PRODUCT KNOWLEDGE TRAINING

Learn the common features and uses of each product.

PK DESCRIPTIONS

1. Doorbell

• Some models are battery operated and are wireless. Wireless are easiest to install.
• If not battery operated, they require AC step-down transformers to reduce household voltage to the proper operating voltage.
• Standard doorbells operate at 10V or 16V.

2. Lamp Holder)

• Used to hold light sockets where design is not a concern. Often used in garages or basements, or as a temporary fixture.
• One type has a pull chain to turn it on. The other, a keyless lampholder, does not have a chain. Another type has a socket, two receptacles and a pull chain that turns off the lamp but not the receptacles.
• Typically is a round porcelain fixture with a socket with prewired leads ready for connecting to a circuit. It also has screw holes for mounting it to a box.
• Another type is the Pigtail. It is merely a socket with wire leads and without a fixture. It is also used for temporary lighting or for testing.

3. Circuit Tester

• Also known as a test lamp, a voltage tester, a neon tester or a test light.
• Consists of two insulated wire probes and a small neon light. Designs vary widely.
• Used to determine if there is electricity running through a circuit or if it is properly grounded.
• Recommend as a basic tool for every toolbox.

4. Continuity Tester

• Used to determine if a wire or circuit can carry electricity from one end to the other.
• Generally consists of two probes (one of them being an alligator clip) and an indicator light powered by a battery.
• Can also be used to test cartridge fuses.

5. Receptacle Analyzer

• Analyzes a receptacle to determine whether or not the wiring is sound, if it is grounded and if the receptacle is receiving power.

6. Fish Tape

• Also known as a snake.
• Used for pulling the electrical cable or wire through the wall or through electrical conduit.
• Often comes in lengths of 25 or 50 feet, 1/2" or 3/4" wide with a hook on one end. Also comes coiled in a case.
• Also used to probe wall cavities to determine the best path for routing a cable.

7. Electrical Tape

• Most common type is plastic, usually 3/4" wide.
• Handy for many uses. In electrical work, it is used to cover bare wires after they have been exposed.

8. Wire Nuts

• Used to connect the bare ends of two wires inside a box. At least two are required at every circuit connection.

• Available in a variety of sizes and colours.
• Connects wires with a twisting action.

9. Fuse Puller

• Used to remove cartridge-type fuses.

10. Insulated Staples

• Used to mount cable to studs or other framing members.
• There are different sizes, so make sure you are recommending the correct one.

NOTE: ALWAYS CONSULT YOUR PROVINCIAL AND LOCAL CODES

OTHER TRAINING TIPS

Designed to give you confi - dence on the salesfloor!
This section is for retail skills training specific to this core product category.

FAQs

Q: What do I need to buy for a basic electrical tool kit?
A: We recommend the following:
Needle-nose pliers
Insulated screwdriver
Combination tool
Utility knife
Keyhole saw
Continuity tester
Neon circuit tester
Fish tape
Electrical tape
Wire connectors

Q: How do I test a switch to see if it is working?
A: Use a continuity tester. First, shut off the electricity going to the switch and remove it. Touch the tester leads to both of the switch's terminals. If the switch is working properly, the tester will light up when the switch is on and go out when the switch is turned off.

Q: What is the easiest way to test an outlet?
A: Use a receptacle analyzer. Leave the power on, but make sure nothing is plugged into any outlet on the circuit, and turn off all switches on the circuit. Now, plug the analyzer into the outlet. A series of lights will tell you if the outlet is wired correctly and working.

Q: My doorbell doesn't work. Do you know what's wrong with it?
A: There are three components to the doorbell; the button, the transformer and the bell itself. First, look for any loose wires throughout the system. If all the wires are connected, test the doorbell button by removing it and touching the two wires together. If this makes the doorbell work, you have a bad button that is easily replaced. It the doorbell still doesn't work, check the transformer. You will have to find it. It might be in the attic, but it can be anywhere. You just need to trace the wire. If it makes a humming sound when the button is pushed, your problem is probably the chime. If it doesn't make a sound, change the transformer to see if that's the problem.

Q: How do I use a wire nut?
A: Strip off about 1/2" of insulation from the wires you want to connect. Hold these wires next to each other and twist clockwise. Screw on the wire connector using only your hand strength. Make sure no bare wire is exposed.

UPSELLING

- A toolbox or divided plastic container will help keep wire connectors and staples organized.
- A test light is a must have for any toolbox. But continuity testers are available for the more ambitious DIYer. In addition, pros may be interested in new designs of more sophisticated testers.

ADD-ON SALES

- Electrician's Pliers
- Wire Strippers
- Tool Box
- Organizer
- Batteries

SELLING TIPS

If your customer is a do-it-yourselfer and is proposing a project that involves installing a new switch or receptacle, make sure he has a complete project package before he leaves the store. Here is a brief checklist of some of the essentials.

- Cable. Are they buying enough cable to reach the distance of the circuit? Allow at least 10-percent excess to accommodate bends. Also make sure the wire will handle the amperage the customer is expecting. Lower resistance wire may be more expensive initially, but will save money by reducing power loss and will increase safety.
- Boxes. Is there a box for every outlet, fixture, splice or other break in the cable?
- Wire Connectors. Every cable splice will need at least two connectors. Sockets and switches do not require connectors since cable is mounted directly to the device.
- Insulated Staples. Use these to mount the cable to the studs. Make sure they are the right size for the cable.
- Electrical Tape. Use for wrapping splices or taping any electrical wires.
- Tools. Essentials include wire cutters, wire stripper, screwdriver and tester.
- Switches, Receptacles or Fixtures. Does the customer have the correct type of fixture or other device that he wants to install?
- Wall Plates. Does the customer have enough wall plates and are they the right configuration for the type of receptacle or fixture he is installing?

MERCHANDISING

- Separate doorbells by battery-operated and electric-operated types.
- Use display boards that have the various doorbell models out for demonstration.

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CANADIAN IMPERIAL AND METRIC MEASUREMENTS

Canadians generally use a mixture of measurement units.

Liquid volumes are typically based on the metric (SI) system. Temperatures and distances are commonly specified using metric terminology. Weights, depending on the type of product, use either the metric or Canadian Imperial system. Lengths and dimensions of construction products, particularly for residential use, are generally in Canadian Imperial measurements. And many of the products we use are manufactured in U.S. measurements.

Canadian building codes are written using metric units. But the construction trades, particularly those in residential construction, typically use the Canadian Imperial system. This mixture of measurement systems frequently results in many product manufacturers providing information using both systems. Unfortunately, the approaches used in presenting the "converted" measurements are not consistent. Some information is based on "exact" conversion measurements, whereas other information is based on "rounded" measurements.

From your perspective and in communicating with your customer, it is important to recognize that in some instances the exact conversion is necessary and in other instances a more "rounded" conversion is appropriate.

CONVERSION FACTORS

1 inch (in.)	=	25.4 mm	32 fluid ounces - US (oz.)	=	1 US qt.
1 foot (ft.)	=	0.3048 m	40 fluid ounces - Canadian (oz.)	=	1 Canadian qt.
1 yard (yd.)	=	0.9144 m			
1 mile (mi.)	=	1.609 km	1 fluid ounce - US (oz.)	=	29.6 mL
			1 fluid ounce - Canadian (oz.)	=	22.8 mL
1 ounce - avoirdupois (oz.)	=	28.35 g	1 cup - US (cup)	=	236mL
1 pound - avoirdupois (lb.)	=	0.454 kg	1 cup - Canadian (cup)	=	227mL
			1 quart - US (qt)	=	0.946 L
1 pound per square inch (psi)	=	6.895 kN/m^2	1 quart - Canadian (qt)	=	1.136 L
1 pound per square foot (psf)	=	0.04788 kPa	1 gallon - US (gal.)	=	3.785 L
			1 gallon - Canadian (gal.)	=	4.546 L

Celsius temperature = (Fahrenheit temperature - 32) / 1.8

SOME TYPICAL MEASUREMENTS FOR HARDWARE AND FASTENER PRODUCTS

("rounded" conversions)

Length		Length		Length		Length		Weight	
in.	mm	in.	mm	in.	m	ft.	m	lbs	kg
1/32	0.8	1 3/8	35	48	1.2	7.5	2.3	1	0.45
1/8	3.2	1 1/2	38	60	1.5	10	3.0	10	4.5
1/4	6.4	2	51	72	1.8	12	3.7	50	22.7
3/8	9.5	4	102	84	2.1	18	5.5	100	45.4
1/2	12.7	12	305	90	2.3	25	7.6	750	340
5/8	15.9	18	457	120	3.0	50	15.2	1250	567
3/4	19.1	24	610	156	4.0	75	22.9	1900	862
7/8	22.2	30	762	216	5.5	100	30.5	2650	1202
1	25.4	36	914	312	7.9			5000	2268

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