INSTRUCTION MANUAL

W 150

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CONTENTS

1 GENERAL

Follow the remarks in your safety manual during all work!

1.01 Preface / introduction

1.01.01 Introduction

In this section, as the operator you will find important remarks on the operation of the machine and the usage of this instruction manual.

This WIRTGEN machine is a product from the wide range of WIRTGEN road-building machinery.

WIRTGEN's extensive experience as well as the latest production and test methods ensure the maximum reliability of your machine. The instruction manual is a part of the machine!

This instruction manual is only valid in conjunction with the safety manual and the transportation instructions. Please note:

This instruction manual was written for the operators/maintenance personnel.

This instruction manual is intended to make you able to operate the machine safely and to exploit the possibilities it offers.

It also provides you with information on the function of important assemblies and systems.

During this process certain terms are used in this instruction manual. To avoid misunderstandings, you should always use the same terms.

Only qualified, instructed and trained personnel are allowed to work on this machine.

The instruction manual, the safety manual, the transportation instructions and the stipulations and regulations applicable in the place of use must be followed (for example health and safety regulations).

The usage of this instruction manual will make it easier for you:

- To become familiar with the machine
- To avoid faults due to incorrect operation

Following the instruction manual will:

- Help you to avoid hazards
- Increase reliability during usage on the construction site
- Increase the service life of the machine
- Reduce maintenance costs and downtimes

Always keep this instruction manual at hand, for example in the tool box on the machine or in the holder provided for this purpose.

If you should receive further information for the machine from us (for example additional technical information), these instructions are also to be followed and added to the instruction manual.

If you do not understand the instruction manual or individual sections, you should ask us before you start the related activity.

WIRTGEN GmbH is not liable for the safe function of the machine:

- In the case of use other than normal.

You cannot make claims under the warranty in case of:

- Operating errors.
- Inadequate maintenance.
- Use of unsuitable fuels / lubricants.
- Use that is not listed in the instruction manual.

The warranty conditions and liability stated in the general terms and conditions of WIRTGEN GmbH are not modified by these instructions.

We reserve the right to make changes without notice in the context of technical development.

This instruction manual also describes optional equipment which may not be fitted to your machine.

The information and illustrations contained in this instruction manual must not be copied, distributed or used for competitive purposes.

Although all translations have been carried out as meticulously as possible No liability can be accepted for translation errors or any resulting consequences; also not in the case that the translation was made by us or was commissioned by us.

The original German text is binding for all warranty and liability claims.

We wish you every success with your WIRTGEN machine!

1.01.02 Changes / caveats

We make every effort to ensure this instruction manual is correct and up to date. To maintain our technological lead, it may be necessary to make changes to the product and its operation without notice. For faults, failures and resulting damage, we accept no liability.

Please also pay attention to any additional information supplied.

1.01.03 Packaging / storage

To ensure adequate protection during shipping, the products have been carefully packaged. On receipt of the goods, the packaging and the goods should be checked for damage.

In case of damage, the unit is not allowed to be placed in operation. Damaged cables and connectors are also a safety risk and must not be used. In this case, please contact your WIRTGEN supplier.

If the units are not placed in operation immediately after unpacking, they must be protected against moisture and soiling.

1.01.04 Markers and symbols

The markers and symbols in this manual are intended to help you to use the unit quickly and safely.

REMARK

The remark provides information on the most effective and most practical usage of the unit and this manual.

➢ **Actions**

The defined sequence of actions will make it easier for you to use the unit correctly and safely.

✓ **Result**

Here you will find a description of the result of a sequence of actions.

[ ] Position numbers in the individual illustrations are marked in the text with square brackets [].

1.01.05 Safety symbols

The safety symbol is a graphic representation of the source of the hazard. The safety symbols in the entire documentation comply with the harmonised standard EN 61310 part 2: Safety of machinery – labels, markings and operation or requirements for marking and EU Directive 92/58/EEC – Minimum Requirements for the Provision of Safety and / or Health Signs at Work.

Warning about a general hazard

This warning symbol is given before activities during which there may be hazards due to several causes.

Warning about hazardous electrical voltage

This warning symbol is given before activities during which there is a risk of electric shock, possibly with fatal consequences.

Warning about batteries

This warning symbol is given before activities during which there are hazards due to caustic fluids.

Warning about rotating parts

This warning symbol is given before activities during which there is a risk due to rotating machine parts, possibly with mortal consequences.

Warning about rotating milling drum

This warning symbol is given before activities during which there is a risk due to the rotating milling drum, possibly with mortal consequences.

Warning about suspended load

This warning symbol is given before activities during which there is a risk due to falling objects, possibly with mortal consequences.

Warning about risk of crushing

This warning symbol is given before activities during which there is a risk due to crushing, possibly with mortal consequences.

Warning about risk of falling

This warning symbol is given before activities during which there is a risk due to falling, possibly with mortal consequences.

Warning about risk of slipping

This warning symbol is given before activities during which there is a risk due to slipping, possibly with mortal consequences.

Warning about risk of tripping

This warning symbol is given before activities during which there is a risk due to tripping, possibly with mortal consequences.

Warning about explosive substances

This warning symbol is given before activities during which there is a risk due to explosive substances, possibly with fatal consequences.

Warning about toxic substances

This warning symbol is given before activities during which there is a risk due to toxic substances, possibly with mortal consequences.

Warning about caustic substances

This warning symbol is given before activities during which there are hazards due to caustic substances.

Warning about inflammable substances

This warning symbol is given before activities during which there is a risk due to inflammable substances, possibly with mortal consequences.

Warning about hot surface

This warning symbol is given before activities during which there are hazards due to hot surfaces.

1.01.06 Documentation

A copy of this manual must be available to the authorised operators/maintenance personnel at all times.

Before you use the machine, you must read this manual carefully and understand it.

This manual is intended to make you familiar with the basic tasks/activities on the machine.

This manual contains important instructions on the safe and correct use of the machine.

Following it will help:

- To avoid hazards.
- To reduce repair costs and down times.
- To increase the reliability and service life of the machine.

Notwithstanding this manual, the laws, ordinances, directives and standards applicable in the country and place of use must be observed.

The usage of the machine is described in this manual. This instruction manual is only valid in conjunction with the safety instructions manual and the transportation instructions from Wirtgen.

A safety instructions manual and the transportation instructions must be accessible for the operators/maintenance personnel at all times.

1.01.07 Declaration of conformity

The declaration of conformity is part of the documentation provided separately by Wirtgen GmbH and will be provided to you on the delivery of the machine.

The CE marking of the machine forms part of the nameplate.

The pictogram indicates conformity with the applicable EU directives that affect the product – that is the machine – and that specify a CE marking.

Wirtgen GmbH
Reinhard-Wirtgen-Straße 2
53578 Windhagen
Germany

EC Declaration of Conformity

We hereby declare that the hereunder designated machine , due to its principles of concept and design, as well as its ancillary equipment marketed by us, conform to the present fundamental safety and health demands of the EC guidelines listed below.
This declaration will immediately become invalid if any modifications are carried out without our prior consent. The instruction manual and the safety manual are included in this declaration.

Machine designation:	**Road Milling Machine**	
Machine type:	**W 150**	
Machine serial number:	**0513**	
Applied EC Directives:	**98/37/EC**	**Machinery Directive**
	2004/108/EC	**EMC Directive**
	2000/14/EC	**Noise Directive**
Applied harmonised standards, in particular:	EN 500-1	Mobile road construction Machinery - Safety - Part 1: General requirements
	EN 500-2	Mobile road construction Machinery - Safety - Part 2: Specific requirements for road milling machines
as well as (if applicable):	EN 500-6	Mobile road construction Machinery - Safety Part 6: Specific requirements for paver finishers

Data according to 2000/14/EC:	Conformity assessment procedure:	Annex V
	Measured sound power level:	109 dB(A)
	Guaranteed sound power level:	110 dB(A)

Date / Signature::
Details of undersigned:

Dipl.-Ing. (FH) EUR ING Georg Chr. Piller
Director Product Safety and Standardization

1.02 Use

1.02.01 Correct use

The machine corresponds to the technical state-of-the-art as well as the applicable safety stipulations at the time it is placed on the market in the context of its correct use.

The machine is designed:

- For milling load bearing road surfaces made of asphalt, asphalt concrete and cement concrete.
- For removing markings on the road surface.

The machine is only intended to be used commercially on enclosed construction sites.

The machine must be operated and maintained as per the related requirements in the technical documentation by trained service staff/maintenance personnel.

Any incorrect operation or activities on the machine not described in this manual represent misuse outside the limits of the manufacturer's statutory liability.

1.02.02 Incorrect use

In particular, the machine is not allowed to be used:

- To carry people who are not personnel for operating the machine
- As lifting equipment
- For milling or removing tracks, pipes, manhole covers and other objects set into the road surface

1.02.03 Residual risks

The residual risks were analysed and evaluated prior to the start the design and planning of the machine.

Information on existing residual risks is given in the documentation.

You can avoid existing residual risks by the practical implementation and compliance with these requirements, for example:

- The special warnings on the machine.
- The general safety instructions in this manual and in the safety manual.
- The special warnings in this manual.
- The instructions in the safety manual.
- The operating organisation's instructions.

Mortal danger/risk of injury for personnel can arise on the machine, for example due to:

- Incorrect usage.
- Incorrect handling.
- Incorrect transport.
- Missing protective devices.
- Faulty or damaged components.
- Handling/usage by personnel who have not been trained and instructed.

Hazards for the environment due to the machine can arise for example due to:

- Incorrect handling.
- Incorrect disposal of lubricants and fuel.
- Noise emission.

Damage to the machine can occur for example due to:

- Incorrect handling.
- Failure to comply with operating and maintenance requirements.
- Use of unsuitable fuels / lubricants.

Damage to other assets in the operating area of the machine can occur for example due to:

- Incorrect handling.
- Incorrectly performed repairs.

The machine's performance or functionality may be limited for example due to:

- Incorrect handling.
- Incorrect maintenance and repair.
- Use of unsuitable fuels / lubricants.

1.03 Climatic conditions

1.03.01 Climatic conditions

Low ambient temperature

In cold weather, the starting behaviour and the operation of the diesel engine depend on the following points:

- Fuels used (see page 199 ff)
- Engine oil viscosity (see page 199 ff)
- State of the battery

Advice for operation in cold weather:

- After starting, leave the diesel engine to run on low load until the temperature gauge indicates increasing values.
- After the diesel engine is switched off, the cooling and lubrication systems take time to cool down. This means that the diesel engine can be shut down for a few hours and then restarted without problems.
- Below 0°C use winter fuel.
- Prior to the cold season, fill in the correct lubricant.
- Check all parts made of rubber (hoses, V-belts etc.).
- Check all electrical cables and connections for chafing and damage to the insulation.
- Keep battery charged and warm.
- Re-fill fuel tank at the end of each shift.

⚠ WARNING!

Injuries and damage may be caused by the usage of alcohol or other starting aids.

Do not use aerosol starting aids, for example ether.

In these cases there is a risk of explosion and injury.

High ambient temperature, high altitude

In case of operation in the following conditions, the amount of fuel injected must be reduced:

- Above an altitude of 1000 m
- Above an ambient temperature of 30°C

Hydraulic system

The acceleration and braking behaviour of the machine are affected by viscous hydraulic oil. In low outdoor temperatures, wait a few minutes after starting the diesel engine before pulling away. During the warming-up phase only drive the machine at moderate speed and low load until the oil in the hydraulic system has warmed up to approx. + 40°C.

1.04 Safety instructions

1.04.01 Environmental protection

Packaging material, cleaning agents and used or left-over fuels / lubricants are to be sent for recycling, as per the regulations for the protection of the environment in the place of use.

1.04.02 Disposal

The protection of the environment is an urgent task. Correct disposal will avoid negative effects on man and the environment and enable valuable raw materials to be reused.

Fuels / lubricants

Dispose of fuels / lubricants as per the related specifications and the related national regulations.

Materials (metals, plastics)

To be able to dispose of materials correctly, they must be sorted by type. Clean materials of other adhering substances. Dispose of materials in accordance with the related national regulations.

Electrics / electronics

The electrical/electronic components are not subject to the WEEE directive 2002/96/EC and the related national laws (in Germany e.g. ElektroG). The electrical/electronic components must be sent to a specialised recycling organisation.

1.04.03 Machine-specific safety instructions

The maximum theoretical lateral tilt on the machine must not exceed 5° or 8.7% in relation to the horizontal.

Requirement:

- The conveyor belts are empty
- The discharge conveyor is in the "straight ahead" position

⚠ DANGER!

Risk of injury!

Lateral inclination values can be reduced drastically, depending on the application conditions, the load on the discharge conveyor or the sub-base if it cannot support the load.

- In case of doubt, always secure the machine against tipping.

Maximum longitudinal tilt on the machine during milling = 14° (25%).

In case of milling on uphill / downhill slopes with values above those stated above, the machine is to be secured with an adequately dimensioned winch (winch truck).

On travelling / transferring / transporting the machine, attention is to be paid to sufficient pendulum stroke.

On travelling / transferring / transporting the machine, it must be horizontal in the lateral direction and raised to the highest point.

On travelling / transferring / transporting / loading the machine, the discharge conveyor must point in the "straight ahead" direction.

⚠ WARNING!

Risk of losing control

The machine operator can loose control of the machine.

- Start and operate the machine only from the driver / operator position.

Disengaging an emergency stop switch

⚠ WARNING!

Risk of crushing!

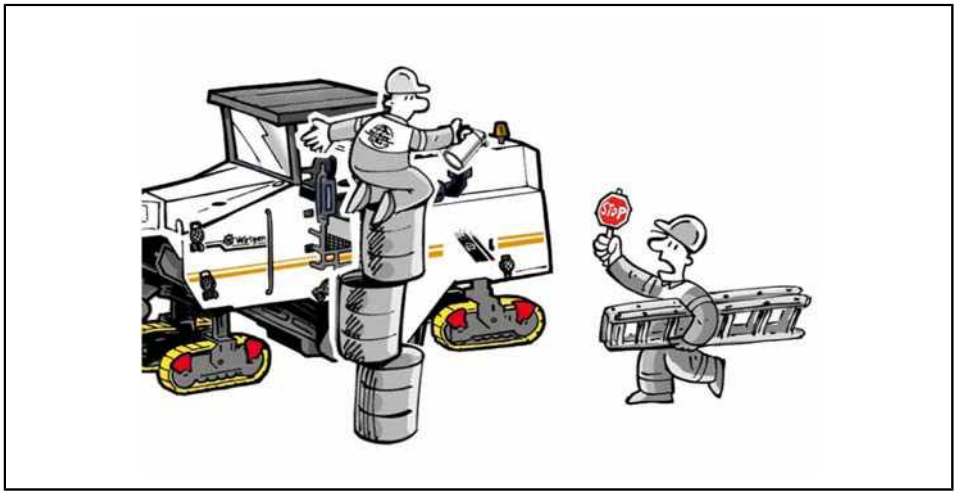
Automatic movements of machine components may be triggered by disengaging an EMERGENCY STOP switch: side plate, material depressor and scraper will lower if they were lifted before.

- Ensure there are no people or objects in the machine's danger zone.

Covers for the side control panels

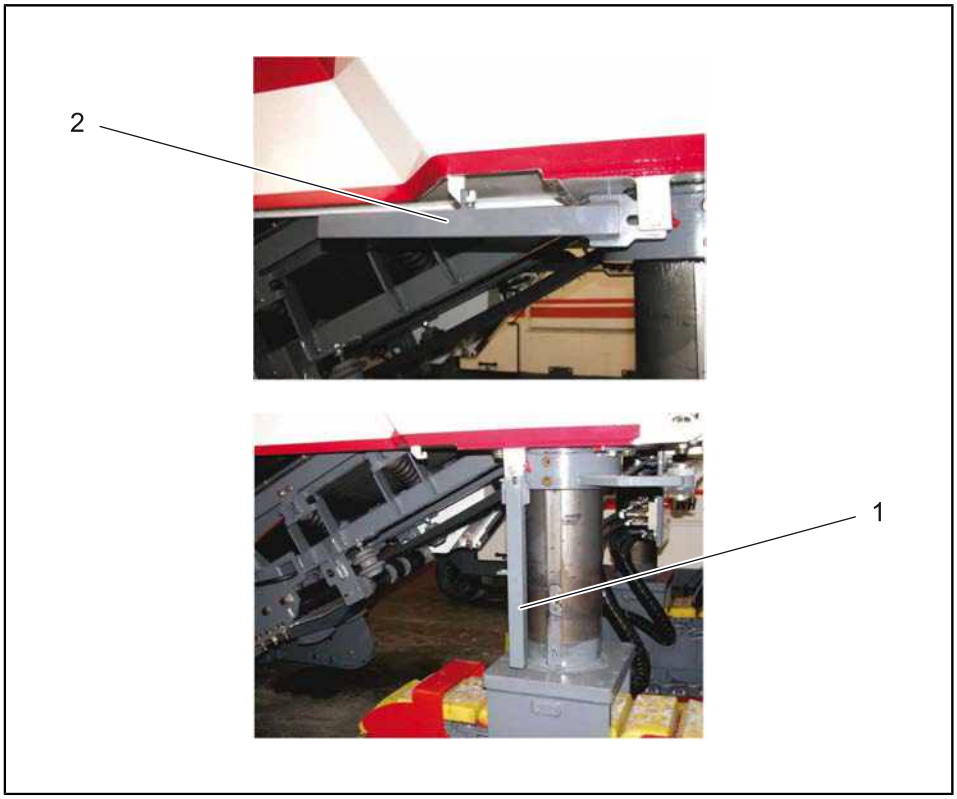
The EMERGENCY STOP switches on the side control panels must be accessible during on-site operation.

The covers are to be opened each time prior to starting the diesel engine.



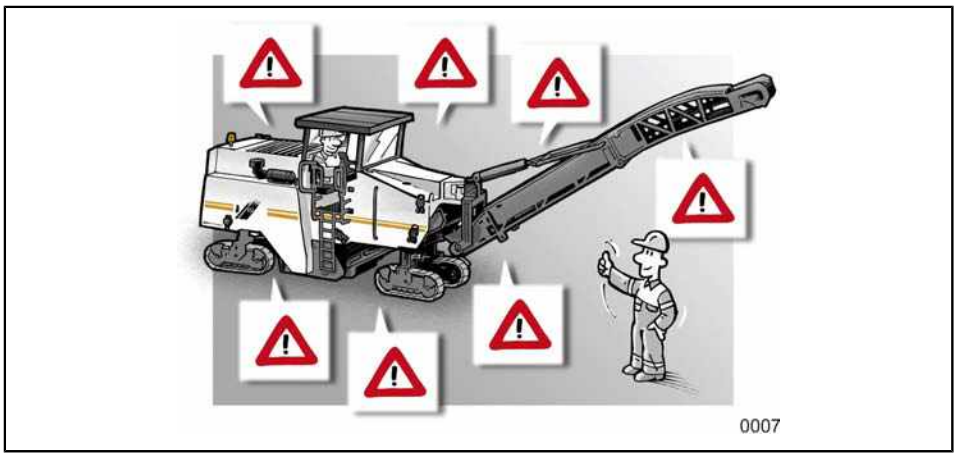
For filling level check or for topping up fuels / lubricants, use secure ladders.

Do not climb onto the machine or use parts of the machine as climbing aids. Risk of falling!



During work inside or under the machine, the safety supports must be fitted to all lifting columns, and the chassis supported on them.

1.04.04 Danger zones



During on-site operation and during transport, there must not be any people in the machine's danger zone.

Entry to the danger zone is only allowed for maintenance and cleaning work:

- With the machine stationary and secured
- For authorised personnel

1.05 Noise / vibration

1.05.01 Noise / vibration data

Noise data in accordance with 98/37/EC and 2006/62/EC

The measurement was made in accordance with EN 500-2 at an engine nominal speed of

2,100 r.p.m.

performed.

The machine emits a noise level of

L_{wA} = 109 dB(A)

At the operator position a sound pressure level of

L_{pA} = 88 dB(A)

is emitted.

Vibration data in accordance with 91/368/EEC: hand / arm oscillations.

In case of correct use, the weighted effective values for the acceleration in relation to hand / arm oscillations of

a_{hw} = 2.5 m/s²

are not exceeded.

Total body oscillations

In case of correct use, the weighted effective values for the acceleration in relation to total body oscillations of

a_w = 0.5 m/s²

are not exceeded.

1.06 Labelling

1.06.01 Colours

Signs / stickers

Colour	Designation	Instructions - information
Red	Prohibition	Dangerous behaviour
	Danger	Stop, evacuation
Yellow	Warning	Attention, caution, check
Green	Help, rescue	Doors, exits, routes, stations, compartments
	Safety	Return to the normal state
Blue	Instruction	Specific behaviour or activity. (e.g. obligation to wear personal protective equipment)

Pilot lights / light emitting diodes (LED)

Colour	Designation	Explanation	Instructions / information for the operator
Red	Emergency	Dangerous state	Immediate action necessary to react to the dangerous state (e.g. press EMERGENCY STOP)
Yellow	Abnormal	Abnormal state; critical state imminent	Monitor or take action to suppress the abnormal state (e.g. restart an interrupted automatic process)
Green	Normal	Normal state	Ready for operation (e.g. diesel engine ready to start)
Blue	Imperative	State that requires action by the operator	Reset function (e.g. confirm)
White	Neutral	Other state	General initiation of functions (e.g. milling drum START/ON, water pump START/ON etc.) or operating state of a component (e.g. milling drum rotating, belt conveyor motor rotating etc.)

1.06.02 Signs / stickers

Refer to the safety manual for the description of safety-relevant stickers.

GS mark

WIRTGEN machines are subject to a type examination by a notified body and have the GS mark.

Approval certificate

WIRTGEN machines are subject to an inspection by an expert in accordance with EU directives and have an approval sticker.

Approval certificate

WIRTGEN machines are subject to an inspection by an expert in accordance with EU directives and have an approval sticker.

Patent information

Information box

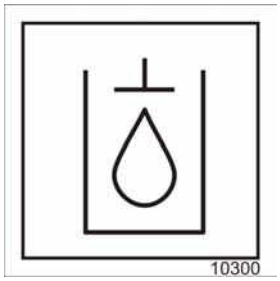
For information leaflets.

Transportation Instructions

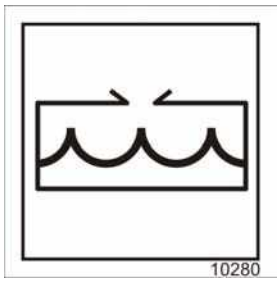
Information on storage location for the related transportation instructions.

Key fob

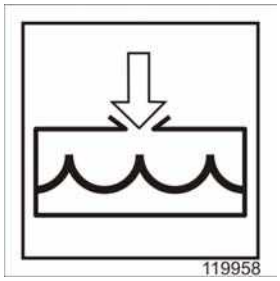
On parking the machine the electrical power supply is to be switched off and the key removed.



Hydraulic oil tank



Water tank



Fill in water

Hydraulic oil tank

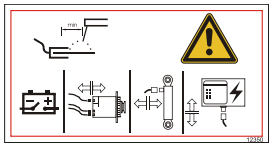
The hydraulic oil tank is filled with bio-degradable hydraulic oil (ISO VG 46).

Diesel fuel tank

Use diesel with a sulphur content of less than 0.5%.

Pay attention to standards.

Storage location for technical documentation and tools



Welding work

Prior to welding work, disconnect electrical devices such as battery, alternator, sensors, controllers, etc. - danger of irreparable damage!

Attach earth clamp as close as possible to the welding point.

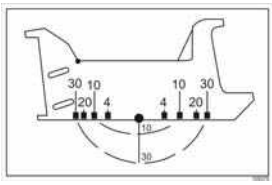
Instructions on lifting points.

Instructions on lashing point.

Load centre of gravity

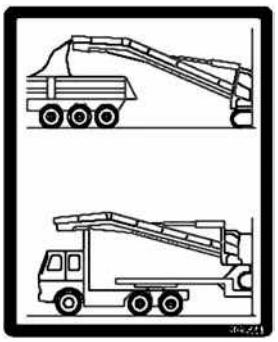
Marking indicating the centre of gravity of a component.

Support point marking, e.g. for lifting using a forklift truck.



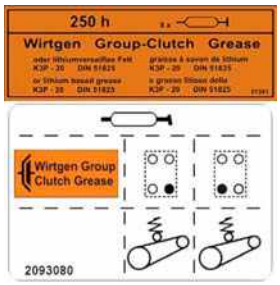
Cutting circle marking

Position markers on the side plate indicate the related milling depth.



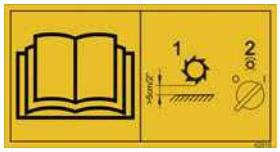
Discharge conveyor

Position of the ball cock for on-site operation and transport.

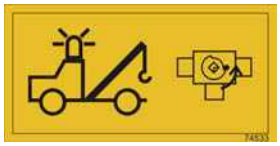


Lubrication instructions

Only use stipulated lubricant.

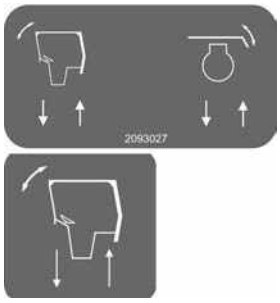


Only switch on the milling drum drive if the milling drum is free from the floor.



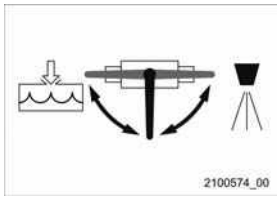
Device for towing away

Position of the ball cock for towing away from a danger zone.

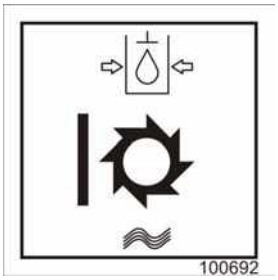


Folding roof - opening/closing hood

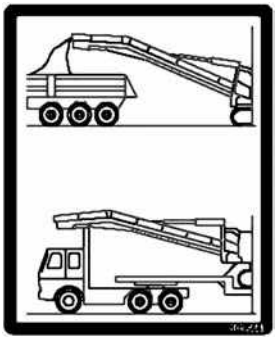
Water system



Filling water tank - operational position



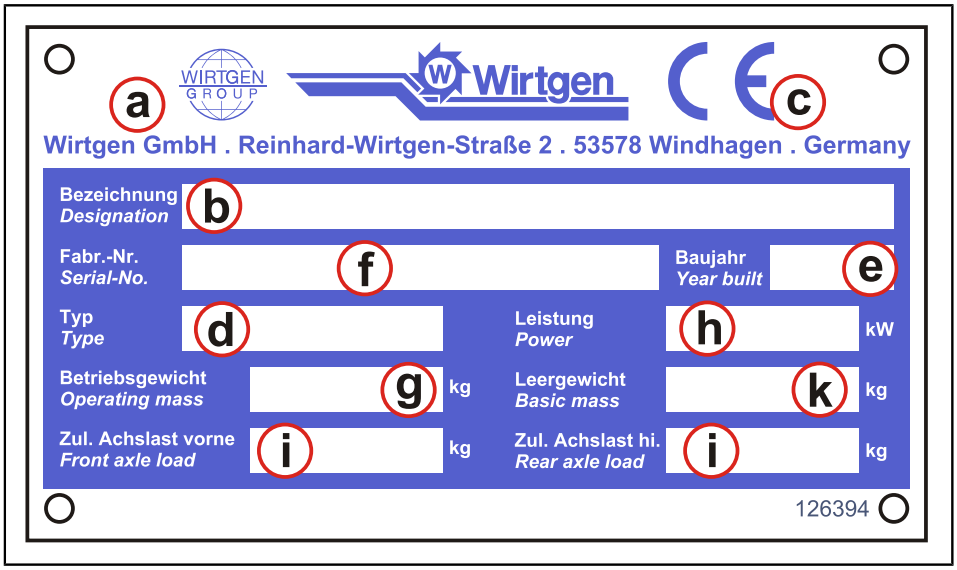
Contact pressure - scraper



Discharge conveyor

Position of the ball cock for on-site operation and transport.

1.06.03 Nameplate



[a]	Name and address of the manufacturer	**[b]**	Description according to the Machinery Directive
[c]	Stipulated markings (for EU countries the CE mark)	**[d]**	Series and type designations
[e]	Year of construction	**[f]**	Serial number
[g]	Operating weight in kg	**[h]**	Engine rated output in kW
[i]	Allowed axle load in kg (for wheeled machines only)	**[k]**	Curb weight in kg

The entire marking represents an official document and must not be altered or effaced.

Additional explanations of the nameplate:

(e) Year of construction

The year of construction is the year during which the manufacturing process was concluded.

It is not allowed to pre-date or post-date the year of construction of the machine when applying the CE marking.

(g) Operating weight

The weight of the basic machine with all standard fittings, with or without driver cabin, with a driver (75 kg) and half-filled fuel tank and all fluid systems, if applicable, with half-filled water spray tank.

Additionally for crawler machines (e.g. specification from - to):

The operating weight with all components which are required for the installation of the equipment on the basic machine (e.g. ballast weight and all possible accessories) and a full water spray tank.

(h) Engine rated output

Diesel engine rated output in kW according to ISO 14396.

(i) - Allowed front / rear axle load

The axle load is the maximum axle load stated by the manufacturer incl. all additional features, tanks filled to the maximum and a supplement of 75 kg for the operator.

(Obligation for wheel machines)

(k) Curb weight

The curb weight of the machine with basic equipment, with filled oil tanks, without tools, with empty tanks and without the weight of the co-driver.

1.06.04 Machine identification

All WIRTGEN machines are identified by the serial number. The serial number is on the nameplate and the chassis of your machine.

Example

0513 0027 = Serial number

0513 = Series code for the **W 150**

0027 = Sequential machine number