EWELLIX

A Schaeffler Company

Vertical axis for Universal Robots collaborative robots LIFTKIT-UR

UNIVERSAL ROBOTS+
Certified
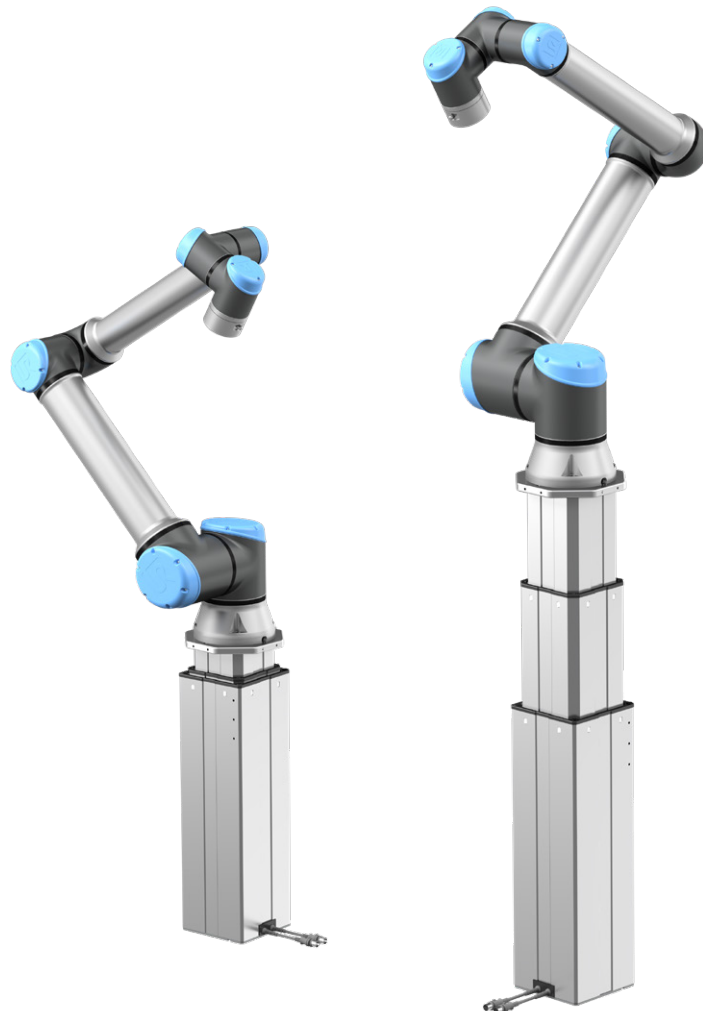
The heritage of innovation

Ewellix is a global innovator and manufacturer of linear motion and actuation solutions. Our state-of-the-art linear solutions are designed to increase machine performance, maximise uptime, reduce maintenance, improve safety and save energy. We engineer solutions for assembly automation, medical equipment, mobile machinery, distribution and a wide range of other industrial applications.

Technology leadership

We earned our reputation through decades of engineering excellence. Our journey began over 50 years ago as part of the SKF Group, a leading global technology provider. Our history provided us with the expertise to continuously develop new technologies and use them to create cutting edge products that offer our customers a competitive advantage.

In 2019, we became independent and changed our name to Ewellix. We are proud of our heritage. This gives us a unique foundation on which to build an agile business with engineering excellence and innovation as our core strengths.

Global presence and local support

With our global presence, we are uniquely positioned to deliver standard components and custom-engineered solutions, with full technical and applications support around the world. Our skilled engineers provide total life-cycle support, helping to optimise the design, operation and maintenance of equipment thus improving productivity and reliability while reducing costs. At Ewellix, we don't just provide products; we engineer integrated solutions that help customers realise their ambitions.
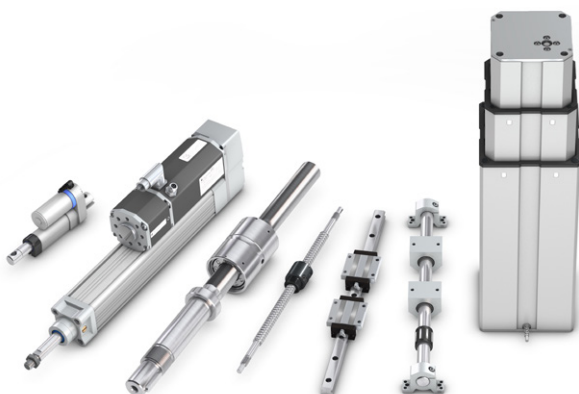
Schaeffler Group – We pioneer motion

Ewellix is since 2023 owned by the Schaeffler Group.

As a leading global supplier to the automotive and industrial sectors, the Schaeffler Group has been driving forward groundbreaking inventions and developments in the fields of motion and mobility for over 75 years.

With innovative technologies, products, and services for electric mobility, CO_2-efficient drives, Industry 4.0, digitalization, and renewable energies, the company is a reliable partner for making motion and mobility more efficient, intelligent, and sustainable.

Schaeffler manufactures high-precision components and systems for powertrain and chassis applications as well as rolling and plain bearing solutions for a large number of industrial applications.

Benefits for handling and inspection

Ewellix provides effective solutions to complete vertical adjustment in a smart way with a wide range of "ready to mount" additional linear axis solutions. We designed them for different applications, giving to your robot an extended operation range.

Fully automated pick and place solutions are becoming a new standard with packaging stations.

A standard collaborative robot does not have such a large vertical working range. With the Ewellix LIFTKIT the base of the robot can be lifted or lowered to work at optimal position.

Stacking on pallets starts at floor level, but the stack can be up to 2 m high, and that's where LIFTKIT can increase your packaging station efficiency.

And every time you need a repetitive operation, as end of line quality inspection, our LIFTKIT can guarantee precision and reliability to maximize your results.

Here below an application example in automotive assembly lines, with a custom LIFTKIT vertical axis for ceiling mounting installation.

Linear axis for collaborative robots LIFTKIT-UR

Operating range extension

- Vertical lifting of the cobot by up to 1 400 mm with compact retracted height
- Robust column design for industrial use, vibration free motion and virtually maintenance free

Plug-and-play solution

- Hardware interface compatible with UR3, UR5, UR10 and UR16 robots
- Universal Robots+ certified product
- Software control integrated with UR controller (URCaps) for easy motion programming
- Basic control option with digital I/O for all cobot manufacturers

Cost savings and higher productivity

Cobots combined with Ewellix LIFTKIT provide a cost-effective solution to upgrade an existing assembly shop, moving from a manual handled to a fully automatized line.
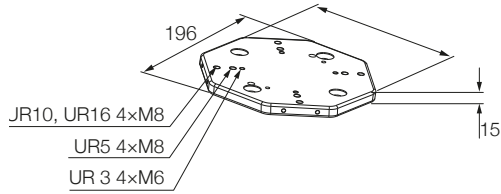
UNIVERSAL ROBOTS+
Certified

Technical data

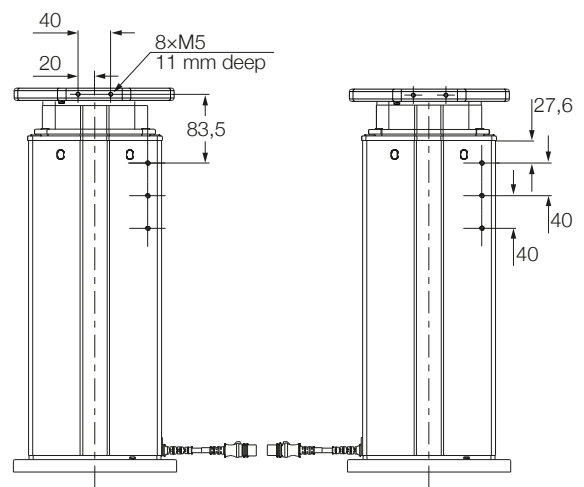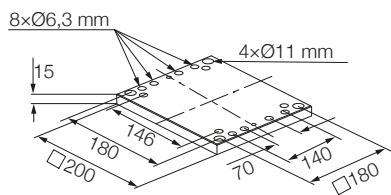|	Unit	LIFTKIT-UR-601
Column type	-	TLT
Performance Data		
Max. Push load	N	1 500
Max. Pull load	N	0
Max. dynamic moments	Nm	210
Max. static moment	Nm	3 000
Max. linear speed	mm/s	80
Duty cycle	-	10% (20% at 500N)
Mechanical Data		
Screw type	-	Acme screw
Stroke range	mm	500 - 1 400
Retracted length (software controlled)	mm	Stroke/2 + 275
Weight @ 0 mm stroke	kg	21
Δ weight per 500 mm stroke	kg	1,7
Robots compatibility	-	UR3, UR5, UR10, UR16, CB-Series and e-series
Cable management	-	Threads on column and interface
	-	plate to attach cable management
Electrical		
Input Voltage/Current		120 VAC / 6,5 A 230 VAC / 3,3 A 24 VDC / 10 A
I/O voltage	-	24 VDC
Emergency stop	-	Connection to UR safety I/O
Communication		
Control interface	-	URCaps plugin compatible with CB3.1 / Polyscope 3.6 or higher
Positioning, repeatability	mm	± 1
Accessible positions	-	any
Feedback	-	Position feedback via URCaps
Soft start and stop	-	Implemented for smooth operation
Software control	-	URcap
Environment		
Type of protection		IP40
Ambient temperature	°C	+10 to +40
Max. humidity	%	85
Vibration	-	Stationary industrial environment

Dimensional drawing
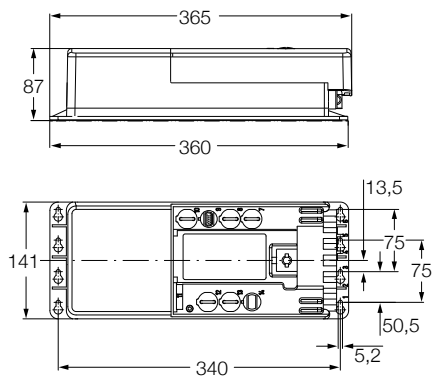
TLT lifting column

Robot attachment plate

196

JR10, UR16 4×M8
UR5 4×M8
UR 3 4×M6

15

TLT Column

4×M10 □101
30 mm deep

□129

Stroke ±4

□146

□163

3×M5
12 mm deep
Holes also on
opposite side

Retracted
length ±4
(without
mounting
plates)

4×M10
30 mm deep

Length
2 300 mm

40

20

8×M5
11 mm deep

83,5

27,6

40

40

Bottom fixation plate

8×Ø6,3 mm

4×Ø11 mm

15

146

180

□200

70

140

□180

Controller

365

87

360

13,5

75

75

141

50,5

5,2

340
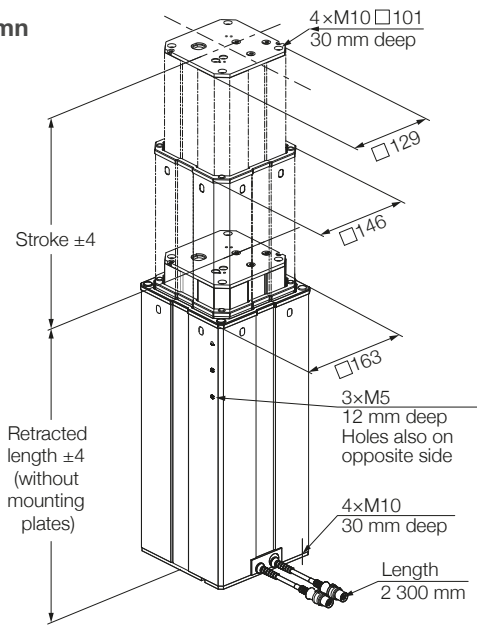
Cable management

Threads for cable management attachments

Connection diagram

Motion control

Electrical
230/120 V
AC24 V DC

Robot attachment plate
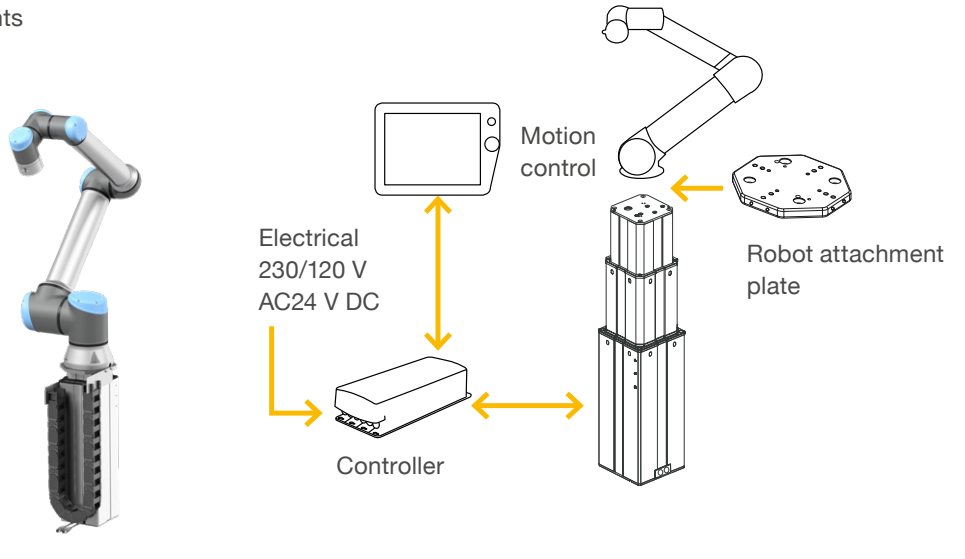
Controller

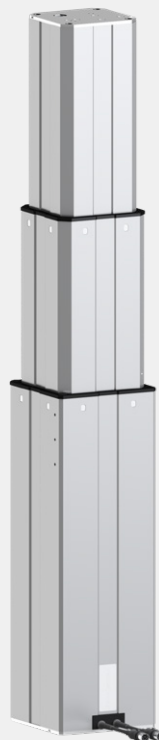## LIFTKIT contains
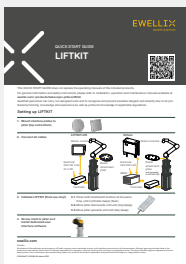
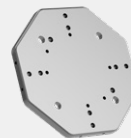*Quick Start Guide*

*Teach pendant not included

Controller

Lifting column

Robot attachment plate

Bottom fixation plate

Handswitch

Power cable

Controller I/O cable

RS232 cable

Software functionality

The URCaps software for the LIFTKIT allows easy positioning access directly within the UR Polyscope environment.

Setup

In the installation tab, the user can manually move the linear axis in both directions and define multiple user specific positions, that are accessible in programming mode.

Motion programming

Within the UR motion program, the LIFTKIT axis is easily integrated through a URCaps command module. Simply insert this element from the structure tab at the desired position of the program. Additionally, reading and setting positions is possible through a script function.

Safety elements

The LIFTKIT has a range of safety elements built in to allow its integration into a robot application.

Software updates

To download the latest software update please check on ewellix.com/support/media-library -> Software updates -> LIFTKIT
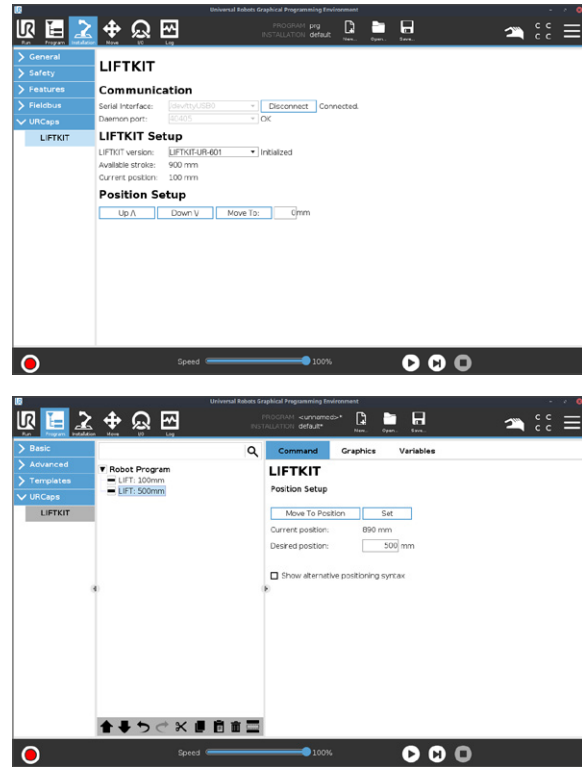
LIFTKIT software functionality

NOTE:

The LIFTKIT-UR is not a functional safety system compliant with EN ISO 13489-1 or IEC 62061. To integrate the LIFTKIT-UR into a functional safety chain, external safety devices have to be integrated into the overall system.
Please move the robot arm close to the center of gravity of the column when moving the LIFTKIT.
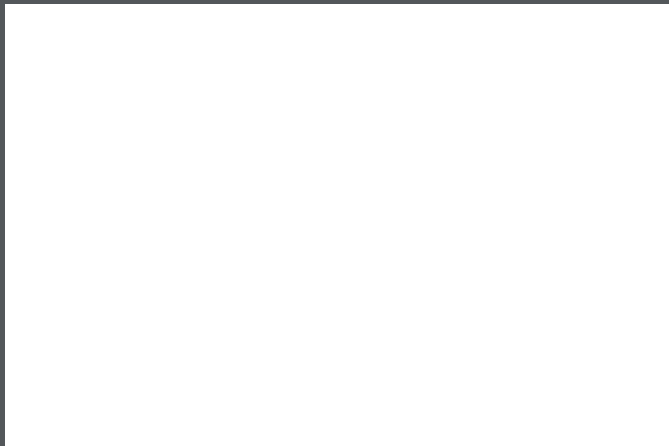
Ordering key

LIFTKIT - [ ][ ] - [ ][ ][ ] - [ ][ ]0 0 - [ ][ ][ ]

Robot

UR   Universal Robots

Stroke

	Stroke	Retracted length	Extended length
500	500 mm	525 mm	1 025 mm
600	600 mm	575 mm	1 175 mm
700	700 mm	625 mm	1 325 mm
800	800 mm	675 mm	1 475 mm
900	900 mm	725 mm	1 625 mm
A00	1 000 mm	775 mm	1 775 mm
B00	1 100 mm	825 mm	1 925 mm
C00	1 200 mm	875 mm	2 075 mm
D00	1 300 mm	925 mm	2 225 mm
E00	1 400 mm	975 mm	2 375 mm

Electrical options

00	24 V DC
11	120 V AC / US cable
22	230 V AC / EU cable
23	230 V AC / CN cable
24	230 V AC / UK cable
25	230 V AC / CH cable

Column type

601   TLT

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