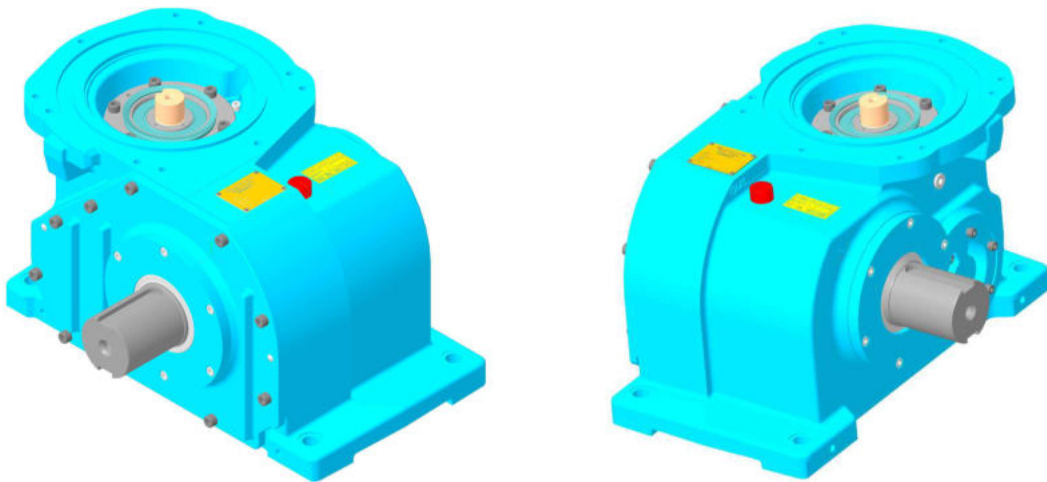


# Set up instructions

## Gear box

Model: *omsHypodrive* EC 2 – 15.1



Please archive this document for future reference

OMS No.

Date of Manufacture  
Month / Year

# Set up Instructions EC2-15.1

(Technical changes reserved – Last changes 2/2021 )



# Set up Instructions EC2-15.1

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## 1 Introduction

These instructions include pictograms for commenting on Warnings and Safety Issues.



**Application Tip:** Additional Comments and Information, no danger involved



**Warning:** of a general risk for the machine or a human safety hazard



**Warning:** of dangerous currents, a liability of serious damage to health or death



**Warning:** of hot surfaces, a liability of serious damage to health and / or serious material damage



**Warning:** of crush injuries, a liability of serious damage to health



**Warning:** of drawing in, a liability of serious damage to health



**Warning:** DANGER  
Risk for the machine or a human safety hazard, a liability of serious damage to health or death

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## 2 Safety Instructions for OMS Escalator Machines

### 2.1 Applicable Use

The OMS – gear box EC 2 – 15.1 is solely intended for usage in escalators and passenger conveyors (travelators, moving walks) for public transportation according to EN 115 : 2017 and DIN EN ISO 12100 part 1 + 2.

The installation and use of the EC 2-25 for other purposes is not applicable. The OMS ANTRIEBSTECHNIK is not liable for personal injury and or damage resulting from none applicable usage.

All Planning, installations and maintenance work may only be carried out by qualified personnel. Qualified personnel are such who having studied for qualifications, or are experienced, or have received instruction and have the knowledge relating to the relevant standards and directives, safety regulations and local knowledge required to install and maintain the machine and be able to recognise and access the risks appertaining to this machine. (Qualified Personnel, as defined in IEC 364).

This OMS – gear box is applicable to the 9th Directive of the Machine and Product Safety Law (*9. Verordnung zum Geräte- und Produktsicherheitsgesetz [Maschinenverordnung]*) and the 2006/42/EC Machine Directive. It is part of a machine, namely an escalator or a travelator and is therefore not liable for CE certification.

The commencement of regular use is not permitted until the gear box has been correctly installed into the escalator or travelator and the manufacturer has applied the CE label to the escalator or travelator to certify that the safety requirements have been fulfilled for the complete product / machine as supplied by the manufacturer.

All other required regulations and certificates (e.g. applicable to general use, maintenance and inspections) remain in force.

The drive manufacturer only respects the warranty for operation and safety of the drive if it is has been erected, maintained and operated according to the printed specifications supplied individually with each drive. The warranty is void if the parameters outlined in the operating, maintenance and control documentation have been exceeded. An incorrect installation or incorrect use of the system, and or violation of the standards outlined above, lead to a complete and absolute none liability of the drive manufacturer.

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OMS Drives may only be stored, erected and run in dry closed areas. The IQ/OQ representative and the user must ensure that adequate measures are taken to avoid a contamination with building dust and or dirt.

Stopping of a running traction machine is via frequency inverter control or via the machine brake. In emergency situations braking may be via an external, auxiliary brake on the escalator main shaft. Make sure that when braking with such an auxiliary brake *only*, the traction machine is not dynamically overloaded. When braking with an auxiliary brake, this should preferably be engaged together with the machine brake.

OMS-Escalator machines may only be operated when in technically good condition and within the parameters as described by OMS.

Applicable use also includes the following:

- Working according to the supplied instructions,
- Observing the regulatory safety and environmental requirements,
- Adherence and observance of the Escalator documentation and regulations.

## 2.2 Non Applicable Use

OMS Drives may not be operated in potentially explosive or environmentally aggressive areas.

Further operation is not permissible once the pre- determined wear points have been achieved.

### Permissible Limits:

- max. Motor Speed: refer to technical documentation;
- Local ambient temperature during operating min.: 0° C max. 45° C and 55° C for 1h.; with motor heating from -10°C up to 45°C and with additional gear box heating from -35°C up to 45°C
- Local ambient temperature without operating: -20°C max. 60°C
- Max. rel. Humidity: 85% at 20°C (none condensing).
- Operation under extreme climatic conditions must be clarified with OMS.

None applicable use also includes the following:

- Dry operation without oil or use of a lubricant other than specified
- Opening the Gearbox when installed on the drive

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## Important:



- All work related to; Transport, Electrical Connections, pre-Service Checks and Maintenance of the Drive System must be carried out by qualified technicians. Incompetent work can lead to serious personal injury and / or damage.

**Warning!** Special Notes appertaining to EC 2 – 15.1:



- The machine is very efficient and has a very low natural friction rate. The machine operates immediately after the brake has been released.



pump.

- At initial start-up, the motor must accelerate to normal speed and be run for min. 30 seconds, before a lower standby speed can be used! This is mandatory to warrant lubrication of the upper Hypoid bearing via the integral oil

## 2.3 Warranty and Liability for the Escalator gear box

- The drive manufacturer only respects the warranty for operation and safety of the gear box if it has been erected, maintained and operated according to the printed specifications supplied individually with each drive.
- The warranty is void if the parameters outlined in the operating, maintenance and control documentation have been exceeded.
- The customer is responsible for the qualified installation of the drive by certified personal.
- If damage or other problems are found on the gear box, then the system must be disabled, otherwise the operator will be liable for all damage and injury appertaining thereto.
- An incorrect installation or incorrect use of the system, particularly with respect to the forbidden procedures outlined above, lead to a complete and absolute none liability of the gear box manufacturer.
- This is also applicable, when after damage has occurred, the operator and/or the installer and /or the maintenance company cannot supply a fully documented list of procedures relating to the erection, testing, maintenance and SOP's of the escalator.

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## 2.4 Dangers, that are associated with the gear box

Our gear boxes are at the cutting edge of technology and are delivered in a safe operating configuration. Any changes made by that customer or his operative that may affect the inherent safety of the escalator drive are not permissible

## 2.5 Instructions for Safe Use

If changes are observed during the service life of the gear box, e.g. wear, ageing etc. then the machine should be serviced and the changes dealt with, according to this OMS Operating Manual.

The gearbox may only be opened by OMS at our factory site; the warranty will otherwise become invalid.

## 2.6 Requirements and Qualification - Installation and Maintenance Personnel

All installations, maintenance work and repairs on the electrical parts of the machine may **only** be carried out by qualified personnel.

Qualified personnel are such who having studied for qualifications, or are experienced, or have received instruction and have the knowledge relating to the relevant standards and directives, safety regulations and local knowledge required to install and maintain the machine and to be able to recognise and assess the risks appertaining this machine. (Qualified Personnel, as defined in IEC 364).

OMS recommend that the technical personnel acquaint themselves with the machine before it is erected and taken into service. Please read the General- and Maintenance Instructions carefully, these instructions will aid you to find mistakes and technical deficiencies during the installation and operating life of the machine.

## 2.7 General Information

Should damage occur during transport, or should the machine appear during erection to have errors or be damaged, please contact OMS and inform us of the damage or error.

In case of damage caused by water, please contact OMS.

A decision as to whether the damage or error can be rectified on site or not, can first be taken after the customer has contacted OMS. OMS will then decide if the machine can be taken into service or whether the machine should be returned - with the original packaging – to OMS.

Please retain the original packaging until after the machine has been taken into service.



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## 3 Installation

### 3.1 Assembly

Prior to installation, the intended frame or foundation upon which the gear boxes are to be installed must always have been calculated and proved adequate.  
The frame must be rigid enough to withstand all and any bending and torsional forces that may occur during operation.

Fix the gear box in the position as in the order using the four mounting holes in the gear unit base. Using the through-holes in the support frame and bolts and nuts to ensure secure attachment is recommended.



**Bolts:** *M 20 quality 12.9*  
**Torque:** *550 Nm*  
**Max. allowed unevenness of the surface :** *0,05mm*  
If necessary, use shims to achieve the required evenness.

### 3.2 Before commissioning:

Exchange the labelled sealing plug on the Gearbox Casing with the supplied Oil Dipstick or the supplied Air Bleeder Valve. Take care to observe the correct positioning of the Gearbox. Retain the sealing plug for possible future transportation of the Machine.

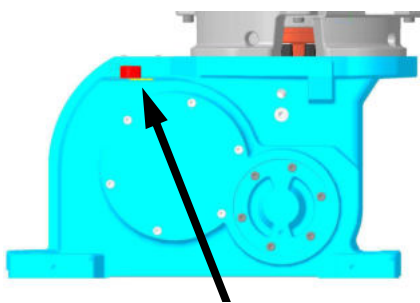


Fig. 1 Screw plug



#### Annotation:



The Gearbox has been sealed against oil leakage during transport. The Gearbox is airtight due to the sealing plug(s). If the Gearbox were to be taken into use with the sealing plug(s) in place, then excess pressure may build up in the Gearbox, eventually causing the Gearbox to leak – oil will be pressed out through the Shaft Gaskets.  
The Oil Dipstick does not seal the gear box.

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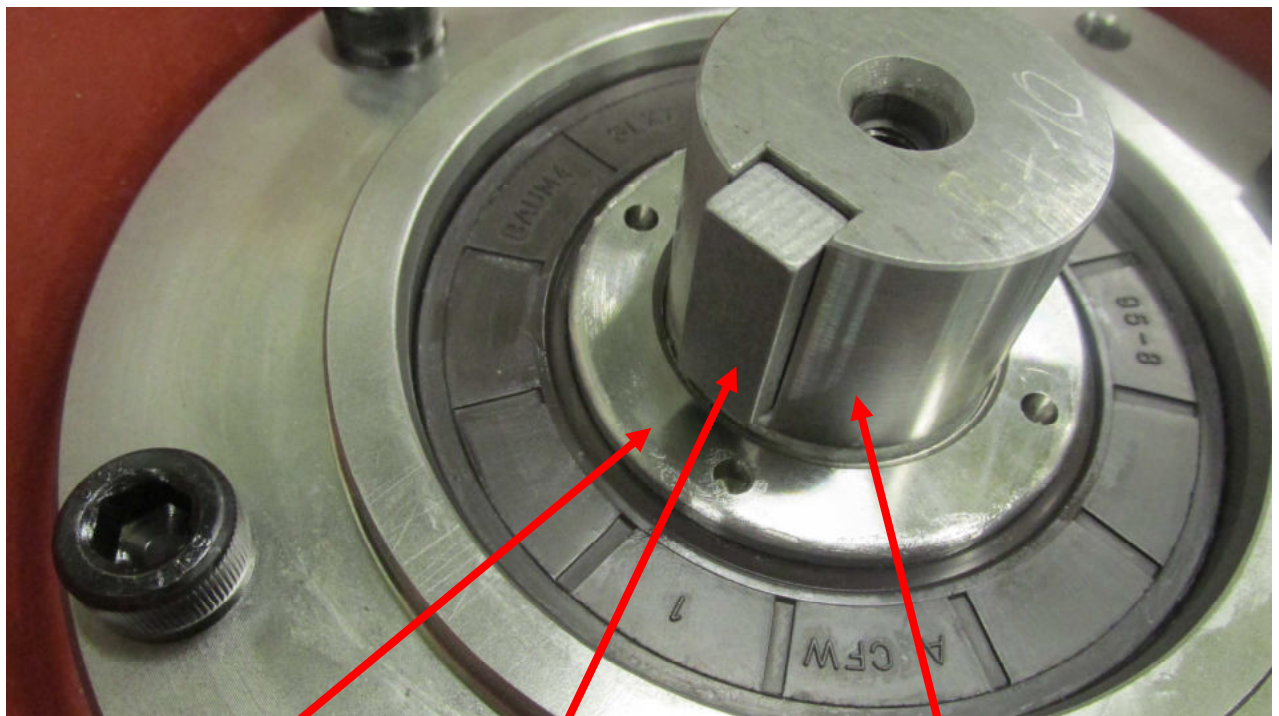
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## 3.3 Mounting the coupling or brake drum

### 3.3.1 Short Hypoid pinion

Delivery conditions :

Without coupling or brake drum



Round nut

Key

Hypoid pinion / Driving shaft

Brake drum :

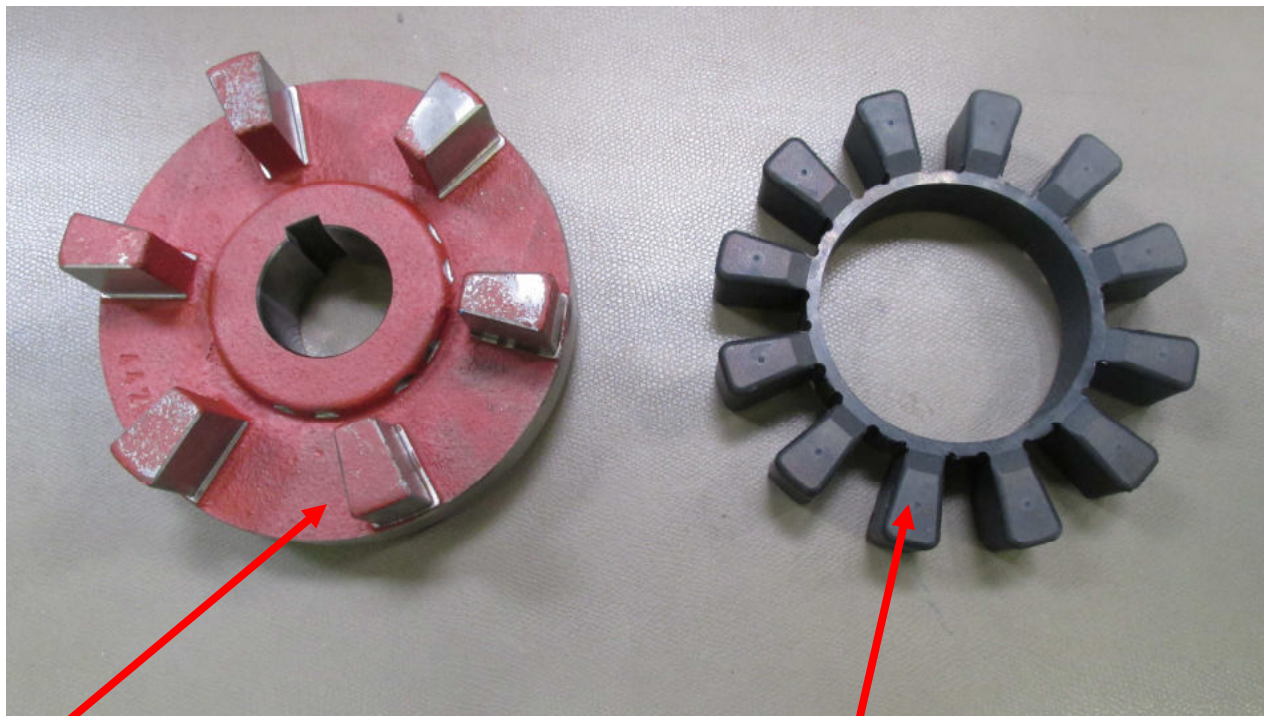
Bild

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Coupling :

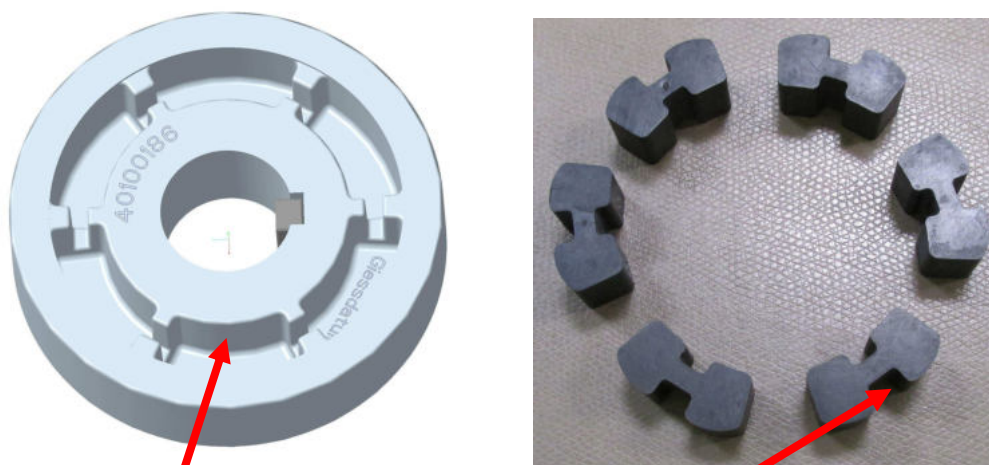
## OMS- claw coupling A:



Coupling flange

Coupling buffer ring

## OMS- claw coupling B:



Coupling flange

Coupling buffer



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Mounting the coupling / brake drum:

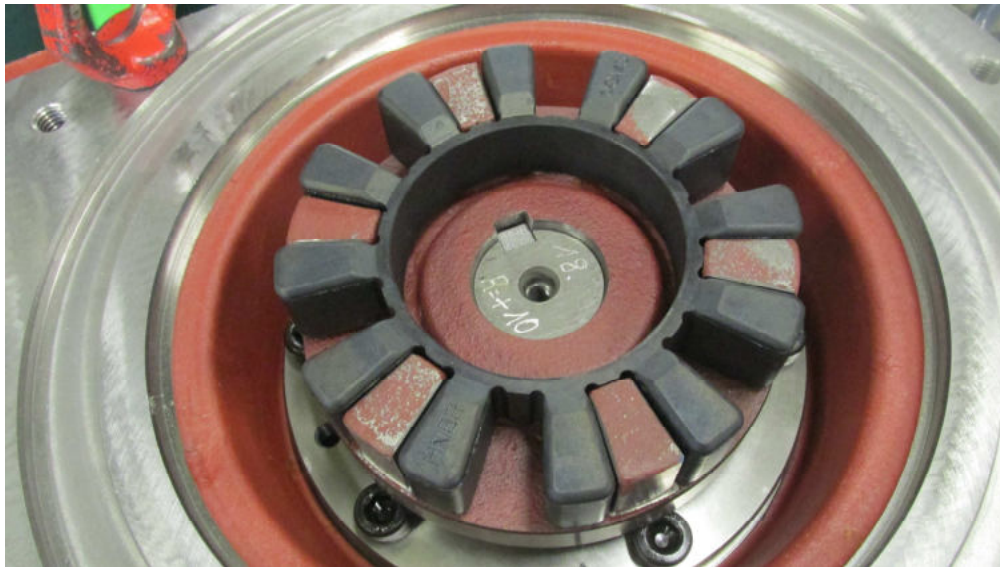
Insert the key into the driving shaft or check the correct mounting

Heat up the coupling flange to approx. 110°C

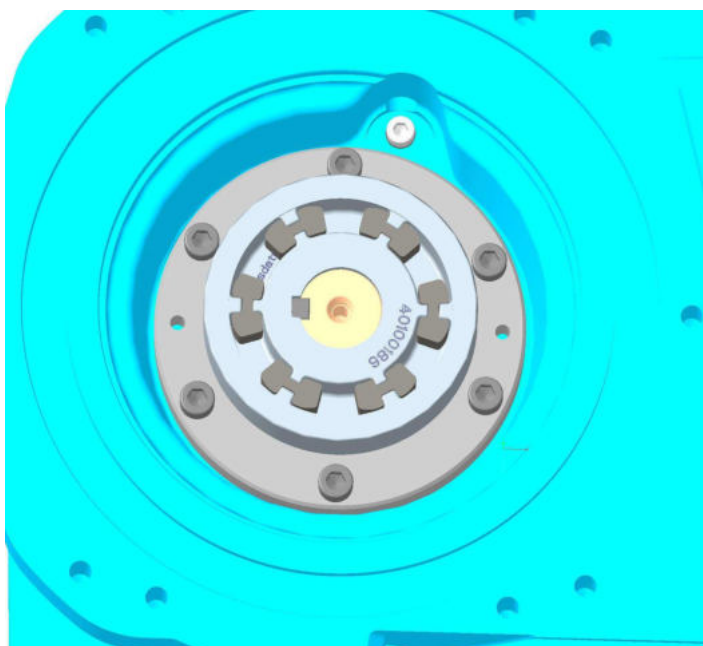
Put the heated flange onto the shaft and slide it down until stop (round nut)

After cooling down the flange insert the coupling buffers / ring

OMS- claw claw coupling A:



OMS- claw coupling B:



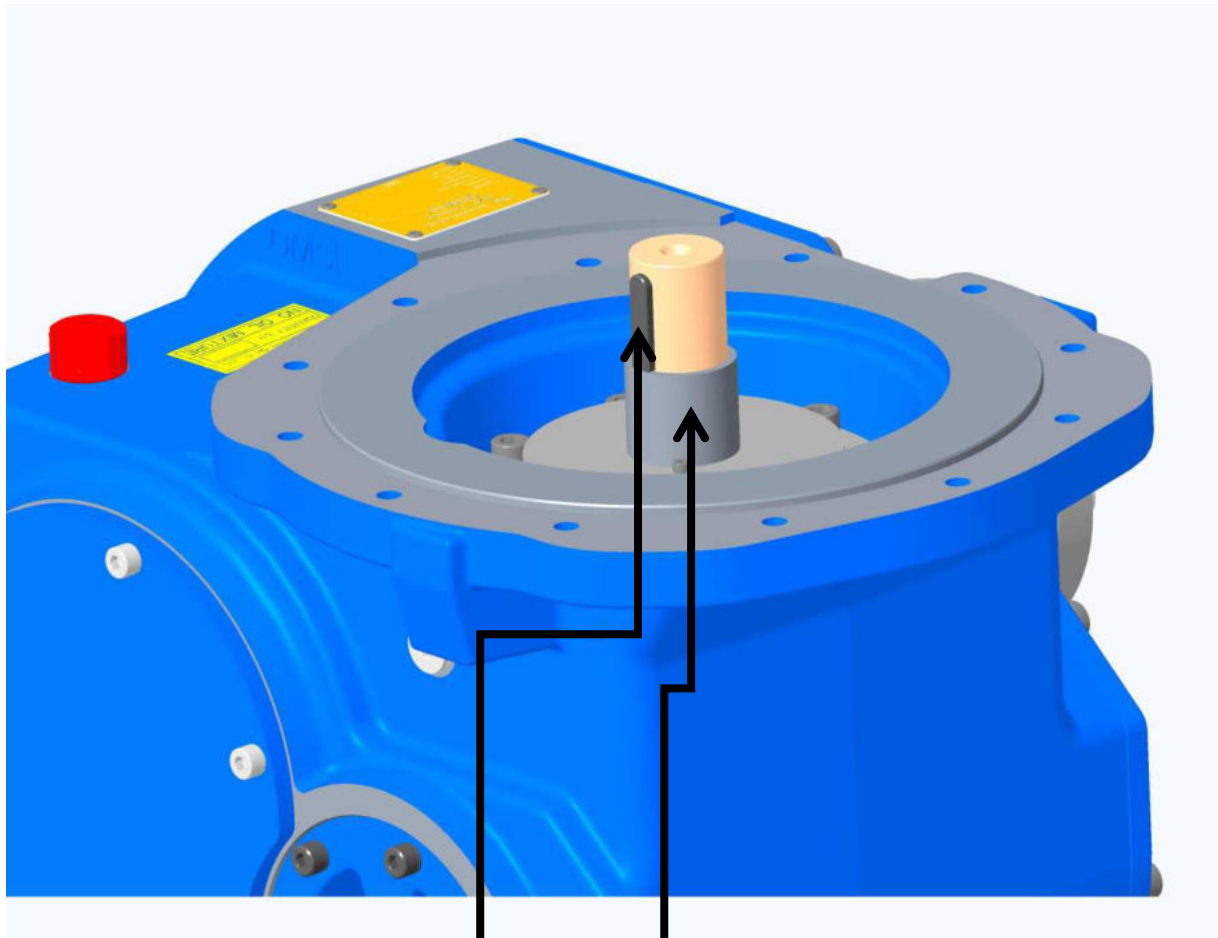
# Set up Instructions EC2-15.1

(Technical changes reserved – Last changes 2/2021 )



## 3.3.2 Long Hypoid pinion

Delivery condition



Check the correct mounting of the key and the sleeve.

Heat up the brake drum for better mounting. Put the brake drum onto the shaft and push it until the stop.

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## 4 Transport and Storage

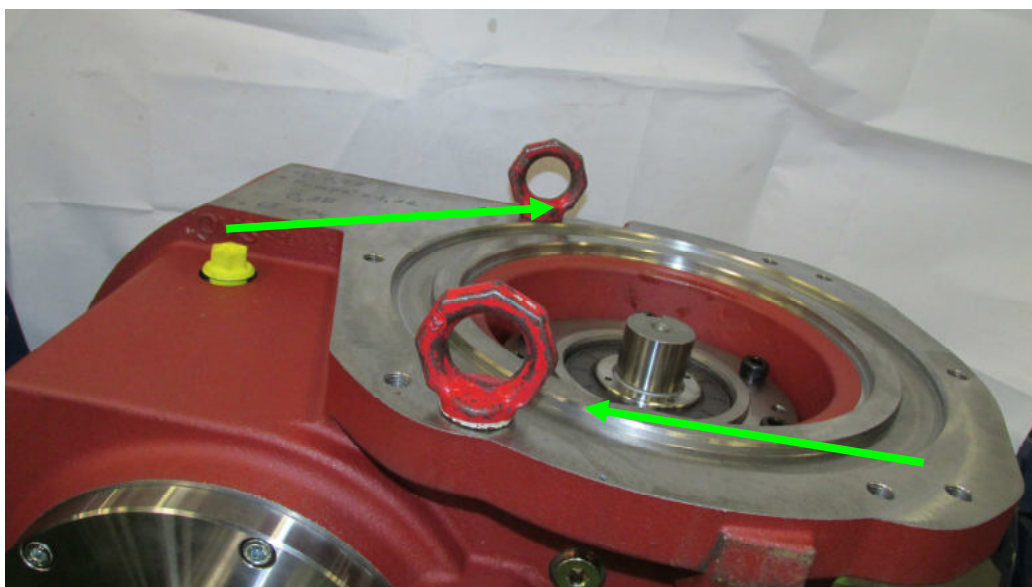
### 4.1 Transport

All machines are inspected and passed prior to leaving our factory site. When you accept delivery of your machine, please check the packaging for signs of exterior damage. If you find damage which appears to have been caused in transit, then please document this damage in the presence of the delivery agent. The machine may not be taken into service.

The Machine leaves the OMS factory in an Oil tight state. If the Machine has to be transported after having been installed, then the oil Dipstick and/or Air Bleeder Valve must be removed and replaced with the original OMS Oil Sealing Plugs. If the plugs are not available, please order new sealing plugs from OMS.

Gearbox weight : approx. 228 kg

### 4.2 Lifting the machine



**Always use the appropriate lifting tackle to lift the elevator machine, otherwise it may fall!**  
**Only high strength eyebolts may be used to lift the gear unit!**  
The gear housing is equipped with threaded holes for eyebolts (M12).

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## 4.3 Storage

The gear box must not be stored outside and may not be exposed to outdoor weather conditions. If it is planned to store the gear box for a longer period of time before installing it, then the measure must be undertaken to ensure an adequate conservation of the gear box.

### A) Up to 3 Months Storage:

No special storage requirements.

### B) For storage up to 18 months:

If it is planned to store the gear box for a longer period of time before installing it, then the gear box can be ordered with the optional conservation kit. The gear box is then treated in the OMS factory and packed in a humidity proof yellow plastic foil.

If this wasn't the case, then:

- At the latest, after six months Storage the gear box must be filled to the highest bolt hole with oil.
- **Warning: Oil Type: See the yellow label; only use one sort of Oil.**
- After filling with Oil, the gear must be packed in a humidity proof (yellow) foil: (this foil can be ordered from OMS)
- Dry Storage is required

Before the gear box is installed:

- **Reduce the Oil Level!** to the standard level
- Install the gear box (Ref. Chapter 5. Preparing for use)

### C) Longer than 18 Months Storage:

Optional factory conservation or procedures as in: **B) Up to 18 Months Storage**  
Dry Storage is required.

Before the Machine is installed:

- Change all the Gearbox Oil. Take care to use the correct type of Oil and **observe the Oil Level** as outlined under: 5.3.1 and 5.3.2.



**After a lengthy storage period, the manufacturer's warranty will have run out. If a further warranty period is required, then the Machine may be returned to OMS to be refurbished (new Bearings etc.), this will incur some expense for the customer.**