

December 2008

MiniTech Engineering & Model Supplies Newsletter

Special Points of Interest.

The Laser Centre
Edge Finder

Getting to know
you featuring
Minitech's own
Isaac Morton.

What is CNC
Machining???

Book Review on
"Bearings"

New products—
0.5mm slitting
saws and the new
CQ6121+ Bench
Lathe.

Welcome to our first Newsletter.
It is intended to publish this every
second month and distribute to
those customers who volunteer
their email address to receive the
document.

Besides news, this will be a
medium for our customers to
share any tips, thoughts and ideas
about their projects that may be
of interest to other readers. If you
would like to contribute please
email your article to me at ...
bob@minitech.com.au.

We don't expect future editions
to read exactly as this edition as
hopefully, some of our readers
will have added to it's contents.
See last page for suggestions....

There will also be specials, new
products and product features that
would be useful in expanding
your skill set.

There is also a getting to know
you section where we intend to
introduce ourselves and
eventually you to everyone else.
We will be inviting our customers
to respond to some questions that
they are happy to share with
everyone else.

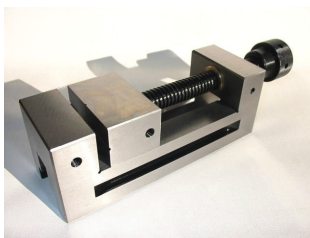
Any suggestions or contributions
to this newsletter will be
gratefully received. We can't
guarantee we will use it but we
will have a lot of fun reading it.

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unsubscribe to this newsletter just
click here... [Unsubscribe](#)



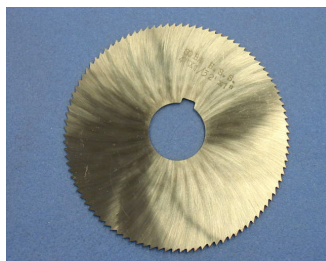
**The Laser Centre
Edge Finder—
How does it work
and how good is
it? See over leaf**

New Products....



3" TOOL MAKERS VICE

Hardened and precision
ground one piece steel. Jaws
75mm wide open to 100mm.
Beautifully made. \$192.50



0.5mm SLITTING SAWS

Slitting saws this thin have
been unavailable for more
than 12 months. 75mm dia x
25.4 bore x 60 tpi. \$19.25 ea



MASTER PRECISION LEVEL—150mm

These have been almost
impossible to acquire and have
been out of stock for over 12
months. \$121

No picture available

"HOW TO WELD"

The latest publication
to hit the shelves.
Every aspect and
every type of welding
taught. \$44

The Laser Centre Edge Finder—why didn't I think of this!

Ever see something that is so simple and so clever that you ask yourself why didn't I think of this first. Especially if it makes money.

Dr Skip Adrian, an Industrial Technology lecturer in a Uni in California for 32 years noticed that students had problems with wigglers etc. After several years experimenting with his classroom laser pointer he came up with this brilliant little tool. To this point, 9000 of them have been sold in 36 countries since 2004.

How accurate is it?

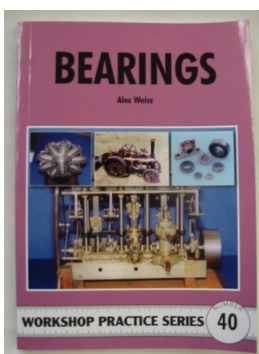
Had to go to their web site for this information but the estimated repeatable accuracy is 1/1000" or .02mm, but like all tools, is dependant on the skill of the operator

How does it work?

You first need to align the LCEF. (Instructions provided and they are quite simple) Put the LCEF in the chuck that will hold the tool and turn on the tumbler switch.

A beam of laser light is projected and a red pin of bright laser light shows up on whatever it strikes. This can be used to move a mill to be directly over a centre pop or to the edge of a work piece. It can also be used to move a tool to the centre of an existing hole.

In a lathe it can be placed in the tailstock to locate the centre of an irregular shaped work piece or in a headstock to locate a tailstock after it has been offset.



BOOK REVIEW

“Bearings” is the latest in the “Workshop Practice Series.”

Written by Alex Weiss and published in 2008. A 117 page paperback book covering

everything the amateur would want to know about making, repairing and selecting bearings. Chapters include plain bearings, ball and roller bearings and their problems and solutions, linear and oscillating bearings, less common bearings, lubrication and seals, which type of bearing to use, modelling applications and full size applications. It reviews how to make plain bearings and remetalling of white metal bearings. Great value at \$19.80.

What is CNC? It's an acronym for Computer Numerically Controlled. The milling machine or lathe has each of the adjustable feeds connected to either a stepper (Moves in very small steps) or servo motor (continuous operation) The drive screws are normally changed from the traditional acme thread to one driven by ball bearings in a thread (Ball screws) to eliminate backlash.

Each of the motors, including the spindle motor, is connected to a controller. This controller is in turn connected to a computer. The computer has special software downloaded to it (Available free from the internet or is included with the machine purchase) to which the operator can enter a set of instructions (Generally called G-Code). When the go signal is given, these instructions are given in a very fast and ordered manner so that a lathe or milling job with a sequence of operations can be completed without human intervention.

This is particularly valuable when a large number of identical parts or a curved or irregular cutting line has to be made with absolute accuracy. Modellers could for example, cut out a set of train wheels complete with spokes from a block of metal in a matter of minutes. Often time the G-code for a job is generated by other computer programs that simply require the operator to scan an image or download a file to their computer.

This simple explanation becomes very complex in industry where repetitive and intricate work makes it the only economic option for production. Home users can use less expensive machines to engrave, etch a photograph onto a sheet of material and cut perfect circles and curves. It can also replicate a part with great accuracy.

Getting to Know you... Isaac Morton... Minitech staff



Longest Career Position?

9 years in the RAAF at Amberley's F111 maintenance depot—too long.

What do you do when you're not working?

Try to LOOK like I'm working. Otherwise it's climbing, trail riding, diving, ski and wake boarding.

Favourite Food?

No real favourites but Thai and Italian are great.

Best Film you've seen?

There is no greatest amongst the truly great.

What would you do if you had unlimited funds?

I'd be a benevolent dictator.

How many keys on your key ring?

Small bundles to suit varying situations

What car do you drive?

Nissan Maxima as they are an underrated bargain second hand

What would you prefer to drive?

None suit all my needs. For 30 years I've had at least 2 cars and 3 motorcycles — most roadworthy.

Where would you like to go on Holiday?

One of those places waxed lyrical. Where is Montego Bay?

Do you return tools to their place after you have used them or when you finish the project?

Being accustomed to shadow boards and vigilance against jet engine FOD (foreign object damage) it's the former.

Project working on now?

Mainly repairs to motorcycles, also wanting to build unique tree house.

3 people you would like to have dinner with?

Jesus Christ, Charles Darwin and a comedian like John Cleese or Dame Edna—all together.

Who would you *not* want to be trapped on a desert Island with?

I can't imagine anyone who wouldn't drive me crazy so I guess someone who had very little meat on them.

Stop Press!

The new CQ6121+ bench lathe has arrived. The workmanship in it is superb. It has a 210mm swing over the bed and 400mm distance between centres, (up on the previous 300mm) and the motor has been beefed up from 550w to 750w. The finish on it is vastly superior to other machines we have seen and are very excited about it.

The previous CQ6121 (one left) is on special for \$1750 whilst the CQ6121+ has an introductory offer of \$1815



CHRISTMAS OPENING TIMES.

OUR STORE WILL BE CLOSED FROM 5PM FRIDAY 19TH DECEMBER 2008 AND WILL REOPEN ON MONDAY 5TH JANUARY 2009.

YOU WILL BE ABLE TO PLACE ORDERS VIA THE WEB SITE THAT WE WILL FILL AND SHIP IMMEDIATELY WE RETURN TO WORK.



Your Suggestions...

This news letter is to be a regular production and future editions to be expanded to include your suggestions. If you have a machining or workshop hint or tip that you would like to share...send it in. If you have a picture of a project that you are working on that you would like to share....send it in. If you want to buy or sell something and you have some details....send it in. Make your contribution less than 100 words and send it by email to bob@minitech.com.au.