

alphaDUR

the reliable solution for
your hardness test



- portable hardness tester
- hardness test of materials
- measurements automatable
- versatile usable
- permanent data storage
- various accessories

BAQ

<http://www.baq.de>

The handy and mobile hardness tester alphaDUR provides precise and reliable hardness testing of all materials that would normally be tested according to traditional hardness testing procedures such as Vickers or Rockwell.

The alphaDUR is easy to use by means of the menu driven operation and the large backlit graphic display. The electronic evaluation of the measurement immediately provides the hardness value in HV, HB or HRC. The quality of the testing is guaranteed by 500 measurements per second.

Therefore the alphaDUR is ideal not only for the mobile use but also for the hardness testing in production and vendor inspection. The alphaDUR can be adjusted to a wide range of materials without problems and can store up to 20 calibrations, complete with material identification. Measured data can be permanently stored with date, time, material and evaluation GOOD/BAD. For further evaluations, a variety of statistical functions are available.

The test load can be adjusted to the range of application. It is not necessary to change the calibration. The small probes allows you to test in areas, which are difficult to reach or lie on curved surfaces, in every possible direction without the need of a correction factor.

The documentation can be done by means of the ports of the alphaDUR to which a printer or a PC can be directly connected.

Technical Data

Measuring procedure	Modified Vickers hardness to the UCI procedure according to VDI/VDE guidelines 2616, Page 1. Measurement of the impression is executed under test load.		
Indenter	Diamond, Vickers 136° pyramid.		
Test materials	Preferably metals, for which alphaDUR can be calibrated. Examinations of ceramic(s), glass and plastic are possible, if comparative measurements are accomplished for calibration.		
Test load	From 3 to 100 N, dependent on probe in use.		
Measuring ranges	Vickers	HV	10 - ca. 3000
	Rockwell*	HRC	20,3 - 68,0
	Brinell*	HB	(76) - 447
	Tensile strength*	N/mm ²	255 - 2180
* Re-evaluation of scales according to DIN 50 150			
Reproducibility	Vickers	HV	+/- 1% of full scale output
	Rockwell	HRC	+/- 0,5 Punkte
	Brinell	HB	+/- 1% of full scale output
Display	Large diagram display, brightness and contrast adjustable. Simultaneous announcement of HV, HRC and HB.		
Data storage	1000 measured values with variable organization into groups. Storage with date, time and evaluation good/badly. Optionally: Storage of 30.000 measured values.		
Statistics	Mean value, minimum, maximum, Standard deviation. Measurements can be deleted at any time.		
Log	Print-out with evaluation, time and date of measurements. Additional print-out of stored values with statistics.		
Interfaces	Serial:	RS232 und RS485	
	Parallel:	Printer	(optional print also via RS232)
Power supply	Main-/Charging unit	100 - 240 V AC / 15 V DC	
	Accumulator	9,6 V / 1700 mAh	
Operating times	Duty cycle (operation period): approx. 5 h Charging time: approx. 2,5 h		
Temperatures	0 - 50°C operating range; Storage -20°C to +70°C		
Dimensions	Instrument: 85 / 225 / 198 (height / width / depth) Probe: ∅ 19,5 mm, length 175 mm		
Weights	complete instrument: 2200 g Probe only 190 g		

Basic Equipment:

- alphaDUR (Power Pack included)
- Probe for hardness testing
- Measuring cable
- Instrument case
- Manual

Accessories:

- alphaSOFT
- Probe shoes for flat and curved surfaces
- Precision stand

Optionally:

- Option for measuring hardening depth
- Option for the storage of 30000 measurements
- Option for measurement of sinter materials
- Option for Relay output in order / not in order