

Issue 07-2007

# TDMmessage

Magazine for Customers, Partners, Interested Parties and Employees of TDM Systems

## TDM Ensures Better Production of Top-of-the-Line Engines at MTU



**MTU in Friedrichshafen, Germany  
has Tool Data Management**  
From start to finish with TDM Systems  
software

**TDM goes Racing**  
TDM Systems support makes Toyota  
even better in the production of F1-racers

**Data Input at Top Speed**  
TDM 3D makes it come true at KRONES

# Time and Money Saved

As every production company knows only too well, less can be more -- less downtime means more money saved in the world of machines. After all, planning processes alone take up to 80 % of overall time spent in processing production orders. That is why „non-productive“ machine times have been receiving more and more attention in recent years. In many industrial plants, this has quickly led to improvements in areas like job preparation. Nevertheless, enormous savings still lie dormant here -- for example in the area of **tool data processing**. That is why TDM Systems has developed special software solutions for data input, like the TDM Import Assistant and the TDM Data and Graphic Generator.



Dipl.-Ing. Jürgen Auer  
President & CEO, TDM Systems

During your company’s entire planning phase, TDM provides you with just-in-time access to digital tool data and -graphics. In **NC-programming**, for example, much time is often spent in selecting tools and accessing feeds and speeds. And NC-simulation is not really true-to-life without accurate 3D graphics of each manufacturer’s tools. The loss of time involved in such side activities prolongs the planning process unnecessarily. A central tool data base and user-oriented functions from TDM Systems can save your company up to 50,000 Euro (approx. US\$ 65,000) while shortening NC-program setup times as well.

Sad but true: even in this day and age, procedures in many companies’ production areas are often overcomplicated. Even today, employees there often spend a good part of their working day searching for tools and getting them ready. After all, who can predict which tool is in which carousel at the moment, or in which machine? In fact, it often turns out that a tool needed for a certain order cannot be located right away. The result: machine downtime and in turn production delay.

That is where TDM comes in. TDM software reduces tool-related machine downtimes to a minimum while exploiting previously unnoticed potentials for time-saving in the **crib** and in **tool procurement**. We at TDM Systems specialize in bringing standardization to the many-sided world of tool inventories. This has made it possible for us to save our customers more than 200,000 Euro (approx. US\$ 260,000) to date! You can do it too!

Yours,  
Jürgen Auer

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In Interview: Dirk Bakemeier from Toyota Motorsport GmbH

## TDM Software Helps Toyota Step on the Gas

Every time Ralf Schumacher chases a new track record on Germany's Nürburgring, a bit of TDM Systems Software is riding with him: Toyota Motorsport GmbH (TMG) makes racing cars for the Panasonic Toyota Racing Team and uses our TDM software for its tools. We were lucky enough to catch up with Dirk Bakemeier, General Manager for Production and Product Quality Control at Toyota Motorsport in Cologne, Germany, for an interview.

*TDMMessage: Mr. Bakemeier, you head up the manufacture of Toyota formula racing cars. What are your biggest challenges in this specialized world?*

Dirk Bakemeier: First of all, we at Toyota have to think about quality. Only by getting the most out of our products we can meet the special demands of Formula 1 racing. What's especially important for us is a smoothly functioning procurement management system. We need to get our materials and parts and get them right away, so that we have time enough to run tests in the wind tunnel or on the racetrack. And then of course there's the topic, that every F1 company team thinks about all the time: cost reduction. All that is reason enough for us, to try to use our resources in future more and more effectively.

*TDMMessage: Your tools, for example?*

Dirk Bakemeier: That's right. A while ago, we set up a centralized tool dispensing system for ourselves. I should mention here that our production facilities are divided into four areas: engine, body, a composite area, and aero. Each area is practically a manufacturer in its own right. Ideally, however, we want them all to use tools jointly in future.



*TDMMessage: Where does TDM Software come in?*

Dirk Bakemeier: TDM helps us organizing our central tool storage system for the entire production area. That includes tool orders, tool tracking and data management. In the near future, we also plan to tie our Kardex carousels and our Zoller presetters to the TDM system.

### Company Close-up

Toyota Motorsport GmbH (TMG), located in Cologne, is the maker of Formula 1 racing cars for the Panasonic Toyota Racing Team. With a total area of 30,000 m<sup>2</sup>, including the wind tunnel, Toyota has brought together under a single roof the production of cars and engines. This 100% subsidiary of Japan's Toyota Motor Corporation employs more than 650 people from 32 different countries.

**Toyota Motorsport** · [www.toyota-f1.com](http://www.toyota-f1.com)

*TDMMessage: How does tool tracking and data management software help Toyota stay ahead?*

Dirk Bakemeier: Our biggest benefit from TDM at the moment is transparency. Without the TDM software, we wouldn't know the tools we have at all. This overview is indispensable to us for keeping our stock in optimum condition. In fact, we hope TDM will help us to reduce our current number of about 44,000 individual tools and

Dirk Bakemeier,  
General Manager  
Production and  
Product Quality  
Control at Toyota  
Motorsport GmbH  
(TMG)



components to a far smaller number. That will mean cost savings for us in the long run. What's more, TDM has not only centralized our tools and our tool dispensing system, but has also brought together in one place all the information which goes along with them. That information is now available to every one of our areas from a central location. We did this by giving every one of our machine operators and NC programmers direct access to the TDM database. They now see directly on their screens what tools are available, so that they can make better selections based on the know-how of other areas.

*TDMMessage: Can you give us an example?*

Dirk Bakemeier: Well, if someone in the body area knows from experience how best to work with aluminum-based materials, he can input this know-how into TDM for his colleagues. Then they can make use of it whenever they are confronted by the same production situation. For example, our cutting parameters are stored in TDM, and any aero area team member who is using a tool already employed by someone in the body area can benefit from that experience. What we have in mind is to establish a family of „standard tools“ step by step for our entire production area.

*TDMMessage: It sounds like that can only result in improved quality in the long run.*

Dirk Bakemeier: Exactly.

*TDMMessage: Mr. Bakemeier, many thanks for finding time for us.*



MTU's new, all-in-one tool data system: Integrated Tool Management Software from TDM Systems!

## TDM for Top-of-the-Line Engine Production

**TDM Systems and TDM Tool Data Management Software are familiar names at MTU Friedrichshafen in Germany. People working with tools there, implemented TDM more than 10 years ago. Whether for tool presetting, for NC programming, or for CAD data exchange: MTU Friedrichshafen now uses TDM software from start to finish in every area. The result: crib costs and tool expenditures have dropped dramatically, and transparency has increased.**

In the mid-1990s, MTU in Friedrichshafen, Germany replaced its former centralized organization with production islands. One of the most important elements in this was the creation of work preparation (WP) teams. Today, every production island has its own WP team. The old, centralized tool dispensation system was done away with, and every island was given its own tool crib. In making these changes, the company also decided to install tool data



Engine Production with TDM on board: The „Tiziana“, a Mangusta-80 yacht, is equipped with „maritune“, a specialized drive system.

### TDM provides assistance in NC programming

More than 8,000 diesel engines for ships, motor vehicles, industrial plants and energy facilities leave the production area in Friedrichshafen every year. Some 400 machines are needed to make them. Processing the individual parts for these engines is extremely complex, and tool requirements are correspondingly high. Tool stocks currently stand at about 42,000 single cutting and non-cutting tools, including holders and mounting tools, and 21,000 tool assemblies. Added to this are 28,000 NC-tool lists. Before the arrival of TDM at MTU, paper was the only means of tracking this huge quantity of tools and information at the Friedrichshafen plant. Long shelves, with endless rows of ring binders and countless data sheets, were required for this.



**Christoph Wellner, Director of Production Engineering and Plant Resource Organization:** „TDM met our list of performance specifications better than any other product. From the very beginning, we were won over by the philosophy of the TDM software system, its user environment, its ability to link screen displays with each other, and its future-oriented technology.“

management software, and the choice fell on TDM software from the company with the same name: TDM Systems GmbH in Tübingen, Germany. „Looking back today, TDM met our performance specifications better than all other products on the market,“ says Christoph Wellner, Director of Production Engineering and Plant Resource Organization. „From the very beginning we liked the idea behind this system, its user environment, its ability to link screen displays, and its future-oriented technology.“

Today, TDM lets the entire WP team of tool planners, NC-programmers and schedulers in Friedrichshafen view all items of tool information at once. The result is a high level of transparency. Tool data information on paper has practically disappeared. The rows of shelf binders are gone. The most suitable tool for each job is found after only a few mouse clicks. Time is also saved by TDM's speedy search function, which finds tools according to specific criteria like tool classes, tool groups, types of technology, and processing materials. As Christoph Wellner puts it, „The graphic features of the TDM system are immensely helpful to us,



especially when we look at tool assemblies to see how they fit together.”

### TDM equips presetters with exact geometric data

For example, 20 Zoller tool presetters devices are directly linked with the TDM software system. Tool measurement is carried out fully automatically, since all required data is contained in the TDM tool management software system. To carry out data transfer, a standard software interface was created in collaboration with the Zoller Company. As a result, the person presetting a job can view the tools and all their accessories on screen, thus eliminating the possibility of errors due to manual data input at the presetters.



There is no lack of tools at MTU. The TDM software system keeps track of 42,000 single tools, 21,000 tool assemblies, and 28,000 NC tool lists.

### Up-to-date tool listing

Transparency in managing NC-programs is ensured by the FIT DNC software of A+B Solutions Company. This system too is in constant communication with TDM. Should the programmer make any changes when inputting an NC-program, the DNC server is updated with the new data as well. A feedback loop then checks tool lists and brings them into line with TDM's tool management system. TDM in turn allocates the tool lists to the proper

NC-program numbers. „Our tool data management system gives us the latest tool lists at all times,“ says Christoph Wellner with pleasure. And Production Engineer Winfried Maier gives the TDM system high marks: „TDM gives us everything we need at a single glance. All required data appears immediately on the screen, whether it comes from the tool crib, the NC programming area or the tool presetting process.“

control. Seven of these centers have barcode readers. Whenever a minimum level is reached, the corresponding item is automatically drawn from the buffer crib or an external order is initiated in the work scheduling and procurement area.

Although tool procurement is carried out with the SAP ERP system, MTU has developed an interface, so that tools can be ordered directly from within the TDM system. In the case of new tools, a set of master data is first created in SAP. SAP then passes the data on to the TDM tool management system, which completes it with further tool characteristics, graphics feeds and speeds etc images, technology data etc.



MTU's Series 4000 railway diesel engines are produced with 8, 12, 16 and 20 cylinders, with an output of 1,200 to 3,000 kW (here a 16V Type 4000 R43 locomotive engine).

A total of 93 cost centers at MTU Friedrichshafen work with TDM. In addition to the production islands, this includes Purchasing, Customer Service, Sales, Development, and many others. Not only does each production island have its own crib, but the earlier centralized crib is also still in use as a buffer crib. It now contains parts subject to wear and tear, such as inserts, solid carbide milling cutters and drills, as well as hand tools, which are required in parallel form serverall cost center. Thanks to the TDM tool data management software, however, inventory has shrunk vastly, and much has been transferred to the cost centers. Christoph Wellner's comment is, „TDM has given us the transparency we need to keep our inventory down in future.“ Currently, 13 cost centers use TDM's crib functions for minimum inventory

### Company Close-up

MTU Friedrichshafen GmbH in Germany is one of the world's leading manufacturers of large-scale diesel engines and complete drive systems (with a power range of 20 to 9,000 kW). The engines are used in ships, heavy-duty transport and rail vehicles, construction machinery, industrial vehicles, agricultural machinery, and decentralized energy plants. Together, MTU Friedrichshafen and MTU Detroit Diesel are the core brands of the Tognum Group.

With 7,500 employees, the MTU Group had a turnover of 2.5 billion Euros in 2005.

**MTU Friedrichshafen GmbH** · [www.mtu-online.de](http://www.mtu-online.de)

*TDM Data and Graphic Generator puts tool data into a database in the twinkling of an eye*

## KRONES has Its Tool Data Under Control



It has been a good 6 months since KRONES AG, which produces filling and packaging machines and equipment systems at its headquarter plant in Neutraubling, initiated a new tool data project. The target was to make digitalized tool data available to the Planning and Production Areas. This was prompted by the insight that tool flows in the production area can be accurately planned only when data flows are supported at all points – starting with Process Planning, going through NC-programming, and extending directly to the machine. The solution: tool data management (TDM) software from the company of the same name: TDM Systems in Tübingen, Germany.

In the majority of such projects, the initial work begins with acquisition of the required data. If tool and item data are not available electronically, they must be arduously entered by hand. This often

database (including 3D data) opened up for the company's NC Programming and Process Planning Areas. „Electronic integration of tool data from the manufacturer catalogues saved us a good 70 % of the time normally required for input. There is no doubt, that the TDM Data and Graphics Generator was the key,“ says Maximilian Kraxner. „The reasons are clear: the Generator is fast and easy

to operate, it delivers correct data and best of all, it provides 3D-graphics images in different formats.“



**Maximilian Kraxner, Director of CAM Technologies at KRONES:**

„Electronic incorporation of tooling data from manufacturer catalogues saved us a good 70 % of the time normally required for input. The TDM Data and Graphics Generator was the key!“

takes up to a full hour per tool. But things were different at KRONES, which was aided by one of TDM's high-performance software tools, the TDM Data and Graphic Generator (TDM 3D). In no time at all, it had put KRONES' tool master data into the database. As Maximilian Kraxner, Director of CAM Technologies at KRONES AG in Neutraubling, says with enthusiasm, „The TDM Data and Graphic Generator enabled us to file more than 2,450 components in our database in only 6 weeks!“

It was only a short time before joint access to tool information in the central TDM

### Company Close-Up

The Krones Concern plans, develops, and installs individual machines and a complete range of technological facilities for filling and packaging. The company's primary customers are breweries, beverage companies, the food, chemical, and pharmaceutical industries and cosmetic companies. Krones first began in 1951 with the production of labeling machines. Today, the company employs more than 9,000 people worldwide. Krones has become a full-service provider of all-around solutions for its customers due to its mastery of machine engineering, systems know-how, procedural technology, microbiology and information technology, all of which are harmoniously linked in optimum fashion at Krones. Between 80% and 85% of the systems produced by Krones go to customers abroad. In 2005 the company had a turnover of 1.695 billion Euros.

**KRONES AG** · [www.krones.com](http://www.krones.com)

TDM Team

## Christoph Oechsner - Mediator in project business

**The job of a software Project Manager isn't easy. He has to satisfy all sides. Today more than ever, he mediates between Sales and Development in his own company and the customer. We asked Christoph Oechsner what it's like.**

*TDMMessage: Mr. Oechsner, what is a „normal“ work day for you?*

Christoph Oechsner: My work involves many different aspects. I give advice to customers, assist in planning and organization and help with technical implementation - all part of my repertory. But it is very rewarding to finish a project successfully and see the customer's satisfaction when he works with our TDM software. And it's a real pleasure when my own concrete experience allows me to pass on helpful information to the customer.

*TDMMessage: Sounds like it keeps you busy! How do these projects differ?*

Christoph Oechsner: We deal with two different kinds of projects: „normal“ standard projects, where we give support to our customers about our TDM software over a hotline and our Help Desk and customer projects with very specific requirements, that call for specialized assistance.

*TDMMessage: What are the particular challenges?*

Christoph Oechsner: Mediation between all sides. We generally make standard software. But it can happen that our customers come to us with needs and demands, that go beyond this standard range. Then we have to find solutions which are technically feasible and realistic in cost. Satisfying all these requirements often calls for skillful negotiation and nerves of iron.

*TDMMessage: Could you give a concrete example?*

Christoph Oechsner: Normally, our Sales Managers give advice to the customer, learn what his requirements and project targets are and then recommend to him the best TDM software modules and interfaces for this. But if his requirements go beyond the standard functions of our modules and interfaces, then the Project Manager has to define precisely

what software functions, scenarios or data flows have to be offered to him. Fortunately, this type of custom-made software is one of our specialities. A standard TDM software module naturally cannot cover all real-life situations and customer requirements. And there are technical challenges too. For example, almost every customer has his own individual SAP software, so that linkups between TDM and SAP are rarely possible without individual customizing. A third component which may also have to be taken into account, is CAD/CAM software which requires its own interface. Thus, we are looking at three different possible components, which may have to be reconciled with each other.

*TDMMessage: And how do you tackle this?*

Christoph Oechsner: For one thing, I go to our Development people to find out how much time and technical effort a project will take. Then we define the costs for this. If we get the green light from the customer, my job is to be a control center for all parties: our customer, our Development area and our sales people.

*TDMMessage: What current project challenges do you face?*

Christoph Oechsner: Currently I'm helping ARBURG to coordinate their update to Version 4 of our TDM software. Then I'm often in Germany's Bavarian area of Neutraubling at Kronen AG, a maker of packaging and bottling systems, where a TDM database has been set up with our TDM Data and Graphic Generator. This is a software add-on, that lets NC programming and job preparation get started in near-real time and gives access to tool information (including 3D data) within the central TDM database. Then we have yet another major project, that involves developing and coordinating a new product together with the Siemens UGS Company.

*TDMMessage: With what kind of problems do your customers come to you these days?*

Christoph Oechsner: Almost all of our customers want three-dimensional models. The reason is that they need 3D data for their documentation, their NC programs, their true-to-life work simulations, their design areas, their tracking systems, their interfaces with other programs etc. Production schedules are becoming tighter all the time and require shorter travers paths and faster speeds. That prompts our customers to seek ways of simulating true-to-life production processes.

TDMMessage: Mr. Oechsner, many thanks for this interesting interview.

**Christoph Oechsner (34)** is a diplomat Machine Engineer and has worked for 10 years at TDM Systems, where he first spent four years in Development. In 2001 he moved to the Project Management area, where he now serves industrial customers like Arburg, Kronen or Trumpf.



*TDMclub Meeting in Düsseldorf*

# International TDM Users' Club Meeting



On February 8th of this year, the annual TDM Users' Club Meeting took place on the premises of the SANDVIK Coromant Company in wintry Düsseldorf, Germany. TDM users arrived from Belgium, France, Italy, the Netherlands, Sweden and even Romania.

SANDVIK GmbH Deutschland hosted the meeting and SANDVIK's Dr. Klaus Christoffel gave an overview concerning the many areas where the SANDVIK Group is active, along with its strategy for the future. This strategy includes a successful, continued development of new products and above all SANDVIK's continued understanding of itself as a long-term partner in finding solutions for customers.

The company's Export Team, guided by Heinz Fink, gave the meeting members the latest news from the TDM software world, including coming innovations and new TDM customers in Europe.



Wim Maton, ASCO industries, during his presentation.

Undisputed highlight of the day, however, was the presentation by Wim Maton of ASCO Industries SA from Zaventem, Belgium, about the various usage of TDM in his company. ASCO has worked with TDM for more than 5 years. Bit by bit, ASCO has expanded its initial TDM platform and now applies TDM software throughout the company with optimized links for planning and production processes. ASCO uses TDM



Exchange of informations at the TDMclub meeting

software data for the simulation of its NC programs. At the moment they are about to build up their crib and ordering processes within TDM.

Do you have further questions about the TDMclub?

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*TDM day and night*

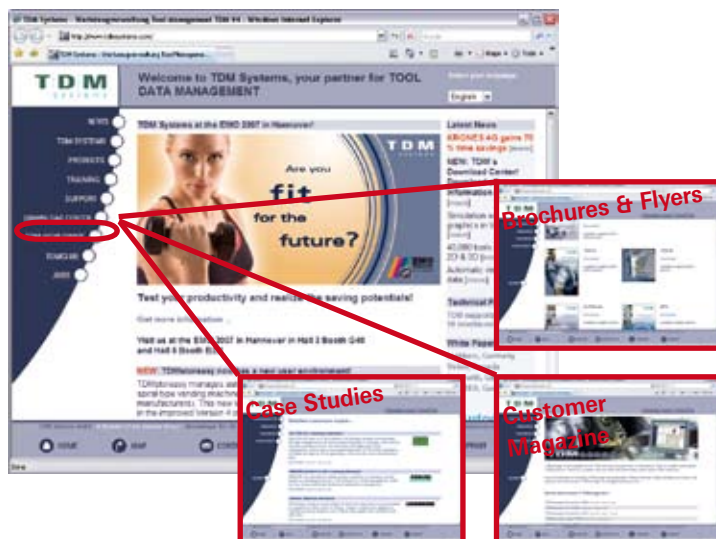
# TDM's NEW Download Center

The website of TDM Systems has been extended by a new Download Center. Everything you need to know about TDM is now easier to get!

Click on the "Download Center" on the start page. There you can find all the information around TDM and TDM Systems ready to download

- Product information
- Reports from satisfied users
- Case Studies

The further expansion of the Download Center is already scheduled. Visit it and get more information than ever!



TDM Systems at the EMO: Hall 3, Booth G40 und Hall 5, Booth B20

## Increased productivity while spotting and exploiting cost saving potentials!

This year's EMO, the most important trade show for production in Europe, begins on September 17th in Hannover, Germany. And TDM Systems will be there. TDMMessage spoke with TDM Systems Marketing & PR Director Daniela Rudolf about the highlights to be presented at this trade show by TDM Systems.

*TDMMessage: Ms. Rudolf, TDM Systems will have one of the most important stands again this year at the EMO Trade Show. What software modules will be in the spotlight, and what do you see as highlights for your visitors?*

Daniela Rudolf: Rather than presenting individual software modules or new features of TDM, at this year's EMO we want to show our visitors how they can save money and improve their production processes with TDM. After all, that is what the whole TDM Systems software spectrum is all about. Our top offer to our EMO visitors this year will be a free productivity check.

*TDMMessage: What will happen there, and what can your visitors expect?*

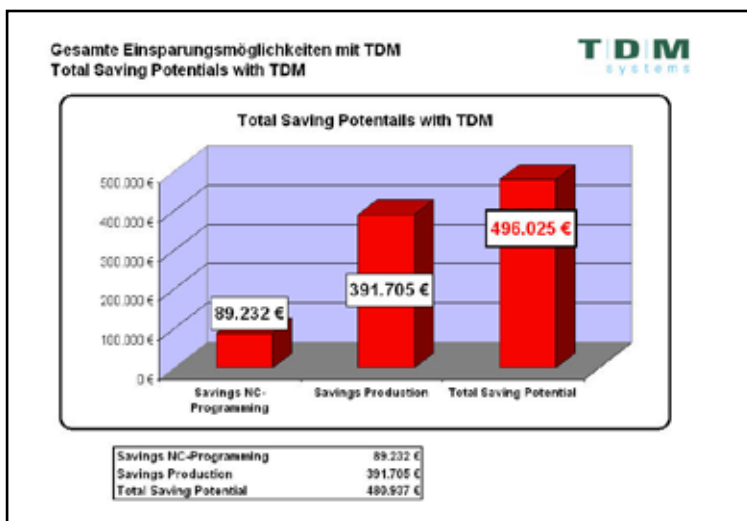


Daniela Rudolf: With the slogan of „Your Fitness Counts!“ we will check possible productivity increases in detail by calculating potential savings for each company in its planning and production areas. Depending on the company's individual situation, this can yield up to 350,000 Euro in savings. To participate, our visitors have only need to bring a few general figures like the ones in the written EMO invitation they have received.

**Visit us at the EMO 2007 in Hannover:  
Hall 3, Booth G40 and Hall 5, Booth B20**

*TDMMessage: In which areas can production plants save the most money?*

Daniela Rudolf: Our main focus of attention and emphasis, of course, is on how tooling data and graphics are worked up and how NC programming and production are carried out. We specialize in calculating how much each user can reduce his expenses in these areas. In addition, we also show the customers the way of putting these theoretical savings into practice.



*TDMMessage: As part of your EMO theme „Fit for the Future“ you will present each participant in this productivity check a body-fat-meter as a gift. What is the idea behind this?*

Daniela Rudolf: This gift of a body-fat-meter is not supposed to insult people. Rather, we want to draw attention to fitness on company level. The more each company can increase its productivity, the more fitness it has for the future. And that is how we want every company to view our giveaways: TDM is your guarantee for getting rid of excess weight!

*TDMMessage: Ms. Rudolf, many thanks for this ‚fitness consulting‘.*

New software for managing all maintenance tasks

# Be in shape with FMM

The maintenance of all plant facilities is an important precondition to bring the production equipment in a good shape. But there are still possibilities to support this area with software solutions. TDM now presents a new solution, to support industrial enterprises managing their complete maintenance processes of all production resources and facilities.



The software is called TDM Facility & Maintenance Management (FMM) and will be introduced at this year's EMO trade show in Hannover. With its integrated solutions for managing tools, gauges and calibration equipment, fixtures, setup and chucking devices and other resources within the plant, TDM's software is already an established feature on the market. Now TDM widens the spectrum with its FMM software for managing inspections, maintenance work, and repair schedules of plant equipment and facilities. This new

service and maintenance software, created in close collaboration with ARBURG, the well-known maker of plastic injection molding machines, is now available from TDM Systems.

### More structure brings more transparency

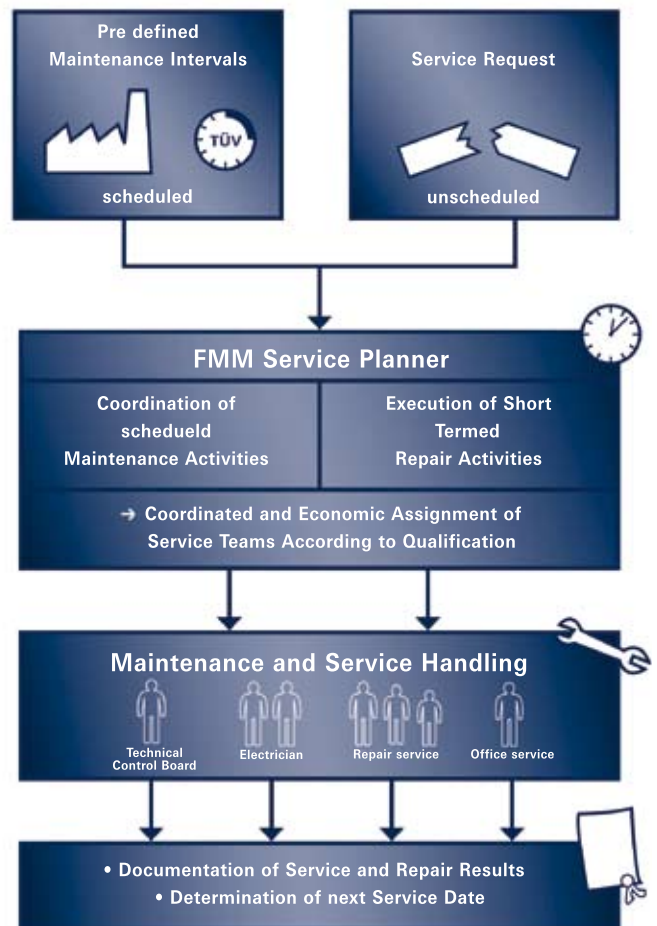
FMM stores and classifies any company's entire inventory. A graphical scheme eases this work for the users and supports the selection of facilities by classes and groups. Using of ID numbers, FMM clearly identifies every piece of equipment in the company, whether it be a battery-powered screwdriver, a manually operated drill or a CNC machine or any other item from the transformed to the overhead crane.

### Managing the tasks easily

FMM supports comprehensive functions and features for managing all maintenance tasks companywide. Planning, cost evaluation and all other activities in this area are made transparent with FMM. FMM also stores specific schedules for inspection, maintenance and repair and links them with the respective resources in the plant. Thus, the services for equipment due to inspection, can be planned realtime, depending on the qualification of the service team and other factors like machine utilization. This enables a very efficient way of keeping the production facilities in shape. If there are disturbances or unexpected maintenance and repair work, employees can report this easily in the company intranet via FMMonline. FMMonline is a software tool only for reporting maintenance cases or requesting services to the service center, using the companies' intranet structure.

### Complete documentation of maintenance

Service technicians and maintenance planners are especially pleased when they find reports (including test results, results of technical control board inspections, and documentation of previous repairs) at their fingertips. FMM even shows downtimes and tracks replacement parts. This makes it easier to evaluate maintenance and repair costs and provides a basis for future investment decisions. It makes no difference, whether we're talking about tiny tools, hand-held devices, shop and plant equipment or complete production facilities. FMM reminds faithfully every time, documents equipment use and keeps track of all parts replaced. This ,equipment



history' let the user see at a glance, for example, how often a conveyor line cable has been replaced."

FMM works either as a stand-alone system or together with TDM's market-leading tool data management software. Companies already using TDM software for their tool data, crib and inventory management, or for tracking measuring and testing equipment can thus profit by integrating FMM into TDM. Master data from the TDM database is then immediately available to FMM as well. And company users already familiar with the TDM software, can start using FMM after only a short time.



*Transparency to workpiece costs by „Cost-per-Part“*

## The detective story of workpiece costs - solved with TDM software!

**TDM Systems GmbH presents its new „Cost-per-Part“ software. It brings workpiece costs out of the production shadow and into the daylight. At the EMO Trade Show in Hannover, TDM Systems GmbH is now showing this new software to the general public for the first time. „Cost-per-Part“ is the result of customer requests and**

**suggestions, and is now an integral part of the TDM tool data management and crib management software.**

This new feature uses latest tool consumption data to calculate tool costs per workpiece or production order. Calculation is based on the number produced workpieces, the time period, the machine's hourly rate and on all tools, especially on consumables like inserts, which have been issued to the machine tool.

Booking record results from the issuing history of the tool crib, where all outgoing tools are tracked for a specific period. Costing requires furthermore tool operation costs, which are stored for any tool component in the TDM data base.

This new TDM software function is particularly interesting for companies with smaller production numbers (often the case in the mold & die industry, where parts produced are often complex in design, require many production steps with different tools and remain in the machine longer). „The idea is to make it possible, to determine workpiece costs even in companies that lack major data acquisition systems,“ says Jürgen Auer, Managing Director of TDM Systems GmbH. „Our customers wanted this, and we went to work and developed our „Cost-per-Part“ as a streamlined, practical solution.“

*Cost-per-Part is available for TDM Version 4.2.2 service pack 3 and higher.*

Date	Series of components	Number of parts	Tool cost	Change requirement
01.01.2007	01.01.2007	10	100.00	10.00
02.01.2007	02.01.2007	20	200.00	20.00
03.01.2007	03.01.2007	30	300.00	30.00
04.01.2007	04.01.2007	40	400.00	40.00
05.01.2007	05.01.2007	50	500.00	50.00
06.01.2007	06.01.2007	60	600.00	60.00
07.01.2007	07.01.2007	70	700.00	70.00
08.01.2007	08.01.2007	80	800.00	80.00
09.01.2007	09.01.2007	90	900.00	90.00
10.01.2007	10.01.2007	100	1000.00	100.00

Report of workpiece costs

## TDM software training

Training	Date
TDM Base Module V4	17.09. - 19.09.07
TDM Tool Crib Module V4	20.09. - 21.09.07
TDM Form Generator V4	24.09. - 26.09.07
TDM System Administrator V4	01.10. - 02.10.07
TDM Base Module V4	12.11. - 14.11.07
TDM Tool Crib Module V4	15.11. - 16.11.07
TDM Form Generator V4	19.11. - 21.11.07
TDM Base Module V4	25.02. - 27.02.08
TDM Tool Crib Module V4	28.02. - 29.02.08

**Attention:** All Training lessons are taking place in Tübingen, Germany, language of teaching is German. We also offer training lessons in French, Italian and English language. Get more information under [support@tdmsystems.com](mailto:support@tdmsystems.com).

## Actual TDM Versions

Modules	Version
TDM V4	4.2.2
TDM Data- und Graphic Generator	4.2.2
TDM Tool Crib Module	4.2.2
TDM Gauge and Calibration Management	4.2.2
TDM Fixture Module	4.2.2
TDM Presetting Module	4.2.2
TDM Ordering Module	4.2.2
TDMshopcontrol	4.2.2
TDM Facility and Maintenance Management	4.2.2
TDM Barcode Module	4.2.2
TDM Production Document Management	4.2.2
TDM Multi Plant Management	4.2.2

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