

# Carbide Processors, Inc.

Northwest Research Institute, Inc.

Newsletter June 2005

3847 S. Union Ave. Tacoma, WA. 98409 (800) 346-8274  
sales@carbideprocessors.com [www.carbideprocessors.com](http://www.carbideprocessors.com)



## President's Letter

Emily and What's His Name go to Redding , Ca. We went down to give a speech on safety and health to the Western Saw Filers Educational Association. Nice folks but they seemed more interested in talking to the pretty blonde lady than they were in talking to the speaker.

## Joel Garcia and a Good Idea

Joel organizes the Western Saw Filers golf tournament. In years past they have called for gifts. This year they set up a deal where we could call the pro shop and buy a gift certificate with a credit card. This way the winner gets what they want, it is much easier for us and the pro shop sees the sales which makes them happy about hosting the event.

A. Landau "If it contains a diamond we can make it." Nice folks and very quality conscious. We were told that the people who use stump grinders didn't care if their tips were chipped. The folks at A. Landau said that may be true someplace but not with their customers. They also give away refrigerator magnets and they must be pretty generous with them because there are half a dozen on the side of our lunchroom refrigerator.

Correction – this is a guide mill not a honer. I got it wrong last month.

Simonds makes both and you better call them for the difference.



## Emily's New Invention

Emily had a customer call and ask if he could buy flux in a squeeze bottle. This makes lot of sense since it doesn't dry out, is really easy to keep mixed with shaking and it is easy to dispense. We've been using it this way in our shop for over twenty years. Anyway Emily invented the idea that maybe, since one customer wanted it that others might.



## Great Free Premium The *Hot Rod* Saw Tip Poker with Normalloy

Possibly the most overbuilt tool anyone every made.



Normalloy is technically an ASM classified Superalloy. This is a much better alloy than required for this use but we use and sell a lot of it so the price is right. Besides we like making really, really good tools.



Birch wood handle with pin vise tip and Brass ferrule. Only \$12.95 See P. 2

## Call Your Simonds International rep to see how to get one free P. 2

## Now Selling Onsrud in Eastern Washington

John Alcamo - Pro Cut Saw & Tool  
202 N Greenacres Road  
Greenacres, WA 99016  
(509)922-7335

## Need This?

We Got It And The Prices Are Good Sale on P. 9



We Save You Money The Same Way Costco & Wal\*Mart Do On Carbide And Silver Solder



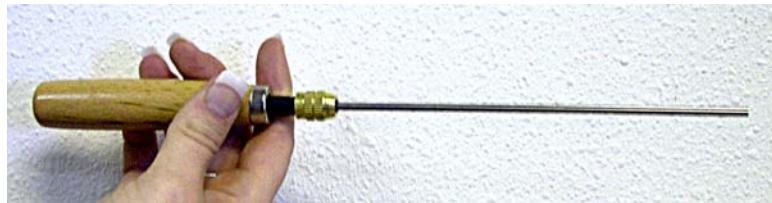
Call this nice lady for both low prices and hard to find parts. 800 346-8274

We shop world wide aggressively to get the very best prices on what we buy. We have seventeen silver suppliers and over forty regular carbide suppliers (over 1500 carbide suppliers total.) . We are a low overhead operation. We don't have outside salespeople so those that do a bit more work to call us can save some money.

## Lowering Cobalt Levels In Coolant Is Easy

Use Cobalt test strips to determine level then add cobalt remover in 4 oz amounts until you get the level where you want it. **Free test strips P.5**

# The ***Hot Rod*** Saw Tip Poker with Normalloy



You can  
customize  
the tip  
with a  
hammer



A multi-purpose saw tip manipulation tool for more effective and safer brazing.

With the new miracle metal Normalloy. It stays cooler much better than tungsten or steel and has none of the risks associated with thoriated tungsten welding rod.

Simonds International wanted something they could give away as a promotion.

The Product Manager, Norm Brown, suggested something nice that filers could use to move tips around while brazing.

Normalloy is technically an ASM, ASTM, SAE classified Superalloy. It is one of the high performance metals developed for aerospace and military uses. Think of a navy fighter flying from Pensacola to a carrier and sucking seawater and sand into a jet engine running at 2300 F. Think of rapidly cycling knives in high temperature, highly corrosive industrial uses.

Birch wood  
handle with  
pin vise tip  
and Brass  
ferrule

**This is a much better alloy than required for this use but we use and sell a lot of it so the price is right. Besides we like making really, really good tools.**



**Safer than a welding rod.** With Normalloy the handle and the upper rod stay cooler, longer. However, unlike a welding rod, when Normalloy is hot you can see it. Here is a Normalloy rod (top) and welding rod (bottom) at about 1800 F which is much higher than brazing temperatures.

## Many, Many Benefits

- 1800 degree working temperature
- Stays cooler longer than welding rods or files
  - 10 % of the thermal conductivity of tungsten
  - 50 % of the conductivity of tool steel
- Much lower cost
- None of the dangers of thoriated tungsten welding rod
- Non-galling – resists molten metal attachment
- High yield Strength
- Excellent high temperature oxidation resistance
- Excellent low temperature impact resistance
- Excellent stress corrosion cracking properties
- Excellent crevice corrosion resistance. properties
- Excellent high temperature service carburization inhibition
- Superior oxidation resistance
- Superior cavitation erosion resistance
- Superior galling resistance
- Resists wear, tearing or freeze up of both the primary and contact materials over a wide range of service temperatures.
- Excellent elevated temperature wear resistance

Comparison data supplied by ASM, SAE and ASTM sources.

**SYSTI  
MATIC**

**SIMONDS**  
INTERNATIONAL

West USA

800-686-9876

West Canada

800-663-0776

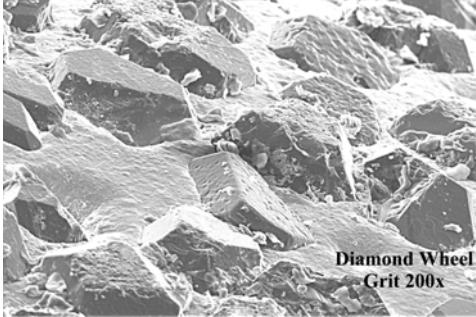
East USA

800-343-1616

East Canada

800-387-7681

## **Grinding Difficult-to-Grind Materials**



Diamond Wheel  
Grit 200x

Diamond wheel grit 200x  
Dye-grinding diamond wheel. Grits in a metal-bonded diamond grinding wheel.

Certain materials, such as ceramic and cermets, are difficult to grind for two reasons. First, they are very hard. This causes the diamond grits in the grinding wheel to dull, resulting in larger forces, excessive heat generation and higher temperatures. Second, because they are brittle, they are very sensitive to high temperatures, which can lead to cracking.

The key to grinding these materials is to keep the temperatures down.

First, improve the cooling by using coolant exit velocities that match the surface velocity of the wheel. This will enable coolant to penetrate the air barrier and get between the grits in the wheel, i.e., into the wheel porosity. For example, a wheel running at 8000 surface feet per minute requires a coolant pressure of 120 psi at the exit. Not only will this reduce temperature by taking away the heat more efficiently, it will reduce temperature by improving lubrication at the grit-workpiece interface, reducing the amount of heat generated.

Next, use a diamond grit that is i) smaller (for example, switch from a 220 to a 320 grit); ii) more friable (a grit that fractures more easily); and iii) angular-shaped (as opposed to blocky-shaped). All three of these will result in a wheel that is self-sharpening, which will generate less heat. And, the angular-shaped grits will attack the workpiece more aggressively, resulting in more efficient cutting.

Third, if using a resin- or metal-bonded wheel, be sure to "stick" the wheel aggressively and frequently to get it to open up.

Fourth, grind more gently, meaning smaller depths of cut and lower table velocities. This more gentle grind will generate less heat. If creep-feed grinding, emphasize reducing the table velocity. If shallow-cut surface grinding, emphasize reducing the depth of cut.

Finally, reduce the wheel speed. This will allow the grits to penetrate more deeply into the workpiece, improving the cutting and chip-formation efficiency and reducing rubbing and excessive friction. The deeper penetration will also place larger forces on the grits, getting them to self-sharpen better.

The downside of all of this is that cycle times will be longer and wheel wear will be greater. That's a fact of life when grinding difficult-to-grind materials. Get over it and get grinding.

Dr. Jeffrey A. Badger is a specialist in grinding. He works independently as a consultant, visiting toolmakers and companies doing grinding, helping them improve their grinding operations. He is also author of the regular question/answer column "Ask the Grinding Doc" in Cutting Tool Engineering. He can be contacted at badgerjeffrey@hotmail.com. His webpage is [www.TheGrindingDoc.com](http://www.TheGrindingDoc.com).

### **Really Good Information Sources**

#### **Free Magazine**

##### [Cutting Tool Engineering](#)

400 Skokie Blvd., Ste. #395  
Northbrook, IL 60062  
Phone: 847-498-9100  
Fax: 847-559-4444

<http://www.cuttingtoolengineering.com/>

#### **Carbide Saw Manual**

By Lowell C. Freeborn

With Mr. Freeborn's permission, we have put this in digital form because it is just too good to lose. If you have

email we will send it to you free. We can send you a paper copy bound but it costs \$12 to have it copied, bound and shipped.

#### **Silver Solder / Braze Alloys**

<http://www.brazealloy.com/>

Hi Impact vs. Trimetal  
Using Trimetal shims  
Solving Braze failure  
Forms and kinds  
Calculating usage  
Free online Brazing book  
About Braze alloys  
Choosing braze alloys  
Pretinning  
**Free online quotes**

#### **Tungsten Carbide**

<http://www.therightcarbide.com/>

Carbide grades  
Carbide quality specifications  
Advanced grades  
Special shapes and sizes  
Failure analysis

#### **Coolant Filtering**

<http://www.coolantfiltering.com/>

Benefits of filtration  
Units we sell  
Removing cobalt  
Health and safety  
What to filter out  
Tool damage from, dirty coolant

#### **Our Main Web Site**

<http://www.carbideprocessors.com/>

#### **Free book on Coolant Management**

- Free book on Brazing Tungsten Carbide and Ceramics
- Free book on Coolant Management

#### **Free online woodworking magazine.** Woodezine.com

#### **Internet based discussion group**

Membership is free. Simply send an email to [IndustrialToolSharpening-subscribe@yahoogroups.com](mailto:IndustrialToolSharpening-subscribe@yahoogroups.com) or if you have questions, email Tim Cook with Cook's Sharpening Service at [MrBass@sanmarcos.net](mailto:MrBass@sanmarcos.net)

This is a new discussion group but I am very impressed by the quality of the participants.

# Carbide Grinding Operations

## Disposing of carbide sludge, swarf and filters

What follows is based on U.S. and Canadian laws. Individual states, provinces, cities, etc. may have their own regulations. We believe that this information will apply in 98% of all cases but we cannot guarantee it 100% in any individual area.

### Not Hazardous Waste

If you collect your waste coolant, swarf, etc put it in barrels or other containers labeled

Carbide Grinding Coolant  
Held for Recycling

In most places material held for recycling is not a hazardous waste since it is not waste at all. The sign can be made from a sheet of plain 8 1/2 x 11 paper using a magic marker and scotch taped to the container. We use peel & stick sheets we run through the printer.

### Sell as much as you can.

Sell the collected swarf where you sell scrap carbide. Empty the bag filter out and let the collected swarf dry. The scrap dealer is primarily interested in the cobalt. There is not a whole lot of money in it but it is generally easier and cheaper than paying to have it hauled away.

### Classify the filter properly

The filter is full of carbide, diamond, binder, oil and grease. Typically it is legal to call it an oil filter. If it is an oil filter, (which it is since it does filter oil) you can dispose of it as service stations dispose of oil filters from an automobile. Often this is a matter of letting it drain, crushing the filter and then throwing it in the trash.

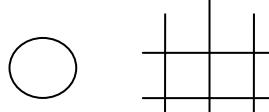
### Recycle the coolant

Quite often having the coolant recycled can save a lot of money. A good filter system will keep the coolant clean to where it needs to be replaced once a year. Have the old coolant recycled and use it for make up coolant over the course of a year.

## Why Filters Clean Finer Than Their Size Rating

The size rating is the smallest size particle that the filter will let through. The filters are made by a felting process where the fibers are laid down at random and pressed together. This means that there millions of smaller nooks and crannies that trap smaller particles.

### The common perception is that the filters are laid out in a grid

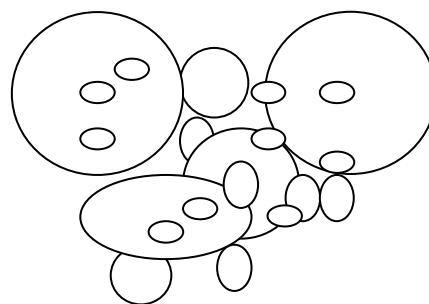


If the circle is a 25-micron particle (actual size of a 25 micron particle is 0.001 inches) then the square is the size of the biggest hole allowed between threads in a bag or string wound filter

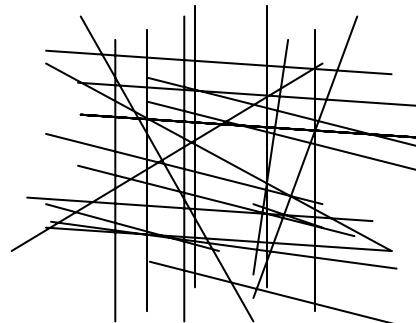
### Instead the filters are laid out overlapping at random



If the circle is a 25-micron particle (actual size of a 25 micron particle is 0.001 inches) then the square is the size of the biggest hole allowed between threads in a bag or string wound filter



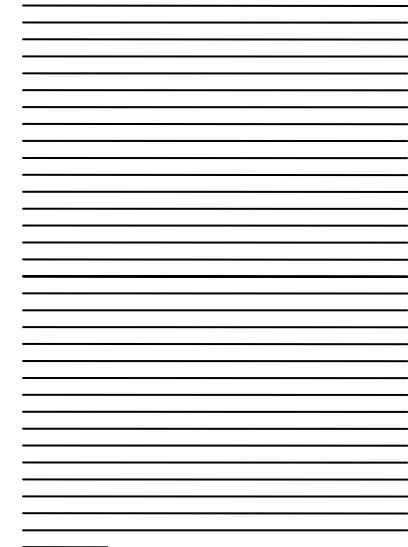
Dirty coolant has lots (10,000 - 25,000 per cc or 165,000 - 400,000 per cubic inch) of different size particles.



The bag is 0.125" thick and the cartridge filter is 1.5 inches thick. 25 microns is 0.000985 inches. 126 layers in the bag and 1,522 layers in the cartridge.



The dot represents a 25-micron particle and the three lines represent the thickness of a bag filter wall.



The dot represents a 25-micron particle and the lines represent the thickness of a cartridge filter wall

## We Buy Scrap Including Swarf and Sludge from Grinding

### You Benefit Two Ways

1. Instead of spending money for disposal you make money
2. You get a record that you have legally disposed of material that could be classified as hazardous waste.

The swarf and sludge from grinding carbide, Stellite and steel alloy knives may be worth something. Call Emily 800 346-8274

**Filing Room Health & Safety**  
Presented to the  
**California Western Saw Filers**  
**June 18, 2005**

I am not an expert in filing room safety and health or anything related. What I will do is explain what the experts have said as well as I understand it. If you have any issue regarding health and safety please contact a true expert immediately.

**1. Science And Engineering Standpoint**

A clean filing room has tremendous economic benefits in terms of reduced consumables, increased machine life, faster grinds and improved quality

**2. Safety and Health**

**3. The situation**

- A. No one really knows how any particular chemical will affect any particular individual
- B. The laws may or may not make sense but they are the law
- C. Most people benefit by giving you the worst news possible.
- D. If I tell you that the odds are one in a million that you will get hurt you may still get hurt. However I will have to face your attorney who will want to know why I led you to believe that the practice was safe.
- E. There is an awful lot of money in fake diseases and fake cures. This includes grossly overstating dangers.

**4. Safe Solutions:**

- A. Know the law and comply – MSDS sheets, training, record keeping
- B. Use good quality materials
- C. Keep a clean shop
- D. (You will notice that these conclusions are considerably less specific than those given from a science and engineering standpoint)

**5. Law**

Laws change for reasons that have very little to do with science, commonsense or anything but popular opinion. However they are still laws.

**6. Legal Rule #1 - Do Not Fight With the Official**

The inspector who visits you may or may not know how stupid some of the laws and regulations are however he or she did not make them but they have to enforce them.

**7. Science**

People come in an amazing variety of sizes and shapes. This reflects their internal chemistry and gives some idea of the range of individual sensitivities to things like sunburn and industrial chemicals.

**8. How the Government Tells If Something Will Kill You (Sort Of)**

When you find a dose that reliably kills half the rats you have an LD50 (lethal dose of 50%) This is sort of how they get the LD50 figure on MSDS sheets and other.

**9. You May be Extremely Lucky**

People have had nails driven into their head, been run over by cars and had their heads ripped off and have survived. This doesn't mean you will.

**10. Safety Rule #1 You Won't Get Hurt If It Doesn't Get To You**

Enclose the Operator and / or Enclose the Machine and / or Control the Air

**11. Air Collection Information and Equipment – articles and suppliers**

**12. Hardmetal Disease - Giant Cell Pneumonitis Induced by Cobalt**

This gets all the publicity but it is just a very small part of the story.

**13. Tungsten-Alloy Shrapnel Might Cause Cancer**

**14. Any kind of chemical exposure is bad if overdone. It is also bad to put sharp, pointy things in your lungs.**

**Safety Considerations in Carbide Brazing and Use**

**1. Here are some rules that are too simple but they give us a place to start.**

- A. Anything that goes into your lungs besides slightly damp, clean air is not good.
- B. The dirtier the stuff you breathe the worse it is for you.

**C. Some stuff is worse to breathe than other stuff**

**D. Some people are hurt more by some things than other people.**

**2. Use good quality materials – cheap, contaminated materials greatly increases the danger. You should be able to get an analysis measured in parts per million.**

**3. Do not overheat the carbide and the braze alloy**

**4. "Safe" Braze Alloys Can Still Be Dangerous**

**5. If you breathe in chunks of these materials they get into your lungs and can tear up the lung tissue. This is pure physical damage. In wet grinding it is chunks in the grinding fluid droplets. In dry grinding it is airborne chunks.**

**Your Best Source of Information - MSDS sheet**

**Monthly Inspection For Safety**

**Cobalt Test Strips  
And Cobalt Remover  
Get a test strip free just for asking**





NW Research Institute, Inc. / Carbide Processors, Inc.  
3847 S. Union Ave. Tacoma, WA. 98409  
253 476-1338 [tomwalz@email.msn.com](mailto:tomwalz@email.msn.com)

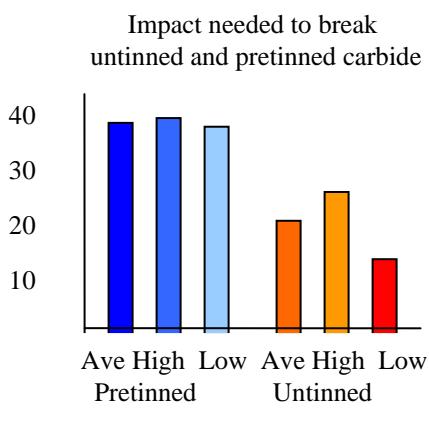


## Why Carbide Processors Pretinned Tips Are The Best In The World

Carbide Processors tips stay on the saw better and are much harder to break than any other pretinned tips.

23 years and an awful lot of money in research have given us tools and techniques to do things no one else can. We routinely do things people say are impossible or that don't make any difference. However, when it is all said and done, **our pretinned carbide works better.**

### Our Pretinning Stops Breakage



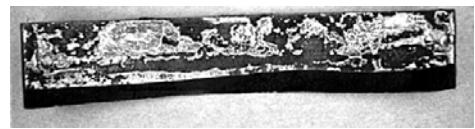
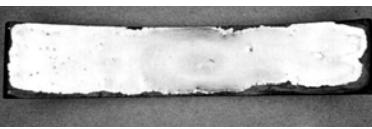
	Untinned	Pretinned
Average	17.63	33.13
High	22.11	34.17
Low	11.78	32.44



### Carbide Processors Tips Are The Easiest To Grind

You grind faster with less wheel usage and less dressing. There is no braze alloy on the edges to clog diamond wheels. We also clean the tips so well that you can actually see a reflection in them.

### Our Pretinning Stops Tip Loss



If the silver solder doesn't stick to the saw tip then the saw tip won't stay on the saw. Our special tools and techniques let us give you much better performance. Above left is our part. The braze alloy is smooth and covers very well. This part will stay on. Above right is a part our competition did. The braze alloy (light color) is blotchy and only covers a small part of the carbide. This part kept coming off.



### Consistent Quality for Consistently Excellent Results

Alloy made to parts per million. (15 x better than AWS requires) We cut it within .001". Proprietary treatments to increase; wettability, cleanliness, etching, priming, bond strength, impact protection. The surface has a slightly rough, micropore finish for greater mechanical and chemical bonding. You can get a tensile as high as 100,000 psi. compared to 10,000 to 20,000 for others.

**\$100 Off Any Filter System**  
purchased between now and September 30, 2005

# Filter Units We Sell



CP 1000 - \$599  
High performance,  
long life, low cost



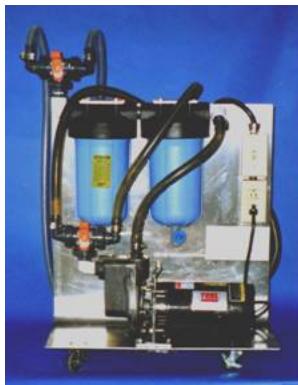
CP 2000 - \$1,198  
Single pass, fine filtering  
Optional sump for laser  
crystals, military, etc.



CP 2002 - \$2,038  
One-month filter life in  
saw shops. Best model for  
saw & tool shops



Wall Mount unit - \$675  
Same life & effective  
filtering as CP 2002 - runs  
off coolant pump on grinder



CP 2002 -2 \$2,454 3 way  
Turn 2 valves and filter 2 sumps  
Mighty Max motor add \$480



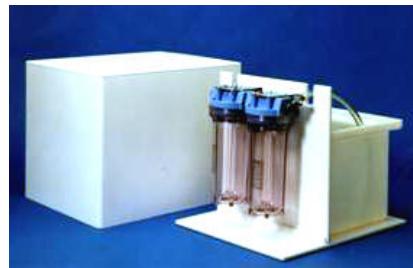
CP 2020 - \$2,398  
4 times filter life of 2002  
Mighty Max motor add \$480



CP 3000 - \$2,160 with  
3<sup>rd</sup> filter & \$2,640 with  
Mighty Max motor –  
ultra clean filtering &  
long filter life



Turbo 2000 - \$4385  
Ten filters and all  
stainless steel filter  
housing With Mighty  
Max motor



Lab unit - \$1798 Optical  
shops, general lens grinding &  
other uses where appearance is  
essential. Quiet, clean pump  
and clean, white professional  
cover

**Also One Only  
CP2002 Filter Unit \$1000**  
This machine was purchased by a customer  
who decided after trying it they wanted our  
bigger system



## Filter Units- explanation and comparisons

CP 1000 - \$599 High performance, long life, low cost

A submersible pump drops in the sump and pumps though a bag filter. This gives very good filtering and very good filter life in light duty shops. Designed for use with manual equipment



CP 2000 - \$1,198 - Single pass, fine filtering - Optional sump for laser crystals, military, etc. This will work in very well in high capacity saw and tool shops but will need a filter change about every three days. Best with a separate sump where ultra fine polishing (think 2,000 grit) is needed.



CP 2002 - \$2,038

One-month filter life in saw shops. Best model for saw & tool shops.

This unit is the result of seven years of constant development with the input of a couple hundred saw and tool operations from one man shops to major international manufacturers.



Wall Mount unit - \$675 - Same life & effective filtering as CP 2002 - runs off coolant pump on grinder. This unit mounts on the wall and uses the coolant pump on the grinder. Most grinders have very small coolant pumps and very ineffective filter systems so you may need to upgrade your grinder coolant pump.



CP 2002-2 \$2,454 3 way - Turn 2 valves and filter 2 sumps - Mighty Max motor add \$480

Makes it very easy to switch from one sump to the other by just switching two valves. Not good for filtering two sumps at the same time



CP 2020 - \$2,398 - 4 times filter life of 2002 - Mighty Max motor add \$480

The CP 2020 has 6 times the capacity of the CP 2002) is solid, proven, hardworking, and has a huge capacity. The unit has a bag filter (typically 25 microns) followed by a cartridge filter (typically 5 microns). The unit can be configured as a parallel unit for polishing after a

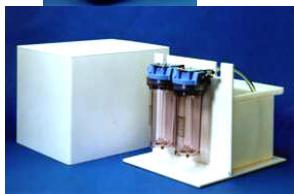


CP 3000 - \$2,160 with 3<sup>rd</sup> filter & \$2,638 with Mighty Max motor – ultra clean filtering & long filter life.

The third filter services as a polishing filter for ultra clean coolant.



Turbo 2000 - \$4385 - A customer requested "silo" unit in stainless steel. This unit holds 10 - 10" filters or 5 - 20" filters. This gives an exceptionally large number of filter options including disposable, reusable and charcoal filters in sizes down to one micron. The open interior causes turbulence that increases efficiency by shifting flow to the most suitable area. An excellent unit for use as a polishing unit with a centrifugal filter system



Lab unit - \$1800 Optical shops, general lens grinding & other uses where appearance is essential. Quiet, clean pump and clean, white professional cover

## Blow Out Sale Slashing Prices

It's our year end and the accountant says we have to lower inventory P. 7

### Accounting Special All Must Go In This Blowout Sale

Tips, various grades and sizes

- Purified Black Flux 1 lb. 12.00
- Purified Black Flux 5 lb. 50.00
- Black Flux 1 lb. 8.00
- Black Flux 5 lb. 27.50
- Black Flux 30 lb. 120.00
- Silver Solder 6.90
- Tipping rods
- Cobalt test strips (\$70 / 100)
- Cobalt remover 4 oz. \$5.95
- Clearance Tips 0.10 / tip
- Clearance Tips .500 0.15 / tip
- Clearance Tips that need pretinning add 0.05 additional /tip



## Buy Silver Solder And Carbide Easier & Save Money

### Your Best Choice For Small Quantities.

We have two new web sites; one for carbide and one for silver solder. You can go on line and get a great deal of information on our products including help in selecting the right product for your needs.

The silver solder / braze alloy site is [www.brazealloy.com/](http://www.brazealloy.com/)

The carbide site is [www.therightcarbide.com/](http://www.therightcarbide.com/)

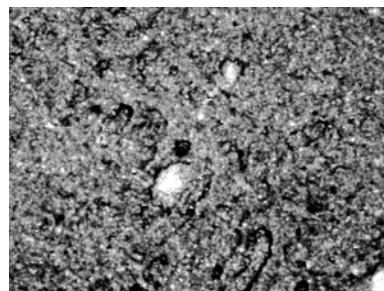
Free quotes on line any time day or night.



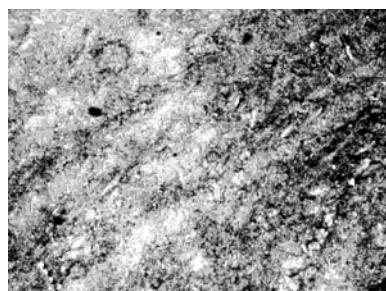
## You Want Flux? – We Got It.



Ordinary Black Flux – very good but it does have inclusions in it



Purified Black Flux – an extra filtering step makes it smoother and much more effective.



**White flux  
Black flux  
Purified Black  
Flux  
1#  
5#  
30# bucket  
Case of 6 – 5#  
jars  
Case of 24-1#  
jars**



## Equipment for Sale

Good morning all,

Royce//Ayr has bought out a small independent sharpener upon his retirement here in Canada and we offer the following equipment for sale.

All equipment is being used until the end of this month and most of it just needs a good cleaning and some tender care to be put to work again.

Machinery is sold as is and we are not able to extend any kind of warranty except for what is stated above.

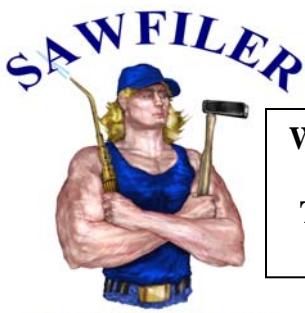
No reasonable offer will be refused.

- 1 small saw polisher with home made table for up to 20" blades US \$100.00
- 1 Roto-Phase phase converter 7.5 HP capacity. US \$250.00
- 1 Saturn FKS 450 T+C grinder (1982) US \$5,000.00
- 1 Vollmer CHC-20H Auto saw grinder Serial #1369 (1985) US \$5,000.00
- 1 Vollmer CHC-20H Auto saw grinder Serial #1443 (1987) US \$6,000.00
- 1 Foley Router bit grinder US \$2,000.00
- 1 Foley 367 saw grinder US \$2,500.00
- 1 Elmar ES850 Auto planer knife grinder, 34" capacity (1990) US \$6,000.00
- 1 Chain saw grinder US \$100.00
- 1 Rotating saw brazing plate. US \$25.00

Please feel free to contact me for more information,  
Gene Veening ROYCE//AYR  
Cutting Tools Inc  
Voice: 1-519-623-0580  
Fax: 1-519-623-9371  
[www.royceayr.com](http://www.royceayr.com)

### Free Ads Here

We are happy to run legitimate ads for people. A legitimate ad is anything that might appeal to the readers. We're real easy about this but I'm not real crazy about ads to make money at home. On the other hand if you had a meeting, puppies for sale, used equipment, job opening or similar we would be happy to run it.



Carbide Processors, Inc.

We Like Big  
Guys  
T shirts up  
to 6x

## New T shirts

Emily likes Canadians so we had a design done with the Canadian flag in it. She says that if she can sell 50 of these at \$14 each it will be worthwhile doing a special run. In the meantime we have new T shirts with just the filer on the front



## Free New Coffee Mugs

I took a day off and while I was gone my old camping buddy stopped by and sold Emily and Mary some really nice, new, big, coffee mugs. They say that giving these away will make me a lot of money so please call and get one or more. Emily 800 346-8274

## Blow Out Sale Slashing Prices

It's our year end and the accountant says we have to lower inventory P.9

## Free Ads Here

We are happy to run legitimate ads for people. A legitimate ad is anything that might appeal to the readers. We're real easy about this but I'm not real crazy about ads to make money at home. On the other hand if you had a meeting, puppies for sale, used equipment, job opening or similar we would be happy to run it.

Royce//Ayr has an ad on P. 9 where they are selling equipment. This is a good example of what qualifies for a free ad. The prices look good and Royce//Ayr certainly is very legitimate.

## Paid Ads Here

We have been asked if we would sell ad space here. I suppose we would. We are now monthly to 2500 names. If you are interested call Kathaleen at 800 346-8274.

**Freeborn Saw Manual  
now in PDF** thanks to Tim cook  
of Cook's Sharpening Service San  
Marco, TX

## Comet Grade Tips

They are a little more expensive and there is a wait to get them but, boy, are they selling.

Grade X for extended wear in man made materials – up to 5 times the life.

Grade M - an impact grade for nail cutting, frozen wood and similar.

Grade A – a metal alloy material - extremely good in aluminum, red oak and similar.

**Do what everyone else does. Buy 500 to try, test them and then buy 5,000 to use.**



## Our Customers Say

Don Brady of Optibit, "Carbide Processors pretinning is lovely and good. Don't want to use any other source."

Greg Pero of All Trades Blades Services, "I really love the Purified Flux."

Sheila of Blum's Saw in Puyallup told Mary that she thinks we are wonderful.

**Carbide Processors, Inc.**

**Northwest Research Institute, Inc.**

**3847 S. Union Ave.**

**Tacoma, WA. 98409**