



HILTI DX450 CARTRIDGE HAMMER

SAFETY PRECAUTIONS & WARNINGS

It is in the interests of those operating this equipment, and for the safety of others, that these **SAFETY PRECAUTIONS & WARNINGS** are carefully read and understood before operating this equipment.

PURPOSE

1. This equipment is designed for securing a variety of material, using the appropriate fasteners into concrete, masonry and steel.

PERSONAL SAFETY

2. This equipment is designed for operation by an able bodied adult. Anyone with either temporary or permanent disability must seek expert advice before using it. It must not be operated by minors, or by anyone under the influence of drugs or alcohol.
3. If the equipment is not used in a safe, careful and controlled way, personal injury or injury to others may result, see 'GUN SAFETY' below.
4. Before attempting to operate this equipment you must familiarise yourself with the equipment, its controls and operating characteristics.
5. Before starting your work, think and plan ahead to ensure you, and others around you, will be working in a safe environment.
6. When using this equipment, it is recommended that the following items of Personal Protective Equipment (PPE) be worn:
 - Ear defenders providing protection up to 140dB(A).
 - Safety helmet to EN397 or BS5240.
 - Impact resistant goggles to EN166-B or BS2092, grade 1 protection.
 - Dust mask giving a minimum of EN149 ffp2 protection.
 - Safety boots to EN345 or Bs1870/4972.
 - Appropriate industrial gloves.

Note: Other types of work, or environment, may require a higher level of PPE.

OPERATING AREA SAFETY

7. Before commencing work, ensure that the area you are to operate the equipment in is a safe environment. Erect safety barriers and warning signs as necessary.
8. Make sure that the work area is clear of obstructions and hazards (projections, cables, pipes, etc.).
9. Before commencing work, warn others who may be working in the vicinity of the equipment, to keep clear. If possible place safety barriers around your work area.
10. Anybody who is working near to you will also need to wear the appropriate PPE.
11. Protect others from noise.
12. Do not use this equipment where there is a danger of igniting fumes from petrol, or gas cylinders.

GUN SAFETY

13. This equipment can be extremely dangerous if not used in a safe and controlled manner. Only trained operatives should use this equipment.
14. Check before and after use that the cartridge has been removed from the equipment.
15. Never point this equipment at yourself, other people or animals.

16. Ensure the cartridge and fasteners are of the correct type for the equipment and task at hand.
17. Always select the weakest cartridge for the task at hand. Cartridges are colour coded to denote cartridge strength as follows:
 - Green = Low
 - Yellow = Medium Low
 - Blue = Medium
 - Red = Medium High
 - Black = High
18. Cartridges must always be stored and locked in a metal box.
19. Ensure there is a fastener in the hammer before loading a cartridge.
20. Do not insert the magazine cartridge into the gun until you are ready to commence work.
21. Always store the equipment in its protective case when not in use.
22. Always point the equipment away from you and keep fingers clear of the trigger.
23. The equipment has a safety feature that until the muzzle is pressed against a solid object, the trigger pressed, the gun will not fire.
24. Always ensure the equipment is unloaded before attempting to clean gun, remove any components or move location.
25. Cartridges must never be carried loose in pockets, in a metal box or with metal fasteners.
26. Do not attempt to use this equipment on glass, ceramic tiles, plastic, cast steel, modern housebricks or plaserboard.
27. Do not attempt to use on top of old/broken fasteners or re-use existing holes.

BEFORE OPERATING THE EQUIPMENT

SAFETY CHECKS

28. Visually inspect the equipment and all its accessories (magazine, cartridges, safety barriers, etc.) for serviceability (completeness, signs of damage, undue wear, etc.). Do not use the equipment if found damaged or worn - contact the hire company immediately.
29. Before attempting to operate the equipment, familiarize yourself with the equipments controls. Make sure you understand their purpose and function.
30. Do not use this equipment in the rain or in wet conditions.
31. Before commencing work, check for hidden electrical cables and pipe work.
32. Before you start the equipment, you must know how to **STOP** it in an emergency.

OPERATING THE EQUIPMENT

LOADING & FIRING

33. Only use the dedicated pistons to suit the type of fastener being used. Consult the hire company if you are unsure.
34. Hold the tool with the muzzle pointing upwards.
35. Only use the correct type and size of fasteners suitable for this equipment and the task to be done. Insert the fastener point first, into the cocking lever.
36. Hold the equipment by its loading grip and use it to rotate the cocking lever forward 180 degrees.
37. Hold the loading grip and slide it rearwards on the cocking handle as far as it will go, then move it forwards to its original position.

38. Rotate the cocking lever rearwards through 180 degrees to its 'rest' position. The fastener is now loaded.
39. Holding the cartridge magazine insert it into the bottom of the rear tool (handle) grip.
40. Rotate the power regulator (knurled wheel on the butt) to the maximum setting. For minimum setting (minus) the indicator will be positioned at the front. Maximum setting (plus) it will be at the rear.
41. Position the equipment at right angles against the work surface and hold the gun with both hands before squeezing the trigger.
42. Reload fasteners as per 34 – 41 above until the magazine is empty. Each movement of the cocking handle loads one cartridge.

MISFIRE PROCEDURE

43. Should a misfire occur, keep the hammer pressed against the work piece for an additional 30 secs.
44. After 30 seconds has elapsed and the cartridge has still failed to fire, point the equipment at a safe area, keeping the hands and body clear of the muzzle, and await a further two minutes before attempting to eject the misfired cartridge.
45. Eject the misfired cartridge; keep separate from all other cartridges and return misfire cartridges to the hire company.

UNLOADING

46. The equipment must always be unloaded after completion of the task, taking short breaks, after misfires and when changing, cleaning or adjusting the cartridge hammer.
47. To unload the equipment, pull the cartridge magazine out from the top of the magazine housing.

SECURITY AND MAINTENANCE

48. Visually check the condition of the equipment at the start of each day.
49. If the equipment operates erratically, or incorrectly, do not use and do not attempt to repair it. Inform the hire company.
50. Periodically clean the equipment to ensure it is free from dust, dirt and other debris.
51. Lubricate the hammer with oil at frequent intervals.
52. After approximately 3000 fixings, return the equipment to the hire company for detailed maintenance.
53. When the equipment is left unattended for long periods (i.e. overnight), ensure it is made secure to prevent unauthorized use or loss.

COLLECTION & PICK-UP

54. For safety reasons this equipment requires you to use a **VAN** or an **ESTATE**.

