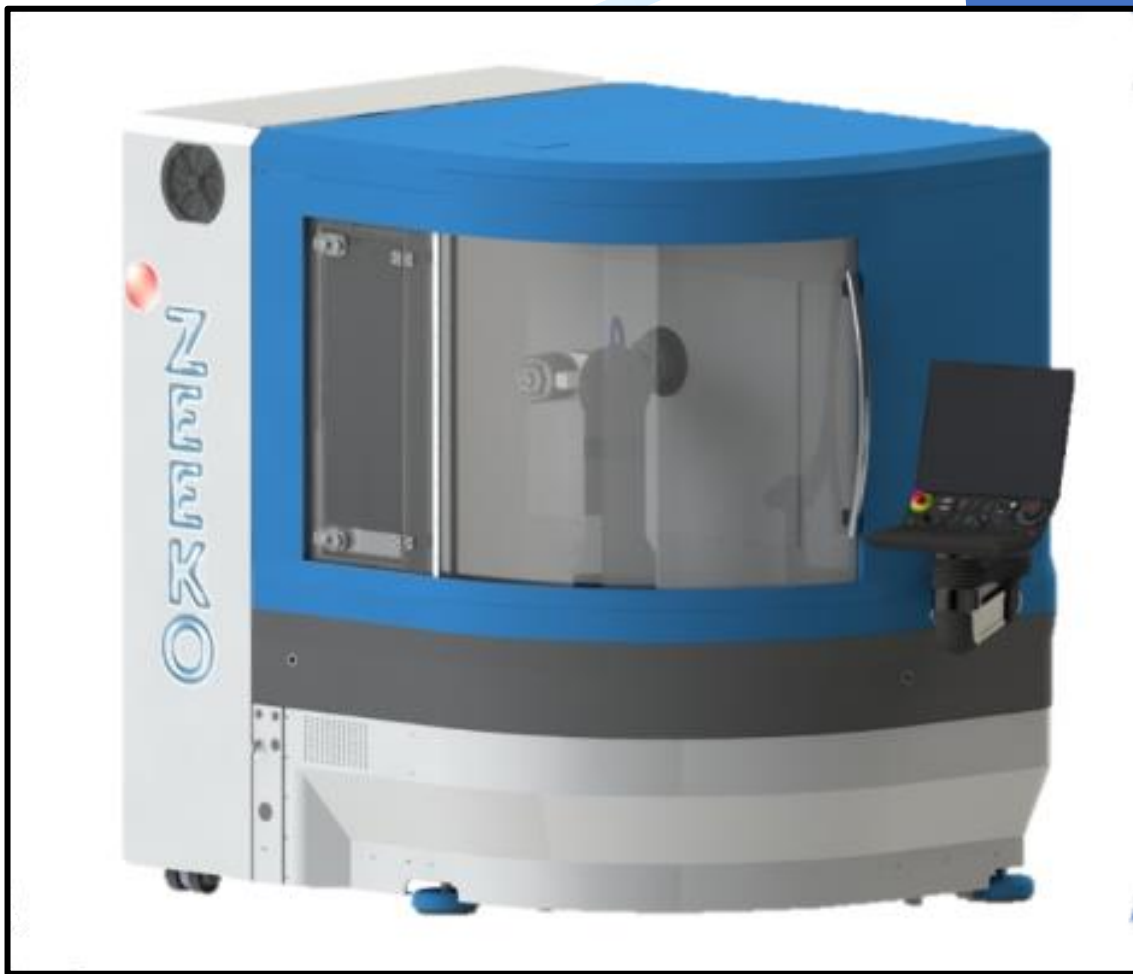


## *Transport & installation manual*



IRP200 MkII Fanuc  
Linear 7 Axis

*Version 7, Rev a*

*June 2024*

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## Liability Statement

Zeeko (hereinafter referred to as “the Manufacturer”) warrants that the CNC machines are free from defects in materials and workmanship for a period of one year from the date of delivery. The Manufacturer will repair or replace, at its option, any defective CNC machine or part thereof, provided that the CNC machine is returned to the Manufacturer, or an authorized service engineer site visit is arranged, within the warranty period.

This warranty does not cover normal wear and tear, damage caused by improper installation, operation, maintenance, or modification, or any damage resulting from misuse, abuse, negligence, accident, or natural causes.

The Manufacturer’s liability under this warranty is limited to the repair or replacement of the defective CNC machine or part thereof, and does not include any incidental or consequential damages, such as loss of profits, loss of production, loss of data, or injury to persons or property. The Manufacturer disclaims any implied warranties of merchantability or fitness for a particular purpose, and any other warranties not expressly stated herein.

The Manufacturer is not liable for any direct, indirect, incidental, or consequential damages arising from the use or inability to use the CNC machines, whether based on contract, tort, or any other legal theory, even if the Manufacturer has been advised of the possibility of such damages. The Manufacturer’s maximum liability under any circumstances shall not exceed the purchase price of the CNC machine.

Some jurisdictions do not allow the exclusion or limitation of certain warranties or damages, so some of the above exclusions or limitations may not apply to you. This liability statement gives you specific legal rights, and you may also have other rights that vary from jurisdiction to jurisdiction.

By purchasing, installing, operating, or using the CNC machines, you agree to be bound by the terms and conditions of this liability statement. If you do not agree with this liability statement, do not purchase, install, operate, or use the CNC machines.

## Preface

Dear Customer,

This Operation Manual details the procedures required for the transport and installation of your IRP200 machine.

Please take time to read the manual carefully and pay particular attention to the safety instructions for this manual which are detailed in [Safety considerations](#).

With the aid of this manual, you will perform the following steps:

- Systematically prepare for the installation of the machine, see [Machine installation requirements](#).
- Transport and install the machine safely, see [Transport](#) and [Installation](#).
- Connect the machine correctly, see [Supply connections](#).
- Commence operation of the machine, see [Operation start-up](#).

It is therefore advised that you always keep this manual in the immediate vicinity of the machine, readily available for consultation.

We wish you success and great results with your IRP200.

## Safety considerations

The following signs may be used throughout the manual to depict areas of safety or general instruction. Please make yourself aware of these signs and take careful consideration when carrying out the specified maintenance tasks.



**WARNING:** Identifies a potentially dangerous situation which may cause loss of life, serious harm or severe damage.

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**ATTENTION:** Signifies a potentially dangerous situation which may cause injury or severe damage.

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**NOTE:** Signifies importance or attention as something to assist memory or communicate a brief message.

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**TIP:** Specifies information that could be useful and save you unnecessary time and effort.

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## Machine installation requirements

### Workspace requirements

#### Floor requirements

- The installation area for the machine must be level (floor unevenness 3 mm/m<sup>2</sup> maximum) and preferably isolated from vibration.
- The conditions must be such that the machine can rest completely on all 5 levelling elements on the floor.
- When selecting the installation area, avoid placing the machine on a step, drain, etc.
- The bearing strength of the floor must be at least 105,000 kg/m<sup>2</sup> to avoid damage to the floor substrate.
- Floor load capacity requirements must be calculated by a qualified structural engineer and must meet the relevant local regulations.

#### Room temperature

- The room temperature must be 20 °C +/- 1 °C.
- The change in temperature must not exceed 2 °C per day.
- The relative humidity should not exceed 80%.
- If necessary, provide for adequate air conditioning.

#### Storage of the polishing fluid

- Observe all regulations regarding the storage of the polishing fluid (lubricant).

#### Electromagnetic Influence

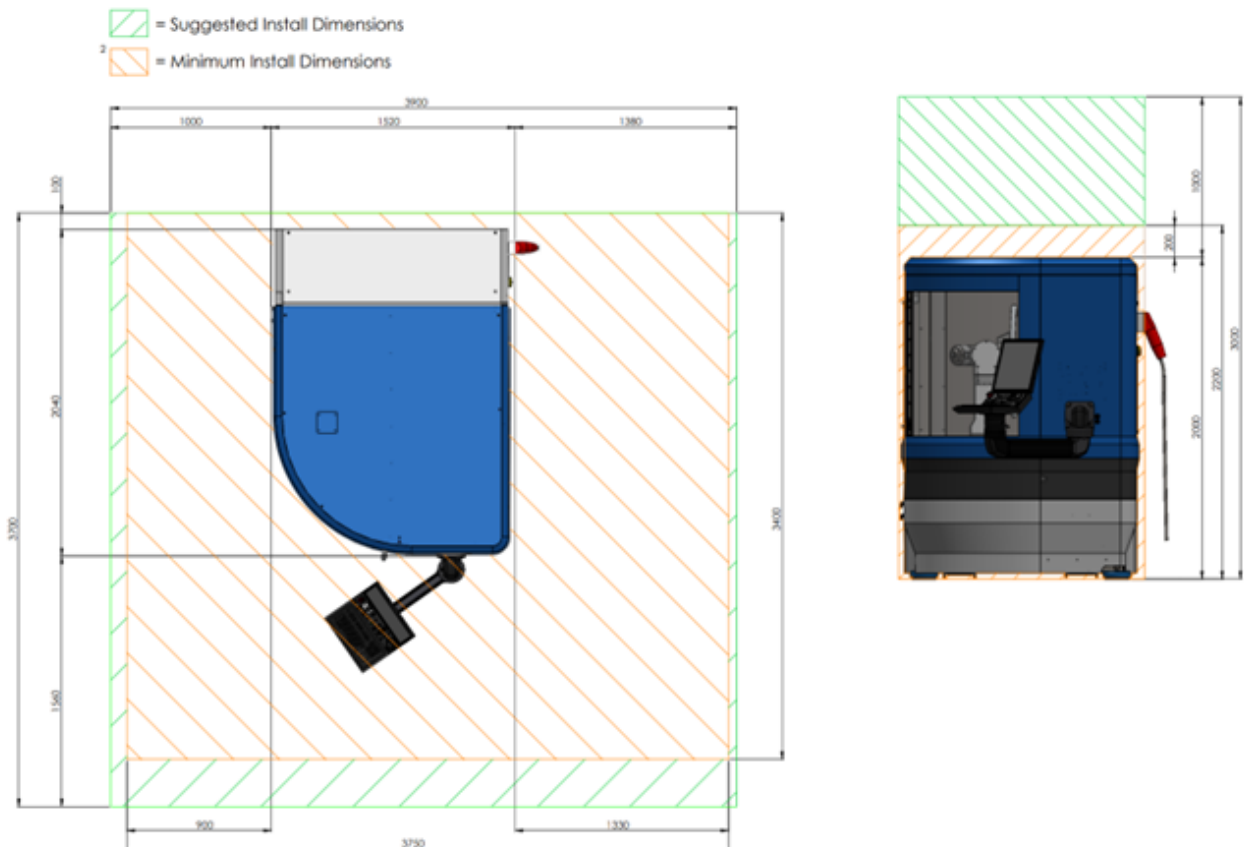
- Interference by other electric installations (high frequency) must be avoided.

## Space requirements

The installation area of the machine alone should be an area measuring approximately 3900 mm x 3700 mm according to the installation plan shown below.

This area comprises:

- The suggested installation area of the machine should be 3900 x 3700 x 3000 (Width x Depth x Height - mm).
- Work area of about 1000 mm in front of the machine.
- Walkway of about 1000 mm to the left of the machine.
- Walkway and Maintenance area of about 1380 mm to the right of the machine.
- Clearance area of about 100 mm at the rear of the machine.
- The overall height of the machine is 2000 mm – Suggested area above machine is 1000 mm (200 mm minimum).
- The minimum install area required is 3750 x 3400 x 2200 (Width x Depth x Height – mm).



## Accessibility

For maintenance work it may be necessary to have one meter (1000 mm) clearance above the machine or a facility to move the machine into another area.

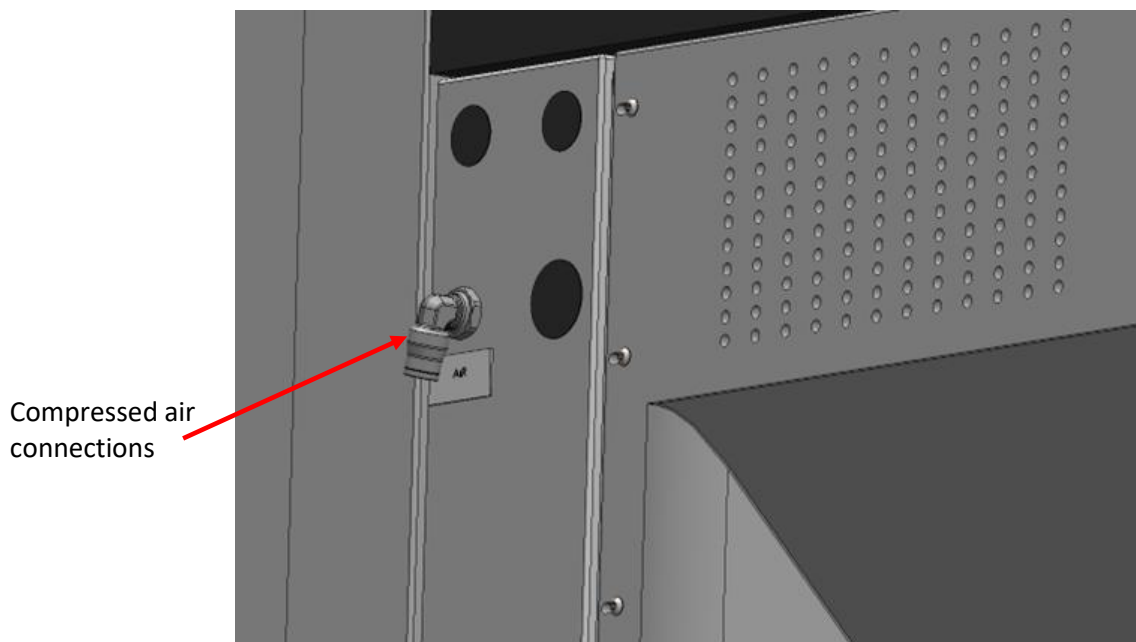


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**NOTE:** The above distances must be checked for compliance with local Health and Safety regulations.

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## Supply connections



## Power supply

The supply to the machine must be maximum 220 Vac, (50/60 Hz, 3PH+PE-plug). The installed load is 7.6 kW.



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**ATTENTION:** The machine must only be plugged into a socket which has a protective earth conductor.

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## Compressed air

The pressure at the compressed air supply must be 6 bar. The minimum pressure for operation is limited to 4.5 bar on the pressure controller within the compressed air conditioner. The supply line must be equipped with a shut-off valve and adequate water trap / refrigerator system on the mains side.



The compressed air line is connected on the left-hand side of the machine by means of a 12 mm OD (Outside Diameter) hose.

## Delivery

Machine, Console and Electrical cabinet are delivered as one unit.

- The total weight of the machine with packaging is approximately 4000 kg.
- Approximate dimensions of machine with packaging are 2760 mm x 1700 mm x 2330 mm (height).
- The pallet is constructed from treated plywood.



**ATTENTION:** Please observe all instructions for transport of the machine if you are responsible for unloading.

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**ATTENTION:** Immediately notify the carrier or Rail Company and Zeeko Ltd of any damages and other defects, e.g. missing items.

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## Transport



**ATTENTION:** The Transport and Installation of the machine must strictly only be carried out in the presence of Zeeko personnel.

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## Transporting the machine

Safety instructions for transport with a forklift:

- The machine should be transported on the pallet unless absolutely necessary. If necessary (for example low doors or passages) remove the machine from the pallet, see [Lifting the machine onto / from the pallet](#) and then transport using the instructions, see [Lifting and relocating the machine without a pallet](#). The machine MUST ONLY be transported with a forklift – NOT a pallet truck.
- The lift truck must have a minimum lifting capacity of 4 tonnes.
- The lift truck forks must be at least 1900 mm long.

- Note the centre of gravity shown in the images in this manual. Consider the risk of the machine tipping over.
- The lorry and the forklift must be always on level ground.
- The machine weighs approximately 4000 kg (with packing).
- Only qualified personnel should perform transport, lifting and positioning of the machine.

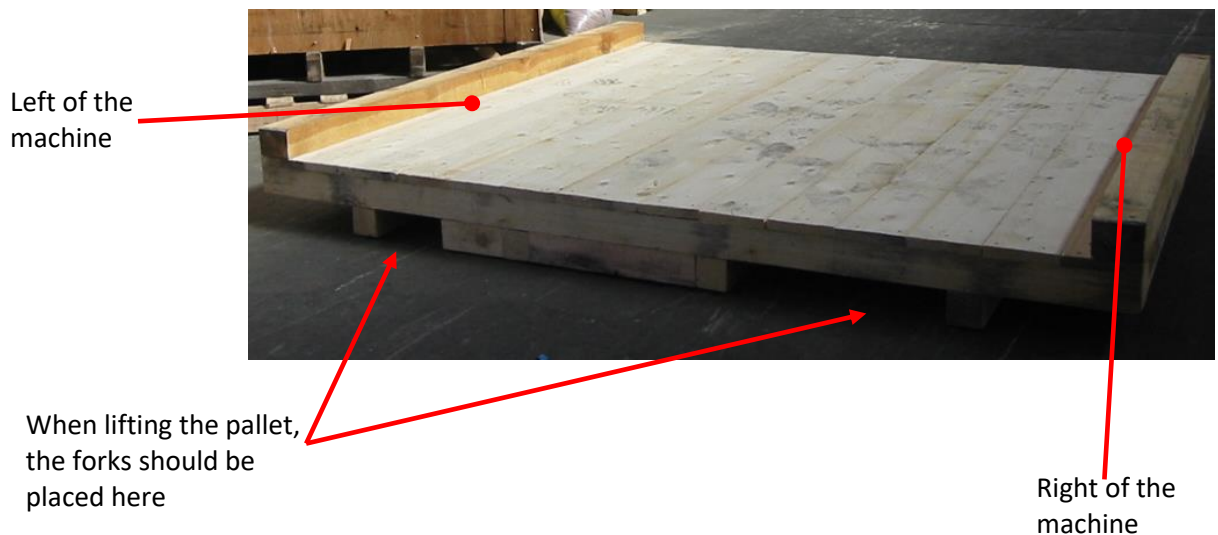


**ATTENTION:** DO NOT lift the machine using the 16 mm holes in the granite base as severe damage will be caused.

- Remove the packaging materials from the machine (shrink wrap) but do not remove from the pallet again unless necessary.
- Move the forks of the lift truck or forklift as far as possible under the pallet.
- Slowly lift the pallet and carefully move it to the installation site.



**ATTENTION:** The pallet must be lifted in the forklift zones marked in below to minimise the risk of tipping over.



### Lifting the machine onto / from the pallet

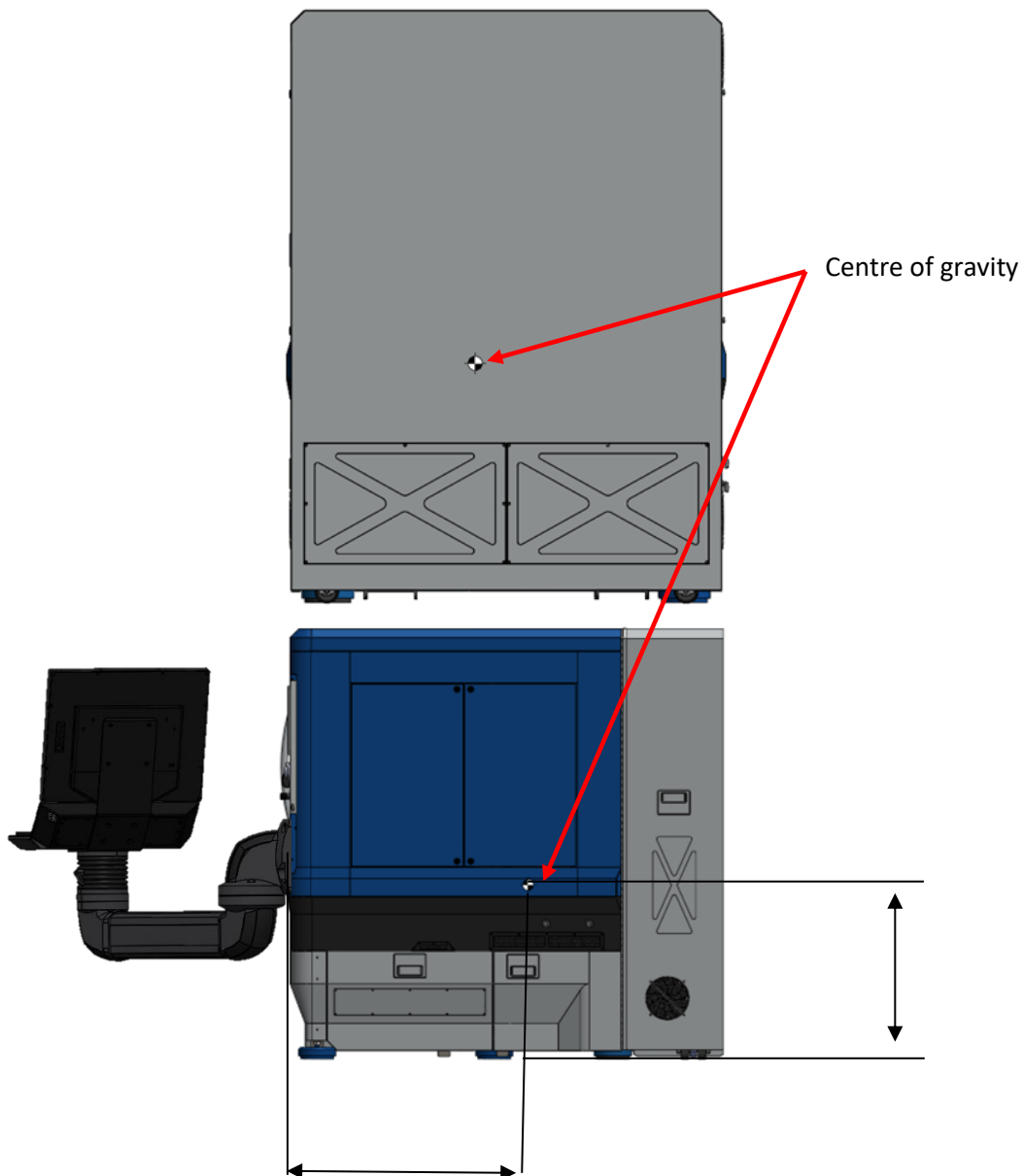


**ATTENTION:** Do NOT use pallets other than those provided by Zeeko as there is a risk of the machine tipping. The machine may be lifted without the pallet but if the machine is being relocated, it should be done so on the pallet unless necessary (low doors or similar).

### Lifting the machine from the floor onto the pallet



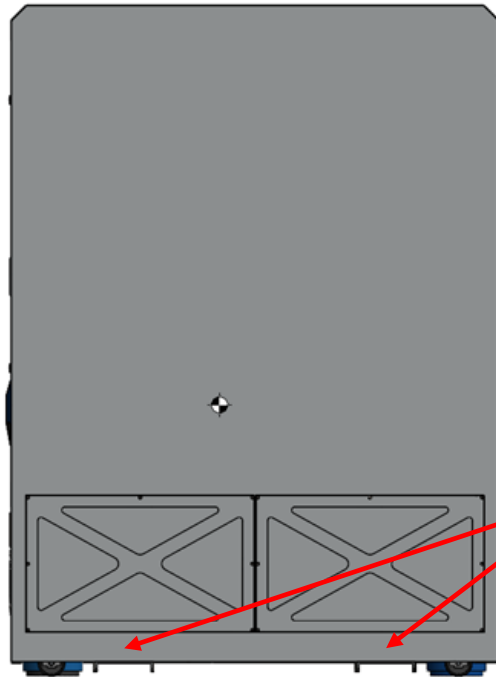
**ATTENTION:** Do NOT lift the machine using the 16 mm holes in the side of the granite base as this will cause severe damage. Please note the centre of gravity.



- Move the forks of the lift truck or forklift as far as possible under the machine.
- Slowly lift the machine.



**ATTENTION:** The machine must be lifted using the fork lift zones to minimize the risk of the machine tipping over.

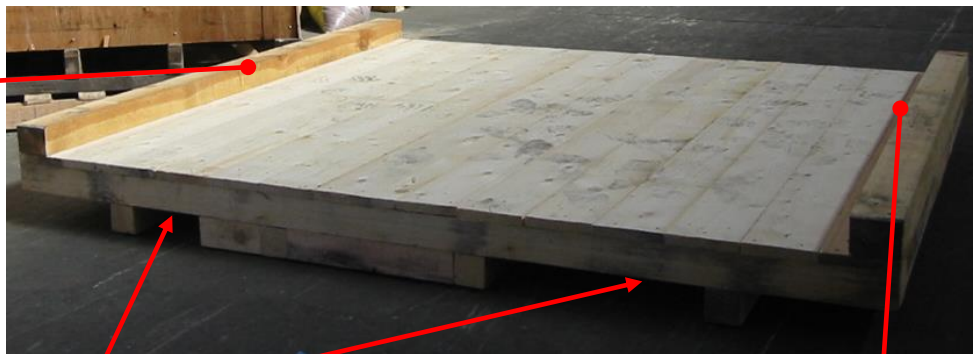


- Position the pallet under the machine.
- Carefully lower the machine onto the pallet.



**ATTENTION:** Ensure that machine is loaded onto the pallet in the correct orientation.

Left of the machine



When lifting the pallet, the forks should be placed here

Right of the machine

- Strap the machine to the pallet using the three 16 mm anchor holes on the side of the granite base.
- To eliminate movement when in transport, fit wooden blocks on the sides of the machine.

### Lifting the machine from the pallet to the floor



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**ATTENTION:** The machine may be lifted without the pallet but if the machine is being relocated, it should be done so on the pallet unless there is a requirement to move it off the pallet (low doors etc).

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**ATTENTION:** Do NOT lift the machine using the 16 mm holes in the side of the granite base as this will cause severe damage. Please note the centre of gravity, shown previously.

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- Place the pallet on the floor.
- Remove straps and wooden packaging blocks from around the machine.
- Move the forks of the lift truck or forklift as far as possible under the machine as possible.



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**ATTENTION:** The machine must be lifted using the forklift zones to minimize the risk of the machine tipping over, as described earlier.

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- Slowly lift the machine clear of the pallet.
- Remove the pallet.
- Slowly lower the machine onto the floor.

### Lifting and relocating the machine without a pallet



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**ATTENTION:** The machine may be lifted without the pallet but if the machine is being relocated, it should be done so on the pallet unless there is a requirement to move it off the pallet (low doors etc).

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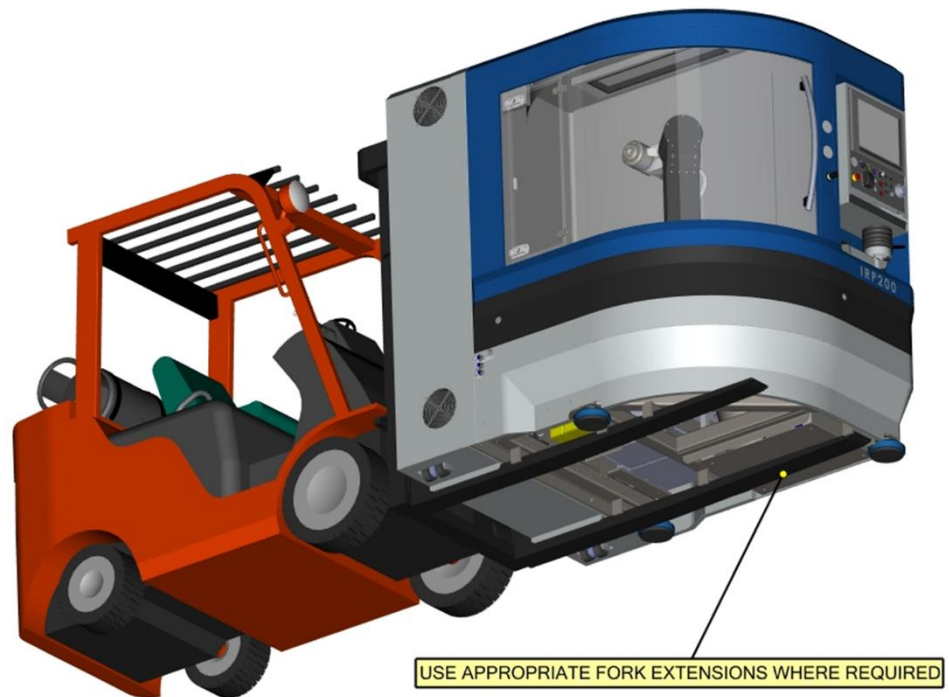
**ATTENTION:** Do NOT lift the machine using the 16 mm holes in the side of the granite base as this will cause severe damage. Please note the centre of gravity, as described earlier.



**ATTENTION:** The machine must be lifted using the forklift zones to minimize the risk of the machine tipping over, as described earlier.

If the requirement arises to move the machine whilst not on the pallet, please follow the below instructions and take great care as to avoid tipping of the machine, crushing, or trapping etc. which may lead to serious injury or death. Consider the gravity center when lifting.

The forklift truck may access the lifting zones from the front or rear of the machine, however, take notice of clearance between the truck's forks and any part of the machine paying close attention to the lower covers and console.



## Installation

### Adjusting the machine

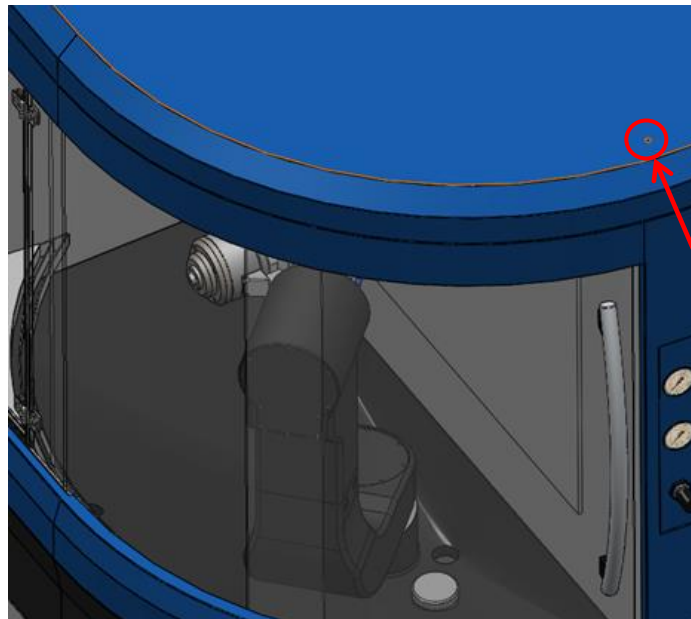


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**ATTENTION:** *The installation area must be clean and level.*

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- Mark the installation area and the position of the levelling elements.
- Level the machine with a spirit level in both directions. To do so, adjust the relevant threaded pins.
- Screw the lock nuts on the threaded pins and tighten them after the machine has been accurately aligned.
- If the doors must be opened prior to electrical connection, there is a manual override for the interlock located on the machine roof.



Manual Access  
Points to Door  
Interlocks

## Connection

### Connecting the compressed air supply

- The compressed air supply can be connected using an adequate standard type of air hose.



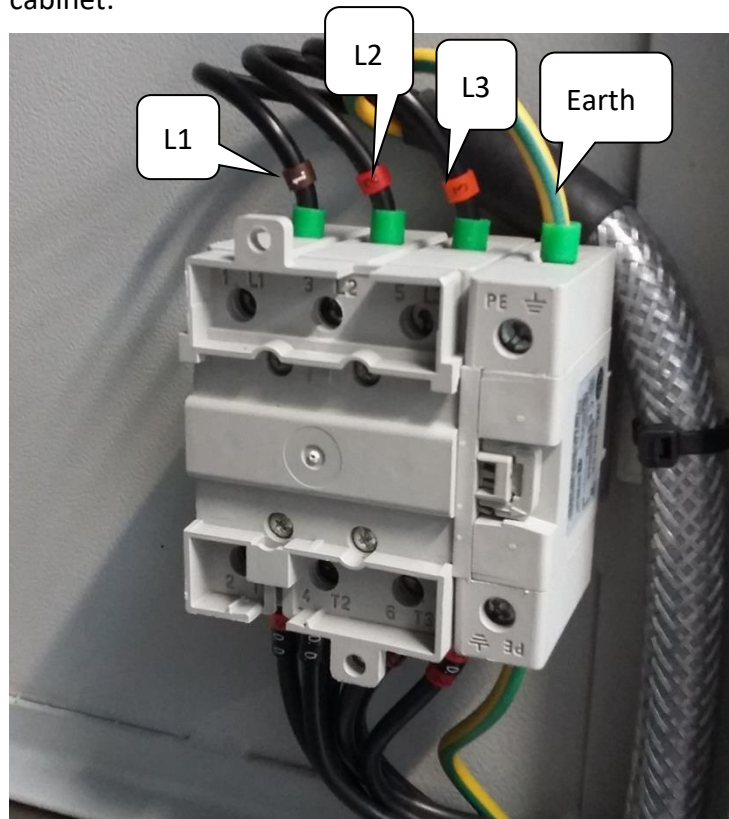
## Electrical connection



**ATTENTION:** Work on electrical parts and equipment must only be done by a qualified electrician or by duly trained personnel under the instruction and supervision of a qualified electrician, in accordance with electro-technical rules and regulations.

The machine will be equipped with a Mennekes Type 4 - 32 Amp-6H (3-pole + N + PE) plug. Connection from customer mains supply should be facilitated by the customer and fitted in line with the local electrical regulations at the site. If requested, we can recommend a suitable outlet and plug for your mains supply.

The mains cable makes connection in the mechanical and electrical cabinet.





## Operation start-up



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**ATTENTION:** Familiarise yourself with the machine prior to start-up.

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The following conditions must be met before putting the machine into operation:

- The space requirements and ambient conditions at the site of installation must be met.
- The power, and compressed air connections required by the machine must be connected.
- The machine panelling must have been mounted.
- The mechanical and electrical cabinet doors must be closed.
- The 'EMERGENCY STOP' button is unlocked, i.e. not depressed (unlocking is achieved by pulling).

The following jobs must be done prior to putting the machine into operation:

- Transport the machine to its site of installation.
- Read the transport safety instructions.
- Lift the machine off the pallet.
- Put the machine into place on the levelling elements and align it.
- Fill the polishing fluid (lubricant) supply unit.
- Connect the compressed air supply.
- Connect the machine to the power supply.