

TABER TYPE ABRASION TESTER

TABER type Rotary Platform Abrasion Tester is commonly referred to as the Abraser (Abrader) or Rotary Platform Head Tester. Abrasion tester can perform accelerated wear testing. Capable of providing reliable data in a few minutes compared to the years that may be required by in-use testing, Abrasion Tester is used for quality & process control, research & development and material evaluation.

Used to test a wide spectrum of materials, the instrument has been referenced in numerous standards and specifications (including plastics, coatings, laminates, leather, paper, ceramics, carpeting, safety glazing, etc.).

Abrasion tests involve mounting a flat specimen approximately 100mm square or round to a turntable platform that rotates on a vertical axis at a fixed speed. The standard material thickness that can be evaluated with the Rotary Abraser is 6.35 mm (materials greater than 6.35 mm but less than 40 mm can be tested with optional accessories). Two abrasive wheels, which are applied at a specific pressure, are lowered onto the specimen surface.



Characteristic rub-wear action is produced by contact of the test specimen against the sliding rotation of the two abrading wheels. As the turntable rotates, the wheels are driven by the sample in opposite directions about a horizontal axis displaced tangentially from the axis of the sample. One abrading wheel rubs the specimen outward toward the periphery and the other, inward toward the center while a vacuum system removes loose debris during the test. The wheels traverse a complete circle on the specimen surface, revealing abrasion resistance at all angles relative to the weave or grain of the material. The resulting abrasion marks form a pattern of crossed arcs in a circular band that cover an area approximately 30 cm².

Each turntable has dual abrading arms that are precision balanced. Independently operated, the abrading arms can be raised (or lowered) to mount or inspect specimens. Each arm is loaded for 250 gram pressure against the specimen, exclusive of the weight of the wheel. To increase the load to 500 or 1000 grams, a mount for auxiliary weights is located on the



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outside of the abrading wheel bearing assembly. This location ensures that weights are concentric with the abrading wheel. A stud on the rear end of the abrading arm is used to carry an optional counterweight (used to reduce the load by 50, 125 or 175 grams).

- Specimen turntable speed control options of both 60 rpm and 72 rpm.
- Easy-to-use operator interface that includes tactile feel buttons and digital display. Simple on-screen instructions allow the operator to change the test parameters via MENU
- A vacuum system is included and is critical for the proper operation of the instrument. The vacuum nozzle(s) is hinged to an adjustable mounting at the rear of the housing. A precision vacuum nozzle adjustment control allows the height to be modified for accommodating varying specimen thickness.
- Precision weights of 250 grams and 750 grams are furnished to provide standard wheel loads of 500 and 1000 grams. Weights are marked to show total load on each wheel. This marking includes the weight of the abrading arm (250 grams).
- A Quick Release Mounting Hub permits quick wheel mounting without the need of a locking nut, increased clearance for the vacuum pick-up nozzle and a larger viewing area for the test specimen. A beveled retaining nut provides a positive locking force on the wheel hub retaining lip making certain that the wheels remain securely fastened until disengaged.

There are various techniques used to interpret results generated with the Abraser or Abrader. The method of evaluation that you select should reflect the type of material that is being tested. If you are following a specification - the method for interpreting test results will be listed.

- Cycles to a Specific End-Point
- Weight (Mass) Loss
- Taber Wear Index
- Volume Loss
- Wear Cycles Per Mil (0.001 inch)
- For Textile Fabrics
- Residual Breaking Force
- Average Breaking Strength
- Percentage Loss in Breaking Strength

Taber Abrasion Tester complies with standards like DIN-53754, 53799, 53109, TAPPI-T476, ASTM-D3884, SAE J1530, ISO 5470-1



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SPECIFICATIONS:

| | |
|----------------------------------|---|
| TAT-001 | Rotary Abrasion Tester |
| Specimen | Φ108mm,thickness 3mm |
| Load | 250,500,1000g |
| Grinding wheel | Φ50.8mm,(W)12.7mm |
| Space between wheels | 63.5mm |
| Grinding wheel and Plate's space | 37-38mm |
| Grinding wheel | Φout diameter 88.9mm, inside diameter 63.5mm |
| Rotating speed | 60r/min,72r/min |
| Counter | LCD.0-999.999 |
| Distance in specimen and hsg | 3mm |
| Dimension(WxDxH) | 55x32x32cm |
| Weight | 20kg |
| Power | AC220V,5A |

| | |
|---------|---------------------------------------|
| TAT-002 | CS-10 Spare Abrasive Wheels (1 Pair) |
| TAT-003 | CS-17 Spare Abrasive Wheels (1 Pair) |
| TAT-004 | H-18 Spare Abrasive Wheels (1 Pair) |



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