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Press release

ZOLLER »smileBasic« Tool Presetter – Good to Have or Must Have?

Introduction

With so many changes happening in the world around us and with the level of uncertainty that we have come to experience, it has become essential for any and every industry sector to adapt to technological advancements in order to sustain in a highly volatile atmosphere. In this article, I am going to talk about the metal machining industry in particular and shed some light on the area of productivity improvement with the help of offline tool presetters. Now how does that help a manufacturer become better prepared to handle volatility? The answer is simple, with offline tool presetting you are reducing set up time and eliminating the influence of operator skill level on the accuracy of setting. Does that mean the operator is being replaced by a machine? No, it only means the operator's time is better utilized and he/she has more free time for performing other value-added activities. For example, an operator currently controlling one CNC machine may be able to handle an additional CNC machine because of the tool setting time saved by the offline tool presetter. Also, because of the user-independent nature of an offline tool presetter, any operator irrespective of the skill level can measure/set tools precisely and avoid inconsistency arising from the skill intensive conventional touch-off method. These aspects help shield the manufacturer from effects of market volatility which may include issues like downtime, high demand, operator unavailability, lack of skilled manpower, etc.

"But aren't tool presetters expensive and meant only for bigger OEMs?" is a typical question that I encounter when interacting with decision makers from MSMEs. And the simple answer to that is – No. 'Expensive' is a relative term and we always need to look at the value a tool presetter brings in by analysing its cost saving potential and by calculating an approximate payback period. For that we have formulated an ROI sheet that helps the manufacturer arrive at a payback period based on the manufacturing setup and the suitable variant of the tool presetter chosen.



Return on Investment

	Α	В	С	D					
Machines	Shift [8 h.]	Average tool change [number per shift]	Machine o per tool [Minu		Work days [Year]	Hourly machine rate [INR]	Machine set-up time Costs [Year]		Set-up time Saving* [Year]
VMC 1	3	15	5	2	300	INR 350.00	INR 3,93,750.00	INR 1,57,500.00	INR 2,36,250.00
VMC 2	3	15	5	2	300	INR 330.00	INR 3,71,250.00	INR 1,48,500.00	INR 2,22,750.00
VMC 3	3	15	5	2	300	INR 400.00	INR 4,50,000.00	INR 1,80,000.00	INR 2,70,000.00
Total						INR 12,15,000.00		INR 7,29,000.00	

The above Excel based table shows a sample calculation that makes use of simple manufacturing data and calculates the tool setup time costs associated with the entire process. This is then compared with the setup time invested after employing an offline tool presetter, and the effective advantage in terms of the setup time cost saving is formulated. The potential cost saved is then compared with the cost of the tool presetter to calculate the payback period. In the example below, I have considered INR 9L as the investment for an entry-level tool presetter from ZOLLER just like the >>smileBasic<< (the value is just a reference figure and not a commercial offer!). In this particular example the payback period turns out to be **15 months**, which is quite a reasonable period for any MSME making use of only three VMCs. Also, there are additional benefits in the form of cost saved due to reduced quality rejections by setting the tool 'right the first time', and improved tool life as a result of precise setting.

Т	otal saving p.a.	7,29,000	INR
ZOLLER Tool Presetter	investment:	9,00,000	INR
ZOLLER TMS / Smart Cabinet System	investment:	0	INR
F	Pay-back period	15	months



The »smileBasic«

The »smileBasic« is a simple but powerful offering from ZOLLER. In contrast to the term 'basic' the »smileBasic« is not really basic! That's because there is **zero compromise** in terms of what's going into building this modern tool presetter. It is built with the same special Aluminium alloy that we use throughout the ZOLLER product range. It makes use of the same **branded hardware components** that other variants make use of. Then what makes it more affordable than some of the other presetters in the line-up? Simple, the »smileBasic« offers just the right features that a manufacturer needs for starting a journey in the world of professional tool presetting.





Basic Inclusions:

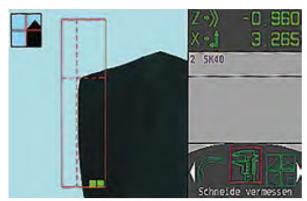
- Easy to use and quick to learn with minimal training
- SK 50 high-precision spindle with integrated calibration spheres including spindle indexing and braking
- Fast measurement, setting and testing of tool cutting edges (length, diameter)
- Software function to determine and measure the maximum contour of the tool
- Various measuring programs for simple measurement like radial and axial runout of the tool cutting edge in the µm range
- Quick and easy printing of the measuring results on labels (option)
- One-hand control handle for quick, concurrent positioning of the Z- and X-axes
- Data output via RS232 interface

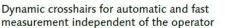
Technical Data:

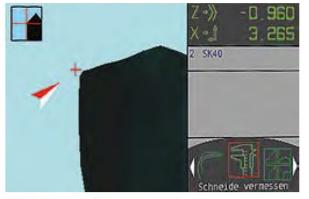
- Max. tool length Z: 350 mm
- Max. tool diameter X: 320 mm

Options:

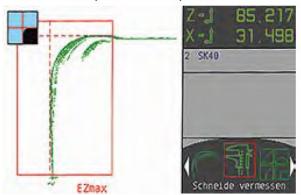
- Base table
- Cutting edge inspection (12-fold magnification of the cutting edge in incident light)
- Projector function
- Software function for the output of thermal labels
- Tool management
- Navigator compass needle
- Pneumatic spindle indexing and spindle brake
- SK 50 vacuum tool mounting spindle
- Adapter and utensil tray (only available with base table)
- Adapter SK, HSK, Capto, VDI and many more
- Spindle-protection
- Label printer







Compass needle for simple camera positioning to measure nominal values (option)



Software function for determining and measuring the tool contour Verdict – definitely a must have!



Cutting edge inspection – 12-fold magnification of the cutting edge in incident light for quality control (option)



In MSMEs, a new piece of equipment such as the tool presetter that supports and enhances the manufacturing process has traditionally been treated as a 'good to have' rather than a 'must have' product. Times have changed, so has the competition. In order to have a competitive advantage in the manufacturing process in terms of quality, throughput, and process reliability, MSMEs need to explore new products on the shelf and update their existing process. The ROI calculation is easy and so is buying the »smileBasic« tool presetter. You just have to send us an email or pick up the phone and give us a ring. Your competitors have done it, what are you waiting for?

About the Author



APOORV NENE

An Industrial Engineer by education, currently working as the Technical Sales Manager for ZOLLER India Pvt Ltd. He can be reached at <u>nene@zoller-in.com</u>

E. ZOLLER GmbH & Co. KG

With enthusiasm for inspection and measuring technology, E. ZOLLER GmbH & Co. KG. based in Pleidelsheim near Stuttgart, have been developing innovative solutions for greater efficiency in manufacturing processes for more than 75 years. More than 40,000 presetting and measuring machines with worldwide unrivalled software solutions have been installed to date.

ZOLLER offers everything for efficient and process-reliable cutting tool handling in the manufacturing process. With ZOLLER solutions, tools are digitally and physically recorded, measured, managed, stored, and inspected throughout the entire tool life cycle. An international network of subsidiaries and agents ensures the highest level of service quality with personal customer care.

ZOLLER India

ZOLLER India is headquartered in Pune, providing sales and service to its customers for tool presetting, tool measuring and inspection machines, tool management software, heat-shrink systems and balancing machines. ZOLLER India was founded in 2004 and runs outside offices in Ahmedabad, Bangalore, Chennai and Delhi.

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