



# AGV (Automatic Guided Vehicle )

### Reason to Use AGV

- Effectiveness Transfer
- Decrease Labor Cost
- Minimize Delivery Mistake
- Automatic Record of Delivery
- Safety Control to Dangerous Environment

### Operation with Use AGV

- Auto Mobile Industries / Auto Parts Industries
- Food Industries
- Beverage Industries
- Furniture Industries
- Medical Industries
- Machine Industries
- Logistic/Warehouse Industries
- Paper Industries
- Chemical Industries

### Usage of AGV System

- Distribution of Parts Supply to Assemble Sections
- Transport between Production Line to another Production Line
- Use as Conveyor for Assemble Line
- Delivery of Special Shaped Goods, Heavy Goods, Dangerous Goods, Sanitary Goods
- Picking and Sorting

### Sample of Usage



#### Assemble Parts delivery by AGV

- Each Parts are delivery form Parts Center to Assemble area.
- Delivery timing can be controlled well.
- It can decrease delivery human error.



#### Mold Transfer

- Mold Transfer between Machine and Mold Storage Warehouse.

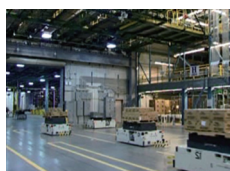


#### Machine Assemble Line

- AGV is an Assemble Work Table too.
- Assemble Machine will Transfer to Packing Section.



#### Usage in Clean Room



#### Transfer Between 2 Factories

- In order to move Semi Finished Products to the next Production Line.



#### Engine Body Assembleing

- On top of AGV, Assemble work of Engine on Top of AGV, and AGV will move to the next Assemble.
- Compare to Work on Conveyor, AGV System is very easy and flexibly to change Line.
- If there are Problem in the line, it is easy to remove one work from the Line.

### For Designn AGV Operation, it is need to consider the following.

- Operation hours (Need to consider how charge battery.
- Slope in the operation area.
- Safety system to pedestrian or the other operation.
- Capacity of AGV



# AGV (Automatic Guided Vehicle) & Automatic Guided Tractor

## KOLEC

### Loading type

Low cost & high performance automatic guided vehicle.  
This machine responds various automatic transfer system



#### ■ TRT300/530

(Direction of travel: Forward & backward)

Various system operation is available,  
however small budget.  
Real automatic guided vehicles of load  
capacity 300kg • 500kg



#### ■ TRT2300

(Direction of travel: Forward & backward)

Economical rear automatic guided vehicle



#### ■ TRT230/DRC530

(Automatic guided tractor)

Real automatic guided tractors of  
towing load mass 500kg • 1000kg

## We offer automatic travel system

### ■ Feature

- **Automatic transfer is realized easily in small budget**  
Automatic carrying task comes true easily and economically.
- **Easy operation and superior safety level are supplied**  
Through various safety devices, you can operate with confidence at totally automatic mode.
- **Easy set up the layout, easy changing the layout**  
You can easily set up, change and increase of guidepath when you adopt magnetic-tape floor type.
- **Low cost, however good response for various automatic level**  
The automatic transfer and communication systems realize various operation.
- **Different kinds of charger are prepared**  
We arrange from automatic battery charger which AGV judge the battery residual quantity and recharge automatically to quick recharge.

### ■ We respond to your requirement

- **We solve a problem of unmanned system by automatic guided vehicles**  
Is it possible to make automatic system by AGV even in arrow space.  
We support your making plan and cutting cost.
- **Set up guide path (diverge & merge)**  
We course plans for quick transport, short cutting to the destination and  
diverge from main travelling route.
- **Automatic transfer**  
We propose various automatic transfer equipments for packing or service.  
For example roller-conveyor top chain-conveyor top, slide-fork top and lifter deck.
- **Communication system**  
Automatic guided vehicle can slow down, stop and start by data transmission. The machine  
can deliver location information and loading information to control system.

### ■ Automatic guide tractor

- **The tractor tow 500kg • 1000kg easily.**  
Compact body, but big towing mass. This automatic guided tractor suit long distance travel.
- **Characteristic device.**  
Our tractor has superior running stability by 5 wheels structure. Because the drive wheel with  
shock absorber shows good attendants for rugged ground.

Charge station



Custom binding





## AGV (Automatic Guided Vehicle) & Automatic Guided Tractor



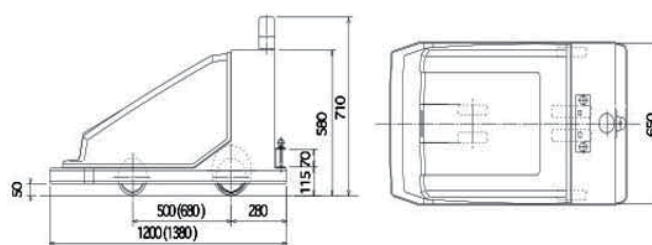
### Specification

#### ■ TRC140

Driving steering	2 wheel drive, 2 wheel steering
Travelling direction	Multi-direction (Forward, reserve, traverse motion for transfer diagonal travel, pivot turn)
Max. Travelling speed	600m/min
Maximum payload	100kg
Induction type	Magnetic induction
Charging method	Quick recharge
Method of crossing	Collision avoidance control
Method of set AGV on guide path	On board operation
Dispatch control	Custom binding available

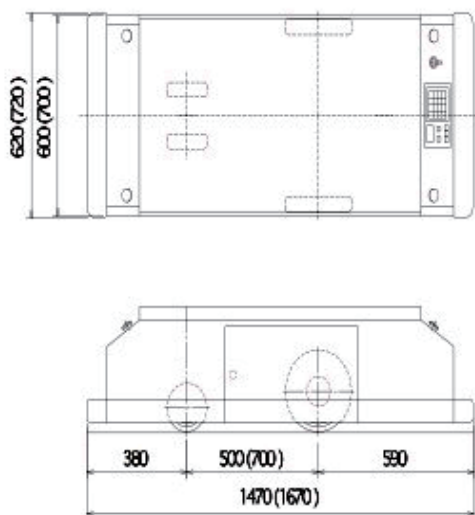
### Dimention

#### ■ DRC230 (DRC530)

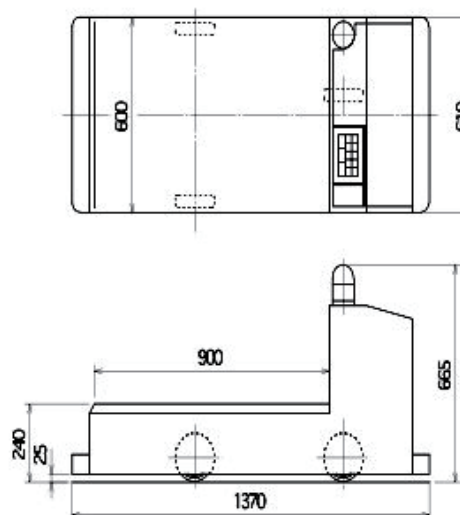


### Dimension

#### ■ TRT330 (TRT530)



#### ■ TRT230



#### ■ TRT

	TRT230	TRT330	TRT530
Driving steering	1 wheel drive, 1 wheel steering	2 wheel drive, 1 wheel steering	2 wheel drive, 1 wheel steering
Travelling direction	Forward, reserve	Forward, reserve	Forward, reserve
Max. Travelling speed	30m/min	40m/min	40m/min
Max. Load Capacity	200kg	300kg	500kg
Induction type	Magnetic induction	Magnetic induction	Magnetic induction
Method of set AGV on guide path (*1)	On board operation	On board operation	On board operation
Disverge & merge	Custom binding available		

\* 1 : We can offer remote control of set AGV on guidepath. (option)

#### ■ DRC

	DRC230	DRC530
Driving steering	1 wheel drive, 1 wheel steering	1 wheel drive, 1 wheel steering
Travelling direction	Forward	Forward
Max. Travelling speed	40m/min	36m/min
Max. Load Capacity	500kg	1000kg
Induction type	Magnetic induction	Magnetic induction
Method of set AGV on guide path (*1)	On board operation	On board operation
Disverge & merge	Custom binding available	

\* 1 : We can offer remote control of set AGV on guidepath. (option)



# AGV (Automatic Guided Vehicle)

## PL Cart

Traction Load : 500 kg

Easily course set and change course.

- Operating settings are easily create in Excel
- The guide using the magnetic tape.



## Specifications

Item			unit	Basic Type	Short Type
Performance	Rated Capacity	Maximum Speed 50m/minute	kg	100	-
		Maximum Speed 30m/minute	kg	200	-
	Towing Load Mass	Towing 1 Item	kg	500	
		Towing 3 Item	kg	50	-
	Maximum Force of Traction		kgf	33.2	
	rated tractive force		kgf	18.4	
Dimensions	Overall Length	Include Front Bumper	mm	1,085	730
		Include Front and Rear Bumper	mm	1,110	-
	Overall Width	Include Bumper	mm	495	
	Overall Height	Standard	mm	250	800
		Type of Battery equipped with side	mm	315	800
efficiency	driving speed	Loading 100kg	load/unload	m/minute	50/50
		Loading 200kg	load/unload	m/minute	30/50
		Towing 1 item : 500kg	load/unload	m/minute	50/50
		Towing 3 item : 50kg	load/unload	m/minute	50/50
	grade ability	3 minute rated value	Loading 200kg	%	3
			Towing 500kg	%	1
Weight	vehicle weight	include Battery and safety device	kg	75	
wheeled system	diameter of tyre/Type	driving wheel	mm	φ 125/ urethane	
		Caster wheel	mm	φ 75/ urethane	
	minimum ground clearance	the lower part driven unit	mm	12	
	Maximum permitted ramp	Passable 15m/minute	mm	5	
	Maximum winding road surface.	Passable 15m/minute	mm	10	
	DAMPING BRAKE system			Drive motor regenerative	
	parking braking system			off brake Type	
running gear	Battery	Type		valve regulated stationary lead-acid batteries	
		voltage/permissible amount	V/Ah	24/32	
	drive motor	Type of ELECTROMOTOR		DC BRUSHLESS	
		output	continuously rated value	kW	0.1x2
steering device	steering system			powered wheel steering	
	minimum radius of guideway wire			mm	600
	induction system			magnetic system	
usage environment	operating temperature limits			°C	0 - 40
	operating humidity limits			%	20 -100 (No condensation)
	condition of usage environment <Indoor general environment>	The absence of dust, oil mist, corrosive gas/there is no rainwater/there is no Leak of the road surface,puddle / no direct sunlight in the optical sensors/ no thermal shock			