

Frequently Asked Questions – UR20

About UR20

What is the UR20 from Universal Robots?

The UR20 is the first in a series of next generation industrial, collaborative robots from Universal Robots. It was redesigned from the ground up, from the software which brings unprecedented motion control capabilities, to the joint architecture resulting in up to 30% more speed and 25% more torque.

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.

What are the key specifications of the UR20?

The UR20 covers larger scale workplace setups with 1750 mm (68.9 in) of reach. Thanks to the new joint design, increased joint speeds allow you to boost your cycle times, while handling a payload of 20 kg (44.1 lbs), without compromising stability. Additional specifications you may find useful include:

Tool flange: EN ISO-9409-1-80-6-M8

Weight: The UR20 arm, including cable, weighs 64 kg (141.1 lbs)

What is the maximum payload capacity of the UR20?

The UR20 gives you a maximum payload capacity of 20kg (44.1 lbs) at full Center of Gravity (CoG) offset and in the entire workspace.

Which certifications does and will the new UR20 robot and the new series meet?

Just like e-Series, our new series of robots will be certified to EN ISO 13849-1, Cat. 3 PLd and ISO 10218-1 by TÜV Nord. There is an update to ISO 10218 coming at in the middle of next the year (2023) and the UL 1740 will follow, but we've accounted for this in the design.

Placing an order

How much does the UR20 cost?

Your local distributor will be able to advise you on price.

Do I have to purchase the robot or is leasing also an option?

Yes, it is! Universal Robots has partnered with DLL a fully owned subsidiary of Rabobank, to offer asset financing solutions in partnership with equipment manufacturers and distributors around the world. Please reach out to your trusted UR distributor to learn more.

Our leasing service is optional if you prefer a different choice such as your local bank.

Applications

What applications will the UR20 support me in?

We believe our customers will find the UR20 useful in many different applications. At this time, we see the UR20 as being a particularly good fit in operations like:

Palletizing

Welding

Materials Handling

Machine Loading

Machine Tending

Installation

I might want to change the UR20 installation at some point, due to changing needs in my production setup. Will the UR20 support me in that?

Yes. The UR20 is the lightest 20 kg industrial, collaborative robot in the market (64 kg in total), allowing a manageable re-installation in your facilities. At the same time, it has a small footprint, taking up less of your valuable space.

The UR20 runs on our PolyScope software offering the flexibility to change or re-configure programs as needs arise.

Unfortunately, I do not have special electrical hookups in my facility. Will this prohibit me from utilizing a UR20?

No. Even with the big step up in performance, a single-phase standard power outlet is all that's needed to power the UR20.

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

Yes. A 3PE TP will be delivered as standard TP in the next revision of the robot safety standards (ISO 10218).

What is the difference between the 3PE TP and the standard teach pendant?

First, a 3PE TP will be required in the next revision of the robot safety standards (ISO 10218). We at UR think that a 3PE is a necessity when working with a industrial, collaborative robot of the size and payload of the UR20, the 3PE TP ensures optimal safety, when working closely to the robot.

Software

What PolyScope software version is used with the UR20?

- PolyScope, 5.14 to support existing URcaps
- PolyScope 6 to support the new URcapX format and all future functionality

Is the UR20 supported by PolyScope 5.13?

No, the UR20 only runs on PolyScope 5.14 which introduces the updated robot size as well as updates to free-drive necessary to handle the larger robot body.

Can I downgrade my UR20 to PolyScope 5?

Yes, you can choose to run 5.14 instead of PolyScope 6.

UR+

Will existing UR+ certified URCaps work with the new UR20?

Yes, when using PolyScope 5.14, all existing URCaps will work with the UR20.

Please note that when using PolyScope 6, some URCaps have a dependency on the robot configuration and software version. Verify with your URcap provider.

I noticed that this tool flange is larger. Can I use end-effectors I already purchased for my e-Series and/or CB3 with the UR20?

Yes. 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. The new and larger robots will accommodate a larger tool flange to support higher forces.

Do I need any special tools or equipment (vs what someone has for e-Series)?

Only standard tools are needed to install and operate a UR20 robot.

Will the 3PE TP functionality impact my UR+ product?

Yes, in some special cases. If your UR+ product contains a freedrive button, you might see an impact on its functionality. In this special case, the freedrive button on the UR+ product will require to be safety grated.

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 clamping situation and limiting the energy transfer to the person to protect them from injury. UR PFL robots provide a suite of safety functions to limit both motion and 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 functions 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 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. Also just like our e-Series cobots, the new cobots have 17 customizable safety functions. These include stopping time limiting and stopping distance limiting – unique safety functions!*

**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.*