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COMAU

# Racer-5

COBOT



**Racer5**  
COBOT

# Comau HUMANufacturing

## Collaboration is the new automation

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.

As a world leader in advanced automation solutions, Comau has always improved manufacturing scenarios through up-to-date and human-centric technologies, capable of enhancing the social and environmental sustainability of the workplaces.

Automation is no longer confined within barriers, but it collaborates with human beings: this is what we like to call Comau HUMANufacturing, the new concept of human-machine collaboration.



## Discover Racer-5-0.80 COBOT

### Features

- **5 kg** payload
- **0.809 m** reach
- **0.03 mm** repeatability
- Collaborative/non-collaborative **speed switch**
- Up to **500 mm/s** cartesian speed in collaborative mode
- Up to **6 m/s** cartesian speed in non-collaborative mode
- Safe Collision Detection function - **PL d CAT. 3** certified by TÜV Süd

### Benefits

- High **repeatability** and **accuracy**
- Racer-5 Industrial robot speed when no human operator near by for an **increased productivity**
- Electrical and air **connections near the wrist** avoiding external harness
- Immediate **awareness** of cobot status due to LED stripe
- Long **life cycle** thanks to mechanical robustness
- **Efficiency** and **flexibility** of the cycle
- **Reduction** of **spaces** for automation
- **Simplified** process **inspection** and quality control

# Racer-5-0.80 COBOT supports humans as they perform manual operations, by optimizing the work process.

Hand guidance enabling button

User button

Electrical & air services integrated on robot wrist:

- RJ45 Ethernet + 2 digital inputs & 2 digital outputs
- Direct air + electrovalve

LED stripe for COBOT status

- GREEN:** collaborative mode
- Blinking Green:** manual guidance mode or programming mode.
- Blinking BLUE:** automatic restart after collision.
- RED:** System alarm
- NO LED:** full speed mode

The diagram illustrates the Racer-5-0.80 COBOT with various callouts. On the left, a side view of the robot arm is shown with a 'Hand guidance enabling button' on the upper arm. In the center, a top-down view of the robot arm highlights a 'User button' and 'Electrical & air services integrated on robot wrist', which includes 'RJ45 Ethernet + 2 digital inputs & 2 digital outputs' and 'Direct air + electrovalve'. On the right, a vertical stack of four images shows the robot's base with different LED stripe colors: green, blinking green, blinking blue, and red. Below these images, a legend explains the status: 'LED stripe for COBOT status'. The legend includes: 'GREEN: collaborative mode', 'Blinking Green: manual guidance mode or programming mode.', 'Blinking BLUE: automatic restart after collision.', 'RED: System alarm', and 'NO LED: full speed mode'. At the bottom right, a blue box contains the text 'FULL - COLLABORATIVE SPEED SWITCH (Controller option + Safety device installed)' and 'Compliant to ISO/TS 15066 - Tested by Tuv Rheinland', accompanied by an image of a SICK sensor device.

**Full speed mode is dynamically managed, when collaboration is not required**

**FULL - COLLABORATIVE SPEED SWITCH**  
(Controller option + Safety device installed)

- Compliant to ISO/TS 15066 - Tested by Tuv Rheinland

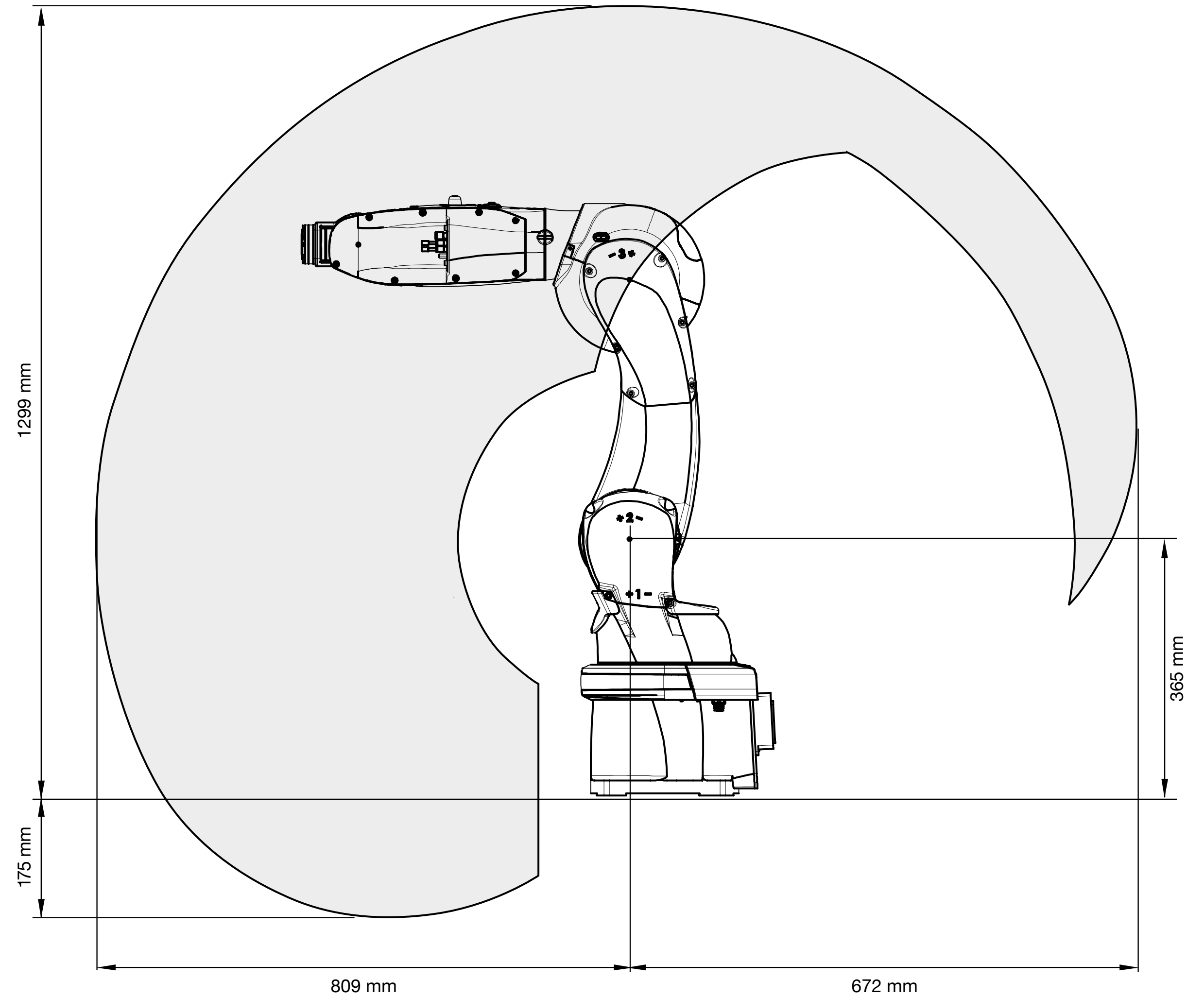
# Technical features

VERSION		Racer-5-0.80 COBOT
Structure / No. of axes		Anthropomorphic / 6 axes
Maximum wrist load		5 kg
Nominal wrist load		1 kg
Axis 4 torque		8,83 Nm
Axis 5 torque		8,83 Nm
Axis 6 torque		4,91 Nm
Admissible inertia on axis 4*		0,42 kg x m <sup>2</sup>
Admissible inertia on axis 5*		0,42 kg x m <sup>2</sup>
Admissible inertia on axis 6*		0,18 kg x m <sup>2</sup>
Stroke /(Max Speed)	Axis 1	+/- 170° (360 °/s) **
	Axis 2	-64° / +114° (300 °/s) **
	Axis 3	-150° / +60° (330 °/s) **
	Axis 4	+/- 200° (500 °/s) **
	Axis 5	- 105°/ +100° (500 °/s) **
	Axis 6	+/- 2700° (800 °/s) **
Max horizontal reach		809 mm
Repeatability		+/- 0,03 mm
Robot weight		34 kg
Features of the tool coupling Robot wrist		ISO 9409 - 1 - A 25
Motors		AC Brushless
Position measurement system		Encoder
Protection degree		IP54
Mounting position		Floor, wall, ceiling
Operating environment temperature		5°C / +40°C
Storage temperature		-10°C / 55°C
Relative humidity		from 5% to 95% without condensation
Maximum temperature gradient		1,5 °C/min

\* Not allowed with maximum load

\*\* Maximum speed

\*\*\* Base vertical cable output available (option)





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