

EN

COMAU

AURA

Advanced Use Robotic Arm





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 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

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

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

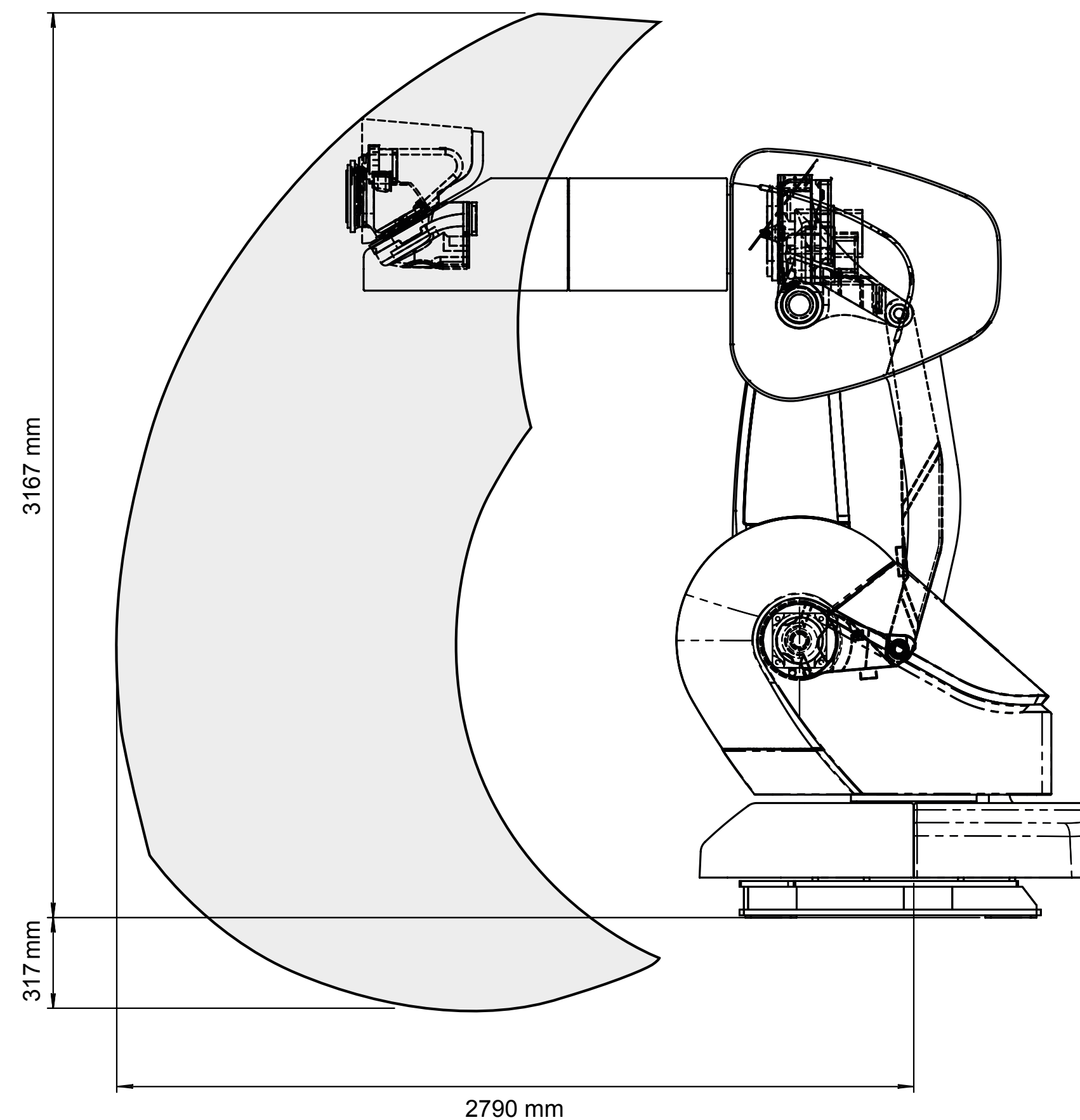
- Optimized working process even in heavy payload collaborative application
- Floor space optimization
- Reduction of yellow components (e.g. fences)
- Easy re-programming by non-experts due to manual guidance



Technical features

VERSION		AURA-170-2.8
Structure / No. of axes		Anthropomorphic / 6 axes
Maximum wrist load		170 kg
Nominal wrist reach		2790 mm
Axis 4 torque		1010 Nm
Axis 5 torque		804 Nm
Axis 6 torque		412 Nm
Stroke /(Max 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)
Repeatability		+/-0,1 mm
Tool coupling flange ISO		9409 - 1 - A 125 9409 - 1 - A 160
Robot weight		1615 kg
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 gray
Mounting position		Floor
Maximum linear speed		up to 2000 mm/s*
Maximum collaborative linear speed		up to 500 mm/s

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

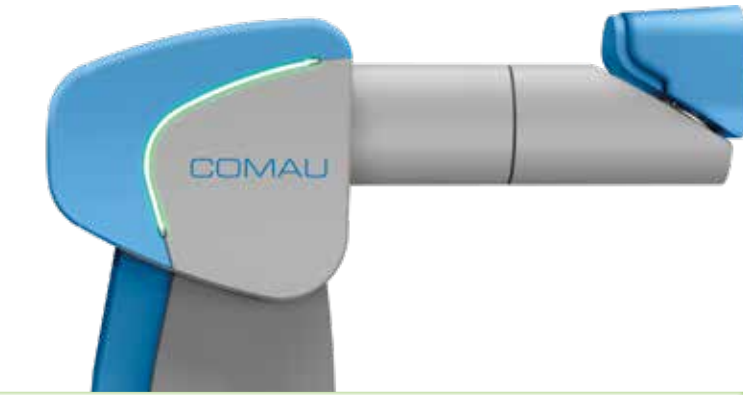




COLLISION AVOIDANCE SYSTEM

- 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

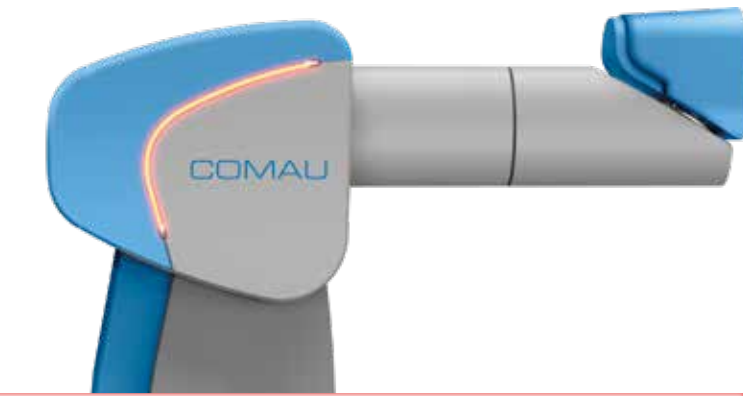
GREEN: collaborative mode
Blinking GREEN: manual guidance mode or programming mode



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



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