The All New UR20 + Our Next Generation of High-Performance Cobots

External FAQs, version 1.1

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Product Information

General Specifications

What are the general specs for the UR20 robot?

- Payload: 20 kg (44.1 lbs) at full CoG offset and in the entire workspace
- Reach: 1750 mm (68.9 in)
- Footprint: Ø 245 mm 6 x M10 60° 105mm center
- Tool flange: EN ISO-9409-1-80-6-M8
- Weight of UR20 arm, including cable: 64 kg (141.1 lbs)

What's included/in the box if someone orders a standard UR20?

The all new UR20 comes with:

- The new 20 kg payload arm
- control box
- 3PE TP (teach pendant with an integrated 3-position enabling device)
- power cable
- cable between the manipulator and the control box
- documentation

When we go to market, will we have an OEM offering available?
We will have the AC OEM version available.

Why is the UR20 only offered with the 3PE teach pendant?
With the payload and reach, it is reasonably foreseeable that the person teaching the robot needs to have the risks of impact reduced. The 3PE TP provides this protection by operating at a reduced speed and requiring actuation of the enabling device. If the teacher is surprised by movement, then any action to release or squeeze the enabling device will cause a stop. A 3PE TP will be required in the next revision of the robot safety standards.

What software is on the UR20? Will is still run on PolyScope?
Yes, the UR20 and the new/updated lineup is compatible with the latest version of PolyScope. We understand the importance of maintaining a consistent user experience so that our customers and partners who are familiar with deploying and programming UR robots will not have to worry about new software training or steep learning curves.

Which certifications will the new UR20 robot, and the new series meet?
Just like e-Series, our new robots will be certified to EN ISO 13849-1, Cat. 3 PLd and ISO 10218-1 by TÜV Nord.

There is an update to 10218 coming at the end of the year and the UL 1740 will follow, but we've accounted for this in the design.

What will the IP classification for the UR20 arm, standard control box and teach pendant be?
As of today, they are all IP54.
- Dust protected: Limited ingress of dust is permitted.
- Protected against water splash from all direction: Limited ingress is permitted.

What will the UR20 be rated with respect to cleanroom classifications?
ISO 14644-1 Class Cleanroom 5 (robot arm). This is about the particles that our robot puts into the atmosphere; it is not about the type of particle. It has nothing to do with hygiene.
As the control box is identical to the control box known from the e-Series, it reaches a class cleanroom 6.

Which applications are we targeting with the new UR20 robot?
Key applications:
1. Palletizing
2. Welding
3. Materials Handling
4. Machine Loading
5. Machine Tending

Safety

Is the UR20 robot as safe as our other cobots?

UR robots are Power and Force Limited (PFL) robots which are often called "cobots". PFL robots are industrial robots with added safety functions to enable the development of safe applications. But only the application of a robot can be judged to be safe or unsafe. A PFL robot can be used in applications where the robot, end-effector or workpiece is allowed to contact a person – but these applications require limiting the energy transfer to the person. UR PFL robots provide a suite of safety functions to limit the energy transfer. A risk assessment is required for all robot applications – collaborative and non-collaborative. The risk assessment determines what safeguarding and what safety function settings are needed. The integration is required to comply to ISO 10218-2 for both collaborative and non-collaborative applications.

Our goal is to make possible the safe integration of robots in collaborative operations and enable easy integrate with industry standard safety devices. A UR robot is one that delivers great performance and fantastic ease of use so that they are a joy to use in all applications, whether collaborative or non-collaborative.

Just like e-Series, our new series of robots will be certified to both EN ISO 13849-1, Cat. 3 PLd and ISO 10218-1 by TÜV Nord. Also just like our e-Series cobots, the new cobots have 17 customizable safety functions so far. This includes having stopping time limiting and stopping distance limiting – unique safety functions! UR cobots are designed to enable operation alongside skilled operators in collaborative applications*.

Risk assessment for a collaborative application might result in combining a safety scanner for speed and separation monitoring (SSM) with power and force limiting (PFL) provided by UR robots.

New Series

Is the UR20 going to be part of a new robot lineup from UR?

Yes, the UR20 will be the first of our new high performance cobot lineup, with additional models being added to the portfolio later.

When is the rest of the new series coming?

Additional cobots will be announced in late 2023/early 2024.

Will the 3PE teach pendant be used on the arms in the new series?

Yes. A 3PE TP will be required in the next revision of the robot safety standards.

Hardware Compatibility

The HPLR robot has a larger base. Why isn't it the same as a UR10/UR10e?

Higher payload and longer reach cause higher forces on the base. We always work to engineer as small a footprint as possible, but a UR10e footprint cannot withstand the forces for the larger UR20 robot. As a result, the size of the base had to be increased.

Will e-Series and CB3 end-effectors work on the new series?
The new and larger robots will accommodate a larger tool flange to support higher forces. A tool flange adapter is available that can reduce the size of the tool flange to match smaller end-effectors, but care should be taken to limit the forces to any smaller dimensioned end-effectors.

Can I use a normal e-Series standard teach pendant with the HPLR arm?
No. The new UR20 robot will require and ship with a 3PE teach pendant.

Will a protective device (safety sensor system) that works with an e-Series robot work with the new UR20 cobot?
Yes, the collaborative robots from UR have a set of common interfaces that allow for interaction with same range of sensors.

Software Compatibility
Will existing UR+ certified URCaps work with the new UR20 robot?
Yes, as the robot shares the same PolyScope software, existing URCaps will work. Please note that some URCaps have a dependency on the robot configuration and software version. Verify compatibility with the URCap provider.

Can I transfer programs/code from my e-Series cobot to the new series?
Yes. Existing URCaps and programs will work on the new series, however some UR+ products could have a limitation.

Will UR continue to sell and support CB3, e-Series and this new series indefinitely?
We will continue to support CB3 and e-Series robots for the foreseeable future. CB3 will reach "end of life" sooner than the e-Series.

Pricing
How much will the new UR20 arm cost?
TBD.

See it in Action
Which shows will we be showing the UR20 robot at?
As of mid-March, we're hoping to have the UR20 + Robotiq palletizing demo, or another demo to be built by a partner, at the following events:
- Automatica; Munich, Germany >> June 21-24, 2022
- IMTS; Chicago, IL, USA >> September 12-17, 2022
- MOTEK; Stuttgart, Germany >> October 4-7, 2022
- PACK EXPO; Chicago, IL, USA >> October 23-26, 2022
- FABTECH; Atlanta, Georgia >> November 8-10, 2022

- All4pack, Paris, France >> November 21-24, 2022

Ordering and Shipping

Will customers be able to put an order in on the date of the announcement or at the trade show?
No.

When will UR begin taking orders for the UR20? When will it begin shipping?
We anticipate taking orders in Q1 2023. If this is the case, we're on track to begin shipping in mid-2023.

Will customers be able to access simulation tools prior to production release?
Yes, customers will have access to these tools later. Please contact a distributor for details.