

Agilent 55281A Angular Optics Kit

Data Sheet

Angular measurements are made at multiple points along a machine's travel path to test for rotation about an axis perpendicular to the axis of motion (pitch and yaw).

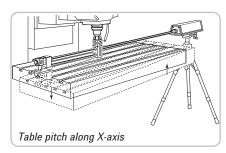
- A common cause of machining errors, geometry errors are as critical as linear positioning errors.
- Unwanted angular motion in a machine tool causes positioning errors that reduce the overall accuracy of your machine.

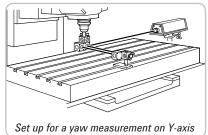
Additional Capabilities

- Positioning errors over the work zone can be estimated from the angular and linear measurements.
- The condition of ways and the range of squareness and parallelism in the work zone can be indicated by angular measurements.
- Angular measurements help find the causes of linear positioning errors and can be useful in making decisions about whether to replace or rebuild older machines.
- Long-term drift tests can be performed over hours or days, showing possible effects of temperature on geometry.

Basic Equipment

- Agilent 5530 Laser Calibration System
- Agilent 55281A Angular Optics Kit





Specifications

The following specifications assume Agilent 5530 Laser Calibration System is in used, the optics are properly aligned and the temperature of all optical components is stabilized in the range of 15 $^{\circ}$ C to 25 $^{\circ}$ C.

Acuracy

±0.2% of displayed value

 ± 0.05 arc sec per meter of traveled distance between the interferometer and reflector

Resolution

0.006 arc sec (0.03 urad)

Range

±10 ° (rotated about base of optic)

±20 ° (rotated about center of optic)

Axial Separation

The maximum distance between the laser head and the reflector can be up to 15 m (50 ft).



Components included in the 55281A Angular Optics Kit	
Description	Quantity
10770A Angular interferometer	1
10771A Angular reflector	1

Related Literature	
Publication title	Publication number
Agilent 5530 Laser Calibration System Brochure	5989-9354EN
Agilent 5530 Laser Calibration System Data Sheet	5989-9712EN
Agilent 5530 Laser Calibration System Flyer	5989-9707EN







www.agilent.com/find/emailupdates Get the latest information on the products and applications you select.

www.agilent.com/find/5530

For more information on Agilent Technologies' products, applications or services, please contact your local Agilent office. The complete list is available at:

www.agilent.com/find/contactus

Α	m	eı	rı	C	а	s

Canada	(877) 894 4414
Brazil	(11) 4197 3600
Mexico	01800 5064 800
United States	(800) 829 4444

Asia Pacific

Australia	1 800 629 485
China	800 810 0189
Hong Kong	800 938 693
India	1 800 112 929
Japan	0120 (421) 345
Korea	080 769 0800
Malaysia	1 800 888 848
Singapore	1 800 375 8100
Taiwan	0800 047 866
Other AP Countries	(65) 375 8100

Europe & Middle East

Belgium	32 (0) 2 404 93 40
Denmark	45 45 80 12 15
Finland	358 (0) 10 855 2100
France	0825 010 700*
	*0.125 €/minute
Germany	49 (0) 7031 464 6333
Ireland	1890 924 204
Israel	972-3-9288-504/544
Italy	39 02 92 60 8484
Netherlands	31 (0) 20 547 2111
Spain	34 (91) 631 3300
Sweden	0200-88 22 55
United Kingdom	44 (0) 118 927 6201

For other unlisted countries:

www.agilent.com/find/contactus

Revised: January 6, 2012

Product specifications and descriptions in this document subject to change without notice.

© Agilent Technologies, Inc. 2012 Published in USA, July 4, 2012 5990-9169EN

