

Game Changing Benefits

Fast Set-Up

- The revolutionary set-up of the Robot has reduced typical robotic deployment measured in weeks to a matter of hours.
- The average set-up time is only half a day.
- The out-of-box experience for an untrained operator to unpack it, mount it and program the first simple task is typically less than an hour.



Easy Programming

- No programming experience required
- Set up and operate the robots with intuitive, 3D visualisation.
- Simply move the robot arm to desired waypoints or touch the arrow keys on the easy-to-use touch screen tablet.

The UR Robot offers significant productivity and safety advantages, even for small operations & promises fastest return for automation investments.

Flexible Re-Deployment

- Light weight
- Space-saving
- Easy to re-deploy to multiple applications without changing the existing production layout.
- Moving the robot to new processes is fast and easy
- Agility to automate almost any manual task including those with small batches or fast change-overs.
- Capable of re-using programs for recurrent tasks.

Collaborative & Safe

- Human operators can now be replaced in dirty, dangerous and dull jobs to reduce repetitive strain and accidental injuries.
- 80% of the thousands of UR robots worldwide operate with no safety guarding (after risk assessment), right beside human operators. The safety system of the robots is approved and certified by TÜV (The German Technical Inspection Association)

Fastest Payback in the Industry

- Advanced robotic automation
- No traditional added costs associated with robot programming, set-up and dedicated shielded work cells.
- Finally Robotic automation is affordable for small and medium sized enterprises (SME).

Applications



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UR UNIVERSAL ROBOTS
Platinum Distributor

ALSTRUT
POSSIBILITIES UNLIMITED



Universal Robots
75,000+
cobots deployed
Globally

Alstrut
400+
cobots deployed
India

UR+ Ecosystem Partnership - The Largest Lineup

AIM
ROBOTICS

Cambrion

cobotizur

FlexiBowl

GRIP

IMPACT
ROBOTICS

Made
CNC+

Ch robot

ROBOSUIT

qbrobotics

ROBOTIQ

Smooth
Robotics

SPIN
ROBOTICS

NORDBO
ROBOTICS

TripleA
robotics

Optimize with human-robot collaboration
Productivity. Adaptability. Reliability.

Robot arm

Technical specification



Specification	UR3e	UR5e	UR10e	UR16e	UR20	UR30
Payload	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 >			< 12 inch touchscreen with PolyScope graphical user interface >		

Performance	UR3e		UR5e		UR10e		UR16e		UR20		UR30	
Power consumption	300 W		570 W		615 W		585 W		750 W		750 W	
Maximum power	300 W		570 W		615 W		585 W		750 W		750 W	
Moderate operating settings	100 W		200 W		350 W		350 W		300 W		300 W	
Operating temperature range	< Ambient temperature: 0-50 °C (32-122 °F) >											
Safety functions	< 17 configurable safety functions >											
In compliance with	< EN ISO 13849-1 (PLd category 3) EN ISO 10218-1 >						< EN ISO 13849-1 (PLd category 3) EN ISO 10218-1 >					

Force sensing, tool flange/torque sensor	UR3e		UR5e		UR10e		UR16e		UR20		UR30	
Force, x-y-z	30.0 N	10.0 Nm	50.0 N	10.0 Nm	100.0 N	10.0 Nm	160.0 N	10.0 Nm	200.0 N	20.0 Nm	200.0 N	20.0 Nm
Torque, x-y-z	0.1 Nm	0.1 Nm	0.2 Nm	0.2 Nm	0.2 Nm	0.2 Nm	0.2 Nm	0.2 Nm	0.2 Nm	0.2 Nm	0.2 Nm	0.2 Nm
Range	±360°	±360°	±360°	±360°	±360°	±360°	±360°	±360°	±360°	±360°	±360°	±360°
Precision	±360°	±360°	±360°	±360°	±360°	±360°	±360°	±360°	±360°	±360°	±360°	±360°
Accuracy	±360°	±360°	±360°	±360°	±360°	±360°	±360°	±360°	±360°	±360°	±360°	±360°

Movement	UR3e		UR5e		UR10e		UR16e		UR20		UR30	
Typical TCP speed	1 m/s		1 m/s		1 m/s		1 m/s		2 m/s		2 m/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	±360°	±180°/s	±360°	±180°/s	±360°	±120°/s	±360°	±120°/s	±360°	±120°/s	±360°	±120°/s
Shoulder	±360°	±180°/s	±360°	±180°/s	±360°	±120°/s	±360°	±120°/s	±360°	±120°/s	±360°	±120°/s
Elbow	±360°	±180°/s	±360°	±180°/s	±360°	±180°/s	±360°	±180°/s	±360°	±150°/s	±360°	±150°/s
Wrist 1	±360°	±360°/s	±360°	±180°/s	±360°	±180°/s	±360°	±180°/s	±360°	±210°/s	±360°	±210°/s
Wrist 2	±360°	±360°/s	±360°	±180°/s	±360°	±180°/s	±360°	±180°/s	±360°	±210°/s	±360°	±210°/s
Wrist 3	Infinite	±360°/s	±360°	±180°/s	±360°	±180°/s	±360°	±180°/s	±360°	±210°/s	±360°	±210°/s

Features	UR3e		UR5e		UR10e		UR16e		UR20		UR30	
IP classification	IP54 water protection		IP54 water protection		IP54 water protection		IP54 water protection		IP65 water protection		IP65 water protection	
Cleanroom classification	Class 6 at 20%* Class 7 at <- -40%* *Velocity and payload		Class 4 at 20%* Class 5 at <- -40%* *Velocity and payload		Class 5 at <-40%* Class 6 at 80%* *Velocity and payload		Class 5 at <-40%* Class 6 at 80%* *Velocity and payload					
Noise	< 65 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	
I/O Ports	2	2	2	2	2	2	2	2	2	2	2	2
Digital in	2	2	2	2	2	2	2	2	2	2	2	2
Digital out	2	2	2	2	2	2	2	2	2	2	2	2
Analog in	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	UR3e		UR5e		UR10e		UR16e		UR20		UR30	
Footprint	Ø 128 mm		Ø 149 mm		Ø 190 mm		Ø 190mm		Ø 245 mm		Ø 245 mm	
Materials	< Aluminium, Plastic, Steel >											
Tool flange connector type	< M8 M8 8-pin (male), EN ISO 9409-1-50-4-M6 >						< M8 M8 8-pin (male), EN 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) >											
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) >											



Industry standard communication protocols such as Modbus, PROFIsafe, and EtherNet/IP are included in all cobot models. Our open platform enables manufacturers to expand connections between cobots and machines without hidden costs.

UR's e-Series cobots are certified by TÜV NORD for ISO10218-1 and safety functions are rated as Cat.3 PL d according to ISO 13849-1. It is, however, crucial to perform a risk assessment to ensure all required safety measures are in place.