# Operator's manual Manuel d'utilisation Instruções para o uso Οδηγίες χρήσεως

**DS 450** 



Please read the operator's manual carefully and make sure you understand the instructions before using the machine. Lea detenidamente el manual de instrucciones y aseg rese de entender su contenido antes de utilizar la m quina. Leia as instruções para o uso com toda a atenção e compreenda o seu conteúdo antes de fazer uso da máquina. Διαβάστε προσεκτικά τις Οδηγίες χρήσεως και κατανοήστε το περιεχfίμενο πριν χρησιμοποιήσετε το μηχάνημα.

# **KEY TO SYMBOLS**

# Symbols on the machine

WARNING! The machine can be a dangerous tool if used incorrectly or carelessly, which can cause serious or fatal injury to the operator or others.



Please read the operator's manual carefully and make sure you understand the instructions before using the machine.

Other symbols/decals on the machine refer to special certification requirements for certain markets.

# **Explanation of warning levels**

The warnings are graded in three levels.

#### **WARNING!**



WARNING! Used if there is a risk of serious injury or death for the operator or damage to the surroundings if the instructions in the manual are not followed.

#### **CAUTION!**



CAUTION! Used if there is a risk of injury to the operator or damage to the surroundings if the instructions in the manual are not followed.

#### NOTICE!

NOTICE! Used if there is a risk of damage to materials or the machine if the instructions in the manual are not followed.

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### **PRESENTATION**

#### Dear Customer,

Thank you for choosing a Husqvarna product!

It is our wish that you will be satisfied with your product and that it will be your companion for a long time. A purchase of one of our products gives you access to professional help with repairs and services. If the retailer who sells your machine is not one of our authorised dealers, ask him for the address of your nearest service workshop.

This operator's manual is a valuable document. Make sure it is always at hand at the work place. By following its content (using, service, maintenance etc) the life span and the second-hand value of the machine can be extended. If you will sell this machine, make sure that the buyer will get the operator's manual.

#### More than 300 years of innovation

Husqvarna AB is a Swedish company based on a tradition that dates back to 1689, when the Swedish King Charles XI ordered the construction of a factory for production of muskets. At that time, the foundation was already laid for the engineering skills behind the development of some of the world's leading products in areas such as hunting weapons, bicycles, motorcycles, domestic appliances, sewing machines and outdoor products.

Husqvarna is the global leader in outdoor power products for forestry, park maintenance and lawn and garden care, as well as cutting equipment and diamond tools for the construction and stone industries.

#### User responsibility

It is the owner's/employer's responsibility that the operator has sufficient knowledge about how to use the machine safely. Supervisors and operators must have read and understood the Operator's Manual. They must be aware of:

- The machine's safety instructions.
- The machine's range of applications and limitations.
- · How the machine is to be used and maintained.

National legislation could regulate the use of this machine. Find out what legislation is applicable in the place where you work before you start using the machine.

#### The manufacturer's reservation

All information and all data in the Operator's Manual were applicable at the time the Operator's Manual was sent to print.

Husqvarna AB has a policy of continuous product development and therefore reserves the right to modify the design and appearance of products without prior notice.

#### **Features**

Values such as high performance, reliability, innovative technology, advanced technical solutions and environmental considerations distinguish Husqvarna's products.

Some of the unique features of your product are described below.

#### Stand DS 450



- The stand is for drilling in roofs, walls and floors.
- The base plate is made of aluminium and is therefore very light weight.
- The column can be tilted 0-75°.
- The drill stand is equipped with a quick connection plate for the drillmotor.
- The feeder housing has two feeding speeds: 4.4:1 for large drills and 1:1 for small drills.
- The feed lever can be used to set the column tilt and to lock the quick mounting.

#### **Accessories**

- Drill column, 2 m
- · Transport wheels
- Vacuum plate
- Vacuum pump
- Drill motor spacer block
- Switch box (USA only)
- AD 10

# **MACHINE'S SAFETY EQUIPMENT**

#### **General**

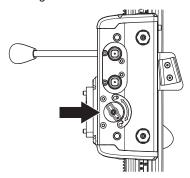


Never use a machine with faulty safety equipment. The machine's safety equipment must be checked and maintained as described in this section. If your machine fails any of these checks contact your service agent to get it repaired.

This section describes the machine's safety equipment, its purpose, and how checks and maintenance should be carried out to ensure that it operates correctly.

# **Carriage lock**

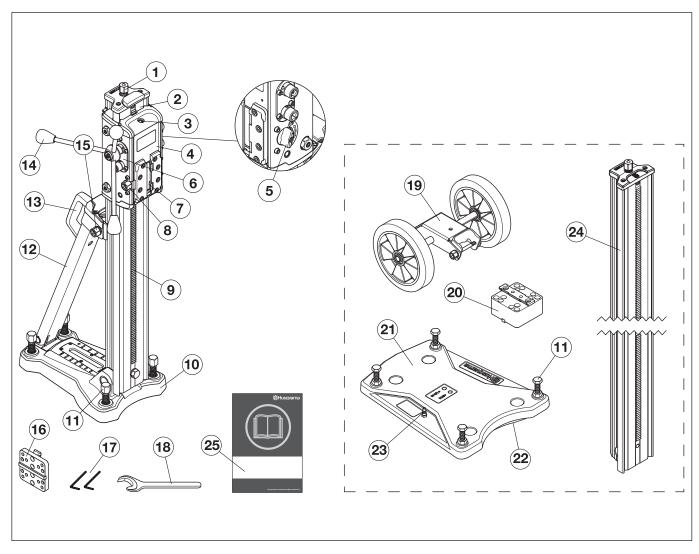
The carriage lock is used when replacing the drill bit and mounting the drill motor. The lock consists of a knob that locks the carriage to the drill column.



### **Carriage lock inspection**

- · Turn the knob to lock it.
- Feel by hand that the carriage is locked to the drill column.

# **WHAT IS WHAT?**



#### What is what on the stand?

- 1 Jacking screw
- 2 Drill column
- 3 Lever indicator
- 4 Carriage
- 5 Carriage lock
- 6 Gear box
- 7 Locking clamp for quick mounting
- 8 Locking screw, locking clamp
- 9 Gear rack
- 10 Base plate
- 11 Leveling adjustment screws
- 12 Stabilizer
- 13 Carrying handle

- 14 Feeder handle
- 15 Locking screw, column tilt
- 16 Mounting plate
- 17 Allen key (5 mm, 6 mm)
- 18 Open-ended spanner, NV 24
- 19 Transport wheels (accessory)
- 20 Drill motor spacer block (accessory)
- 21 Vacuum plate (accessory)
- 22 Gasket, base vacuum suction
- 23 Connection, quick connection for vacuum pump
- 24 Drill column, 2 m (accessory)
- 25 Operator's manual

### Steps before using a new stand

- Please read the operator's manual carefully and make sure you understand the instructions before using the machine.
- This machine is designed for and intended for drilling concrete, brick and different stone materials. All other use is improper.
- The machine is intended for use in industrial applications by experienced operators.
- · Keep the workplace tidy. Disorder leads to accident risks.
- Also read the operating manual enclosed with the drill motor and check that its performance is compatible with the stand.

#### Always use common sense

It is not possible to cover every conceivable situation you can face. Always exercise care and use your common sense. Avoid all situations which you consider to be beyond your capability. If you still feel uncertain about operating procedures after reading these instructions, you should consult an expert before continuing.

Do not hesitate to contact your dealer if you have any more questions about the use of the machine. We will willingly be of service and provide you with advice as well as help you to use your machine both efficiently and safely.

Let your Husqvarna dealer regularly check the machine and make essential adjustments and repairs.

All information and all data in the Operator's Manual were applicable at the time the Operator's Manual was sent to print.



WARNING! Under no circumstances should you modify the original design of the machine without approval from the manufacturer. Always use original spare parts. Unauthorized modifications and/or accessories may lead to serious injury or death to the user or others.

#### **Protective equipment**

#### General

Do not use the machine unless you are able to call for help in the event of an accident.

#### Personal protective equipment

You must use approved personal protective equipment whenever you use the machine. Personal protective equipment cannot eliminate the risk of injury but it will reduce the degree of injury if an accident does happen. Ask your dealer for help in choosing the right equipment.



WARNING! The use of products such as cutters, grinders, drills, that sand or form material can generate dust and vapours which may contain hazardous chemicals. Check the nature of the material you intend to process and use an appropriate breathing mask.



WARNING! Long-term exposure to noise can result in permanent hearing impairment. So always use approved hearing protection. Listen out for warning signals or shouts when you are wearing hearing protection. Always remove your hearing protection as soon as the engine stops.



WARNING! There is always a risk of crush injuries when working with products containing moving parts. Wear protective gloves to avoid body injuries.

Always wear:

- Protective helmet
- Hearing protection
- Protective goggles or a visor
- Breathing mask
- · Heavy-duty, firm grip gloves.
- Tight-fitting, heavy-duty and comfortable clothing that permits full freedom of movement.
- Boots with steel toe-caps and non-slip sole.
- Always have a first aid kit nearby.

Be careful as clothing, long hair, and jewellery can get caught in moving parts.

### **General safety precautions**



WARNING! Read all safety warnings and all instructions. Neglecting to follow the warnings and instructions can lead to serious injury or death for the operator or others.

#### Work area safety

- Keep work area clean and well lit. Cluttered or dark areas invite accidents.
- People and animals can distract you causing you to lose control of the machine. For this reason, always remain concentrated and focused on the task.
- Do not use the machine in bad weather, such as dense fog, heavy rain, strong wind, intense cold, etc. Working in bad weather is tiring and can lead to dangerous conditions, e.g. slippery surfaces.
- Never start to work with the machine before the working area is clear and you have a firm foothold. Look out for any obstacles with unexpected movement. Ensure that no material can become loose and fall, causing injury when operating the machine.
- Always check the rear side of the surface where the drill bit will emerge when drilling right through. Secure and cordon off the area and make sure that no one can be injured or material damaged.

### Personal safety



WARNING! There is always a risk of crush injuries when working with products containing moving parts. Always wear protective gloves.

- Wear personal protective equipment. See instructions under the "Personal protective equipment" heading.
- Never use the machine if you are tired, if you have drunk alcohol, or if you are taking medication that could affect your vision, your judgement or your co-ordination.
- Never allow anyone else to use the machine without first ensuring that they have understood the contents of the operator's manual.
- Be careful as clothing, long hair, and jewellery can get caught in moving parts.
- Never work alone, always ensure there is another person close at hand. Apart from being able to receive help to assemble the machine, you can also get help if an accident should occur.

#### Use and care

- Never use a machine that is faulty. Carry out the checks, maintenance and service instructions described in this manual. Some maintenance and service measures must be carried out by trained and qualified specialists. See instructions under the Maintenance heading.
- Never use a machine that has been modified in any way from its original specification.
- Keep all parts in good working order and ensure that all fixtures are properly tightened.

#### Transport and storage

- Store the equipment in a lockable area so that it is out of reach of children and unauthorized persons.
- Store the drilling machine and stand in dry and frost free conditions.

# General working stand safety warnings



WARNING! Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

NOTICE! Save all warnings and instructions for future reference.

- Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories Accidental starting of the power tool is a cause of some accidents..
- Properly assemble the working stand before mountinh the tool. Proper assembly is important to prevent risk of collapse.
- Securely fasten the power tool to the working stand before use. Power tool shifting on the working stand can cause loss of control.
- Place the working stand on a solid, flat and level surface. When the working stand can shift o rock, the power tool or workpiece cannot be steadily and safely controlled.
- Do not overload the working stand or use as ladder scaffolding. Overloading or standing on the working stand causes the stand to be "top-heavly" and likely to tip over.

This stand is for Husqvarna DM machines. Only use power tools designed for this stand.

#### Secure the stand

There are three methods for fixing the stand.

- Securing with vacuum plate (accessory)
- · Fixing with expander or anchor
- Fixing with threaded rod, washer and lock nut

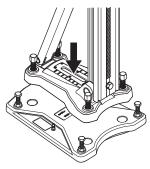
#### Securing with vacuum plate (accessory)



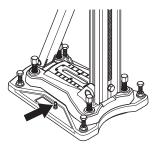
WARNING! The vacuum plate must never be used for ceiling or wall drilling. Careless or incorrect use can result in serious, even fatal injury.

If the vacuum plate is used, make sure the support surface is not porous and can loosen from the floor or the wall. Make sure that the vacuum pump has sufficient power to secure the vacuum plate.

· Fasten the vacuum plate with the bolt.



- Loosen the leveling screws so that they are above the bottom of the vacuum plate.
- Connect the vacuum hose and turn on the pump.



- A minimum pressure of 0.85 bars must be reached in order for the base plate to seal tightly against the surface.
- Tighten the leveling screws slightly until you can feel pressure on the screw.

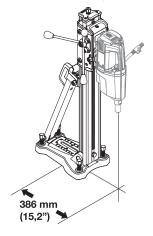
IMPORTANT! Make sure the leveling screws are in contact with the surface when using the vacuum plate to reduce the risk of the vacuum plate comming loose.

#### Fixing with expander or anchor

IMPORTANT! When drilling roofs and walls, only expander or anchor suitable for surfaces exposed to tensile forces should be used.

Use only expander or anchor which is approved for current application.

Drill a hole for the expander/anchor at a distance of 386 mm (15,2") from the center of the hole. (The measurement applies for use together with DM 280/340.)



- Bolt down the base plate. Check carefully that the expander is secured correctly.
- The bottom plate can be adjusted to the surface by using the leveling adjustment screws.

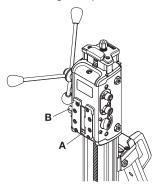
# Fixing with threaded rod, washer and lock nut

If the mounting surface is inadequate for drilling in roofs or walls, the base plate can be fixed using a threaded rod, which is mounted on the backside with a washer and lock nut.

# Assembly of drill motor

IMPORTANT! Always pull out the plug from the outlet socket before cleaning, maintenance or assembly.

- Always remove the drill bit before the motor is mounted or dismounted.
- · Lock the feed housing lock.
- Fit the drilling machine in the track on the locking clamp. Make sure that the drilling machine is pushed all the way to the bottom (A) of the track on the locking clamp. Fasten the locking clamp with the locking screw (B).

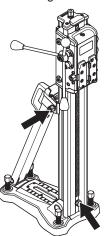


 The adapter plate is mounted on the drill motor. Not used with Husqvarna's drill motors.

### Adjust the column tilt

The column can be tilted 0-75°.

- Loosen the locking screws for column tilt and set the desired drill angle. Tighten the locking screws.
- The angle indicator can be used for approximate adjustment. If higher precision is required, alternative measuring methods should be used.



# **Before drilling**



WARNING! Before drilling, check that all locking screws are tightened well.

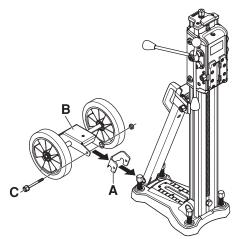
Serious accidents can occur if the concrete core remains in the drill when backing out the drill motor/drill from the floor, wall or ceiling.



WARNING! When drilling roofs, always use a water collector that is approved for your drill motor, or use a hydraulic drill motor. There is a risk that the drilling machine and the stand become live if water leaks into the machine.

# **Transport wheels (accessory)**

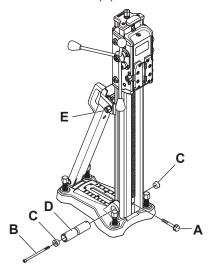
 Push the aluminium bail (A) towards to the mounting on the stand.



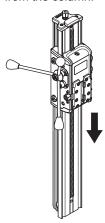
- Place the wheel set (B) over the aluminium bail.
- Insert the bolt (C) and fit the nut. Screw the bolt tight.

# Change drill column (accessory)

Remove the bolt (A).



- Loosen the screw (B) with an allen key (6 mm) and remove the cones.
- Gently knock away the axle (D).
- · Loosen the locking screw (E).
- · Remove the drill column from the stabiliser.
- Unlock the feeder housing. Remove the feeder housing from the column.



Assemble the parts in the reverse order.

# **MAINTENANCE**

#### Stand maintenance



WARNING! Inspection and/or maintenance should be carried out with the motor switched off and the plug disconnected.

The lifetime of your machine can be extended considerably if it is used, cared for and maintained in the proper manner.

#### Cleaning and lubrication

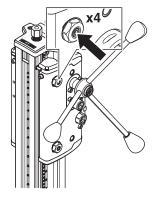
IMPORTANT! Remove the drill motor.

- It is important that the drill stand is kept clean for functionality to be maintained.
- Clean the stand using a high pressure washer and then wipe dry.
- Lubricate the moving parts on the stand. Apply grease to counteract corrosion on the contact surfaces.

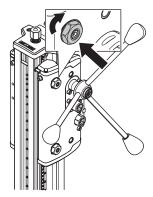
#### Adjusting the feed housing

The surfaces of the carriage's guide rollers must be in contact with the V-shaped grooves in the drill column. If there is play between the column and the feed housing, the play must be adjusted.

· Loosen set screws holding guide roller shafts.

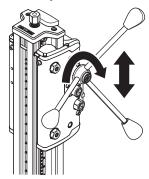


 Start adjustment with top roller on either side. Adjust the guide rollers a little with the adjusting nut. Use a fixed spanner (NV 24).



- · Tighten the set screw to lock the guide roller shaft in place.
- Adjust the lower roller on the opposite side in the same manner. Repeat on the other two rollers.

 Use the feed handle to see if the feed housing moves smoothly on the column. If not, adjust the rollers again.



#### Repairs

IMPORTANT! All types of repairs may only be carried out by authorised repairmen. This is so that the operators are not exposed to great risks.

#### **Daily maintenance**

- 1 Check that nuts and screws are tight.
- 2 Clean the outside of the machine.
- 3 Check that the feed crank can be moved without resistance.
- 4 Check that the gearing moves easily and does not cause any noise.
- 5 Check for any wear or damage on the column.
- 6 Check that the feed housing can be moved easily and does not backlash against the stand column.

# **TECHNICAL DATA**

#### **Technical data**

	DS 450
Dimensions	
Height, mm/inches	1174/46,2
Width, mm/inches	295/11,6
Depth, mm/inches	632/24,9
Weight, kg/lbs	24/53
Travel length, mm/inch	648/25,5
Max. drill diameter, mm/inches	
With spacer	450/18
Without spacer	350/14
Maximum load, kg	80
The column's angling	0-75°

# **EC-declaration of conformity**

#### (Applies to Europe only)

**Husqvarna AB**, SE-433 81 Göteborg, Sweden, tel: +46-31-949000, declares under sole responsibility that the drill stand **Husqvarna DS 450** from 2012's serial numbers and onwards (the year is clearly stated in plain text on the type plate with subsequent serial number) are in conformity with the requirements of the COUNCIL'S DIRECTIVES:

of May 17, 2006 "relating to machinery" 2006/42/EC

The following standards have been applied:

SS-EN12348+A1:2009, EN 60745-1:2009

The supplied stand conforms to the example that underwent EC type examination. The stand must conform to applicable regulations, EU-requirements as well as national requirements.

Göteborg January 26, 2012



Anders Ströby

Vice President, Head of Power Cutters and Construction Equipment Husqvarna AB

(Authorized representative for Husqvarna AB and responsible for technical documentation.)