

Wireless
Charging
24V
B&PLUS

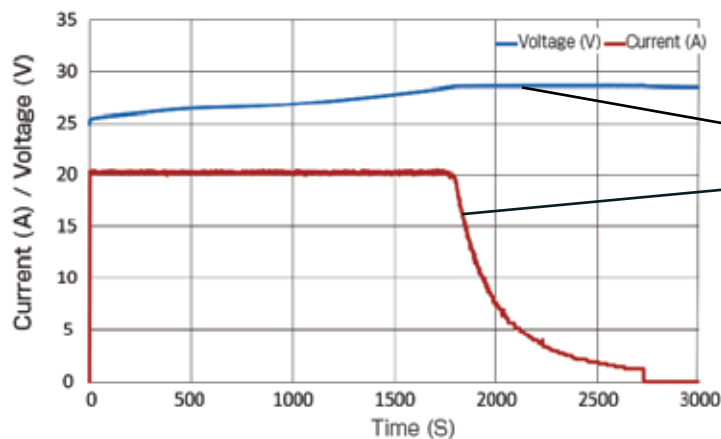
Charge
The battery
Wirelessly



210W 600W 1000W 2000W

5 Value

1: CCCV Charging



Control the charging current by the battery capacity

When the battery is in the discharging state, the system automatically charge the by constant current (CC). And it also control the charging current so as not to exceed the constant voltage (CV).

2: Zero Battery Consumption



The charging amplifier is powered by the wireless power

The system works **by the wireless power from station side**. Therefore The battery is not consum the current by this system, and it concentre on the AGV operation.

3: IP65 Protection



The structural design resistant to dust and water, oils

The head is sturdy structure by a resin mold, and IP protection class is IP65. It's **maintenance-free** stacture and can be used with peace of mind for a long time.

4: Easy LED Indicator



Equipped with status LED display, and show the charging stuation

The LED are equipped at base and charging amplifier. It display the **charging progress**, and 12 kinds of **error conditions** by combination E1~E3.

5: External Output

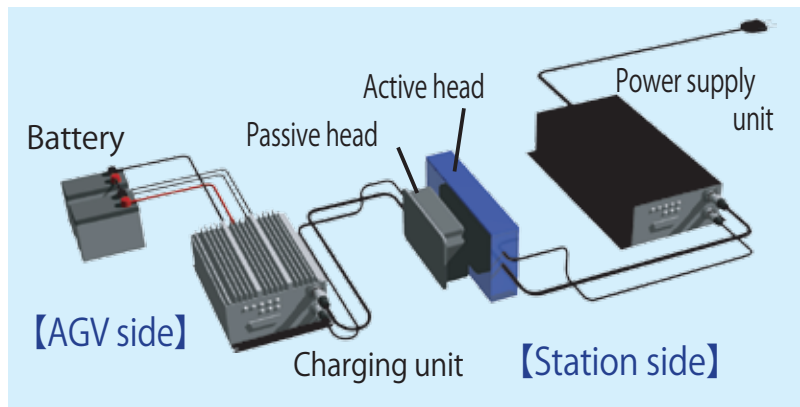


Easy display the Charging conditions by External Output

The system has **external D-sub port**, output the charging progress and error conditions. LED unit and the external signals **identify the charging conditions more easily**.



4 Range



Selectable lineup for various AGV / AGF systems

	RCS210	RCS600	RCS1000	RCS2000
Total Power	210W	600W	1000W	2000W
Charging Current	7A	20A	34A	67A
Acceptable Battery	24V lead	24V lead/Li (12V,48V)	24V lead/Li (12V,48V)	24V lead/Li (48V)
Recommended Battery	20AH~50AH	35AH~100AH	100AH~150AH	150AH~300AH
Application	Small AGV	Standard AGV	Standard AGV Standard AGF	Large AGV Standard AGF



Small AGV



Standard AGV



TUGNOVA(forklift)

RCS 2000



World smallest class, 2KW highpower charging

- For high power AGV and AGF
- Max.67A rapid charging
- The system demention is world smallest Class
- Long operation distance types

RCS2000 Series				
	Charging Unit	Passive head	Active head	Power supply unit
Type name	RCS2000-CA24	RCS2000-CH	RCS2000-AH	RCS2000-AC-B24
Electric Spec.	Charging spec. (CC:Constant Current / CV:Constant Voltage) CC: max.67A (10-25mm) max.50A (25-30mm) max.34A (30-35mm) max.17A (35-45mm) CV: max.30V		Rated input voltage/Supply voltage: AC200V $\pm 10\%$ Three-phase Max. Current consumption : 12.5A	
Operation Distance Offset	Distance Z : 10-25mm (2KW), 25-30mm (1.5KW) 30- 35mm (1KW), 35- 40mm (500W) Offset X : ± 10 mm Offset Y : ± 20 mm		Front View	Top View
Demension	W280 × D 200 × H 80 (mm)	W250 × D 150 × H 40 (mm)	W250 × D 150 × H 40 (mm)	W350 × D 240 × H 131.2 (mm)
Weight	4.6kg	3.0kg	3.3kg	8.5kg
Protection Class	IP40	IP6X	IP6X	IP20
Remarks	- Maximum continuous time of over 34A chargin is 10min. After 10min, the system reduce the current to 34A. - 48V battery charging options (60V34A) is available			

RCS 1000



Most populer AGV charger 1KW Standard types

- Constinuuous 34A charging
- Best seller products for AGV builder
- Selectable for 24V / 48V types

RCS1000 Series				
	Charging Unit	Passive head	Active head	Power supply unit
Type name	RCS1000-CA24	RCS1000-CH	RCS1000-AH	RCS1000-AC
Electric Spec.	Charging spec. (CC:Constant Current / CV:Constant Voltage) CC: max.34A CV: max.30V		Rated input voltage/Supply voltage: AC200V $\pm 10\%$ Single-phase Max. Current consumption : 7.5A	
Operation Distance Offset	Distance Z : 0-15mm Offset X : ± 10 mm Offset Y : ± 10 mm		Front View	Top View
Demension	W260 × D 160 × H 80 (mm)	W170 × D 100 × H 45 (mm)	W210 × D 150 × H 45 (mm)	W350 × D 210 × H 80 (mm)
Weight	2.7kg	2.0kg	2.8kg	3.5kg
Protection Class	IP40	IP65	IP65	IP20
Remarks	- Long distance head (20-40mm) is available - 48V battery charging options (60V17A) is available			

RCS 600



Suitable for small and middle class AGV

- Developed by the customer request for small / middle class AGV
- Cost effective products
- Selectable for 12V / 24V / 48V types

RCS600 Series				
	Charging Unit	Passive head	Active head	Power supply unit
Type name	RCS600-CA24	RCS600-CH	RCS600-AH	RCS600-AC
Electric Spec.	Charging spc. (CP:Constant Power / CV:Constant Voltage) CP: max.25A CV: max.35V		Rated input voltage/Supply voltage: AC90V – 220V Single-phase 50/60Hz Max. Current consumption : 9.0A	
Operation Distance Offset	Distance Z : 0–20mm Offset X : ±10mm Offset Y : ±15mm		Front View 	Top View
Demension	W260 × D 160 × H 80 (mm)	W170 × D 100 × H 45 (mm)	W254 × D 125 × H 45 (mm)	W350 × D 210 × H 80 (mm)
Weight	2.7kg	2.0kg	3.0kg	3.5kg
Protection Class	IP40	IP65	IP65	IP20
Remarks	<ul style="list-style-type: none"> - Long distance head (20–40mm) is available - 12V battery charging options (15V34A) is available - 48V battery charging options (60V10A) is available 			

RCS 210



Compact head types for Small AGV

- For smallest AGV
- 7A charging for Lead battery
- Smallest head in RCS series

RCS210 Series				
	Charging Unit	Passive head	Active head	Power supply unit
Type name	RCS210-PB24	RCS240PH	RCS240AH	RCS240-AC01
Electric Spec.	Charging spc. (CC:Constant Current / CV:Constant Voltage) CC: max. 7A CV: max.30V		Rated input voltage/Supply voltage: AC90V – 220V Single-phase 50/60Hz Max. Current consumption : 4.0A	
Operation Distance Offset	Distance Z : 0–10mm Offset X + Offset Y : ±10mm		Front View 	Top View
Demension	W230 × D 188 × H 50.5 (mm)	W140 × D 100 × H 40 (mm)	W140 × D 100 × H 40 (mm)	W300 × D 210 × H 80 (mm)
Weight	1.6kg	1.3kg	1.3kg	2.7kg
Protection Class	IP20	IP65	IP65	IP20
Remarks				

7 Option

1. Extension Cable



It can extend the cable length between the head to charging amplifier and power amplifier

2. Output Cable



This cable can connect at D-sub poart, and output the charging conditions.

3. Data writing Cable



Data writing cable is used to change the charging parameter.

4. Station Bracket



Station bracket is used to fix the power supply unit and power suuply head.

5. Thermistor



It measure the battery temperature conditions to stop the chargings for safety.

6. Battery Cable



Battery connection cable between charging amplifier and the battery.

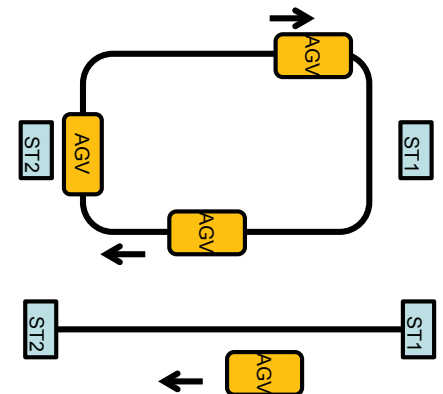
7. Amplifier filter



Prevent the dust by the amplifier filter. The system need to exchange the filter regularly.

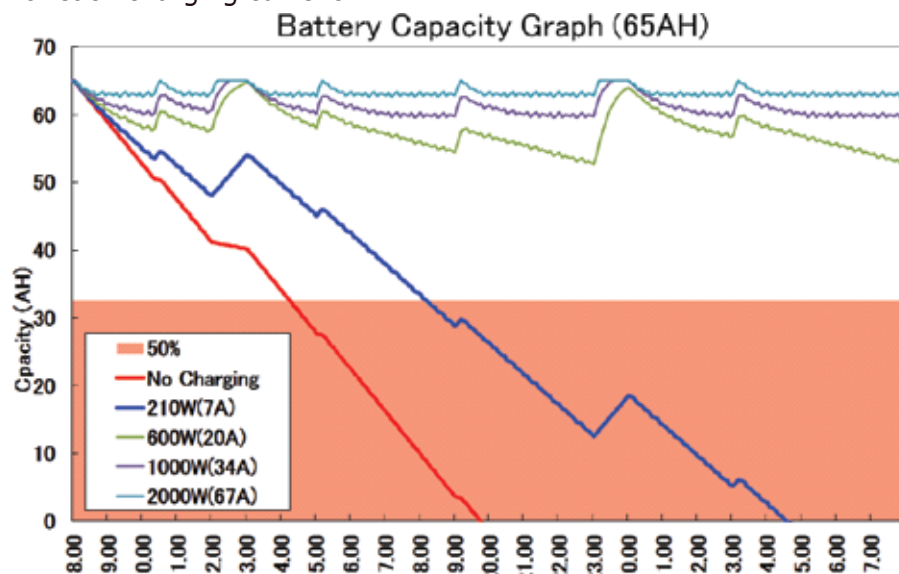
Free simulation to confirm the effect of wireless chargings

We support to confirm the effec of wireless charging by free simulations. Based on your AGV operation details, We caluculate the battery expeted conditions as below;



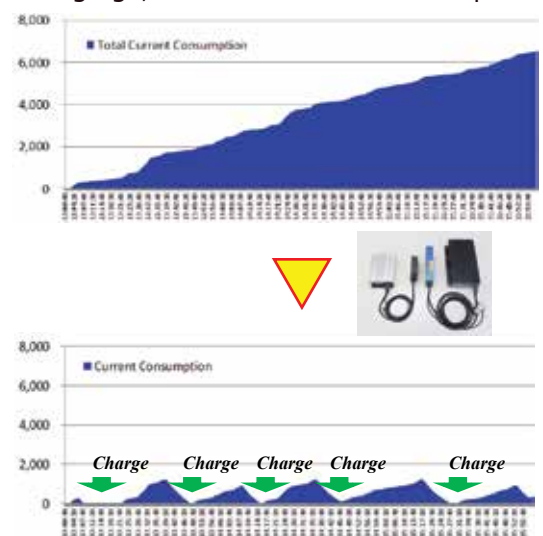
System comparition by Battery Capacity Graph

The simulation caluculate the battery capacity progress of each charging current.



Battery Consumption Status

Battery consumption gradually increase without chargings, however if you use chargings, it save the total consumption.



Wireless Power Supply by
B & PLUS K.K.

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Web : <http://www.b-plus-kk.com>

* Info may change the mention contents such as specifications without a notice.

Thank you for understanding

* Please refer to the instruction manual. It can be download by HP.