

Intelligent Drivesystems, Worldwide Services

NO PAINT! NO FLAKING!

nsd tupH Corrosion Protection

Painted geared motor after 12 months of use

NORD geared motors **nsd** tupH are ideal for use in extreme ambient conditions.

- Easy to clean surfaces
- Resistant to acids and alkalis (wide pH range)
- No infiltration of corrosion, even in case of damage
- Cannot flake
- Corrosion-resistant - prevents contact corrosion
- Alternative to stainless steel
- Conforms to FDA Title 21 CFR 175.300
- Free from chromates

(EN)

SURFACE AND CORROSION PROTECTION

nsd tupH

Sealed Surface Conversion System

The alternative to stainless steel



DRIVESYSTEMS

NSD TUPH SURFACE TREATMENT REDUCES COSTS, LESS WEIGHT, IMPROVED PROCESS RELIABILITY

Drive technology for extreme ambient conditions with the wide range of products with which you are familiar for standard geared motors - however with the durability of stainless steel and an excellent price-performance ratio. NORD DRIVESYSTEMS now has an answer for these requirements: **nsd^{tuph}** Sealed Surface Conversion System



Paint is only applied to the surface and may even cover any porosity. Because paint does not form a permanent bond with the material, it may flake off, even with moderate use.

■ Paint
■ Aluminium surface



The **nsd^{tuph}** process has a base layer, which forms a permanent bond with the surface of the aluminium and ensures a strong basis for the bonding of the surface coating. This combination offers extreme resistance and is 6-7 times harder than untreated aluminium and up to 1,000 times harder than paint.

■ Sealing
■ Adhesion layer
■ Aluminium surface

Extensive tests with **nsd^{tuph}**:



Sprinkling of the products with hot water at 38° – 45°C.



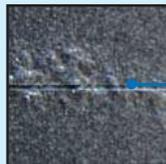
Foaming of the products with cleaning agents as well as 1.56% acid.



Soaking time of 10 - 30 min. for each cleaning cycle.



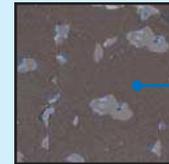
Spraying with hot water at 38° – 45°C under high pressure. Spraying with cleaning agents with 0.26% concentration.



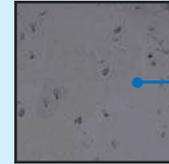
Spreading of corrosion in the region of a scratch test on conventional paint.



Example of a **nsd^{tuph}** surface after a scratch test without spreading of corrosion.



Gravelometer test for flaking resistance on a painted surface according to ASTM B3179.



Gravelometer test for flaking resistance on **nsd^{tuph}** according to ASTM D3179.

The complete solution for extreme conditions

- **nsd^{tuph}** Surface-treated housing components
- DIN and standard components made from stainless steel
- Washdown housing (gear unit and motor)
- Stainless steel shafts
- Special shaft sealing rings
- Food Grade Oil

nsd^{tuph} for extreme conditions

- Food and beverage industry
- Dairies
- Pharmaceutical industry
- Water and sewage plants
- Carwash systems
- Offshore and coastal areas
- Cleaning with chemicals (washdown, wide pH range)

Available products with **nsd^{tuph}**:

SMI worm gear units



2-stage bevel gear units



NORDBLOC. 1* helical gear units



*Up to size 6

Smooth motor



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