

**Operating Manual  
Hydraulic Drill and Chipping Hammer  
Type 2 2407 0010**



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## Main features of the tool

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Mechanical torque-limiting clutch  
 No-load hammering absorption  
 Quick-change chuck  
 SDS max insert tool system  
 Drilling and chiselling modes  
 Chisel position adjustment  
 Gearing and hammering mechanism with grease lubrication  
 Pivotal side handle  
 Depth gauge attachment

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## Technical Specification

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Operating pressure:	1450 PSI
Power:	1.75 HP
Speed:	250 RPM
Oil flow:	2.6-13.2 GPM
Tool system:	SDS max
Weight (net):	appr.28.6 lbs. without hoses
Dimensions (L x H x W):	19-1/2" x 7-1/2" x 11-3/4"
<b>Minimum distance between to the wall:</b>	<b>1-1/2"</b>
Typical drilling performance in medium-hard concrete B 35	3/4" dia.: 14-1/2"/min 1" dia.: 12" /min 1-1/4" dia.: 7-1/2" /min
Noise level :	92 dB (A)
Equivalent constant RMS acceleration:	29-1/2 ft./s <sup>2</sup>

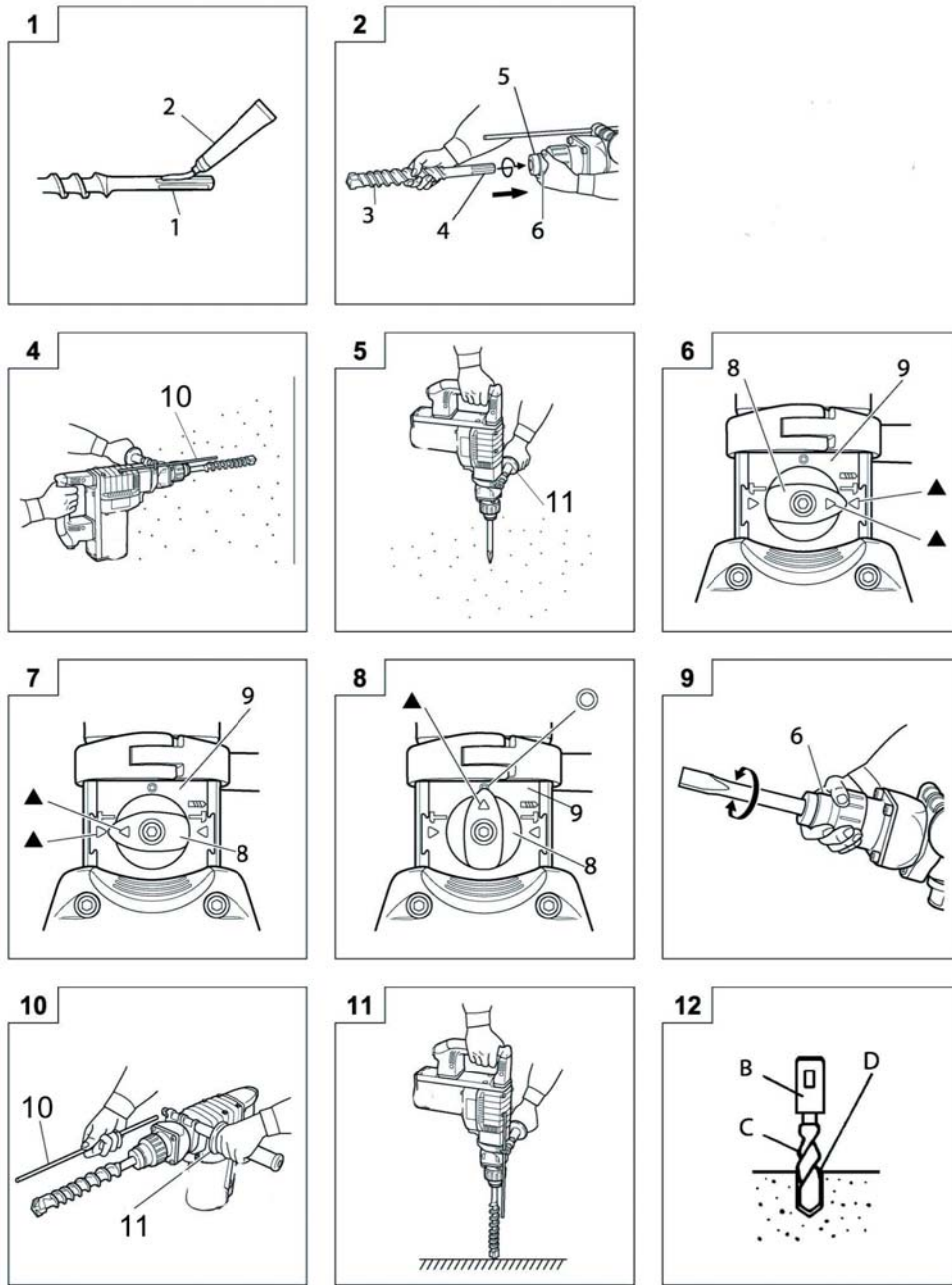
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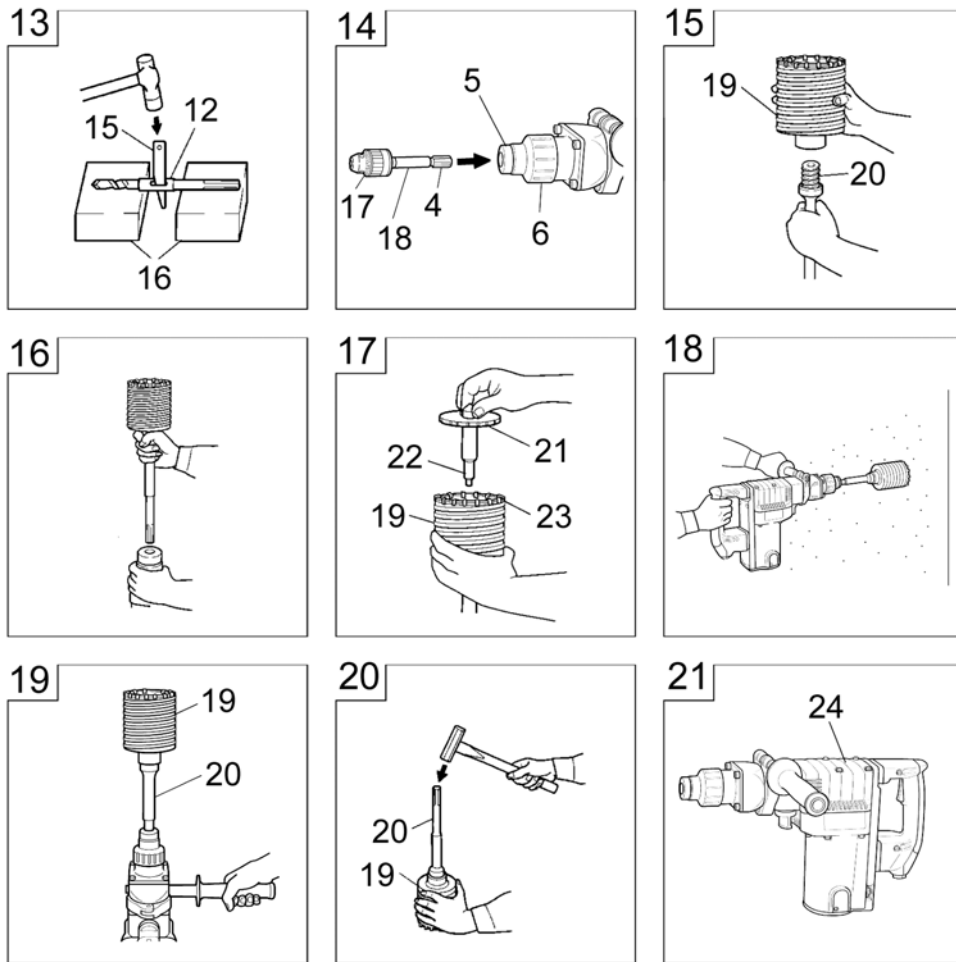
## The machine is designed for following uses:

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use	Required insert tools	Working Area
Drilling in concrete, masonry and natural stones	Drill bit with SDS max. shank - Hammer drill bits - Breach bits - Hammer drill bits	Drilling range in concrete 1/2"-2" dia. 1-9/16"-2" dia. 1-3/4"-6" dia.
Chiseling in concrete, masonry and natural stone	Moul pointed, flat and shaped chisels with SDS max. shank	Surface finishing and breaches
Drilling in wood and metal	Chuck holder Keyless chuck Wood drill bits and metal drill bits with smooth or hex- shank	Wood drill bits 3/8"-1-1/4" dia. Metal drill bits 3/8-3/4" dia.
Mixing non-flammable materials, e.g. mortar)	Chuck holder Keyless chuck Mixing tools with smooth or or hex. shank	Mixing tools 3-1/8"-6" dia.

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	<b>English</b>	<b>Deutsch</b>
01	Tool shank	Werkzeugschaft
02	Grease	Schmierfett
03	Tool	Werkzeug
04	Part of SDS max shank	Teil des SDS-max Schaftes
05	Front cap	Vordere Abdeckung
06	Grip	Spannbacke
08	Selector lever	Wahlhebel
09	Under cover	Untere Abdeckung
10	Stopper	Anschlagstange
11	Side handle	Seitengriff
12	Taper shank adapter	Konusschaftadapter
13	Drill bit (taper shank)	Bohren (mit konischem Schaft)
14	Indicating groove shows standard-depth matching the outside diameter of the anchor for drilling	Anzeigerille zeigt Normalloch-Tiefe gemäß Außendurchmesser des Ankers für Bohren.
15	Cotter	Keil
16	Rest	Auflage
17	Drill chuck	Bohrfutter
18	Chuck adapter	Bohrfutteradapter
19	Core bit	Bohrkrone
20	Core bit shank	Bohrkronenschenkel
21	Guide plate	Führungsplatte
22	Center pin	Mittelstift
23	Core bit tip	Bohrkronenspitze
24	Crank case cover	Kurbelgehäuseabdeckung

## GENERAL OPERATIONAL PRECAUTIONS

**WARNING!** When using hydraulic machines, basic safety precautions should always be followed to avoid the risk of personal injury. Read all these instructions before operating this machine and save these instructions.

### For safe operations:

1. Keep work area clean. Untidy areas and workbenches increase the danger of accidents.
2. Consider work area environment.
3. Keep children away. All visitors should be kept away from work area.
4. Machines not used should be kept safely. They should be stored in a dry, high or locked up place, out of reach of children.
5. Do not force the machine. It will do the job better and safer at the rate for which it was intended.
6. Use the right machine. Do not force small machine or tool to do the job of a heavy duty machine. Do not use tools for purposes not intended.
7. Dress properly. Do not wear loose clothing or jewellery; they can be caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Wear protecting hair covering to contain long hair.
8. Use safety glasses. At operations with formation of dust, wear a face or dust mask.
9. Never carry the machine by the hose.
10. Secure work. Use clamps or a vice to fix the work piece. It is safer than using hands and clears both hand to operate the machine.
11. Do not overreach. Keep proper footing and balance at all times.
12. Maintain tools with care. Keep cutting tools sharp and clean for better and safer performance. Follow instructions for lubrication and changing accessories. Regularly check the hoses and replace in case of damage. Keep handles dry, clean, and free from oil and grease.
13. Disconnect machine. When not in use, before servicing, and when changing accessories such as bits and chisels.
14. Remove adjusting keys and wrenches. Before activating the motor, observe that keys and adjusting wrenches have been removed.
15. Avoid unintentional starting. Do not carry a connected machine with a finger at the button. Before transportation check if the machine is turned off.
16. Stay alert. Watch what you are doing. Use common sense. Do not operate the machine when you are tired.
17. Check damaged parts. Before using the machine, damaged parts or protective devices should be carefully checked to make sure they work soundly and fulfill the designated function. Check alignment, connections and attachment of moving parts. Also check if parts are broken. Parts or protective devices that are damaged should, if nothing else is mentioned in these operation instructions, only be exchanged or repaired by qualified personnel. The same applies to defective switches. Do not use the machine if the switch does not turn it on and off.

18. **Warning** The use of other accessories or other additional items than recommended in these operating instructions may include the risk of bodily injury.
19. Have your machine repaired by a qualified personnel. This hydraulic drill and chipping hammer is in accordance with the relevant safety requirements. Repairs should only be carried out by qualified personnel using original spare parts, as otherwise considerable danger may occur for the user.

### **PRECAUTIONS ON USING DRILL AND CHIPPING HAMMER**

- To protect your ears during operation, wear hearing protection.
- Do not touch the bit during or immediately after operation. The bit becomes very hot during operation and could cause serious burns.
- Before starting to demolish, chisel or drill into a wall, floor or ceiling, thoroughly confirm that such items as electric cables or conduits are not buried inside.
- Always hold the body handle and side handle of the machine firmly. Otherwise the counterforce produced may result in inaccurate and even dangerous operation.



## APPLICATIONS

- Drilling holes in concrete
- Drilling anchor holes
- Demolishing concrete, chiselling, digging, and squaring (by applying optional accessories)



Deviance of illustration possible



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## PRIOR TO OPERATION

### 1. How to install tool

#### NOTE

Always use original SPITZNAS tools such as drills or moil pointed chisels.

- Clean the toll shank and then lubricate it with the grease provided in the green tube (**Fig. 1**).
- To attach the tool (SDS max shank), insert it into the hole until it contacts the innermost end of the hole as illustrated in **Fig. 2**. If you continue to turn the tool with slight pressure, you can feel a spot where there is a hitch. At that spot, depress the grip to the direction of an arrow mark and insert the tool all the way until it hits the innermost end. Releasing the grip reverts the grip and secures the tool in place.
- To remove the tool, fully depress the grip in the direction of the arrow and pull out the tool.

## HOW TO USE THE DRILL AND CHIPPING HAMMER

### 1. How to drill holes (Fig. 4)

Pull the switch trigger after applying the drill bit tip to the drilling position.

It is unnecessary to forcibly press the machine main body. It is sufficient to slightly press the machine to an extent that shavings are freely discharged.

#### CAUTION

Although this machine is equipped with a safety clutch, if the drill bit becomes jammed in concrete or other material, the resultant stoppage of the drill bit could cause the machine body to turn in reaction. Ensure that the main handle and side handle are gripped firmly during operation.

### 2. How to chisel or demolish (Fig. 5)


By applying the tool tip to the chiselling or demolishing position, operate the hammer drill by utilizing its empty weight. Forcible pressing or thrusting is unnecessary.

### 3. When drilling at “rotation + hammering”:

#### CAUTION:

If you switch the selector lever during motor rotation, the tool can start to rotate abruptly, resulting in unexpected accidents. Be sure to switch the selector lever when the motor is at a complete stop.

#### Switching to “rotation + hammering”

- Pull the selector lever, release lock and turn it clockwise.
- Align ▲ of the selector lever with ▲ on the  T side of the undercover as illustrated in **Fig. 6**.
- Push in the selector lever to lock it.

#### NOTE:

Turn the selector lever (do not pull it up) to check if it is completely locked and make sure that it does not turn.

**4. When demolishing and chiselling at “hammering”: CAUTION:**

- If the selector lever is switched during motor rotation, the tool can start to rotate abruptly, resulting in unexpected accidents. Make sure to switch the selector lever when the motor is at a complete stop.
- If a chisel or chipper is used at the position of “rotation + hammering”, the tool can start to rotate, resulting in unexpected accidents. Make sure that they are used at the position of “hammering”.

**(1) Switching to “hammering”**

- Pull the selector lever, release lock and turn it counter clockwise.
- Align ▲ of the selector lever with ▲ on the T side of the undercover as illustrated in Fig. 7.
- Push in the selector lever to lock it.

**NOTE:**

Turn the selector lever (do not pull it up) to check if it is completely locked and make sure that it does not turn.

**(2) When fixing working positions of tools such as cold chisel, etc.,**

- Pull the selector lever, release lock and turn it. Align ▲ of the selector lever and ■ T of the undercover as illustrated in Fig. 8.
- Push in the selector lever to lock it.
- Turn the grip as illustrated in Fig. 9 and fix the tool to the desired working direction.
- Turn the selector lever to “striking” according to the procedures mentioned in the above item (1) and secure the position of the tool.

**5. Install the stopper (Fig. 10).**

- Loosen the side handle and insert the straight portion of the stopper into the handle bolt hole.
- Move the stopper to the specified position and rotate the grip of the side handle clockwise to fix the stopper.

**6. Warming up (Fig. 11).**

The grease lubrication system in this unit may require warming up in cold regions. Position the end of the bit so makes contact with the concrete, turn on the switch and perform the warming up operation. Make sure that a hitting sound is produced and then use the unit.

**CAUTION**

When the warming up operation is performed, hold the side handle and the main body securely with both hands to maintain a secure grip and be careful not to twist your body by the jammed drill bit.

## DRILLING AND DRIVING-IN OPERATIONS FOR ANCHORS

### 1. When a taper shank adapter is used. (Fig. 12)

- Install drill bit with taper shank in the taper shank adapter.
- Switch on the machine and drill a base hole to the depth sounded by indicating groove on the drill bit.
- After cleaning out dust with a bellows, attach the plug to the anchor tip and drive in the anchor with a manual hammer.
- To remove the drill bit (taper shank), insert the cotter into the slot of the taper shank adapter and strike the head of the cotter with a manual hammer supporting on rests. (Fig. 13)

## USING DRILL CHUCK, CHUCK ADAPTER

Note that this machine can be used at “rotation only” if separately sold parts such as drill chuck and chuck adapter are attached. Use it with the selector lever positioned at “rotation + hammering”.

### CAUTION:

During operation, be sure to grip the handle and the side handle firmly to prevent your body from swaying.

(1) **Switching to “rotation + hammering”** For switching to “rotation + hammering”, follow the same procedures mentioned in [3. When drilling at “rotation + hammering”].

### (2) Attaching chuck adapter to drill chuck (Fig. 14)

- Attach the chuck adapter to the drill chuck.
- The SDS max shank of the chuck adapter is equivalent to the drill bit. Therefore, follow the same procedures as [How to install tool] for attaching and detaching drill bits.

### (3) Drilling

- Even if you apply more-than-required pressure to the machine body, drilling can never be performed as quickly as you expect. Applying more force or pressure to the machine body than what is needed, on the contrary, damages the drill tip, resulting in the declined working efficiency and shortened life of this machine.
- It may sometimes occur that a drill breaks shortly before ending the drilling procedure. Therefore it is important to Diminish the contact pressure, when drilling procedure approaches its end.

## HOW TO HANDLE A CORE BIT

When a core bit is used, large diameter holes and blind holes can be drilled. In this case, use optional accessories for core bits (such as a center pin and core bit shank) for more efficient operation.

### 1. Mounting

#### CAUTION

Before mounting a core bit, always disconnect the hydraulic hoses.

- Mount the core bit on the core bit shank. **(Fig. 15)** Before that, feed oil to the screw portion of core bit shank for easy dismounting.
- Mount the core bit shank on the main body in the same manner as in mounting the drill bit and the moil pointed chisel. **(Fig. 16)**
- Insert the center pin into the guide plate until it reaches the extremity.
- Fit in the guide plate by aligning its concave portion with the core bit tip. When the position of the concave is shifted by turning the guide plate right or left, the guide plate never slips off even when the drill is used in a downward direction. **(Fig. 17)**

### 2. Drilling holes

- Disconnect hydraulic hoses
- A spring is built in the center pin. By straightly and gently pressing it to the wall or floor surface, the entire surface of the core bit tip attains contact to start the hole drilling job. **(Fig. 18)**
- When the hole depth reaches approximately 5 mm, the hole position can be determined. Then remove the center pin and guide plate from the core bit and continue the hole drilling job.

### CAUTION

When removing the center pin and guide plate, always disconnect the hydraulic hoses.

### 3. How to dismount the core bit

- By holding the machine (with the core bit inserted) in an upward position, drive the machine to repeat impact operation two or three times, whereby the screw is loosened and the drill becomes ready for disassembly. **(Fig. 19)**
- Remove the core bit shank from the machine, hold the core bit with one hand, and strongly strike the head of the SDS max shank portion of the core bit shank with a manual hammer two or three times, whereby the round-head screw is loosened and the drill is ready for disassembly. **(Fig. 20)**

## HOW TO REPLACE GREASE

This machine is assembled closely to avoid entrance of dust etc. Therefore, the machine can be used without lubrication for long periods. Replace the grease as described below.

### 1. Grease replacement period

Replace grease after every 6 months of usage.

### 2. Grease refilling

#### CAUTION

Before refilling the grease, turn the machine off and disconnect the hydraulic hoses.

- Remove the crank case cover and wipe off the grease inside (**Fig. 21**).
- Supply 20g of SPITZNAS hammer grease (A) standard accessory contained in a tube) into the crank case. As the tube contains 30g of grease, supply 2/3 of the contained grease.
- After refilling the grease, install the crank case cover securely.

#### NOTE

The SPITZNAS Hydraulic Hammer Grease A is of the low viscosity type. .

## MAINTENANCE AND INSPECTION

### 1. Inspecting the tool

Since use of a dull tool will degrade efficiency and cause possible motor malfunction, sharpen or replace the tool as soon as abrasion is noted.

#### Inspecting the mounting screws;

Regularly inspect all mounting screws and ensure that they are properly tightened. Should any of the screw be loose, retighten them immediately. Failure to do so could result in serious hazard.

#### CAUTION

Repairs, modifications and inspections of SPITZNAS Hydraulic Machines have to be performed only by authorized professionals.

#### NOTE

Due to SPITZNAS continuing programme of research and development, the specifications herein are subject to change without prior notice.

**Information concerning operating noise and vibration**

<b>The typical A-weighted sound pressure level:</b>	<b>92 dB(A)</b>
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(Always wear earplugs to protect your ears during work)

<b>The typical weighted root mean square acceleration value:</b>	<b>31 ft./s<sup>2</sup></b>
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