

DRIVE SOLUTIONS FOR BAKED GOODS PRODUCTION

CASE STUDY: FINE LADY BAKERY



**Helical and
bevel gear units**



**Quiet running
and long life**



**Specially for heavy-duty
applications**



High output torques



Tailored modifications



To enable Fine Lady Bakeries to quickly resume production after a gear unit failure, NORD DRIVESYSTEMS rapidly supplied a MAXXDRIVE industrial gear unit with a modified shaft.



FOOD INDUSTRY

Baked goods production, proofing cabinet, winding drum



GEARED MOTORS

NORD MAXXDRIVE industrial gear unit and helical and bevel gear units

PROJECT REQUIREMENTS

When the gear unit of a vital winding drum failed at the Fine Lady Bakeries, the Banbury (England) based baked goods producer required a quick but long term solution. The bakery therefore turned to the nearby located NORD GEAR LTD, a member of the NORD DRIVESYSTEMS GROUP. To allow the bakery to resume production as soon as possible, the failed gear unit from a competitor needed to be replaced with a gear unit from the standard NORD although a specially designed and manufactured shaft was necessary.

Finding a solution on-site. – A NORD technician surveyed the gear unit damage at Fine Lady Bakeries. He started by recording the main dimensions such as the diameter and length of the shaft as well as the installation position of the gear unit on the proofing cabinet and found that

the design of the installation was flexible enough to accommodate a new gear unit as the mounting frame could be modified. However, the diameter and length of the original gear unit shaft had to be retained in order to match the dimensions of the drive coupling.

Output torque and axial load – For the selection of the new drive solution, the maximum output torque of the existing gear unit had to be considered. This was 25,000 Nm at an output speed of 1 rpm. In addition, the selected gear unit needed to withstand the axial force of the continuous conveyor which, according to the design, was directly placed on the gear unit. Once the axial load had been calculated, NORD decided to use a gear unit from its MAXXDRIVE industrial gear unit series for this application.

CUSTOMER PROFILE

For many years, Fine Lady Bakeries has produced a wide range of baked goods at its 10 hectare premises in Oxfordshire. Together with a factory in Manchester the company produces millions of loaves of bread every week. As well as this, it produces various types of rolls and Good Friday “hot cross buns”. As especially in the Easter period there is a considerable increase in production, it is vitally important that the proofing cabinet equipment works perfectly during this time.





“After the gear unit failure we contacted NORD and their employees quickly responded to our emergency situation. The defective gear unit was quickly identified, measured and replaced.”

KEITH HOLLOWAY, TECHNICAL BUYER FOR FINE LADY BAKERY LTD

APPLICATION SOLUTION

NORD MAXXDRIVE gear units are specially designed for heavy duty applications such as mixers and provide high output torques from 15,000 to 25,000 Nm with quiet running and a long service life. The greatest challenge for the implementation of the drive solution was the fact that the delivery times for large customised gear units may range from four weeks for a standard gear unit and up to 16 weeks for more complex requirements. The Fine Lady Bakeries’ gear unit required a special shaft, which had to be specified and designed at the NORD headquarters in Germany.

Tailor-made gear unit in the shortest time possible – Due to the urgency of the situation at Fine Lady Bakeries, the NORD team pulled out all the stops. The design was ready within 24 hours and the bakery could be given an offer, together with a

construction drawing. The delivery time for a gear unit with a special shaft is normally 12 weeks, but in this case the time could be reduced to less than six weeks.

Successful commissioning – With the necessary modifications made to the existing mounting frame, NORD also installed the two gear units which had been ordered so that the plant could resume operation as quickly as possible. The new gear unit concept from NORD not only gives Fine Lady the confidence that it can fully rely on the local service and advice, but also that it can depend on a high level of productivity.



Heavy duty applications – NORD MAXXDRIVE industrial gear units offer high output torques from 15,000 to 250,000 Nm

THE PROJECT AT A GLANCE

After a gear unit failure at the Fine Lady Bakeries, the specific choice was a size 8 gear unit from the NORD MAXXDRIVE series with a rated torque of 31,000 Nm and an axial thrust of 140,000 (N).

- The gear units are available as helical gear and bevel gear versions
- Are equipped with high quality, low friction bearings
- Have a low-torsion, one-piece housing





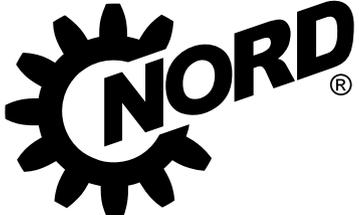
**FURTHER REFERENCES AND
APPLICATION CASES:**

www.nord.com/references

D Getriebebau NORD GmbH & Co. KG, Getriebebau-Nord-Str. 1, 22941 Bargteheide, Deutschland, T +49 4532 2890, F +49 4532 289 2253, info@nord.com

EN NORD GEAR LTD., 11 Barton Lane, Abingdon Science Park, Abingdon, OX14 3NB Oxfordshire, T +44-1235-534404, F ++44-1235-534414, GB-sales@nord.com

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