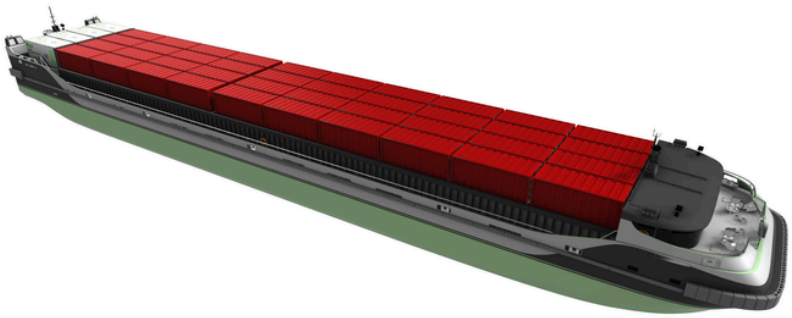
Parallel Hybrid Barge

PM120HY-P

General Energies



The PM120HY-P is only 80 meters in length and is powered by two containerized power battery packs (1580 kWh each), allowing it to carry 120 containers.

Due to its parallel hybrid power system, the PM120HY-P utilizes a "Boost Mode" when navigating against the current in the upstream of the Yangtze River mouth to enter the Wai Gao Qiao Terminal or during sea voyages. While at the Yangshan Port, it charges the two container power battery packs via shore power, coordinated by a Battery Management System (BMS) and accessible through 4G communication. The container power batteries charge simultaneously through the shore's fast DC charging piles, with a charging time of 4.5 hours.

During navigation in the Huangpu River within Shanghai's urban area, the PM120HY-P operates in "E-Motor Mode" throughout the journey, emitting no carbon or nitrogen oxide emissions. Upon leaving the Huangpu River and entering the Suzhou-Shanghai Port Line, it switches to "Engine Mode," where the ship is propelled by diesel engines. Upon reaching the Suzhou-Shanghai Port, the ship swaps the two container power batteries. As the diesel engine drives the motor for battery charging, the container power batteries can be fully discharged. Additionally, the diesel engine can power the onboard fire pump through PTO. The PM120HY-P can also choose to charge the container batteries using the "Generator Mode" while on the river.

Compared to a 120-container fuel-powered container ship, the PM120HY-P reduces carbon emissions by 140 tons per year, achieving a 56% reduction rate for both nitrogen oxide (NOx) and sulfur dioxide (SO2) emissions.

DIMENSION

LOA (m)	80
Bridge H(m)	6.7
Beam (m)	12.6
Depth(m)	4.7
Draft (m)	3.0
Displacement (t)	2608

PERFORMANCE

Cruising Speed (knot)	7
Cruise Range(Km)	347
Maximum Speed(knot)	10
Crew (person)	8
Battery	2 ×1548kWh
PTI/PTO motor	2×300/400kW

PROPULSION SYSTEM

Parallel Hybrid Electric Propulsion System

Standard Version:

Diesel main engine + PTI/PTO Motor

2 x 160kW + 2 x 160kW

FEATURE

- Parallel Hybrid
- Burst Mode
- Flexible Operation
- 56% Emission Reduction