AMR200

VERSATILE AUTONOMOUS MOBILE ROBOT FOR LOAD TRANSPORT – HEIGHT 1400 MM









TRAINING APPLICATIONS

- **Integrating a latest-generation, multipurpose autonomous mobile robot into an existing training environment (packaging line, maintenance workshop, Fab Lab, etc.).**
- **Mapping the robot's working environment and defining specific travel zones.**
- **Creating trajectories between different points**
- **Creating a program for a given mission.**

OPERATING PRINCIPLE

The FlexCruiser F1001400 is **a latest-generation Autonomous Mobile** Robot designed **for industrial** use. It can be fitted **with modular** shelves for transporting parcels, boxes and other **products (total payload capacity: 100 kg).**
It optimises internal logistics, especially in narrow environments where loading and unloading are manual.
Extremely quick and easy commissioning, thanks to protocols specially designed by the developer, Ipsum Tek.

The ready-to-use AMR200 package offered by DIDATEC includes the following as standard:

- **1 FlexCruiser** AMR robot, model FC-100-1400, with **mains-powered battery** charger.
- **2 touchscreen control tablets** for shared operation, with the AMR map and position synchronised on both screens.
- **1 Wi-Fi router integrated into** the robot for **long-range communication over a closed network with the supplied** tablets.
- **1 spare battery** with an additional **rapid charger, ensuring** an operational battery is always available.
- **1 height-adjustable loading shelf with a** payload of up to 20 kg, leaving 80 kg of payload capacity on the robot base.
- **Quick-start** user manual + technical **and maintenance manual.**
- **(Other possible configurations on request)**

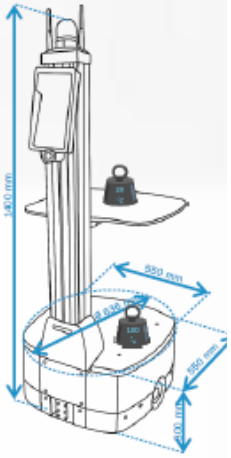
Key benefits:

- **Modularity:** Flexible system with interchangeable trays/shelves to suit requirements.
- **Versatility:** Flexible for freight transport (manual loading/unloading)
- **Efficiency:** Optimizing logistics flows without compromising performance
- **Advanced** precision: Optimized use of AI and visual analysis for complex operations
- **Autonomous** management: Independent operation with centralized control and optimised navigation
- **Ergonomics:** Touchscreen tablet and user-friendly, intuitive HMI for simplified control and management.
- **Simplicity of** maintenance: Easy maintenance for continuous operation

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CARACTERISTIQUES PRINCIPALES :



- **Dimensions et Capacité** : 550 mm (larg.), 636 mm (diag.), hauteur 1400 mm / 300 mm (base), charge utile totale ≤ 100 kg (20 kg/plateau)
- **Autonomie** : Jusqu'à 18 heures de fonctionnement continue
- **Vitesse maximale** : 1 m/s
- **Navigation** : Autonome avec haute précision pour éviter les obstacles et optimiser les trajets
- **IHM locale** : Tablette tactile de contrôle (10 pouces)
- **IA et Vision** : Utilisation avancée (IA + analyse visuelle) pour une navigation précise (+ modules optionnels)
- **Compatibilité** avec des AMR d'autres marques via Fleet Manager universel, opéré par ipsum tek
- **Fiabilité et répétabilité** : Conçu pour des déplacements fréquents et fiables en industrie
- **Protection ESD de série** : Prévention des risques de décharges électrostatiques

SECURITÉ :





- **Chaine de sécurité globale** : SIL3/PLd
- **Déconnexion moteur** : STO SIL3/PLe
- **Contrôle du mouvement moteur** : SLS, SDI, SMS, SIL2/PLd
- **Freinage moteur** : SBC SIL2/PLd (Double circuit sécurisé + protocole de freinage d'urgence et d'évitement d'humains)
- **Interface de propulsion** : CANopen Safety®
- **Profil de contrôle moteur** : CANopen CiA / DS 402
- **LIDAR (SICK) + Logique de d'arrêt de sécurité (SICK)** : pour protection optimale (PId)
- **Caméras 3D** Intel pour la détection d'obstacles
- **Sonar arrière** pour aide au recul (procédure d'approche station de recharge)
- **Bouton d'arrêt d'urgence** et mise sous tension (ON/OFF)
- **Signalisation** lumineuse et sonore

BATTERIE ET CHARGE :



- **Type** : Lithium-ion 23V-800Wh, fournissant une puissance continue pour des missions longues
- **Durée de charge** : Environ 3 heures pour une recharge de 20% à 80%
- **Durée de vie** : jusqu'à 8000 cycles
- **Maintenance** : Remplacement rapide de la batterie en moins d'une minute

CONFORME AUX DIRECTIVES EUROPÉENNES : CE

- **Générales AMR** : EU conformity (CE), ISO EN 12100, ISO EN 13849-1, ISO 3691-1 (supercedes EN 1525), EN 60204-1
- **LIDAR** : ISO EN 13849-1:2015, ISO EN 13482:2014, ISO EN 13855:2010, DIN CLC/TS 62046:2009, CEI TS 62998- 1:2019, ISO EN 13849-1:2015, ANSI/ITSDF B 56.5:2012
- **Batterie certifications** : CE, FCC, RoHS, UN38.3, MSDS

AVAILABLE SUPPLEMENTARY OPTIONS

- **Additional loading tray (up** to 20 kg per tray for a total payload of 100 kg)
- **Automatic charging station,** located using **ArUco technology,** with **precise** docking using **ultrasonic sensors** at the rear of the robot.
- **Additional robot control touchscreen** tablet to provide **more operator call points.**
- **Replacement battery**
- **Desktop rapid charger** for the spare battery.

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Illustrations are for reference only. Version: FT-AMR200-STD-GB

AMR200

ENGLISH TRANSLATION OF ILLUSTRATION TEXT

The original diagrams, photographs and software screens are retained. The English text below provides the corresponding technical information and labels.

Main specifications — illustrated panel

Dimensions and capacity	Width: 550 mm; diagonal: 636 mm; height: 1400 mm / 300 mm (base); total payload ≤100 kg (20 kg per shelf).
Operating time	Up to 18 hours of continuous operation.
Maximum speed	1 m/s.
Navigation	High-precision autonomous navigation, obstacle avoidance and route optimisation.
Local HMI	10-inch touchscreen control tablet.
AI and vision	Advanced artificial intelligence and visual analysis for precise navigation, with optional additional modules.
Compatibility	Compatible with other AMR brands via the universal Fleet Manager operated by IpsumTek.
Reliability and repeatability	Designed for frequent, reliable movements in industrial environments.
ESD protection	Included as standard to prevent electrostatic discharge.

Safety — illustrated panel

Overall safety chain	SIL3 / PLd.
Motor disconnection	STO SIL3 / PLe.
Motor motion monitoring	SLS, SDI, SMS, SIL2 / PLd.
Motor braking	SBC SIL2 / PLd; dual safety circuit, emergency braking and human avoidance protocol.
Drive interface	CANopen Safety®.
Motor control profile	CANopen CiA / DS402.
Protective sensing	SICK LiDAR and SICK safety stop logic for optimum protection (PLd).
Obstacle detection	Intel 3D cameras.
Reversing assistance	Rear sonar for approaching the charging station.
Controls and signalling	Emergency stop; power ON/OFF button; visual and audible signals.

Battery, charging and standards — illustrated panels

Battery	Lithium-ion, 23 V – 800 Wh, providing continuous power for long missions.
Charging time	Approximately 3 hours from 20% to 80%.
Service life	Up to 8000 cycles.
Replacement	Battery replacement in less than 1 minute.

European directives and standards listed in the source:

General AMR: EU conformity (CE), ISO EN 12100, ISO EN 13849-1, ISO 3691-1 (supersedes EN 1525), EN 60204-1.

LiDAR: ISO EN 13849-1:2015, ISO EN 13482:2014, ISO EN 13855:2010, DIN CLC/TS 62046:2009, CEI TS 62998-1:2019, ISO EN 13849-1:2015, ANSI/ITSDF B56.5:2012.

Battery certifications: CE, FCC, RoHS, UN38.3, MSDS.

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