

Dake 2-1/2

Dake 2-1/2 Model Compound Leverage Arbor Press User Manual

MODEL: 2-1/2

1. Introduction

Welcome to the user manual for the Dake 2-1/2 Model Compound Leverage Arbor Press. This manual provides essential information for the safe and effective operation, setup, and maintenance of your arbor press. Dake has been building heavy metal equipment since 1887, and our arbor presses are designed for durability and precision.

Arbor presses are hand-operated tools that apply high-pressure force to objects through a levered ram. They are ideal for tasks requiring precise control and significant force, such as installing and removing components like arbors, bearings, rivets, or for compressing items. This model utilizes a compound leverage mechanism to maximize the force applied with minimal human effort.

2. Key Features

- **Compound Leverage Mechanism:** Requires less effort than standard arbor presses, providing up to 6 tons of force. Can also be used in a simple leverage mode for lighter pressure applications.
- **Handwheel:** Quickly advances the ram for initial positioning, allowing for efficient setup.
- **Ratcheted Lever:** Lowers the ram onto the object with precision and control, and can be set at a comfortable position for the user.
- **Smooth Action Gears:** Enable fine control over ram movement with the lever, ensuring accurate pressing.
- **Counterweight:** Repositions the lever to the top after a downstroke, reducing strain and preparing the press for the next task quickly.
- **Friction Brake:** Allows for precise positioning and control of the ram, preventing rapid descent.
- **Open Base and Slotted Table Plate:** Provides stable support for solid objects and an outlet for arbors and shafts to pass through. The plate can be removed or rotated to one of its 4 openings of varying diameters to suit different applications.

- **Adjustable Ram Cap:** Can be adjusted using included 0.008"- and 0.015"-thick shims to adjust the ram forwards and backwards and to compensate for wear. A set screw adjusts the ram sideways.

3. Specifications

Attribute	Value
Load Capacity	6 ton (can be configured for 12 ton)
Leverage Ratio	66:1
Throat Depth	7-3/4 inches
Ram Size	1-1/2 inch sq.
Max. Working Height Above Base	21-1/2 inches
Max. Working Height Above Plate	20-1/4 inches
Max. Diameter Work	15-1/2 inches
Max. Plate Opening	3 inches dia.
Overall Dimensions (H x W x L)	32-1/2 x 20 x 8-1/4 inches
Weight	315 lb.
Material	Metal
Color	Black

Note: H is height (vertical distance from lowest to highest point, not including ram); W is width (horizontal distance from left to right); L is length (horizontal distance from front to back).

4. Setup

The Duke 2-1/2 Model Arbor Press comes assembled. For stable operation, it is recommended to bench mount the press. The base features three 41/64"-diameter holes for secure mounting. Mounting hardware is not included and must be sourced separately based on your bench material and thickness.

Before initial use, ensure the ram moves freely. You can adjust the ram cap using the included 0.008" and 0.015" shims to fine-tune its forward and backward position and to compensate for any wear over time. The set screw allows for sideways adjustment of the ram.



Image: The Duke 2-1/2 Model Compound Leverage Arbor Press, showcasing its robust cast iron frame, the long operating lever, the handwheel for ram adjustment, and the slotted table plate at the base.

5. Operating Instructions

The Duke 2-1/2 Model Arbor Press is designed for versatile pressing applications. Follow these steps for

operation:

1. **Positioning the Ram:** Use the handwheel to quickly advance or retract the ram to the desired working height. This allows for rapid initial positioning of the ram close to the workpiece.
2. **Controlling Ram Descent:** The press features a friction brake on the ram. This brake allows you to control the descent of the ram, preventing it from dropping too quickly and ensuring precise placement. Tighten or loosen the brake as needed to achieve the desired resistance.
3. **Applying Force (Leverage):**
 - **6-Ton Configuration:** For standard operations requiring up to 6 tons of force, use the main operating lever.
 - **12-Ton Configuration (Compound Leverage):** For applications requiring higher force, push the pin on the lever mechanism to engage the compound leverage. This increases the power at the end of the ram by a factor of five, allowing for up to 12 tons of force.
4. **Pressing the Workpiece:** Once the ram is positioned and the desired leverage is set, apply force by pulling down on the operating lever. The ratcheted design allows for controlled, incremental pressing.
5. **Releasing the Ram:** After the pressing operation, release the lever. The counterweight will automatically reposition the lever to its top position, preparing the press for the next cycle.

Common Applications: This arbor press is suitable for a wide range of tasks including:

- Assembly work
- Repair work
- Pressing in bearings or bushings
- Straightening small shafts
- Pushing in pins

Your browser does not support the video tag.

Video: An overview of Dake Arbor Presses, demonstrating the features and operation of a similar model. This video highlights the wheel, lever, and gear reduction systems, as well as the compound leverage and ram control mechanisms, providing a visual guide to the functionality of Dake arbor presses.

6. Maintenance

Regular maintenance ensures the longevity and optimal performance of your Dake Arbor Press.

- **Cleaning:** Keep the press clean and free of debris, especially around the ram, gears, and table plate. Use a clean cloth to wipe down surfaces after each use.
- **Lubrication:** Periodically apply a suitable lubricant to all moving parts, including the ram, gears, and pivot points, to ensure smooth operation and prevent wear. Consult a machinery lubricant guide for appropriate product selection.
- **Inspection:** Regularly inspect the press for any signs of wear, damage, or loose components. Pay close attention to the ram, lever mechanism, and mounting points. Address any issues promptly to prevent further damage or unsafe operation.
- **Ram Adjustment:** As mentioned in the setup section, periodically check and adjust the ram cap and set screw to maintain proper alignment and compensate for wear.

7. Troubleshooting

While Dake arbor presses are built for reliability, minor issues may arise. Here are some common troubleshooting tips:

- **Ram Sticking or Rough Movement:**
 - Check for debris or foreign objects on the ram or within the gear mechanism. Clean thoroughly.
 - Apply lubricant to the ram and gears.
 - Inspect the ram cap and set screw for proper adjustment. Misalignment can cause sticking.
- **Insufficient Force:**
 - Ensure the compound leverage mechanism is correctly engaged if maximum force is required.
 - Verify that the workpiece is properly positioned and stable on the table plate.
- **Excessive Play in Ram:**
 - Adjust the ram cap and set screw to reduce play.
 - Inspect for worn components if adjustment does not resolve the issue.







If you encounter persistent issues or require assistance with repairs, please contact Dake customer support.

8. Warranty and Support

For detailed warranty information and customer support, please refer to the official Dake documentation or contact Dake directly. A comprehensive User Guide (PDF) is available for download, providing additional information and diagrams for your product.

You can access the official User Guide [here](#).

For any inquiries or technical assistance, please reach out to Dake customer support through their official channels.

 <p>DAKE DAKE SINGLE LEVERAGE ARBOR PRESS Model Y INSTRUCTIONAL MANUAL</p> <p><small>⚠️WARNING</small> Read and understand all instructions and regulations before operating. Failure to follow safety instructions and labels could result in serious injury.</p> <p><small>DAKE Corporation 1550 Valley Forge Dr. Gardner, MA 01459</small> <small>Phone: 800-837-3253 508-653-0020</small></p>	<p>Dake Model Y Single Leverage Arbor Press - Instructional Manual and Specifications</p> <p>Instructional manual, specifications, warranty, and ordering information for the Dake Model Y Single Leverage Arbor Press. Learn about safety, maintenance, and parts.</p>
 <p>DAKE DAKE SINGLE LEVERAGE ARBOR PRESS Model Y INSTRUCTIONAL MANUAL</p> <p><small>⚠️WARNING</small> Read and understand all instructions and regulations before operating. Failure to follow safety instructions and labels could result in serious injury.</p> <p><small>DAKE Corporation 1550 Valley Forge Dr. Gardner, MA 01459</small> <small>Phone: 800-837-3253 508-653-0020</small></p>	<p>DAKE Model Y Single Leverage Arbor Press Instructional Manual</p> <p>Instructional manual for the DAKE Model Y Single Leverage Arbor Press, covering specifications, safety guidelines, maintenance, parts list, warranty, and terms of sale.</p>
 <p>DAKE DAKE SINGLE LEVERAGE ARBOR PRESS Model 1 INSTRUCTIONAL MANUAL</p> <p><small>⚠️WARNING</small> Read and understand all instructions and regulations before operating. Failure to follow safety instructions and labels could result in serious injury.</p> <p><small>DAKE Corporation 1550 Valley Forge Dr. Gardner, MA 01459</small> <small>Phone: 800-837-3253 508-653-0020</small></p>	<p>Dake Single Leverage Arbor Press Model 1 Instructional Manual</p> <p>Instructional manual for the Dake Single Leverage Arbor Press, Model 1. Includes warranty information, return policy, terms and conditions, specifications, safety guidelines, maintenance, and parts list.</p>
 <p>DAKE DAKE COMPOUND LEVERAGE ARBOR PRESS Model 2, 2-1/2, and 2B INSTRUCTIONAL MANUAL</p> <p><small>⚠️WARNING</small> Read and understand all instructions and regulations before operating. Failure to follow safety instructions and labels could result in serious injury.</p> <p><small>DAKE Corporation 1550 Valley Forge Dr. Gardner, MA 01459</small> <small>Phone: 800-837-3253 508-653-0020</small></p>	<p>DAKE Compound Leverage Arbor Press Models 2, 2-1/2, 2B: Instructional Manual, Specifications, and Parts List</p> <p>Comprehensive instructional manual for DAKE Compound Leverage Arbor Presses, Models 2, 2-1/2, and 2B. Includes specifications, safety guidelines, operation instructions, warranty, return policy, terms and conditions, and a detailed parts list with ordering information.</p>
 <p>DAKE DAKE RATCHET LEVER ARBOR PRESS Model 4M INSTRUCTIONAL MANUAL</p> <p><small>⚠️WARNING</small> Read and understand all instructions and regulations before operating. Failure to follow safety instructions and labels could result in serious injury.</p> <p><small>DAKE Corporation 1550 Valley Forge Dr. Gardner, MA 01459</small> <small>Phone: 800-837-3253 508-653-0020</small></p>	<p>Dake Ratchet Lever Arbor Press Model 4M: Instructional Manual, Specifications, and Parts</p> <p>Comprehensive instructional manual for the Dake Ratchet Lever Arbor Press Model 4M. Includes detailed specifications, safety guidelines, operation instructions, maintenance procedures, warranty information, return policy, and a complete parts list with ordering information.</p>
 <p>DAKE DAKE 10- & 20-Ton Floor/Bench Utility Press INSTRUCTIONAL MANUAL</p> <p><small>⚠️WARNING</small> Read and understand all instructions and regulations before operating. Failure to follow safety instructions and labels could result in serious injury.</p> <p><small>DAKE Corporation 1550 Valley Forge Dr. Gardner, MA 01459</small> <small>Phone: 800-837-3253 508-653-0020</small></p>	<p>DAKE 10- & 20-Ton Floor/Bench Utility Press Instructional Manual</p> <p>Comprehensive instructional manual for DAKE 10-ton and 20-ton hydraulic utility presses, covering specifications, safety, assembly, operation, troubleshooting, and parts lists.</p>