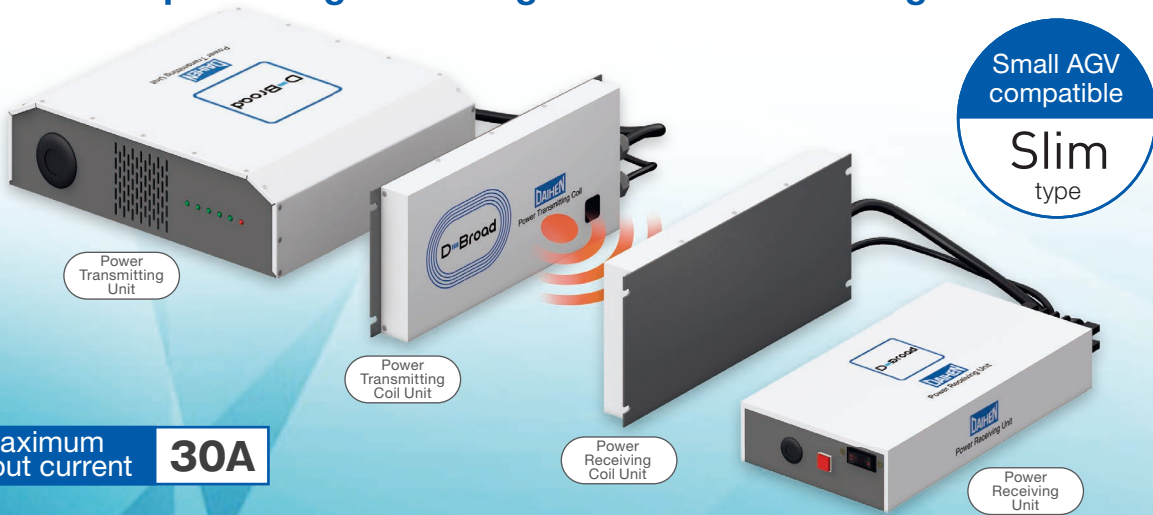


Wireless Power Transfer System for AGVs

The D-Broad Series combines two significant advantages:
compact design and a high tolerance for misalignment.



Easily retrofitted to a small AGV

Installation example ①

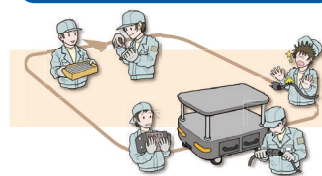


Installation example ②

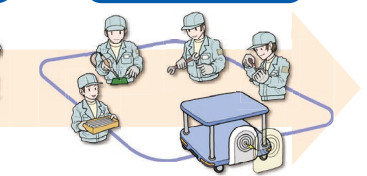


Benefits

Direct charging (wired, contact type)



Wireless Power Transfer



- No need for time-consuming charging or replacement of storage batteries
- No battery storage area required
- No risk of electric shock during charging
- Reduced deterioration of cables and terminals and the like

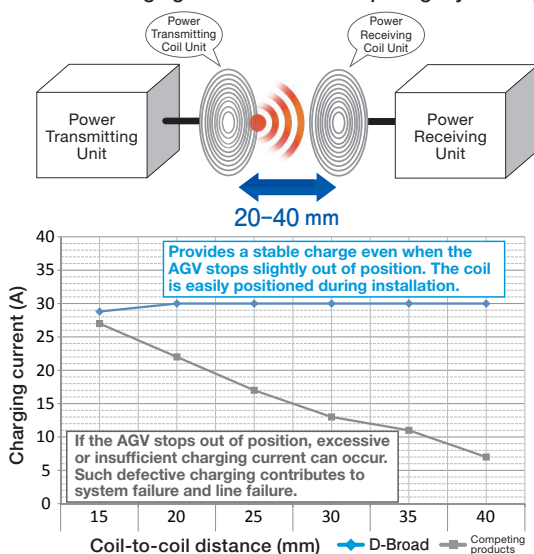
Improved productivity & reduced labor costs

Improved safety

Features

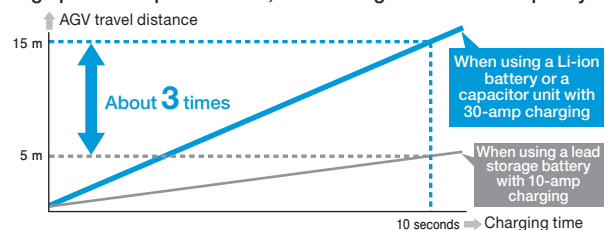
High tolerance for misalignment

A constant current of 30 amps can be supplied across a 20-mm to 40-mm distance between power transmitting and receiving coils. This allows for stable charging even if the AGV stops slightly out of position.



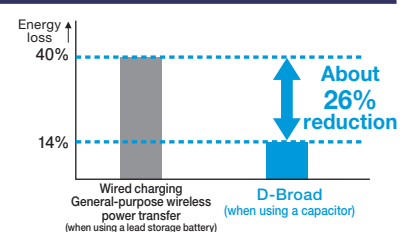
Compatible with various power storage devices. Accommodates fast charging.

This system can accommodate lead storage batteries as well as a variety of power storage devices such as capacitors and lithium-ion (Li-ion) batteries. Providing up to 30 amps of current, it can charge such devices quickly.



Energy efficiency

Use of an optional Capacitor Unit as a power storage device results in a roughly 26% reduction in energy loss.



D^{III}Broad Slim_{type} Wireless Power Transfer System for AGVs

[Configuration]

● Power Transmitting Unit	1	● Power Receiving Unit	1
● Power Transmitting Coil Unit (Includes 1-m cable for connecting to Power Transmitting Unit)	1	● Capacitor Unit (optional)	1
● Power Receiving Coil Unit (Includes 1-m cable for connecting to Power Receiving Unit)	1		

[Specifications]

Common to all units			
Distance between Power Transmitting and Receiving Coil Units	<ul style="list-style-type: none"> • 30 mm ±10 mm • Charging current remains constant even as the distance changes. 	Operating temperature range	0–40°C
Permissible tolerance for misalignment of AGV stop position (direction of travel)	Charging current remains constant even if the stop position deviates by ±10 mm.	Operating humidity range	20–80% (No condensation)
		Storage temperature range	-20–55°C
		Storage humidity range	20–80% (No condensation)

Power Transmitting Unit		Power Receiving Unit	
Number of phases	3-phase	Output voltage range	12–52.5 V
Rated input frequency	50/60 Hz	Maximum output current	30 A
Rated input voltage	200 V ±10%	Weight	2.5 kg
Rated input power	2 kW	Dimensions (W × D × H)	350 × 180 × 60 mm (Excluding projections)
Required power supply capacity	2.3 kVA		
Rated power factor	0.9 or higher		
Weight	6 kg		
Dimensions (W × D × H)	343 × 421 × 130 mm (Excluding projections)		

Power Transmitting Coil Unit		Power Receiving Coil Unit	
Weight	2.5 kg	Weight	2.5 kg
Dimensions (W × D × H)	380 × 38 × 150 mm (Excluding projections)	Dimensions (W × D × H)	380 × 38 × 150 mm (Excluding projections)

[Optional]

57F Capacitor Unit		171F Capacitor Unit	
Capacity	57F	Capacity	171F
Output voltage range	24 V ±10% or 48 V ±10%	Output voltage range	24 V ±10% or 48 V ±10%
Maximum output current	67.2 A (24 VDC), 33.6 A (48 VDC)	Maximum output current	67.2 A (24 VDC), 33.6 A (48 VDC)
Weight	20 kg	Weight	40 kg
Dimensions (W × D × H)	260 × 346 × 284 mm (Excluding projections)	Dimensions (W × D × H)	398 × 500 × 359 mm (Excluding projections)



Precautions for Use

- Use only in a dry location.
- Do not use in a location exposed to direct sunlight.
- Never place metallic objects between power transmitting and receiving coils.
- Use this system as a complete set. (Never combine with components from another manufacturer's wireless power transfer system.)
- During wireless power transfer, remain outside a 50-cm radius of the Power Transmitting Coil Unit.
- Before installation, obtain a permit for use of high-frequency equipment.

Product specifications and designs are subject to change without notice.



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