

Sample loom



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A sample loom, also known as a laboratory loom or small-scale weaving machine, is used to produce small fabric samples before large-scale production begins. This allows designers and manufacturers to test different yarn combinations, weave structures, patterns, and finishing techniques without the expense of setting up a full-size production loom. Sample looms are invaluable for research and development, design studios, educational institutions, and manufacturers to fine-tune their fabric creations.

Parts of a sample loom

- Frame: The main structure of the loom that holds all the other components in place.
- Warp Beam: Located at the back of the loom, it holds the warp yarns wound in parallel lines, releasing them as the weaving progresses.
- Heddles: Wires or cords with eyes (holes) in the center, through which warp threads are individually threaded.
- Harnesses/Heald Frames: Frames that hold the heddles and control the movement of groups of warp yarns, creating the shed for weft insertion.
- Reed: A comb-like device that separates the warp yarns, guides the shuttle, and pushes each weft yarn (pick) into place (called beating-up).
- Shuttle: A device, often shaped like a boat, that carries the weft yarn across the shed (the space created by raising some warp threads).

Parts of a sample loom

- Cloth Beam/Take-up Roll: Located at the front of the loom, it winds up the woven fabric as it is produced.
- Lease Rods: These rods help to maintain the correct separation and order of warp threads.
- Picking Motion: The mechanism that propels the shuttle, carrying the weft yarn, through the shed.
- Shedding Motion: The mechanism that raises and lowers heald frames to create the shed.
- Beating-up Motion: The mechanism that swings the reed forward to push the newly inserted weft yarn firmly against the already woven fabric