

Fixturing systems

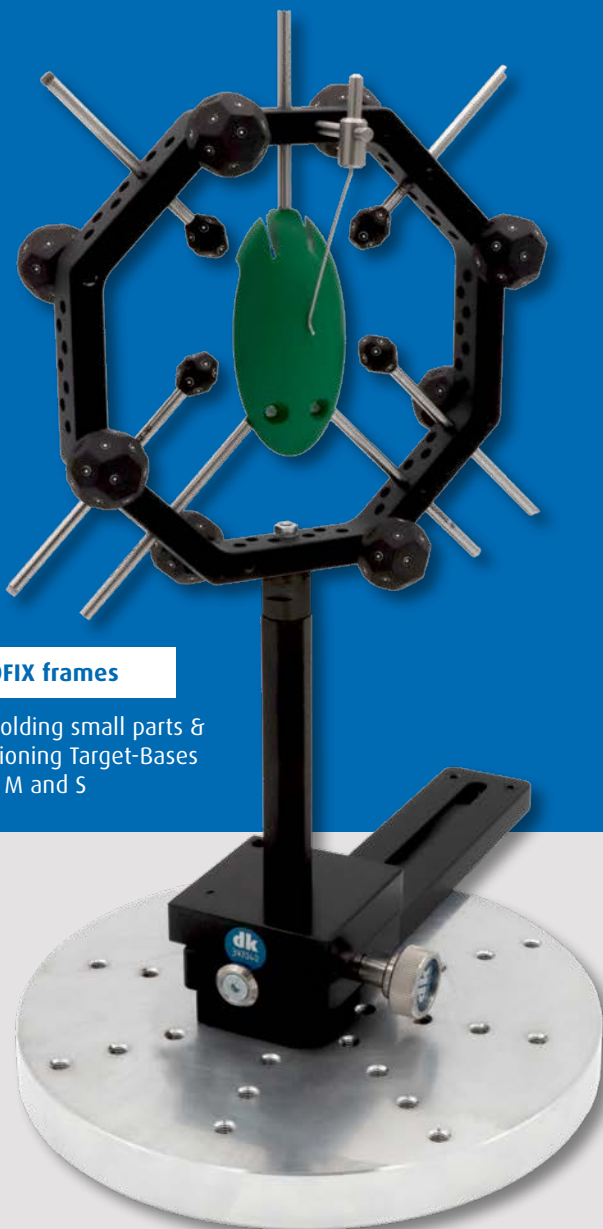
Target-Base clamping systems for 3D scanning



For every scanning process the optimum solution with Target-Bases, Target-Supports and fixating systems

Reference points, dot marks, targets, measurement marks or adhesive marks...

The designations for measuring points for referencing in the various scanning measurement technologies are very diverse. However, the problem is always the same: these self-adhesive points cause a lot of extra work when they are stuck directly onto the test specimen and then have to be removed again afterwards leaving no residues. The ideal scenario for many metrology technicians is that the measuring points are not stuck directly onto the component, but onto special elements that can be spatially positioned anywhere to suit the test specimen and the measuring task. dk offers many freely configurable solutions here that go far beyond simple frames.



OCTOFIX frames

For holding small parts & positioning Target-Bases sizes M and S



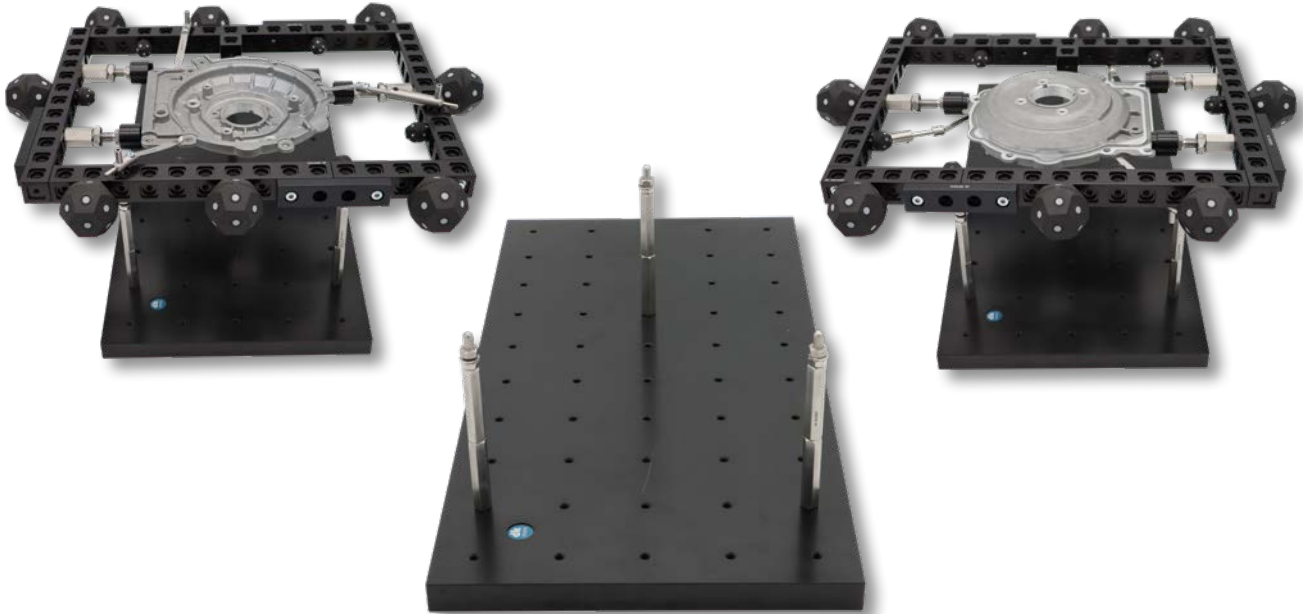
SWA39 clamping system & OCTOFIX frames

For holding small parts and positioning Target-Bases



QUADERFIX reversible frames

For part fixation with freely positional Target-Bases on SPANNFIX ECO baseplates



QUADERFIX clamping system

For holding larger parts with Target-Bases on a freely positionable fixating system



Target-Bases

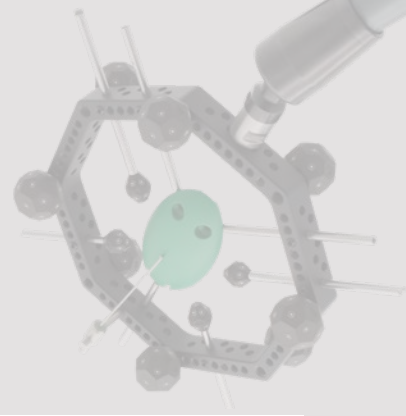
- » Different sizes with up to 31 faces per base
- » With thread or magnet
- » For conventional dot marks from \varnothing 0.8 to 12 mm

SPANNFIX PRO clamping system

For fixating complex parts combined with articulated arms for 3D positioning of the Target-Bases via Target-Supports



Module system OCTOFIX as stationary frame



OCTOFIX set



Perfection through module system and SWA39 quick-change interface:

- » Base rail for exact alignment in the axis of rotation
- » SWA39 quick-change interface for efficient changes between different pre-setup fixations
- » Secure fixation of the test specimen with minimal concealment by retaining elements
- » Repeat accurate part fixation by series measurements
- » Reference marks remain in the set position

OCTOFIX frames

Wide field of applications through comprehensive module system:

- » Frames with many connection and adjustment possibilities
- » Functional pins with female thread and stepped support on the opposite side for use as a holder for both the component and the Target-Bases
- » Infinite radial adjustment of the functional pin with secure locking with a grub screw
- » Freely positional spring finger with column for part fixation
- » Target-Bases size M for screwing onto the frame and size S for screwing onto the adjustable pin



Components of OCTOFIX

Sets

OCTOFIX basic set

Description	Order number
Set contains 1 x quick-action clamp on a base rail (263715); 1 x 200 mm OCTOFIX frame complete with substructure (441100); 6 x 60 mm functional pins (269028); 6 x 80 mm functional pins (269029); 3 x 100 mm functional pins (269030); 2 x M4 columns for spring fingers (269042); 2 x Ø 4 mm spring fingers, L 60 mm (269039); 2 x M6 columns for spring fingers (368200); 2 x Ø 6 mm spring fingers, L 95 mm (302780); 10 x Target-Bases size S (441000); 10 x Target-Bases size M (441010)	441200



Individual components

SWA39 quick-action clamp on an adjustable base rail

Description	Order number
For mounting on turntable or baseplate with threads; adjustment range 170 mm; with M 5, M 6 and M 8 fastening screws	263715



SWA39 200 mm OCTOFIX frame for parts up to Ø 160 mm compl. with substructure

Description	Order number
Frame, 100 mm elevating column and SWA39 quick-change adapter; with Ø 4 mm mounting hole for functional pin, M6 thread for Target-Bases M and M 4 thread with grubscrew for locking the fixating pin or Target-Base pin; each thread can also be used for the mounting column for M 4 and M 6 spring fingers	441100



Ø 4 mm functional pin for part fixation and Target-Base bracket

Description	Order number
One side with M 2.5 female thread / other side with stepped support; L 60 mm	269028
One side with M 2.5 female thread / other side with stepped support; L 80 mm	269029
One side with M 2.5 female thread / other side with stepped support; L 100 mm	269030



Column with thread for spring finger

Description	Order number
Ø 4 mm; M 4; L 30 mm for spring finger 269039	269042
Ø 6 mm; M 6; L 50 mm for spring finger 302780	368200



Spring finger, round type

Description	Order number
Adapter Ø 4 mm; L 60 mm; wire thickness 1.1 mm	269039
Adapter Ø 6 mm; L 95 mm; wire thickness 1.5 mm	302780



Thrust clamp Ø 4 mm, sprung

Description	Order number
L 115 mm; spring travel 15 mm; conical tip and 3D joint	269057



Target-Base size S and M, 10 piece set (no adhesive marks)

Description	Order number
10 x S with 13 faces; M 2.5 thread; suitable for Ø 1.5 mm reference points	441000
10 x M with 19 faces; M 6 thread; suitable for Ø 3 mm reference points	441010



Fixating system SWA39 + OCTOFIX Target-Frames

Universal test piece fixating system SWA39 with quick-change interface for medium sized parts

- » Base rail for exact alignment in the axis of rotation
- » SWA39 quick-change interface for efficient changes between different clamping devices and pre-setup clamped parts
- » Secure fixation of the test specimen with minimal concealment by retaining elements
- » Simple and repeat accurate part fixation by series measurements
- » SWA39 module system with wide selection of clamping devices in various sizes and with diverse accessories



Universal Target-Base system OCTOFIX with a 3D articulated arm suitable for SWA39

- » Frame with fastening possibilities for up to 16 Target-Bases size M each with 19 faces
- » Hex column as extension for positioning the Target-Bases spaced at 50 mm to the frame and so up to 100 mm from each other
- » High-strength 3D articulated arm with central lock and toothed ring for maximum stability and strength of the Target-Bases
- » Perfect positioning of the targets for maximally efficient process



Example applications



Many other solutions from the dk fixating programs can be used for scanning but also with tactile and optical measuring machines, computed tomography, surface and contour measuring machines etc.

SWA39 + OCTOFIX components

Sets

OCTOFIX basic set SWA39 vice

Description

Set contains 1 x quick-action clamp on a base rail (263715);
1 x 50 mm precision vice set (440030); 4 x 35 mm steel dowel pins (282310);
4 x 80 mm carbon dowel pins (440040); 1 x adjustable base rail (245150);
1 x TurnStop articulated joint (241030); 1 x 200 mm OCTOFIX frame (441105);
10 x Target-Bases size M (441010); 6 x M6 columns for Target-Base (441050)

Order number

441210



Individual components

SWA39

SWA39 quick-action clamp on an adjustable base rail

Description

For mounting on turntable or baseplate with threads;
adjustment range 170 mm; with M5, M6 and M8 fastening screws

Order number

263715



50 mm precision vice set with SWA39 interface

Description

Jaw width 50 mm; clamping width 35 mm with exchange set for 75 mm;
incl. actuating knob 282101

Order number

440030



Round clamp intermediate element

Description

Steel; straight stepped; L 35 mm; 1 set of 4

Order number

282310

Carbon; straight stepped; L 80 mm; 1 set of 4

440040



OCTOFIX

Adjustable base rail for M5, M6 and M8

Description

For mounting on turntables; adjustment range 170 mm; mounting of articulated arm via M8

Order number

245150



TurnStop articulated joint TS-280 with 280 mm action radius

Description

For arbitrary spatial positioning of the OCTOFIX frames;
Lower connector thread M8; upper connector thread for OCTOFIX M8;
high-strength central locking with progressive clamping sequence and toothed disc

Order number

241030



200 mm OCTOFIX frame for parts up to Ø 160 mm

Description

Frame for mounting on 3D articulated arm with a Ø 4 mm mounting hole for functional pins, M6 thread for Target-Bases M and M4 thread with grub screw for locking the fixating pin or Target-Base pin; each thread can also be used for the mounting column for M4 and M6 spring fingers

Order number

441105



Hex column with M6 thread for Target-Bases

Description

L 50 mm; 6 faces for adhesive marks; for screwing onto OCTOFIX

Order number

441050



Target-Base size M, 10 piece set

Description

10 x M with 19 faces; M6 thread; suitable for Ø 3 mm reference points

Order number

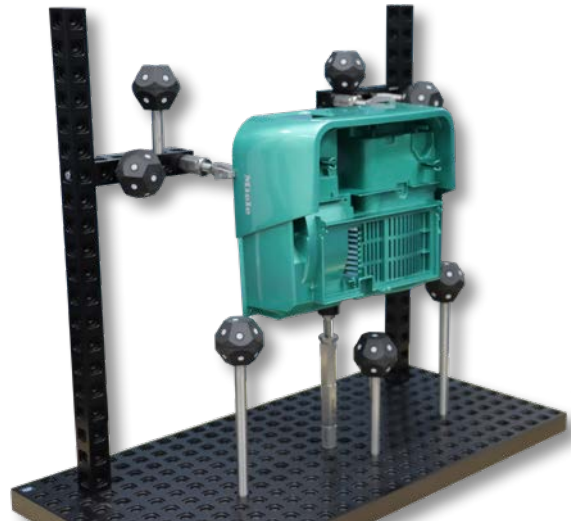
441010



QUADERFIX fixating system + Target-Bases

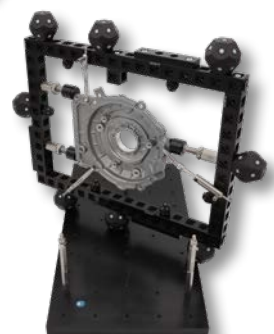
Universal test piece and Target-Base fixing system QUADERFIX for large parts

- » Module system for constructing arbitrary fixtures from standard square elements
- » Non-rotating construction of connections for a high-strength 3D configuration
- » Wide choice of structural elements, extensions, supports and clamping elements
- » Compatible with all other dk fixating programmes for infinite variations
- » 4 side direct adaptation of Target-Bases on M6 threads in a 25 mm grid



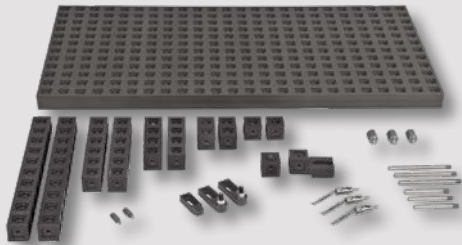
Reversible frame constructions from the QUADERFIX programme

- » The modular system also permits the configuration of rectangular or free-form frames
- » Test specimens secured by means of supports and clamping elements can be rotated through 180° together with the frame and Target-Bases and securely repositioned
- » Baseplate either on the machine or from one of the dk fixating programmes

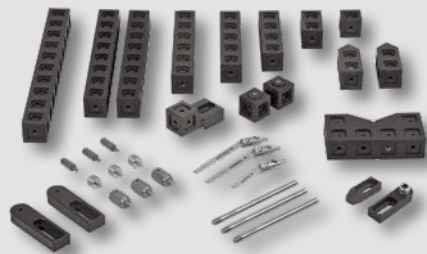


QUADERFIX + Target-Bases components

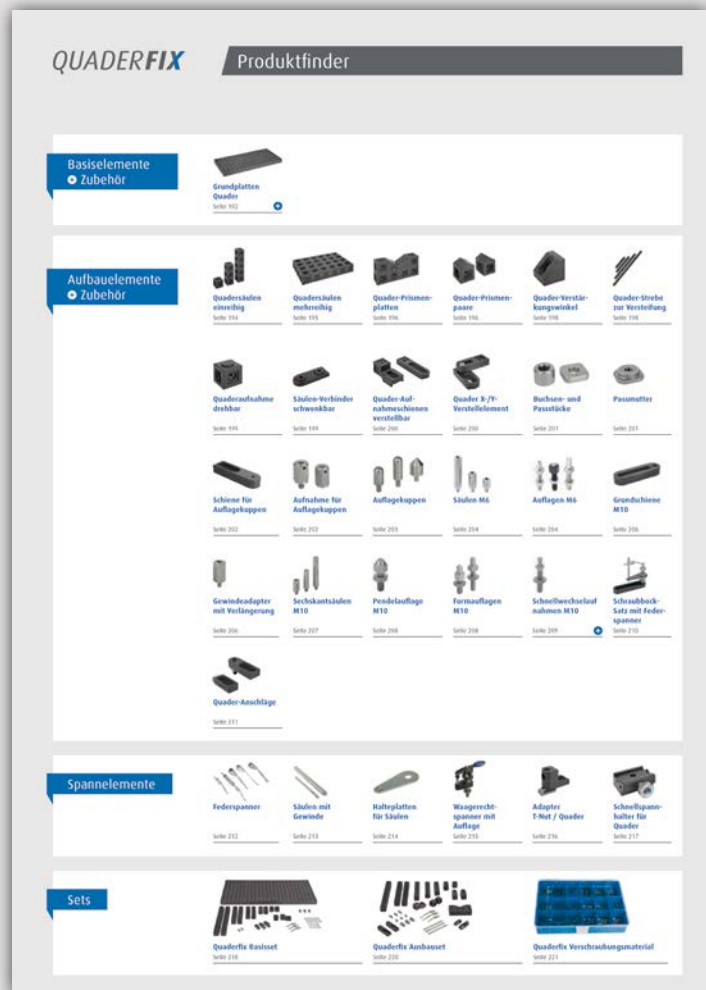
QUADERFIX basic set item No. 369915



QUADERFIX expansion set item No. 369930



QUADERFIX fastening set item No. 369800



*The entire QUADERFIX module system covers 33 pages of the dk catalogue

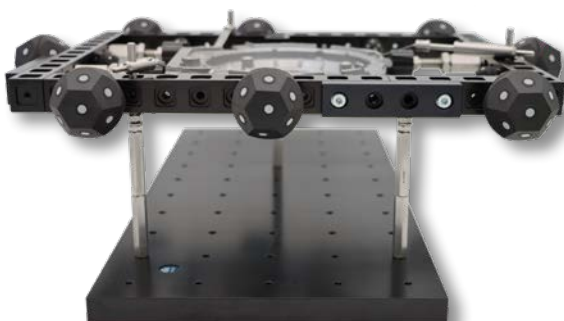
Individual components

Target-Base size M and L, 10 piece set

Description

Order number

- | | |
|---|--------|
| 10 x M with 19 faces; M6 thread; suitable for Ø 3 mm reference points | 441010 |
| 10 x L with 31 faces; M6 thread; suitable for Ø 8 mm reference points | 441020 |
| 10 x XL with 31 faces; M6 thread; suitable for Ø 12 mm reference points | 441030 |



SPANNFIX fixating system + Target-Support



SPANNFIX fixating programme

These fixation programmes developed for conventional measuring technologies offer solutions for all conceivable test part setups in the scanning domain.

- » Several proven and comprehensive modular systems that can all be combined with each other
- » Very wide choice of basic and structural elements, extensions, supports and clamping elements
- » Process optimised designed fixtures made from standard parts
- » Precise repeatable positioning when measuring identical parts
- » Target-Bases adaptable directly to the fixating system or indirectly via articulated arms



Target-Support

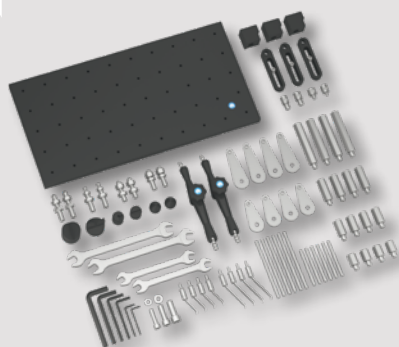
The reference points are perfectly positioned via 3D articulated arms using Target-Supports and Target-Bases.

- » No adhesive dots on the specimen
- » Modular principle also by fixating and positioning the measuring marks
- » Very rapid placement of the measuring marks used for positioning as these are already stuck onto the Target-Bases
- » Very easy to readjust and supplement if reference points are missing
- » Can be dismantled & reconfigured as often as required
- » Precise and very robust

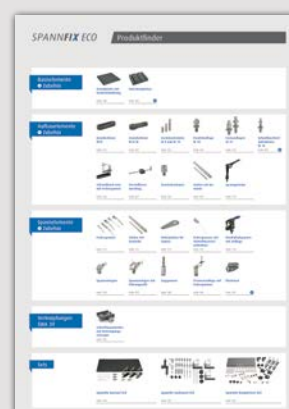
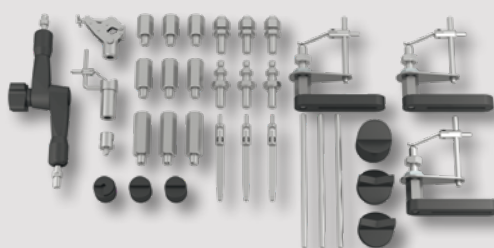


SPANNFIX ECO components

SPANNFIX ECO starter set item No. 285180



SPANNFIX ECO expansion set item No. 285155



*The entire SPANNFIX module system covers 33 pages of the dk catalogue

3D joint + Target-Support components

Sets

3D Joint set with Target-Supports

Description

Set contents: 1 x adjustable base rail for articulated arm (245150);
1 x TurnStop articulated joint (241030); Target-Support rail (441060);
4 x M6 hex columns for Target-Bases (441050);
10 x Target-Bases size M (441010); 10 x Target-Bases size L (441020)

Order number

441220



Individual components

Adjustable base rail for M5, M6 and M8

Description

For mounting on turntables; adjustment range 170 mm; mounting of articulated arm via M8

Order number

245150

TurnStop articulated joint TS-280 with 280 mm action radius

Description

For arbitrary spatial positioning of the OCTOFIX frames;
Lower connector thread M8; upper connector thread for OCTOFIX M8;
high-strength central locking with progressive clamping sequence and toothed disc

Order number

241030

200 mm Target-Support rail with 6 faces

Description

With central M8 thread for adaption to TurnStop articulated joint;
14 x M6 threads for adaption to Target-Bases M, L and hex columns

Order number

441060

Hex column with M6 thread for Target-Bases

Description

L 50 mm; 6 faces for adhesive marks; for screwing onto Target-Support rails

Order number

441050

Target-Base size M and L, 10 piece set

Description

10 x M with 19 faces; M6 thread; suitable for Ø 3 mm reference points

Order number

441010

10 x L with 31 faces; M6 thread; suitable for Ø 8 mm reference points

441020

10 x XL with 31 faces; M6 thread; suitable for Ø 12 mm reference points

441030



Freely configurable fixtures via 3D downloads

Part and process specific clamping can be individually configured. Easy 3D data downloads of all dk fixating systems from our homepage. Multi-clamping is also possible. The modular construction systems from dk, with more than 1,000 parts, enable endless multiple use through rapid dismantling into the

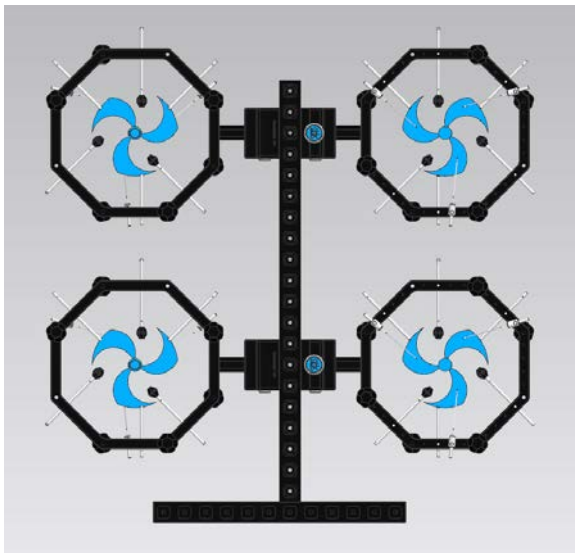
individual components and repeated reconfiguration into further solutions, true to our credo:

FAST. REASSEMBLY. LIFELONG.

3D data

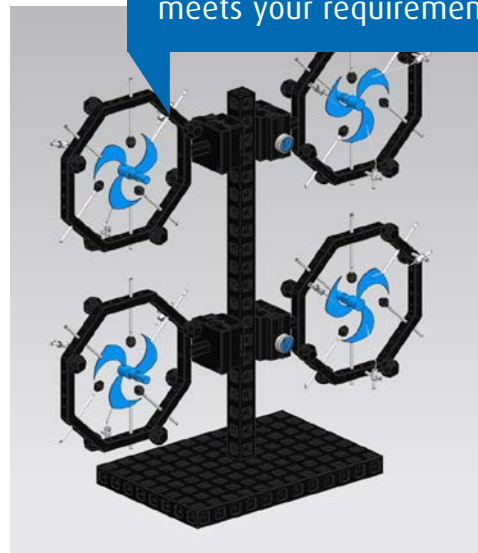
Quicker downloads of all CAD data directly from the dk homepage. Simple, free and in any data format.

Example applications



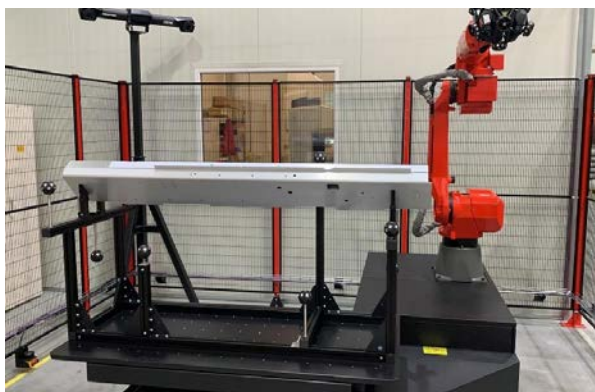
3D designer service and user consultation from dk:

We use your product, system and 3D data to develop a solution that meets your requirements



Custom-made products and automation

We also realise custom-made products without or with only partial use of standard parts.



In doing so, we follow the trend towards automation, where 3D scanning runs in completely unmanned systems.



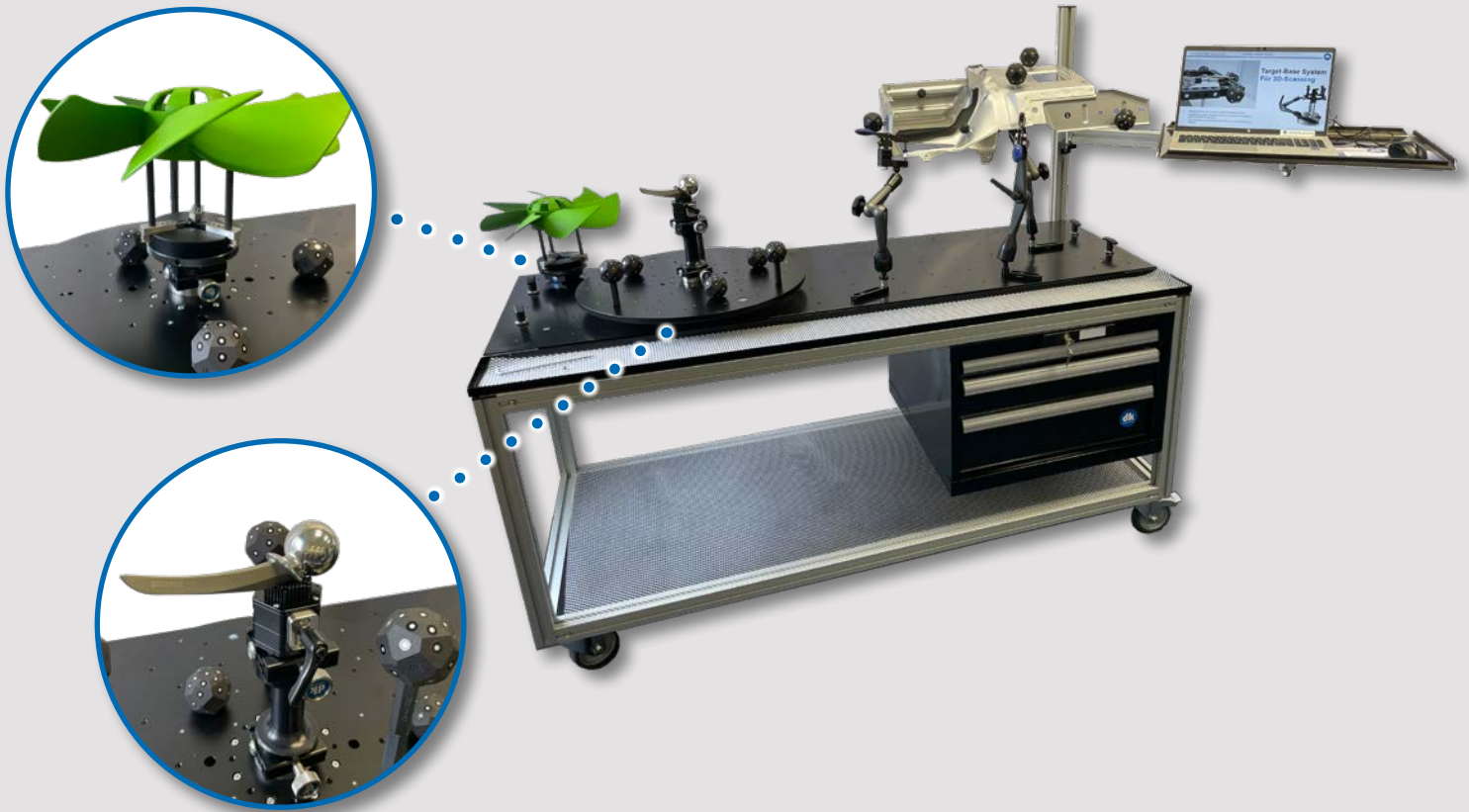
Mobile multifunctional measurement table for applications with 3D scanners

Perfect 3D scanning with dk function tables:

Easy adaptation of all dk fixation systems for fixtures that support the complete scanning of the test specimen in one go. The turntable in the form of a threaded plate, which can be rotated through 360°, supports this perfectly. Mobile version with lockable swivel castors.

Standard version or customer-specific.

The interchangeable threaded grid plate serves as the overall basis for direct mounting of fixation devices and target bases. Mounts for measuring arm, computer, screen and any other equipment can be added on a modular basis. Tools, adhesive points, scanning sprays and more find the ideal storage space directly on the shelf or in the drawers..



Magnet Target-Base removes the need to stick onto the test specimen

For magnetic capable test objects, the Target-Bases from dk can also be used as a magnetic variant: the reference points can thus be placed as desired, quickly repositioned and finally simply removed.

Magnetic Target-Base size M and L, 10 piece set

Description	Order number
10 x M with 19 faces; magnetic; suitable for Ø 3 mm reference points	441010-M
10 x L with 31 faces; magnetic; suitable for Ø 8 mm reference points	441020-M
10 x XL with 31 faces; magnetic; suitable for Ø 12 mm reference points	441030-M



The magnetic dk Target-Bases are particularly suitable for very large objects, where a Target-Support fixture is uneconomical, but the adhesion and removal of multiple reference points is costly and time-consuming. The high magnetic force provides security for precise measurements.



Reference points, dot marks, targets & measurement marks as adhesive marks

Self-adhesive measuring points developed by measuring technology and print experts, in the most frequently requested sizes and at an economical cost. Suitable for almost all optical scan systems.

PREMIUM - white / black - reference targets

Order number	Size	Targets per box	Colour	Adhesive strength	Quality
56000101	0.2 mm	4,000	white/black	Standard	Premium
56000102	0.4 mm	4,000	white/black	Standard	Premium
56000103	0.8 mm	4,000	white/black	Standard	Premium
56000104	1.0 mm	4,000	white/black	Standard	Premium
56000105	1.5 mm	4,000	white/black	Standard	Premium
56000106	2.0 mm	3,000	white/black	Standard	Premium
56000107	3.0 mm	3,000	white/black	Standard	Premium
56000108	5.0 mm	2,500	white/black	Standard	Premium
56000109	8.0 mm	1,200	white/black	Standard	Premium
56000110	0.2 mm	4,000	white/black	Strong	Premium
56000111	0.4 mm	4,000	white/black	Strong	Premium
56000112	0.8 mm	4,000	white/black	Strong	Premium
56000113	1.0 mm	4,000	white/black	Strong	Premium
56000114	1.5 mm	4,000	white/black	Strong	Premium
56000115	2.0 mm	3,000	white/black	Strong	Premium
56000116	3.0 mm	3,000	white/black	Strong	Premium
56000117	5.0 mm	2,500	white/black	Strong	Premium
56000118	8.0 mm	1,200	white/black	Strong	Premium

Premium quality on a sheet

Highend print:
Highest contrast & print definition

Precut:
Laser cut for perfect handling & precision



RETRO - reference targets

Order number	Size	Targets per box	Colour	Adhesive strength
56000301	3.0 mm	960	Retro	Standard
56000302	6.0 mm	960	Retro	Standard
56000303	3.0 mm	4,000	Retro	Standard
56000304	6.0 mm	4,000	Retro	Standard
56000305	8.0 mm	800	Retro	Strong
56000306	12.0 mm	800	Retro	Strong



STANDARD - white / black - reference targets

Order number	Size	Targets per box	Colour	Adhesive strength	Quality
56000201	1.5 mm	6,000	white/black	Light	Standard
56000202	3.0 mm	6,000	white/black	Light	Standard
56000203	5.0 mm	6,000	white/black	Light	Standard
56000204	8.0 mm	5,000	white/black	Light	Standard
56000205	10.0 mm	3,000	white/black	Light	Standard
56000206	12.0 mm	3,000	white/black	Light	Standard
56000207	1.5 mm	6,000	white/black	Strong	Standard
56000208	3.0 mm	6,000	white/black	Strong	Standard
56000209	5.0 mm	6,000	white/black	Strong	Standard
56000210	8.0 mm	5,000	white/black	Strong	Standard
56000211	12.0 mm	3,000	white/black	Strong	Standard

Standard quality on a roll

Standard print:
High quality with a matt finish

Precut:
Conventional punch technology for easy handling with large areas



High performance 3D scanning spray for optical 3D measuring technology



Optimised matting sprays with the high purity established substance cyclododecane. The product series contains three different products with process-specific selectable sublimation times up to residue-free volatilisation, which makes downstream parts cleaning superfluous. Furthermore, a semi-permanent scanning spray for highest contrasts with easy cleaning is available, based on natural raw materials.

High performance 3D scanning sprays

ATTBLIME ABzero

Description

Solvent-reduced for sensitive surfaces;
For small and medium components; scan time up to 1 hour;
Residue-free sublimation after 1 to 2 hours; no cleaning necessary

Order number

56000401



ATTBLIME AB2

Description

With perfect application of around 3.6 µ;
For small and medium components; scan time 1 to 2 hours;
Residue-free sublimation after 2 to 4 hours; no cleaning necessary

Order number

56000402



ATTBLIME AB6

Description

Reliably long lasting without re-spraying;
For medium to large components; scan time 2 to 6 hours;
Residue-free sublimation after 6 to 24 hours; no cleaning necessary

Order number

56000403



ATTBLIME ABP

Description

Semi-permanent scanning spray with the optimised tone cooperative grey;
Maximum contrast for the latest generation of optical measuring systems;
Scan time arbitrary as no sublimation;
Easy removal for residue-free cleaning

Order number

56000404



*Order quantity / PU: 6, 12, 48 or 96 aerosol cans with 400 ml

The high performance 3D scanning sprays are free from ethanol, titanium dioxide, n-hexane and adamantane. The raw material cyclododecane (CDC) contained in the residue-free sublimating scanning sprays does not bioaccumulate in aquatic organisms. CDC is therefore harmless to humans and the environment and can be applied much more sparingly than alternative products. CDC is also exempt from labelling according to GHS / Globally Harmonised System.

The pigments contained in the permanent scanning spray ABP are based on renewable natural raw materials.

All sprays shown are "Made in Germany".

We are happy to supply diverse other products on request.





The digital version of the
catalogue can be found under:
www.dk-fixiersysteme.de



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www.dk-fixiersysteme.de

modular. simple. better.

The entire world of fixating, clamping and positioning

The around 1,000 part comprehensive standard construction sets of the dk fixating systems for measuring technology offer the following advantages:

- » Modular system that has grown and proven itself over decades
- » Modularity across different programmes
- » Solutions for every positioning task
- » Economic efficiency through the synergy effects of several sector solutions

SWA39



SPANNFIX PRO



SPANNFIX ECO



QUADERFIX



SCHIENENFIX



MICROFIX



SWA39CT



SPEZIALFIX



ARTICULATED SYSTEMS



SWA39SURF



**FAST
REASSEMBLY
LIFELONG**

The basic principle of all dk fixating systems!

Our fixtures are modular in design, can be dismantled at any time and can be identically reassembled again. The compatibility of the dk fixation systems makes the utility value perfect.