JT5.
*2: Conforms to ISO9283.
*3: Motion range of JT1 varies depending on the direction of the mounting surface. Viewing from the robot backside, when the mounting surface is located on the left, it is [+120 to -30]. When the surface is on the right side, it is [+30 to -120].
*4: Depends on payload and motion patterns.



KJ244 (Floor) — Standard Specifications

Type		Articulated robot
Degree of freedom (axes)		6
Payload (kg)		Wrist : 15 Arm : 25
Max. reach*1 (mm)		2,490
Position repeatability*2 (mm)		±0.5
Motion range (°)	Arm rotation (JT1)	±120
	Arm out-in (JT2)	+130 - −80
	Arm up-down (JT3)	+90 - −65
	Wrist swivel (JT4)	±720
	Wrist bend (JT5)	±720
	Wrist twist (JT6)	±410
Painting speed (m/s)		1.5
Mass (kg)		540
Mounting		Floor
Power requirements*3 (kVA)		5
Explosion-proof construction	America	Combination of pressurized and intrinsically safe (CL I ZN 1 AEx ib pxb IIB T4 / AEx ib IIB T4 Gb)
	Canada	Combination of pressurized and intrinsically safe (Ex ib pxb IIB T4 Gb / Ex ib IIB T4 Gb)
	Europe	Combination of pressurized and intrinsically safe (II2 G Ex pxb ib IIB T4 / Ex ib IIB T4 Gb)
	Korea	Combination of pressurized and intrinsically safe (Ex ib pxb IIB T4 Gb / Ex ib IIB T4)
	China	Combination of pressurized and intrinsically safe (Ex ib px IIB T4 Gb / Ex ib IIB T4 Gb)
	Japan & Asia (except China & Korea)	Combination of pressurized and intrinsically safe (fG4 / Ex ib IIB T4 Gb)
Controller	America, Canada	E35
	Europe	E45
	Japan & Asia	E25

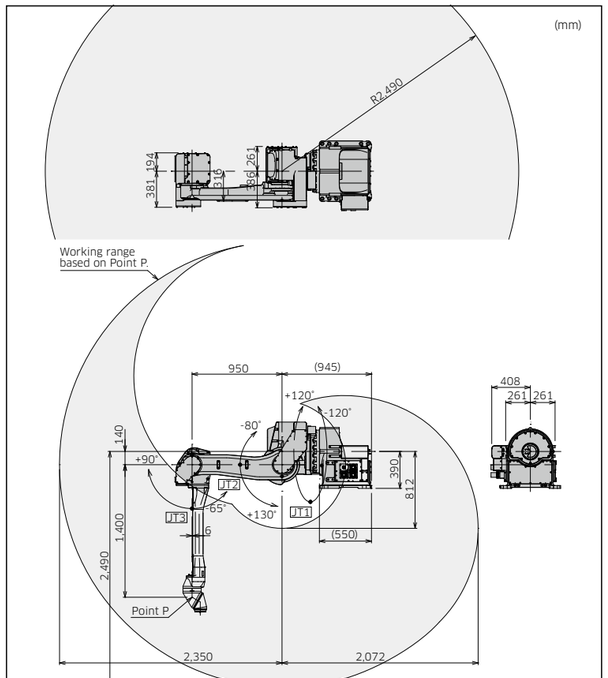
*1: Distance between centers of JT1 and JT5.
*2: Conforms to ISO9283.
*3: Depends on payload and motion patterns.



KJ244 (Shelf) — Standard Specifications

Type		Articulated robot
Degree of freedom (axes)		6
Payload (kg)		Wrist : 15 Arm : 25
Max. reach*1 (mm)		2,490
Position repeatability*2 (mm)		±0.5
Motion range (°)	Arm rotation (JT1)	±120
	Arm out-in (JT2)	+130 - −80
	Arm up-down (JT3)	+90 - −65
	Wrist swivel (JT4)	±720
	Wrist bend (JT5)	±720
	Wrist twist (JT6)	±410
Painting speed (m/s)		1.5
Mass (kg)		530
Mounting		Shelf
Power requirements*3 (kVA)		5
Explosion-proof construction	America	Combination of pressurized and intrinsically safe (CL I ZN 1 AEx ib pxb IIB T4 / AEx ib IIB T4 Gb)
	Canada	Combination of pressurized and intrinsically safe (Ex ib pxb IIB T4 Gb / Ex ib IIB T4 Gb)
	Europe	Combination of pressurized and intrinsically safe (II2 G Ex pxb ib IIB T4 / Ex ib IIB T4 Gb)
	Korea	Combination of pressurized and intrinsically safe (Ex ib pxb IIB T4 Gb / Ex ib IIB T4)
	China	Combination of pressurized and intrinsically safe (Ex ib px IIB T4 Gb / Ex ib IIB T4 Gb)
	Japan & Asia (except China & Korea)	Combination of pressurized and intrinsically safe (fG4 / Ex ib IIB T4 Gb)
Controller	America, Canada	E35
	Europe	E45
	Japan & Asia	E25

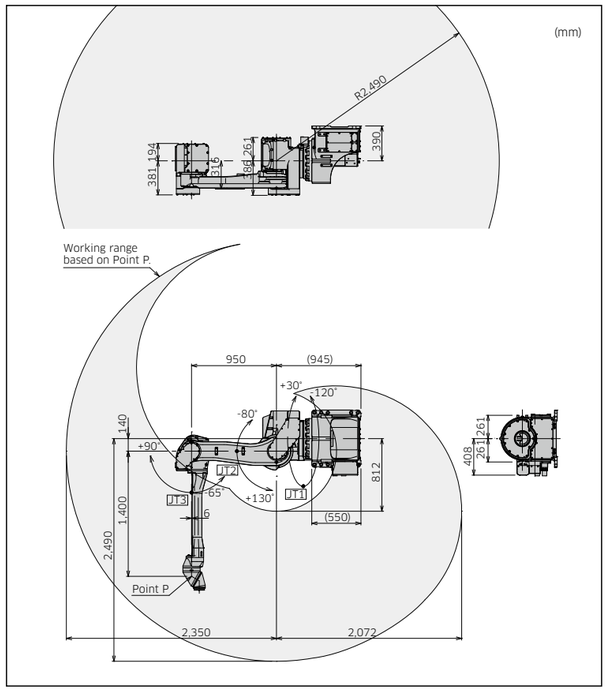
*1: Distance between centers of JT1 and JT5.
*2: Conforms to ISO9283.
*3: Depends on payload and motion patterns.



KJ244 (Wall) — Standard Specifications

Type		Articulated robot
Degree of freedom (axes)		6
Payload (kg)		Wrist 15 Arm 25
Max. reach*1 (mm)		2,490
Position repeatability*2 (mm)		±0.5
Motion range (°)	Arm rotation (JT1)	+30 - −120*3
	Arm out-in (JT2)	+130 - −80
	Arm up-down (JT3)	+90 - −65
	Wrist swivel (JT4)	±720
	Wrist bend (JT5)	±720
	Wrist twist (JT6)	±410
Painting speed (m/s)		1.5
Mass (kg)		530
Mounting		Wall
Power requirements*4 (kVA)		5
Explosion-proof construction	America	Combination of pressurized and intrinsically safe (CL I ZN 1 AEx ib pxb IIB T4 / AEx ib IIB T4 Gb)
	Canada	Combination of pressurized and intrinsically safe (Ex ib pxb IIB T4 Gb / Ex ib IIB T4 Gb)
	Europe	Combination of pressurized and intrinsically safe (II2 G Ex pxb ib IIB T4 / Ex ib IIB T4 Gb)
	Korea	Combination of pressurized and intrinsically safe (Ex ib pxb IIB T4 Gb / Ex ib IIB T4)
	China	Combination of pressurized and intrinsically safe (Ex ib px IIB T4 Gb / Ex ib IIB T4 Gb)
	Japan & Asia (except China & Korea)	Combination of pressurized and intrinsically safe (fG4 / Ex ib IIB T4 Gb)
Controller	America, Canada	E35
	Europe	E45
	Japan & Asia	E25

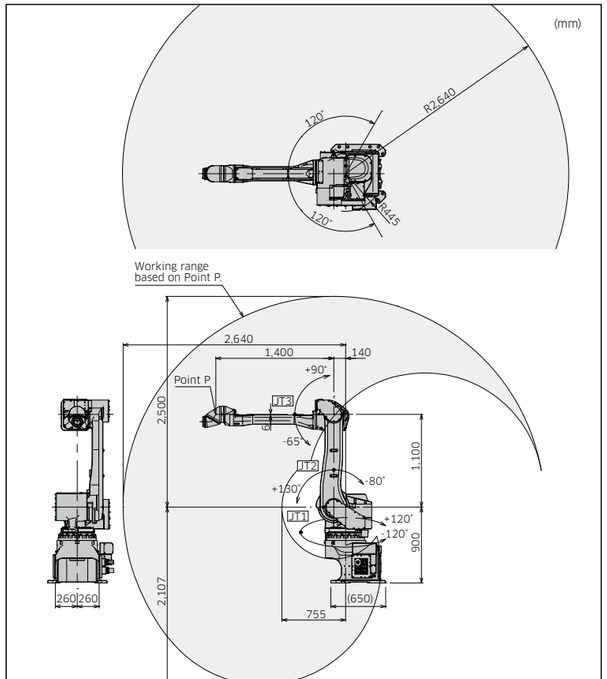
*1: Distance between centers of JT1 and JT5.
*2: Conforms to ISO9283.
*3: Motion range of JT1 varies depending on the direction of the mounting surface. Viewing from the robot backside, when the mounting surface is located on the left, it is [+120 to -30]. When the surface is on the right side, it is [+30 to -120].
*4: Depends on payload and motion patterns.



KJ264 (Floor) — Standard Specifications

Type		Articulated robot
Degree of freedom (axes)		6
Payload (kg)		Wrist : 15 Arm : 25
Max. reach*1 (mm)		2,640
Position repeatability*2 (mm)		±0.5
Motion range (°)	Arm rotation (JT1)	±120
	Arm out-in (JT2)	+130 - −80
	Arm up-down (JT3)	+90 - −65
	Wrist swivel (JT4)	±720
	Wrist bend (JT5)	±720
	Wrist twist (JT6)	±410
Painting speed (m/s)		1.5
Mass (kg)		540
Mounting		Floor
Power requirements*3 (kVA)		5
Explosion-proof construction	America	Combination of pressurized and intrinsically safe (CL I ZN 1 AEx ib pxb IIB T4 / AEx ib IIB T4 Gb)
	Canada	Combination of pressurized and intrinsically safe (Ex ib pxb IIB T4 Gb / Ex ib IIB T4 Gb)
	Europe	Combination of pressurized and intrinsically safe (II2 G Ex pxb ib IIB T4 / Ex ib IIB T4 Gb)
	Korea	Combination of pressurized and intrinsically safe (Ex ib pxb IIB T4 Gb / Ex ib IIB T4)
	China	Combination of pressurized and intrinsically safe (Ex ib px IIB T4 Gb / Ex ib IIB T4 Gb)
	Japan & Asia (except China & Korea)	Combination of pressurized and intrinsically safe (fG4 / Ex ib IIB T4 Gb)
Controller	America, Canada	E35
	Europe	E45
	Japan & Asia	E25

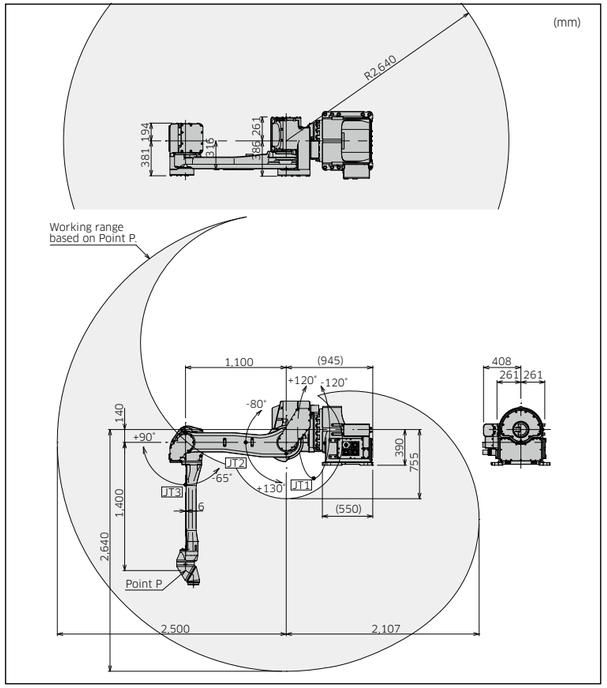
*1: Distance between centers of JT1 and JT5.
*2: Conforms to ISO9283.
*3: Depends on payload and motion patterns.



KJ264 (Shelf) — Standard Specifications

Type		Articulated robot
Degree of freedom (axes)		6
Payload (kg)		Wrist : 15 Arm : 25
Max. reach*1 (mm)		2,640
Position repeatability*2 (mm)		±0.5
Motion range (°)	Arm rotation (JT1)	±120
	Arm out-in (JT2)	+130 - −80
	Arm up-down (JT3)	+90 - −65
	Wrist swivel (JT4)	±720
	Wrist bend (JT5)	±720
	Wrist twist (JT6)	±410
Painting speed (m/s)		1.5
Mass (kg)		530
Mounting		Shelf
Power requirements*3 (kVA)		5
Explosion-proof construction	America	Combination of pressurized and intrinsically safe (CL I ZN 1 AEx ib pxb IIB T4 / AEx ib IIB T4 Gb)
	Canada	Combination of pressurized and intrinsically safe (Ex ib pxb IIB T4 Gb / Ex ib IIB T4 Gb)
	Europe	Combination of pressurized and intrinsically safe (II2 G Ex pxb ib IIB T4 / Ex ib IIB T4 Gb)
	Korea	Combination of pressurized and intrinsically safe (Ex ib pxb IIB T4 Gb / Ex ib IIB T4)
	China	Combination of pressurized and intrinsically safe (Ex ib px IIB T4 Gb / Ex ib IIB T4 Gb)
	Japan & Asia (except China & Korea)	Combination of pressurized and intrinsically safe (fG4 / Ex ib IIB T4 Gb)
Controller	America, Canada	E35
	Europe	E45
	Japan & Asia	E25

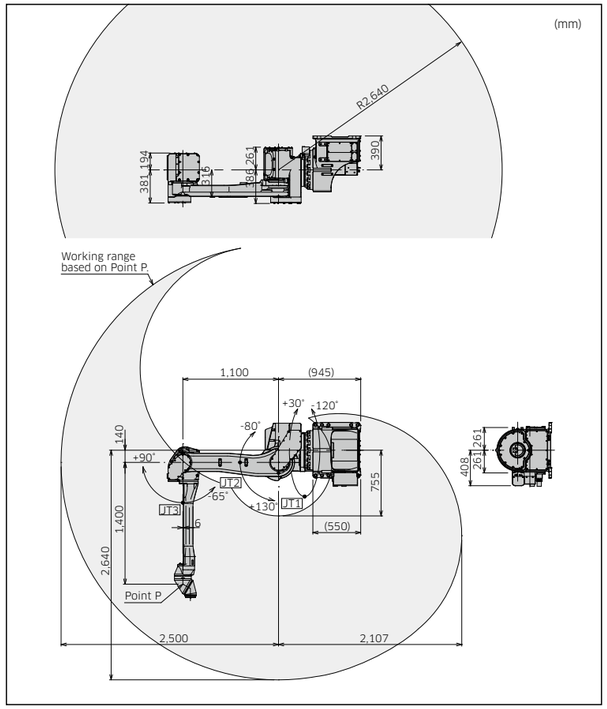
*1: Distance between centers of JT1 and JT5.
*2: Conforms to ISO9283.
*3: Depends on payload and motion patterns.



KJ264 (Wall) — Standard Specifications

Type		Articulated robot
Degree of freedom (axes)		6
Payload (kg)		Wrist : 15 Arm : 25
Max. reach*1 (mm)		2,640
Position repeatability*2 (mm)		±0.5
Motion range (°)	Arm rotation (JT1)	+30 - −120*3
	Arm out-in (JT2)	+130 - −80
	Arm up-down (JT3)	+90 - −65
	Wrist swivel (JT4)	±720
	Wrist bend (JT5)	±720
	Wrist twist (JT6)	±410
Painting speed (m/s)		1.5
Mass (kg)		530
Mounting		Wall
Power requirements*4 (kVA)		5
Explosion-proof construction	America	Combination of pressurized and intrinsically safe (CL I ZN 1 AEx ib pxb IIB T4 / AEx ib IIB T4 Gb)
	Canada	Combination of pressurized and intrinsically safe (Ex ib pxb IIB T4 Gb / Ex ib IIB T4 Gb)
	Europe	Combination of pressurized and intrinsically safe (II2 G Ex pxb ib IIB T4 / Ex ib IIB T4 Gb)
	Korea	Combination of pressurized and intrinsically safe (Ex ib pxb IIB T4 Gb / Ex ib IIB T4)
	China	Combination of pressurized and intrinsically safe (Ex ib px IIB T4 Gb / Ex ib IIB T4 Gb)
	Japan & Asia (except China & Korea)	Combination of pressurized and intrinsically safe (fG4 / Ex ib IIB T4 Gb)
Controller	America, Canada	E35
	Europe	E45
	Japan & Asia	E25

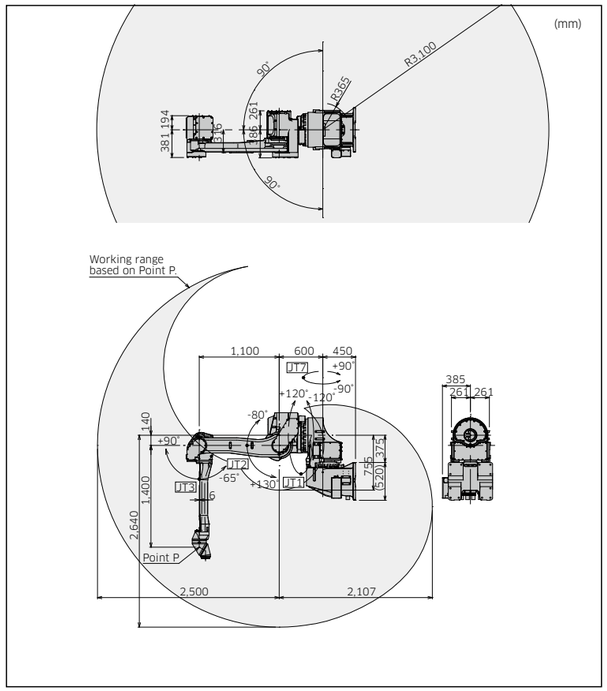
*1: Distance between centers of JT1 and JT5.
*2: Conforms to ISO9283.
*3: Motion range of JT1 varies depending on the direction of the mounting surface. Viewing from the robot backside, when the mounting surface is located on the left, it is [+120 to -30]. When the surface is on the right side, it is [+30 to -120].
*4: Depends on payload and motion patterns.



KJ314 (Wall) — Standard Specifications

Type		Articulated robot
Degree of freedom (axes)		7
Payload (kg)		Wrist : 15 Arm : 25
Max. reach*1 (mm)		3,100
Position repeatability*2 (mm)		±0.5
Motion range (°)	Arm rotation (JT1)	±120
	Arm out-in (JT2)	+130 - −80
	Arm up-down (JT3)	+90 - −65
	Wrist swivel (JT4)	±720
	Wrist bend (JT5)	±720
	Wrist twist (JT6)	±410
	Arm swing (JT7)	±90
Painting speed (m/s)		1.5
Mass (kg)		720
Mounting		Wall
Power requirements*3 (kVA)		5
Explosion-proof construction	America	Combination of pressurized and intrinsically safe (CL I ZN 1 AEx ib pxb IIB T4 / AEx ib IIB T4 Gb)
	Canada	Combination of pressurized and intrinsically safe (Ex ib pxb IIB T4 Gb / Ex ib IIB T4 Gb)
	Europe	Combination of pressurized and intrinsically safe (II2 G Ex pxb ib IIB T4 / Ex ib IIB T4 Gb)
	Korea	Combination of pressurized and intrinsically safe (Ex ib pxb IIB T4 Gb / Ex ib IIB T4)
	China	Combination of pressurized and intrinsically safe (Ex ib px IIB T4 Gb / Ex ib IIB T4 Gb)
	Japan & Asia (except China & Korea)	Combination of pressurized and intrinsically safe (fG4 / Ex ib IIB T4 Gb)
Controller	America, Canada	E35
	Europe	E45
	Japan & Asia	E25

*1: Distance between centers of JT1 and JT5.
*2: Conforms to ISO9283.
*3: Depends on payload and motion patterns.



E25, E35, E45/E27, E37, E47

Features

- Universal controller with common specifications for global use.
- The explosion-proof teach pendant's large, color LCD touch panel allows users to teach, edit and monitor information such as current position and I/O signals in the explosion-proof area.

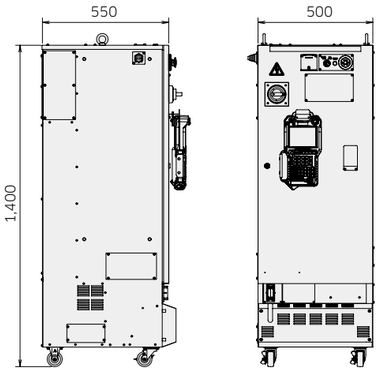
Standard Specifications

America		E35	E37
Dimensions (mm)		W500×D550×H1,400	
Construction		Enclosed structure/Indirect cooling system	
Controlled (axes)		6	
Memory capacity (MB)		8	
I/O signals	External operation	Motor power Off, Hold	
	Input (Channels)	32	
	Output (Channels)	32	
Cable length	Robot-controller (m)	3	
	Teach pendant (m)	10	
Mass (kg)		170 (E35/E37)	
Power requirements	E35/E37	AC440-480V ±10%, 60 Hz, 3ø 7.3kVA (E35)/5.1kVA (E37)*1 Protective ground, leakage current: 10 mA at maximum	
Installation environment	Ambient temperature (℃)	0 - 45	
	Relative humidity (%)	35 - 85 (No dew, nor frost allowed)	
Teach pendant		TFT color LCD display with touch-panel, E-Stop switch, teach lock switch, Enable switch	
Operation panel		E-stop switch, teach/repeat switch*2, control power light (Cycle start, motor-on, hold/run, and error rest are activated from the teach pendant.)	

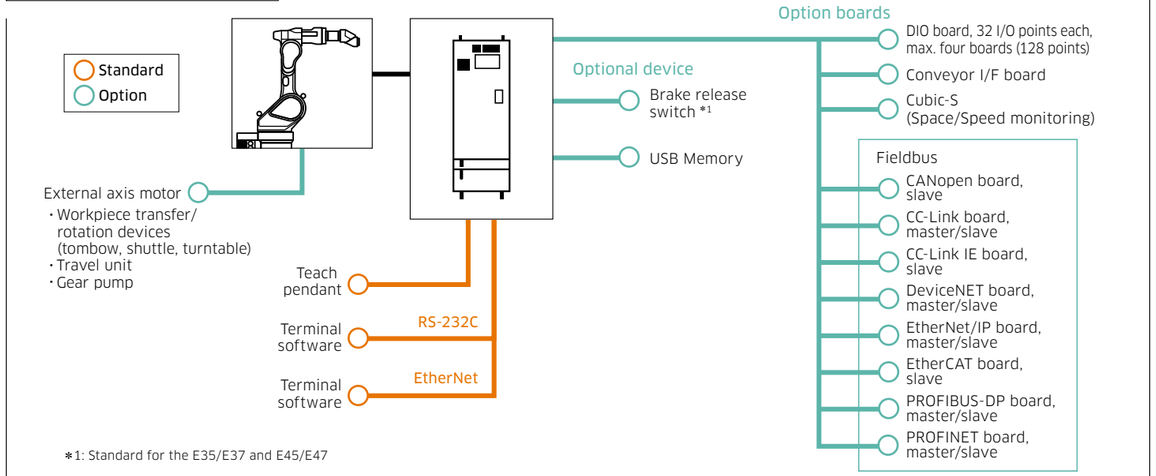
*1: Power requirements ensure maximum operation of a robot, not those required for normal operations.

External view and dimensions

E25, E35, E45 / E27, E37, E47



System configuration



*1: Standard for the E35/E37 and E45/E47

Small sized painting applications

Servo Tombow

Smooth, high quality painting

1. Smooth movement

Servo motion control provides smooth movement to eliminate work slippage.

2. Enhanced paint quality

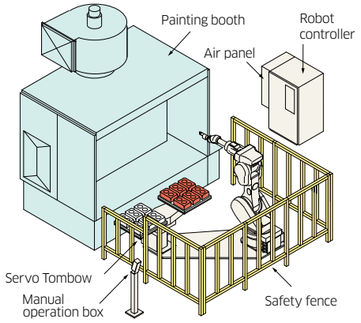
For small cubical boxes (electronic appliances such as TV cabinets, etc.), the spray gun can be oriented to each surface at a right angle. The distance between the gun and the surface can also be adjusted simply by entering a value. These features enable easy operation and enhance painting quality.

3. Coordinated movement with robot

The Servo Tombow's table rotation is synchronized with the robot's movements, assuring a uniform paint finish. The Tombow table offers 360 degrees of rotation.

4. Prevents paint mist accumulation

TTo minimize paint mist accumulation, workpieces can be positioned above a water tank when spraying.

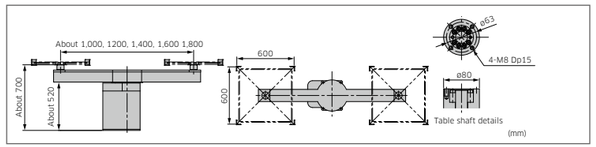


Standard Specifications

		Standard	Heavy load type
Table load		20 kg x 2 Table	40 kg x 2 Table
No. of control (axes)		Robot 6+Servo tombow 2	
Control method		Servo control	
Teaching playback method		PTP teaching+CP control	
Position detection method		Absolute encoder	
Arm	Diameter (mm)	1,000, 1,200, 1,400, 1,600, 1,800	
	Operation angle (°)	180°	
	Indexing time (sec)	2.0/180°	2.4/180°
Table	Operation angle	Infinite revolution	
	Indexing angle (°)	90-deg and arbitrary angle	
	Indexing time (sec)	0.8/90°	1.2/90°
	Uninterrupted rotary speed (rpm)	Max. 90	Max. 45
	Rotary direction	Normal/reverse rotation	
Explosion protection		Air pressurized explosion protection and intrinsically safe. Explosion-proof composite type (Expib II BT4 / Exib II BT4)	
Mass (kg)		Approx. 140 - 160	
Color		Munsell 10GY9/1 equivalent	

Note: The standard arm lengths are 1,000 mm, 1,200 mm, 1,400 mm, 1,600 mm and 1,800 mm.
The work loading table and loading fixtures to be prepared by the purchaser.

External view and dimensions



Small sized painting applications

Servo Tombow-R

Enhanced space efficiency

1. Space saving

The robot is installed at the center of the pre-configured Servo Tombow painting package, allowing for a smaller and more efficient workspace.

2. Adaptable to all painting conditions

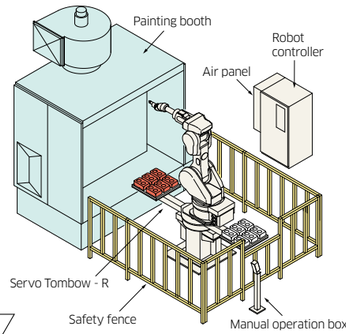
The tables and arm can be positioned and speed-controlled with a high level of precision. The tables can also be continuously rotated and fixed at any desired angle, making it possible to select the best painting method for the workpiece.

3. Enhanced paint quality

Because there are few obstacles surrounding the tables, the robot can move freely and in-booth turbulence is minimized. This results in an enhanced paint quality.

4. Ideal for automated transportation equipment

This system attaches and removes workpieces behind the paint robot. As a result, this system can be easily combined with automated transportation equipment that uses conveyors or delivery robots.

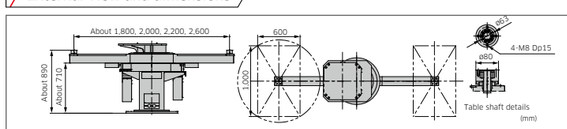


Standard Specifications

		Standard	Heavy load type
Table load		20 kg x 2 Table	40 kg x 2 Table
No. of control (axes)		Robot 6+Servo tombow 2	
Control method		Servo control	
Teaching playback method		PTP teaching+CP control	
Position detection method		Absolute encoder	
Arm	Diameter (mm)	1,800, 2,000, 2,200, 2,600	1,800, 2,000, 2,200
	Operation angle (°)	180	
	Indexing time (sec)	4.0/180°	
Table	Operation angle	Infinite revolution	
	Indexing angle (°)	90-deg and arbitrary angle	
	Indexing time (sec)	1.0/90°	1.7/90°
	Uninterrupted rotary speed (rpm)	Max. 120	Max. 45
	Rotary direction	Normal/reverse rotation	
Explosion protection		Air pressurized explosion protection and intrinsically safe. Explosion-proof composite type (Expib II BT4 / Exib II BT4)	
Mass (kg)		Approx. 550 - 690 (excluding the manipulator base)	
Color		Munsell 10GY9/1 equivalent	

Note: A set of work loading tables and loading fixtures are necessary.
Install the Manipulator KF121 onto a tombow-R with an arm length of 1,800 mm or 2,000 mm.
Install the Manipulator KF192/193/194 onto a tombow-R with an arm length of 2,200 mm or 2,600 mm.

External view and dimensions



Small sized painting applications

Servo Twister

A compact, sophisticated system

1. Small installation space

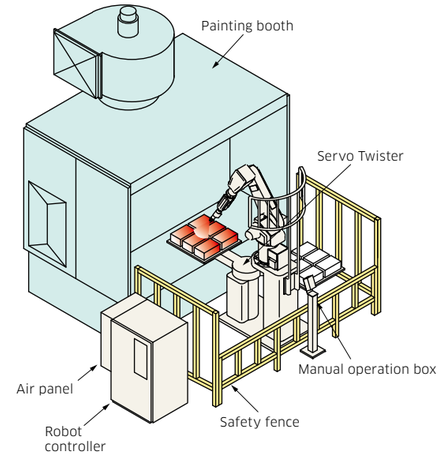
The minimum installation space required for this system is 2,200 mm wide x 1,966 mm long for a 600 x 600 mm table. Its compact size allows for installation a narrow, hand-spraying booth.

2. Rotary table functions

The Servo Twister provides rotary coating, indexed coating and rotary synchronization functions.

3. Shared coating program

The robot and painting table are integrated into one unit, so programs can be shared by more than one robot.

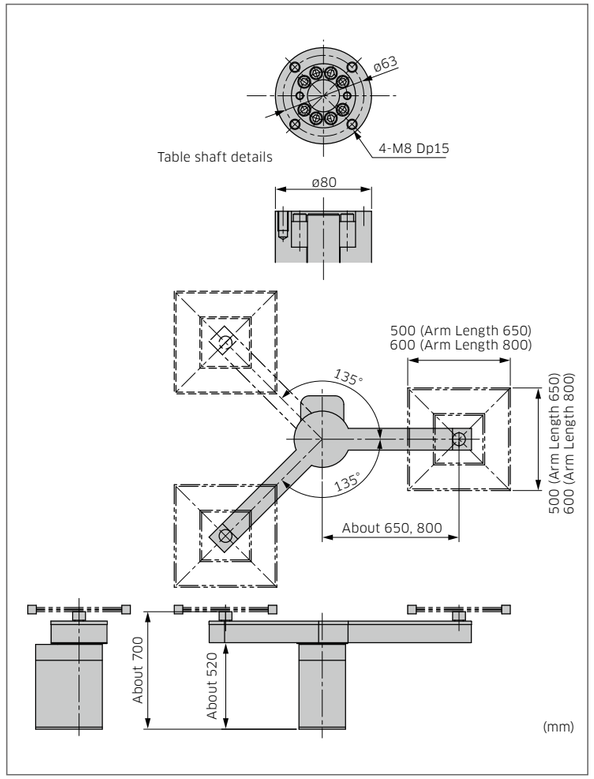


Standard Specifications

		Standard
Table load		20 kg x 2 Table
No. of control (axes)		Robot 6+Servo twister 2
Control method		Servo control
Teaching playback method		PTP teaching+CP control
Position detection method		Absolute encoder
Arm	Diameter (mm)	650, 800
	Operation angle (°)	135
	Indexing time (sec)	1.8/135°
Table	Operation angle	Infinite revolution
	Indexing angle (°)	90-deg and arbitrary angle
	Indexing time (sec)	0.8/90°
	Uninterrupted rotary speed (rpm)	Max. 90
	Rotary direction	Normal/reverse rotation
Explosion protection		Air pressurized explosion protection and intrinsically safe. Explosion-proof composite type (Expib II BT4 / Exib II BT4)
Mass (kg)		120
Color		Munsell 10GY9/1 equivalent

Note : The work loading table and loading fixtures to be prepared by the purchaser.

External view and dimensions



Medium sized work-piece painting cell

Servo Shuttle

The ultimate table painting package

1. Highly efficient

Servo motion control ensures smooth movement while providing high speed work transfers, table rotation and continuous rotation tracking with the robot and any standby feeder position.

2. Higher coating quality

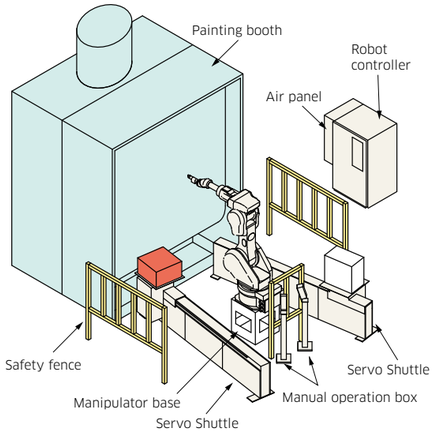
The combination of controlled table positions, a high speed precision robot and the Servo Shuttle results in high quality painting.

3. Increased table load

Paint large items such as automobile instrument panels.

4. Simple installation

The pre-configured Servo Shuttle painting package is easy to install and still allows for the painting of complex workpieces.

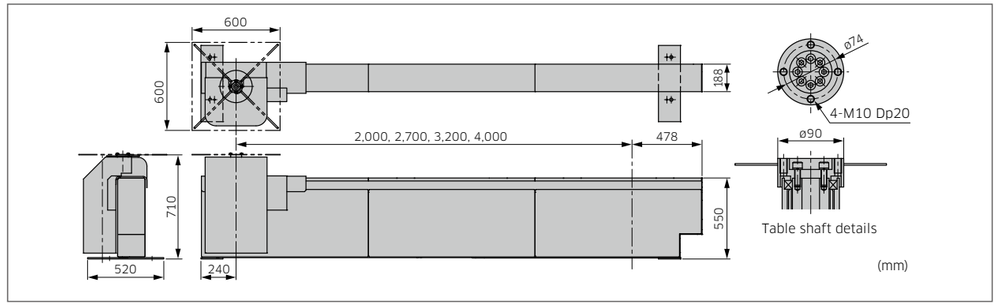


Standard Specifications

		Standard	Heavy load type
Table load		20 kg x 2 Table	60 kg x 2 Table
No. of control (axes)		Robot 6+Servo shuttle 2	
Control method		Servo control	
Teaching playback method		PTP teaching+CP control	
Position detection method		Absolute encoder	
Shuttle	Stroke (mm)	2,000, 2,700, 3,200, 4,000	
	Max. speed (mm/sec)	1,000	
Table	Operation angle	Infinite revolution	
	Indexing angle (°)	90-deg and arbitrary angle	
	Indexing time (sec)	0.8/90°	1.2/90°
	Uninterrupted rotary speed (rpm)	Max. 90	Max. 45
	Rotary direction	Normal/reverse rotation	
Intermediate stop function		The intermediate stop function and multiple coating control function are available.	
Explosion protection		Air pressurized explosion protection and intrinsically safe. Explosion-proof composite type (Expib II BT4 / Exib II BT4)	
Mass (kg)		One side: 300 to 500	
Color		Munsell 10GY9/1 equivalent	

Note : The work loading table and loading fixtures to be prepared by the purchaser.

External view and dimensions



Medium sized work-piece painting cell

Servo Wing

High quality table painting with a small footprint

1. Space saving

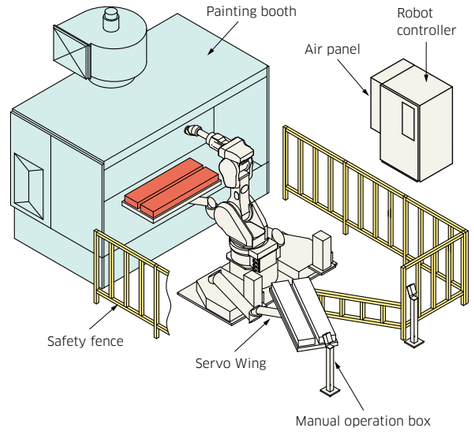
This pre-configured painting package can handle large workpieces while its efficient layout minimizes its overall footprint.

2. Less time spent teaching

A single program can be used because the left and right arms can be set for the same painting positions, thus reducing teaching time.

3. Minimize booth contamination & aiflow turbulence

Slim arms without fixed rails mean painting can be done above a water tank. This reduces contamination and airflow turbulence in the paint booth.

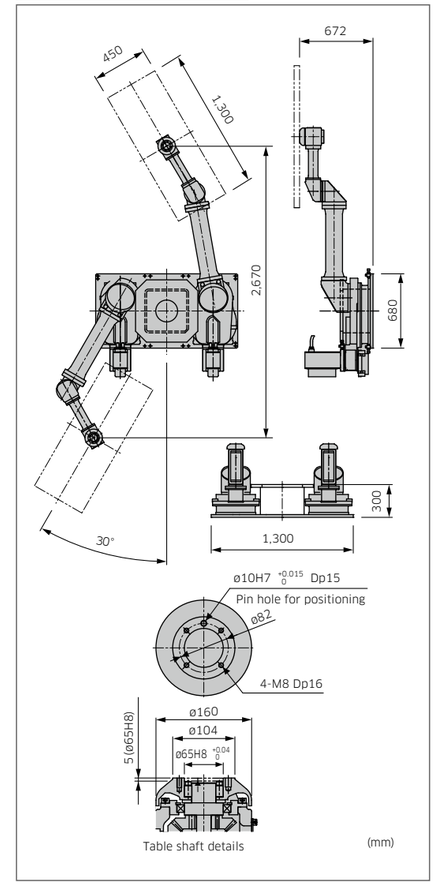


Standard Specifications

Table load		30 kg x 2 Table
No. of control (axes)		Robot 6+Servo wing 2
Control method		Servo control
Teaching playback method		PTP teaching+CP control
Position detection method		Absolute encoder
Arm	Stroke (mm)	2,670
	Indexing time (sec)	3.2
Table	Operation angle (°)	Infinite revolution
	Indexing angle (°)	90-deg and arbitrary angle
	Indexing time (sec)	1.2/90°
	Uninterrupted rotary speed (rpm)	Max. 90
	Rotary direction	Normal/reverse rotation
Intermediate stop function		The intermediate stop function and multiple coating control function are available.
Explosion protection		Air pressurized explosion protection and intrinsically safe. Explosion-proof composite type (Expib II BT4 / Exib II BT4)
Mass (kg)		970
Color		Munsell 10GY9/1 equivalent

Note: The arm index time indicates the time of arm movement from the intermediate stop position to the painting position.
The arm index time varies depending on the intermediate stop position.

External view and dimensions



Medium sized work-piece painting cell

Servo Spinner

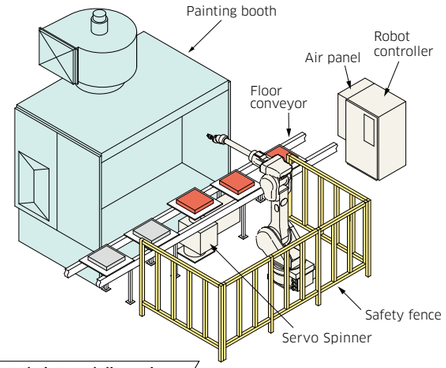
A new dimension in line coating

1. Flexible component placement

You can choose the ideal painting position for the workpiece, which reduces contamination of the paint booth.

2. Uninterrupted painting

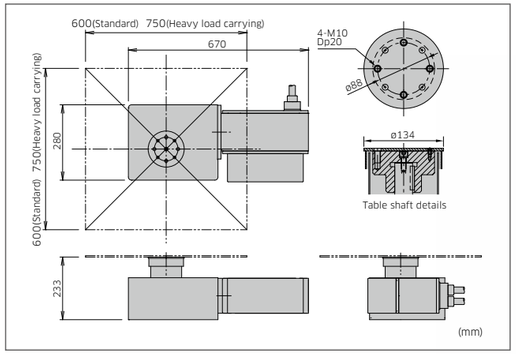
Painting can be performed with the table rotating, thus minimizing the robot's wait time.



Standard Specifications

		Standard	Heavy load type
Table load (kg)		20	60
No. of control (axes)		Robot 6+Servo Spinner 1	
Control method		Servo control	
Teaching playback method		PTP teaching+CP control	
Position detection method		Absolute encoder	
Table	Operation angle	Infinite revolution	
	Indexing angle (°)	90-deg and arbitrary angle	
	Indexing time (sec)	0.8/90°	1.1/90°
	Uninterrupted rotary speed (rpm)	Max. 90	Max. 45
	Rotary direction	Normal/reverse rotation	
Explosion protection		Air pressurized explosion protection and intrinsically safe. Explosion-proof composite type (Expib II BT4 / Exib II BT4)	
Mass (kg)		60	
Color		Munsell 10GY9/1 equivalent	

External view and dimensions



Large sized work-piece painting cell

Servo Turntable

Complete surface painting with uninterrupted turntable rotation

1. Flexible Workpiece Placement

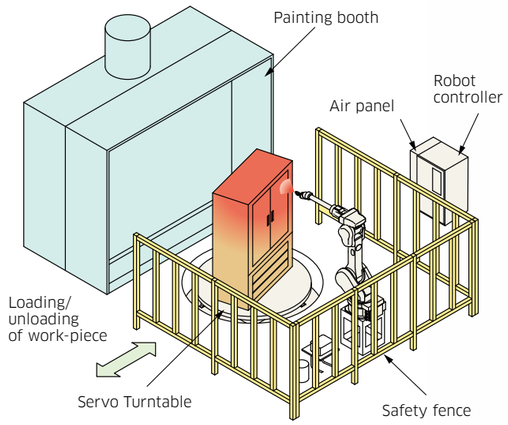
The integrated control of the robot and table allows any painting position to be achieved according to the work shape.

2. Compatible with Many Paint Applications

This system supports various painting applications, including synchronous control, arbitrary-angle indexing, and continuous table rotation for paint spraying.

Standard Specifications

		Standard	Heavy load type
Table load (kg)		Max. 500	Max. 1,000
No. of control (axes)		Robot 6+Servo Turntable 1	
Control method		Servo control	
Teaching playback method		PTP teaching+CP control	
Position detection method		Absolute encoder	
Table	Operation angle	Infinite revolution	
	Indexing angle (°)	90-deg and arbitrary angle	
	Indexing time (sec)	2.5/90°	5/90°
	Uninterrupted rotary speed (rpm)	Max. 10	Max. 5
	Rotary direction	Normal/reverse rotation	
Explosion protection		Air pressurized explosion protection and intrinsically safe. Explosion-proof composite type (Expib II BT4 / Exib II BT4)	
Mass (kg)		180 (without table jig)	
Table diameter (mm)		up to ø2,000	
Color		Munsell 10GY9/1 equivalent	
Foot switch function (Option)		Uninterrupted normal rotation, rotation stop	Uninterrupted rotation, 45-deg., 90-deg., 180-deg., indexing (changeable indexing angle), rotation stop



External view and dimensions