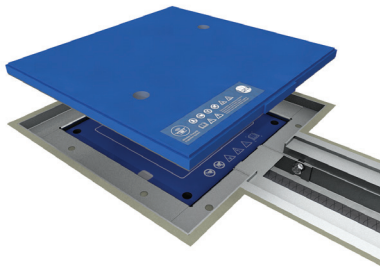
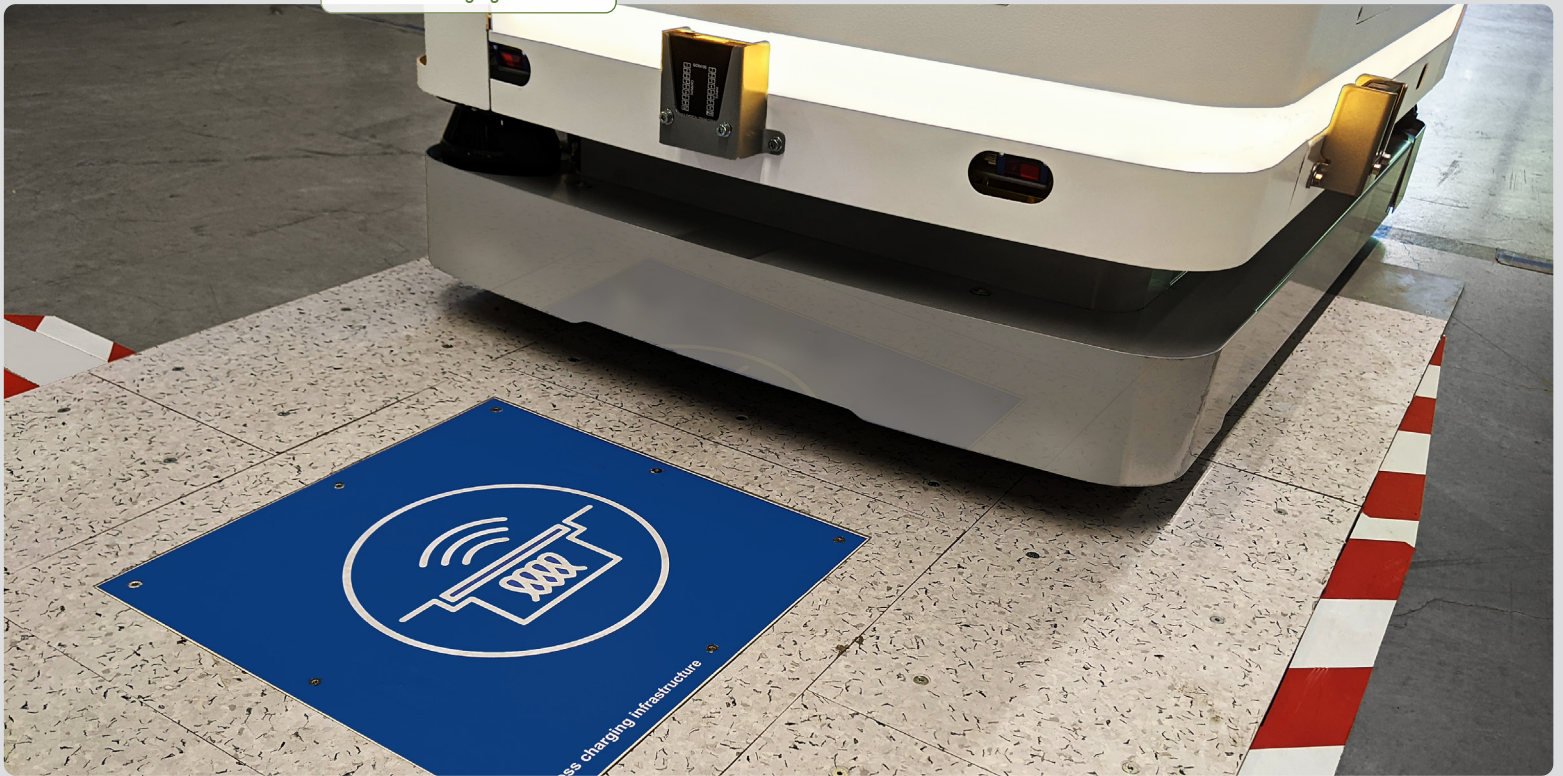


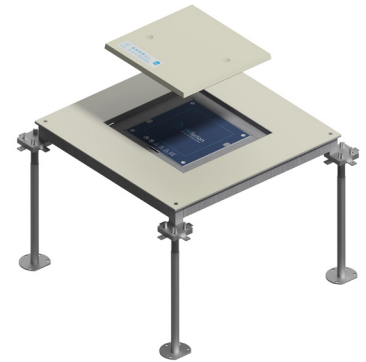
Wireless Charging Protection



WCPS-R-3013™ In-Floor Protection System



WCPS-Ramp™ On-Floor Protection System



WCPS-RF™ Raised-Floor Protection System

JORDAHL® WCPS™

Wireless Charging Protection Systems

In-Process Wireless “Opportunity” Charging

Optimized Energy Management

The efficiency of autonomous logistics depends significantly on optimized energy management and when vehicles are charged as part of the working process, enormous productivity gains can be achieved.

Autonomous transportation systems, EVs, AGVs & AMRs, are part of interlinked and highly efficient value chains where reliable and harmonized energy supplies are essential. When the decision is made to automate intralogistics processes by using autonomous vehicles, it is imperative to integrate the appropriate charging methodology as a part of the working process.

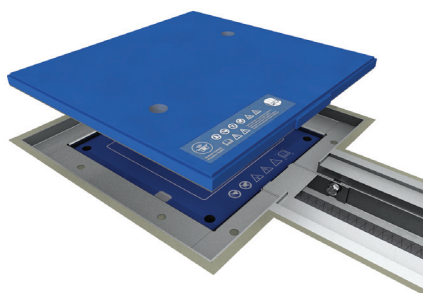
An efficiently planned energy supply has a large impact on the optimal deployment and availability of the fleet as well as their operational readiness in the workflow. Addressing the power supply of vehicles early and opting for contactless wireless charging technology unleashes the full potential of your autonomous fleet.

Introducing the WCPS™ from Jordahl

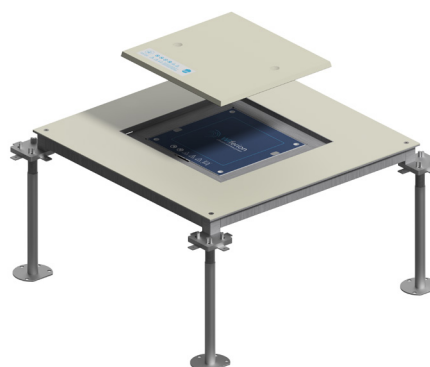
Introducing the Wireless Charging Protection Systems (WCPS) from Jordahl, flush-to-the-floor, on-floor and raised floor contactless charging protective infrastructure for wireless charging systems



WCPS-RAMP™, On-Floor Protection System



WCPS-R-3013™, In-Floor Protection

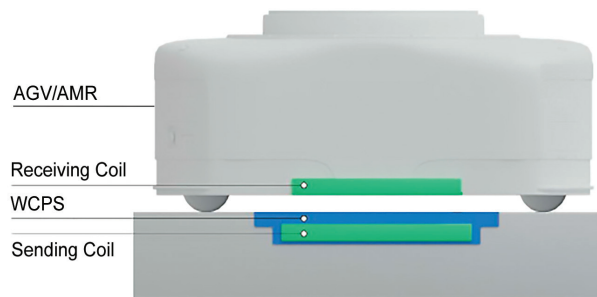


WCPS-RF™, Raised-Floor Protection System

Protected by Jordahl®

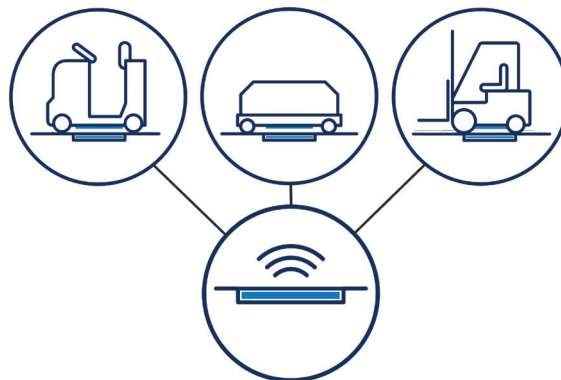
Opportunity at Every Stop

Charging coils are placed in the ground under a protective cover and are activated only when a matching receiving coil is positioned above it. Charging begins immediately and ends as soon as the 2 coils are no longer in position. More locations equal more opportunity to charge and intelligently planned charging points ensure a stable high state of charge and maximum utilization.



Flexible, Scalable & Industry Ready

By eliminating restricted areas and detours for off-line charging, each process can be ideally interlocked optimally combining vehicle types with one another to create a smoother, more reliable and safer process.

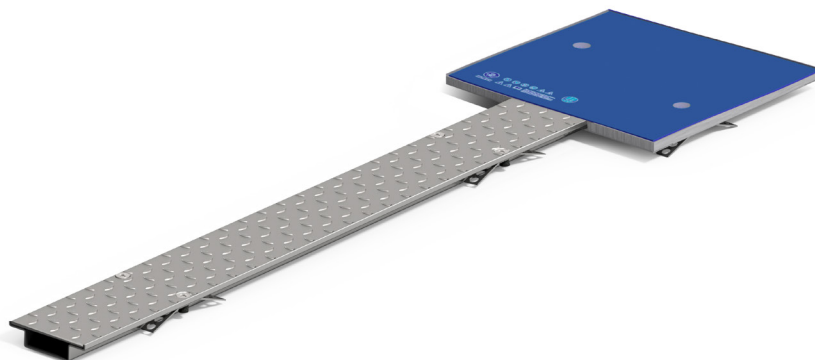


Maximized Uptime

Implementation of in-process opportunity charging allows for optimized fleet management and significantly improved vehicle uptime while smaller fleet sizes with higher utilization result in increased efficiency throughout the entire process.

Jordahl® WCPS-R-3013™

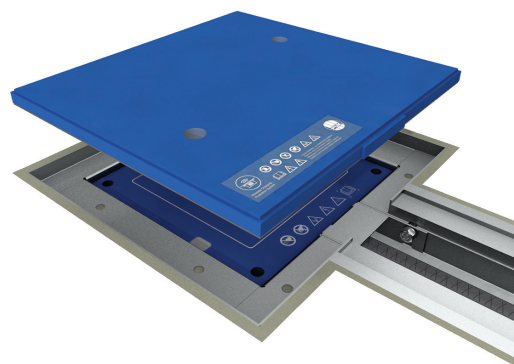
In-Floor, Wireless Charging Protection System



WCPS-R-3013™ is the industry ready, flexible, scalable protection system for in-floor installation of wireless charging systems. The WCPS-R-3013 can be used as a stand-alone solution or in conjunction with other floor-mounted or vertically mounted charging solutions, combining optimum usability while remaining flexible to future charging technologies. Designed for mixed traffic the WCPS-R-3013 can be approached from all sides providing maximum flexibility for the entire autonomous fleet.

The WCPS-R-3013™ Advantage

- VDE certified, IP65 protection class
- Total protection for wireless charging systems
- Flush mounted, safe and traffic ready
- In-process opportunity charging of EVs, AGVs & AMRs
- Superior safety with fewer restrictions
- Highly resistant to external elements
- Perfectly suited for demanding environments
- Scalable

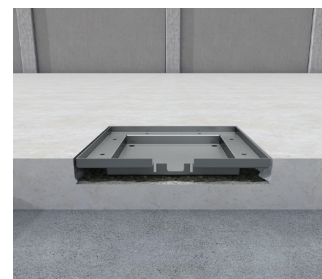
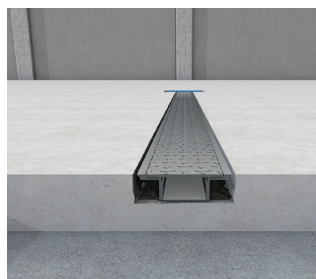


Industry Ready

The WCPS-R-3013 consists of 4 main components, the formed steel housing which accommodates the charging coil and associated electronics, the heavy-duty formed steel channel which protects the charging cable, the heavy duty steel channel cover and the charging coil cover.

Integrated

The WCPS-R-3013 can be easily integrated into new or existing construction and is always flush to the floor.

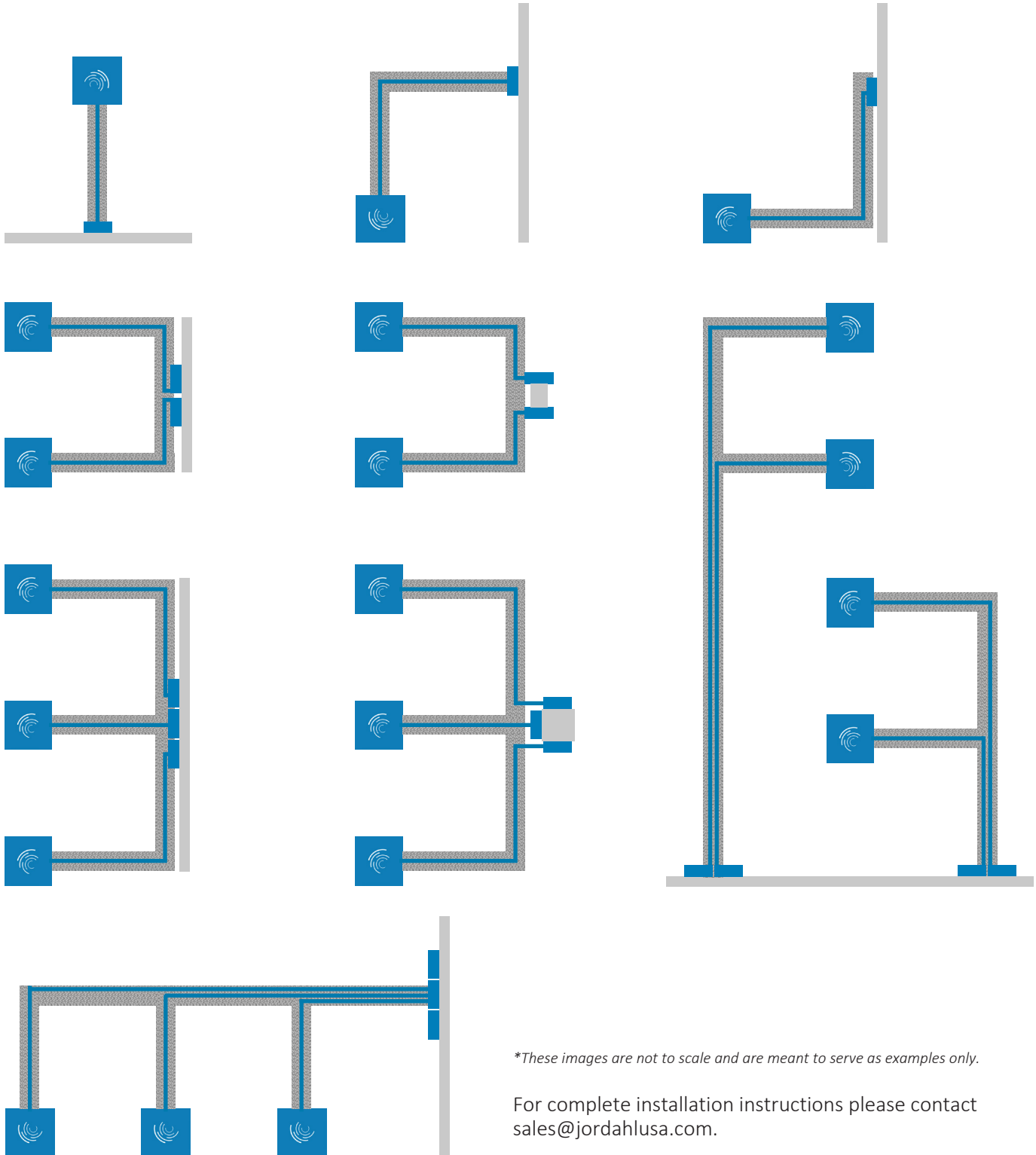


WCPS-R-3013™

Configuration Examples

The WCPS-R-3013 can be configured in a variety of ways including adding multiple charging stations off of a main channel, using right angle channels and adding extensions. The channels and channel covers can be cut to length and angle as desired. The charging module can be mounted to walls, columns, posts, pillars, racks or stands.

Below are several possible installation scenerios for the WCPS-R-3013.

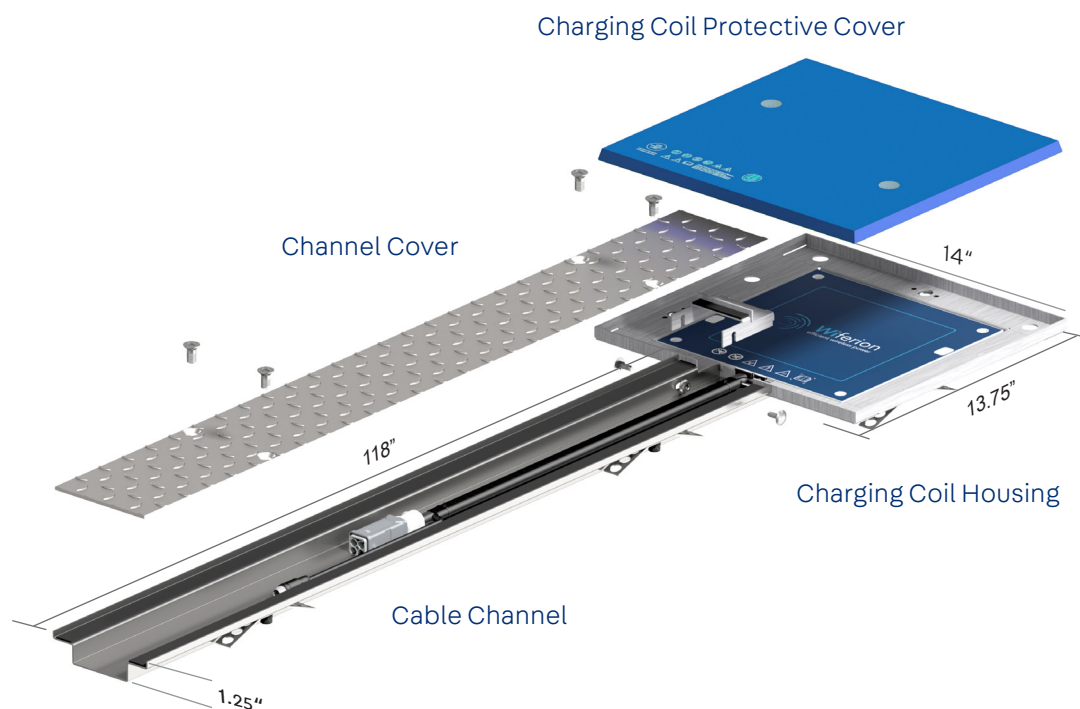


WCPS-R-3013™

Components

WCPS-R-3013 Component Parts List

The WCPS-R-3013 consists of 4 primary components, the charging coil housing, the cable channel, channel covers and the charging coil cover. All systems come with channel connectors and leveling hardware.



Primary Components

Charging Coil Housing	WCPS-KE-L-3013
Leveling Anchor	WCPS-NA
PCX Protective Cover	WCPS-D-13
Quick Connector	WCPS-KESV 30-E
Screw(s)	UKS M3 x 6E
Leveling Bar	WCPS-NBKE-S
Primary Channel (3 mtr)	WCPS-AK-30
Channel Cover Set (3x1 mtr)	WCPS-SKD5-12-F
Leveling Anchor	WCPS-NA
Leveling Bar	WCPS-NBK-S
End Plate	WCPS-KEB-30-S
Side Profile Gasket	WCPS-SPG-19

Product Code

Optional Components

Extension Channel (3 mtr)	WCPS-K-30-S
Extension Channel Cover Set	WCPS-SKDS-12-F
Extension Channel Connector	WCPS-KV-30-S
Extension Side Profile Gasket	WCPS-SPG-19
Channel T-Connector	WCPS-KTV-30-S
Channel L-Connector	WCPS-KLV-30-S

Product Code

Extension Channel (3 mtr)	WCPS-K-30-S
Extension Channel Cover Set	WCPS-SKDS-12-F
Extension Channel Connector	WCPS-KV-30-S
Extension Side Profile Gasket	WCPS-SPG-19
Channel T-Connector	WCPS-KTV-30-S
Channel L-Connector	WCPS-KLV-30-S

WCPS-R-3013™

Specifications

WCPS-R-3013 In-Floor Specifications

Item: WCPS-R-3013

Primary Channel Sections:

- Max. channel length: 7.50 m (295")
- Material thickness: 2mm (0.08")
- Material type: Steel 1.0226 (Z275)
- Coating: Hot-dip Galvanized
- Depth: 30mm (1.25")
- Width Outer: 170mm (6.7")
- Width Inner: 75mm (3")
- Length: 3000mm (118")
- Weight: 24.9kg (54.9 lbs) *including covers below

Channel Cover(s):

- Static Load: 15kN (3,372lbf)
- Thickness: 6mm (0.25")
- Material type: Steel 1.0122 (S235JRC)
- Coating: Hot-dip Galvanized
- Dimensions: 1000 x 120 x 6 mm (39.5" x 4.75" x 0.25")

Charging Coil Housing:

- Depth: 30mm (1.25")
- Dimensions: 350 x 328 x 30 mm (13.75" x 13" x 1.25")
- Thickness: 2mm (0.08")
- Material type: Stainless Steel (1.4301)
- Weight: 2.2 kg (4.85 lbs)

Charging Coil Cover:

- Dynamic surface pressure: 8MPa
- Certified static load 15kN (3,372lbf)
- Interference free cover 13mm (0.5")
- Chemical resistant
- Weight: 4.3kg (9.5 lbs)

Certifications & Ratings:

- IP65 Rating
- CE Certified
- VDE Certified (DIN EN 50085-2-2)
- Flame retardant cover plate (Bfl-S1)

Jordahl® WCPS-RAMP™

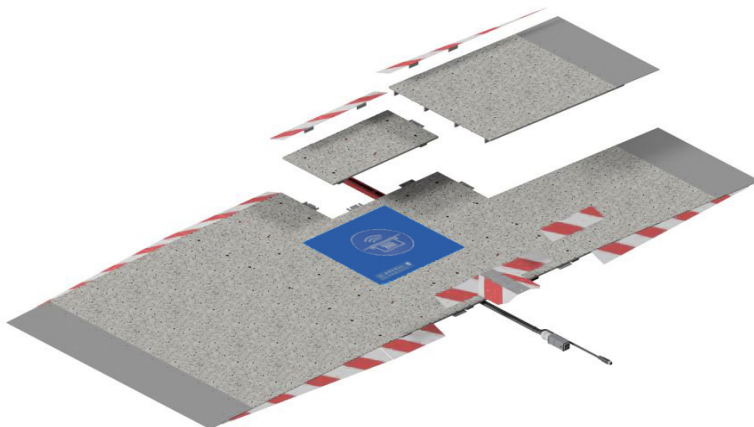
On-Floor, Wireless Charging Protection System



The WCPS-RAMP™ is a fully integrated on-floor wireless charging protective infrastructure for wireless charging systems. Designed specifically for demanding on-floor applications in industry, manufacturing, logistics, laboratories, clean rooms and warehouses. The WCPS-RAMP is a non-permanent, modular, safe, flexible, industry ready solution for protecting wireless charging systems.

The WCPS-RAMP™ Advantage

- Safe, Secure, Work-Flow Optimized
- Easy Installation and Set Up
- Adaptive, Repositionable, Expandable
- Non-Invasive Installation
- Load Rated to 6000 lbs
- Bfl-S1 Fire Protection Rating
- Slip Class: R9 (DIN 51130)
- ISO3 Clean Room Compatible
- Electroconductive (DIN EN 108)
- Trip Protection Side Strips
- Resistant to cleaning agents & chemicals



Due to its modular design, the WCPS-RAMP™ can be expanded by adding additional panels.

Standard Size: 2088 x 800 x 21 (mm)

Expansion Panel Sizes (mm)

- Ramp Plateau 200 x 400 x 21
- Ramp Plateau 400 x 400 x 21
- Ramp Module 400 x 644 x 21

WCPS-RAMP™

Specifications

WCPS-RAMP On-Floor Specifications

Item: WCPS-Stage21-K1

Ramp Structure:

- Dimensions: 2088 mm x 800 mm x 21 mm
- Material: Stainless Steel (1.4301)
- Slope: 3%

Charging Coil Housing:

- Depth: 21mm (.75")
- Dimensions: 350mm x 328mm x 21mm (13.75" x 13" x .75")
- Thickness: 2mm (.08")
- Material type: 1.4301 Stainless Steel

Charging Coil Cover:

- Dimension: 310 x 310 x 6 mm
- Certified static wheel load 500kg (1,102lb)
- Interference free cover
- Chemical resistant
- Full Surface Covering, ISO 3

Ramp Surface Covering

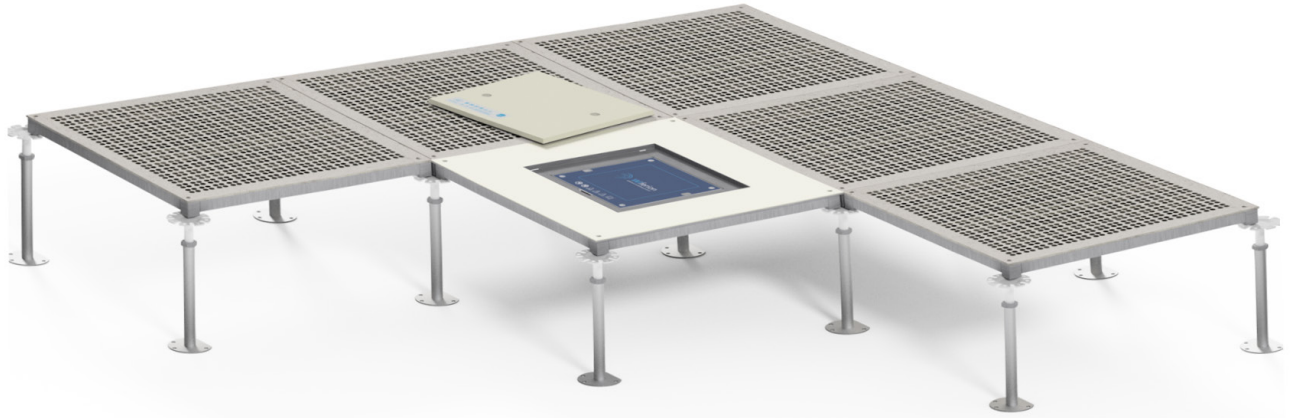
- Slip Protection: Bfl-S1 / Cover UL-94-V0
- Fire Protection: R9 (DIN 51130)
- Clean Room Compatible: ISO 3
- Load Category: 43 (Heavy)
- Electrically Conductive: DIN EN 1081

Trip Protection Modules

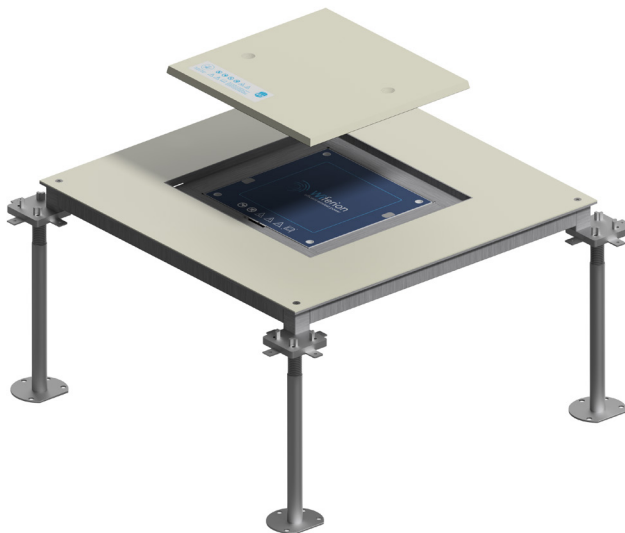
- Material: Stainless Steel (1.4301)
- Cover material: ISO 3

Jordahl® WCPS-RF™

Wireless Charging Protection System for Raised Floors



The WCPS-RF™ is a fully integrated wireless charging protective infrastructure for wireless charging systems. Designed specifically for raised floor applications in industry, logistics, laboratories and clean rooms the WCPS-RF consists of 3 primary components, the protective charging coil housing, the integrated floor panel and the protective PCX charging coil cover.



The WCPS-RF™ Advantage

- Integrated Floor Panel (DIN 51130)
- Protective Charging Coil Housing
- PCX Protective Coil Cover
- Load rated to 1,124 lbs (DIN 12825)
- Bfl-S1 Fire Protection Rating
- ISO 3, Clean Room Certified
- Electroconductive (DIN EN 1081)



WCPS-RF™

Specifications

WCPS-RF Raised Floor Specifications

Item: WCPS-RF-610

Floor Panel:

- Dimensions: 610 x 610 x 36 mm (24" x 24" x 1.42")
- Material type: Stainless Steel (1.4301)
- Weight: 20kg (44lbs)

Charging Coil Housing:

- Depth: 36mm (1.42")
- Dimensions: 358 x 356 x 36 mm (14.1" x 14" x 1.42")
- Thickness: 2mm (0.08")
- Material type: Stainless Steel (1.4301)

Charging Coil Cover:

- Dimension: 344 x 322 x 13 mm (13.5" x 12.68" x 0.5")
- Certified static wheel load 500kg (1,102lb)
- Material type: Composite
- Interference free
- Chemical resistant

Surface Covering

- Slip Protection: Bfl-S1 / Cover UL-94-V0
- Fire Protection: R9 (DIN 51130)
- Clean Room Compatible: ISO 3
- Load Category: 43 (Heavy)
- Electrically Conductive: DIN EN 1081

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