

AURA

Advanced Use Robotic Arm



COMAU





AURA

Soft as a Human Touch

The Culture of Automation

Designing advanced automation solutions means thinking about the industry in a new way, developing new scenarios, designing innovative products and creating new ways to streamline production processes.

It requires more than technical competence; it requires a team of professionals whose vision is rooted in a culture of excellence. It also requires a combination of talent, passion and experience that unite to define new trends in automation.

Here at Comau, our passion for our work reflects who we are.

Comau HUMANufacturing

Industry 4.0. The factory is changing to become a network of flexible, modular and scalable automation systems that are capable of operating autonomously or in a secure synergistic way with operators, always connected and under control.

With AURA, automation is no longer confined within barriers, but it collaborates with human beings: this is what we like to call Comau HUMANufacturing.



Discover AURA: almost human

The skin which covers this Comau robot recalls human skin sensitivity.

AURA supports humans as they perform manual operations by optimizing the work process.

Speed is tuned, depending on the device signals, which makes it possible for the robot to move in open space or in contact operations by following programmed trajectories or learning from the operator via manual guidance.

Why AURA is unique:

- compared to collaborative robots on the market, it has the highest payload and reach;
- high speed mode is dynamically managed, when collaboration mode is not required;
- collision avoidance solution applied to robot and tools;

Safe and Sensitive

The Challenge of Collaborative Robotics

To build a flexible production environment, it is necessary to:

- remove fences or other obstacles to create a barrier-free floor;
- allow humans and robots to work side-by-side, complementing each other's particular skills;
- allow operators to interact easily with robots, correcting their behavior, as needed, and quickly teaching them new tasks.

Comau AURA technology is flexible enough to be compliant with all types of collaborative operations

TYPE OF COLLABORATIVE OPERATION	MAIN MEANS OF RISK REDUCTION
Safety-rated monitored stop	No robot motion when operator is in collaborative work space
Hand guiding	Robot motion only through direct input of operator
Speed and separation monitoring	Robot motion only when separation distance above minimum separation distance
Power and force limiting by inherent design or control	In contact events robot can only impart limited static and dynamic forces

AURA technology certified by TÜV SÜD according to EN ISO 13849-12015

6 safety layers for a modular approach

STANDARD CONFIGURATION

Foam

Contact sensor

Proximity sensor

OPTIONS

Manual guidance

Laser scanner management

Force control

Features

- High payload and reach collaborative robot (170 kg, 2.8 m reach)
- Collision avoidance system
- Automatic switch between collaborative/high speed modes
- Mode identification based on LED color
- Fully collaborative robotic systems (including gripper)
- Hollow Wrist robot

Benefits

- Optimized working process even in heavy payload collaborative application
- Floor space optimization
- Reduction of yellow components (e.g. fences)
- Easy re-programming by non-experts due to manual guidance

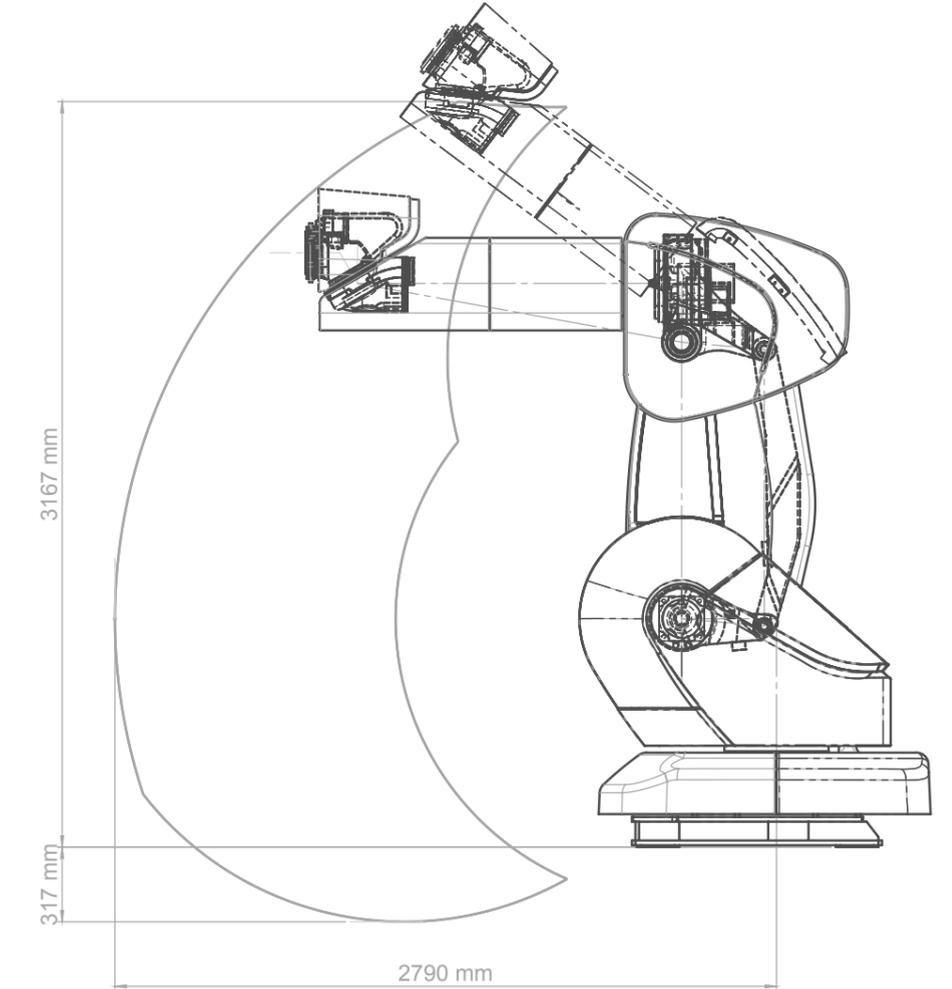


With AURA we transform a standard Comau Hollow Wrist robot into a collaborative solution.

Technical specifications

VERSION	AURA-170-2.8	
Structure / n° axes	anthropomorphous / 6 axes	
Max load at wrist	170 kg (375 lbs)	
Torque on axis 4	1010 Nm	
Torque on axis 5	804 Nm	
Torque on axis 6	412 Nm	
Stroke / (Speed)	Axis 1	+/- 180° (100 °/s)*
	Axis 2	+85° / - 20° (85 °/s)*
	Axis 3	-50° / -220° (100 °/s)*
	Axis 4	+/- 180° (130 °/s)*
	Axis 5	+/- 180° (140 °/s)*
	Axis 6	+/- 180° (190 °/s)*
Maximum horizontal reach	2790 mm (109.8 in)	
Repeatability	+/-0,1 mm	
Robot weight	1615 kg (3560 lbs)	
Tool coupling flange	ISO 9409 - 1 - A 125 ISO 9409 - 1 - A 160	
Motors	AC brushless	
Position measurement system	encoders	
Total power installed	8 kVA	
Working temperature	0 / +45 °C	
Storage temperature	-25 °C / + 55 °C	
Robot color	blue and grey	
Assembly position	floor	
Maximum linear speed	up to 2000 mm/s*	
Maximum collaborative linear speed	up to 500 mm/s	
Maximum proximity detection	up to 200 mm	

* Maximum speed not collaborative mode (with additional safety device)





COLLISION AVOIDANCE SYSTEM

- Proximity sensor integrated into the skin to detect the operator in advance, thereby avoiding a collision
- Skin system is also applicable for the end-effector, providing a fully collaborative application

GREEN: collaborative mode

Blinking GREEN: manual guidance mode or programming mode



BLUE: hard touch (manual restart)

Blinking BLUE: soft touch (automatic restart)



RED: alarm or fault



No LED: high speed mode, not collaborative (laser scanner installed)



COLLABORATIVE/NON-COLLABORATIVE MODE SWITCH

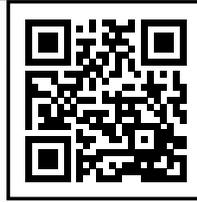
- Laser scanner option allows switch from high performance mode to collaborative mode



Ease of use

- Intuitive interface inspired by smartphones and tablets
- Program in as little as 15 minutes without having to learn a programming language
- Wireless communication
- No need to have a dedicated device for each robot (the tablet can be shared among multiple robots and vice versa)
- Manual guidance mode to move/program the robot without writing SW code

Local distributor



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