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MANUAL CLICKER PRESS - MANUAL TEST SAMPLE CLICKER PRESS

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Manual Clicker Press MCP-5000

Manual Clicker Press MCP-5000 - Basic Sample Clicker Press is used for cutting ASTM, ISO, DIN, and JIS standard samples made of rubber, leather, and paper. Specimen dies are sold separately.

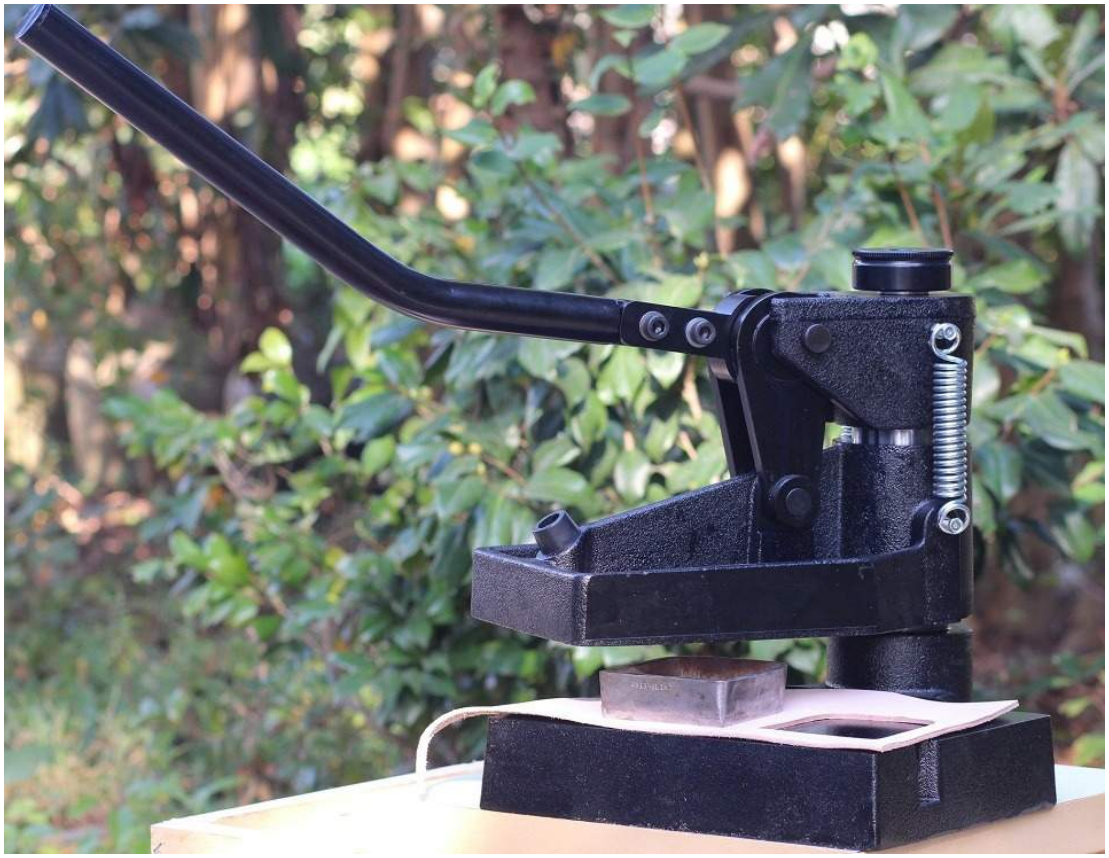
Advantages:

1. The surprising power and strength of this industrial quality die-cutting machine it apart from all other clickers in its class;
2. The MCP-5000 hand-operated press die cutter with a swing-arm cutting head can perform many types of die cutting with steel rule dies and clicker dies;
3. This bench-top clicker has been used for rubber, leather, paper, and many other materials;
4. The clicker press allows you to use cutting dies pre-formed to the exact shapes that you cut on a regular basis in a fraction of the time;
5. Ruggedly built with a cam actuated mechanical advantage. This die-cutting press requires little effort making operation very easy;
6. The swing arm operation provides the operator with a clear view, it allows you to see where you’re setting the die and offers easier clicking;
7. The knurled adjustment knob makes it easy to adjust the machine for various material thicknesses.

APPLICATIONS

Manual Clicker Press - Manual Test Sample Clicker Press units operate well in stand-alone cutting situations, and also complement a Hydraulic press for smaller operations.

With the single lever rotation and compressing action, its speed of operation is quite surprising and you can be up and cutting for a fraction of the cost of a hydraulic press.



Applications:

Rubber Specimens, Leather, Laboratories, Belt Manufacturers, Embroidery badge cutting, Rubber stamp cutting, Surfboard fin manufacture, Key fobs, Gasket & rubber washers, and much more.

THEORY & METHOD

Manual Clicker Press MCP-5000: Working Principle, Standards Compliance, and Buyer's Guide

The Manual Clicker Press MCP-5000 turns a single lever pull into a precise, repeatable specimen cut. This page goes past the feature summary and walks through how the press generates 5 tons of cutting force from a 32-inch handle, why each design choice on the data sheet was made, and which test standards the Manual Test Sample Clicker Press was built to serve.

Read on if you are evaluating whether the MCP-5000 fits your lab's workflow, or you already own one and want to get the most out of it. Specimen dies and operating practice both matter as much as the press itself, and both are covered below.

How the Manual Clicker Press Generates 5 Tons of Force

The Manual Clicker Press MCP-5000 multiplies a light operator pull into multi-ton cutting force in two stages. A 32-inch lever and a cam profile stack their ratios, then concentrate the load onto a steel-rule die edge, where the pressure exceeds the shear strength of the sheet and severs the specimen against a polypropylene board.

Stage 1: the 32-inch lever arm

The operator grips the handle 32 inches above the cam pivot. A pull of 100 N at the end of that arm produces several hundred N·m of torque at the pivot. A longer arm raises the torque for the same operator effort, which is why the MCP-5000 handle is sized at 32 inches rather than something shorter and more compact. The extra arm length is what keeps the press hand-operable for full-day specimen runs.

Stage 2: the cam profile

The cam converts that torque into a short linear stroke at the cutting head. Cam profiles rise in mechanical advantage as the head approaches bottom of stroke, the moment when the die needs the most force. Near the end of travel, the effective lever ratio of the cam peaks, and the press delivers up to 5 tons (about 44 kN) at the die. The cam-actuated design lets a

bench-top press hit hydraulic-class forces without a pump, reservoir, or motor.

From force to clean cut

Force alone does not cut. The steel-rule die concentrates the load onto a sharpened edge a fraction of a millimeter wide. Local contact pressure rises into the high-megapascal range and exceeds the shear yield strength of rubber, leather, paper, foam, cork, felt, and similar non-metallic sheet. The material parts cleanly along the die profile in a single stroke, which is why the operation is called "clicking": one quick rotation, one sharp report, one finished specimen.

Why the cutting board is polypropylene

The die must bottom through the material to release the specimen, so what sits underneath matters. The MCP-5000 uses a polypropylene cutting board because the polymer combines enough stiffness to resist deflection under multi-ton load with enough yield tolerance to take the die bite without splintering or shattering the edge. Polypropylene also tolerates repeated cycles and is straightforward to rotate or replace as the surface scars. A metal anvil under the same load would chip a steel-rule edge in one stroke.

Why the swing arm rotates 360 degrees

The swing-arm head pivots a full 360 degrees around its post. The operator swings the head fully off the cutting board to load material and align the die, then swings it back over the workpiece for the cutting stroke. Full rotation also lets the operator approach the die from any angle for orientation-critical specimens, such as anisotropic rubber sheet where the tensile axis must align with the calendering direction, or coated fabric where warp and weft must be respected.

Standards the MCP-5000 Was Built to Serve

The Manual Test Sample Clicker Press accepts specimen dies cut to the major international test standards. The dies define the specimen geometry; the press supplies the force. The most common pairings encountered in materials labs:

- **ASTM D412:** tensile properties of vulcanized rubber and thermoplastic elastomers. Dies A through F, with Die C and Die D the most widely specified.
- **ASTM D624:** tear strength of rubber. Die B, Die C, Die T, and the trouser test piece.
- **ASTM D751:** tensile and tear properties of coated fabrics.
- **ISO 37:** tensile testing of rubber, vulcanized or thermoplastic. Specimen types 1 through 4.
- **ISO 34-1:** tear strength of rubber. Trouser, angle, and crescent specimens.
- **ISO 23529:** general procedures for the preparation and conditioning of rubber test pieces.
- **DIN 53504:** tensile testing of rubber and elastomers, the European reference for tensile properties.
- **JIS K6251:** Japanese tensile test for vulcanized rubber and thermoplastic elastomers.

The 5-ton cutting capacity covers every dumbbell, tear, and rectangular specimen called for in these methods, across the rubber hardnesses and leather thicknesses normally tested. Specimen dies are interchangeable across most bench-top clicker bases, so existing dies usually drop straight onto the MCP-5000 without modification.

How to Get the Most Out of an MCP-5000

The press itself is straightforward; specimen quality depends on how you set it up and maintain the consumables.

Setting cutting depth

Adjust the knurled height knob so the die just kisses the polypropylene board, no deeper. The first sign that the depth is wrong shows at the specimen edge: a feathered or torn edge means the die did not bottom; deep, repeating gouges in the board signal an over-aggressive depth setting and accelerated die wear.

Mounting and reaction load

The 100-lb press transmits its 5-ton reaction load through the base each stroke. Bolt the MCP-5000 to a rigid bench using the supplied hardware. A flexing benchtop wastes input force as deflection and yields inconsistent cut quality across the 12 x 9 inch board.

Specimen orientation

Anisotropic materials, including calendered rubber and woven coated fabrics, must be cut with the grain direction matching the standard. Use the 360-degree swing rotation to orient the die before each cut rather than rotating the material on the board. Rotating the die preserves your reference marks and keeps the workpiece flat.

Die care

Steel-rule and forged dies dull with use, faster on hard elastomers than on paper or thin leather. Send dies for resharpening and recertification on a schedule tied to specimen count, not just calendar time. Accredited test programs typically require certified dies; resharpening services restore the edge and recertify the geometry against the specifying standard.

When the MCP-5000 is the wrong tool

The MCP-5000 covers most specimen preparation up to its rated 10 mm thickness and roughly 85 Shore A hardness. Beyond that, or for throughput above a few hundred cuts per day, a hydraulic swing-arm clicker press is the better fit. Steel-rule dies and a polymer cutting board work on non-metallic sheet only; do not attempt to cut metal stock on the MCP-5000.

Frequently Asked Questions

Can the MCP-5000 cut samples thicker than 10 mm?

The MCP-5000 is rated for material up to 10 mm thickness. Cutting thicker stock risks incomplete shear, premature die wear, and stalled strokes. For thicker rubber, denser elastomers above approximately 85 Shore A, or layered laminates beyond 10 mm, step up to a hydraulic clicker press with higher tonnage.

How long does the polypropylene cutting board last on the Manual Clicker Press?

Cutting board life depends on die count, die geometry, and material. Light specimen work yields months of use per board face; heavy production with aggressive dies shortens that. Rotate the board to spread scoring across all four corners and the center, then replace it once the surface becomes uneven enough to affect cut quality at the die edge.

Does the Manual Test Sample Clicker Press need a special bench?

A rigid bench rated for at least the press weight plus reaction load is enough. The MCP-5000 weighs 100 lbs and applies up to 5 tons of momentary reaction per stroke. Bolt it to a solid wood or steel workbench using the supplied mounting hardware. Avoid lightweight folding tables; they flex and waste input force as deflection.

Are MCP-5000 specimen dies interchangeable with other clicker presses?

Yes, in most cases. Standard ASTM, ISO, DIN, and JIS specimen dies built for bench-top clicker bases drop onto the MCP-5000 swing arm. Forged dies with mallet handles also work, though the handle stays unused on a clicker. Confirm die base dimensions with your supplier before ordering if you are moving dies between press brands.

How much operator force does a Manual Clicker Press actually require?

Far less than the 5 tons delivered at the die. The 32-inch lever and cam profile together provide a mechanical advantage above a hundred to one near bottom of stroke, so a one-handed pull is enough to fully cycle the press for typical rubber and leather specimens. Operators do not need to lean into the lever for routine work.

Can the MCP-5000 cut production parts as well as test specimens?

Yes. The same 5 tons of cam-actuated force handles short-run production parts as readily as test pieces. Many labs buy the MCP-5000 for ASTM and ISO specimen prep and find it also serves for gaskets, rubber washers, key fobs, badges, surfboard fins, and similar non-metallic cut parts whenever a hydraulic press is not justified.

TECHNICAL SPECIFICATIONS

Manual Clicker Press - Manual Test Sample Clicker Press Specifications:

- Cutting Pressure: Up to 5 Tons
- Swing Rotation 360 degrees
- Maximum Cutting Thickness: 10mm
- Cutting Board: Poly Propylene
- Cutting Board Size: 12" x 9"
- Press Width x Depth x Height: 12" x 14" x 14"
- Handle Height: 32"
- Press Weight: 100 lbs
- Height Adjustment: Knob on top of post = Infinite adjustment to height within its range

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