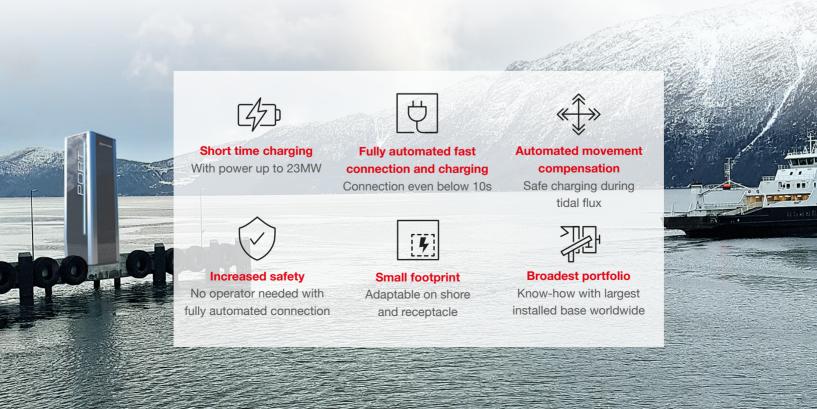




Shortest charging time for sustainable fleets – Solutions adaptable to ship and land side

For every vessel which needs to be in service with 100% reliability, charged fast, when space on ship and land is limited.

Where connection time is critical regardless of tidal flux and weather, Wabtec solutions with Stemmann-Technik technology is the answer. We are the market leader in charging applications, experienced manufacturer that provides dependable high-power charging.





- Largest experience and installed devices
- Expertise in supporting to choose best fit solution to terminal shape and vessel
- Unique high voltage solutions
- Adaptation for country specific demands

Duty cycle up to 100%*	PANTO type top / side	TOWER type	BOW type
Rated voltage	Up to 1000 V AC and 1500 V DC	Up to 1000 V DC and AC Up to 15 kV AC	Up to 1000 V AC and DC Up to 15 kV AC
Nominal current	Up to 1500 A	Up to 3kA at 1kV Up to 900A at 15kV	Up to 5kA DC and 3kA AC at 1kV. Up to 600A at 15 kV
Max Power	2,5 MW at 1kV AC (3ph) 2,2 MW at 1,5kV DC	5MW at 1kV; 23MW at 15kV	5 MW at 1kV 15 MW at 15kV
Connection time	<10s	<10s	<15s
Set-up land	Panto from top/side, telescopic from side	Arm in tower	Arm beside ramp
Set-up ship	Contact bars on roof /side	Enclosed socket (receptacle)	Enclosed socket (receptacle)
Connection	Automated, berth at specific location	Automated, socket detection, only side	Automated, socket detection, front/rear
Vertical (tidal) compensation	1 200mm / or Length of contact bars at Vessel	5 000 mm	8 500 mm
Horiz. lateral compensation	± 310mm / or width of carbon brushes at Panto	± 300 mm	±1 500 mm depends on configuration
Horiz. longitud. compensation	± 280mm / 1 450 mm	1 600 mm	±1 500 mm depends on configuration
Main benefits	Simple, effective for short distances, compact size.	Short charging time. High voltage option. Good berthing tolerances	Small footprint on ramp, compact size, largest movement compensation

*Duty Cycle 100% according to DNVGL-RU-SHIP-Pt4Ch8Se2





