

**Compliance with following International Standards:**

IS: 13630 (Part:11), ISO:10545 (Part :7)

**Operating Principle:**

The ability of glazed tiles to resist surface abrasion encountered in everyday use is determined by abrading the glazed surface either with a wet abrasive media consisting of steel balls of 1 to 5 mm diameter, aluminum oxide abrasive powder, and distilled water; or with a dry abrasive media consisting of porcelain cylinders and Aluminum Oxide Abrasive Powder.



The test is conducted by holding a number of test specimens on a flat horizontal disc. The disc is rotated at a speed of 300 rpm with the axis of rotation 22.5 mm out. This causes the abrasive load placed above the test specimen to rub over the surface of test specimen in a circle of 45 cm diameter. The abrasive load is kept in place over the test surface inside a rubber lined cylindrical metallic ring. The ring also keeps the test specimen firmly pressed against the metallic disc.

**Construction Details:**

The Resistance to surface Abrasion tester for glazed tiles consists of a fabricated horizontal metal disc, a motorized arrangement to rotate the disc, a pre set type electronic counter, specimen holding ring for holding test specimens on the surface of the disc.

The metallic disc is fabricated from mild steel plate. It can be rotated at a vertical axis displaced by 22.5 mm from the centre of the disc such that any point on its surface traverses through a circle of 45 mm diameter once for each revolution of the disc. A counter weight is fixed on the lower face of the disc to balance the effect of vibrations set up due to its eccentricity.

The disc is rotated at a speed of 300 rpm with the help of a motor and V belt and pulley arrangement. A pre set type electronic counter with key lock reset and memory backup is provided to record the total number of rotations of the disc and also to switch off the motor after the desired number of rotations.

The test specimens are held against the upper surface of the disc with the help of rubber lined circular rings and holding plates with cover which serve both to hold the test specimens and as containers for abrasive loads placed over them. Eight such holders are provided to hold up to eight test specimens over the disc at one time.

The above components are mounted over a rigid metallic base. The equipment is finished in attractive powder coating and bright chrome / Zinc plating to give it a corrosion resistant finish.

Supplied with steel balls of 1mm - 5mm diameter and silicon carbide powder only. Other grinding media at extra cost

Technical Specification	
Diameter of rotating disc	580 mm
Eccentricity of axis of rotation of the disc	22.5 mm
Speed of rotation of disc	300 ± 10 rpm
Max. no of test specimens tested at a time	4 numbers
Inside diameter of specimen holding ring	87 mm
Distance of centre of test area from center of disc	195 mm
Electric Motor power	1/4 HP Single-phase, 230 Volts, 50 Hz, AC supply
Digital counter	4 digits pre-set type electronic counter with memory back up and key-lock reset

Note: Specifications are subject to change.