

Gear your port
up for the future with
customized solutions!

/// ShoreCONNECT

Great Onshore Power Supply Solutions

/// FerryCHARGER

CHARGING WORLD's SEASIDE

/// Our Location

Head Office · Production Area · Testing Range



/// Facts & Figures

Founded:	1912 in Luxembourg since 1950 in Schüttorf · Germany
Legal form:	Limited Liability Company [GmbH]
Owner:	Wabtec Corporation since 2014
Employees:	about 480 [Schüttorf · Germany] about 110 [France · Netherlands · Poland]
Areal:	56.000 m ²
Workshop:	15.000 m ²
Office:	2.700 m ²

/// Onshore Power Supply & Charging Systems

- What's the problem?
- the mission?
- What we can do to change it?

/// Onshore Power Supply & Charging Systems



/// Onshore Power Supply & Charging Systems

- Nitrous Oxide (NO_x) – acid rain
- Carbon Dioxide (CO_2) –
Greenhouse Gas – global warming
- Noise & Vibration & health issue human

/// Onshore Power Supply & Charging Systems

- Pressure from local city / politics / NGO's
- Corporate target: going green
- Cheaper than diesel (price kw/h, taxes, port fees)
- Practical advantage (24h work)
- Defined by law (f.e. California, Brussels, Norway, IMO)



/// Average Power Requirements

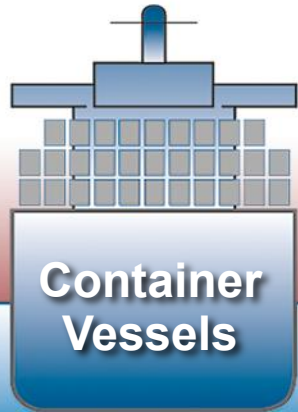
...for various vessels types, LVSC/HVSC



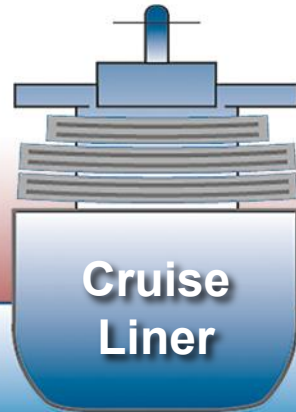
Container Ship	up to 7 MW
<hr/>	
Cruise Ship	up to 20 MW
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Reefer	up to 8 MW
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Ro-Ro, Ferry	up to 8 MW
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Tanker	up to 6 MW
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Bulk general cargo ship	up to 4 MW

/// Onshore Power Supply & Charging Systems

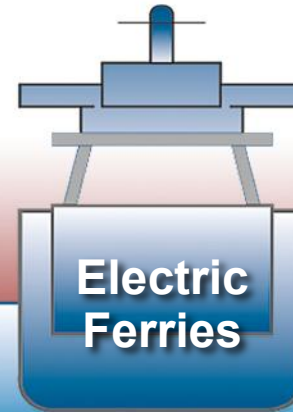
Onshore Power Supply
via Cable Reel
Container System



Onshore Power Supply
via Cable Reel /
Mobile Carrier System



Quick Charging
Connection via
Pantograph System



Special Applications
via Cable Reel
System



ShoreCONNECT

/// Cruise Ships



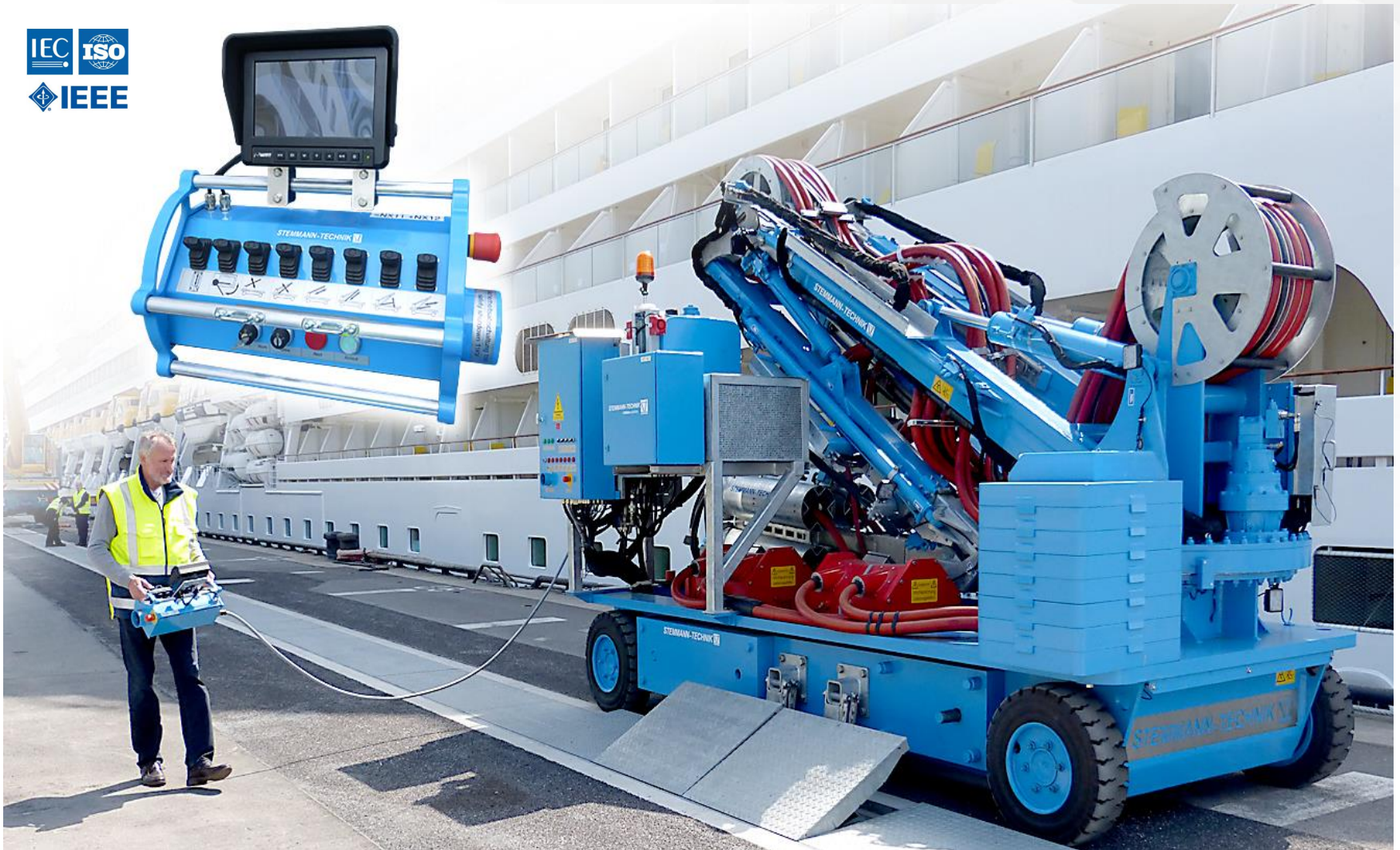
/// Onshore Power Supply for Cruise Liner

...fast and simple connection to the cruise ship



/// Onshore Power Supply for Cruise Liner

...land side procedure can be handled by one person



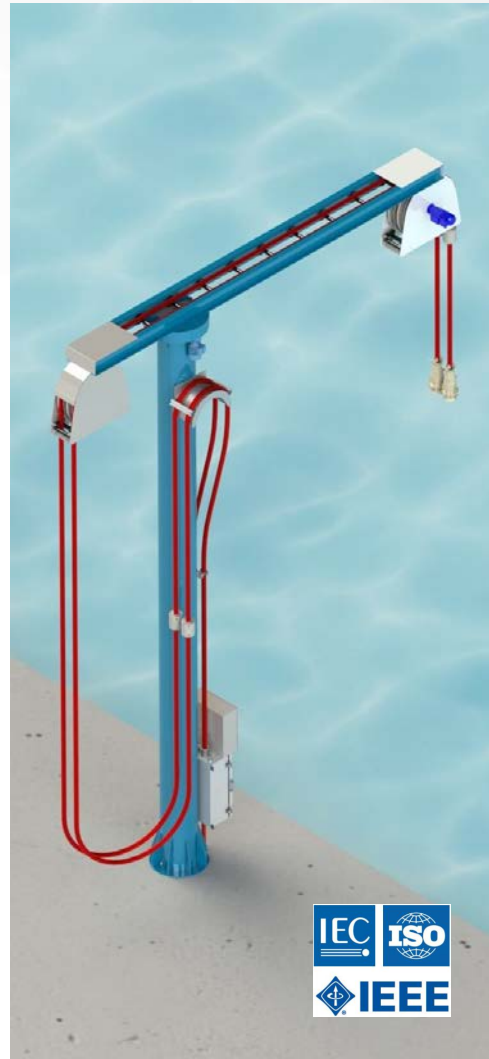
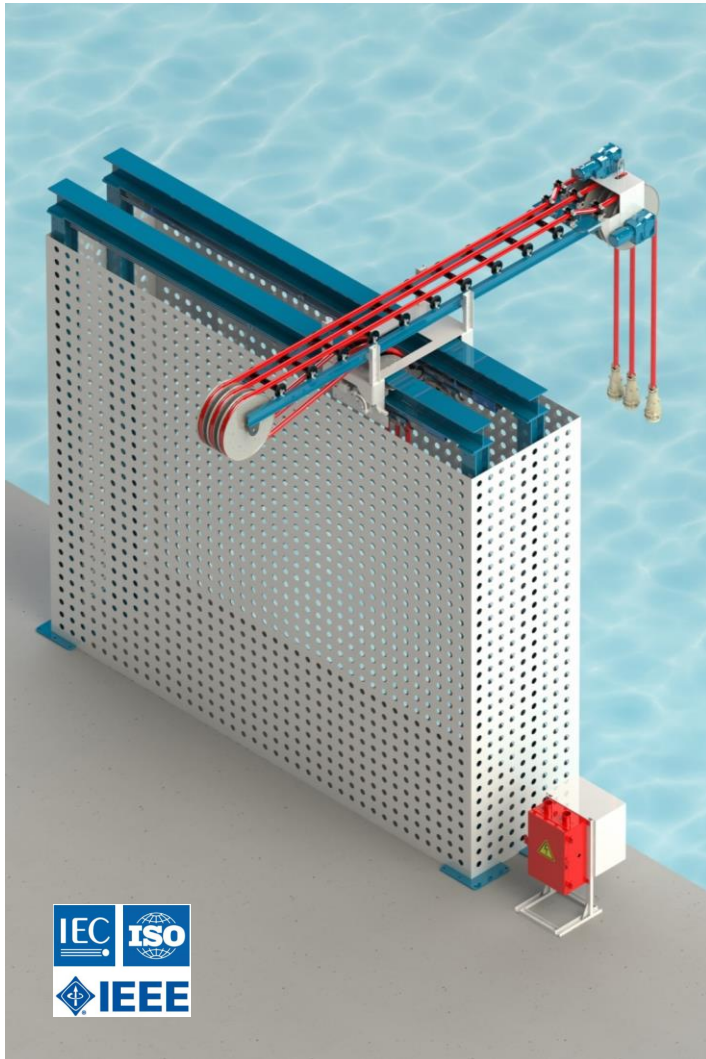
/// Onshore Power Supply for Cruise Liner

...various tidal range compensations



/// ShoreCONNECT Variants

...for various vessels types



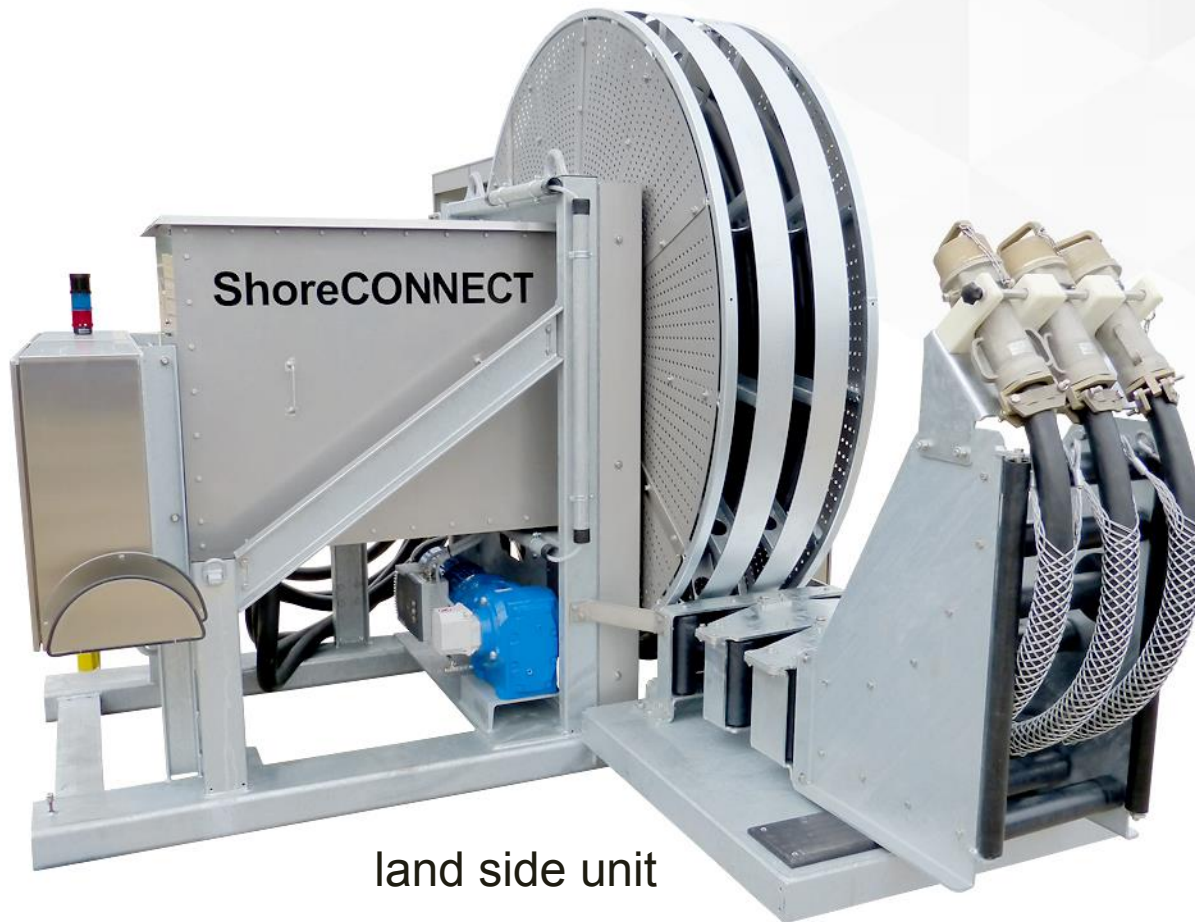
/// ShoreCONNECT Variants

...for various vessels types



/// ShoreCONNECT Variants

...for various vessels types



land side unit



Connection box as
land side and/or
onboard unit



/// ShoreCONNECT Variants

...for various vessels types



ShoreCONNECT

/// Container Vessels



/// Cable Reel Container Systems

...for container vessels



The feed of the onshore power supply for container vessels is realized for example by the installation of a 40 ft. HC-container in the bottom storage row.

The system consists of a spiral cable reel with slip ring assembly and fibre optic rotary connector incl. the drives for the reel and the extension system of the roller conveyer.

/// Cable Reel / Mobile Socket System

...for container vessels



Combination of HC-container installation on board and mobile socket installation land side.

Flexible mounting heights depending on the local conditions.

Flexible traveling lengths depending on the local conditions.

FerryCHARGER

/// Charging worlds' seaside

The great automated
tower solution for your
ferry terminal



/// FerryCHARGER for Electric Ferries

...automated tower solution

System especially for ferries that cover short distances

fully recharge in 10 minutes

passenger service since 2015

400 kW to cruise at 10 knots

system secured into attractive housing

compensates ferry movement while docking

fully automated

connecting / disconnecting time only 7 seconds

replacement of 2,000-hp diesel engine

saving 264,000 gallons of fuel/year

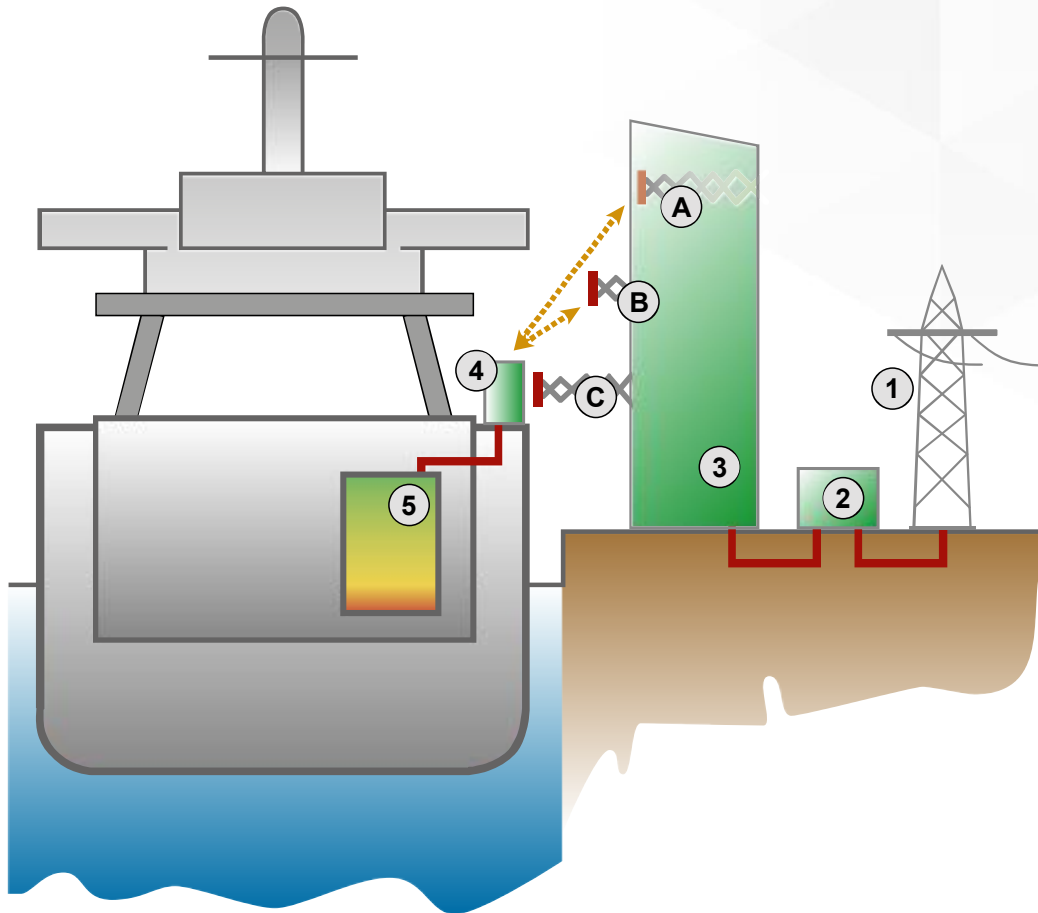
saving nearly 3,000 tons of CO₂/year

powered by 800 kW battery



/// FerryCHARGER for Electric Ferries

...automated tower solution



1 Regional electricity grid

2 Transformer station

3 FerryCHARGER
autom. tower version

4 Ship side unit

5 Battery storage
of the ferry

A,B,C Automatic
supply process

↔ Sensors for position
detection

/// FerryCHARGER for Electric Ferries

...automated tower solution



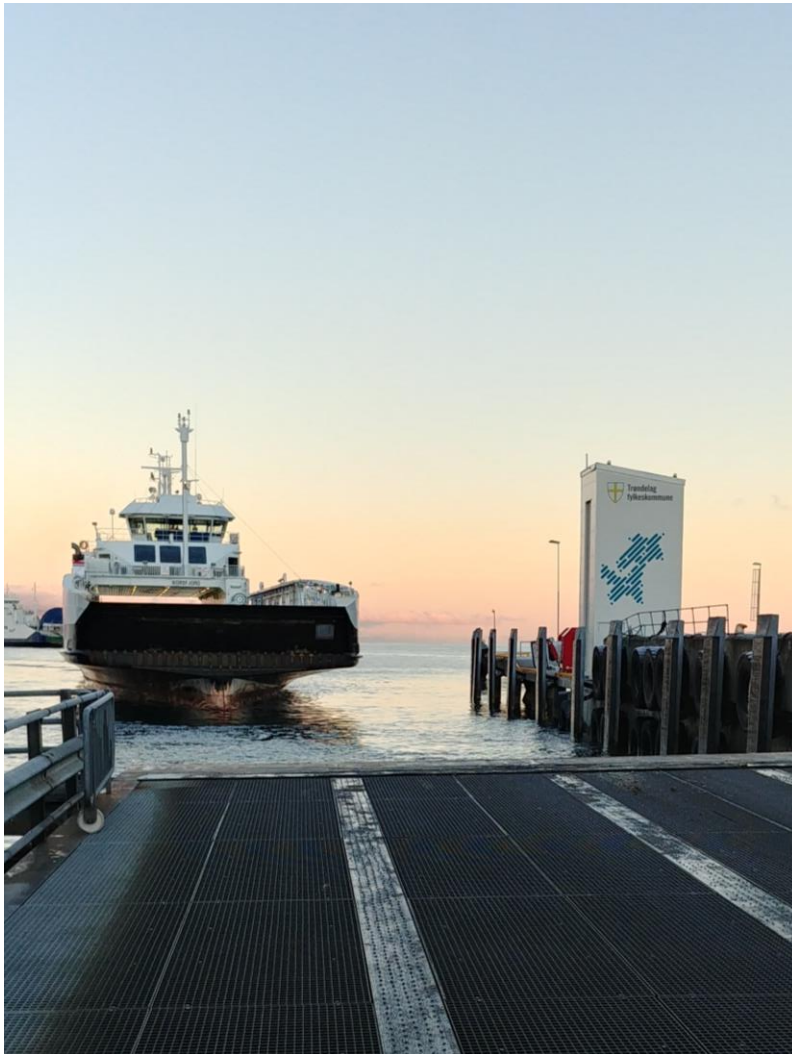
onboard unit

various
tower
heights



/// FerryCHARGER for Electric Ferries

...automated tower solution



TECHNICAL DATA

Voltage	Low-Voltage / High Voltage Up to 1000 V / up to 12 kV
Amperage	up to 3000 A, continuous current, 100 % duty cycle
Connecting time:	max. 15 seconds (technical specification)
Control	control cabinet at the device
Working range telescopic arm	vertical = appr. 5 m distance to vessel = max 1.8 m horizontal = 0,4 m
Interface	Profinet
Cycles	20.000 / year
Telescopic Plug	Max. degree of freedom in rotation angle to the x, y and z axis of 5°

/// FerryCHARGER for Electric Ferries

...automated tower solution



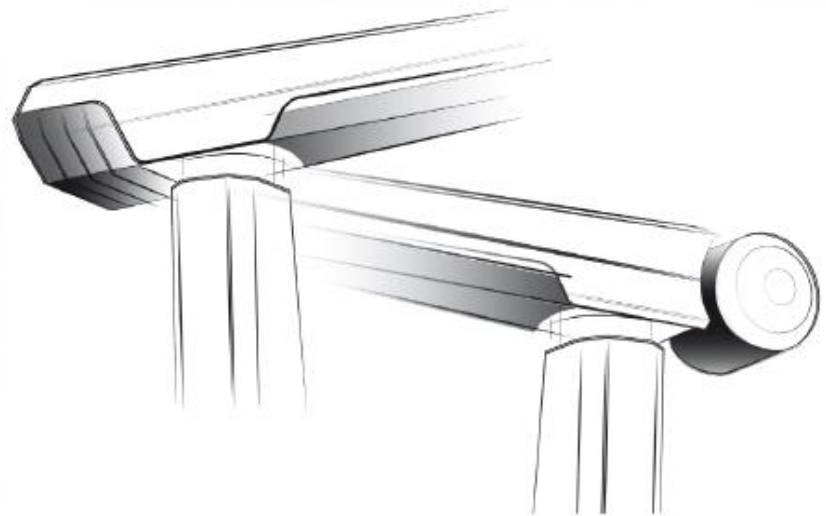
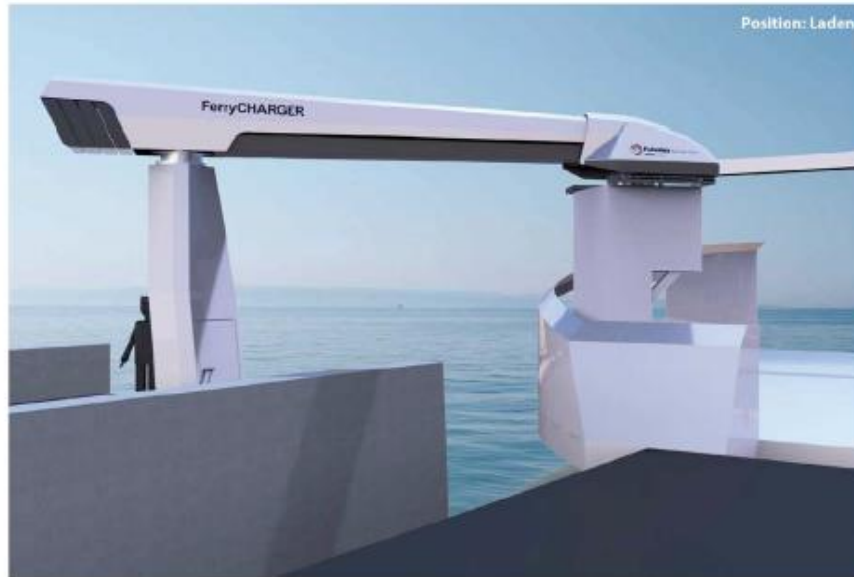
/// FerryCHARGER for Electric Ferries

...automated tower solution



/// Bow-FerryCHARGER

Application concept



/// Charging Panto

...The Top-down "Component for, Opportunity Charging"



/// CHARGING STINGER

...For Depot- and Fleet Charging





Stemmann-Technik
*A **Wabtec** Subsidiary*

Thank you for your attention

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