



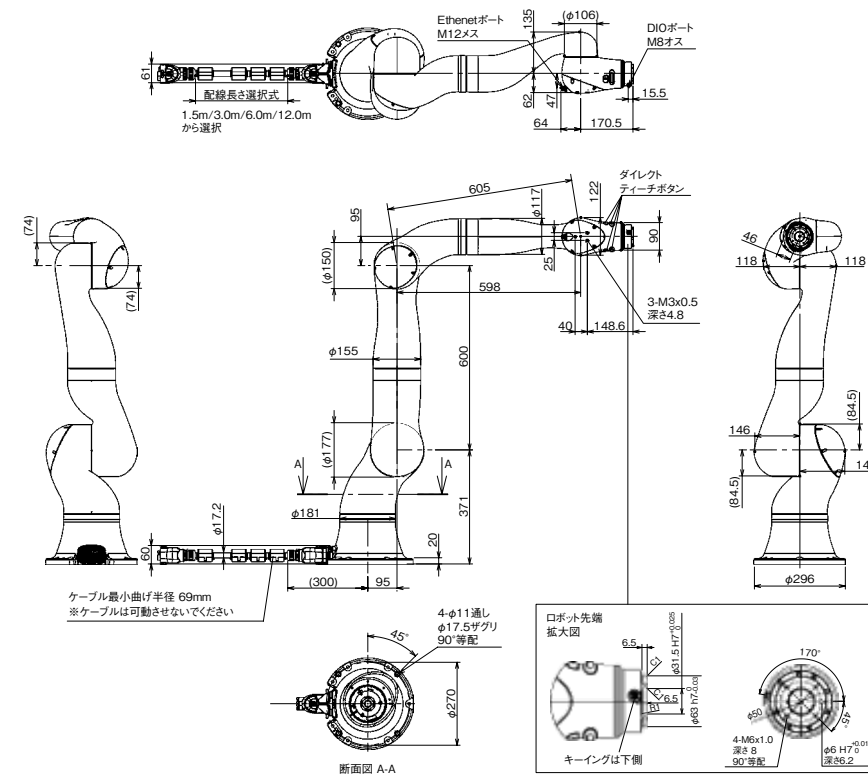
Y a m a h a
M o t o r
C o b o t

Flexibly, Freely, Collaboratively.
7-axis cobot
is released
by Yamaha Motor.

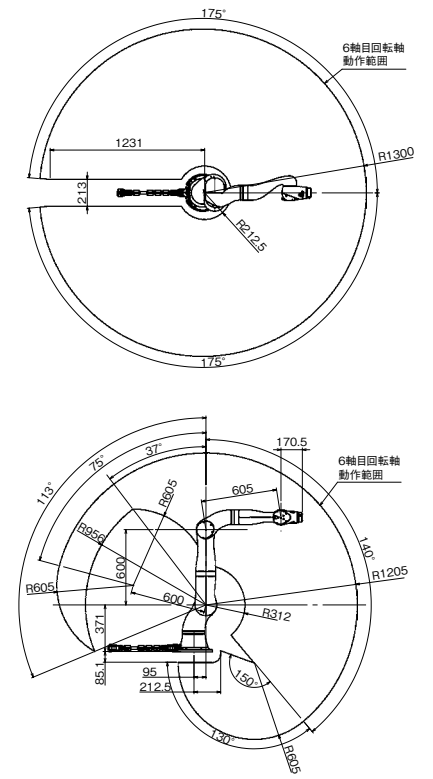


Exterior view

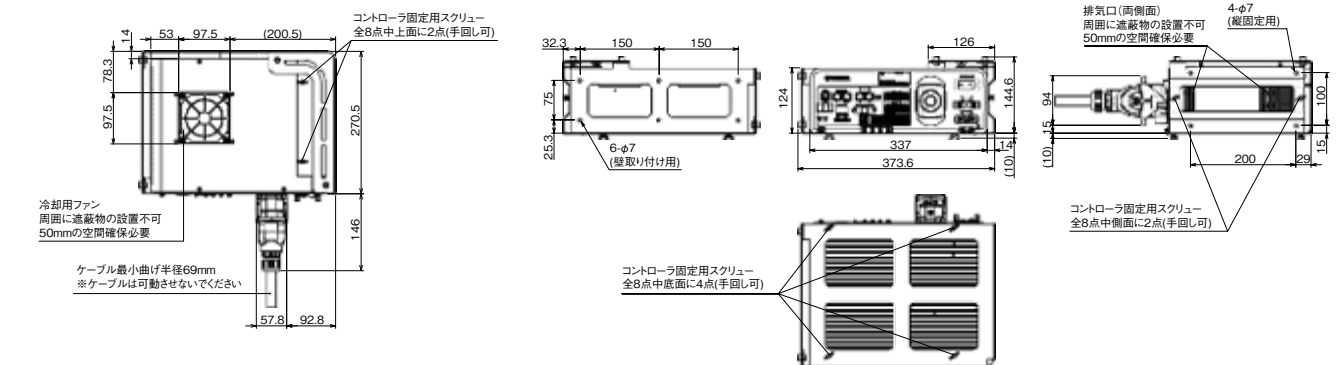
■ Arm



■ Operating range



■ controller



⚠ Precautions

Please read the instruction manual carefully and use the product correctly.

販売代理店



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●Specifications and appearance are subject to change without prior notice for improvement.
 ●Exporting the robot requires documentation related to controlled goods under customs regulations. For details, please contact us

URL <https://www.yamaha-motor.co.jp/robot/>

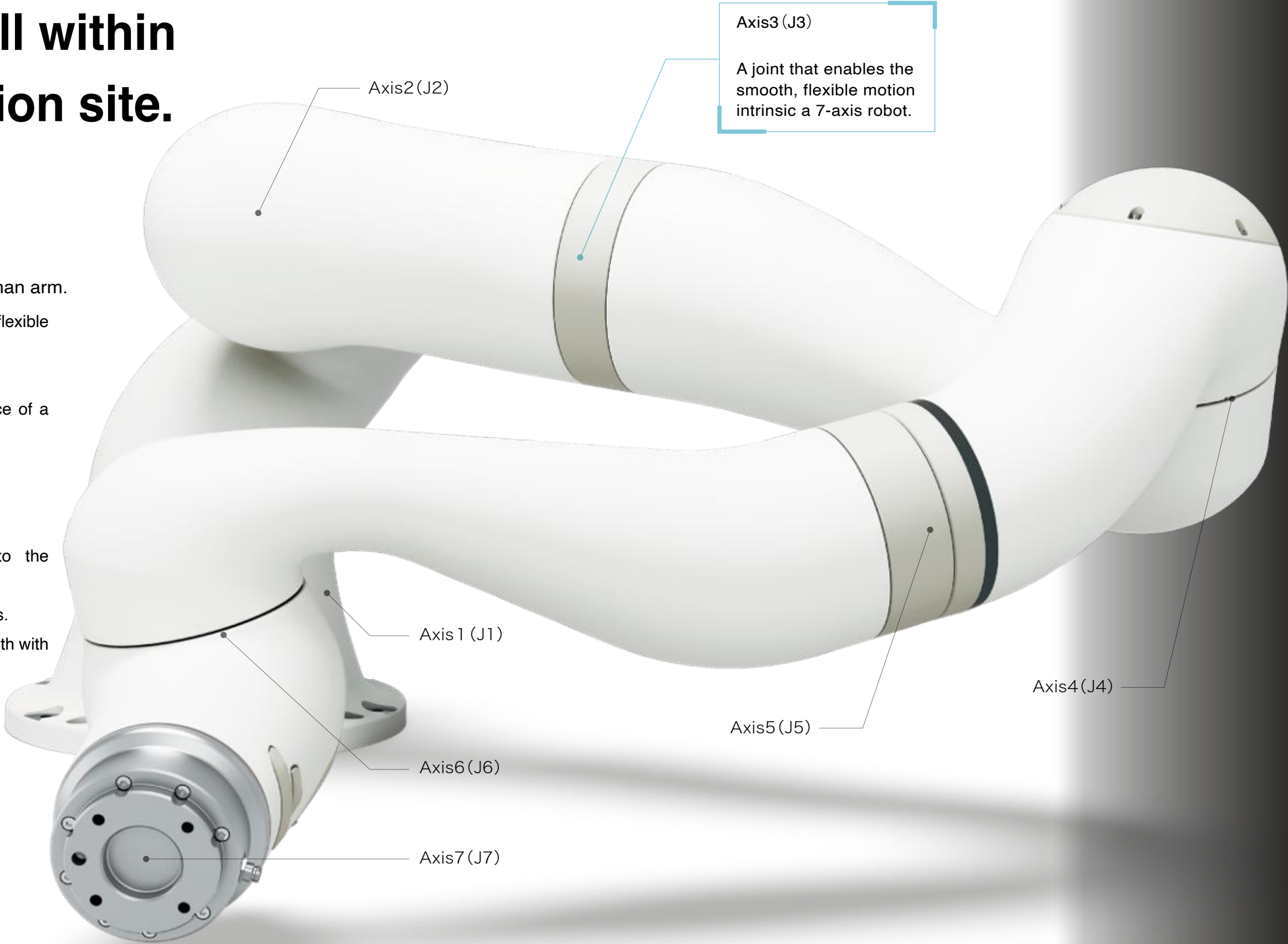
Cobot mounted with human flexibility.

Cobot fits well within your production site.

Commitment to Development
Mimicking the movement of the human arm.
Human arms are capable of highly flexible movements.

To create a robot that can work in place of a human,
we gave it 7 axes.
enabling flexible movement.

The arm minimizes angular parts to the extreme,
and most of them are formed with curves.
It conveys a sense of softness and warmth with a matte finish, aiming to eliminate the "cold and intimidating image" often associated with conventional industrial robots.



Features

Movements made possible by 7 axes

Although most collaborative robots typically have 6 axes, the Yamaha Motor Cobot adds a third axis, enabling a free movement like human arm.

Thanks to the third axis, it can:
Maneuver into tight spaces
Navigate around obstacles
This allows the robot to be placed without being constrained by the factory or work cell layout.



Delicate force control

All 7 axes are equipped with built-in torque sensors, enabling smooth motion through compliance control. Even slight external forces can be detected with high precision, allowing the robot to perform smooth, adaptive tasks such as connector insertion/removal and polishing of mechanisms.



Certified Trust

If this cobot contacts with a worker, it immediately stops operation, so there is no concern about joint damage in any of the axes, allowing for safe use. Diverse ability with a high speed mode is available. you can also use it as an industrial robot with the installioin of safety guarding and proper risk assessment.

Note: Use under specified conditions.

The cobot obtained Third-party certification from TÜV SÜD.



Simple Visual Programming

“Code-Block Programming”=Create programs by connecting blocks that contain command statements.

Note:Free-form programming is also supported.

Even first time users of a Yamaha Motor Cobot can operate it intuitively.



Controller

Compact Design

A compact housing with dimensions of 335mm (W) x 235mm (D) x 115mm (H).

Helps reduce the size of control panels.

The operation pendant is also designed to be very simple and stylish, allowing for easy operation regardless of the operator's skill level.



Type	Specification
Input Voltage Range	DC48V ±2%
Power Capacity (for Drive)	48V 30A max
Power Capacity (for Control)	48V 10A max

Installing a cobot on AGV and AMR

Thanks to 48V DC control, battery sharing with AGVs and AMRs is possible. This significantly contributes to factory automation.



Exhibited at the 2023 International Robot Exhibition
Cobot x AGV



Exhibited at Japan Mobility Show 2023
Mobile Robot Arm

Model Selection

YCO1300		YCO	N			TP	N	
Robot Body	Cable Length Options	Controller	Safety Standard	Communication Options	PoE Option	Pendant	Display	Cable Length Options
	1L:1.5m		Normal	(Blank):None	(Blank): None		None	N:No cable
	3L:3.0m			EP:EtherNet/IP				5M:5m
	6L:6.0m			PN:PROFINET				12M:12m
	12L:12.0m			ES:EtherCAT				

Application

Examples of how the Yamaha Motor Cobot can be used



Visual inspection



Connector insertion/removal



Fitting together



Buffing



Sealing



Screw tightening

Other applications include:
•Palletizing
•Assembly
•Loading/unloading to/ from processing machines
•Pick & place
•Deburring and more

Robot Specifications

Item	Unit	Value	Item	Detail	Unit	Value
Overall Length	mm	1673	Allowable Moment	Wrist Twist(J5)	Nm	28
Maximum Arm Reach (Range)	mm	1300		Wrist Pitch (J6)		28
Number of Axes		7		Wrist Roll (J7)		12
Body Weight	kg	45	Allowable Inertia	Wrist Twist(J5)	Kg·m2	0.95
Installation Conditions		Floor		Wrist Pitch (J6)		0.95
Motor Specifications		AC Servo Motor (All axes, with brakes)		Wrist Roll (J7)		0.25
Torque Sensing		Built-in torque sensors on all axes				
Position Detection Method		Absolute	Wiring		Connector	
Maximum Speed	mm/s	3000(TCP/High-speed mode)	Digital Input		Located on the flange via M8 connector	
Maximum Payload	kg	10	User Ethernet		Located on the 6th axis via M12 connector	
Repeatability	mm	±0.04 (ISO9283)				