

# DEUTZ TCD 9.0/12.0/13.5

For mobile machinery ■ 300 - 450 kW / 400 - 600 hp at 1700-2100 min<sup>-1</sup>/rpm ■ EU V, US T4, CN 4, EU III A

- Water-cooled 4- and 6-cylinder inline engines with turbo-charging and with charge air cooling.
- Engine and exhaust aftertreatment (EAT) are optimised for highest total system efficiency and thus ensure lowest consumption and total operating cost.
- Consistent installation and connection dimensions of the engine facilitate the changeover of existing installations to the next stage of the emission laws. The size and design of the engines will remain identical in the change to US Tier 4 and EU Stage V due to a protected technology. No changes to the customer's device. A variant without EAT is available as an option for less regulated markets.
- The powerful Common Rail injection system and the electronic engine control with intelligent link to the drive management ensure optimum engine performance at low fuel consumption.
- In terms of aftertreatment, for higher regulated markets, the engines are expected to have no EGR and meet Stage V emissions regulations with a diesel oxidation catalyst (DOC) + SCR with a diesel particulate filter (DPF) and SCR packaged in a single unit. For U.S. Tier 4, and CN IV, the engines will have SCR only. For lower regulated markets the engines will meet the requirements with just EGR and no aftertreatment.
- Long oil change intervals and easy changing of the engine fluids reduce the running cost and increase the availability of the machinery.
- Best cold starting performance even under extreme conditions.
- The extremely compact engine design and customer friendly accessories reduce the installation cost and increase the number of applications.



## TECHNICAL DATA

| Engine type        |                         | TCD 9.0 L4        | TCD 12.0 L6       | TCD 13.5 L6       |
|--------------------|-------------------------|-------------------|-------------------|-------------------|
| No. of cylinders   |                         | 4                 | 6                 | 6                 |
| Bore/stroke        | mm   in                 | 135/157   5.3/6.2 | 130/150   5.1/5.9 | 135/157   5.3/6.2 |
| Displacement       | l   cu in               | 9.0   550         | 12.0   732        | 13.5   824        |
| Max. nominal speed | min <sup>-1</sup>   rpm | 2100              | 2100              | 2100              |

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|---|-------------------------|-------------|-------------|-------------|
| Power output as per ISO 9249 <sup>1)</sup>    | kW   hp                 | 303   406   | 403   540   | 453   608   |
| at speed                                      | min <sup>-1</sup>   rpm | 1200 - 1700 | 1200 - 1400 | 1100 - 1500 |
| Max. torque                                   | Nm   lb/ft              | 1710   1261 | 2505   1848 | 2757   2033 |
| at speed                                      | min <sup>-1</sup>   rpm | 1200        | 1200        | 1350        |
| Minimum idling speed                          | min <sup>-1</sup>   rpm | 800         | 600         | 600         |
| Weight as per DIN 70020 Part 7A <sup>2)</sup> | kg   lb                 | 808   1781  | 983   2167  | 990   2183  |

1) Power data without deduction of fan power

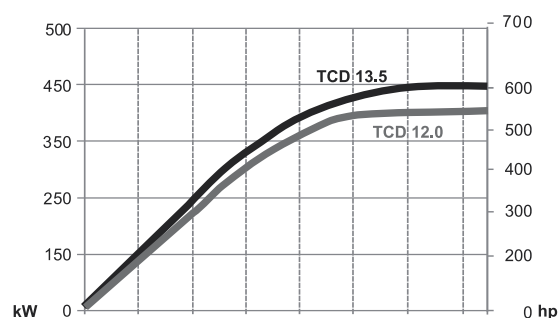
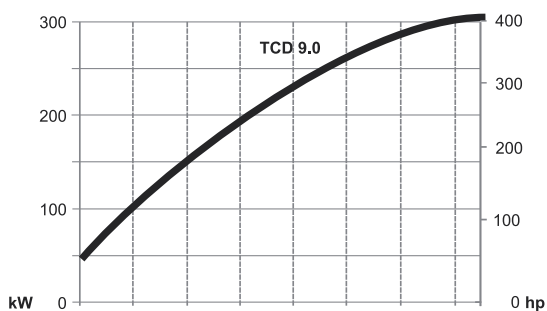
2) Without starter/alternator, cooler and fluids but with flywheel and flywheel housing

## CHARACTERISTIC CURVES

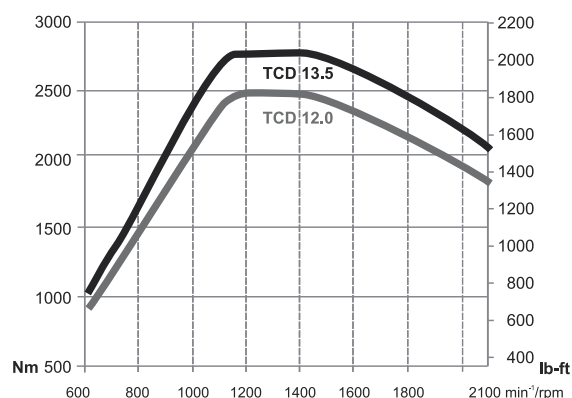
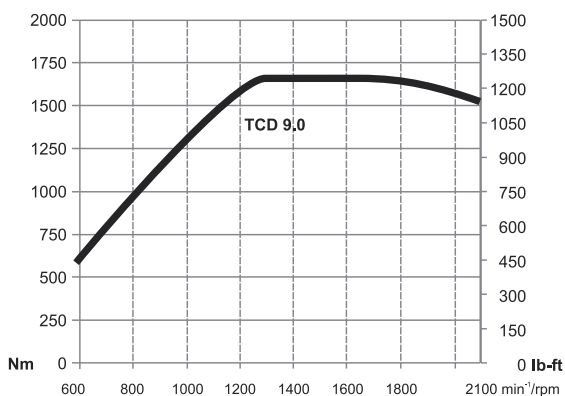
TCD 9.0 L4

TCD 12.0/13.5 L6

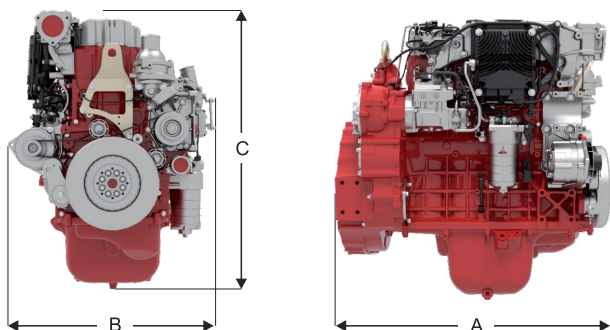
### Power



### Torque



## DIMENSIONS



| Engine type |         | EAT         |            |             |
|-------------|---------|-------------|------------|-------------|
|             |         | DOC         | SCR        | DPF         |
| TCD 9.0 L4  | mm   in | 1057   41.6 | 827   32.6 | 1140   44.9 |
| TCD 12.0 L6 | mm   in | 1378   54.3 | 852   33.5 | 1161   45.7 |
| TCD 13.5 L6 | mm   in | 1378   54.3 | 852   33.5 | 1161   45.7 |

- Standard for US Tier 4
- Standard for EU Stage V

Note: Preliminary technical data. The engine dimensions and weights vary depending on the scope of delivery.  
The data on this data sheet are for information purposes only and are not binding values.  
For more information please contact your responsible sales partner.

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The engine company.

