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*Originalfassung*

**DE BETRIEBSANLEITUNG**

*Übersetzung / Translation*

**EN USER MANUAL**

**CZ NÁVOD K POUŽITÍ**

**SK NÁVOD NA POUŽITIE**

**ZWANGSMISCHER**

**FORCED ACTION MIXER**

**MÍCHAČKA S NUCENÝM OBĚHEM**

**ZMIEŠAČ S NÚTENÝM OBEHOM**



**ZI-ZWM100**

EAN: 9120039234434

**ZI-ZWM120**

EAN: 9120039234441



**ACHTUNG: Öl kontrollieren!**



**ATTENTION: Check Oil!**

**YOUR  
JOB.  
OUR  
TOOLS.**



36	POSKYTOVÁNÍ ZÁRUKY (CZ)	58
37	ZÁRUKA (SK)	59
38	PRODUKTBEOBSACHTUNG   PRODUCT MONITORING	60

## 2 SICHERHEITSZEICHEN / SAFETY SIGNS

### BEZPEČNOSTNÍ ZNAČKY / BEZPEČNOSTNÉ ZNAČKY

<b>DE</b>	SICHERHEITSZEICHEN BEDEUTUNG DER SYMBOLE	<b>EN</b>	SAFETY SIGNS DEFINITION OF SYMBOLS
<b>CZ</b>	BEZPEČNOSTNÍ ZNAČKY VÝZNAM SYMBOLŮ	<b>SK</b>	BEZPEČNOSTNÁ ZNAČKA VÝZNAM SYMBOLOV



**DE CE-KONFORM:** Dieses Produkt entspricht den EU-Richtlinien.

**EN EC-CONFORM:** This product complies with the EC-directives.

**CZ CE SHODA:** Tento výrobek vyhovuje směrnicím EU.

**SK V ZHODE S CE:** Tento produkt vyhovuje smerniciam EÚ.



**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 bedienen zu können 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.

**CZ PŘEČTĚTE SI NÁVOD!** Přečtěte si pozorně návod k použití a údržbě stroje a dobře se seznámte s jeho ovládacími prvky, abyste mohli stroj správně ovládat, čímž zabráníte škodám na zdraví osob i poškození stroje.

**SK PREČÍTAJTE SI NÁVOD!** Pozorne si prečítajte návod na použitie a údržbu vášho stroja a oboznámte sa s ovládacími prvkami stroja, aby ste dokázali riadne ovládať, ako aj obsluhovať stroj a vyvarovali sa tak ublíženiu na zdraví a škodám na stroji.



**DE Persönliche Schutzausrüstung!**

**EN Personal protective equipment!**

**CZ Osobní ochranné prostředky!**

**SK Osobné ochranné pracovné prostriedky!**



**DE Maschine vor Wartung und Pausen ausschalten und Netzstecker ziehen!**



**EN Stop and pull out the power plug before any break and engine maintenance!**

**CZ Před údržbou a přestávkami vypněte stroj a vytáhněte síťovou zástrčku!**

**SK Vypnite pred údržbou a prestávkami stroj a vytiahnite sieťovú zástrčku!**



**DE Gefährliche elektrische Spannung!**

**EN High voltage!**

**CZ Nebezpečné elektrické napětí!**

**SK Nebezpečné elektrické napätie!**



**DE Warnung vor Handverletzungen!**

**EN Warning against hand injuries!**

**CZ Upozornění na poranění rukou!**

**SK Varovanie pred poraneniami rúk!**



- DE** Motor vor Nässe schützen!  
**EN** Protect motor from moisture!  
**CZ** Chraňte motor před vlhkem!  
**SK** Chráňte motor pred mokrom!

- DE** Warnschilder und/oder Aufkleber an der Maschine, die unleserlich sind oder die entfernt wurden, sind umgehend zu erneuern!  
**EN** Missing or non-readable security stickers have to be replaced immediately!  
**CZ** Výstražné štítky a/nebo nálepky na stroji, které jsou nečitelné či byly odstraněny, je nutné ihned obnovit!  
**SK** Varovné štítky a/alebo nálepky na stroji, ktoré sú nečitateľné alebo boli odstránené, musíte okamžite nahradiť novými!

### 3 TECHNIK / TECHNIC / TECHNICKÁ ČÁST / TECHNIKA

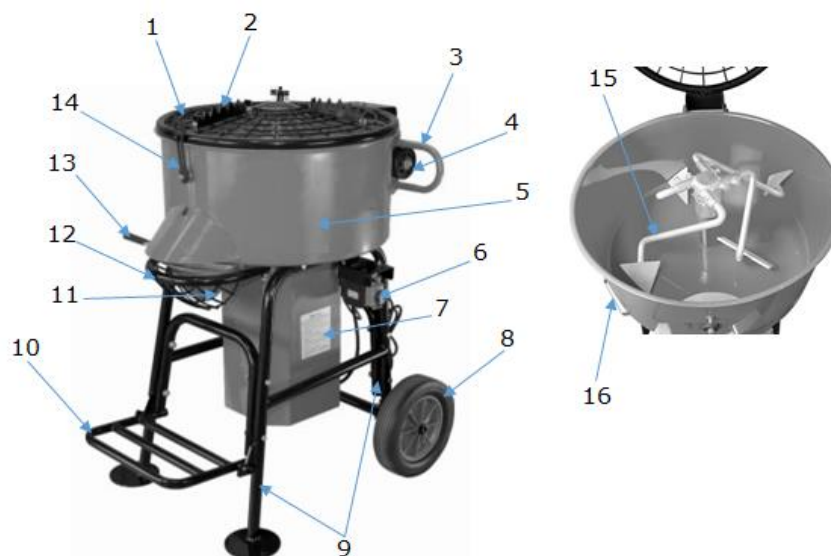
#### 3.1 Lieferumfang / delivery content / Rozsah dodávky / Rozsah dodávky



	<b>ZI-ZWM100</b>		<b>ZI-ZWM120</b>
<b>1</b>	Maschine fertig zusammengebaut/ machine completely assembled / Kompletně sestavený stroj / Hotovo zmontovaný stroj	<b>1</b>	Maschine fertig zusammengebaut / machine completely assembled / Kompletně sestavený stroj / Hotovo zmontovaný stroj
<b>2</b>	Bedienungsanleitung / manual / Návod k obsluze / Návod na obsluhu	<b>2</b>	Bedienungsanleitung / manual / Návod k obsluze / Návod na obsluhu



### 3.2 Komponenten / components / Komponenty / Komponenty



ZI-ZWM100 / ZI-ZWM120			
<b>1</b>	Schutzgitter / protective grille / Ochranná mřížka / Ochranné mreže	<b>9</b>	Teleskopbeine / telescopic legs / Teleskopické nohy / Teleskopické nohy
<b>2</b>	Sackaufreißer / bag opener / Otvírač pytlů / Otvárač vriec	<b>10</b>	Kipprahmen für Eimer / bucket stand / Výklopný rám pro kbelíky / Výklopný rám pre vedro
<b>3</b>	Transportgriff / transport handle / Transportní rukojeť / Prepravná rukoväť	<b>11</b>	Materialauslass / material outlet / Výpust materiálu / Výpust materiálu
<b>4</b>	Transportrad / loading wheel / Transportní kolečko / Prepravné koleso	<b>12</b>	Sicherheitsgitter / safety grid / Bezpečnostní mřížka / Bezpečnostné mreže
<b>5</b>	Trommel / mixing drum / Buben / Bubon	<b>13</b>	Schieber / slide / Šoupátko / Posúvač
<b>6</b>	EIN-AUS-Schalter / ON-OFF-switch / SPÍNAČ/VYPÍNAČ / ZAPÍNAČ-VYPÍNAČ	<b>14</b>	Gummiverschluss / rubber lock / Pryžový uzávěr / Gumový uzáver
<b>7</b>	Motorabdeckung / motor cover / Kryt motoru / Kryt motora	<b>15</b>	Mischarme / mixing arms / Míchací ramena / Miešacie ramená
<b>8</b>	Rad / wheel / Kolo / Koleso	<b>16</b>	Bügel / bracket / Závěs / Oblúk

### 3.3 Technische Daten / technical details / Technické údaje / Technické údaje

	ZI-ZWM100	ZI-ZWM120
Spannung / voltage / Napětí / Napätie	230 V / 50 Hz	
Motorleistung / motor power / Výkon motoru / Výkon motora	1,1 kW	
Trommel Durchmesser Ø / drum diameter Ø / Průměr bubnu Ø / Priemer bubna Ø	630 mm	725 mm
Trommelvolumen / drum capacity / Objem bubnu / Objem bubna	100 l	120 l



Trommel Höhe / drum height / Výška bubnu / Výška bubna	300 mm	305 mm
Motordrehzahl / rpm (motor) / Otáčky motoru / Otáčky motora	1400 min-1	1400 min-1
Umdrehungen Mischarme / speed mixing arms / Otáčky míchacích ramen / Otáčky miešacích ramien	30	31
Getriebeöl / gear oil / Převodový olej / Prevodový olej	SAE80W-90 SHC 630	SAE80W-90 SHC 630
Getriebeölmenge / gear oil capacity / Množství převodového oleje / Množstvo prevodového oleja	1,6 l	1,6 l
Höhe Materialauslass (Schubkarre) / height material outlet (wheelbarrow) / Výška výpusti materiálu (ruční kolečko) / Výška výpustu materiálu (fúrik)	510-655 mm	530-675 mm
Höhe Materialauslass (Eimer) / height material outlet (bucket) / Výška výpusti materiálu (kbelík) / Výška výpustu materiálu (vedro)	355 mm	328 mm
Max. Körnung / max. grain size / Max. zrnitost / Max. zrnitosť	5 mm	5 mm
Schutzart / protection mode / Druh krytí / Stupeň ochrany	IP44	IP44
Nettogewicht / net weight / Hmotnosť netto / Netto hmotnosť	114 kg	123 kg
Bruttogewicht / gross weight / Hmotnosť brutto / Brutto hmotnosť	134 kg	146 kg
Maschinendimension (LxBxH) / machine dimensions (LxWxH) / Rozměry stroje (dxšxv) / Rozmer stroja (D x Š x V)	820x650x1050 mm	880x770x1070mm
Verpackungsmaße (LxBXH) / packaging dimensions (LxWxH) / Rozměry obalu (dxšxv) / Rozmery balenia (D x Š x V)	950 x 654 x 1154 mm	997 x 774 x 1154 mm



## 11 PREFACE (EN)

### Dear Customer!

This operating manual contains information and important notes for safe commissioning and handling of the CONCRETE MIXER ZI-ZWM100 and ZI-ZWM120, hereinafter referred to as "machine".



The manual is an integral part of the machine and must not be removed. Keep it for later use in a suitable place, easily accessible to users (operators), protected from dust and moisture, and enclose it with the machine if it is passed on to third parties!

### **Please pay special attention to the chapter Safety!**

Due to the constant further development of our products, illustrations and contents may differ slightly. If you notice any errors, please inform us.

Technical changes reserved!

**Check the goods immediately after receipt and make a note of any complaints on the consignment note when the delivery person takes them over!**

**Transport damage must be reported separately to us within 24 hours.**

**ZIPPER MASCHINEN GmbH cannot accept any liability for transport damage not noted.**

### Copyright

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Court of jurisdiction is the Linz Regional Court or the court responsible for 4707 Schlüsslberg.

### Customer Service Address

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## 12 SAFETY

This section contains information and important notes on safe start-up and handling of the machine.

For your own safety, read these operating instructions carefully before putting the machine into operation. This will enable you to handle the machine safely and prevent misunderstandings as well as personal injury and damage to property. In addition, observe the symbols and pictograms used on the machine as well as the safety and hazard information!



### 12.1 Intended use of the machine

The machinery is intended exclusively for the following operations: *for the production of concrete, mortar and plaster.*

**ZIPPER-MASCHINEN assumes no responsibility or warranty for any other use or use beyond this and for any resulting damage to property or injury.**

#### 12.1.1 Technical restrictions

The machine is intended for use under the following ambient conditions:

Rel. Humidity:	max. 70 %
Temperature (Operation)	+5° C bis +40° C
Temperature (Storage, Transport)	-20° C bis +50° C

#### 12.1.2 Verbotene Anwendungen / Gefährliche Fehlanwendungen

- Operating the machine without adequate physical and mental aptitude
- Operating the machine without knowledge of the operating instructions
- Changes in the design of the machine
- Operating the machine outside the technical limits specified in this manual
- Remove the safety markings attached to the machine
- Modify, circumvent or disable the safety devices of the machine
- Mixing explosive, flammable and harmful substances

The improper use or disregard of the versions and instructions described in this manual will result in the voiding of all warranty and compensation claims against Zipper Maschinen GmbH.

### 12.2 User requirements

The machine is designed for operation by one person. The physical and mental aptitude as well as knowledge and understanding of the operating instructions are prerequisites for operating the machine. Persons who, because of their physical, sensory or mental abilities or their inexperience or ignorance, are unable to operate the machinery safely must not use it without supervision or instruction from a responsible person.

**Please note that local laws and regulations may determine the minimum age of the operator and restrict the use of this machine!**

Put on your personal protective equipment before working on the machine.

**Work on electrical components or equipment may only be carried out by a qualified electrician or under the instruction and supervision of a qualified electrician.**

### 12.3 Safety devices

The machine is equipped with the following safety devices:



- The machine is equipped with a safety switch, which switches off the motor as soon as the protective grille is opened.





## 12.4 General safety instructions

To avoid malfunctions, damage and health hazards when working with the machine, the following points must be observed in addition to the general rules for safe working:

- Before start-up, check the machine for completeness and function. Only use the machine if the guards and other non-parting guards required for machining have been fitted, are in good operating condition and have been properly maintained.
- Choose a level, vibration-free, non-slip surface for the installation location.
- Ensure sufficient space around the machine!
- Ensure sufficient lighting conditions at the workplace to avoid stroboscopic effects.
- Ensure a clean working environment.
- Only use perfect tools that are free of cracks and other defects (e.g. deformations).
- Remove tool keys and other adjustment tools before switching on the machine.
- Keep the area around the machine free of obstacles (e.g. dust, chips, cut parts, etc.).
- Check the strength of the machine connections before each use.
- Never leave the running machine unattended.
- The machine may only be operated, serviced or repaired by persons who are familiar with it and who have been informed of the hazards arising from this work.
- Ensure that unauthorised persons maintain a safe distance from the machine and keep children away from the machine.
- When working on the machine, never wear loose jewellery, loose clothing, ties or long, open hair.
- Hide long hair under hair protection.
- Wear close-fitting protective clothing and suitable protective equipment (eye protection, dust mask, ear protection and gloves).
- Always work with care and the necessary caution and never use excessive force.
- Do not use the machine in areas where vapours from paints, solvents or flammable liquids represent a potential danger (danger of fire or explosion!).
- Do not overload the machine!
- Shut down the machine and disconnect it from the power supply before carrying out any adjustment, conversion, cleaning, maintenance or repair work. Before starting any work on the machine, wait until all tools or machine parts have come to a complete standstill and secure the machine against unintentional restarting.
- Do not work on the machine if it is tired, not concentrated or under the influence of medication, alcohol or drugs!

## 12.5 Electrical safety

- Make sure that the machine is earthed.
- Only use suitable extension cables.
- Only use extension cables that are suitable for outdoor use.
- Never use longer cables than necessary.
- Never leave the cable rolled up on the reel when starting the machine.
- Ensure that cables lying on the ground are well marked.
- A damaged or tangled cable increases the risk of electric shock. Handle the cable with care. Never use the cable to carry, pull or disconnect the power tool. Keep the cable away from heat, oil, sharp edges or moving parts.
- Water entry into machine increases the risk of electric shock. Do not expose machine to rain or moisture.
- The machine may only be used in humid environments if the power source is protected by a residual current circuit breaker.
- Do not use the power tool if it cannot be turned on and off with the ON-OFF-switch.

## 12.6 Special safety instructions for forced action mixer

- Danger due to hazardous dust emissions from cement or additives. Therefore, always wear a dust mask when filling the machine!
- In case of any contact of the skin with concrete, it must be washed off immediately.
- Risk of injury due to tipping of the machine. Therefore, ensure to operate the machine on a solid, level ground only!
- Do not start the machine with a loaded drum.





- Do not turn off the machine while the drum is loaded.
- Only fill and empty the drum while the motor is running
- Never try to move the machine while it is loaded and / or in operation.
- Do not insert tools or your hands into the drum (risk of injury due to rotating mixing arms).

## 12.7 Hazard Warnings

Despite their intended use, certain residual risks remain. Due to the structure and construction of the machine, hazardous situations may occur when handling the machines:

### DANGER



A safety instruction designed in this way indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

### WARNING



Such a safety instruction indicates a potentially hazardous situation which, if not avoided, may result in serious injury or even death.

### CAUTION



A safety instruction designed in this way indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

### NOTICE



A safety notice designed in this way indicates a potentially hazardous situation which, if not avoided, may result in property damage.

Irrespective of all safety regulations, their sound common sense and corresponding technical suitability/training are and remain the most important safety factor in the error-free operation of the machine. **Safe working depends first and foremost on you!**

## 13 TRANSPORT

### Transport

For transport over shorter distances (at the construction site) tilt the machine until it stands on the two larger wheels. The machine can be moved using the transport handles.

### Transport of the machine with a vehicle



- Fix the protective grille with the rubber lock (1).
- By tilting the machine, it can be easily loaded or unloaded onto vehicle cargo beds using the small transport wheels (2).
- On the cargo bed, carefully store the machine on its four wheels.
- Secure the machine with tension belts against unintentional slipping.



## 14 ASSEMBLY

### 14.1 Checking delivery content

Always note visible transport damages on the delivery note and check the machine immediately after unpacking for transport damage or missing or damaged parts. Report any damage to the machine or missing parts immediately to your retailer or freight forwarder.

### 14.2 The workplace

Place the machine on a solid, flat surface. The space required by the machine and the required load-bearing capacity of the subfloor result from the technical data (dimensions, weight) of your machine. When designing the working area around the machine, observe the local safety regulations. When dimensioning the required space, take into account that the operation of the machine must be possible without restrictions at all times. The selected installation location must ensure a suitable connection to the electrical mains.

### 14.3 Electrical connection

#### WARNING



**Dangerous electrical voltage!** The machine may only be connected to the mains supply and the associated checks carried out by a qualified electrician or under the instruction and supervision of a qualified electrician!

1. Check that the neutral connection and protective earthing are functioning properly
2. Check that the supply voltage and frequency correspond to the specifications of the machine

#### NOTICE



##### Deviation of the supply voltage and frequency

A deviation from the value of the supply voltage of  $\pm 5\%$  is permissible.  
A short-circuit fuse must be provided in the power supply system of the machine!

3. Find the required cross-section of the supply cable (it is recommended to use a cable type H07RN (WDE0282), taking measures to protect against mechanical damage) in a current capacity data sheet.
4. Make sure that the power source is protected by a residual current circuit breaker.
5. Connect the unit only to a properly grounded outlet.
6. When using an extension cable, make sure that it is dimensioned appropriately for the connected load of the machine (the connected load can be found in the technical data). You can find the correlation between cable cross-section and cable length in specialist literature or consult an electrician.

## 15 OPERATION

Only operate the machine when it is in perfect condition. Inspect the machine visually every time it is to be used. Check in particular the safety equipment, electrical controls, electric cables and screwed connection for damage and if tightened properly. Replace any damaged parts before operating the machine.

### 15.1 Operation instructions

- Secure the machine against tipping or moving before putting the machine into operation. Avoid damp, wet or slippery surfaces.
- Ensure that the mixing arms are seated correctly. They must not touch the drum wall.
- Only fill or empty the drum while the motor is running.

#### Wet mixture capacity of the machine:

Drum volume is the quantity of water that the drum can hold. Water weighs 1 kg per litre.



"Wet mixture" means a combination of sand, cement, gravel (or premix) with water. The "wet mixture" weighs approximately 2.5 kg per litre.

This results in a "wet mixture" capacity of 35% to 45% of the drum volume in kg. For example, a drum with a volume of 100L has a maximum capacity of about 45kg (45% of 100kg) of "wet mixture" (in this case, it might be 2x20kg bags of premixed concrete and 5 litres of water).

## 15.2 Start/Stop

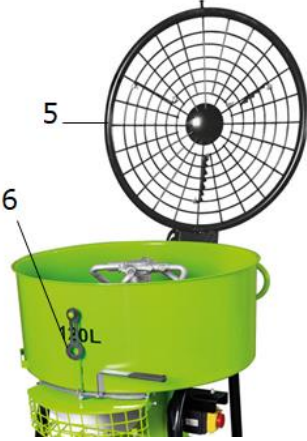




Green ON-button (I): start the machine  
Red OFF-button (0): stop the machine

## 15.3 Operation

	<p><b>1. Height adjustment of the telescopic legs</b></p> <p>Before starting the machine, the telescopic legs must be adjusted to the desired height (4 levels), so that it is possible to empty the drum into buckets or wheelbarrows without any obstruction.</p> <ul style="list-style-type: none"> <li>To do this, position the machine on its four wheels.</li> <li>Disassemble the four locking bolts (1).</li> <li>Set the desired height (2) of the telescopic legs.</li> <li>Reinstall the locking bolts (1) and set the machine up again.</li> </ul>
	<p><b>2. Bucket stand</b></p> <p>To empty the mixed material from the drum into buckets, use the bucket stand (3).</p> <ul style="list-style-type: none"> <li>Flip the bucket stand (3) into horizontal position.</li> </ul>
	<p><b>3. Safety grid</b></p> <p><b>NOTICE:</b> The safety grid (4) must already be installed on the material outlet before the machine is put into operation.</p>



	<p><b>4. Closing the drum</b></p> <ul style="list-style-type: none"><li>• Close the protective grille (5) and secure it against unintentional opening with the rubber lock (6).</li><li>• Only then the machine can be put into operation.</li><li>• Turn on the Machine. The mixing arms must rotate before you load the drum.</li></ul> <p><b>NOTICE:</b> The machine is equipped with a safety switch that stops the motor as soon as the protective grille is opened.</p>
	<p><b>5. Loading the drum with material in bags</b></p> <ul style="list-style-type: none"><li>• Place the material bag on the protective grille (7) and pry/tear open the bag with the bag opener (8).</li></ul> <p><b>CAUTION:</b> There is a risk of injury from sharp edges on the bag opener. Therefore, wear safety gloves.</p> <ul style="list-style-type: none"><li>• Add the required quantity of sand, cement and gravel (or premix) to the drum successively.</li><li>• Add the required amount of water to the drum successively.</li></ul> <p><b>NOTICE:</b> If the machine is blocked for example by a stone, switch it off before removing the obstacle. Secure the machine against unintentional restart.</p>
	<p><b>6. Emptying the drum</b></p> <p>If the material is properly mixed and has reached the desired consistency, the drum can be emptied.</p> <ul style="list-style-type: none"><li>• Emptying takes place via the material outlet. For this, push the slider (9) at the bottom of the drum to the left. Do not switch off the machine, the mixing arms <b>MUST</b> rotate during this process!</li></ul> <p><b>NOTICE:</b> Make sure that the material does not set in the drum.</p> <p><b>CAUTION:</b> As the machine is running during emptying and the mixing arms are rotating, never hold hands or objects into the drum (risk of injury).</p>

## 16 CLEANING, MAINTENANCE, STORAGE , DISPOSAL

### WARNING



**Danger due to electrical voltage!** Handling the machine with the power supply up may result in serious injury or death. Always disconnect the machine from the power supply before servicing or maintenance work and secure it against unintentional restart!



## 16.1 Cleaning

### NOTE



Wrong cleaning agents can attack the varnish of the machine. Do not use solvents, nitro thinners, or other cleaning agents that could damage the machine's paint. Observe the information and instructions of the cleaning agent manufacturer!

Regular cleaning is a prerequisite for the safe operation of the machine and its long service life. Therefore, clean the device after each use of chips and dirt particles.

- Always clean the machine immediately after use!
- Do not direct the water jet onto the electrical components or the motor cover when cleaning with a high-pressure cleaner or water hose!
- Wipe off any dirt on the motor cover with a damp cloth.
- Clean the drum thoroughly with water immediately after each use. Remove cement and mortar crusts. Smallest quantities of the remaining material would harden in the drum. This is where larger quantities of material will accumulate after each use.

**TIP: Fill the drum with water and some crushed stone or gravel (25mm) and then turn on the machine. Empty drum after a few minutes and wash inside and outside with water.**

- Do not use stones to clean the drum.
- Do not tap the motor housing and drum with a shovel or other hard object, otherwise they may be damaged.
- Impregnate bare surfaces of the machine against corrosion (e.g. with rust protection agent WD40).

## 16.2 Maintenance

The machine is low-maintenance and only a few parts have to be serviced. Nevertheless, any faults or defects which may affect the safety of the user must be rectified immediately!

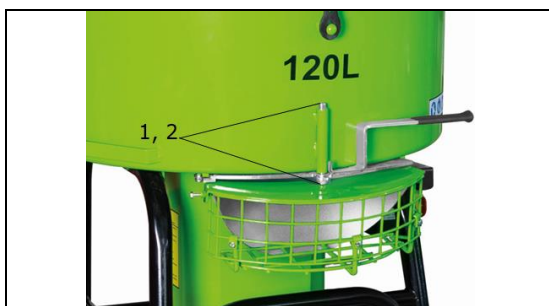
- Before each start-up, make sure that the safety devices are in perfect condition and function properly.
- Check all connections for tightness at least once a week.
- Regularly check that the warning and safety labels on the machine are in perfect and legible condition.
- Use only proper and suitable tools.
- Only use original spare parts recommended by the manufacturer.

### Inspection and maintenance plan

The type and degree of machine wear depend to a large extent on the operating conditions. The following intervals apply when the machine is used within the specified limits:

Interval	Component	Activity
Before usage	Slide	Check, adjust if necessary
	Mixing arms	Check, adjust or replace if necessary
After every use	Drum	Clean
1 x week	Connections	Check for tight fit and retighten if necessary
After 1000 working hours	Gearbox oil	Change

### 16.2.1 Slide



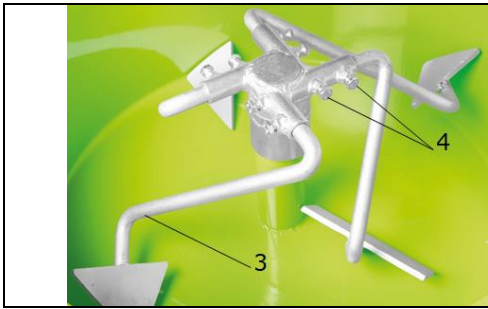
Check to ensure that the slide is working properly and is not jammed.

- The slide can be adjusted with the screw (1) and nut (2).





### 16.2.2 Mixing arms



Make sure that the mixing arms are correctly seated. There must be a distance between the drum wall and the mixing arms.

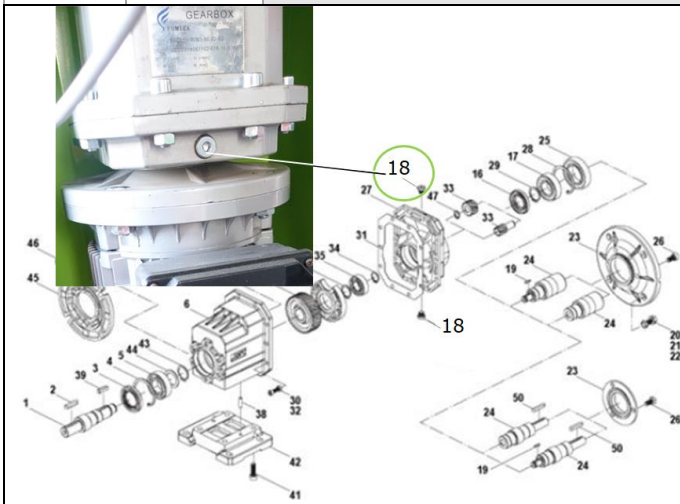
- Each of the four mixing arms (3) can be adjusted or changed by loosening the screws (4) fixing the respective arm.

### 16.2.3 Changing the gear oil

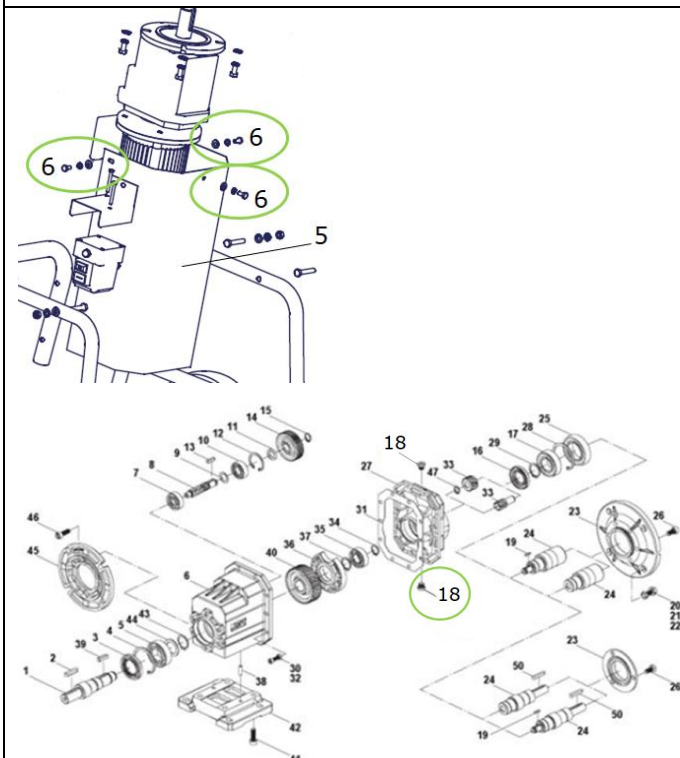
#### NOTICE



**Waste oils are toxic and must not be released into the environment!** Contact your local authorities for information on proper disposal.



- Loosen the front screw (18) to drain the old gear oil into a suitable container and dispose of it properly.
- Tilt the machine for this purpose.
- After completely draining the gear oil, retighten the front screw (18).



Refill with fresh gear oil.

- To do this, first remove the motor cover (5) by loosening the three screws (6).
- Open the rear screw (18) and fill in fresh gear oil.
- Refer to the technical data for the gear oil capacity.
- Then retighten the screw (18).
- Reinstall the motor cover (5).



## 16.3 Storage

### NOTICE



Improper storage can damage and destroy important components. Only store packed or unpacked parts under the intended ambient conditions!

When not in use, store the machine in a dry, frost-proof and lockable place to prevent the formation of rust on the one hand and to ensure that unauthorised persons and in particular children have no access to the machine on the other hand.

## 16.4 Disposal



Observe the national waste disposal regulations. Never dispose of the machine, machine components or equipment in residual waste. If necessary, contact your local authorities for information on the disposal options available.

If you buy a new machine or an equivalent device from your specialist dealer, he is obliged in certain countries to dispose of your old machine properly.

## 17 TROUBLESHOOTING

### WARNING



**Danger due to electrical voltage!** Handling the machine with the power supply up can lead to serious injuries or even death. Always disconnect the machine from the power supply before servicing or maintenance work and secure it against unintentional or unauthorised reconnection!

Trouble	Possible cause	Solution
<b>Motor does not start</b>	• Switch defective	• Contact an electrician
	• Power supply is off	• Check power supply
	• Protective grille opened	• Close protective grille
<b>Motor surrt, läuft aber nicht an</b>	• Mixing arms blocked	• Stop the machine, disconnect it from the power supply and clean the drum.
	• Wet mixture capacity exceeded	• Empty drum
<b>Machine starts but getting blocked under small load and switches automatically off</b>	• The extension cable is too long or with a small cross section	• Contact an electrician
	• The socket is too far from the main line and the extension cable has a small cross section	• Contact an electrician

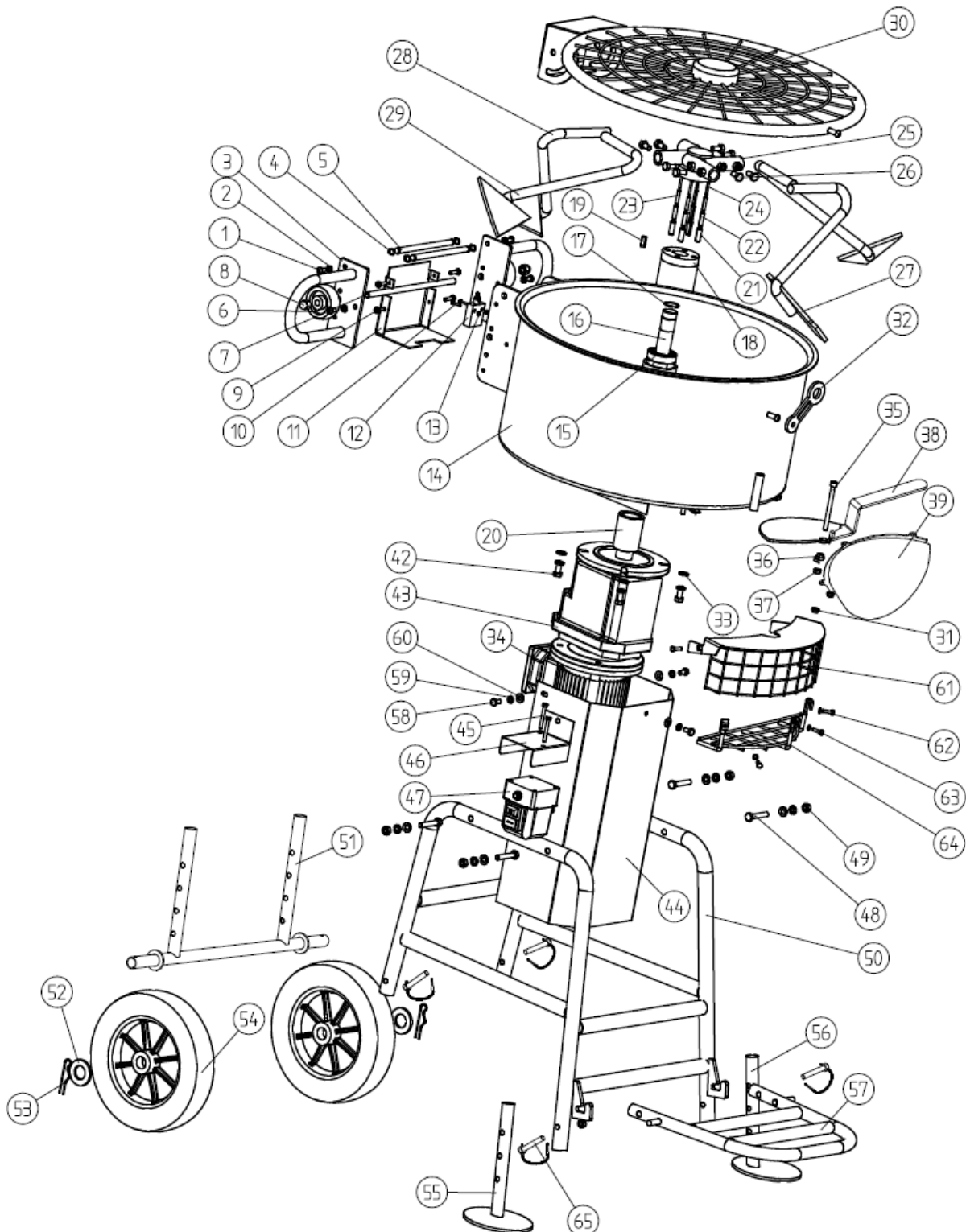




## 32 ERSATZTEILE / SPARE PARTS / NÁHRADNÍ DÍLY / NÁHRADNÉ DIELY

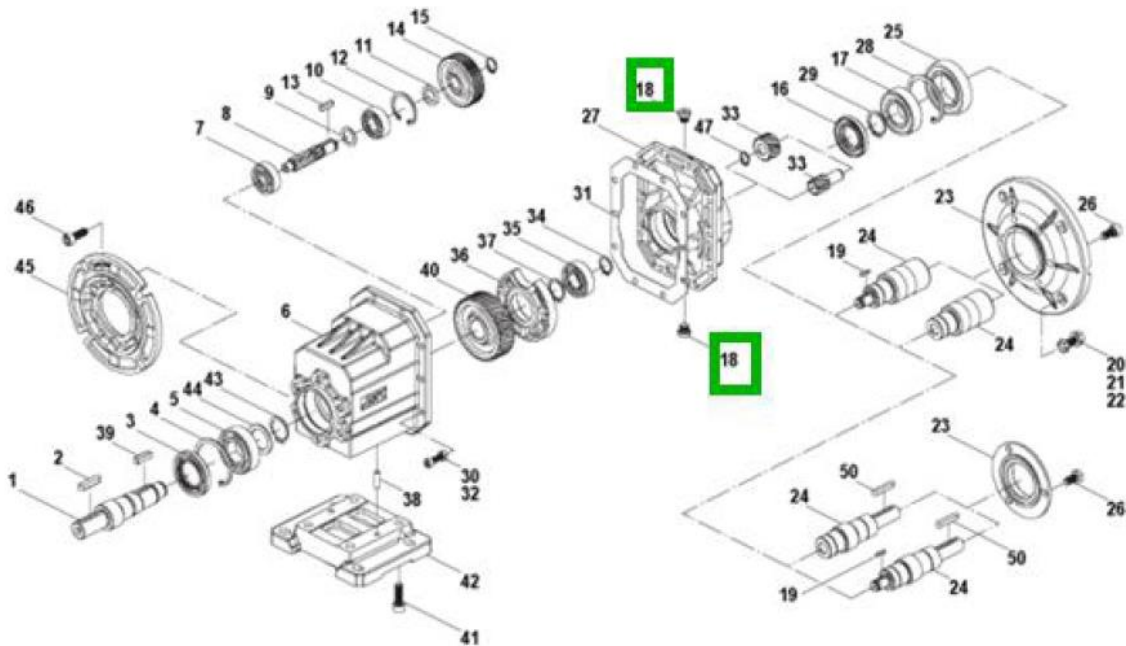
### 32.1 Explosionszeichnung / exploded view / Výkres v rozloženém stavu / Výkres rozloženej zostavy

#### 32.1.1 Maschine / machine





### 32.1.2 Getriebe / Gearbox



### 32.1.3 Spare parts list gear box

No.	Name	No.	Name
1	Output shaft	25	Bearing
2	Key	26	Socket head cap screw
3	Oil seal	27	Input cover
4	Hole circlip	28	Hole circlip
5	Bearing	29	Shaft circlip
6	Gear box	30	Hex nut
7	Bearing	31	Housing gasket
8	Pinion shaft	32	Socket head cap screw
9	Circlips retaining rings	33	Pinion
10	Bearing	34	Shaft circlip
11	Spacer ring	35	Bearing
12	Hole circlip	36	Support seat
13	Key	37	Shaft circlip
14	Gear	38	Cylindrical pin
15	Shaft circlip	39	Key
16	Oil seal	40	Gear
17	Bearing	41	Socket head cap screw
18	Oil plug	42	Foot
19	Key	43	Shaft circlip
20	Hex head bolt	44	Washer
21	Washer	45	Output flange
22	Hex nut	46	Hex socket screws
23	Intput flange	47	Shaft circlip
24	Intput shaft	50	Key