



# Operator's Manual

## Concrete Cutter SC220 Series



Original instructions

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This Operator's Manual presents the original instructions. The original language of the Operator's Manual is English.

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## **Foreword**

This manual contains important instructions for this machine. These instructions must be followed during installation, operation, and maintenance of the machines.

This manual provides information and procedures to safely operate. For your own safety and to reduce the risk of injury, carefully read, understand, and observe all instructions described in this manual.

We reserves the right to change any of the contents in this manual without notice.

## **Warranty**

Our products are covered by warranty for a period of twelve (12) months from the date of purchase against defects in material or workmanship provided that:

- The product concerned has been operated and maintained in accordance with the operating instructions.
- Has not been damaged by accident, misuse or abuse.
- Has not been tampered with or repaired by any unauthorized person.

Any evidence of failure to meet these conditions may result in a denial of the warranty claim.

The owner is responsible for the cost of transportation to and from the authorized repairer and the unit is at the owners risk while in transit to and from the repairer.

Impact damage is not covered under warranty. Clutches are not covered under any warranty.

Engines are officially guaranteed by engine manufacturer. Please refer to the annex for engine warranty.

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## 1. SAFETY INFORMATION

### 1.1 Operating Safety

- Only trained personnel are permitted to start, operate, and shut down the machine. They have received instruction on how to properly use the machine and are familiar with required safety devices
- The machine must not be accessed or operated by children and people impaired by



alcohol or drugs.

- NEVER operate this machine in application for which it is not intended.
- NEVER allow anyone to operate this equipment without proper training. People operating this equipment must be familiar with the risks and hazards associated with it.
- NEVER operate the machine with the belt guard missing. Exposed drive belt and pulleys create potentially dangerous hazards that can cause serious injuries.
- DO NOT allow anyone to stank or lean on the unit during operation.
- Do not run the machine indoors or in an enclosed area such as a deep trench unless adequate ventilation, through such items as exhaust fans or hoses, is provided. Engine exhaust contains carbon monoxide. This is a poison you cannot see or smell. Exposure to carbon monoxide can cause loss of consciousness and CAN KILL YOU IN MINUTES.
- Do not operate the machine with unapproved accessories or attachments.
- ALWAYS wear protective clothing appropriate to the job site when operating the machine.
- ALWAYS close fuel valve on engines equipped with one when machine is not being operated.
- ALWAYS store the machine properly when it is not being used. The machine should be stored in a clean, dry location out of the reach of children.
- Before starting operation, check that all control and safety devices are functioning properly.
- Never operate the machine in a potentially explosive environment.
- Never leave the machine running unattended!
- Incorrect operation or misuse by untrained personnel can endanger the health and safety of the operator or third persons and also cause machine and material damage.
- Read, understand, and follow procedures in the Operator's Manual before attempting to operate the machine.

## **1.2 Operator Safety while using Internal Combustion Engines**

- DO NOT smoke when refueling the engine or during any other fuel handling operation.
- DO NOT refuel a hot or running engine.
- DO NOT refuel the engine near an open flame.
- DO NOT spill fuel when refueling the engine.
- Do not touch the engine or muffler while the engine is on or immediately after it has been turned off. These areas get hot and may cause burns.
- If fuel is spilled during refueling, wipe it off from the engine immediately and discard the rag in a safe place. Do not operate the unit if fuel or oil leaks exist-repair immediately.
- NEVER operate this equipment in an explosive atmosphere.
- NEVER operate any gas powered equipment in a poorly ventilated or enclosed area.
  
- NEVER perform any work on the unit while it is running. Before working on it, stop the engine and disconnect the spark plug wire to prevent accidental starting.
- Avoid prolonged breathing of exhaust gases.
- Avoid contact with hot exhaust systems and engine parts.
- Allow engine to cool before performing any repairs or service.
- ALWAYS transport and handle fuel only when contained in approved safety containers.
- ALWAYS keep the area around the muffler free of debris such as leaves, paper, cartons,

etc. A hot muffler could ignite the debris and start a fire.

### **1.3 Diamond Blade Safety**

- Use appropriate steel centered diamond blades manufactured for use on concrete cutters.
- Always inspect diamond blades before each use. The blade should exhibit no cracks, dings, or flaws in the steel centered core and/or rim. Center (arbor) hole must be undamaged and true.
- Examine blade flanges for damage, excessive wear and cleanliness before mounting blade. Blade should fit snugly on the shaft and against the inside/outside blade flanges.
- Ensure that the blade is marked with an operating speed greater than the blade shaft speed of the cutter.
- Only cut the material that is specified by the diamond blade. Read the specifications of the diamond blade to ensure the proper tool has been matched to the material being cut.
- Always keep blade guards in place. Exposure of the diamond blade must not exceed 180 degrees.
- Ensure that the diamond blade does not come into contact with ground or surface during transportation. Do not drop the diamond blade on ground or surface.
- The engine governor is designed to permit maximum engine speed in a no-load condition. Speeds that exceed this limit may cause the diamond blade to exceed the maximum safe allowable speed.
- Ensure that the blade is mounted for proper operating direction.

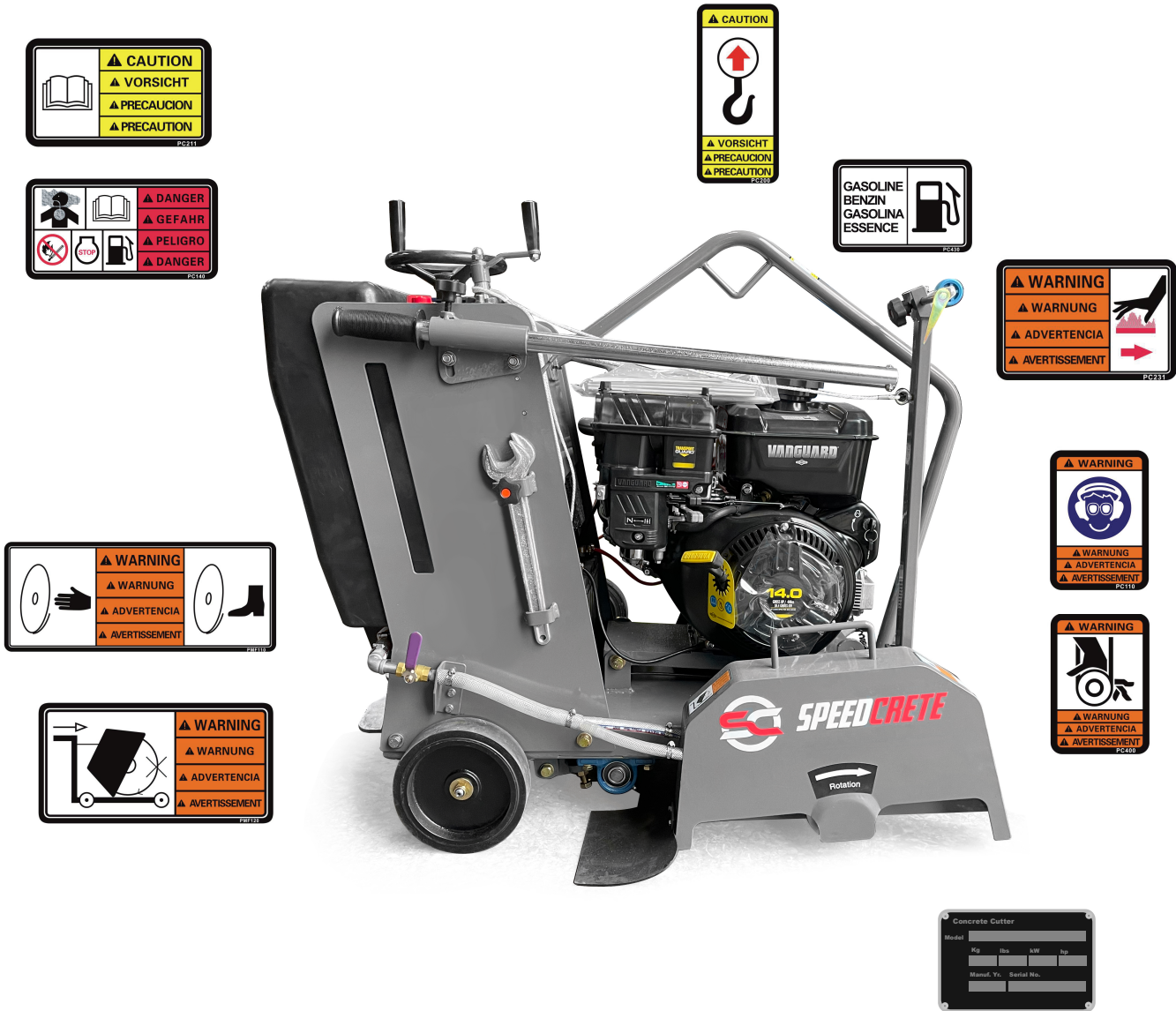
### **1.4 Transportation Safety**

- Use the lifting bail and appropriate lifting equipment to ensure the safe movement of the cutter.
- Do not use the handle bars and/or front pointer as lifting points.
- Never tow the saw behind a vehicle.
- Ensure that both pointer bars are positioned appropriately to minimize their exposure during transportation.
- Safeguard against extreme cutter attitudes relative to level. Engines tipped to extreme angles may cause oil to gravitate into the cylinder head making the engine difficult to start.
- Never transport the cutter with the blade mounted.
- 

### **1.5 Maintenance Safety**

- Never lubricate components or attempt service on a running machine.
- Always allow the machine a proper amount of time to cool before servicing.
- Keep the machinery in running condition.
- Fix damage to the machine immediately and always replace broken parts.
- Dispose of hazardous waste properly. Examples of potentially hazardous waste are used motor oil, fuel and fuel filters.
- Do not use food or plastic containers to dispose of hazardous waste.



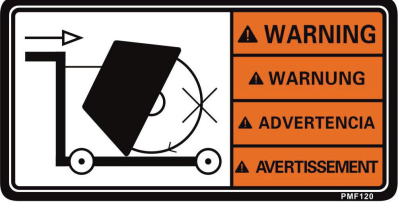
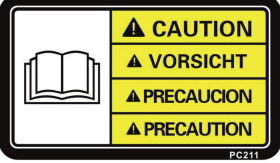

### **1.6 Label Location**








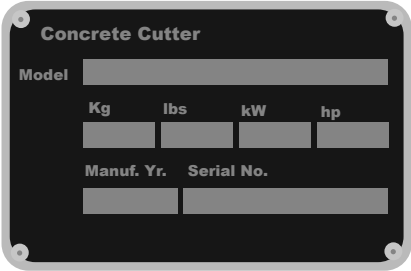
### 1.7 Safety and Operating Labels

These machines use international pictorial labels where needed. These labels are described below:

| Label | Meaning |
|-------|---------|
|-------|---------|

|   |  |
|---|--|
|    | <p><b>DANGER!</b><br/>Engines emit carbon monoxide; operate only in well-ventilated area. Read the Operation Manual for machine information. No sparks, flames, or burning objects near the machine. Shut off the engine before refueling. Use only clean, filtered unleaded gasoline.</p> |
|    | <p><b>WARNING!</b><br/>Cutting hazard. Always replace blade guard!</p>   |
|   | <p><b>WARNING!</b><br/>Machine may not be offset with the cutting blade rotating.</p>  |
|  | <p><b>CAUTION!</b><br/>Read and understand the supplied Operator's Manual before operating the machine. Failure to do so increase the risk of injury to yourself or others.</p>  |
|  | <p><b>WARNING!</b><br/>Always wear hearing and eye protection when operating this machine.</p>   |

| Label   | Meaning   |
|---|---|
|  | <p><b>WARNING!</b><br/>Hand injury if caught in moving belt. Always replace belt guard.</p> |

|   |  |
|---|--|
|    | <p><b>CAUTION!</b><br/>Lifting point.</p>  |
|    | <p><b>CAUTION!</b><br/>Use only clean, filtered fuel.</p>  |
|    | <p><b>WARNING!</b><br/>Hot surface!</p>  |
|  | <p><b>WARNING!</b><br/>Hot surface!</p>  |
|  | <p>A nameplate listing the model number and serial number is attached to each unit. Please record the information found on this plate so it will be available if the nameplate is lost or damaged. When requesting service information, the serial number should be specified of the unit.</p> |

## 2. OPERATION

### 2.1 Operating Principle

The following instructions were compiled to provide you information on how to obtain long and trouble free use of the machine. Periodic maintenance of the machine is essential. Read the manual carefully and thoroughly familiarize yourself with the machine and all its functions. Failure to do so may injure yourself or a bystander.

## 2.2 Delivery Checks

Immediately on taking delivery of your new machine and before putting it into service.

- Read the operator's manual completely—it could save a great deal of unnecessary expense. Read the engine manual supplied.
- Check the general condition of the machine – has it been damaged during delivery?
- Check engine oil level.
- Check fuel level.

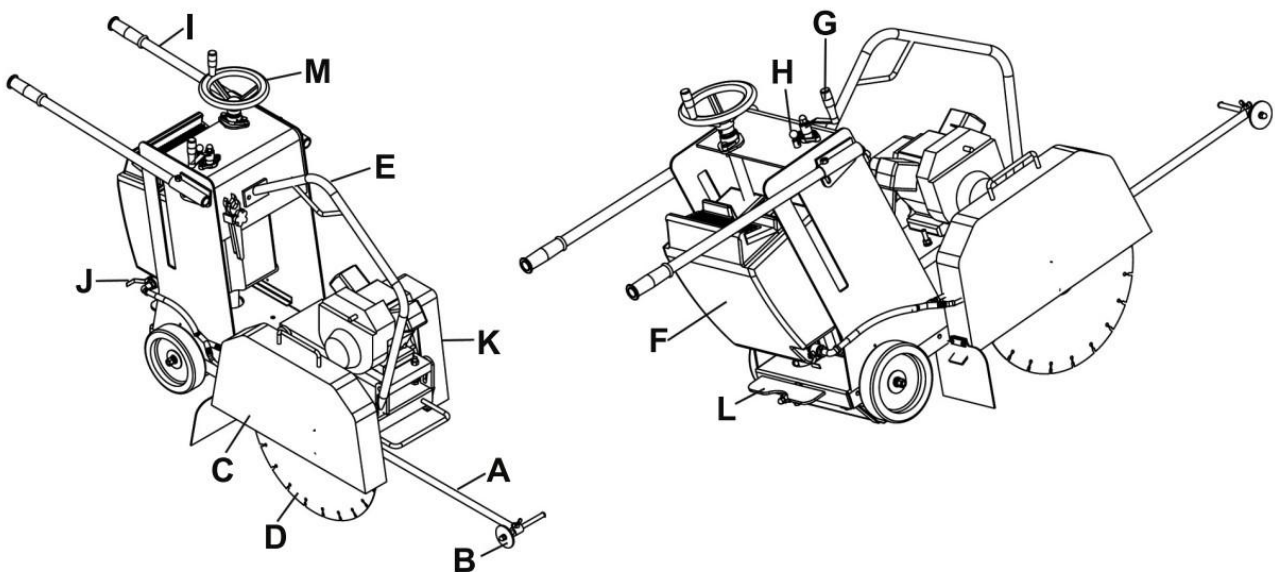
Recommended lubricants are detailed in the Care and Maintenance section.

## 2.3 Application-Description

The machine must only be used for the following purposes:

- Cutting expansion joints in concrete and asphalt surfaces.
- Repair work on streets, e.g. cutting out damaged areas in asphalt and concrete.
- Straightening blacktops and concrete surfaces.
- For demolition jobs and refurbishment of old buildings.
- Sawing off precast concrete parts.
- Expansion joints and installation channels in floors.
- Laying induction loops and cables in signal installations.

## 2.4 Application-Standard Features

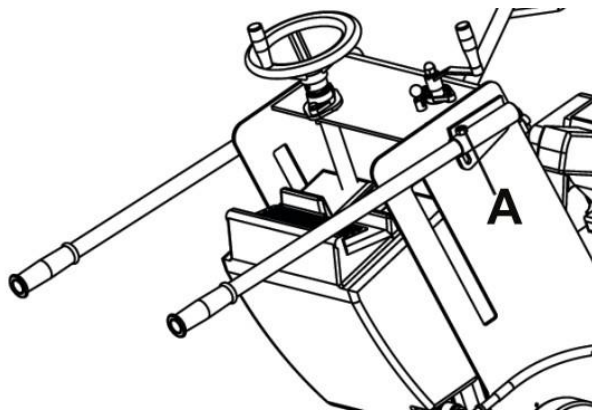


- A. Front Pointer:** Use to guide machine in a straight line.
- B. Guide Wheel:** Align to cutting line and blade to produce straight cuts.
- C. Blade Guard:** Covers blade. Must always be in place when operating machine! Tool direction marked on guard with an arrow.
- D. Blade:** Tool that cuts asphalt or concrete material, not included with machine.
- E. Lifting Point:** Lift machine only from this point.
- F. Water Tank:** Fill only with water. Use only for dust suppression when cutting dry.
- G. Crank Handle:** Turn Counter-Clockwise to raise blade and Clockwise to lower blade.

- H. Blade Depth Stop:** To lock Crank Handle in position.
- I. Rear Handle:** Handle is adjustable to several positions to suit for operator.
- J. Water Control Valve:** Controls water flow to blade.
- K. Belt Guard:** Covers engine drive belt.
- L. Parking Brake:** Used to hold machine in parked position.
- M. Travel Speed Lever:** Controls ground travel speed and direction of machine. Move lever forward to travel forward and rearward to travel backward. Lever must be near stop position before moving Parking Brake into engaged position.

## 2.5 Adjusting the handle

The height of the handles can be adjusted according to the use and the body height of the operator. To do this, release the knob (A) and apply the handle in the new position, then tighten the knob (A).



## 2.6 Cutting depth setting

With the crank handle you can set the cutting depth precisely. Turn the crank handle in the clockwise direction to increase the cutting depth and turn it in the counterclockwise direction to reduce the cutting depth. One turn corresponds to a cutting depth adjustment of 6mm.

## 2.7 Water tank

The concrete cutter features an integrated, removable water tank.

To fit the water tank, attach the retaining clamp and tighten it with the strap.

To remove the water tank or to attach an external water supply, you can disconnect the hose on two different spots.

The amount of water can be regulated or stopped.

## 2.8 Assembling the cutting blade

1. Checking a new cutting blade:

- The blade type must be suitable for the material to be cut. Observe the peripheral speed, refer to the "Technical data"!
- The arbor diameter of the cutting blade must precisely fit the shaft to ensure smooth blade running.
- The cutting blade must be undamaged.

**NOTICE:** Observe the correct direction of rotation of the cutting blade! That means the rotational

direction mark on the cutting blade must correspond with the rotational direction mark on the cutting blade guard.

2. Fold up the cutting blade guard.
3. Prior to the assembly of the cutting blade, clean the spring washers and the locking pin and check them for damage.
4. Attach cutting blade and spring washer on the shaft.
5. Tighten the hexagonal bolt firmly. To do this, apply counter pressure on the spanner surfaces of the cutting shaft.
6. Fold down the cutting blade guard.

**NOTICE:** Starting the machine is only permitted with a water hose connected and the water supply turned on.

## **2.9 Before Starting**

Before starting the machine, check the following items:

- All handles are free from grease, oil and dirt.
- All control levers are in the neutral position.
- All bolted joints are tightened.
- Fuel level
- Oil level in the engine
- Air cleaner maintenance indicator

**NOTICE:** Check the oil level in the engine and machine before starting. The warranties are VOID if the machine run without oil.

## **2.10 To Start**

1. Start engine and let engine warm up. All cutting is done at full throttle.
2. Align blade and cutter with cut. Open water valve and turn water control valve on.
3. Lower blade into cut slowly.
4. Cut as fast as blade will allow. If blade climbs out of cut, reduce forward speed or depth of cut.
5. Use only enough side pressure on cutter handles to follow cutting line.

## **2.11 To Stop**

Petrol Engine – close throttle all the way and flip oil minder kill switch to off position.

Diesel Engine – close throttle all the way, depress kill switch button and hold down until engine stops completely.

# **3 MAINTENANCE**

## **3.1 Periodic Maintenance Schedule**

The chart below lists basic trowel and engine maintenance. Refer to engine manufacturer's Operator's Manual for additional information on engine maintenance. A copy of the engine Operator's Manual was supplied with the machine when it was shipped. To service the engine, tilt the seat forward.



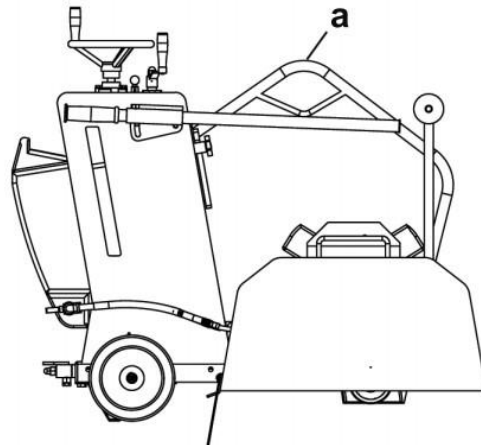
|  | Daily | Every 20 hours | Every 50 hours | Every 100 hours | Every 200 hours | Every 300 hours |
|--|-------|----------------|----------------|-----------------|-----------------|-----------------|
| Check fuel level.  | ●     |                |                |                 |                 |                 |
| Check engine oil level.                                    | ●     |                |                |                 |                 |                 |
| Inspect air filter. Replace as needed.                     | ●     |                |                |                 |                 |                 |
| Check external hardware.                                   | ●     |                |                |                 |                 |                 |
| Replace the engine oil                                     |       | ●              |                |                 |                 |                 |
| Clean air filter   |       | ●              |                |                 |                 |                 |
| Check drive belt for wear.                                 |       |                | ●              |                 |                 |                 |
| Change engine oil.   |       |                |                | ●               |                 |                 |
| Check fuel filter.   |       |                |                | ●               |                 |                 |
| Clean and check spark plug.                                |       |                |                |                 | ●               |                 |
| Replace oil filter.  |       |                |                |                 | ●               |                 |
| Replace spark plug.  |       |                |                |                 |                 | ●               |
| Replace fuel filter.                                       |       |                |                |                 |                 | ●               |
| Check the cutting blade for damage and tightness           | ●     |                |                |                 |                 |                 |
| Check the direction of rotation arrow of the cutting blade | ●     |                |                |                 |                 |                 |
| Check that the height adjustment moves freely              | ●     |                |                |                 |                 |                 |
| Check the water supply                                     | ●     |                |                |                 |                 |                 |

### 3.2 Transporting and Lifting the machine

- Always shut off engine when transporting machine.
- Always empty the water tank.
- Always remove the cutting blade before lifting, loading, or transporting.
- Lower machine until frame is parallel to ground.
- Fold the guide wheel to the top and the handles to the front.
- Make sure lifting device has enough capacity to hold machine (see identification plate on

machine for weight).

- Use lifting hook (a) when lifting machine.



### 3.3 Belt Checking

Check the belt in the course of the weekly engine maintenance and retighten it as follows, if necessary:

1. Remove the belt guard.
2. Loosen the jam nut.
3. Loosen the four fastening nuts of the engine until the engine can be moved without play.
4. Tighten the belt with the tension screw.
5. If necessary, correct the parallel alignment of the engine. As a first step, tighten a fastening nut of the engine and correct the alignment by means of the tension screw.
6. Tighten all fastening nuts of the engine as well as the jam nut.
7. Mount the belt guard.

### 3.4 Trouble Shooting

| SYMPTOM                             | POSSIBLE CAUSES | SOLUTION   |
|-------------------------------------|-----------------|--|
| Engine running rough or not at all. | Fuel?           | Look at the fuel system. Make sure there is fuel being supplied to the engine. Check to ensure that the fuel filter is |

|  |  |   |
|--|--|---|
|  |  | not clogged.  |
|  | Ignition?  | Check to ensure that the ignition switch has power and is functioning correctly.                        |
| Engine does not start                  | The main switch is in the "0" position.                | Set the main switch to the "I" position.  |
|  | Fuel tap is closed.                                    | Open the fuel tap.  |
|  | Fuel tank is empty.                                    | Top up with fuel.   |
|  | Fuel line is clogged.                                  | Have the fuel line cleaned.   |
|  | Fuel filter is clogged.                                | Have the fuel filter replaced.  |
|  | Carburetor is clogged.                                 | Have the carburetor cleaned.  |
|  | Air cleaner is clogged.                                | Clean or replace air cleaner.   |
|  | Spark plug cap is defective.                           | Have the machine repaired.  |
|  | Spark plug is defective.                               | Change the spark plug.  |
|  | Spark plug is loose.                                   | Tighten the spark plug.   |
|  | Spark plug gap is set incorrectly.                     | Set the spark plug gap.   |
|  | Insufficient engine oil.                               | Top up with engine oil.   |
| Engine shuts off right after starting. | Idle speed is adjusted incorrectly.                    | Set idle speed.   |
|  | Fuel tank is empty.                                    | Top up with fuel.   |
|  | Fuel filter is clogged.                                | Have the fuel filter replaced.  |
|  | Air cleaner is dirty.                                  | Clean or replace air cleaner.   |
|  | Insufficient engine oil.                               | Top up with engine oil.   |
| Engine has low performance.            | Air cleaner is dirty.                                  | Clean or replace air cleaner.   |
| Recoil starter defective.              | Starter rope jammed.                                   | Have the starter rope replaced.   |
|  | Starter rope torn off.                                 |   |
| Cutting blade does not rotate.         | The belt is faulty.                                    | Replace the belt.   |
| Engine cannot be turned off.           | Electrical connection of the main switch is defective. | 1. Close the fuel tap. The engine will switch off after a few seconds.<br>2. Have the machine repaired. |

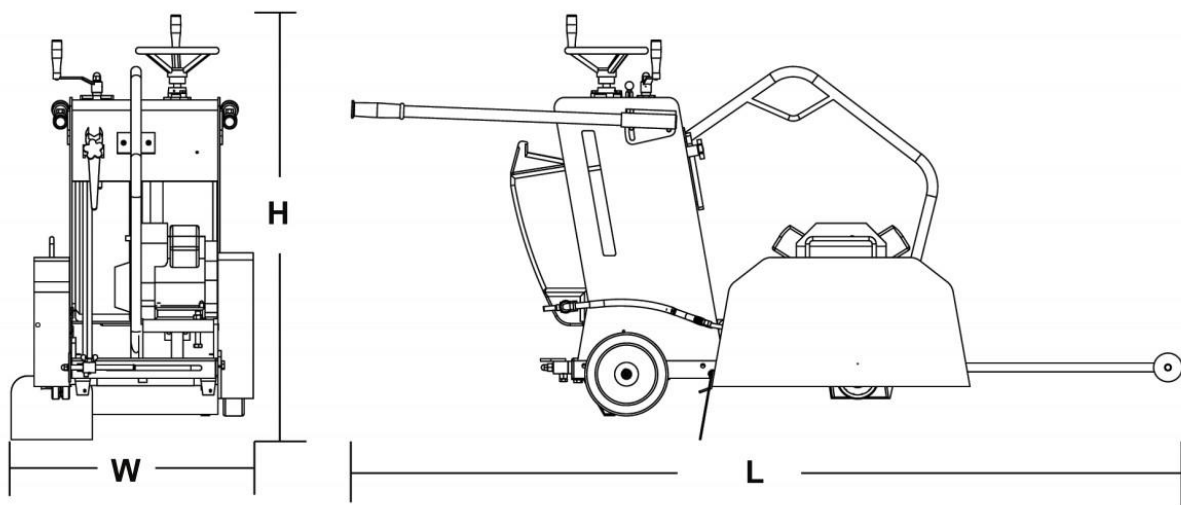
#### 4. TECHNICAL DATA

|             |         |         |            |             |
|-------------|---------|---------|------------|-------------|
| Model       | CC220-1 | CC220-2 | CC220-3    | CC220-4     |
| Engine type | Diesel, | Chinese | Robin EX40 | Honda GX390 |

|                     |        | KM186F              | Petrol Engine |            |           |
|---------------------|--------|---------------------|---------------|------------|-----------|
| Power               | kw(hp) | 6.6(9.0)            | 9.6(13.0)     | 10.3(14)   | 9.6(13.0) |
| Weight              | kg(lb) | 161(354)            | 145(319)      | 146.5(322) | 145(319)  |
| Max. cutting Depth  | cm(in) | 20(8)               |               |            |           |
| Blade Size          | cm(in) | 35-50(14-20)        |               |            |           |
| Water Tank Capacity | L      | 46                  |               |            |           |
| Depth Adjustment    |        | Handle Rotation     |               |            |           |
| Driving             |        | Semi-self Propelled |               |            |           |

| Model               |        | CC260-2                  | CC260-4     | CC260-5      | CC260-6         |
|---------------------|--------|--------------------------|-------------|--------------|-----------------|
| Engine type         |        | Chinese<br>Petrol Engine | Honda GX690 | B&S Vanguard | Kohler<br>CH740 |
| Power               | kw(hp) | 13.4(17.8)               | 16.5(22.1)  | 16.7(23.0)   | 20.1(27.0)      |
| Weight              | kg(lb) | 234(515)                 | 235(517)    | 226(497)     | 234(515)        |
| Max. cutting Depth  | cm(in) | 27(10.6)                 |             |              |                 |
| Blade Size          | cm(in) | 30-65(12-26)             |             |              |                 |
| Water Tank Capacity | L      | 46                       |             |              |                 |
| Depth Adjustment    |        | Handle Rotation          |             |              |                 |
| Driving             |        | Semi-self Propelled      |             |              |                 |

**Working Size (L x W x H):**



| Model        | L (mm) | W(mm) | H(mm) |
|--------------|--------|-------|-------|
| CC220 Series | 2020   | 530   | 970   |
| CC260 Series | 1860   | 680   | 1100  |

**Sound Specification (According to DIN EN 13862):**

|  |          |             |
|--|----------|-------------|
|  | CC220-1  | CC220-2/3/4 |
|  | CC260-1  | CC260-2/3/4 |
| The sound pressure level at operator's location ( $L_{pA}$ ) | 105dB(A) | 104dB(A)    |
| The guaranteed sound power level ( $L_{WA}$ )                | 107dB(A) | 106dB(A)    |

**Vibration Specification (According to DIN EN 13862):**

Uncertainty of measurement of vibration total value  $a_{nv}$ :

CC220 Series:  $1.7m/s^2$

CC260 Series:  $1.8m/s^2$

**EC DECLARATION OF CONFORMITY**

hereby certifies that the construction equipment specified hereunder.

1. Category / Art / Categoría / Catégorie:

Concrete Cutter

2. Type / Typ / Tipo / Type:

CC220-1, CC220-2, CC220-3, CC220-4

CC260-2, CC260-4, CC260-5, CC260-6

has been produced in accordance with the following standards:/in übereinstimmung mit folgenden Richtlinien hergestellt worden ist:/ha sido fabricado en conformidad con las siguientes normas: / a été produit conformément aux dispositions des directives européennes ci-après :

2000/14/EC, Appendix V

2006/42/EC

2004/108/EC

EN 55012:2007

