



RAUTOOL G1

OPERATING INSTRUCTIONS 856690 EN

RAUTOOL G1

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RAUTOOL G1

SAFETY WARNINGS

Intended use

The tool is intended to be used only with original REHAU supplementary sets for machining the REHAU compression sleeve system in the size range of 40 – 110 mm.



Read all safety warnings and assembly instructions before using the tool. 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 safety warnings:

1. Keep your workplace tidy and free of obstructions. Make sure there is always sufficient light.
2. Keep children, pets and unauthorised persons away from the place at which you are working. Do not let any other persons touch the hydraulic hose, tool or cable.
3. Wear suitable working clothing. Do not wear loosely fitting clothes or jewellery. They may get caught in moving parts. Wear a hairnet if you have long hair. Use goggles.
4. Do not touch moving parts (risk of trapping fingers).
5. Be alert. Only use the tool if you have received instructions in using it.
6. Keep your tools in a safe place. When not in use, tools should be kept in dry, closed rooms out of the reach of children.
7. The tool is **only** to be used to create REHAU compression sleeve joints with the dimensions **40-110 mm**. Do not use the tool or the electro-hydraulic unit for other purposes or dimensions.
8. Only operate the tool with original REHAU parts and accessories.
9. Only have servicing and repair work done at a specialist workshop authorised by REHAU.

We reject any liability for work performed by non-authorised personnel. The addresses of authorised service centers may be obtained from your dealer or REHAU sales office.

Tool-specific safety warnings: (electro-hydraulic unit/foot pump)

1. Keep the tool dry and protect it from extreme heat, oil and solvents.
2. Do not carry the hydraulic unit by the supply cable or hydraulic hose. Do not pull the tool along behind you by the supply cable or hydraulic hose.
3. Be sure not to damage the hydraulic hose or the power supply cable. Before use, always check the hydraulic hose and power supply cable, e.g. for chafing, cuts, cracks, bruising, kinks etc. Never work with a damaged hydraulic hose or supply cable. Immediately instruct the REHAU Service Center to replace damaged hydraulic hoses or power supply cable.
4. Do not touch any points of leakage on hydraulic hoses while the system is under pressure.
5. Do not attempt to uncouple the quick couplings when the system is pressurised.
6. The quick coupling must not be pressurised when uncoupled.
7. For safety reasons (legal regulations) the hydraulic hose must be replaced after at most five years by an authorised REHAU Service Center. This time period must not be exceeded. The year of construction of the tool can be found on the guarantee card. If anything should be unclear, please contact your dealer or a REHAU sales office.
8. Do not connect the pump/power unit up to any other cylinders or tools.

Electro-hydraulic unit:

1. Only use single-phase alternating current of the stated voltage (see power specification label).
2. Do not subject the unit to rain. Do not operate the unit in an environment that is damp, wet and/or at risk of fire or explosion.
3. Never leave the device unattended when connected up to a power supply.
4. Be careful to utilise suitable extension cables.
5. Remove from the power supply when carrying out every tool modification (e.g. replacing the expander heads, jaw sets) so that unintentional activation can be avoided.
6. To prevent the motor from overheating, do not operate at maximum pressure for any prolonged period.



REHAU will not accept any liability for damage or injury attributable to unsafe product use, poor maintenance or improper product or system usage.

For planning and assembly kindly use our current Technical Information brochure. You can obtain the up-to-date brochure from your wholesale dealer, your REHAU sales office or by downloading from www.rehau.com.



Processing work carried out at temperatures under -10°C and over 45°C can damage the joint components and the tool, and can bring about personal injury.

- Do not go below the minimum processing temperature of -10 °C.
 - At low temperature (below 0 °C) it is recommended that the joint components be stored in a warm environment beforehand.
-

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ITEMS SUPPLIED

RAUTOOL G1

- cylinder with handle and hydraulic hose
- hydraulic unit HMP 1 and/or foot pump G1
- expander set with fixing nut incl. 2 short pins
- 2 long pins
- expander head 50 x 6.9 (and/or 50 x 4.6)
- expander head 63 x 8.6 (and/or 63 x 5.7)
- set of clamping jaws G1 50
- set of clamping jaws G1 63
- pipe cutter 63
- deburrer
- transport case G1
- operating instructions



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REPLACEMENT PARTS/ACCESSORIES

- Hydraulic unit HMP 1
art. no. 137924



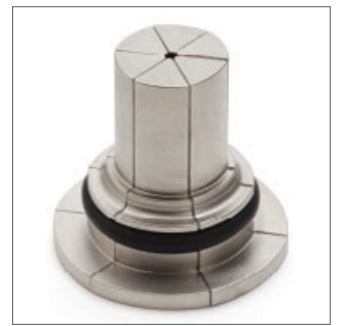
- Foot pump G1 HFP 14/22
art. no. 138132



- set of clamping jaws G1 40
art. no. 201802
- set of clamping jaws G1 50
art. no. 137624
- set of clamping jaws G1 63
art. no. 137634
- set of clamping jaws G1 75
art. no. 137644
- set of clamping jaws G1 90
art. no. 137654
- set of clamping jaws G1 110
art. no. 137664



- expander head G1 40 x 5.5
art. no. 139881
- expander head G1 50 x 6.9
art. no. 139891
- expander head G1 63 x 8.6
art. no. 139901
- expander head G1 40 x 3.7
art. no. 138463
- expander head G1 50 x 4.6
art. no. 137424
- expander head G1 63 x 5.7
art. no. 137434
- expander head G1 75 x 8.6
art. no. 137584
- expander head G1 90 x 8.2
art. no. 137604
- expander head G1 110 x 10
art. no. 137614



RAUTOOL G1

TECHNICAL DATA: FOOT PUMP

Foot pump G1 HFP 14/22:

Flow rate per hub:

approx. 2cm³ starting
from 2 bars

Pressure:

450 bars

Max. shear force:

56 kN (linear)

Foot power:

approx. 36 kg at 450 bars

Oil filling:

0.35 l

Oil specification:

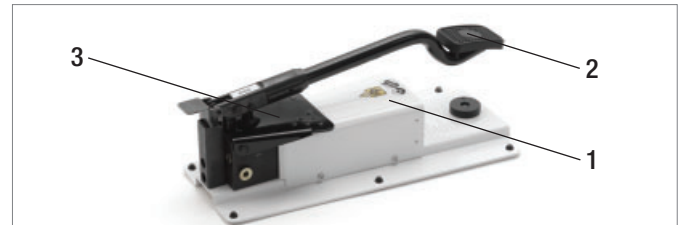
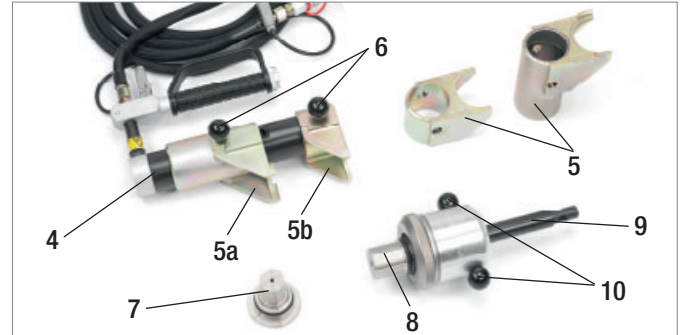
8 cSt at 40°C, non-
corroding and water-free

Weight:

4.9 kg

RAUTOOL G1

EQUIPMENT DESCRIPTION AND OPERATING PRINCIPLE



Pos. No.	Tool elements	Function
1	Foot pump	Hydraulic foot pump for pressure build-up in the work unit
2	Foot pedal	Foot pedal / hand pedal for pressurisation
3	Discharge lever	Discharge lever to open the discharge valve in order to return the tool to the start position
4	Compression cylinder G1	Work units to hold the jaw sets / expander set G1
5	Jaw set G1	A set comprises one short and one long jaw
5a	Long jaw	Moving jaw
5b	Short jaw	Fixed jaw
6	Pins G1	Device for fixing the jaw set / expander set on the compression cylinder
7	Expander head 50	Expanding tool for expanding pipes 50
8	Expander head 63	Expanding tool for expanding pipes 63
9	Expander set G1	Expander device for expanding the pipes in conjunction with the expander head and compression cylinder with 2 short pins
10	Short pins G1	Device for fixing the expander set on the compression cylinder

RAUTOOL G1

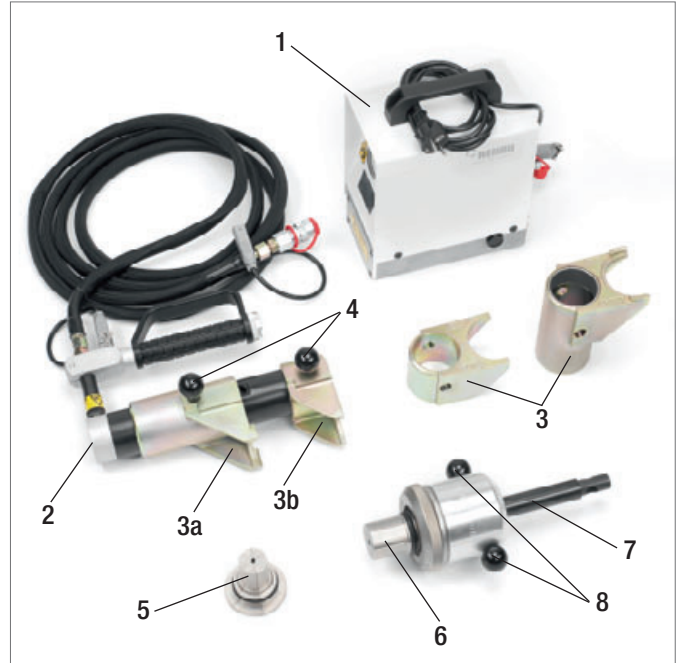
TECHNICAL DATA: HYDRAULIC UNIT

Hydraulic unit HMP 1 / RAUTOOL G1:

Motor voltage:	230 V / 50 Hz Extra (110 V)
Power consumption:	0.22 KW
Oil specification:	8 cSt (at 40°C, non-corroding and water-free)
Motor remote control:	24 V security voltage
Flow rate:	0.28 l/min (theoretically usable: 0.33 l/min)
Pressure:	approx. 450 bars
Max. shear force:	56 kN (linear)
Weight:	8.5 kg
Continuous sound pressure level:	70 dB(A)
Effectivity of the acceleration on the handle:	< 2.5 m/s ²

RAUTOOL G1

DEVICE DESCRIPTION AND FUNCTIONAL PRINCIPLE OF THE HYDRAULIC UNIT



Pos. No.	Tool elements	Function
1	Electrical unit	Electro-hydraulic unit for pressure build-up in the work unit
2	Compression cylinder G1	Work units to hold the jaw sets / expander set G1
3	Jaw set G1	A set comprises one short and one long jaw
3a	Long jaw	Moving jaw
3b	Short jaw	Fixed jaw
4	Pins G1	Device for fixing the jaw set / expander set on the compression cylinder
5	Expander head 50	Expanding tool for expanding pipes 50
6	Expander head 63	Expanding tool for expanding pipes 63
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TOOL PREPARATION

The tool cylinder is used for expanding and clamping.
The tool conversation is for this as follows!

Expansion

To expand, the cylinder must be directly connected to the unit / foot pump by the hydraulic hose (quick coupling) and control cable.

Caution:

Ensure that the quick coupling is completely engaged. The coupling is to be pressurised only when engaged. Check plug connections thoroughly for dirt, clean if necessary.



Completely insert the expander set into the cylinder and fix in the cylinder using the 2 short pins and one long pin.

Caution:

Pins must be fully inserted! As a general rule, operation may only commence once the pins are fully inserted.



To exchange expander heads, remove fixing nut, position expander head correctly, screw fixing nut completely on. From dimension 75 mm, expander heads are screwed on directly (without fixing nut). Expander heads > 75 mm must also be screwed on completely. Avoid possible cants when mounting.



Clamping

The expander set must be removed for clamping. To do this, pull out the long pin completely and the short pins to the stop. Pull out and remove the expander set from the cylinder.



First, clamp on the long clamping jaw and then the short one. Then fully insert the long pins.

Caution:

Pins must be fully inserted! As a general rule, operation may only commence once the pins are fully inserted.



In confined assembly situations, use an Allen key to release and turn the tool handle.



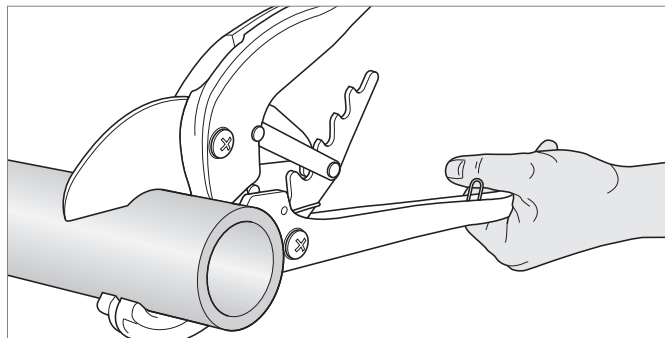
RAUTOOL G1

ASSEMBLY PROCEDURE



Failure to observe these instructions may result in damage to the jointing system, to the tool and in personal injury.

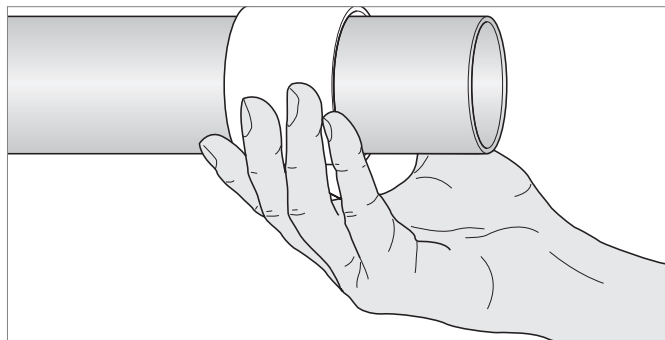
1. Using pipe cutters, cut pipe to required length at right angles and without leaving burrs. Do not use saws, or similar!



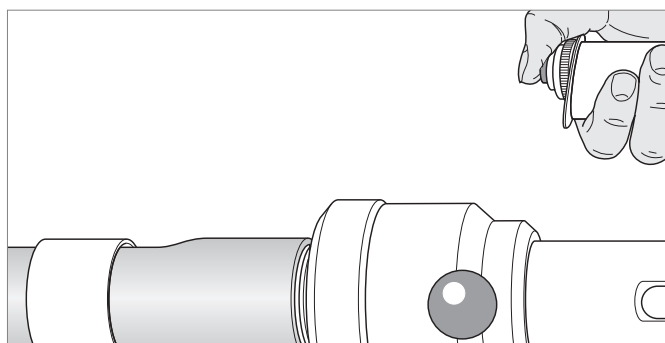
2. Slide compression sleeve onto pipe.

Caution:

On metal compression sleeves, the inner chamfer must point towards the joint.



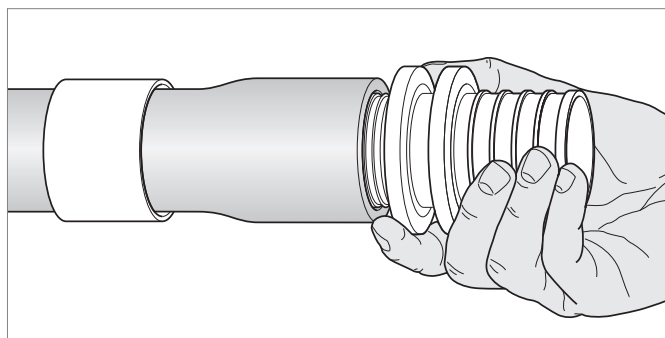
3. Expand pipe, rotate 30°, and repeat. The compression sleeve must not be in the expansion area. Expansion is to be carried out using the pressure switch or by activating the foot lever.



4. Insert fitting into pipe up to the stop. After a brief period the fitting will sit tightly in the pipe (memory effect).

Caution:

All sealing ribs must be covered! Until the memory effect has fully set in, the fixing can still fall out of the pipe. Make sure the fitting is positioned evenly.

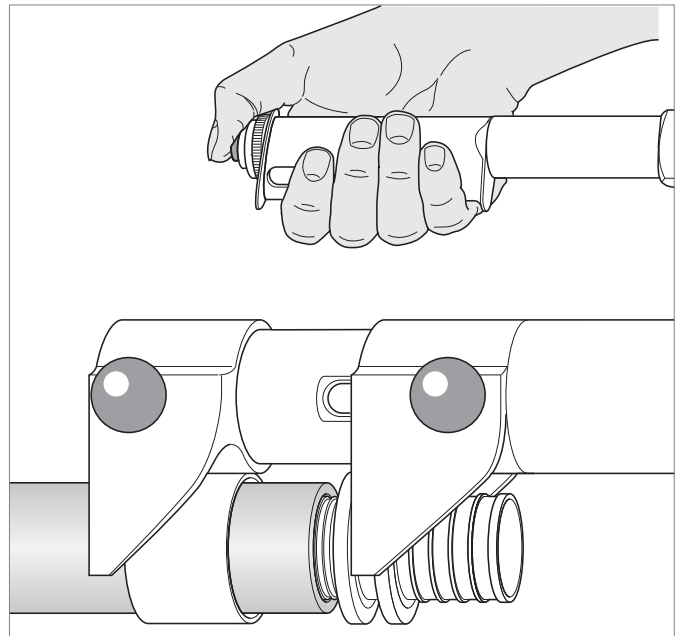




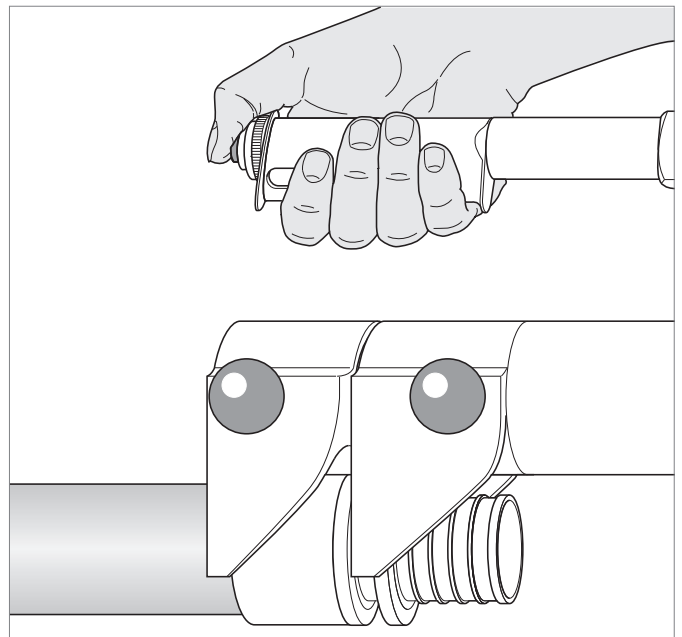
5. Insert joint fully into clamping tool.

Caution:

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



6. Insert the compression sleeve all the way up to the fitting collar by activating the pressure switch / foot lever.



Processing at temperatures of under -10°C and over 45°C may result in damage to the joint components, the tool and/or in personal injury.

- Do not work below the minimum processing temperature of -10°C .
- At low temperatures (below 0°C), it is recommended that the joint components be stored in a warm environment before processing.

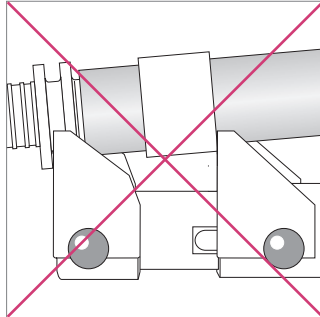


Please observe also the instruction leaflet of the compression sleeves 110x10!

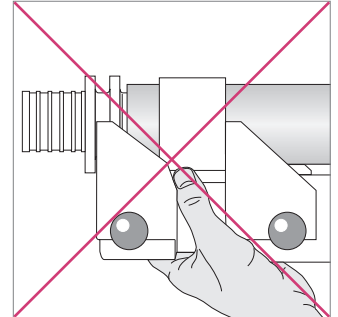
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IMPORTANT NOTES

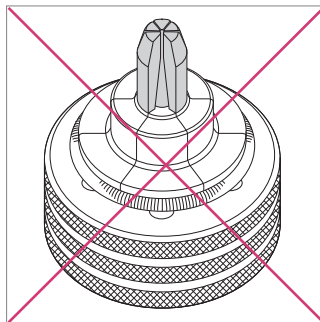
Always apply clamping jaws/jointing technique at right angles, making sure it completely contacts the entire surface.



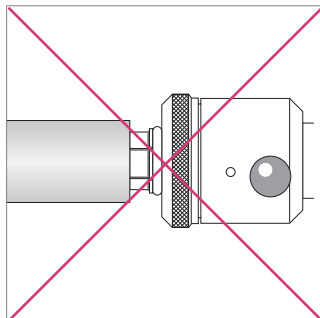
Caution:
Do not touch moving parts (risk of trapping fingers!).



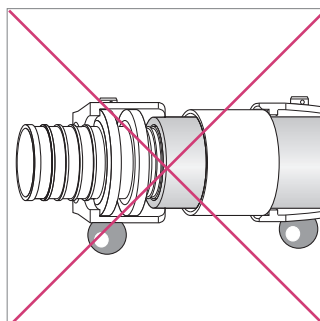
Never use with damaged expander head as this will damage the pipe. Replacements are available from your dealer or from the REHAU sales office.



Always insert expanding tool into pipe up to the stop.



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



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IMPORTANT NOTES RAUTITAN

Compatibility dimension 40



NEU / NEW / NOUVEAU / NUOVO / NUEVO / НОВЫЙ ø 40		ø 40	
201802-001		+ + 	



Unbedingt vermeiden! Under no circumstances!
A éviter impérativement! Da evitare assolutamente!
¡Evitar siempre!

ALT / OLD / ANCIEN / VECCHIO / ANTIGUO ø 40		ø 40	
137964-001		+ 	



	ø 40	ø 40
201802-001		
137964-001		

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MAINTENANCE NOTES

Regular check:

- Always keep the jaw sets, expander set, expander head and cylinder clean. Should dirt build up, clean and oil with a brush. The tool is then to be stored in a dry place.
- Before each use, check the jaw sets, expander head, expander set and basic tool (inc. hydraulic hose) for damage or visible wear. Damaged tools may no longer be used and are to be sent immediately for repair to an authorised Service Center.

- Make sure that the jaw sets fully close when compressing and that the compression sleeve is inserted fully up to the fitting collar.
- Regularly grease the expander set tapers. Do not apply any grease to the expander segments! If excess grease gets onto the expander segments, the segments must be carefully cleaned (e.g. cleaning solvent) and then dried.

Repairs:



Risk of accident!

Do not carry out any repair work to the tool yourself. Repairs may only be carried out by an authorised Service Center.

Storage:

Never store the tool if wet! Dry out the tool and oil it. Then store it in a dry place.

To top up oil lay unit on its side and open oil filler screw.



To vent the system stand foot pump upright and lower down clamping tool; operate tool several times without building up pressure.



The correct oil level is to the middle of the display glass when pump unit is standing upright...



... or on its side (oil filler screw facing upwards). Do not overfill with oil.



To vent the system stand pump unit upright and lower down clamping tool; operate tool several times without building up pressure.



Clean and dry tool before storing it away!

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NOTES ON TROUBLE SHOOTING

Fault	Removal
Motor not running	<ul style="list-style-type: none">- Check plug socket used to see if live.- Check supply cable for faults (not under pressure) and have it replaced, if necessary.
Motor runs (foot lever is actuated) but tool not working or only partially	<ul style="list-style-type: none">- Check oil level, if necessary top up.- Check hydraulic hose for leakage (not under pressure) and have it replaced, if necessary.- Vent system.
Unit not reaching 450 bar pressure	<ul style="list-style-type: none">- Check oil level, if necessary top up.- Check hydraulic hose for leakage (not under pressure) and have it replaced, if necessary.- Vent system
If the faults cannot be remedied, return tool to REHAU Service Center or to your dealer.	



REHAU®

Unlimited Polymer Solutions

GARANTIE-KARTE / GUARANTEE CARD CERTIFICAT DE GARANTIE / GARANZIA

Artikel: / Article:

Article: / Articolo:

Nr.: / No.: / No.: / Codice:

Seriennummer: / Serial number:

No: de serie: / Numero di serie:

Ausgabedatum an Handwerkskunden: / Date delivered to customer:

Date de deliverance au client: / Data di consegna al cliente:

Stempel/Unterschrift: / Stamp/Signature:

Tampon/Signature: / Timbro/Firma:

Garantiezeit: 12 Monate ab Lieferung bei bestimmungsgemäßem Gebrauch und pfleglicher Handhabung.

Guarantee period: 12 months from delivery if used as directed for the applications intended and handled with reasonable care.

Duree de la Garantie: 12 mois a compter de la livraison, sous condition d'une utilisation conforme et d'une manipulation soignée.

Durata della garanzia: 12 mesi a partire dalla data di consegna, se l'attrezzo è utilizzato secondo lo scopo cui è destinato e se maneggiato con cura.

Mit Ihrem neuen Verpress- und Aufweitwerkzeugen wurden zu Ihrer Sicherheit im Werk mehrere Tests unter Last durchgeführt. Gebrauchsspuren sind dabei unvermeidlich, mindern aber die Qualität des Werkzeugs in keiner Weise.

Die Geräte wurden durch unsere Abteilung Qualitätssicherung kontrolliert und freigegeben. Sollte es trotz sorgfältiger Fertigung und Montage einen Grund zur Beanstandung geben, bitten wir Sie, das Gerät zusammen mit diesem Schein zur Reparatur bzw. zum Umtausch einzusenden. Weitere Ansprüche gleich welcher Art, sind ausgeschlossen.

For your benefit/safety some tests under load were carried out on your new expander and pipe clamping tool in the factory. It is inevitable that traces of use result from these tests. They do not however in any way detract from the quality of the tool.

The tools have been tested and approved by our quality control department. If despite the careful manufacture and assembly of the tool you still have reason for complaint we kindly ask you to return the tool for repair or exchange together with this guarantee card. Any further claims regardless of their type are not valid.

Plusieurs tests ont été réalisés en usine sur cet outillage d'expansion et de sertissage afin d'en garantir la sécurité. La mise en service de l'appareil pour la réalisation de ces tests n'a toutefois aucune répercussion sur la qualité de l'outillage.

Ces outillages ont été soumis aux contrôles de notre service Assurance Qualité. Si malgré ces exigences rigoureuses de fabrication et de montage, il y a motif à contester la qualité de l'outillage, nous vous prions de bien vouloir nous retourner celui-ci accompagné de ce certificat, pour réparation ou échange. Toute autre revendication quelqu'elle soit, est à exclure.

Per la Vostra sicurezza, gli attrezzi di espansione/compressione sono stati sottoposti a diversi test. Tracce dell'utilizzo sono inevitabili, ma non ne compromettono in alcun modo la qualità.

Gli attrezzi sono stati controllati e approvati dal nostro reparto qualità. La produzione e il montaggio dell'attrezzo sono stati eseguiti secondo elevati standard qualitativi. Se, nonostante ciò, dovete riscontrare delle anomalie, Vi preghiamo di rispedircelo unitamente alla presente garanzia. Provvederemo a ripararlo o a sostituirlo. Ulteriori contestazioni di qualsivoglia natura non saranno prese in considerazione.

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Soweit ein anderer als der in der jeweils gültigen Technischen Information beschriebene Einsatzzweck vorgesehen ist, muss der Anwender Rücksprache mit REHAU nehmen und vor dem Einsatz ausdrücklich ein schriftliches Einverständnis von REHAU einholen. Sollte dies unterbleiben, so liegt der Einsatz allein im Verantwortungsbereich des jeweiligen Anwenders. Anwendung, Verwendung und Verarbeitung der Produkte stehen in diesem Fall außerhalb unserer Kontrollmöglichkeit. Sollte dennoch eine Haftung in Frage kommen, so ist diese für alle Schäden auf den Wert der von uns gelieferten und von Ihnen eingesetzten Ware begrenzt.

Ansprüche aus gegebenen Garantieerklärungen erlöschen bei Einsatzzwecken, die in den Technischen Informationen nicht beschrieben sind.

Insofar as the intended application deviates from that described in the relevant Technical Information brochure, the user must consult REHAU and must receive express written consent from REHAU before commencing this utilization. If the user fails to do so, the sole responsibility for the utilization shall lie with the individual user. In this case, the application, use and processing of products are beyond our control. Should a case of liability arise, however, this shall be limited to the value of the goods delivered by us and used by you in all cases of damage.

Claims arising from granted guarantees shall become invalid in the case of intended applications that are not described in the Technical Information brochures.

L'utilisateur qui envisage une application différente de celles décrites dans la présente Information Technique est tenu de consulter REHAU et de demander formellement une autorisation préalable écrite. En cas d'omission l'utilisateur est seul responsable de l'application du produit.

L'application, l'utilisation et la mise en oeuvre de nos produits se trouvent dans ce cas hors des possibilités de contrôle de REHAU. S'il est toutefois question de responsabilité, celle-ci est exclusivement limitée pour tout dommage à la valeur de la marchandise que nous vous avons livrée et que vous avez mise en oeuvre.

Des prétentions qui pourraient résulter d'éventuelles attestations de garantie seront considérées comme nulles et non avenues si l'utilisation du produit ne correspond pas à celle décrite dans la présente Information Technique.

Se è previsto un impiego diverso da quelli descritti nell'Informazione Tecnica attualmente in vigore, l'utilizzatore deve contattare la REHAU e, prima dell'impiego, chiedere espressamente il nulla osta scritto della REHAU. Altrimenti l'impiego è esclusivamente a rischio dell'utilizzatore.

In questi casi l'impiego, l'uso e la lavorazione dei nostri prodotti sono al di fuori delle nostre possibilità di controllo. Se nonostante tutto, dovesse sorgere una controversia su una nostra responsabilità, questa sarà limitata al valore dei prodotti da noi forniti e impiegati da Voi.

Diritti derivati da dichiarazioni di garanzia non sono più validi in caso d'applicazioni non descritte nelle Informazioni Tecniche.

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