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### *Originalfassung*

**DE ORIGINALBETRIEBSANLEITUNG**

**ERDLOCHBOHRER**

### *Übersetzung / Translation*

**EN USER MANUAL**

**EARTH AUGER**

**FR MANUEL D'UTILISATION**

**TARIÈRE**

**CZ NÁVOD K POUŽITÍ**

**ZEMNÍ VRTÁK**

**SL NAVODILO ZA UPORABO**

**ZEMELJSKI VRTALNIK**

**HR UPUTE ZA UPORABU**

**BUŠILICA / SVRDLO ZA ZEMLJU**

**HU HASZNÁLATI UTASÍTÁS**

**FÖLDFÚRÓ**



# **ZI-ELB70**

## **EAN: 9120039232201**



FIG. C



FIG. D



FIG. E



FIG. F



FIG. G



FIG. H

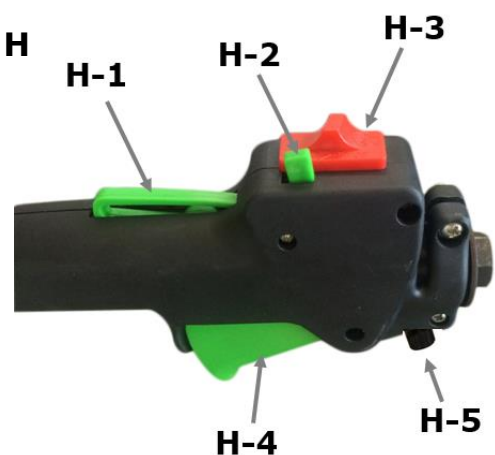
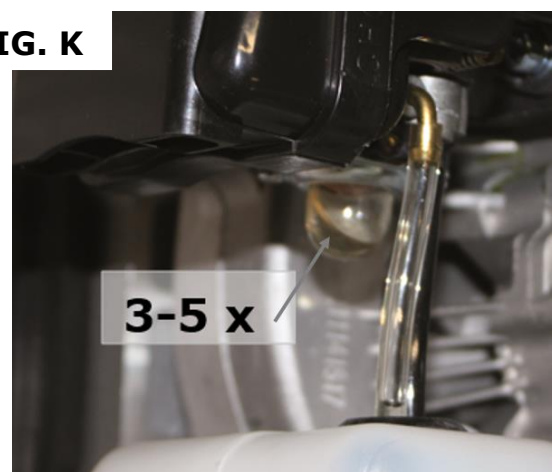


FIG. J



FIG. K





## 2 SICHERHEITSZEICHEN / SAFETY SIGNS

**DE** SICHERHEITSZEICHEN  
BEDEUTUNG DER SYMBOLE  
**ES** SEÑALES DE SEGURIDAD  
DEFINICIÓN DE SÍMBOLOS  
**CZ** VÝZNAM BEZPEČNOSTNÍCH  
SYMBOLŮ

**EN** SAFETY SIGNS  
DEFINITION OF SYMBOLS  
**FR** SIGNALISATION DE SÉCURITÉ  
DÉFINITION DES SYMBOLES  
**SL** VARNOSTNE OZNAKE  
POMEN SIMBOLOV

**HR** SIGURNOSNI ZNAKOVI  
ZNAČENJE SIMBOLA  
**HU** Biztonsági szimbólumok  
értelmezése és használat



**DE** **CE-KONFORM** - Dieses Produkt entspricht den EG-Richtlinien.  
**EN** **EC-CONFORM** - This product complies with the EC-directives.  
**ES** **Conforme CE!** - Este producto cumple con las Directivas CE.  
**FR** **Conforme CE!** - Ce produit est conforme aux Directives CE.  
**CZ** **CE-SHODNÉ:** tento výrobek odpovídá směrnicím EU  
**SL** **CE-KONFORM** - Ta proizvod ustreza zahtevam glede na smernice ES.  
**HR** **CE-CERTIFIKAT** - Ovaj proizvod sukladan je europskim smjernicama i normama.  
**HU** **CE-KONFORM** - Ez a termék megfelel az EG irányelveknek



**DE** **ANLEITUNG LESEN!** Lesen Sie die Betriebs- und Wartungsanleitung Ihrer Maschine aufmerksam durch und machen Sie sich mit den Bedienelementen der Maschine gut vertraut um die Maschine ordnungsgemäß zu bedienen und so Schäden an Mensch und Maschine vorzubeugen.  
**EN** **READ THE MANUAL!** Read the user and maintenance manual carefully and get familiar with the controls in order to use the machine correctly and to avoid injuries and machine defects.  
**ES** **¡LEA EL MANUAL!** Lea el manual de uso y mantenimiento cuidadosamente y familiarícese con los controles con el fin de utilizar la máquina correctamente, para evitar lesiones y defectos de la máquina.  
**FR** **LIRE LE MANUEL!** Lire le manuel d'utilisation et de maintenance avec soin permet de se familiariser avec les fonctions en vue d'utiliser correctement la machine afin d'éviter les blessures et le dysfonctionnement de l'appareil.  
**CZ** **PRČTĚTE SI NÁVOD!** Pozorně si pročtěte návod k použití a údržbě vašeho stroje a seznámte se dobře s ovládacími prvky stroje, abyste ho mohli správně obsluhovat a tím předejít zraněním a škodám.  
**SL** **PREBERITE NAVODILO!** Pozorno preberite navodilo za uporabo in vzdrževanje stroja in se dobro seznajte z upravljalnimi elementi stroja, da boste lahko stroj pravilno upravljali in tako preprečili poškodbe ljudi in poškodbe na stroju.  
**HR** **PROČITAJTE UPUTE!** Pažljivo pročitajte upute za rad i održavanje uređaja te se dobro upoznajte s njegovim upravljačkim dijelovima kako biste uređaj mogli namjenski koristiti te time izbjeci tjelesne ozljede i oštećenja na uređaju.  
**HU** **Használati utasítás elolvasása!** Olvassa el figyelmesen a kezelési utasítást, és ismerkedjen meg a gép kezelőelemeivel annak érdekében, hogy megfelelően működhessen és karbantarthassa azt és így megakadályozza a gép károsodását.



**DE** **Vergiftungsgefahr!** Nicht in Innenräumen und in der Nähe von offenen Fenstern und Belüftungen verwenden  
**EN** **Danger of Intoxication!** Only use outdoors and far from open windows and vents!  
**ES** Peligro de Intoxicación! No usar en interiores o cerca de ventanas abiertas o ventilaciones!  
**FR** **Danger d'intoxication!** Utiliser uniquement en extérieur long de fenêtre ouverte et hors vents!  
**CZ** **Nevarnost zastrupitve!** Ne delajte s strojem v zaprtem prostoru in tudi ne v bližini odprtih oken ter prezračevalnih odprtih!  
**SL** **Opasnost od trovanja!** Ne koristite u unutrašnjosti niti u blizini otvorenih prozora i ventilacija  
**HR** **Mérgezés!** Ne használjon beltérben vagy nem szellőztethető helyen.



**DE** **WARNING!** Beachten Sie die Sicherheitssymbole! Die Nichtbeachtung der Vorschriften und Hinweise zum Einsatz der Maschine kann zu schweren Personenschäden und tödliche Gefahren mit sich bringen.  
**EN** **ATTENTION!** Ignoring the safety signs and warnings applied on the machine as well as ignoring the security and operating instructions can cause serious injuries and even lead to death.  
**ES** **¡ATENCIÓN!** Ignorar las señales de seguridad y advertencias aplicadas en la máquina, así como ignorar las instrucciones de seguridad y el manual de instrucciones, pueden causar lesiones graves e incluso conducir a la muerte.  
**FR** **ATTENTION!** Ignorer la signalisation de sécurité, les avertissements présents sur la machine ainsi que les consignes de sécurité et les instructions peut causer des blessures graves et même entraîner la mort.  
**CZ** **POZOR!** Dbejte na bezpečnostní pokyny. Nedodržení předpisů a pokynů k použití stroje může vést k těžkým úrazům, končících až smrtí.  
**SL** **OPOZORILO!** Upoštevajte varnostne oznake! Neupoštevanje predpisov in napotkov za uporabo stroja lahko privede do težkih telesnih poškodb in celo do nesreč s smrtnim izidom.



**HR POZOR!** Poštujte sigurnosne simbole! Nepoštivanje propisa i napomena za korištenje uređaja može prouzročiti teške ozljede i situacije opasne po život.

**HU FIGYELEM!** Vegye figyelembe a biztonsági szimbólumokat! A gép használatára vonatkozó utasítások és figyelmeztetések be nem tartása súlyos személyi sérülést és halált okozhat



**DE** Schutzausrüstung (Handschuhe, Augen- oder Gesichtsschutz, Gehörschutz, Schutzhelm, Arbeitskleidung, Sicherheitsschuhe)



**EN** Protective clothing! ( ear protectors, safety gloves, safety shoes, safety goggles or face protection and safety helmet, working wear)

**ES** ¡Ropa de protección! (ropa ajustada, guantes de protección, casco, gafas o casco, protección auditiva, zapatos de seguridad)



**FR** Vêtements de protection (vêtements moulants, gants de protection, casque, lunettes ou un casque de protection, protection auditive, chaussures de sécurité)



**CZ** Ochranné vybavení! (pracovní oděv, rukavice podl, přilbu, ochranné brýle nebo kryt obličeje, ochranu sluchu, bezpečnostní)



**SL** Zaščitna oprema (tesno oprijeta delovna obleka, zaščitna čelada, zaščitna očala ali zaščita za obraz, zaščita za sluh).

**HR** Zaštitna oprema (Rukavice, zaštitne naočale ili zaštita za lice, zaštitne slušalice, zaštitna kaciga, radno odijelo, zaštitne cipele)!

**HU** Védőfelszerelés használata kötelező



**DE** Verbrennungsgefahr!

**EN** Burn hazard

**ES** ¡Peligro de quemaduras!

**FR** Risque de brulure !



**CZ** Nebezpečí popálení!

**SL** Nevarnost opeklin!

**HR** Opasnost od opekлина!

**HU** Égési sérülések



**DE** Leicht entflammbar! Offenes Feuer verboten!

**EN** Highly flammable! Naked flames prohibited!

**ES** ¡Altamente inflamable!

**FR** Extrêmement inflammable !



**CZ** Lehce zápalné!

**SL** Lahko vnetljivo!

**HR** Lako zapaljivo! Zabranjeno izlagati otvorenom plamenu!

**HU** Nyílt láng használata tilos! Könnyen gyúlékony!



**DE** Feste Teile können wegkatapultiert werden!

**EN** Solid Objects can be thrown away!

**ES** ¡Atención por objetos que pueden ser lanzados!

**FR** Attention aux objets qui peuvent être jetés!

**CZ** Volné předměty mohou být vrženy do prostoru!

**SL** Trdni deli se lahko odbijejo od stroja!

**HR** Kruti dijelovi lako se mogu odbiti od uređaja!

**HU** Figyelmeztetés! Ügyeljen kő elrepülhet!



**DE** Nicht in rotierende Teile greifen!

**EN** Don't touch rotating parts!

**ES** ¡Cuidado con las piezas giratorias, no tocar!

**FR** Se méfier des pièces en rotation, ne pas toucher!

**CZ** Nedotýkejte se rotujících částí!

**SL** Ne posegajte v rotirajoče dele stroja!

**HR** Ne dirajte rotirajuće dijelove uređaja!

**HU**

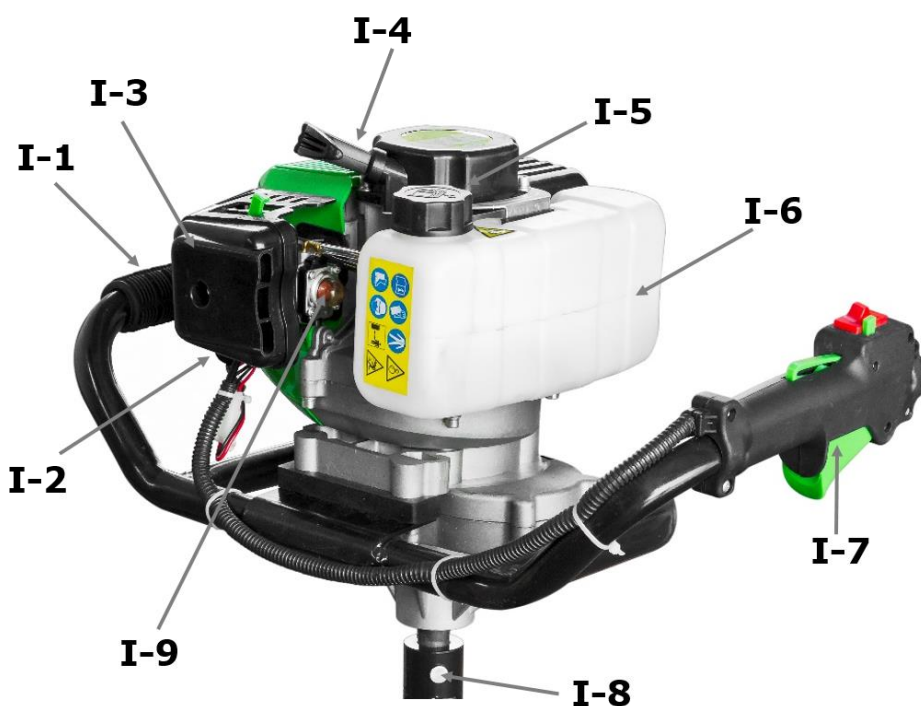


**DE** Sicherheitsabstand einhalten!  
**EN** Keep safe distance!  
**ES** ¡Mantener la distancia de seguridad!  
**FR** Garder une distance de sécurité!  
**CZ** Dodržujte bezpečnostní odstup!  
**SL** Vzdržujte varnostno razdaljo!  
**HR** Održavajte sigurnosni razmak!  
**HU** Tartsa a biztonsági távolságot!

## 3 TECHNIK / TECHNIC

### 3.1 Komponenten / components /

**FIG. I**



**ZI-ELB 70 (FIG I)**

|            |                                                                                                                                                                         |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>I-1</b> | Haltegriff / Bar holder / Soporte de fijación de barra / Support de fixation de la barre / Držák fixační tyče / Ročaj / Ručka za nošenje / Fogantyú                     |
| <b>I-2</b> | Zündkerzenstecker / Spark plug cap / Tapa de la bujía / Bouchon de bougie / Zapalovací kabel / Vtič za svečko / Utikač za svjećicu / Gyújtógyertya                      |
| <b>I-3</b> | Luftfilter / Air filter / Filtro de aire / Filtre à air / Vzduchový filtr / Zračni filter / Filtar za zrak / Levegőszűrő                                                |
| <b>I-4</b> | Seilzugstarter / Recoil starter / Bobina de arranque / Démarreur à rappel / Startovací šňůra / Zaganjalnik na poteg vrvi / Potezni starter / Berántószerkezet           |
| <b>I-5</b> | Tankdeckel / Fuel tank cap / Tapón del depósito / Bouchon du réservoir / Víčko palivové nádrže / Pokrov rezervoarja / Poklopac spremnika za gorivo / Tanksapka          |
| <b>I-6</b> | Treibstoff-Tank / Fuel tank / Depósito de combustible / Réservoir de carburant / Palivová nádrž / Rezervoar za gorivo / Spremnik za gorivo / Üzemanyagtartály           |
| <b>I-7</b> | Bediengriff / Operating handle / Manija de control / Poignée de contrôle / Ročaj za upravljanje / Ručka za upravljanje / Gázkar és ki-be kapcsológom, valamint fogantyú |
| <b>I-8</b> | Bohreraufnahme / Drill adapter / Adaptador de taladros / Adaptateur de la mèche / Upínací otvor vrtáku / Vpenjalo za sveder / Prihvat za svrdlo / Fúrószár csatlakozás  |
| <b>I-9</b> | Primärpumpe / Fuel pump / Bomba de combustible / Pompe à essence / Primární pumpa / Primarna črpalka / Pumpa za gorivo / Szivató buborék                                |

### 3.2 Lieferumfang / delivery content

**FIG. A**

**FIG. B**


#### **ZI-ELB70 (FIG. A)**

|          |                                                                                                                                                                 |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1</b> | Bohrraggregat / Aggregate / Conjunto principal / Ensemble principal / Agregát vrtáku / Vrtalni agregat / Agregat / Alapgép                                      |
| <b>2</b> | Bohrer Ø 100mm / drill Ø 100mm / Taladro Ø 100mm / Mèche Ø 100mm / Vrták Ø 100mm / Sveder Ø 100mm / Svrđlo Ø 100mm / Fúrószár Ø 100mm                           |
| <b>3</b> | Bohrer Ø 150mm / drill Ø 150mm / Taladro Ø 150mm / Mèche Ø 150mm / Vrták Ø 150mm / Sveder Ø 150mm / Svrđlo Ø 150mm / Fúrószár Ø 150mm                           |
| <b>4</b> | Bohrer Ø 200mm / drill Ø 200mm / Taladro Ø 200mm / Mèche Ø 200mm / Vrták Ø 200mm / Sveder Ø 200mm / Svrđlo Ø 200mm / Fúrószár Ø 200mm                           |
| <b>5</b> | Bedienwerkzeug / tools / Herramientas / Outils / Nářadí pro údržbu / Priloženo orodje / Kutija s alatom / Szerszámok                                            |
| <b>7</b> | Betriebsanleitung / operation manual / Manual de instrucciones / Mode d'emploi / Návod k použití / navodilo za uporabo / Upute za uporabu / Használati utasítás |
| <b>8</b> | Handkurbel / manual crank / manivela manual / manivelle / ruční kliky / ročno crank / Ručna okretaljka / Kézi tekerő                                            |

#### **ZI-ELB70 (FIG: B) optional**

|          |                                                                                                                                                                                                                        |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>6</b> | Bohrerverlängerung / drill extension bar / Barra de extensión de taladro / Barre d'extension de mèche / Prodloužení vrtáku / Podaljšek svedra / Produžetak za svrdlo / Hosszabító (Nem alaptartozék, külön rendelhető) |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**3.3 Technische Daten / technical details**

| <b>ZI-ELB70</b>                                                                                                                                                                                                                                                                                                                           |                                                                                                                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Motor-Typ / engine type / motor / Moteur / Typ motoru / Typ motora / Tip motorja / Tip motora / Motor-Típus                                                                                                                                                                                                                               | 2-Takt-Motor / 2-stroke engine / 2-tiempos / 2-taktní motor / 2-taktný motor / 2-taktni motor<br>2-ütemű-Motor<br><b>JR1E44F-5 (EUV)</b> |
| Hubraum / displacement / Capacidad / Capacité / Objem motoru / Objem motora / Delovna prostornina / Kapacitet /Térfogat                                                                                                                                                                                                                   | 51,7 cm <sup>3</sup>                                                                                                                     |
| Motorleistung / Engine power / Potencia del motor / Puissance moteur / Výkon motoru / Výkon motora / Zmogljivost motorja / Snaga motora / Motorteljesítmény                                                                                                                                                                               | 1,5kW (@7500min-1)                                                                                                                       |
| Leerlauf / idle speed / Velocidad en ralentí / Vitesse de ralenti / Otáčky naprázdno / Otáčky naprázdno / Prosti tek / Broj okretaja u praznom hodu /Üresjárat fordulat                                                                                                                                                                   | 3000 min <sup>-1</sup>                                                                                                                   |
| Bohrerdrehzahl / drill speed / la velocidad de perforación / vitesse de forage / rychlost vrtačka / rýchlost vrtáku / svedra hitrost / Brzina vrtnje svrdla /Fúrószár fordulat                                                                                                                                                            | ~280 min <sup>-1</sup>                                                                                                                   |
| Starter / starter / Arranque / Démarrage / Startér / Štarter / Zaganjač / Starter /Indítás                                                                                                                                                                                                                                                | Seilzug / recoil / Câble / Câble Startovací šňůra / Štartovacia šnúra / na poteg vrvi /Berántó                                           |
| Zündung / ignition / ignición / Allumage / zapalování / zapaľovanie / Vžig / Paljenje /Gyújtás                                                                                                                                                                                                                                            | Elektronisch / electronic                                                                                                                |
| Tank-Kapazität / fuel tank capacity / Capacidad del depósito / Capacité du réservoir / Objem palivové nádrže / Objem palivové nádrže / Prostornina rezervoarja / Kapacitet spremnika za gorivo /Tank-ürméret                                                                                                                              | 1,2 l                                                                                                                                    |
| Mischverhältnis Benzin:Öl / Mixing ratio gasoline:oil / Relación de mezcla gasolina:aceite / Ratio de mélange essence: huile / Směs benzínu a oleje / Zmes benzínu a oleja / Mešalno razmerje bencin:olje / Omjer miješanja benzin:ulje / Üzemanyag keverék                                                                               | 40:1                                                                                                                                     |
| Bohrerlänge (Bohrerverlängerung) / drill lenght (extension bar length) / Longitud taladro (Barra de extensión) / Longueur de la mèche (Barre d'extension) / Délka vrtáku (Prodloužení vrtáku) / Dĺžka vrtáku (Predĺženie vrtáku) / Dolžina svedra (Podaljšek svedra) / Duljina svrdla (Produžetak za svrdlo) /Fúrásmélység-hosszabbítóval | 700 mm (450 mm)                                                                                                                          |
| Bohrerdurchmesser / drill diameter / Diámetros taladros / Diamètre des mèches / Poids perceuses / Průměr vrtáku / Priemer vrtáku / Premier svedra / Promjer svrdla                                                                                                                                                                        | 200 / 150 / 100mm                                                                                                                        |
| Bohrergewicht / drill weights / Peso taladros / Hmotnost vrtáku / Hmotnosť vrtáku / Teža svedra / Težina svrdla / Fúrószársúly                                                                                                                                                                                                            | 3 / 2,3 / 1,8 kg                                                                                                                         |
| Schall-Druckpegel / sound pressure level / Nivel presión sonora / Niveau de pression acoustique / Úroveň hluku / Uroveň hluku / Nivo zvočnega tlaka / Razina zvučnoga tlaka / Hangnyomásszint <b>L<sub>PA</sub></b>                                                                                                                       | 97 dB(A) k: 3dB(A)                                                                                                                       |
| Schall-Leistungspegel / sound power level / Nivel potencia acústica / Niveau de puissance acoustique / Akustický výkon / Akustický výkon / Nivo zvočne moči / Razina buke / Hangerőszint <b>L<sub>WA</sub></b>                                                                                                                            | 114 dB(A) k: 3dB(A)                                                                                                                      |
| Vibration / vibration / vibración / vibration / kmitání / kmitanie / Vibracija / Vibracija / Vibráció                                                                                                                                                                                                                                     | 18m/s <sup>2</sup> k:1,5m/s <sup>2</sup>                                                                                                 |
| Gewicht (ohne Bohrer) / weight (without drill) / Peso (sin taladro) / Poids (sans mèche) / Hmotnost (bez vrtáku) / Hmotnosť (bez vrtáku) / Teža (brez svedra) / Težina (bez svrdla) / Súly- fúrószár nélkül                                                                                                                               | 8,5 kg                                                                                                                                   |



## 9 PREFACE (EN)

### Dear Customer!

This manual contains important information and advice for the correct and safe use and maintenance of the earth auger ZI-ELB70.

Following the usual commercial name of the device (see cover) is substituted in this manual with the name "machine".

The manual is part of the machine and may not be stored separately. Read it profoundly before first use of the machine and keep it for later reference. When the machine is handed to other persons always put the manual to the machine.

### Please follow the security instructions!

Please read the entire manual, to prevent misunderstandings, machine damage or even injuries!



Due to continuous development of our products illustrations, pictures might differ slightly.

If you however find errors in this manual, please inform us.

Technical changes excepted!

### Copyright law

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### Customer Support

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## 10 SAFETY

### 10.1 Intended Use

The machine must only be used for its intended purpose! Any other use is deemed to be a case of misuse.

To use the machine properly you must also observe and follow all safety regulations, the assembly instructions, operating and maintenance instructions lay down in this manual.

All people who use and service the machine have to be acquainted with this manual and must be informed about the machine's potential hazards.

It is also imperative to observe the accident prevention regulations in force in your area.

The same applies for the general rules of occupational health and safety.

The machine is used for:

Drilling cylindrical holes in soil (loam, topsoil, sand, or the like). This can be holes for planting small trees, for installing fencing posts or the like.

**Any manipulation of the machine or its parts is a misuse, in this case ZIPPER-MASCHINEN and its sales partners cannot be made liable for ANY direct or indirect damage.**

Even when the machine is used as prescribed it is still impossible to eliminate certain residual risk factors.



### WARNING

- **Use only drills allowable for this machine!**
- **Never use a damaged drill!**
- **Use the machine never with defective or without mounted guard**
- **The earth auger may only be used in its vertical position (drill downwards)!**
- **This machine is only designed for outdoor use (garden) and must be held with both hands during operation!**
- **If possible position yourself downwind to avoid inhaling the exhaust gases!**

### Ambient conditions

The machine may be operated:

humidity

max. 70%

temperature

+5°C to +40°C (+41°F to +104°F)

The machine shall not be operated in areas exposed to increased fire or explosion hazard.

### Prohibited use

- The operation of the machine outside the stated technical limits described in this manual is forbidden.
- the machine may not be used:
  - in ice, stone or rock
  - in areas where electric cables, gas, water or telephone lines are buried
  - in a pit or sewer (missing ventilation!)
- The use of the machine not according with the required dimensions is forbidden.
- The use of the machine not being suitable for the use of the machine and not being certified is forbidden.
- Any manipulation of the machine and parts is forbidden.
- The use of the machine for any purposes other than described in this user-manual is forbidden.
- The unattended operation on the machine during the working process is forbidden!
- It is not allowed to leave the immediate work area during the work is being performed.



## 13.1 Security instructions

**Missing or non-readable security stickers have to be replaced immediately!**

**To avoid malfunction, machine defects and injuries, read the following security instructions!**

The locally applicable laws and regulations may specify the minimum age of the operator and limit the use of this machine!

- Use the machine only in good enough light to allow a safe operation can be guaranteed.
- In tiredness, decreased concentration or under the influence of alcohol or drugs, the work on the machine is prohibited!
- Caution in slippery conditions - slip hazard - risk of injury. When working, robust and non-slip footwear. Slides / stumble / traps are a major cause of serious injury
- When operating the max. allowable slope of the working environment is 15 °!
- Keep attention by working on uneven ground or ground with slope!
- Working on icy or slippery ground is forbidden!
- No other person, children or pets shall remain within 15m!
- The machine must be operated only by trained persons (knowledge and understanding of this manual), which have no limitations of motor skills compared with conventional workers.
- Unauthorized persons, especially children and not trained personnel must be kept away from the running machine!
- Do not wear loose clothing, long hair openly or loose jewellery like necklaces etc. when operating the machine
- They might be caught by rotating parts and cause serious injuries.
- Use personal safety equipment: ear protectors, safety gloves in EN 388, class 3111, safety shoes S1, safety goggles or face protection and safety helmet when working with the machine
- WARNING: Gasoline is highly flammable!
- Smoking and open flames are prohibited during refuelling. Do not refuel when the engine and carburettor are still very hot.
- Refuel only outdoors or in a well ventilated area.
- Avoid contact with skin and clothes (fire hazard).
- Check after refuelling tank cap and check for leaks.
- Danger of burns! During the operation flow of hot exhaust gases and engine parts such as the muffler and engine become hot.
- Never place a hot machine in dry grass or other easily flammable materials.
- After the operation, the machine must cool down. Otherwise there is an imminent risk of burns
- Ensure yourself that there are neither water or gas pipes nor electric lines installed underground in the working area.
- Ensure yourself that there are no loose objects lying around in the working area.
- Eliminate high grass, bushes etc. from the immediate working area. They might be winded up by the rotating drill and block it.
- Take especially care, if the ground contains many stones or roots. An unattended stalling of the drill might easily cause an accident
- Never leave the machine running unattended!
- Switch off the machine before maintenance or adjustment.
- Never lift or carry the machine with the engine running
- Store in a dry, out of reach of children place and empty Tank completely



### NOTICE

#### Emergency procedure

A first aid kit in accordance with ISO 3864 should always be readily available for a possible accident. Initiate the evacuation in accordance with the necessary first aid measures. When requesting support, provide the following details:

- |                             |                     |
|-----------------------------|---------------------|
| 1. Place of accident        | 2. Type of accident |
| 3. Number of injured people | 4. Injury type(s)   |

## 13.2 Remaining risk factors

Even if the machine is used as required it is still impossible to eliminate certain residual risk factors totally. The following hazards may arise in connection with the machine's construction and design:



- **Risk of noise:**

Working for a long time can damage your hearing if you do not use a very good hearing protection.

- **Risk to the hands or fingers:**

Access while it is working in the mowing apparatus. After the operation, the machine must cool down. Otherwise, there is an acute risk of scalding!

- **Vibration:**

The declared vibration emission value has been for a standardized test is measured and can be used to compare one tool with another electric are.

The declared vibration emission value may also be used for a preliminary assessment of exposure.

Warning:

Emission level of vibration can be different from the specified value during the actual use of the electric tool, depending on the manner in which the power tool is used. When you feel uncomfortable or notice discoloration of skin on your hands during the use of the machine, stop working immediately. Observe sufficient break times to rest. Failure to have sufficient break times may result in a hand-arm vibration syndrome.

The extent of exposure depending on the type of work or machine use should be estimated and appropriate breaks taken. In this way, the extent of exposure can be considerably reduced over the entire work time. Minimize the risk caused by vibrations. Maintain this machine according to the instructions in the manual.

- **Risk of thrown out objects:**

When working with earth augers there is a danger that stones and other objects are thrown out with injury potential by drilling. The risk of injury can be reduced by wearing appropriate safety equipment but not entirely eliminated. Make sure that other people or animals are not staying within the danger area.

- **Risks of working area:**

Ensure yourself that there are neither water or gas pipes nor electric lines installed underground in the working area.

- **Risk of burns:**

Touching the mufflers, exhaust and other machine components which can be hot after prolonged continuous operation or when the engine is hot cause severe burns.

- **Risk of fire and explosion:**

Gasoline is highly flammable and explosive under certain conditions.

NEVER refuel fuel or engine oil while the machine is in operation or is hot.

When refueling and at places where fuel is stored not smoke or allow open flames or sparks.

Do not overfill the fuel tank and avoid the spillage of gasoline during refueling. If fuel is spilled make sure the area is completely dry and cleaned before starting the engine.

Make sure that the filler cap is tightly closed again after refueling safely.

- **Chemical risks:**

Never use or refuel a gasoline or diesel engine in a closed area without adequate ventilation.

Carbon monoxide emissions from the internal drive units of the engine can cause in confined spaces through inhalation health effects and death. Therefore use the machine only in well-ventilated rooms or outdoors in operation.

Liquid fuels can cause serious damage on the skin and the environment.

- **Risk of kickback**

Through sudden blocking of the drill, it may, until the slip clutch begins to come to a sudden twist of the body.

These risk factors can be minimized through obeying all security and operation instructions, proper machine maintenance, proficient and appropriate operation by persons with technical knowledge and experience.

In spite of all safety is and remains her healthy common sense and their corresponding technical qualification / training for use of the machines most important safety factor!



## 14 OPERATION

Unpack the machine and check the machine for any transport damage and for completeness of delivery.

### 14.1 Operation instructions

| NOTICE                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"><li>• The machine is delivered pre-assembled, only the drill must be fitted before operation.</li><li>• If the rotating parts (drills) are mounted incorrectly, it can lead to serious accidents! Check before starting work the correct mounting of the drill.</li><li>• Mount the drill only with the supplied shear pin and split pin.</li><li>• Drill deeper holes within 2-3 working steps!</li><li>• <b>Is the ground with many roots and / or stones keep extreme caution: Be especially careful that you do not meet an unexpected blocking of the drill by jamming in a root or a large stone unprepared.</b></li><li>• Before use check the earth auger to dust and dirt particles, particularly the engine cooling air inlet, carburetor and air filter. Clean if necessary.</li><li>• <b>The first 10 hours of operation the machine shall not be operated but only at medium engine speed.</b> Do not operate the engine at max. speed right from the start, as the engine itself as well as the gearing components need a running-in time. The engine itself reaches its max. capacity after the first 10 hours of operation. Non-compliance with this instruction reduces your engine lifespan substantially. To reduce the max. possible engine speed, turn the adjustment knob (H-5), so that the throttle lever (H-4) cannot be pushed entirely in</li></ul> |

### 14.2 Operation

#### 14.2.1 Mounting drill

- To mount the drill (Fig. A) turn the aggregate upside down
- Put the drill to the drill adapter that you can plug the shear pin through the holes.
- Insert the shear pin (Fig. J;b) through the drill and drill adapter and secure the shear pin with the split pin.

By using the drill extension bar (Fig. B) mount it like a drill and mount the drill like described above.

#### 14.2.2 Refueling

**The machine is run by a gasoline (benzene-free engine fuel)-oil mixture. You need for the 2-Stroke engine a fuel mixture of 40:1. Ensure yourself that no particles get into the fuel tank when refueling. Use a filter.**

ZIPPER MASCHINEN strongly recommends the usage of HQ premixed fuels especially recommended for 2-stroke motors. Many of them keep their consistency even after long periods of storage.

If you prefer to mix your own fuel please use HQ Synthetic Oil for 2-stroke engines.

Synthetic oil reduces accumulation of soot on the spark plug, cylinder, engine cock and exhaust pipe. This increases the degree of lubrication and prolongs the engines lifespan.

| HINWEIS                                                                             |                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>Shake fuel tank prior to every usage! During storage oil descends slowly in the fuel tank. If you start the engine under this condition, it has barely any lubrication which would lead to severe engine damage. <b>No warranty</b></p> |



### 14.2.3 Cold starting

1. Put the machine with the drill to the ground. The drill must be moved freely.
2. Put the choke into position ON as shown in (Fig. C).
3. Put the switch (H-3) into position *START*.
4. Push the fuel pump (I-9) 3-5 times (Fig. K).
5. Press the security lever (H-1) with the heel of your hand.
6. Operate the throttle lever (H-4).
7. Push the locking lever (H-2) in order to block the throttle lever to increased idling.
8. Now grab the bar holder (I-1) and with the other hand the starter handle (I-4) and pull it out briskly! Repeat if necessary
9. The engine starts with increased idle speed!
10. After engine has started push the throttle lever (H-4) and the locking lever (H-2) will be unlocked. Now the engine runs in normal idle speed.
11. If the engine runs clear put the choke into position OFF as shown in (Fig. D).
12. Let the engine run in idle speed for 2-3 Minutes!

### 14.2.4 Warm starting

1. Put the machine with the drill to the ground. The drill must be moved freely.
2. Put the switch (H-3) into position *START*.
3. Now grab the bar holder (I-1) and with the other hand the starter handle (I-4) and pull it out briskly! Repeat if necessary.

If the machine does not start after several attempts repeat the procedure as for cold starting.

### 14.2.5 Stopping the engine

The engine can stopped any time (especially in danger) by releasing the throttle lever and put the switch (H-3) into STOP position.

We recommend to first lift the drill out of the hole than release the throttle and then to put the switch (H-3) in position STOP.

Wait until the drill stands still. Now you can put down the machine.



## WARNING

**Stop the engine immediately in case of imminent danger!**

## 14.3 Operating

- Remove loose objects lying around in the immediate working area. They might be winded up by the rotating drill and block it.
- Take a safe position and hold the auger firmly on both handles.
- Put the tip of the auger on the ground and start the process carefully and increase gradually the speed.
- Drill holes without exerting too much body weight on the auger. Allow the auger to advance by its own weight.
- If the auger drill is jammed in the soil and cannot be pulled out, stop the engine remove the aggregate, mount the manual crank and turn out the drill counterclockwise.



## 15 MAINTENANCE



### ATTENTION

**No cleaning, upkeep, checks or maintenance when machine is running**  
Shut off the machine and let it cool down before start servicing!

The machine does not require intense maintenance. However, to ensure a long lifespan, we strongly recommend following the upkeep and maintenance plan.

Repairs must be carried out by specialists! Use original ZIPPER parts only!

Wear safety gloves if you mount or demount drills!

Damaged drills may never be straightened or welded!

### NOTICE

Only a properly maintained equipment may be a satisfactory tool. Care and maintenance deficiencies can cause unpredictable accidents and injuries.

Repairs should be performed only by authorized service centers.

**Improper operation may damage the equipment or endanger your safety.**

#### 15.1 Maintenance plan

| Controls for the maintenance of the machine |                                   |
|---------------------------------------------|-----------------------------------|
| Loose or lost screws, nuts, bolts           | Regularly prior to each operation |
| Damage of any part of the machine           | Regularly prior to each operation |
| Damage of drills                            | Regularly prior to each operation |
| Fuel tank of tightness                      | Regularly prior to each operation |
| Machine cleaning                            | Regularly after operation         |
| Cleaning spark plug                         | Every 25 working hours            |
| Cleaning air filter                         | Every 20-30 working hours         |

#### 15.2 Cleaning

Clean the machine and the working attachment from soil, dust, grass, chips, and small twigs, etc.

Clean the machine housing with a wet cloth and a mild cleaning solution.

Put on all coatless flats a thin coat of oil.

### NOTICE

The usage of solvents, aggressive chemicals or scouring agents damages the machine housing.

##### 15.2.1 Clean the air filter

A clogged air filter reduces the engines power output drastically and causes engine disfunction. Furthermore it reduces the engines lifespan!

Loosen with a hex-key the screw fixing the air filter cover (*Fig. E*).

Take off the cover and remove the filter (*Fig. F*).

Clean the air filter (*Fig G*) with water. Wring it out strongly. Let it dry. Drip some drops of oil onto the filter. Mount the filter back and mount on the cover again.

##### 15.2.2 Clean the spark plug

Take off the spark plug cap (*I-2*). Loosen and remove the spark plug. Clean it with a small brush from soot debris.

The contact distance shall account approx. 0, 5mm or ~ credit card thickness.

##### 15.2.3 Carburettor

### NOTE

Carburettor adjustments should be carried out only by trained specialist personnel!



### 15.2.4 Storage

If you store the machine longer than 30 days:

- Allow the engine to cool down before storing the machine
- Drain fuel from fuel tank and carburettor and store the fuel in a suitable container.
- Store the unused machine in a dry place out of the reach of children.

### 15.2.5 Disposal

Do not dispose the machine, machine components fuel and oil in residual waste. Contact your local authorities for information regarding the available disposal options. When you buy at your local dealer for a replacement unit, the latter is obliged to exchange your old.



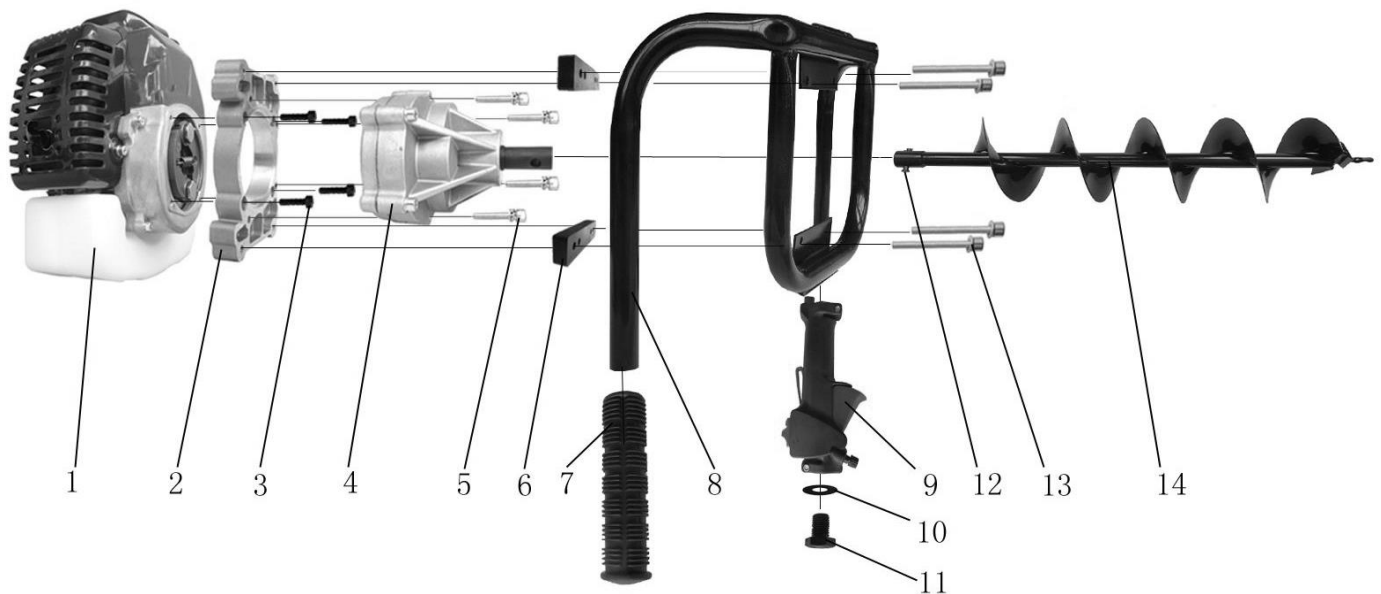
## 16 TROUBLE SHOOTING

| Trouble                                            | Possible cause                        | Solution                                                                                                          |
|----------------------------------------------------|---------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Engine does not start</b>                       | • Incorrect starting sequence         | • Observe the correct starting sequence                                                                           |
|                                                    | • Dirty air filter                    | • Clean/replace air filter                                                                                        |
|                                                    | • No fuel supply                      | • Refuel                                                                                                          |
|                                                    | • Fault in the fuel line              | • Check the fuel line for kinks or damages                                                                        |
|                                                    | • Engine flooded.                     | • Screw off, clean and dry the spark plug. Then pull the cranking rope several times and reinstall the spark plug |
|                                                    | • Spark plug connector not placed on. | • Place on the spark plug connector                                                                               |
|                                                    | • No ignition spark                   | • Clean/replace spark plug<br>• Check ignition cable                                                              |
| <b>Engine starts and is stalled immediately</b>    | • Incorrect idle adjustment           | • Contact customer service                                                                                        |
| <b>Machine works with interruptions</b>            | • Carburetor incorrectly adjusted     | • Contact customer service                                                                                        |
|                                                    | • Spark plug fouled                   | • Clean/replace spark plug<br>• Check spark plug connector                                                        |
| <b>Smoke</b>                                       | • Incorrect fuel mixture              | • Use correct fuel mixture                                                                                        |
|                                                    | • Carburetor incorrectly adjusted     | • Contact customer service                                                                                        |
| <b>Machine does not work with full performance</b> | • Machine overloaded                  | • Too much pressure<br>• soil too tough                                                                           |
|                                                    | • Dirty air filter                    | • Clean/replace air filter                                                                                        |
|                                                    | • Carburetor incorrectly adjusted     | • Contact customer service                                                                                        |
| <b>Drill rotates at idling</b>                     | • Idle speed too high                 | • Adjust a lower idle speed                                                                                       |
| <b>Drill rotates but has no power</b>              | • Choke is ON                         | • Set Choke to OFF                                                                                                |
| <b>Drill jumps</b>                                 | • Drill damaged                       | • Replace a new drill                                                                                             |
|                                                    | • Unsuitable, stony soil              | • impossible                                                                                                      |



## NOTICE

**Should you in necessary repairs not able to properly to perform or you have not the prescribed training for it always attract a workshop to fix the problem.**



|           |                                       |   |
|-----------|---------------------------------------|---|
| <b>1</b>  | engine                                | 1 |
| <b>2</b>  | connecting plate                      | 1 |
| <b>3</b>  | inner hexagon screw M6x20             | 4 |
| <b>4</b>  | gear case assy                        | 1 |
| <b>5</b>  | inner hexagon combination screw M6x45 | 4 |
| <b>6</b>  | shock absorbing rubber                | 2 |
| <b>7</b>  | handle cover                          | 1 |
| <b>8</b>  | earth driller frame                   | 1 |
| <b>9</b>  | switch & gas lever & cable            | 1 |
| <b>10</b> | switch assy                           | 1 |
| <b>11</b> | hex screw M12*16                      | 1 |
| <b>12</b> | straight pin & R shape pin            | 1 |
| <b>13</b> | inner hexagon combination screw M6x30 | 4 |
| <b>14</b> | driller bit                           | 1 |