

# MAXXDRIVE® industrial gear units

Interchanges

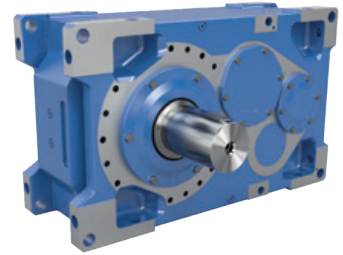


# Complete drive solutions from a single source



## NORD Delivers

NORD offers full-featured drive solutions that can tackle the toughest requirements. All components are carefully selected and precisely configured to meet your exact specifications. In the rare case that standard components won't meet your needs, our in-house engineering team will work with you to design custom components or a complete customized system.



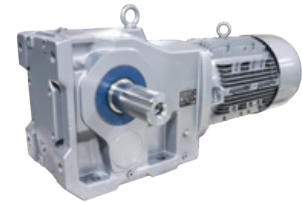
## Reduce Lead Times and Decrease Inventory

- ▶ 25% of orders ship same day or next day with NO expedite fees
- ▶ 47% of orders ship within 5 working days
- ▶ 81% of orders ship in 2-3 weeks



## Global Product Designs, Standards, and Support

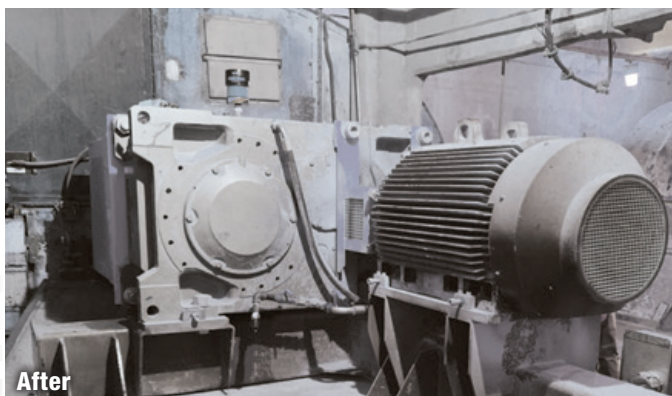
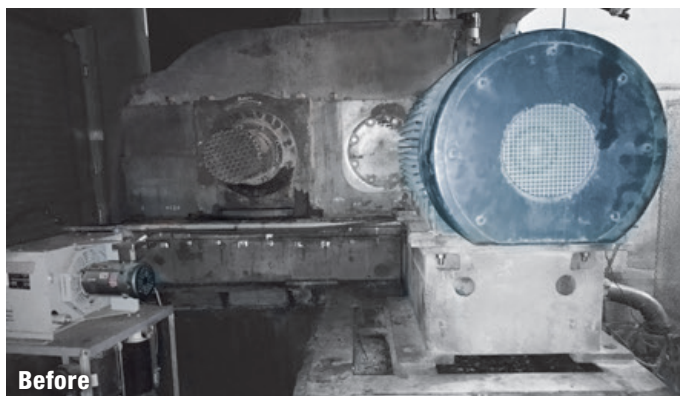
- ▶ Innovative product range (one-stop shop)
- ▶ Global connected presence
- ▶ Mechanical and electrical application engineers ready to assist you
- ▶ Online resources



## Increase Efficiency and Reduce Operation Costs

- ▶ First-class customer service and support, plus myNORD online tools
- ▶ Product flexibility through standard components and customizations
- ▶ Program personalization, such as weekly shipment schedules and custom nameplates
- ▶ Partner with a company that is easy to do business with and wants to see you succeed!





NORD's engineering team will work with you directly to select, configure, and implement your drive solution.

### Selection of New Gear Unit

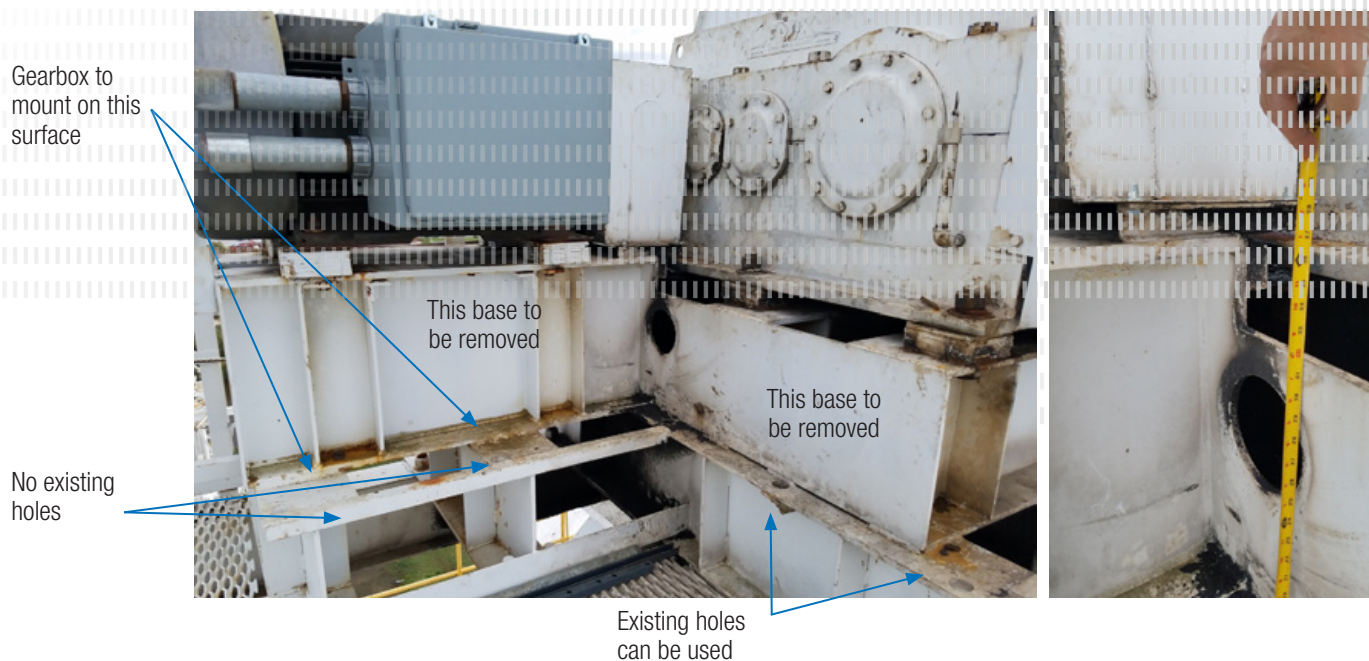
- ▶ Application
- ▶ Design of existing unit(s)
- ▶ Service history

### Development of Drop-In Strategy

- ▶ Compare new gear unit dimensions to existing
- ▶ Review available mounting structure
- ▶ Consider if special output shaft is required

### Design of Transition Base

- ▶ Match mounting footprint of existing unit
- ▶ Locate output shaft in the same location as the existing unit
- ▶ Fabrication optimization to production methods and materials



NORD DRIVESYSTEMS

# MAXXDRIVE® interchange advantages

MAXXDRIVE® industrial gear unit interchanges provide economical, long-term drive solutions for industrial and heavy commercial applications.

## Advantages for our customers

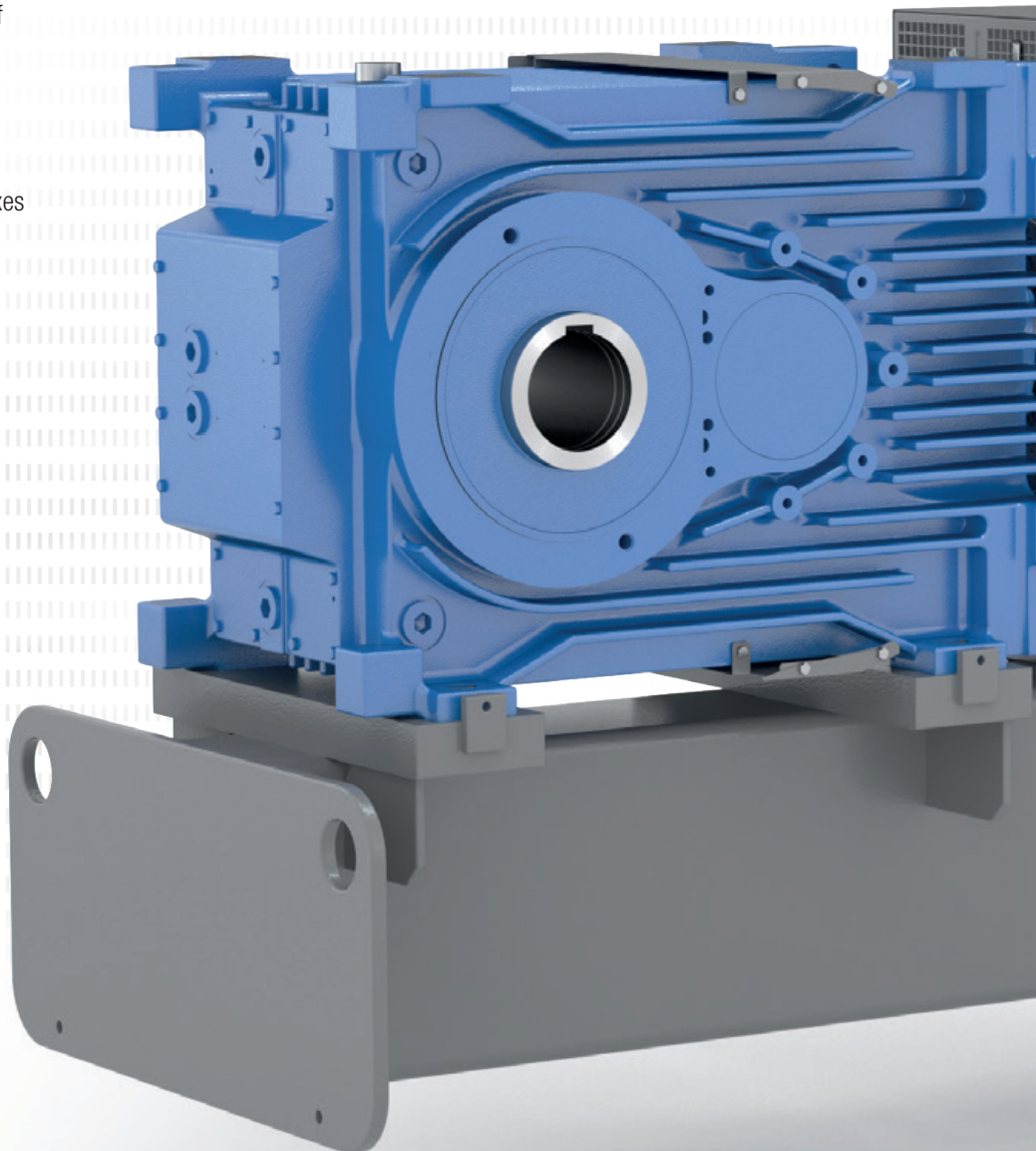
- ▶ All new components
- ▶ State-of-the-art design
- ▶ Consistent quality
- ▶ All encompassing warranty

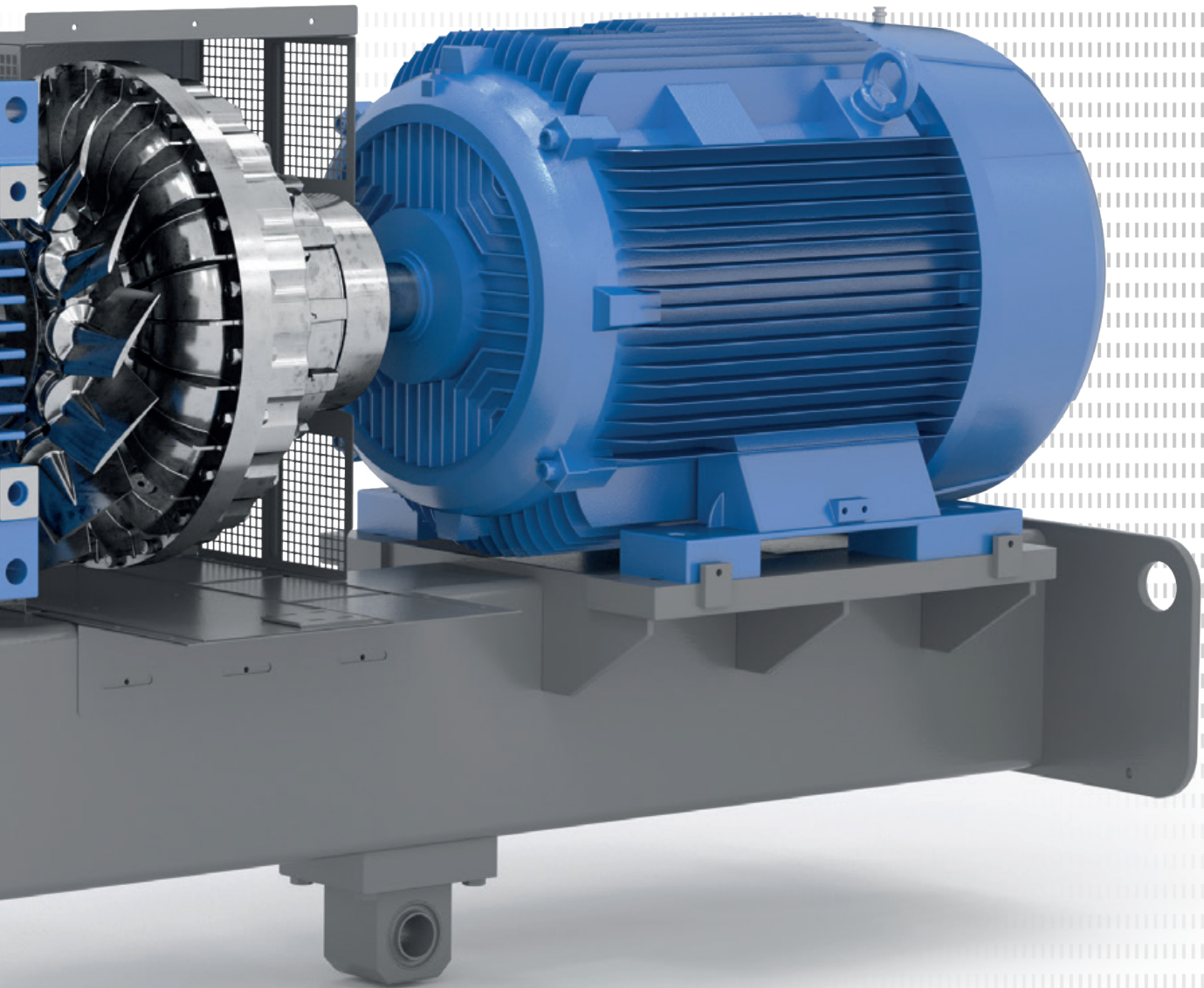
## Reduced Downtime

- ▶ New gearboxes readily available in event of catastrophic failure
- ▶ Replacement parts typically in stock

## Reduced Costs

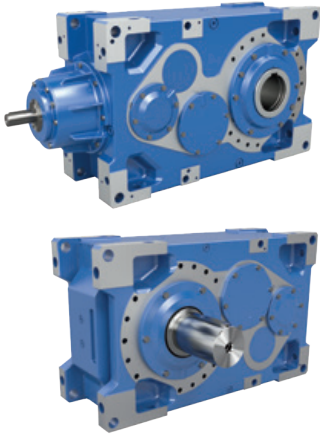
- ▶ Ability to economically stock spare gearboxes
- ▶ Less spare parts inventory required





# MAXXDRIVE® interchange product overview

## MAXXDRIVE® Industrial Gear Units

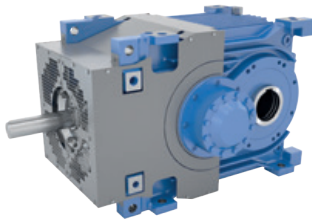


- ▶ All bearings and sealing surfaces are machined in a single process (promoting quieter operation and a long service life)
- ▶ No separating joints in the housing, no sealing surfaces subject to torque
- ▶ High-precision axis alignment
- ▶ Low maintenance
- ▶ Gear ratio range 5.54 to 400:1 with the same foot dimensions
- ▶ Parallel axis and right-angle

- ▶ 11 case sizes
- ▶ 2.5 – 8,075 HP
- ▶ 132,800 – 2,301,200 lb-in of torque
- ▶ 5.54 – 30,000:1\* ratio range

\*with combination gearbox

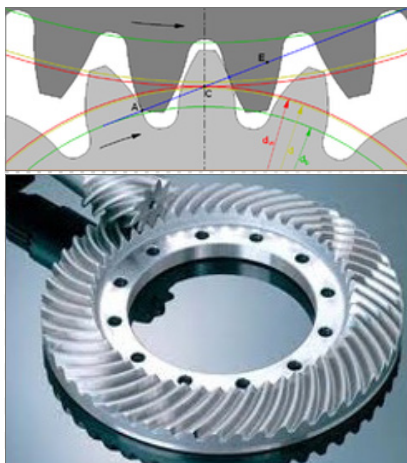
## MAXXDRIVE® XT Industrial Gear Units



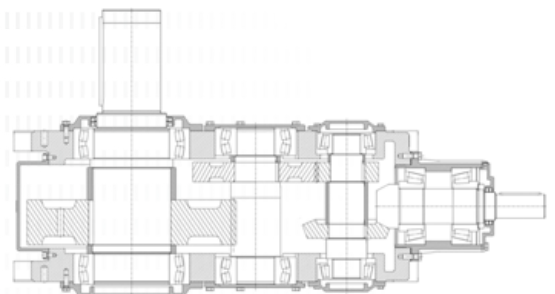
- ▶ Optimized housing and surface design for highest thermal performance limit
- ▶ All bearings and sealing surfaces are machined in a single process (promoting quieter operation and a long service life)
- ▶ No separating joints in the housing, no sealing-surfaces subject to torque
- ▶ High-precision axis alignment
- ▶ Low maintenance

- ▶ 7 case sizes
- ▶ 30 – 2,825 HP
- ▶ 132,800 – 663,800 lb-in of torque
- ▶ 6.14 – 22.91:1 ratio range

## High-Grade Components



- ▶ Case-hardened and hard-finished gearing
- ▶ C4, 42 CrMo4, or 18 CrNiMo7-6 steels
- ▶ Exclusive use of roller bearings
- ▶ Gearing designed and rated to international standards



## UNICASE™ Housing

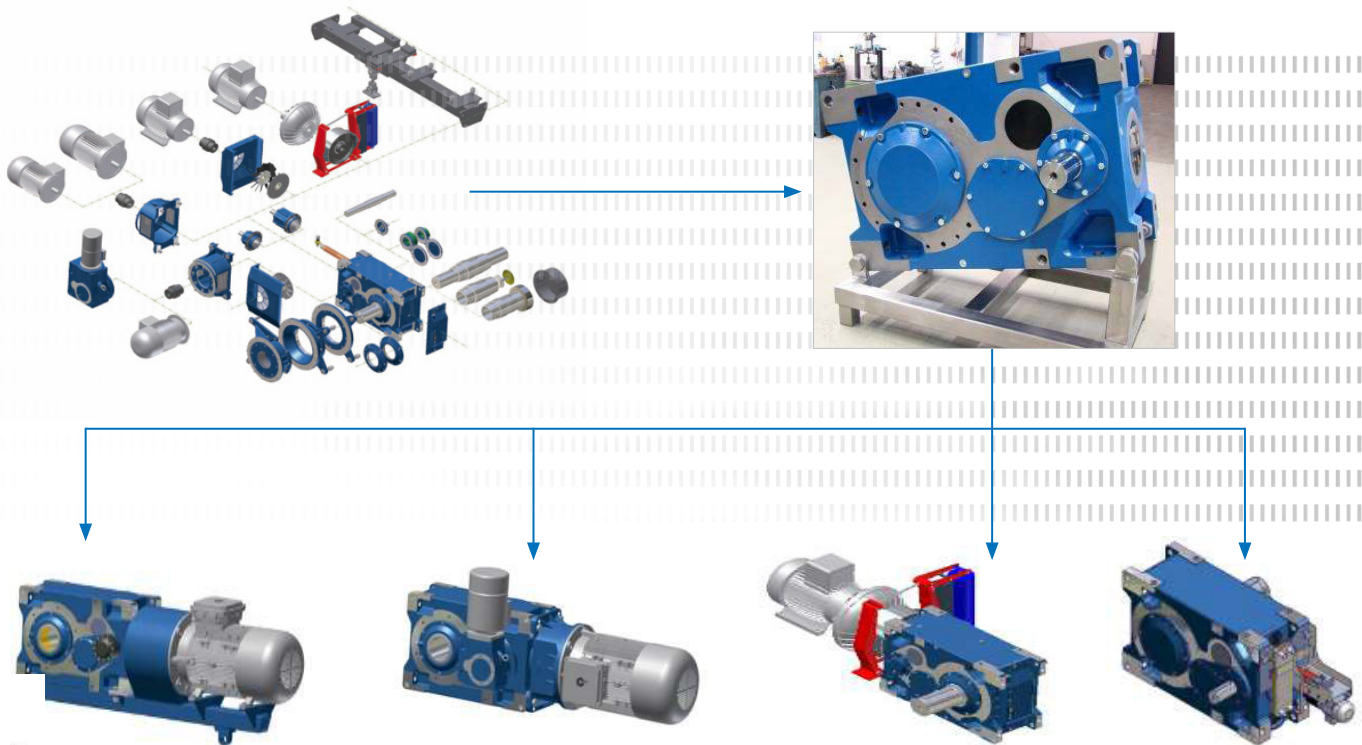


- ▶ Optimized strength-to-weight ratio
- ▶ Precision machining in one set up
- ▶ Reduced leak paths
- ▶ Multiple mounting surfaces
- ▶ Higher stiffness

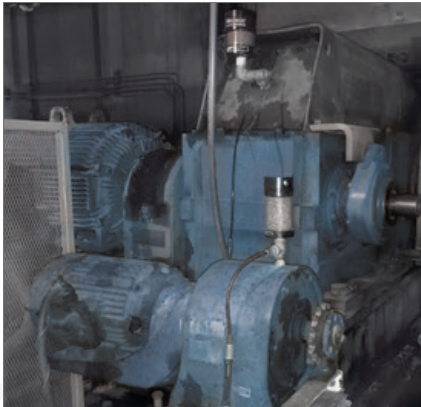


## Optimized Modularity

NORD gear units are engineered based on a modular concept, allowing a wide range of configuration option from our standard offering.



# Interchange examples - bucket elevators

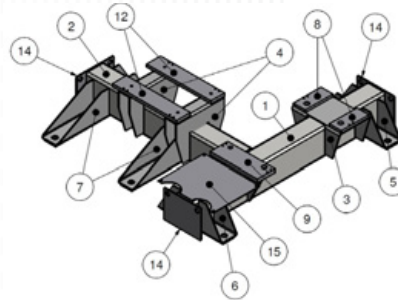
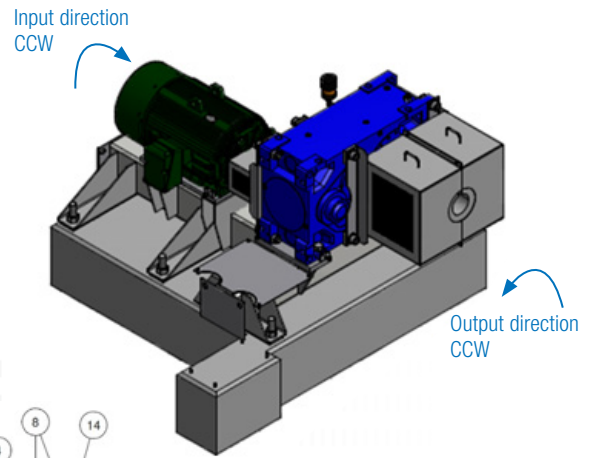


Existing Gear Unit - Falk 2155Y2

- ▶ 350 HP motor
- ▶ 40 rpm out
- ▶ Backstop

## NORD Solution

- ▶ SK13307 gear unit
- ▶ Input and output couplings
- ▶ Transition base
- ▶ Backstop
- ▶ Guarding
- ▶ Heat exchanger (explosion-proof)

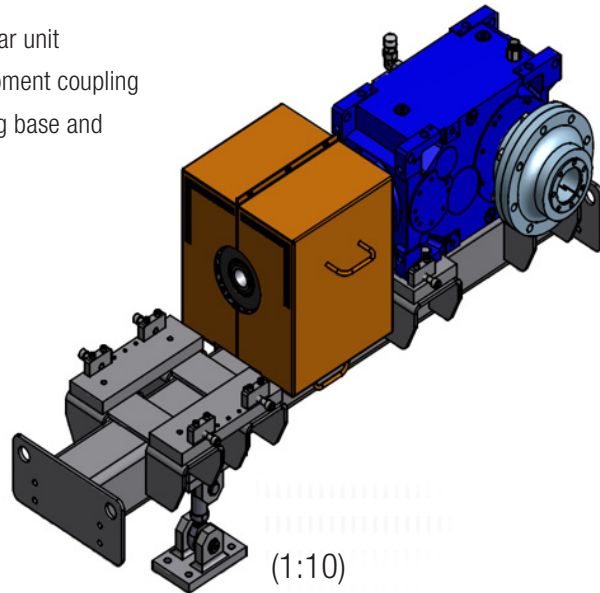


Existing Gear Unit - Foote Jones

- ▶ 75 HP motor
- ▶ Foot-mounted
- ▶ Chain drive on output

## NORD Solution

- ▶ SK5407 gear unit
- ▶ Flanged moment coupling
- ▶ Motor swing base and torque arm
- ▶ Shaft fan







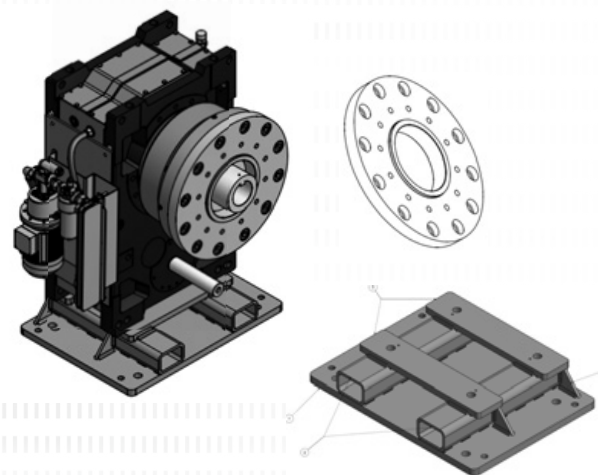
### Existing Gear Unit - Lufkin 45V

- ▶ 300 HP motor
- ▶ 125 rpm out
- ▶ Output thrust bearing



### NORD Solution

- ▶ SK10207 gear unit
- ▶ Special input and output shafts
- ▶ Transition base
- ▶ Transition flange
- ▶ Guarding
- ▶ Heat exchanger (explosion-proof)



# MAXXDRIVE® interchange options

## Monitoring Devices and Sensors

- ▶ Oil inspection glass
- ▶ Oil level glass
- ▶ Dipstick
- ▶ Pt 100 (temperature sensor or transmitter)
- ▶ Oil filter contamination indicator, electrical
- ▶ Oil filter contamination indicator, visual
- ▶ SPM nipple (for vibration sensor)
- ▶ Pressure/flow monitoring (oil circulation)
- ▶ Special requirements on request

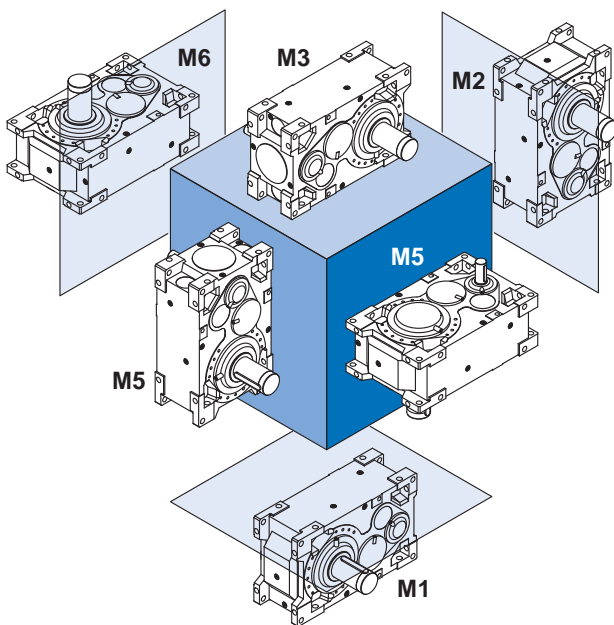
## Temperature Management

- ▶ Fans, 3 options (axial, radial, or electric)
- ▶ External oil/air cooler
- ▶ External oil/water cooler
- ▶ Internal cooling coils (water)
- ▶ Oil heaters

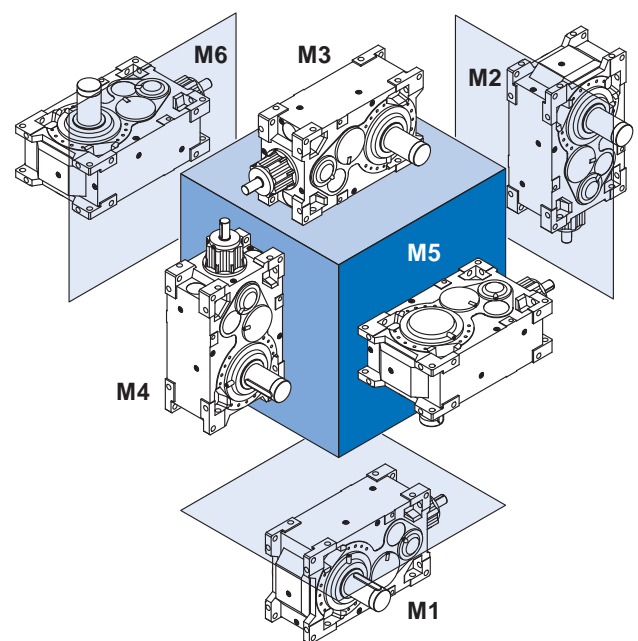
## Sealing Systems

- ▶ Single seal NBR/FKM
- ▶ Double seal NBR/FKM
- ▶ Dust protection seal
- ▶ Taconite seal (re-lubricated labyrinth seals)
- ▶ Gamma-ring seal, dust protection
- ▶ Special requirements on request

## Installation Orientations

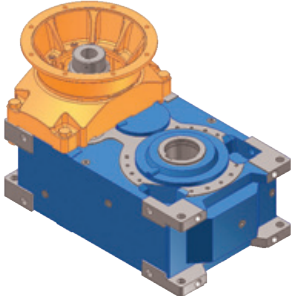


*Parallel shaft gear units*

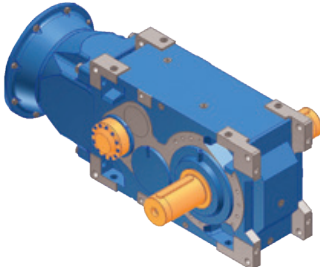


*Helical bevel gear units*

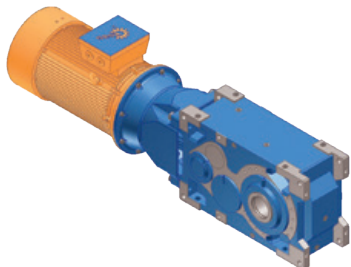
Optional Accessories



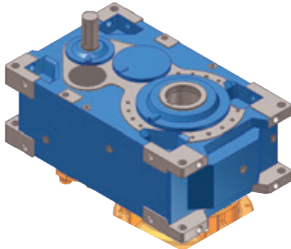
IEC / NEMA Input



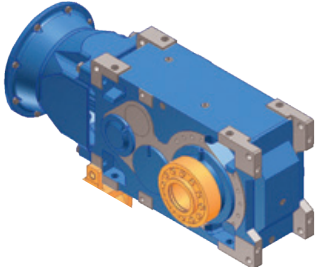
Double Output Shaft / Backstop



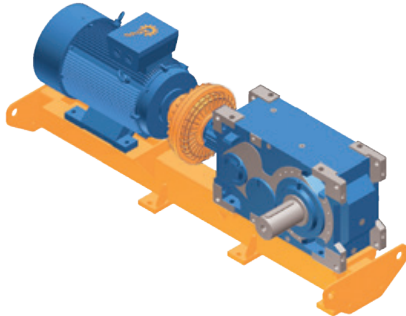
IEC / NEMA with Motor



Agitator Flange

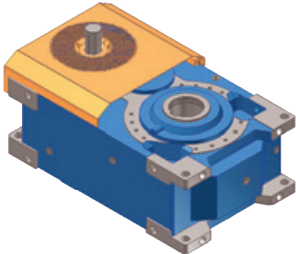


Shrink Disc / Torque Support

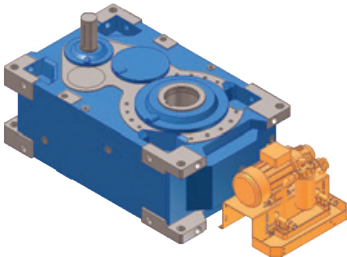


Base Frame / Fluid Coupling

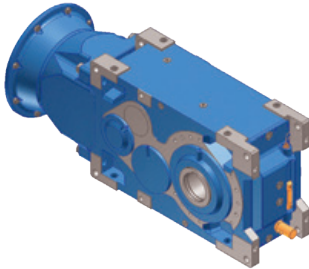
Temperature Management Examples



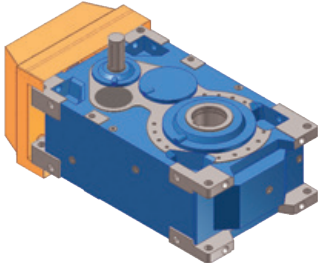
Radial Fan



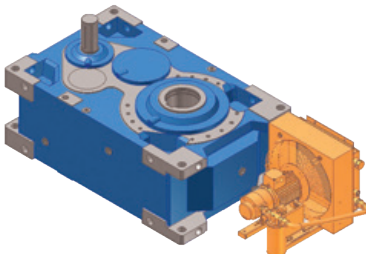
Oil Water Cooler



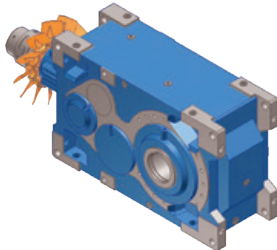
Oil Heater / Sight Glass



Electric Fan



Oil Air Cooler

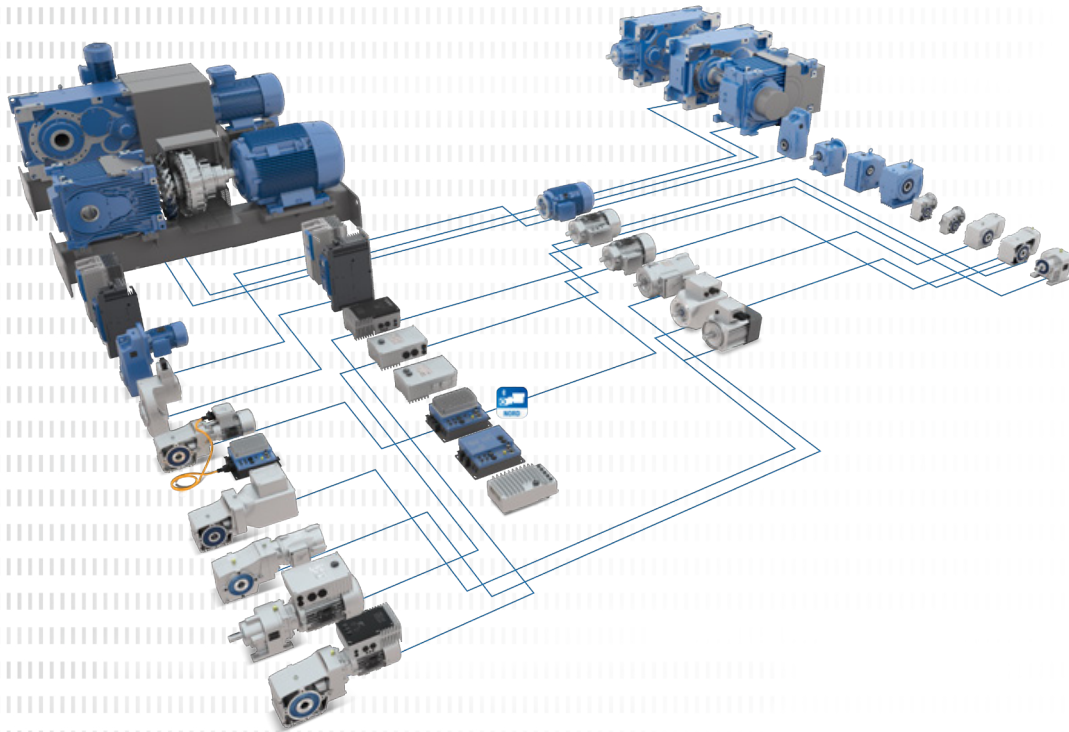


Axial Fan

# MAXXDRIVE® industrial gear units



The modular system design of NORD DRIVESYSTEMS empowers users to create customized solutions to their exact requirements. From gear units to motors to drive electronics, each of the variants combines the highest product quality, short lead times, rapid delivery, and a strong price-to-performance ratio.



## NORD DRIVESYSTEMS Product Portfolio

- ▶ Complex drive systems from modular components
- ▶ High availability, global production network
- ▶ Short delivery times for stock components and spare parts
- ▶ Highest product quality at all locations
- ▶ ATEX versions available
- ▶ myNORD customer portal for online configuration, pricing, quoting & ordering
- ▶ 24/7 dependable partner for engineering, production, installation and service

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