# DEUTZ TCD 7.8

For mobile machinery 160-260 kW / 214-348 hp at 1800-2200 min<sup>-1</sup>/rpm EU Stage IV and V / US EPA Tier 4

- Water-cooled 6-cylinder inline engine with turbocharging, charge air cooling and cooled external exhaust gas recirculation
- 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 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 DEUTZ Common Rail (DCR®) injection system and the electronic engine control (EMR) with intelligent link to the drive management ensure optimum engine performance at low fuel consumption.
- The engines meet the requirements of the EU Stage IV and US EPA Tier 4 with DVERT® selective catalytic reduction (SCR) and particulate filter (DPF). Through the use of the DPF they already comply with the EU Stage V emissions standard expected from 2019.\*
- Best cold starting performance even under extreme conditions.
- Long oil change intervals and easy changing of the engine fluids reduce the running cost and increase the availability of the machinery.

- The extremely compact engine design and customer friendly accessories reduce the installation cost and increase the number of applications.
- 100% power take-off at flywheel and front end and additionally up to two PTO drives with a total torque of up to 395 Nm.





#### **TECHNICAL DATA**

| Engine type        |                         | TCD 7.8 L6        |  |  |
|--------------------|-------------------------|-------------------|--|--|
| No. of cylinders   |                         | 6                 |  |  |
| Bore/stroke        | mm   in                 | 110/136   4,3/5,4 |  |  |
| Displacement       | I   cu in               | 7,8   476         |  |  |
| Max. nominal speed | min <sup>-1</sup>   rpm | 2200              |  |  |

| Engine type                       |                         | TCD 7.8 L6  |  |
|-----------------------------------|-------------------------|-------------|--|
| Power output as per ISO 14396 1)  | kW   hp                 | 260   348   |  |
| at speed                          | min <sup>-1</sup>   rpm | 2200        |  |
| Max. torque                       | Nm   lb/ft              | 1400   1033 |  |
| at speed                          | min <sup>-1</sup>   rpm | 1450        |  |
| Minimum idling speed              | min <sup>-1</sup>   rpm | 600         |  |
| Specific fuel consumption 2)      | g/kWh   lb/hph          | 192   0,32  |  |
| Weight as per DIN 70020 Part 7A3) | kg   lb                 | 725   1598  |  |

 $<sup>^{\</sup>star}\,\,$  Based on the proposal by the EU Commission COM (2014) 581 final from 25.09.2014



Power data without deduction of fan power

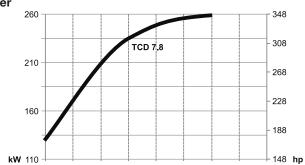
<sup>2)</sup> Best point consumption refers to diesel with a density of 0.835 kg/dm3 at 15°C.

<sup>3)</sup> Without starter/alternator, cooler and fluids but with flywheel and flywheel housing

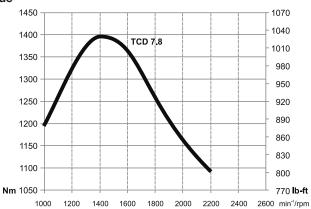
#### **CHARACTERISTIC CURVES**

#### TCD 7.8

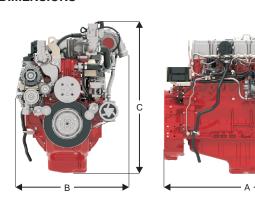


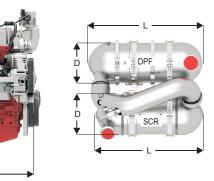


#### **Torque**



### **DIMENSIONS**







|             |         |             |            |             | SCR        |            | DPF        |            | DVERT® EAT |     |
|-------------|---------|-------------|------------|-------------|------------|------------|------------|------------|------------|-----|
| Engine type |         | Α           | В          | С           | D          | L          | D          | L          | SCR        | DPF |
| TCD 7.8     | mm   in | 1214   47,8 | 793   31,2 | 1046   41,2 | 318   12,5 | 816   32,1 | 318   12,5 | 775   30,5 |            |     |

Standard

For EU Step IV / EPA Tier 4 and for EU Stage V. All connection variants are available either in 0° or 90° positions for inlet and outlet flanges. Note: The engine dimensions and weights vary depending on the scope of delivery. For more information please contact the DEUTZ AG or the responsible sales partner.

## **DEUTZ AG**

Ottostraße 1

51149 Cologne, Germany Phone: +49 (0) 221 822-0 Telefax: +49 (0) 221 822-3525 E-Mail: info@deutz.com www.facebook.com/deutzofficial www.deutz.com