# GOPAL®

## THE COMPLETE SOLUTION FOR SAFE AND SIMPLE AUTOMATION

robotize

# A NEW STANDARD FOR FLEXIBILITY AND SAFETY

GoPal® is a comprehensive range of fully CE-approved 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 labor 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 pallet 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 pallet stations are fully approved for collaboration with humans. The GoPal solutions set new standards for safety in the automation of internal pallet transport, while challenging the notion that robots are unsafe or difficult to handle.



**GOPAL®
PALLET STATION**



**GOPAL®
PALLET STATION EXPANSION**



**GOPAL®
CONVEYOR PALLET STATION (E)**



**GOPAL®
CONVEYOR PALLET STATION (EW)**



**GOPAL®
POWER STATION**



**GOPAL®
ELEVATION PALLET STATION**

# 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 software. The GoPal is a fully integrated plug-and-play solution that is safe and simple - with no surprises or hidden costs.
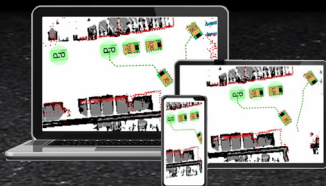
**GOPAL®
AUX INTERFACE**

**GOPAL®
CALL BUTTON (X1)**

**GOPAL®
CALL BUTTON (X5)**

**GOCONTROL
SOFTWARE**

**GOPAL®
PALLET SENSOR**

**GOPAL®
WARNING BEACON**

**GOPAL® PALLET STATIONS**
Pickup/delivery/transit

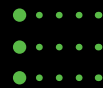**GOPAL® ROBOT**
Autonomous Mobile Robot

# COMPLETE CONTROL – FOR MAXIMUM SAFETY AND SIMPLICITY

All the robots, call buttons and pallet stations in the GoPal solution are monitored and controlled by GoControl – the software at the heart of the system.

### AIR TRAFFIC CONTROLLER
In a multi-robot system, GoControl maintains the optimal traffic flow for maximum safety and efficiency.

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

### GOPAL AUX BOX
The GoPal Aux box adds four features, including 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 such as 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.

ERP/WMS System

GOCONTROL

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## GOCONTROL
Fleet management/data capture

# TECHNICAL SPECIFICATIONS
## GOPAL® 400 / E24 / E24W / U24W

| GoPal Model | | 400 | E24 | E24W | U24W |
|---|---|---|---|---|---|
| **DIMENSIONS** | Length (mm) | 1400 | | 1400 | |
| | Width (mm) | 860 | | 1060 | |
| | Height (mm) | 315 | 340 | 340 | |
| **WEIGHT** | Robots (kg) | 175 | 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 center) (mm) | 950 | | 1000 | |
| **LOAD** | Maximum payload incl. pallet (kg) | 425 | 1025 | 1230 | 1230 |
| | Dimensions (max.), L x W x H (mm) | 1240 x 820 x 2400* | | 1240 x 1020 x 2400* | |
| **PALLET TYPES** | Standard Euro pallets | X | X | X | |
| | Standard half-Euro pallets | X | X | X | |
| | Industrial Euro pallets | | | X | |
| | US/UK pallets | | | | X |
| | 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%) | | | |
| | Friction coefficient (min.) | 0,60 | | | |
| | Maximum edge height (mm) | 4 | | 3 | |

*Depends on load conditions.

## SAFETY
Laser scanners (360° protection)
Mechanical bumper (360° protection)
4 x emergency stop buttons

## ADDITIONAL OBSTACLE AVOIDANCE SENSORS
3 x 3D cameras (two front facing and one rear facing)

## CHARGER INTERFACE
Automatic docking interface (at robot front)
Connector for manually charging (at robot rear)

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

## BATTERY
| | |
|---|---|
| Type / voltage | LiFePO$_4$ / 48 V |
| Charge time | 45 min. (full charge) |
| Number of charges | About 5.000 |

## ENVIRONMENTAL
| | |
|---|---|
| Operating temperature | -10°C to +45°C |
| Humidity (max.) | 95% (non-condensing) |

## PALLET CONDITION
Undamaged, original strength maintained

## COMMUNICATION
| | |
|---|---|
| Wi-Fi | 802.11AC |

## 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 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

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