

Fixturing systems

*Clamping systems for
measuring technology*



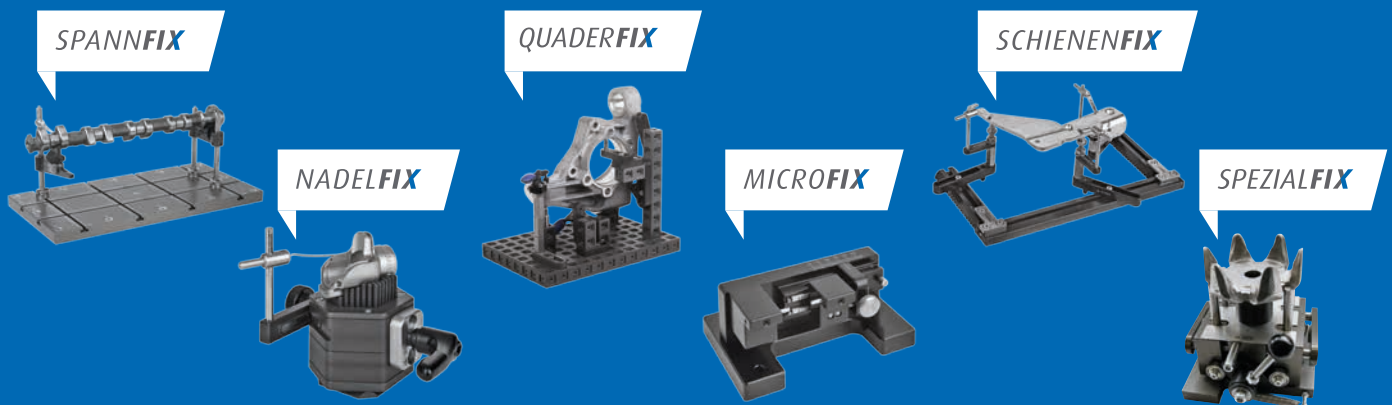
Tactile and optical measuring and testing

The entire dk system consists of several differently orientated but mutually compatible programs. Additionally, we also develop customer specific solutions. Our aim is to bring the part being tested into the optimum position and to hold it there with the least possible clamping force and highest degree of repeat accuracy. This applies to single part holding and repetitive measuring tasks. The most professional solutions include the use of modular clamping systems. Single elements can be accurately

and with high repeatability constructed to form constantly new fixture combinations. The CAD models available from dk support the planning of measuring fixtures and their documentation.

» **Modular clamping systems guarantee speed, economy, conservation of resources and reliable measuring results.** «

Summary of the product range



Advantages of the dk products

» Rapid assembly

The perfectly matched module elements enable complete clamping fixtures to be easily constructed and workpieces quickly clamped.

» Accessible measuring points

Best possible accessibility to the workpiece being measured so that, where possible all measuring points can be reached in one setup.

» Secure measuring

The parts being measured are held with high stability. Measurement results are not falsified and the measuring process is carried out without interruption.

» Low fixture costs

The intelligent dk concept, with a wide selection of standard modules, enables the construction of simple or complex clamping fixtures without the need of machining special parts. The configurations can be repeatedly taken apart and re-assembled in a new configuration. High wear resistance guarantees many years of repeated use. That sustainably reduces processing times by new products and consequently saves fixture costs.

» Reproducible setups

After the first measuring process, further workpieces can always be located in the same position. Repeat measurements can be carried out in automatic mode, which reduces measuring time.

» Combinable systems

The extent of the modular systems and the choice of specifications of the individual functional modules enable solutions for almost any clamping task and measuring process. The mutual compatibility of the different dk-programs sustainably facilitates this.

Clamping system for tactile measuring

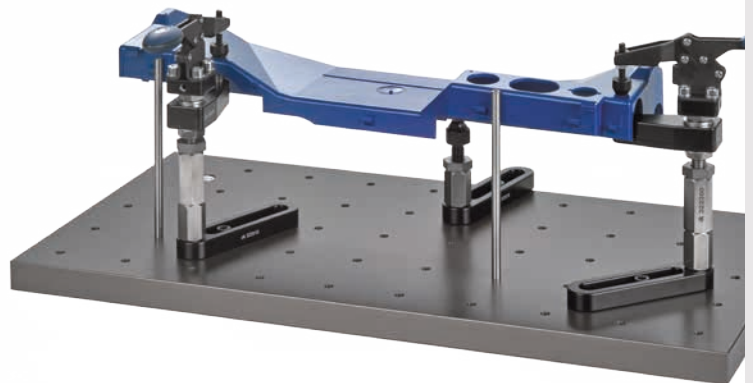
Function

Comprehensive, intelligent modular systems consisting of base, structural and clamping elements for holding various workpiece geometries. Base plates with grid holes or T-slots for mounting columns on which arms with supports and clamping elements can be mounted. From this follows the positioning with repeat accuracy and the quick and effective

clamping of the workpiece. As an alternative there is the proven dk quick change system with a wide choice of bases, structural and clamping elements. The unique total concept guarantees the precise, quick, repeatable and so economical holding of parts for measurement without using expensive single-use special fixtures.

Advantages

- » Suitability for many sizes and geometries of parts through modularity and diversity
- » Accurate repeat positioning and secure holding with low clamping forces
- » Time saving, resource saving and cost efficient through intelligent combinable modules, instead of product specific special fixtures
- » Combinable with other dk measuring holding programs through standardised interfaces



Modules

Base plates, adjustable structural elements, adjustable risers, enormous selection of clamping elements such as vices, chucks, small part clamps, tailstocks, strap tensioners, magnetic holders, C-clamps and other elements.



Clamping system for tactile measuring

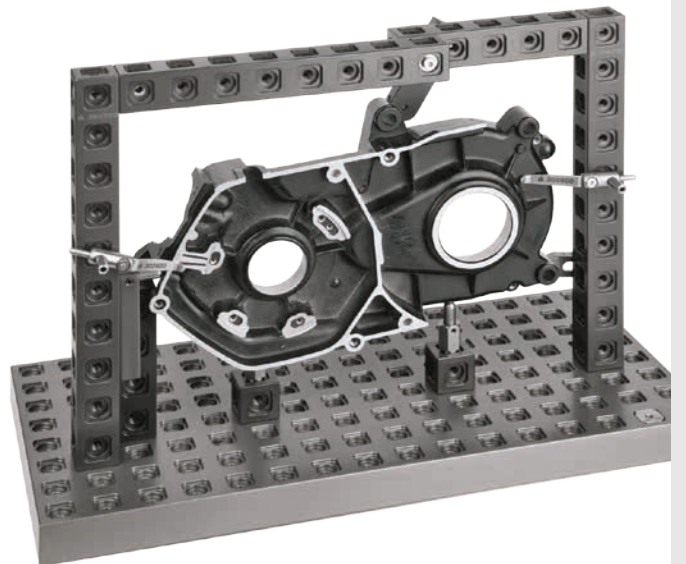
Function

Highly stable holding of large and heavy workpieces with a well thought out system of solid modular elements, that cannot rotate when joined together. Base plates with a 25 mm grid for supporting components of the module system with which any vertical or horizontal position can be achieved and held even under heavy loading. Where accurate repeat

positioning and clamping is a concern, the elements from the SPANNFIX program are the ideal choice. They perfect the QUADERFIX system. The result is an unrestricted basis for measuring fixture solutions through the universal system thinking of dk-Fixiersysteme over and above the actual QUADERFIX program.

Advantages

- » Suitable for holding large and heavy parts on tactile metrology machines
- » Non-twisting connecting of the modules to each other through positive locking of the contact elements
- » Absolute modularity and a wide choice of components in various versions
- » Perfectly combinable with the SPANNFIX components
- » The elements of the dk quick change system can be used through standardised interfaces



Modules

Base plates, vertical and horizontal components and supports as well as an enormous selection of clamping elements from the SPANNFIX system to suit any workpiece geometry.



Clamping system for optical and multi-sensorial measuring

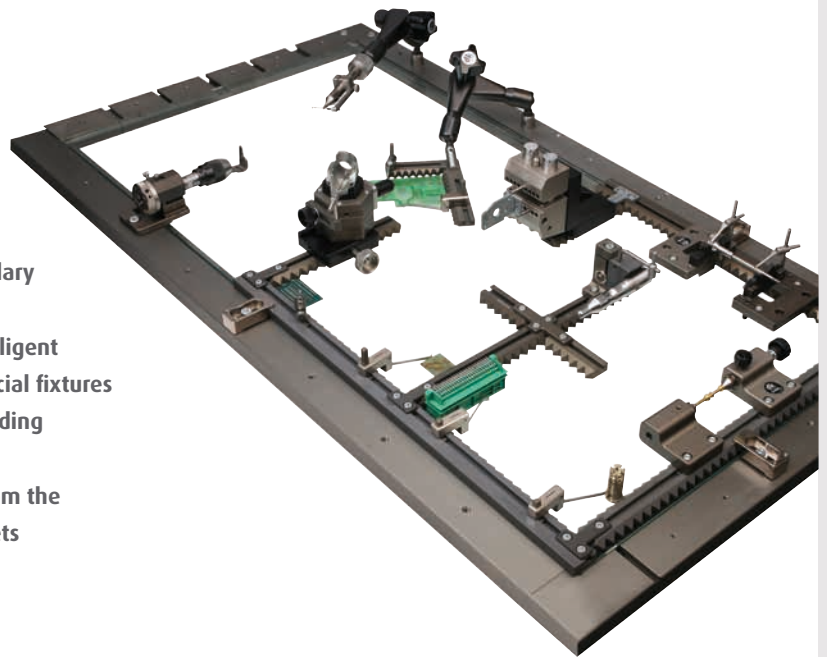
Function

System modules for optical metrology machines, multi-sensorial equipment measuring projectors and measuring microscopes but also for tactile measuring. The basis is a modular rail system with structural and clamping elements for optimally locating components of diverse geometries, preferably for optical measuring processes. A system of toothed rails are fastened to a measuring machine and create the perfect base

for workpieces whose straight edges can be perfectly measured through the toothing. Simultaneously, the T-slots on the rails enable infinite position adjustment of the spring clamp elements that have direct contact with the workpiece, and enable the fastening of basic, structural and clamping modules from SCHIENENFIX and SPANNFIX.

Advantages

- » **Universal application through modularity and diversity of the components**
- » **Optimum visibility and consequently exemplary measurability of the workpiece**
- » **Time, resource and cost efficient due to intelligent combinability of the modules instead of special fixtures**
- » **Combinable with other dk measurement holding programs through standardised interfaces**
- » **Maximum economy through setups away from the metrology machine with exchangeable pallets**



Modules

Toothed slot rails, directly applicable spring clamps, adjustable structural elements and an enormous selection of clamping elements such as vices, chucks, small part clamps, magnetic holders, C-clamps and other elements.



Clamping system for tactile measuring

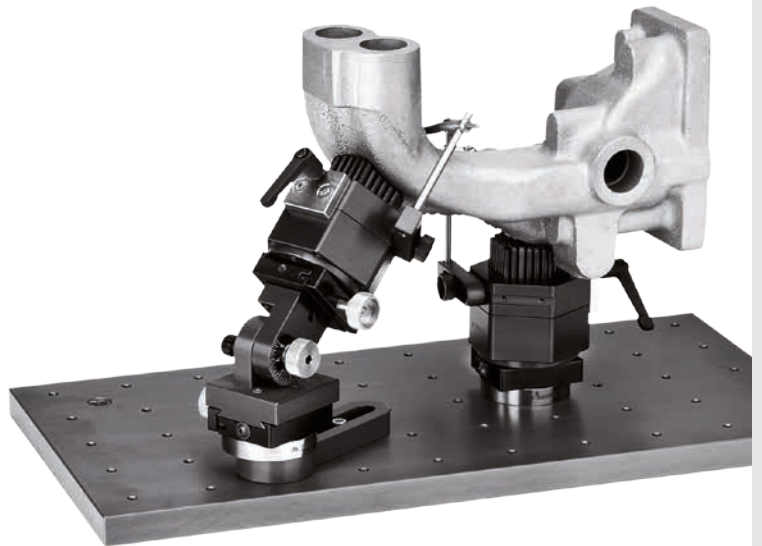
Function

Workpieces with complicated free-form geometries for which no conventional clamping equipment exists can be securely and reproducibly fixated and held with NADELFIX. Parts to be tested are pressed into a bed of individually sprung pins which are then locked in place through a central clamp. This

rapidly produced exact negative from of the test piece holds the piece in place with minimum clamping force, e.g. by using spring clamps. There is no surface damage as by normal vices, nor is there any unreliable, improvised clamping.

Advantages

- » Excellent suitability for free-form surfaces
- » Secure and gentle holding through a form fit with minimum clamping force
- » Time saving and cost efficient due to rapid adjustment to variable workpiece geometries
- » Universal clamping element instead of manufacturing and storing product specific special fixtures
- » Simple and tool-free operating principle
- » Combinable with the other dk programs
- » System modules with versatile application possibilities



Modules

Basic elements are various sizes of needle bed. Flexible clamping attachment for integrated clamping. Structural element for quick, secure and accurately repeatable positioning in free room.



MICROFIX

Clamping solution for micro parts

Function

Clamping solution for micro parts from 0.3 mm to 10 mm. Specially developed for gentle holding with adjustable clamping force. For rotationally symmetrical and cubic parts.

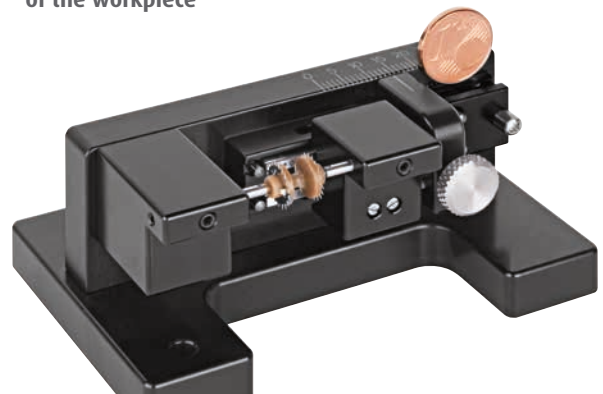
Modules

Special construction with exchange pallets and hollow centres or tailstock centres.



Advantages

- » Accurate repeatable positioning and secure holding with a constant clamping force
- » Constant, low and adjustable clamping force so that there is no influence to the form or dimensions of the workpiece



SPEZIALFIX

Special solutions

Function

Custom-made products for components with special dimensions, geometries or other characteristics in conjunction with special measuring requirements. Multi-component clamping for tactile or optical measuring.

Modules

Special constructions with or without using standard components.



Advantages

- » High-end-solutions for workpieces or process orientated positioning, holding and clamping
- » Partial or fully automated solutions are realisable



dk FIXIERSYSTEME *modular. simple. better.*

The core expertise at dk FIXIERSYSTEME focuses on modular clamping designed specifically for measuring technology.

Having been on the market since 1972, the dk team began working with fixing technologies from an early stage and has further developed this range of products over the course of time. Today, the product

range encompasses approx. 1000 products which can be freely combined and therefore form a modular system. Users who work with dk technology, regularly confirm that the possibility to combine modules flexibly and the durability of the elements guarantee a precise measurement result with a continuous workflow.



The entire world of dk FIXIERSYSTEME for measuring technology under www.dk-fixiersysteme.de



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