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New MTU and DDC engines for the oil & gas industry

- **1200 rpm Series 4000 Engines cover the Range from 870 to 1390 kW**
- **12V and 16V 4000 G71: Lowest Operating Costs in their class**
- **Series production to commence in early 2005**

Friedrichshafen/Detroit - MTU Friedrichshafen and Detroit Diesel introduce their new 12V 4000 G71 and 16V 4000 G71 engines for diesel-electric drilling rig drives to the market. The new engines have been systematically designed for 1,200 rpm applications in order to meet market requirements. The 12-cylinder engines deliver a power output of 870 kW to 1105 kW while the 16-cylinder units cover the range from 1140 kW to 1390 kW. With a weight-to-power-ratio of 4.8 kg/kW, the new engines are the best in their class. The G 71 engines feature a number of innovative technologies, including common rail fuel injection, optimally matched turbocharging and an integrated engine management system (MDEC). Consequently, they are the most advanced and economical engines for drilling rig drives on the market and are among the lightest in their class. "The compactness of the new engines considerably

facilitates the operation of diesel-electric drilling installations, particularly in the case of on-shore installations that are frequently transported from drilling site to drilling site, where the transport weight must be kept as low as possible”, said Uli Kemnitz, head of sales DaimlerChrysler Off-Highway NAFTA region.

12V and 16V 4000 G71: Lowest Operating Costs in their class

The new engines are equipped with a state-of-the-art common rail fuel injection system that makes it possible for all the key combustion-influencing parameters to be independently controlled. These include the injection timing and duration of injection, as well as the injection pressure and rate. This is a decisive advantage when it comes to reducing the fuel consumption while complying with present and future emission limits. The fuel is injected at high pressure throughout the entire operating range of the engine, thus resulting in a fuel consumption which is around 10 percent below the values of competing engines in this power output range. This means that fuel costs and operating costs are at an exceptionally low level. Exhaust emissions meet the EPA Tier 1 and IMO exhaust emission standards.

Another technical highlight of the 1200 rpm Series 4000 is their turbocharging. The 12V 4000 is equipped with two powerful, high-efficiency turbochargers while the 16V 4000 has 4 turbos. Both models turbo arrangements were developed for optimized use in drilling installations.

Like all modern MTU and Detroit Diesel engines, the 4000 G71 engines are controlled by an electronic engine management system. The system makes it possible for the engine and other drive components, such as cooling,

transmission, generators, pumps, etc., to be incorporated into an integral management system.

Series production to commence in spring of 2005

Production of the new 12- and 16-cylinder engines of Series 4000 G71 will commence in early 2005 at Detroit Diesel Corporation in Detroit, MI, in the United States. The engines were developed on the basis of the MTU and Detroit Diesel Series 4000 engines that are currently used in various power generation applications throughout the world. With their speed of 1200 rpm, their compactness and exceptionally low fuel consumption, the new engines have been specifically designed to meet the requirements of the oil & gas market.

Technical data of the 12V 4000 G71

Engine power output, max.:	1481 HP (1105 kW)
Power output per cylinder:	123 HP (92 kW)
Displacement per cylinder:	4.05 liters
Bore:	165 mm
Stroke:	190 mm
Rated speed:	1200 rpm
Dimensions (LxWxH):	2460 x 1350 x 1710 mm
Weight:	5280 kg (incl. bearings, dry)
Power-to-weight ratio:	4.8 kg/kW
Injection:	Common Rail

Technical data of the 16V 4000 G71

Engine power output, max.:	1863 HP (1390 kW)
Power output per cylinder:	116 HP (87 kW)
Displacement per cylinder:	4.05 liters
Bore:	165 mm
Stroke:	190 mm
Rated speed:	1200 rpm
Dimensions (LxWxH):	2900 x 1350 x 1710 mm
Weight:	6700 kg (incl. bearings, dry)
Power-to-weight ratio:	4.8 kg/kW
Fuel consumption:	190 g/kWh (at rated power in EPA)
Injection:	Common Rail

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