

MiRHook™

Designated use

Collaborative mobile robot with hook

for fully-automated pick-up and delivery of carts

Dimensions

Length 600 to 1250 mm (lowest to highest position)

Width 600 mm

Height 550 to 900 mm (lowest to highest position)

Height above floor Robot: 50 mm; Gripping height: 60 mm - 400 mm

Weight (without load) 97 kg

Pulling capacity

Load on trolley up to 300 kg

Speed and performance

Running time 8-10 hours or 15-20 km (depending on load)

Maximum speed 1.5 m/s (5.4 km/h)

Maximum grade increase 5% with 200 kg load

Turning radius (without trolley) 0.83 m (around center of robot)

Swinging radius (with trolley) Total length of robot and cart plus 0.55 m

Positioning accuracy (placing trolley) ±20 cm from center of position, 10° accuracy

Power

Battery Li-NMC, 24 V, 40 Ah; charging time: up to 3 hours (0-80%: 2 hours)

Internal charger Input: 100-230 V ac, 50-60 Hz / Output: 24 V, max 15 A

Environment

Ambient temperature range +5°C to 50°C (humidity 10-95% non-condensing)

IP class IP 20

Communication

WiFi Dual-band wireless AC/G/N/B

Bluetooth (external equipment, e.g. sliding doors) 4.0 LE, range: 10-20 m

I/Os USB and Ethernet

Safety sensors

SICK laser scanners S300 (front and back) 360° visual protection around robot

3D camera Intel RealSense™ on robot detection of objects ahead 5-50 cm above floor

3D camera Intel RealSense™ on front of hook detection of objects ahead up to 200 cm above floor

Ultrasonic scanners (4 pcs.) detection of transparent objects ahead, e.g. glass doors

Cart

Length 500 to 4000 mm

Width 400 to 1500 mm

Height 200 to 2000 mm
