

TIP TALK

MARCH 2017

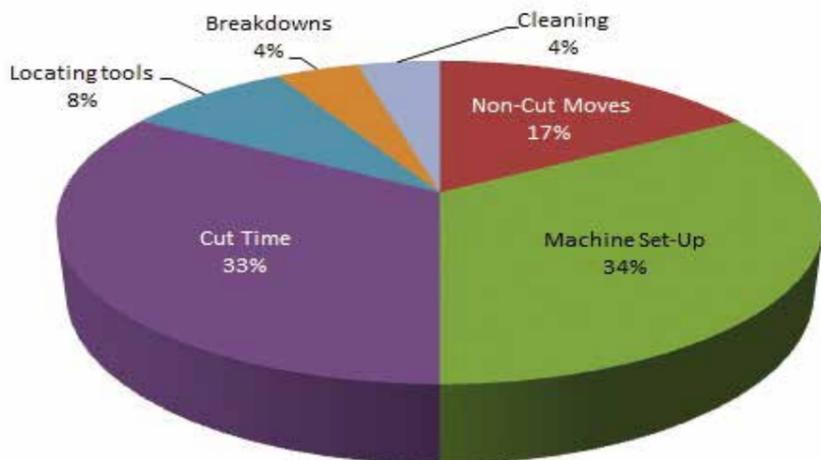
www.iscar.co.nz

0800 808 477

ARE YOU CHASING THE BIG MONEY?

Look at the typical time usage for a CNC machine on the graph below. Whether the machine is running or not, you still have the same on-going costs of labour, finance, and overheads.

MACHINE UTILISATION



In New Zealand (the land of the Long White Cloud and short runs) we notice most companies don't seem to pay much attention to non-cut times, apart from in the cycle time. They are then forced to look at the cost of the tools to try and be more competitive. We call this chasing small money.

Tooling is 3% of your total cost. Labour (machine time) is 26%, and that's nearly eight times more. So which is better: a 10% saving on \$1000 or a 20% saving on \$10?

Our advice is to chase the **Big Money**. Try this approach with your tooling supplier:

"The cost of your tooling is irrelevant compared to the cost of production."

Chase the Big Money with these production solutions:

- MultiMaster Milling Cutters:** just change the head, no set-up time, and the tool can remain in the holder with no offset changes required.
- ChamDrill Drilling Tools:** same as MultiMaster but in drilling options. Just change the head, no set-up time, and the tool can remain in the holder with no offset changes required.



Want conventionality? Try:

- FiniShred:** a Solid Carbide Cutter with two functions: a ripper and finisher in one. Cut your production time by half.
- CHATTERFREE:** a cutter designed to reduce vibrations so you can increase feed and depth of cut over any other cutter design. Make massive savings in labour.
- Pre-Thread and Chamfer Hole Drills:** a two-in-one operation.
- Tool Vending Machines (Automatic Tool Management):** tools where you want them, when you want them. No more hunting for that missing pack of inserts, or overstocking on "special deals" offered by a sales rep to his buddy (your person in charge of purchasing).



...and there's much much more!

There is only **one** Tooling Supplier in New Zealand that helps you chase the Big Money, by reducing labour costs, reducing cycle time, reducing set-up and downtime, and managing your tools. Leave chasing the small change to your competition.

Talk to **ISCAR PLUS** when you want to get serious about Big Money.

ISOTURN: Swiss Precision Decision

Iscar Plus is unique in helping its customers improve their productivity, profitability, and performance through the application of leading-edge technologies and the use of advanced cutting tools. The progressive work of Iscar's R&D department has enabled the company to remain constantly at the forefront of tool development.



Now, due to customer demand, Iscar has extended the application range of the popular double-sided WNGP 0403 and DNGP 0703 inserts by adding Swiss-type external tools to its already comprehensive selection of boring bars.



The new **PWLNL X-04S** and **PDJNR/S lever-lock tools** are available in 10, 12, and 16mm square shank sizes. The ingenious clamping system enables users to index the insert by using the supplied key from either free side of the tool without removing it from the machine.

This reduces machine idle time and increases production efficiency.

The new tools have been designed specifically for Swiss-type automatics and small CNC machines that are widely used in sectors such as the medical, aerospace, automotive, electronics, and general metalworking industries.

The new Swiss-type boring bars, carrying **WNGP 0403** and **DNGP 0703** inserts are ideal for machining complex precision parts, with a length to diameter ratio that is subject to deflection in the turning process. The new tools will make the economical double-sided WNGP 0403 and DNGP 0703 inserts even more attractive, as they can also be utilised for external turning.

Make the Swiss Precision Decision by choosing **ISOTURN Boring Bars** for your next job. Contact us on 0800 808 477 for more information.

WANT TO MAKE MONEY IN CNC MACHINING?

THEN YOU NEED THE **NXV1020A VERTICAL MACHINING CENTRE**



FEATURING:

- 3-Axis Direct Drive Design
- Spindle Speed 12,000 RPM
- Spindle Taper BBT40
- Rapid Feed Rate 48/48/32
- Travel 1020/520/540mm
- Weight 5.4 Tonnes

Starting from **\$123,000 +GST**

For viewings and demonstrations call iCNC on 0800 85 87 84

All your tooling needs at **grabatool.co.nz**

ISCAR PLUS

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NEW! ROCKSTAR DRILLS WILL ROCK YOUR WORLD!



950 HOLES NO PROBLEM FOR ROCKSTAR DRILLS

Iscar Plus tested a single through-coolant ROCKSTAR Solid Carbide drill across four different metals. The 5.6mm drill was used to make a total of 950 holes on Stainless 316, Low Carbon, P20, and Bisloy 80.

The image to the left shows the ROCKSTAR Drill after the tests were run, with exceptional cutting edge retention clearly visible.

Stainless 316	Low Carbon	P20	Bisloy 80
420	210	208	110

There is no other brand of drill that comes close to this level of performance, we guarantee it!

Milling Aluminium Intelligently

Milling aluminium may seem to be an easy process: take a balanced, sharp, polished tool and rotate it at maximum speed, set at medium feed, and the material will cut like butter.



However, the characteristics of aluminium mean it's not always that simple. Aluminium exhibits high thermal conductivity and therefore the chips produced when machining transfer high levels of generated heat, resulting in significantly-reduced thermal loading of the cutting edge. Due to these properties, milling aluminium is characterised by extremely high cutting speeds and feeds.

They also result in the formation of built-up edge (BUE) when machined.

This unwelcome phenomenon increases the mechanical load on the cutting edge, making efficient chip flow more difficult to

achieve. It also affects the balance of rotating tools, and causes the entire machining process to be less efficient.

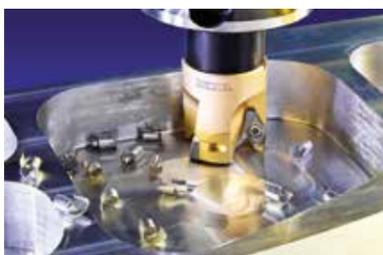
The evacuation of aluminium chips may also be affected by using the wrong kind of cutting tool. If the volume of a tool's chip gullet (flute) is not sufficient, the long chips during aluminium milling will clog the tool. Overcoming this obstacle demands the use of a tool with less teeth, or reducing the applied cutting data; actions that negatively impact productivity.

Tool manufacturers take the specific features of aluminium into consideration when developing cutters. A key to success is the correct combination of cutting geometry, tool material, and tool treatment, in addition to the options for delivery of optimum coolant supply.

ISCAR has developed an entire comprehensive range of indexable milling cutters, designed specifically for the efficient machining of aluminium.

HELIALU Milling Tools

The HELIALU line of indexable milling tools enables efficient high speed machining of aluminium, ensuring powerful metal-removal rates, high-accuracy, and excellent surface finish characteristics. In short, all the qualities demanded by the world's leading producers of aluminium components.



SOLIDSHRED End Mills

The ECR-B3-R-C family of 3-flute, solid carbide end mills are designed for rough machining at high metal removal rates. They feature serrated cutting edges that divide wide chips into narrow that are easily evacuated. Inner coolant channels directed to each cutting edge enable the delivery of uninterrupted coolant flow to the cutting zone.



These design features, in combination with polished flutes, significantly improve chip evacuation abilities allowing considerably increased productivity. The serrated edge that chops the chips also enhances vibration resistance, and together with the relieved neck of the end mill contributes to stable cutting under high tool overhand conditions.



CHATTERFREE ECA-H4...CF End Mills

The desire to increase the productivity of end mills led to the launch of an innovative 4-flute ISCAR design: CHATTERFREE ECA-H4...CF. A family of end mills that provide an extra flute to help increase metal removal rate for both rough and finishing. These end mills have an impressive vibration-dampening ability due to the inclusion of a non-equal flute helix and the variable angular pitch of its teeth.

MULTI-MASTER Milling Tools

For applications requiring high overhang of a tool, MULTI-MASTER is the best. Designed with shanks of different configurations and a variety of replaceable cutting heads, MULTI-MASTER is ideal for milling aluminium. Long-reach solid carbide end mills are produced from expensive carbide rods of considerable overall length. Despite the small fluted part of an end mill being directly involved in cutting, after tool wear or a sudden breakage, the whole expensive rod needs to be thrown away. This is a serious economic disadvantage, which MULTI-MASTER does away with by simply replacing the cutting head.



Milling aluminium is an easy process if it is done intelligently. ISCAR provides a range of tools to make the process as efficient and cost-effective as possible.

To take advantage of ISCAR's milling solutions on offer, call us now on 0800 808 477.

FACEBOOK IRL

For those of a certain generation who do not and cannot comprehend why Facebook exists, I am trying to make friends outside of Facebook while applying the same principles.

Therefore, every day I walk down the street and tell passersby what I have eaten, how I feel at the moment, what I have done the night before, what I will do later, and with whom. I give them pictures of my family, my dog, and of me gardening, taking things apart in the garage, watering the lawn, standing in front of landmarks, driving around town, having lunch, and doing what anybody and everybody does every day. Also, I listen to their conversations, give them the "thumbs up" and tell them I like them.

And it works just like Facebook. I already have four people following me: two police officers, a private investigator, and a psychiatrist.



Pearls of Wisdom

1. Knowledge is knowing a tomato is a fruit. Wisdom is not putting it in a fruit salad.
2. Politicians and diapers have one thing in common: they should both be changed regularly and for the same reason.
3. To steal ideas from one person is plagiarism. To steal from many is research.
4. Light travels faster than sound. This is why some people appear bright until you hear them speak.
5. A bus station is where a bus stops. A train station is where a train stops. On my desk, I have a work station.
6. The shinbone is a device for finding furniture in the dark.
7. Some people say, "If you can't beat them, join them." I say, "If you can't beat them, beat them," because they will be expecting you to join them, so you will have the element of surprise.
8. Some cause happiness wherever they go. Others, whenever they go.

Charities we proudly supported in 2016

