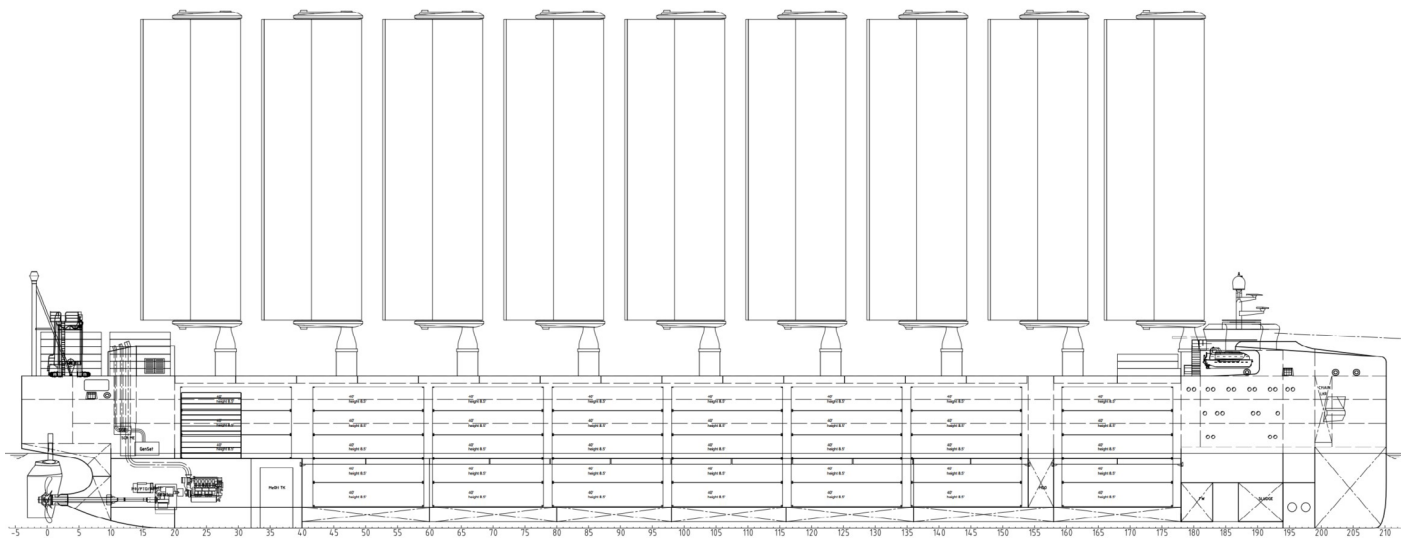


# RASANT - MPV CARGO SAILER

**RASANT**  
Hybrid Sail Cargo Ships



Project developed by:



## GREEN ASPECTS

- Average ratio of sail power for propulsion >50% (voyage simulations)
- Hull form optimized for low resistance and efficient sailing
- Weather routing for maximized saving and increased speed by sail power
- Parallel hybrid propulsion system with large electric motor and battery capacity
- Methanol-powered main engine
- Fuel-cell ready propulsion plant design
- Built-in shore connection for clean harbor operation
- Large recuperation potential while sailing with wind power

## MAIN DATA

|                          |                     |
|--------------------------|---------------------|
| Length (over all)        | 149.95 m            |
| Length (between PP)      | 147.15 m            |
| Breadth (moulded)        | 22.40 m             |
| Depth (main deck)        | 14.10 m             |
| Draught (design)         | 8.20 m              |
| Draught (max)            | 8.70 m              |
| Deadweight (design)      | 12,207 dwt          |
| Deadweight (max)         | 13,600 dwt          |
| Tonnage                  | 13,110 GT; 4,496 NT |
| Air draught (in ballast) | 52 m                |

## WIND ASSISTED PROPULSION SAIL SYSTEM

9 WINGS à 363 m<sup>2</sup> 3,267 m<sup>2</sup>  
Max speed under sails 18 kn

## PROPULSION PLANT

|                                 |                             |
|---------------------------------|-----------------------------|
| Main engine                     | Dual fuel 4-stroke          |
| Rated power                     | 2,400 kW @ 900 rpm          |
| Fuel                            | Methanol / MGO (ULSFO, Bio) |
| PTO                             | up to 733 kW                |
| PTI/PTH                         | up to 1100 kW               |
| Propeller                       | CPP                         |
| Low EEDI, Low CII, IMO TIER III |                             |

Concept design developed in cooperation with  
Detlef Löll Ingenieurbüro GmbH, Rörd Braren  
Bereederungs-GmbH & Co. KG and TECHNOLOG  
services GmbH



[www.rasant.eu](http://www.rasant.eu)

## SPEED / RANGE

|                                   |          |
|-----------------------------------|----------|
| Service speed without WAPS        | 12.0 kn  |
| (des.draught; 90% MCR; 200kW PTO) |          |
| Range on MGO without WAPS         | 8,000 nm |
| Range on MeOH without WAPS        | 4,000 nm |

## CAPACITIES

|                    |   |
|--------------------|---|
| Hold 1             |   |
| • Cont dims.       | 40' x 7 rows x 5 tiers                          |
| Hold 2             |   |
| • Upper part       | 93.8 x 18.4 x 8.1 m                             |
| • Lower part       | 79.8 x 18.4 x 4.9 m                             |
| Total              | 24 580 m <sup>3</sup> = 868 229 ft <sup>3</sup> |
| Decks              |   |
| Weatherdeck        | 127.4 x 18.40m / 2344 m <sup>2</sup>            |
| Tweendeck          | 93.8 x 18.4m / 1725 m <sup>2</sup>              |
| Tank top box wide: | 53.2 x 18.4m / 979 m <sup>2</sup>               |
| Tank top box long: | 79.8 x 13.22m / 1055 m <sup>2</sup>             |
| Tank top total:    | 79.8 x 18.4m / 1330 m <sup>2</sup>              |
| (monkey islands)   |   |
| Container in holds | 496 TEU   |

All sail systems positioned on the starboard side.  
Free, unblocked access to the entire length of the hold from the port side.

## CLASS NOTATION

DNV + 1A Multi-purpose dry cargo ship, WAPS, NAABSA, ICE(1C), Grab(3-20), Strengthened (IB), E0, NAUT(NAV), DG(B,P), DBC, BWM(T), BIS, LCS, TMON (Open loop water), Clean, Recyclable, Battery Safety

## AUXILIARY PLANT

|                 |                  |
|-----------------|------------------|
| Power           | 2x 549 kW        |
|                 | 245 kW (EM/Port) |
| Fuel            | MGO (ULSFO, Bio) |
| Shore Power     | 500 kW           |
| Battery         | 2,500 kWh        |
| WHRS (optional) | 200 kW           |

## COMPLEMENT

Crew (incl. reserves) 15



Funded by:



Bundesministerium  
für Digitales  
und Verkehr

## NAVIGATION/ RADIO

GMDSS A3  
Integrated Bridge System, advanced weather routing

## TANK CAPACITIES

|             |                    |
|-------------|--------------------|
| MGO         | 350 m <sup>3</sup> |
| Methanol    | 300 m <sup>3</sup> |
| Lube oil    | 40 m <sup>3</sup>  |
| Fresh water | 120 m <sup>3</sup> |

## CONSUMPTION

Design draught + ISO conditions + IMO tier  
III + tolerance 5% included, no wind power, engine only:

| Fuel       | MGO     | MGO      | MeOH     |
|------------|---------|----------|----------|
| Sea margin | 0%      | 15%      | 15%      |
| PTO        | 0 kW    | 200 kW   | 200 kW   |
| 10 kn      | 5.1 t/d | 6.8 t/d  | 9.3 t/d  |
| 11 kn      | 6.4 t/d | 8.6 t/d  | 11.4 t/d |
| 12 kn      | 8.2 t/d | 10.8 t/d | 15.2 t/d |

Fuel consumption is reduced by at least 50% on an average sea voyage by the use of wind power and can be up to 100% in ideal conditions.

## SPECIAL EQUIPMENT

Bow thruster 2x 500 kW  
Pontoon type hatch covers  
Pontoon type tween deck (grain BH)  
Gantry crane  
Cargo hold ventilation 2/6-fold  
Gate rudder

## STACK WEIGHTS

In hold: 150t / 40'; 100t / 20' stack  
Uniform loads:  
15 t/m<sup>2</sup> on tank top  
2.0 t/m<sup>2</sup> on tween deck  
1.75 t/m<sup>2</sup> on weather deck and hatch covers

Coordinated by:



Project executing agency:

