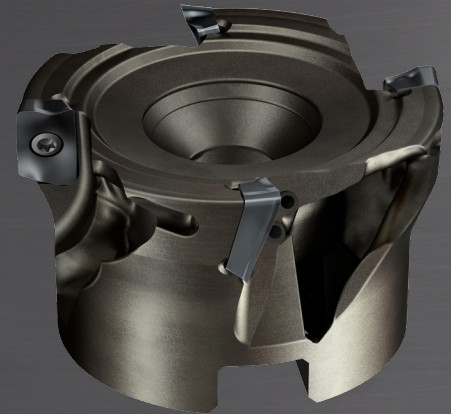


Lightweight CoroMill® 390

Produced with additive manufacturing

Additive manufacturing enables precision control of the cutter design, allowing for the production of shapes and features not possible with metal cutting. Virtually any material can be printed, such as a titanium alloy, in this case.

When designing lightweight CoroMill® 390, material has been tactically removed to create the optimal cutter design for minimizing mass. This makes it more compact and significantly lighter than a conventional cutter.



Features and benefits

- Reduced cutter weight provides reduced vibration and increased stability
- Shorter distance between damper and cutting edge increases structural strength and improves process security
- Silent Tools™ damping technology offers high productivity when machining with long overhangs
- CoroMill® 390 insert grades and geometries deliver light cutting action for a smooth cutting performance

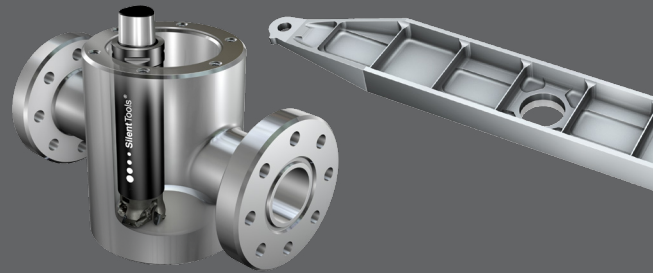




ISO application areas

Application

- Lightweight CoroMill® 390 is designed for long-reach face milling, deep shoulder and side milling, cavity milling and slot milling
- For use at depths more than four times the cutter diameter, combined with Silent Tools™ milling adapters



Performance

| | |
|----------------------------|--|
| Workpiece material: | P2.5.Z.HT, hardness 290 HB |
| Operation: | Face milling with big radial cutter engagements (80–100% of cutter diameter) |
| Machine: | OKUMA MA550-VB |
| Adapter: | C5-Q22D-048-220 |



| | Conventional CoroMill® 390 | Lightweight CoroMill® 390 |
|--|----------------------------|---------------------------|
| Tool material | Steel | Titanium alloy |
| Tool diameter, mm | 50 | 50 |
| Weight, g (oz) | 317 (11.2) | 66 (2.33) |
| Insert | R390-11T308M-PM 1130 | R390-11T308M-PM 1130 |
| Z_n | 3 | 3 |
| n , rpm | 1,273 | 1,273 |
| v_c , m/min (ft/min) | 200 (656) | 200 (656) |
| v_f , mm/min (in/min) | 573 (22.6) | 573 (22.6) |
| f_z , mm/z (in/z) | 0.15 (0.006) | 0.15 (0.006) |
| a_p , mm (inch) | 1.5 (0.059) | 4.5 (0.177) |
| a_e , mm (inch) | 50 (1.97) | 50 (1.97) |
| MRR, cm ³ /min (in ³ /min) | 43 (2.62) | 129 (7.87) |

Result: 200% increased productivity

A small reduction in distance and mass between the cutting edges and the Silent Tools™ damper enables an increased depth of cut, and in doing so, a significant productivity increase when working with long overhangs.

For more information, contact your local Sandvik Coromant representative or visit www.sandvik.coromant.com/coromill390

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