

Designated use	
Collaborative mobile robot with hook	for fully-automated pick-up and delivery of carts
Dimensions	
Length	1180 to 1275 mm (highest to lowest positions)
Width	580 mm
Hight	550 to 900 mm (highest to lowest positions)
Hight above floor	Robot: 50 mm; Gripping height: 50-390 mm
Weight	103 kg
Color	
Ral	7011
Towing Capacity	
Load on cart	Up to 500 kg at <1% incline - 300 kg at 5% incline
Speed and Performance	
Battery run time	8-10 hours or 15-20 km (depending on load)
Maximum speed	1.1 m/s (4 km/h)
Turning radius (without cart)	520 mm (around center of robot)
Swinging radius (with cart)	Total length of robot and cart plus 550 mm
Positioning accuracy	+/-200 mm 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	IP20
Communication	
WiFi	Dual-band wireless AC/G/N/B
Bluetooth	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 50-500 mm above floor
3D camera Intel RealSense™ on front of hook	Detection of objects ahead up to 2000 mm above floor
Ultrasonic scanners (4 pcs.)	Detection of transparent objects ahead, e.g. glass doors
Cart	
Length	500 to 2400 mm
Width	400 to 1500 mm
Height	200 to 2000 mm



