



INDUSTRIAL
SOLUTIONS FOR

POWER GENERATION



SUMITOMO

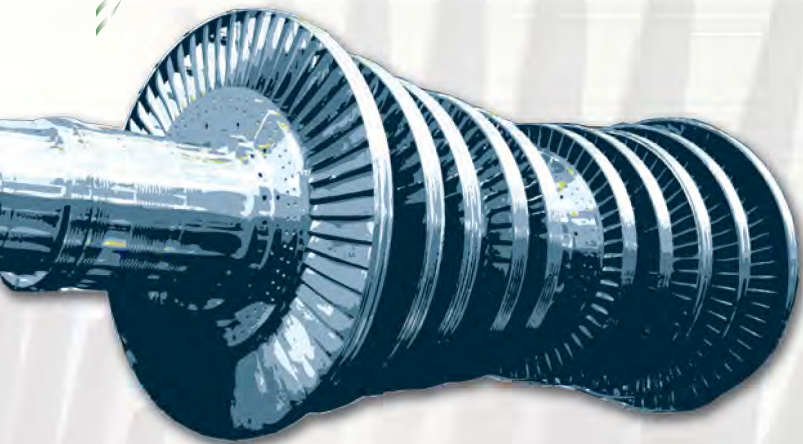
CARBIDE - CBN - DIAMOND

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**Stay on top of the newest
energy generation technologies
with high-performance tooling
from Sumitomo.**



POWER GENERATION: TURNING TOOLS



PVD Coated AC510U & AC520U

- PVD coated carbide for roughing, finishing, and medium cut machining of exotic material
- Tool life is extended due to increased Super ZX™ coating hardness
- Multilayered coating is alternately stacked and allows for higher speeds and wear resistance



CVD Coated AC820P & AC830P

- Ultra hard, ultra smooth, super fine, and super flat coating greatly improves both heat and wear resistance, resulting in higher speeds and feeds
- Excellent on all general purpose, carbon, alloyed, and difficult to machine steels; ideal for roughing or medium cutting applications



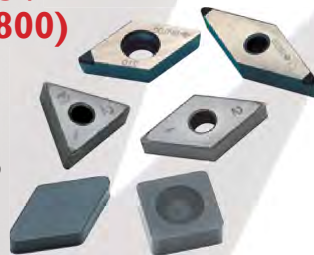
Coated SUMIBORON BNC™ Series

- Combination of special ceramic based coatings and new PcBN material maximizes overall performance
- Four coated grades featuring three types of edge treatments provide a variety of solutions specific to machining hardened steel



SUMIBORON PCBN (BN700, SV Breaker, & BNS800)

- Machines super alloy material effectively with multi-corner (BN700) and solid CBN (BNS800)
- Excellent chip control due to SV chipbreaker specifically designed to reduce long, stringy chips that may damage the workpiece



For machining
turbine blades



For machining
rotor shafts



For machining
turbine casings



For machining oil industry
related components

POWER GENERATION: MILLING TOOLS

WEX Indexable Endmill

- The unique shape and strength of the cutting edge has been optimized resulting in reduced cutting forces
- A wide range of machining applications due to the new "Super ZX", "Super FF", and diamond-like carbon coatings
- Cutter body and insert strength provide for high feed rate capabilities
- Efficient chip removal due to air/coolant hole design



MSX High Feed Endmill

- High feed rates - up to 0.055 IPT
- Higher clamping rigidity due to double clamping system
- Available in 0.750" - 1.500" bodies with air holes for improved chip evacuation
- Capable of both ramping and helical boring applications

"Metal Slash Mill" High Feed Endmill

- High feed rates - maximum feed rate of 0.078 IPT
- Four corner insert design yields low tooling costs per part
- Unique design directs cutting forces into the machine spindle to facilitate high feed rates even in low rigidity conditions



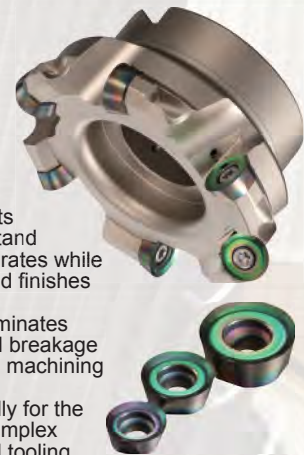
WRX Wave Repeater Endmill

- High efficiency deep shoulder milling
- Uses the same geometry insert as the 90° WEX endmill to reduce inventory costs



WRCX Indexable Shell Mill

- Round style inserts (with wiper) withstand extraordinary frd rates while providing improved finishes
- Pocket design eliminates insert rotation and breakage during aggressive machining
- Created specifically for the interpolation of complex three-dimensional tooling surfaces and for maximum roughing capabilities



For machining turbine blades



For machining rotor shafts



For machining turbine casings



For machining oil industry related components

POWER GENERATION: DRILLING TOOLS

WDX Indexable Drill

- New balanced design for stability and three chipbreakers for superior chip control
- New insert grades yield longer tool life in steel and cast iron
- Four cornered insert design for easy tool management
- Available in 2XD, 3XD, and 4XD drills



SMD Replaceable Tip Drill

- Available in metric and inch diameters ranging from 0.4688" - 1.2008"
- Available in 3XD, 5XD, and 8XD hardened steel coolant through bodies that can accept multiple diameters
- Three styles of DEX™ drill tips to maximize performance in steels, stainless steels, cast irons, and exotic materials
- Ground serrations on back of drill tip allow for precise assembly and superior repeatability



GS/HGS Solid Carbide Drills

- Increased wear resistance due to the high oxidation temperature of the Sumitomo DEX™ coating
- Point and flute geometry of the GS drill reduce thrust and horsepower consumption
- Available in coolant through and non-coolant through geometries



Master Tool offers specialized tooling systems designed specifically to meet demands unique to the various power generation industries.



**For machining
turbine blades**



**For machining
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