

NORTON

SAINT-GOBAIN

Xtrimium™

POWERING PERFORMANCE

Transforming
surfaces
...and beyond

GEAR GRINDING 4.0

 SAINT-GOBAIN



GEAR GRINDING 4.0

We have enhanced the Norton Xtrimium gear grinding platform by combining **three powerful Norton technologies** to bring you unrivalled grinding performance.

New Norton Xtrimium worm grinding wheels with **next-generation bond technology** are designed to deliver **higher productivity** and **lower process costs**.

The wheels **run faster**, are **burn-free** and provide a **superior surface finish** that meets the highest industry standards.

POWERFUL FORMULATION

WITH PATENTED TECHNOLOGY

NEW CERAMIC GRAIN

For a finer surface finish

NEW NATURAL OPEN MICROSTRUCTURE AND HIGHER POROSITY

For exceptional productivity

NEXT GENERATION BOND TECHNOLOGY

For reduced friction and stronger form holding

SHAPED MICRO-STRUCTURED CERAMIC GRAIN WITH NORTON QUANTUM™ CHEMISTRY

Higher productivity

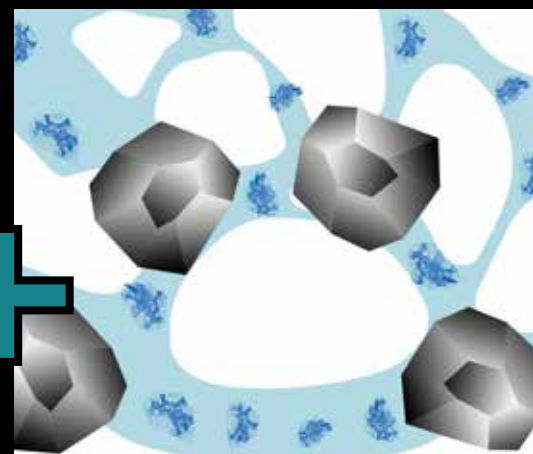
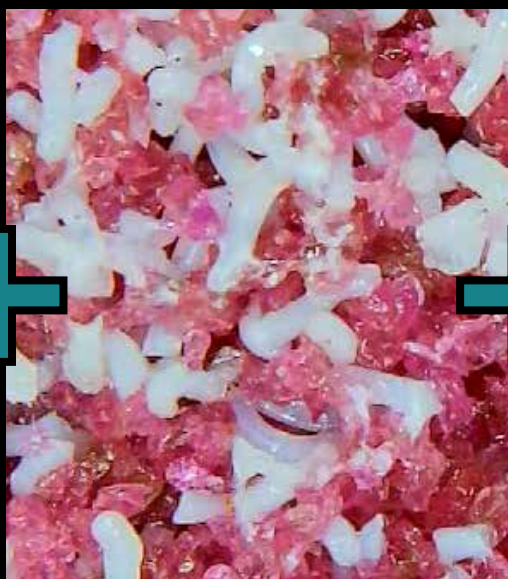


OR



ENGINEERED MICRO-STRUCTURE CERAMIC GRAIN WITH NORTON QUANTUM™ PRIME CHEMISTRY

Superior surface quality ($m < 1$)



THE BOND THAT GRINDS!

Choose from our two leading technologies to meet your application requirements.

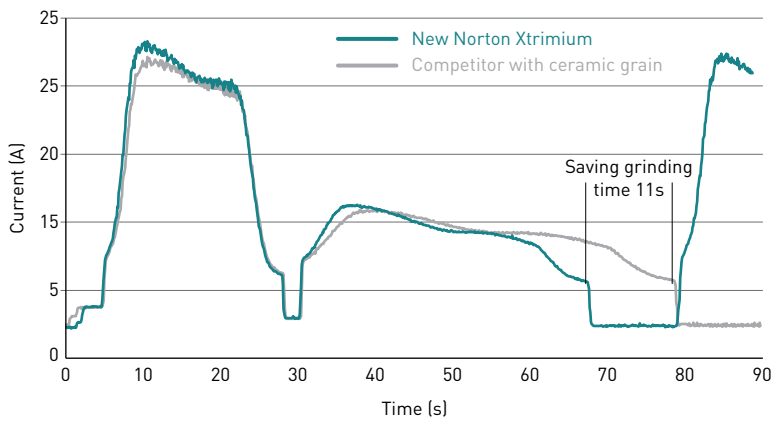
CASE STUDY 1 - MAIN SHAFT GEAR



GEAR DATA

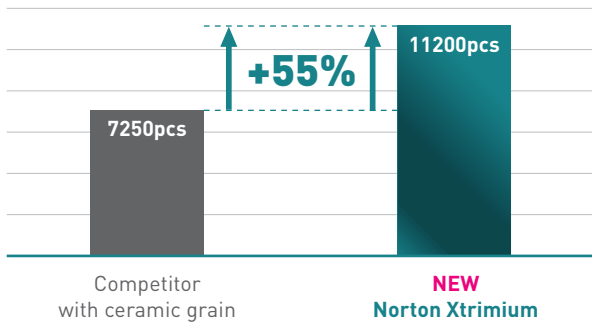
m	4,58 mm	Helix angle β	21,7°
Z	46	Material	20NiCrMoS2
Zb	58 mm	HRC	58~62
Pressure angle α	19,8°		

RESULTS - GRINDING POWER

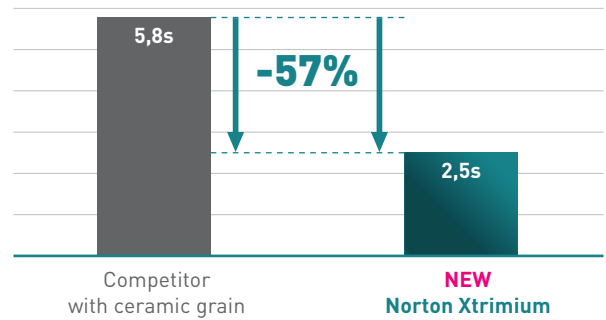


Measurements made by the application engineer directly on the machine spindle enable quick and easy analysis of power development during grinding.

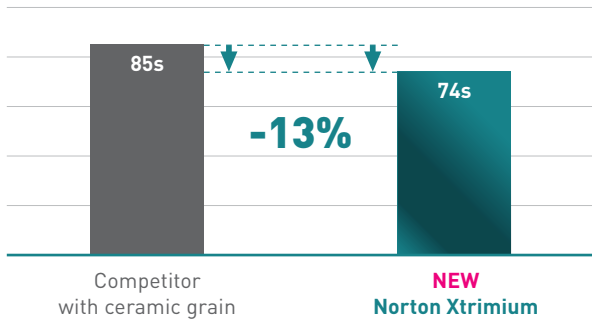
WHEEL LIFE (pcs/wheel)



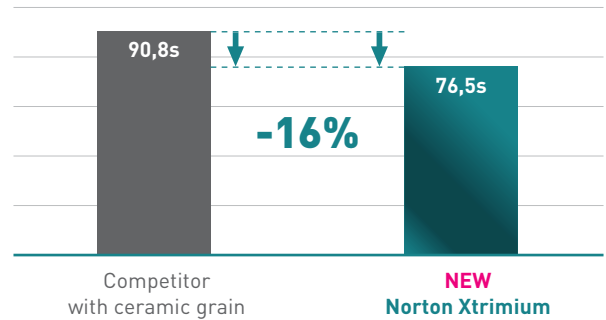
DRESSING TIME (s/part)



GRINDING TIME (s/part)



TOTAL CYCLE TIME (s/part)



RESULTS

Ra	0,36 - 0,38 μm	Rmr 1 (min 55%)	70 - 77
Rz	2,4 - 2,6 μm	Rmr 3 (min 95%)	100%

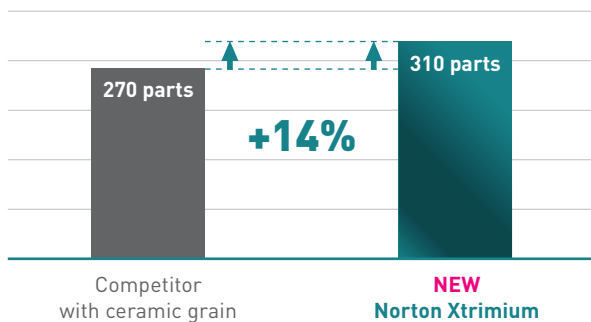
CASE STUDY 2 - EV GEAR



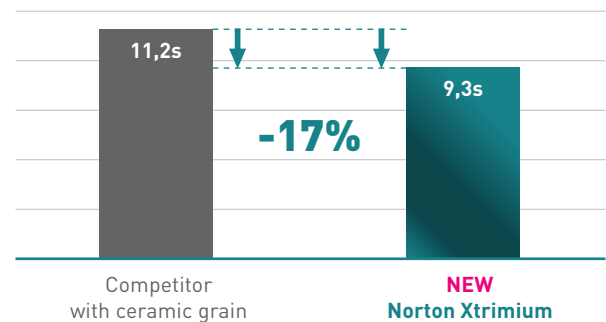
GEAR DATA

m	1,3 mm	Helix angle β	19°
Z	24	Material	20CrMn5
Zb	23,3 mm	HRC	58~62
Pressure angle α	17,5°		

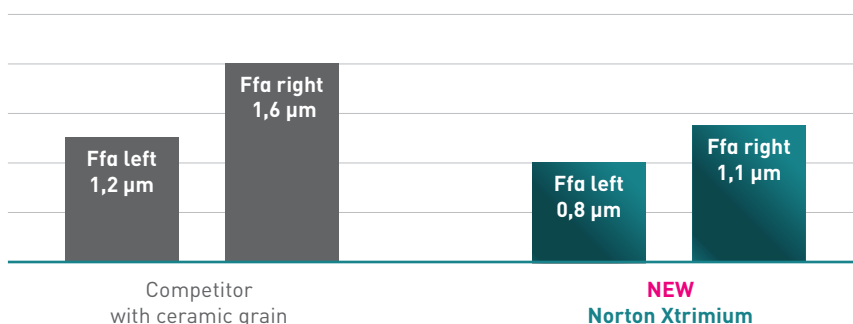
PART PER DRESS



GRINDING TIME (s/part)



PROFILE TOLERANCE



RESULTS

Next generation Norton Xtrimium worm grinding wheel provides improved profile holding and extra fine surface finish $R_z = 1,9 - 2,2\mu\text{m}$ on a complex EV gear.



Saint-Gobain Abrasifs
European Headquarters
251 Rue de l'Ambassadeur
78700 Conflans
France

Tel: +33 (0)1 34 90 40 00
Fax: +33 (0)1 34 90 43 97

For more information about the Xtrimium platform, contact our grinding specialists:
gear-abrasives@saint-gobain.com

www.nortonabrasives.com

www.youtube.com/NortonAbrasiveEMEA

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Form # 4450