User Instruction Manual

ANGLE GRINDER

DL-JM100-E2 DL-JM115-E2 DL-JM125-E1

The picture is for reference only

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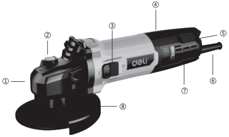
1 Schematic Diagram of the Angle Grinder



This schematic diagram is for reference only
The appearance of the machine varies for different models, and the actual product shall prevail!

Serial No.	Name	Serial No.	Name
①	Head casing	⑤	Rear switch
②	Self-locking cap	⑥	Cable sheath
③	Side switch	⑦	Rear cover
④	Carbon brush	⑧	Guard

2 General safety warnings for power tool

⚠ Warning

Read all warnings and instructions. Failure to follow the following warnings and instructions may result in electric shock, fire and/or serious injury. Save all warnings and instructions for inquiry.
In the following warnings the term "power tool" refers to mains powered (corded) power tool or battery powered (cordless) power tool.

Workplace Safety

1. Keep the workplace clean and bright. Chaotic and dark sites can cause accidents.
2. Do not operate power tool in an explosive environment, such as one with flammable liquid, gas or dust. Sparks from power tool can ignite dust or gas.
3. Keep children and bystanders away when operating power tool. Lack of concentration can make the operator lose control of the tool.

Electrical safety

1. Power tool plug must match the socket. The plug should never be modified in any way. Power tool to be grounded should not use any conversion plugs. Unmodified plugs and matching sockets will reduce the risk of electric shock.
2. Keep the human body away from grounded surfaces, such as pipes, heat sinks, and refrigerators. There is an increased risk of electric shock if the human body earthed.
3. Power tool must not be exposed to rain or damp environment. Water entering the power tool will increase the risk of electric shock.
4. Do not misuse electrical wires. Never use electrical wires to carry, pull or unplug power tool. Keep the wire away from heat, oil, sharp edges or moving parts. Damaged or tangled wires will increase the risk of electric shock.
5. When using power tool outdoors, use an extension cord suitable for outdoor use, which will reduce the risk of electric shock.
6. If it is not possible to avoid operating power tool in a humid environment, use a power supply with Residual Current device (RCD) protection. The use of RCD can reduce the risk of electric shock.

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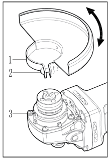
4. Always use an undamaged grinding wheel flange of the appropriate size and shape for the selected grinding wheel. The possibility of grinding wheel fracture can be reduced by supporting the grinding wheel with a suitable grinding wheel flange. The flange of the cutting wheel can be different from the flange of the grinding wheel.
5. It is not allowed to use worn grinding wheels left over from large-sized power tools. The grinding wheel used for large-sized power tools is not suitable for high-speed working conditions of small-sized tools and may burst.

Special safety warnings for cutting operations of the grinding wheel

1. Do not "clamp" the cutting wheel or apply too much pressure. Do not cut too deeply. The application of over-stress to the grinding wheel increases the load of the grinding wheel during cutting, which is easy to wind or get stuck, and increases the possibility of rebound or bursting of the grinding wheel.
2. Do not face the rotating wheel or stand behind it. When the grinding wheel is removed from the operating point beside the operator, the possible rebound will push the rotary grinding wheel and power tools towards the operator.
3. When the grinding wheel is stuck or the cutting is interrupted for any reason, turn off the power tool and hold the tool until the grinding wheel is completely stopped. Never try to separate the cutting wheel from the cutting when the grinding wheel is still running, or it will rebound. Investigate and take corrective measures to eliminate the cause of wheel seizure.
4. The cutting operation cannot be restarted on the workpiece. After the grinding wheel reaches full speed, carefully re-enter the cutting. If the power tool is restarted on the workpiece, the grinding wheel may jam, creep out or rebound.
5. Supporting the plate or oversized workpieces can minimize the risk of grinding wheel seizure and rebound. Large workpieces droops with their own weight. Supports must be placed near the cutting line of the workpiece and near the edge of the workpiece on both sides of the grinding wheel.
6. Please take extra care when "blind cutting" into walls or other blind areas. The extended grinding wheel may cut the gas pipe or water pipe, electric wire or object causing rebound.

4 Installation and function description

Installation instructions
Guard installation and adjustment



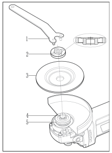
1. Guard 2. Screw 3. Front cover

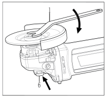
The guard is a kind of protective device, which is used to prevent injury due to broken grinding wheel during operation. When installing the guard, turn the angle grinder upside down, take out the slot of the front cover (3) of the guard (1) and put it into the guard (1). Adjust the direction of the grinding wheel guard (1) in the direction of the arrow as required by the working conditions, and then fully tighten the screws (2) with a cross screwdriver.

Before starting work, please confirm that the guard is installed and fastened. Slightly loosen the set screw, the guard can be rotated and fixed at the required working angle, and confirm whether the set screw is fully tightened after the guard is adjusted.

Assembly and disassembly of grinding wheel

Note:
In order to prevent serious accidents, the power must be turned off and the power plug must be pulled out from the socket.





1. Wrench
2 Upper press plate
3 Depress-center grinding wheel
4. Spindle
5 Lower press plate
6 Shaft lock

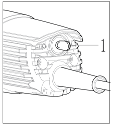
Assembly:

1. Face the spindle of the machine upward;
2. Install the lower press plate (5) on the spindle (4);
3. Install the protrusion of depress-center grinding wheel (3) onto the lower pressing plate (5);
4. Install the convex face of the upper press plate (2) on the depress-center grinding wheel (3) and screw it on the spindle;
5. Press the shaft lock (6) firmly to prevent the spindle from rotating, and tighten the nut on the upper press plate (2) clockwise with a wrench (1) to tighten the grinding wheel.

Note:
When installing the grinding plate, the convex part of the upper press plate shall face inward;

Disassembly
The disassembly sequence is opposite to the installation sequence. When removing the grinding wheel, follow the installation steps in reverse order.

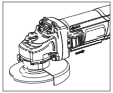
Feature description
Switching



Rear switch

Note:
Before connecting the power supply of the polishing machine, please confirm that the power supply of the machine has been turned off. Check that the switch of the tool operates freely and ensure that the switch is off before power on!

When starting the polishing machine, pull the switch lever to Position "ON" or "I".When stopping the machine, pull the switch lever to Position "OFF" or "O".



Side switch

When starting the polishing machine, pull the switch lever to Position "I". When stopping the machine, pull the switch lever to Position "".

Actual operation:
To reduce hazards and injuries such as explosion and electric shock etc., check whether there are hidden wires, gas and water supply pipes on the surface of the workpiece before operation!

Personal safety

1. Keep alert. Pay attention to what you are doing and keep a clear head when operating a power tool. Do not operate power tool when you are tired, or in response to drugs, alcohol, or therapy. A moment of neglect in handling a power tool can result in serious injury.
2. Use personal protective equipment. Wear goggles and safety devices at all times. Use of equipment such as dust masks, non-slip safety shoes, hard hats, hearing protection, etc., under appropriate conditions, can reduce personal injury.
3. Prevent accidental starting. Make sure the switch is in the off position before connecting the power supply and/or battery case, and before picking up or carrying tool. Putting a finger on a switch that is powered on or inserting the plug while the switch is on can cause a hazard.
4. Remove all adjustment keys or wrenches before power tool are switched on. A wrench or key left on the rotating parts of a power tool can cause personal injury.
5. Do not stretch your hand too long. Always pay attention to your footing and balance. So that you can have a good control of power tool in unexpected situations.
6. Dress appropriately. Don't wear loose clothing or accessories. Keep clothes, gloves, and hair away from moving parts. Loose clothing, attachment and long hair can get caught up in moving parts.
7. If a device is provided for connection with a chip removal or dust collection device. Ensure good connection and proper use. The use of these devices can reduce the hazard caused by dust.
8. Don't take a casual attitude and ignore the tool's safety guidelines just because you are getting familiar with the tool after frequently using it. One careless action can lead to serious injury in an instant.

Use and precautions of power tool

1. Do not use power tool for improper purposes. Use appropriate power tool according to the application. Using power tool properly designed with rated values will help you work more efficiently and safely.
2. If the switch cannot turn on or off the power supply of the tool, the power tool cannot be used. Power tool that cannot be controlled with the switch are dangerous and must be repaired.

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3. Unplug from the charger before making any adjustments, replacing attachment or storing power tool. This protective measure will reduce the risk of accidental starting of the tool.
4. Keep the power tool not for use out of the reach of children; the person operating the power tool shall be familiar with the tool and have learned these instructions. Power tool is dangerous in the hands of untrained users.
5. Maintain the power tool and attachment. Check the installation deviation or jamming of moving parts, damage to the parts and other conditions affecting the operation of power tool. Any damage should be repaired before use of power tool. Many accidents are caused by poorly maintained power tool.
6. Keep cutting tool sharp and clean. A well-maintained tool with a sharp cutting edge is less likely to get stuck and easier to control.
7. Use the power tool, attachment, and work cutter etc. according to the instructions, the requirements for the specific model of the power tool in consideration of the operation conditions and the work to be done etc. Danger may be resulted if the power tool is used not in compliance with the requirements.
8. Keep handle and holding surface dry, clean and free of grease. In the event of an accident, a slippery handle does not guarantee a safe grip and control of the tool.

Maintenance and repair

Power tool should be repaired by professional maintenance personnel using the same spare parts. This will ensure the safety of the power tool being repaired.

Wear ear plugs. Exposure to noise can cause hearing damage.

Use the auxiliary handle provided with the tool. Improper operation may cause personal injury.

The hidden line or its own flexible wire may be touched when cutting attachment, so when operating at this position, the tool should be held by an insulated holding surface. Cutting accessories touching live wires can electrify the exposed metal parts of the tool and cause electric shock to the operator.

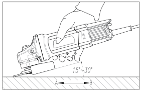
3 General safety rules of the angle grinder

General safety warnings of the angle grinder

1. This power tool functions as a grinder, for cutting and grinding. Read all safety warnings, instructions, diagrams and regulations provided with the power tool. Failure to follow the following instructions may result in electric shock, fire and/or serious injury.
2. It is not recommended using this power tool for operations such as brushing and polishing. Power tool may cause danger and personal injury if they are not operated according to the specified functions.
3. Attachment not recommended by the tool manufacturer and specially designed shall not be used. Otherwise, they may not ensure safety after they are installed to your tool.
4. The rated speed of the attachment must be at least equal to the maximum speed marked on the power tool. The attachment will burst and splash when running at a speed higher than the rated speed.
5. The outer diameter and thickness of the accessories must be within the rated capacity of the power tool. Incorrect attachment dimensions will result in inadequate protection or controlling.
6. The shaft hole size of the grinding wheel, flange plate, backrest cushion or any other attachment must be suitable for installation on the spindle of power tool. Attachment with shaft holes that do not match the mounting parts of the power tool will lose stability, cause excessive vibration and loss of control.
7. Do not use damaged attachment. Before use each time, check the attachment, such as whether the grinding wheel has fragments and cracks, whether the backrest cushion has cracks, tears or excessive wear, or whether the wire brush is loose or the wire is broken. If the power tool or attachment falls, check for damage and install intact attachment as necessary. After checking and installing the attachment, keep any person away from the plane of the rotating attachment, and run at the maximum no-load speed of the power tool for 1 min. Damaged attachment usually breaks during this test.
8. Always wear protective equipment. Use mask, safety goggles, or safety glasses as applicable. When applicable, wear dust mask, hearing protector, gloves and work apron that can block small

Grinding

1. The angle between the grinding wheel and the workpiece is about 15 degrees, and partial contact renders the best effect;
2. To avoid overheating, discoloration or crazing of the workpiece, please apply light force to move the machine body back and forth;
3. Never grind with the cutting blade;
4. In order to prevent sparks and grinding debris from shooting on the body of the operator, select an appropriate way to hold the machine according to the rotation direction of the grinding wheel.



Note:
Metal grinding will generate sparks. It is strictly prohibited to store any combustible materials within the spark scattering range to avoid fire!

Product parameters

Item No.	DL-JM100-E2	DL-JM115-E2	DL-JM125-E1
Rated voltage	220-240V~		
Rated frequency	50-60Hz		
Rated power	900W		
Rated speed	12000rpm		
Specifications	ϕ100mm	ϕ115mm	ϕ125mm
Switch position	Rear	Side	Side
Spindle thread	M10	M14	M14
Insulation class	Class II		

⚠ Warning

1. Use safety glasses. When there is much debris or dust, please wear a mask and always wear goggles.
2. Do not drill holes at the machine parts during use, which may cause electric leakage.
3. When putting down the angle grinder after work, first confirm whether the angle grinder is completely stopped, otherwise, it may damage other items.
4. If the machine is damaged due to accidental dampness, falling or natural damage due to long-term use, please have it timely maintained by professionals, and it shall be used only after passing the insulation test.
5. Ensure that the air inlet and outlet of the machine are free of foreign matters during use to prevent the machine from heating and damage.

5 Troubleshooting

Faults	Causes	Troubleshooting
The motor does not work after power on	1. Power failure 2. Connector fallen 3. Poor switch contact or action failure of the switch 4. The carbon brush does not contact the commutator surface	1. Repair the power supply 2. Check all the connectors 3. Repair or replace the switch 4. Replace the carbon brush
There is abnormal sound and no rotation or slow rotation after power-on	1. Switch contact burned out 2. Mechanically stuck	1. Switch contact burned out 2. Mechanically stuck
Annular fire or large sparks generated on the commutator	1. Armature short circuit 2. Poor contact between the carbon brush and commutator 3. The commutator surface is not smooth and clean	1. Repair or replace the armature 2. Replace the carbon brush 3. Remove the sundries to make the commutator surface smooth and clean
Slow rotation and sound during operation	1. Damaged grinding plate 2. The grinding plate touches the reinforcement	1. Replace the grinding plate 2. Re-select the operation point

Remarks: Non-professional personnel are not allowed to disassemble the machine for maintenance, which may cause failure of the machine due to improper maintenance.

6 Description of the accessories

Accessories:
Guard x1 Wrench x1 Carbon brush x2

7 Maintenance and service

Maintenance and cleaning

1. Before repairing power tool or changing parts and attachment, be sure to remove the plug from the socket.
2. Power tool and ventilation gaps must be kept clean to improve the quality and safety of work.
3. If the dustproof cover is damaged, it must be replaced immediately. It is best to entrust the customer service of our company to replace it. After each operation, the tool joint must be cleaned.
4. The power tool produced by our company are strictly inspected for quality. If the machine still breaks down, please take it to our authorized customer service department for repair.
5. When operating the tool, pay attention to the cutting direction, and the direction of pushing the tool must be opposite to the rotation direction of the tool.

When inquiring and ordering parts, be sure to provide the model number of parts of the machine.

Disposal of waste

Damaged machinery, attachment and waste packaging materials must be recycled in an environmentally friendly manner.

Service and customer consultation

For warranty, repair or replacement of parts such as breakdown drawings of the machine and information on spare parts, please inquire with a qualified dealer.

abrasive or workpiece fragments. The eye protection shield must block flying debris generated by various operations. Dust mask or respirator must be able to filter particles generated by operation. Long-term exposure to high intensity noise may cause hearing loss.

9.Keep bystanders at a safe distance from the work area. Any person entering the work area must wear protective equipment. Pieces of work parts or broken attachment may fly out to injure bystanders close to the operation area. Cutting attachment touching live wires can electrify the exposed metal parts of the power tool and cause electric shock to the operator.

10.For operation places where the cutting attachment may cut the hidden wires or own wires, the power tool can only be held by insulating holding surface. Cutting attachment touching live wires can electrify the exposed metal parts of the tool and cause electric shock to the operator.

11.Keep the cord away from the rotating attachment. Improper control may cut or wind the cord, with which the operator's hand or arm may be drawn into the rotating attachment.

12.Do not put down the power tool until the attachment completely stop moving. Rotating attachment may grab the surface and pull the power tool, leaving you out of control of the tool.

13.Do not start the power tool when carrying it. Accidental contact with the rotating attachment may entangle your clothes and cause the attachment to hurt your body.

14.Clean the vents of power tool frequently. The motor fan will suck dust into the enclosure, too much metal powder deposition will lead to electrical hazards.

15.Do not operate power tool near flammable materials, which may be ignited by sparks.

16.Do not use attachment that require coolant. Water or other coolants may cause electrical corrosion or shock.

Rebound and related warnings

Rebound refers to the sudden reaction force generated by stuck or twined rotating grinding wheel, backrest cushion, steel wire brush or other attachment. Blocking or winding will cause rapid rotation blocking of the rotating attachment, and then the out-of-control power tool will produce movement opposite to the rotation direction of attachment at the locking point.

For example, if the grinding wheel is wound or stuck by the workpiece, the edge of the grinding wheel extending into the stuck point may enter the material surface and cause the grinding wheel to creep out or rebound. The grinding wheel may fly towards or away from the operator, depending on the direction of movement of the grinding wheel at the stuck point. Under this condition, the grinding wheel may also break.

Rebound is the result of misuse of the power tool and/or incorrect operating procedures or conditions, which can be avoided with the following preventive measures.

1.The operator shall keep a firm grip on the power tool to keep his body and arm in the correct state to resist rebound. Any auxiliary handle shall be used all the time to maximally control the rebound force or torque when starting. Proper precautions taken can help the operator control the reaction torque or rebound force.

2.Never put your hands near the rotating attachment. The attachment may rebound and injure your hands.

3.Do not stand where the power tool may move when rebounding occurs. The rebound will drive the tool against the grinding wheel movement direction at the winding point.

4.Be careful when working at sharp corners and sharp edges, etc. Avoid bounce and winding of the attachment. Sharp corners, sharp edges and bounces have a tendency to wrap around the rotating attachment and cause runaway rebound.

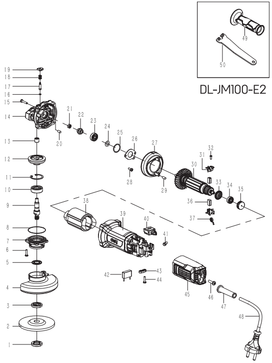
5.Do not attach a saw chain, wood carving blade or toothed saw blade, which will cause frequent rebound and out-of-control.

Special safety warnings for grinding and sand-cutting operations

1.Only use the recommended grinding wheel model and the guard s pecially designed for the selected grinding wheel. Grinding wheels not designed for power tools cannot be fully protected and are unsafe.

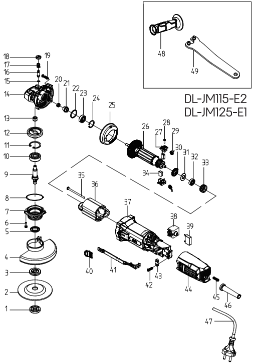
2.The guard must be firmly installed on the power tool and placed in the safest way, with only the minimum part of the grinding wheel exposed to the operator. The guard helps protect the operator from the danger of bursting the grinding wheel fragments and accidental contact with the grinding wheel.

3.The grinding wheel shall only be used for the recommended purpose. For example, do not grind with the side of the cutting wheel. The force applied to the side of the grinding wheel may cause it to break.



DL-JM100-E2

DL-JM100-E2 SPARE PART LIST		
No.	Name	QTY
1	Outer Flange	1
2	Grinding wheel	0
3	Inner Flange	1
4	Wheel cover	1
5	Dust cover	1
6	Screw M4*14	4
7	Bearing holder	1
8	O-ring 45.6*42*1.8	1
9	Output shaft	1
10	bearing 6201RS Z3	1
11	spring ring 32	1
12	Big gear	1
13	HK0808 Needle bearing	1
14	Gear cover	1
15	Screw ST4*20	4
16	O-ring 6*4*1	1
17	Self-locking pin	1
18	Self-locking spring	1
19	Self-locking cap	1
20	Wool rope 6*13	1
21	M6 Nut	1
22	Pinion	1
23	Bearing 608	1
24	Washer 17*0.3*8.1	1
25	O-ring Ø21.5*1.8	1
26	Bearing plate	1
27	Fad Guid	1
28	Screw M4*12	2
29	Rubber column	2
30	Armature	1
31	Carbon brush holder	2
32	Screw ST3*10	4
33	Ring	1
34	Bearing 607-2RS	1
35	Bearing sleeve 607	1
36	Carbon brush	2
37	Coil spring	2
38	Stator	1
39	Motor housing	1
40	Switch	1
41	Connect Cap	1
42	Capacitance	1
43	Wire plate	1
44	Screw ST4*14	2
45	Back cover	1
46	Screw ST4*16	1
47	Cord guard	1
48	power cord	1
49	Auxiliary handle	1
50	Wrench	



DL-JM115-E2
DL-JM125-E1

DL-JM115-E2/DL-JM125-E1 SPARE PART LIST		
No.	Name	QTY
1	Outer Flange	1
2	Grinding wheel	0
3	Inner Flange	1
4	Wheel cover	1
5	Dust cover	1
6	Screw M4*14	4
7	Bearing holder	1
8	O-ring Ø44*1	1
9	Output shaft	1
10	bearing 6201RS Z3	1
11	spring ring 32	1
12	Big gear	1
13	HK0808 Needle bearing	1
14	Gear cover	1
15	O-ring Ø4*1	1
16	Self-locking pin	1
17	Self-locking spring	1
18	Self-locking cap	1
19	Screw ST4*20	4
20	M6 Nut	1
21	Pinion	1
22	O-ring Ø21.5*1.8	1
23	608 Bearing	1
24	spring ring 22	1
25	Fad Guid	1
26	Armature	1
27	Carbon brush holder	2
28	Screw ST3*10	4
29	Coil spring	2
30	Ring	1
31	Bearing 607	1
32	Washer φ7×φ15×0.3	1
33	Bearing sleeve 607	1
34	Carbon brush	2
35	Screw ST4*70	2
36	Stator	1
37	Motor housing	1
38	Switch	1
39	Capacitance	1
40	Pushing block	1
41	Switch rod	1
42	Screw ST4*14	2
43	Wire plate	1
44	Back cover	1
45	Screw ST4*14	1
46	Cord guard	1
47	power cord	1
48	Auxiliary handle	1
49	Wrench	1

Product Warranty Card

Dear users :

Thank you for buying our products. In order to ensure your profit, users who buy our products can contact local distributor or Specified repair stations with invoice and warranty cards if the product failures due to quality problems.

Warranty Notice:

1.From ____________ (Year/Month/Day) to ____________ (Year/Month/Day),

If the failure happen in normal use, our company will provide free warranty, parts replacement and other services according to the failure situation.

2.This warranty card and purchase invoice are the voucher of after-sales service provided by our company to customers. The card must be detailed only after filling in the following form and affixing the official seal with the distributor.

3.In one of the following cases, free warranty service will be invalid, and maintenance fees will be required：

（1）Exceed the expiration date；

（2）Failure or damage caused by not following the requirements of the product manual, maintenance or improper storage；

（3）Failure or damage caused by disassembling, repairing or modification of the product without the permission of our company；

（4）Machine breakdown or damage caused by force majeure；

（5）Consumable accessories.

This card is issued with the product. One card for one machine, to ensure that you can fully enjoy the right to free warranty service provided by the company, please keep this card properly, lost will not be replaced.

Purchase Date: ____________ (Year/Month/Day)

Product Certificate

Inspector:
01

Date of manufacture：
____

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