



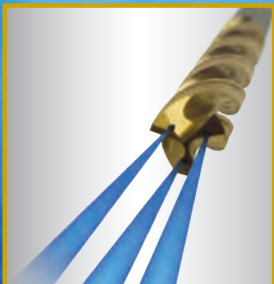
CFT

S Y S T E M S™

A G E O R G E W H A L L E Y C O M P A N Y



Innovations In Coolant-Fed Tooling & Systems



Performance Thru Innovation

Today, manufacturers are looking for a competitive edge. They are driven to find better ways to improve cutting tool performance...increase throughput.... reduce finishing costs... get more output from existing machines.

Fortunately, the answers to those diverse questions have one common solution...

Coolant-fed Tooling.

And a world technology leader in the design and development of coolant-fed tooling and systems is CFT Systems™, A George Whalley Company.

From twist drills to end mills, cobalt to carbide, CNC toolholders and high-pressure pumps. CFT Systems™ has led the industry for decades in advancing the state-of-the-art in coolant-fed tooling systems.

Today, our global customer base relies on CFT Systems™ to increase both productivity and bottom line profitability in some of the world's most demanding machining applications.

We invite you to review the many coolant-fed products, product groups and technologies we have pioneered to help sharpen your competitive edge.

The Coolant-Fed Solution

The speeds, feeds and temperature extremes of today's machining processes can be brutal...and that's exactly where we do our best work.

Coolant-fed tooling developed by CFT Systems™ is engineered to supply coolant where it's needed most...at the cutting point of the tool. Our coolant-fed systems direct coolant from the machine tool's pumping system, through orifices running the length of the tool to small ports located at or near the tool's primary cutting edge.

Coolant-Fed Benefits...

Increased tool life

- By directing coolant to the cutting edge of the tool, lubrication is improved and friction is significantly reduced to substantially increase tool life.

Increased Speeds & Feeds

- The flushing action of the coolant forces chips away from the workpiece, eliminating compaction, clogging and chip re-cutting, to achieve maximum speed and feed rates.

Improved Accuracy

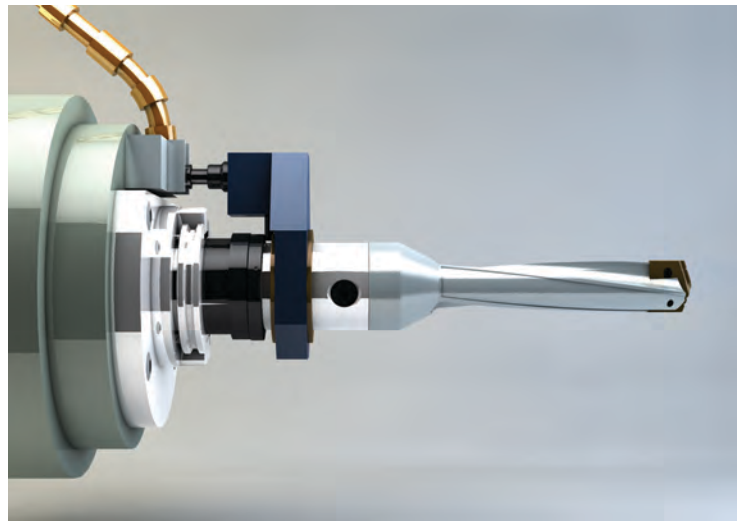
- The free cutting action of coolant-fed tools, combined with more effective chip ejection, provides improved cutting performance and enhanced accuracy.

Reduced Secondary Operations

- The reduction of heat, friction and galling reduces the potential for stress cracking, while improving surface integrity. The improved finish may eliminate the need for costly secondary operations like reaming, boring and grinding.

CFT Innovation

As a pioneer in the development of high performance coolant-fed tooling and delivery systems, CFT Systems™ has been responsible for countless product developments, including special sealing devices for coolant-fed tooling, unique coolant rotary inducers and specialized holders for coolant-fed tools. Our deep passion for the design and development of new coolant-fed products and technologies, has positioned CFT Systems™ for decades as a driving force in the development of coolant-fed solutions for today's extremely diverse machining applications.



ATC modular holder connection with double margin spade insert drill

CFT Quality

CFT Systems™ products are manufactured from the finest materials and engineered to provide extended performance, even in demanding applications. All CFT Systems™ products meet or exceed multiple industry standards.

CFT "Off-the-Shelf" Solutions

CFT Systems™ maintains an extensive inventory of both standards and specials. This inventory includes drills, reamers, cutters, end mills, taps, spade drill inserts and holders, toolholders, sealing devices, high pressure coolant pumps and more. The bottom line? We don't want our customers waiting to put our coolant-fed tooling to work.





Ultra-Gold Solid Carbide Coolant-Fed Twist Drills

These top-of-the-line drills have highly polished flutes coupled with a new multi-layered gold coating. This combination allows the tool to reach greater drilling depths without chip impaction. CFT Systems™ supplies this line of solid carbide, micro-grain twist drills in a 2 flute parabolic style and a 3 flute special controlled flute style.

These drills are manufactured to close tolerances in order to meet or exceed the most rigid aerospace requirements. Ultra-Gold Solid Carbide Coolant-Fed Twist Drills are designed for drilling at high speeds and excellent feed rates in deep hole extended reach applications.

Ultra-Gold Solid Carbide Coolant-Fed Twist Drills are also well-suited for machining non-ferrous materials such as aluminum, aluminum alloys and composites, in addition to free machining stainless steel, steel and cast iron. These drills come equipped with reinforced carbide cylindrically ground shanks to adapt easily to shrink fit holders, hydraulic holders and precision collet chucks. The drills range in diameter from .1875" to .5312" and lengths up to 21X the drill diameter.

Cobalt Coolant-Fed Twist Drills

The CFT Systems™ Series M604 is one of the most versatile, metric stub length cobalt drills available today. This drill combines parabolic flute design with a CNC shank. The shanks are produced with a whistle notch enabling easy adaptability to most machines and machining requirements. Performs like carbide with the forgiveness of high speed steel. Available in diameters of 5mm to 14mm and overall lengths of 82mm to 124mm.

The Series 605 high performance coolant hole spotting drill is designed to initiate a precise starting hole on tough or hard materials where work hardening conditions may be caused by a lack of lubrication. Provides fast, accurate spotting and single operation centering and chamfering ensuring accurate, deep holes. Available in diameters of 1/4" to 1" and overall lengths of 2-1/2" to 6". Available in 90°, 120°, 135° and 145° point angles.

CFT Systems™ Series 609 cobalt coolant-fed drills with a spiral, parabolic flute performs similar to carbide drills, but are more suitable for a wider range of materials and machine tools. The Hardlube treatment combined with parabolic flute provides excellent chip evacuation, extending tool life and cutting edge durability. Manufactured with ASP 30 Powdered Metal for longer life and consistent performance. The Series 609 is a jobber length drill available in decimal and metric sizes with diameters ranging from 11/64" to 1/2" and overall lengths of 4-1/4" to 6".

The Series 603DM coolant-fed extra-length cobalt double margin twist drills from 1/2" diameter to 3/4" diameter with a 9" flute and 12" overall lengths is available in TiN and Life-Coat. This series is the perfect fit between high speed and solid carbide; it's forgiving yet offers long life and high penetration rates with excellent accuracy.



High-Speed Steel Coolant-Fed Twist Drills

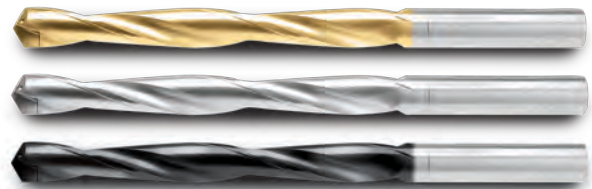
The CFT Systems™ Series 303 and 307 are high speed steel parabolic-style coolant-fed drills and perform exceptionally well in steel, aluminum and most other materials. The 32° helix has excellent shearing action in addition to assisting the lift of the chip in the vertical position and the flow of the chip in the horizontal position. Parabolic design gives maximum chip room and lift in deep hole drilling. Split point design is self-centering and provides accurate hole locations. Available in diameters of 1/8" to 3/4" and overall lengths of 3-1/2" to 10-3/4".

We have the widest range and style of high speed coolant-hole twist drills in the industry, available in straight shank, taper shank, standard and extra-long lengths. Diameters range from 1/8" to 2-15/16."



Carbide-Tipped Drills

Carbide-tipped drills are designed for non-ferrous materials such as aluminum and cast iron. However, they can be used in other materials such as medium steels where in steel applications performance may not be consistent. Double angle point increases the margin life over other high-speed and cobalt drills. Constant web with rolled heel provides maximum chip evacuation. Available in select sizes.



Solid Carbide Coolant-Fed Twist Drills

CFT Systems™ offers a complete product line of solid carbide, coolant-fed drills in metric and decimal sizes. Designed for drilling depths 5X to 7X diameter, these drills are produced with straight shanks. Several of the drills suit material-specific applications with coatings, helix angles and drill points to match. Available in metric diameters from 3mm to 14mm. Fractional sizes range from 1/8" to 9/16" diameters.

Solid carbide coolant-fed double margin twist drills Series 928 to 935 are available in fractional and metric sizes and range from 3mm to 19mm diameters. Lengths range from 15X to 40X diameter. Additional drills are available in micro-mini series.

These drills have a high luster and are available in TiAlN coating at the front end of the flute. They also are available in Life-Coat Plus, which is a unique finish coating the entire length of the flute. The machine tool industry considers drills with this type of unique coating to be a top performer, out-producing similar competitive coated style drills in the market today.





Coated Throw-Away Spade Drill Inserts and Holders

CFT Systems™ inserts are manufactured with ultra-high performance coatings which allow for higher speeds and feeds, longer tool life, reduced machining time and improved productivity. Our combination of materials and multi-layered coatings provides for a broader range of applications, subsequently reducing your inventory.

Our throw-away inserts are available in high-speed, cobalt and super-cobalt as well as carbide. They range in size from 3/8" to 4-1/2" diameter. Our spade drill insert holders are all coolant-thru. The holders are available in various shanks and flute styles.



Solid Carbide Coolant-Fed End Mills

Great for slotting, plunge cutting and profiling! CFT Systems™ offers a line of solid carbide coolant-fed 3 flute end mills that are designed for machining materials such as stainless steel and titanium, as well as other ferrous and non-ferrous materials. These end mills are available in roughing and finishing styles from 1/4" to 3/4" diameter. One axial hole runs through the center of the tool exiting out each flute.

All end mills have highly polished flutes coupled with a multi-layered gold coating. With good coolant pressure through the tool, cutting chips are easily flushed away from the cutting surface greatly improving stock removal, tool life and part finish.



Hurricane™ Solid Carbide Coolant-Fed End Mills

The CFT Systems™ Hurricane™ is the only solid carbide, coolant-fed variable helical end mill available today. The Hurricane™ is manufactured with four unique flutes which provide a synchronized cutting action that eliminates vibration.

Additionally, we have added new style 4 flute ball end mills which have coolant holes exiting for both side and end cutting. This state-of-the-art design allows for simultaneous roughing and finishing as well as quicker feeds which increase production. Our 6 coat, blue/grey finish improves lubricity. Available in diameters of 1/4" to 3/4" and overall lengths of 2-1/2" to 4".



Modular Tool Holders

Modular tool holders are critical to the development of improved manufacturing methods through reduced set-up time, improved flexibility and the reduction or elimination of special tooling costs. The CFT Systems™ modular tools will easily adapt to end mills, cutters, drills, reamers, taps and boring tools. In addition, our Modular System satisfies the need for fixed tooling kits in on-demand vending systems.

All the CFT Systems™ toolholders are made with coolant-fed features. These tool holders are available in CAT V-Flange and BT Shanks and are also adaptable to HSK systems as well.



ATC Automatic Tool Change Rotary Inducers

Our business is retrofitting and upgrading machine tools and we've been the experts since the early 1970's.

Whether your machine tools are older or brand new, have coolant-thru-the-spindle or outside the spindle, CFT Systems™ will help you increase your production output with our manual or ATC (Automatic Tool Change) rotary inducers.

Many of today's brand new CNC machines don't have sufficient coolant volume and/or high enough coolant pressure thru-the-spindle to satisfy certain coolant-fed tooling requirements. We provide rotary inducers to handle coolant-thru-the-tool from 10 to 100 gpm with pressures up to 1,000 lbs.

CFT Systems™ provides 30, 40, 50, and 60 V-flange toolholders; 30, 40, and 50 BT toolholders with manual or ATC inducers. We are also able to provide HSK-type inducer holders.

Our complete range of tool rotary inducers includes collet chucks, end mill holders, Morse taper holders, straight shank and modular tool adapter systems such as ABS®.

CFT Systems™ has the industry's most complete selection and broadest range of standard inducers with most available from our large inventory. We specialize in designing and developing new styles and sizes of holders to fit unique, specific requirements.

Our complete system includes cutting tools, rotary inducers and high pressure pumping systems. Check our website and contact us to learn how to achieve the best overall performance and return on your machine tool investment.

*ABS is a registered trademark of Komet Group GMBH.



Sealed and Leak-Proof Collets, Bonded Collets, Retention Knobs, Discs and Positive-Sealed Stop Screws

No other company provides more methods of sealing cutting tools inside toolholders than CFT Systems™. Whether your application is low, medium or high pressure, tools with or without flats, metric or decimal sizes, CFT Systems™ can provide the sealing device you need to suit a variety of shank sizes and styles.



VelociFlow™ High Pressure Electric Coolant Pumping Systems

The VelociFlow™ High Pressure Electric Coolant Pump safely and efficiently pumps coolant into your machine tool, increasing volume and pressure for coolant-fed tooling applications. This high pressure cooling system can dramatically improve speeds and feeds without damage to the machine tool, the part, or tooling.

High pressure cooling systems outperform conventional flood cooling:

- Increased production efficiencies
- Longer tool life
- Improved surface finishes
- Better chip evacuation
- Swift, smooth flow of coolant to the cutting zone

The VelociFlow™ is the simplest, most economical way to maximize the full capability of advanced, coolant-fed tooling:

- Minimal maintenance
- Small footprint (19-5/8" W x 39-7/16" D)
- Completely self-contained
- Compatible with most high-quality coolants, both oil and synthetic mixtures
- Adaptable to coolant through the spindle, exterior flushing, and coolant rotary inducer
- Automatic overload protection
- Equipped with a dirty filter alarm circuit



VelociFlow™ Model 2500E

- 10 gpm @ 1000 psi
- Dual pleated filters (10 Micron)
- Single "m" code controlled outlet
- Turret index signal





CFT Systems™ Innovations in Coolant-Fed Products & Systems

Globalization creates competition and competitive pressures unlike those of the past. Manufacturers are constantly seeking ways to machine products that are better, faster, more efficient and cost effective than ever before.

Today's CFT Systems™, A George Whalley Company, is fully committed to providing our growing worldwide base of customers with the latest in innovative, high-quality coolant-fed products and systems.

Since 1937 The George Whalley Company has carved its niche by transforming ideas into reality. We invite you to learn more about the inventive spirit of our CFT Systems™, our dedication to improving performance through innovation and most importantly, working with customers as partners helping them solve their most challenging machining applications.

Everything Coolant-Fed™



Scan here to
access our website

18200 South Waterloo Rd.
Cleveland, Ohio 44119
P: 216.453.0099
F: 216.481.9966
Toll Free: 1.800.600.2248

CFT Systems • www.cftsystems.com