

# Market **Update** Note



10 July 2024

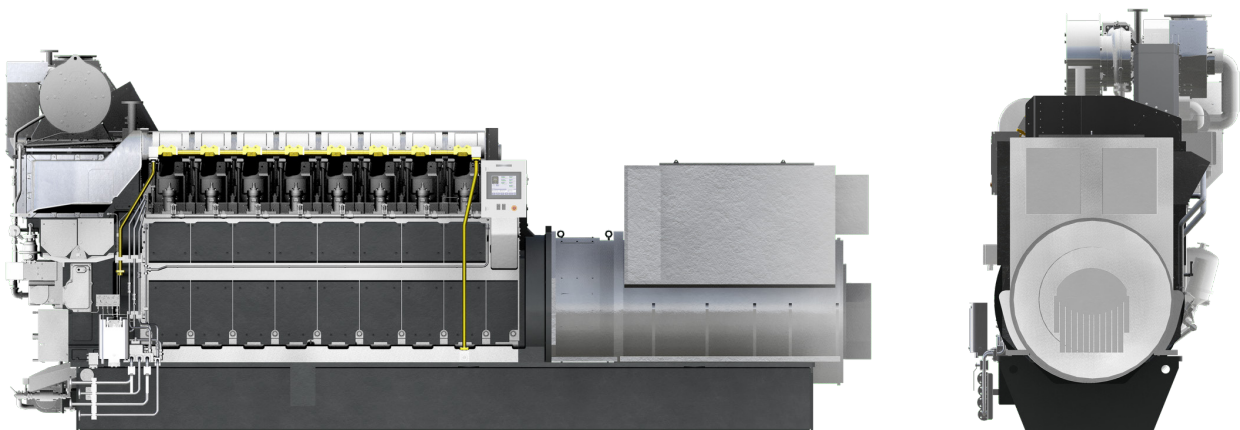
## Methanol ready option expands flexibility for MAN L21/31 engines

### Introduction of a dual-fuel ready concept to power your global merchant fleet on methanol

The possibility to retrofit gensets for operation on green methanol in a cost-effective and risk-mitigated manner will ensure the fuel flexibility for a highly proven engine and the option of methanol for genset power generation on large merchant vessels.

The existing MAN L21/31DF-M engine is designed for methanol operation and combines classic engine design principles with innovative dual-fuel technology.

The 21/31DF-M design utilises the same well-proven basic technology as our 21/31. The new methanol-ready DF-M concept introduces gensets benefitting from the proven design, reliability, high performance, and fuel flexibility known from the 21/31 engine platform. Furthermore, it offers certainty of decarbonisation of the onboard electrical power production at a time that best suits the vessel owner.



**MAN Energy Solutions**

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Our DF-M ready design package ensures an easy methanol retrofit based on the part-load optimised MAN L21/31 Mk. 2 GenSet.

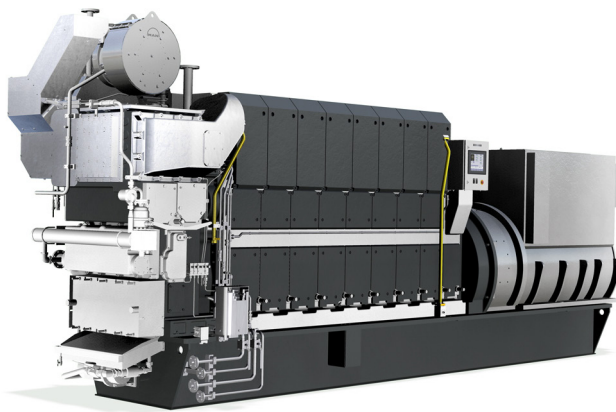
The DF-M ready package, which is illustrated below, includes:

- DF-M cylinder head prepared for methanol injector
- Engine side covers for hotbox
- Trigger wheel to be installed inside the engine crankcase
- Side covers prepared for splash oil system
- SaCoS DF-M control module
- Engine prepared with wastegate arrangement for temperature control
- Exhaust gas pipe, incl. explosion valve.

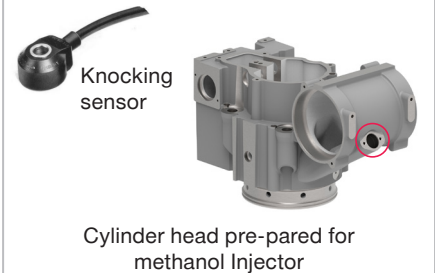
The DF-M ready package is available for order from June 2024.

Direct your questions regarding this Market Update Note to our Promotion and Business Development Manager for Small Bore GenSets & Propulsion at [Hakon.Hansen@man-es.com](mailto:Hakon.Hansen@man-es.com).

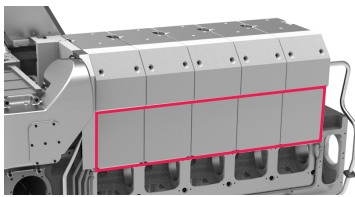
MAN Energy Solutions  
Teglholmmsgade 41  
2450 Copenhagen SV  
Denmark  
[www.marine.man-es.com](http://www.marine.man-es.com)



## Cylinder head



## Hotbox covers



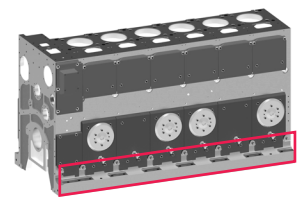
Hotbox covers adapted for methanol piping

## Camshaft, trigger wheel



Trigger wheel for methanol timing

## Side covers, splash oil system



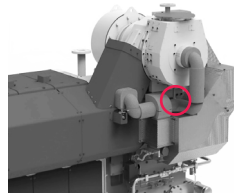
Prepared for crankcase monitoring system for highest safety

## SaCoS control system (DF)



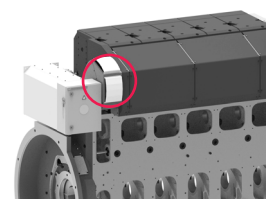
SaCoS control system similar to DF

## Wastegate system



Wastegate system for temperature control

## Exhaust gas pipe with relief valve



Extra exhaust relief valve for highest safety