Double Insulated Portable Electric Drill

Instruction manual



³⁄8" Drill

IMPORTANT

Please make certain that the person who is to use this equipment carefully reads and understands these instructions before starting operations.

The Model and Serial No. plate is located on the main housing of the tool. Record these numbers in the spaces below and retain for future reference.

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Model No.

Туре ____

Serial No.

Part No. 692502-591



IMPORTANT SAFETY INSTRUCTIONS

WARNING: When using electric tools, basic safety precautions should always be followed to reduce the risk of fire, electric shock and personal injury, including the following:

READ AND FOLLOW ALL INSTRUCTIONS.

There are certain applications for which this tool was designed. Porter-Cable strongly recommends that this tool NOT be modified and/or used for any application other than for which it was designed. If you have any questions relative to its application DO NOT use the tool until you have written Porter-Cable and we have advised you.

> Product Manager Porter-Cable Corporation 4825 Highway 45 North P.O. Box 2468 Jackson, TN 38302-2468

POLARIZED PLUGS: To reduce the risk of electric shock, this equipment has a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not change the plug in any way.

1. KEEP WORK AREA CLEAN. Cluttered areas and benches invite injuries.

2. AVOID DANGEROUS ENVIRONMENT. Don't expose power tools to rain. Don't use power tools in damp or wet locations. Keep area well lit. Avoid chemical or corrosive environment. Do not use tool in presence of flammable liquids or gases.

3. GUARD AGAINST ELECTRIC SHOCK. Prevent body contact with grounded surfaces. For example: pipes, radiators, ranges, refrigerator enclosures.

4. KEEP CHILDREN AWAY. Do not let visitors contact tool or extension cord. All visitors should be kept away from work area.

5. STORE IDLE TOOLS. When not in use, tools should be stored in dry, and high or locked-up place – out of reach of children.

6. DON'T FORCE TOOL. It will do the job better and safer at the rate for which it was intended.

7. USE RIGHT TOOL. Don't force small tool or attachment to do the job of a heavy duty tool. Don't use tool for purpose not intended – for example – do not use a circular saw for cutting tree limbs or logs.

8. DRESS PROPERLY. Do not wear loose clothing or jewelry. Loose clothing, draw strings and jewelry can be caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Wear protective hair covering to contain long hair.

9. USE SAFETY GLASSES. Wear safety glasses or goggles while operating power tools. Also face or dust mask if operation creates dust. All persons in the area where power tools are being operated should also wear safety glasses and face or dust mask.

10. DON'T ABUSE CORD. Never carry tool by cord or yank it to disconnect from receptacle. Keep cord from heat, oil, and sharp edges. Have damaged or worn power cord and strain reliever replaced immediately. DO NOT ATTEMPT TO REPAIR POWER CORD.

11. SECURE WORK. Use clamps or a vise to hold work. It's safer than using your hand and it frees both hands to operate tool.

12. DON'T OVERREACH. Keep proper footing and balance at all times.

13. MAINTAIN TOOLS WITH CARE. Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and if damaged, have repaired by authorized service facility. Inspect extension cords periodically and replace if damaged. Have all worn, broken or lost parts replaced immediately. Keep handles dry, clean and free from oil and grease.

14. DISCONNECT TOOLS when not in use, before servicing, and when changing accessories such as blades, bits, cutters, etc.

15. REMOVE ADJUSTING KEYS AND WRENCHES. Form habit of checking to see that keys and adjusting wrenches are removed from the tool before turning it on.

16. AVOID UNINTENTIONAL STARTING. Do not carry a plugged-in tool with finger on switch. Be sure switch is off when plugging in. Keep hands, body and clothing clear of blades, bits, cutters, etc. when plugging in the tool.

17. OUTDOOR USE EXTENSION CORDS. When tool is used outdoors, use only extension cords marked "Suitable for use with outdoor appliances - store indoors when not in use."

18. STAY ALERT. Watch what you are doing. Use common sense. Do not operate tool when you are tired or while under the influence of medication, alcohol or drugs.

19. CHECK DAMAGED PARTS. Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorized service center unless otherwise indicated elsewhere in this instruction manual. Have defective switches replaced by authorized service center. Do not use tool if switch does not turn it on and off.

20. WEAR EAR PROTECTION to safeguard against possible hearing loss.

SAVE THESE INSTRUCTIONS

ADDITIONAL SAFETY RULES FOR PORTABLE DRILLS

1. ALWAYS HOLD DRILL by the handle ONLY to prevent accidental electrical shock resulting from cutting a live wire when drilling into a wall or other blind area.

2. DO NOT USE BITS LARGER than those recommended. Large bits may overload the drill and damage the motor and gears.

3. USE ONLY the chuck key to tighten or loosen the chuck.

4. VERIFY DIRECTION OF ROTATION of drill is correct for operation to be performed before starting tool.

5. NEVER HOLD WORK in your hand, lap, or against other parts of your body when drilling.

6. DO NOT use drill as a router or try to elongate or enlarge holes by twisting the drill. Drill bits may break and cause injury.

7. SOME WOOD CONTAINS PRESERVATIVES WHICH CAN BE TOXIC. Take extra care to prevent inhalation and skin contact when working with these materials. Request, and follow, any safety information available from your material supplier.

REPLACEMENT PARTS

When servicing use only identical replacement parts.

MOTOR

Many Porter-Cable tools will operate on either D.C., or single phase 25 to 60 cycle A.C. current and voltage within plus or minus 5 percent of that shown on the specification plate on the tool. Several models, however, are designed for A.C. current only. Refer to the specification plate on your tool for proper voltage and current rating.

CAUTION: Do not operate your tool on a current on which the voltage is not within correct limits. Do not operate tools rated A.C. only on D.C. current. To do so may seriously damage the tool.

EXTENTION CORD SELECTION

If an extension cord is used, make sure the conductor size is large enough to prevent excessive voltage drop which will cause loss of power and possible motor damage. A table of recommended extension cord sizes will be found below. This table is based on limiting line voltage drop to 5 volts (10 volts for 230 volts) at 150% of rated amperes.

If an extension cord is to be used outdoors it must be marked with the suffix W-A following the cord type designation. For example – SJTW-A to indicate it is acceptable for outdoor use.

Length of Cord in Feet										
	115V	25 Ft.	50 Ft.	100 Ft.	150 Ft.	200 Ft.	250 Ft.	300 Ft.	400 Ft.	500 Ft.
	230V	50 Ft.	100 Ft.	200 Ft.	300 Ft.	400 Ft.	500 Ft.	600 Ft.	800 Ft.	1000 Ft.
	0-2	18	18	18	16	16	14	14	12	12
Rating	2-3	18	18	16	14	14	12	12	10	10
	3-4	18	18	16	14	12	12	10	10	8
	4-5	18	18	14	12	12	10	10	8	8
ere	5-6	18	16	14	12	10	10	8	8	6
Ampere	6-8	18	16	12	10	10	8	6	6	6
	8-10	18	14	12	10	8	8	6	6	4
ate	10-12	16	14	10	8	8	6	6	4	4
de	12-14	16	12	10	8	6	6	6	4	2
Nameplate	14-16	16	12	10	8	6	6	4	4	2
Ž	16-18	14	12	8	8	6	4	4	2	2
	18-20	14	12	8	6	6	4	4	2	2

RECOMMENDED EXTENSION CORD SIZES FOR USE WITH PORTABLE ELECTRIC TOOLS

OPERATING INSTRUCTIONS

FOREWORD

Porter-Cable drills are designed to drill holes of various sizes in wood and metal as indicated in the following chart:

Size of Drill	Type of Bit	Max. Dia. Hole	Material
	Twist Drill	³ ⁄8"	Metal
³ ⁄8"	Spade Bit	³ ⁄4"	Wood
	Hole Saw	1 ³ ⁄16"	Wood



Fig. 1

INSTALLING AND REMOVING DRILL BIT

1. **CAUTION:** MAKE SURE DRILL IS DISCONNECTED FROM POWER SOURCE.

2. The three-jaw chuck is designed for self-centering of the drill bit. Open jaws large enough by turning outer sleeve counterclockwise, when viewing the chuck from the bit end so that the bit shank can be inserted.

3. Clean and insert smooth end of drill bit as far as it will go into the chuck, or up to the flutes for small bits.

4. While holding the bit with one hand, turn outer sleeve clockwise until bit is gripped in the chuck.

5. Tighten chuck – insert chuck key into each of 3 keyholes in chuck body (Fig. 1) in succession and tighten securely by turning key clockwise.

CAUTION: BE SURE CHUCK KEY IS REMOVED BEFORE STARTING TOOL.

6. To remove bit, reverse foregoing procedure.

TO START AND STOP DRILL

1. Make sure power circuit voltage is the same as that shown on the specification plate of the drill.

2. Connect drill to power circuit.



3. Squeeze trigger switch (A) Fig. 2, to start motor. Release trigger to stop motor. On variable speed models, as the trigger switch is squeezed, the drill speed increases.

REVERSING SWITCH

Your drill will operate in either the forward direction (clockwise rotation) for dilling holes, or the reverse direction (counterclockwise rotation) for releasing jammed drill bits. For counterclockwise rotation move the reversing switch lever (B) Fig. 3, in the direction indicated by the arrow next to the word "reverse", or in the opposite direction for clockwise rotation.





HOW TO HOLD THE DRILL

WARNING: The front end of the drill may be made live if the tool drills into live wiring in the wall. TO PREVENT ACCIDENTAL ELECTRICAL SHOCK, DRILL MUST BE HELD AS SHOWN IN FIG. 4.



Fig. 4

HOW TO USE THE DRILL

GENERAL DRILLING

1. Be sure drill is securely gripped in chuck. (See INSTALLING AND REMOVING DRILL BIT).

2. Set reversing switch for clockwise rotation.

3. Make sure work is held securely in vise or clamped in place prior to starting drill operation.

CAUTION: Loose work may spin and cause bodily injury.

4. Locate exact center for hole to be drilled and using a center punch, make a small dent in work.

5. Place tip of drill bit in dent made by center punch, hold drill square with work, and start the motor.

6. Apply steady, even pressure to keep drill bit cutting. Too little pressure will keep the bit from cutting and dull the edges due to excessive friction created by sliding over the surface.

CAUTION: Too much pressure may cause the bit to break or overheat resulting in bodily injury or damaged drill bits.

CAUTION: BE ALERT and brace yourself against the twisting action of the drill.

7. If drill stalls or becomes jammed in the hole, release trigger immediately, removing drill bit from work and determine cause of stalling or jamming. DO NOT SQUEEZE TRIGGER ON AND OFF IN AN ATTEMPT TO FREE A STALLED OR JAMMED DRILL – THIS WILL DAMAGE THE MOTOR. The direction of rotation may be reversed to help free a jammed bit. Be sure direction of rotation is RESET before attempting to continue drilling.

8. Reduce the pressure on the drill just before the bit cuts through the work to avoid splintering wood or stalling in metal.

9. When bit has completely penetrated work and is spinning freely, withdraw it from the work while the motor is still running, then turn off drill.

DRILLING WOOD

In addition to the instructions listed under GENERAL DRILLING, the following also apply:

1. When using twist drills in wood, they should be withdrawn from the hole frequently to clear chips built up in flutes to avoid overheating and burning work.

2. If a backing block is used to keep back of work from splintering, it should be clamped securely in place. If a backing block is not used with spade bits or hole saws, ease up pressure as soon as bit point breaks through work, and complete the hole from the opposite side.

DRILLING METAL

In addition to the instructions listed under GENERAL DRILLING, the following also apply:

1. Use only good quality sharp high speed steel twist bits when drilling metal.

2. With variable speed drills, start drilling with slow speed and gradually increase speed as drill cuts. The harder the material, the slower the speed required. The softer the material, the faster the speed.

3. When drilling a large hold, it is easier to first drill a smaller hole ($\frac{1}{2}$ dia. of the required hole) and then enlarge it to the required size.

4. The use of a lubricant, such as oil, on the drill point helps keep the bit cool, increases drilling action and prolongs drill bit life.

MAINTENANCE

KEEP TOOL CLEAN

Periodically blow out all air passages with compressed air. Remove build up of grime resulting from working with green or sappy wood. All plastic parts should be cleaned with a soft damp cloth. NEVER use solvents to clean plastic parts which could possibly dissolve or otherwise damage the material.

CAUTION: Wear safety glasses while using compressed air.

FAILURE TO START

Should your tool fail to start, check to make sure the prongs on the cord plug are making good contact in the outlet. Also, check for blown fuses or open circuit breakers in the line.

BRUSH INSPECTION AND LUBRICATION

CAUTION: For your continued safety and electrical protection, brush inspection and replacement on this tool should ONLY be performed by an AUTHO-RIZED PORTER-CABLE SERVICE STATION or a PORTER-CABLE SERVICE CENTER.

At approximately 100 hours of use, take or send your tool to your nearest Authoirzed Porter-Cable Service Station to be thoroughly cleaned and inspected; worn parts replaced, when necessary; relubricated with fresh lubricant, if required; reassembled with new brushes; and performance tested.

Any loss of power before the above maintenance check may indicate the need for immediate servicing of your tool. DO NOT CONTINUE TO OPERATE TOOL UNDER THIS CONDITION. If proper operating voltage is present, return your tool to the Service Station for immediate service.

SERVICE AND REPAIRS

All quality tools will eventually require servicing or replacement of parts due to wear from normal use. These operations, including brush inspection and replacement, should ONLY be performed by either an AUTHORIZED PORTER-CABLE SERVICE STATION or a PORTER-CABLE SERVICE CENTER. All repairs made by these agencies are fully guaranteed against defective material and workmanship. We cannot guarantee repairs made or attempted by anyone other than these agencies.

Should you have any questions about your tool, feel free to write us at any time. In any communications, please give all information shown on the nameplate of your tool (model number, type, serial number, etc.).

ACCESSORIES

The testing of these tools has been accomplished with the following accessories. For safest operation, it is recommended that only these accessories be used with this product.

WARNING: Since accessories other than those listed have not been tested with this product, use of such accessories could be hazardous.

3/8" MODEL -	TWIST DRILL BITS	3/8" or less in diameter
	SPADE BITS	3⁄4" or less in diameter
	HOLE SAWS	1^{3}_{16} " or less in diameter

DECIMAL EQUIVALENTS OF WIRE, LETTER AND FRACTIONAL SIZE DRILLS

	OF WINE, LE	TIER AND F		and the second	
Drill Size No.	Decimal	Drill Size No.	Decimal	Drill Size No.	Decimal
80	.0135	1/8	.1250	5/16	.3125
79	.0145	30	.1285	0	.3160
1/64	.0156	29	.1360	P	.3230
78	.0160	28	.1405	21/64	.3281
77	.0180	9/64	.1406	Q	.3320
76	.0200	27	.1440	R	.3390
75	.0210	26	.1470	11/32	.3437
74	.0225	25	.1495	S	.3480
73	.0240	24	.1520	T star	.3580
72	.0250	23	.1540	23/64	.3594
71	.0260	5/32	.1562	U	.3680
70	.0280	22	.1570	3/8	.3750
69	.0292	21	.1590	V	.3770
68	.0310	20	.1610	W .	.3860
1/32	.0312	19	.1660	25/64	.3906
67	.0320	18	.1695	X	.3970
66	.0330	11/64	.1719	Y	.4040
65	.0350	17	.1730	13/32	.4062
64	.0360	16	.1770	Z	.4130
63	.0370	15	.1800	27/64	.4219
62	.0380	14	.1820	7/16	.4375
61	.0390	13	.1850	29/64	.4531
60	.0400	3/16	.1875	15/32	.4687
59	.0410	12	.1890	31/64	.4844
58	.0420	11	.1910	1/2	.5000
57	.0430	10	.1935	33/64	.5156
56	.0465	9	.1960	17/32	.5312
3/64	.0469	8	.1990	35/64	.5469
55	.0520	7	.2010	9/16	.5625
54	.0550	13/64	.2031	37/64	.5781
53	.0595	6	.2040	19/32	.5937
1/16	.0625	5	.2055	39/64	.6094
52	.0635	4	.2090	5/8	.6250
51	.0670	3	.2130	41/64	.6406
50	.0700	7/32	.2187	21/32	.6562
49	.0730	2	.2210	43/64	.6719
48	.0760	1	.2280	11/16	.6875
5/64	.0781	А	.2340	45/64	.7031
47	.0785	15/64	.2344	23/32	.7187
46	.0810	В	.2380	47/64	.7344
45	.0820	С	.2420	3/4	.7500
44	.0860	D	.2460	49/64	.7656
43	.0890	E 1/4	.2500	25/32	.7812
42	.0935	F	.2570	51/64	.7969
3/32	.0937	G	.2610	13/16	.8125
41	.0960	17/64	.2656	53/64	.8281
40	.0980	Н	.2660	27/32	.8437
39	.0995	I	.2720	55/64	.8594
38	.1015	J	.2770	7/8	.8750
37	.1040	К	.2810	57/64	.8906
36	.1065	9/32	.2812	29/32	.9062
7/64	.1094	L	.2900	59/64	.9219
35	.1100	M	.2950	15/16	.9375
34	.1110	19/64	.2969	61/64	.9531
33	.1130	N	.3020	31/32	.9687
32	.1160			63/64	.9844
	1200			1	1.0000

PORTER-CABLE LIMITED ONE YEAR WARRANTY

Porter-Cable warrants its Professional Power Tools for a period of one year from the date of original purchase. We will repair or replace at our option, any part or parts of the product and accessories covered under this warranty which, after examination, proves to be defective in workmanship or material during the warranty period. For repair or replacement return the complete tool or accessory, transportation prepaid, to your nearest Porter-Cable Service Center or Authorized Service Station as listed under "TOOLS-ELEC-TRIC" in the Yellow Pages of your telephone directory. Proof of purchase may be required. This warranty does not apply to repair or replacement required due to misuse, abuse, normal wear and tear or repairs attempted or made by other than our Service Centers or Authorized Service Stations.

ANY IMPLIED WARRANTY, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WILL LAST ONLY FOR ONE (1) YEAR FROM THE DATE OF PURCHASE.

To obtain information on warranty performance please write to: PORTER-CABLE CORPORATION, 4825 Highway 45 North, P.O. Box 2468, Jackson, Tennessee 38302-2468; Attention: Product Service. THE FOREGOING OBLIGATION IS PORTER-CABLE'S SOLE LIABILITY UNDER THIS OR ANY IMPLIED WARRANTY AND UNDER NO CIRCUMSTANCES SHALL PORTER-CABLE BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES. Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights and you may also have other legal rights which vary from state to state.

PORTER-CABLE SERVICE CENTERS

Parts and Repair Service for Porter-Cable Power Tools are Available at These Locations

CALIFORNIA

City of Industry 91745 (Los Angeles) 1305 John Reed Court Phone: (818) 333-3566 Fax: (818) 330-5900

San Leandro 94577 (Oakland) 3039 Teagarden Street Phone: (510) 357-9762 Fax: (510) 357-7939

COLORADO

Denver 80204 2561 West 8th Avenue Phone: (303) 892-6113 Fax: (303) 595-0358

FLORIDA Hialeah 33014 (Miami) 16373-75 NW 57th Ave. Phone: (305) 624-2523

Fax: (305) 628-2654 Tampa 33609 4538 W. Kennedy Boulevard Phone: (813) 877-9585 Fax: (813) 289-7948

GEORGIA Morrow 30260 (Atlanta) 1286 Citizens Parkway Suite C

Suite C Phone: (404) 961-0900 Fax: (404) 961-8624 ILLINOIS Addison 60101 (Chicago) 311 Laura Drive Phone: (708) 628-6100 Fax: (708) 628-0023

MARYLAND Baltimore 21227 7397 Washington Blvd. Suite #102 Phone: (410) 799-9394 Fax: (410) 799-9398

MASSACHUSETTS Franklin 02038 (Boston) Franklin Industrial Park 101E Constitution Blvd. Phone: (508) 520-8802 Fax: (508) 528-8089

MICHIGAN Troy 48083 (Detroit) 1355 Combernere Phone: (810) 597-5000 Fax: (313) 597-5004

MINNESOTA Minneapolis 55429 4315 68th Avenue North Phone: (612) 561-9080 Fax: (612) 561-0653

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North Kansas City 64116 1141 Swift Avenue P.O. Box 12393 Phone: (816) 221-2070 Fax: (816) 221-2897 St. Louis 63119

7574 Watson Road Phone: (314) 968-8950 Fax: (314) 968-2790

Flushing 11365-1595 (N.Y.C.) 175-25 Horace Harding Expwy.

Phone: (718) 225-2040 Fax: (718) 423-9619 NORTH CAROLINA Charlotte 28209

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OHIO Columbus 43214 4560 Indianola Avenue Phone: (614) 263-0929 Fax: (614) 263-1238 Cleveland 44125

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Fax: (216) 447-3097

PENNSYLVANIA Philadelphia 19154 12285 McNulty Road Phone: (215) 677-7800

Fax: (215) 677-9908 TEXAS Dallas 75220 10720 N. Stemmons Freeway

Phone: (214) 353-2996 Fax: (214) 350-3943 Houston 77055 West 10 Business Center 1008 Wirt Road, Suite 120 Phone: (713) 682-0334

Fax: (713) 682-4867 WASHINGTON Renton 98055 (Seattle)

268 Southwest 43rd Street Phone: (206) 251-6680 Fax: (206) 251-9337

Authorized Service Stations are located in all large cities, For the one nearest you, see the classified section in your phone book (under "Tools-Electric").

DELTA SERVICE CENTRES

ALBERTA #10 6320 11th Street S.E. Calgary, Alberta T2H 2L7 Phone: (403) 255-3530 Fax: (403) 258-0767

BRITISH COLUMBIA 8520 Baxter Place Burnaby, B.C. V5A 4T8 Phone: (604) 420-0102 Fax: (604) 420-3522 MANITOBA 1699 Dublin Avenue Winnipeg, Manitoba R3H 0H2 Phone: (204) 633-9259 Fax: (204) 632-1976 ONTARIO

644 Imperial Road Guelph, Ontario N1H 6M7 Phone: (519) 836-2840 Fax: (519) 836-9352 40 West Pearce St. Unit #2 Richmond Hill, Ontario L4B 1E3 Phone: (416) 771-6111 Fax: (416) 771-6831

Fax: (416) 771-6831 QUÉBEC 523 Rue Deslauriers St. Laurent, (Montréal) P.Q. H4N 1W2 Phone: (514) 336-8772

Fax: (514) 336-3505

Suite 202 2022 Rue Lavoisier Ste. Foy, Québec, Québec G1N 4L5 Phone: (418) 681-7305

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G1N 4L5 Phone: (418) 681-7305 Fax: (418) 681-1695

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