

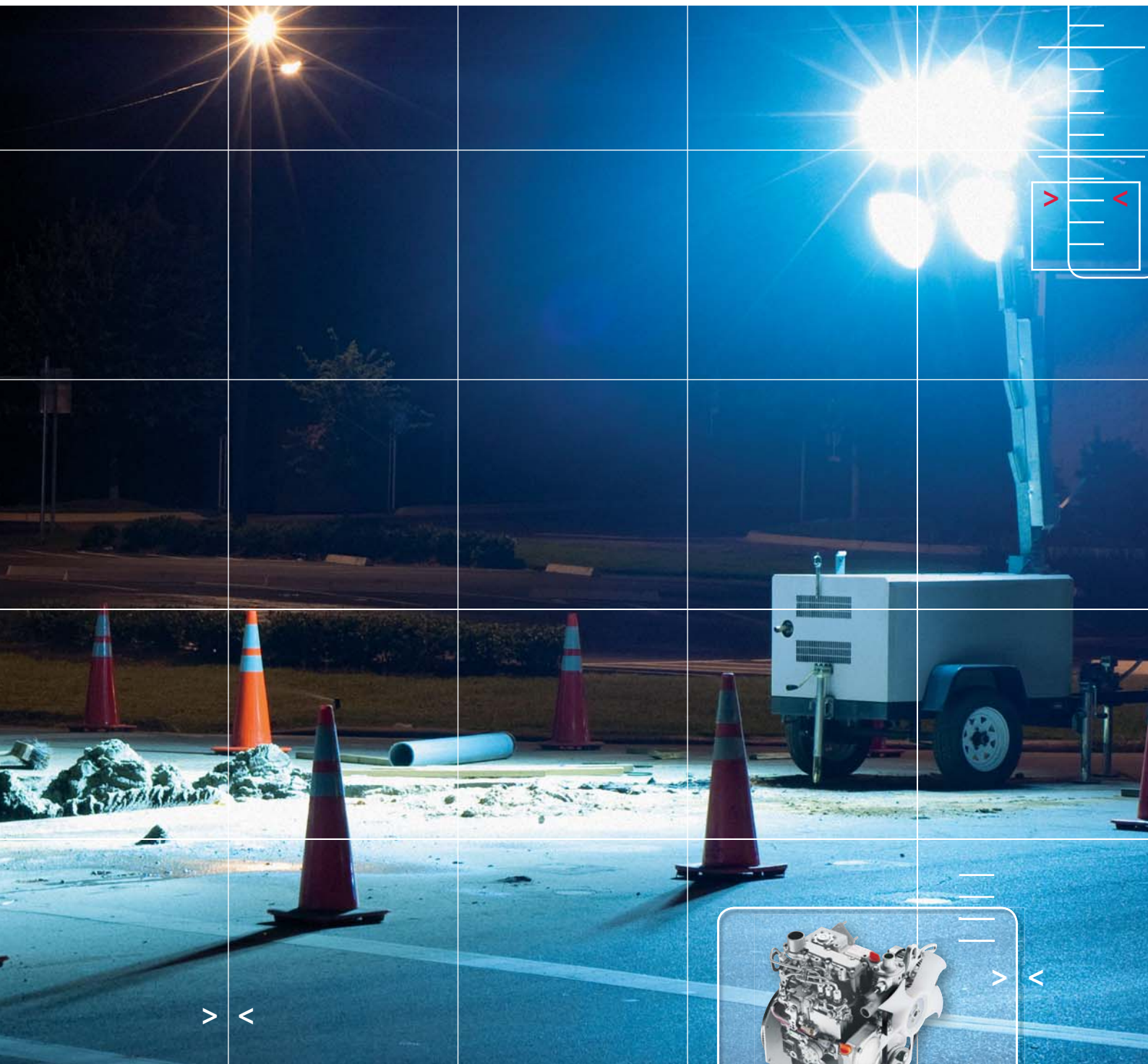


YANMAR

WATER-COOLED DIESEL ENGINES


MM Series

3TNM68 - 14.1 kW (18.9 hp) / 3TNM72 - 17.0 kW (22.8 hp)



Call for Yanmar solutions





World Class, Original Technology From Yanmar to the World, to the Future.

Yanmar introduced the world's first commercial compact diesel engine in 1933. The technical innovation has kept on flowering ever since, making Yanmar a constant leader in diesel technology. Yanmar products are popular in fields as diverse as agriculture, construction, power generation as well as commercial and pleasure marine applications. Yanmar's industrial diesel engines have a great reputation for high, enduring reliability, and clean emissions making it compliant with emissions regulations all over the world. Yanmar responds precisely to customers' needs. With high performance and high quality engines at the core, Yanmar is always seeking new ways to harmonize technology with the environment.

MINI x MAX

Minimum Size & Maximum Performance

People these days are much more aware about the needs of the planet. The demand for diesel engines that consume less fuel and place less load on the environment is high in many sectors that are truly close to home, including lawn & garden equipment, compact farm machinery and many other applications. As a result of significant technological studies, Yanmar proudly presents two models of MINIMAX diesel engine series with

- ① Ultra Compact Size
- ② Low Noise & Vibration
- ③ Environment – Friendly.

**Ultra
Compact
&
High
Performance**

**Low Noise
&
Vibration**

New Compact Diesel Power

**MM
series**

**Environment
-Friendly**

What's So Special about the MM Series?

Ultra-Compact and High Performance

[**Best in class Power Density**]

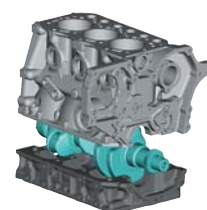
The secret to that power density lies in the new cylinder body. In addition to its extremely high output for the size, the engine also has smaller base for flexible installation on a wider range of work machines.

(*Power density is the ratio of engine output relative to the engine's external dimensions. The MM series is ahead even of the present 3TNV70.)

Low Noise & Vibration

[**The Ladder Frame Structure**]

The ladder frame structure of cylinder block achieves drastic reductions of noise and vibration from the engine body.

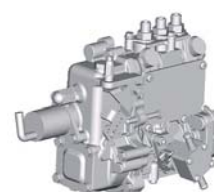


Ladder Frame

Environment-Friendly

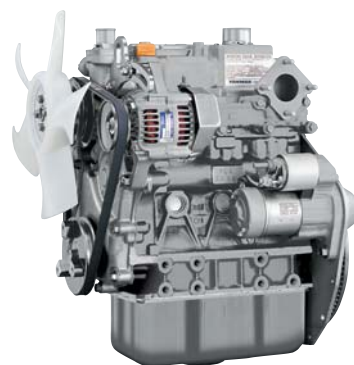
[**Compliant with EPA Tier 4 in the U.S. and Extra-low Fuel Consumption**]

The high combustion performance is achieved together with low emissions that satisfy EPA Tier 4. Yanmar's original combustion technologies and MC fuel injection pump and nozzle are the key to this achievement.



New MC F.I. Pump





New Compact Diesel Power

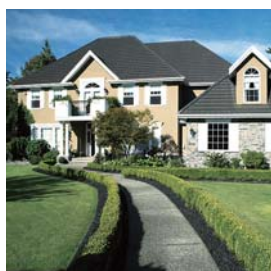
MMseries

Easy Installation

[**Easy Installation and Replacement, the Perfect fit for your Machine**]

With its compact size and universal base attachment design, the MM series is an easy replacement for almost all major applications.

- Lawn and Garden Equipment
- Small Agricultural Machinery
- Utility Vehicles
- Compact Generators

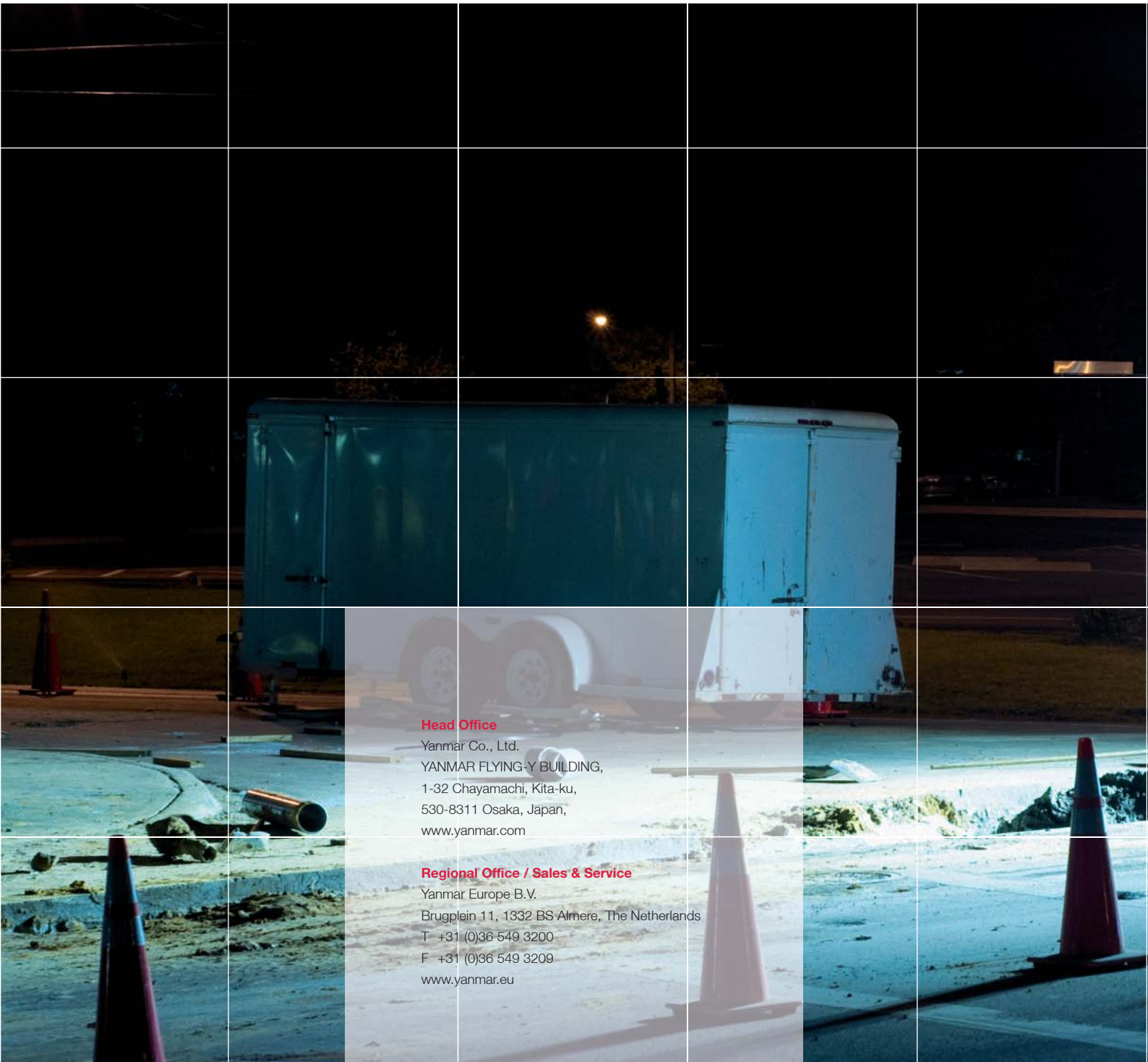


Specifications

| | | | | | | | | |
|---------------------------------------|--------------|-------------------|--|------|-------|--------|------|-------|
| Model | | | 3TNM68 | | | 3TNM72 | | |
| Type | | | Vertical cylinder,4-cycle water-cooled diesel engine | | | | | |
| Combustion | | | Indirect injection(IDI) | | | | | |
| Aspiration | | | NA | | | | | |
| No.of cylinders | | | 3 | | | | | |
| Cyl. Bore x stroke | | mm | 68x72 | | | 72x74 | | |
| Displacement | | Litter | 0.784 | | | 0.903 | | |
| Rated output | | Speed | NET | | Gross | NET | | Gross |
| | | min ⁻¹ | kW | hp | kW | kW | hp | kW |
| Industrial use | Intermittent | 3600 | 14.1 | 18.9 | 14.7 | 17.0 | 22.8 | 18.2 |
| | | 3400 | 13.5 | 18.1 | 14.1 | 16.5 | 22.1 | 17.3 |
| | | 3200 | 12.8 | 17.2 | 13.3 | 15.6 | 20.9 | 16.3 |
| | | 3000 | 12.6 | 16.9 | 13.0 | 14.7 | 19.7 | 15.3 |
| Generator use | Stand-by | 3600 | 14.6 | 19.6 | 15.2 | 17.0 | 22.8 | 18.2 |
| | | 3000 | 12.2 | 16.4 | 12.6 | 14.5 | 19.4 | 15.2 |
| | | 1800 | 7.3 | 9.8 | 7.4 | 8.6 | 11.5 | 8.8 |
| | | 1500 | 6.1 | 8.2 | 6.2 | 7.3 | 9.8 | 7.4 |
| | Continuous | 3600 | 13.3 | 17.8 | 13.9 | 15.5 | 20.8 | 16.7 |
| | | 3000 | 11.1 | 14.9 | 11.5 | 13.2 | 17.7 | 13.9 |
| | | 1800 | 6.6 | 8.8 | 6.7 | 7.8 | 10.5 | 8.0 |
| | | 1500 | 5.5 | 7.4 | 5.6 | 6.6 | 8.9 | 6.7 |
| Cooling system | | | Radiator | | | | | |
| Starting system | | | Electric starting | | | | | |
| Dimensions (back plate) | Length | mm | 431 | | | 450 | | |
| | Width | mm | 416 | | | 416 | | |
| | Height | mm | 500 | | | 506 | | |
| Dry mass (back plate) | | kg | 77 | | | 83 | | |
| Dry mass (Semi SAE #6 bell housing) | | kg | 86 | | | 92 | | |
| Dry mass (SAE #5 bell housing) | | kg | 99 | | | 105 | | |

Note:When specification varies,the above engine speed and rated output will vary accordingly.





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