

# INSTRUCTION MANUAL

## W 200i

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# 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. In case of a warranty claim, it is necessary to demonstrate that approved diesel fuel and engine oil have been used.
- 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.

All rights expressly reserved in accordance with the law on copyright.

We wish you every success with your WIRTGEN machine!

**Loss of validity of the exhaust certificate (type approval):**

Use of non-genuine parts, e.g. during a repair or maintenance job, will invalidate the exhaust certificate.

Use of non-approved fuel and/or engine oil will invalidate the exhaust certificate.

Operating the machine without a valid exhaust certificate may represent a criminal offence. Comply with local environmental legislation.

## **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 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.

## 1.01.06 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					
<b>EC Declaration of Conformity</b>					
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.					
<i>Machine designation:</i>	<b>Road Milling Machine</b>				
<i>Machine type:</i>	<b>W 200i</b>				
<i>Machine serial number:</i>	<b>1420</b>				
<i>Applied EC Directives:</i>	<b>2006/42/EC</b>	<b>Machinery Directive</b>			
	<b>2004/108/EC</b>	<b>EMC Directive</b>			
	<b>2000/14/EC</b>	<b>Noise Directive</b>			
<i>Applied harmonised standards, in particular:</i>	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			
<i>as well as (if applicable):</i>	EN 500-6	Mobile road construction Machinery - Safety Part 6: Specific requirements for paver finishers			
<i>Data according to 2000/14/EC:</i>	Conformity assessment procedure:	Annex V			
	Measured sound power level:	109 dB(A)			
	Guaranteed sound power level:	110 dB(A)			
<i>Person authorised to compile the technical file:</i>	Georg Piller, Wirtgen GmbH				
<i>Date / Signature:</i>	_____				
<i>Details of undersigned:</i>	Dipl.-Ing. (FH) EUR ING Georg Chr. Piller Director Product Safety and Standardization				
2228295_00 Translation of the original declaration of conformity					

## 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:

- For fuels used, see Fuels - lubricants selection tables.
- For engine oil viscosity, see Fuels - lubricants selection tables.
- 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

At increasing altitude or ambient temperature, the maximum power of the engine, the exhaust quality, the temperature level and, under extreme circumstances, the starting behaviour are impaired.

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



In electronically controlled engines, the fuel quantity is adapted automatically.

#### 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 lose control of the machine.

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

**Disengaging an emergency stop switch****⚠ WARNING****Risk of crushing!**

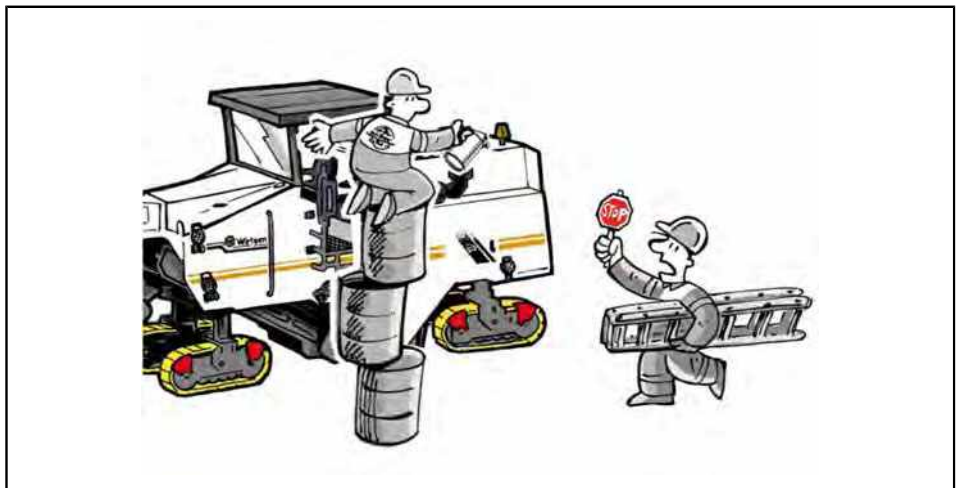
Automatic movements of machine components may be triggered by disengaging an EMERGENCY STOP switch: side plate, material depressor and scraper will lower if they were lifted before.

- 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!

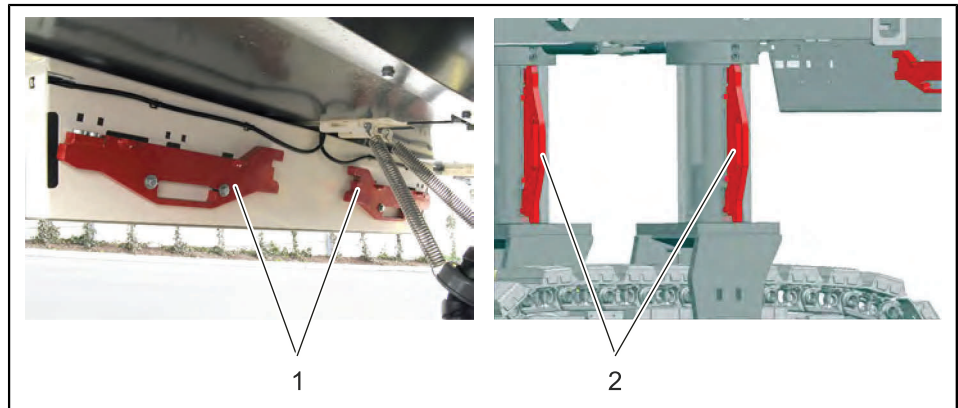
### Fire extinguishers



Observe national and / or local regulations and retrofit a fire extinguisher, if required.

The provided mounting position was specified by WIRTGEN.

### Support



[1] Supports in storage

[2] Supports in use



During work inside or under the machine, the available safety supports must be fitted, 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:**

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

**1,600 r.p.m.**  
performed.

The machine emits a noise level of

**$L_{wA} = 109 \text{ dB(A)}$**

At the operator position a sound pressure level of

**$L_{pA} = 91 \text{ dB(A)}$**

is emitted.

**Vibration data:**

**Hand / arm vibration.**

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

**$a_{hw} = 2.5 \text{ m/s}^2$**

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





**$a_w = 0.5 \text{ m/s}^2$**

are not exceeded.






## 1.06 Labelling

### 1.06.01 Colours

#### Signs / stickers

Colour	Designation	Instructions - information
	Prohibition	Dangerous behaviour
	Danger	Stop, evacuation
	Warning	Attention, caution, check
	Help, rescue	Doors, exits, routes, stations, compartments
	Safety	Return to the normal state
	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
	Emergency	Dangerous state	Immediate action necessary to react to the dangerous state (e.g. press EMERGENCY STOP)
	Abnormal	Abnormal state; critical state imminent	Monitor or take action to suppress the abnormal state (e.g. restart an interrupted automatic process)
	Normal	Normal state	Ready for operation or function active
	Imperative	State that requires action by the operator	Reset function (e.g. confirm)
	Neutral	Other state	Monitoring or general 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.



**VDE approval sticker**

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



**Patent information**



**Information box**

For information leaflets.



**Transportation Instructions**

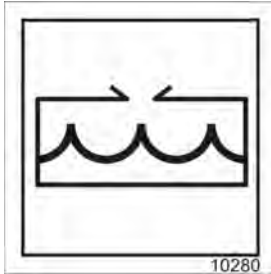
Information on storage location for the related transportation instructions.



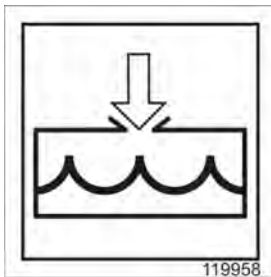


**Key fob**

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



**Water tank**



**Fill in water**



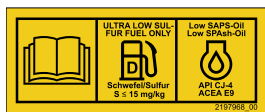
**Sulphur-free diesel**

Only fill with sulphur-free diesel.  
Sulphur content ≤ 15 mg/kg.  
Pay attention to standards.



**Low-ash engine oil**

Only fill with low-ash engine oil.  
Pay attention to standards.



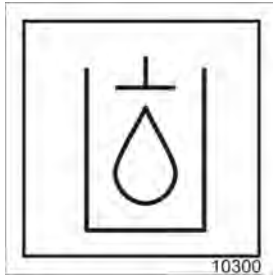
**Diesel and engine oil - sulphur-free and low-ash**

Only fill with sulphur-free diesel.  
Only fill with low-ash engine oil.  
Pay attention to standards.



**Structure of the diesel fuel pre-filter**

Changing the filter element is described in the instruction manual.



Hydraulic oil tank



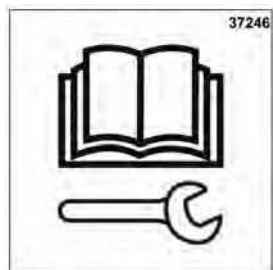
Hydraulic oil tank

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

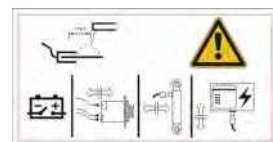


Hydraulic oil tank

The hydraulic oil tank is filled with bio-degradable hydraulic oil (ISO VG 68).



Storage location for technical documentation and tools



Welding work

Prior to welding work, disconnect electrical components such as battery, alternator, sensors, controllers etc.

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



Instructions on lifting points.

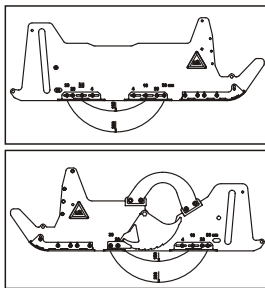


Instructions on lashing point.



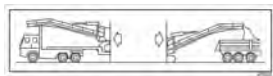
**Load centre of gravity**

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.

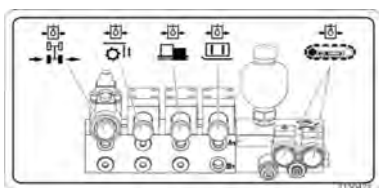


**Discharge conveyor**

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

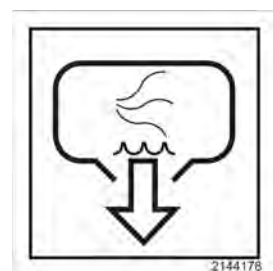


**Diagnose socket**

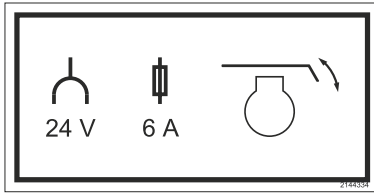


**Valve block sticker**

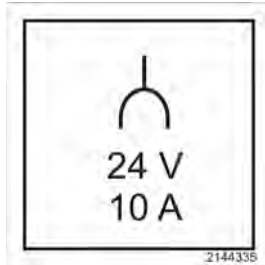
- Steering hydraulic valve (fixed setting)
- Scraper hydraulic valve (adjustable)
- FCS scraper hydraulic valve (adjustable)
- Side plate hydraulic valve (adjustable)
- Track tensioner hydraulic valves (fixed setting)



**Water removal from compressed air tank**



**Socket hood**  
Socket 24 V, 10 A.  
Fuse 6 A.  
Engine hood.



**Socket**  
socket 24 V, 10 A.



**Lubricate with grease**



**Cover panel**  
Open cover panel first; then the rear window.

### 1.06.03 Nameplate



<b>a</b> Wirtgen GmbH . Reinhard-Wirtgen-Straße 2 . 53578 Windhagen . Germany	
<b>b</b> Bezeichnung / Designation	
<b>f</b> Fabr.-Nr. / Serial-No.	<b>e</b> Baujahr / Year built
<b>d</b> Typ / Type	<b>h</b> Leistung / Power kW
<b>g</b> Betriebsgewicht / Operating mass kg	<b>k</b> Leergewicht / Basic mass kg
<b>i</b> Zul. Achslast vorne / Front axle load kg	<b>i</b> Zul. Achslast hi. / Rear axle load kg
126394	

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

**i** 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**

**1420 0001** = Serial number

**1420** = Series code for the **W 200i**

**0001** = Sequential machine number

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