



Batteries Lapidary grinder

USER'S MANUAL

14312024



42143036
January, 16, 2024

Partners in excellence



Foreword

This user's manual is valid for the following products:

14312024: Batteries lapidary grinder Ø115

Revisions history

| Version | Date | Author | Comments |
|---------|----------|--------|-------------------|
| 00 | 16.01.24 | FR | Document creation |
| | | | |
| | | | |
| | | | |
| | | | |

Summary

| | | |
|------|--|----|
| 1. | General information | 4 |
| 1.1. | About the notice | 4 |
| 1.2. | General requirements | 4 |
| 1.3. | Receiver of the operating instructions | 4 |
| 1.4. | Exclusion of liability | 4 |
| 1.5. | Intellectual property | 5 |
| 2. | Safety labels explanation | 6 |
| 3. | General safety instructions | 7 |
| 4. | Description | 9 |
| 5. | Use instructions | 10 |
| 5.1 | Storage | 10 |
| 5.2 | Handling | 10 |
| 5.3 | Mounting the grinding wheel | 10 |
| 5.4 | Safety measures to be taken before use | 10 |
| 5.5 | Grinding wheel replacement | 11 |
| 6. | Maintenance | 12 |
| 6.1 | Maintenance frequency | 12 |
| 6.2 | After-Sales Service | 12 |
| 6.3 | Environmental protection | 12 |
| 6.4 | Elimination | 13 |
| 7. | Batteries instructions | 14 |
| 7.1 | Safety instructions | 14 |
| 7.2 | Specified use | 14 |
| 7.3 | Charging | 15 |
| 8. | Signalization | 16 |
| 9. | Technical characteristics | 17 |
| 10. | Spare parts & consumables | 18 |
| 10.1 | Consumables | 18 |
| 10.2 | Motor WPB-36-18 LTX | 18 |
| 10.3 | Lapidary grinder Ø115 (ref : 14312024) | 20 |
| 11. | CE Certificate of conformity | 22 |

1. General information

This user's manual is a translation of the French version. The French version will be decisive in case of litigation.

User or maintenance personnel must have read and understood these instructions for use.

The instructions must be always accessible and to all people concerned.

1.1. About the notice

This user's manual has been drawn up according to the technical data applicable at the time of printing. Minor changes may occur as part of product improvement.

Technical data is given as an approximation.

The photos are non-contractual (modification of the machine, optional accessory, etc.)

1.2. General requirements

Labor laws applicable in the areas of use and the instructions relating to safety must be respected. In the event of non-compliance, the operator will assume full responsibility.

In the event of a discrepancy between the regulations at the operator those of the machine manufacturer and its supplier, the most stringent regulations will apply.

The purchaser is responsible for providing all equipment, consumables, and resources necessary for commissioning the product and training staff. The manufacturer of the product having non influence of the conditions of use and training of personnel, declines all responsibility for the application of the instructions and training received.

However, our After-Sales Service is at your complete disposal to provide consulting, training, and other advisory services.

1.3. Receiver of the operating instructions

The instructions for use described in this user's manual enable the product to be used properly.

These instructions are written for the exclusive use of qualified personnel who have proven their ability to handle the product as well as product maintenance personnel.

1.4. Exclusion of liability

Any use of the product different from that indicated is non-compliant and endangers the life and health of personnel as well as the surrounding equipment.

PANDROL declines all liability in the event of bodily injury or material damage to the operator or third parties in the following cases:

- When the product is not used in accordance with instructions,



- If these instructions have not been read or understood by the user or the maintenance personnel or if the personnel are not sufficiently qualified.
- If the product has been used for an application other than that intended,
- If the product is used in condition outside the indicated limit values
- If the product is not maintained using original spare parts,
- If components and related element of the product are modified arbitrarily.

1.5. Intellectual property

The technical characteristics and construction features of the product constitute the intellectual property of PANDROL.

The copyright on this user's manual belongs to PANDROL. Any reproduction, publication, or any other mode of exploitation for competitive purposes of this user's manual is prohibited. The purchaser and operator of the product is prohibited from communicating its content to persons outside the company.

2. Safety labels explanation



The machine can be dangerous.

Careless and incorrect use results in injury to the operator.



Carefully read the instructions of the operating manual before using the machine



Sparks can cause fire in combustible material such as petrol, wood, dry grass, ...

3. General safety instructions

- Never start up the machine until you have read and understood the directions for use,
- User must always work with clean equipment,
- Never use the machine when you are tired or under influence of medicines, alcohol or substances which can alter your sight, dexterity, or appreciation capacity,
- Operator must respect the regulations, procedures, and particular applicable orders in effect yard,
- Use and maintenance interventions must be carried out by qualified personnel,
- The operator must wear the necessary protection for grinding operation: glasses, gaiters, gloves, etc.
- The machine must be handled by 1 operator and be held with both hands to drive it with accuracy and safety, careless use can turn it into a dangerous tool,
- The operator must ensure that no one can affect his work (people, animals, flammable material, buried cables and wires). Sawing operation can start when the working area is free from any obstacle,
- Under no circumstances the original design and configuration should be modify without approval from PANDROL,
- To work safely the operator must have a firm foothold and a good balance,
- If sparks are directed (directly or not) towards a flammable material (shrubs, culture...), place a screen stopping any incandescent particles to avoid any fire,
- The personal protective equipment is mandatory;



- **Don't expose your machine or tools to rain, they should be store in a dry place,**
- The **lapidary grinder Ø115** reference 14312024 is designed to work exclusively with a **grinding wheel Ø115 mm with a sunk nut Ø5/8" – 11 threads by inch,**
- Do not use grinding wheel which maximum rotation speed stipulated by the supplier would be inferior to 40 m/s,
- Always disconnect the grinder from the electricity supply before carrying out any work on the machine (changing grinding wheel for example)
- Never use damage grinding wheels,
- Verify the grinding wheel deadline date of use,



Never use griding wheel which have passed the deadline date of use

- Every time a new grinding wheel is fitted or reassembled, let it run slightly for 30 seconds. During this test, all the staff must be kept at a distance except for the user who must hold the machine in such a way that he is outside the wheel rotation area and away from the safety opening side,
- Always make sure that the grinder is switched off before plugging the supply cord into the mains socket,
- If an extension supply cord is used outside, only see one which has been approved for the purpose,
- Always guide the supply cord away to the rear of the grinder,
- Measure the grinding wheel rotation speed at regular intervals and imperatively every time the machine is repaired,



- Verify grinding wheel tightening to avoid any injury during grinding operation,
- Fix and tighten the safety guard before grinding, the grinder must imperatively be used with the guard,
- Replace the safety guard every time a grinding wheel has burst,
- Store the grinding wheels in a dry place,
- Warning: When engine stops running, the grinding wheel continues its rotation for several seconds.

4. Description

Small and light the lapidary is used for rail reprofiling operation after aluminothermic welding.

This machine allows a:

- **Rough grinding:** it must be performed before the weld section can be opened to any traffic. ~~On main railways, no metal excess thickness above 0.5 mm must be remained on the top of the rail head as well as on the lateral surface with the running surface.~~
- **Finishing grinding:** this operation is performed to suppress any geometrical discontinuity due to welding and also enables the weld to be checked up.

The engine is fed with 2 batteries (18V and 8Ah).

For safety instructions, environmental protection and use of batteries, refer to the manufacturer's manual.

5. Use instructions

5.1 Storage

Don't store the grinding unit outside without engine protection from rain, it must always be store in a dry place.

Batteries must always be separated from the motor during transport.

5.2 Handling

The weight of the grinder in order to work is 9 kg.

The two handles provided on the frame allow a lonely person to handle and operate the machine.

5.3 Mounting the grinding wheel

Always switch off the motor and unplug the batteries before fitting the grinding wheel.

- Push the wheel lock button and fit the wheel on its axle.
- Before any use, to ensure a good tightening of the wheel, start the engine and push on the rotating wheel.



Blocking button

5.4 Safety measures to be taken before use

Tools :

- Use exclusively the flange delivered with the grinder.
- Grinders are manufactured to receive a $\varnothing 115$ mm grinding wheel, the manufacturer's instruction given on the wheel must imperatively comply with the following indications or be more important:
 - Peripheral speed : 42 m/s
 - Rotating speed : 7000 rpm

Protective guard



Never use the grinder without the guard in place.

It can be adjusted according to the wheel's wear.

5.5 Grinding wheel replacement



- Imperatively stop the motor,
 - Unplug the batteries,
 - Wait the complete stop of the wheel before pushing the lock button.
-

Procedure: push the button to unlock the grinding wheel and loosen it with the key **reference 31910002** delivered with the machine

6. Maintenance

6.1 Maintenance frequency

Responsibility for maintenance is the responsibility of the owner of the equipment. Maintenance must be carried out at least once a year by a competent and qualified person.

| TASK | Nature of the operation | FREQUENCY | | | |
|------------------|--|------------|-----------|-------|----------------------------------|
| | | Before use | After use | 1500H | Wear sign or incorrect operation |
| Complete machine | Inspection of the machine | | | | |
| Complete machine | Clean the machine using a clean cloth or compressed air gun to remove dirt | | | | |
| Reducer | Renew the grease | | | | |
| Battery | Replacement | | | | |

Reducer:

- During warranty period, avoid losing reducer head screws, it can result in warranty loss
- Renew the grease every 1500 hours work,
- To remove head :
 - Loosen the screws,
 - Take off the wear grease,
 - Put 60 g of reducer new grease.

6.2 After-Sales Service

For all requests for repairs or spare parts, please contact our After-Sales Service at the following email address:

contact.sav@pandrol.com

When making your request, please specify the machine reference, as well as its serial number and year of manufacture.

6.3 Environmental protection

For all works carried out with or on the machine, comply with legal obligations to limit and avoid waste. The management of this waste must be done in comply with the environmental protection regulations in force in the country of use.

During repair and maintenance work, materials that may contaminate water such as lubricants and oils, should not contaminate the ground or be poured into pipes.

6.4 Elimination

Machine elimination

Elimination of the machine and its components or fluids must comply with local disposal regulations.

Due to risk of pollution for the environment, call on a specialized company to dismantle the machine.



Batteries elimination

Do not dispose of battery packs together with household waste material and must be collected separately and return to an environmentally compatible recycling facility.

Check with your local authority or retailer for recycling advice and collecting point.



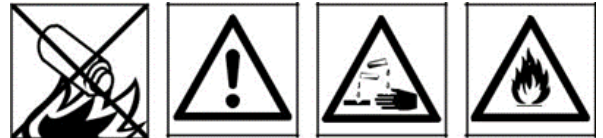
7. Batteries instructions

7.1 Safety instructions



Before using the battery pack, read the entire Operating Instructions carefully and thoroughly. Keep safe all documents accompanying the battery pack.

- Protect battery from water and moisture.
- Do not use faulty or deformed battery.
- Do not open battery.
- Do not short-circuit the contacts of the battery.



- Do not expose battery to naked flame.
- Slightly acidic, flammable fluid may leak from defective li-ion battery.
- If battery fluid leaks out and meets your skin, rinse immediately with plenty of water. If battery fluid leaks out and meets your eyes, wash them with clean water and seek medical attention immediately.
- Transporting li-ion battery packs: The shipping of li-ion battery packs is subject to laws relating to the carriage of hazardous goods (UN 3480 or UN 3481). Inform yourself of the currently valid specifications when shipping li-ion battery packs. If necessary, consult your freight forwarder. Certified packaging is available from Metabo.



Damages or leaking batteries must not be transported. Contact your forwarding contractor for further information.

7.2 Specified use

The battery is designed for use in corresponding Metabo battery-operated power tools. They must only be charged using Metabo chargers. To select the appropriate device, please contact us. Read the relevant instructions for the devices used. For example, the charging process is displayed on the charger. For details, see the charger instructions.



The user bears sole responsibility for any damage caused by improper use. Generally accepted accident prevention regulations and the safety information must be observed.

7.3 Charging

Charge the battery before use (see 4.4.2 Battery). Do not recharge a fully charged battery pack. If performance diminishes, recharge the battery pack.

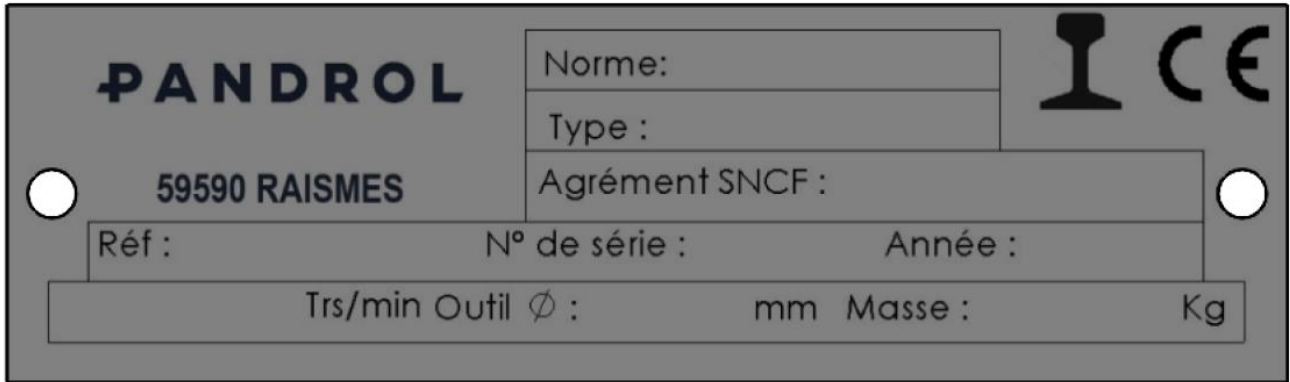
The ideal storage temperature is between 10°C and 30°C. The permissible storage temperature is between 0°C and 50°C.

Li-Power li-ion battery has a capacity and a signal indicator (depending on the model):

- Press the button and the charge level is displayed by the LEDs.
- If one LED is flashing, the battery pack is almost flat and must be recharged.

8. Signalization

Our machine is manufactured under a traceability process and identified by a unique serial number.



9. Technical characteristics

- Weight: 7.5 kg with battery
- Dimension:
 - Length: 630 mm
 - Wide: 120 mm
 - Height: 165 mm
- Motor:
 - Power: 2400 W
 - Rotation speed : 6600 tr/min \pm 300
 - Double insulated
- Batteries:
 - Type: LIHD
 - Tension: 2 x 18 V
 - Capacity: 8 Ah
- Grinding wheel: \varnothing 115 with sunk nut \varnothing 5/8" 11 thread by inch
- Noise level:
 - Lpa : 88 dB (A)
 - Lwa : 99 dB (A)
- Vibration:
 - Motor side handle: 5 m/s²
 - Tool side handle: 4.75 m/s²



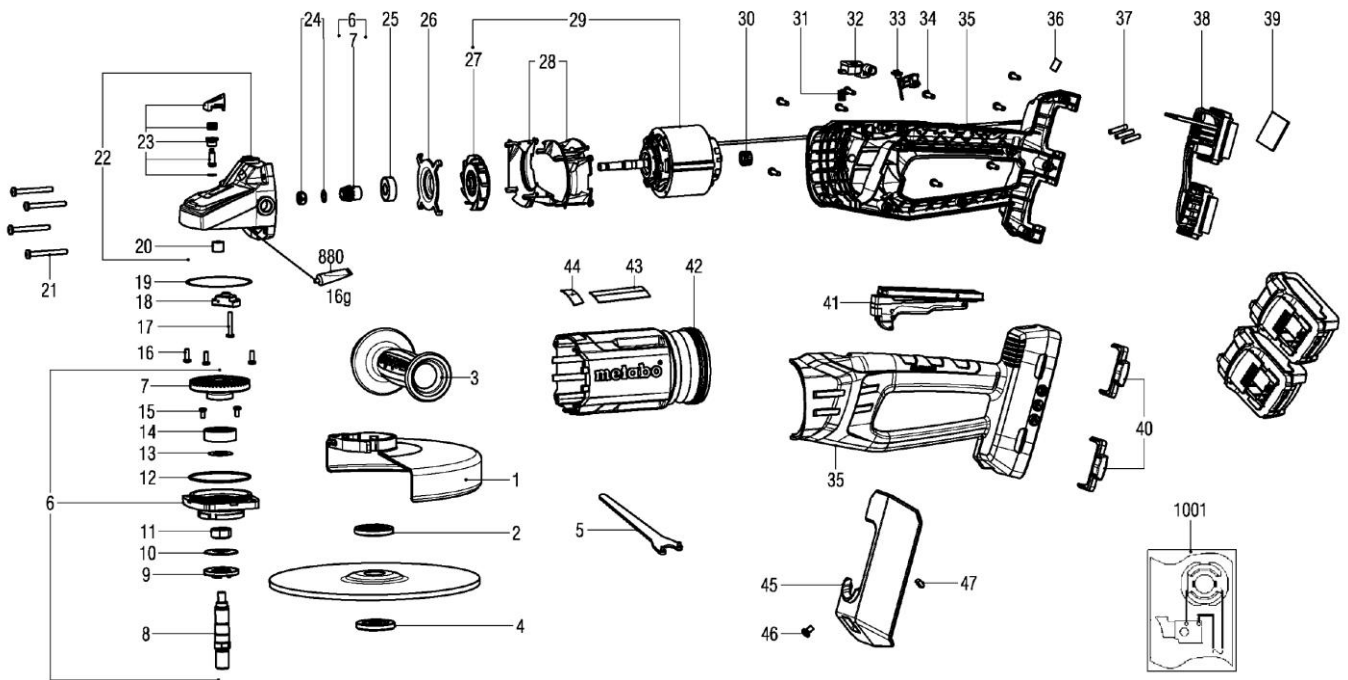
The wear grinding wheel is a waste following code 12 01 21

10. Spare parts & consumables

10.1 Consumables

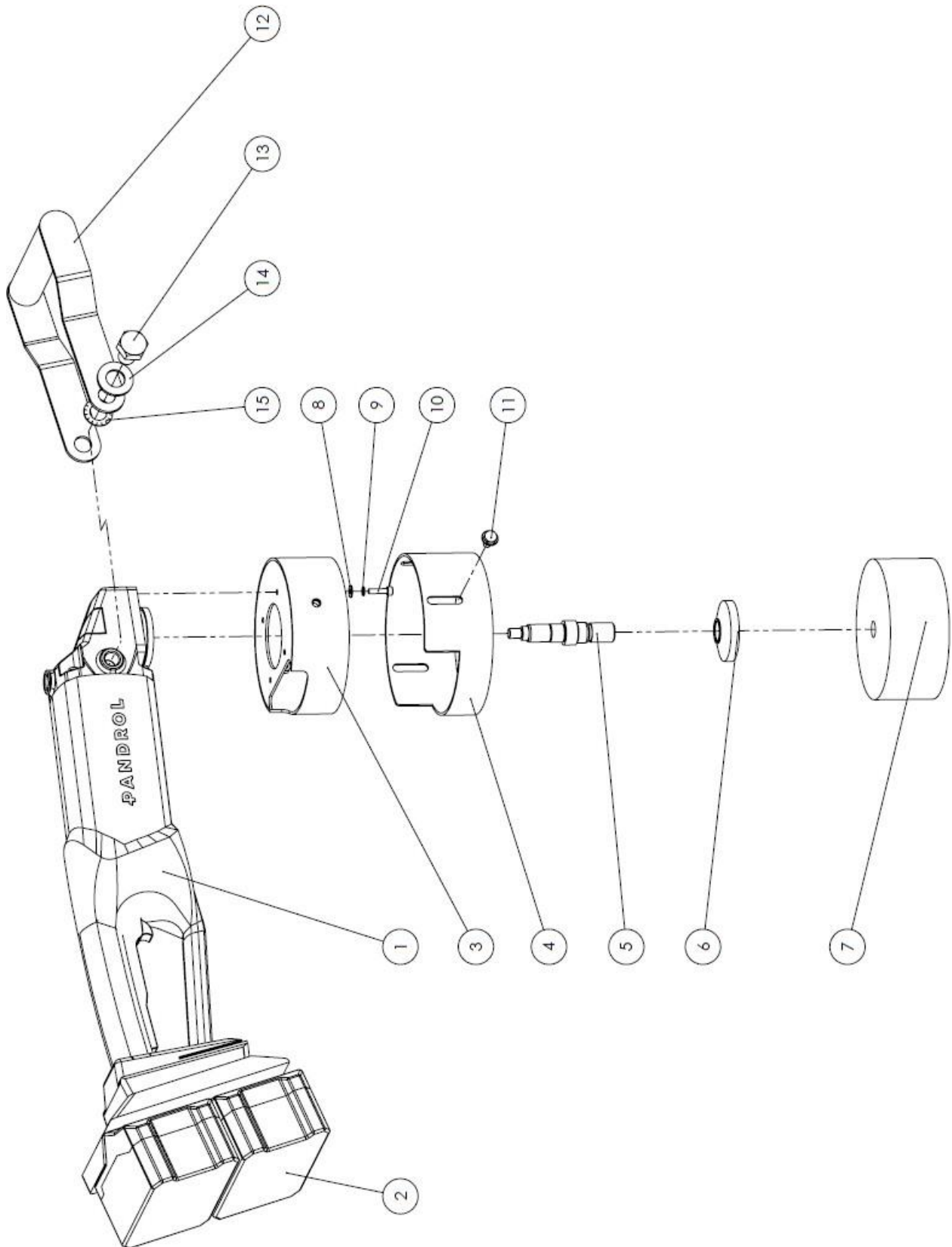
This machine is designed to work with grinding wheels according to the machine with the reference 47901006.

10.2 Motor WPB-36-18 LTX



| Position | Quantité | Référence | Désignation | PG |
|----------|----------|-----------|--|----|
| 1 | 1 | 316076800 | Capot de protection complet,D230 | 31 |
| 2 | 1 | 341031160 | Bride de fixation | 22 |
| 3 | 1 | 314001470 | Poignee antivibratoire,M 14 | 30 |
| 4 | 1 | 316027620 | Flasque (Quick) | 30 |
| 6 | 1 | 316073030 | Bride complet | 36 |
| 7 | 1 | 316073040 | Roue conique avec pignon et Pignon | 31 |
| 8 | 1 | 341163200 | Arbre d'engrenage M14 | 19 |
| 9 | 1 | 341039120 | Bride de fixation | 17 |
| 10 | 1 | 141156890 | Jonc | 11 |
| 11 | 1 | 341072600 | Clavette de serrage | 12 |
| 12 | 1 | 143195400 | Joint torique | 11 |
| 13 | 1 | 141153220 | Rondelle | 11 |
| 14 | 1 | 143115190 | Roulement billes,15X 35X 11 | 19 |
| 15 | 2 | 141119570 | Vis a tete bombee | 11 |
| 16 | 3 | 141119860 | Vis a tete bombee | 12 |
| 17 | 1 | 141124100 | Vis a tete bombee | 11 |
| 18 | 1 | 341212240 | Bague de butee | 20 |
| 19 | 1 | 339060320 | Disque de compensation | 12 |
| 20 | 1 | 143116090 | Douille d'aiguilles | 11 |
| 21 | 4 | 141120560 | Vis tole avec tete bombee | 11 |
| 22 | 1 | 316073160 | Carter du reducteur complet | 30 |
| 23 | 1 | 316073070 | Dispositif d'arret de broche | 40 |
| 24 | 1 | 316073050 | Necessaire de fixation | 20 |
| 25 | 1 | 143116220 | Roulement a billes, 9x26x8 | 14 |
| 26 | 1 | 339130880 | Couvercle de palier fixe | 14 |
| 27 | 1 | 330002290 | Ventilateur complet | 15 |
| 28 | 2 | 343438540 | Diffuseur | 17 |
| 29 | 1 | 316073060 | Moteur complet,36 V | 57 |
| 30 | 1 | 343438590 | Couverture | 14 |
| 31 | 1 | 342004070 | Ressort de pression | 11 |
| 32 | 1 | 343438570 | Touche d'arret | 17 |
| 33 | 1 | 316069370 | Jeu de cordons avec interrupteur + LED | 26 |
| 34 | 9 | 141116020 | Vis tole avec tete bombee | 12 |
| 35 | 1 | 343454540 | Poignee 2 Partie | 29 |
| 36 | 1 | 338129960 | Plaque indicatrice, CAS | 12 |
| 37 | 3 | 341213440 | Gaine thermoretractable | 11 |
| 38 | 1 | 343089020 | Unite electronique,WPB36-18LTX | 51 |
| 39 | 1 | 338077630 | Plaque signalétique | 11 |
| 40 | 2 | 343447510 | Curseur de commande | 11 |
| 41 | 1 | 343412690 | Interrupteur, | 30 |
| 42 | 1 | 315013780 | Carter du moteur | 23 |
| 43 | 1 | 338134430 | Plaque d'identite | 13 |
| 44 | 1 | 338127740 | Plaque indicatrice | 14 |
| 45 | 1 | 315420830 | Pare-etincelles | 23 |
| 46 | 1 | 141110580 | Vis a tete bombee | 11 |
| 47 | 1 | 141130660 | Ecrou carre | 11 |
| 48 | 1 | 143160210 | Toroidal ferrite | 12 |
| 66 | 2 | 316066720 | Verrouillage complet | 14 |
| 67 | 4 | 342004180 | Pressure spring | 11 |
| 880 | 1 | 344130910 | Tube de graisse 50gr | 24 |
| 1001 | 1 | 338506830 | Plan de cablage | |

10.3 Lapidary grinder Ø115 (ref : 14312024)



| Rep | Ref | Qté | Désignation | Description |
|-----|----------|-----|--------------------------------------|------------------------------------|
| 1 | 48402049 | 1 | Meuleuse seule Metabo WPB 36-18 LTX | Metabo WPB 36-18 LTX Grinder alone |
| 2 | 48402027 | 2 | Batterie LIHD 18V - 8,0 Ah Metabo | LIHD 18V - 8,0 Ah Metabo battery |
| 3 | 35910520 | 1 | Carter fixe ø115 Metabo | Fixed casing Ø115 |
| 4 | 35910523 | 1 | Carter mobile ø115 Metabo | Mobile casing Ø15 |
| 5 | 31110434 | 1 | Axe de meule 5/8" | Grinding wheel shaft 5/8" |
| 6 | 31210381 | 1 | Flasque moteur | Motor flange |
| 7 | 47901006 | 1 | Meule ø115 | Grinding wheel |
| 8 | 41104003 | 4 | Rondelle M4N Zinguée øext 10 | Washer M4N |
| 9 | 41104001 | 4 | Rondelle W4 zinguée | Washer W4 |
| 10 | 41004012 | 4 | Vis CHC M4 x 20 Cl:8,8 Zinguée | Screw CHC M4 x 20 Cl. 8,8 |
| 11 | 41006051 | 3 | Vis avec rondelle elastique HM6 x 12 | Screw with elastic washer HM6 x 12 |
| 12 | 35910519 | 1 | Poignée meuleuse METABO | Handle |
| 13 | 41014013 | 2 | Vis H M14 x 20 Cl:8,8 Zinguée | Screw H M14 x 20 Cl. 8,8 |
| 14 | 41114001 | 2 | Rondelle M14N Zinguée øext 30 | Washer M14N |
| 15 | 41114003 | 2 | Rondelle eventail de 14 Zinguée | Fan Washer M14 |



11. CE Certificate of conformity



CERTIFICATE OF CONFORMITY

Le constructeur soussigné (*The undersigned manufacturer*) :

PANDROL SAS
Z.I. DU BAS PRE
59590 RAISMES

Certifie que le matériel neuf désigné ci-après (*Certify that the under described products*) :

Meuleuse lapidaire Ø115
Moteur METABO sur batterie

Lapidary grinder Ø115
METABO motor on batterie

| | |
|--------------------------------------|----------------------|
| Version Ø115 (réf : 14312024) | N° de série : |
|--------------------------------------|----------------------|

Est conforme à (*comply with*) :

- Norme Européenne (*European Norm*) : NF EN 13977
- Directive machine (*Machine directive*) : 2006/42/CE
- Procédure d'auto-certification (*self-certification procedure*) : Article R4313-20

La société **PANDROL SAS** est le détenteur du dossier technique.

Petite-Forêt, Janvier 2024

Thibaut Descamps

Directeur BU EMEA / EMEA BU Director

PANDROL

Find out more

pandrol.com

Raismes
Z.I. du bas Pré 59590 Raismes - France

+33 (0)3 27 22 26 26
infos.pandrol-fr@pandrol.com

© Pandrol

Partners in excellence