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# Core Drill

Part No. 127-40

# Instruction Manual

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Ver. 5

**OFI Testing Equipment, Inc.**

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# ***Table of Contents***

Intro.....	2
Description.....	2
Components .....	2
Installation.....	3
Safety.....	3
Operation.....	4
Maintenance.....	5
Warranty and Return Policy .....	6

## ***Intro***

The OFITE Core Drill is used to cut smaller core specimens from whole core samples taken from the well bore. OFITE provides a variety of core drill bits, which allows the user to prepare core specimens varying from 0.5" to 2" in diameter. The floor-mounted press is easy to operate and utilizes a water cooling system to permit rapid and efficient cutting. It is a simple and reliable method of preparing core specimens for permeability and other tests frequently conducted in petroleum reservoir research facilities.

## ***Description***

Water circulates through a specially-designed water swivel. The water swivel directs the flow of water through the diamond-tipped core bit and onto the surface of the core. This provides cooling to the bit to prevent overheating. The core holding tray catches the water and a flexible hose feeds it to a drain.

## ***Components***

#127-40 OFITE Core Drill with Water Swivel  
#127-40-003-1 Diamond-Tipped Core bit, 1" Diameter × 6" Long

Optional:

#127-40-009 Water Swivel Repair Kit  
#127-40-002-1 Diamond-Tipped Core Bit, .5" Diameter × 6" Long  
#127-40-002-2 Diamond-Tipped Core Bit, .75" × 6" Long  
#127-40-005 Reservoir with Submersible Pump, Flexible Hoses, and Fittings, Corrosion Resistant, 230 Volt

#127-40-SP Spare Parts for Core Drill for One Year:

#127-40-003-1 Diamond-Tipped Core Bit, 1" Diameter, 6" Long, Qty: 2  
#127-40-004-1 Diamond-Tipped Core Bit, 1.5" Diameter, 6" Long, Qty: 2

## ***Installation***

1. Carefully remove the drill press from the shipping crate and place it upright near an electrical power source.
2. Connect the water swivel to a source of clean, fresh water. Connect the tray drain to an appropriate drain.
3. Plug the drill press into an appropriate power source.

The drill press is capable of using either 120-volt or 240-volt power. Refer to the manufacturer instruction manual for more information.

## ***Safety***

The Core Drill features a diamond-tipped core bit designed to cut through solid stone. Always secure the core sample in the provided vise and keep hands and arms away from the core bit during operation.

To prevent electric shock, always protect electrical power plugs and outlets from splashing or leaking water.

# Operation



Note

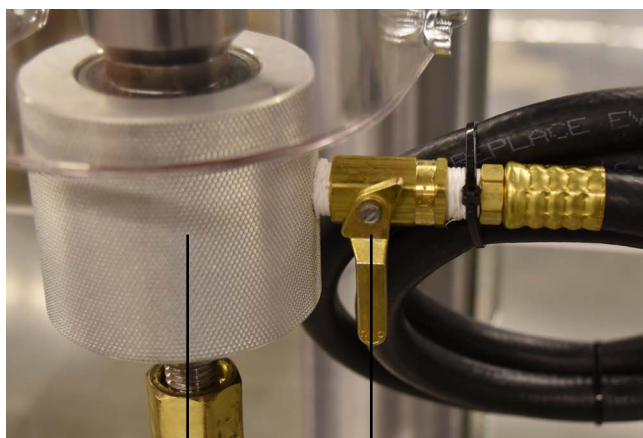
1. Place a layer of soft material (such as wood) on the tray. This will help prevent the bit from coming in contact with the metal tray and damaging the bit.

2. Place the sample on the tray.

When drilling into a cylindrical core sample, use the provided vise to secure it in place and prevent it from moving during drilling.

3. Raise the tray so that the end of the core bit is within an inch of the surface of the core sample.

4. Turn on the water supply. Make sure the valve on the water swivel is closed.



Water Swivel

Valve

5. Turn on the drill bit.
6. Slowly open the valve on the water swivel while lowering the bit onto the sample.



Tip

Use the valve on the water swivel to adjust the amount of water flowing onto the sample. During drilling, the water coming out of the hole should be milky white.



Important

**If you notice the core sample moving during drill, stop lowering the bit immediately. Raise the bit up off the sample, turn off the drill press, and close the water swivel valve. Readjust the vise to make sure it is gripping the sample firmly and try again.**

7. When drilling is complete, slowly raise the drill bit.
8. Turn the drill press off.
9. Turn off the water supply.

# Maintenance

Before performing any maintenance, make sure the drill press is turned off.

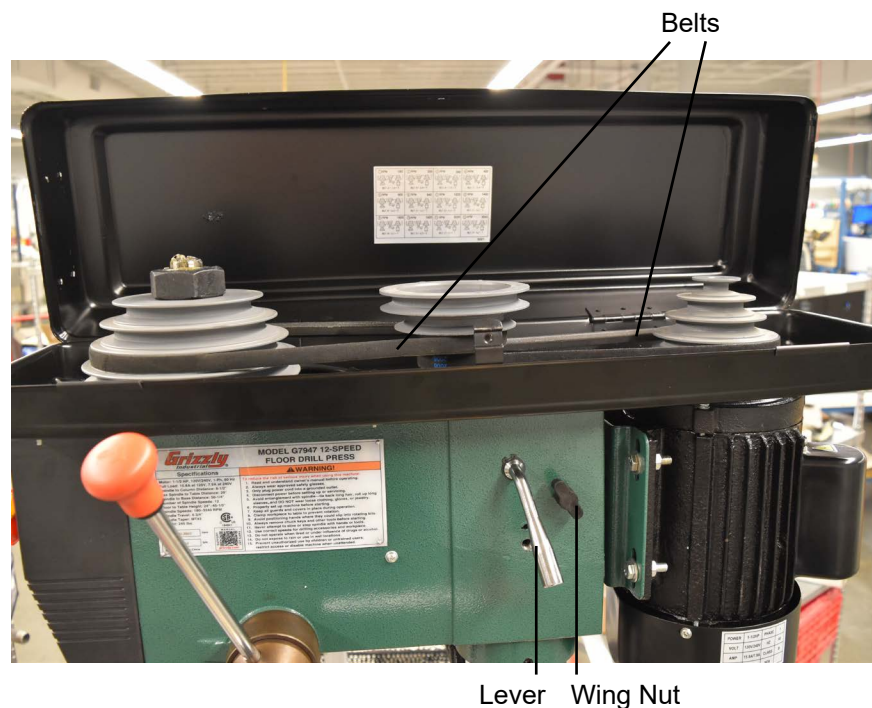
## Changing the Core Bit

1. Lower the core holding tray so that it is at least 6" below the tip of the core bit.
2. Turn the core bit counter-clockwise to loosen it.
3. Pull the core bit straight down to remove it from the water swivel.
4. Place the new core bit into the water swivel and turn it clockwise to tighten it in place.

## Changing Speeds

The recommended drilling speed for typical sandstone cores with a 1" - 1½" bit is 1,400 - 1,600 RPM.

1. To change the speed of the drill, open the top panel to expose the belt system.
2. Loosen the motor adjustment nut. This will loosen the motor.
3. Use the lever to move the motor inward and loosen the tension on the belts.
4. Adjust the belts for the desired speed. Refer to the diagram on the inside of the panel for the correct configuration.



# Warranty and Return Policy

## Warranty:

OFI Testing Equipment, Inc. (OFITE) warrants that the products shall be free from liens and defects in title, and shall conform in all respects to the terms of the sales order and the specifications applicable to the products. All products shall be furnished subject to OFITE's standard manufacturing variations and practices. Unless the warranty period is otherwise extended in writing, the following warranty shall apply: if, at any time prior to twelve (12) months from the date of invoice, the products, or any part thereof, do not conform to these warranties or to the specifications applicable thereto, and OFITE is so notified in writing upon discovery, OFITE shall promptly repair or replace the defective products. Notwithstanding the foregoing, OFITE's warranty obligations shall not extend to any use by the buyer of the products in conditions more severe than OFITE's recommendations, nor to any defects which were visually observable by the buyer but which are not promptly brought to OFITE's attention.

In the event that the buyer has purchased installation and commissioning services on applicable products, the above warranty shall extend for an additional period of twelve (12) months from the date of the original warranty expiration for such products.

In the event that OFITE is requested to provide customized research and development for the buyer, OFITE shall use its best efforts but makes no guarantees to the buyer that any products will be provided.

OFITE makes no other warranties or guarantees to the buyer, either express or implied, and the warranties provided in this clause shall be exclusive of any other warranties including ANY IMPLIED OR STATUTORY WARRANTIES OF FITNESS FOR PURPOSE, MERCHANTABILITY, AND OTHER STATUTORY REMEDIES WHICH ARE WAIVED.

This limited warranty does not cover any losses or damages that occur as a result of:

- Improper installation or maintenance of the products
- Misuse
- Neglect
- Adjustment by non-authorized sources
- Improper environment
- Excessive or inadequate heating or air conditioning or electrical power failures, surges, or other irregularities
- Equipment, products, or material not manufactured by OFITE
- Firmware or hardware that have been modified or altered by a third party
- Consumable parts (bearings, accessories, etc.)

## Returns and Repairs:

Items being returned must be carefully packaged to prevent damage in shipment and insured against possible damage or loss. OFITE will not be responsible for equipment damaged due to insufficient packaging.

Any non-defective items returned to OFITE within ninety (90) days of invoice are subject to a 15% restocking fee. Items returned must be received by OFITE in original condition for it to be accepted. Reagents and special order items will not be accepted for return or refund.

OFITE employs experienced personnel to service and repair equipment manufactured by us, as well as other companies. To help expedite the repair process, please include a repair form with all equipment sent to OFITE for repair. Be sure to include your name, company name, phone number, email address, detailed description of work to be done, purchase order number, and a shipping address for returning the equipment. All repairs performed as "repair as needed" are subject to the ninety (90) day limited warranty. All "Certified Repairs" are subject to the twelve (12) month limited warranty.

Returns and potential warranty repairs require a Return Material Authorization (RMA) number. An RMA form is available from your sales or service representative.

Please ship all equipment (with the RMA number for returns or warranty repairs) to the following address:

OFI Testing Equipment, Inc.  
Attn: Repair Department  
11302 Steeplecrest Dr.  
Houston, TX 77065  
USA

OFITE also offers competitive service contracts for repairing and/or maintaining your lab equipment, including equipment from other manufacturers. For more information about our technical support and repair services, please contact [techservice@ofite.com](mailto:techservice@ofite.com).