



MAXXDRIVE® INDUSTRIAL GEAR UNITS FROM NORD DRIVESYSTEMS

Reliable agitating and mixing under difficult conditions

A total of 16 MAXXDRIVE® industrial gear units from NORD ensure the biogas production in the Smits Groep plant Image: NORD DRIVESYSTEMS



Although relatively new, the MAXXDRIVE® industrial gear units from NORD DRIVESYSTEMS are among the established drive solutions for heavy-duty applications. Apart from conveying, lifting and driving, mixing and agitating are among the most important application areas. For the agitators in a non-standard biogas plant in the Netherlands, the powerful industrial gear units significantly contribute to the implementation of gas production.

MAXXDRIVE® industrial gear units from NORD DRIVESYSTEMS can be found in all industrial applications, where high performance and high ratios are required. They achieve output torques of up to 282,000 Nm and powers of up to 6,000 kW. Their torsionally rigid, one-piece UNICASE™ housing ensures a long service life as it can handle high axial and radial loads. NORD is the only manufacturer that builds industrial gear units of such dimensions and specifications with a one-piece UNICASE™ housing. Through continuous development of the series, the system manufacturer of drive solutions serves more and more industry-specific requirements, for example sizes with extended centre distance for use in lifting gear.

Powerful mixing requested

An important application area is agitating and mixing, which is essential in biogas plants, for example. Only by thoroughly blending the products to be fermented, a homogeneous mass is obtained that provides optimum ambient conditions for

microbes with regard to temperature, viscosity and acidity. If the microbes are active, they produce sufficient biogas. The biogas plant expansion of the Dutch Smits Groep's largescale agricultural unit, however, presented the designers of the mixing technology with a challenge. Contrary to standard practice, the rotating agitators had to blend a rectangular base of about 1,200 m² instead of a circular one. Another difficulty was the fact that more concrete pillars than roof girders had been placed in the towers.

ATEX-compliant and powerful

The Dutch system manufacturer Jongia Mixing Technology developed a concept, where two highperformance agitators per tower ensure the biogas production. This is implemented using MAXXDRIVE® industrial gear units. Each agitator with 4.5-metre agitator shafts is driven by a NORD industrial gear unit. The application uses a total of 16 ATEX-compliant gear units with a speed ratio of 123:1, powers of 37 kW 1/2 and an output torque of almost 29,000 Nm.

The biogas plant has been in operation for almost one year now. The Smits Group is satisfied. They already plan the construction of another biogas plant with eight fermenters to further increase their biogas volume. Once again with the participation of: Jongia and NORD.

About NORD DRIVESYSTEMS

With approx. 4,700 employees today, NORD DRIVESYSTEMS has

developed, produced and sold drive technology since 1965, and is one of the leading global full-service providers in the industry. In addition to standard drives, NORD delivers application-specific concepts and solutions for special requirements such as energy-saving drives or explosion-protected systems. In the 2021 financial year, annual sales amounted to 870 million Euros. NORD has 48 subsidiaries in 36 countries and further sales partners in more than 50 countries. They provide technical

support, local stocks, assembly centres and customer service. NORD develops and produces a wide range of drive solutions for more than 100 industries, gear units for torques from 10 Nm up to over 282 kNm, supplies electric motors in the power range of 0.12 kW to 1,000 kW, and supplies the required power electronics with frequency inverters of up to 160 kW. Inverter solutions are available for conventional control cabinet installations as well as for decentralised, fully integrated drive units. www.nord.com

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