

Operating Instructions

ROTOGRIND NT – FOR ORTHODONTIC USE

LABORATORY EQUIPMENT IN
STAINLESS STEEL



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Dear Customer!

The orthodontic angulation table for ROTOGRIND NT is perfectly suited for grinding precise angles onto maxillary and mandible models by using a mounted slider for precise positioning. A high degree of freedom is provided for precise positioning. Variable angle adjustment with locking positions. As there is an easy axial movement combined with lateral adjustment of the end stop along the model platform, the full surface of the grinding disc can be used in trimming. If the angulation table is not needed it can easily be moved away from the working area. Orthodontists have the choice between fully-coated diamond grinding discs to obtain models with a fine finish surface finish and the rough coated diamond grinding disc for fast cutting and high throughput.

Any other use or usage beyond this scope is considered unintended use. The manufacturer shall not be responsible for any damages that may result thereby. Prior to installation of the device operating instructions and especially the safety instructions must be read and followed by all personnel who use this device.

After having unpacked the device, please check carefully whether transportation damages of any kind have occurred. If that is the case, the carrier or manufacturer must be notified within 3 days. The company will not be responsible for any damages found after that. These operating instructions must be read and followed by all personnel who use this device. To ensure quick access we recommend to keep it at a safe place near the device. This documentation is protected by copyright. Transmittal or reproduction of this document in whole or in part and disclosure of its contents is not permitted. If the operation manual gets lost an extra copy can be ordered from the manufacturer at a nominal fee.

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1 Technical Description

1.1 Basic equipment

- Wet- / dry trimmer ROTOGRIND NT with angulation table
- Grinding disc for orthodontic use (Ø 280 mm)
- Inlet hose, 150 cm
- Drain hose, 80 cm
- Allen® key, size 6
- Allen® key, size 2

1.2 Special Accessories

- Best.-Nr.: 20308000 Laser guide for model alignment
- Best.-Nr.: 20306000 LED-working lamp
- Best.-Nr.: 20309000 Grinding disc for orthodontic use (Ø 280 mm)
- Best.-Nr.: 27902000 Extraction DUSTY COMFORT Safety Notes

1.3 Device components

- 1 Front
- 2 Grinding disc
- 3 Orthodontic angulation table
- 4 Adjusting spindle for tray table
- 5 Extraction hose for dry trimming
- 6 Quick release (secured with Allen® screw before first use)
- 7 Drain hose for wet trimming
- 8 Appliance outlet for extraction
- 9 Power supply
- 10 Main switch
- 11 Ball valve with black handle to regulate the amount of water
- 12 Switch for dry or wet trimming
- 13 Overload protection
- 14 Locking bolt
- 15 Disc rinsing tube, small
- 16 Rubber seal
- 17 Central screw for removing grinding disc
- 18 Disc rinsing tube, large
- 19 Water supply
- 20 Angle end-stop
- 21 Angle scale



Fig.: Front



Fig.: Lateral view



Fig.: Grinding disc



Fig.: Lateral view

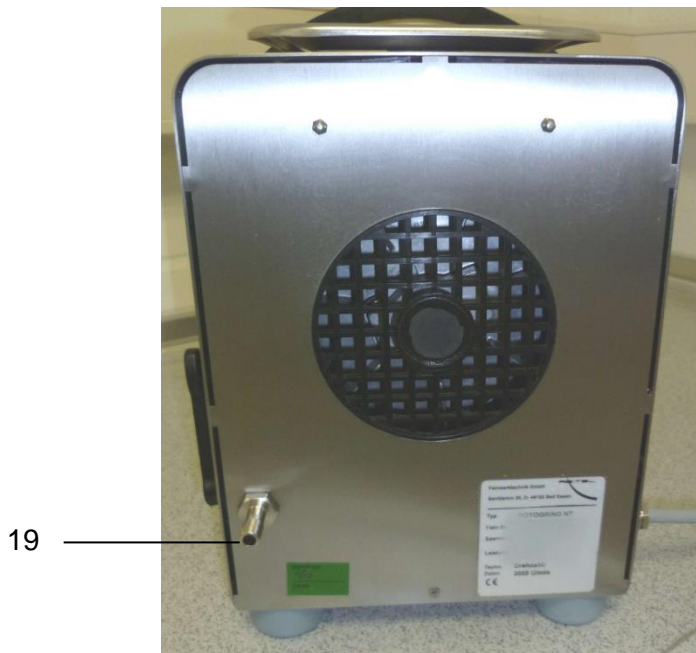


Fig.: Rear view

1.4 Technical Data

Line voltage	230 V/50-60 Hz
Current consumption	1.500 W
Height / Width / Depth	350/350/470 mm
Floor area (W/D)	200/250 mm
Weight	22 kg
Speed	3.000 rpm
Grinding disc diameter	280 mm
Sound level	≤ 70 dB(A)
Housing	Stainless steel
Made in Germany (Subject to modifications)	

2 Safety Notes

2.1 General Safety Notes

- All equipment undergoes final inspection and testing before leaving our factory. However, if equipment is damaged during shipping or through any other circumstances, it must not be used in service. Please check the device regularly for damages. Damaged parts should be replaced immediately.
- All power / air / water / gas sources should be rated for the demands of the device as listed in the technical data sheets. Maximum ratings must not be exceeded. All VDE (Verein Deutscher Elektro-Ingenieure) standards should be followed. Equipment should be grounded according to standards.
- Adherence to valid regulations regarding necessary checks (e.g. according to Accident Prevention & Insurance or electrical equipment) is exclusively taken over by the buyer/user of this product.
- This device has been designated to be used only for its intended purpose. All other applications must be prohibited for safety reasons as otherwise the manufacturer's warranty expires.
- The device may only be used by persons who have been instructed in the handling and are expressly commissioned with the operation.
- The device should be set-up in a clean, well-ventilated room, if necessary under a hood.
- Supporting surfaces should be straight, flat and adequately stable.
- No objects may be placed on the device.
- To avoid injury, appropriate protection should be worn (as gloves, safety glasses, safety shoes, hearing protection etc.)
- If the machine is defective or working improperly it must be taken out of service. In case of further use of the machine the owner will be held responsible for any consequential damage.
- To prevent accidents from water, fire or explosion, all power/air/water/gas sources should be turned off after working hours and during breaks, and secured against unauthorized access.
- When carrying out maintenance works or repairs or when opening the device always turn off the main power switch and unplug the whole unit.
- Repairs should be carried out only by the manufacturer or by qualified and certified personnel appointed according to chapter 7 – warranty.
- In case of leaking water out of housing or tank shut down device and call service.
- Check all hose connections for leak tightness, if necessary tighten hose clamps again

2.2 Specific Safety Notes

Note:

- Before opening the device, remove the locking screw (Allen® key) on the quick release (6).
- **Use the ROTOGRIND NT with the orthodontic front only with grinding discs, Ø 280 mm.**
- Investment material and dry hard plaster reduce the grinding disc's service time. The diamond grinding discs may not be used for metal and quartzide material. The diamonds will start to melt immediately and the grinding disc is rendered unusable.
- The ROTOGRIND NT for orthodontic use includes a wet-rinsing, cleaning the grinding disc. When working with material containing components which are not meant to be put into the public wastewater disposal, suitable cleaning systems have to be used or the wastewater has to be collected and disposed of separately.
- When installing the device, make sure that power sources cannot come into contact with (splash) water.

- The ROTOGRIND NT for orthodontic use is a benchtop unit. Supporting surfaces should be straight, flat and adequately stable.
- When opening the machine's front, please keep in mind that the grinding disc doesn't stop immediately after the machine has been turned off. Wait till it has stopped completely.
- Always wear goggles when working.
- Always use a wedging block when working on smaller pieces.
- Put the working piece on the model tray first and then press it towards the grinding disc.
- Never put your hands into the running device or behind a grinding disc during operation.
- Only turn on the machine again when the grinding disc is still at a halt.
- Don't use worn or damaged grinding discs.
- Only change the grinding disc when it stands still and the whole unit is unplugged.
- Only use original REITEL grinding discs – with an outer diameter of 250 mm. Using grinding discs supplied by other manufacturers will render our warranty null and void with immediate effect.
- Always respect the regulations of the grinding discs manufacturer (e.g. max. speed, sense of rotation, cutting speed, material to be worked on).
- Keep the housing clean and dry.

3 Installation

The equipment delivered is ready for immediate use. The sealed power plug is directly connected to the mains supply 230 V / 16 A. For installation, please refer to chapter 2.

3.1 Installation

1. Attach supplied hose to water inlet (19) fastening it with the hose clamp included in delivery. Fix the other end of the hose to your water tap.
2. Fix the drainage hose to the water outlet (6). Lead wastewater via drain hose with a fall to the plaster-settling basin (respect local regulations).
3. Connect the machine to the power supply.
4. For dry trimming, connect the extraction unit to the extraction hose (5) and plug the suction plug into the socket (8) on the trimmer.
5. Before putting the device into operation, remove the locking screw from the quick release.

3.2 Changing a grinding disc

1. Turn off power switch (10). Pull the mains cable (9) from the socket.
2. Wait until the grinding disc has completely stopped.
3. Remove the security screws and open the quick releases (6), hinge the front (1) aside.
4. Release the central nut (17) holding the disc by using the Allen® key (see chapter 1.1) counter-clockwise. Take off the central nut and remove the disc.
5. Clean the disc's working surface and supporting disc, put on supporting disc and new grinding disc and ensure that it's placed correctly and then fix the screw in a clockwise direction.
6. Reinsert the front with the quick release (6).

4 Operation

Trimming maxillary and mandible models.

4.1 Generalities

Geometry of dental model sockets according to "BEGG" accommodates the anatomic factors and the intermaxillary relations.

4.2 Angulation table

The REITEL orthodontic angulation table is perfectly suited for trimming all shapes of maxillary and mandible models.

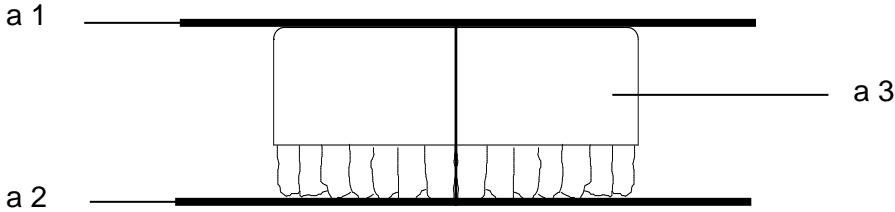
If the angulation table is not needed it can be easily moved away from the working area. As soon as angle settings are locked various kinds of sockets can be trimmed efficiently and reproducibly.

4.3 Chronological run of operation

1. Set angle stop at 0°.
2. Reference the maxillary model with the occlusion level against the vertisquare. Slide vertisquare and model toward the trimming wheel (see figure a) until the base's bottom has been completely leveled relative to the occlusion.
3. Mark the Raphe-Median and trim it up to the dorsal limit (see figure b).
4. Set angle stop to 62° and reference the model with the tuber plane level against the vertisquare. The buccal cuts should be to the deepest portion of the buccal vestibule (see figure c).
5. Trim the maxillary front symmetric in 25° angle to the maxillary middle (see figure d).
6. When coming to the end, bevel the tuber level at 0 ° end-stop parallel to the tooth (see figure e).
7. Check the base of the maxillary and mandible. All angles of maxillary and mandible areas must be symmetric (if that's not true trim again).

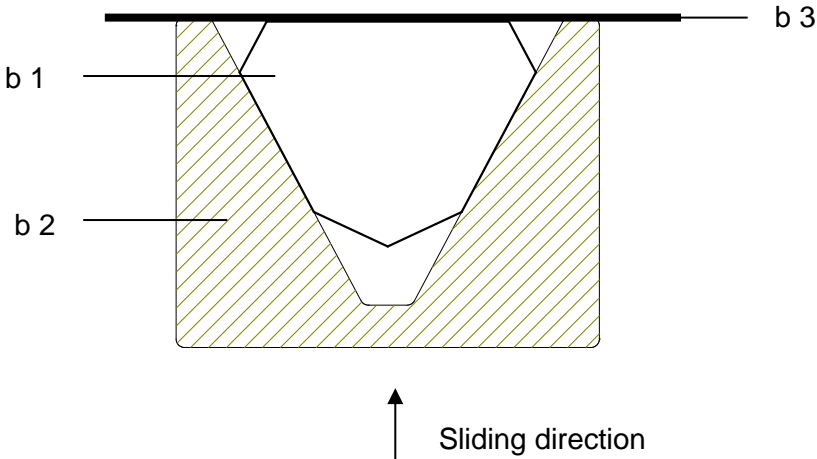
Tools: In order to facilitate grinding of the tuber level of maxillary and mandible models we recommend to make a pattern beforehand (see figure a).

Fig. a:



- a 1 Grinding disc
- a 2 Occlusion level and angle stop
- a 3 Dental model

Fig. b:



- b 1 Dental model
- b 2 Pattern
- b 3 Grinding disc

Fig. c:

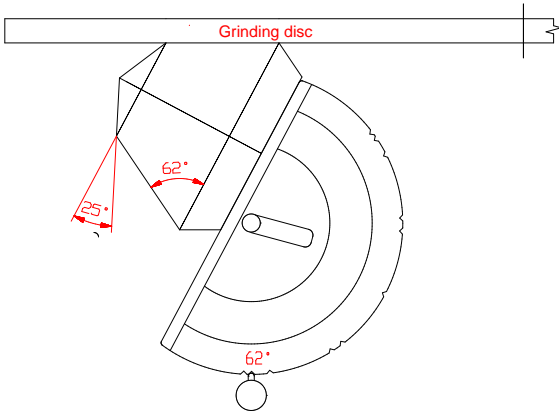


Fig. d:

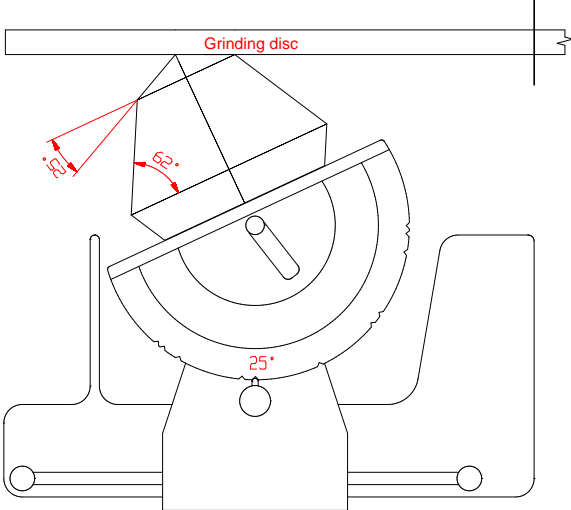
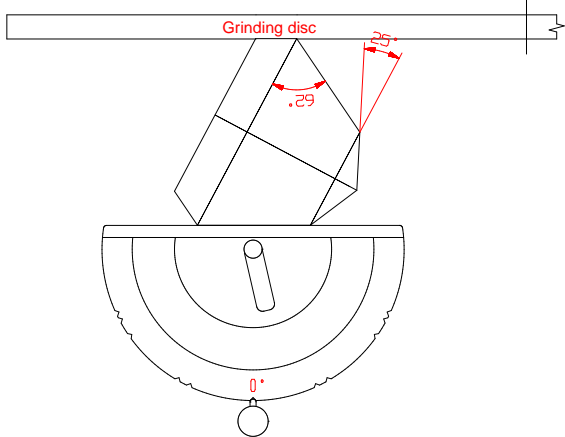


Fig. e:



4.4 Cleaning

1. Turn off power.
2. Pull the plug out of the socket.
3. Wait until the grinding disc has completely stopped.
4. Open the quick release (6) at the device and release the locking pin at the hinge (7).
Remove the locking pin upwards from its housing at the hinge and remove the front cover (8) forwards.
5. Clean the front and the angulation table under running water. Clean the inside with a moist cloth.
6. Clean the rubber sealing. Reinsert the front cover (8) and fix it with the locking pin (7) at the device. Tighten the locking pin at the hinge (7) and close the front (8) with the quick release (6).

5 Troubleshooting

Device doesn't turn on.	<ul style="list-style-type: none"> a. Power failure → Check main fuse of the building. Turn on the main power switch. b. Test safety switch by opening and closing the front cover (switching operation is triggered by a pin at the housing).
Abrasive power diminishes.	<ul style="list-style-type: none"> a. Replace worn or defective grinding discs. b. Clean dirty grinding discs (e.g. with steam cleaner). c. Investment material and dry hard plaster reduce the grinding disc's service time. d. Check water cleaning, flushing hole may be blocked, too little water.
Machine is untight.	<ul style="list-style-type: none"> a. Check correct fitting of the front cover (1). b. Clean the sealing behind the front, maybe grease sealing with vaseline. c. Replace sealing.
Grinding wheel does not turn.	<ul style="list-style-type: none"> a. In case of blockage, main switch off and after 5 min. press the device fuse. b. Central screw is not tightened or does not tension the disc (grinding wheel too thin – third-party product) → Use spacer.
Water flow disturbed.	<ul style="list-style-type: none"> a. The drain hose should have a slight slope to the settling tank. b. Drain hose blocked, remedy blockage.
Odor nuisance during operation.	<ul style="list-style-type: none"> a. Brake grinds → inform service. b. Too frequent switching on and off leads to smell of the brakes.
Vibrations during grinding.	<ul style="list-style-type: none"> a. Grind the bearing surface smooth first. b. Check the axial impact of the grinding disc.
Device moves on the table.	<ul style="list-style-type: none"> a. Disc is unbalanced → replace. b. Disc surface soiled → clean. c. Place the device on a vibration-free surface.

6 Maintenance

- Regularly check the appliance for visible damage to the housing or power cord.
- Clean the front and inner grinding area once a week (see chapter 4.2 cleaning).

Note

Clean and protect your device at regular intervals with the REITEL stainless steel care spray (order-no.: 90405000) to remove lime, plaster and dust as well as other contaminants from the surface of the equipment and to prevent corrosion. The spray creates a lasting, water repellent protective film which helps keep the equipment clean.

7 Warranty

We, REITEL Feinwerktechnik GmbH, offer a 1 year's warranty beginning from the proven date of purchase. This warranty covers all defects traceable to materials, design or workmanship. The following warranty regulations are applicable:

Within the warranty period Reitel Feinwerktechnik GmbH or an authorized distributor agrees at its sole option, to perform repair or replace this product at no charge covering all defects traceable to materials, design or workmanship. Warranty only applies to appropriate use and regular maintenance of this product according to the operating instructions. Claims under warranty are restricted to complementary performance. Additional claims, especially claims for indemnifications, are not covered by this warranty.

1.

Warranty claims have to be addressed to the distributor the product was purchased from or directly to our service department.

Contact:

REITEL Feinwerktechnik GmbH

Senfdamm 20

49152 Bad Essen

Germany

Phone: +49(0)5472-9432-32 (Service Department)

Phone: +49(0)5472-9432-0 (Reception)

Fax-No: +49(0)5472-9432-40

2.

In case of warranty claim application the sales receipt or your purchase invoice showing the date of purchase of the product and the serial number must be furnished. Securely pack and ship the device, freight charges prepaid, at your own risk to us, along with a report describing the defect. We reserve the right to decline warranty if this information has been removed or modified after purchase of the product or if they are not included in case of warranty claims.

3.

Warranty repairs have to be performed by REITEL Feinwerktechnik GmbH or by authorised distributors. Repairs performed by non-authorised companies will void the claim for refund since damages to the product resulting hereof are not covered by warranty.

4.

If the unit sent in for repair or replacement is still under the original warranty then warranty is to the end of the original 1 year warranty.

5.

If the unit is destined to be operated in another country than originally intended and manufactured for, modifications to the product might be necessary to comply to special technical and /or safety standards of that specific country. Such modifications are no defects traceable to materials, design or workmanship. and are therefore expressly excluded from warranty claims.

Modification costs or damages arising from operation of the product under deviating conditions are not covered by warranty.

6.

Exclusions from warranty:

- Service and maintenance work as well as repair and replacement of consumables according to our consumables' list
- Transportation cost of the machine or installation and dismounting expenses incurred
- Damages due to use of the product other than for its intended purpose
- Damages due to faulty installation or insufficient maintenance of the product (e.g. decalcification)
- Damages due to natural disaster e.g. lightning, water, fire, act of nature beyond control, war, inadequate line voltage, insufficient ventilation, no decalcification, insufficient care and cleaning or non-adherence to operation and maintenance instructions according to the accompanying operation guide.
- Damage due to use of the product other than in accordance with the instructions provided by REITEL Feinwerktechnik GmbH;
- The warranty does not cover the cost of removal and replacement of parts and accessories, unless supplied as original equipment by REITEL Feinwerktechnik GmbH
- All kind of damages occurred not directly at the device as well as consequential damages (e.g. damages to furniture due to a lack of water, downtime of the machine, material, lost working hours, wages and other consequential damages).

This warranty shall be rendered null and void if:

- the product has been subject to any modification, repair or replacement other than as authorised by REITEL Feinwerktechnik GmbH
- the product is continued to be operated despite a functional defect

7.

The warranty is device specific and may be claimed, within the warranty period, by any person who has legally acquired the device.

8.

Consumables are excluded from warranty. Spare parts are subject to a warranty coverage of 6 months against all defects traceable to materials, design or workmanship according to these warranty regulations.

9.

Legal default claims on the part of the purchaser remain unaffected by this warranty.

10.

We reserve the right to charge a fee if repair of the device is rejected and the device is destined to be sent back unrepaired.

11.

Please note:

Upon repair or replacement of this unit, personal data and settings might get lost or damaged. We don't accept liability for all kind of data loss. The customer is advised to backup essential programs and data before sending for service.

12.

This warranty shall be interpreted in accordance with German law to the exclusion of UN sales law. Place of jurisdiction is our business location.

13.

If any provisions of this warranty are judged to be illegal or unenforceable, the continuation in full force and effect of the remaining provisions will not be prejudiced. The provisions of this warranty judged to be illegal or unenforceable shall be construed so as to give effect to the intent manifested by the provision held invalid, illegal or unenforceable and to give effect to section 13 hereof.

14.

Should you need to borrow a device while your device is being repaired, please contact Messrs. REITEL or your distributor. These loans are a service for which availability cannot necessarily be guaranteed. After the warranty period, a fee may be charged for loan equipment as well as for shipping and packaging.

8 Disposal Regulations



According to valid laws our devices are properly disposed of according to B2B – Regulations for proper disposal. Pls. contact your local dealer for additional information.

9 Spare Parts List

Best.Nr. Ref.:	Rotogrind (VA) (22.1 + 22.2) Ersatzteilliste/Spare Parts List	Stck/ ME Qty.	ME Unit
E7056200	"Klebt + Dichtet" 70 ml Tube Sealing glue, 70 ml tube	1	Stck piece
E6014500	Ablaufschlauch Di 30 mm Drain hose	0,8	m
E7059610	Dichtfett Sealing grease	1	Stck piece
E6012010	Dichtungsgummi für Frontabdeckung (ab 22.2 1013 413) Front rubber seal	1	Stck piece
E6014800	Dichtungsgummi für Frontausschnitt Rubber sealing for front cutout	1	Stck piece
E6015100	Inbusschlüssel 2mm Allen key 2 mm	1	Stck piece
E6015120	Inbusschlüssel Größe 5 Allen key, 5 mm	1	Stck piece
E7254400	LED-Lampe Leuchtkörper (nur für Trafo E60173) LED lamp bulb (only for network adapter E60173)	1	Stck piece
E7328000	Linearkugellager rostfrei (KFO) inkl. 61364.4 (2 St./Tisch)	1	Stck piece
E6019710	Schalter mit Wiedereinschaltenschutz 2 / 3 / 4 Switch incl. restart protection 2 / 3 / 4	1	Stck piece
E6015600	Schleifscheiben- Unterlegscheibe Alu Grinding disc support	1	Stck piece
E6013210	Schleifscheibenaufnahme (Alu) Aluminium disc support	1	Stck piece
E6037900	Umschalter Selector switch	1	Stck piece
E6022000	Wasser-Zulaufschlauch Water-feed hose	1	Stck piece
20305000	KFO Angulationstisch, Anpassung beim Hersteller erforderlich	1	Bgr assy

10 EU DIRECTIVE

EU-Konformitätserklärung EC-Conformity Declaration CE-Déclaration de Conformité

im Sinne der EG-Richtlinie 2006/42/EG über Maschinen (Anhang II A)
according to Machinery Directive 2006/42/EC (Appendix II A)
au sens de la Directive Machines 2006/42/CE (Annexes II A)

Name und Anschrift des Herstellers/Name and address of manufacturer/Nom et adresse du fabricant:

Reitel Feinwerktechnik GmbH
Senfdamm 20
49152 Bad Essen

Diese Erklärung bezieht sich nur auf die Maschine in dem Zustand, in dem sie in Verkehr gebracht wurde; vom Endnutzer nachträglich angebrachte Teile und/oder nachträglich vorgenommene Eingriffe bleiben unberücksichtigt. Die Erklärung verliert ihre Gültigkeit, wenn das Produkt ohne Zustimmung umgebaut oder verändert wird./This declaration relates exclusively to the machinery in the state in which it was placed on the market and excludes components which are added and/or operations carried out subsequently by the final user. This declaration will become invalid if any unauthorised modification is made to the product./Cette déclaration concerne exclusivement les machines dans l'état dans lequel elles ont été mises sur le marché et exclut des composants ajoutés et/ou les opérations effectuées par la suite par l'utilisateur final. La présente déclaration perd sa validité si des modifications non-autorisées ont été apportées à la machine.

Hiermit erklären wir, dass die nachstehend beschriebene Maschine/**We hereby declare** that the machine described below/**Nous déclarons** que la machine ci-dessous

Produktbezeichnung/Product name/Nom du produit: Nass- und Trockentrimmer/
Universal dry / wet Trimmer/
Taille modèles universel à eau et à sec

Typenbezeichnung/Type/Type:ROTOGRIND MINI / NT

allen einschlägigen Bestimmungen der Maschinenrichtlinie 2006/42/EG sowie der Richtlinie 2014/30/EU (EMV-Richtlinie) über elektromagnetische Verträglichkeit entspricht. Die Schutzziele der Richtlinie 2014/35/EU über elektrische Betriebsmittel sowie 2011/65/EU (RoHS 2) werden eingehalten./is in conformity with all applicable requirements of the Machinery Directive 2006/42/EC and the Electromagnetic Compatibility Directive 2014/30/EU. The safety objectives of the Directive on Electrical Equipment 2014/35/EU as well as the Directive 2011/65/EU (RoHS 2) are adhered to./est conforme aux dispositions applicables de la Directive Machines 2006/42/CE et de la Directive Compatibilité Electromagnétique 2014/30/EU. Les objectifs de sécurité de la Directive sur les Matériels Electriques 2014/35/EU ainsi que de directive 2011/65/EU (RoHS 2) sont respectés.

Angewandte harmonisierte Normen/Harmonised standards applied/Normes harmonisées appliquées:

EN ISO 12100:2011	EN 61010-1:2020
DIN EN 60204-1:2019	EN 61000-6-1:2019
DIN EN 45635-1	EN 61000-6-3:2011

Bevollmächtigter für die Zusammenstellung der relevanten technischen Unterlagen/Representative authorised to compile the relevant technical documentation/Personne autorisée à constituer la documentation technique pertinente:

Daniel Reitel
Reitel Feinwerktechnik GmbH
Senfdamm 20
49152 Bad Essen

11.02.2021

Ort, Datum
Place, Date
Lieu, Date

Daniel Reitel, Geschäftsführender Gesellschafter/Managing Director/
Directeur Général



Unterschrift/Signature/
Signature

Manufacturing according to Quality Management ISO 13485:2016, incorporating established standards.



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