RAUTOOL™ M1 Manual Tool Kit

Product instructions

REHAU

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This manual contains safety-related information that requires your special attention. It is indicated with the safety alert symbol and the signal words described below: :

⚠ **DANGER**	Indicates a hazardous situation which, if not avoided, will result in death or serious injury.
⚠ **WARNING**	Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
⚠ **CAUTION**	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
NOTICE	Indicates a risk of property damage, including damage to the individual components.

1. Safety information

Read all safety warnings and assembly instructions before using the tool. The tool is intended to be used for assembly of SDR11 compression-sleeve fittings in the size range of 25 to 40 mm. Follow these operating instructions and always keep the safety warnings with the tool. In addition to the operating instructions, always observe generally applicable statutory and other binding regulations relating to the prevention of and protection against accidents.

General use and care

- The tool is suitable for preparation of REHAU compression-sleeve joints only. Do not use tool for other purposes.
- Only operate the tool with original REHAU parts and accessories.
- Maintenance and repaire work should be done only in a REHAU authorized service center. We will not be responsible for any work performed by an dunauthorized person.

NOTICE

To avoid damage to tool, always follow all operating instructions.

- REHAU will not accept any liability for damage or injury attributable to unsafe product use, poor miantenance or improper product and system usage. For technical information, contact your local REHAU representative or download documents at www. rehau.com/resourcecenter.
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⚠ CAUTION

Improper handling of the tool may result in personal injury and/or damge to the tool.

- Do not touch moving parts. Touching moving parts could cause fingers to become trapped.
- Do not wear loosely fitting clothes or jewelry. They may get caught in moving parts. Wear a hat if you have long hair.
- Do not work below the minimum processing temperature of 14ā°F (-10°C). Processing at temperatures under 14°F (-10°C) or over 113°F (45°C) may result in dmage to jointing components, to the tool and/or in personal injury.

2. Items supplied

M1 25 to 40 mm

- M1 basic tool
- QC pipe expander (Art. 214176-001)
- Ratchet pipe cutter (Art. 315242-001)
- Expansion head QC 25 x 2.3 mm (Art. 131567-001)
- Expansion head QC 32 x 2.9 mm (Art. 13568-001)
- Expansion head assembly M1 40 x 3.7 mm (Art. 137314-001)
- Set of clamping jaws M1 25/32 mm (Art. 137364-001)
- Set of clamping jaws M1 40 mm (Art. 201798-001)
- Grease and brush pack
- Rugged plastic transport case
- Opening instructions

3. Replacement parts and accessories

Expander Heads
Art. No. 131567-001
25 x 2.3 mm

Art. No. 131568-001
32 x 2.9 mm

Compression Jaws
Art. No. 137364-001
25/32 mm

Art. No. 201798-001
40 mm

40 mm Expander Bit
Art. No. 137314-001

M1 Basic Tool
Art. No. 137304-001

Note: Previous versions of the threaded RO expander heads are compatible with the QC expander tool.

- Art. No. 139662-001 Threaded RO Expander head 25 x 2.3 mm
- Art. No. 137193-001 Threaded RO Expander head 32 x 2.9 mm
- Art. No. 139592-001 RO Expander tool

QC exapnder heads are not compatible with the previous expander tool.

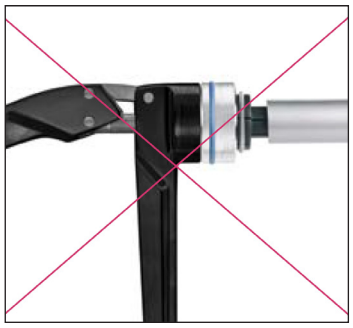
4. Tool preparation

- During every change of the jaw sets, make sure that the pins are inserted completely and safely.
- Before each use of the jaw sets, check the expander and the tool for damge or visible wear. Damaged tools may no longer be used and should immediately be sent to your local REHAU representative.
- When introducing the expander set, always insert it completely into the clamping jaw and fix it with the set screw.

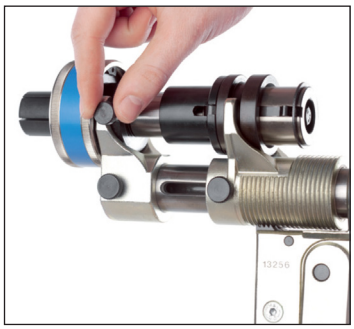
Expanding Tool

Expander
When changing expander heads,open expander completely (> 90° position). Lock expander head into position. Make certain expander head secures with an audible click. Use expander heads of a size conforming to the pipe dimensions (i.e. 25 x 2.3 mm).

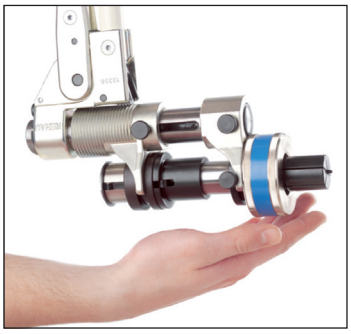
Note: Always insert the expanding tool into the pipe up to the stop.



Expander set
Pipes of dimension 40 mm can also be expanded using the expander bit M1. For that purpose, insert the expander bit into the clamping jaws M1 40 mm and fix it with the retaining screw.

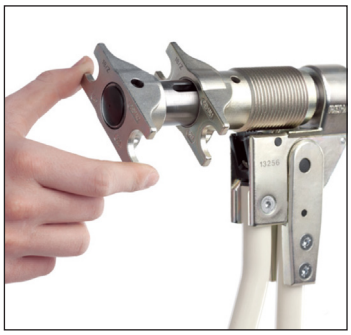


Before operating the tool, the correct fit and the compression effect of the expander bit in the clamping jaws must be checked. The expander bit must sit tightly in the clamping jaws and may not fall out.



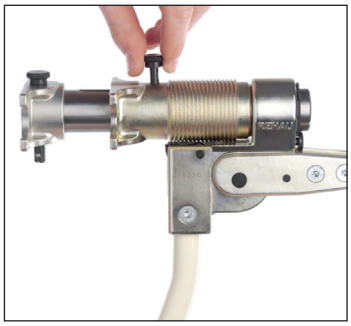
5. Using the tool

1. When fitting clamping jaws, always push the long clamping jaw on the tool cylinder first, followed by the short clamping jaw.

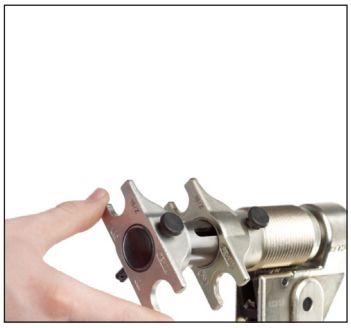


2. Insert the short pin into the long clamping jaw and the long pin into the short clamping jaw.

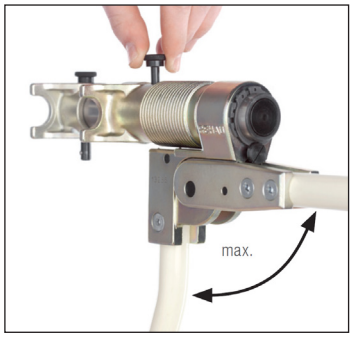
Note: To ensure that the double clamping jaws (for example size 25 mm) are aligned identically, always insert the pins all the way.



3. The clamping jaws are brought into the correct position by turning the tool cylinder.



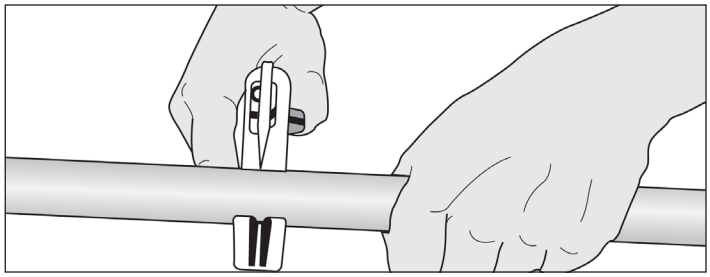
4. Exchange of clamping jaws should always be carried out in the starting position (maximum deflection of the tool lever).



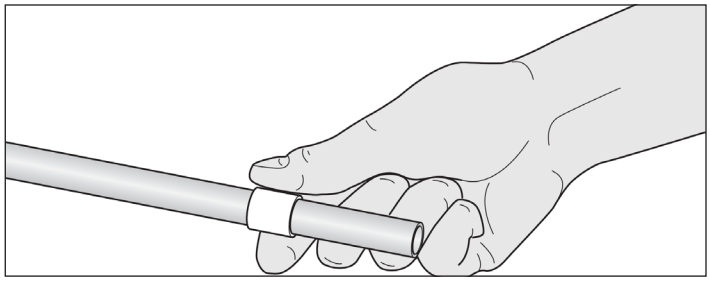
6. Assembly procedure

1. Using pipe cutters, cut pipe to required length at right angles and without leaving burrs.

Note: Keep your hand at a safe distance from the tool. Do not use saws or similar.

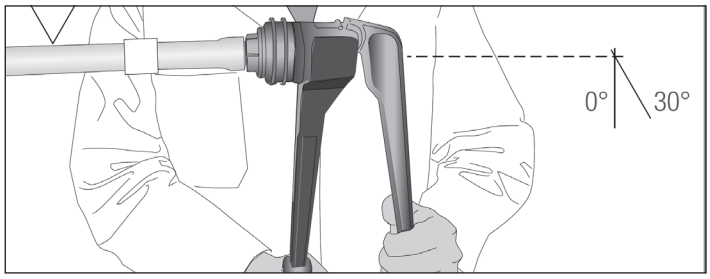


2. Slide compression sleeve onto pipe, ensuring that the inside taper points toward joint.



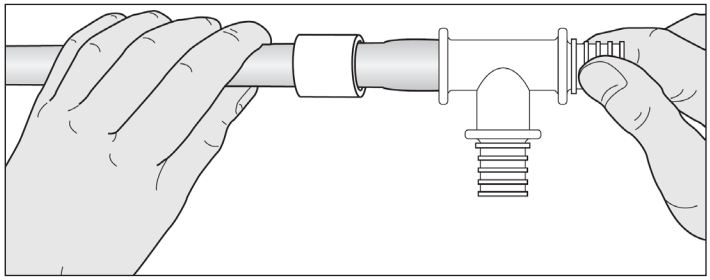
3. Expand pipe using expander or expander bit. Rotate 30° and repeat. The minimum distance between expander head and compression-sleeve must be one compression-sleeve length.

Note: Slide the sleeve down the pipe at least two pipe diameters to avoid damaging the pipe or tool during expansion.



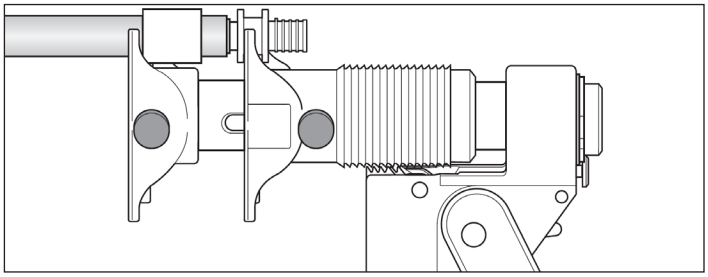
4. Before the pipe shrinks back to its original shape, insert the EVERLOC fitting into the expanded pipe up to the stop. If the fitting does not insert far enough, pull the fitting out and repeat the expansion process.

Note: All sealing ribs must be covered. Until the memory effect has set in completely, the fitting can fall out of the pipe. Make sure that the fitting is correctly seated.

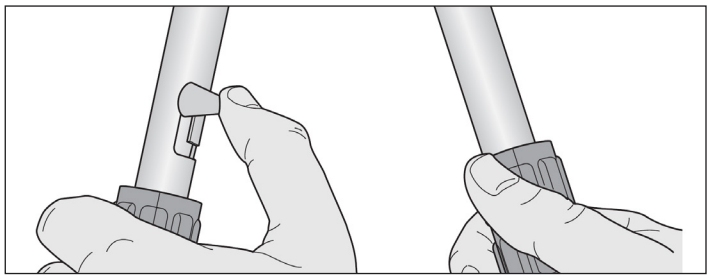


5. Insert the joint fully into the clamping tool.

Note: Do not tilt. Tool must be applied over full surface and at right angles.

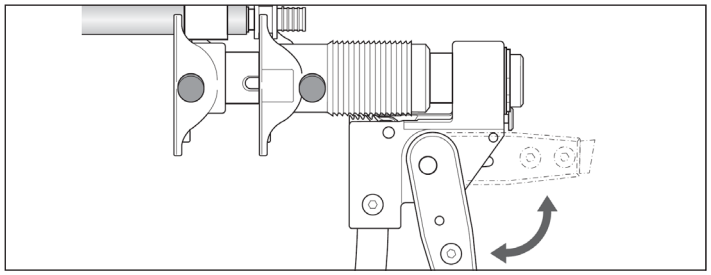


6. Bring selector button into sliding position (upper position of button).

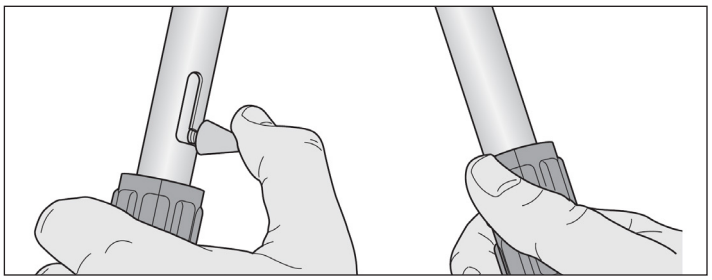


7. Activate lever to push compression sleeve up to fitting collar.

Note: End the compression process immediately when the compression-sleeve is flush with the fitting collar. Avoid „over-pressing" the fitting components this could damage the fitting components or jam the tool. A maximum gap of 0.030 in. is acceptable.

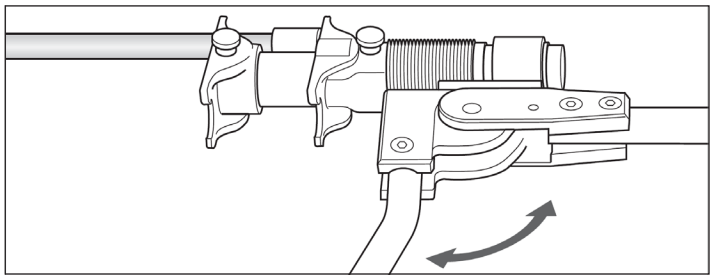


8. Move selector button to reset position (button down to the side).

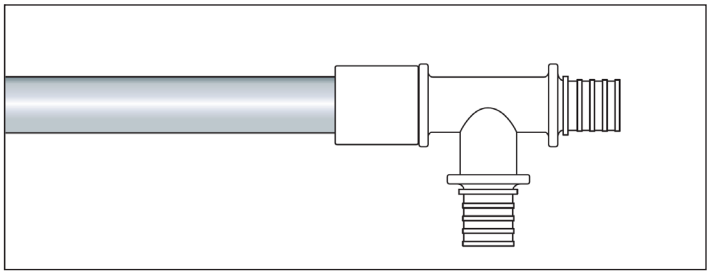


9. Press lever **again** until safety catch is released. Then move lever up 90° to return tool to starting position.

Inspect the completed EVERLOC connection. The sleeve should close tightly against the collar of the fitting. A maximum gap of 0.030 in. is acceptable. If the gap is too large or there is misalignment, rotate the tool 90 to 180° and repeat the compression steps.



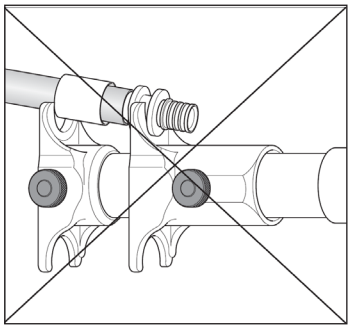
10. Completed compression-sleeve connection.



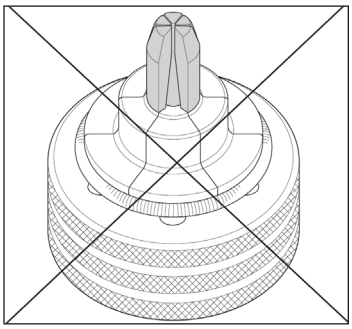
7. Important notes

NOTICE Adhere to these instructions to reduce risk of property damage.

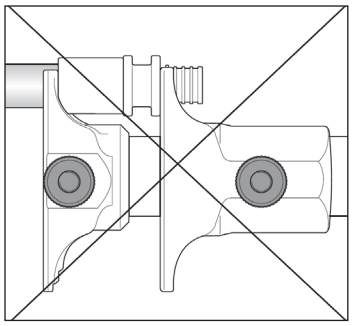
Always apply clamping tool or joint at right angles, making sure it completely contacts entire surface.



Never use damaged expander head as this will damage the pipe. Replacements are available from your local REHAU representative.

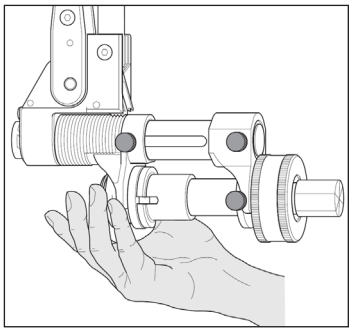


Make sure fitting is correctly seated in tool. Applying the tool to the wrong fitting collar will over-compress the joint.

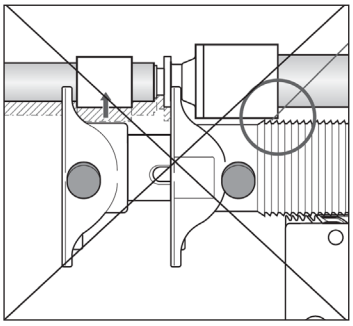


If using an expander bit, make sure the bit is in the correct position (completely inserted into the jaw) before starting tool and ensure lock screw is tightened.

Check for fit (clamping) before use to avoid falling out.

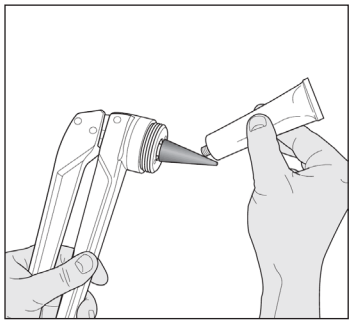


Note: Never allow fitting components with a large external diameter to rest on the jaw teeth, as this will significantly reduce the compression contact surface.



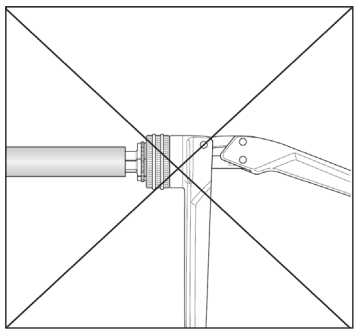
Regularly grease the expanding tool taper using tube of lubricant supplied with the tool.

Note: Do not apply any grease to the surface of the expanding segments that come in contact with the pipe.

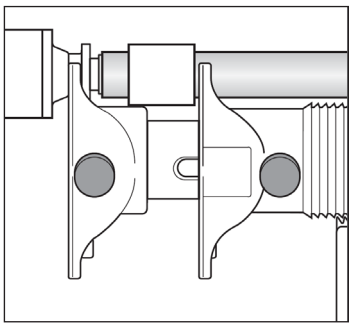


Always insert expanding tool intopipe as far as it will go.

Do not tilt the expander.



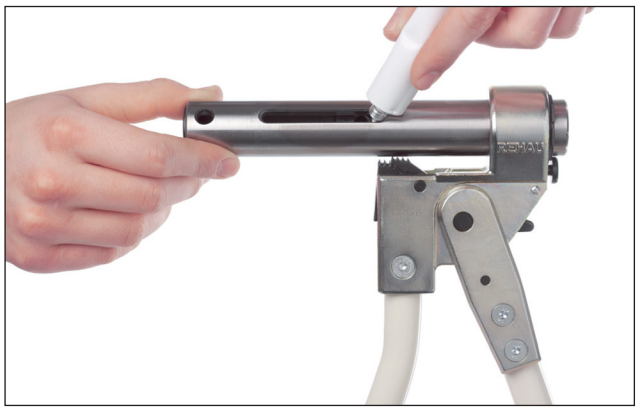
Transition fittings with a large external diameter must be laid and compressed on the "free side."



8. Maintenance

Regular inspection

- Always keep jaw sets, expander heads and cylinder clean. If theybecome dirty, clean them with a brush and then oil them. The toolshould then be stored dry.
- Before each use, check the jaw sets, the expander and the tool fordamage or visible wear. Damaged tools must no longer be used andshould immediately be sent to your local REHAU representative forrepair.
- During compression, the sets must close fully and the compression sleeves must be pushed up to the fitting collar.
- Regularly remove the grease from the taper of the expander. Thereshould be no grease on the surface of the expandingsegments. Should excess grease reach the expanding segments,clean the segments carefully (for example with cleaner's naphtha)and then dry them.
- Grease the inside of the cylinder regularly (tube of lubricantenclosed), keeping the outside surface of the cylinder dry. Do not grease the compression jaws.



Repairs

Do not perform any repairs on the tool yourself. Repairs should only be carried out by an authorized REHAU representative.

Storage

Never store a wet tool! Dry the tool and grease it. Then store the tool dry.

For updates to this publication, visit **na.rehau.com/resourcecenter**

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