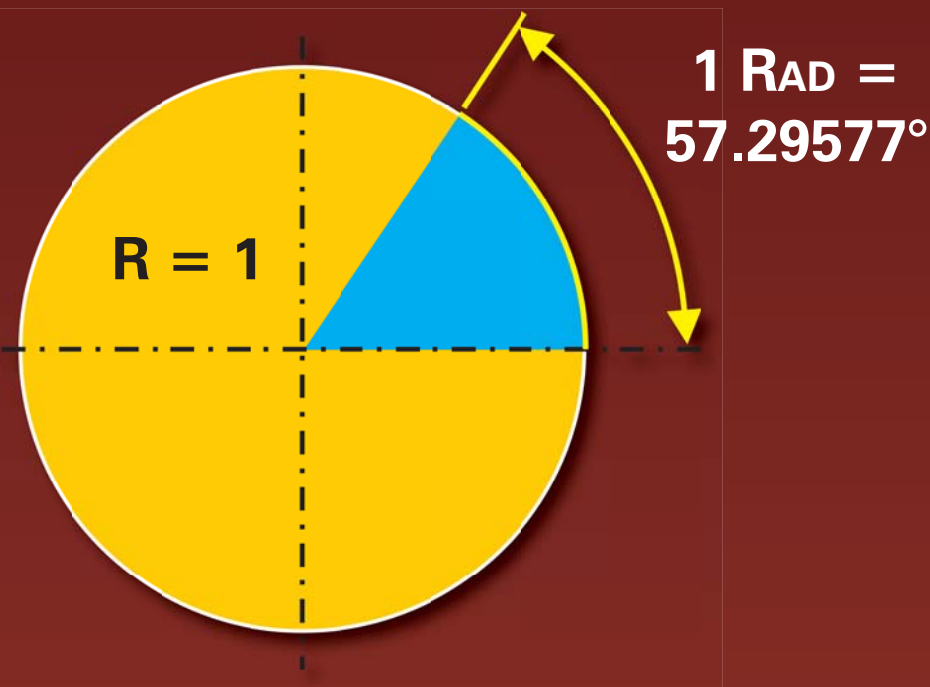
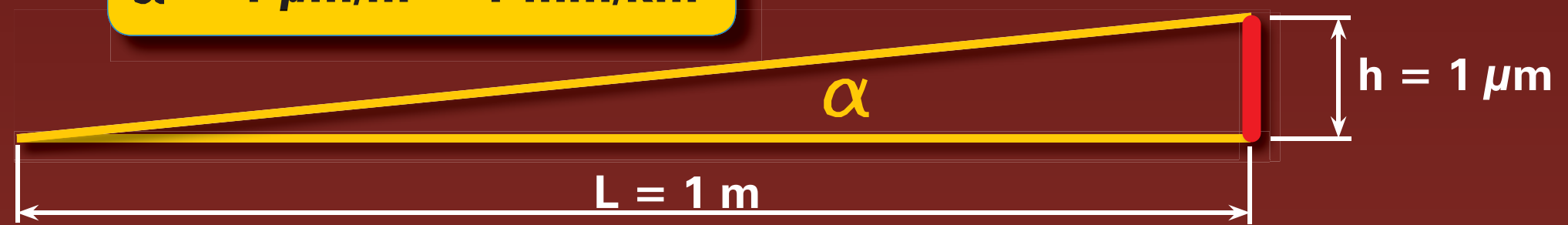


INCLINATION MEASURING SYSTEM

NEIGUNGSMESSSYSTEME



$$\alpha = 1 \mu\text{m/m} = 1 \text{ mm/km}$$

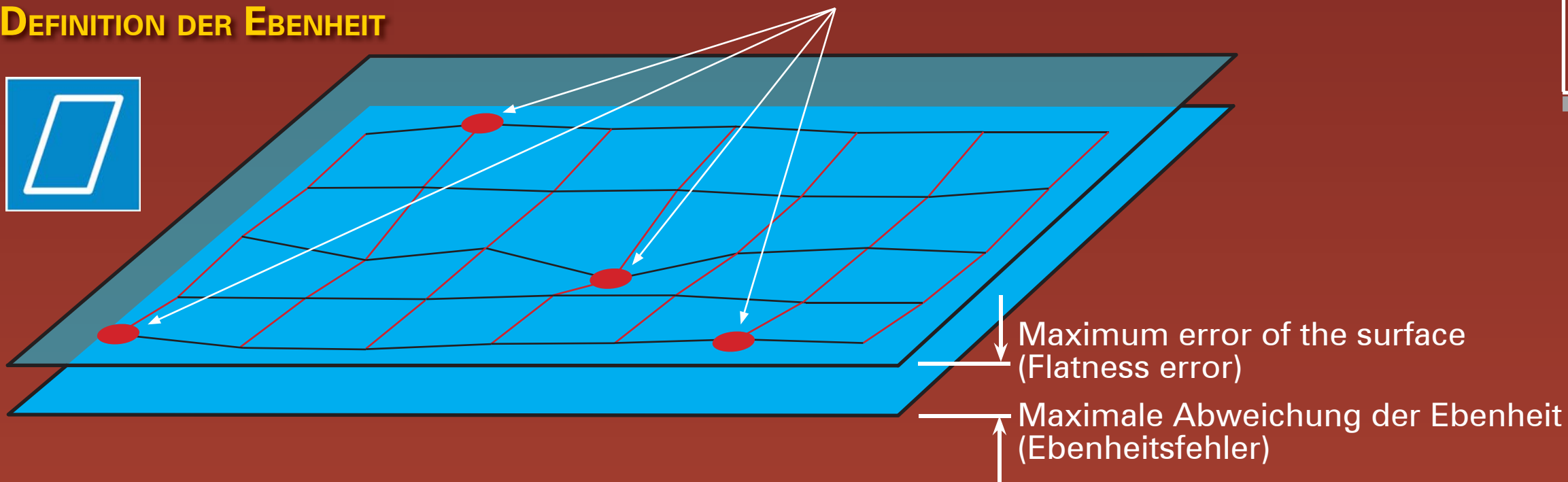


DEFINITION OF FLATNESS

DEFINITION DER EBENHEIT

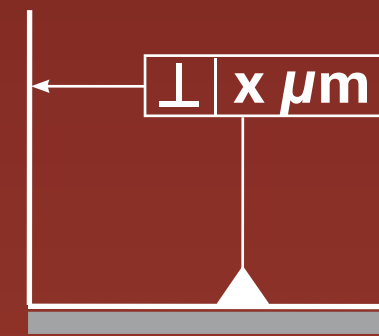


Contact points lower and upper plane
Berührungspunkte an den beiden Ebenen

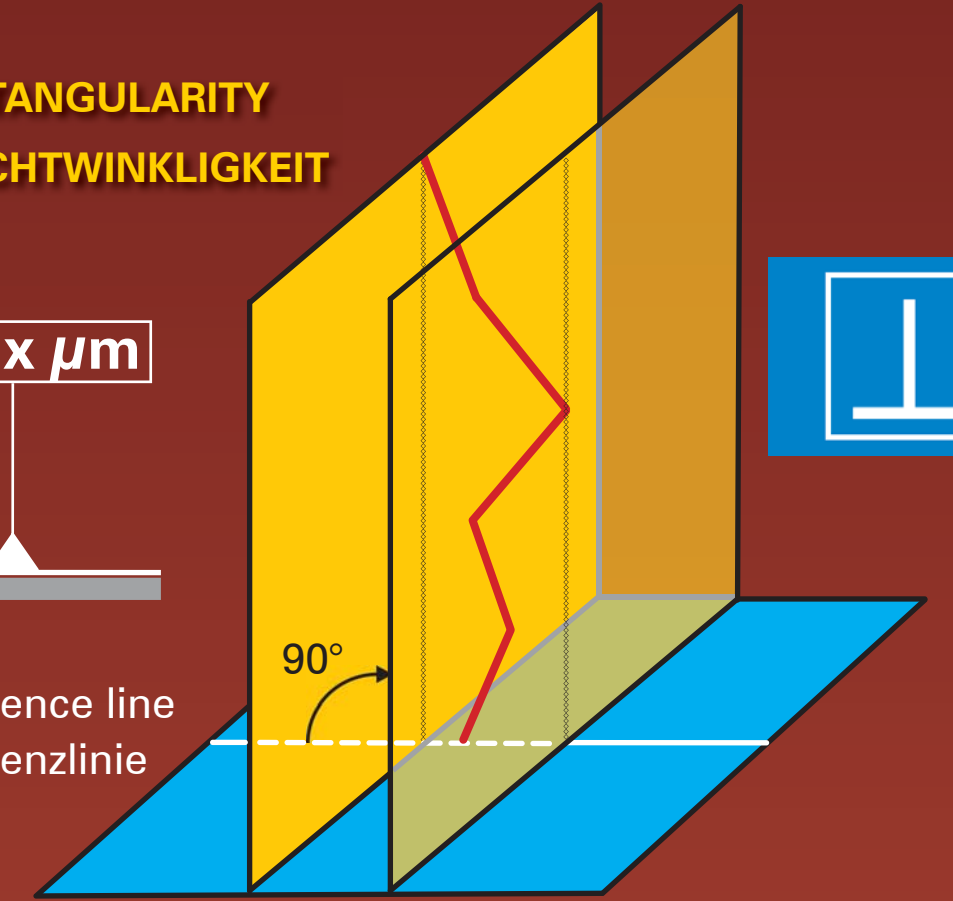


DEFINITION OF RECTANGULARITY

DEFINITION DER RECHTWINKLIGKEIT

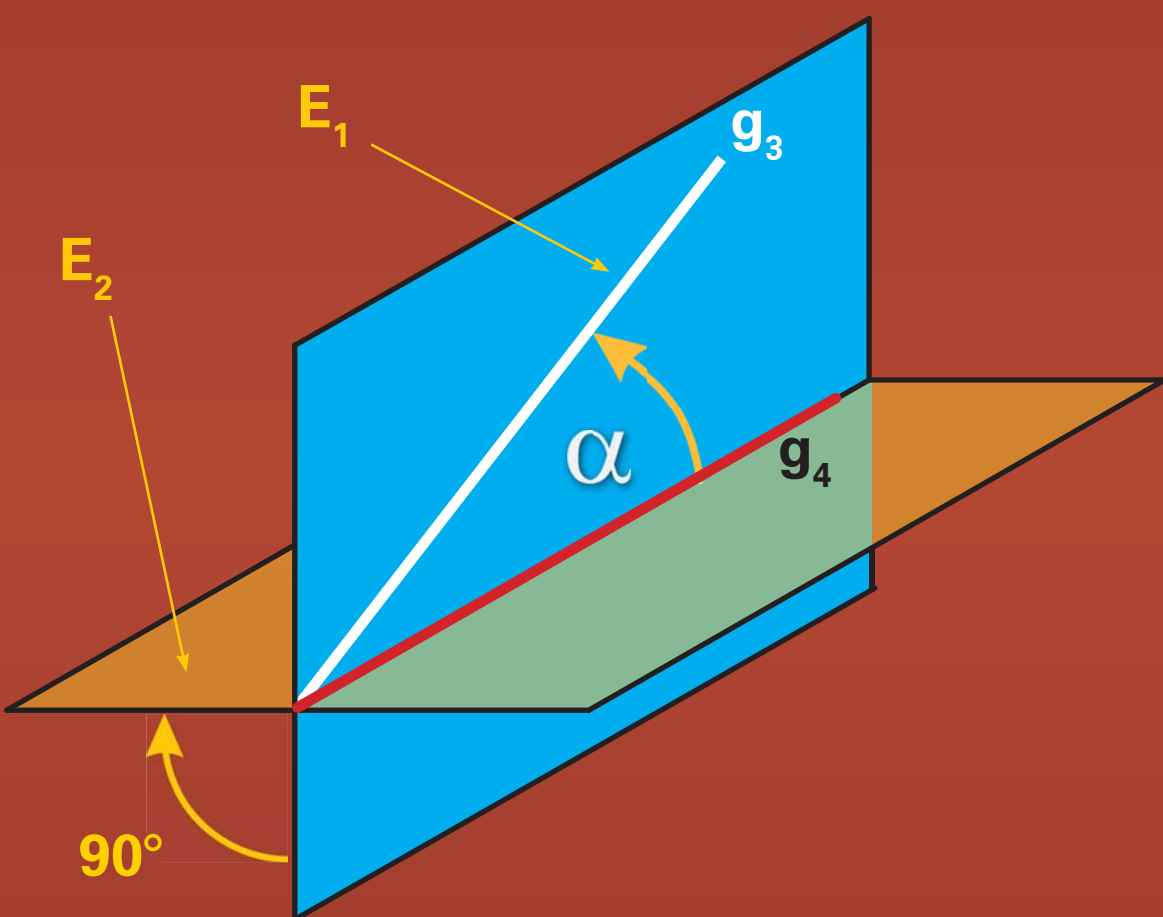


Reference line
Referenzlinie



Right angle tolerance according to ISO1101

Der Abstand der beiden Ebenen entspricht dem Winkelfehler nach ISO1101

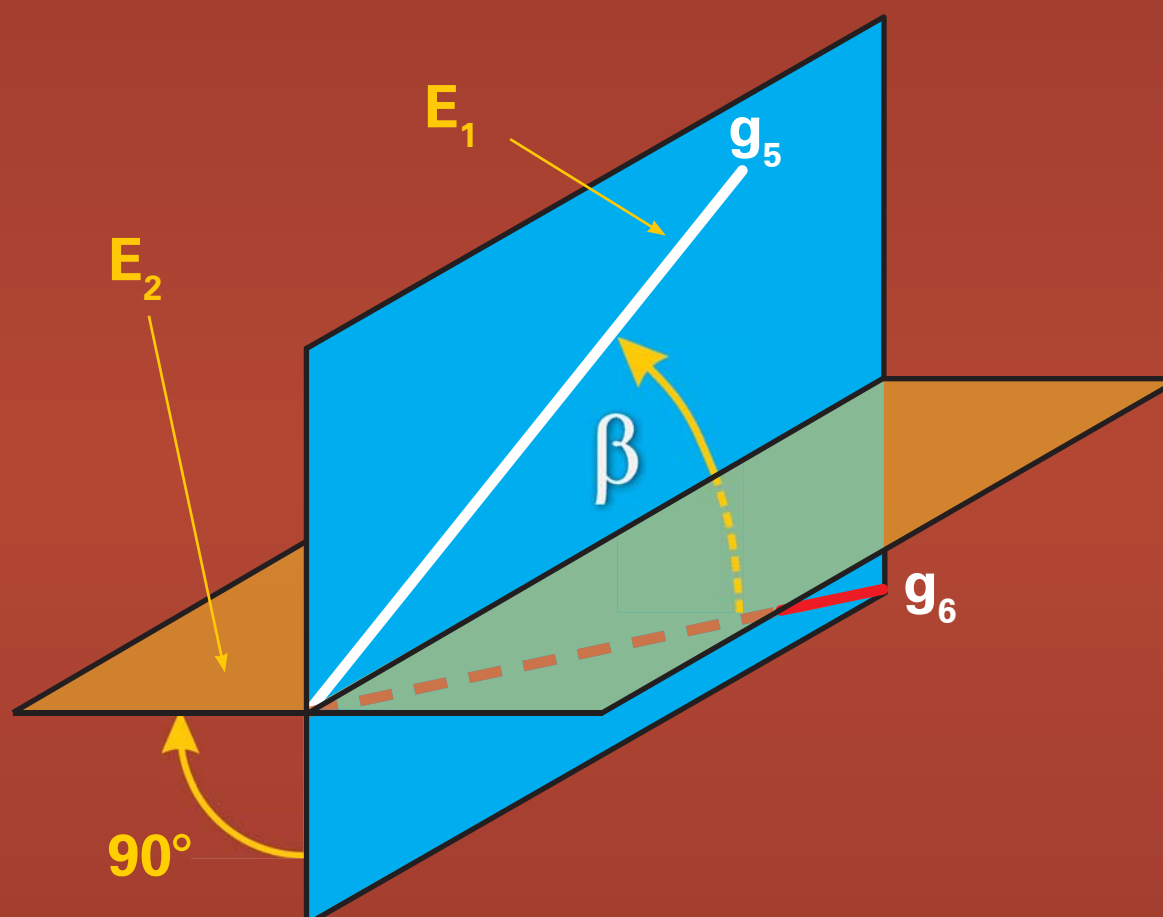


ABSOLUTE INCLINATION

An absolute inclination corresponds to the angle α between two straight lines, whereas one of these lines lies in the intersection between a vertical and the horizontal (reference) plane that must be absolutely horizontal.

ABSOLUTE NEIGUNG

Bei einer absoluten Neigung liegen beide Linien, die den Winkel α einschliessen, in einer vertikalen Ebene, wobei eine Schenkel auch in der horizontalen Ebene liegen muss.



RELATIVE INCLINATION

A relative inclination corresponds to the angle β between two straight lines, whereas both lines have to be in a vertical plane.

RELATIVE NEIGUNG

Bei einer relativen Neigung liegen beide Linien, die den Winkel β einschliessen, in einer vertikalen Ebene.



PRECISION SPIRIT LEVEL
PRÄZISIONSWASSERWAAGE



CLINOMETER
INKLINOMETER



INCLINATION MEASURING INSTRUMENTS
NEIGUNGSMESSGERÄTE

THE ABSOLUTE ZERO BY MEANS OF A REVERSAL MEASUREMENT

DAS ABSOLUTE NULL MITTELS UMSCHLAGSMESSUNG



Reversal measurement
Umschlagsmessung

ZERO- POINT DEVIATION
of the measuring instrument (ZERO-OFFSET)

$$= \frac{(X + X')}{2}$$

NULLPUNKTABWEICHUNG
des Messgerätes (ZERO-OFFSET)

$$= \frac{(X + X')}{2}$$

INCLINATION
of the surface of the object

$$= \frac{(X - X')}{2}$$

NEIGUNG
der Messunterlage

$$= \frac{(X - X')}{2}$$



INCLINATION SENSORS
NEIGUNGSSENSOREN



	$\mu\text{m/m}$	mm/m	Arcsec	Arcmin	Grad	mRad	Rad
1 $\mu\text{m/m}$	1	0.001	0.20627	0.00344	$5.730 \cdot 10^{-5}$	0.001	$1 \cdot 10^{-6}$
1 mm/m	1'000	1	206.265	3.43775	0.0573	1	$9.99 \cdot 10^{-4}$
1 Arcsec	4.848	0.00485	1	0.01667	$2.778 \cdot 10^{-4}$	0.00485	$4.848 \cdot 10^{-6}$
1 Arcmin	290.89	0.29089	60	1	0.01667	0.29089	$2.909 \cdot 10^{-4}$
1 Grad	17'455.1	17.46	3'600	60	1	17.45	0.01745
1 mRad	1'000	1	206.26	3.43775	0.0573	1	0.001
1 Rad	$1.557 \cdot 10^6$	1'557	206'264.8	3'437.75	57.3	1'000	1



WYLER AG

Inclination Measuring Systems
Neigungsmesssysteme

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