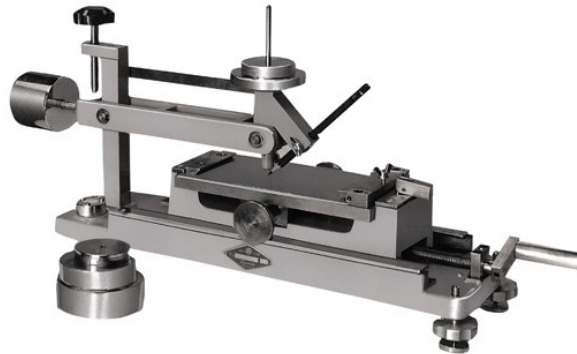




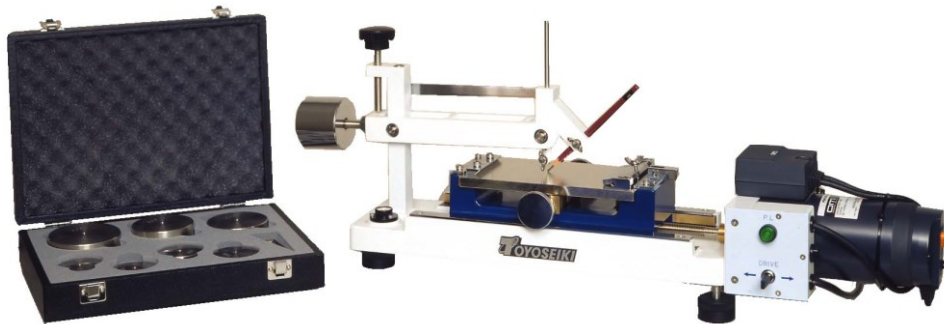
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## No. 431 Scratch hardness tester by pencil test



**Model P / NP**

*Note: Inspected pencil shown is not provided.*



**Model D-P / D-NP**

*Note: Inspected pencil shown is not provided.*

### ■ APPLICATION

The TOYOSEIKI **Scratch hardness tester by pencil test** determines hardness of paint films from scratching by a pencil lead having a specific hardness kept at 45° under constant load and moving specimen table, and the scratch so generated is measured.

## ■ SPECIFICATIONS

### Hand-powered model

Model	P	NP
Test method	Pencil scratch	Pencil scratch & Clemen scratch
Test load	500gx1, 300gx1, 100gx2, 50gx1	1000gx1, 500gx1, 300gx1, 100gx2, 50gx2
Pencil	Not provided as standard accessory	
Sapphire needle		1 piece provided (Needle tip angle: 45°)
Scratch angle	45°	Pencil scratch: 45° Clemen scratch: 90°
Size of test table	150 x 100mm	
Dimensions	W560 x D140 x H280mm	
Weight	Approx. 20kg	
Related standards	JIS K 5600-5-4 (Testing methods for paints Part 5: Mechanical property of film Section 4: Scratch hardness <Pencil method>)	JIS K 5600-5-4 (Testing methods for paints Part 5: Mechanical property of film Section 4: Scratch hardness <Pencil method>)  JIS K 6902 (Testing method for laminated thermosetting high-pressure decorative sheets)

## Motorized model

Model	D-P	D-NP
Test method	Pencil scratch	Pencil scratch & Clemen scratch
Test load	500gx1, 300gx1, 100gx2, 50gx1	1000gx1, 500gx1, 300gx1, 100gx2, 50gx2
Pencil	Not provided as standard accessory	
Sapphire needle	45°	1 piece provided (Needle tip angle: 45°)
Scratch angle		Pencil scratch: 45° Clemen scratch: 90°
Size of test table	150 x 100mm	
Scratch speed	30 to 150mm/min. (0.5 to 2.5mm/sec.)	
Power requirement	Single-phase, AC100V, 50/60Hz, 0.1kVA	
Dimensions	W720 x D160 x H300mm	
Weight	Approx. 20kg	
Related standards	JIS K 5600-5-4 (Testing methods for paints Part 5: Mechanical property of film Section 4: Scratch hardness <Pencil method>)	JIS K 5600-5-4 (Testing methods for paints Part 5: Mechanical property of film Section 4: Scratch hardness <Pencil method>)  JIS K 6902 (Testing method for laminated thermosetting high-pressure decorative sheets)

*Specifications are subject to change without notice.*

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