

# S205

## HRSA turning grade

S205 is a new CVD (chemical vapour deposition) grade developed for last stage machining applications in aerospace engine components within the area of HRSA turning.

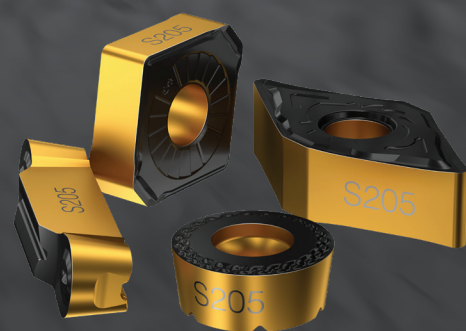
The grade offers increased productivity through higher cutting speeds in semi-finishing and finishing applications without compromising on tolerances and surface conformity.

### Features

- Second generation Inveio® coating for high wear resistance and long tool life
- Post-treatment technology strengthens the insert by modifying its mechanical properties

### Benefits

- 30-50% higher cutting speeds than competition without compromising on tool life
- Higher cutting speed translates to improved productivity
- Excellent resistance to flank and adhesive wear resulting in longer tool life



# Application

- Last stage machining applications where  $a_p \leq RE$  (nose radius)
- Aged Ni-based materials
- Pre-machined surfaces
- Aerospace engine components : turbine discs, rings, casings, shafts
- Applications requiring higher cutting speeds



**S**

ISO application area

# Performance

**Component:** Test bar  
**Material:** Aged Inconel 718, 43.2 HRC  
**Operation:** External turning (finishing)

**+110%**  
Tool life

	Competitor 1	Competitor 2	Sandvik Coromant S205
Insert	CNMG	CNMG	CNMG120408-SM
$v_c$ , m/min	130	130	130
$f_n$ , mm/rev	0.11	0.11	0.11
$a_p$ , mm	0.2	0.2	0.2
Insert edge after 5 mins of machining			
Tool life, min	5	5	10.5
Result	Sandvik Coromant S205 shows 110% increase in tool life compared to competition.		