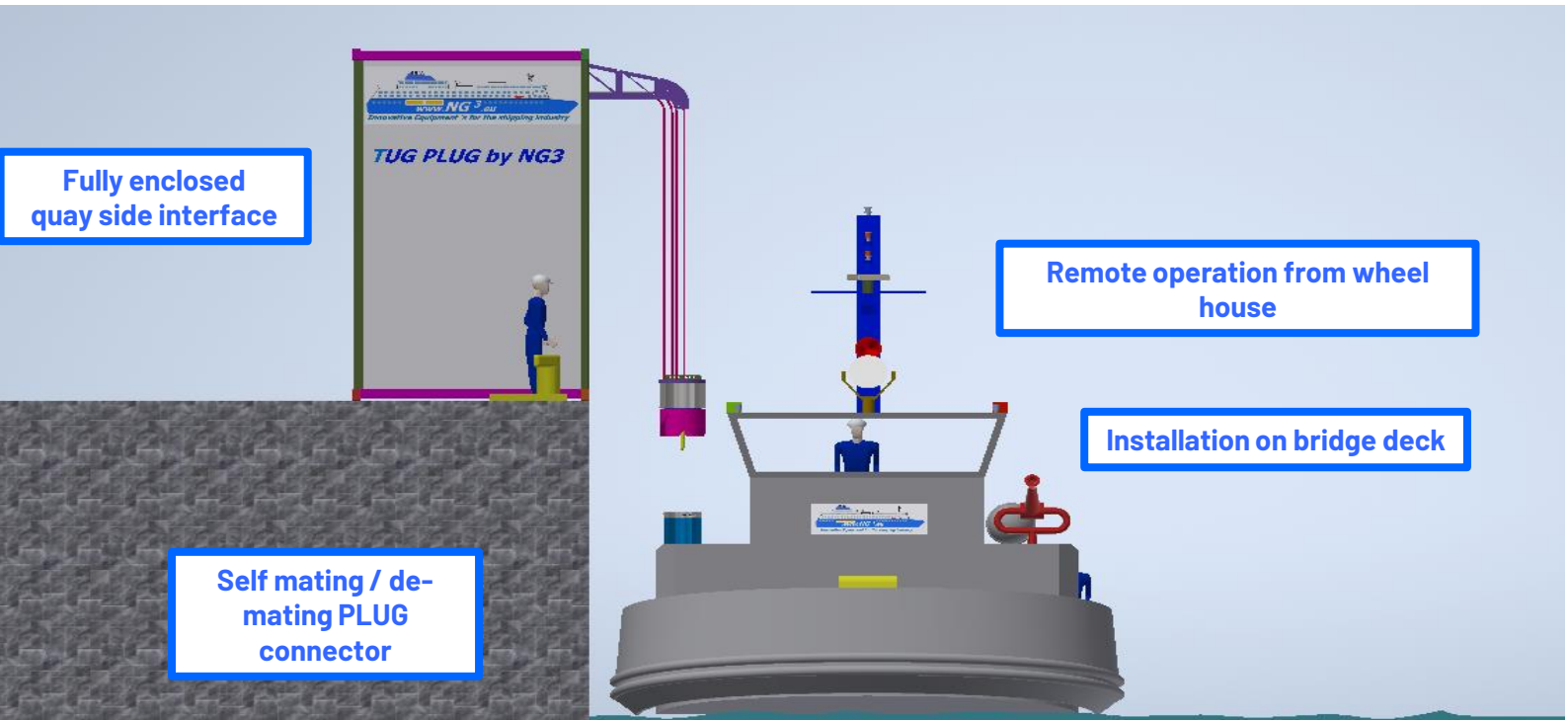


***TUG PLUG :
"hands off"
and power full
charging for
Electric Tugs!***

Main features and benefits

- **Proven PLUG technology**, more than **30 000** connexions since 2011!!
- Based on **simple, sound and reliable** mechanical effects
- **Alternate or direct** current
- **2000 A / 1 kV or 700 A / 11 kV** capability, **Higher Voltage / Ampèrage** available as an option
- Compliant with **80 005 IEC** functional requirements and **CE machinery directive and EUROCODE**
- **Remote operation from the bridge**
- **Very limited on-board weight and foot print**
- **Charging power within seconds** as soon as the vessel is docked
- **Compatible with large draft/tide variations**
- Built in **Emergency Release** Capability
- **Remote trouble shooting** through a quay side **internet interface**
- **Environmentally friendly**, (optimizes use of steel and copper resources...)
- **Low Maintenance**, easily performed by crew/base personnel
- **Compact and compatible with retrofit** on existing vessels within a few days
- **Double configuration** possible to charge two tugs with the same unit
- Can be **winterized**
- **Charging within seconds** after docking
- **Avoids risk and delays** due to manual handling of cables and connectors

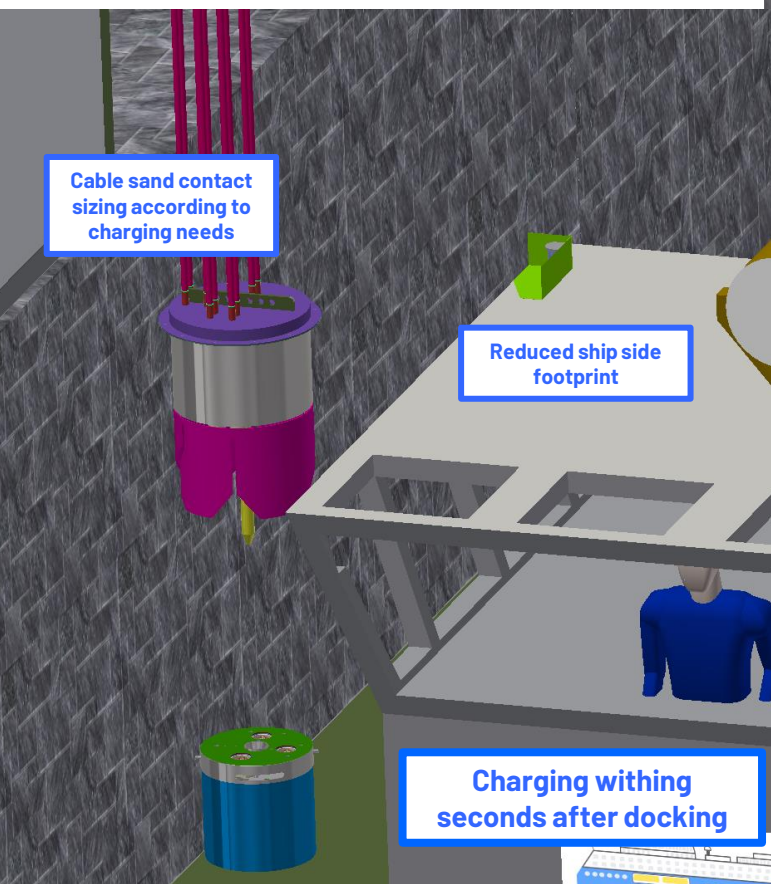


Fully enclosed quay side interface

Remote operation from wheel house

Installation on bridge deck

Self mating / de-mating PLUG connector



Cable sand contact sizing according to charging needs

Reduced ship side footprint

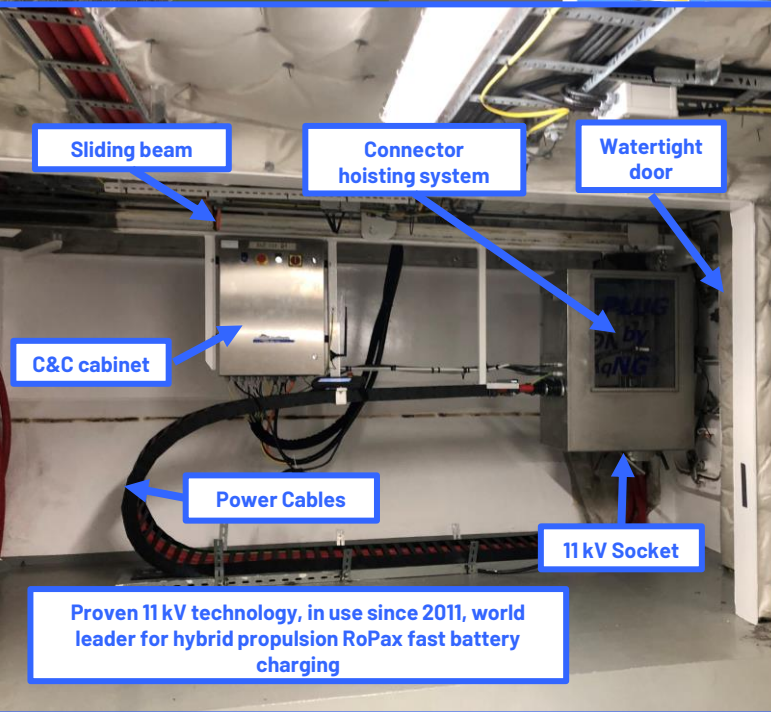
Charging withing seconds after docking

Self adjustment with the vessel draft and tide variations

Compliant with CE directive and Eurocode

Self standing interface, nlimited harbour engineering

Can be winterized



Sliding beam

Connector hoisting system

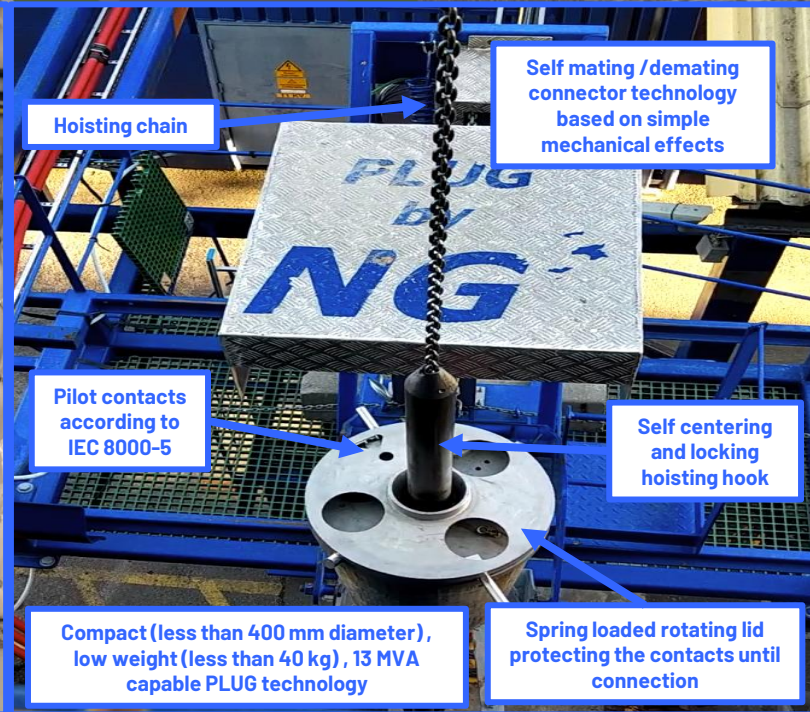
Watertight door

C&C cabinet

Power Cables

11kV Socket

Proven 11 kV technology, in use since 2011, world leader for hybrid propulsion RoPax fast battery charging



Hoisting chain

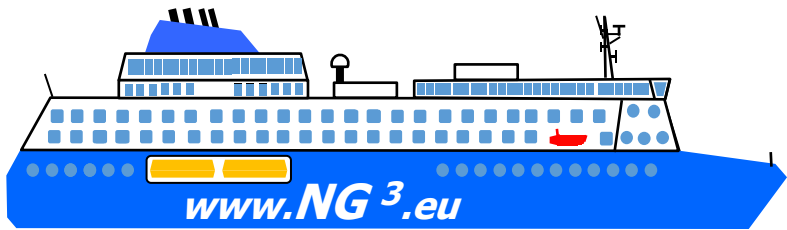
Self mating / demating connector technology based on simple mechanical effects

Pilot contacts according to IEC 8000-5

Self centering and locking hoisting hook

Compact (less than 400 mm diameter), low weight (less than 40 kg), 13 MVA capable PLUG technology

Spring loaded rotating lid protecting the contacts until connection



Shore power you can afford!

Contact : sales@ng3.eu

See PLUG in action on you tube :



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Natural Gas,
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