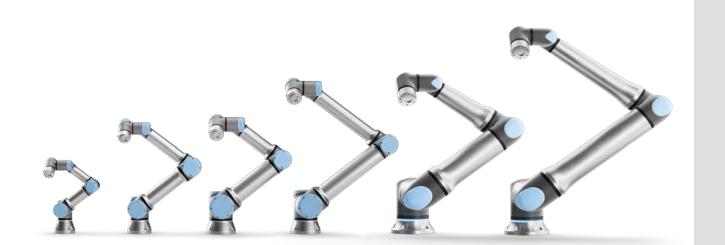


# UNIVERSAL ROBOTS







# The UR Cobots are packed with truly amazing benefits.

- 1 Intitive programming
- 2 Fast set up
- Flexible deployment
- 4 Collaborative and safe cobots
- 5 Fastest payback in the Robot Industry

### Quick payback:

UR cobots routinely deliver payback within a year.

# HUMAN-ROBOT COLLABORATION IS 85% MORE PRODUCTIVE

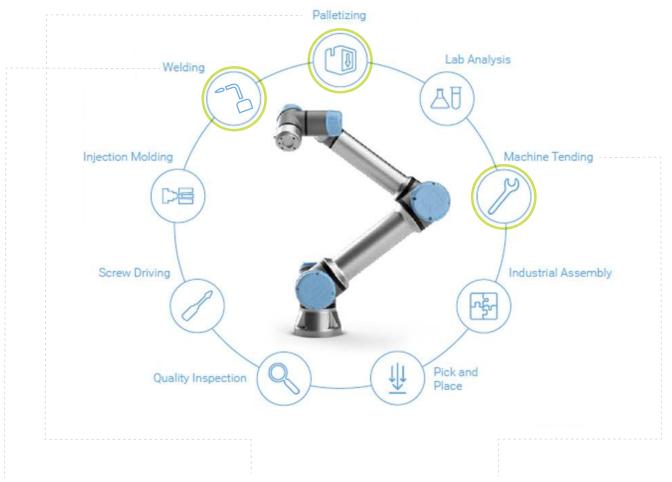
than humans or robots alone

Source: MIT research data on financial Times article "Meet the cobots: humans and robots together on the factory floor

They free people up to do what they're good at: creating, collaborating, and doing something amazing.

Collaborative robots, or cobots, expand capacity for businesses of all sizes. They can change the way employees work; integrate seamlessly with existing processes, layouts, and equipment; and improve quality across many applications. Collaborative automation makes the workplace safer and lets workers pursue more valuable tasks.

# Applications



### Welding

Empower your welders while maintaining consistent, high weld quality and improving workplace safety.

### Palletizing

Protect your people from repetitive work while optimizing end-of-line with payback on investment in less than a year.

### **Machine Tending**

Improve work safety for your machine tending people while saving cost and increasing productivity.

## Industries

- Automotive and Subcontractors
- Food and Agriculture

.

- Furniture and Equipment
- Electronics and Technology
- Metal and Machining

.

- Plastic and Polymers
- Pharma and Chemistry

•

- Scientific and Research
  - Your Industry?

### Universal Robots' three tiers of Service Offerings, UR CARE, UR INSIGHT, and UR PERFORMANCE, are tailored to your needs.

### **UR** Care

Get a successful deployment, an easy-to-use portal, and e-learning to keep your business on track. This service is included with every cobot purchase.

### **UR** Insight

Universal Robots ensures you have sufficient insight from the cobot to drive the right decisions. Achieve understanding by collecting and analyzing data about your cobot.

- UR Academy e-Learning
- ✓ Ticket Management via myUR
- myUr Monitoring Dashboard
- O Notifications
- 🔵 Log report
- Annual Cobot Performance Check
- Expert recommendations and advice
- Covered under warranty

### UR Academy e-Learning

- Ticket Management via myUR
- myUr Monitoring Dashboard
- Notifications
- 🕢 Log report
- Annual Cobot Performance
  Check
- Expert recommendations and advice
- 🔵 Covered under warranty

### **UR Performance**

A service that will help you to optimize performance of your cobot and build your confidence in a product that just works. Leverage cobot expertise and consultation to optimize configurations, productivity and performance.

$\oslash$	UR Academy e-Learning
$\oslash$	Ticket Management via myUR
$\oslash$	myUr Monitoring Dashboard
$\oslash$	Notifications
$\oslash$	Log report
$\oslash$	Annual Cobot Performance Check
$\oslash$	Expert recommendations and advice
$\bigotimes$	Covered under warranty

UR INSIGHT includes everything in UR CARE and introduces the ability to connect the robot for visibility and analysis of daily activities.

### myUR Monitoring Dashboard

- Track cycle times and cycle counts in real-time from a smart device
- Monitor multiple robots' workcells on one dashboard and access the dashboard from any networked computer

### Notifications

• Receive notifications for robot stops, alarms, and application-specific events while at the office or on the road

### Log Report

 Diagnose production inefficiencies and gain a deeper understanding of your productivity through exportable/ downloadable log reports. UR PERFORMANCE includes everything in UR INSIGHT, adding an annual performance check conducted by an automation expert and the ability to extend your warranty.

### Annual Cobot Performance Check

- Ensures the cobot configuration is set up correctly
- Areas of risk, potential wear, and possible efficiencies are all highlighted

### Expert Advice

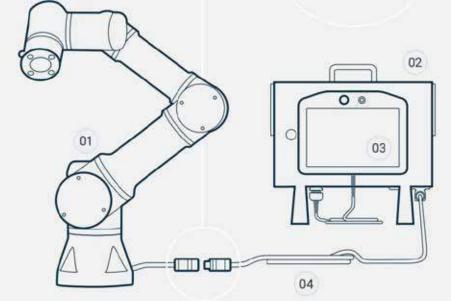
• High-level personalized expert recommendations

### Covered Under Warranty

- Option to extend the warranty of the robot up to 36 months.
- $\cdot\,$  Extended warranty requires the Annual Cobot Performance
- $\cdot\,$  Check be conducted annually

# System specifications





Unboxing your UR cobot:

- 01 Robot arm
- 02 Control box
- 03 Teach pendant
- 04 Cable (available in 4 options)
- 05 Base flange connector

Every e-Series purchase includes a 6 m standard cable and a base flange connector that enables through-side and throughhole mounting for your robot.

The cable suite offers variants available for separate purchase that simplify the deployment of many common applications, like extending your range with a 12 m version of the standard cable. Also available is the High-Flex cable, designed to withstand more extensive and repeated bending. Making the right selection from the cable suite helps manufacturers tend multiple machines, weld larger workpieces, and in-crease pallet height with ease

### **Cable suite**

Specification	Standard*	Standard Extended**
Material	PVC	PVC
Color	Black	Black
Length	6 m (19.7 ft)	12 m (39.4 ft)
Diameter (d)	12.1 mm (0.48 in)	12.1 mm (0.48 in)
Specification	High-Flex**	High-Flex Extended**
Material	PUR	PUR
Color	Blue	Blue
Length	6 m (19.7 ft)	12 m (39.4 ft)
Diameter (d)	13.4 mm (0.53 in)	13.4 mm (0.53 in)
Bend Radius	4 x d (static) 8 x d (dynamic)	4 x d (static) 8 x d (dynamic)
Bend Cycle	5 million	5 million

\* Included with robot purchase

\*\* Separately sold accessory

# UNIVERSAL ROBOTS

### Robot arm















#### **Specification** UR3e UR5e UR10e **UR16e UR20 UR30** Payload at full CoG offset and in the entire workspace 3 kg (6.6 lbs) 5 kg (11 lbs) 12.5 kg (27.5 lbs) 16 kg (35.3 lbs) 20 kg (44.1 lbs) 30 kg (66.1 lbs) Reach 500 mm (19.7 in) 850 mm (33.5 in) 1300 mm (51.2 in) 900 mm (35.4 in) 1750 mm (68.9 in) 1300 mm (51.2 in) Degrees of freedom < 6 rotating joints > < 6 rotating joints >

Programming < 12 inch touchscreen with PolyScope graphical user interface >

### Performance

Power consumption Maximum power Moderate operating settings	300 100		570 200		615 350		585 350		750 500		750' 300	
Operating temperature range < Ambient temperature: 0-50 °C (32-122 °F) >				< Ambient temperature: 0-50 °C (32-122 °F) >								
Safety Functions	Safety Functions <17 configurable safety functions >				<17 configurable safety functions >							
In compliance with < EN ISO 13849-1 (PLd category 3) EN ISO 10218-1 >		218-1 >	< EN ISO 13849-1 (PLd category 3) EN ISO 10218-1 >									
Force sensing, tool flange Range Precision Accuracy	<b>Force, x-y-z</b> 30.0 N 2.0 N 3.5 N	<b>Torque,</b> <b>x-y-z</b> 10.0 Nm 0.1 Nm 0.1 Nm	<b>Force, x-y-z</b> 50.0 N 3.5 N 4.0 N	<b>Torque,</b> <b>x-y-z</b> 10.0 Nm 0.2 Nm 0.3 Nm	<b>Force, x-y-z</b> 100.0 N 5.0 N 5.5 N	<b>Torque,</b> <b>x-y-z</b> 10.0 Nm 0.2 Nm 0.5 Nm	<b>Force, x-y-z</b> 160.0 N 5.0 N 5.5 N	<b>Torque,</b> <b>x-y-z</b> 10.0 Nm 0.2 Nm 0.5 Nm	<b>Force, x-y-z</b> 200 N 5.5 N 10 N	<b>Torque,</b> <b>x-y-z</b> 20.0 Nm 0.2 Nm 1 Nm	<b>Force, x-y-z</b> 200 N 5.5 N 10 N	<b>Torque,</b> x-y-z 20.0 Nm 0.2 Nm 1 Nm

### Movement

Typical TCP speed	11	m/s	1r	n/s	1r	n/s	1r	n/s	2r	n/s	2r	n/s
Pose repeatability per ISO 9283	± 0.03 mm		± 0.03 mm		± 0.05 mm		± 0.05 mm		± 0.1 mm		± 0.1 mm	
Axis Movement	Working range	Maximum speed	Working range	Maximum speed	Working range	Maximum speed	Working range	Maximum speed	Working range	Maximum speed	Working range	Maximum speed
Base Shoulder Elbow Wrist 1 Wrist 2 Wrist 3	± 360° ± 360° ± 360° ± 360° ± 360° ± 360° Infinite	± 180°/s ± 180°/s ± 180°/s ± 360°/s ± 360°/s ± 360°/s	± 360° ± 360° ± 360° ± 360° ± 360° ± 360°	± 180°/s ± 180°/s ± 180°/s ± 180°/s ± 180°/s ± 180°/s ± 180°/s	± 360° ± 360° ± 360° ± 360° ± 360° ± 360°	± 120°/s ± 120°/s ± 180°/s ± 180°/s ± 180°/s ± 180°/s ± 180°/s	± 360° ± 360° ± 360° ± 360° ± 360° ± 360°	± 120°/s ± 120°/s ± 180°/s ± 180°/s ± 180°/s ± 180°/s ± 180°/s	± 360° ± 360° ± 360° ± 360° ± 360° ± 360°	± 120°/s ± 120°/s ± 150°/s ± 210°/s ± 210°/s ± 210°/s ± 210°/s	± 360° ± 360° ± 360° ± 360° ± 360° ± 360°	± 120°/s ± 120°/s ±150°/s ± 210°/s ± 210°/s ± 210°/s ± 210°/s

#### **Features**

IP Classification	IP54 water protection	IP54 water protection	IP54 water protection	IP54 water protection	IP65 water protection	IP65 water protection
Cleanroom classification ISO 14644-1 *Velocity and payload	Class 6 at 20%* Class 7 at >= 40%*	Class 4 at 20%* Class 5 at >= 40%*	Class 5 at <=40%* Class 6 at 80%*	Class 5 at <=40%* Class 6 at 80%*		
Noise	> 60 dB (A)	> 65 dB (A)	> 65 dB (A)	> 65 dB (A)	> 65 dB (A)	< 65 dB(A)
Arm mounting	Any Orientation	Any Orientation	Any Orientation	Any Orientation	Any Orientation	Any Orientation
l/O Ports Digital in Digital out Analog in	2 2 2	2 2 2	2 2 2	2 2 2	2 2 2	2 2 2
Tool I/O power supply voltage	12/24 V	12/24 V	12/24 V	12/24 V	12/24 V	12/24 V
Tool I/O power supply	600 mA	1.5 A (Dual pin) 1 A (Single pin)	2 A (Dual pin) 1 A (Single pin)	2 A (Dual pin) 1 A (Single pin)	2 A (Dual pin) 1 A (Single pin)	2 A (Dual pin) 1 A (Single pin)

### Physical

Footprint	Ø 128 mm	Ø 149 mm	Ø 190 mm	Ø 190mm	Ø 245 mm	Ø 245 mm
Materials		< Aluminum	, Plastic, Steel >	< Aluminum, Plas	tic, Steel >	
Tool flange connector type		< M8   M8 8-pin (male), E	N ISO-9409-1-50-4-M6 >		< M8   M8 8-pin (female)	EN ISO-9409-1-80-6-M8 >
Cable length (robot arm)			< 6 m (236 in) >	< 6 m (236 in) >		
Weight including cable	11.2 kg (24.7 lbs)	20.6 kg (45.4 lbs)	33.5 kg (73.9 lbs)	33.1 kg (73 lbs)	64 kg (141.1 lbs)	63.5 kg (139.9 lbs)
Humidity		< 90%RH (non-condensing) >		< 90%RH (non-o	ondensing) >	



### Control box and teach pendant Technical specification



**OEM 5.2** 



Features

**Control box** 

reatures				
Robot types	UR3e, UR5e, UR10e, UR16e	UR3e, UR5e, UR10e, UR16e, UR20	UR3e, UR5e, UR10e, UR16e	UR3e, UR5e, UR10e, UR16e, UR20
Software compatibility	PolyScope 5 and below	All PolyScope versions	PolyScope 5 and below	All PolyScope versions
IP classification	IP44	IP44	IP20	IP20
ISO 14644-1 class cleanroom	6	6	6	6
Operating temperature range	0-50 °C (32-122 °F)			
I/O Ports				
Digital In	16	16	16	16
Digital Out	16	16	16	16
Analog In	2	2	2	2
Analog Out	2	2	2	2
Quadrature Digital Inputs	4	4	4	4
I/O power supply	24V, 2A	24V, 2A	24V, 2A	24V, 2A
Communication	Modbus TCP PROFINET Ethernet/IP USB 2.0, USB 3.0			
RAM	2 GB	4 GB	2 GB	4 GB
Power Source	100-240 VAC, 47-440 Hz	100-240 VAC, 47-440 Hz	AC model: 100-240 VAC, 47-440 Hz DC model: 24 - 48 VDC	AC model: 100-240 VAC, 47-440 Hz DC model: 24 - 48 VDC

### Physical

Control box size (W x H x D)	460 mm x 449 mm x 254mm (18.2 in x 17.6 in x 10 in)	460 mm x 449 mm x 254 mm (18.2 in x 17.6 in x 10 in)	451 mm x 168 mm x 150 mm (17.6 in x 6.6 in x 5.9 in)	451 mm x 168 mm x 150 mm (17.6 in x 6.6 in x 5.9 in)
Weight	12 kg (26.5 lbs)	12 kg (26.5 lbs)	AC model: 4.7 kg (10.4 lbs) DC model: 4.3 kg (9.5 lbs)	AC model: 4.7 kg (10.4 lbs) DC model: 4.3 kg (9.5 lbs)
Power supply output	UR3e: 600 W UR5e, UR10e, UR16e: 1500 W	UR3e: 600 W UR5e, UR10e, UR16e, UR20: 1500 W	UR3e: 600 W UR5e, UR10e, UR16e: 1500 W	UR3e: 600 W UR5e, UR10e, UR16e, UR20: 1500 W
Materials	Powdered coated steel	Powdered coated stee	Aluminium	Aluminium
Humidity	90 %RH (non-condensing)	90 %RH (non-condensing)	90 %RH (non-condensing)	90 %RH (non-condensing)

Standard 3PE **Teach pendant Features** Robot types e-Series (standard) e-Series (optional), UR20 (standard) IP classification IP54 IP54 Incl. in certifications EN ISO 10218-1 EN ISO 13849-1 EN ISO 10218-1 EN ISO 13849-1 Humidity 90 %RH (non-condensing) 90 %RH (non-condensing) 1280 x 800 pixels 1280 x 800 pixels Display resolution Freedrive 1 button 2 buttons to support for right and left handed operation **Physical** Materials Plastic (PC/ASA) Plastic (PC/ASA) Teach pendant size 300 mm x 231 mm x 50 mm (11.8 in x 9.1 in x 1.97 in) 300 mm x 231 mm x 50 mm (11.8 in x 9.1 in x 1.97 in) Weight (inclding 1 m TP cable) 1.6 kg (3.5 lbs) 1.8 kg (3.961 lbs) Cable length (Teach pendant) 4.5 m (177.17 in) 4.5 m (177.17 in)

1st Edition published January 2023. \* Preliminary specification. Subject to change





Call Allied Automation at 800-214-0322 to schedule a complimentary on-site evaluation and robot demo.

### Contact Us Today.

When an Allied Automation expert walks in your door, everything's on the table. We're engineers first so our goal is the same as yours- finding the best solution for you, not just selling you a specific brand or part. In Allied, you have a partner who gathers all the information available, learns your specific needs, then puts together all the pieces to find the parts or the system that's just right for you. Contact your Allied Automation representative today.



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