AUTOMOTIVE

providing solutions for each industry

www.tungaloy.com
The automotive industry, since its beginning in the 1890’s, has been one of the most powerful industries in the world. It continuously demands new developments and improvements on the manufacturing processes.

For this reason Tungaloy’s engineering teams and factories are located near the major car plants to provide automotive clients with creative solutions to improve their production processes.

Tungaloy invests heavily in R&D to provide the automotive industry with advanced solutions for sustained growth.
Face Milling - Roughing
Economical 16 cornered insert solution clamped on adjustable pocket design. Also available with quick change mounting design.

Face Milling - Roughing
10-cornered insert with highly positive cutting edges and polished rake faces for roughing aluminum.

Boring-CamBore
Boring pilot and finishing cam-bore with indexable blades.

Cylinder Head
ENGINE

Face Milling - Finishing
Tangential PCD/CBN inserts on extra close-pitch cutter. Various insert geometries are available.

Adjustable runout
TAILORED TOOL

Boring - CamBore
Line bar in carbide body with micro-bore unit for finish boring.

Reaming - Before seat pressing
Valve Seat, Valve Guide.
Tailored tool with brazed carbide or PCD for rough and finish reaming of parent hole before seat pressing, the option with centering module is available.

Reaming - After seat pressing
Valve Seat, Valve Guide.
Tailored tool with indexable PCD blades for rough and finish reaming of pressed seat and guide. Suitable for chamfering multi-angle seat profiles.

Drilling
Head-exchangeable drill reduces machine downtime. Available with chamfering adaptor.
Face Milling - Roughing
Economical 16 cornered insert solution clamped on adjustable pocket design. Also available with quick change mounting design.

Face Milling - Roughing
10-cornered insert with highly positive cutting edges and polished rake faces for roughing aluminum.

Boring - Cylinder
Specially designed insert geometry reduces vibration.

Cylinder Block
ENGINE

Boring - Crank Bore
Line bar in carbide or steel body with micro-bore unit for finish boring.

Drilling
Head-exchangeable drill reduces machine downtime. Available with chamfering adaptor.
**Side Face Milling-Bearing**
Gang milling cutter with staggered positioning of the inserts to avoid vibration.

**Milling Crank Half Bore**
Improved insert positioning to reduce steps.

**Shoulder Milling**
3-cornered positive insert with anti-vibration design. Suitable for machining components with low rigidity.

**Face Milling - Finishing**
Tangential PCD/CBN inserts on extra close-pitch cutter. Various insert geometries are available.

Adjustable runout
DrillLine

**TUNGsIX-DRILL**

*Drilling*
Double-sided, 6-cornered insert with reinforced central insert for stable drilling.

**DRILLMEISTER**

*Drilling - Flange Hole*
Head-exchangeable drill reduces machine downtime. Available with chamfering adaptor.

**SOLIDDRILL**

*Drilling - Oil Hole*
Long solid carbide drill. MQL machining is applicable.

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**Crank Shaft**

**ENGINE**

**MillLine**

**TAILORED TOOL**

**Hollow Milling - with Plunging Operation**
Machining flange face by plunging operation in one pass.

**TUNGcut**

**Grooving**
Multi-functional tool shortens cycle time as grooving, turning and facing can be performed in one operation.
Pin Milling
8-cornered insert with positive rake angle for smooth pin milling.

Facing & Centering
Specially designed DoPent cutter combined with centering-drill for facing and centering, which reduces cycle time.
Automotive Industry

**TurnLine**

**Y-PRO SERIES**

External Turning
25° included angle suitable for profile turning and under-cutting.

**MillLine**

**TUNG CUT**

Grooving
Multi-functional tool shortens cycle time as grooving, turning and facing can be performed in one operation.

**MillLine**

**TECSLOT**

Milling - Cam Milling
Tailored tool cam for milling with chamfer.

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**Cam Shaft**

**Engine**

**MillLine**

**DOPENT**

Facing & Centering
Specially designed DoPent cutter combined with centering-drill for facing and centering, which reduces cycle time.

**DrillLine**

**SOLIDDRLILL**

Drilling
A solid carbide drill with high performance and long tool life.

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Tungaloy - Industry Solutions
DrillLine

MillLine

TUNGMEISTER

Shoulder Milling
Head changeable solid carbide endmill, drastically reduces set-up time.

Drilling
A solid carbide drill with high performance and long tool life.

Slitting
6-cornered tangential insert with sharp cutting edge reduces burr, in slitting operation.

DrillLine

SOLIDDRILL

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Slitting
6-cornered tangential insert with sharp cutting edge reduces burr, in slitting operation.

DrillLine

TUNGSLOT

Connecting Rod

Engine

Face Milling
10-cornered inserts provide economical advantages. Cermet grade achieves excellent surface finish.

Drilling
Double-sided, 6-cornered insert with reinforced central insert for stable drilling.

Drilling, Boring, & Chamfering
One tailored tool can be applicable for drilling, boring, and chamfering, which significantly reduces the number of required tools.

Cermet grade insert

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**Automotive Industry**

**TurnLine**

**DimpleFX**

**Face Turning - Roughing**
Hexagonal 12-cornered ceramic insert for highly productive machining.

**T-CBN Series**

**Face Turning - Finishing**
CBN insert with excellent fracture resistance achieves long tool life.

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**Fly Wheel Engine**

**TurnLine**

**DomTurn**

**Boring**
Double-sided insert with positive cutting edges provides economic advantages in boring.

**DrillMeister**

**Drilling**
Head-exchangeable drill reduces machine downtime. Available with chamfering adaptor.

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**Tungaloy - Industry Solutions**
Impeller & Turbo Charger

**External Turning - Finishing**
Special insert geometry for finishing slender parts.

**Grooving**
Uniquely designed 4-cornered insert with sharp cutting edges. Inserts are also available in tailored profile.

**Balancing Operation**
Head-changeable solid carbide endmill for balancing operation, reduces set-up time.

**Face Milling - Roughing**
Double-sided insert with 16 cutting edges for roughing / semifinishing, ideal solution for high nickel + Cr or SiMo material.

**Drilling**
Head-exchangeable drill reduces machine downtime. Available with chamfering adaptor.

**Face Milling - Flange Back Face**
Slotting cutter with economical 6-cornered insert. Applicable for face milling of back face of flange.

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External Turning - Roughing
Small ECO insert in grade of T9100 series with PremiumTec.

External Turning - Finishing
CBN inserts in BXM grade series provide long tool life and reliability in machining of hardened parts.

PSC system with polygonal design provides quick tool change, high accuracy, and high repeatability.

Transmission Shaft

Grooving
Multi-functional tool shortens cycle time as grooving, turning and facing can be performed in one operation.
External Turning - Roughing
Small ECO insert in grade of T9100 series with PremiumTec.

Grooving
Uniquely designed 4-cornered insert with sharp cutting edges suitable for shallow grooving.

CVJ Pinion Final
TRANSMISSION

External Turning - Finishing
CBN inserts in BXM grade series provide long tool life and reliability in machining of hardened parts.
Face Milling - Roughing
10-cornered insert with highly positive cutting edges and polished rake face for roughing aluminum.

Shoulder Milling
Excellent aluminum cutter with highly positive insert. Suitable for machining with large depth of cut due to the secure insert clamping system.

Face Milling - Finishing
Tangential PCD/CBN inserts on extra close-pitch cutter. Various insert geometries are available.

Transmission Case

Drilling
Head-exchangeable drill reduces machine downtime. Available with chamfering adaptor.
Boring, Reaming, Slotting, and Profiling

Exclusively designed tools with PCD cutting edges for highly productive machining. Available in PCD-brazed type or PCD blade type.

- Slitting
- Reaming + Chamfer
- Boring + Counter
- Formed Tool
- Blade Reamers with guide-pads

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**Automotive Industry**

**TurnLine**

**TUNGCUT**

**Grooving**
Multi-functional tool shortens cycle time as grooving, turning and facing can be performed in one operation.

**TurnLine**

**T-CBN SERIES**

**Internal Turning - Finishing**
CBN for long tool life and reliability in finishing of hardened steel.

**ToolLine**

**TUNECAP**

PSC system with polygonal design provides quick tool change, high accuracy, and high repeatability.

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**Idler Gear Ring Gear**

**TRANSMISSION**

**DrillLine**

**DRILLMEISTER**

**Drilling**
Head-exchangeable drill reduces machine downtime. Available in tailored tools for drilling combined with chamfering or counterboring.
Drilling
Head-exchangeable drill reduces machine downtime.

Drilling
Double-sided, 6-cornered insert with reinforced central insert for stable drilling.

Internal Milling
Exclusively designed spherical cutter used on dedicated machines for milling of differential case.

Differential Case
TRANSMISSION

External Turning - Roughing
Highly rigid “Double-clamp” system provides remarkable stability and high accuracy.

Grooving
Multi-functional tool system for grooving and turning.
**Automotive Industry**

**MillLine**

**TAILORED TOOL**

**Slot Milling**
Optimized insert positioning for slotting with large cutting width.

**Boring**
Tailored tool for boring and countersinking with long damped adaptors for reducing vibration.

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**Brake Caliper**

**DrillLine**

**DRILL MEISTER**

**Drilling**
Head-exchangeable drill reduces machine downtime.

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**Tungaloy - Industry Solutions**
Face Turning - Roughing
Hexagonal 12-cornered ceramic insert for highly productive machining.

Face Turning - Roughing
Small ECO insert in grade of T9100 series with PremiumTec.

Face Turning - Finishing
CBN for long tool life and reliability in finishing of cast iron.

Drilling
Head-exchangeable drill reduces machine downtime. Available with chamfering adaptor.
Milling - Two Faces
Specially designed cutter with economical 6-cornered insert for milling two faces in one operation.

Face Milling
Suitable for face milling of narrow space close to the wall, economical double-sided insert, yet with sharp geometry to reduce cutting force.

Boring & Chamfering
Specially designed tools for boring with steps and chamfering in one operation.

Drilling
Head-exchangeable drill reduces machine downtime. Available with chamfering adaptor.

Slotting
6-cornered tangential insert with sharp cutting edge reduces burr, in slitting operation.
Wheel Hub

DrillLine TungSix-Drill
Drilling
Double-sided, 6-cornered insert with reinforced central insert for stable drilling.

TurnLine EcoTurn
Face & External Turning - Roughing
Small ECO insert in grade of T9100 series with PremiumTec.

DomTurn
Boring
Double-sided insert with positive cutting edges provides economic advantages in boring.

DrillLine DrillMeister
Drilling
Head-exchangeable drill reduces machine downtime.

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Machining of Die & Mold

**Rough Milling - Facing, Pocketing**
High-feed milling provides incredibly high metal removal rates in prehardened steel and difficult-to-cut material.

**Profile Milling - Finishing**
Optimized insert geometry achieves highly precise finishing of dies and molds.

**Deep Hole Drilling**
Brazed carbide gundrill for deep hole operations.

Indexable gundrill with 3-cornered insert, with chip-splitter. This combination increases productivity by 3 times compared to brazed gundrill.
Milling

A wide variety of modular heads are available for various milling operations, such as high-feed milling, face milling, shoulder milling, and pocket milling.

Endmilling

Head-changeable solid carbide endmill. A wide variety of cutting heads are available for complete milling solution.
**DrillLine**

**Drilling**
Head-exchangeable drill reduces machine downtime. Available with chamfering adaptor.

**MillLine**

**Shoulder Milling**
Head changeable solid carbide endmill reduces set-up time.

**DrillLine**

**Solid Gundrill**
ø0.9 - ø3.0 small diameter solid carbide gundrill for precise drilling of common rail hole drilling.

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**Common Rail & ABS SMALL PARTS**

**External Turning**
Double-sided insert with positive cutting edges offers twice the number of corners compared to competitors, which provides economical advantages in turning of small parts.

**Grooving**
Uniquely designed 4-cornered insert with sharp cutting edges, suitable for grooving slender parts.

**Internal Turning**
Solid carbide bars suitable for various internal turning operations of miniature parts.
Dr. Carbide
the cure for your machining needs
Right in your hands!
New Application Package

Download it Now!

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