Instruction Manual

Atomicer

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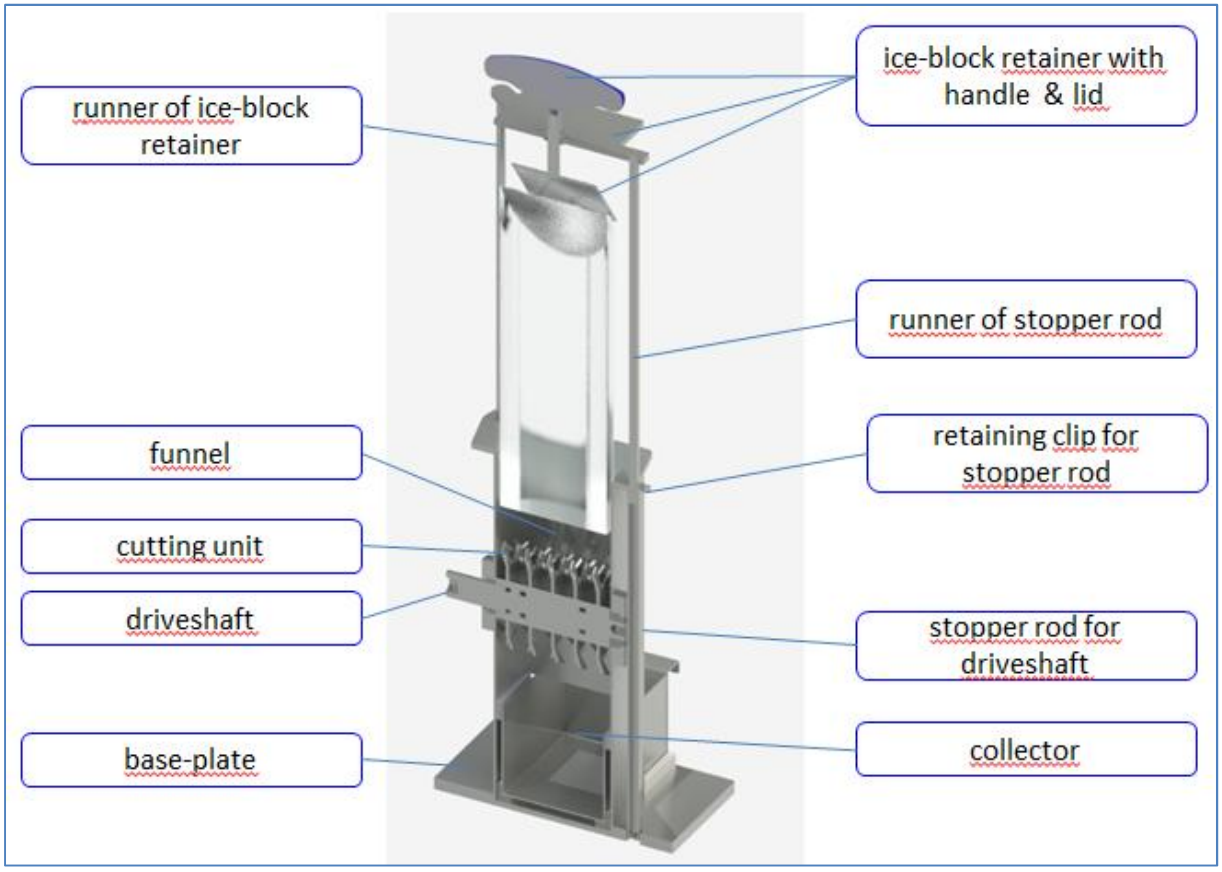
Atomicer *in detail*



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Instruction Manual „Atomicer“ ice-mill

Before starting operating the ice-mill please read this instruction manual carefully!

General description of the ice-mill

The Atomicer may only be activated after carefully review of the instruction manual.

The Atomicer is a sterilizable device that can be used for the production of sterile crushed ice for and during surgeries. The Atomicer can manufacture sterile crushed ice from a sterile block of ice with a size of approximately 10 x10 x 30cm.

The Atomicer can be driven manually by using a crank.

Additionally there is the possibility to drive the Atomicer with an air driven machine system (air drill).

Figure 1: Atomicer with crank for manual usage

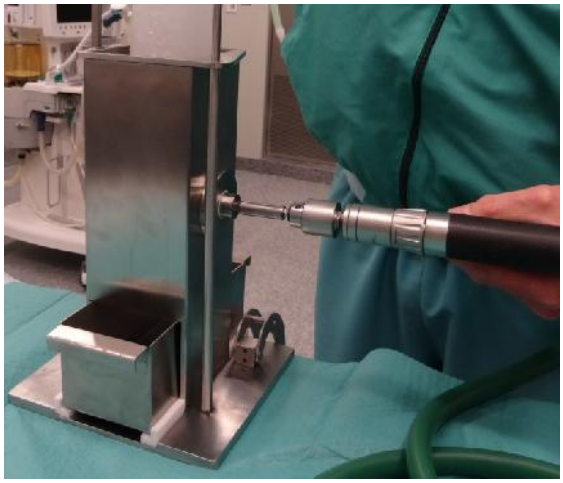

Figure 2: Atomicer driven by an air-driven machine system

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Fixation and Assembly

Fix the baseplate with the enclosed hand clamp on a strong table.

Figure 3: strong fixation with the hand clamp

Insert the cutting-unit into the funnel, so that the driveshaft with the catch pins can be inserted from the outside.

Figure 4: driveshaft in cutting-unit

Ensure that the stopper rod is clipped on in the retaining clip. Insert the driveshaft completely until it is queued at the stopper rod.

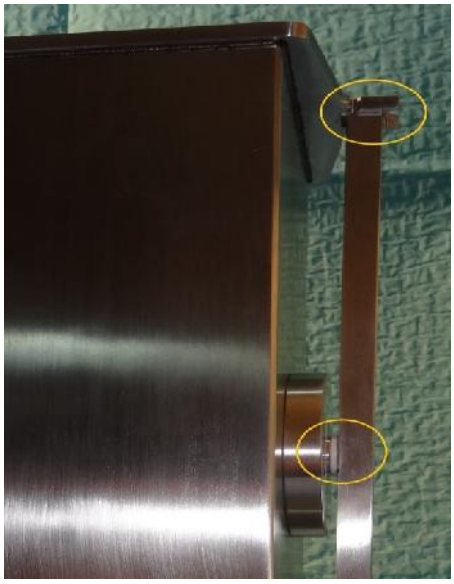

Figure 5: stopper rod in correct position

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Operation

The operation of the Atomicer occurs via mechanical two-hand control system. This is to ensure that the operator, when working with the machine, cannot reach the cutting area.

1. Place the block of ice in the funnel of the Atomicer and position it with the ice-block retainer.
2. Simultaneously, bring the two guide rods (round rod & square rod) into the appropriate pipe runner.
3. To begin the crushing process fix the adapter in the air drill and insert the adapter into the driveshaft. Acitvate the air drill, thereby bringing the transmission through the driveshaft to the cutting-unit. The power transmission only works when the driveshaft and cutting-unit are in correct position to each other. The correct position is achieved if the driveshaft is queued on the stopper rod which is vertical positioned and fixed in the retaining clip.

Figure 6: ice-block retainer in correct position

4. If the stopper rod is squeezed out of the retaining clip through the driveshaft [1] (pressure about 20 Newton) the driveshaft goes into a freewheel and no power is transmitted to the cutting-unit. To bring the driveshaft back into correct position, pull it back by using rotating movements until the stopper rod can be correctly positioned again in the retaining clip.

Figure 7: out swinged stopper rod & driveshaft in freewheel

[1] by inappropriate operation with the lack of steering the stopper rod

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5. Simultaneously, position the block of ice in the ice-block retainer. Turn the ice-block retainer down in rotating movements using some pressure.

6. The produced crush-ice is collected in the collector.

It is not possible to activate the Atomicer with an air driven machine system without the ice-block retainer and its guide rod system. Without the counter bearing mechanism, which is achieved with the stopper rod in correct position, the driveshaft will go into freewheel. No transmission power can be transferred to the cutting-unit.

Safety Aspects

The Atomicer may only be operated with the attached and provided safety devices by the manufacturer and is designed for operation by one person only. It is forbidden that two or more people operate the Atomicer simultaneously. The Atomicer is intended exclusively for crushing frozen blocks of ice. With improper use of the Atomicer the warranty will be void. The manufacturer is not liable for damage to the machine nor personal injuries caused by improper use.
Check the Atomicer and its components (funnel, cutting-unit, driveshaft,) before starting operation.
Do not start operating a damaged Atomicer.
Repairs may only be carried out by the company **SMT Schilling.** Improper unauthorized repairs may lead to considerable danger for the user. In addition, the warranty becomes void. A repair of the Atomicer may only be done by its original manufacturer (SMT Schilling), otherwise the warranty becomes void for any following defects .Faulty components must only be replaced by original spare parts. Only with the original spare parts, safety requirements are fulfilled.

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Requirements for the installation location

Ensure that the workplace is adequate for the safe operation of the Atomicer. The Atomicer must be fixed on a solid, flat, horizontal and non-slip surface. The support system must have appropriate loading capacity (min 40 kg).

Figure 8: fixation on a strong surface

Safety hazards

The rotating cutting-unit can injure body parts, especially hands and fingers. For this reason, pay, attention during the operation of the Atomicer that nobody touches it. It is forbidden to operate the Atomicer without the ice-block retainer.

Care and Maintenance

Following methods may be used for treatment of the Atomicer.
Cleaning supplies must be suitable for stainless steel and plastic materials.
A frequent cleaning reprocessing in accordance with specifications has a low impact on the Atomicer. The end of the product lifetime is normally reached through wearout and damages thorough usage. To realize this in time, annual check-ups are recommended. The Atomicer must be disassembled prior to treatment (funnel, cutting-unit, driveshaft & ice-block retainer).

Lubrication of moving parts is not necessary.

Attention: Ensure careful handling of the cutting-unit, because of its sharp cutting edges.

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It is recommended that the Atomicer gets sterilized in functional condition, to avoid the possible danger of contamination by accidental rupture of sterile gloves, should the sharp cutting-unit be touched accidentally.

Cleaning and Disinfection

The Atomicer is suitable for both, mechanical cleaning/disinfecting (<93°C) and manual cleaning.

Sterilization

The Atomicer qualifies for all major steam sterilization processes according to EN 554.
The recommended sterilization procedure: steam sterilization 134°C with 3 bar pressure and a holding period ≥ 5 Minutes.

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Components' Attributes

The Atomicer consists only of stainless steel according to DIN EN ISO 7153-1[2].
The plastic components used are approved for medical devices and are tested on biocompatibility.

Figure 10: Atomicer after operation

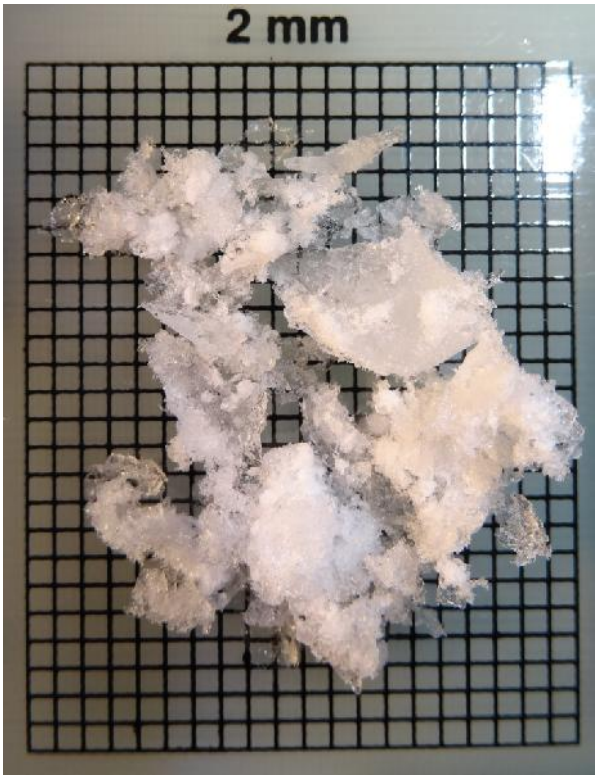

Figure 9: product – grid of ice-cubes

[2] Surgical instruments, metallic materials, part 1: stainless steels

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Spare Parts

13-12-37-1800-52

Pusher

13-12-37-1800-55

Cutting unit (Rasper)

13-12-37-1800-51

Drive shaft

13-12-37-1800-53

Crank handle

13-12-37-1800-30

Adapter for crank handle

13-12-37-1800-32

Knurled Screw

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13-12-37-1800-40

Adapter ¼“

13-12-37-1800-41

Adapter three-shank-end

13-12-37-1800-42

Adapter Hudson

13-12-37-1800-43

Adapter hex

13-12-37-1800-44

Adapter AO, large

13-12-37-1800-35

Ice holding tank

13-12-37-1800-50

Case

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