Operating Instructions

INDURET MINI

LABORATORY EQUIPMENT
IN STAINLESS STEEL

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Dear Customer!

The INDURET MINI is suitable for casting precious and non-precious alloys under vacuum. All castings produced are precise and have an homogeneous structure. As the castings are subjected to high pressure, they have no porosity or inclusions. With the INDURET MINI, the casting time is visually determined by the user.

Any other use or use beyond this is deemed improper. For resulting damage the user/operator of this device is solely responsible.
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. In case of loss it can be ordered at a nominal fee from the manufacturer.

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1 Technical description

1.1 Basic Equipment

- INDURET MINI
- 1 Ceramic crucible (non-precious alloy)
- 1 Graphite crucible (EM)
- 1 Graphite crucible holder
- 1 Ceramic stop rod S
- 1 Graphite stop rod
- 1 Hose package

1.2 Special Accessories

- Order-No.: 21601000 Pressure reducer Argon
- Order-No.: 23801000 Graphite crucible for precious alloy
- Order-No.: 23801200 Graphite crucible Plus for precious alloy
- Order-No.: 23802000 Graphite stop rod
- Order-No.: 23804000 Ceramic stop rod S
- Order-No.: 23805000 Graphite crucible holder
- Order-No.: 23806000 Crucible holder
- Order-No.: 23807000 Water cooling unit
- Order-No.: 23809000 Maintenance unit
- Order-No.: 23811000 Starter package including order-no.:
  21601000, 23801000, 23802000, 23803000, 23805000, 23809000, 23812000, 23815000, 23816000, 23818000, 23819000, 23823000, 23812000
- Order-No.: 23814200 Thermocouple
- Order-No.: 23815000 Centering and isolation rings
- Order-No.: 23816000 Milling tool for crucible outlet
- Order-No.: 23818000 Alloy chute
- Order-No.: 23828000 Dosage tube
- Order-No.: 23819000 Positioning pliers

1.3 Operating Elements

1 Pressure gauge for pillar frame
2 Control lamp „performance reduction“
3 Switch “Manual Argon rinsing”
4 Sight glass
5 Inductor chamber
6 Clamping lever
7 Mould’s chamber
8 Lamp „Argon rinsing“
9 Power switch
10 Lamp step 1 draw vacuum
11 LED Casting machine “ready for operation”
12 Control lamp step 2 lift pestle (casting)
13 Control lamp step 3 Pressurisation (automatic)
14 Stew switch
15 LED “Heating on”
16 LED “Error”
17 Heating control
18 Device fuse 4 A
19 Device fuse 1 A
20 Power supply for water cooling unit
21 Type plate
22 Power outlet
23 Argon connection
24 Air connection
25 Water drain
26 Water outlet
27 Sound absorber
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29 Selector switch pressurization medium “Argon / air”
30 Display „Heating disturbance“
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32 Temperature display


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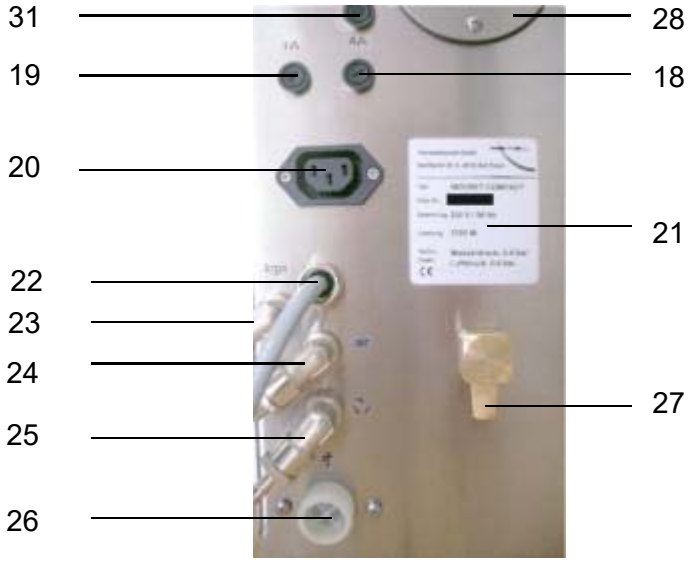
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1.4 Technical Data

Line voltage	230 V/50-60 Hz
Current consumption	3.200 W
Height/width/depth	460/350/650 mm
Weight	38 kg
Air pressure/Argon pressure	6 bar
Water pressure	min. 3-4 bar
Casting ring size	1–9 incl. model casting
Temperature	max. 1.600 °C
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 have been 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.
- Don't place anything on top of the machine.
- To avoid injury, appropriate protection should be worn (e.g. 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 suspected ingress of liquid stop operation and contact Service.
- Check all hose joints for tightness, if necessary fasten clamps.

2.2 Specific Safety Instructions

Note:

The machine must not be used by persons with electronically controlled medical aggregates such as pacemakers.

- Never store explosive, highly inflammable or burnable material in the working area.
- Only put the hot crucibles, pestles and moulds on a heat-resistant and fireproof support.
- Only use the device for melting metals and alloys in the crucibles intended for this purpose.
- Do not melt materials that produce toxic gases.
- Only switch on the generator with inserted melted material.
- Do not reach into the inductor chamber when the heater is on.
- Use pliers when inserting and removing the casting rings or melting crucibles. There is a risk of burns.
- Only open the casting chambers if there is no overpressure or underpressure.
- Handle gas cylinders carefully, do not heat them and protect them from falling over.
- Alloys with a longer melting time are not permitted. The rest period between a casting and the start of a new heating process must be at least 6 minutes. During this time, no hot crucible should be in the device. Casting ring chamber and inductor chamber must be open during this time for cooling reasons.
- Small metal quantities below 15 g are inaccurate and difficult to melt due to lack of mass. If it comes to mishandling, often cause errors in embedding or a wrong temperature assessment of the molten metal.
- Precious metal (EM) is usually cast in the graphite crucible, if necessary in the ceramic crucible with the graphite crucible holder.
- When melting thin and few precious metal platelets, make sure that they do not stand upright, otherwise no coupling takes place and the metal does not melt. Therefore push the plates together, place old cast cones on the new material or weld or score the plates together.

  Pay attention to the maximum percentage of old material and shred it enough! The parts must lie on the bottom of the pot, otherwise there is no or only partial metal melting.
- The heating process may include max. 3 minutes. Alloys with a longer melting time are not permitted.

3 Installation

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

3.1 Installation

- In order to minimize the casting delay time, the INDURET MINI should be installed in the immediate vicinity of the preheating furnace.
- Do not place the device in a dusty room, e.g. near a sandblaster.
- The INDURET MINI is a tabletop device. Pay attention to stable, non-wobbling, plumbing table design.

3.2 Compressed air connection

Connecting medium	Connection type device	Hose length	Laboratory installation
Compressed air	Quick coupling NG 7	2 m 14 mm Ø	quick coupling NG 7, 6 bar

The casting result depends on the compression set speed.

DES target pressure build-up speed from -0.8 bar to 3.0 bar in 1-2 sec.

That's why:

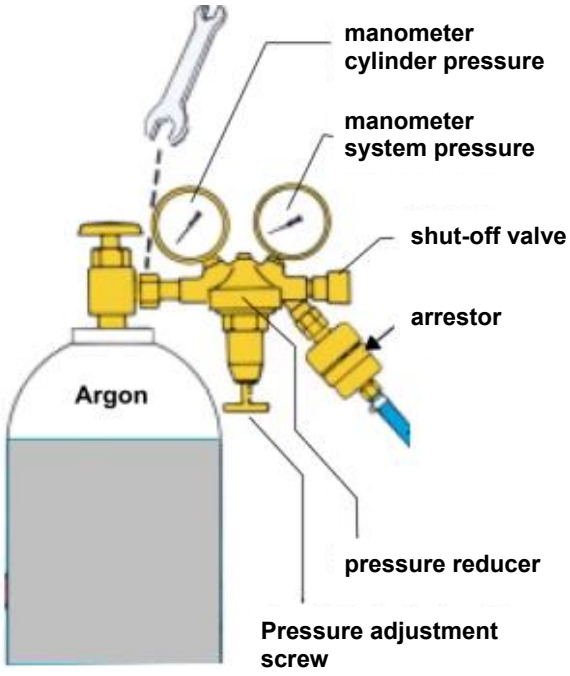
- Keep the distance to the compressor low.
- Flow opening of all connections and hoses at least 8 mm.
- Compressor pressure at least 6 bar (permissible pressure drop at the device max 0.5 bar).
- at least 80 l boiler volume or free compressor capacity / compressed air supply with 50 l / min. ensure continuously.
- Do not bend supply hoses.
- Keep compressed air connections water, dirt and oil free

3.3 Protective gas connection (optional)

Connecting medium	Connection type device	Hose length	Laboratory installation
protective gas Argon (min. 4.6)	Quick coupling NG 7	2 m 14 mm Ø	Bottle: pressure reducer 5-6 bar (not l/min)

Via a pressure reducer (included in the starter kit) the corresponding gas cylinder is connected.

Fig.: argon connection



3.4 Water connection

Connecting medium	Connection type device	Hose length	Laboratory installation
water supply	$^3/_4$ ″ - Union screw	2 m 16 mm Ø	$^3/_4$ ″- Union screw
water drain	Flow opening 6-8 mm, secure with clamp	2 m 12 mm Ø	free expiring

Connect the water inlet with the supplied hose to the supply line.

The water inlet pressure must be at least 3 bar. The water drain hose leads into a drain basin or the household drain. The drain must be permanently lower than the device to prevent backflow.

Alternatively, the water circulation cooling can be installed, which you can get as an accessory from REITEL.

3.5 Connection for power supply

Connecting medium	Connection type device	Hose length	Laboratory installation
Electrical connection	preinstalled	2,5 m	230 V/16 A 50 Hz socket

Protection: fuse 16 A slow-blow or circuit breaker K16 A or C16 A, minimum voltage 215 V / max. 240 V.

4 General Notes

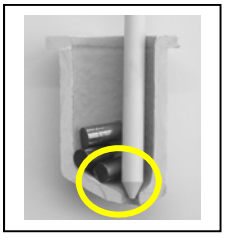
The precondition for obtaining excellent casting results is correct sprueing, embedding and recognition of the correct casting moment.
The REITEL INDURET MINI produces precise casting with a homogeneous structure, with nearly all kind of alloys available in the market.

We don’t have any reliable information regarding their suitability or we don’t recommend these alloys.
In case of casting problems, we’ll be glad to perform testing for you against payment of a fee.

4.1 Alloys

1. Nickeliferous alloys containing more than 67 % nickel (Ni).
   These alloys were developed for flame casting and therefore, are only partially suitable for vacuum pressure casting.
2. Ferric alloys containing more than 30% of iron (Fe) 30 %.
   It’s difficult to determine the correct casting moment due to the fast burning iron parts.
3. Aluminum-containing (Al) alloys with copper content (Cu).
   The already melting at low temperatures aluminum creates a strong formation of smoke and slag.
4. Beryllium-containing (Be) alloys
   These alloys develop toxic fumes when melted! When using these types of alloys, the company REITEL assumes no liability for functional and health damage of any kind.

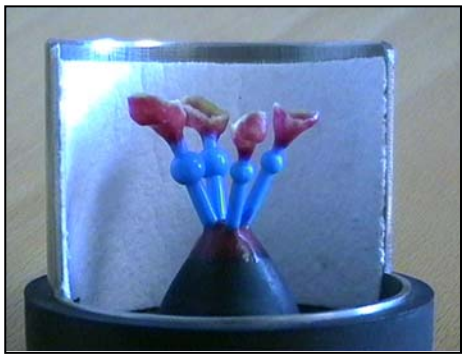
4.2 Clean working area for precise casting



1. Clean the inductor (5) – and mould’s chamber (7) and if necessary use a vacuum cleaner to suck them out.
2. Arrange mould seal and pliers.
3. Check the ceramic crusible for a round outflow hole with a diameter of 8 mm.
4. Clean ceramic crucible or use milling tool to clean crucible outlet.

4.3 A right way

1. Correct choice of casting channels and positioning in the casting ring in crown and pontic technique.



A homogeneous casting depends very much on the correct dimensioning of the casting channels and the supply channels.

For crowns and inlays, the sprues should be at least 3 mm in diameter. The lost head must be exactly in the heat center. The distance to the muffle wall should be 5 mm and to the muffle top 7 mm.

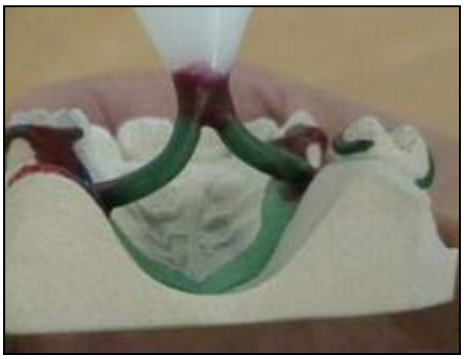
In a pontic construction, the casting channels must always have the same thickness as the crossbeam, ie the supply reservoir. If a crossbeam is used, it must have a diameter of 5 mm. For pontic constructions, air ducts (0.6 mm - 0.8 mm) should be installed on compact model parts.

The prosthetic object must be embedded about 5 mm from the edge of the casting ring. The melt reservoir must start in the middle of the steel ring from the height dimension. Helpful here is the crosshair control. When viewed from above, the object must be eccentric.

The wall thickness of the crowns and bridges must be at least 0.2 mm for noble metal casting (ideally 0.3 mm). If this value is undershot, the surface tension is greater than the specific gravity of the alloy and the alloy can not flow out completely into the object. For Cr-Co-Mo crowns and pontics, the wall thickness should be 0.4 mm - 0.5 mm.

2. Correct choice of sprues and positioning of the sprue in model casting constructions.

As casting channels wax wires of 4.0mm - 4.5 mm diameter are used. An additional use of pressure compensation channels means that basically two casting channels are sufficient for all model casting models. The casting channels must be arranged so that they lead from the center of the casting mold to wax modeling.

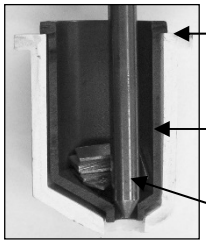


Important for all incitements in vacuum pressure casting are soft, radiused transitions in the main flow direction of the alloy. Sharp redirections should be avoided at all costs. The sprues must constantly increase from the prosthetic modeling to the funnel. The hopper floor is 3 – 4 mm above the highest model point.

If a model can not be fitted with 2 sprues to feed all parts of the volume (clip model casting, palatal plate), additional reservoirs can be fitted. Here, the diameter of a reservoir of 3 mm is sufficient.

4.4 Crucibles and stop rods

Melting **precious alloys**



23805000 **Graphite crucible holder**

23801000 **Graphit crucible normal**
23801200 **Graphite crucible Plus**
23800000 **Sigradur crucible**

23802000 **Graphite stop rod**

23802000 Graphite crucible holder: *In conjunction with the thermocouple, it is possible with this crucible holder to measure the temperature of the precious metal melt.*

23801000 Graphit crucible normal: *Graphite-containing crucible for precious metal alloys.*

23801200 Graphite crucible Plus: *Graphite-containing crucible for precious metal alloys with ceramic insert at the outflow hole.*

23800000 Sigradur stop rod: *Glassy carbon crucible mainly used for palladium-based alloys in combination with the 23812000* ***Longlife stop rod****.*
Gold alloys can be combined with the 23802000 ***Graphite stop rod****.*

Melting **non-precious metal alloys (chrome-cobalt-molybdenum)**

23803000 **Ceramic crucible for non-precious alloy**

23804000 **Ceramic stop rod S** (without temperature control)
23812000 **Stop rod Longlife** (with temperature control)

23803000 Ceramic crucible for non-precious alloy: *The crucible consists of a special ceramic mass and has a long service life due to its high heat exchange resistance.*

23812000 Stop rod Longlife: *In conjunction with the thermocouple, this shutter stop rod makes it possible to measure the temperature of the melt in the* ***ceramic crucible for non-precious metal****.*

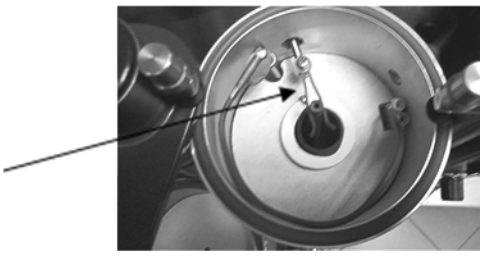
In order for the induction field to couple optimally, a minimum of 15 g of alloy must rest on the bottom of the crucible.

The argon optimizes the temperature measurement and the casting result (oxide reduction, homogeneous melting).

5 Casting Process

Note:
The stop rods and the crucibles are fragile. Therefore, they should be handled carefully, e.g. when hot, work with needle-nose pliers and use the crucible holder for storage.
The breakage sensitivity of the stop rods is increased by moisture, oil, etc., so they are to be stored dry and to be taken out of the packaging just before use.

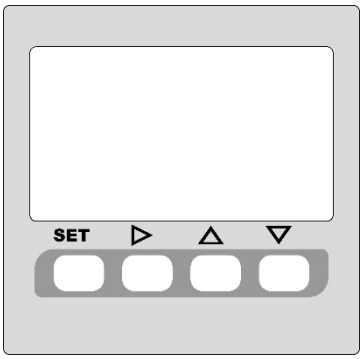
1. Prior to starting the casting process, heat up the casting mould in the preheating furnace Due to the delay time during melting, heat up the casting mould to the maximum admissible temperature. Please observe the manufacturer's instructions. Wrong temperature or too short preheating time will lead to bad casting results.
2. Turn on the watercooling. This should be min. have a pressure of 3-4 bar.
3. Check the compressed air. Set the compressor pressure reducer to 6 bar. (Vacuum only possible with compressed air connection).
4. Turn on the argon bottle. Set the gauge pressure gauge to 6 bar outlet pressure.
5. Turn on the main switch. The switch lights up green. The LED (green) flashes for approx. 10 seconds. When the LED lights up permanently, the device is ready for operation.
6. Select a.) air or b.) argon with the selector switch (29). Depending on the degree of discharge argon or compressed air. We recommend argon for better surface finish on non-precious metal.
7. Open both chambers. Swing the inductor chamber (5) and the casting ring chamber (7) to the left.
8. Insert a crucible into the inductor chamber (5) as described in 4.4.
9. Clamp the stop rod in the lifting clamp. Check the correct position of the stop rod tip in the crucible hole, if necessary, press the stop rod slightly. For this purpose, the casting ring chamber (7) must be opened. There must be no visible light gap between the bottom hole of the crucible and the stop rod through the lamp in the bottom of the device.



Inductor chamber

10. Adjust the height oft he casting rings in the casting ring chamber (7).
    - Size 1 – 9: 2x 10 mm + 1x 6 mm insulation.
    - Top edge oft he chamber and casting ring must be brought to the same height. (The casting ring chamber is prepared for the sizes 1 – 9 and model casting.) Attention: The muffle should be as close as possible under the crucible opening to shorten the flow path.
11. Insert the insulating and centering aid.
12. Put the metal into the crucible. In order for the induction field to couple optimally, place min. 15 g of metal on the bottom of the crucible.

5.1 Setting the temperature display



1. After switching on the device, "Lo.tE." appears on the display (32). This display remains as long as the temperature does not exceed 200 °C. (The actual temperature is displayed above 200 °C.)
2. Press "SET" to set the target temperature.
3. "CI.bE." appears on the display. Now use the arrow keys (▲ + ▼) to set the temperature higher or lower. By holding down the respective button, the temperature can also be changed in steps of ten.
4. The set value is automatically saved after a few seconds.
5. Then press "SET" again to confirm the temperature.
6. "AI.bE." appears on the display. Now use the arrow keys (▲ + ▼) to set the same temperature as for the first run. The temperatures in "CI.bE." and "AI.bE." must be the same.
7. The set value is automatically saved after a few seconds.

5.2 The casting process without temperature control

Perform the preparatory activities 1-12 as described in chapter 5 and 5.1.

5.2.1 The casting process without temperature control without pre-melting

1. Place the hot casting ring in the positioning ring and close the chambers by placing the locking lever vertical and pressing it towards the unit.
2. Set the step switch to position "1" and the rotary control to max. "10". Melting under vacuum begins.
3. When the casting time is reached a signal sounds. Set the tap-changer to position "2" (signal stops). The stop rod releases the bottom hole of the crucible and the pressurization is triggered.
4. After about 10 seconds, the chamber can be vented. To do this, set the on-load tap-changer to position "0" and pull the locking lever toward you. Do not open the chambers until the pressure gauge has returned to 0 bar.

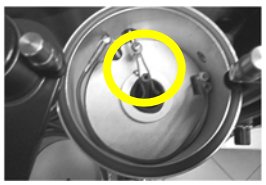
5.2.2 The casting process without temperature control with pre-melting

1. Close the chambers. Leave the locking lever in the starting position.
2. Set the step switch to position "1" and the rotary control to max. "10" Pre-melting starts. The green and yellow LEDs are permanently lit.
3. Stop the pre-melting when the pellets in the crucible start to break at the edges. Open the casting ring chamber and place the hot casting ring in the positioning ring. Pay attention to cleanliness in the casting ring chamber.
4. Close and lock the column frame (crucible and casting ring chamber). The melting process will now continue.
5. A signal sounds when the set target temperature is reached. When the casting time is reached, set the tap-changer to position "2" (signal stops). The stop rod releases the bottom hole of the crucible and the pressurization is triggered.
6. After about 10 seconds, the chamber can be vented. To do this, set the on-load tap-changer to position "0" and pull the locking lever toward you. Do not open the chambers until the pressure gauge has returned to "0" bar.

5.3 After the casting

Take out the locking rod and the crucible with the auxiliary tool and place them on the crucible rack.

At the end of work or longer breaks: Close the protective gas bottle, switch off the appliance and close the tap.



Inductor chamber

6 Troubleshooting

In the event of faults or application-related questions, please contact the INDURET Hotline Phone-No.: +49 (0) 5472-9432-33.

7 Maintenance

Note:

Water in the air filter indicates damp compressor air. Please have your compressor checked by a specialist. Also connect a maintenance unit (REITEL accessory).

- Check the air filter (28) weekly for dirt or moisture.
- Check the condition of the device regularly. Pay attention to e.g. on visible damage to housing, power cord or pressure hoses.
- Clean the housing at regular intervals with a damp cloth or with the REITEL stainless steel care spray.
- Once a week, vacuum the casting ring chamber (5) and inductor chamber (7).
- Clean once a week the gaskets and grooves as well as the protective glass. Pay attention here if defective seals have to be changed.
- Drain and check the compressed air device every 2 months.
- After 2 years or approx. after 1500 castings you need a check-up. This includes a complete device overhaul incl. Loaner and replacement of wearing parts, for a fixed price on company REITEL.

Note

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

8 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 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 manfactured 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 GmH;
- 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.

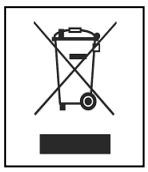
13.

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 free may be charged for loan equipment as well as for shipping and packaging.

9 Rules for disposal



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.

10 Spare Parts List

Bestell-Nr. Ref.	Induret Ersatzteileliste / Spare parts list 03/2019	Stck/ME Qty.	ME Unit
E6218220	Adapterplatte Boden / Adaptor plate 10mm (2pcs./set)	1	Satz/set
E6212900	Dichtungssatz f.Muffel-u.Induktorkammer / Set of sealings for mould and inductor chamber	1	Satz/set
26805000	Druckausgleichsbehälter	1	St./pc.
E7206820	Drosselventil Spulenheber Nachrüstung	1	St./pc.
E6202000	Dichtungssatz für Schauglas / Set of sealings for sight glass	1	Satz/set
E6215800	Durchflußwächter für Kühlwasser / Flow control unit for cooling water	1	St./pc.
23823100	Muffeldichtung Induret, Graphit / Graphite muffle sealing for Induret	5	St./pc.
E6611910	Filter (Faltenfilter) mit Gehäuse bei aussenliegendem Luftfilter / Filter (fold filter) with casing for exterior air filter	1	St./pc.
E7015700	Filter (im Gerät) / Filter (in the device)	1	St./pc.
E6611900	Filter Keramisch (ab 07.2010, ersetzt E66119.1) / Ceramic filter (from	1	St./pc.
E6210400	Halteklammer für Verschlußstößel / Holding clip for pestle	1	St./pc.
E7402700	Hauptschalter mit Überstromschutz	1	St./pc.
E6012120	Lüftungswechselfilter	1	St./pc.
E6209110	Muffelauflageplatte / Muffle support	1	St./pc.
E6202800	Muffelisolier.- und Positionierblock Größe 1/3/6	1	Satz/set
E6219200	O-Ring schwarz dünn / Black thin O-ring	1	St./pc.
E6060010	O-Ring schwarz für Kabeldurchführungen	1	St./pc.
E6202210	Sichtschutzglas dunkelgrün / Dark-green sight glass, aktuell 59mm	1	St./pc.
E7504000	Stufenschalter / Multiple contact switch	1	Bgr./unit
E7212700	Taster für Argon / Argon key	1	St./pc.
23814200	Thermoelement / Thermocouple	1	St./pc.
E6218310	Thermoelementstecker / Plug for thermocouple	1	St./pc.
E6209100	Tiegelhalteplatte / Crucible holding plate	1	St./pc.
23825000	Muffelringe, Set 1-9	1	Set

11 EU DIRECTIVE

im Sinne der Niederspannungs-Richtlinie 2014/35/EU (Anhang III B)
according to Low Voltage Directive 2014/35/EU (Appendix III B)
au sens de la Directive Basse Tension 2014/35/EU (Annexes III B)

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 das Gerät in dem Zustand, in dem es 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 nachstehend beschriebenes Gerät/**We hereby declare** that the machine described below/
Nous déclarons que la machine ci-dessous

Produktbezeichnung/Product name/Nom du produit:	**Vakuum Druckgussanlage/ Induction heated casting machine/ Appareil à couler „Vide-Pression“**
Typenbezeichnung/Type/Type:	INDURET MINI

allen einschlägigen Bestimmungen der Richtlinie 2014/30/EU 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 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 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:

DIN EN 61010-1:2020	EN 61000-6-1:2019
DIN EN 60519-3:2006	EN 61000-6-3:2011

Reitel Feinwerktechnik GmbH - D-49152 Bad Essen - REITEL
Department for Quality and Safety

30.03.2021

Ort, Datum Place, Date Lieu, Date	Daniel Reitel, Geschäftsführender Gesellschafter/Managing Director/ Directeur Général	Unterschrift/Signature/ Signature

We manufacture in compliance with Quality Management ISO 13485:2016 incorporating established standards.

102023

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