

DEUTZ Group: Annual CO₂ emissions in our plants¹⁾

Tonnes	2015	2014
CO ₂ emissions (Scope 1)	13,251	16,289
CO ₂ emissions (Scope 2)	51,070	57,021
CO ₂ emissions (Scope 3)	531	1,528
Total CO ₂ emissions	65,134	77,463

Scope 1: CO₂ emissions caused by combustion in our own facilities.

Scope 2: CO₂ emissions relating to purchased energy (e.g. electricity, district heating).

Scope 3: CO₂ emissions from flying and the use of hire cars.

¹⁾ Plants in the DEUTZ Group, excluding joint ventures.

FURTHER IMPROVEMENT OF AIR PURITY

Over and above the effects of the production programme, emissions of dust, carbon dioxide, benzene and nitrogen oxide have decreased substantially as a result of particularly low-emission engines being tested and a shortening of the testing times in the test bay.

DEUTZ Group: Emissions per engine in our plants¹⁾

Emissions per engine	2015	2014
CO ₂ (kg)	460	365
Nitrogen oxide (kg)	0.128	0.140
Dust (g)	2.6	2.7
Benzene (mg)	44.8	48.6

¹⁾ CO₂ emissions in plants in the DEUTZ Group. All other figures relate to German plants.

A variety of individual technical and organisational measures made it possible to shorten the testing times. To further reduce emissions and costs, we are planning to carry out cold testing²⁾ of some of our products in the production test bays in Cologne. The construction of a laboratory for exhaust after-treatment technology, which contains a model gas testing rig, enables the simulation of engine emissions for bench-scale testing. This saves on various test runs at the development stage.

In order to satisfy customers' requirement for even more eco-friendly engine technologies, DEUTZ AG has converted four of its test cells so that engines can be tested with LPG as part of research and development. The advantage in terms of air purity is obvious: LPG-powered engines do not emit any dust.

²⁾ Functional testing of the engine without initiating the combustion process.

FOCUS ON WATER POLLUTION CONTROL

We ensure the safe operation of all equipment to which the German Federal Water Act (WHG) applies by having them inspected regularly by experts from a central monitoring agency. This not only ensures the necessary technical requirements for safe operation are in place but also reduces the likelihood of equipment downtimes.

The retirement and deinstallation of the electroplating plant in Cologne-Deutz significantly lowered environmental risk during the reporting year. The deinstallation of the electroplating equipment and the transfer of some of it to the new location of the external service provider were carried out in close cooperation with the local environmental authorities – a model example of collaborative partnership.

In the last stage of its expansion, the R&D testing centre's cellars were extensively refurbished. The work was undertaken in order bring the equipment-specific water pollution controls in line with the latest technology. This predominantly involved replacing waste water pipes and recoating the floors, which have to resist penetration by substances that could pollute the water. Just under €0.2 million was invested in these measures.

Use of resources improved again The recooling plant, which supplies the R&D testing centre with water for cooling, had previously been operated using an open recirculating cooling system. Besides the loss of water resulting from this process, the outdated machinery consumed a lot of electricity. We completed the installation of a closed recirculating cooling system and the replacement of the inefficient circulating equipment last year. Just under €0.3 million was invested in this construction work. The ongoing benefits of this measure – reduced water consumption at the Cologne-Porz site and lower consumption of electrical energy – will help to conserve the resources available to our Company in the long term.