

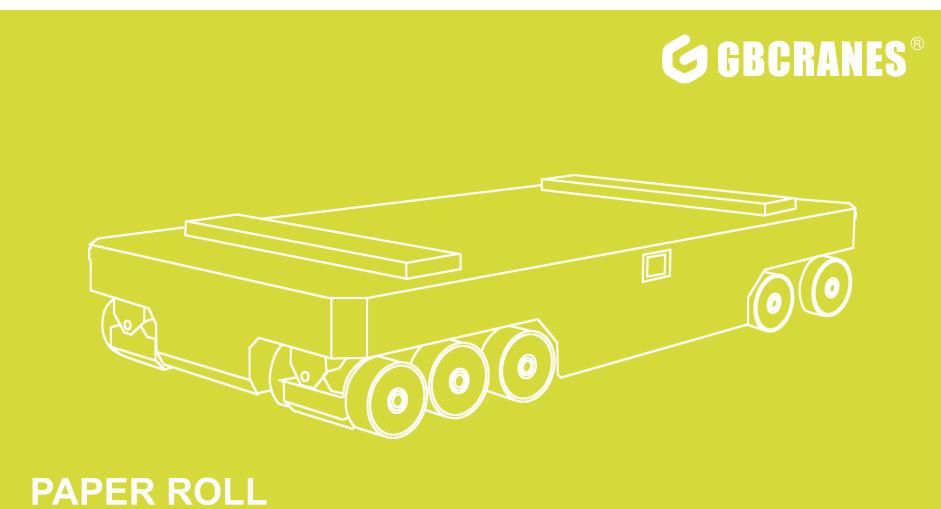
GBL 1.5t Bidirectional Latent Paper Roll Outbound Robot can automatically move underneath materials and transport them to designated storage positions. With bidirectional movement, it enables intelligent material distribution. Paper roll outbound robot operates with high stability, accuracy, and flexibility - capable of forward, backward, turning, and branch-path movement, with a maximum load capacity of 1500 kg. It adopts a hybrid navigation system combining QR code and inertial guidance, ensuring precise positioning, flexible application, and real-time route planning and adjustment. Its advanced scheduling algorithm guarantees stable performance and comprehensive functionality.



## Technical specifications

Technical specifications				
	GBL 1.5t Bidirectional Late	ent Paper Roll Outbound Robot		
Basic parameters	Dimensions L*W*H (mm)	1070*850*280		
	Turning radius (mm)	560		
	Net weight (kg)	320		
	Rated load (kg)	1500		
	Lifting height (mm)	60		
	Obstacle height (mm)	5		
paran	Obstacle width (mm)	10		
asic	Gradeability(%)	≥5		
	Motion mode	Forward, backward, in-place rotation		
	Navigation mode	QR code + Inertial navigation		
	Noise level	≤75dB		
	Communication mode	WIFI, 5G (optional)		
	Charging mode	Automatic + Manual		
ion	Active obstacle avoidance	Front laser detection		
Safety protection	Audio-visual alarm	Light		
ety pi	Bumper detection	Pneumatic bumpers on all sides		
Saf	Emergency stop	Front and rear emergency stop buttons		
ance	Positioning accuracy (mm)	<±5		
form	Angular accuracy (°)	<±1		
Motion performance	Rated speed (no load) (mm/s)	1200		
Motic	Rated speed (full load) (mm/s)	1000		
Battery performance	Battery type	LiFePO <sub>4</sub>		
	Rated voltage (V)	48		
	Capacity (Ah)	40		
	Operating time (h)	8		
	Charging time (h)	≤2 hours after full discharge		

\*Specifications are subject to change without notice. Please contact us for details



PAPER ROLL
OUTBOUND
ROBOT

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The paper roll outbound robot provided by GBCRANES adopt advanced LiDAR-based natural navigation technology. By intelligently recognizing the environment, they achieve precise positioning and autonomous path planning. Their strong environmental adaptability ensures stable operation under high and low temperatures as well as in complex weather  $conditions, allowing them \ to \ perform \ reliably \ even \ in \ outdoor \ environments \ with \ seasonal \ changes. \ With \ a \ maximum \ load$ capacity of up to 10 tons across three standard models, these paper roll outbound robot offer a safe, precise, and efficient unmanned handling solution for paper rolls - significantly improving production efficiency and reducing operational costs.



GBH 3t Heavy-Duty Paper Roll Outbound Robot provides a single-vehicle load capacity of 3 tons. It supports in-place rotation and lateral movement, making it ideal for transporting large-sized paper rolls. It can operate on asphalt, selfleveling, and concrete floors, showing strong adaptability to various ground conditions. Equipped with a self-lifting mechanism, the Paper Roll Outbound Robots can directly carry workpieces or move underneath a rack, lift it, and indirectly transport the load. It adopts a hybrid navigation system combining PGV and QR code for fully automated operation, while also supporting remote control when needed.

















Dimensions L*W*H (mm) 2100*1800*590  Turning radius (mm) 1025  Net weight (kg) 1500  Rated load (kg) 3000  Lifting height (mm) 120  Obstacle height (mm) 5  Obstacle width (mm) 10  Gradeability(%) ≥5  Motion mode Forward, backward, in-place rotation, lateral movement Navigation mode PGV + QR code  Noise level ≤75dB  Communication mode WIFI, 5G (optional)  Charging mode Automatic + Manual  Active obstacle avoidance Front, rear, left, and right laser obstacle detection  Audio-visual alarm Light  Bumper detection Pneumatic bumpers (front and rear)  Emergency stop Emergency stop buttons at front-left/right and rear-left/right  Positioning accuracy (") <±1  Rated speed (no load) (mm/s) 1000  Rated voltage (V) 48  Capacity (Ah) 120  Operating time (h) 8  Charging time (h) 52 hours after full discharge	Technical specifications				
Turning radius (mm) 1025  Net weight (kg) 1500  Rated load (kg) 3000  Lifting height (mm) 120  Obstacle height (mm) 5  Obstacle width (mm) 10  Gradeability(%) ≥5  Motion mode Forward, backward, in-place rotation, lateral movement  Navigation mode PGV + QR code  Noise level ≤75dB  Communication mode WIFI, 5G (optional)  Charging mode Automatic + Manual  Active obstacle avoidance Front, rear, left, and right laser obstacle detection  Audio-visual alarm Light  Bumper detection Pneumatic bumpers (front and rear)  Emergency stop Emergency stop buttons at front-left/right and rear-left/right  Positioning accuracy (mm) <±5  Angular accuracy (°) <±1  Rated speed (full load) (mm/s) 800  Battery type LiFePO₄  Rated voltage (V) 48  Capacity (Ah) 120  Operating time (h) 8			y-Duty Paper Roll Outbound Robot		
Net weight (kg) Rated load (kg) Rated load (kg)  Lifting height (mm)  Obstacle height (mm)  Obstacle width (mm)  Motion mode  Forward, backward, in-place rotation, lateral movement  Navigation mode  Noise level  Communication mode  WIFI, 5G (optional)  Charging mode  Automatic + Manual  Active obstacle avoidance  Front, rear, left, and right laser obstacle detection  Audio-visual alarm  Light  Bumper detection  Pneumatic bumpers (front and rear)  Emergency stop  Emergency stop buttons at front-left/right and rear-left/right  Positioning accuracy (mm)  ×±5  Angular accuracy (°)  Rated speed (no load) (mm/s)  Rated speed (full load) (mm/s)  Battery type  LiFePO₄  Rated voltage (V)  48  Capacity (Ah)  120  Operating time (h)  8		Dimensions L*W*H (mm)	2100*1800*590		
Rated load (kg)  Lifting height (mm)  120  Obstacle height (mm)  5  Obstacle width (mm)  10  Gradeability(%)  Motion mode  Forward, backward, in-place rotation, lateral movement  Navigation mode  Noise level  Charging mode  Automatic + Manual  Active obstacle avoidance  Front, rear, left, and right laser obstacle detection  Audio-visual alarm  Light  Bumper detection  Pneumatic bumpers (front and rear)  Emergency stop  Emergency stop buttons at front-left/right and rear-left/right  Positioning accuracy (mm)  Agular accuracy (°)  Rated speed (no load) (mm/s)  Battery type  Rated voltage (V)  AB  Capacity (Ah)  120  Operating time (h)  8		Turning radius (mm)	1025		
Lifting height (mm)  Distacle height (mm)  Distacle width (mm)  Gradeability(%)  Earne   Distacle width (mm)  Distacle width (mm)  Gradeability(%)  Earne   Distacle width (mm)		Net weight (kg)	1500		
Obstacle height (mm) Obstacle width (mm) Obstacle width (mm) Obstacle width (mm)  Gradeability(%)  Forward, backward, in-place rotation, lateral movement Navigation mode Noise level Noise level Communication mode WIFI, 5G (optional) Charging mode Automatic + Manual Active obstacle avoidance Front, rear, left, and right laser obstacle detection Audio-visual alarm Light Bumper detection Pneumatic bumpers (front and rear) Emergency stop Emergency stop buttons at front-left/right and rear-left/right Positioning accuracy (mm)  **Emergency top** Angular accuracy (°) Rated speed (full load) (mm/s) 800  Battery type LiFePO4 Rated voltage (V) 48 Capacity (Ah) 120 Operating time (h) 8		Rated load (kg)	3000		
Motion mode   Forward, backward, in-place rotation, lateral movement		Lifting height (mm)	120		
Motion mode   Forward, backward, in-place rotation, lateral movement	neters	Obstacle height (mm)	5		
Motion mode   Forward, backward, in-place rotation, lateral movement	Basic paran	Obstacle width (mm)	10		
Motion mode   Forward, backward, in-place rotation, lateral movement		Gradeability(%)	≥5		
Noise level ≤75dB  Communication mode WIFI, 5G (optional)  Charging mode Automatic + Manual  Active obstacle avoidance Front, rear, left, and right laser obstacle detection  Audio-visual alarm Light  Bumper detection Pneumatic bumpers (front and rear)  Emergency stop Emergency stop buttons at front-left/right and rear-left/right  Positioning accuracy (mm) < ±5  Angular accuracy (°) < ±1  Rated speed (no load) (mm/s) 1000  Rated speed (full load) (mm/s) 800  Battery type LiFePO₄  Rated voltage (V) 48  Capacity (Ah) 120  Operating time (h) 8		Motion mode	Forward, backward, in-place rotation, lateral movement		
Communication mode  Charging mode  Automatic + Manual  Active obstacle avoidance  Front, rear, left, and right laser obstacle detection  Audio-visual alarm  Light  Bumper detection  Emergency stop  Emergency stop  Positioning accuracy (mm)  Agular accuracy (°)  Rated speed (full load) (mm/s)  Battery type  Rated voltage (V)  Aguarity (Ah)  Operating time (h)  8  Automatic + Manual  Front, rear, left, and right laser obstacle detection  Light  Proumatic bumpers (front and rear)  Emergency stop buttons at front-left/right and rear-left/right  1000  Rated speed (full load) (mm/s)  Battery type  LiFePO4  Rated voltage (V)  48  Capacity (Ah)  120  Operating time (h)  8		Navigation mode	PGV + QR code		
Charging mode  Automatic + Manual  Front, rear, left, and right laser obstacle detection  Audio-visual alarm  Light  Bumper detection  Emergency stop  Positioning accuracy (mm)  Audio-visual alarm  Emergency stop  Positioning accuracy (mm)  Audio-visual alarm  Emergency stop  Emergency stop buttons at front-left/right and rear-left/right  Angular accuracy (°)  Rated speed (no load) (mm/s)  Battery type  Rated voltage (V)  As  Capacity (Ah)  Derating time (h)  8		Noise level	≤75dB		
Active obstacle avoidance  Audio-visual alarm  Light  Bumper detection  Pneumatic bumpers (front and rear)  Emergency stop  Emergency stop buttons at front-left/right and rear-left/right  Positioning accuracy (mm)  Audio-visual alarm  Emergency stop  Emergency stop buttons at front-left/right and rear-left/right  Angular accuracy (°)  Rated speed (no load) (mm/s)  Battery type  LiFePO4  Rated voltage (V)  As  Capacity (Ah)  120  Operating time (h)  8		Communication mode	WIFI, 5G (optional)		
Audio-visual alarm  Bumper detection  Pneumatic bumpers (front and rear)  Emergency stop  Positioning accuracy (mm)  Angular accuracy (°)  Rated speed (no load) (mm/s)  Battery type  Rated voltage (V)  Capacity (Ah)  Derating time (h)  Light  Pneumatic bumpers (front and rear)  Emergency stop buttons at front-left/right and rear-left/right  1000  LifePO4  Rated voltage (V)  48  Capacity (Ah)  Derating time (h)  8		Charging mode	Automatic + Manual		
Positioning accuracy (mm) < ±5  Angular accuracy (°) < ±1  Rated speed (no load) (mm/s) 1000  Rated speed (full load) (mm/s) 800  Battery type LiFePO <sub>4</sub> Rated voltage (V) 48  Capacity (Ah) 120  Operating time (h) 8	ion	Active obstacle avoidance	Front, rear, left, and right laser obstacle detection		
Positioning accuracy (mm) < ±5  Angular accuracy (°) < ±1  Rated speed (no load) (mm/s) 1000  Rated speed (full load) (mm/s) 800  Battery type LiFePO <sub>4</sub> Rated voltage (V) 48  Capacity (Ah) 120  Operating time (h) 8	rotect	Audio-visual alarm	Light		
Positioning accuracy (mm) < ±5  Angular accuracy (°) < ±1  Rated speed (no load) (mm/s) 1000  Rated speed (full load) (mm/s) 800  Battery type LiFePO <sub>4</sub> Rated voltage (V) 48  Capacity (Ah) 120  Operating time (h) 8	fety pi	Bumper detection	Pneumatic bumpers (front and rear)		
Battery type  LiFePO <sub>4</sub> Rated voltage (V)  48  Capacity (Ah)  120  Operating time (h)  8	Saf	Emergency stop	Emergency stop buttons at front-left/right and rear-left/right		
Battery type  LiFePO <sub>4</sub> Rated voltage (V)  48  Capacity (Ah)  120  Operating time (h)  8	ınce	Positioning accuracy (mm)	<±5		
Battery type  LiFePO <sub>4</sub> Rated voltage (V)  48  Capacity (Ah)  120  Operating time (h)  8	rform	Angular accuracy (°)	<±1		
Battery type  LiFePO <sub>4</sub> Rated voltage (V)  48  Capacity (Ah)  120  Operating time (h)  8	n per	Rated speed (no load) (mm/s)	1000		
Rated voltage (V) 48  Capacity (Ah) 120  Operating time (h) 8	Moti	Rated speed (full load) (mm/s)	800		
Rated voltage (V)  Capacity (Ah)  120  Operating time (h)  Charging time (h)  Self-barge  Charging time (h)  Self-barge  All Bargers  A	Battery performance	Battery type	LiFePO <sub>4</sub>		
Capacity (Ah)  Operating time (h)  Charging time (h)  Solve 2 hours after full discharge		Rated voltage (V)	48		
Operating time (h) 8  Charging time (h) ≤2 hours after full discharge		Capacity (Ah)	120		
math discharge		Operating time (h)	8		
		Charging time (h)	≤2 hours after full discharge		

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GBH 10t Heavy-Duty Paper Roll Outbound Robot provides a single-vehicle load capacity of 10 tons. It supports in-place rotation and lateral movement, making it ideal for transporting large-sized and heavy paper rolls. It can operate on asphalt, self-leveling, and concrete floors, offering excellent adaptability to various ground conditions. Equipped with a self-lifting mechanism, the Paper Roll Outbound Robots can directly carry workpieces or move underneath a rack, lift it, and indirectly transport the load. It adopts a hybrid navigation system combining PGV and QR code for fully automated operation, while also supporting remote control when needed



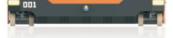






safety





Technical specifications				
		yy-Duty Paper Roll Outbound Robot		
Basic parameters	Dimensions L*W*H (mm)	4000*2000*650		
	Turning radius (mm)	2200		
	Net weight (kg)	2800		
	Rated load (kg)	10000		
	Lifting height (mm)	120		
	Obstacle height (mm)	5		
	Obstacle width (mm)	10		
	Gradeability(%)	≥5		
	Motion mode	Forward, backward, in-place rotation, lateral movement		
	Navigation mode	PGV + QR code		
	Noise level	≤75dB		
	Communication mode	WIFI, 5G (optional)		
	Charging mode	Automatic + Manual		
ion	Active obstacle avoidance	Front, rear, left, and right laser obstacle detection		
otect	Audio-visual alarm	Light		
Safety protection	Bumper detection	Pneumatic bumpers (front and rear)		
Saf	Emergency stop	Emergency stop buttons at front-left/right and rear-left/right		
ance	Positioning accuracy (mm)	<±5		
Motion performance	Angular accuracy (°)	<±1		
on pe	Rated speed (no load) (mm/s)	700		
Motic	Rated speed (full load) (mm/s)	700		
Battery performance	Battery type	LiFePO <sub>4</sub>		
	Rated voltage (V)	48		
	Capacity (Ah)	200		
	Operating time (h)	8		
	Charging time (h)	≤2 hours after full discharge		
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