



CMET ORA
TOO

HOW WE PRODUCE OUR HIGH QUALITY BLADES

CMT stands for quality, which means we put quality into everything we do. It only makes sense. At CMT we figure that if our router bits are going to be top quality, high-performance and orange, then our saw blades should be too. And to do that, we simply follow the same guidelines for our blades that we do for our bits: we start with a solid design, use only the best materials and manufacture with skill and care. And of course, make sure they are trademark orange.



DESIGN

The simplicity of a circular saw blade design is in reality a complexity of technical considerations. Each blade has to make a certain type of cut, and this requires careful analysis of hook and grind angles, gullet designs, to location of sound dampening slots and the thickness of the blade - just to name a few. So in order for us to get the best design for our blades - and for you to get the best performance from them - we use the same method that we use to engineer our router bits: we combine the knowledgeable minds and experience of our technical department and the latest computer technology. The result is a superior blade that has some rather special "standard" features:

Anti-vibration Design. The anti-vibration cuts in the blade do exactly what their name implies: they are the anti in anti-vibration. This translates into less chattering during cutting and consequently it lengthens the life of the blade. Anti-vibration also means a flawless cut, so stabilizers and scoring blades are no longer necessary.

Expansion Slots. These little hook-shaped cuts in the blade help to reduce noise while regulating the expansion and contraction of the blade as it generates heat during cutting operations.



MATERIALS

When it comes down to it, saw blades are much like router bits - it's just two components: steel and carbide. So in selecting the raw materials, we are every bit as picky with our saw blades as we are with our router bits. Besides, why mess with a winning formula like superior steel and tungsten carbide?

Steel. It's the heart of the blade, so CMT uses only the finest steel available: super 42-44 Rockwell hardness steel.

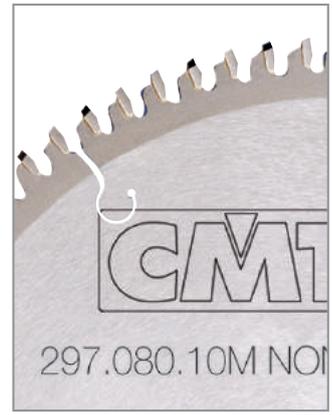
Carbide. The cutting tips of every CMT blade are made from the best grades of micrograin carbide.

MANUFACTURING

CMT saw blades are machined on automated CNC machines, from start to finish. The advanced technology and precision of these machines ensures uniform quality on every blade while giving us the possibility to carry out more efficient quality controls.

Laser Cutting. The steel plate of the blade is laser cut, NEVER die cut, from superior strength steel. This way of cutting steel is not only extremely precise but it makes it possible to cut harder strengths of steel and does not stress the plate while cutting, so the resulting blade is flat and true and more resistant to warping.

Grinding & Tensioning. After it has been cut, the blade is polished and tensioned, the evidence of which can be seen in the superior finish and a tension ring that are visible on the blade. Then the central bore is ground to a smooth finish so that the blade will fit precisely on the saw arbor and will have perfect concentricity during rotation. The seats for the carbide teeth are also ground, making sure that the carbide tips fit perfectly, providing the right conditions for making a secure braze.



Silver-Copper-Silver Sandwich Brazing. Once again, experience has been a good teacher. Automated brazing with a special silver-copper-silver “sandwich” brazing compound yields excellent results and reduces the chances of failed welds. In addition, this combination of metals is critical during brazing because as the steel body and the carbide tipped teeth are heated and cooled, they expand and contract at different rates.

The copper layer acts as a buffer and keeps the carbide from cracking during cool down shrinkage.

When woodworking, the copper provides flexibility and resistance to impact which in turn protects the carbide tips and steel shoulders when cutting through harder substances or knots in the wood.

Specially Formulated Carbide Tips. What is true for router bit carbide tips is also true for the carbide tips on saw blades: what’s good for one type of blade may not be good for another.

At CMT, we have studied carbide formulas and their impact on blade performance and have developed specially formulated carbide tips to match each blade’s application. Larger blades require an extra-fine harder carbide that holds its edge and resharpens easily, while smaller blades need a special carbide that can withstand the occasional nail or imperfections that often occur in construction work.

For each blade and each use, there is carbide made especially for it.

Sharpening & Laser Marking. The final step is sharpening the micrograin carbide teeth. During the sharpening phase, each angle is ground to razor-sharp precision - down to the Milacron - on multi-axis CNC machines.

We also laser mark our blades so you have all the details about the blade type and its uses, right there on the blade.

Quality Control. We always manually check the quality of our blades at each step of the manufacturing process. However, now we also use a fully automatic measuring process that measures every dimension of the blades without actually coming into contact with it.



CMT's fully automatic measuring system.

Packaging & Instructions. CMT blades are packed and protected for shipping, display and storage in either a sturdy cardboard box or in a patented heavy duty HDPE plastic case that’s as durable as our tools. Illustrated instructions for resharpening are included with your CMT blade so that you have all the details you need to keep the blade sharp, which will also help you extend the life of the blade.



CMT ORANGE TOOLS. Manufacturers of high quality woodworking tools since 1962, we are still proud to put “Made in Italy” on all our orange tools.

Maximizing Saw Performance



| BLADE'S RANGE | ORANGE CHROME | INDUSTRIAL / XTREME | ITK PLUS | CONTRACTOR |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PERFORMANCE | SUPERIOR ★★★★★ | BEST ★★★★★ | BETTER ★★★ | GOOD ★★ |
| DESCRIPTION | Designed for professional woodworkers who require high precision and durability from their saw blades. Special chrome carbide reduces tooth abrasion, whereas the chrome plated body protects against rust, corrosion and guarantees long-lasting performance.  | Designed for fine woodworkers, finish carpenters, construction and industrial users who run their blades all day long demanding ultimate precision and extended life, while conquering the most challenging applications.  | Designed for the professional contractor and remodeler, CMT's ITK Plus delivers a clean, fast, effortless cut through wood and wood composite material. With a nice balance of features to price the ITK Plus line as a great value.  | Designed for the contractor and remodeler CMT's Contractor thin-kerf blade line delivers solid performance at a very economical price. Ideal for any construction projects that require cutting wood and wood composite material.  |
| USER | Professional Woodworker | Professional | Contractor & Remodeler | Contractor & Remodeler |
| USAGE | Run All Day | Run All Day | Daily Use | Daily Use |
| PRICE POINT | Premium | Premium | Mid | Value |
| MATERIALS | Wood, plywood, OSB, laminate, melamine, mouldings, MDF. | Wood, Wood with nails, Plywood, OSB, Laminate, Melamine, MDF, Non-Ferrous, Metals, Stainless Steel, Plastics, Fiberglass, Solid Surface. | Wood, Composite Decking, Plywood, OSB, Laminate, Melamine, MDF, Fibercement. | Wood, Composite Decking, Plywood, OSB, Laminate, Melamine, MDF. |
| STEEL PLATE | LASER-CUT PREMIUM QUALITY STEEL PLATE Made of 46-48 HRC precision German steel which is laser-cut to provide tighter tolerances ensuring longer life and more accurate cuts. | LASER-CUT PREMIUM QUALITY STEEL PLATE Made of 46-48 HRC precision German steel which is laser-cut to provide tighter tolerances ensuring longer life and more accurate cuts. | HEAVY-DUTY LASER-CUT PLATE Made of a thin & strong plate, laser cut from the finest steel which is then hardened to 44 HRC to ensure a longer life and more accurate cuts. | HEAVY-DUTY STAMPED DIE CUT PLATE Made of a thin & strong plate cut from the finest steel which is then hardened to 44 HRC to ensure a longer life and more accurate cuts. |
| CARBIDE TEETH |  INDUSTRIAL CHROMIUM MICROGRAIN CARBIDE Cutting teeth are made from a specially formulated chromium micrograin carbide which stays sharper longer by reducing cutting edge abrasion, improving cut quality and tool life. |  INDUSTRIAL CHROMIUM MICROGRAIN CARBIDE Special formulated chromium micrograin carbide which stays sharper longer by reducing cutting edge abrasion, improving cut quality and tool life. |  INDUSTRIAL SINTERHIP HI-DENSITY CARBIDE™ The new process SinterHIP (high temperature 1025°C and high pressure 105 bar) creates a porosity-free and Hi-Density carbide which provides a longer cutting life than traditional carbide. |  LONG LASTING CONSTRUCTION GRADE CARBIDE A specially formulated construction grade carbide which provides a longer cutting life and great resistance to impact. |
| KERF | THICK | FULL KERF | THIN-KERF | THIN-KERF |
| BRAZING |  TRI-METAL BRAZING The Silver-Copper-Silver tri-metal brazing process lets the teeth withstand the severe impact caused by cutting harder woods and composite material. |  TRI-METAL BRAZING The Silver-Copper-Silver tri-metal brazing process lets the teeth withstand the severe impact caused by cutting harder woods and composite material. | SILVER BRAZING The silver brazing process lets the teeth withstand the standard impact caused by cutting soft woods and composite material. | SILVER BRAZING The silver brazing process lets the teeth withstand the standard impact caused by cutting soft woods and composite material. |
| COATING |  CHROME COATING Blade plate is covered with a chrome layer to protect your tool against corrosion and rust, guaranteeing a longer tool life. | HARD LACQUER Protects against corrosion and rust. |  NON-STICK ORANGE SHIELD COATING Keeps the blade running cool, reduces pitch build up and protects against corrosion. Ideal for all types of wood including wet lumber. | HARD LACQUER Protects against corrosion and rust. |
| EXPANSION SLOTS |  LASER-CUT HEAT EXPANSION SLOTS Are engineered to allow the blade to expand when heat build-up occurs from use, preventing blade warping. | LASER-CUT HEAT EXPANSION SLOTS Are engineered to allow the blade to expand when heat build-up occurs from use, preventing blade warping. | LASER-CUT HEAT EXPANSION SLOTS Are engineered to allow the blade to expand when heat build-up occurs from use, preventing blade warping. | HEAT EXPANSION SLOTS Are engineered to allow the blade to expand when heat build-up occurs from use, preventing blade warping. |
| SOUND DAMPENING CHANNELS | LASER-CUT SLOTS FILLED WITH SOUND-DAMPENING MATERIAL Slots are filled with polyurethane to reduce vibrations and noise (10% less than standard saw blades), improving cut quality and blade life. | LASER-CUT SOUND-DAMPENING CHANNELS Are specifically designed to dampen running noise and control wobbling caused by unwanted harmonic vibration. | LASER-CUT SOUND-DAMPENING CHANNELS Are specifically designed to dampen running noise and control wobbling caused by unwanted harmonic vibration. | ✗ |
| TENSIONING RINGS | TENSIONING RING A visible tension ring on the blade body provides stability during cut and perfect concentricity during rotation. | TENSIONING RING A visible tension ring on the blade body provides stability during cut and perfect concentricity during rotation. | ✗ | ✗ |
| SHARPENING |  PRECISION MIRROR FINISH SHARPENING Each tooth is ground to razor sharp precision on a multi-axis CNC machine which creates the perfect edge angles, guaranteeing extra-clean cuts and extended life. Featuring less than 0.25 µm Rmax in edge roughness. |  PRECISION MIRROR FINISH SHARPENING Each tooth is ground to razor sharp precision on a multi-axis CNC machine which creates the perfect edge angles, guaranteeing extra-clean cuts and extended life. Featuring less than 0.25 µm Rmax in edge roughness. |  SHEAR ANGLE SHARPENING The shear angle grind on the teeth's front face produces smooth cuts, while reducing the cutting force needed and improving cutting performance. | STANDARD SHARPENING Each tooth is sharpened with accuracy and control to guarantee clean cuts and longer lifetime. |