

PULL LINE BLOWER



OPERATING INSTRUCTIONS

EZ.300

by zeitler.swiss



Production and Distribution

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Dear Customer

Thank you for choosing a quality engineered ZEITLER product.

Our machines are built using modern production techniques and comprehensive quality assurance. Every effort has been made to ensure your satisfaction and trouble-free use of the machine.

Please contact either your dealer or us for any queries concerning your EZ300.

ZEITLER AG

Markus Zeitler



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1. Guide to Using the Operating Instructions

Pictograms

All the pictograms attached to the machine are shown and explained in the operating instructions.

Symbols in text



Warning where there is a risk of an accident or personal injury or serious damage to property.



Caution where there is a risk of damaging the machine or its individual components.

Engineering improvement

ZEITLER's philosophy is to continually improve all of their products. For this reason, we may modify the design, engineering and appearance of our products periodically.

Therefore, some changes, modifications and improvements may not be covered in the operating instructions.

2. Safety Precautions and Working Techniques



Special safety precautions must be observed when working with a power tool.



It is important you read and understand the operating instructions before using your machine for the first time. Always keep the Operating Instructions with the EZ300 for future reference. Non-observance of the safety precautions may result in serious or even fatal injury.

Observe all application such as local safety regulations, standards and ordinances for ex. Gouvernement, Insurances, Associations etc.

If you have not used this type of power tool before: Have your dealer or other experienced user show you how to operate your power tool properly.

Minors should never be allowed to use a electrical machine except for minors of more than 16 years and trained under supervision for their apprentice.

Bystanders, especially children, and animals should not be allowed in the area where a power tool is in use. When the machine is not in use, shut it off and place it so that it does not endanger others. Secure it against unauthorized use.

The power tool user is responsible for avoiding injury to third parties or damage to their property.

Do not lend or rent your machine without the operating instructions. Be sure that anyone using the EZ300 understands the information contained in the operating instructions.

In some countries the operation of noise emitting power tools is restricted by local regulations. Observe country specific requirements and regulations.

Accessories and Spare Parts

Only use genuine replacement parts and accessories that are explicitly approved for the EZ300 by ZEITLER AG.

These parts are specifically designed to match your machine model and meet your performance requirements and also to avoid the risk of accidents and damage to the machine. If you have any question in this respect, consult an authorized servicing dealer.

Never attempt to modify your power tool in any way since this will increase the risk of personal injury.

ZEITLER AG excludes all liability for personal injury and damage to property caused while using unauthorized attachments.

Physical Condition

To operate the power tool you must be rested, in good physical condition and mental health. If you have any condition that might be aggravated by strenuous work, check with your doctor before operating a power tool.

Persons with pacemakers only: The ignition system of your power tool produces an electromagnetic field of a very low intensity. This field may interfere with some pacemakers. To reduce health risks, ZEITLER AG recommends that persons with pacemakers consult their physician and the pacemaker manufacturer before operating this tool.

Do not operate the power tool if you are under the influence of any substance (alcohol, drugs) which might impair visions, dexterity of judgement.

Applications

The EZ300 Pull Line Blower is intended exclusively for blowing in or sucking out special pull lines in pipe work that has already been laid. Then, cables or extra strong pull lines can be fixed to the pull line in order to pull them through the pipe work.

It must not be used for any other purpose because of the increased risk of accidents and damage to the machine. Never attempt to modify your power tool in any way since this may result in accidents or damage to the machine.

Disposal of lines

Used lines can also be used for other purposes or must be properly disposed of. All relevant regulations and laws of the particular country must be complied with when disposing of old lines.

Personal protective Equipment

Wear proper protective clothing and equipment.



Clothing must be sturdy but allow complete freedom of movement. Wear snug-fitting clothing, an overall and jacket combination, do not wear a work coat.



Avoid any clothing, scarves, neckties, jewellery or anything that could get into the air intake.



Tie up and confine long hair (e.g. with a hair net, cap, hard hat, etc.)



Wear sturdy shoes with non-slip soles.



Wear safety glasses and 'personal' hearing protection, e.g. earplugs or ear muffs.

Fueling



Gasoline is an extremely flammable fuel. Keep clear of naked flames, do not spill any fuel – do not smoke.

Always **shut off the engine** before refuelling.

Do not fuel a hot engine – fuel may spill and **cause a fire**.

Open the fuel cap carefully to allow any pressure build-up in the tank to release slowly and avoid fuel spillage.

Fuel your power tool in a well-ventilated area, outdoors only. If you spill fuel, wipe the machine immediately – if fuel gets on your clothing, change immediately.



To reduce the risk of **serious or fatal burn injuries**, check for fuel leakage. If fuel leakage is found, do not start or run the engine until leak is fixed.

Tighten down the fuel cap as securely as possible. This reduces the risk of unit vibrations causing the fuel cap to loosen or come off and spill quantities of fuel.

Before Starting

Check that your power tool is properly assembled and in good condition – refer to appropriate chapters in the operating instructions.

- Throttle trigger must move freely and spring back to the idle position when released
- Setting lever/switch must move easily to position **STOP** or **0**
- Check that the spark plug boot is secure – a loose boot may cause arcing that could ignite combustible fumes and **cause a fire**
- Check condition of fan wheel and fan housing
- A worn fan housing (cracks, nicks, chips) may result in an increased risk of injury from thrown foreign objects
- If either the fan wheel or fan housing is damaged, consult your dealer – ZEITLER AG recommends you contact a service dealer
- Never attempt to modify the controls of the safety devices in any way

To reduce the risk of personal injury, do not operate your machine if it is damaged or not properly assembled.

Starting the Engine

Start the engine at least 3 meters from the fueling spot, outdoors only.

Your power tool is designed to be operated by one person only. Do not allow other persons in the work area – even when starting the engine.

Do not drop start the engine – the correct starting procedure is described in the Operating Instructions.

Make sure to place the unit on level ground, to have secure footing, and do hold the unit securely.

As soon as the engine starts, the air flow may throw small objects (e.g. stones) in all direction.

During Operation

Do not direct the air blast towards bystanders on animals since the air flow can blow small objects at great speed – **risk of injuries**.

In the event of impending danger or in an emergency, switch off the engine immediately by moving the setting lever/switch to **STOP** or **0**.

To reduce the **risk of injury** by thrown objects, do not allow other persons within 5 meters of your own position. Never leave a running machine unattended.

Take special care in slippery conditions, on slopes or uneven ground.

Watch out for obstacles such as tree stumps, roots and ditches which could cause you to **trip or stumble**.

Never work on a ladder or any other insecure support.

Be particularly alert and cautious when wearing hearing protection because your ability to hear warnings (shouts, alarms, etc.) is restricted.

To reduce the **risk of accidents**, take a break in good time to avoid tiredness or exhausting.

Work calmly and carefully – in daylight conditions and only when visibility is good. Stay alert so as not to endanger others.

After finishing work, put the unit down on a level, non-flammable surface. To reduce the **risk of fire**, do not put it down near easily combustible materials (e.g. wood chips, bark, dry grass, fuel)

Your power tool produces **toxic exhaust fumes** as soon as the engine is running. These fumes may be colourless and odourless and contain unburned hydrocarbons and benzol. Never run the engine indoors or in poorly ventilated locations.

To reduce the risk of serious or fatal **injury from breathing toxic fumes**, ensure proper ventilation when working in ditches, hollows or other confined locations.

Optional accessories: air hose of 2 m for extension (see 'To use accessories')

To reduce the **risk of accidents**, stop work immediately in the event of nausea, headache, visual disturbances (e.g. reduce field of vision), problems with hearing, dizziness, deterioration in ability to concentrate. Apart from other possibilities, these symptoms may be caused by an excessively high concentration of exhaust gases in the work area.

The dust that occurs during operation may be harmful to health. If dust levels are very high, wear a suitable protective mask.

To **reduce the risk of the fire, do not smoke** while operating or standing near your power tool. Note that combustible fuel vapour may escape from the fuel system.

If your power tool was exposed to unusual influences for which it was not designed (e.g. heavy impact or a fall) always check that it is in good condition before continuing work – see also 'Before Starting Work'. Check the fuel system in particular for leaks and make sure the safety devices are working properly. Do not continue operating your power tool if it is damaged. In case of doubt, have the machine checked by your servicing dealer.

Vibrations

Prolonged use of the power tool may result in vibration-induced circulation problems in the hands (whitefinger disease).

No general recommendation can be given to the length of usage because it depends on several factors.

The period of usage is prolonged by:

- Keeping your hands warm
- Work breaks

The period of usage is shortened by:

- Any personal tendency to suffer from poor circulation (symptoms: frequently cold fingers, itching)
- Low outside temperatures
- Gripping force (a tight grip hinders circulation)

Continual and regular users should monitor closely the condition of their hands and fingers. If any of the above symptoms appear (e.g. tingling sensation in fingers), seek medical advice.

Maintenance and Repairs

Service the machine regularly. Do not attempt any maintenance or repair work not described in the operating instructions. Have all other work performed by a servicing dealer.

ZEITLER AG recommends that you have servicing and repair work carried out exclusively by an authorized servicing dealer for EZ300. Service dealers are regularly given the opportunity to attend training courses and are supplied with the necessary technical information.

Only use genuine replacement parts and accessories that are explicitly approved for the EZ300 by ZEITLER AG. These parts are specifically designed to match your machine model and meet your performance requirements and also to avoid the risk of accidents and damage to the machine. If you have any question in this respect, consult an authorized servicing dealer.

Never attempt to modify your power tool in any way since this will increase the risk of personal injury.

ZEITLER AG excludes all liability for personal injury and damage to property caused while using unauthorized attachments.

To reduce **the risk of injury** from unintentional engine startup, **always shut off the engine and disconnect the spark plug boot** before performing any repairs, maintenance or cleaning work. – Exception: carburettor and idle speed adjustments.

Do not turn the engine over on the starter with the spark plug boot or spark plug removed since there is otherwise a **risk of fire** from uncontained sparking.

Do not service or store your machine near open flames.

Check the fuel filler cap for leaks at regular intervals.

Use only a spark plug of the type approved by ZEITLER AG and make sure it is in good condition – see 'Technical data'.

Inspect the ignition lead (insulation in good condition, secure connection).

Check the condition of the muffler.

To reduce the **risk of fire and damage to hearing**, do not operate your machine if the muffler is damaged or missing.

Do not touch a hot muffler since **burn injury** will result.

Vibration behaviour is influenced by the condition of the AV elements – check the AV elements at regular intervals.

Shut off the engine before dealing with problems.








3. Scope of supply EZ300

Art. 100086 EZ300 Pull Line Blower, in original plastic carrying case with standard equipment



Standard equipment EZ300 includes

- | | | | |
|--------------------------------|--|-----|--|
| Art.100087 | | 1 x | Blowing connection |
| Art.100088 | | 1 x | Suction connection |
| Art.100105 | | 1 x | Head piece 140 with pull line supply (for int Ø 50 to 140 mm) |
| Art.100099 | | 1 x | Head piece 200 with pull line supply (for int Ø 120 to 200 mm) |
| Art.112003
to
Art.112090 | | 5 x | Shuttles, free selection of five different int. conduit Ø up to Ø 150 mm set in small case:
4 disks white (=90% of tube dimension)
4 disks black (=70% of tube dimension)
2 axles |

- | | | |
|------------|---|--|
| Art.100152 |  | 1x Small case with parachutes
Green, for int. conduit Ø of 60 to 100 mm |
| Art.100153 |  | 1x Blue, for int. conduit Ø of 100 to 150 mm |
| Art.101486 |  | 1 x Cone black 50 - 130mm
for int. conduit Ø from 50 to 130 mm,
in case of difficult access or frayed conduit end |
| Art.100056 |  | 1 x Box with shuttle assembly material
20 x screw with hole
2 x open wrench 7 mm
40 x washer M4
1 x scissors
10 x rings |
| Art.100089 |  | 1 x Fuel can 0.5 l (empty) |
| |  | 2 x Pull line rolls d 1 mm, approx. 900 m, tensile strength approx. 24 kg |
| Art.100120 |  | 1 x Air hose 1,8 m |
| | | 1 x Operating instructions |

4. Optional Accessories and Expendable Materials

- | | | | |
|--|--|--|---|
| Art.100114
Art.100115
Art.100116
Art.100117
Art.100118
Art.100119 | | Foam body (special designed) for int Ø of tubes of
100mm
120mm
140mm
160mm
180mm
200mm | |
| Art.100127 | | Tubulure 40 to foam body for int. Ø of conduits 80 to 100 mm | |
| Art.100129 | | Tubulure 70 to foam body for int. Ø of conduits 120 to 200 mm | |
| | | For details see ADDENDUM DISKS AND AXLES (www.zeitler.swiss) | |
| Art.100309 | | Parachute for conduits int. Ø 30 - 60 mm | |
| Art.100154 | | Parachute for conduits int. Ø 150 - 200 mm | |
| Art.100049 | | Head piece 140 | Changing:
- tear off used foam collar
- take off as much of the remaining adhesive
- clean surface with denatured alcohol
- short period for drying
- fix new foam collar and press it on tightly |
| Art.100100 | | Head piece 200 | |
| Art. 100146 | | Screw with hole 20 pieces | |
| Art.100150 | | Ring 20 pieces | |
| Art.100148 | | Washer 20 pieces | |

5. Special Pull line

5.1. Inside unrolling

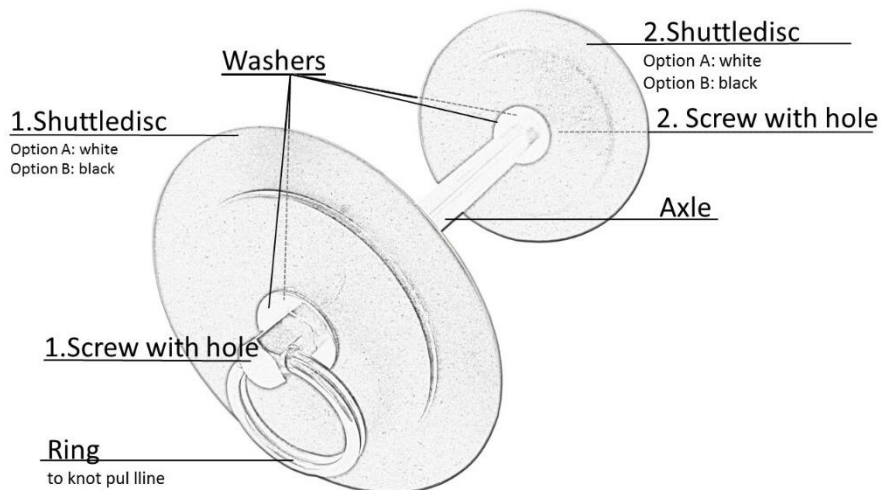
- | | | |
|------------|--|--|
| Art.100132 | | Pull line rolls ø 1 mm, approx. 900 m length, tensile strength approx. 24 kg box of 10 rolls |
| Art.100716 | | Pull line toneable with copper wire ø 1 mm, approx. 820 m length, tensile strength approx. 24 kg, box of 10 rolls |
| Art.100136 | | Pull line rolls ø 4 mm, 1100 m length, tensile strength approx. 210 kg, box of 3 rolls |
| Art.100717 | | Pull line toneable with copper wire ø 4 mm, approx. 1100 m length, tensile strength approx. 210 kg, box of 3 rolls |
| Art.100522 | | Pull line with meter marks ø 4 mm, approx. 1100 m length tensile strength approx. 210 kg, box of 3 rolls |
| Art.100140 | | Pull line rolls ø 4 mm, 750 m length, tensile strength approx. 340 kg, box of 3 rolls |

5.2. Outside unrolling

- | | | |
|-------------|--|--|
| Art. 102509 | | Cable Pull Line on edge coil ø 5 mm
Box with 2 rolls of 500 m tensile strength 450 kg |
| Art. 102510 | | Cable Pull Line on edge coil ø 4 mm
Box with 4 rolls of 500 m tensile strength 340 kg |
| Art. 102511 | | Cable Pull Line on edge coil ø 4 mm
Box with 2 rolls of 1000 m tensile strength 340 kg |
| Art. 102512 | | Cable Pull Line with meter marks on edge coil ø 4 mm
Box with 2 rolls of 1000 m tensile strength 350 kg |
| Art. 102513 | | Cable Pull Line with meter marks on edge coil ø 4 mm
Box with 4 rolls of 500 m tensile strength 350 kg |

6. Shuttle Assembling

- Assemble at **each** end of axle
- 2 washers
 - 1 disk (black or white)
 - 1 screw with hole
- Tighten with the two open end wrenches



NEVER USE SHUTTLE WITHOUT PULL LINE – COULD GET LOST!

7. How to Use Accessories

Head piece 140 and 200 plus special equipment

For every application, fix connection and head piece corresponding to the interior conduit Ø.

Head piece 140 for Ø 50 to 140 mm,
 Head piece 200 for Ø 120 to 200 mm

Shuttle **! First step: blow conduit through without shuttle!**

Disk black - for normal sequence through all commercial conduits
 - for conduits with deformation, dirt, dust, residues

Disk white - in case of condensed water or meteor water in conduit
 - possibility for calibration

Parachute (** see optional accessories)

- used for heavy soiled conduits and conduits with variations of Ø up to 50 mm
- occupied conduits might be fed with pull line using an appropriate parachute

Parachute yellow	for int. conduit Ø of 30 to 60 mm
Parachute green	for int. conduit Ø of 60 to 100 mm
Parachute blue	for int. conduit Ø of 100 to 150 mm
Parachute violet	for int. conduit Ø of 150 to 200 mm

Cone orange with metallic head

For conduit Ø from 50 to 120 mm, in case of difficult access or frayed conduit end

Air hose 1.8 m

It is helpful in places with very tight clearance or in places lacking enough fresh air. Fix air hose between the head piece and the blowing connection.

Foam body

Specially designed to feed special pull line in conduits already equipped with cables.
 Available for internal conduit diameter of 80, 100, 120, 140, 160, 180 and 200 mm.

Tubulure 40 and 70

Required to apply the foam body to feed special pull line in conduits already equipped with cables.
 Tubulure 40 required for foam body sizes Ø 80 to 100 mm
 Tubulure 70 required for foam body sizes Ø 120 to 200 mm

8. Blowing mode with EZ300

1. Conduit ends must be clean and cut off evenly (if not possible → use orange cone)
2. Decide on the conduit end at higher level
3. Post control person on opposite side (where device is not in use). (eye protection, wear safety goggles)
4. Fill the tank with the mixture of gasoline and engine oil – see instructions
5. Adjust blowing connection (bayonet catch)
6. Fix head piece or special equipment appropriate to conduit \varnothing
7. Provide shuttle suitable for pipe inside diameter
TOLERANCE to inside $\varnothing + 0 / -2$ mm (see shuttle installation)
8. Start the engine according to the instructions
9. Apply foam ring close to conduit
10. First blow through the tube with air only (dirt, dust, water)
11. Check volume of air flowing out (be careful!)
12. Switch off the engine
13. Insert the pull line through the pull line supply and knot it tightly to the screw of the shuttle, with only a short end left
14. Place the corresponding shuttle in conduit
15. Start the engine
16. Place the foam ring close to the conduit and blow in the pull line without interruption
17. Increase blowing speed by throttle lever, if necessary, lock throttle lever
18. DO NOT block air intake/screen of the EZ300 with clothing or body
19. As soon as the shuttle has reached the end of the conduit, the pull line stops uncoiling
- if the shuttle pauses: pull back by hand and try from the opposite side or with alternative accessories (see use of accessories eg. suction mode)
20. Store the device in a safe place and switch off the engine as instructed
21. Inlet side: cut the line and secure it from retraction
22. Outlet side: release shuttle and secure line from retraction

Blowing mode completed: always remove head piece and blowing connection!

How to couple two pull lines rolls:

If the existing line length of one roll is not sufficient, you may add another line roll:

1. You are working with a started roll of pull line, make sure to secure the end of the line so that it cannot slip into the duct (large knot / tie object)
2. Stop the blowing process on time before the end of the line
3. Release the knot / object and carefully pull the remaining line completely through the line supply
4. Thread the line start of the second roll through the line supply
5. Tie the end of the first roll firmly and strongly to the start of the second roll (for example, with a Figure Eight (Flemish) knot)
6. Place the EZ100 tight to the duct and continue blowing
7. When working with a parachute make sure to keep pull line tense, to keep parachute open.

ATTENTION: connecting two roll ends automatically reduces the tensile strength

NEVER BLOW IN SHUTTLE WITHOUT PULL LINE –
MAY GET STUCK OR LOST IN THE DUCT AND CAN'T GET PULLED BACK.

9. Suction Mode with EZ300

**Only change to suction mode if blowing mode does not work
(Never use with water in the conduit!)**

1. Conduit ends must be clean and cut off evenly
2. Decide on the conduit end at higher level
3. Open the intake screen with the screwdriver
4. Adjust suction connection (bayonet catch)
5. Fix head piece or special equipment appropriate to int. conduit \varnothing
6. opposite side where the device is not in use: position helper
7. get pull line roll ready
8. assemble shuttle for the int. conduit \varnothing
TOLERANCE to int. conduit \varnothing +0/-2 mm (see 'Assemble the shuttles')
9. insert the pull line through the screw hole, knot it tightly with only a short end left
10. opposite side: fix the end of the roll to an object that CANNOT disappear into the conduit
11. opposite side: place shuttle in the conduit
12. Start engine according to instructions
13. Press EZ300 head piece tightly to the conduit
14. Vacuum shuttle without interruption (beware of dust)
15. Never block conduit with clothing or body
16. Never block air intake/grill of the EZ300 with clothing or body
17. As soon as the shuttle arrives, stop the vacuum mode
18. Place the tool on safe ground and shut off the motor according to instructions
19. Cut off the shuttle and secure the line
20. Cut off the pull line and secure it

Suction mode completed: always remove the suction connection and close the intake screen!

NEVER USE SHUTTLE WITHOUT PULL LINE – COULD GET LOST!



To reduce the risk of personal injury from fire, never attempt to suck on hot or burning substances (e.g. smoldering ashes, glowing cigarettes).



To reduce the risk of fatal injury from fire or explosion, never attempt to suck on combustible fluids (e.g. gasoline) or materials soaked in combustible fluids.



Shut off the motor before opening the intake screen. The intake screen must always be closed and secured when the suction connection is not attached to reduce the **risk of injury** from contact with rotating components. This may also result in damage to the engine.

10. Fuel

Your engine requires a mixture of gasoline and engine oil.



For health reasons, avoid direct skin contact with gasoline and avoid inhaling gasoline vapor.

STIHL MotoMix

ZEITLER AG recommends the use of STIHL MotoMix. This ready-to-use fuel mix contains no benzol or lead, has high octane rating and ensures that you always use the right mix ratio.

MotoMix is specially formulated for use in STIHL engines and guarantees a long engine life.

MotoMix is not available in all markets.

Mixing Fuel



Unsuitable fuels or lubricants or mix ratios other than those specified may result in serious damage of the engine. Poor quality gasoline or engine oil may damage the engine, sealing rings, hoses and the fuel tank.

Gasoline

Use only high-quality brand-name gasoline with a minimum octane rating of 90 – leaded or unleaded.

Engine Oil

Use only quality two-stroke engine oil. We recommend STIHL two-stroke engine oil since it is specially formulated for use in STIHL engines and guarantees a long engine life.

If STIHL two-stroke engine oil is not available, use only quality two-stroke oil designed for use in air-cooled engines. Do not use oils designed for water-cooled engines or engines with a separate lubricating system (e.g. conventional four-stroke engines)

Mix ratio

STIHL two-stroke engine oil 1 : 50 = 1 part oil to 50 parts gasoline

Examples

Gasoline	STIHL engine oil	50 : 1
Liter	Liter	(ml)
1	0.02	(20)
5	0.10	(100)
10	0.20	(200)
15	0.30	(300)
20	0.40	(400)
25	0.50	(500)



Other brand-name two-stroke engine oils: 25 parts gasoline to 1 part oil

Use a canister approved for storing fuel. Pour oil into canister first, then add gasoline and mix thoroughly.

Storing Fuel

Store fuel only in approved safety-type fuel canisters in a dry, cool and safe location protected from light and sun.

Fuel mix ages – only mix sufficient fuel for a few weeks work. Do not store fuel mix for longer than 3 months. Exposure to light, sun, low or high temperatures can quickly make the fuel mix unusable.

Thoroughly shake the mixture in the canister before fueling your machine.



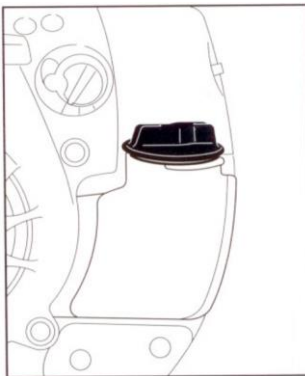
Pressure may build up in the canister – open it carefully.

Clean the fuel tank and canister from time to time.

Dispose of remaining fuel and cleaning fluid properly in accordance with local regulations and environmental requirements.

11. Fueling

Preparations



- Before fueling, clean the filler cap and the area around it to ensure that no dirt falls into the tank
- Position the machine so that the filler cap is facing up
- Open the filler cap
- Fill up with fuel
- Close the filler cap

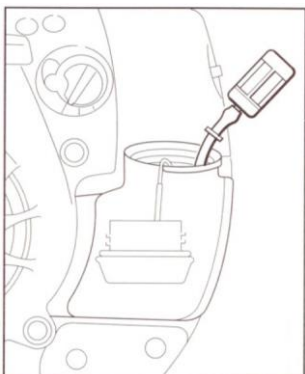
Fill up with fuel

Take care to not spill fuel while fueling and do not overfill the tank.



After fueling, tighten down the filler cap as securely as possible.

Changing the fuel pickup body



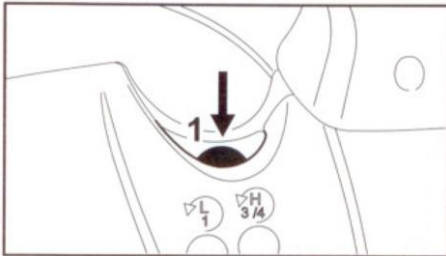
Change the fuel pick up body every year.

- Drain the fuel tank
- Use a hook to pull the fuel pickup body out of the tank and take it off the hose
- Push the new pickup body into the hose
- Place the pickup body in the tank

12. Starting / Stopping the Engine

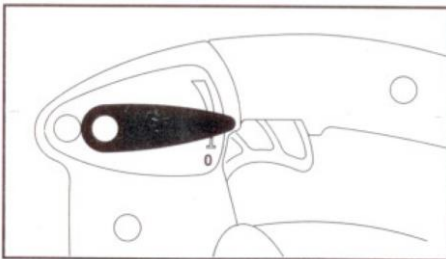
Starting the engine

- Observe safety precautions



- Press the fuel pump bulb (1) at least five times – even if the bulb is filled with fuel

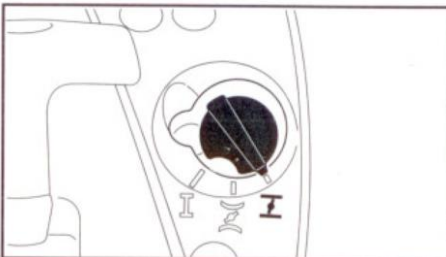
Adjusting the setting lever



- To start move the setting lever to the run position **I**

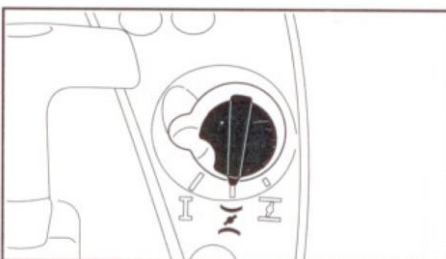
The setting lever selects and holds any throttle position between idle and full throttle.

Adjusting the choke knob



If the engine is cold

- Set the choke knob to **I**



If the engine is warm

- Set the choke knob to **II**

Also use this setting if the engine has been running but is still cold.

Starting



- Place the unit on safe ground
- Make sure you have a firm footing: Hold the unit firmly with your right hand on the housing and press down
- Hold the starter grip with your left hand
- Pull the starter grip slowly until you feel it engage and then give it a brisk strong pull
- Do not pull out the starter rope all the way – it might otherwise break
- Do not let the starter grip snap back. Guide it slowly back into the housing so that the starter rope can rewind properly

Other hints on starting

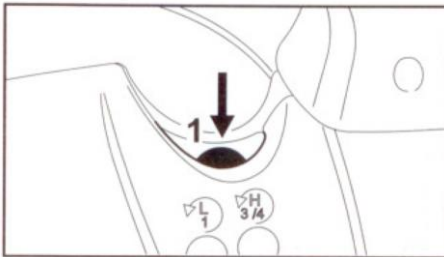
If the engine stops when choke knob is on **I** or during acceleration.

- Move the choke knob to **II** and continue cranking until the engine runs.

If the engine does not start

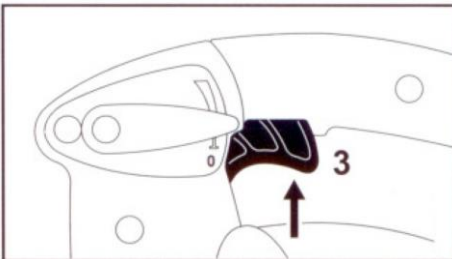
- Make sure all settings are correct (choke knob, setting lever in run position **I**).
- Repeat the starting procedure.

If fuel tank has been run completely dry and then refueled



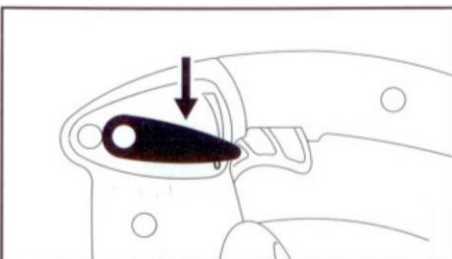
- Press the fuel pump bulb (1) at least five times – even if the bulb is filled with fuel
- Now re-start the engine

As soon as the engine runs



- Blip the throttle trigger (3) – the choke knob moves to the run position **I** – the engine returns to idle speed.

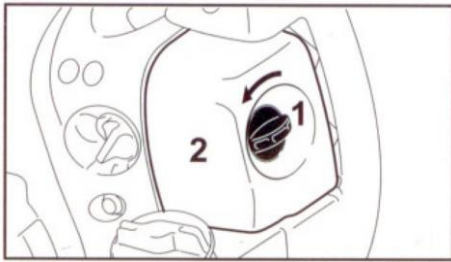
11.9. Shut off the engine



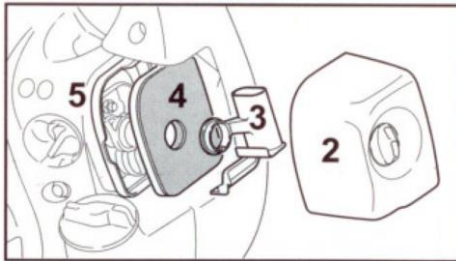
- Move the setting lever to **0** – the engine stops – the setting lever springs back to the on position.

13. Cleaning the Air Filter

If there is a noticeable loss of engine power



- Turn the filter cover lock (1) counterclockwise to the vertical position.
- Remove the filter cover (2)
- Clean away loose dirt from around the filter



- Pull off the retainer (3) and take the filter (4) out of the filter housing (5)
- Install a new filter. As a temporary measure you can knock it out on the palm of your hand or blow it out with compressed air – do not wash!

Replace damaged parts.

Installing the filter

- Fit the filter in the filter housing and push the retainer into position.
- Refit the filter cover and turn the filter cover lock to the horizontal position.

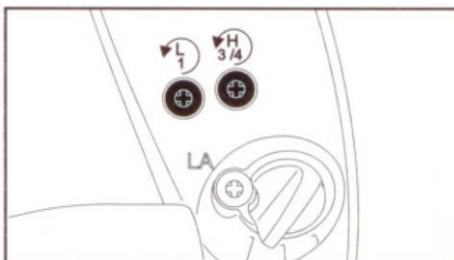
14. Adjusting the Carburetor

The carburetor comes from the factory with a standard setting

This setting provides an optimum fuel-air mixture under most operating conditions.

With this carburetor it is only possible to adjust the high speed screw within fine limits.

Standard Setting



- Shut off the engine
- Turn high speed screw (H) counterclockwise (no more than a 3/4 turn) as far as stop
- Turn the low speed screw (L) carefully home as far as stop and then open it 1 full turn

Fine Tuning for Operation in Mountains or at Sea Level

A slight correction of the setting may be necessary if engine power is not satisfactory when operating at high altitude or at sea level.

- Check the air filter and clean it if necessary
- Warm up the engine

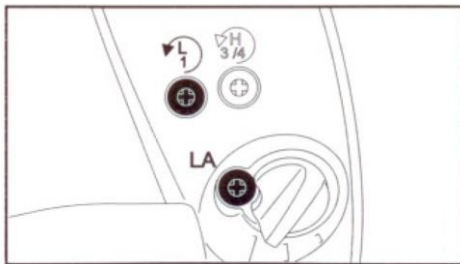
At high altitude

- Turn high speed screw (H) clockwise (leaner) – no further than stop.

At sea level

- Turn high speed screw (H) slightly counterclockwise (richer) – no further than stop.

Adjusting Idle Speed



- It is usually necessary to change the setting of the idle speed screw (LA) after every correction to the low speed screw (L).

Engine stops while idling

- Check the standard setting.
- Turn the idle speed screw (LA) clockwise until the engine runs smoothly.

Erratic idling behavior

If acceleration is poor even though the standard setting is correct, the idle setting is **too rich**:

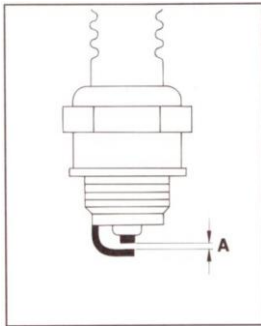
- Turn the low speed screw (L) slowly clockwise until the engine runs and accelerates smoothly.

If acceleration is good, the idle setting is **too lean**:

- Turn the low speed screw (L) slowly counterclockwise until the engine runs and accelerates smoothly.

15. Checking the Spark Plug

If the engine is down on power, difficult to start or runs poorly at idle speed, first check the spark plug.

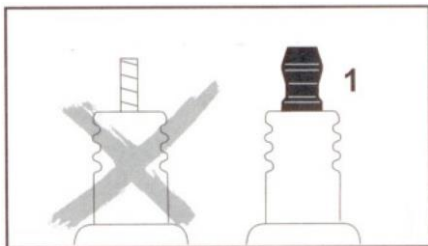


- Remove the spark plug, see “Starting / Stopping the Engine”
- Clean dirty spark plug.
- Check electrode gap (A) and readjust if necessary – see ‘Technical Data’
- Rectify the problems which have caused fouling of the spark plug

Possible causes are:

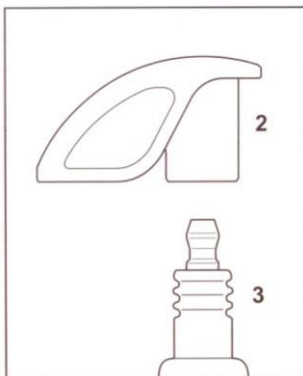
- Too much oil in fuel mix.
 - Dirty air filter
 - Unfavorable running conditions
- Fit a new spark plug after about 100 operating hours – or sooner if the electrodes are badly eroded. Install only suppressed spark plugs of the type approved by ZEITLER AG – see “Specifications”.

To reduce the risk of arcing and fire



If the spark plug comes with a detachable adapter nut:

- Screw the adapter nut (1) onto the thread and tighten it down firmly.



On all spark plugs:

- Always press the boot (2) firmly to the spark plug (3)

16. Engine Running Behaviour

If engine running behavior is unsatisfactory even though the air filter is clean and the carburetor is properly adjusted, the cause may be the muffler.

- Have the muffler checked for contamination (carbonization)

ZEITLER AG recommends that you have servicing and repair work carried out exclusively by an authorized servicing dealer.

17. Rewind Starter

To help prolong the wear life of the starter rope, observe the following points:

- Pull the starter rope only in the direction specified
- Do not Pull the rope over the edge of the guide bushing
- Do not pull out the rope more than specified
- Do not allow the starter grip to snap back, guide it back into the housing slowly – see 'Starting / Stopping Engine'

Have a damaged starter rope replaced by your dealer before it breaks completely.

18. Transport, Storage, Shipping

ALWAYS SHUT OFF THE ENGINE!!

Transporting in a vehicle:

- Allow the tool to cool down before placing it in the original plastic case.
- Properly secure the plastic case to prevent turnover, fuel spillage and damage.

Storing for periods of 3 months or longer

- drain and clean the fuel tank in a well-ventilated area
- dispose of fuel properly in accordance with local environmental requirements
- run the engine until the carburetor is dry – this helps prevent the carburetor diaphragms sticking together
- thoroughly clean the machine – pay special attention to the cylinder fins and air filter
- store the machine in a dry, high or locked location, out of the reach of children and all unauthorized persons

Shipping of the unit

- drain and clean the fuel tank in a well-ventilated area
- dispose of fuel properly in accordance with local environmental requirements
- run the engine until the carburetor is dry – this helps prevent the carburetor diaphragms sticking together
- thoroughly clean the machine – pay special attention to the cylinder fins and air filter
- place the unit in its original carrying case
- close case correctly and secure closures for ex. with cable ties or string

19. Maintenance and Care

The following intervals apply to normal operating conditions only. If your daily working time is longer or operating conditions are difficult (very dusty work area, etc), shorten the specified intervals accordingly		before starting work	after finishing work or daily	after each refuelling stop	monthly	every 12 months	if problem	if damaged	if required
Complete machine	Visual inspection (condition, leaks)	x		x					
	Clean		x						
Control handle	Check operation	x		x					
Air filter	Clean						x		x
	Replace							x	x
Filter in fuel tank	Check						x		
	Replace filter					x		x	x
Fuel tank	Clean						x		x
Carburetor	Check idle setting	x		x					
	Readjust idle								x
Spark plug	Readjust electrode gap						x		
	Replace after 100 hours of operation								
Cooling inlets	Clean								x
All accessible screws and nuts (not adjusting screws)	Retighten								x
Antivibration elements	Check	x					x		x
	Replace							x	
Safety labels	Replace							x	

20. Minimize Wear and Avoid Damage

Observing the details in the operating instructions helps reduce the risk of unnecessary wear and damage to the power tool.

The power tool must be operated, maintained and stored with the due care and attention described in the operating instructions.

The user is responsible for all damage caused by non-observance of the safety precautions and operating and maintenance details in the Operating Instructions. This includes in particular:

- Alterations or modifications to the product not approved by ZEITLER AG
- Using tools or accessories which are neither approved or suitable for the product or are of a poor quality
- Using the product for purposes for which it was not designed.
- Using the product for sports or competitive events.
- Consequential damage caused by continuing to use the product with defective components.

Maintenance Work

All the operations described in 'Maintenance and Care' must be performed on a regular basis. If these maintenance operations cannot be performed by the owner, they should be performed by a servicing dealer.

ZEITLER AG recommends that you have servicing and repair work carried out exclusively by an authorized servicing dealer. Dealers are regularly given the opportunity to attend training courses and are supplied with the necessary technical information.

If these maintenance operations are not carried out as specified, the user assumes responsibility for any damage that may occur. Among other parts, this includes:

- Damage to the engine due to neglect or deficient maintenance (e.g. air and fuel filters), incorrect carburetor adjustment or inadequate cleaning of cooling air inlets (intake ports, cylinder fins)
- Corrosion and other consequential damage resulting from improper storage.
- Damage to the machine resulting from the use of poor quality replacement parts.

Some parts of the power tool are subject to normal wear and tear even during regular operation in accordance with instructions and, depending on the type and duration of use, have to be replaced in good time. Among other parts, this includes:

- Filters (air, fuel)
- Blower wheel
- Rewind Starter
- Spark plug

21. Support

First Name: _____

Company: _____

Last Name: _____

Phone: _____

E-Mail: _____

Website: _____

Duct outside Ø: _____ mm

Duct length: _____ m

Duct inside Ø: _____ mm

Is the duct Ø identical along the way?

yes no

Does air go through the duct?

yes no

Is there water in the duct?

yes no don't know

Is the duct already occupied?

yes no

Have you tried to blow-in with parachute?

yes no

Which parachute size was used?

30-60mm 60-100mm
 100-150mm 150-200mm

Have you tried to blow-in with shuttle?

yes no

Which shuttle size was used?

_____ mm

What shuttle color was used?

white black

Have you tried to blow from opposite?

yes no not possible

How far did you blow the pull line?

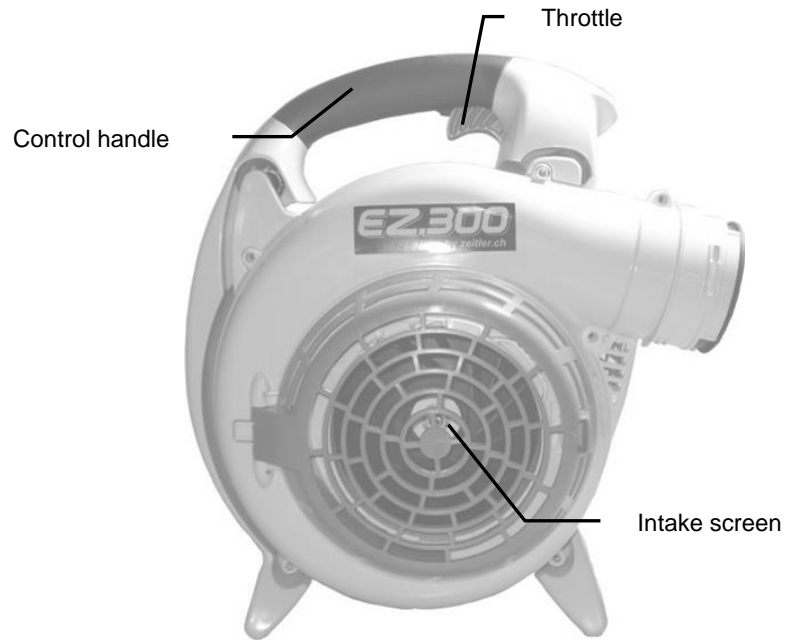
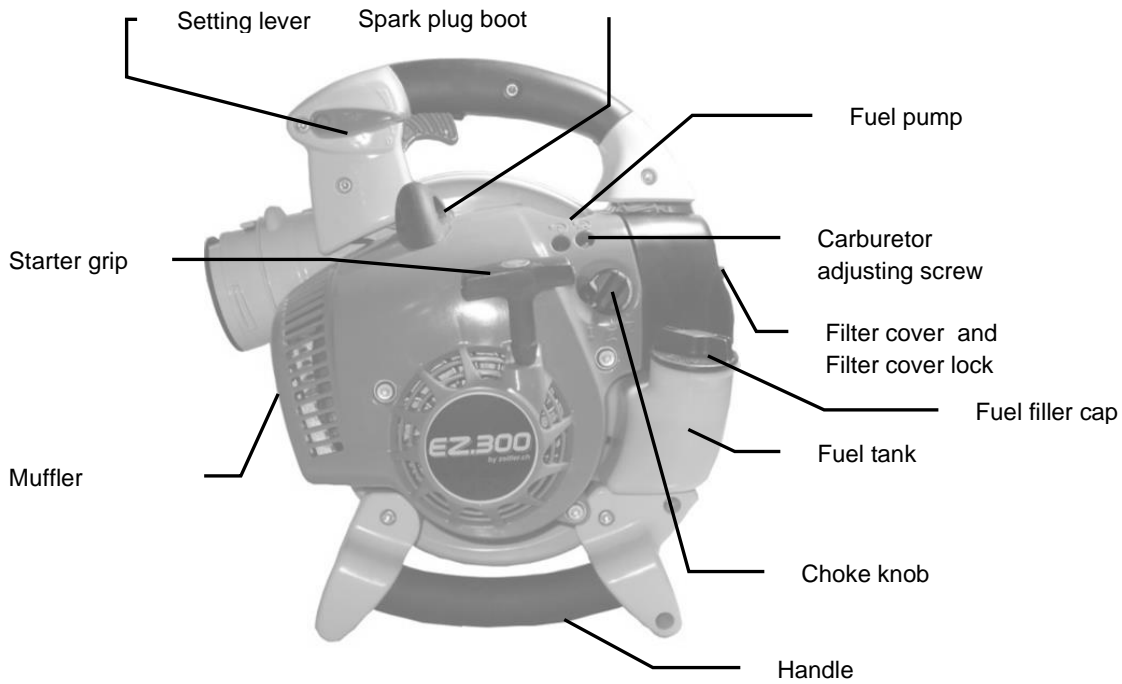
_____ Meter

Which pull line was used?

ø 1mm ø 4mm ø _____

More useful information

22. Main Parts EZ300



23. Technical Data EZ300

Engine **Single cylinder two-stroke engine**

Displacement	27,2 cm ³
Bore	34 mm
Stroke	30 mm
Idle speed	2500 1/min
Engine power to ISO 7293	0,8 kW (1,1 PS)

Ignition System

Electronic magneto ignition	
Spark plug (suppressed)	NGK CMR 6 H
Electrode gap	0,5 mm

Fuel System

All position diaphragm carburetor with integral fuel pump

Fuel tank capacity	0,44 l
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Maximum air flow rate

Blowing mode	810 m ³ /h
Suction mode	770 m ³ /h

Air Velocity

Round nozzle Ø 200mm	7 m/s
Round nozzle Ø 150mm	13 m/s
Round nozzle Ø 100mm	29 m/s
Round nozzle Ø 50mm	115 m/s

Weight

Not fueled	5,7 kg
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Noise and Vibration Data

Weighted equivalent level includes idling and racing in a ratio of 1:6

Sound pressure level L_{peq} to ISO 22868

Blowing mode	90 dB(A)
Suction mode	96 dB(A)

Sound power level L_{weq} to ISO 3744

Blowing mode	103 dB(A)
Suction mode	105 dB(A)

Vibration measurement $a_{hv, eq}$ to ISO 22867

Blowing mode	1,7m/s ²
Suction mode handle left	1,8m/s ²
Suction mode handle right	1,5m/s ²

24. Maintenance and Repairs

Users of this machine may only carry out the maintenance and service work described in the operating instructions. All other repairs must be carried out by an authorized servicing dealer.

Only use genuine replacement parts and accessories that are explicitly approved for the EZ300 by ZEITLER AG. These parts are specifically designed to match your machine model and meet your performance requirements and also to avoid the risk of accidents and damage to the machine. If you have any question in this respect, consult an authorized servicing dealer.

ZEITLER AG recommends that all maintenance and repair work be carried out by an authorized dealer. Dealers regularly attend training courses and are supplied with the necessary technical information.

25. Guarantee / Legal Details

1. We guarantee to rectify free-of-charge any defects or shortages affecting the device within the guarantee period that are due to material or manufacturing faults
2. The guarantee period is 24 months and starts with the purchase by the first ultimate buyer. The date on the original sales voucher shall apply here.
3. The following are excluded from the guarantee:
 - Parts that are subject to wear and tear due to normal use or other natural causes, as well as defects in the device, which are also due to wear and tear due to normal use or other natural causes
 - Defects affecting the device which are due to the non-observance of the Operating Instructions, improper use, anomalous environmental conditions, incorrect operating conditions, overloading or a lack of proper maintenance and care
 - Device defects caused by the use of accessories and/or spare parts that do not originate from the manufacturer of the Pull Line Blower.
 - Devices that have been subjected to modifications or additions.
 - Minor deviations from reference properties which are immaterial as regards the value and suitability for use of the device.
4. The rectification of faults we recognise as being under guarantee will take place in such a way that we will repair the faulty device without charge or replace it with a device in perfect condition (if necessary, a subsequent model), according to our choice. Any devices or parts that have been replaced automatically become our property.
5. Any claims under guarantee must be made within the guarantee period. The device affected is to be delivered to the seller or manufacturer in its original carrying case (if despatched by some means of transport, the closures must be secured additionally). The device must always be accompanied by the original sales voucher, as well as details of the date and purchase and product. Devices that have been opened up are no longer covered by the guarantee. All transport costs and risks will be to the account of the buyer.
6. Any claims other than the right to rectification of device faults nominated in these guarantee conditions are not covered by this guarantee.
7. Any services carried out under guarantee do not extend or renew the guarantee period for the device.

Swiss law shall apply.

The legal domicile is the location of the manufacturer's head office.

26. EC Declaration of Conformity

ZEITLER AG
Sonnhalde 7
CH-6206 Neuenkirch
SWITZERLAND

Certify that the new machine described below

Category	Tool to blow in or suck out special pull line in conduits
Make:	ZEITLER AG
Model:	EZ300
Displacement:	27,2 cm ³

is conform to the specification of Directives 98/37/EC, 89/336/EEC and 2000/14/EC.

The product has been developed and manufactured in compliance with the following standards:
EN ISO 12100, EN 61000-6-1, EN 55012

The measured and guaranteed sound power levels were determined to Directive 2000/14/EC, Annex V, using the ISO 11094 standard.

Measured sound power level – 103dB(A)

Guaranteed sound power level – 105dB(A)

Serial number is given on the type plate of the tool.