

※ No scaffolding required! Equipped with the latest GPR! **KEYTEC**

Accurate rebar location and depth can be measured by remote control!

※In some cases, such as on the underside of slabs (ceilings), a scaffold or scooter may be required.

NX 25

Flex NX



Sticks and travels on walls and ceilings of concrete structures!
Practical application on site!

Suction type wall/ceiling traveling robot

SPIRADER®

World's first practical application!

Jointly developed by East Japan Railway Company and ONGA Engineering Co in Japan.

SPIRADER is a registered trademark of ONGA Engineering Co.

Equipped with the latest GPR!

the movie



*Appearance and specifications are subject to change without notice.

Suction-type wall/ceiling traveling robot is utilized to save labor for rebar assessment!

Rebar corrosion inside reinforced concrete is affected by the depth from the surface to the rebar (rebar cover). Rebar exploration is sometimes performed in the planning of surface repair work to prevent rebar corrosion. Conventional rebar inspection is a manual process that requires time and labor to move and install an elevated work vehicle to the measurement position. By using this robot, the movement of each measurement point can be greatly simplified and labor saving can be expected!

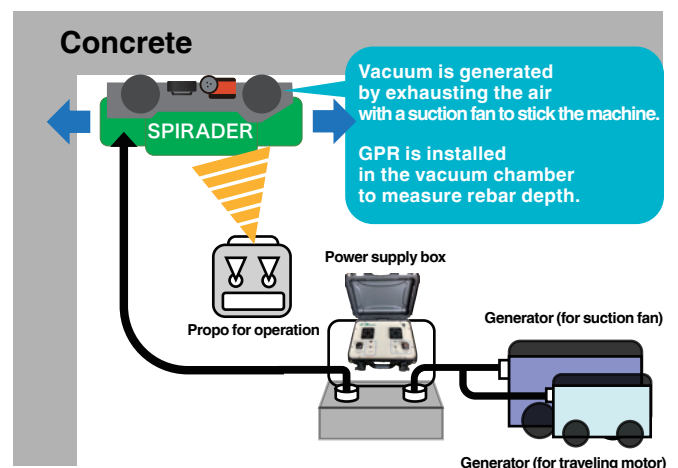
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GPR Equipped: The robot can detect buried pipes such as electric conduit, gas and water pipes (CD pipes, plastic pipes, and other non-metallic pipes), concrete thickness, asphalt pavement thickness, and tunnel lining thickness, cracks as well as reinforcing steel bars!

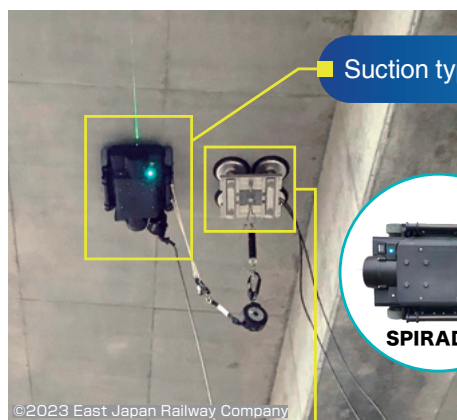
Improved safety and efficiency!

Practical use in bridges in the field!

Reliable rebar depth inspection!



Components and Specifications



Suction type wall/ceiling traveling robot



SPIRADER



Generator



Power supply box



Propo for operation



Safety equipment



Suction cup



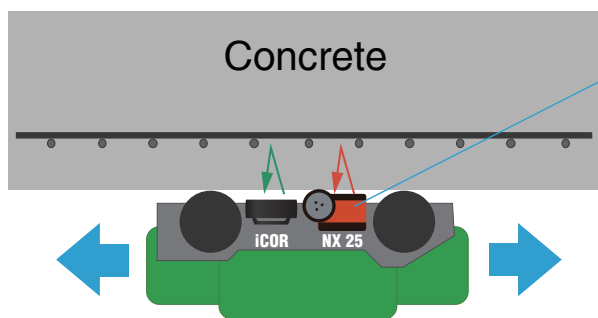
Generators and Vacuum Pump

SPIRADER Specifications

Main unit dimensions: approx. W408xD575x232.5mm
Weight: approx. 19.5 kg (including electromagnetic radar, robot unit approx. 18.5 kg)
Traveling speed: Maximum speed = 25 cm/s, measuring speed = 20 cm/s
Sticking method: High-speed turbo exhaust system
Power supply method: External power supply (3kVA generator) via power cable
Travelling safety device: Infrared distance sensor mounted in front to prevent collision with walls, etc. and to prevent overstepping.
Suction abnormality detection function: Vacuum pressure in suction is monitored in real time by a pressure sensor.
 Blue LED indicates safe sticking area and red LED indicates dangerous area.
 Safety equipment (fall protection): Load capacity 800 kg

It is planned to be equipped with GPR and rebar corrosion detector!

A rebar corrosion detector is also planned to be installed in the future. Accurate rebar location and depth can be measured by remote control.



the latest GPR!

Rebar corrosion detector

Flex NX



NX 25

iCOR

