



High Performance Cutting Tools



END MILLING SOLUTIONS FOR AEROSPACE INDUSTRY & DIFFICULT TO MACHINE MATERIALS

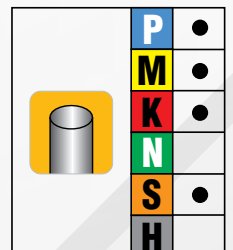


FEATURES

- Variable helix angle and variable flute spacing
- Stable core geometry
- Optimized centre cutting geometry
- New generation coating
- Available in 4 flutes, 5 flutes, 6 flutes and 7 flutes
- Available in neck options

FUNCTIONS & BENEFITS

- Higher productivity
- Reinforced core geometry for higher rigidity at elevated parameters
- Superior tool life
- Excellent surface finish
- High MRR





PRODUCT RANGE

- Turbo End Mill Range (F177TR/ NF177TR/ F178TR GOLD/ F178TR BLACK/ F179TR/ F179TRL/ F180TR/NF180TR)for Stainless Steel/ Titanium/ Super Alloys/ Steel /Cast Iron)
- VR End Mill Range(5VR/6VR) for Trochoidal Milling for Structural parts for Titanium/ Stainless Steel/ PH/Super Alloys/ Steel)
- Roughing Chip Breaker End Mill Range (F192CB/ F193CB/NF193CB/F193CBL/F194CB) for Steel/ Stainless Steel/ Titanium/ Super Alloys)



DIAMETER RANGE

- F177TR 3mm-20mm
 - NF177TR with neck- 6mm-20mm
 - F179TR – Ball nose -4mm-20mm
 - F179TRL – Ball nose -6mm-20mm
 - F178TR BLACK 4mm-20mm
 - F178TR GOLD 4mm-20mm
 - F180TR 10mm-16mm
 - NF180TR 10mm-16mm
 - NF180TR with neck 10mm-16mm
 - 5VR- 6mm-20mm
 - 6VR- 6mm-20mm
- * Special as per Drawing on request

■ CASE STUDIES ■

12MM END MILL FOR MACHINING A STRUCTURAL SUPPORT FOR BOEING AND AIRBUS

- CHALLENGE** : Reduction in CPC
COMPONENT : Side Plate (ASGRCS-1082)
COMPETITON : Global Competitor
SOLUTION : EM 8.00MMX19X63 SH8 4FLT CR0.8 TR ALT- FBK0510611
CUTTING DATA : Machine : Makino Slim twin Spindle VMC, Shrink-fit- BT40- Regofix, Coolant – Emulsion
 RPM = 3183, Feed = 1300mm/min
 Ap = 12mm, Ae = 2-3mm
 Existing Tool Life – 32 Parts
 Achieved Tool Life – 104 Parts
RESULT BENEFIT : Tool Life Benefit
 : Reduction in CPC by 66%



Material – 15-5 PH – 40 HRC

TROCHOIDAL MILLING 16MM END MILL FOR A VENDOR OF BOEING

- CHALLENGE** : Reduction in CPC
COMPONENT : Boeing Floor to Frame Fitting
COMPETITON : Global Competitor
SOLUTION : EM 16.00MMX34X48X100SH16 6F CR3 5FLTALT
CUTTING DATA : Machine : Mitsubishi DH80 HMC Holder BT50 Side-lock Totem , Coolant – Soluble Oil
 RPM = 1200 Feed = 420
 Ap = 30mm, Ae = 4mm
 Existing Tool Life – 240 minutes
 Achieved Tool Life – 344 minutes
RESULT BENEFIT : Tool Life Benefit
 : Reduction in CPC by 30%



Material – Ti6Al4V



Forbes Precision Tools and Machine Parts Limited

Forbes Building, Charanjit Rai Marg, Fort, Mumbai 400 001, India

Phone: +91 22 6135 8902

Email: sales@forbes.co.in, Website: www.totem-forbes.com