

# *User manual Wheelspinner*

WS15A-Z / WS22A-Z

From serial number: 08021



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**Index :**

1. Description of the machine .....	pag. 3
2. Appropriate use .....	pag. 4
3. Safety precautions .....	pag. 5
4. Transport and storage .....	pag. 6
5. Installation .....	pag. 6
6. Operating Instructions .....	pag. 7
7. Cleaning and maintenance .....	pag. 10
8. Technical data.....	pag. 11
9. Default Table .....	pag. 12
Appendix I :	SCE106001C Electric flowchart Wheelspinner type WS15A-Z & WS22A-Z.
Appendix II :	CE Declaration of conformity

## 1. Description of the machine :

The Wheelspinner contains a drum made of lightweight alloy and is driven by a 1,5 kW (2,2 kW\*) asynchronous motor. The electric engine is equipped with clicsons (temperature switches) mounted on the electric windings that continuously check the engine temperature.

The engine and drum are mounted on a steel frame.

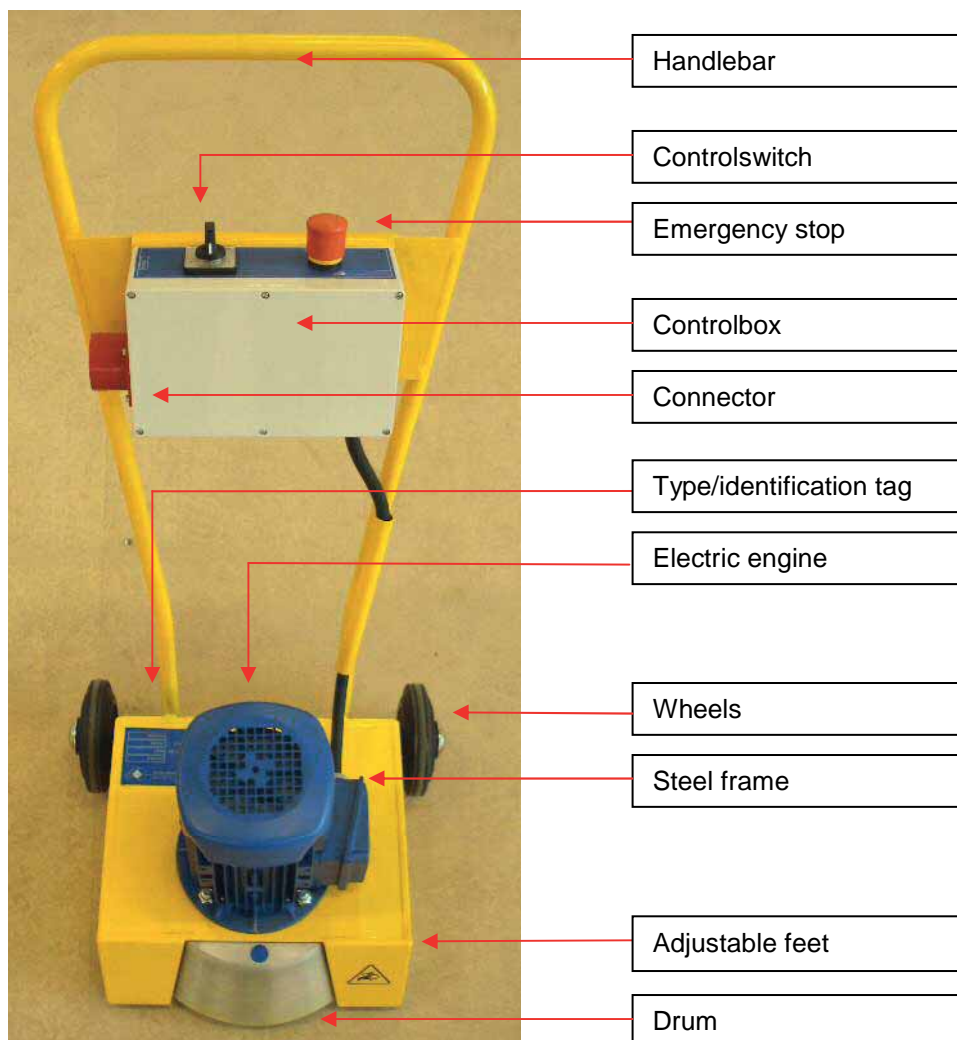
Through the use of the handlebar and the two wheels the Wheelspinner can be moved. The handlebar also can be used to press the Wheelspinner against the wheel.

To the front bottom of the Wheelspinner adjustable and vibration damping feet are mounted, which can be adjusted in height to lean the Wheelspinner for and backwards.

The electric control parts are fitted in the plastic controlbox. This box is mounted on the handlebar. The Wheelspinner is equipped with a 5 pins plug (3-pole+N+earth) suitable for 380-415 VAC, 50/60Hz 16A.

The machine is operated by a 3-way switch (left-stop-right)

There is an emergency switch mounted on the controlbox that shuts the power off when pressed.



\*) Values are valid for the WS22A-Z version.

## 2. Appropriate use :

The Wheelspinner is constructed to spin the Wheel by driving the tyre of a car, bus, truck and trailer with a speed of approximately 80 km/h. The Wheelspinner must be used for this purpose only!

The Wheelspinner requires a electric feeder cable. This cable is not included in the package.



To change the rotation direction the drum first have to come to a complete stop, do not turn the switch to the other rotation direction before the drum has come to a complete stop.  
Do not switch the engine on and off too frequently.

The electric engine delivers a nominal torque of 10 Nm (14 Nm\*) that corresponds with a force of 64 N (90 N\*) in the middle of the drum.

Because of the mass of the drum and the driven wheel it will take some time to reach the correct rotation speed.

To make sure not to overload the engine because of big speed differences it is required to let the drum slip against the tyre.

Because of electric short-circuit danger the Wheelspinner cannot be used outside in the rain or in a humid areas.

Ignoring these precautions results in a shortened product lifetime.

*\*) Values are valid for the WS22A-Z version.*

### 3. Safety precautions:



- Make sure that you unplug the electric feeder cable before maintaining the Wheelspinner.
- Make sure the earth pole is always connected in such a way that the frame doesn't get electric during a failure.
- Make sure the earth pole is connected so at a failure the frame doesn't get electric.
- Place the electric feeder cable safe and far away from the working floor because of stumbling hazards and the risk of damaging the cable.
- Always connect the electric feeder cable from the back to prevent it gets grabbed by the drum and/or the Wheel.
- Do not use the Wheelspinner outside or in a humid area because of electric short-circuit danger.
- Before connecting the electric feeder cable check if the control switch is switched to "stop" (see chapter 6; operating instructions) otherwise the drum will start spinning unwanted.
- If, because of any reason, the power was shut down (because of emergency stop or thermal protection), pull the switch to "0" before reset, otherwise the Wheelspinner will spin.
- When the drum spins, keep away your hands or feet. The spinning drum can cause serious harm. In case the drum is still rotating do not move the Wheelspinner.
- Please make sure the Wheelspinner stands on a stabile surface and make sure the vehicle is well supported.
- Prevent the vehicle from moving for/backwards by blocking the other wheels.
- Don not try to slow down the spinning wheel by lowering the vehicle to the ground. Please use the vehicle brake system to slow down the wheel.
- Do not stand in front of the rotating Wheel, dirt and little stones can come out and could cause serious harm.
- Always make use of personal protection materials.
- Check the tyre visual for damages before using the Wheelspinner.
- Check the Wheel and tyre pressure before using the Wheelspinner.

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#### 4. Transport and storage :

The Wheelspinner weighs 41 kg.

Through the use of the handlebar and the two wheels the Wheelspinner can be moved.

#### 5. Installation :

The Wheelspinner needs to be connected on a 3 phase 400V/50Hz with **earth** fuse at 3X16A cable (not included) with a 5 pole CEE connecting plug.

The Wheelspinner is equipped with a 5 pole CEE plug mounted on the controlbox. The controlbox is mounted on the handlebar.

The three poles (L1, L2 and L3) must be connected to the power, pole PE is used for the earth connection.

The fifth pole is not used in this application.

To get the best performance out of the Wheelspinner a short thick power cable must be used (at least 5x1,5mm<sup>2</sup>).

## 6. Operating instructions:

Before operating the Wheelspinner make sure to follow the safety instructions listed in chapter 3.

### 6.1 Controls:

Next to the connecting plug an 3-way operating switch (left-stop-right) is mounted.

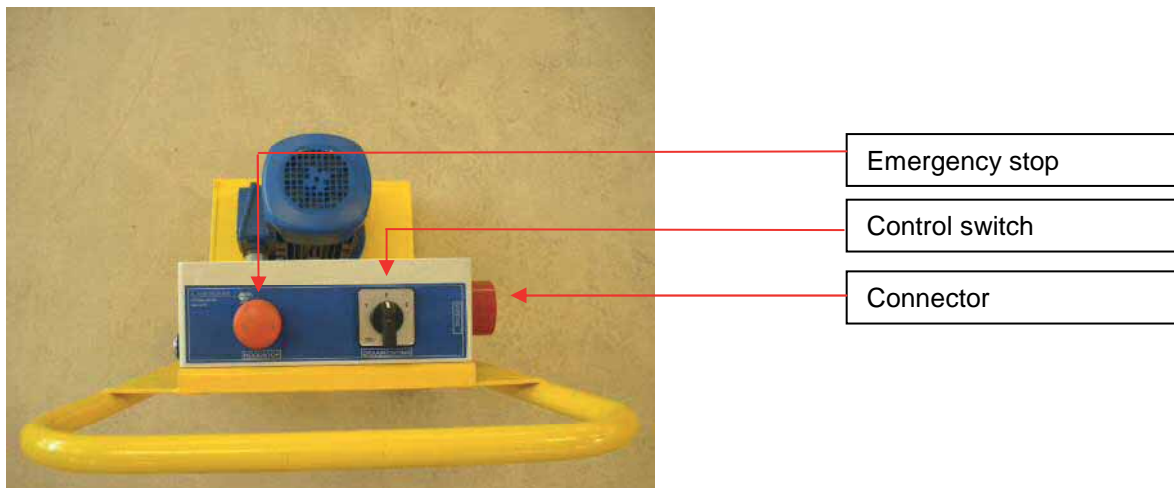
The middle position, position "0", is used to stop the Wheelspinner. The power supply is cut off.

In position "1" and "2" the Wheelspinner will spin to the left or right. This depends on how the power supply is connected to the plug.

The rotation direction in position "1" and "2" can be changed and will depend on the connection of the power cable. This must be find out experimentally.

For emergency situations an emergency switch is mounted on top of the controlbox. This switch will cut the power supply off.

**Note**, when the emergency switch is pressed the power supply is cut off but because of the kinetic energy the spinning drum will not stop immediately!



### 6.2 Power supply :

Connect the Wheelspinner to a power supply with an cable accommodate with a 5 pole A CEE plug (see chapter 5 installation)

We recommend short thick power supply cables(at least 5x1,5 mm<sup>2</sup>); when using a cable reel, make sure to unroll the complete cable.

Before plugging the power supply cable in to the Wheelspinner make sure that the operating switch is in position 0 "stop". Always connect the power supply cable from behind (operating side) and make sure the cable can't reach the spinning drum or wheel.

When necessary the rotation direction can be changed by changing the phase wires in the control switch.

### 6.3 Before the spinning :

Before spinning the Wheel (drive/rotate) the following points must be checked.

To spin a Wheel with the Wheelspinner make sure the Wheel is lifted off the ground. To lift the Wheel use tools made for this purpose such as a garage jack and place axle stands. Block the movement of the vehicle by blocking the other wheels.

Before spinning check the tyre and rim condition, the tyre pressure and make sure all objects such as dirt are removed from the tyre.



Always make sure the Wheel can spin free and the brakes are not operated.

**Spinning a blocked Wheel can cause serious damage to the Wheelspinner and the vehicle !**

Thereafter the Wheelspinner with the drum can be positioned in front of the Wheel.

Before operating the Wheelspinner check that the drum and tyre are making good contact and there are no obstacles that can bother the Wheelspinner.

Also check that the aluminum drum doesn't hit the border of the rim to prevent damage to the Wheelspinner and the rim.

By adjusting the two vibration dampers mounted on the front of the frame the position of the drum towards the tyre can be slightly corrected.

Unfasten the locking nut underneath the damper to adjust the vibration damper.

Fasten the locking nut after adjustment.



Adjustable feet/vibration damper

To make the electric engine perform well, it is necessary to cool himself. Always check that the engine can suck air to cool itself (along the cover on top of the engine).



### 6.3 Spin the Wheel :

To spin the wheel (drive) the rotating movement must be transferred from the drum to the tyre. To do this, the drum must be pushed against the tyre. Because of the friction between the drum and the tyre the wheel will begin to spin.

Please follow instructions :

- Place the Wheelspinner in front of the wheel with the drum 0,5 cm towards the tyre (so the drum can spin free) make sure the spinner is standing on his wheels and vibration dampers and hold the handlebar stable.
- Choose a spinning direction and turn the operating switch to position 1 or 2. Hold the handlebar stable when starting the Wheelspinner because of reaction forces.
- When the Wheelspinner is at his operating speed push the drum against the tyre with help of the handlebar. The wheel will begin to spin.  
Continue holding the handlebar stable because of strong reaction forces caused by the spinning wheel.  
**Note:** By pressing the vibration dampers strong to the ground, those reaction forces will decrease.  
Always be careful; by pressing the drum weak against the tyre it will begin to slip and cause tyre damage. By pressing too hard the electric engine will be overloaded.
- When the drum and wheel are synchronized the speed of the wheel will be approximately 80 km/h.  
Stop pressing the drum against the wheel and place the Wheelspinner back on his wheels and vibration dampers.
- Set the operating switch to position "0" (the Wheelspinner will slow down slowly)
- Do your measurements according to safety instructions.



**A spinning wheel can cause serious injury and damage !**



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Only when the WheelSpinner has come to a complete stop, changing the spinning direction or moving the machine is allowed. To prevent the machine from damage, do not start and shut the machine off more than 20 times/hour and do not change spinning direction immediately.

Never use the WheelSpinner to change the spinning direction of a spinning wheel!

Only lower the wheel to the ground after it came to a complete stop.

### **7. Cleaning and maintenance :**

The WheelSpinner is constructed to run with low maintenance.

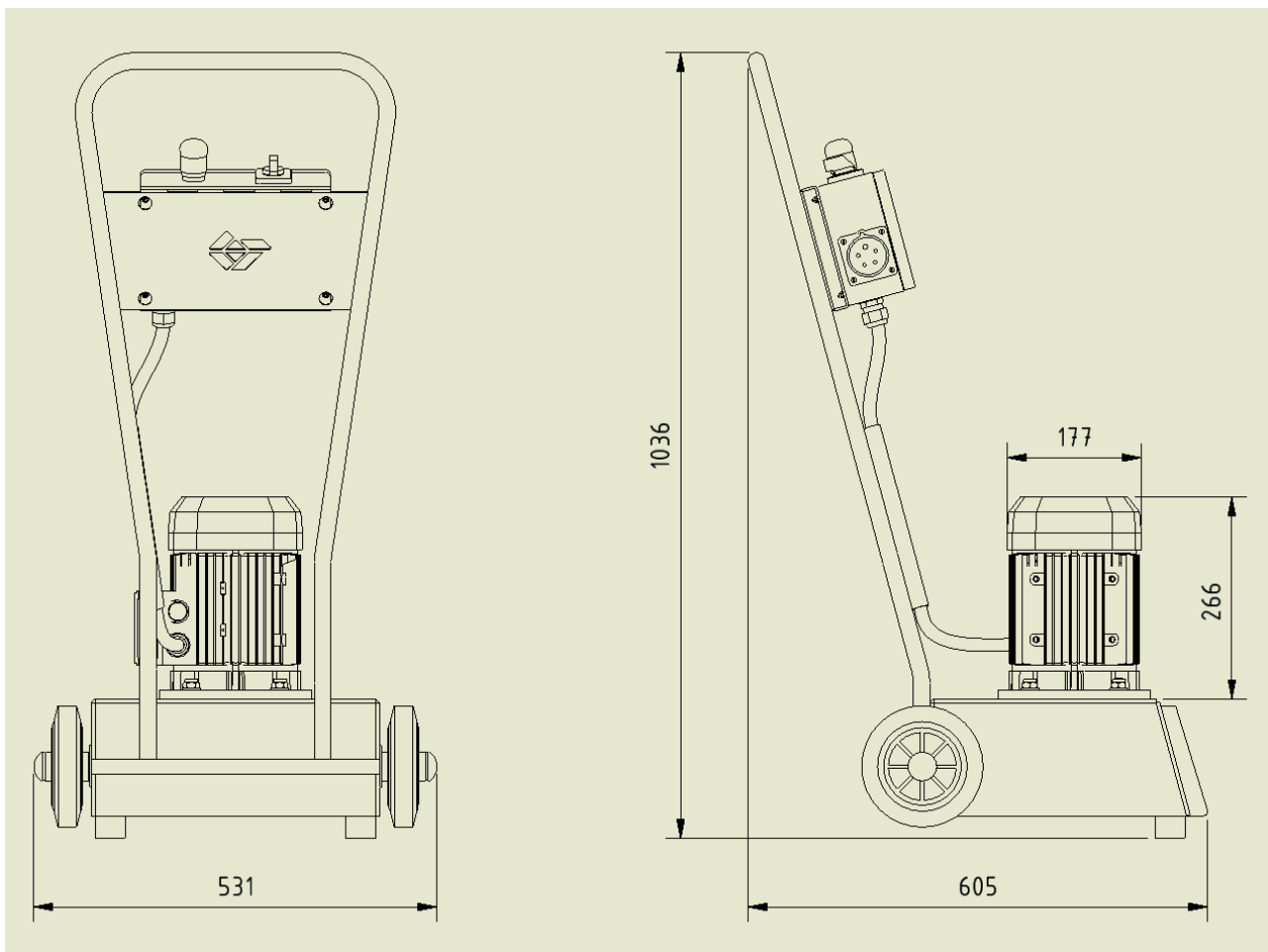
There is no lubrication required and the bearings are maintenance free. (20.000 hours or 4 years)

**Note:** Make sure no grit, dust or dirt can access rotating parts and keep the WheelSpinner clean and properly.

Check regularly if there is any dust and dirt in the coolfan to make sure the engine cooling is optimal.

## 8. Technical information :

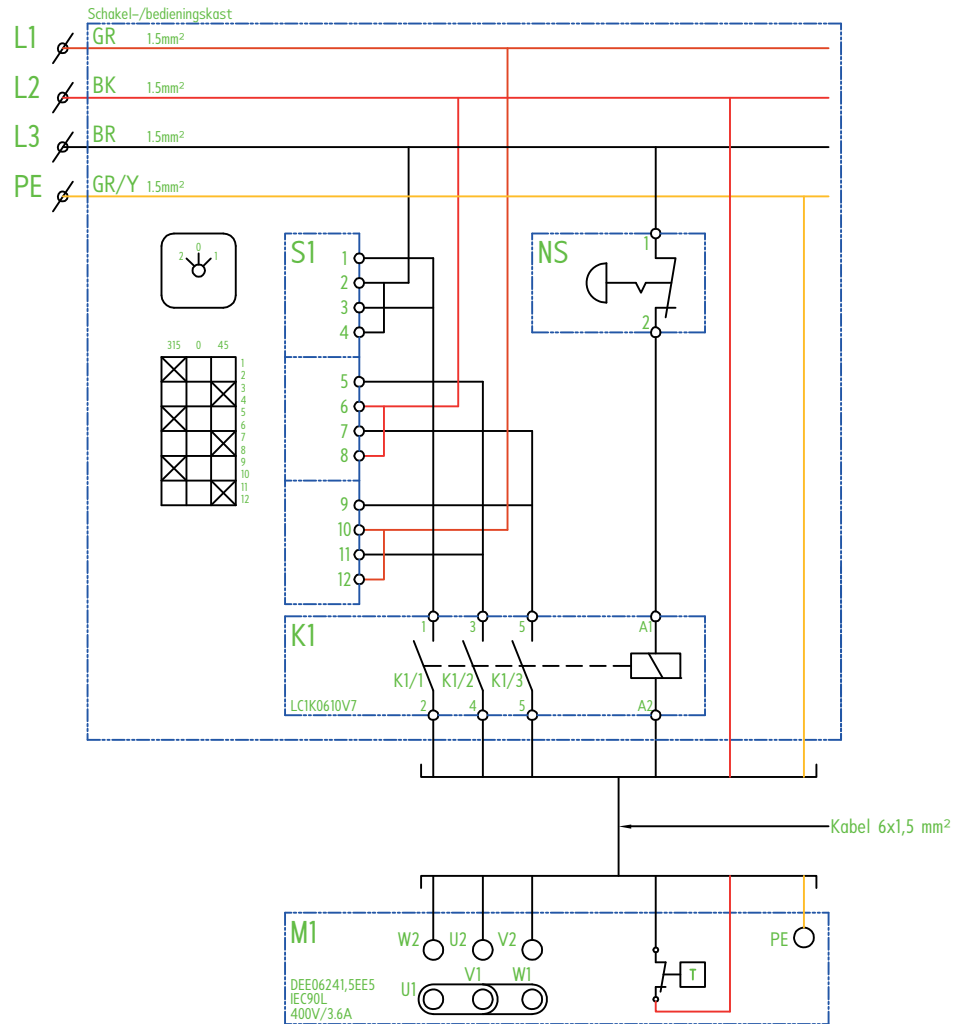
Type	: WS15(22)A-Z.
Dimensions	: LxWxH = 531x605x1036.
Weight	: 41 KG.
Power	: 1,5 kW.
Power supply	: 3~400v/50Hz – In=3.6A
Power supply fused at	: 10-16A.
Drum	: Ø355mm – alloy.
Speed	: circa 1390 RPM at P <sub>nom</sub> .
Drive Torque (nominal)	: 10 Nm.
Drive speed (measured in the middle of the drum)	: 22,2 m/s ofwel 80 km/h.
Controls	: 3-way switch (left-stop-right).
Color	: RAL 1003.
Protection class	: IP55.
Operating temperature	: -10°C +40°C.



## 9. Default Table :

Default	Possible cause	Solution
The drum doesn't start spinning.	Emergency switch is operated.	Reset the emergency switch en try to start again.
	Power supply not connected.	Check the power supply cable and the power supply.
Electric engine almost stops when pressed against the tyre.	Wheel doesn't run free.	Check if the wheel can run free and if necessary correct it.
	The drum is pushed too hard against the wheel causing the electric engine to fail.	Press less against the machine so the drum can spin against the tyre.
The tyre smells like burned rubber.	Wheel doesn't run free.	Check if the wheel can run free and if necessary correct it.
	The drum is pushed too soft against the wheel causing the slip between the tyre and drum.	Press more against the machine so the drum can spin against the tyre.
Electric engine shuts itself off before the wheel is at operating speed.	Engine gets overloaded.	Let the Wheelspinner cool down and try again. Push the drum less against the wheel.
	The Wheelspinner is turned on and off too much.	Let the Wheelspinner cool down and try again.
Drum hits the rim	Wheelspinner isn't set up correctly.	Adjust the vibration dampers to make sure the drum can't hit the rim.
Engine cover hits rim or wheel cap.	Wheelspinner isn't set up correctly	Adjust the vibration dampers to make sure the drum can't hit the rim or wheel cap.

U=400 V-50Hz



Datum :	21-10-2004	Revisie :		Benaming :	ELECTRISCH SCHEMA WIELSPINNER WS15A Z
Getekend :	EW	Datum :	C 26-05-05 (CV)	Omschrijving :	

Benaming :  
ELECTRISCH SCHEMA WIELSPINNER  
WS15A Z

Oepening :

A. VAN TILBURG  
HYDRAULIEK BV



Tekening nummer :  
SCE106001

Revisie :	C	Order :	
Blad :	1	Van :	1

# **EG-VERKLARING VAN OVEREENSTEMMING**

(Volgens bijlage IIA van de Machinerichtlijn)

A. van Tilburg Hydrauliek B.V.  
Steenovenstraat 1  
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**Verklaart hierbij dat:**

**Wielspinner**  
**Type: WS15AZ**  
**Serienummers: 08021 t/m 08035**

**In overeenstemming is met de Machine richtlijn 98/37/EG**

**In overeenstemming is met de volgende andere Europese Richtlijnen:**  
73/23/EEG, 89/336/EEG

**In overeenstemming is met de volgende geharmoniseerde Europese normen,**  
NEN-EN 292-1  
NEN- EN 292-2  
NEN-EN 294  
NEN-EN 349  
NEN-EN 418  
EN 60204-1

**Plaats** Roosendaal  
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**Naam** J. Dekkers (Technisch bedrijfsleider)  
**Handtekening**

