... COMPLETE MACHINING SOLUTIONS

Pole Position for efficient machining.
 Unlike any other sector, the automotive industry is currently undergoing a radical shift in attitude. For years, speed determined the direction; today, it goes without saying that the joy of driving also includes the “joy of energy efficiency.” A new ecological awareness demands the development of new technologies with a degree of radicalism currently unknown—technologies that are giving rise to truly innovative components and ultimately to new automobiles that are as energy-efficient as they are appealing.

Add to this difficult economic circumstances, which are proving a formidable challenge for automotive suppliers in particular: Models are changing at a rapid pace, but productivity must still be increased while maintaining the same high quality in the face of ever slimmer profit margins.

Our specialist brands Walter, Walter Titex and Walter Prototyp provide you with high-tech tools and machining solutions from a professional supplier of the automotive industry for complete machining procedures, all from one single source. Providing the tools to achieve your goals with innovation, flexibility, quality, and productivity—that’s our goal.

Expect more. Engineer what you envision.
The trend toward higher performance with smaller displacement and lower fuel consumption means higher mechanical loads on the engine block. This calls for increasingly high-quality materials made of GG gray cast iron and cast iron with GGV vermicular graphite. Our new Tiger-tec® Silver cutting tool materials and Xtra-tec® tool systems are just the thing for machining such materials. You can achieve extremely high level of dimensional accuracy, optimum quality in surface finishes and increases in productivity of up to 100% through the combined use of Walter milling cutters, Walter Titex high-performance drills and the threading tool manufactured by Walter Prototyp. Our solutions give you a competitive cost-per-part edge in mass-production processes, even those involving complex parts.

Automotive components are increasingly manufactured from aluminum thanks to its low weight. We offer a complete PCD tool line for high-precision, economical machining of aluminum alloy components. Our high-tech PCD tools provide significant gains in both quality and productivity in series-production operations. These tools stand out for their extremely long service life and ensure superior dimensional stability. For aluminum cylinder heads, this means the ultimate in function reliability in conjunction with optimal combustion. For drivers, it means lower fuel consumption and thus also lower CO2 emissions.
TEAM ORDERS: MARKET-FOCUSED DEVELOPMENT.

We have worked in close collaboration as a machining partner with manufacturers in the automotive industry for a number of decades, and have observed the developments taking place in this sector extremely closely. This is the key to our ability to develop industry-specific machining solutions in partnership with you, our automotive customers. It’s what allows us to respond quickly and consistently to current and future materials trends and new machining requirements. Benchmark cutting tools such as the new Tiger tec®Silver indexable inserts are a logical consequence of the uncompromising attitude of innovation we bring to everything we do. Those are our team orders.

With our specialist brands Walter, Walter Titex and Walter Prototyp, we see ourselves at the interface between machine manufacturers and the machining production area in the automotive sector. The machining solution begins with an analysis of all parameters, encompasses planning and development, and finishes up after a test phase with the commissioning of a new machining processes. It makes no difference whether the path to a cost-effective, complete machining solution involves standard tools, special tools, or modified standard tools.

In all cases, we are committed to increasing your competitive edge.
Walter Capto™: External machining

Walter Capto™ is a highly precise, extremely stable turning-tool changing system available in sizes C3 to C8. It allows large turning forces to be transferred. The three-dimensional clamping system employed in the indexable insert provides maximum stability.

Because they convert linear power to rotational power, crankshafts made of high-strength steel and ductile iron face immense forces. At several 1,000 revolutions per minute, this complex component in today’s high-performance cars is exposed to enormous physical forces and mechanical loads. A key objective in machining processes is to achieve the highest levels of dimensional stability. With our high-performance tools, you will be able to produce long-lasting, durable crankshafts made of ductile iron or steel alloys at highly-competitive per-part costs.

Because they convert linear power to rotational power, crankshafts made of high-strength steel and ductile iron face immense forces. At several 1,000 revolutions per minute, this complex component in today’s high-performance cars is exposed to enormous physical forces and mechanical loads. A key objective in machining processes is to achieve the highest levels of dimensional stability. With our high-performance tools, you will be able to produce long-lasting, durable crankshafts made of ductile iron or steel alloys at highly-competitive per-part costs.

Transmission shafts are transmission components whose function it is to pass on rotational movements and torques. As such, they are subjected to high torsional loads and must therefore be finished to exacting standards. Not only the shaft itself, but also the shaft-hub interface demands an extremely precise design. With the turning and drilng and boring tools in our specialist Walter and Walter Titex brands we have discovered the right solutions for machining this crucial component.

Process reliability is priority number one for bearing and web machining with the versatile Walter rotary broaching tool. The high number of teeth on the tool’s robust ISO index-able inserts ensures a high output as well as precise contours and a superior surface quality.

A drill using the special XD® technology with polished flutes and a TINAL FUTURA coating on the drill tip. X·treme DH is ideal for drilling high strength materials with an interrupted cut. Specifically optimised for a long tool life in crankshaft machining applications. Reliable to 38 x D, factory original reconditioning is available.

Even under harsh application conditions, the Walter internal milling cutter, thanks to its cartridge design, performs impressively as it handles extremely large machining volumes. This versatile tool is a breeze to adjust to just about any workpiece profile.

When used with the AK600 adaptor sleeve, the Walter Turn boring bar can be adjusted precisely and automatically to tip height, thereby reducing vibrations in the machining process. The technology employs positive ISO inserts with a PVD aluminium oxide or CVD coating.

Walter Capto™ is a highly precise, extremely stable turning-tool changing system available in sizes C3 to C8. It allows large turning forces to be transferred. The three-dimensional clamping system employed in the indexable insert provides maximum stability.

The high-performance, universal Walter Titex solid carbide drill with TFL coating and internal coolant supply facilitates high-precision drilling. This tool’s excellent cutting data translates to extremely low per-part costs for you. Available in diameters from 3 to 25 mm and in lengths of up to 5 x D, the Walter Titex solid carbide drill is ideally suited for all materials up to 1,000 Nm.

Extremely accurate, extremely stable monoblock tool for grooving, parting off, and resecting. The clamping screw is accessible from the top and the bottom, making the tool easy to handle even when inverted. When used with Tiger-tec® cutting tool materials, this is a versatile and extremely efficient turning tool.

CRANKSHAFT

Walter Capto™: External machining

Up to 420 powerful indexable inserts on this Walter external milling cutter ensure extremely high feed rates and maximum process reliability in bearing and web machining.

TRANSMISSION SHAFT

Walter Capto™: External machining

XD Technology

Walter Titex X·treme DH drill: Oil galley machining

Walter Titex Alpha®4 solid carbide drill: Radial bore drilling

Walter rotary broaching tool: Bearing and web machining

Walter CUT-grooving tool G1011: Grooving, parting off, recessing

Walter internal milling cutter: Bearing and web machining

Walter external milling cutter: Bearing and web machining

Walter internal milling cutter: Oil galley machining

Walter Capto™ is a highly precise, extremely stable turning-tool changing system available in sizes C3 to C8. It allows large turning forces to be transferred. The three-dimensional clamping system employed in the indexable insert provides maximum stability.

Walter Turn boring bar: Small-diameter boring

Walter Cut-grooving tool G1011: Grooving, parting off, recessing

Transmission shafts are transmission components whose function it is to pass on rotational movements and torques. As such, they are subjected to high torsional loads and must therefore be finished to exacting standards. Not only the shaft itself, but also the shaft-hub interface demands an extremely precise design. With the turning and drilling and boring tools in our specialist Walter and Walter Titex brands we have discovered the right solutions for machining this crucial component.

Process reliability is priority number one for bearing and web machining with the versatile Walter rotary broaching tool. The high number of teeth on the tool’s robust ISO indexable inserts ensures a high output as well as precise contours and a superior surface quality.

A drill using the special XD® technology with polished flutes and a TINAL FUTURA coating on the drill tip. X·treme DH is ideal for drilling high strength materials with an interrupted cut. Specifically optimised for a long tool life in crankshaft machining applications. Reliable to 38 x D, factory original reconditioning is available.

Even under harsh application conditions, the Walter internal milling cutter, thanks to its cartridge design, performs impressively as it handles extremely large machining volumes. This versatile tool is a breeze to adjust to just about any workpiece profile.

When used with the AK600 adaptor sleeve, the Walter Turn boring bar can be adjusted precisely and automatically to tip height, thereby reducing vibrations in the machining process. The technology employs positive ISO inserts with a PVD aluminium oxide or CVD coating.

Walter Capto™ is a highly precise, extremely stable turning-tool changing system available in sizes C3 to C8. It allows large turning forces to be transferred. The three-dimensional clamping system employed in the indexable insert provides maximum stability.

The high-performance, universal Walter Titex solid carbide drill with TFL coating and internal coolant supply facilitates high-precision drilling. This tool’s excellent cutting data translates to extremely low per-part costs for you. Available in diameters from 3 to 25 mm and in lengths of up to 5 x D, the Walter Titex solid carbide drill is ideally suited for all materials up to 1,000 Nm.

Extremely accurate, extremely stable monoblock tool for grooving, parting off, and resecting. The clamping screw is accessible from the top and the bottom, making the tool easy to handle even when inverted. When used with Tiger-tec® cutting tool materials, this is a versatile and extremely efficient turning tool.
These days there’s a new attitude about driving and to satisfy customers, the automotive industry needs to find the right solutions. Solutions the industry in turn expects from its automotive suppliers.

Our expertise lies in efficient, reliable machining processes and as such, we are your go-to source for complete machining solutions. Together, we will find solutions to today’s challenges. Our engineering experts provide technical support wherever you need it—on every continent.

In our Technology Centres in Germany, China, and the U.S., our engineers and technicians are working on future-oriented production technologies for the automotive industry in close collaboration with customers and researchers. This involves developing custom machining processes for a wide range of components, followed by testing and breaking-in—a process that continues until we have found the absolute best turning, drilling, milling, or threading solution in terms of technology and cost-effectiveness.

Our passion for technology gives us the drive to create efficient, reliable processes—all to your advantage.
Today transmission cases for high-performance transmissions are generally made of hypoeutectic aluminium or magnesium alloys. This presents a challenge for machining applications in that it requires fulfilling complex datum dimensions and minimising machining times. Our high-performance Walter PCD tools, Walter Titex solid carbide drills, and Walter Prototyp solid carbide taps are the perfect trio for precise, cost-effective machining operations involving these complex parts.

The brake calliper is an important component of disk brakes and one that is subjected to high loads. In the car industry today, it is made of cast iron (GG50) or aluminium. The brake calliper is an essential safety component that must withstand high thermal and mechanical loads. A key objective of machining processes is to achieve the highest levels of process reliability and dimensional stability. In light of ever-increasing pressure from the competition, another indispensable ingredient of success is the ability to minimize per-part costs while maintaining superior quality. Our tools are up to the task.

With its high number of teeth, the Walter PCD face mill F4050 provides extremely high feed rates. A combination of finely adjustable runout and optimal cutting edge geometry enables a high-quality surface finish and superior tool life.

Walter Prototyp Paradur® ECo-CI: Internal threads for hydraulic connections and ventilation bores

The new Paradur ECo-CI with the innovative Xtra treat™ surface treatment is the ideal tool for high cutting speeds and a broad range of applications. It is highly productive, wear-resistant, and reliable, making it the obvious choice for cost-effective cast-iron machining on a mass-production scale.

Walter Titex Alpha® Jet with chamfer: Core hole drilling in flange bores

The Walter Titex Alpha® Jet solid carbide drill for precise drilling and chamfering in the flange bore. This precision tool’s geometry has been optimised for short machining times (drilling and chamfering in one operation) and low per-part costs.

An efficient and impressive PCD tool for an ultra-long tool life and excellent dimensional stability in root face finishing processes. Enables cost efficiency in mass-production operations.

The Walter Prototyp® ECO-LM is a high-performance thread former with highly specific geometry and an extra smooth surface for precise machining of blind hole threads in the transmission case.

With this solid carbide step drill with chamfer and reverse chamfer functionality, several machining steps can be performed without retooling. Cycle times are reduced as a result.

A custom tangential disk set mill fitted with Tiger-tec® indexable inserts from the standard product line. A fixed insert seat provides great stability and enables high feed rates. The result is short machining times and thus also low per-part costs.

The best way to achieve desirable per-part costs is to use a tool that can perform several machining steps in one operation. The Walter combination tool with Tiger-tec® inserts provides maximum productivity and a high level of process reliability. And its extreme ease of handling is yet another feather in this combination tool’s cap.
MODCO®: PRECISION AND PRODUCTIVITY IN SERIES.

Under the well-known MODCO® label, we provide customers in the automotive industry with complex draw bar tools as well as PCD and CBN tools for series production.

Thanks to their extremely long tool edge life, these Walter tools are characterised by process reliability, extremely high precision and repeat accuracy, combined with good cost efficiency. MODCO® gives you flawless, reproducible quality at a highly competitive price.

No matter whether you are producing in small quantities or on a large scale—when you use MODCO® tools, you get efficient machining that puts you ahead of the competition.

MODCO® tools.
Your key to productivity.

The innovative MODCO® PCD tools from Walter (face mill F4050 shown on the left) are the first choice in the automotive industry when it comes to achieving high-quality surface finishes and an extremely long tool life.

The MODCO® label stands for complex draw bar tools offering users process reliability, precision, and productivity at the highest levels.