ALPHA NOX NAVY X

ANNX

ANNX | state-of-the-art. nano-structured multi-layer coating specially designed for machining stainless steel

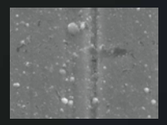
We have created a new nano-structured multi-layer coating based on AlTiSiCrN in order to process different types of structure and material additives in stainless steel that can be difficult to machine.

Particularly when using super duplex steels. there is immense pressure on the cutting edges. Thanks to the multi-layer. nano-structuring of our new AlphaNox Navy X coating. a high level of elasticity is achieved and the internal stress of the coating is reduced. There is very controlled wear and the coating wears off very evenly. Layer spalling and premature breakouts are effectively prevented.

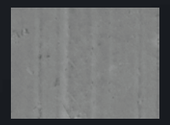
The key properties of our ANNX coating at a glance:

– Can be widely used with all stainless steels and types of structure
– Breakout prevention through low internal stress and high elasticity of the coating
– Long-lasting protection of the hard metal against material fatigue thanks to special components and structure of the coating

Finishing X as viewed through a scanning electron microscope



BEFORE FINISHING



AFTER FINISHING

HOFMANN & VRATNY | EXM1 SERIES

ANNX

Outstanding layer smoothing – our new Finishing X technique

Finishing X is the name we have given to a special type of layer smoothing used in combination with AlphaNox Navy that is characterised by unparalleled evenness, more homogeneous wear, and improved wear resistance. It has been developed specially to prevent micro-breakouts caused by droplets coming loose and guarantee a chip disposal process that will remain at its optimum level for a long time. The effects of the symbiosis between our AlphaNox Navy and the Finishing X technique at a glance:

– Improved surface quality during finishing
– Optimised chip disposal due to smooth chip spaces
– Maximum stability for coating and cutting edges
– Reduction of built-up edges and chips sticking on the tool
– Absolute smoothness for a reduced friction coefficient (0.4)

ALPHANOX NAVY X ANNX –AT A GLANCE

Structure	Nanostructured multilayer
Components	Aluminium chromium titanium nitride
Layer thickness	3 – 4 µm
Layer hardness	approx. 3000 - 3200 HV
Adhesion factor	Friction coefficient: approx. 0.4 (dry on steel)
Max. operating temperature	approx. 1100°C
Cooling	wet machining (limited suitablility for dry machining)
Main application	Stainless Steel
Secondary application (limited suitability)	Stainless steel