

FREUD

Operating Instructions



FDW710 Portable Doweling Machine

**English
Français
Español**

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BRIEF DESCRIPTION

The Freud FDW710 doweling machine is intended solely for drilling in solid wood and wood related materials such as MDF, particle board, plywood, etc. Any alternative use of this machine would be considered a failure to comply with the intended purpose of the machine. The manufacturer is not liable for any damage or injury arising from the improper use of this machine and the user assumes sole responsibility in this case.

ADDITIONAL SAFETY RULES FOR DOWELING MACHINES

- **WARNING!** Do not drill material containing amianthus. Working with materials containing amianthus/asbestos and/or silica stones produces a dust which is harmful to health. Protect yourself from inhaling this dust, in compliance with regulations on accident prevention.
- Be sure that you use this machine in an uncluttered work environment.
- Avoid wearing loose fitting clothing while operating this tool.
- Always wear eye protection, hearing protection, dust mask, and anti-slip footwear when using this tool.
- Always unplug the power cord before making bit changes or adjustments to the tool.
- Be sure the bits are properly tightened before turning the machine on.
- Allow the bits to achieve full speed before beginning the drilling operation.
- Keep hands away from the drill bits and the dust extraction port during operation.
- Be sure there are no foreign objects like nails in the wood before beginning the drilling operation.
- Be sure the power cord does not interfere with the drilling operation and that it always leads away from the rear of the machine.
- If only one drill bit is being used, be sure to remove the set screw from the unused collet.
- Be careful when handling drill bits as they are very sharp.
- This tool is not suitable for use in the rain.

WARNING: Some dust created by power sanding, sawing, grinding, drilling, and other construction or woodworking activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

DOUBLE INSULATION

- I. To ensure safer operation of this tool, *Freud* has adopted a double insulation design. “Double Insulation” means that two physically separated insulation systems have been used to insulate the electrically conductive materials connected to the power supply from the outer frame handled by the operator.

To keep the double insulation system effective, follow these precautions:

- Be careful not to pierce the motor housing as this could damage the efficiency of the double insulation system.
- Only Freud Authorized Service Centers should disassemble or assemble this power tool, and only genuine Freud replacement parts should be installed.

EXTENSION CORDS

Make sure your extension cords are in good condition. Make sure you use an extension cord that is heavy enough to carry the current your tool requires. An undersized cord will cause a drop in voltage which creates a loss of power and could cause your tool to overheat. Please utilize the table below to identify the proper gauge cord for the tool you are using. Remember, the lower the number, the heavier gauge the cord. If you are unsure as to which gauge cord you need, use the next heavier gauge.

Recommended Gauge for Extension Cords				
Tool's Ampere Rating	Cord Length in Feet			
	25	50	100	150
	Cord Size in A.W.G.			
0-6	18	16	16	14
6-10	18	16	14	12
10-12	16	16	14	12
12-16	14	12	Not Recommended	

DESCRIPTION AND SPECIFICATIONS

SYMBOLS

Some of the following symbols may be used on your tool. Please study them and learn their meaning. Proper interpretation of these symbols will allow you to operate the tool better and safer.

Symbol	Name	Designation/Explanation
V	Volts	Voltage (potential)
A	Amperes	Current
Hz	Hertz	Frequency (cycles per second)
W	Watt	Power
	No load speed	Rotational speed, at no load
	Revolutions or reciprocation per minute	Revolutions, strokes, surface speed, orbits, etc. per minute
	Class II construction	Designates double insulated construction tools
	Alternating current	Type or a characteristic of current

PARTS & FEATURE DIAGRAM



- A. On/Off Switch
- B. Auxiliary Handle
- C. Adjustable Fence
- D. Base
- E. Drilling Depth Rod
- F. Drilling Depth Rod Lock Knob
- G. Micro Adjustment Screw
- H. Fence Lock Knob
- I. Fence Adjustment Scale
- J. Drilling Depth Adjustment Scale
- K. Transparent Window
- L. Depth Stop Adjustment Screw
- M. Adjustable Pin
- N. Motor Cover
- O. Collets
- P. Collet Screws
- Q. Rack & Pinion Dial
- R. Height Lock Screw
- S. Turret
- T. Turret Adjustment Screw
- U. Protective Cover
- V. Vacuum Adaptor
- W. Turret Screw Wrench
- X. Screwdriver
- Y. Pin Adjustment Screw
- Z. Adjustable Pin Lock Screw

SPECIFICATIONS

	FDW710
POWER SOURCE	Single-Phase, 120V, AC 60Hz
AMPS	6.5 AMPS
WATTS	710
NO-LOAD SPEED	18,500 RPM
DISTANCE BETWEEN BITS	32 MM (center to center)
DRILLING DEPTH	0 - 1 1/16 INCHES (0 – 27 mm)
MIN. BIT DIAMETER	3/16 INCHES (5 mm)
MAX. BIT DIAMETER	1/2 INCHES (12 mm)
CHUCK SIZE	10 mm
BORING BIT SHANK SIZE	10 mm (Right Rotation)
APPROX. TOOL WEIGHT	7.9 LBS (3.6 Kg)

ASSEMBLY & OPERATION

PRIOR TO OPERATION

1. Check Power Supply

Ensure that the power source to be utilized conforms to the power source requirements specified on the tool name plate. Ensure the receptacle being used accepts the plug tightly. If a faulty receptacle is used, it may cause overheating, resulting in a serious hazard.

2. Check Work Area

Confirm that the work site is placed under appropriate conditions conforming to precautions prescribed in the safety section of this manual.

3. Before Plugging in the Tool

Ensure that the power tool switch is in the OFF position to prevent the tool from accidental start-up, which could cause serious injury.

CHANGING BORING BITS

WARNING: Disconnect tool from power source before installing or removing boring bits.

CAUTION: Be careful when removing or installing boring bits as they are extremely sharp and could be hot after use. Improper care when handling bits can cause severe cuts and severe burns. Allow bits to cool completely before attempting to remove them from the machine.

Removing Boring Bits – Fig 1

1. From the top of the tool, insert the included screwdriver (X) through the auxiliary handle and into the collet screws (P). Rotate counter clockwise until the drill bit is loose.
2. Remove the drill bit by pulling out of the collet.

Installing Boring Bits – Fig 1

1. With the collet screws loose, install the drill bit until it reaches the bottom of the collet and the flat side of the bit faces the collet screw.
2. Rotate the collet screws clockwise to tighten the drill bit.

WARNING: The collet system in this doweling machine is designed for use only with 10 mm x 20 mm shank brad point boring bits. These boring bits have a flat side on the shank which enables the collet screw to make a very tight connection. Do not attempt to use round shank drill bits in this machine as the collet is not designed for use with these bits.

NOTE: The collet screws can also be accessed from the bottom of the machine by removing the protective cover (U).

ADJUSTING DRILLING DEPTH – Fig 2

Step 1: Setting the Drill Bits to Zero

1. Disconnect the power to the machine and turn the Micro Adjustment Screw (G) on the back of the Drilling Depth Rod (E) counter clockwise until the tip of the Micro Adjustment Screw becomes flush with the end of the Drilling Depth Rod.
2. Loosen Drilling depth Rod Lock Knob (F) and set the indicator line on the drilling depth rod to the zero position on the drilling depth scale. Tighten the Drilling Depth Rod Lock Knob
3. Set the machine vertically on a flat surface and push down until the drill bits make contact with the surface. Caution: The tips on the boring bits are very sharp and can damage surfaces they come into contact with. Be careful if lowering onto a hard surface as this could dull or damage the tip of the bits.
4. While keeping the bits in contact with the flat surface, turn the micro adjustment screw clockwise until it contacts the round fence column.
5. The machine is now set at zero; the tips of the boring bits are even with the outside of the base and will just contact the work piece.

Step 2: Adjusting the Drilling Depth Rod – Fig 3

1. Follow the instructions in Step 1 above to set the drill bits to zero before adjusting drilling depth.
2. With the power disconnected to the machine, loosen the Drilling Depth Rod Lock Knob (F)
3. Move the Drilling Depth Rod (E) until the indicator line reaches the desired depth of cut (The drilling depth can be adjusted from 0” to 1 1/16”). **Do not rotate the micro adjustment screw (G) as this will eliminate the zero setting accomplished in step one.**
4. Tighten drilling Depth Lock Knob.

ADJUSTING THE FENCE

Setting the Fence Angle – Fig. 4

1. With the power disconnected to the machine, loosen the Fence Lock Knob (H).
2. Move the fence to the desired angle.
3. Tighten the fence lock knob.

Note: The fence is adjustable from 0° to 90° and has positive stops at 0°, 22.5°, 45°, 67.5°, and 90°.

Setting the Fence Height – Fig 4

1. Loosen the height lock screw (R).

2. Move the fence up or down using the rack and pinion dial (Q) until the desired height is reached.
3. Tighten the height lock screw (R).

Using the Turret – Fig 5

The Turret (S) is designed so that common fence heights can be preset.

You can preset height settings using anyone of the four steps in the turret.

1. First disconnect power to the machine and loosen the nut on the turret adjustment screw (T).
2. Raise the turret adjustment screw so that it is clear of the turret.
3. Set the fence to the required height using the instructions from the section above titled “Setting the Fence Height.”
4. Lower the turret adjustment screw until it makes contact with the turret.
5. Tighten the nut on the turret adjustment screw.

Note: This machine was assembled at the factory with the fence height preset at a 3/8” allowing the machine to cut in the middle of a 3/4” panel.

Operating Instruction

Starting the Tool – Fig 6

WARNING: Make sure that the voltage from the power supply matches the voltage specified on the tool. Before plugging in the tool ensure the drill bits are properly installed and tightened.

1. Plug the tool in with the On/Off Switch (A) in the off position.

2. Hold the machine firmly by the Motor Cover (N).
3. Turn the machine “ON” by pushing the ON/OFF switch towards the rear of the machine.
4. Turn the machine “OFF” by pushing the ON/OFF switch towards the front of the machine.

Joining Operations

Locating to Pencil Marks

1. Follow the instruction titled “Setting the Fence Height” to set the fence height to the width of wood you are joining. In most applications it is preferable to drill in the center of the material.
2. Draw a pencil mark at the location where the two wood panels will be joined making sure the mark is clearly scribed on both wood panels perpendicular to the edge of the panel. – **Fig 7**
3. Clamp the panel in place to prevent it from moving during the operation of the tool.
4. Position the machine on the wood and align the centerline on the transparent window (K) to the pencil line. – **Fig 8**
5. Turn on the machine, hold the machine firmly by the motor cover (N) and plunge the drill bits into the wood until they reach the desired drilling depth.
6. Pull back on the motor cover until the drill bits have returned to inside the base (D) of the machine.
7. Turn off the machine.
8. Repeat steps 1 through 7 for the second piece of wood.
9. Install glue and dowels into the holes, attach the panels, and clamp in place until the glue is dry.

Line Boring Operations

Setting the Adjustable Pins – Fig 9

1. Unlock the pin by inserting the included Screwdriver (X) into the Adjustable Pin Locking Screw (Z) and turning counter clockwise.
2. Use a flat head screw driver to turn the Pin Adjustment Screw (Y)
3. Turn the screw to align the marks on the Adjustable Pin to the position on the scale that matches the diameter of the bit being used.
4. Turn the adjustable pin locking screw clockwise to tighten.

The adjustable pins can be set for the following drill bit sizes:

Metric Sizes	Imperial Sizes
5 mm	1/4 Inch
8 mm	5/16 Inch
	3/8 Inch
	7/16 Inch
	1/2 Inch

Using the Adjustable Pins – Line Boring Application

This machine has two adjustable pins (M). These pins can be used to drill a series of equidistant holes measured 32 mm apart. The drilling process may be started at either the right or left side of the wood panel.

1. Clamp the work piece into place to prevent it from moving during the operation of the tool.
2. Mark the location on the panel where you wish to start the series of holes. – **Fig 10**
3. Clamp a straight edge to the panel to serve as a guide for the doweling machine.
4. Center the locating line for the outermost drill bit on your mark. – **Fig 11**
5. Turn the machine on and drill the first two holes.
6. Pull the drill bits back and turn off the machine.
7. Lift the machine and position the pin over the farthest hole. Be sure the pin is contacting the side of the hole closest to the next hole location. – Fig 12
8. Continue the operation until you have drilled the desired number of holes.

Using the Machine with One Bit Installed

There are applications where it is necessary to use the doweling machine with only one bit installed. With two bits installed, the machine is designed to drill two holes 32 mm apart measured from the center of each bit. Applications such as face frames may require that the holes be closer together than 32 mm.

Step 1:

Follow the instructions in the section titled Changing Boring Bits on page 10 to remove one of the bits. Remember to completely remove the collet screw from the empty collet.

Step 2:

Follow the instructions in the section of this manual titled “Locating to Pencil Marks” on page 13 of this manual. However, instead of locating using the center line on the transparent window, center the machine using the center line of the bit that is remaining in the machine.

Installing the Vacuum Adaptor – Fig 13

1. With the machine unplugged, remove the four screws that attach the protective cover (U) to the base (D).
2. Remove the protective cover.
3. Install the vacuum adaptor with the dust chute angled towards the rear of the machine and replace the four screws removed in step one.

MAINTENANCE & INSPECTION

Service

It is recommended that all service on your Freud tool be performed by an Authorized Freud service center. Service by unauthorized service personnel may result in misplaced internal components resulting in risk of tool malfunction and personal injury to the tool user.

Power Cord

Check that the power cord is in good condition. If it is not, have it replaced immediately at a Freud Authorized service center.

Tool Lubrication

All power tools require care and attention. Every couple of years, we recommend leaving the tool with an authorized Freud service center for a general cleaning and lubrication.

Ventilation Openings

Make sure the air vents are always kept clean and free of obstacles. If clogged, vacuum out obstruction. It is recommended that you blow off the entire tool with compressed air after each use.

Bearings

Bearings that become very noisy should be replaced at once to avoid overheating or motor failure.

Inspect Accessories

Regularly inspect your boring bits. Using worn accessories with diminish the efficiency of the work and could damage the tool's motor.

Inspect Screws

Regularly inspect all screws in your power tool and make sure they are properly tightened. Loose screws should be retightened immediately.

SERVICE LOCATIONS

To locate a Freud Authorized Service Center near you, call: 1-800-334-4107

Or visit our web site at: www.freudtools.com

In Canada call: 1-800-263-7016

Or visit the Canadian site for a full list of service centres at: www.freud.ca

ACCESSORIES

Standard Accessories

- Collet Screwdriver
- Vacuum Adaptor
- Carrying Case
- Owner's Manual

WARRANTY

90 DAY MONEY BACK GUARANTEE

If you are not completely satisfied with your Freud power tool for any reason you may return the tool (in its original packaging and complete with all accessories) to the place of purchase with proof of purchase (e.g. dated sales receipt) for a full refund, within the first 90 days of ownership.

FREUD LIMITED FIVE YEAR POWER TOOL WARRANTY

Freud warrants to the original consumer purchaser that each new Freud power tool shall be free from defects in material and workmanship for a period of five (5) years from the purchase date. When warranty service is requested, proof of purchase (e.g. dated sales receipt) is required. Should the power tool fail within ninety (90) days from the date of purchase, it will be repaired or replaced AT THE CUSTOMER'S DISCRETION, subject to the Guidelines below. Thereafter, upon verification of failure or malfunction, at its option, Freud will repair or replace the power tool, subject to the Guidelines below. This warranty does not cover damage incurred from repair or attempted repair by anyone other than Freud authorized personnel, normal wear and tear, abuse, lack of maintenance, or accidents.

FREUD WARRANTY GUIDELINES

1. In the event of failure or malfunction, return the product, properly packaged and postage prepaid, to Freud at the address listed below or to an authorized Freud tool service station. See back of price list for authorized repair dealers. You may also contact Freud at the numbers below for instructions on returns and technical advice.
2. All implied warranties for Freud's power tools (INCLUDING MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE) are limited to the period of five years from the purchase date. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

3. A warranty claim shall be limited to repair or replacement as stated in Freud's Limited Tooling Warranty and Freud's Limited Power Tool Warranty, and in no event shall Freud be liable for any other direct, indirect, incidental or consequential damages, costs or expenses. INCIDENTAL AND CONSEQUENTIAL DAMAGES ARE EXCLUDED UNDER ALL WARRANTIES. Some States do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.
4. Freud warranties give you specific legal rights, and you may also have other rights which vary from State to State.
5. Freud warranties shall not be deemed to have failed their essential purpose while Freud is willing to repair or replace defective products.
6. Freud assumes no liability for defects or damage caused by abuse or misuse of any product or unauthorized service of any product. The product must have been used for its recommended purpose and not modified by sharpening or other changes. Normal wear and tear is not covered under Freud warranties.
7. Any action for breach of warranty must be commenced within one year after the accrual of the cause of action.
8. All warranties are expressly limited to the original consumer purchaser. All warranties and other rights of the purchaser shall be governed under laws of the State of North Carolina.

To obtain service under Freud warranties, contact an authorized repair station or send your tool via UPS or Federal Express to:

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