

drive unit, pressing tongs, Mini pressing tongs, pressing ring and adapter tongs will be needlessly stressed.

- **Before using pressing tongs, pressing rings with adapter tongs (pressing jaws, pressing slings with adapter jaws) from other manufacturers, check whether these are suitable for the REMS radial presses.** Pressing tongs, pressing rings with adapter tongs of other makes can be used in REMS Power-Press SE, REMS Power-Press, REMS Power-Press ACC, REMS Akku-Press and REMS Akku-Press ACC if they are designed for the necessary thrust force of 32 kN, fit mechanically in the REMS drive unit, can be properly locked and break without danger, e.g. without the risk of flaying parts of the press jaws, at the end of their life or when overloaded. It is recommended to only use pressing tongs and pressing rings with adapter tongs which are designed with a safety factor  $\geq 1.4$  against permanent fracture, i.e. withstand a necessary thrust force of 32 kN up to a thrust force of 45 kN. Also read and observe the instruction manuals and safety instructions of the respective manufacturer/supplier of the pressing tongs, pressing rings with adapter tongs and the installation and assembly instructions of the manufacturer supplier of the press fitting system to be pressed and observe any restrictions for use that are specified there. Failure to do so could lead to fracture and flying parts can cause serious injuries. Pressing tongs, pressing rings with adapter tongs (pressing jaws, pressing slings with adapter jaws) from other manufacturers are not approved by REMS for REMS Power-Press E.
- **Only operate the axial press with pressing heads fully inserted.** Failure to do so could lead to fracture and flying parts can cause serious injuries.
- **Always screw expanding heads as far as they will go onto the expander.** Failure to do so could lead to fracture and flying parts can cause serious injuries.
- **Use only undamaged pressing tongs, Mini pressing tongs, pressing rings, adapter tongs, pressing heads and expanding heads.** Damaged pressing tongs, Mini pressing tongs, pressing rings, adapter tongs, pressing heads and expanding heads can jam or fracture and/or the press fitting will be faulty. Do not attempt to repair damaged pressing tongs, Mini pressing tongs, pressing rings, adapter tongs, pressing heads and expanding heads. Failure to do so could lead to fracture and flying parts can cause serious injuries.
- **Pull out the plug or remove the battery before assembly/disassembly of pressing tongs, Mini pressing tongs, pressing rings, adapter tongs, pressing heads and expanding heads.** There is a risk of injury.
- **Comply with the maintenance regulations for the power tool and follow the maintenance instructions for pressing tongs, Mini pressing tongs, pressing rings, adapter tongs, pressing heads and expanding heads.** Following the maintenance instructions has a positive effect on the life of the power tool, the pressing tongs, Mini pressing tongs, pressing rings, adapter tongs, pressing heads and widening heads.
- **Check the connecting cable and extension leads of the power tool regularly for damage.** Have these renewed by qualified experts or an authorised REMS customer service workshop in case of damage.
- **Only allow trained persons to use the power tool.** Apprentices may only use the power tool when they are over 16, when this is necessary for their training and when they are supervised by a trained operative.
- **Children and persons who, due to their physical, sensory or mental abilities or lack of experience and knowledge are unable to operate the power tool safely may not use this power tool without supervision or instruction by a responsible person.** Otherwise there is a risk of injury due to false operation.
- **Only use approved and appropriately marked extension leads with a sufficient cable cross-section.** Use extension leads up to a length of 10 m with cable cross-section 1.5 mm<sup>2</sup>, from 10–30 m with cable cross-section 2.5 mm<sup>2</sup>.

## Safety instructions for batteries

### ⚠ WARNING

Read all the safety notes, instructions, illustrations and technical data which come with this power tool. Failure to heed the following instructions can lead to electric shock, fire and/or severe injuries.

Save all warnings and instructions for future reference.

- **Only use the battery in REMS power tools.** Only then is the battery safe from dangerous overloading.
- **Only use original REMS batteries with the voltage specified on the rating plate.** Using other batteries can lead to injuries and risk of fire due to exploding batteries.
- **Use the battery and the rapid charger only in the specified operating temperature range.**
- **Only recharge REMS batteries in the REMS rapid charger.** There is a risk of fire if an unsuitable battery charger is used.
- **Charge the battery to full capacity in the REMS rapid charger before using for the first time.** Batteries are delivered partly charged.
- **Insert the battery into the battery compartment straight and without force.** There is a risk of bending the battery contacts and damaging the battery.
- **Protect the batteries against heat, sunlight, fire, moisture and wet.** There is a risk of explosion and fire.
- **Do not use the batteries in areas where there is a risk of explosion and in the vicinity of inflammable gases, solvents, dust, fumes, liquids for example.** There is a risk of explosion and fire.
- **Do not open the battery or modify its construction.** There is a risk of explosion and fire due to short-circuiting.
- **Non utilizzare batterie con alloggiamento difettoso o con contatti danneggiati.** Damage to or improper use of the battery can cause fumes to escape. The fumes can irritate the respiratory tracts. Let in fresh air and consult a doctor in case of symptoms.

- **Fluid can leak from the battery when used improperly. Do not touch the fluid.** Leaking battery fluid can cause skin irritation and burns. Rinse off immediately with water in case of contact. Also consult a doctor if the fluid gets into the eyes.
- **Observe the safety instructions on the battery and the rapid charger.**
- **Keep unused batteries away from paper clips, coins, keys, nails, screws or other small metal objects which could cause bridging of the contacts.** There is a risk of explosion and fire due to short-circuiting.
- **Remove the battery before stowing/storing the power tool for long periods of time.** Protect the battery contacts against short-circuiting, e.g. with a cap. This reduces the risk of fluids escaping from the batteries.
- **Do not throw defective batteries in the normal household waste.** Hand the defective batteries over to an authorised REMS contract service workshop or a recognised disposal company. Observe the national regulations.
- **Keep batteries out of reach of children.** Batteries can be life threatening if swallowed, seek medical assistance immediately.
- **Avoid contact with leaking batteries.** Leaking fluid can cause skin irritation and burns. Rinse off immediately with water in case of contact. Also consult a doctor if the fluid gets into the eyes.
- **Take the batteries out of the power tool when they are empty.** This reduces the risk of fluids escaping from the batteries.
- **Never recharge the non-rechargeable batteries, open them, throw them on fires or create a short-circuit.** The batteries can cause fires and burst. There is a risk of injury.

### Explanation of symbols

#### ⚠ WARNING

Danger with a medium degree of risk which could result in death or severe injury (irreversible) if not heeded.

#### ⚠ CAUTION

Danger with a low degree of risk which could result in minor injury (reversible) if not heeded.

#### NOTICE

Material damage, no safety note! No danger of injury.



Read the operating manual before starting



Use eye protection



Use ear protection



Electrical device complies with protection class II



Environmental friendly disposal

## 1. Technical Data

### Intended use

#### ⚠ WARNING

REMS radial presses are intended for the purpose of making press joints of all common pressfitting systems.

REMS cropping tongs are intended for the purpose of cropping threaded bars up to the strength class 4.8 (400 N/mm<sup>2</sup>).

REMS cable shears are intended for the purpose of cropping electric cables  $\leq 300 \text{ mm}^2$  ( $\varnothing 30 \text{ mm}$ ).

REMS axial presses are intended for the purpose of making compression sleeve connections.

REMS pipe expanders are intended for the purpose of expanding and calibrating pipes.

REMS batteries are intended for supplying energy to the REMS cordless drive units and the REMS cordless LED lamp. Note voltage of the batteries.

Rapid chargers are intended for charging the REMS batteries.

All other uses are not for the intended purpose and are prohibited.

### 1.1. Scope of Supply

Electrical radial presses/pipe expanders: Drive unit, instruction manual, sheet steel case

Cordless presses/pipe expanders: Drive unit, Li-Ion battery, rapid charger, instruction manual, sheet steel case

### 1.2. Article numbers

REMS Power-Press SE drive unit	572101
REMS Power-Press drive unit	577001
REMS Power-Press ACC drive unit	577000
REMS Mini-Press ACC drive unit Li-Ion	578001
REMS Mini-Press 22 V ACC drive unit Li-Ion	578002
REMS Akku-Press drive unit Li-Ion	571003
REMS Akku-Press ACC drive unit Li-Ion	571004
REMS Ax-Press 25 ACC drive unit Li-Ion	573003
REMS Ax-Press 25 L ACC drive unit Li-Ion	573004
REMS Ax-Press 40 drive unit Li-Ion	573006
REMS Akku-Ex-Press Cu ACC drive unit Li-Ion	575006
REMS Akku-Ex-Press P drive unit Li-Ion	575009
REMS Akku-Ex-Press P ACC drive unit Li-Ion	575008
REMS Akku-Ex-Press Q & E ACC drive unit Li-Ion	575005
REMS Power-Ex-Press Q & E ACC drive unit	575007
Expanding device 6–40 mm, 1/2–1 1/2"	575100
Expanding device 54–63 mm, 2"	575101
REMS battery Li-Ion 14.4 V, 1.6 Ah	571545

similar installation conditions, only operate the power tool on the mains with a fault current protection switch (FI switch) which interrupts the power supply as soon as the leakage current to earth exceeds 30 mA for 200 ms.

### Rechargeable batteries

#### NOTICE

Always hold the battery 14.4 V (25) upright when inserting it in the drive unit or the rapid charger. If inserted at an angle it can cause damage to the contacts and result in a short circuit which damages the battery.

#### Total discharging by undervoltage

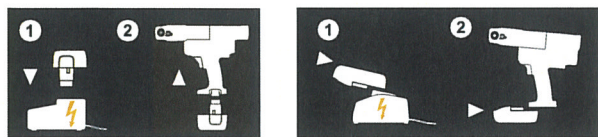
The Li-Ion batteries may not drop below a minimum voltage because otherwise the battery could be damaged by "total discharge". The cells of the REMS Li-Ion battery are delivered pre-charged to approx. 40 %. Therefore the Li-Ion batteries must be charged before use and recharged regularly. Failure to observe this regulation of the cell manufacturer can lead to damage to the Li-Ion battery by total discharging.

#### Total discharging due to storage

If a relatively low charged Li-Ion battery is stored, self discharging can lead to total discharge damage of the battery after longer storage. Li-Ion batteries must therefore be charged before storing and recharged every six months at the latest and charged again before use.

#### NOTICE

**Charge the battery before use. Recharge Li-Ion batteries regularly to avoid their total discharge. The rechargeable battery will be damaged by total discharge.**



Only use a REMS rapid charger for charging. New Li-Ion batteries and Li-Ion batteries which have not been used for a long time only reach full capacity after several charges. Non-rechargeable batteries may not be charged.

#### Battery charging status check for all Li-Ion cordless presses

All REMS cordless presses made as of 2011-01-01 are equipped with an electronic battery charging status check with battery charge indication by a 2-coloured green/red LED (23). The LED lights green when the battery is fully or still sufficiently charged. The LED lights red when the battery must be charged. If this condition occurs during pressing and the pressing process is not finished, the pressing must be completed with a fully charged Li-Ion battery. If the drive unit is not used, the LED goes out after approx. 2 hours but comes on again when the drive unit is switched back on.

#### Graduated charging level indicator (28) of the Li-Ion 21.6 V battery

The graduated charging level indicator shows the charging level of the battery with 4 LEDs. At least one LED lights for a few seconds after pressing the key with the battery symbol. The more LEDs that light green, the higher the charging level of the battery. If a LED flashes red, the battery must be recharged.

#### Rapid charger Li-Ion/NiCd and rapid charger Li-Ion (Art. No. 571560 and 571575)

The left control lamp lights up and remains green when the mains plug is plugged in. If a battery is inserted in the rapid charger, the green control lamp flashes to indicate that the battery is charging. The green light stops flashing and remains on to signal that the battery is fully charged. If the red control lamp flashes, the battery is defective. If the red control lamp comes on and remains on, this indicates that the temperature of the rapid charger and / or the battery is outside the permissible operating range of the rapid charger of 0°C to +40°C.

#### NOTICE

The rapid chargers are not suitable for outdoor use.

- 2.2. Installing (changing) the pressing tongs, pressing tongs Mini (Fig. 1 (1)), pressing tongs 4G (Fig. 15), pressing tongs (S) (Fig. 16), the pressing ring (PR-3S) with adapter tongs (Fig. 17), the pressing ring (PR-3B) with adapter tongs (Fig. 18), the pressing ring 45° (PR-2B) with adapter tongs (Fig. 19) in radial presses

Pull out the mains plug or remove the battery. Only use pressing tongs, pressing tongs Mini or pressing rings with system-specific pressing contour according to the pressfitting system to be pressed. Pressing tongs, pressing tongs Mini or pressing rings have letters on the pressing jaws or pressing segments to identify the pressing contour and a number to identify the size. The adapter tongs are marked by the letter Z and a number which serves for assignment to the permissible pressing ring which carries the same identification. The pressing ring 45° (PR-2B) may only be applied at an angle of 45° to the adapter tongs Z1/adapter tongs Mini Z1 (Fig. 19). Read and observe the installation and assembly instructions of the manufacturer/supplier of the press fitting system to be pressed. Never use non-matching pressing tongs, pressing tongs Mini, pressing ring, adapter tongs and adapter tongs Mini (pressing contour, size). The press joint could be rendered useless and the machine and pressing tongs, pressing tongs Mini, pressing ring, adapter tongs and adapter tongs Mini could be damaged.

It is best to place the drive machine on a bench or on the floor. The pressing tongs, pressing tongs Mini, adapter tongs and adapter tongs Mini can only be

installed (changed) when the press rollers (5) are fully retracted. On REMS Power-Press SE push the rotation direction lever (7) to the left and actuate the safety inching switch (8) if necessary, on REMS Mini-Press ACC, REMS Power-Press / Power-Press ACC and REMS Akku-Press / Akku-Press ACC, press the reset button (13), on REMS Mini-Press 22 V ACC press the emergency off button (27) until the press rollers (5) have moved right back.

Open the tongs retaining bolt (2). To do this, press the locking pin/bolt (4) and the tongs retaining bolt (2) springs out. Insert the chosen pressing tongs, Mini pressing tongs (1), adapter tongs and adapter tongs Mini (19). Push the tongs retaining bolt (2) forward until the locking pin/bolt (4) snaps in. At the same time, press down the pressure plate/button (3) directly over the tongs retaining bolt (2). Do not start radial presses without pressing tongs, pressing tongs Mini or pressing ring with adapter tongs and adapter tongs Mini inserted. Only start the pressing process to make a press joint. Without pressing counterpressure by the press fitting the drive machine or pressing tongs, pressing tongs Mini, pressing ring, adapter tongs and adapter tongs Mini will be exposed to unnecessarily high stress.

#### CAUTION

**Never operate press when the tongs shank (2) is not locked. Risk of fracture!**

- 2.3. Installing (changing) the pressing heads (14) in axial presses (Figs. 6, 9)

Remove the battery. Only use system-specific pressing heads. REMS pressing heads have a letter to identify the compression sleeve system and a number to identify the size. Read and observe the installation and assembly instructions of the manufacturer/supplier of the used compression sleeve system. Never use non-matching pressing heads (compression sleeve system, size) for pressing work. The press joint could be unserviceable, and both the machine and the pressing heads might be damaged.

Push the selected pressing heads (14) right in, if necessary turning them until they engage (ball catch). Keep the pressing heads and locating hole inside the pressing device clean.

- 2.4. Installing (changing) the expanding head (16) in REMS Akku-Ex-Press Q & E ACC and REMS Power-Ex-Press Q & E ACC (Fig. 7, 8)

Pull out the mains plug or remove the battery. Only use genuine expanding heads for Uponor Quick & Easy. Read and observe the installation and assembly instructions of the manufacturer/supplier of the used system. Never use non-matching expanding heads (system, size) for expansion work. The joint could be unserviceable, and both the machine and the expanding heads might be damaged. Grease the cone of the expanding mandrel (18) lightly. Screw the selected expanding head as far as it will go onto the expander. Read and observe the installation and assembly instructions of the manufacturer/supplier of the used system. REMS expanding heads P and Cu are unsuitable for the REMS Akku-Ex-Press Q & E ACC and REMS Power-Ex-Press Q & E ACC pipe expanders and may therefore not be used.

#### Changing the expanding device on the REMS Power-Ex-Press Q & E ACC

Pull out the mains plug. Unscrew the expanding device (15) from the REMS Power-Ex-Press Q & E ACC. Screw on the selected expander as far as it will go and tighten by hand.

- 2.5. Mounting (changing) the expanding head (16) on the REMS Akku-Ex-Press Cu ACC (Fig. 11)

Remove the battery. Grease the cone of the expanding mandrel lightly. Screw the selected expanding head onto the expanding device (15) to the stop. The expanding device must now be set so that the thrust of the drive machine is taken up by the drive machine and not the expanding head at the end of the expanding. Unscrew the expanding device (15) complete with screwed on expanding head from the drive machine for this. Let the feed piston run forward as far as possible without the machine switching into reverse. In this position the expander with screwed-on expanding head must be screwed onto the drive unit until the expanding jaws (17) of the expanding head (16) are fully open. The expanding head must be secured with the locking nut (24) in this position.

- 2.6. Mounting (changing) the expanding head (16) on the REMS Akku-Ex-Press P, REMS Akku-Ex-Press P ACC (Fig. 10)

Remove the battery. Grease the cone of the expanding mandrel (18) lightly. Screw the selected expanding head onto the expanding device (15) to the stop. Only use system-specific expanding heads. Expanding heads are labelled with letters to identify the compression sleeve system and with a number to identify the size. Read and observe the installation and assembly instructions of the manufacturer/supplier of the used system. Never expand with the wrong expanding heads (compression sleeve system, size). The connection could be useless and the machine and expanding heads could be damaged.

#### NOTICE

Make sure that the compression sleeve is far enough away from the expanding head (16) in the expanding process because otherwise the expanding jaws (17) can bend or break.

## 3. Operation

#### CAUTION

After the drive unit has been in storage for a long period of time, the overpressure valve must be actuated first by pressing the reset button (13) before putting back into operation. If it is stuck or stiff, it may not be pressed. The drive unit must be handed over to an authorized REMS customer service workshop for inspection.