SANDVIK Coromant

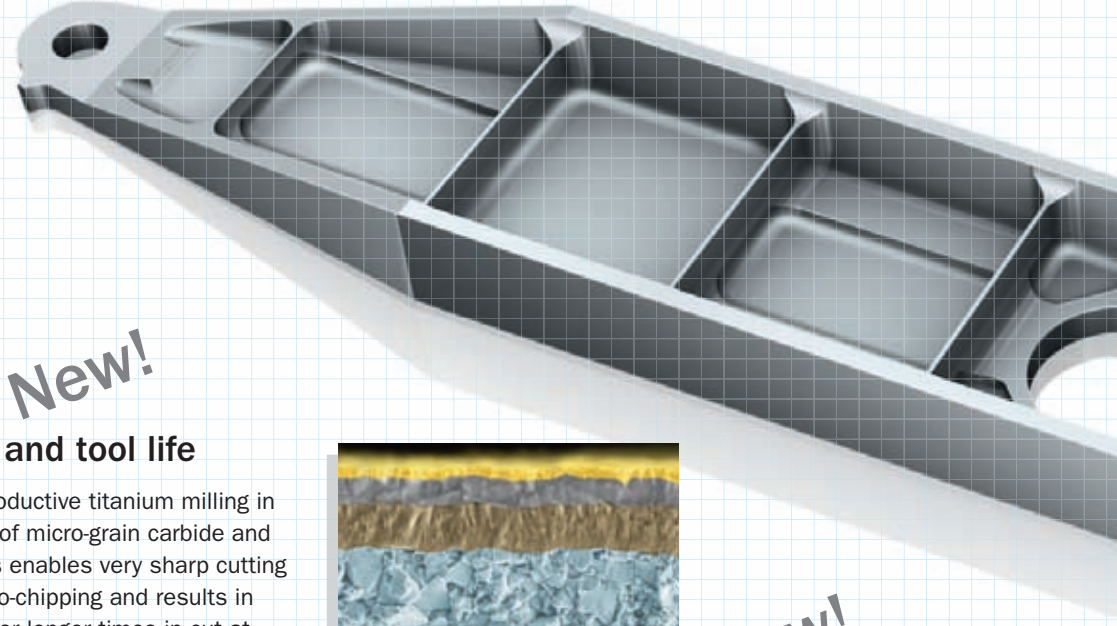
Grades S30T and S40T

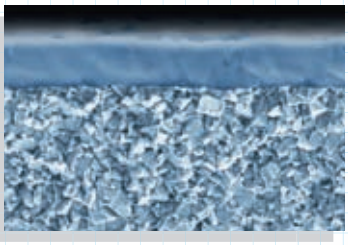
Productivity and security in titanium milling



At the forefront of material's technology

Grades S30T and S40T make use of the latest technology within the development of cutting tool material. They are developed to cope with the tough demands of titanium milling where the thermal, chemical and mechanical loads on the cutting edges come close to the limits of every known cutting tool material.





New!

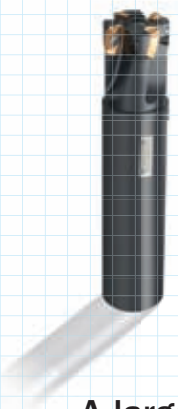
Grade S30T for speed and tool life

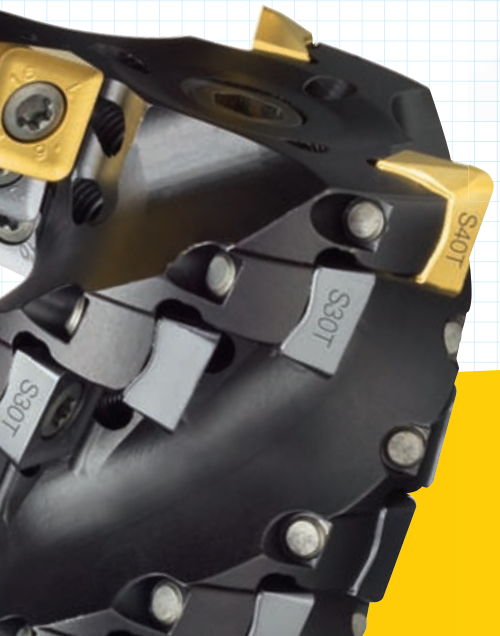
S30T has been developed with productive titanium milling in focus. It combines the properties of micro-grain carbide and a wear resistant PVD coating. This enables very sharp cutting edges that resist fatigue and micro-chipping and results in cutting edges that are preserved for longer times in cut at higher cutting speeds.

New!

Grade S40T for difficult conditions

S40T is developed for difficult conditions in titanium milling. It combines cemented carbide, having high toughness, with a thin CVD coating. The result is a grade that withstands vibration and other difficult cutting conditions for longer times in cut. The wear is predictable, making the cutting edge gradually duller without breaking.







A large selection of CoroMill® cutters with S30T and S40T

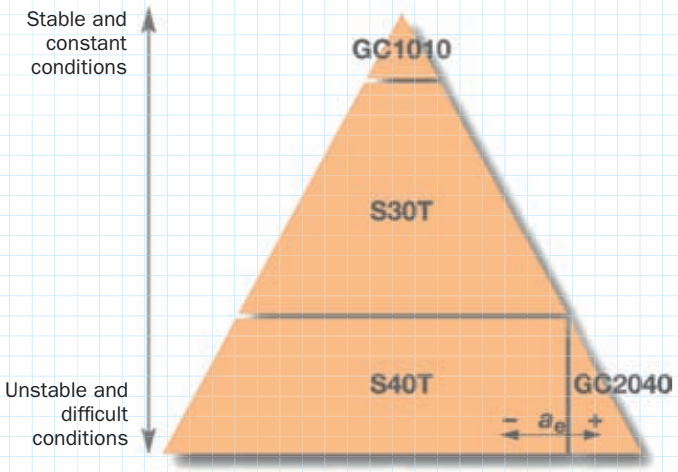
S30T and S40T are available in a variety of CoroMill cutters for face milling, shoulder milling, long-edge milling, plunging, high-feed milling, profiling and slot milling.



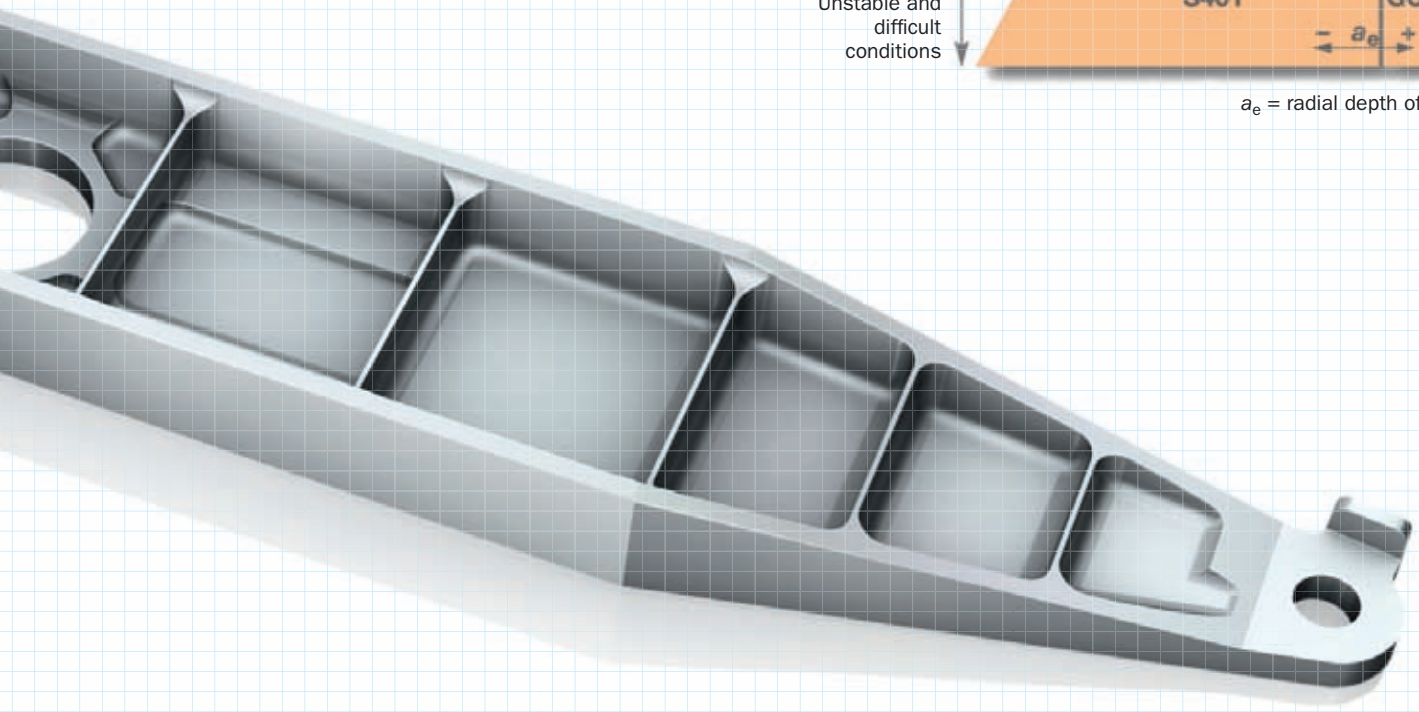
Introducing a grade chain for titanium milling

By introducing two new grades, the wide range of demands in titanium milling machining can be met.

One grade focuses on productivity and cutting speed, the other on security in unstable and difficult machining conditions, for example when the cutter path is not optimized. Together with our existing milling grades, we have created a strong and reliable grade chain for titanium milling.



a_e = radial depth of cut



S30T

Use insert grade S30T for best tool life and largest cutting data improvements when:

- Stability is relatively good
- Cutting conditions are predictable
- There is small to moderate amount of vibration
- Cutting speeds are moderate to elevated

Always use coolant, preferably with internal supply at high pressure (HPC)

S40T

Apply insert grade S40T for highest security and longest tool life when:

- Cutting conditions are difficult or unpredictable, such as when cutter paths are not optimized.
- Stability is poor with moderate to severe amount of vibration
- Cutting speeds are moderate

Always use coolant, preferably with internal supply at high pressure (HPC)

GC1010

Excellent grade for high speed machining application and finishing at high surface speeds. Requires very favourable cutting conditions; high stability and optimized programming.

GC2040

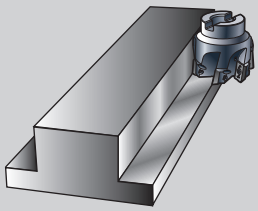
Grade for best tool life when heat generation is excessive yet toughness demand is high. Typically for large engagements when using large-diameter cutters.

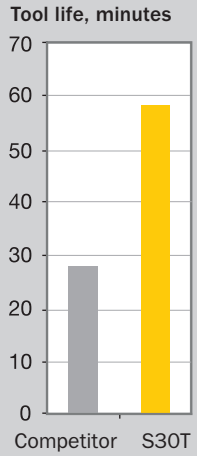
Grade S30T proves its performance

Component: Frame component, Aerospace
Operation: Roughing shoulder
Workpiece material: Ti-6Al-4V, 330 HB
Tool: R390-063Q22-11H, D_c 63 mm
Insert: R390-11T308M-MM, grade S30T
Coolant: Emulsion, low pressure, external

	Competitor	S30T
a_p (mm)	7.7	7.7
a_e (mm)	16	16
v_c m/min	75	75
f_z (mm/tooth)	0.1	0.1
Tool life (min)	28	58

Result:
107% longer tool life with grade S30T.





Grade S40T outperforms competitor

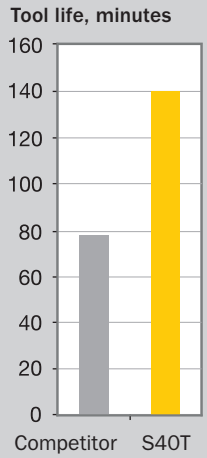
Component: Frame component, Aerospace
Operation: Roughing of forged face and corners
Workpiece material: Ti-6Al-4V forged, 300 HB
Tool: R300-050Q22-12H
Insert: R300-1240M-MM, grade S40T
Coolant: Emulsion, low pressure, external

	Competitor	S40T
a_p (mm)	2–3	2–3
a_e (mm)	6–50	6–50
v_c m/min	50–63	50–63
f_z (mm/tooth)	0.16–0.20	0.16–0.20
Tool life (min)	78	140

Result:
80% tool life increase with CoroMill 300 and grade S40T compared to competitor round insert cutter.


Competitor


S40T



Grade S30T

Enables higher cutting speeds

Longer tool life

Grade S40T

High security in unstable conditions

Longer tool life



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Your success in focus