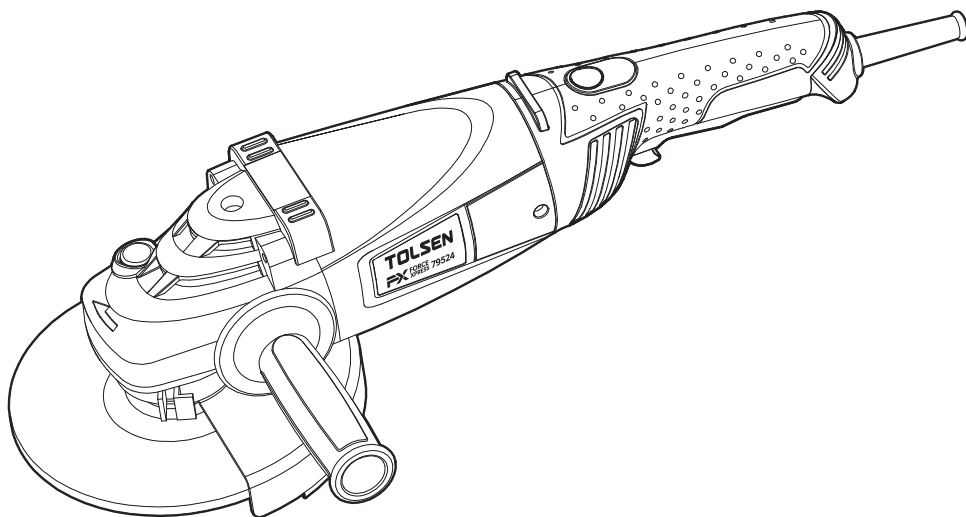


# TOLSEN **FX** FORCE XPRESS

## 79524 ANGLE GRINDER

INSTRUCTION MANUAL

220-230V~ 2350W



**SAVE THIS MANUAL !**

You will need this manual for safety instructions, operating procedures and warranty.  
Put it and the original sales receipt in a safe dry place for future reference.

## IMPORTANT SAFETY INFORMATION

### General Power Tool Safety Warnings

#### WARNING:

**Read all safety warnings and instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury. Save all warnings and instructions for future reference. The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.**

1. Keep work area clean and well lit. Cluttered or dark areas invite accidents.
2. Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Power tools create sparks which may ignite the dust or fumes.
3. Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.
4. Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with grounded power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.
5. Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is grounded.
6. Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
7. Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
8. When operating a power tool outdoors, use an extension cord suitable for outdoor use. Use of a cord suitable for outdoor use reduces the risk of electric shock.
9. If operating a power tool in a damp location is unavoidable, use a Ground Fault Circuit Interrupter (GFCI) protected supply. Use of a GFCI reduces the risk of electric shock.
10. Grounded tools require a three wire extension cord. Double Insulated tools can use either a two or three wire extension cord.
11. Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating power tools may result in serious personal injury.
12. Use safety equipment. Always wear eye protection. Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
13. Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool. Carrying power tools with your finger on the switch or energizing power tools that have the switch on invites accidents.

14. Remove any adjusting key or wrench before turning the power tool on. A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
15. Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
16. Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.
17. If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. Use of these devices can reduce dust-related hazards.
18. Only use safety equipment that has been approved by an appropriate standards agency. Unapproved safety equipment may not provide adequate protection. Eye protection must be ANSI-approved and breathing protection must be NIOSH-approved for the specific hazards in the work area.
19. Do not force the power tool. Use the correct power tool for your application. The correct power tool will do the job better and safer at the rate for which it was designed.
20. Do not use the power tool if the switch does not turn it on and off. Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
21. Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.
22. Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool. Power tools are dangerous in the hands of untrained users.
23. Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
24. Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
25. Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed. Use of the power tool for operations different from those intended could result in a hazardous situation
26. SERVICE AND REPAIRS should be made by qualified repair technicians at an authorized repair center. Improperly repaired tools could cause serious shock or injury.

## Safety Warnings Common for Grinding, Sanding or Wire Brushing Operations

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1. This power tool is intended to function as a grinder, sander or wire brush. Read all safety warnings, instructions, illustrations and specifications provided with this power tool. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.
2. Operations such as polishing or cutting-off are not recommended to be performed with this power tool. Operations for which the power tool was not designed may create a hazard and cause personal injury.
3. Do not use accessories which are not specifically designed and recommended by the tool manufacturer. Just because the accessory can be attached to your power tool, it does not assure safe operation.
4. The rated speed of the accessory must be at least equal to the maximum speed marked on the power tool. Accessories running faster than their RATED SPEED can break and fly apart.
5. The outside diameter and the thickness of your accessory must be within the capacity rating of your power tool. Incorrectly sized accessories cannot be adequately guarded or controlled.
6. The arbor size of wheels, flanges, backing pads or any other accessory must properly fit the spindle of the power tool. Accessories with arbor holes that do not match the mounting hardware of the power tool will run out of balance, vibrate excessively and may cause loss of control.
7. Do not use a damaged accessory. Before each use inspect the accessory such as abrasive wheels for chips and cracks, backing pad for cracks, tear or excess wear, wire brush for loose or cracked wires. If power tool or accessory is dropped, inspect for damage or install an undamaged accessory. After inspecting and installing an accessory, position yourself and bystanders away from the plane of the rotating accessory and run the power tool at maximum no-load speed for one minute. Damaged accessories will normally break apart during this test time.
8. Wear personal protective equipment. Depending on application, use face shield, safety goggles or safety glasses. As appropriate, wear dust mask, hearing protectors, gloves and workshop apron capable of stopping small abrasive or workpiece fragments. The eye protection must be capable of stopping flying debris generated by various operations. The eye protection must be capable of stopping flying debris generated by various operations. The dust mask or respirator must be capable of filtering out particles generated by your operation. Prolonged exposure to high intensity noise may cause hearing loss.
9. Keep bystanders a safe distance away from work area. Anyone entering the work area must wear personal protective equipment. Fragments of workpiece or of a broken accessory may fly away and cause injury beyond immediate area of operation.
10. Hold power tool by insulated gripping surfaces only, when performing an operation where the accessory may contact hidden wiring or its own cord. An accessory contacting a "live" wire may

make exposed metal parts of the power tool “live” and shock the operator.

11. Position the cord clear of the spinning accessory. If you lose control, the cord may be cut or snagged and your hand or arm may be pulled into the spinning accessory.

12. Never lay the power tool down until the accessory has come to a complete stop. The spinning accessory may grab the surface and pull the power tool out of your control.

13. Do not run the power tool while carrying it at your side. Accidental contact with the spinning accessory could snag your clothing, pulling the accessory into your body.

14. Regularly clean the power tool’s air vents. The motor’s fan will draw the dust inside the housing and excessive accumulation of powdered metal may cause electrical hazards.

15. Do not operate the power tool near flammable materials. Sparks could ignite these materials.

16. Do not use accessories that require liquid coolants. Using water or other liquid coolants may result in electrocution or shock.

17. Maintain labels and nameplates on the tool. These carry important safety information. If

unreadable or missing, contact Harbor Freight Tools for a replacement.

18. Avoid unintentional starting. Prepare to begin work before turning on the tool.

19. Do not depress the spindle lock when starting or during operation.

20. Do not leave the tool unattended when it is plugged into an electrical outlet. Turn off the tool, and unplug it from its electrical outlet before leaving.

21. Use clamps (not included) or other practical ways to secure and support the workpiece to a stable platform. Holding the work by hand or against your body is unstable and may lead to loss of control and personal injury.

22. This product is not a toy. Keep it out of reach of children.

23. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

## Safety Warnings Specific for Sanding Operations

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Do not use excessively oversized sanding disc paper. Follow manufacturer’s recommendations when selecting sanding paper. Larger sanding paper

extending beyond the sanding pad presents a laceration hazard and may cause snagging, tearing of the disc or kickback.

## Safety Warnings Specific for Wire Brushing Operations

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1. Be aware that wire bristles are thrown by the brush even during ordinary operation. Do not overstress the wires by applying excessive load to the brush. The wire bristles can easily penetrate light clothing and/or skin.

2. If the use of a guard is recommended for wire brushing, do not allow any interference of the wire wheel or brush with the guard. Wire wheel or brush may expand in diameter due to work load and centrifugal forces.

SPECIFICATIONS

Electrical Rating	220-230V / 50Hz
Rated Power	2350W
Motor No Load Speed	$n_0$ : 6000/min
Max. Accessory Diameter (sold separately)	230mm
Spindle Thread	M14



Note: Symbolology

	SGS Group
	Intertek Testing Services inc.
	WARNING mark concerning Risk of Eye Injury. Wear ANSI-approved safety goggles with side shields
	Read the manual before set-up and/or use.

## SETUP

### Before Use

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Read the ENTIRE IMPORTANT SAFETY INFORMATION section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

**WARNING:**

**TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:** Turn the Power Switch of the tool off and unplug the tool from its electrical outlet before assembling or making any adjustments to the tool.

### Installing the Wheel Guard

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**WARNING:**

**TO PREVENT SERIOUS INJURY:** Do not operate this tool without the Wheel Guard properly installed.

1. Loosen the Wheel Guard Bolt.
2. Slide the collar of the Wheel Guard over the rim of the Gear Housing.
3. Rotate the Wheel Guard as needed to shield you during the planned work.
4. Tighten the Wheel Guard Bolt securely.
5. Check the Wheel Guard to ensure it is firmly in place. Adjust if necessary before proceeding.

### Installing the Side Handle

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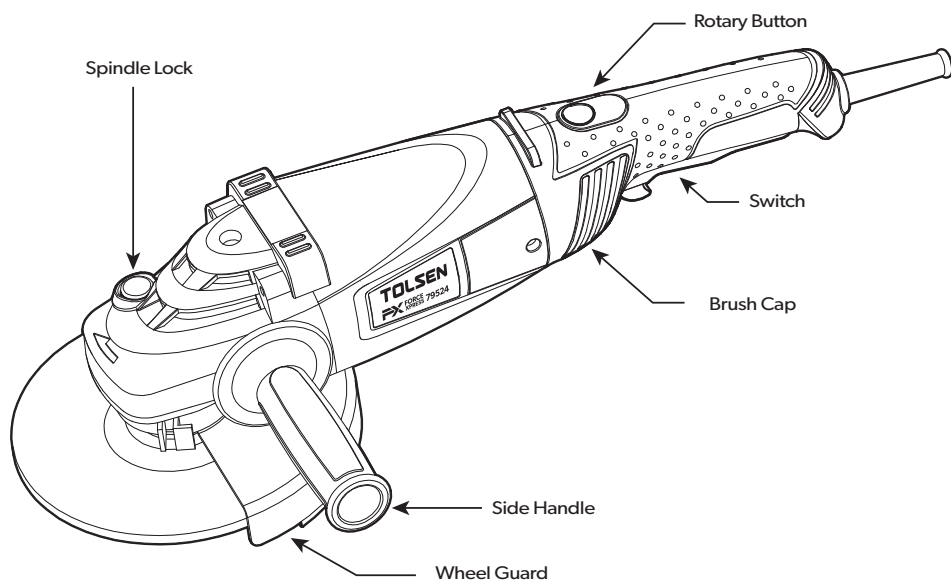
**WARNING:**

**TO PREVENT SERIOUS INJURY:** Do not operate this tool with one hand only or without the Side Handle properly installed.

1. The Side Handle may be installed in one of three positions, on either side or on top of the Gear Housing.
2. Screw the threaded end of the Side Handle into the selected position. Tighten securely before beginning work.

## Functions

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## OPERATING INSTRUCTIONS

### Tool Set Up

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**WARNING:**

**TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:** Turn the Power Switch of the tool off and unplug the tool from its electrical outlet before installing accessories

### Installing a Non-threaded Grinding Wheel

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1. The Grinding Wheel (sold separately) MUST be:

- rated to at least 6000/min.
- no larger than 230mm in diameter.
- fitted with a 22.2mm round arbor hole.
- 6mm thick or less.
- suitable for surface grinding, not edge grinding.
- dry and clean.
- undamaged.

2. Press in and hold the Spindle Lock Button to prevent the Spindle from turning.

3. Remove the Outer Flange. Keep the Inner Flange in position on the Spindle.

4. Closely inspect the Grinding Wheel before mounting.

5. For wheels with gaskets: Slip the grinding

wheel onto the Spindle with the gasket first.

The gasket should be centered on the grinding wheel and the wheel and gasket should rest flat against the Inner Flange.

**WARNING:**

**To prevent serious injury, gaskets must be used for all grinding wheels they are provided with. Gaskets help prevent grinding wheel damage and wheel slippage, causes of wheel failure.**

6. Thread the Outer Flange onto the Spindle.

Wrench tighten only enough so that the wheel is securely held on the spindle.

**WARNING:**

**To prevent serious injury, do not overtighten flange. Overtightening can damage the wheel, causing wheel failure.**

### Installing a Threaded Accessory

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**CAUTION:**

**TO PREVENT INJURY:** Wear heavy-duty work gloves when handling wire wheels and brushes. These accessories are sharp and can cause injury.

1. The accessory **MUST** be:

- rated to at least 6000RPM.
- no larger than 230mm in diameter.
- fitted with a threaded opening of M14.
- undamaged.
- a sanding disc and backing pad, a sanding flap disc, a wire wheel or a wire cup brush (accessories not included).

2. Press in and hold the Spindle Lock Button to prevent the Spindle from turning.

3. Remove the Outer Flange and the Inner Flange and keep in a safe place.

4. Thread disc accessory firmly onto the Spindle. Wrench tighten onto the spindle.

## General Operating Instructions

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### WARNING:

**TO PREVENT SERIOUS INJURY: Grip the tool firmly in both hands.**

1. Make sure that the Switch is not locked on, then plug in the tool.

2. Press down on the Switch to release the safety.

3. Slide the Switch up towards the wheel to start the tool.

4. Allow the tool to come up to full speed before touching the work material.

5. Apply the wheel to the work material at a 10° – 15° angle, allowing the tool to operate at full speed. If the tool bogs down, use lighter pressure.

6. To create a smoother surface, keep the tool moving over the work surface.

7. Press down on the back of the Switch and release the Switch to stop the tool.

8. Allow the tool to come to a complete stop before setting it down.

9. To prevent accidents, turn off the tool and disconnect its power supply after use. Clean, then store the tool indoors out of children's reach

## MAINTENANCE AND SERVICING

**WARNING:**

**TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:** Turn the Power Switch of the tool off and unplug the tool from its electrical outlet before performing any inspection, maintenance, or cleaning procedures.

**TO PREVENT SERIOUS INJURY FROM TOOL FAILURE:** Do not use damaged equipment. If abnormal noise or vibration occurs, have the problem corrected before further use.

## Cleaning, Maintenance, and Lubrication

1. BEFORE EACH USE, inspect the general condition of the tool. Check for:
  - loose hardware
  - misalignment or binding of moving parts
  - cracked or broken parts
  - damaged electrical wiring
  - any other condition that may affect its safe operation.
2. AFTER USE, wipe external surfaces of the tool with clean cloth.
3. Periodically blow dust and grit out of the motor vents using dry compressed air. Wear

ANSI-approved safety goggles and NIOSH-approved breathing protection while doing this.

4. CARBON BRUSH MAINTENANCE. The carbon brushes may require maintenance when the motor performance of the tool decreases or stops working completely. Carbon brushes are internal to the Motor Housing, and should only be checked by a qualified service technician.

**WARNING:**

**If the supply cord of this power tool is damaged, it must be replaced only by a qualified service technician.**

## Troubleshooting

Problem	Possible Causes	Likely Solutions
Tool will not start.	<ol style="list-style-type: none"> <li>1. Cord not connected.</li> <li>2. No power at outlet.</li> <li>3. Tool's thermal reset breaker tripped (if equipped).</li> <li>4. Internal damage or wear. (Carbon brushes or switch, for example.)</li> </ol>	<ol style="list-style-type: none"> <li>1. Check that cord is plugged in.</li> <li>2. Check power at outlet. If outlet is unpowered, turn off tool and check circuit breaker. If breaker is tripped, make sure circuit is right capacity for tool and circuit has no other loads.</li> <li>3. Turn off tool and allow to cool. Press reset button on tool.</li> <li>4. Have technician service tool.</li> </ol>
Tool operates slowly.	<ol style="list-style-type: none"> <li>1. Excess pressure applied to workpiece.</li> <li>2. Power being reduced by long or small diameter extension cord.</li> </ol>	<ol style="list-style-type: none"> <li>1. Decrease pressure, allow tool to do the work.</li> <li>2. Eliminate use of extension cord. If an extension cord is needed, use one with the proper diameter for its length and load.</li> </ol>
Performance decreases over time.	Carbon brushes worn or damaged.	Have qualified technician replace brushes.
Excessive noise or rattling.	Internal damage or wear. (Carbon brushes or bearings, for example.)	Have technician service tool.
Overheating.	<ol style="list-style-type: none"> <li>1. Forcing tool to work too fast.</li> <li>2. Blocked motor housing vents.</li> <li>3. Motor being strained by long or small diameter extension cord.</li> </ol>	<ol style="list-style-type: none"> <li>1. Allow tool to work at its own rate.</li> <li>2. Wear ANSI-approved safety goggles and NIOSH-approved dust mask/respirator while blowing dust out of motor using compressed air.</li> <li>3. Eliminate use of extension cord. If an extension cord is needed, use one with the proper diameter for its length and load. See General Power Tool Safety Warnings section.</li> </ol>
Tool does not grind, sand or brush effectively.	<ol style="list-style-type: none"> <li>1. Disc accessory may be loose on Spindle.</li> <li>2. Disc accessory may be damaged, worn or wrong type for the material.</li> </ol>	<ol style="list-style-type: none"> <li>1. Be sure disc accessory arbor is correct and Outer Flange/Arbor Nut is tight.</li> <li>2. Check condition and type of disc accessory. Use only proper type of disc accessory in good condition.</li> </ol>

### WARNING:

**Follow all safety precautions whenever diagnosing or servicing the tool. Disconnect power supply before service.**

# CE DECLARATION OF CONFORMITY

WE  
SUZHOU TOLSEN TOOLS CO.,LTD.  
198 HUASHAN ROAD, ZHANGJIAGANG,  
JIANGSU, CHINA

Declare that the product  
79524 Angle Grinder  
220-230V,50Hz,2350W,M14,Class II  
Serial number: N/A

Complies with the essential health and safety requirements of the following Directives:

EC Machinery Directive 2006/42/EC  
The EMC Directive 2014/30/EU

Standards and technical specifications referred to:

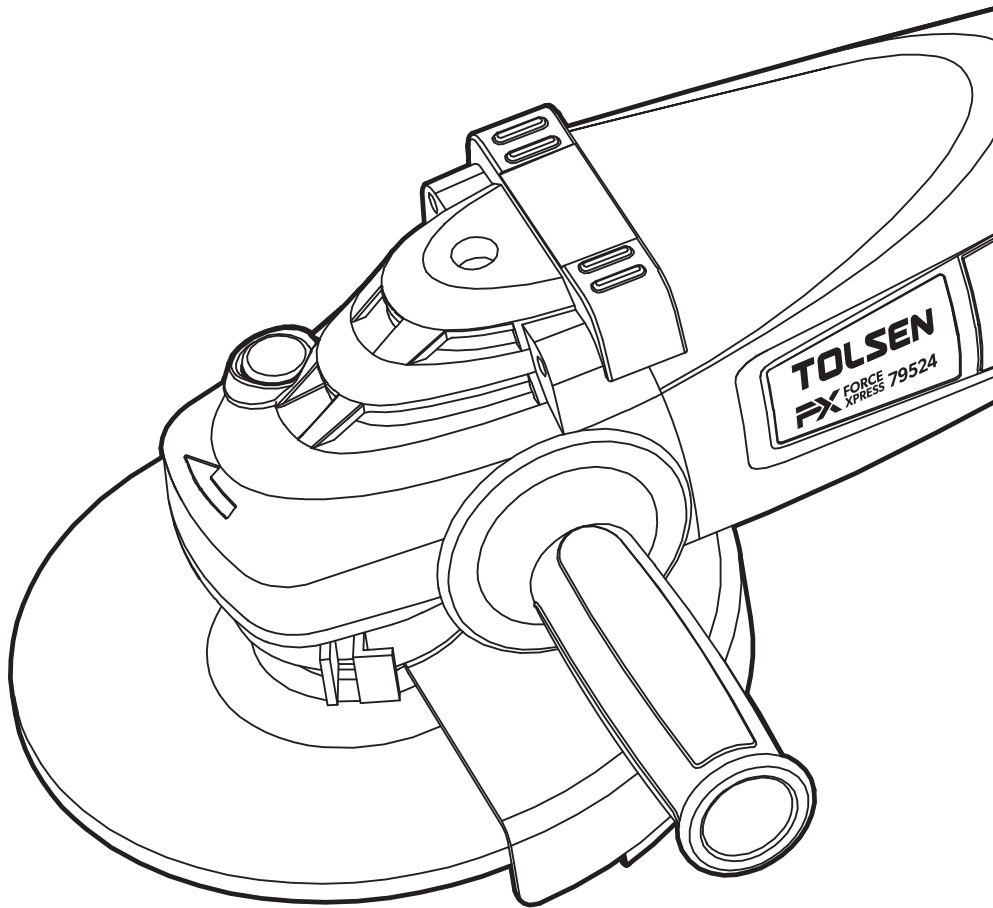
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EN 55014-1:2017  
EN 61000-3-2:2014  
EN 61000-3-3:2013  
EN 55014-2:2015

Authorised Signatory and technical file holder

Signed for and on behalf of:  
SUZHOU TOLSEN TOOLS CO.,LTD.  
198 HUASHAN ROAD, ZHANGJIAGANG,  
JIANGSU, CHINA  
ZHANG XING YU  
Group Quality Director

on:26/05/2020





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