TUSKROBOTS
EUROPE

TUSK ES OMNI

Omnidirectional pallet-handling robot



Technical specifications

Basic parameters

Overall dimensions	**1,297 × 1,497 × 170 mm**
Maximum lifting weight / self-weight	**1,000 kg / 380 kg**
Fork height / fork extension distance	**90 mm / 1,400 mm**
Maximum lifting height	**≤330 mm**
Turning width	**1,908 mm**
Wireless communication	**2.4 / 5 GHz dual-band; IEEE 802.11a/b/g/n**
Operating temperature	**0-45 °C**

Movement capability

Navigation mode	**SLAM + DM code**
Movement mode	**Omnidirectional**
Speed, unloaded	**0-1.44 m/s**
Speed, fully loaded	**0-1.2 m/s**
Rated acceleration	**1 m/s²**
Stop accuracy	**DM ±5 mm / ±1° SLAM ±10 mm / ±1°**
Maximum clearance	**30 mm**
Maximum slope	**4° (7%) 2° at full fork extension**
Maximum step	**10 mm**

Safety protection

Obstacle detection	**Dual front + dual rear laser sensors; 360° coverage**
Front laser range	**0-3 m**
Mechanical protection	**Emergency stop, reset button and full-body protection strip**
Alarm functions	**Voice and visual alarms**
Fork tip protection	**Collision switch**
Safety level	**PLd**

Lithium battery performance

Battery type	**LFP ($LiFePO_4$)**
Rated voltage / capacity	**51.2 V / ≥30 Ah**
Battery endurance	**≥8 h**
Charging time	**≤1.5 h**
Battery life	**2,000 full charge cycles**

Pallet opening height

Overall range	**95-130 mm**
At 1,000 kg load	**100-130 mm**