

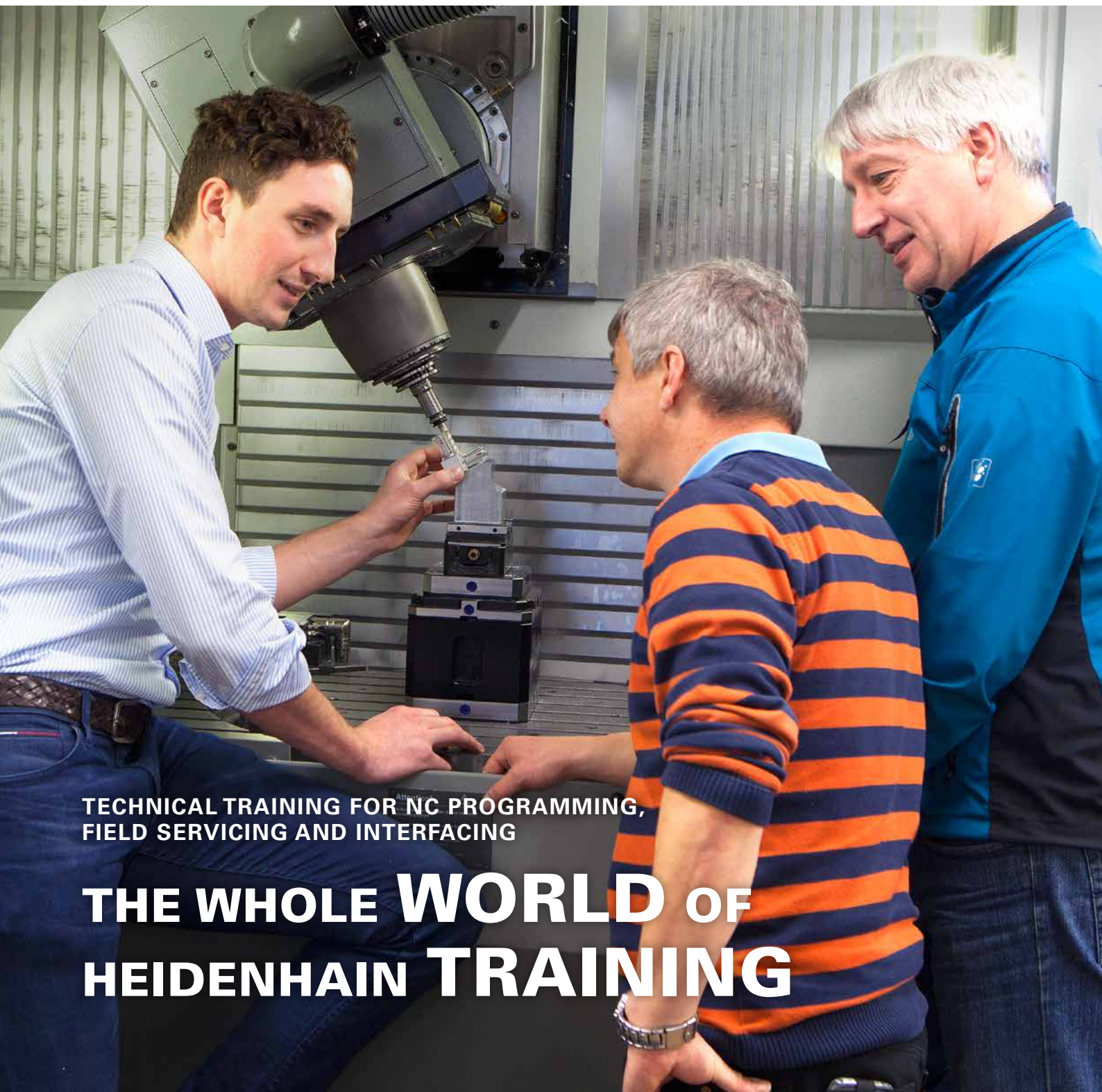


HEIDENHAIN

Edition 02

Klartext *Training*

NEWS FROM THE WORLD OF TECHNICAL TRAINING



TECHNICAL TRAINING FOR NC PROGRAMMING,
FIELD SERVICING AND INTERFACING

**THE WHOLE WORLD OF
HEIDENHAIN TRAINING**

Editorial

Dear Klartext Reader,

Technical qualification and continuing training are indispensable for achieving technological improvement and securing the future of a company and its employees. HEIDENHAIN offers demand-oriented training courses in which the required technical knowledge is imparted practically, efficiently and in conformity with the customers' needs.

This special edition of Klartext therefore takes you with into the world of HEIDENHAIN technical training. Special attention has been placed on the users of TNC controls. After all, it's very important that they're able to make the best use of the powerful functions.

We'll begin by introducing you to our ultra-modern training center in Traunreut, Germany. Then you can become informed about the broad spectrum of courses that range all the way from our regular seminar program in Traunreut to customer-specific courses on site. Or learn how to find the right course in your area by checking in the article on page 12 describing our training network.

Learn first hand how the HEIDENHAIN HIT learning method has proven itself in the field. The Klartext staff visited the Schwandorf vocational center in Bavaria's Upper Palatinate and observed the

instruction of a precision mechanics class. The interactive learning system makes it more fun to learn and increases the trainees' motivation to learn.

What else is there in this issue? HEIDENHAIN is supporting the sponsorship program for vocational schools (FöPS) or—together with the VDW Youth Education and Development Foundation—the education of teachers and trainers in the field of computer-aided manufacturing.

Read and enjoy, with best wishes from the Klartext staff!



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Klartext

Training + Edition 02

Content

The address for HEIDENHAIN know-how

The HEIDENHAIN training center

4

**HEIDENHAIN training starts here:
training.heidenhain.de**

Finding courses—and booking them

7

“Why don’t we just play stupid ...”

The curriculum

8

**Not just knowledge, but skills:
the history of technical training from HEIDENHAIN**

End user training from 1983 until today

10

**Training Network:
short ways to technical training**

Long-range knowledge transfer

12

It’s a HIT in vocational school

The new interactive HEIDENHAIN learning software
in practice at a vocational school

16

FöPS—the support program for schools

HEIDENHAIN supports educational institutions

20

**HEIDENHAIN and VDW
add their weight to teacher training**

VDW Youth Education and Development Foundation
issues new training documents for vocational teachers

21

Distinction for a Traunreut trainer team

Seven of our NC trainers have graduated from
a multi-level advanced course to become certified vermit@ trainers

22



TRAINING CENTER

The address for

HEIDENHAIN know-how

The HEIDENHAIN training center



Advanced vocational training of employees is a fundamental competitive advantage for a company. Production employees in particular are faced with increasingly complicated tasks. Time pressure and rising demands regarding dimensional accuracy and surface definition are significant challenges for machine operators. Therefore it's a good thing that machine tools, their controls and the associated measuring technology are continuously being improved. But only qualified workers can use this knowledge and equipment efficiently.

The most important goal of training courses from HEIDENHAIN is to be able to work with encoders and numerical controls optimally. HEIDENHAIN has reacted to the steadily rising demand for advanced vocational training with a modern building for the Technical Training Department.

The training building is the response to an increased number of course participants as well as the demand for more individualized courses for specific assignments. Just a couple of steps from the company headquarters in Traunreut,



The course rooms are equipped with up-to-date technology. They feature sophisticated presentation technology and participant workstations that are linked to the machines in the machine shop.



An NC program is typically discussed while it is being written on the programming stations in the course room. It can subsequently be tested on a machine tool, where it is then improved and executed.



Theory becomes practice on modern machines in the spacious machine hall.

Germany, stands the three-floor training center, which has been in operation since July 2012, with its well lit course rooms and large machine hall.

Theory and praxis go hand in hand

The intense imparting of knowledge is based on the combination of theory and practice, since learning by experi-

ence imparts not just knowledge, but also skills. The technical equipment of the new training center sets the stage for this. Eight course rooms are each equipped with an interactive whiteboard and two high-resolution digital beamers. Theoretical knowledge learned here leaves an impression. Using the programming stations and machine simulation units available to each participant, the knowledge is immediately put to the test, with practical programming exercises after each section.

The transition to the real world is smooth and flowing: an NC program written in the course room is transmitted to the TNC control of a suitable machine tool in the machine hall. The program is optimized under realistic conditions, machining can proceed, and more experience is gained. This reinforces the newly learned knowledge. After all, the course participants are later expected to use the HEIDENHAIN products in their company efficiently, immediately putting their knowledge to use.

There are five machining centers in the spacious, 360 square meter large machine hall: two milling machines, one lathe and two milling/turning machines. They feature the entire range of TNC controls, from the new TNC 640 control for milling/turning to the tried and proven iTNC 530 to the CNC PILOT 640 lathe control.

Motors, position encoders and speed encoders from HEIDENHAIN are built into all the machines. This way, not only can NC programming courses be offered, but also hands-on courses for interfacing, commissioning and field service.

HEIDENHAIN also places high demands on its own trainers. The course leaders must have been trained as technicians for metal-cutting machining, have several years of practical experience, and must be good instructors.

A high-quality ambiance for learning

HEIDENHAIN's training center provides the ideal rooms and equipment for teaching, using the most modern methods and technology available today. The holistic approach comes to life here: multimedia technology that supports all instructional possibilities, a very well-equipped machine hall, and to top it off a relaxed atmosphere for stress-free learning.

The goal is to master practical tasks as well as possible using controls and encoders from HEIDENHAIN. Not just the employees profit from this knowledge, but also companies that have to prove themselves on the global market in these times of rapidly changing work processes.



Modern technological equipment establishes a tight connection between practical and theoretical knowledge. The result is especially useful and high-quality knowledge.

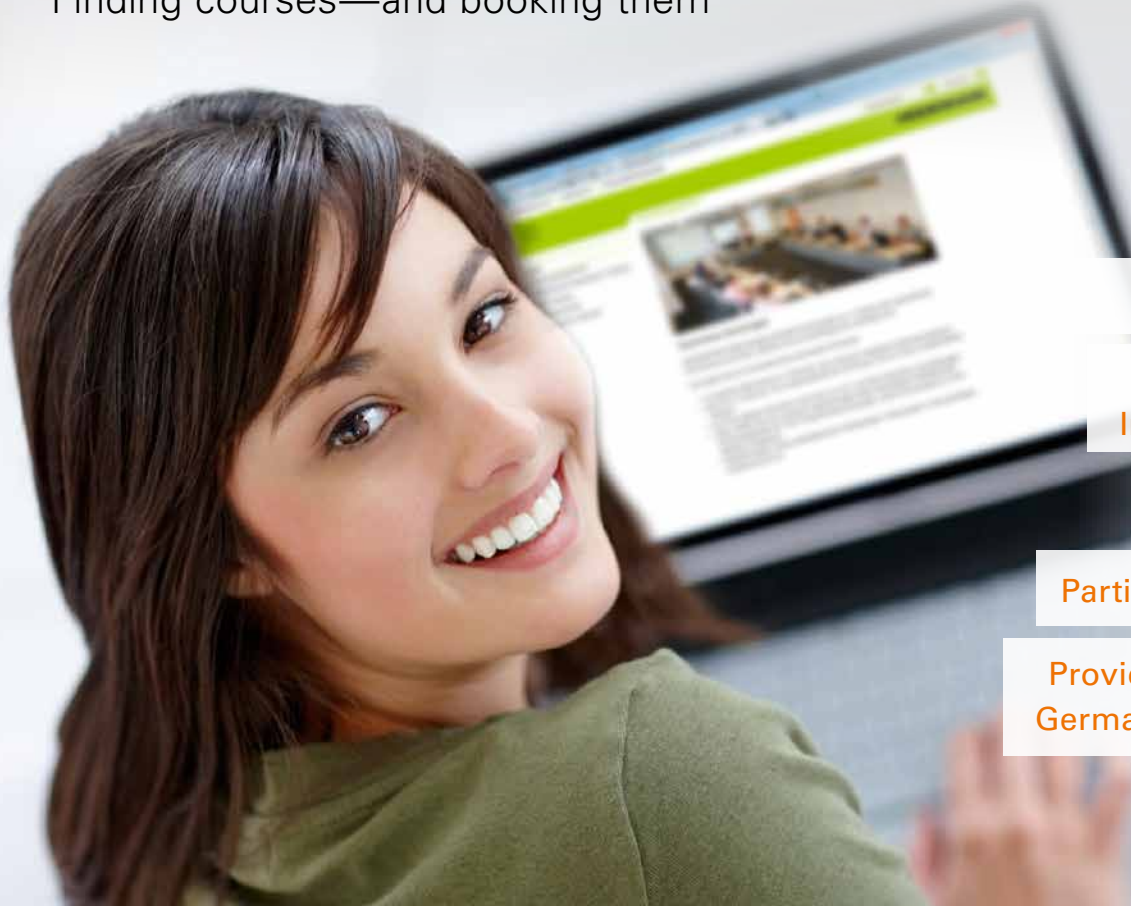


The training center is situated right next to the HEIDENHAIN main facility in Traunreut, Germany. The building has three floors, covering over 1700 square meters. The eight course rooms, a cafeteria, several offices and the 360 square meter machine hall offer ideal facilities and possibilities for learning all about HEIDENHAIN products. One course room can also be used for larger events, with room for up to 80 people.

TRAINING PORTAL

HEIDENHAIN training starts here: training.heidenhain.de

Finding courses—and booking them



Training program

HEIDENHAIN
Interactive Training

TNC training

Participant information

Providers for courses in
Germany and worldwide

The HEIDENHAIN training portal – <http://training.heidenhain.de> – is the Internet site for all information about HEIDENHAIN courses. The well-structured portal presents all you need to know about advanced training regarding HEIDENHAIN products.

The **Training Program** link takes you right to the groups of courses. In the annual overview—with filter function support—you'll find fast access to the complete curriculum. Select your topic and then you'll see which courses are offered. Click a course to see what it covers, also well as other information, including the course schedule, duration and location. You can also reserve a spot right here. The number of places

still available is shown, and there is a link to the online registration form.

In the **HEIDENHAIN Interactive Training** section you can find out everything about HIT, the new HEIDENHAIN learning method. You can purchase the interactive learning software from our online shop. Download the free demo version of the TNC programming station software as well as the free PDF of the associated Milling Workbook. Enter the world of NC programming!

The **TNC-Training** section imparts the fundamentals of NC technology. This interactive online training program opens in its own window. This private-study training program is recommended as preparation for the TNC basic courses.

You can test your knowledge at the end of each section.

Under **Participant Information** you will find much information useful for booking a course: telephone numbers if you have any questions, directions to Traunreut, and a hotel directory.

The current course offerings near your location are shown under **Providers for courses in Germany and worldwide**



+ training.heidenhain.de

TRAINING PROGRAM

“Why don't we just play stupid ...”

The curriculum

This isn't your grandfather's technical training. The trainers use a modern method for HEIDENHAIN courses. Because knowledge is transferred best when the contents of the courses are oriented to the students' practice. Besides the basic courses for machine operators, the course offerings are also intended for people from other fields, trained personnel with complex tasks or for specialists who you like to use HEIDENHAIN controls and encoders or adapt them to their machines.

The goal of the training program is to offer courses in which the required technical knowledge is imparted practically, efficiently and in conformity with the customers' needs. After all, the users ought to exploit the full potential of their TNC controls in order to find optimal solutions for their problems. The training that is offered is diverse: about 30 courses are available for very different levels of previous knowledge.

The basic courses for beginners deal with the fundamentals: from simple NC programming to cycle programming and all the way to the methods and techniques, for example, of creating program section repeats. The many realistic training examples and simulations make you fit for everyday use of the TNC.

The advanced courses are targeted at experienced programmers. They deal with more complex control functions

such as free contour programming or Q parameter programming. In the same way, they teach solutions to demanding tasks in terms of accuracy, surface definition and process reliability. In spite of the complexity of the topics, the contents are taught in easy-to-understand lessons using practical exercises.

Course offerings for users with special knowledge requirements

HEIDENHAIN supplements the basic and advanced courses with specific topics such as tilted working planes, 5-axis milling or mill turning. The training center offers plenty of space for them. The subjects taught here using multimedia technology include everything that has to do with the HEIDENHAIN product range. In the machine hall, which is equipped with powerful machine tools and TNC controls, that which is learned is applied directly to practice.

HEIDENHAIN also offers on-site training for people who want to be trained on their own machines. Then the course is tailored to the special needs of the student: topics, contents and the duration of the training are freely definable. HEIDENHAIN takes care of the logistical organization: laptops and original keyboards are supplied and set up on site before training begins. Students in on-site courses are assured the same high quality of training as students receive in Traunreut.



The synthesis of theory and practice

Practical relevance is the essence of our training: the participants work themselves into the theory on their PCs and then create programs on the programming stations. The tasks learned are applied immediately: a selected program is simulated and tested on a machine tool in the workshop. It's fun to test one's knowledge and it's the best preparation for practical application later on the job.

The more difficult the contents, the more important it is to work closely with the instructor. Specific questions, ideas and suggestions for improvement are dealt with immediately. And as a positive side effect, this improves motivation and educational achievement.



TNC knowledge for specialists

The contents of the courses adapted are attuned to the most varied of tasks and the respective target groups.

Uptraders: Users who want to change from an old HEIDENHAIN control model to a current one and need to try out and exercise the functions of the new control under consideration of their existing programming skills.

The topics of the courses orient themselves to the needs of the user. Special courses are also in the program, such as KinematicsDesign, the HEIDENHAIN software for interactive creation of control kinematics for all TNCs—specifically for machine tool builders.

OEMs and retrofiters: These machine specialists profit from special courses in the HEIDENHAIN machine hall. In addition to theory, many questions can be handled dealing directly with the machines. For example, the optimization of axis movements according to the criteria of speed, accuracy or surface definition can be tried out right on the machine. On the topic of diagnostics, the participants have access to various machines for measuring and inspection tasks. The evaluation of data is naturally a component of the course.

Vocational school teachers and trainers: These basic or advanced courses cover the special requirements of vocational and applied science instructors. The new HIT learning solution is introduced and the advantages of the interactive learning method for variety in instruction are explained. The instructors also find it valuable to exchange their knowledge and experiences.



Training program

Type of course	Target group
NC programming	Users of HEIDENHAIN NC controls: Experts in NC programming (production, production planning, advanced NC training)
PLC, interfacing	Experts from machine manufacturers and retrofiters: PLC programmers, electrical engineers, project planners
Commissioning / optimization	Commissioning experts from machine manufacturers and retrofiters
Field service	Expert operators, maintenance and service technicians from machine manufacturers and dealers, retrofiters, service providers and end customers



+ http://training.heidenhain.de/de_EN/training-program

HISTORY

Not just knowledge, but skills: the history of technical training from HEIDENHAIN

End user training from 1983 until today

Courses that have proven very useful in practice are designed at HEIDENHAIN over many years and are continuously expanded. After all, there's a lot involved: instructors with the practical knowledge, a comprehensive and modular training program, easily understandable documents, and courses that are adapted as closely as possible to the customer's application. Ideally, this TNC training should be available worldwide. Here KLARTEXT offers a brief overview of the history of TNC training.

From the very beginning, TNC controls have made things especially easy for the user with readily understandable dialog guidance. This also applies to the courses at HEIDENHAIN: Even the very first generations of controls were accompanied by training in manufacturing parts economically and very precisely right at the machine.

Originally it was assumed that the machine manufacturers would provide their customers with the skills needed for NC programming. For this reason, the first courses were directed exclusively toward the machine tool builders.

As the control manufacturer, HEIDENHAIN itself has the best knowledge of its own controls. It was decided to stop withholding this advantage from the customers: after a short time, in 1983, HEIDENHAIN added its first courses for end users as well.

Then and now

The task list for the first course was in principle the same as today. At the beginning, however, they needed only one week to cover all the functions offered by the TNC. Today the complete training program encompasses up to 16 different courses for the current TNC family of controls: basic courses, advanced and special courses, TNC knowledge for control switchers and customer-specific courses.

And of course the equipment in the training rooms has changed drastically: in the 90s they were still working with a simulation table with a small model of a machine. Today, the training center provides the course participants an entire hall with five NC-controlled machine tools.

In the early days, the training rooms were equipped with TNC controls that took up a relatively large amount of space. The participants often had to share a control between them. Unlike then, today every participant has his own PC-based programming station with the latest software.

New target groups for imparting knowledge

If at the beginning the focus was exclusively on training for machine operators and application engineers, in the new millennium it also includes vocational instructors, teachers and apprentices. PC based programming stations offered the technical prerequisites for educators to teach program creation—and simulation—on more than just paper.



While back then the participants shared the TNC hardware ...



... today every course participant has his or her own programming station.

As a result, in 2007 cooperation began with FöPS, a support program for vocational schools (page 22), and immediately after it in 2008 with the VDW Youth Education and Development Foundation (page 23). The projects pursued the goal of promoting highly practice-oriented, qualified NC knowledge during the training period.

Interactive media—not only for apprentices

TNC knowledge for all: from 2004 to 2007, HEIDENHAIN was active in the Leonardo Da Vinci project, which received support from the EU. HEIDENHAIN created an “eLearning” program that used plentiful animations to very vividly impart fundamental knowledge on the topics of NC basics, machining in a tilted plain, and the use of touch probes. This information on NC fundamentals is available to everyone today free of charge under training.heidenhain.de, TNC Training.

2012 followed with HIT—an interactive training system that combines a workbook and a HEIDENHAIN programming station with new interactive training software. The system is available to every user over the HEIDENHAIN shop and is now also being used in vocational schools.



Milestones

1980

Since the first courses for end users in **1983**, demand has increased dramatically. The training has to be moved to other buildings to make more room.



The first user courses were held in 1983 for the TNC 145.

1990

In **2000**, the TNC courses are provided a fixed location in a brand new building. The building holds five training rooms and a cafeteria on one floor. A five-axis machine is set up on the ground floor so that the skills learned can be practically tested. For 12 years this facility provides the space needed for the increasing demand for TNC training.

1995

At the same time—also in **2000**—the HEIDENHAIN Training Network is planned: authorized partners and educational facilities offer technical training distributed over various regions both in and outside of Germany. In this program, qualified instructors conduct courses using the original documents from the HEIDENHAIN courses with their high level of quality. This brings us closer to the customer, make more course dates possible and enables instructors to adapt the content more closely to the customers’ needs. This all requires a great deal of organizational effort, for example in translating the training documents into numerous languages. This worldwide training network is being expanded even today.

2003: The performance range of the controls continues to increase and specific TNC knowledge has to be trained increasingly intensively in order to put the users in an ever better position to best exploit the potential of HEIDENHAIN controls for their individual tasks. This is because the powerful controls, combined with qualified training, lead to an outstanding competitive advantage.

2010

In mid-**2012**, the newly conceived and built, dedicated training center is officially opened. Away from manufacturing and administrative offices, here the participants can learn in modern equipped rooms in a relaxed educational atmosphere. The new “workshop” is characterized by interior architecture that’s every bit as attractive as functional and includes the various NC-controlled machine tools.



Today there are numerous basic and advanced courses for controls like the TNC 640.

2015

Training Network: short ways to technical training

Long-range
knowledge transfer

The HEIDENHAIN Training Network is a worldwide network consisting of HEIDENHAIN subsidiaries and distributors on the one hand and authorized training partners on the other. The goal is to make technical training of high quality available at all locations, both in Germany and worldwide.

Worldwide competent
training program

In its **Training Center in Traunreut, Germany**, HEIDENHAIN offers a comprehensive program of courses intended both for the TNC user as well as for specialist in service and interfacing. The course contents, the equipment and the training documentation meet the demands for high quality instruction.



HEIDENHAIN is present in all industrial companies with its own **subsidiaries or through distributors** in a worldwide network of courses for NC programming, servicing and control-machine interfacing. The requirements on the content and quality of knowledge transfer orients itself to the courses in the Training Center in Traunreut.



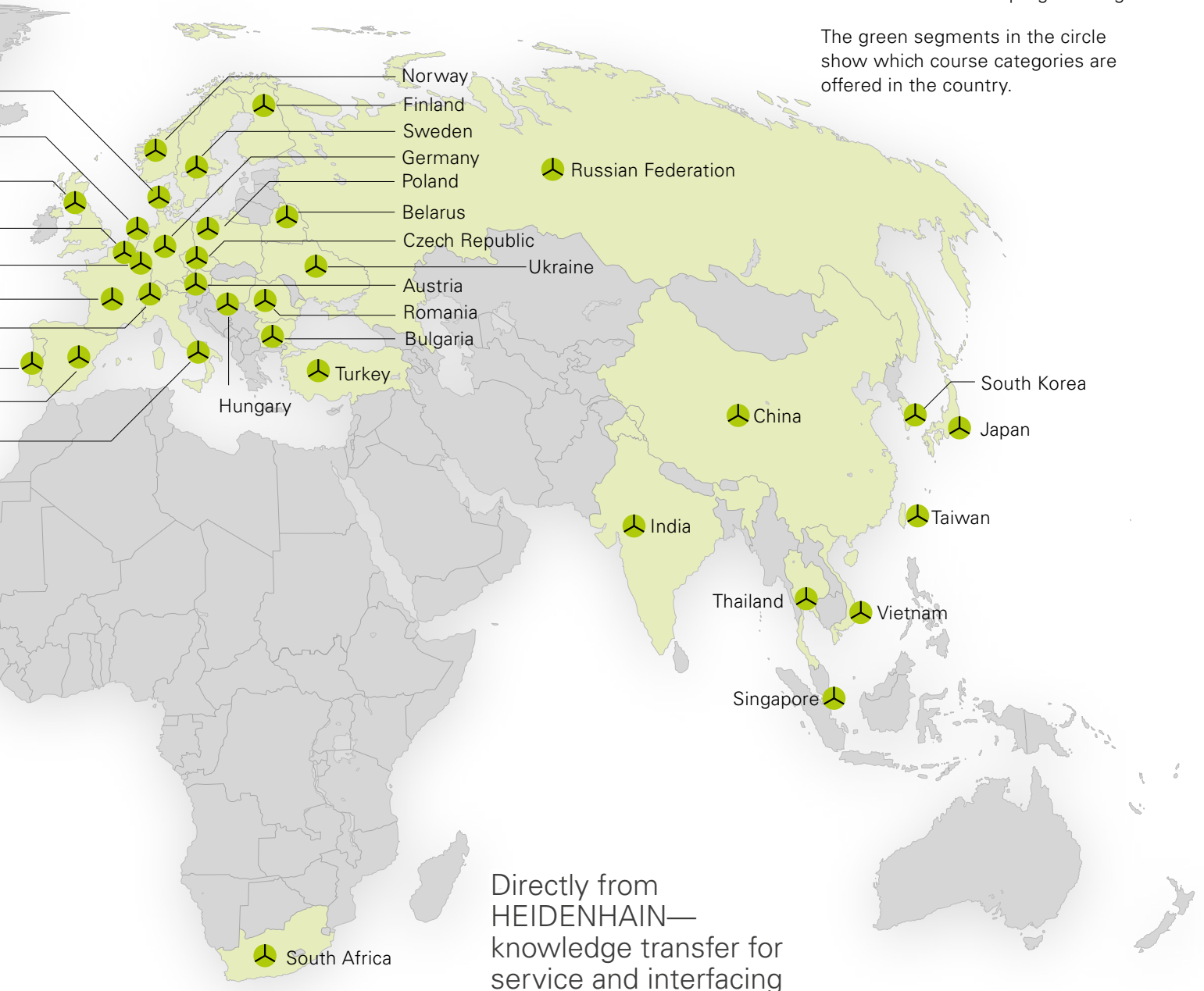
Service courses take place all over the world at HEIDENHAIN subsidiaries.

HEIDENHAIN worldwide

In the following categories:

Interfacing  Service
 NC programming

The green segments in the circle show which course categories are offered in the country.



Directly from HEIDENHAIN—
knowledge transfer for
service and interfacing

Courses for the interfacing of controls and encoders to machines as well as service topics set very high demands on product-specific technological knowledge. An no one is more competent than HEIDENHAIN itself in such matters. This is why such courses in Germany are offered exclusively in the Training Center in Traunreut. Everywhere else in

the world, the HEIDENHAIN network of subsidiaries assumes this demanding task.

Specialists for the interfacing of controls or for retrofitting, service and repair enterprises profit from a comprehensive program of courses.

TNC knowledge for high demands

For many years, the training network has been continuously expanded in order to optimize access to courses by establishing numerous providers at all locations. The TNC users in particular in Germany and its neighboring countries profit from an increasingly dense network of **authorized training partners**. These external training facilities impart practical TNC knowledge for TNC users in programming courses. These are independent companies and educational institutions that are optimally prepared by HEIDENHAIN through a special program in Traunreut and are kept continually up to date on the latest information regarding new developments.

The quality of knowledge transfer from the authorized training partners is comparable with the requirements of the training program offered in the new Training Center in Traunreut. Besides the well-equipped training rooms with original HEIDENHAIN TNC programming stations, course participants can also expect access to CNC milling machines with HEIDENHAIN controls. The contents are imparted in individual units using easily understandable and user-friendly practical exercises. And naturally the course contents are coordinated with the contents in Traunreut. The course curricula of the authorized training partners covers a large range, beginning with the basic seminars for NC programming to HEIDENHAIN basic courses for operating principles and

fundamental functions of the controls, all the way to special topics such as machining in a tilted plane or tool and workpiece calibration. Beyond this, on-site special courses are also offered that are tailored to the customer's specific requirements. All in all, a well-rounded package with the clear goal of optimally training TNC users to be able to work with their TNCs effectively and therefore economically.

Authorized training partners in your area

In the following categories:

NC fundamentals  NC programming

The green segments in the circle show which course categories are offered by the training partner.

36 training partners in Germany
20 training partners in Europe (without Germany)
2 training partner in Asia



Finding course easily

Many partners in the HEIDENHAIN Training Network offer additional courses that are specifically adapted to the requirements of an enterprise. This makes it possible to use the respective machine to its full potential. The course duration is also definable: from one-day seminars to a full-week course.

The different training partners have various topic areas in their curricula. You can find the right course for you by using the interactive course search function:



+ http://training.heidenhain.de/de_EN/worldwide-search-for-courses/



Components of a model-airplane engine manufactured on an iTNC 530

Example of a training partner

For course participants who place a high value on learning by experience and practice-oriented training, the CNC Technik Kolm Company on the lovely Attersee Lake is the right address.

Owner-manager Johann Kolm has made an occupation out of his hobby and manufactures model-airplane engines. His motors are the objects of the courses and find easy acceptance. Mr. Kolm explains why: "The manufactured components serve not only as examples—they also have to work." Starting with the production drawing, the participants are expected to write a program, define the setup, find suitable tools, determine the machining strategy and then, af-

ter machining the workpiece, measure it on the machine. It covers the entire process sequence." Of course, both the HEIDENHAIN programming stations and the iTNC 530 play central roles in this process.

The course participants undergo intensive training. Every theoretical section is therefore followed by the workshop practice, which means "prepare, set up, machine." And everyone gets his chance on the 5-axis machine.


Model construction here makes a good contribution to the joy of learning: understandable theory, true-to-practice simulations and shop-floor experiences result in a fast learning experience and create a close relationship to the real work.

+ www.cnctechnik.net



Johann Kolm praises the easy comprehensibility of the HEIDENHAIN control.

It's a HIT in vocational school



The new interactive HEIDENHAIN learning software in practice at a vocational school

Optimally matched: HIT learning software and HIT workbook.

HIT—HEIDENHAIN Interactive Training is the new interactive learning software from HEIDENHAIN offering comprehensive and practice-oriented training on everything about the controls. The Klartext editorial staff wanted to know how it functions in practice and visited the Oskar-von-Miller vocational training center in Schwandorf, Germany. We show how students and teachers profit from the didactic HEIDENHAIN learning solution.

The Oskar-von-Miller vocational school in Schwandorf emphasizes a type of vocational education that provides students with an optimal career start from modern equipment and motivated teachers. 3,580 students are educated here in various, predominantly technical occupations. Accompanied by the head of the Metal Technology Department, Alois Mayer, we visited the instruction of a precision mechanics class.

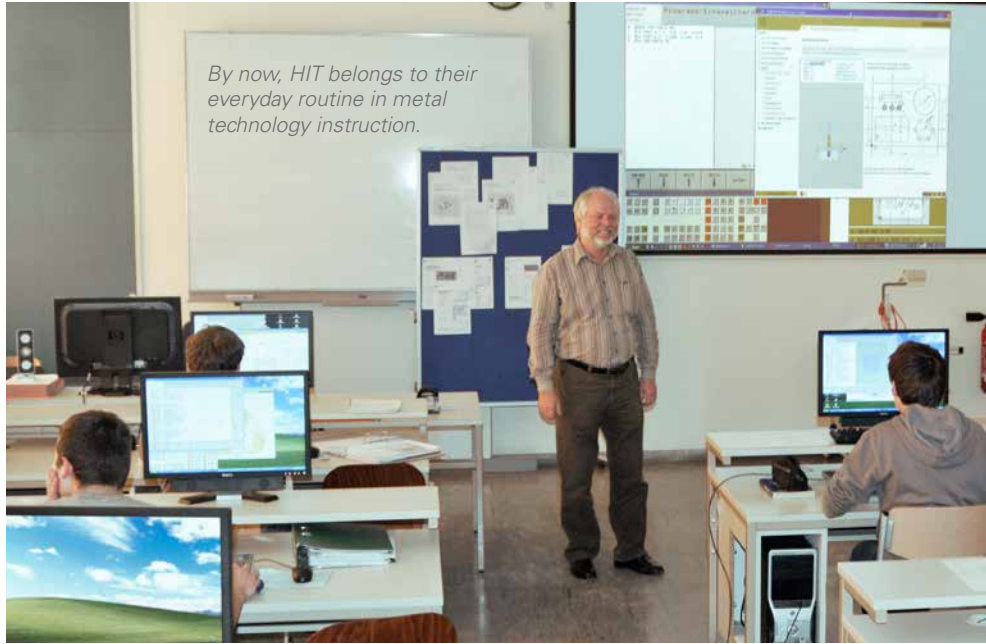
Lots of material, little time

A special challenge: only one 45-minute lesson is available per week for learning CNC programming. This is a short period of time that doesn't exactly make it easy to learn the necessary skills for program creation, much less to do the training needed to gain confidence in working with controls.

This is why there is a great need for a modern learning application that optimizes knowledge transfer in this very small instruction period. Alois Meyer learned about HIT during a teachers' seminar. He immediately advocated for its introduction. HEIDENHAIN offered his training center the opportunity to test the learning application free of charge.

The school in Schwandorf has been using HIT now since the spring of 2012 in order to teach theoretical and practical NC fundamentals effectively in a classroom environment. The attractive and flexible learning solution for HEIDENHAIN controls begins with the most important elements of a CNC machine and then trains the students in the fundamentals of CNC programming, directly on a programming station. The application optimally connects theoretical learning with practical exercises.

By now, HIT belongs to their everyday routine in metal technology instruction.



Johann Klein, the teacher and faculty advisor for the metal workshops emphasizes, "Without the programming station, many students would not have the possibility to gain practical NC experience from the very beginning."

Linking the classroom to the workshop

In the vocational school, almost all HIT learning modules are being used—depending on the students' previous knowledge. HIT is already being used in the first and second years in order to teach the typical layout of an NC milling machine, axis designations and functions, the meaning of datums and the fundamental use of touch probes. The students also learn the layout of part programs in conversational format.

With HIT; the vocational school in Schwandorf has succeeded in making a smooth transition from the classroom to the machine shop. The programming station is optimally integrated in the network: the programs created can be loaded to the machine tool and then tested under real conditions.

“The students' motivation has grown strongly thanks to this modern learning method.”

Teacher and Faculty Advisor for the Metal Workshop, Johann Klein

Interactive learning increases motivation

"The students' motivation has grown strongly thanks to this modern learning method," says Johann Klein. HIT simulated important aspects of program creation using concrete tasks. The user is guided toward solutions interactively through many realistic scenarios

But for the teacher, too, HIT offers a significant benefit: "Students can learn on their own and I can use that time to devote myself to individual questions and problems," says Klein.



Creating programs in the classroom—testing them on the machine.



“ It used to be that our students learned how to program on paper. Now they learn interactively with the programming station.”

Head of Metal Technology Department,
Alois Meyer

Oskar-von-Miller vocational school in Schwandorf, Germany

The Oskar-von-Miller vocational training center has its main facility in Schwandorf in the Upper Palatinate, Germany. Branch locations are located in Nabburg, Neunburg and Oberviechtach. A total of 3,580 students are educated here in various, predominantly technical occupations.

The “commercial advanced training school” was opened in 1902. In October, 1958, instruction began in the building on Glätzl Street. In July 1998, the Ministry of Education and Cultural Affairs bestowed the vocational school center with the name affix “Oskar-von-Miller.”



+ www.bsz-sad.de



The head of the metal technology department, Alois Meyer (left) and the teacher and faculty advisor for the metal workshop, Johann Klein (right) reports to the KLARTEXT editorial staff about the application of HIT in their school.

FöPS—the support program for schools

HEIDENHAIN supports educational institutions

FöPS is a HEIDENHAIN initiative that promotes educational institutions that offer CNC training with emphasis on milling or turning.



Teachers, trainers and trainees profit

HEIDENHAIN offers special courses for trainers in vocational schools, technical colleges and vocational education institutes. These courses include CNC fundamental and intermediate training for turning and milling controls. They also provide teachers and students with comprehensive documentation that is available free of charge after the courses take place.

CNC in practice with the programming station

Educators and students can use the cost-free programming station to create NC programs with up to 100 blocks, graphically simulate them and then transfer them to a machine tool for execution. Programming stations without any limits, both with virtual or hardware keyboard, can be purchased as classroom licenses at special prices.

Interactive learning with HIT and TNC training

The interactive HEIDENHAIN learning method imparts fundamental knowledge of CNC programming and technical background knowledge. It consists of the modules HIT software, the HIT workbook and a TNC programming station.

In addition, the interactive e-learning software “TNC Training in the Web” imparts fundamentals of CNC programming as well as tilted-plane machining and touch probe system applications.

Update Information

Teachers and trainers who participate in the support program receive an annual FöPS letter with current information.

For further information on FöPS, please contact:

+ foeps@heidenhain.de

You can download the free programming station from here:

+ www.klartext-portal.com/pc-software/programming-station

HEIDENHAIN and VDW

add their weight to teacher training



www.vdw-nachwuchsstiftung.de

VDW Youth Education and Development Foundation issues new training documents for vocational teachers

HEIDENHAIN and the youth foundation of the VDW—the association of German machine tool manufacturers—have combined their efforts in order to support the education of teachers and the advancement of young people in the machine tool industry. In close cooperation, these partners have created new, state-of-the-art CNC training documents. This documentation combines the latest developments in the industry with the requirement of modern educational structures.

The goal is to ensure a high-value qualification of trainers that includes state-of-the-art and practice-oriented methods of CNC programming. In this way, they intend to do justice to today's developments in the machine tool industry.

The documents developed by HEIDENHAIN and the VDW Youth Education and Development Foundation are divided into teachers' and students' documents. The training material for teachers is modular in form and is also suited for self-study. It is divided into two parts: the emphasis of the first part is CNC programming. The second part adds workpiece setup and how to operate the machine tool.

The instructional documents are designed to make it easier for the students to work their way into CNC programming using numerous practical examples from the field of CNC manufacturing.

HEIDENHAIN also offers teacher's training specifically for the VDW Youth Education and Development Foundation. The idea is to give the teachers the experience they need on everything that has to do with milling and turning. HEIDENHAIN also supports training and the VDW at trade shows. In the trade-show booth of the VDW Youth Education and Development Foundation you can inform yourself about HEIDENHAIN programming or communicate personally with trainers and trainees.



You can order the documents in the online shop of the VDW Youth Education and Development Foundation.

Distinction for a Traunreut trainer team

Seven of our NC trainers have graduated from a multi-level advanced course to become certified vermit® trainers

In its training center in Traunreut, Germany, HEIDENHAIN offers high-quality training. This high quality is ensured not only through an ultra-modern infrastructure in the training center, for example through the application of state-of-the-art media technology or late-model machine tools, but also through regular advanced education for the trainers. Of course, the trainers are continually in contact with product managers and software developers for the CNC control to stay up to date with currently available functions. Moreover, the optimization of knowledge transfer is a central topic in the advanced education of HEIDENHAIN trainers.

For this reason, seven NC trainers completed a multi-level advanced course to become certified vermit® trainers. The certificates were bestowed during the 2015 Trainer Meeting. At the same time, the trainer team was distinguished for developing a modular and flexible course plan with the **BLICKER 2015**. The BLICKER is awarded by vermit® for outstanding achievement or innovations during workshops for know-how transfer or for the development of course solutions.

Until now, course participants were always obliged to book standard training programs with fixed content and fixed

duration. The new TNC workshop model is an innovation in that it now enables them to configure their course content with complete flexibility. They can book courses of variable duration between 0.5 and 3 days and can always choose from three topics offered in parallel.

To make application for courses as simple as possible, the TNC workshop offers its own booking mask with a compact and quickly understandable selection of available topics.

We would be very happy to be able to greet you at one of our next TNC workshops.



From left: Michael Wiendl, Martin Menzel, Christian Schneider; Mathias Köhler, Peter Schilling-Frenk, Florian Bauer, Markus Baumgartner; in front: Udo Nowak, Director of the HEIDENHAIN Training Center



The application-oriented design of the user workshops is the main emphasis at HEIDENHAIN:

User workshops

Due to high demand, the Traunreut Training Center conducts regular user workshops free of charge. Together with partners from the manufacturing process chain, it demonstrates the practical application of the latest technologies. The machine hall, equipped with high-tech machines and state-of-the-art control technology is the central component of the user workshop. Here the participants experience in live operation what they learned beforehand in short lecture blocks. Of course, plenty of time is planned in to answer specific questions and allow the participants to share their experiences with each other. Experts from the collaborating partner companies provide their expertise for all technical questions.

You can find the current topics and dates at:

+ http://training.heidenhain.de/de_EN/training-program/anwender-workshops/

HEIDENHAIN

Schulungsportal

Home

TNC-Workshops März (21.03. - 23.03.)

März 2016 (KW12) Mai 2016 (KW21) November 2016 (KW44)

21.03.2016		22.03.2016		23.03.2016	
Vormittag	Nachmittag	Vormittag	Nachmittag	Vormittag	Nachmittag
AFC 6	KinematicsOpt 6	Tast (iTNC 530) 6	Tast (iTNC530) 6	Tast (iTNC530) 6	Tast (iTNC530) 6
Q-Parameter 5	Schwenk (3+2) iTNC 530 6	Schwenk (3+2) iTNC 530 6	Schwenk (3+2) iTNC 530 6	Schwenk (3+2) iTNC 530 6	Schwenk (3+2) iTNC 530 6
Tast TNC 640 6	Schwenk (3+2) TNC 640 6	Schwenk (3+2) TNC 640 6	Schwenk (3+2) TNC 640 6	Fräs-Dreh TNC 640 6	Fräs-Dreh TNC 640 6

Legende
 ■ Anzahl freier Plätze
 ■ Nur noch eine begrenzte Anzahl an Plätzen vorhanden
 ■ Kurs ist bereits belegt

Zwischensumme € 0,-

Weiter

vermit® – the network

vermit® is an open network of people who manage small to medium-sized technology training centers and conduct courses in them (technical trainers), are involved in national and international qualification strategies, or accompany

professional qualification activities. The activities of vermit® include the formulation of qualification activities for evaluation and comparison of services in **industrial** sectors as well as the expansion of previously developed seals of quality.

You can find more information at:

+ www.vermit.net





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