

### GoPal®



robotize

### A NEW STANDARD FOR FLEXIBILITY AND SAFETY

GoPal® is a comprehensive range of fully CEapproved solutions for automating internal pallet transport in factories and warehouses.

Our Autonomous Mobile Robots (AMRs) are designed and approved for safe collaboration with humans and support a wide range of pallet types and payloads.

The GoPal solution provides a fully integrated solution with robots, pallet stations and software, which can be deployed in a matter of days and with only minor changes to existing infrastructure.

# THE GOPAL SAFETY PHILOSOPHY IS INTEGRATED IN ALL OUR SOLUTIONS



#### **FAST ROI**

The GoPal solution will typically begin saving you money within 4-18 months after deployment - depending on salary levels and the shift plan used in your facility.

#### **MAXIMIZE SAFETY**

Deploying AMRs both reduces manual labour as well as reduces accidents caused by forklifts and pallet jacks. The GoPal solution will simply make your workplace safer.

#### MINIMIZE DAMAGES

On occasion, forklift and pallet jack drivers may accidentally destroy goods, materials or even damage parts of your infrastructure. With GoPal, all these costs are minimized.

# HEAVILY LOADED WITH BENEFITS

#### **EASY ADMINISTRATION**

GoPal operates as a single shift - 24/7/365. Never again will you have to plan shifts or call-in replacements. Our AMRs never call-in sick or need a day off.

#### **DATA & COMMUNICATION**

GoPal provides you with a steady stream of valuable data to enable you to continuously optimize your internal pallet operations. GoPal can also be integrated with your ERP/WMS for advanced operations.



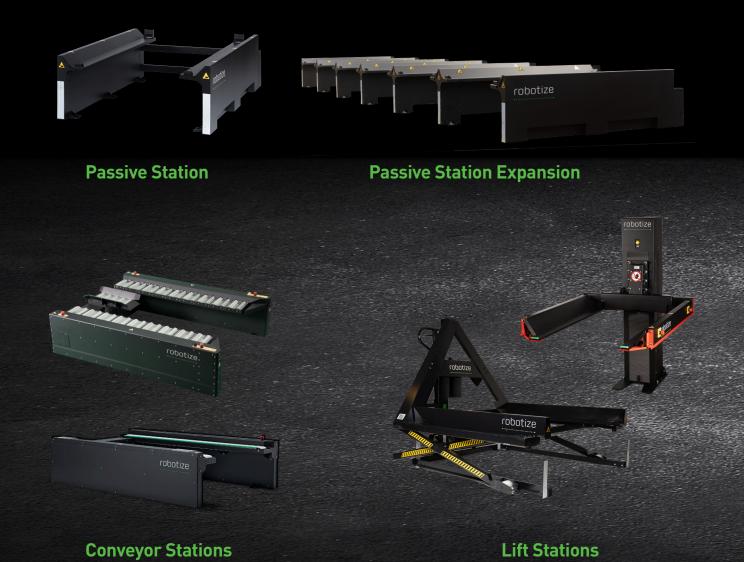
## WIDE RANGE OF PALLET STATIONS

#### • · · · · PICK-UP, DELIVERY AND TRANSIT POINTS

GoPal stations are used as pick-up, delivery, and transit points. Robotize offers a wide range of stations, which allow for seamless integration in your facility - whether you require a conveyor belt interface or a non-standard pick-up delivery height.

#### • · · · · SAFE HUMAN-ROBOT COLLABORATION

All GoPal stations are fully approved for collaboration with humans. The GoPal solution sets new standards for safety in the automation of internal pallet transport, while challenging the notion that robots are unsafe or difficult to handle.



## WIDE RANGE OF ACCESSORIES

#### • · · · · SAFE AND SIMPLE AUTOMATION

To further facilitate the safe and simple automation of your internal pallet transport, all our accessories are designed, produced, and approved to work seamlessly with our AMRs and our GoControl Fleet Manager. The GoPal is a fully integrated plug-and-play solution that is safe and simple - with no surprises or hidden costs.



AUX Interface



Call Button (Single)



Call Button (Multi)



GoControl Eleet Manager



**Pallet Sensor** 



GoPal® Warning Beacon





GoPal® Stations

Pickup/delivery/transit

GoPal® Robot

Autonomous Mobile Robot

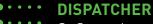
# - FOR MAXIMUM SAFETY AND SIMPLICITY

All robots, call buttons and stations are monitored and controlled by the GoControl Fleet Management System – the heart of the GoPal® Solution.



#### TRAFFIC CONTROLLER

In a multi-robot solution, GoControl maintains the optimal traffic flow for maximum safety and efficiency.



GoControl receives and organizes all orders in the system and dispatches robots according to order priority.



The AUX Interface enables features such as wireless activation of automatic doors, robot deactivation in case of fire, automatic detection/transport ordering for pallets on pallet stations and hardwired interface for transport ordering from control devices (e.g. local machines/PLCs).

#### • · · · · SIMPLE INTERFACE AND DATA PRESENTATION

GoControl captures and presents all system data (robot position on map, distance driven, pallets moved and much more). GoControl also interfaces with your ERP/WMS system.



### TECHNICAL SPECIFICATIONS GoPal® E22 / E24 / E24W / U24W

		E22	E24	E24W	U24W	
DIMENSIONS	Length (mm)	1400				
	Width (mm)	860		1060		
	Height (mm)	340				
WEIGHT	Robots (kg)	187		215	242	
PERFORMANCE	Battery time	6-14 hours or ~ up to 20 km*				
	Maximum speed m/s (km/h)	2,4 (8,6)		2,2 (7,9)		
	Turning radius (from robot centre) (mm)	950		1000		
LOAD	Maximum payload incl. pallet (kg)	500 1000		1200		
	Dimensions (max.), L x W x H (mm)	1240 x 820 x 2400*		1240 x 1020 x 2400*		
PALLET TYPES	Standard Euro pallets	•	•	•		
	Standard half-Euro pallets	•	•	•		
	Industrial Euro pallets			•		
	US/UK pallets				•	
	Other/custom pallets	On inquiry				
LANE CONDITIONS	Minimum lane width (mm)	1200		1400		
	Recommended lane width (mm)	2100		2300		
	High speed lane width (mm)	2800		3000		
FLOOR REQUIREMENTS	Slope average (max.)	Near-level (2%)		evel (2%)		
	Friction coefficient (min.)	0,60				
	Maximum edge height (mm)	4		3		

<sup>\*</sup>Depends on load conditions.

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Laser scanners (360° protection) Mechanical bumper (360° protection)

4 x emergency stop buttons

#### **BATTERY**

Type / voltage LiFePO4 / 48 V

Charge time 45 min. (full charge)

Number of charges About 5.000

#### **ADDITIONAL OBSTACLE AVOIDANCE SENSORS**

3 x 3D cameras (two front facing and one rear facing)

#### **ENVIRONMENTAL**

Operating temperature -10°C to +45°C

Undamaged, original strength maintained

Humidity (max.) 95% (non-condensing)

#### CHARGER INTERFACE

Automatic docking interface (at robot front)

Connector for manually charging (at robot rear)

#### COMMUNICATION

PALLET CONDITION

Wi-Fi 802.11AC

Due to a policy of continued product development, Robotize reserves the right to change any specification without notice.

#### ADVANCED INTRALOGISTICS MADE SIMPLE, SAFE AND SCALABLE

Robotize is a leading manufacturer of mobile and collaborative robotics solutions based just north of Copenhagen in Lyngby, Denmark.

We specialize in the design and manufacture of advanced and safe collaborative Autonomous Mobile Robots (AMRs) for internal pallet transport in factories and warehouses.

We are dedicated to exploring the limits of our fully approved robots in order to provide our customers with all the benefits of automation.

For more information about the GoPal® solution, please visit

WWW.ROBOTIZE.COM

Or call us on

+45 3080 9070

