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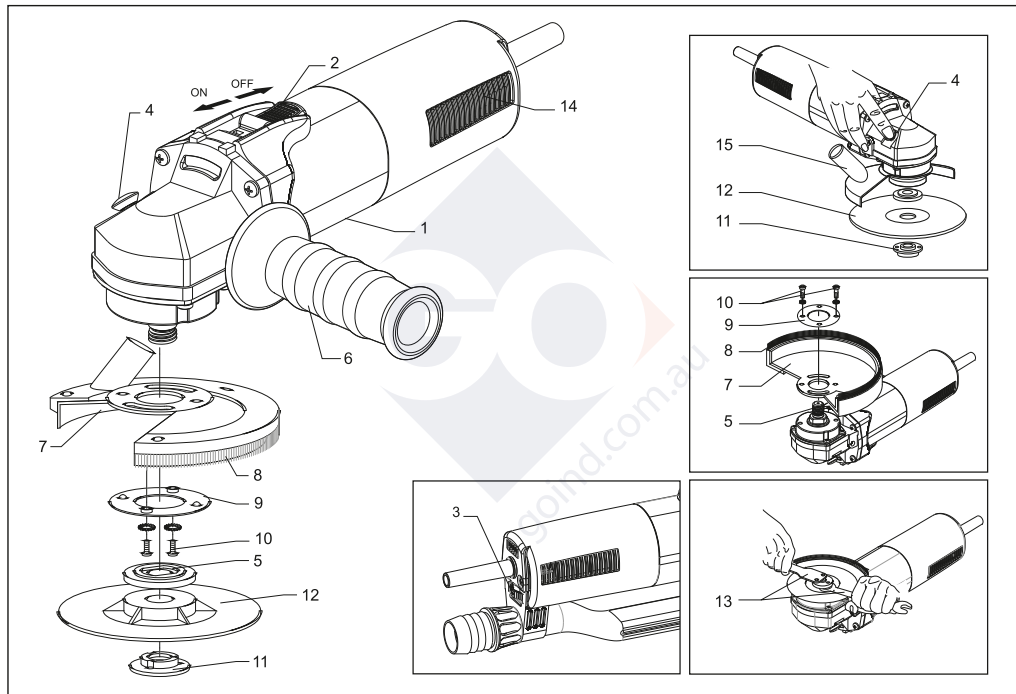


BA31ES

Smerigliatrice miniangolare con aspirazione
Mini-angular grinder with dust extraction
Mini meuleuse angulaire avec aspiration
Einhand Miniwinkelschleifer mit Staubabsaugung
Mini amoladora angular con aspiración
Haakse minislijper met stofafzuiging
Угловые шлифовальные минимашины с пылеудалением















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SIMBOLS

Some of the following symbols may be used on your tool. Please study them and learn their meaning. Proper interpretation of these symbol will allow you to operate the tool better and safer.

	Warning symbol/ Warning message	ISO7010 - W001
	Read instruction manual	ISO7010 - M002
	Wear eye protection	ISO7010 - M004
	Wear ear protection	ISO7010 - M003
	Wear a mask	ISO7010 - M016
	Wear a gloves	ISO7010 - M009
	CE compliant	
	EurAsian Mark	
	C-Tick Mark	
	Disposal of decommissioned	
	Insulation class II	
	Arrow	Act in the direction indicated by the arrow direction

TECHNICAL DATA

TYPE	BA31ES
PROTECTION CLASS	□ / II
ABSORBED POWER W	900
ELECTRONIC OVERLOAD PROTECTION	YES
ELECTRONIC SPEED CONTROL	YES
n NOMINAL RPM /min	1.500 ÷ 4.000
Ø DISC PAD DIAMETER mm	115
SPINDLE THREAD	M14
DISC SPINDLE STOP	YES
EXTRACTION SYSTEM (*)	CENTRALIZED
WEIGHT kg according to EPTA-Procedure 01/2003	2,1

The values shown are based on a nominal voltage of 230V/50Hz. In the case of voltages and frequencies of different power values may vary. Refer to the label technical specifications to the nominal values of the tool.

(*) The tool must be connected to a suitable dust extraction system (not supplied).

GENERAL WARNINGS

All instructions concerning safety and the prevention of industrial accidents can be found in file SAFETY INSTRUCTIONS, that forms integral part of this documentation. This INSTRUCTION MANUAL only contains additional information that specifically explain how to use the machine.

SPECIFIC USE

General safety instructions

This electrical tool is designed to operate as a grinder, grinding and abrasive cutting operations, metal brushing. Read all safety warnings, instructions, illustrations and specifications supplied with this electrical tool. Failure to respect all instructions shown below may cause electric shock, fire and/or serious accident.

Sanding and polishing operations are not recommended with this electrical tool. Operations for which the use of the electrical tool is not provided for can create hazards and cause harm to personnel.

These of this tool for smoothing, metal brushing and polishing operations is not recommended. Its use for applications other than those for which it has been designed may lead to hazardous situations and cause injuries to people.

Do not use accessories that are not specifically designed for the intended use of the tool or that have not been recommended by the manufacturer. The fact that an accessory can be fixed to the tool does not imply that it can be used safely.

The rated speed of accessories must be at least equivalent to the maximum speed of the tool. If operated at a greater speed than the rated one, accessories may break and cause the ejection of chips.

The external diameter and thickness of accessories must be appropriate to

guarantee the protection and safety of the tool. Accessories with incorrect dimensions cannot be adequately protected or controlled.

The configuration of the cutting/grinding wheels or any other accessory must perfectly adapt to the tool spindle. Accessories with holes that cannot be aligned with the fitting components on the tools will cause unbalance, excessive vibrations and may be difficult to control.

Do not use an accessory if damaged. Before use, inspect all the accessories, like the abrasive cutting/grinding wheels, in order to verify that they are not cracked or splintered. If the tool or accessory has fallen, verify that they are not damaged and, if necessary, replace it with a new one. After inspecting or installing an accessory, move to a safe distance with any other person present and operate the tool at maximum speed without load for one minute. Damaged accessories generally break during this test period.

Wear personal protective equipment. According to the the application, use face shield, mask or safety goggles. According to the case, wear a dust mask, ear protection, gloves and a smock capable of stopping small abrasive fragments of the work piece. Eye protection must be able to stop flying bits produced from the different operations. The dust mask or the respirator must be capable of filtering particles produced by your work. Prolonged exposure to high intensity noise can cause a loss of hearing.

Keep the people present at a safety distance with respect to the work area. Anyone entering the work area must wear personal protection equipment. The fragments of the work piece or the broken accessories can fly off and cause injuries in the immediate vicinity of the work area.

Keep the tool only for isolating gripping surfaces, while the operations are carried out in which the cutting accessory may be in contact with the hidden cables or with its cable. The contact between the cutting accessory and the

cable "under voltage" can also put the exposed metal parts of the electrical tool "under voltage" and can cause an electrical shock for the operator.

Position the cable far from the rotation accessory. If control is lost, the cable can be cut or twisted and your hand or arm could be pulled into the rotation accessory.

Never put the electrical tool back before the accessory has completely stopped. The rotation accessory can be pressed on the surface with the electrical tool put out of your control.

Do not operate the electrical tool while carrying it at the side. Accidental contact with the rotation accessory can get your clothes entangled and attract the accessory towards you.

Regularly clean the fan openings of the electrical tool. The motor fan will attract the dust into the housing; excess dust accumulation can cause electrical hazards.

Do not operate the electrical tool in the proximity of flammable material. The sparks can ignite these materials.

Do not use accessories that need liquid coolants. The use of water or other liquid coolants can cause electrocution or electrical shock

ADDITIONAL SAFETY WARNINGS FOR GRINDING AND ABRASIVE CUTTING OPERATIONS

Use only the type of cutting/grinding wheels recommended for your tool and the protection specifically designed for the selected cutting/grinding wheel. Cutting/grinding wheels not designed to be used with the tool cannot be adequately protected and are unsafe.

The protection must be solidly fixed to the tool and placed in the safest position possible so as to minimise the potential risk of contact between the operator and cutting/grinding wheel. The protection is designed to protect operators from the ejection of fragments in case of breakage and from accidental contacts with the grinding wheel.

Cutting/grinding wheels must be used for the recommended applications only. For example do not use the cutting side of the wheel for grinding operations. Abrasive cutting wheels may break because they are designed to be used for peripheral grinding operations and for the application of lateral forces.

Always use the cutting/grinding wheels with undamaged flanges and verify that their shape and dimensions are appropriate for the selected cutting/grinding wheel. The purpose of flanges is to support the cutting/grinding wheel and reduce the potential risk of breakage. Flanges for cutting wheels may be different from those of grinding wheels.

Do not use grinding/cutting wheels that have been fitted on larger tools. These cutting/grinding wheels are unsuitable because of their higher speed as compared to that of smaller tools and could therefore cause explosions.

ADDITIONAL SAFETY WARNINGS FOR ABRASIVE CUTTING OPERATIONS

Do not "stall" the cutting wheel or apply an excessive pressure. Do not attempt to increase the cutting depth. The application of a high pressure on the cutting wheel increases the load and the risk of torsion and bending during cutting, with the consequent risk of rebound forces or breakage.

Do not stand in line with the cutting/grinding wheel or behind it while it is rotating. When the cutting/grinding wheel moves away from the operator's body during operation, the rebound force may push the revolving cutting/grinding wheel and the tool towards the operator.

If the cutting/grinding wheel bends or the cutting operations stops for any reason, disconnect the tool from the power supply and keep it still until the cutting/grinding wheel has come to a full stop. Do not attempt to remove the cutting wheel while it is moving because this could produce a rebound force. Identify the cause of the problem and perform the necessary corrective actions to prevent the problem from reoccurring.

Do not resume the cutting operation. Resume the cutting operation only when the cutting wheel has reached its maximum speed. The cutting wheel may stall, lift or produce a rebound force if the tool is restarted when the work piece is present.

Always use appropriate supports for panels or large work pieces in order to minimise the risk of interlocking and rebound forces. Large work pieces tend to bend because of their weight. Supports must therefore be placed under the work piece, close to the cutting line and to the edge of the work piece on both sides.

Pay particular attention when cutting "pockets" on existing walls or other areas with limited visibility. The projecting cutting wheel may cut gas or water pipes, electrical cables or other objects and thus produce a rebound force.

SPECIFIC SAFETY WARNINGS FOR METAL BRUSHING:

Keep in mind that the brush, even during normal operation, emits metal bristles. Do not apply excessive force to the metal wires, by applying excessive force to the brush. The metal bristles can easily penetrate light clothing and/or hair.

If use of protection for the metal brushing is recommended, do not allow any interference of the disc to the metal wires or of the brush with the protection. The disc with metal wires or the brush can expand in diameter due to the work load and centrifugal forces.

FURTHER HAZARD WARNINGS

Avoid having dust accumulated on the work station. The dust can easily ignite. A work piece can be safely locked in position only using an appropriate tightening device or a screw clamp and not just holding it with your hand. **Adjust the protective earmuffs so as to impede a trail of sparks in the direction of the operator. Do not touch the rough and cut grinding wheels before they are cooled. Activate the locking key of the spindle only when the spindle is stopped.** Otherwise, the electrical tool may suffer damages.



Wear protective goggles

INFORMATOIN NOISE / MEAN ACCELERATION VALUE

The tools are suppressed in accordance for the prevention and elimination of radio disturbances measured in accordance with standard: **EN 60745**

	Sound pressure level / Sound power level			3 axis vibration level (Surface grinding))	
	L _{pA}	L _{WA}	Uncertainty	a _h	Uncertainty
	dB(A)			m/s ²	
BA 31ES	90	101	3	5,50	1,50



DANGER The indicate measurements refer to new power tools.

Daily use causes the noise and vibration values to change.

Displayed emission values are comparative and are to be employed for a provisional assessment of the operator's risk exposure during the work period. Appropriate evaluation of work period must also include tool's idle and stop periods. These emission values represent the tool's main applications.

If the tool is used for other applications, with other accessories, or if it does not undergo regular maintenance, emission values can significantly increase during operations.



Use hearing protection!

PARTS OF THE TOOL

- 1 - Technical data identification label
- 2 - ON/OFF switch
- 3 - Speed control
- 4 - Wheel spindle locking button
- 5 - Spindle
- 6 - Side handle
- 7 - Adjustable protective shield
- 8 - Dust brush
- 9 - Collar with protective shield fixing points
- 10 - Protective shield fixing screws
- 11 - Disc pad tapered ring nut
- 12 - Abrasive disc mouting plate
- 13 - Spanners
- 14 - Motor ventilation slots
- 15 - 29 mm Ø suction port

STARTING UP



WARNING Pay attention to the mains voltage! The mains voltage must correspond to the voltage indicated on the technical data identification label (1).



DANGER Before any intervention on the electrical tool take the plug out from the socket

BEFORE STARTING THE TOOL

Before starting-up the tool, ensure that:

- the packaging is complete and does not show signs of having been damaged during storage or transport;
- the tool is complete; check that the number and type of components comply with that reported in this instruction booklet;
- the power supply and socket outlet can support the load reported in the table and that indicated on the tool identification plate reproduced;
- the power supply cable and plug are in perfect condition;
- the ON/OFF switch (2) works properly though with the power supply disconnected;
- the wheel spindle locking button (4) is released (rotate the abrasive wheel by hand for at least one revolution);
- all the parts of the tool have been assembled in the proper manner and that there are no signs of damage;
- the ventilation slots (14) are not obstructed.

ASSEMBLING THE TOOL



DANGER: never work without protective earmuffs (7)



Wear protective gloves!

- screw in the auxiliary handle (6); the handle can be mounted on the left or right of the tool body;
- mount the dust brush (8) securely on the protective shield (7) (pushfit);
- mount the protective shield (7) with collar on the body of the tool using the screws (10). Ensure that the protrusions on the collar (9) are inserted in the slots cut into the flange of the adjustable protective shield (7);
- after tightening the screws (10) and collar (9), the adjustable protective shield (7) must be able to rotate with a slight resistance approximately 20° in order that it may be positioned as desired;
- connect the extraction device by the suction pipe in the nozzle (15).



The protective shield (7) must be mounted around the handle.

ASSEMBLY OF THE DISC HOLDER SANDING PAD AND THE ABRASIVE DISC

1. Insert the disc pad (12) on the spindle (5);
2. fit the abrasive disc;
3. screw on the ring nut (11) and tighten it using the pin wrench (13) preventing the spindle from moving with the 17 mm spanner or with the spindle locking button (4).

REPLACING THE ABRASIVE DISCS

This can be done in one of two ways:

1. Mode: lock the wheel holder shaft (5) pushing button (4) simultaneously rotating the abrasive disc holder sanding pad (12) until alerted of its locking. Unlock the wheel spindle by releasing the button and rotate the wheel by hand to ensure that it runs freely. Release the wheel holder shaft by releasing the button and manually rotating the abrasive disc holder sanding pad to control its unlocking.



WARNING!: never press the wheel spindle locking button until the tool has stopped moving and is perfectly stationary; the gear box or the push button pin could be broken and the guarantee would be invalidated.

2. Mode insert the 17 mm wrench (13) into the pocket of the shaft between the abrasive disc holder sanding pad and the gear box to lock the wheel holder shaft (5). Proceed as in the 1st mode: "Unscrew the ring nut [...]"

Tools other than those mentioned must not be used for slackening for tightening purposes.



WARNING: Before use, check the state of the wheel. The wheels must be properly assembled and must rotate freely. Never use defective or damaged wheels/cutters. Defective wheels can fall to pieces and cause dangerous incidents.

Start the tool and check that there are no unusual vibrations, no dismounting movement of the abrasive disc. **Otherwise switch-off the tool immediately and eliminate the cause.**

STARTING AND STOPPING

- **Starting:** push the slide of the ON/OFF (2) forward; if the tool is to be locked in the ON position, apply pressure to the front part of the slide switch at the same time.
- **Stopping:** release the slide ON/OFF (2).
If locked, press the ON/OFF switch in the lower part downwards and release it in the OFF position.



WARNING: after an interruption of the electrical energy, if the ON/OFF switch is inserted, it is necessary to release the switch (see Stopped).

ELECTRONIC RPM REGULATION

The rpm can be adjusted by rotating the speed adjustment wheel(3) located on the rear of the tool. The choice of speed depends on the characteristics of the abrasive paper disc and the material to be worked.

ACCESSORIES

Abrasive discs Ø 115 mm.



The use of tools of larger diameter will overload the motor and drive system leading to rapid deterioration.

MAINTENANCE



All maintenance operations are carried out with the power supply disconnected. At the end of each work session, or when required, remove any dust from the body of the tool using a jet of compressed air, paying particular attention to the motor ventilation slots.

No other maintenance operations must be undertaken by the user. Maintenance and cleaning of the inner parts, like brushes, ball bearings, gears etc. or others, must be carried out only by an authorized customer-service workshop or on www.rupes.com.

Use only the original RUPES parts or accessories.

DISPOSAL (WEEE DIRECTIVE)



For EU countries only: According to the European Directive on Waste from electrical and electronic equipment and its implementation in conformity with national standards, exhausted electrical equipment must be collected separately, in order to be recycled in an environmentally friendly way. The product, when it reaches the end of its life, must not be dispersed in the environment or thrown away as household waste. It must be disposed at authorized recycling centres (contact your local authorities to know where to dispose of the product according to the law). The correct disposal of the product contributes to the health and preservation of the environment.

Illegal disposal of the product will entail penalties against the offenders. Disposing of the product correctly contributes to protecting human health and safeguarding the environment. Any illegitimate disposal of the product will be punishable by law.

CONFORMITY DECLARATION

We declare on our responsibility that the hand-held motor operated tool, which is mentioned in the present operating manual, is in conformity with the Essential Requirements of Safety of the following Directives:
2006/42/EC; 2014/30/EU; 2011/65/EU

The tests have been carried out in accordance with following Standards:

EN 60745-1:2009 + A11:2010
EN 60745-2-3:2011 + A2:2013 + A11:2014 + A12:2014 + A13:2015
EN 55014-1:2006 + A1:2009 + A2:2011
EN 55014-2:1997 + A1:2001 + A2:2008
EN 61000-3-2:2006 + A1:2009 + A2:2009
EN 61000-3-3:2013
EN IEC 63000: 2018

Vermezzo con Zelo(MI), 01/12/2021

RUPES S.p.A a socio unico

IL PRESIDENTE

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