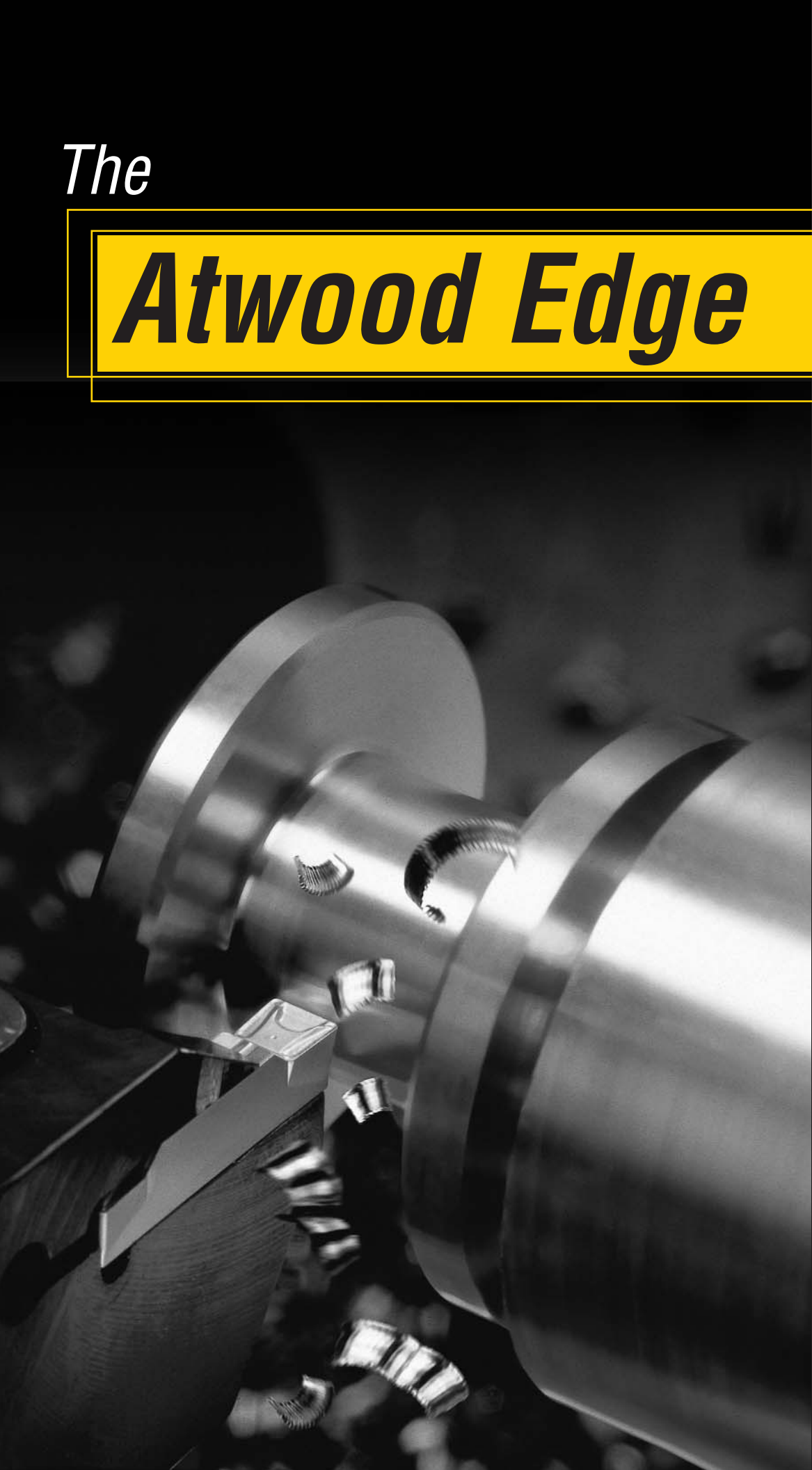


*The*

# ***Atwood Edge***



*The Tooling Specialist*

*What's the difference between an Atwood Tool  
and one from our competition?*



## *Technical Expertise. That's The Atwood Edge.*

And, it's what sets us apart from other suppliers. Unmatched technical expertise gained from years of industry experience and product knowledge.

So, while they supply you with tools and little else, we provide you with solutions that give you a competitive edge.

And, improve all areas of your operation.

Especially production. You'll get maximum productivity from your equipment when you use the right tool or implement a product solution recommended by the Atwood Production Improvement Specialists.

Inventory management. We'll streamline your inventory, help you manage it better and drastically cut costs.

And, purchasing. You'll see significant savings through supplier consolidation, simpler ordering and competitive pricing.

The result: a more productive, more efficient, more profitable operation.

The Atwood Edge - it can do a lot for your bottom line.



# Production Improvement Specialists

*Today, more and more suppliers are just selling tools. That's it. And, they're doing it without the necessary knowledge and experience to provide you with the best cutting tools for your specific applications.*

*Your production remains the same, but wouldn't you rather see it improve?*

*That's where our technical expertise makes a difference.*

*We constantly search for ways to both increase production levels and decrease production costs.*

*That's The Atwood Edge.*





# Production Improvement Specialists (continued)

## The Right Tool Can Significantly Improve Your Production.

Many companies don't even realize that the tools they're currently using could be limiting production. After all, those are the tools they've always used.

With Atwood, you can trust that our tool recommendations will always be centered around improving your productivity.

Our Production Improvement Specialists will evaluate your tool situation and make sure you're using the best tool for the job. Because, when your equipment is working at optimum efficiency, it can be the difference between paying off that equipment investment in five years - instead of ten.

## We'll Keep You on the Cutting-Edge of Rapidly Advancing Tool Technology.

Today, tools are becoming obsolete faster than ever. In fact, 70% of your current tools will be replaced by improved versions within the next five years. If your supplier doesn't keep up with changes, your production will suffer.

Atwood can help.

Our specialists will update you with product innovations and improvements so that you always

use the latest, most effective tools and related products available.

## Our Repair Services Can Dramatically Cut Your Costs.

Consider this situation: you are continually replacing a certain tool with a new, expensive one on a regular basis. Many suppliers consider this business as usual. We do not.



In fact, our specialists often identify tool inefficiency situations and then provide solutions, such as repairing or sharpening existing tools. This solution is a proven, cost-effective alternative to always purchasing costly new tools.

It's also another example of The Atwood Edge at work for you.

## On-Site Technical Support

When you have problems in production, know that the Atwood specialists are available to come to your facility and provide solutions.

## Documentation is Proof of Your Savings.

Our tool recommendations and product solutions produce real, significant savings. We can provide full documentation on a regular basis as to how they directly and positively affect your operation's bottom line.

## Atwood Technical Services

- Consulting/Engineering Services
- Repair Capabilities
- On-site Technical Support
- Documentation
- In-plant Customized Training



# Streamlined Inventory Management

*Continually-advancing technology means that the tools you have in-stock now may be obsolete next year, or next week. So, what good is a supplier who simply replenishes your inventory with the same old tools?*

*That's where Atwood's technical expertise can help.*

*We stay current with product innovations and improvements so you won't have just any tools in your inventory, you'll have the right ones.*

*We'll also help with your other inventory concerns - too many unnecessary parts, lack of organization, poor employee accessibility, poor accountability of tools, no standardization. These all contribute to an inefficient inventory system that is costing you time and, most importantly, money. Our inventory solutions will help you better manage your inventory and drastically cut costs.*

*That's The Atwood Edge.*





# Streamlined Inventory Management (continued)



## Our Vending Machines Provide Quick, Easy Access to the Latest Tool Technology.

A tool vending machine is a great convenience. But, filling it with the same old parts time and again doesn't do you much good.

You need a supplier with the technical expertise to replace outdated tools with the latest, most effective cutting tools available - Atwood.

We'll keep our "Vertex" Supply Bay Vending Machines stocked with the best tools, so production has access to the latest technology.



## Software Simplifies Tool Crib Management.

Atwood also has the tool crib software to improve your tool crib management, including parts standardization, stocking, tool location, accountability and replenishment.

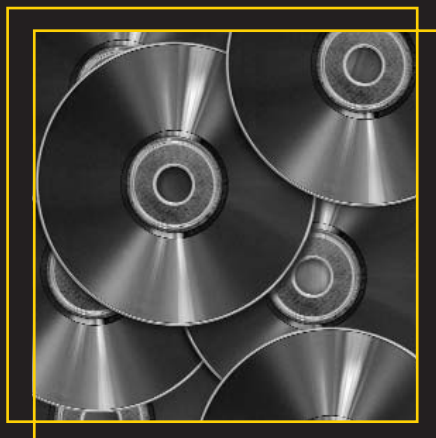
And, with our technical expertise, we'll keep it current - replacing outdated tools whenever a newer, better one is available.

## Customized, Local Inventory Reduces Your Inventory Costs.

Atwood is a local supplier, so your products are always nearby and available. Plus, we can customize our in-house inventory to meet your specific product needs, thus eliminating your cost of stocking all of your products at your facility.

## Atwood Inventory Management Programs

- "Vertex" Tool Vending Machines
- "Cribware" Tool Crib Software
- Local Inventory
- Barcode Technology
- Parts Substitution/Standardization
- Blanket Orders/J.I.T.
- Obsolete/Overstock Elimination
- Accountability



# Simplified Purchasing Initiatives

*Cutting costs in purchasing is essential for a healthy bottom line, and many suppliers can help. But, what else do you get from them? Very little.*

*With Atwood, you get our technical expertise that ensures you get the best tools, at competitive prices, so all areas of your operation benefit - production, inventory management and purchasing.*

*And, through supplier consolidation and e-commerce, we'll further simplify the purchasing process and reduce many costs - which can add up to significant savings over the long term.*

*That's The Atwood Edge.*



# Simplified Purchasing Initiatives (continued)

## Competitive Pricing.

Because of our strong relationships with only the best manufacturers, we can deliver the highest quality cutting tools at competitive prices. With Atwood, you'll satisfy production's need for the best tools, and purchasing's need to keep costs in check.

And, there are a number of ways that we can keep our prices at competitive levels, including volume leveraging, supporting national contract agreements, tri-level negotiations, consistent discount structures and volume incentive rebates.



## Deal with Just One, Consolidated Supplier.

The benefits of having just one supplier are many - less paperwork and processing, easier ordering, simplified billing. Plus, you only deal with one supplier instead of several.

Atwood has the capability to be your one-source supplier for all your product needs, which will help reduce much of the time and cost associated with purchasing.

## With E-Commerce, We're Just a Click Away.

Now you have 24/7 access to Atwood Industries through our website. You can order our products directly, obtain product specs with links to over 100 of our manufacturers, and e-mail us with questions.

Visit us at [www.atwoodindustries.com](http://www.atwoodindustries.com) so you can conveniently conduct business with us on-line, anytime.

## Atwood Purchasing Initiatives

- Competitive Pricing
- Supplier Consolidation
- E-Commerce
- EDI
- Bar Code Purchasing and Receiving
- Monthly Billing
- Detailed Reporting
- A/E, Visa, M/C





# Continuous Improvement Programs



*The Tooling Specialist*

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## Milling Investment Return Analysis Worksheet

Customer: Key Account	Issued by: Atwood Tool Engineer	Date: 10/08/02
Contact: John	Machine # Mazak Horizontal	Test # Gem-Stone Mill #1
Document #44300-016 Increased speed & feed resulting in lower cutting time		
<i>Component: Gem Stone</i>	<i>Material: Cast Iron</i>	
<i>Operation: Mill</i>	<i>Hardness:</i>	<i>CMC Code:</i>
Milling Cutter	45 degree milling cutter	90 degree milling cutter
Milling Code	RA245-127R38-12L	F90-D5.00-1.50-M
Manufacturer	Sandvik	Iscar
Cutting Grade	3020	IC520M
Insert code	R245-12T308M-KH	ADKT 1505 PDR-HM
No. of inserts	6	9
Cutter Diameter	5.000	5.000
Cutting Speed	786	551
Feed/insert	0.0116	0.0055
RPM	600.0	420.6
Feed (IMP)	41.8	20.8
Axial depth of cut	0.10	0.05
Radial depth of cut	4.80	4.80
Metal Removal Rate (cu.in./min)	20.04	5.00
Criterion Tool Change	Productivity & Finish	
Machine cost/hour	\$60.00	\$60.00
Cutting time/component (mins)	0.29	1.15
Non cutting time/component (mins)	1	1
No. of components/edge	10	10
Tool changing time (mins)	5	5
Total time/component (mins)	1.79	2.65
Cutter Cost	\$591.00	\$400.00
Holder life, n (number of indexes)	10000	10000
No. of Inserts	6	9
Insert Cost	\$7.98	\$8.20
No. of edges/insert	4	2
Machine cost/component	\$1.29	\$2.15
Tool Cost/component	\$1.20	\$3.69
Tool change cost/component	\$0.50	\$0.50
Total machining cost/component	\$2.99	\$6.34
No. of components Batch	4000	4000
Insert consumption Batch	600	1,800
Tool Cost/Component Reduction %	67%	

Saved Time / Batch Hrs.	57.33
Productivity Increase %	32%
Savings/component	\$3.35
Savings / Batch	\$13,404.36

# Continuous Improvement Programs (continued)



As a key Atwood customer, you benefit greatly from our technical expertise. Because of it, we can cut costs in all areas of your operation-production, inventory and purchasing.

We can also provide documentation. Here are some examples of how our initiatives have saved money. And, as part of our commitment to your continuous improvement, we are always looking for new, innovative ways to cut your costs so that you operate more productively, more efficiently and more profitably.

*That's the Atwood Edge.*

## ATWOOD INDUSTRIES, INC.

COST IMPROVEMENT SUMMARY  
INTEGRATED SUPPLY CUSTOMER

DATE	DOCUMENT#	DESCRIPTION	TYPE	SAVINGS	Y/N
9/1/01	44300-001	Tested & converted to Sandvik RA390 cutter from R290	Product	3,575.44	Y
9/20/01	44300-002	Tested & converted to Sandvik SNMG 543PR 4025 insert from Valenite	Product	15,472.00	Y
10/30/01	44300-003	Implemented monthly billing - A/P processing and cash flow savings	Other	10,000.00	Y
12/5/01	44300-004	Tested & converted to Sandvik indexable U-Drill from Carboloy	Product	6,423.75	Y
1/22/02	44300-005	Repair of Waukesha helical end mills vs. replacing new	Other	3,207.32	Y
3/2/02	44300-006	Tested & converted to CBN insert from Kennametal insert	Product	1,055.13	Y
3/28/02	44300-007	Tested & converted to Sandvik RA200 button cutter from Dapra ball mill	Product	15,000.00	Y
4/21/02	44300-008	Tested & converted to Hitachi mill from Iscar - reduced machining time	Product	8,820.50	Y
5/1/02	44300-009	Cost savings due to installation of automated tool vending machine	Other	18,000.00	Y
5/5/02	44300-010	Tested & converted component 558 to Sandvik TNMG from Kennametal TNMA	Product	1,414.04	Y
6/20/02	44300-011	Implemented key supplier contract price agreements	Price	17,000.00	Y
7/11/02	44300-012	Inventory reduction due to Manufacturer & Atwood stocking agreement	Inventory	4,317.41	Y
8/28/02	44300-013	Tested & converted to Vardex threading insert from Carboloy	Product	244.15	Y
9/3/02	44300-014	Upgraded to new Norton roll grinding wheel - increased life and performance	Product	8,359.94	Y
9/29/02	44300-015	Tested & converted to Union Butterfield coolant fed tap from standard HSS tap	Product	65,656.66	Y
10/8/02	44300-016	Tested & converted to Sandvik RA245 mill from Iscar F90	Product	13,404.36	Y
10/10/02	44300-017	Tested & converted to Niagara tialn end mill from SGS carbide end mill	Product	3,349.20	Y
10/12/02	44300-018	Tested & converted to Emuge M16 tap from Greenfield - increased speed/feed	Product	2,561.42	Y
11/13/02	44300-019	Tested & converted to Vega threadmill from OSG tap	Product	719.20	Y
1/1/03	44300-020	Installed Cribware barcode inventory & purchasing system	Other	35,000.00	Y
1/14/03	44300-021	Achieved tooling package discount for new Mazak	Price	4,293.05	Y
1/23/03	44300-022	Lowered price/leadtime/inventory requirement on special TPG insert	Price	7,097.50	Y
2/2/03	44300-023	Tested & converted to Circle boring bar from Micro 100	Product	2,004.97	Y
2/20/03	44300-024	Tested & converted to Sandvik CNMG-MF from Carboloy	Product	2,825.00	Y
2/27/03	44300-025	Tested & converted to Sandvik RA390 end mill from HSS end mill	Product	2,785.10	Y
3/10/03	44300-026	Tested & converted to Milacron coolants - improved life and performances	Product	14,750.00	Y
3/25/03	44300-027	Union Butterfield price reduction	Price	7,533.00	Y
5/15/03	44300-028	Resharpen of drill/taps/end mills	Other	1,622.19	Y
6/5/03	44300-029	Tested & converted to Sandvik grade 4005 from 4025 - doubled per edge life	Product	4,317.41	Y
7/10/03	44300-030	Tested & converted to Sandvik indexable U-Drill from Mitsubishi	Product	732.05	Y
<b>TOTAL</b>				<b>\$281,540.79</b>	



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