







**Hangfa Robot Family**

<p><b>OmniTurtle</b> Mecanum Wheel Type Omnidirectional Transporter</p>	<p><b>OmniRhino</b> Differential Speed Wheel Type Omnidirectional Transporter</p>	<p><b>OmniTitan</b> A-Titan Wheel Type Omnidirectional Transporter</p>	<p><b>OmniAnt</b> Steering Wheel Omnidirectional Transporter</p>
<p>Flexible, romantic, chivalrous</p>	<p>Steady, loyal and decisive</p>	<p>Loyal, endurance, endless Strength</p>	<p>Simplicity, diligent, enduring vitality</p>
			

Hangfa is committed to manufacturing good robots aim to become a first-class and a century-old enterprise

**Chengdu Hangfa Robotics Co.,Ltd.**

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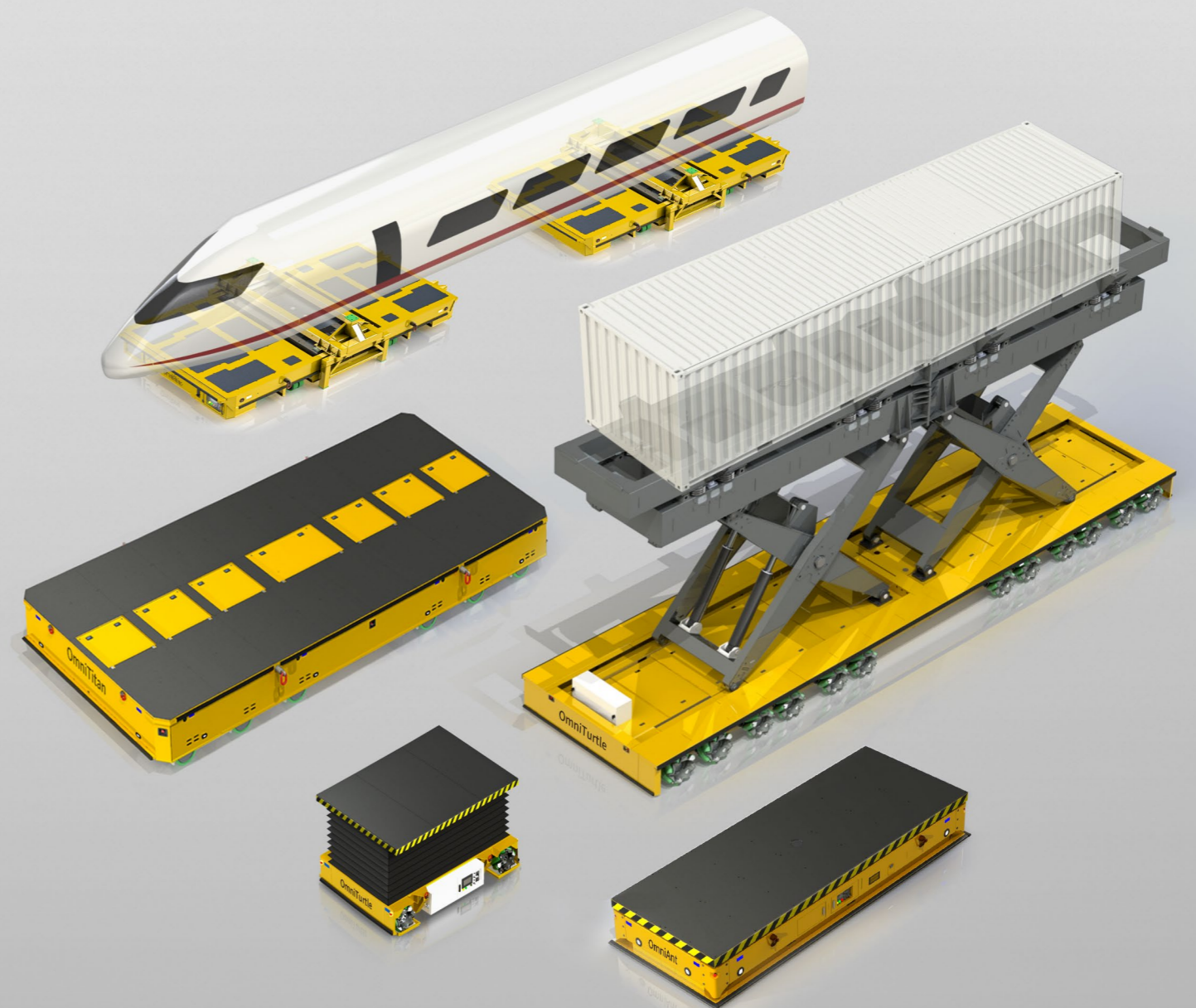


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# Heavy-duty Omnidirectional Transporter **Product Brochure**





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## Company Profile

Chengdu Hangfa Robotics Co., Ltd. was founded in 2016. We specialize in R&D, production, sales, and service of mobile robots, omnidirectional wheels, and non-standard automation equipment. Our head office is located in Pidu District, Chengdu, with about 300 employees and a 100-mu ( $\approx 6.7$  ha) facility. We are certified to ISO9001 and GJB9001, and have been recognized as a National High-tech Enterprise, Sichuan Province Specialized & Sophisticated SME, and Sichuan Province Gazelle Enterprise. We hold over 40 patents, filling multiple domestic technology gaps.

After years of development, Hangfa Robotics has become a world-leading and highly influential supplier of heavy-duty mobile robots. Our products serve a wide range of industries, including rail transportation, aerospace, new energy, power, construction machinery, shipbuilding, metallurgy, and general manufacturing. We have offices in Beijing, Belgium, South Korea, and Singapore.

Our vision: Make "HANGFA" a globally recognized brand in the mobile robotics industry.



Processing, Assembly and Commissioning Factories



New factory in 2025

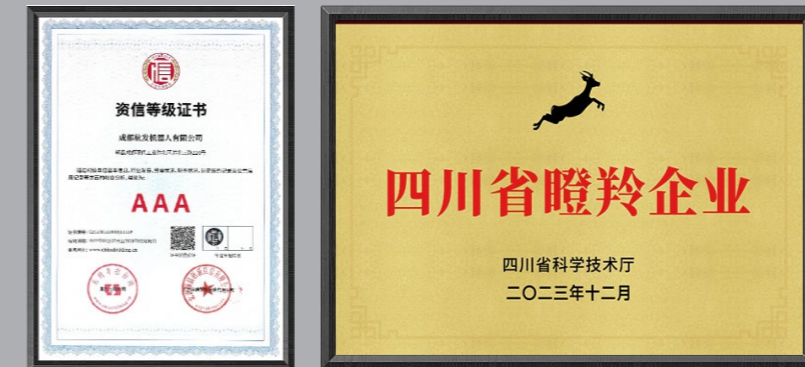


Production and Office Environment

# Honors and Patents

- Sichuan Province Gazelle Enterprise
- National High-tech Enterprise
- Sichuan Province Specialized New Enterprise
- Technology Small and Medium Enterprises
- Quality Management system Certification
- Weapons and Equipment Quality Management System Certification
- Environmental Management System Certification
- Occupational Health and Safety Management System Certification

- More Than 40 Independent Intellectual Property Rights
- AGV Software and Hardware Integrated Enterprise
- Integrity Management Demonstration Unit
- An Enterprise that Abides by Contracts and Values Credit

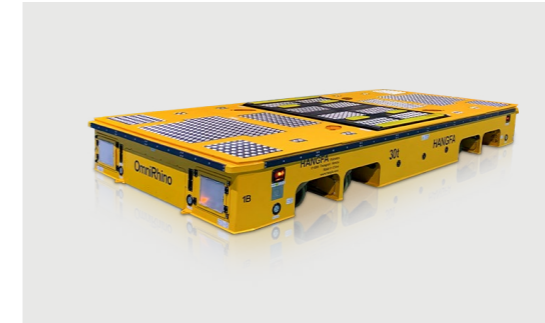


## Our Customers


## Key Products



OmniTurtle Series	
Load Range for One Unit	0~100t
Wheel system type	Mecanum Wheel
Product Features	It can perform seamless movement switching and 360° omnidirectional movement. The movement adjustable accuracy is better than 1mm. The internal stress is controllable during linkage, with high responsiveness and high-precision synchronous following.
Typical Application Scenarios	Efficient transportation, docking, multi-transporters linkage, cool applications.



OmniRhino Series	
Load Range for One Unit	0~120t
Wheel system type	Differential Speed Wheel and Universal Wheel
Product Features	It is with strong ability to overcome obstacles and adapt to ground conditions. It can be used on the road and rail. The internal stress of some models can be controlled when linked.
Typical Application Scenarios	High reliability linkage, better durability and ground adaptability than Mecanum wheel.



OmniTitan Series	
Load Range for One Unit	0~500t
Wheel system type	A-Titan Differential Speed Wheel
Product Features	Extra large load
Typical Application Scenarios	Transportation of ultra-large and ultra-heavy parts. poor ground conditions. Adaptable to poor ground conditions.



OmniAnt Series	
Load Range for One Unit	0~30t
Wheel system type	Steering Wheel +Universal Wheel
Product Features	Automatic transporter, economical, simple and reliable, capable of high-speed movement.
Typical Application Scenarios	AGV High speed transporter, economical AGV.

# OmniTurtle

## Mecanum Wheel Type Omnidirectional Transporter



HTB



HTL



HTT



HTM

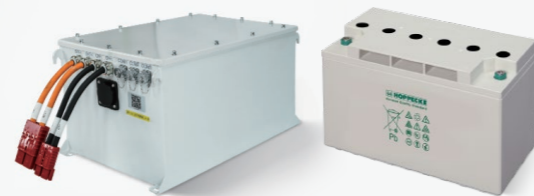
- 0~100t Load capacity for one unit
- Mecanum wheel as driving wheel
- Pendulum suspension/hydraulic suspension
- Especially suitable for precision docking applications, the adjustable accuracy is better than  $\pm 1\text{mm}$
- The internal stress of some models can be controlled when linked
- Flexible arrangement of wheel systems position/rail passing ability/frame self-lifting
- Continuously perform 360° arbitrary posture changes without switching time

### Movement Mode

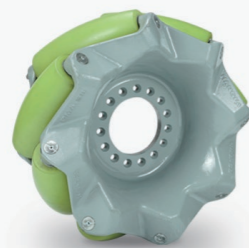


### New Energy Automotive Grade Lithium Battery System

#### Maintenance-free Lead-acid Battery



### Mecanum Wheel

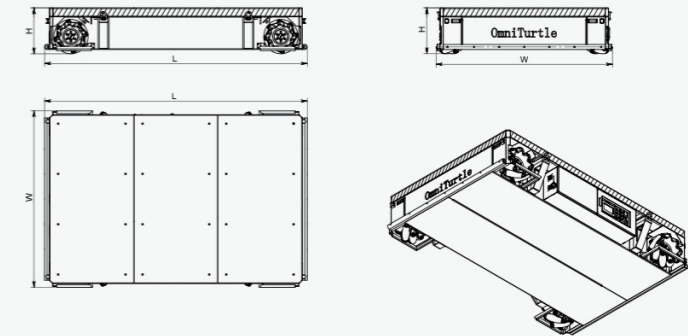


### Industrial Remote Controller

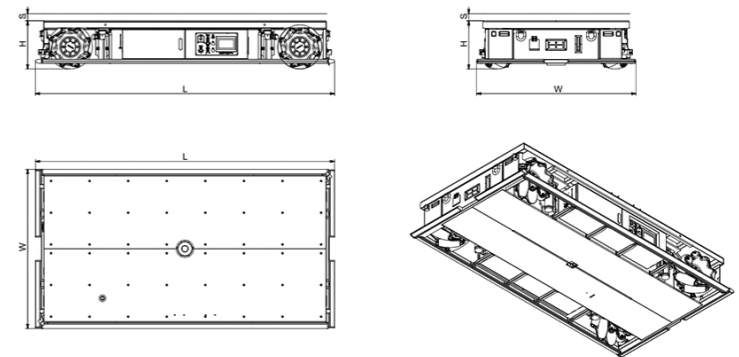


### Product Appearance

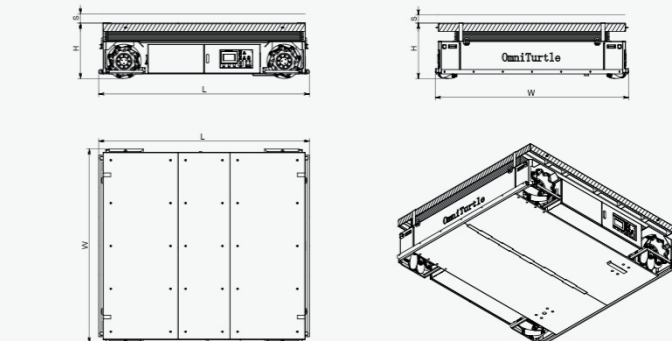
HTB  
Without Lifting Mechanism



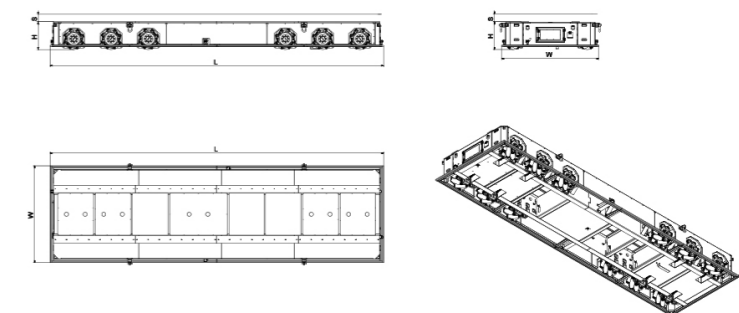
HTT  
With Direct Action Lifting Mechanism



HTL  
With Scissor Lifting Mechanism



HTM  
Wheel System Lifting Mechanism



Parameter Selection Table										
Product Specifications										
Model No	HT*1504	HT*2004	HT*20A04	HT*2504	HT*3104	HT*3604	HT*4004	HT*4008		
Length mm (L)	800	900	900	1500	2000	2200	2400	3200		
Width mm (W)	600	600	700	1000	1300	1400	1500	1800		
HTB	Height mm (H)	200	250	250	300	350	450			
	Net Weight (t)	0.1	0.1	0.2	0.45	0.7	1.2	1.5	3	
	Load Capacity (t)	0.2	0.15	0.5	1	1.7	3	4.5	9	
HTT	Height mm (Hmin)	-	-	350	400	450	500			
	Lifting Stroke mm(S)	-	-	60	100		120			
	Lifting Speed mm/min	-	-	200						
	Net Weight (t)	-	-	0.3	0.8	1.3	1.6	2.1	4	
	Load Capacity (t)	-	-	0.5	0.6	1.2	2.5	4	8	
HTL	Height mm (Hmin)	-	-	-	400	450	500			
	Lifting Stroke mm(S)	-	-	-	600	800	800	900	600	
	Lifting Speed mm/min	-	-	-	900					
	Net Weight (t)	-	-	-	0.8	1.3	1.6	2.1	4	
	Load Capacity (t)	-	-	-	0.6	1.2	2.5	4	8	
HTM	Height mm (Hmin)	-	-	-	-	350	400	450		
	Lifting Stroke mm(S)	-	-	-	-	80	120	150		
	Lifting Speed mm/min	-	-	-	-	200				
	Net Weight (t)	-	-	-	-	1.2	1.4	1.8	3.4	
	Load Capacity (t)	-	-	-	-	1.2	2.5	4	8	
Power Source										
Battery Type	Ternary lithium battery			Lead-acid battery/lithium iron phosphate battery						
Battery Capacity	48V30AH			48V50AH	48V120AH		48V200AH			
Typical Battery Endurance	12h (According to the work schedule)									
Full Discharge Charging Time	8h Lead-acid battery/4h lithium iron phosphat battery (Customizable for fast charging)									
Charger Power Supply	AC220V/AC380V									
Driving Unit										
Number of Driving Units	4						8			
Wheel Diameter mm	156.5	203.2	203.2	254	310	360	406.4			
Wheel Load Capacity t	0.1	0.08	0.24	0.45	0.65	1.1	1.6			
Maximum Total Weight t	0.4	0.32	0.96	1.8	2.6	4.4	6.4	12.8		
Number of Driving wheels	4									
Motor Type	Brushless servo motor									
Obstacle Surmounting Ability (Suspension Stroke)	±15mm				±20mm					
Maximum Pressure on the Ground	11Mpa									
Movement Features										
Minimum Turning Radius	0m									
Full Load Moving Speed	0~0.5m/s									
Moving Adjustable Accuracy	±1mm									
Lifting Adjustable Accuracy	±2mm									
Movement Function	360° translation in any direction , turning, rotation and compound movement of the above movements									
Environment Condition										
Applicable Ground	Concrete, self leveling, hard asphalt, steel plate flooring, etc									
Full Load Climbing Ability	5%									
No Load Climbing Ability	>20% (Interference between the ground and the transporter frame needs to be considered)									
Protection Level	IP54									
Working Environment	Temperature: -15~+45°C; Humidity: 0~95%, no condensation.									
Storage Environment	Temperature: -20~+50°C; Humidity: 0~95%, no condensation.									
Others										
Control Mode	Remote control operation/automatic navigation/receiving communication instructions from upper computer control									
Fault Rescue Function	Manual lowering, wheel unlocking, external towing									

\* Optional multi-transporter linkage function.

\* The transporter can be customized with any number of wheel systems.

\* Products will be continuously improved and upgraded, and the parameters in the table may change.

\* Most parameters have not reached the technical limit and can be adjusted and customized according to your needs. Please contact us.

Parameter Selection Table											
HT*4504	HT*4508	HT*5004	HT*5008	HT*5804	HT*5808	HT*5812	HT*6604	HT*6608	HT*6612	HT*6616	
2500	3400	2700	3700	3000	4200	5500	3300	4600	6000	7500	
1650	2000	1800	2100	2000	2300	2600	2200	2500	2800		
500		550			630			720			
1.7	3.5	2	4	2.5	5	7.5	3.5	7	10.5	14	
5.5	11	7	14	9	18	28	13	27	42	55	
600		650			750			850			
150											
200											
150											
2.5	4.5	3	5.5	4	7	10	5	10	15	20	
5	10	6	12	8	16	25	12	24	37	50	
600		650			750			850			
900	600	900	600	900	600		900	600	-	-	
900											
600											
2.5	5	3	6	4	8	13	5.5	12	-	-	
5	10	6	12	8	15	22	12	22	-	-	
500		550			630			720			
150											
180											
200											
200											
150											
2	3.5	2.5	4.5	3.5	6	8	4.5	9	12	16	
5	11	6	13	8	17	27	12	25	40	55	
Lead-acid battery/lithium iron phosphate battery											
Lead-acid battery/lithium iron phosphate battery											
48V150AH	48V200AH	48V150AH	48V200AH	48V200AH	48V400AH	48V600AH	48V300AH	48V600AH	72V600AH		
According to the work schedule											
8h Lead-acid battery/4h lithium iron phosphat battery (Customizable for fast charging)											
AC220V/AC380V											
4											
4	8	4	8	4	8	12	4	8	12	16	
457.2		508			584.2			660			
1.9		2.3			3.1			4.5			
7.6	15.2	9.2	18.4	12.4	24.8	37.2	18	36	54	72	
4		8			4		8				
Brushless servo motor											
±20mm											
±25mm											
11Mpa											
0m											
0~0.5m/s											
±1mm											
±2mm											
360° translation in any direction , turning, rotation and compound movement of the above movements											
Concrete, self leveling, hard asphalt, steel plate flooring, etc											
5%											
>20% (Interference between the ground and the transporter frame needs to be considered)											
IP54											
Temperature: -15~+45°C; Humidity: 0~95%, no condensation.											
Temperature: -20~+50°C; Humidity: 0~95%, no condensation.											
Remote control operation/automatic navigation/receiving communication instructions from upper computer control											
Manual lowering, wheel unlocking, external towing											

# OmniRhino

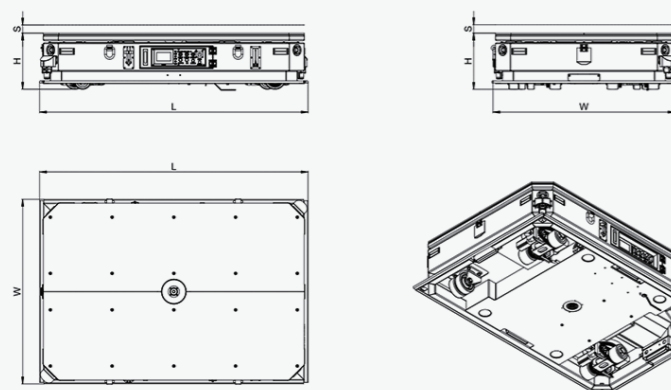
## Differential Speed Wheel Type Omnidirectional Transporter



- Flexible movement ability, capable of running straight, turning, lateral movement, oblique movement, rotation and compound movements of the above movements
- Flexible arrangement of wheel systems position/rail passing ability/dual use for road and rail/frame self-lifting

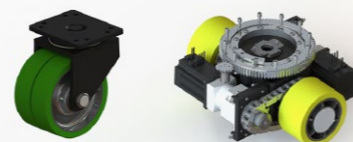
- 0~60t load capacity for one unit
- Differential speed driving wheel unit
- The internal stress of some models can be controlled when linked
- Spring suspension/pendulum suspension/air suspension

### Product Appearance



### Differential Speed Wheel and Universal Wheel

RHC / RHE / RHS

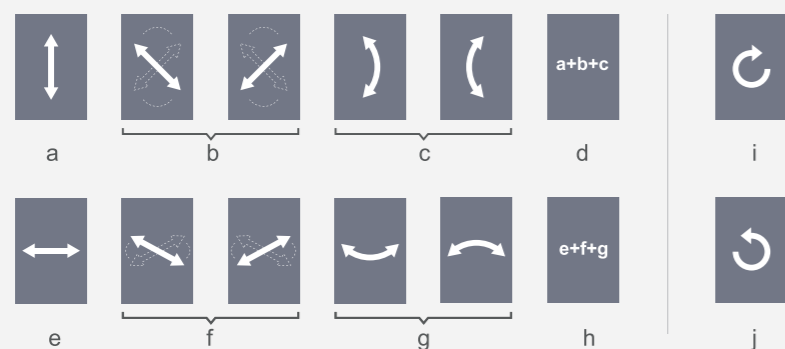


### 差速舵轮

RHG



### Movement Mode



### New Energy Automotive Grade Lithium Battery System



### Industrial Remote Controller



Parameter Selection Table																			
Series No	RHC					RHE					RHG			RHS					
Product specifications																			
Model No	RHC01	RHC02	RHC03	RHC05	RHC10	RHE05	RHE10	RHE20	RHE40	RHE50	RHG10	RHG20	RHG30	RHS20	RHS40	RHS60			
Lengthmm (L)	1600	2000	2500	3000	3500	2500	3000	4500	5000	5500	5000	5500	6000	4000	4500	5500			
Width mm (W)	800	1000	1200	1500	1800	1200	1800	2000	2200	2600	2400	2700	3000	2300	2600	2700			
Heightmm (Low State Hmin)	290		330			450	320	420	430	500	650	600	650	750	600	650	750		
Lifting Mode	Scissor type lifting platform/direct action lifting platform												Transporter frame lifting						
Suspension/Lifting Stroke mm(s)	Customizable												60						
Load Capacity																			
Net Weight (t)	0.7	1.2	1.6	2.5	6	2	3	4	5	6	4	5	6	5	7	10			
Load Capacity (t)	1	2	3	5	10	5	10	20	40	50	10	20	30	20	40	60			
Power Source																			
Battery Type																			
Lithium iron phosphate battery																			
Battery Capacity	48V50AH		48V100AH	48V200AH	48V100AH	48V200AH	48V400AH	48V600AH	48V300AH	48V400AH	48V600AH	48V200AH	72V400AH						
Typical Battery Endurance	(Customizable according to customer's requirement)																		
Full Discharge Charging Time	(Customizable for fast charging)																		
Charger Power Supply	AC220V/AC380V																		
Driving Unit																			
Number of Driving Units	2					4					2								
Motor Type																			
DC servo motor																			
Suspension Type																			
Spring suspension					Pendulum suspension					Air suspension									
Wheel Type																			
Polyurethane Solid Wheel								Rubber Solid Wheel				Polyurethane Solid Wheel							
Maximum Ground Pressure				8Mpa				10Mpa				5Mpa				8Mpa			
Driven unit																			
Number of Universal Wheels				4				2				4							
Universal Wheel Model No		D100	D150	D200	D250	D268	D200	D268	Pendulum suspension				D360	D400B	D400C				
Universal Wheel Rated Load Capacity		0.8	1.6	2	2.9	5.4	2	5.4					7	12	18				
Suspension type																			
-								Pendulum suspension				Air suspension							
Maximum Ground Pressure				10Mpa								10Mpa							
Movement Features																			
Minimum Turning Radius																			
0m																			
No Load Maximum Moving Speed																			
0~0.5m/s																			
Full Load Maximum Moving Speed																			
0~0.5m/s																			
Moving Adjustable Accuracy																			
±2mm																			
Environment Condition																			
Applicable Ground																			
Concrete, self leveling, steel plate flooring, etc																			
Full Load Climbing Ability																			
5%																			
No Load Climbing Ability																			
>20% (Interference between the ground and the transporter frame needs to be considered)																			
Protection Level																			
IP54																			
Working Environment																			
Temperature: -15~+45°C; Humidity: 0~95%, no condensation																			
Storage Environment																			
Temperature: -20~+50°C; Humidity: 0~95%, no condensation																			
Control Mode																			
Remote control operation/automatic navigation/receiving communication instructions from the upper computer for control																			
Control Mode																			
Straight movement, diagonal movement, lateral movement, rotation, turning, etc. For details, please refer to the chapter on the introduction of movement modes.																			
Movement Function																			
Manual lowering, external traction (with the help of ground tanks)												Manual lowering, external traction (The drive unit can be lifted off the ground without the help of a ground tank)							
Fault Rescue Function																			

\* Optional multi-transporter linkage function.

\* The transporter can be customized with any number of wheel systems.

\* Products will be continuously improved and upgraded, and the parameters in the table may change.

\* Most parameters have not reached the technical limit and can be adjusted and customized according to your needs. Please contact us.

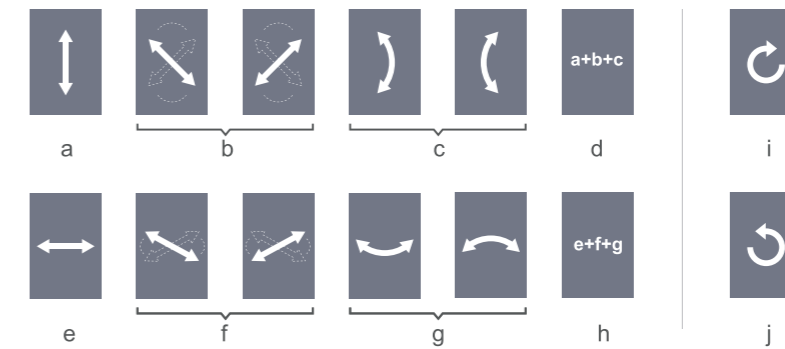
# OmniTitan

## A-Titan Wheel Type Omnidirectional Transporter



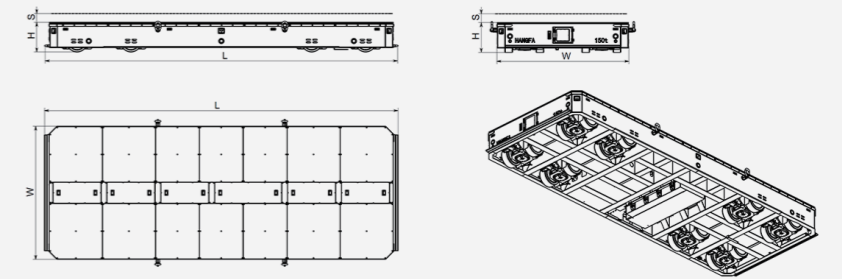
- 0~500t load capacity for one unit
- Self-lifting differential speed wheel, transporter body lifting
- New Energy Automotive Grade Lithium Battery System
- Flexible movement ability, capable of running straight, turning, lateral movement, oblique movement, rotation and compound movements of the above movements
- New Energy Automotive Grade Lithium Battery System
- Adaptable to indoor and outdoor rain, snow, and low temperature environments

### Movement Mode

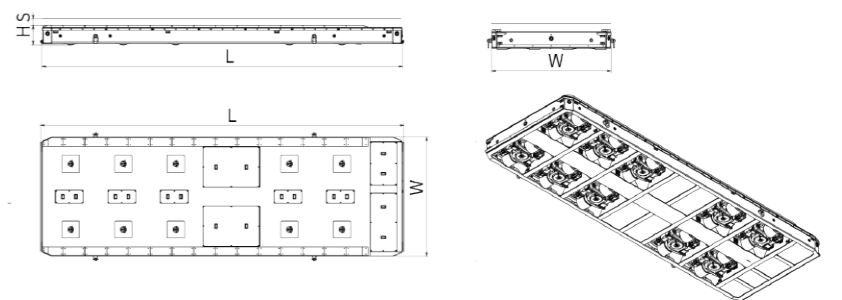


### Product Appearance

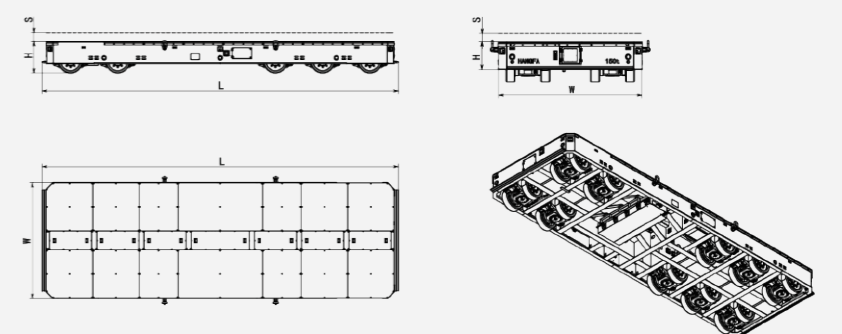
TA Product Appearance



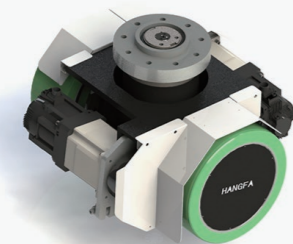
TB Product Appearance



TR Product Appearance



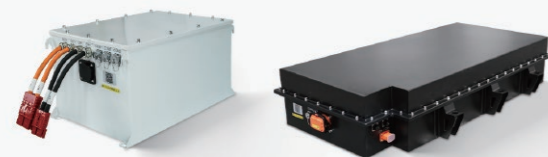
### TA / TB gear train



### TR gear train



### New Energy Automotive Grade Lithium Battery System



### Industrial Remote Controller



Parameter Selection Table																
Series No	TA															
Product specifications																
Model No	TA24	TA40	TA60	TA80	TA100	TA150	TA200	TA250	TA300	TA180	TA270	TA360	TA450	TA540	TA720	
Length mm (L)	3000	4000	5000	6000	5500	6500	7500	9000	11000	6000	7000	8500	10000	12000	16000	
Width mm (W)	1700	2000			2500					3000						
Height mm (Low State Hmin)	450	530			670					770						
Lifting Mode	Transporter Frame Lifting															
Suspension/lifting Stroke	150					200										
Load Capacity																
Maximum Total Weight t	24	40	60	80	100	150	200	250	300	180	270	360	450	540	720	
Maximum Net Weight t	3	5	6	7	8	12	16	22	28	15	20	27	35	43	60	
Rated Load Capacity t	20	30	50	70	80	120	160	200	240	140	200	270	340	400	500	
Power Source																
Battery Type	Lithium iron phosphate battery															
Battery Capacity kWh	10	25			30	60	90	56	110	170	220					
Typical Battery Endurance	12h (Customizable according to customer's requirement)															
Full Discharge Charging Time	8h (Customizable for fast charging)															
Charger Power Supply	AC220V/AC380V															
Driving Unit																
Number of Driving Units	4	4	6	8	4	6	8	10	12	4	6	8	10	12	16	
Unit Model No	A06	A10			A25					A45						
Wheel Diameter mm	250	310			457					500						
Unit Rated Load Capacity t	6	10			25					45						
Motor Type	AC motor															
Suspension / Self-lifting Type	Hydraulic independent type															
Wheel Type	Polyurethane															
Maximum Ground Pressure	10Mpa															
Movement Features																
Minimum Turning Radius	0m															
Movement Speed Range	0-30m/min															
Full Load Slope Moving Speed	0-20m/min															
Lifting Speed	60-200mm/min															
Moving Adjustable Accuracy	±2mm															
Lifting Adjustable Accuracy	±1mm															
Movement Function	Straight movement, diagonal movement, lateral movement, rotation, turning, etc. For details, please refer to the chapter on the introduction of movement modes.															
Environment Condition																
Applicable Ground	Concrete, self leveling, steel plate flooring, etc															
Full Load Climbing Ability	5%															
No Load Climbing Ability	>20% (Interference between the ground and the transporter frame needs to be considered)															
Protection Level	IP54															
Working Environment	Temperature: -15~+45°C; Humidity: 0~95%, no condensation															
Storage Environment	Temperature: -20~+50°C; Humidity: 0~95%, no condensation															
Others																
Control Mode	Remote control operation/automatic navigation/receiving communication instructions from the upper computer control															
Fault Rescue Function	Manual lowering, external traction (with the help of ground tanks)															
Other Function	Night lighting , Weight measurement, center of gravity position measurement, overload alarm, eccentric load alarm															

\* Optional multi-transporter linkage function.

\* The transporter can be customized with any number of wheel systems.

\* Products will be continuously improved and upgraded, and the parameters in the table may change.

\* Most parameters have not reached the technical limit and can be adjusted and customized according to your needs. Please contact us.

Parameter Selection Table																
TB								TR								
TB80	TB120	TB160	TB240	TB320	TB400	TB480	TB560	TR40	TR60	TR80	TR100	TR150	TR200	TR250	TR300	TR400
4000	5000	5000	6500	8000	9000	10000	11000	5500	7000	8500	6500	8000	10000	12000	14000	17000
2000		2400						2600			3400					
320		420						750			1100					
Transporter Frame Lifting																
80		100						300								
80	120	160	240	320	400	480	560	40	60	80	100	150	200	250	300	400
4	6	6	9	12	16	20	24	7	10	12	12	17	24	30	35	40
70	110	150	225	300	375	450	520	30	45	60	80	120	160	200	240	320
Lithium iron phosphate battery																
10	20	25	60			90	120	30	60	56	110	170	220			
12h (Customizable according to customer's requirement)																
8h (Customizable for fast charging)																
AC220V/AC380V																
4	6	4	6	8	10	12	14	4	6	8	4	6	8	10	12	16
B20		B40						R10			R25					
250		310						559			848					
20		40						10			25					
AC motor								AC motor								
Hydraulic independent type																
Polyurethane								Rubber								
15Mpa								5Mpa								
0m								0m								
0-20m/min								0-40m/min								
0-10m/min								0-20m/min								
60-200mm/min																
±2mm																
±1mm																
Straight movement, diagonal movement, lateral movement, rotation, turning, etc. For details, please refer to the chapter on the introduction of movement modes.																
Concrete, self leveling, steel plate flooring, etc								Concrete, self leveling, steel plate flooring, asphalt,Hard Ground Surface,etc								
3%								10%								
>10%(Interference between the ground and the transporter frame needs to be considered)								>20%(Interference between the ground and the transporter frame needs to be considered)								
IP54																
Temperature: -15~+45°C; Humidity: 0~95%, no condensation																
Temperature: -20~+50°C; Humidity: 0~95%, no condensation																
Remote control operation/automatic navigation/receiving communication instructions from the upper computer control																
Manual lowering, external traction (with the help of ground tanks)																
Night lighting , Weight measurement, center of gravity position measurement, overload alarm, eccentric load alarm																

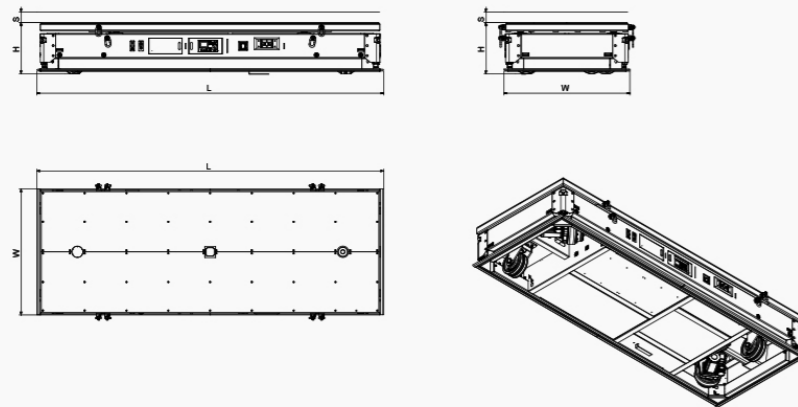
# OmniAnt

## Steering Wheel Type Omnidirectional Transporter



- 0~30t load capacity for one unit
- Steering Driving Wheel Unit
- 1.5m/s high-speed version can be customized
- Flexible movement ability, capable of running straight, turning, lateral movement, oblique movement, rotation and compound movements of the above movements

### Product Appearance



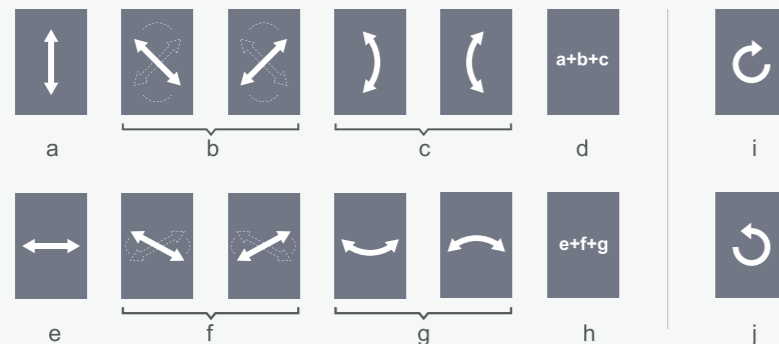
### Steering Driving Wheel +Universal Wheel



### New Energy Automotive Grade Lithium Battery System



### Movement Mode



### Industrial Remote Controller



### Parameter Selection Table

Parameter Selection Table		ANT				
Series No	ANT					
Product specifications						
Model No	AN02	AN05	AN10	AN20	AN30	
Length mm (L)	2000	2500	3000	3500	4000	
Width mm (W)	1300	1500	1800	2000	2100	
Height mm(Low State Hmin)	400	470	500	600	650	
Lifting Mode	Scissor type lifting platform/direct action lifting platform					
Suspension/Lifting Stroke mm(s)	Customizable					
Load Capacity						
Net Weight t	1	2	3	5	6	
Load Capacity t	2	5	10	20	30	
Power Source	Lithium iron phosphate battery					
Battery Type	Lithium iron phosphate battery					
Battery Capacity	48V50AH	48V100AH	48V200AH	72V200AH		
Typical Battery Endurance	12h(Customizable according to customer's requirement)					
Full Discharge Charging Time	8h (Customizable for fast charging )					
Charger Power Supply	AC220V/AC380V					
Driving Unit						
Number of Driving Units	2					
Motor Type	DC servo motor					
Suspension Type	Pendulum suspension					
Maximum Ground Pressure	10Mpa					
Driven unit						
Number of Universal Wheels	2					
Universal Wheel Model No	D150	D200	D268	D360	D400B	
Universal Wheel Rated Load Capacity t	1.6	2	5.4	7	12	
Suspension type	Pendulum suspension					
Maximum Ground Pressure	10Mpa					
Movement Features						
Minimum Turning Radius	0m					
No Load Maximum Moving Speed	0-0.5m/s					
Full Load Maximum Moving Speed	0-0.5m/s					
Moving Adjustable Accuracy	±2mm					
Environment Condition						
Applicable Ground	Concrete, self leveling, steel plate flooring, etc					
Full Load Climbing Ability	5%					
No Load Climbing Ability	>20% (Interference between the ground and the transporter frame needs to be considered)					
Protection Level	IP54					
Working Environment	Temperature: -15~+45°C; Humidity: 0~95%, no condensation					
Storage Environment	Temperature: -20~+50°C; Humidity: 0~95%, no condensation					
Control Mode	Remote control operation/automatic navigation/receiving communication instructions from the upper computer for control					
Movement Function	Straight movement, diagonal movement, lateral movement, rotation, turning, etc.					
Fault Rescue Function	Manual lowering, external traction (with the help of ground tanks)					

\* Optional multi-transporter linkage function.

\* The transporter can be customized with any number of wheel systems.

\* Products will be continuously improved and upgraded, and the parameters in the table may change.

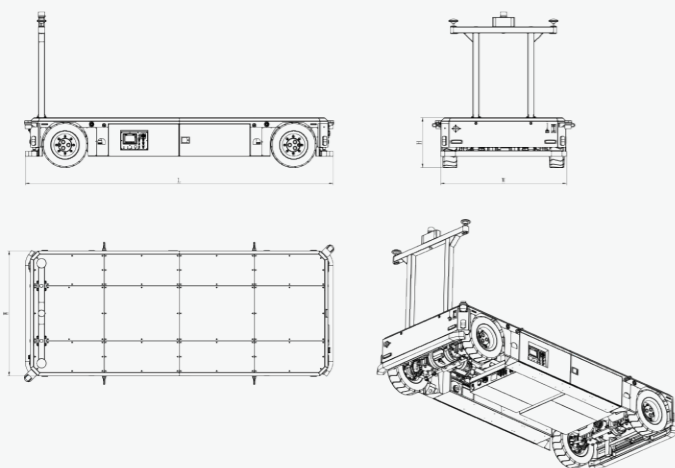
\* Most parameters have not reached the technical limit and can be adjusted and customized according to your needs. Please contact us.

# P Series Bridge-type Transporter

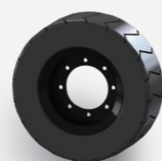


- 0~60t load capacity for one unit
- 3D Radar + Beidou RTK Navigation
- Maximum Travel Speed: 10km/h
- New Energy Vehicle Power System, 600V Platform
- Automotive-Grade Rubber Tire
- Outdoor Navigation & Safety System (Adaptable to Outdoor Rain, Snow & Low-Temperature Environments)

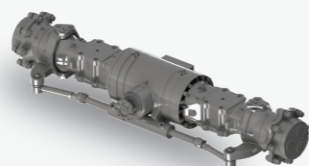
## Product Appearance



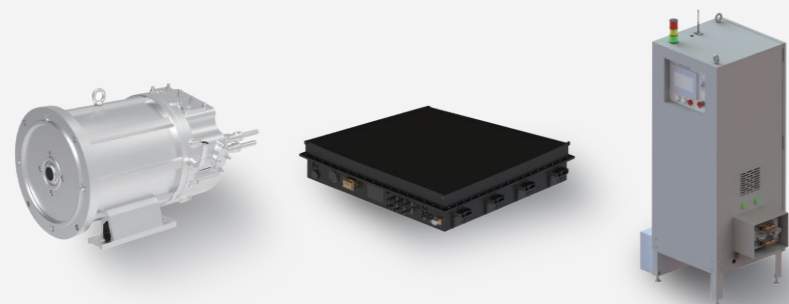
## Automotive-Grade Rubber Tire



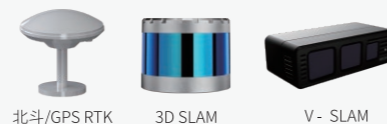
## Axle Assembly



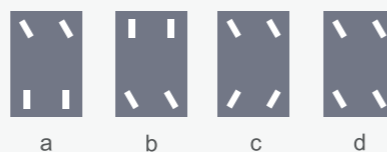
## New Energy Vehicle Power System, 600V Platform



## Outdoor Navigation & Safety System



## Movement Mode



## 参数选型表

Series No	P		
Product specifications			
Model No	P10	P25	P60
Lengthmm (L)	5000	6500	8000
Width mm (W)	2000	2500	3000
Heightmm (Low State Hmin)	800	1000	1500
Lifting Mode	Customizable Lifting Platform		
Lifting Stroke mm(s)	Customizable		
Load Capacity			
Net Weight (t)	4	6	10
Load Capacity (t)	10	25	60
Power Source			
Battery Type	Lithium iron phosphate battery		
Battery Capacity	56	110	170
Typical Battery Endurance	50km ( Comprehensive Working Condition 50% No-Load & 50% Full-Load )		
Full Discharge Charging Time	2h / 8h		
Charger Power Supply	AC380V		
Driving Unit			
Number of Driving Units	Double-Axle Steering, Rear-Axle Drive		
Motor Type	Permanent Magnet Synchronous Motor		
Suspension Type	Pendulum suspension		
Wheel Type	Rubber Solid Tire / Rubber Pneumatic Tire		
Maximum Ground Pressure	5Mpa		
Movement Features			
Minimum Turning Radius	5	6.5	7.5
Travel Speed	0-10km / h		0-6km / h
Motion Performance	Straight movement, diagonal movement, turning, etc.For details, please refer to the chapter on the introduction of movement modes		
Environment Condition			
Applicable Ground	Concrete, self leveling, steel plate flooring, etc		
Full Load Climbing Ability	5%		
No Load Climbing Ability	>20% (Interference between the ground and the transporter frame needs to be considered)		
Protection Level	IP55 ( Adaptable to Outdoor Rainy Working Environment )		
Working Environment	Temperature: -25~+45°C;Humidity: : 0~95%, no condensation		
Storage Environment	Temperature: -20~+50°C;Humidity: 0~95%, no condensation		
Control Mode			
Control Mode	Remote control operation/automatic navigation/receiving communication instructions from the upper computer for control		
Fault Rescue Function	External Traction		

\* Products will be continuously improved and upgraded, and the parameters in the table may change.

\* Most parameters have not reached the technical limit and can be adjusted and customized according to your needs. Please contact us.

# WH

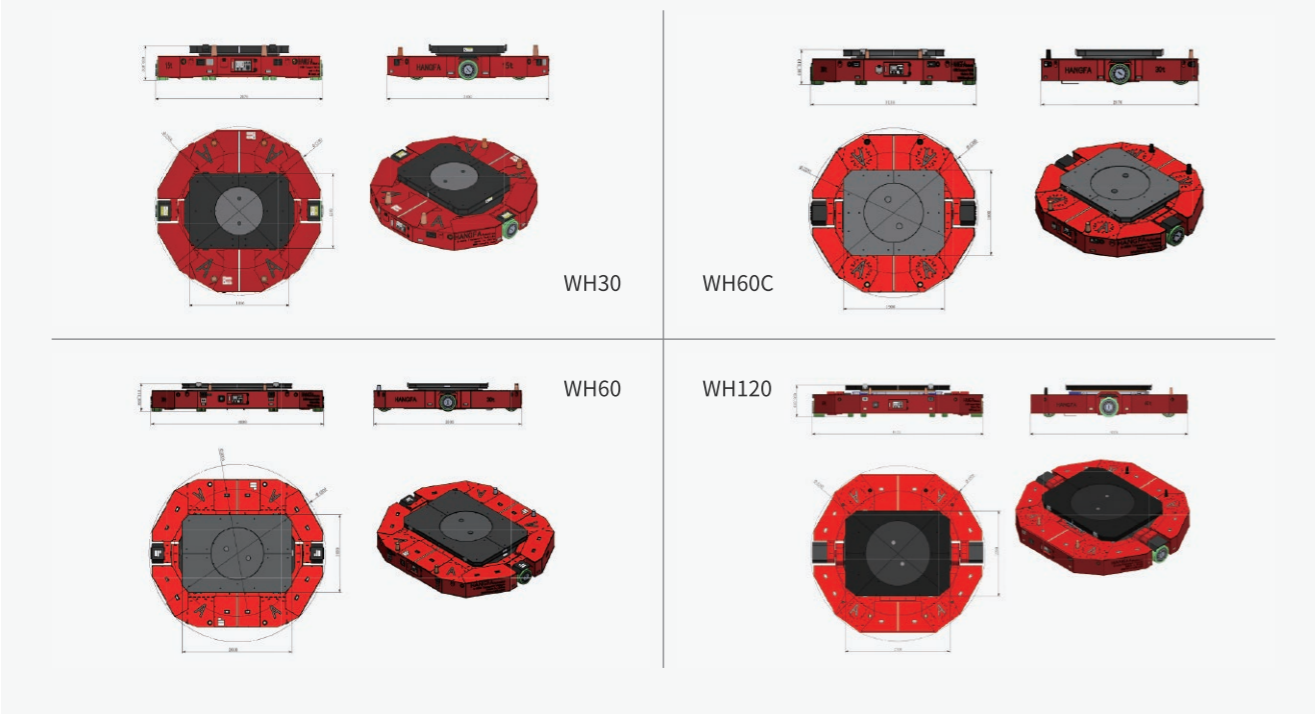
## Wind Turbine Blade Transporter



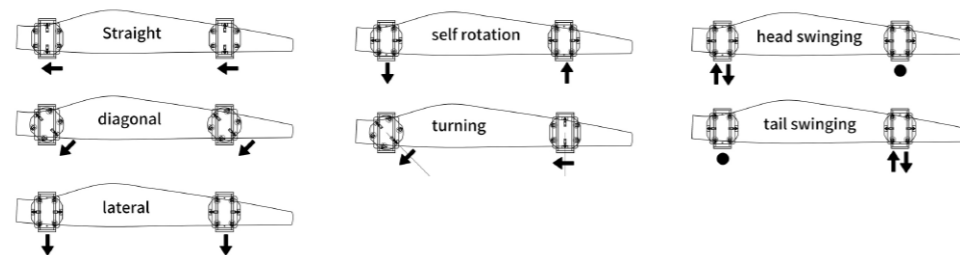
- 30~120t load capacity after linked
- 80m Linkage distance to apply for 130m blade
- The rotatable stage allows the blades to be transported only under axial force
- The maximum speed can reach 1m/s
- The internal stress of some models can be controlled when linked

- The floating chassis design can adapt to the drainage slope of large-area sites and the slope in and out of the workshop

### Product Appearance



### WH Movement Mode



### Parameter Selection Table

Series No	WH				
Product Specifications					
Model No (One set contains two units)	WH30	WH40	WH60C	WH60	WH120
Overall Dimensions Rotation Diameter mm	2700		3200	4200	4500
Height mm (Low state)	560		660		810
Lifting Stroke mm	120		150		
Loading Platform Size mm	1600×1200		1900×1600	2600×1850	2700×2200
Load Capacity					
Rated Load Capacity t (for one unit)	15	20	30		60
Rated Load Capacity t (for one set)	30	40	60		120
Net Weight t (for one unit)	5	5	6.5	8.5	10
Power Source					
Battery Type	Maintenance-free lead-acid batteries		Lithium iron phosphate battery		
Battery Capacity kWh	14.4		25		50
Typical Cruising Range (20°C)	8Km	7Km	8Km		8Km
Typical Battery Endurance					Two shifts
Charging Time	8h		4h		
Standby Time	>72h				
Charger Power Supply (Other voltages optional)	AC220V/AC380V				
Basic Features					
Maximum Center Distance of Two Units Linkage	80m				
Driving Wheel Diameter mm	330		410		500
Ice and Snow Wheel	Optional				
Drive Motor Type	Brushless servo motor				
Suspension /Self-lifting Type	Independent hydraulic lift table				
Maximum Ground Pressure	10Mpa				
Movement Features					
Minimum Turning Radius	0m				
Rated Moving Speed	0~0.85m/s		0~0.6m/s		
Maximum Moving Speed	0~1m/s				
Lifting Speed	300mm/min		200mm/min		
Moving Adjustable Accuracy	±3mm				
Lifting Adjustable Accuracy	±5mm				
Environment Condition					
Applicable Ground	Concrete, self leveling, steel plate flooring, etc				
Full Load Climbing Ability (T1)	2% (Continuous ramp. For example, the drainage slope of a large area)				
Full Load Climbing Ability (T2)	6% (Short ramp. For example, a short ramp in and out of a workshop)				
No Load Climbing Ability	20% (consider the interference between the ground and the vehicle frame or set up a transition arc)				
Protection Level	IP54 (Adaptable to outdoor work in light rain and snowy days)				
Working Environment	Temperature: -30~+50°C; Humidity: 0~95%, no condensation				
Storage Environment	Temperature: -15~+50°C; Humidity: 0~95%, no condensation				
Other					
Control Mode	Remote control operation				
Movement Function for One Unit	Go straight, rotate, turn				
Movement Function for Two Units Linkage	Straight movement, diagonal movement, lateral movement, rotation, turning, head flick, tail flick and compound movements				
Weight Measurement Function	Weight measurement, overload alarm				
Fault Rescue Function	Lift platform is manually lowered and wheels are unlocked				
Other Function	Night operating lighting and speakers				

\* Optional multi-transporter linkage function.

\* The transporter can be customized with any number of wheel systems.

\* Products will be continuously improved and upgraded, and the parameters in the table may change.






\* Most parameters have not reached the technical limit and can be adjusted and customized according to your needs. Please contact us.

# Omni Wheel / Mecanum Wheel


	<p><b>QL Series Omni Wheel 90°</b></p> <p>Diameter(mm): 50.8(2") ~ 203.2(8")    Main Models:                  Load Range: 5kg ~ 30kg    QL-05A/B    QL-08    QL-10                  Roller Material: Rubber    QL-13    QL-15    QL-20                  Hub Material: Aluminium</p>
	<p><b>CL Series Omni Wheel 90°</b></p> <p>Diameter(mm): 101.6(3") ~ 127(5")    Main Models:                  Load Range: 5kg ~ 50kg    CL-10    CL-13                  Roller Material: Rubber                  Hub Material: Steel</p>
	<p><b>QLM Series Omni Wheel 90°</b></p> <p>Diameter(mm): 120 ~ 406.4    Main Models:                  Load Range: 50kg ~ 2000kg    QLM-12    QLM-15    QLM-20s    QLM-20                  Roller Material: Rubber/Polyurethane    QLM-24    QLM-25    QLM-28    QLM-31                  Hub Material: Aluminium /Steel    QLM-36    QLM-40    QLM-40A</p>
	<p><b>PLM Series Omni Wheel 90°</b></p> <p>Diameter(mm): 203.2 (8")    Main Models: PLM-20                  Load Range: 0kg ~ 80kg                  Roller Material: Polyurethane                  Hub Material: Aluminium</p>
	<p><b>QMA Series Mecanum Wheel 45°</b></p> <p>Diameter(mm): 101.6 (4") ~ 203.2 (8")    Main Models:                  Load Range: 30kg ~ 40kg    QMA-10    QMA-15    QMA-20                  Roller Material: Rubber                  Hub Material: Steel</p>
	<p><b>CMA Series Mecanum Wheel 45°</b></p> <p>Diameter(mm): 156.5 ~ 660.4    Main Models:                  Load Range: 100kg ~ 4500kg    CMA-15    CMA-20    CMA-20A    CMA-25                  Roller Material: Polyurethane    CMA-31    CMA-36    CMA-40    CMA-45                  Hub Material: Aluminium /Steel    CMA-50    CMA-58    CMA-66</p>
	<p><b>HMA Series Mecanum Wheel 45°</b></p> <p>Diameter(mm): 310 ~ 406.4 (16")    Main Models:                  Load Range: 600kg ~ 1500kg    HMA-31    HMA-40                  Roller Material: Polyurethane                  Hub Material: Aluminium /Steel</p>

# Research-Platform


## Navigator Series Platform

Model No	Navigator Q1	Navigator Q2	Navigator C1	Navigator C2	Navigator L1
Product Picture					
Size	560x600x241(mm)	672x481x241(mm)	494x490x219(mm)	698x598x279(mm)	720x559x283(mm)
Load Capacity	50kg	50kg	50kg	80kg	80kg

## Compass Series Platform

Model No	Compass Q1	Compass Q2	Compass C1	Compass C2	Compass L1
Product Picture					
Size	369x400.5x110(mm)	450x330x115(mm)	342x370x115.5(mm)	352.4x370x135(mm)	400x354x108(mm)
Load Capacity	20kg	20kg	20kg	30kg	30kg

## Discovery Series Platform

Model No	Discovery Q1	Discovery Q2	Discovery C1	Discovery C2	Discovery L1
Product Picture					
Size	365.5x400.2x109(mm)	359x313.5x114(mm)	231x314x120(mm)	301.6x308x112(mm)	325x285x100(mm)
Load Capacity	10kg	10kg	10kg	15kg	15kg

Hangfa Product Experience

Wind Power



OmniTitan-Heavy-duty Omnidirectional Transporter(400t)



OmniTitan-Transporter(200t)



OmniTitan-Transporter(200t)



OmniTitan-Transporter(200t)



OmniTitan-Transporter(200t)



OmniTitan-Transporter(110t)



OmniTitan-Transporter(200t)



OmniTitan-Transporter(80t)



OmniTitan-Transporter(150t)



OmniTitan-Transporter(50t)



OmniTitan-Transporter(80t)



OmniTitan-Transporter(80t)

Hangfa Product Experience

Wind Power



WH-Blade Transporters(30tx2)



WH-Blade Transporters(15tx2)



WH-Wind Turbine Blade Linkage Transporters(30tx2)



WH-Blade Transporters(30tx2)



WH-Blade Transporters(25tx2)



OmniTitan-Transporters(60t)



WH-Blade Transporters(30tx2)



WH-Blade Transporters(25tx2)



OmniTitan-Transporters(110t)



OmniTitan-Transporters(140t)



OmniTitan-Transporters(80t)



OmniTitan-Transporters(200t)



OmniTitan-Two-Transporter Linkage Transporters(600t)



OmniTitan-Transporters(400t)



OmniTitan-Transporters(500t)



OmniTitan-Transporters(300t)



OmniTitan-Transporters(300t)



OmniTitan-Transporters(300t)



OmniTitan-Transporters(300t)



OmniTitan-Transporters(300t)



OmniTitan-Transporters(150t)



OmniTitan-Transporters(300t)



OmniTitan-Transporters(500t)



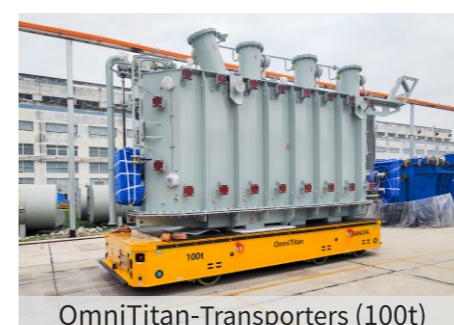
OmniTitan-Transporters(160t)



OmniTitan-Transporters (150t)



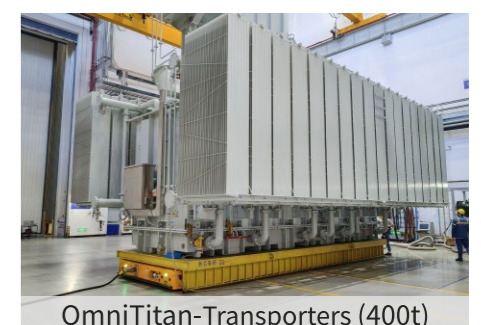
OmniTitan-Two-Transporter Linkage Transporters (300t)



OmniTitan-Transporters (100t)



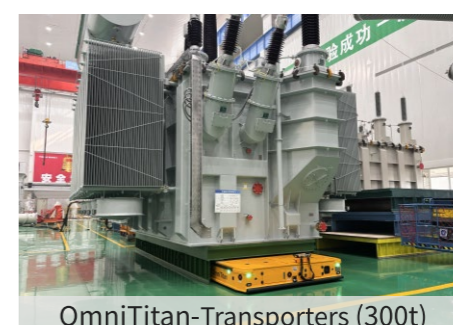
OmniTitan-Transporters (80t)



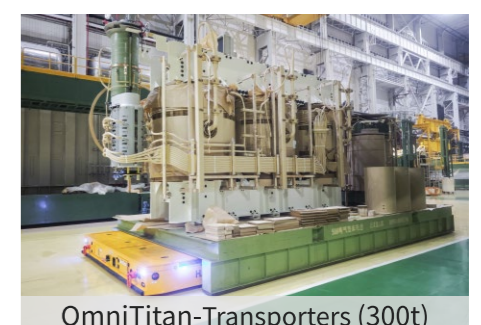
OmniTitan-Transporters (400t)



OmniTitan-Transporters (30t)



OmniTitan-Transporters (300t)



OmniTitan-Transporters (300t)



OmniTitan-Transporters (65t)



OmniTitan-Transporters (50t)



OmniTitan-Transporters (18t)

Hangfa Product Experience

Rail Transportation



OmniTurtle-Two-Transporter Linkage Train Transporter(25tx2)



OmniRhino-Transporter(30tx2)



OmniRhino-Transporter(25tx2)



OmniRhino-Transporter(15tx2)



OmniTurtle-Transporter (40t)



OmniRhino-Transporter(30tx2)



OmniTurtle-Transporter(5t)



OmniTurtle-Transporter(10tx2)



Aerial Train Tractor (100t)



OmniRhino-Production Line(13t)



OmniRhino-Transporter(4t)



OmniRhino-Transporter(10t)

Hangfa Product Experience

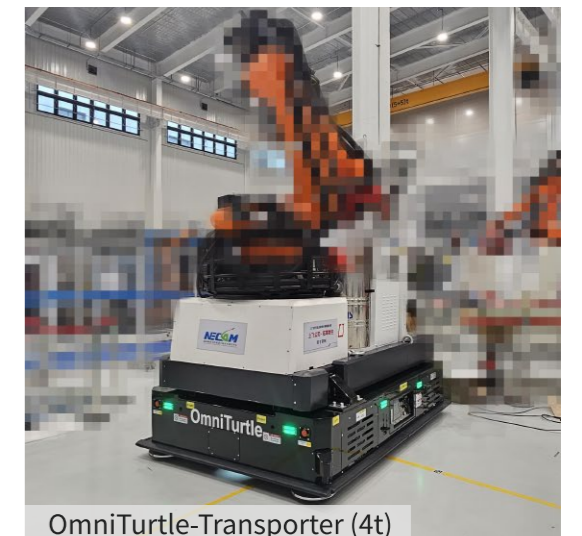
Aerospace and Military



OmniTurtle-Heavy-duty Omnidirectional Transporter (3.5t)



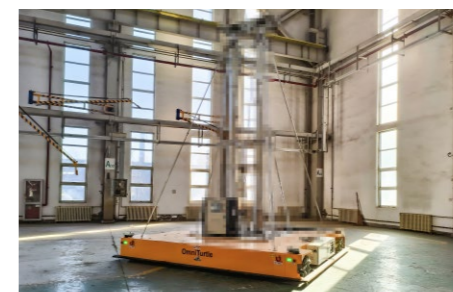
OmniTitan-Transporter (15t)



OmniTurtle-Transporter (4t)



OmniTurtle-Transporter (13t)



OmniTurtle-Transporter (3t)



OmniTurtle-Transporter (2.75t)

Hangfa Product Experience

Heavy Construction Machinery



Cotton Picking Machine Transporter(40t)



OmniTitan-Transporters(30t)



OmniRhino-Three-transporter Linkage Omnidirectional Transporters(50t x 3)



OmniTitan-Transporters(50t)



OmniAnt-Transporters(20t)



OmniAnt-Transporters(25t)



OmniTitan-Transporters(15t)



OmniRhino-Transporters(10t)



OmniAnt-AGV(20t)



OmniRhino-Transporters(20t)



OmniRhino-Rail Transporter(50t)



OmniRhino-Transporters(6t)

Hangfa Product Experience

Metallurgy , Cable and Others



OmniRhino-Titanium Lump Transporter (10t)



OmniRhino-Package Transporter (30t)



Customized Cable Transport AGV (8t)



OmniTitan-Transporter (60t)



OmniTitan-Steel Coil Transporter(50t)



OmniTurtle-Transporter (5t)



OmniTitan-Transporter (60t)



OmniTitan-Transporter (100t)



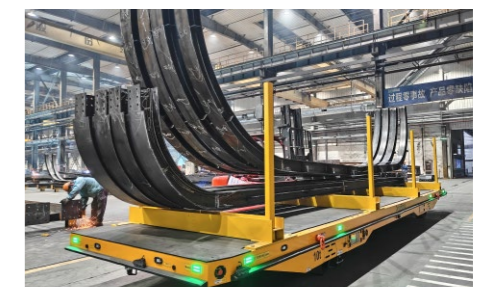
OmniTitan-Transporter (200t)



OmniTitan-Transporter (12x2t)



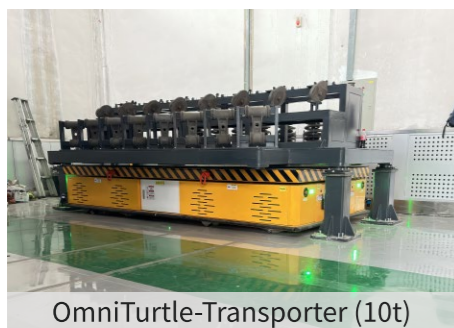
Customized Transporter (4t)



OmniRhino-Transporter(10t)



OmniAnt-Heavy-duty Omnidirectional Transporter (20t)



OmniTurtle-Transporter (10t)



OmniTitan-Transporter (40t)



OmniTitan-Transporter (40t)



OmniTitan-Transporter (50t)



OmniTitan-Transporter (80t)



OmniTitan-Transporter (30t)



OmniTurtle-Transporter (10t)



OmniTurtle-Transporter (5t)



OmniTitan-Transporter (50t)



RGV Transporter (12t)



RGV Transporter (10t)



OmniAnt-Fish Transport AGV (2m³)



OmniTitan-Transport(30t)



OmniRhino-Drill Pipe Transport AGV(10tx2)



OmniTurtle- Lifting Transporters(3tx2)



OmniRhino-Transporter(6t)



OmniRhino-Transporter(30t)



OmniTitan-Transporter(20t)



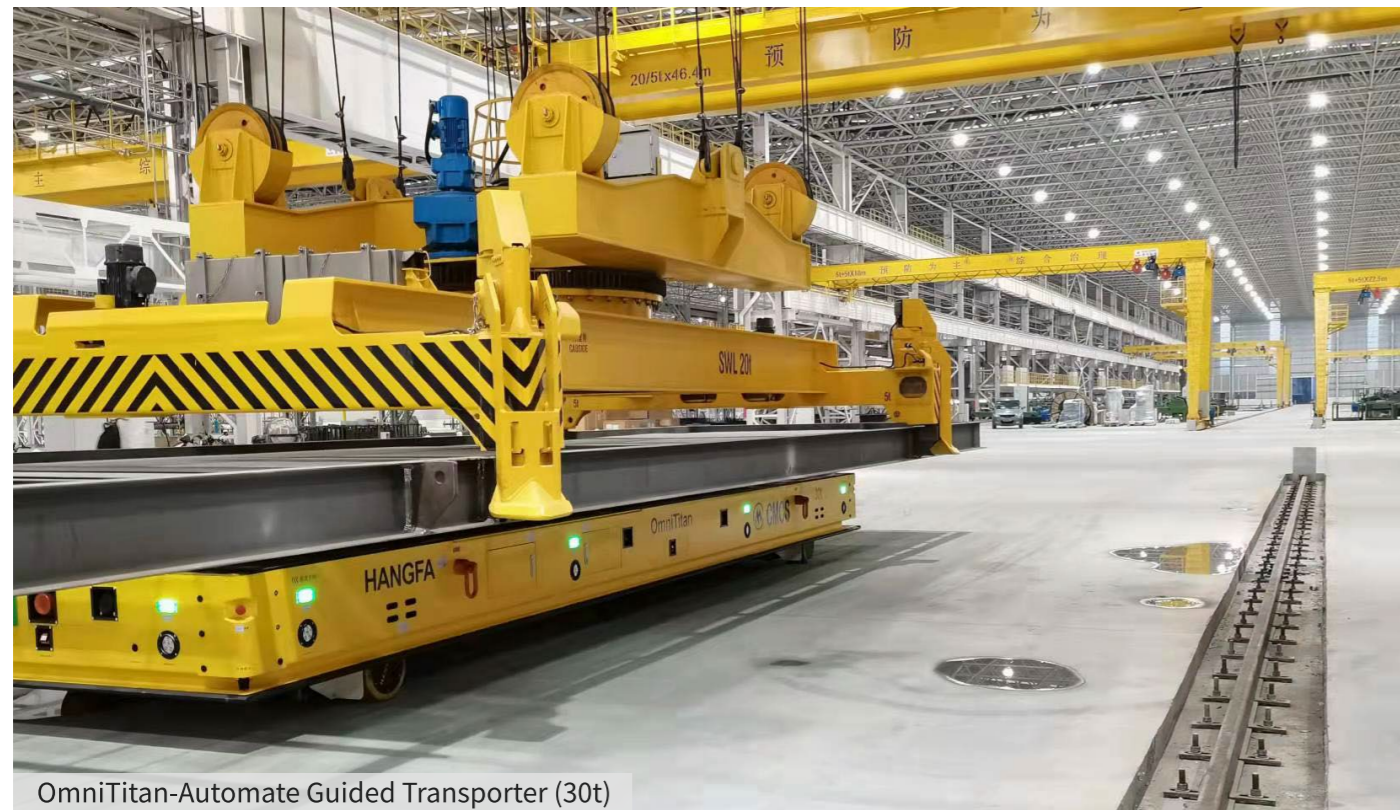
OmniTitan-Transporter(60t)



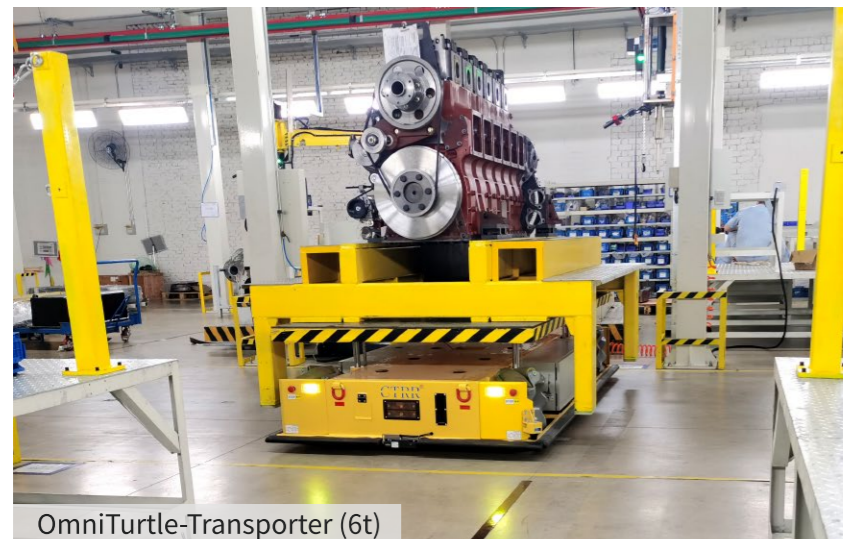
OmniTurtle-Transporter(10t)



OmniTitan-Transporter(100t)



OmniTitan-Automate Guided Transporter (30t)



OmniTurtle-Transporter (6t)



OmniTitan-Transporter (150t)



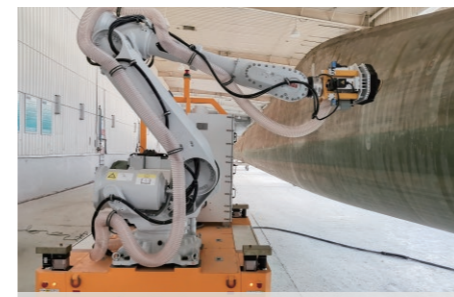
OmniAnt-Transporter (1.5t)



OmniRhino-Transporter (2.5t)



OmniRhino-Transporter (4t)



OmniTurtle-Robot Arm Carrying Platform (5t)



OmniTurtle-Transporter (4t)



OmniTurtle-Robot Arm Carrying Platform (5t)



OmniTurtle-Transporter (100kg)



OmniTurtle-Robot Arm Carrying Platform (5t)



OmniTurtle-Transporter (1.2t)



OmniRhino-Transporter (2t)



Customized Forklift AGV (4t)



Customized Forklift AGV (15t)



Customized Forklift AGV (7.5t)



OmniTurtle-Transporter (10t)



OmniTurtle-Aerial Work Lifting Platform (3t)