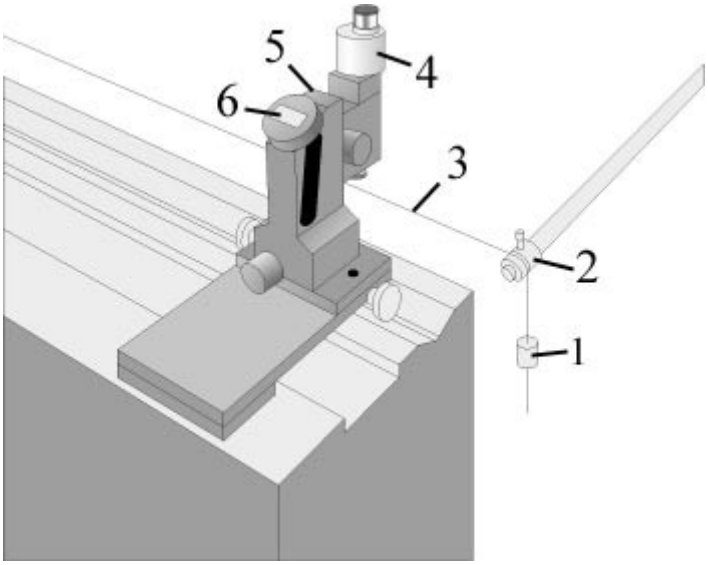
Alignment Tester FLZ

The FLZ aligment tester is a transportable microscope for the alignment of machine guides.

Revision:02

Layout for the testing of a carriage guide



1 - Weight
2 - Return pulley
3 - Measuring wire
4 - Microscope with split-image eyepiece
5- Spirit level
6 - LCD measured value display

The measuring wire ist fastened to the headstock or a special holding device, fed at the end of the base over a pulley and stretched tight with a weight (layout according to DIN 8606).

The alignment tester must be placed on the carriage of the machine or a corresponding device, which can be moved in a longitudinal direction in predefined steps on the machine base. The measuring wire must be aligned in such a way that the same values are measured in the starting and end position of the carriage, i.e. that it is tensioned to form an imaginary connecting line parallel to these positions. When the wire is aligned to the bearing, the value display is set to zero.

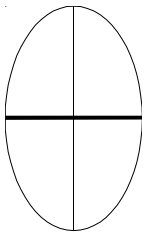
The straightness deviation can now be read directly on the display for each position when both parts of the image are fitted together by moving the microscope horizontally with the integrated micrometer spindle.

Technical description

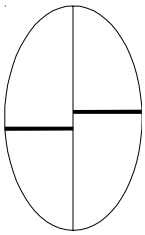
The microscope and the stand are connected by a rigid dovetail guide. To bring the measuring wire into focus, the microscope can be vertically adjusted by means of a pinions gear on the stand. Horizontally, the position of the microscope is recorded by a digital measuring system and indicated in a LCD. Since horizontal movement is effected in the object plane, errors of the first order are ruled out.

With a spirit level the alignment tester can be precisely installed in a horizontal position. The microscope spirit level and plane mounting surface, which is provided with two drilled holes for insertion of the fastening bolts, are aligned to each other.

Image of the split-image eyepiece



measuring wire in the center



measuring wire not in the center

Features and accessories

Order no.:	Alignment Tester FLZ split-image eyepiece, digital measuring system, total magnification approx. 44x including transport box

Order no.:	Alignment Tester FLZ-45 45° split-image eyepiece for low space environment, digital measuring system, total magnification approx. 44x including transport box

Order no.:	Video upgrade kit video system with CCD camera and 5“ TFT monitor for direct attachment to the alignment tester FLZ. Display of the split-image on the detachable monitor.

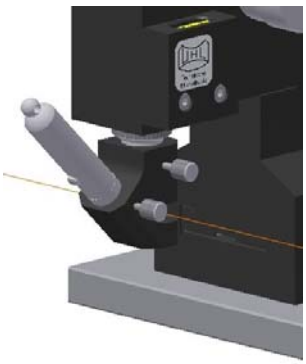
Order no.:	Wire adjustment equipment
FLZ-DJE	Clamping device with magnetic stand to adjust the measuring wire, inclusive 2 weights (for steel and bronze wire). The wire can be adjusted horizontally and vertically.

accordingly

Order no.:	500g additional weight
LZ.43	connectable by a threaded pin

Order no.:	Measuring wire up to 6m guide length
LZ.46	phosphor bronze wire Ø 0,3 mm, on spindle (1kg), length about 1.8 km

Order no.:	Measuring wire over 6m guide length
LZ.47	steel wire Ø 0,3 mm, on spindle (1kg), length about 1.8 km

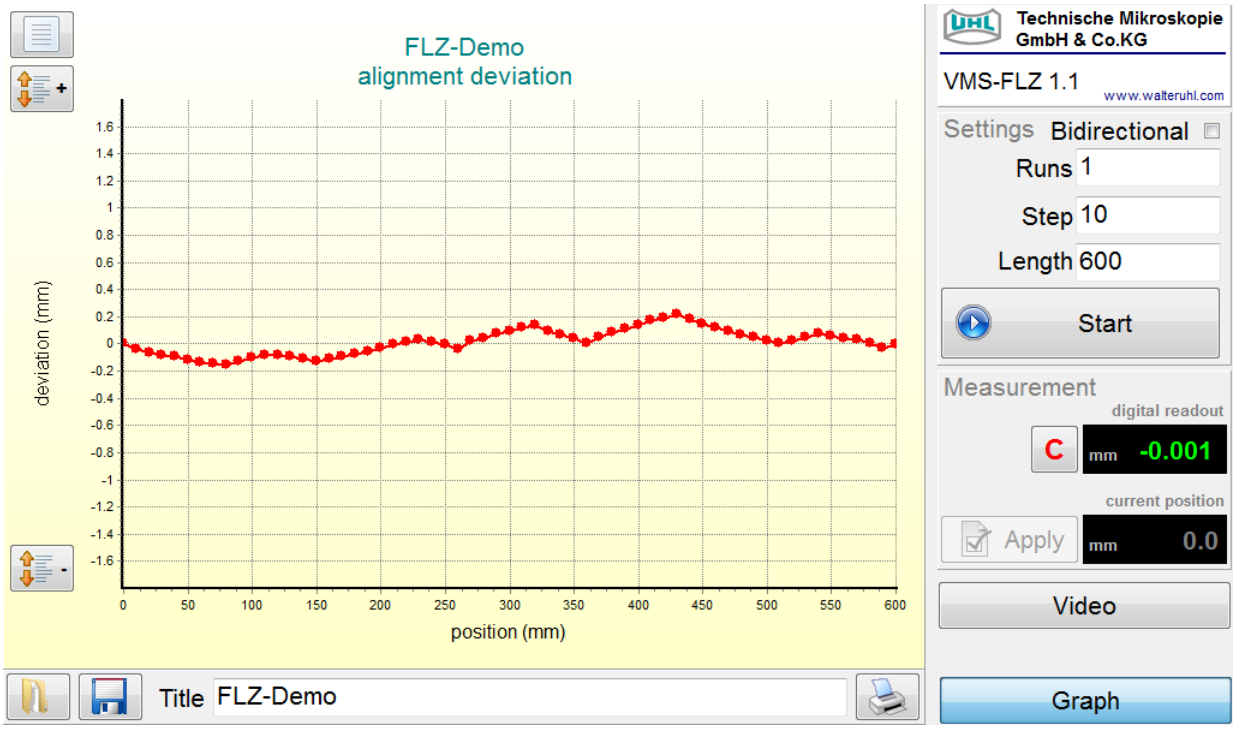


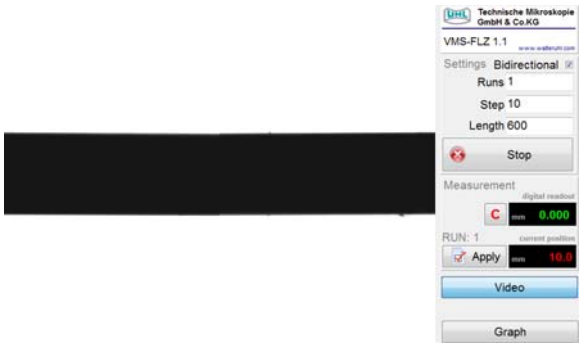
Order no.:	LED illumination
FLZ-BL	retrofittable battery illumination with LED. The illumination is fixed directly on the lens. The LED illuminates a surface below the wire to get a transmitted light effect.

Order no.:	USB Interface-Cable
FLZ-IK	Interface cable to connect the digital readout with a PC for data transfer

Order no.:	Wireless data transmission
FLZ-IF	Transmitter and USB receiver for a PC to transfer the value of the digital readout

Order no.:	Software VMS-FLZ
VMS-FLZ	Shows a graphic of the alignment deviation. Requires the interfaces FLZ-IK or FLZ-IF for data transmission. Optional: Display of the split-image by USB video camera VM4-USBI





Technical data

Total magnification	approx. 44x
Horizontal adjustment range	10 mm
Vertical adjustment range	40 mm
Working adjustment distance	approx. 25 mm
Resolution of the digital measuring system	0.001 mm
Weight to be attached with: **phosphor bronze wire** **steel wire**	 150 g 650 g
Total height	approx. 300 mm
Foot width	140 mm
Center to center distance of the mounting holes	110 mm
Diameter of the mouting holes	9 mm
Weight	4 kg
Functions of the digital measuring system	On / Off Zeroising (Inc / Abs) Preset (preselection) Tolerance +/- Precending sign selection

Walter Uhl
technische Mikroskopie
GmbH & Co.KG
Loherstraße 7
D-35614 Aßlar

Tel. (0 64 41) 8 86 03
Fax (0 64 41) 8 57 18

www.walteruhl.com