Newage hardness testing
AMETEK

Pin Brinell

Portable Hardness Tester

is a unique portable hardness tester that employs a precision shear pin to ensure correct manual loading against the sample. It is easy to use, economical and proven.

Portable Hardness Tester

Wide range

A wide range of hardness can be checked from HB100 to 700. HB100 to 450 Brinell can be checked using the standard indenter. A tungsten carbide indenter is used when the Brinell measurement is from 300 to 700.

Two Pin Brinell kits

Two Pin Brinell kits are available. The CPIT Kit comes with the indenter holder, impact cylinder, regularindenter(Brinell 100 - 450), handle for the impact cylinder, pin ejector, 250 calibrated shear pins, a hardness conversion chart and custom fitted carrying case.

Static testing

The CPST Kit comes with a clamping vise for static testing including large flat, small flat and vee anvils. Also included are the indenter holder, rubber indenter boot, regular indenter (Brinell 100 - 450), test block (nominal HB200), 7X Brinell scope, pin ejector, allen wrench, 250 calibrated shear pins, hardness conversion chart and custom fitted carrying case.

The Pin Brinell tester makes an actual mechanical hardness test - it is not merely a test of other properties that correlate to a Brinell value. The Pin Brinell is an improvement over more traditional impact bar methods. There is less operator influence on the test result; it is much easier and faster to use; it is far less costly. There is no calibration required

A calibrated shear pin fits into the Pin Brinell housing. The shear pin comes into contact with the indenter and prevents the indenter from recessing back into the Pin Brinell housing. The indenter is positioned against the sample. Load is applied using either an impact hammer for impact testing or through the use of a C-clamp for static load testing. When the load is applied which exceeds the shear pin's shear value, the pin breaks. The load to indentation size ration provides a displacement that is equivalent to the most common Brinell test (3000 kgf, 10 mm Ball) and the Brinell values arrived at using the standard Brinell formula. The diameter of the resulting indentation on the sample is then measured using a Brinell scope, such as our Pocket or HiLight models, or using our B.O.S.S. optical scanning system.

Ordering

Pin Brinell Test Kits

Model	Scale
CPIT	Pin Brinell Impact Test Kit
CPST	Pin Brinell Static and Impact Test Kit

Options, Accessories and Spares

Part No.	Description	CPIT	CPST
CP-1	Indenter Holder	Std	Std
CP-2	Impact Cylinder	Std	Std
CP-3	Indenter, Regular (HB100 - 500)	Std	Std
CP-3A	Indenter, Carbide (HB300 - 700)	Option	Option
CP-4	Shear Pins, Calibrated, 250 each	Std	Std
CP-30	7X Brinell Scope	Option	Std
CP-100	Bench Support for CPST Static Clamp	Option	Option
CP-110	3 lb Flat Face Hammer	Option	Option
CP-200	Handle for CPIT Impact Tester	Std	Option
35-450	20X Pocket Brinell Scope, Fixed Focus	Option	Option
5620-05	20X HiLight Brinell Scope, Adj. Focus	Option	Option
3541C	Calibrated Checking Scale, Certified	Option	Option
MC-0143	Battery, HiLight Scope (CR2 3V Lithium)	Option	Option

Specifications

Scale Range (Routine): HB100 - 700

Accuracy*: +1% of applied load Tester Kit Weights

- CPIT Kit: 4 lbs
- CPST Kit: 15 lbs

Capacity:

- CPIT: Unlimited:
- CPST: 6-inch on static tester

Impact effect of load may affect various materials differently. A comparison to a standard Brinell tester can be used to determine possible effects.

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