ACHTECK

2026

# Automotive industry tooling solutions


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**GANZHOU ACHTECK TOOL TECHNOLOGY CO.,LTD.**

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ACHTECK

## Company Profile

Ganzhou Achteck Tool Technology Co., Ltd. is a wholly-owned subsidiary of Chongyi Zhangyuan Tungsten Co., Ltd. (Listed Company with stock code 002378). The registered capital of Achteck is 1.66 billion USD with 800 employees. The main products include: Coated Carbide Inserts, Carbide Rod and supporting tool holders. Achteck is known for its outstanding R&D competence, production & testing equipment and its coated carbide insert production technology.

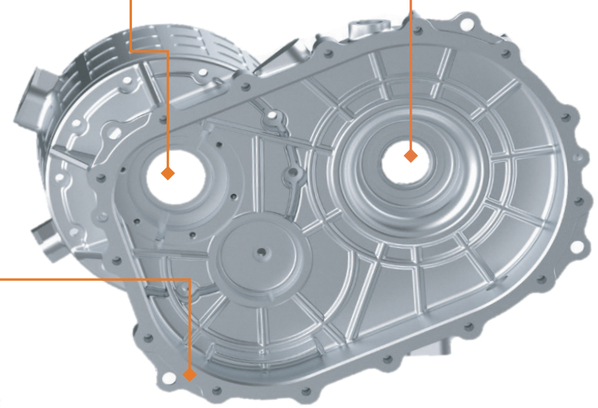
Achteck produces inserts for Turning, Grooving, Milling and Drilling that are widely applied in automotive, energy, die & mold, general machinery, aerospace and other industries. Achteck Tool is technology oriented, owns a strong research team that keeps on innovating. Having "Benefits from Resources, Reliance on Technologies, Devotion to Humanity and Top with Trust" as the operating philosophy and "Safety, Harmony, Efficiency and Innovation" as the target, Achteck aims to become a well-known brand in the world and a first-class cemented carbide manufacturer in China.

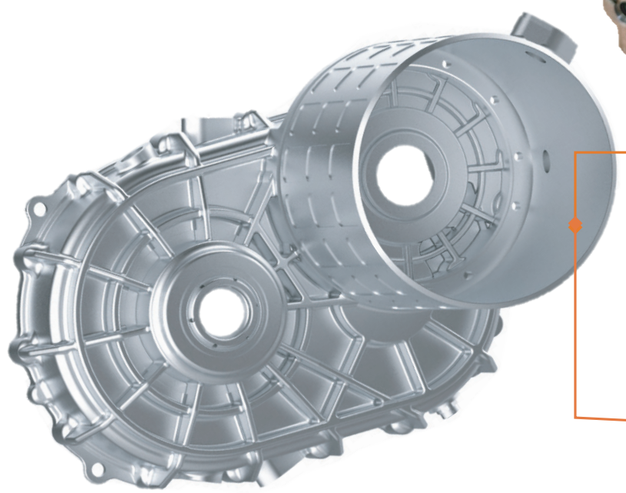

Contents:

- Motor Housing
  Material: Aluminum alloy

Application: Oil Seal Hole Machining
Solution: Custom Boring Tool
➢Forward and reverse boring of upper and lower end faces for guaranteed dimensional stability.
➢Inserts use Achteck standard inserts.

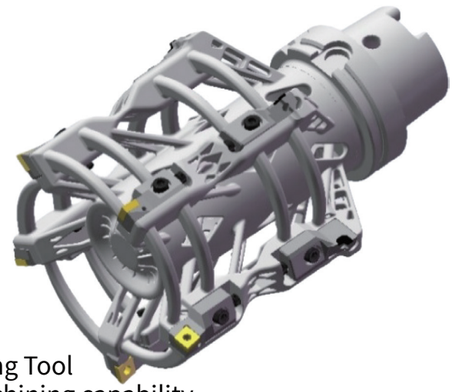






Stator Bore Compound Boring Tool

Application: Joint Face Machining
Solution: ACHTECK Welded PCD Face Mill
➢Cutting edges directly meet cross-hatch specifications, eliminating tedious post-process tool adjustment
➢Tool profile design features high feed rate and excellent stability



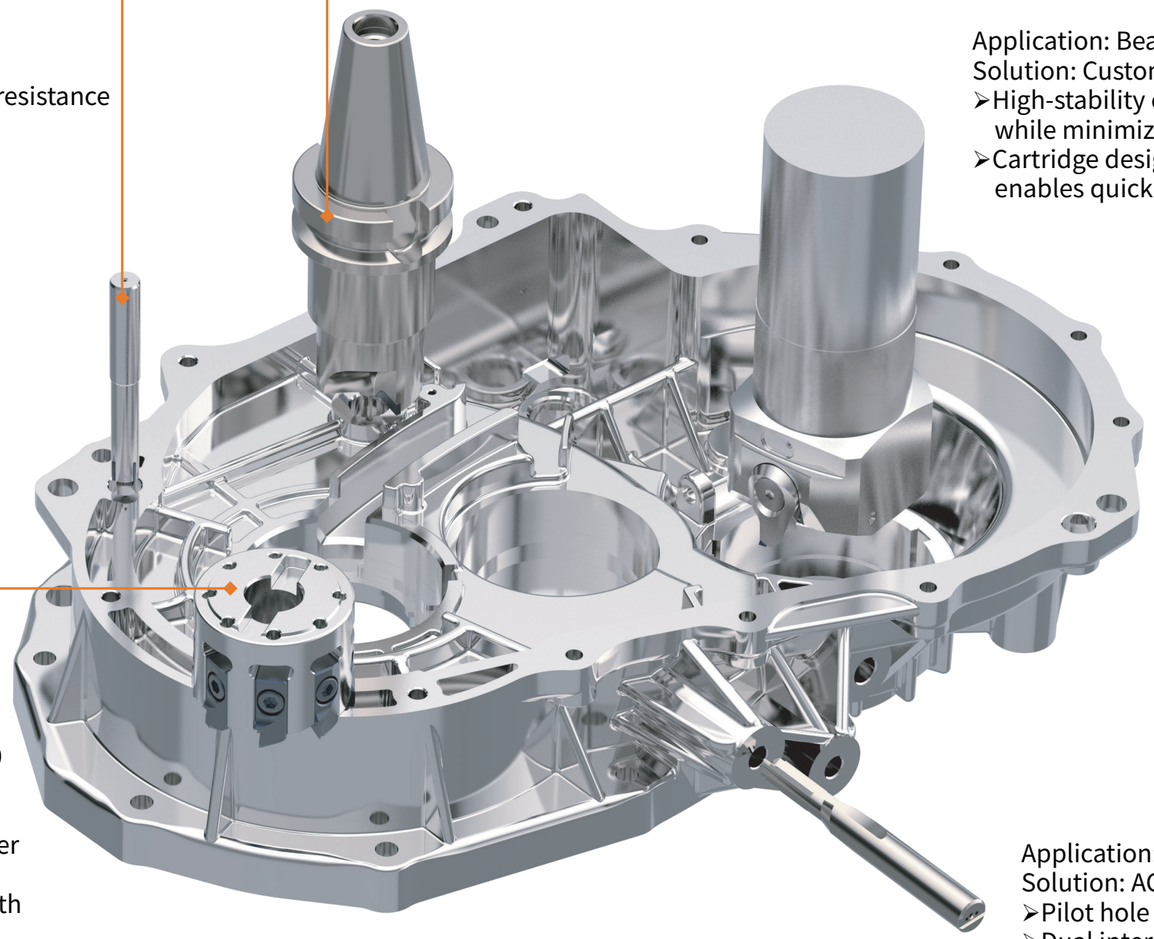
Application：Boring Machining
Solution: AchtECK Custom Boring Tool
➢Exceptional precision and machining capability.
➢Tool body dimensions customized to customer requirements.
➢Tool holders feature high adjustment accuracy.
➢Adjustable cartridges for easy handling

# Reducer Housing
# Material: Aluminum alloy

Application: Boring Machining
Solution: ACHTECK Custom Boring Tool
- ➢Exceptional precision and machining capability
- ➢Tool body dimensions customized to customer requirements
- ➢Tool holders feature high adjustment accuracy
- ➢Optional 3D-printed tool body for reduced weight

Application: Pin Hole Machining
Solution: Welded PCD Reamer
- ➢Semi-custom design with short lead time
- ➢PD10 grade material delivers both high machining efficiency and excellent wear resistance

Application: Bearing Hole Finishing
Solution: Custom Finish Boring Tool
- ➢High-stability compact structure ensures tool rigidity while minimizing overall tool weight
- ➢Cartridge design with integrated adjustment unit enables quick machining dimension adjustment



Adjustable Cartridge PCD Face Mill
- ➢Covers bore diameter range: D63-D250
- ➢Cutter body made of aluminum alloy (for D80 and above)
- ➢Optional 3D-printed structure for lighter weight
- ➢Precision internal coolant channels with variable-pitch tooth design
- ➢Four cartridge configurations available: face milling, shoulder milling, cross-hatch milling, and wiper edge

Application: Hole Machining
Solution: ACHTECK Custom Step Drill
- ➢Pilot hole and chamfer machined in a single operation
- ➢Dual internal coolant hole design on tool body for optimized cooling and chip evacuation

## Subframe
## Material: Aluminum alloy

Application: Thin-wall Face Machining
Solution: ACHTECK Wave Edge Cutter & PCD Corn Milling Cutter
- Specially treated cutting edges for low vibration during machining
- Tool material features high wear resistance and long service life

波刃刀

PCD玉米铣刀

Application: Boring Machining
Solution: ACHTECK Custom Boring Tool
- Exceptional precision and machining capability
- Equipped with ACHTECK standard inserts
- Tool holders feature high adjustment accuracy

Application: Long Overhang Face Machining
Solution: ACHTECK Anti-vibration PCD Face Mill
- Specially treated cutting edges for low vibration during machining
- Machining length up to 15 times diameter when paired with anti-vibration arbor

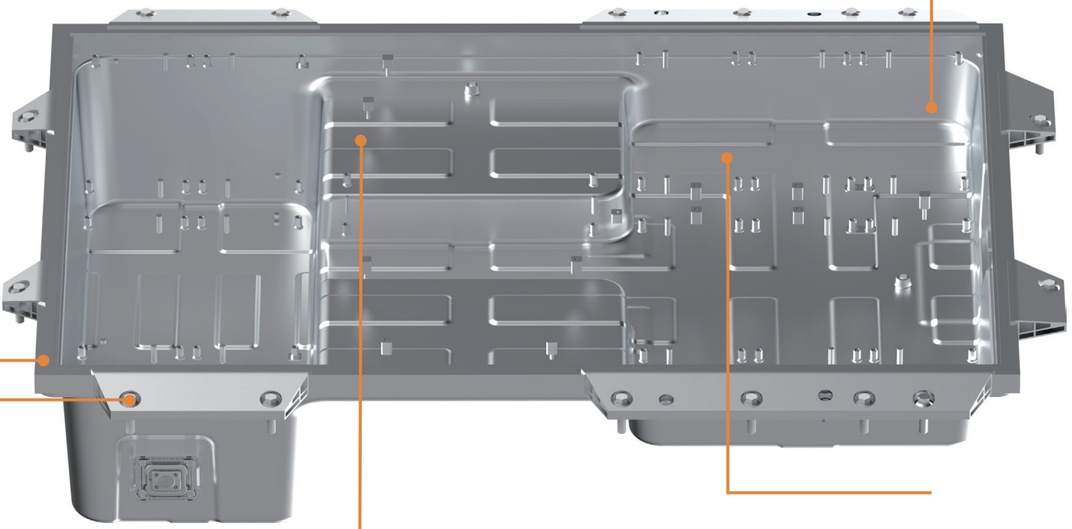
Application: Spatial Hole Machining
Solution: ACHTECK Angle Head Tool System
- Tool shank and output shaft are made of chromium-manganese alloy steel with carburized surface after heat treatment, delivering excellent internal toughness, surface hardness of HRC55-58 and outstanding wear resistance
- Integrated tool shank for higher rigidity
- Equipped with P4 grade bearings for high precision, output shaft runout <0.005mm and long service life; spiral bevel gears deliver high torque and low noise
- Main body made of aviation aluminum alloy for high strength and light overall weight

Application: Hole Machining
Solution: ACHTECK Custom Step Drill & T190 Carbide Form Tap
- Pilot hole and chamfer machined in a single operation
- Dual internal coolant hole design on tool body for optimized cooling and chip evacuation
- Tap with ALC coating features low friction coefficient, specially designed for aluminum alloy

## Battery chassis
## Material: Aluminum alloy

Application: Housing surface milling
Solution: Brazed PCD and indexable PCD milling cutter

- ➢Provide special design
- ➢Close pitch design, high efficiency and good surface quality
- ➢Multi-functional face milling cutter for various applications
- ➢Provide grinding services to ensure product quality , highly economical



Application：Side wall finishing
Solution：M245 Solid carbide end mills

- ➢Tool diameter: 3~20mm
- ➢Variable helix angle and differential pitch design
- ➢Excellent vibration resistance for good surface finish
- ➢Optional diamond coating improves wear resistance

Application：Side wall finishing
Solution：PCD milling cutter

- ➢Provide special size design
- ➢Coarse or close pitch for different applications
- ➢Low vibration and high stability in milling thin-walled workpieces, with sharp cutting edges and grade PD10

Application：Hole machining
Solution：Step drilling

- ➢Provide special design
- ➢Option: solid carbide and brazed PCD
- ➢Used self-developed precision rod
- ➢High wear resistance for long tool life

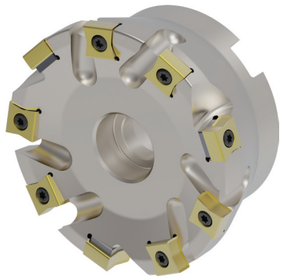
Application：Side wall rough milling
Solution：porcupine milling cutter

- ➢Option: APE90 porcupine milling cutter series and brazed PCD cutter
- ➢AW100K for aluminum alloy, high efficiency and low cost
- ➢Low vibration and high stability in milling thin-walled workpiece , with sharp cutting edge and grade PD10

# Cylinder blocks
# Material: Cast iron

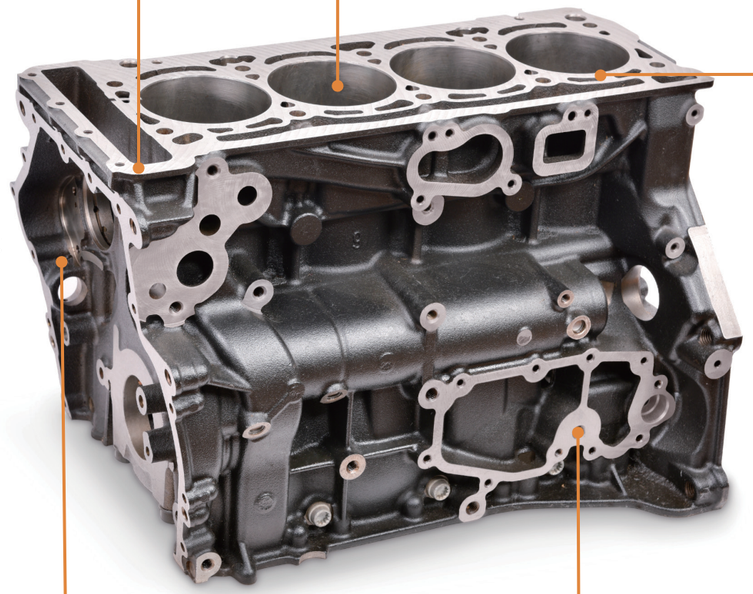
Application: Top and bottom faces rough milling
Solution: 1. Achteck AFM45/75/88-SN12
2. Achteck AFM45-XN07/09
3. Achteck AFM45-XN09-W

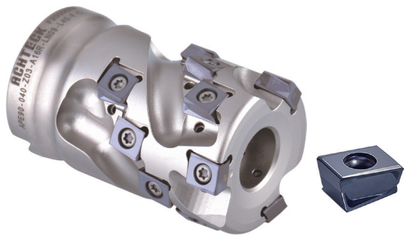
➢Cutter diameter range: D63-250mm
➢Wedge clamping XNMF 09 insert, reliable insert clamping
➢Grades AC301K/AP251K for cast iron milling



Application: Cylinder bore rough boring
Solution: Achteck special cutter+SN12 or LNET12 standard insert

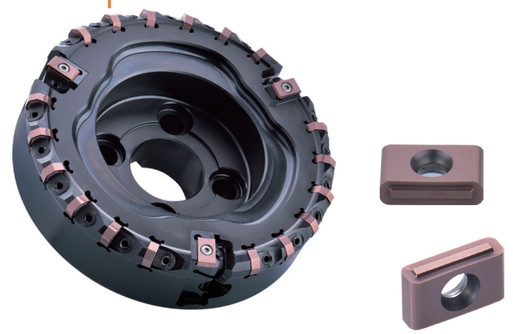
➢LN12 insert with 4 left and 4 right cutting edges
➢Double sided SN12 insert with 8 cutting edges, highly economical





Application: Side boss milling
Solution:
1. Achteck APE90-LN09/LN13
2. Achteck ASM90-LN09/LN13
3. Achteck ASM90-WN08
4. Achteck AFM88-SN12
5. Achteck ASM90-LN12

➢Tangential milling insert with spiral cutting edge
➢Precise internal coolant for each insert
➢APE90 with tangential design with high cutting strength and high reliability



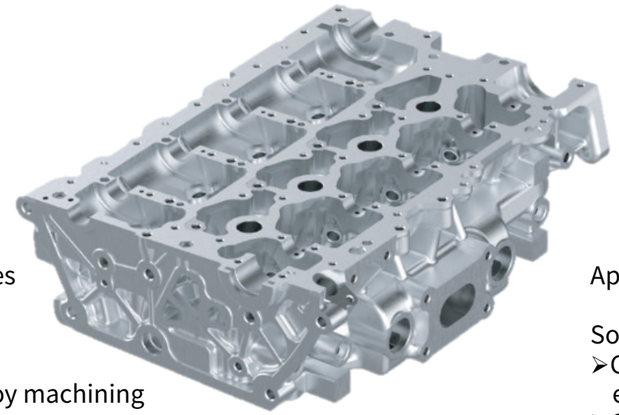
Application: Finish face milling
Solution: Achteck AFF40-LN12/LN15

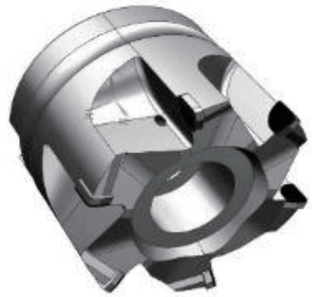
➢Close pitch design with a 40° approach angle
➢Negative insert with 16 cutting edges, highly economical
➢The blackened tool body has good appearance and corrosion resistance
➢Precision adjustable cartridges for the wiper inserts ensures the highest quality surface finish


Application: Drilling
Solution: Achteck solid carbide D106 drills with internal coolant

➢Composite nano-coating, high wear resistance and toughness
➢Different diameter choices of 3xD, 5xD and 8xD

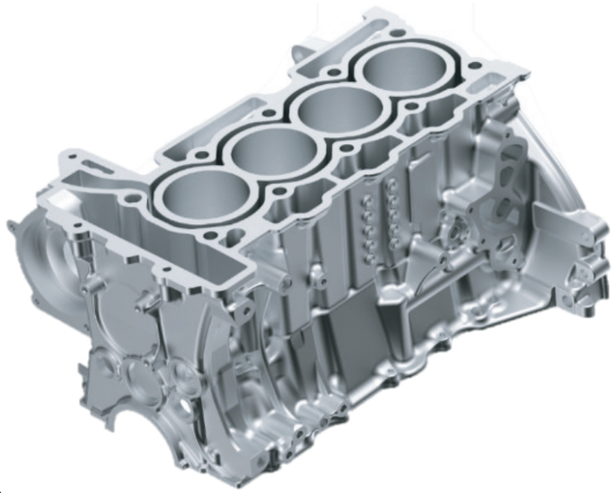
- Aluminum Alloy Cylinder Block & Head
  Material: Aluminum alloy





Application: Rough Machining of Top, Bottom and Peripheral Surfaces
Solution: ACHTECK AFM88-SN12 Series Face Mill
➢Covers cutter diameter range: D50-D315
➢8 double-sided cutting edges with cutting depth up to 10mm
➢Equipped with AW100K grade specially designed for aluminum alloy machining

Application: Finish Machining of Peripheral Surfaces
& Surfaces with Cross-hatch Requirements
Solution: ACHTECK Welded PCD Face Mill
➢Cutting edges directly meet cross-hatch specifications, eliminating tedious post-process tool adjustment
➢Cutting edge design features high feed rate and excellent stability
➢Available in both PD10 and PD20 grades

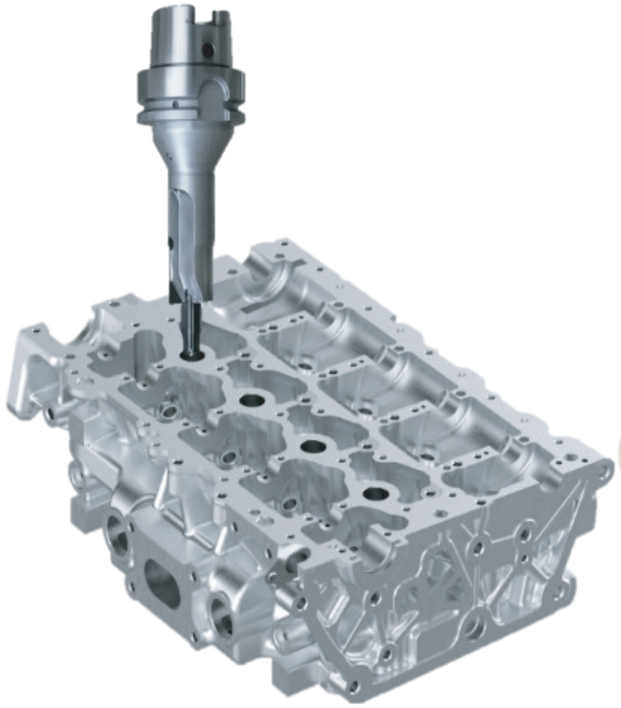


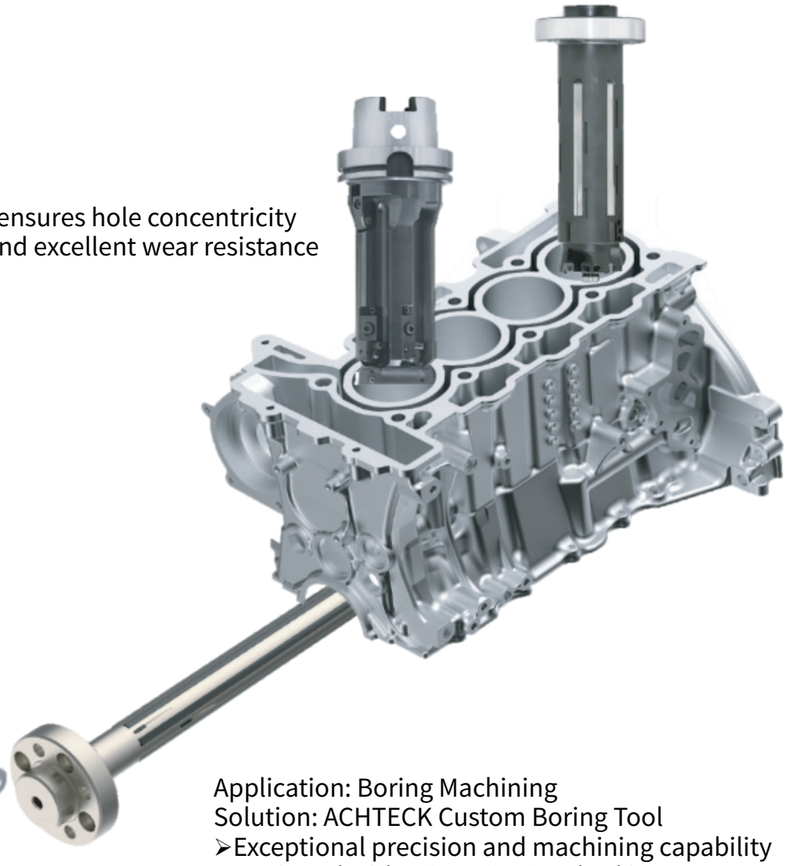
Application: Hole Machining
Solution: ACHTECK Custom Step Drill & PCD Reamer
➢Pilot hole and chamfer machined in a single operation
➢Dual internal coolant hole design on tool body for optimized cooling and chip evacuation
➢Semi-custom reamer with short lead time, customizable diameter
➢PD10 diamond grade ensures high machining efficiency and outstanding wear resistance

Adjustable Cartridge PCD Face Mill
➢Covers cutter diameter range: D63-D250
➢Cutter body made of aluminum alloy (for D80 and above)
➢Precision internal coolant channels with variable-pitch tooth design
➢Four cartridge configurations available: face milling, shoulder milling, cross-hatch milling, and wiper edge

# Aluminum Alloy Cylinder Block & Head
# Material: Aluminum alloy

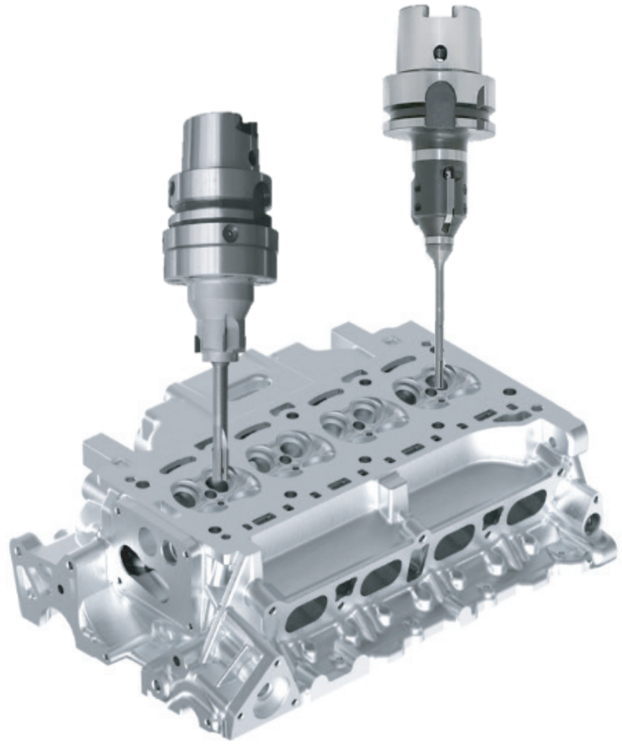
Application: Spark Plug Hole Machining
Solution: ACHTECK Custom Compound PCD Tool
➢Integrated drill and PCD tool compound design ensures hole concentricity
➢PD10 grade ensures high machining efficiency and excellent wear resistance



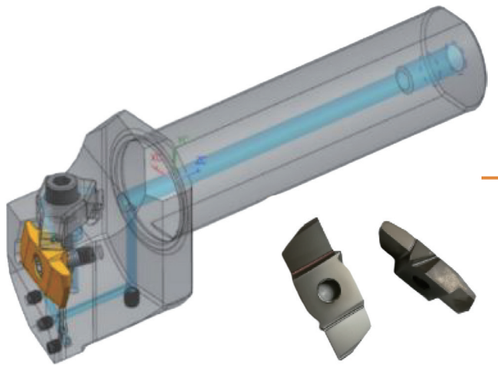


Application: Boring Machining
Solution: ACHTECK Custom Boring Tool
➢Exceptional precision and machining capability
➢Equipped with ACHTECK standard inserts
➢Tool holders feature high adjustment accuracy

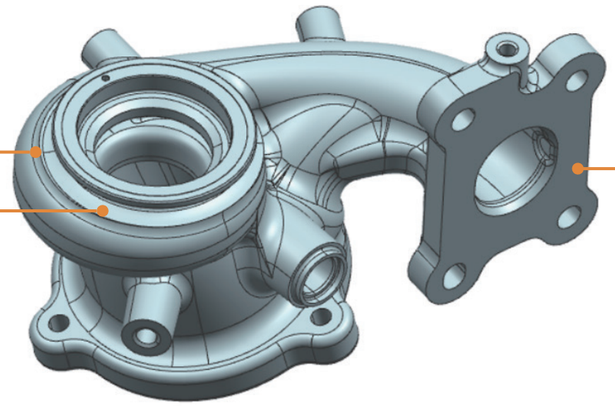
Application: Valve Guide & Seat Machining
Solution: ACHTECK Custom Compound Tool
➢Customized according to customer dimensions
➢One-piece design ensures hole concentricity
➢Seat insert is independently adjustable to ensure sealing band machining position and roundness



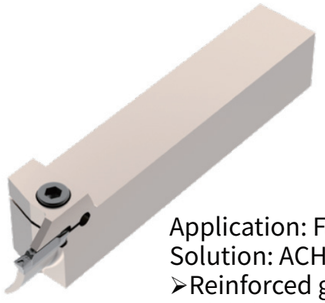
## Turbo Housing
## Material: Heat-resistant Stainless Steel



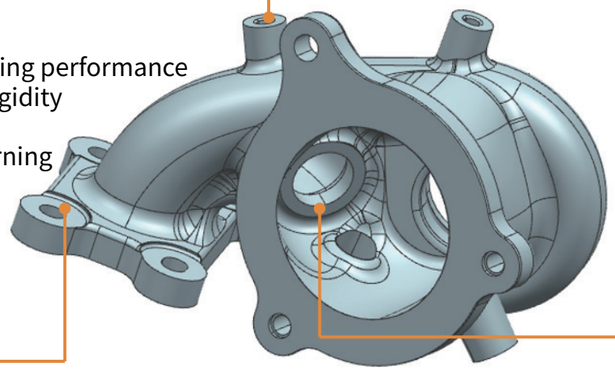
Application: V-groove Machining
Solution: V-groove Cutter
- ➢Dual internal coolant hole design on front and rear flank faces
- ➢Variable relief angle insert design improves insert support rigidity
- ➢Dual locking design with screw and clamp enhances clamping rigidity to meet complex cutting force requirements

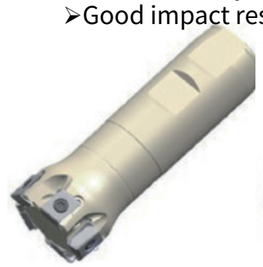


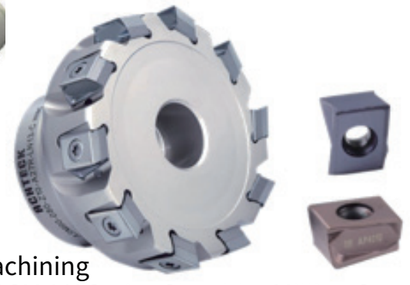
Application: Flange Face Machining
Solution: Roughing: ACHTECK AFM45-XN07 or AFM40-ON05;
Finishing: AFF45-ON05-C-S
- ➢Negative inserts with multi-edges on both sides for cost efficiency
- ➢Good impact resistance and favorable wear resistance



Application: Face Grooving
Solution: ACHTECK Face Grooving Tool
- ➢Reinforced grooving insert for better clamping performance
- ➢High-hardness tool improves cutter body rigidity
- ➢Dual relief angle design provides sufficient clearance during face grooving and face turning







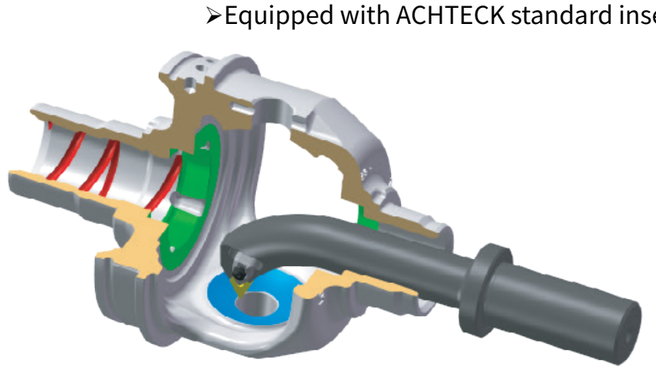
Application: Boss Machining
Solution: ACHTECK ASM-LN Series Shoulder Milling Cutter
- ➢Covers cutter diameter range: D63-D250
- ➢Large cutting depth, 4 cutting edges on both sides for cost efficiency
- ➢Axial rake angle insert design for light cutting and smooth chip evacuation

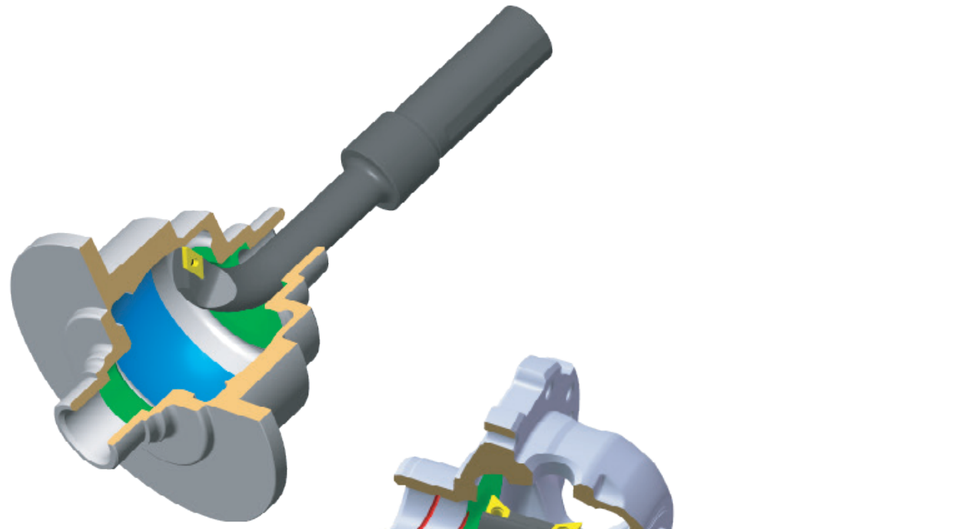
Application: Reverse Flange Face Milling
Solution: ACHTECK Custom Reverse Milling Cutter
- ➢Negative insert design with multi-edges on both sides for cost efficiency
- ➢Cutting edge design features high feed rate and excellent stability

Application: Valve Cover Spot-facing
Solution: ACHTECK Custom Compound Tool
- ➢Custom tool body with standard insert structure
- ➢Sharp cutting edges for light cutting and reduced vibration during machining

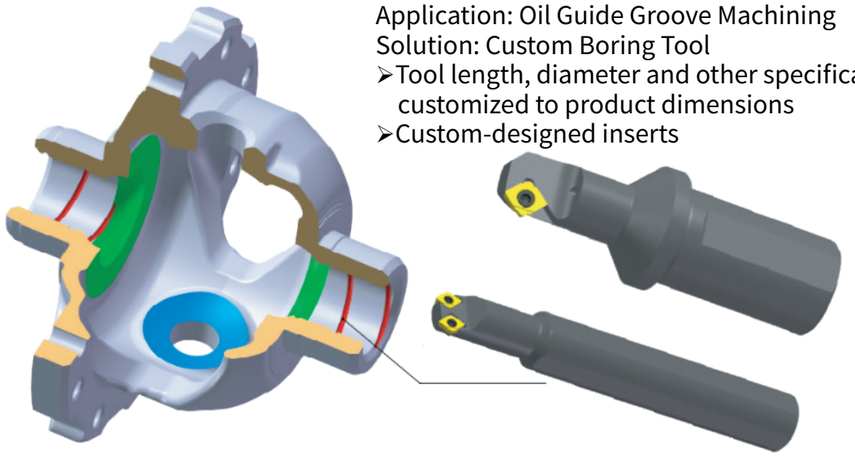
- Differential Housing
  Material: Cast Iron

Application: Inner Spherical Surface Machining
Solution: Custom Gooseneck Tool
➢Tool shank curvature customized to product dimensions
➢Equipped with ACHTECK standard inserts

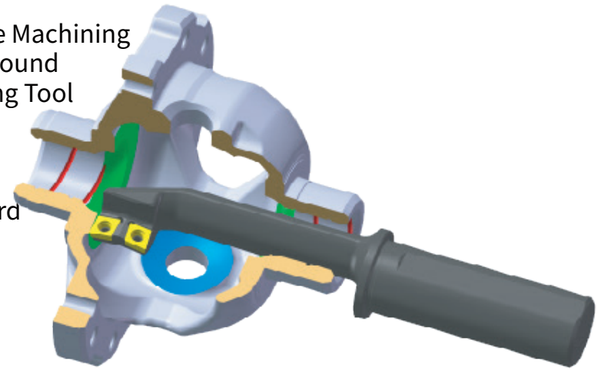




Application: Oil Guide Groove Machining
Solution: Custom Boring Tool
➢Tool length, diameter and other specifications customized to product dimensions
➢Custom-designed inserts

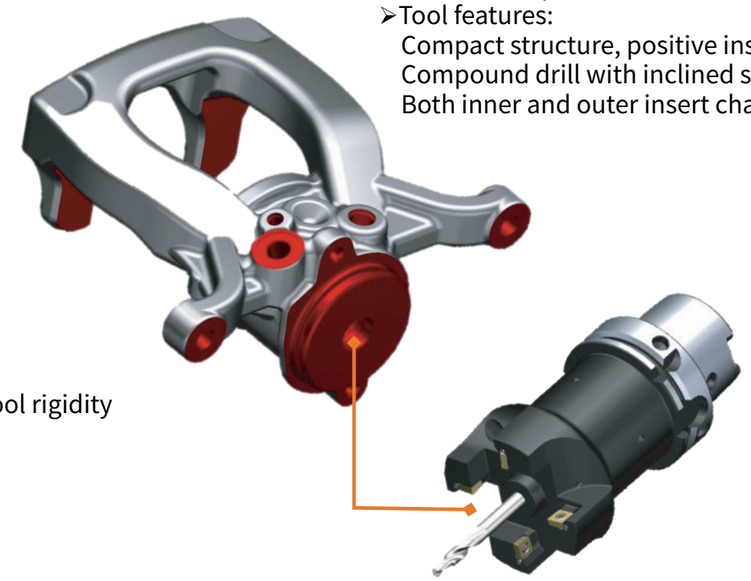


Application: Inner Bore & End Face Machining
Solution: ACHTECK Custom Compound Forward & Reverse Boring Tool
➢Tool length, diameter and other specifications customized to product dimensions
➢Equipped with ACHTECK standard inserts

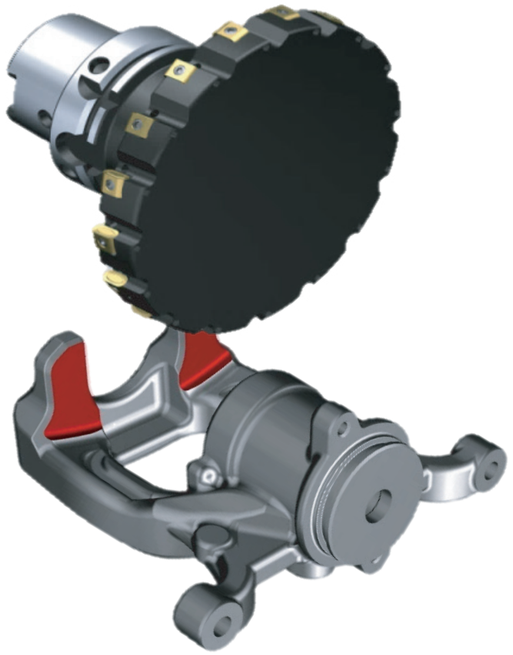


- Caliper
  Material: Cast Iron

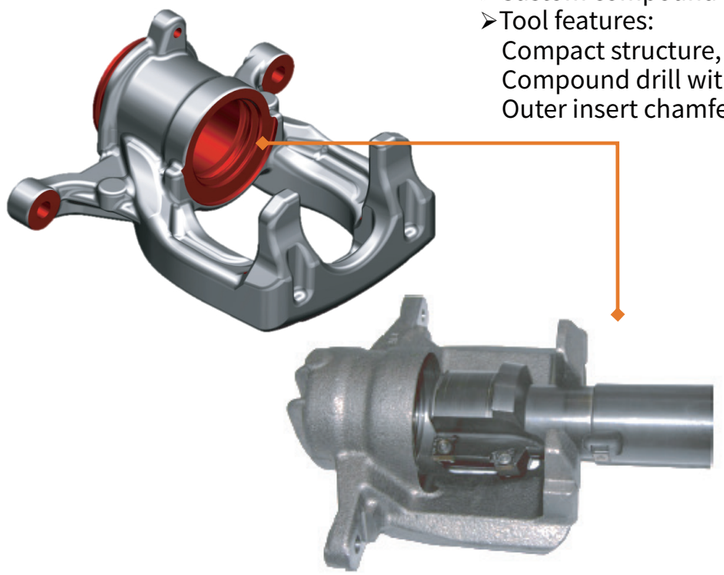
Application: Outer Diameter Finishing of Bushing Rear End
Solution: ACHTECK Custom Compound Tool
➢Custom compound tool with standard inserts
➢Tool features:
Compact structure, positive inserts with taper screw adjustment
Compound drill with inclined side-lock clamping reduces tool change time
Both inner and outer insert chamfering, inner insert with tool holder adjustment



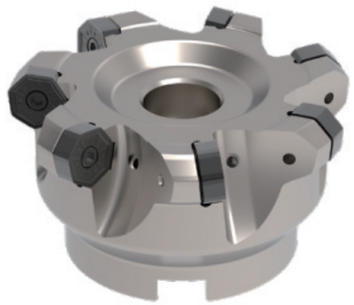
Application: Reverse Milling of Caliper Jaw Back Face
Solution: ACHTECK Custom Compound Tool
➢Custom tool body with standard or custom inserts
➢Tool features:
ertical tooth arrangement (or flat mounting)
Integral tool or sleeve-type B-type locking interface ensures tool rigidity



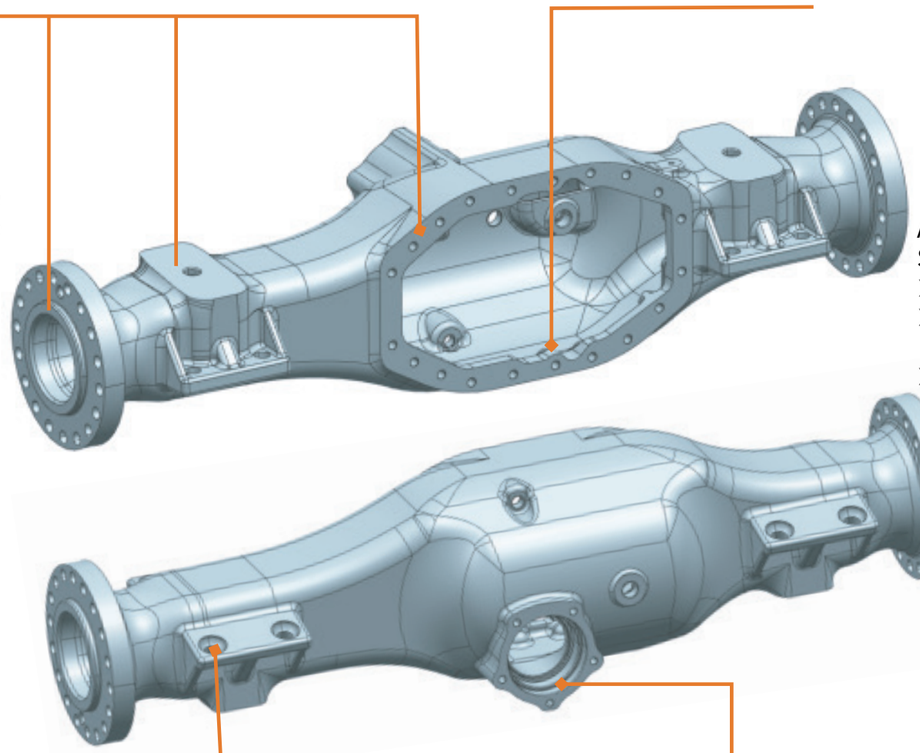
Application: Outer Diameter Finishing of Bushing Rear End
Solution: ACHTECK Custom Compound Tool
➢Custom compound tool with standard inserts
➢Tool features:
Compact structure, positive inserts with taper screw adjustment
Compound drill with inclined side-lock clamping reduces tool change time
Outer insert chamfering, inner insert with tool holder adjustment

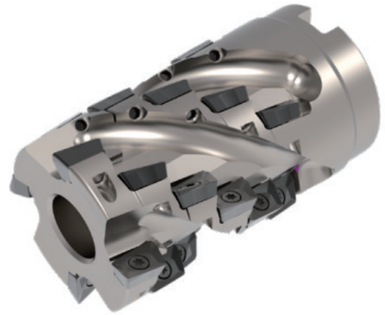


- Axle
  Material: Steel, Cast Iron



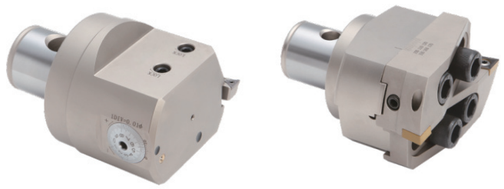
Application: Rough Machining of Banjo Face
Solution: ACHTECK AFM45-XN07 Series Face
➢Covers cutter diameter range: D40-D250
➢14 double-sided cutting edges with 5mm cutting depth for high cost efficiency
➢Large positive rake geometry delivers efficient, smooth machining and low cutting force during roughing





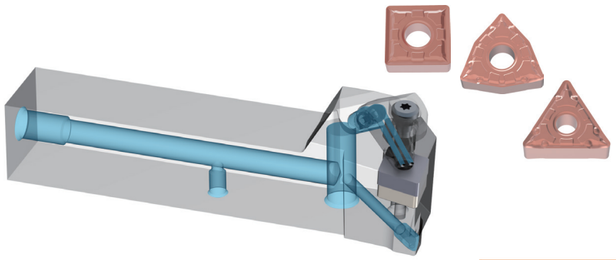
Application: Rough Machining of Holes on Banjo Face
Solution: ACHTECK APE90-AO12 Series Corn Milling Cutter
➢Covers cutter diameter range: D25-D80
➢Helical edge insert design for low resistance, light cutting performance and good versatility
➢Inserts with wiper edge design ensure excellent surface roughness

Application: Hole Machining
Solution: ACHTECK ADI Series Crown Drill
➢Covers drill diameter range: D12.5-D53
➢Pull-back locking design for superior rigidity
➢Available in UF and UM edge preparation options



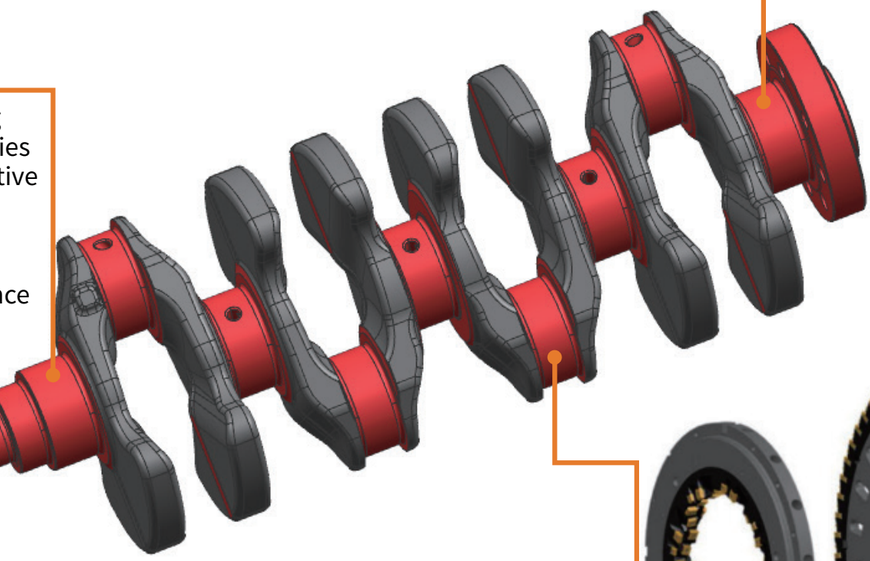
Application: Through Hole Machining
Solution: ACHTECK ARB & AFB Series Boring Tools
➢Multiple boring operations achievable by replacing cartridge types
➢Machining range: Ø20mm–Ø203mm (Ø153mm for ARB series)
➢Precision screw is housed inside the tool body, protected from chip impact and corrosion, extending the overall tool service life

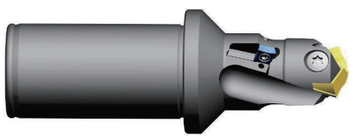
- Crankshaft
  Material: Steel, Cast Iron

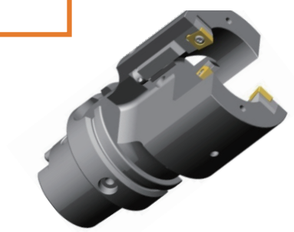


Application: Outer Diameter & End Face Turning
Solution: ACHTECK ISO Turning Tool Holder Series
- ➢Available with C, D, W, V, T, R, S and other positive & negative inserts
- ➢Wide selection of chipbreaker geometries
- ➢High-pressure internal coolant tool holders optional for superior chip breaking performance

Application: Main Journal Machining
Solution: ACHTECK Turn-Broaching Tool
- ➢Cutter head customized to machine interface and workpiece dimensions
- ➢Equipped with standard ACHTECK inserts, with extensive chipbreaker and grade options



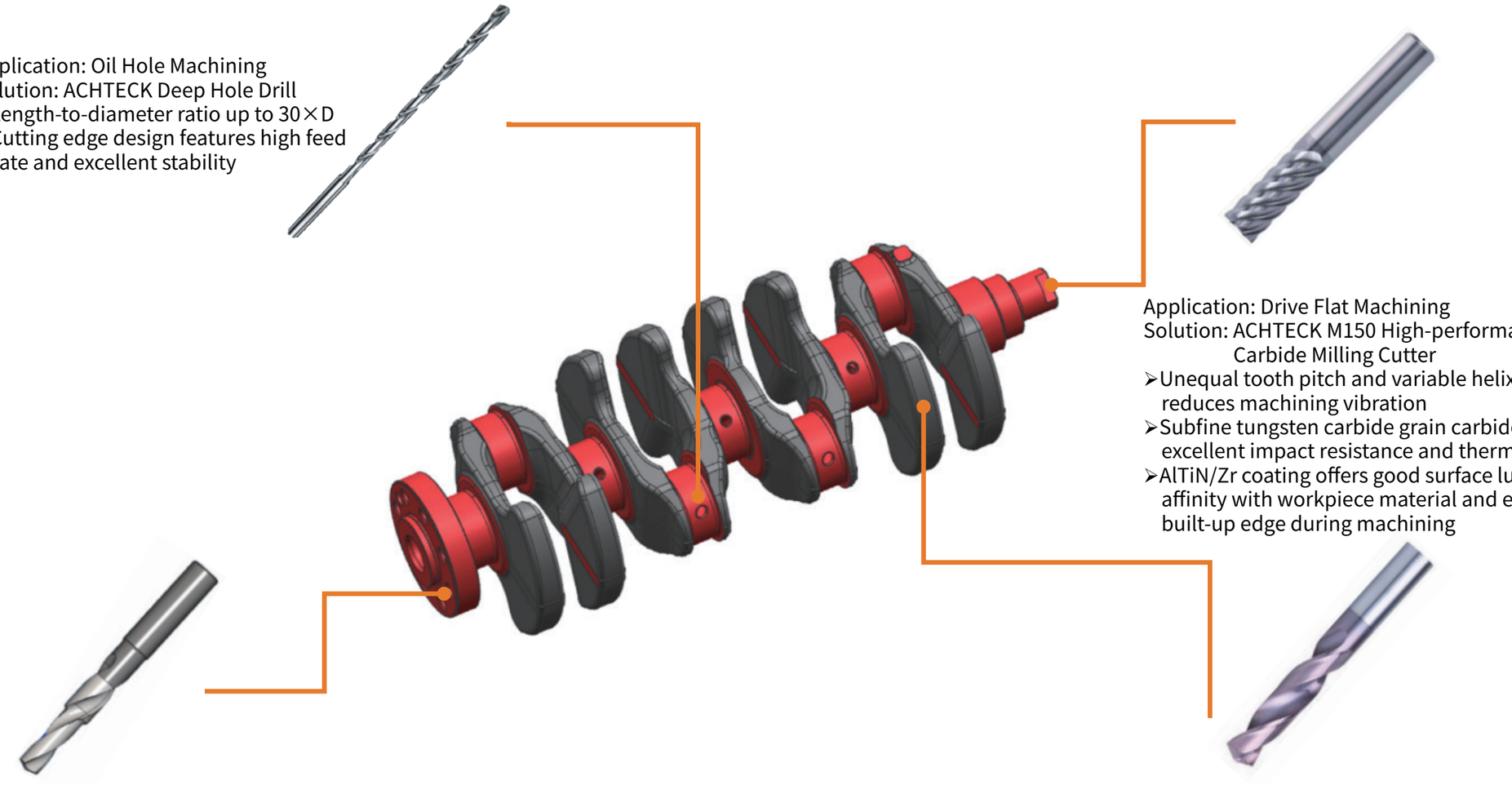




Application: Small End Bore & Outer Diameter Machining
Solution: ACHTECK Compound Sleeve Turning Tool
- ➢Custom tool body with standard ACHTECK cartridges and inserts
- ➢Both drill and chamfer inserts are adjustable

Application: Connecting Rod Journal Machining
Solution: ACHTECK Internal & External Milling Cutters
- ➢Cutter head customized to customer specifications
- ➢High-strength alloy steel construction for long service life
- ➢Ground inserts deliver high machining precision

- Crankshaft
  Material: Steel, Cast Iron



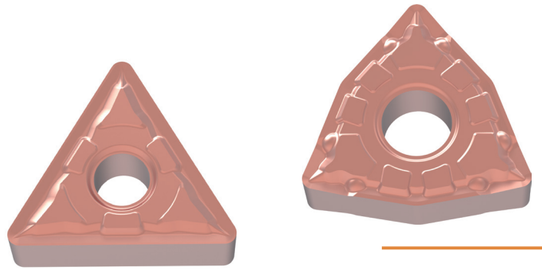
Application: Oil Hole Machining
Solution: ACHTECK Deep Hole Drill
➢Length-to-diameter ratio up to 30×D
➢Cutting edge design features high feed rate and excellent stability

Application: Drive Flat Machining
Solution: ACHTECK M150 High-performance Solid Carbide Milling Cutter
➢Unequal tooth pitch and variable helix design effectively reduces machining vibration
➢Subfine tungsten carbide grain carbide substrate provides excellent impact resistance and thermal fatigue resistance
➢AlTiN/Zr coating offers good surface lubricity, reduces affinity with workpiece material and effectively suppresses built-up edge during machining

Application: Flange Thread Pilot Hole Machining
Solution: ACHTECK Custom Step Drill
➢Customized to customer dimensions, pilot hole and chamfer machined in a single operation
➢Composite nano-coating delivers exceptional wear resistance and toughness

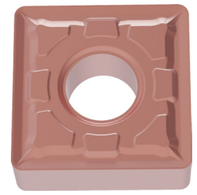
Application: Dynamic Balance Hole Machining
Solution: ACHTECK D106 Series Solid Carbide Internal Coolant Drill
➢Composite nano-coating for outstanding wear resistance and toughness
➢Available in 3×D and 5×D configurations

- Valve Stem
  Material: Nickel-based Alloy



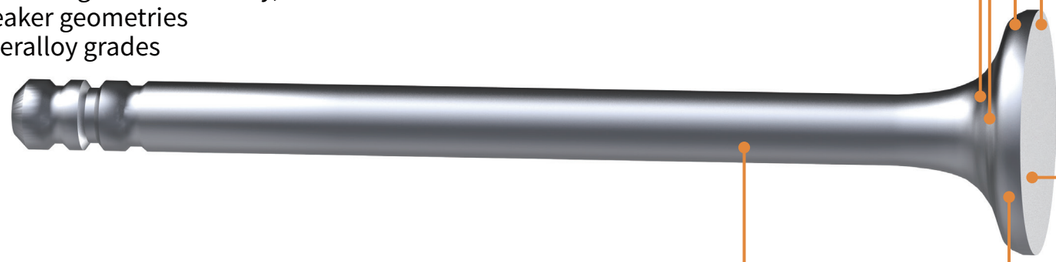
Application: Profile Finish Turning of Neck
Solution: 1. WNMG 080408E-SC1/MB2
2. TNMG 160408E-SC3

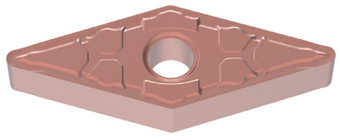
- Negative double-sided 6-edge inserts for high cost efficiency, matched with SC1/MB2/SC3 chipbreaker geometries
- Available in AP100S and AP010S superalloy grades



Application: Rough Turning of End Face & Outer Diameter
Solution: SNMG 120408E-MC3/MC4

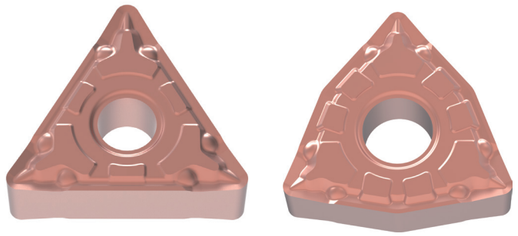
- Negative double-sided 8-edge inserts for high cost efficiency, matched with MC3/MC4 chipbreaker geometries
- Available in AP100S and AP010S superalloy grades





Application: Rough Turning of Welding Groove
Solution: VNMG 160408E-MB2/SC3

- Negative double-sided 4-edge inserts for high cost efficiency, matched with MB2/SC3 chipbreaker geometries
- Available in AP100S and AP010S superalloy grades



Application: Finish Turning of End Face & Outer Diameter
Solution: 1. TNMG 160408E-SC1/MB2
2. WNMG 080408E-SC1/MB2

- Negative double-sided 6-edge inserts for high cost efficiency, matched with SC1/MB2 chipbreaker geometries
- Available in AP100S and AP010S superalloy grades