VERSATILITY

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NEW TURNING GRADES
LINE T9300 WITH MT-CVD COATING

T9315 • T9325

P M

PRAMET

UP! GRADE

NEW TURNING GRADE LINE T9300

We are bringing you a new UP!GRADE GENERATION line of turning grades designated as T9300. At the moment this consists of two members – T9315 and T9325. They provide a consistent solution over a broad range of steel turning applications. This might be seen as a great advantage especially for small customers with limited resources. Aditionally the long and predictable tool life will be appreciated in mass production and unmanned operations.

The base layer of the new coating is composed of high **WEAR RESISTANT TICN** deposited by MT-CVD technology. As a final top layer, the new generation of alfa-Al_2O_3 coating with it's world-wide **UNIQUE PROPERTIES** was developed to reach optimum **PERFORMANCE** in productive steel turning applications. The new coating provides outstanding heat, wear and chemical protection of bulk material. The newly developed coating exhibits a higher flaking wear resistance, resistance to built-up edge and plastic deformation compared to currently used coatings present on the market.

The total thickness and accurate ratio of the above mentioned ceramics layers are tailored for both substrates to meet customer demands in every respect.

Functional gradient substrates, in which the surface area is enriched by cobalt binder, has been chosen. This solution combines high rigidity, hardness and resistance to plastic deformation with an extraordinary resistance to crack initiation and propagation. The combination of cobalt binder content with the type and amount of hard-phase constituents was carefully chosen to achieve an optimum microstructure to fit the appropriate machining area grade which it has been developed for.

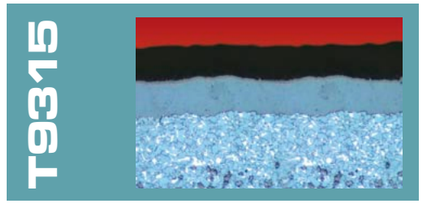
UP! GRADE ...A NEW GENERATION OF GRADES

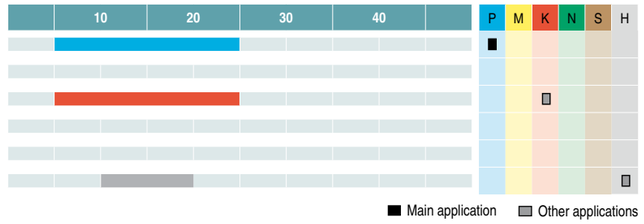
T9315

MAIN FEATURES

- High temperature resistance
- Long time in cut
- Continuous cut
- No coolant
- Stable cutting conditions

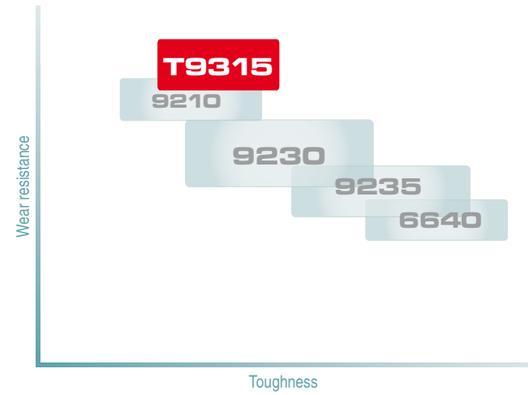
TECHNICAL INFORMATION



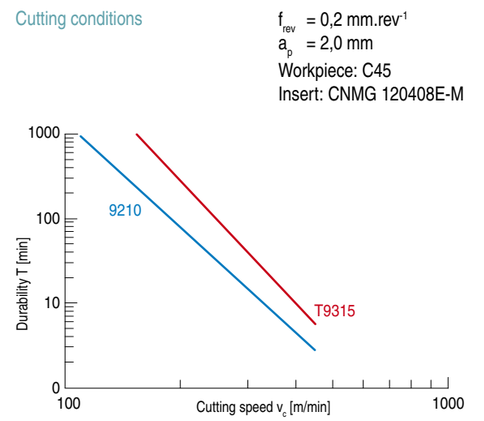


- New material of generation T9300 characterized by high wear resistance with considerable toughness
- Functional gradient substrate with relatively low content of cobalt binder phase
- Thick MT-CVD coating with unique Al_2O_3 top layer warrants extra-ordinary thermal, chemical stability and protection of substrate
- Special final treatment after coating
- Machining of material group P, conditionaly K, H
- Finishing, continuous and reasonably interrupted cuts
- High stability of cutting edge
- High cutting speed

AREA OF APPLICATION



COMPARISON OF GRADE T9315 AND 9210 ON STEEL

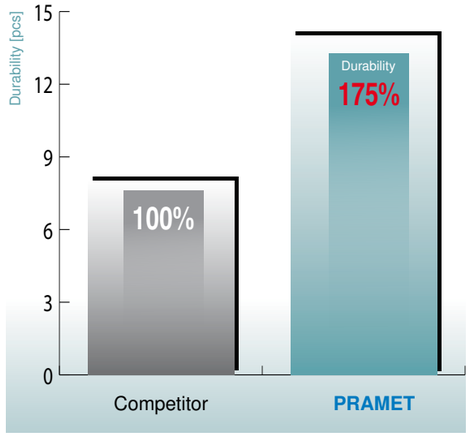


COMPARISON WITH COMPETITORS

MACHINING WITH NEW GRADE T9315

Workpiece: 38MnCrB6
Operation: turning
Insert: CNMM 160616E-OR; T9315 - Pramet
CNMM 160616E-RP; P15 - Competitor
Cooling: Yes

Cutting conditions		Competitor	Pramet grade T9315	
Cutting speed	v_c	205	205	m.min^{-1}
Feed per revolution	f_{ot}	0,3	0,3	mm.rev^{-1}
Axial depth of cut	a_p	2,5	2,5	mm
Durability	T	8	14	pcs

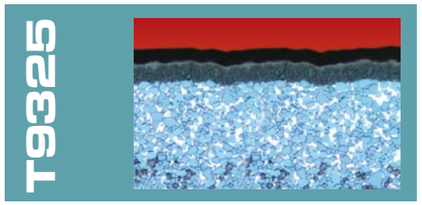


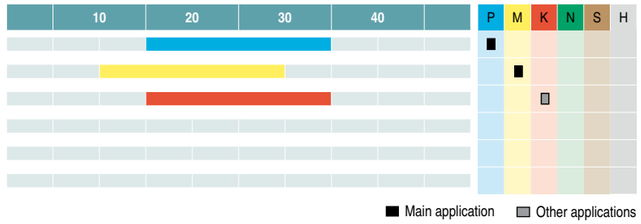
T9325

MAIN FEATURES

- Medium temperature resistance
- Optimal for short cutting cycles
- Suitable for interrupted cuts
- Coolant used
- Unstable cutting conditions

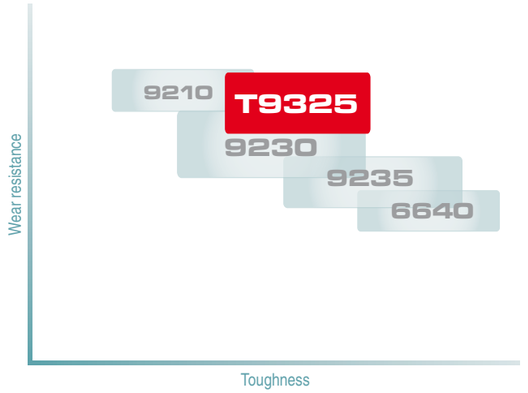
TECHNICAL INFORMATION





- The most versatile grade of new generation T9300
- Functional gradient substrate with moderate content of cobalt binder phase
- Medium thick MT-CVD coating with unique Al_2O_3 top layer warrants extra-ordinary thermal and chemical stability and protection of substrate
- Special final treatment after coating
- Machining of material group P, M conditionaly K
- Versatile application
- Unfavourable cutting conditions, continuous and/or interrupted cuts
- Medium and higher cutting speed

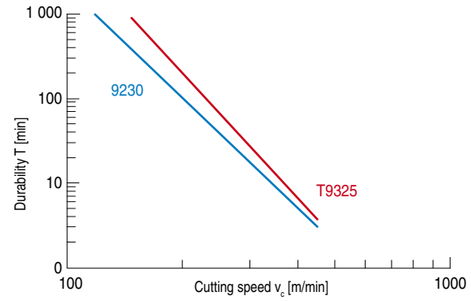
AREA OF APPLICATION



COMPARISON OF GRADE T9325 AND 9230 ON STEEL

Cutting conditions

f_{rev} = 0,2 mm.rev^{-1}
a_p = 2,0 mm
Workpiece: C45
Insert: CNMG 120408E-M

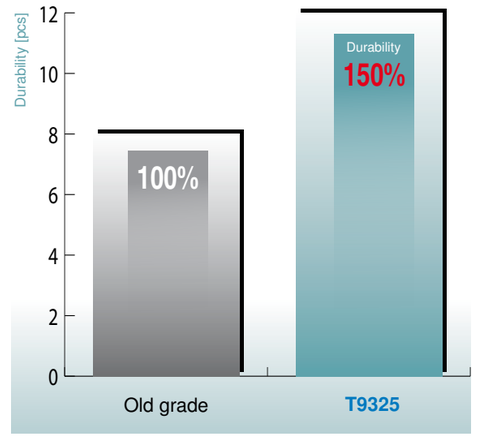


COMPARISON WITH COMPETITORS

MACHINING WITH NEW GRADE T9325

Workpiece: C45
Operation: turning
Insert: CNMG 190616E-OR; T9325 - New grade
CNMG 190616E-RM; 9230 - Old grade
Cooling: No

Cutting conditions		Old grade 9230	Pramet grade T9325	
Cutting speed	v_c	180	180	m.min^{-1}
Feed per revolution	f_{ot}	1	1	mm.rev^{-1}
Axial depth of cut	a_p	3,5	3,5	mm
Durability	T	8	12	pcs



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