



## Rated Output of Gen-set at 100% load (Marine Gen-set)

Engine Type	900 rpm / 60 Hz		1000 rpm / 50 Hz	
	Engine	Generator	Engine	Generator
5H21C	1,200	1,152	1,200	1,152
6H21C	1,440	1,382	1,440	1,382
7H21C	1,680	1,612	1,680	1,612
8H21C	1,920	1,843	1,920	1,843
9H21C	2,160	2,074	2,160	2,074

### Remark

The Generator outputs are calculated by an efficiency of 96% and a power factor of 0.8 lagging.

## Dimensions and Weights

### Gen-set for 900 / 1000 rpm

Engine Type	Dimension (m)				Dry Weight (ton)	
	A	B	C	H	Engine <sup>2)</sup>	Gen-set <sup>1,3)</sup>
5H21C	3,735	2,249	5,984	2,600	14.3	22.1
6H21C	4,085	2,249	6,334	2,600	16.0	24.9
7H21C	4,435	2,305	6,740	2,600	17.8	28.3
8H21C	4,785	2,305	7,090	2,653	19.4	30.2
9H21C	5,135	2,450	7,585	2,653	21.0	33.6

### Remark

1) : Depending on alternator

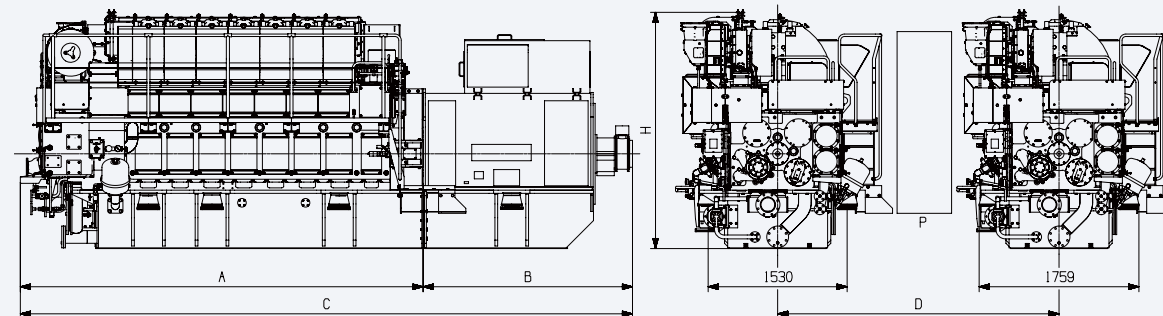
2) : Without common base frame

3) : With Common base frame & Alternator (Maker : HHI-EES)

D : Min. distance between engines 2,990 mm (with gallery)

P : Free passage between the engines, width 600 mm and height 2,000 mm

Note) All dimensions and weight are approximate value and subject to change without prior notice.



### World Wide HYUNDAI

- HHI-EMD Direct Service Center
- Cooperative Repairer
- Authorized Repairer
- Spare Parts Depot
- Dealer

## Global Service Network

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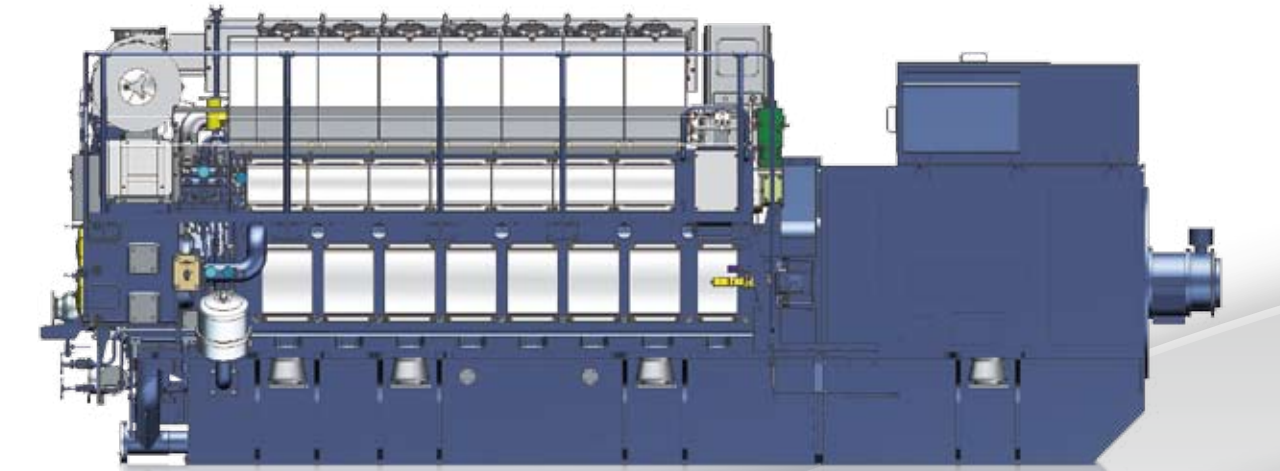
#### Country Code : + 1

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# HiMSEN Engine

Hi-touch Marine & Stationary ENGINE

## H21C



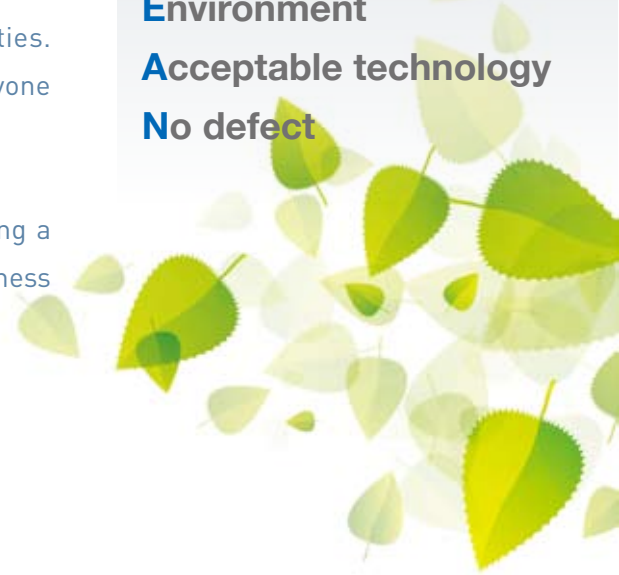


## Design Philosophy

HiMSEN family has been successfully launched into the market with original design philosophy Smart, Simple and Robust since 2001 thanks to support and cooperations from many owners, shipyards and classification societies. We would like to express our sincere gratitude to everyone involved in this enterprise.

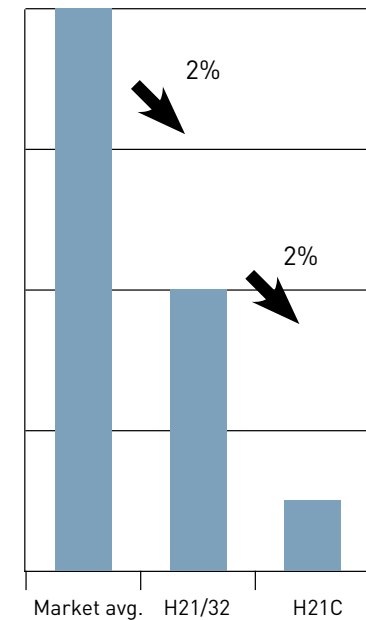
HiMSEN has just started a new generation, H21C, adding a design philosophy "CLEAN" and we hope that your business will prosper with HiMSEN engines.

**CLEAN Engine**  
**Customer reLiability (unlimited)**  
**Environment Acceptable technology**  
**No defect**

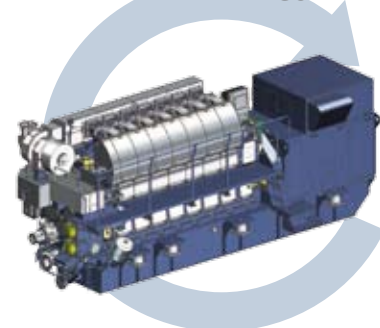


## Owner's Benefits

### Fuel Oil Consumption



Customer oriented technology



### Power Density

Technical Data (based on Marine Genset)

No. of cylinders	5, 6, 7, 8, 9
Rated speed	900/1000 rpm
Power per Cylinder	240 kW
Cylinder Bore	210 mm
Piston stroke	330 mm
Mean Piston Speed	9.9 / 11.0 m/s
Mean Effective Pressure	28.0 / 25.2 bar
Compression Ratio	16~17.5
Specific fuel oil consumption(85%)	180g/kWh (+5%) @ISO condition

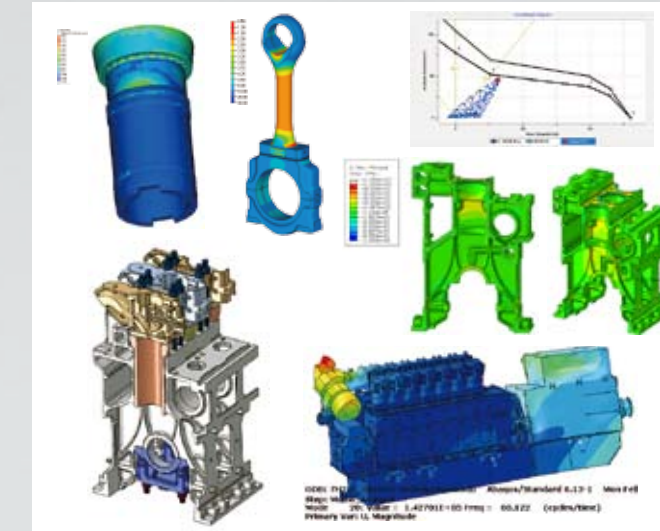
The high power density contributes to the efficient and space-saving for marine and stationary applications. The most advanced Hi-touch technologies are applied to this engine so that the engine has the excellent performance, low fuel consumption, low emission and so on. HiMSEN H21C medium speed engine brings a new era of earth-friendly engines, boasting a compact structure and stylish exterior.

# H21C

## Main Structures



## Analysis



## User Friendly Design

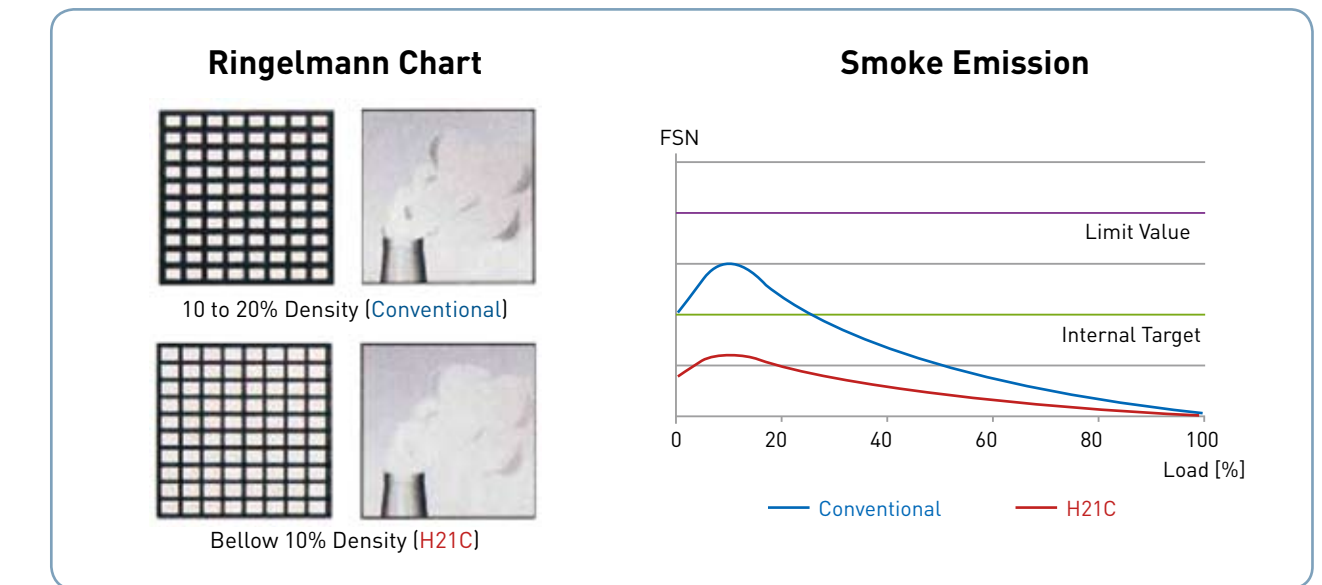


## Verification



Main structures focusing on a user-friendliness and durability are designed with CAE technologies and fully verified by various internal tests of the prototype engine. In particular, the advantages of smart engine design and the highest power output make it possible to save the total cost ownership. Also the application of state-of-the-art technologies helps owners make better choices among a wide range of medium speed engine.

## Emission Control Technology



Newly developed HiMSEN engine, H21C, significantly achieved up to 60% improvement in smoke generation throughout the whole range of engine operation, especially during the engine starting without any additional devices.

H21C is optimized to comply with IMO Tier II and able to meet IMO Tier III regulations with Hyundai Selective Catalytic Reduction(SCR), which has the highly significant competitiveness ever. Furthermore, if you want to use high sulphur content fuels, the exhaust gas scrubbing is a promising alternative solution to reduce SOx emission.

