

TIP TALK

JANUARY 2014

www.iscar.co.nz

0800 808 477

INCREASE YOUR WORKSHOP EFFICIENCY

Do you want to reduce tool handling costs? Cut down on handling, procurement, inventory, administration and increase efficiency with the MATRIX, an electronic warehousing system. The MATRIX is your total management system to control inventory, streamline purchasing and drive down costs. MATRIX combines the most innovative automated tool dispenser with MATRIX-TM, a powerful management software. Access to an item stored in MATRIX's locked bins is electronically controlled by the management software according to pre-defined authorisations.



The MATRIX draw with bins.

A&G Price, a Thames based foundry and engineering works, has recently installed their second MATRIX from Iscar Pacific. Initially specialising in the production of steam locomotives, the company has expanded into carrying out highly technical refurbishment work for industries such as hydroelectric power generation, mining and processing; as well as winning contracts on the ANZAC frigate and the America's Cup campaigns in 1995 and 2000.

Seeing an opportunity to decrease machine and staff down time, A&G Price decided to install an electronic warehousing system to move away from manual stock control. After running a vending machine for years and finding that system lacking, A&G Price started the search for a product that would track and control their tooling spending and consumption through the reporting and statistics function, as well as monitor who has taken out the tools. 'The old tool vending system sent us an email and

...the MATRIX automatically reorders new tools by sending an email to Iscar Pacific, with tools delivered to you the next day.

then that would be hand written on a purchase req, passed onto the store man who turned it into a purchase order and it then got processed so a lot of double handling' – Jake Tyrrell-Baxter, Machine Shop Manager.

'training is really easy for the guys to pick it up, it's a dream'
Neil Goodman, EG Whiter

The MATRIX has cut down this process, as well as providing Jake with reporting tools, and future proofing the A&G Price's tool inventory systems 'to the point where we could take tools and book tools through it as well, and have an open stock inventory on that front' – Jake. With the MATRIX system you can set minimum stock levels and the MATRIX will automatically reorders new tools by sending an email to Iscar Pacific, with tools delivered to you the next day.

Up in Auckland at the workshop of toolmaker, EG Whiter, owner Neil Goodman installed his MATRIX three years ago and hasn't looked back. After becoming fed up with having tools kept in disarray in draws, the MATRIX was installed and now his workshop efficiency has improved because tools are in one place, always in stock and re-ordering is as easy as pressing a button. Training his staff was quick and straightforward 'training is really easy so for the guys to pick it up it's a dream, it's just really easy for them, Iscar put the catalogue out there for me so they can use the barcode to scan it and also use their flybuys card or whatever they've got to log in, just a scan log in, just scan products, makes it really fast' – Neil Goodman, EG Whiter. Employees now not only know exactly where the tool they need is and how to find it, but have also been empowered to learn for themselves about which inserts are which and the grade of each insert.

"The MATRIX shows you what you're spending, what you're ordering and gives you stock value of the machine", RPM CEO, Chris Vincent.

A&G Price had their original MATRIX for two years and recently added their second one which has been installed to run seamlessly with the first. The MATRIX has also been able to integrate with the hardware from A&G Price's first tool vending system. Flexibility is the key to any storage solution, and MATRIX excels. Drawer configurations can be swapped-in or out, and add-on cabinets are connected with a click of a cable. Multiple cabinets can be deployed in different locations and networked to run from one common database.

Tool and die manufacturer RPM make the most of their MATRIX when it comes to reporting. 'The MATRIX shows you what you're spending, what you're ordering and gives you stock value of the machine', RPM Chief Executive Chris Vincent. The reporting function of the MATRIX allows the administrators to access reports with the full transaction history by item, employee and cost code; and consumption statistics for better planning and cost reduction analysis. Reports and graphs can be viewed online or downloaded in XLS, XML, CSV or PDF formats.

The MATRIX has an easy to use interface with a large touch screen that allows the user to issue, return and administer items. The plug and play technology means that the MATRIX can be up and running quickly with little training required.

Why use a MATRIX in your machine shop?

1. Short distance to Point of Use, saving time to issue tools
2. 24/7 access to tools
3. Less warehouse handling
4. Automated ordering and inventory control.
5. Statistics and reports that allow you to control tool costs and consumption
6. Reduced purchasing and administrative costs
7. Minimized stock-outs and excess stock
8. No wasted time looking for missing tools
9. Ability to track tools and their usage
10. The right persons receive the right tools

The Matrix is available now from Iscar Pacific through our CTMS specialist salesman. Call us now on 0800 808 477 for more information.



Jake Tyrrell-Baxter, with his two MATRIX machines.

Merry Christmas from iCNC!

YCM, making all your Christmas wishes come true!

Dear Santa,

This year I want a **NXV1020A** from YCM, it's awesome!

It's got all this stuff

- BBT40 Spindle
- High Stability & Tool Management
- 3 Axis Direct Drive Design
- 12,000 RPMs

I don't know how you'll get it down the chimney, especially since it looks like you've had a few too many pies. Have you tried the paleo diet?

Have a fantastic day!
Craig

iCNC | INTEGRATING
MACHINES - TOOLING - KNOW HOW

www.icnc.co.nz **YCM**

Wishing you a Happy New Year!

HOLIDAY OPENING HOURS

Our Auckland office will be closed from Christmas Day reopening on **Monday January 6th**.

As always we will have staff on call for emergency requirements and can send tools by courier on days they are operating.

In consideration of our staff, we will not be available on statutory holidays.



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TURN-MILLING CAN INCREASE YOUR EFFICIENCY

Turn-milling is a process whereby a milling cutter machines a rotating workpiece. This method combines milling and turning techniques and has many advantages, but only relatively recently the introduction of multitasking machine tools has allowed turn-milling to display its benefits.

For years, even under mass adoption of CNC technology, development of metal cutting machine tools was traditional enough, when progress of specific machines like turning, milling or drilling moved towards a separate direction. If machining centers already successfully integrate machining by rotating tools – milling and drilling – turning CNC machines continued with their own progress. Looking for new ways to make the manufacturing process more efficient by reducing settings of a machined part and its transfer from one machine to another led to adding a tool head with rotary drive to typical CNC turning machines and allowed realisation of turn-milling. Today modern multitasking machine tools feature additional axes of the head movement, advanced control systems and upgraded software that provide the opportunity to perform the majority of machining operations with only one setting per workpiece.

In turn-milling, there are two principle kinds of machining: peripheral when the axes of a workpiece and a cutter are parallel; and face, for which these axes cross. Peripheral turn-milling is similar to milling by helical interpolation and may apply both to external and internal surfaces of the revolution, while with the use of face turn-milling only the external surfaces can be machined. Despite that turn-milling seems to be very similar to turning (“turning by rotating mill”), there is a substantial difference between these two machining processes. The cutting speed in turn-milling is defined by the peripheral speed of the milling cutter and not by the rotary velocity of the workpiece as in turning. The workpiece rotation relates

to feed.

What are the advantages of turn-milling and where is its application practical?

First of all, machining of non-continuous surfaces may cause interrupted cutting (various grooves, undercuts, etc.). In classical turning, this operation results in impact load, poor surface finish and early tool wear. In turn-milling, the tool is a milling cutter that is intended exactly for interrupted cuts with cyclic load.

The cutting speed in turn-milling is defined by the peripheral speed of the milling cutter and not by the rotary velocity of the workpiece as in turning.

Machining materials produces long chips. In turning, chip disposal is difficult, and finding a proper chipbreaking geometry of a cutting tool is not such a simple task. The milling cutter used in turn-milling generates a short chip that considerably improves swarf handling.

Take for example, machining eccentric areas of rotating components such as crankshafts or camshafts. In turning, off-center masses of these components (crank journal, eccentric cam, etc.) cause unbalanced forces that adversely affect performance.

Turn-milling with its low rotary velocity of a workpiece gives the possibility to prevent this negative effect. Also, consider machining heavy-weight parts; their rotation, which defines cutting speed in turning, is connected with limitations of the main drive of a machine tool. If the drive does not allow

rotation of large masses with required velocity, cutting speed is far from the optimal range, and turning performance will be low. Turn-milling provides a way to overcome the above difficulties effectively.

ISCAR indexable face milling cutters are good tools for turn-milling. However, productive machining with the use of the turn-milling method demands right cutter positioning with respect to the workpiece, correct choice of insert geometry and tool path. Cutter positioning, for instance, influences form errors, and insert geometry – surface finish. Usually the final shape is produced by a wiper insert, which is mounted on the cutter. The questions of applying turn-milling, tool choice and defining cutting data deserve fuller consideration and should be examined specifically.

Introducing turn-milling into the manufacturing process can solve serious problems and substantially improve your output. Productivity using this relatively new and promising machining method is possible when you have a suitable modern machine and correctly chosen cutting tools.



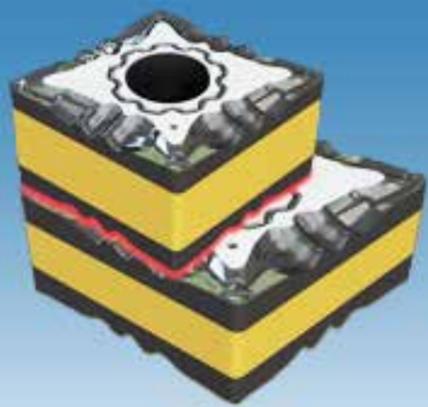
A FRESH LOOK AT TURNING

Most machinists like to use strong inserts for security but in 80% of jobs only a small part of the insert is used. So IMC engineers took a fresh look at this problem and came up with a new concept. **Why not make a small insert that is the same thickness as current inserts?**

There you have it, the new FLASH TURN inserts from ISCAR, or RHINO TURN from Taegutec, featuring smaller size inserts with same thickness, giving superior strength at more economical pricing.

Have a look at the WNMG, CNMG, SNMG and DNMG Inserts.

Do more with less!



FLASHTURN



WHAT'S IN THE KICK ASS COLUMN TODAY?

Round milling inserts that produce a square shoulder like a Heli-Mill insert?

ISCAR's new 606 round inserts are designed for the machinist that wants to save time and have less hassles, ramping down in a profiling situation the inserts generate the

90 degree shoulder making finishing operations much faster. Very positive rake angles and dovetail style clamping make sure these inserts reduce power requirements and increase stability in the cutter body

The H606 RXCU 1206 inserts have six cutting edges to ensure that your machining economics are taken care of.

Truly kick ass material if you are profiling with round inserts, only two chip breakers are needed for Cast iron, steel, stainless and high temp alloys.



The H606 from ISCAR

GRABATOOL IS BACK!

Our discount tooling site will be back in action in January 2014 so keep a look out for tooling bargains.

Grabatool will be bringing back the famous Wednesday midweek deals, plus specials for \$3, \$5 and \$7.

Go to www.grabatool.co.nz now to sign up for weekly emails and be the first to know about our deals.



LAUNCHING JAN 2014

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