PowerCat

Made in Germany www.PowerCat.biz

Operating Instructions for PowerCat MTC 25

(MTC 25= **M**aximum **T**owing **C**apacity **25** tons

Please read this short Operating Manual before starting to work with Powercat!

Table of contents

1. General

Thank you for your purchase of PowerCat MTC 25.

This machine has undergone rigorous in-the-field testing by professional riggers for more than 3 years. It is intended to be used instead of a forklift- truck to push and pull loads on unpowered skates up to 25 metric tons/ 55.000 lbs on industrial floors such as concrete, asphalt(tarmac) or industrial floor pavement.
Please click to www.powercat.biz to see a number of applications as well as movies to illustrate the proper handling and use of it.

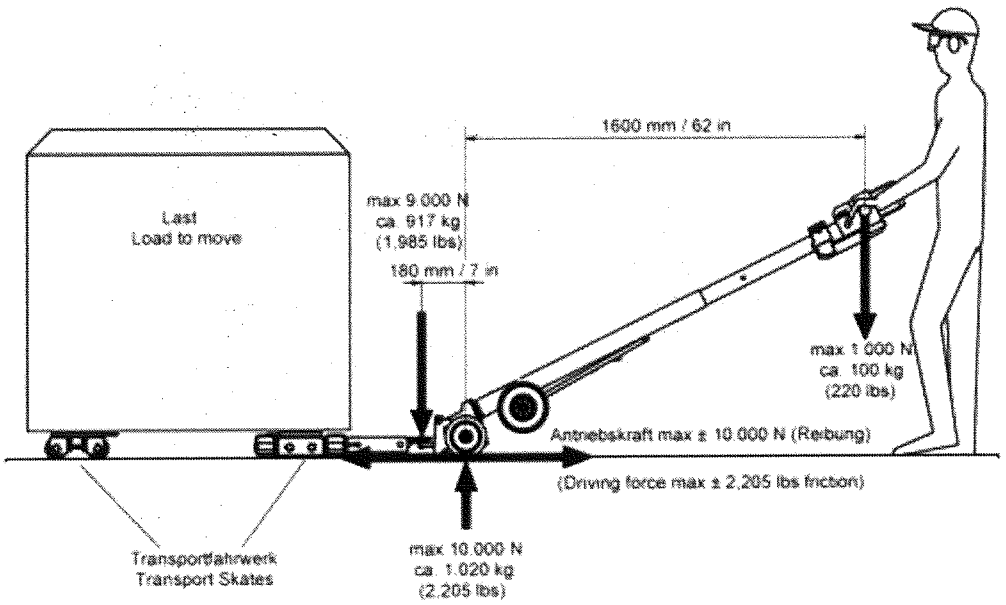
Please read the following instructions properly before starting to work with Powercat.

2. Work Principle and Function

How it works : PowerCat is a smart tool to help you move loads. The work principles are " Leverage" and "Traction". To have best results in moving it is recommended that the floor is free of dust or any liquids or grease as this would affect traction. With applying a downward force on the handles you can generate traction on the drive wheels and by pushing the switch you can move the load either forward or backward.
Sometimes it can be helpful to clean the wheels from dust and other debris with a moist cloth.

Work principle:

PowerCat Funktionsprinzip
PowerCat Work Principle



Warning:
Before working with PowerCat, please make sure that only professional and trained, skilled people operate this equipment. Before moving loads make sure to have sufficient space around you and the machine and that there are no workers between the machine and any obstacles (wall, other machine, column or others). Make sure that the load you want to move on skates is secured before and after movement by hardwood wedges to prevent from uncontrolled rolling.

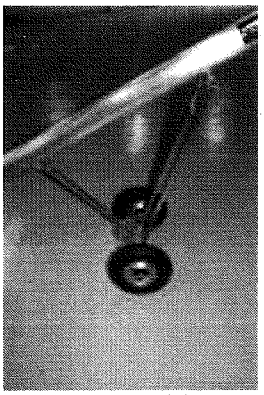
PowerCat is designed to move loads on level, even floors.
You are not to use PowerCat on slopes or grades.

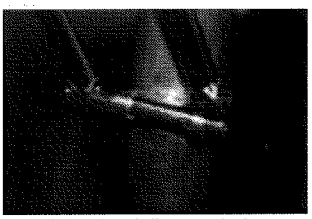
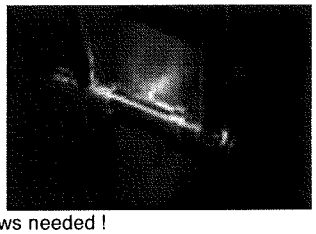
3. Scope of Delivery

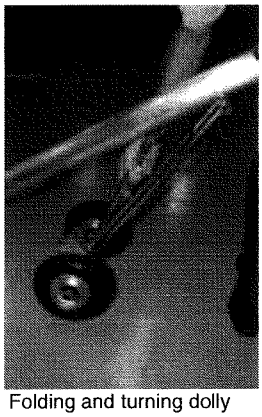
PowerCat MTC 25 is delivered with the following accessories:

Position	Quantity	Description	Version
1	1	PowerCat basic machine	MTC 25
2	1	2 wheel folding auxilliary Dolly- "Landing Gear" with magnet	
3	1	Adjustable Docking- Head	
4	1	Adaptor to connect with GKS or JUNG skates	

Auxiliary Dolly (Pos. 2)
Hold Powercat upright with bottom on the rubber pad and attach the folding dolly by inserting the holes to the corresponding bolts. See pictures below.
This dolly caters for easy transport to the site.
By folding and turning the dolly forward it clicks to the maintube and is held by a magnet.

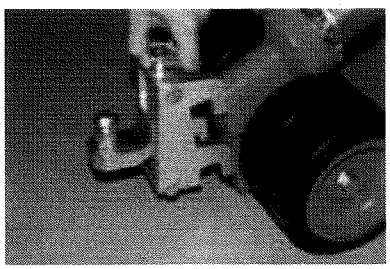

Installed 2 wheel dolly

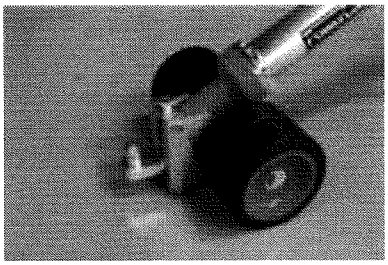


Attaching the dolly – no bolts or screws needed !


Folding and turning dolly

Docking Head (Pos. 3)

The docking head is inserted onto the 4 bolts. The spindle is intended for height adjustment both for the skate as well as for a convenient working height of the operator.

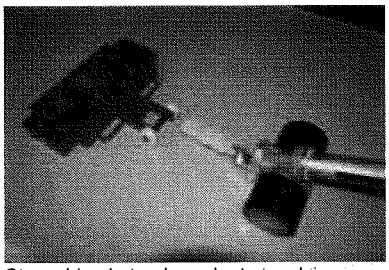




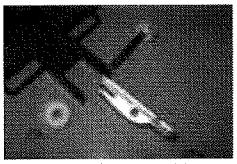
For pushing a load directly on a transport skate the bolt can be unscrewed.

Adaptor to connect to the transport skate (Pos. 4)

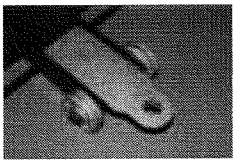
The pictures below show how the adaptor is connected to the steerable transport skate instead of the tow bar.
After connecting PowerCat to the transport skate by the adaptor and if there is load on the transport skate the dolly can be folded and turned forward to click to the maintube by magnet.
Always make sure that the load is placed directly and in full on the transport skate to have best load discharge on the drive wheels of PowerCat.
Please see pictures for illustration.



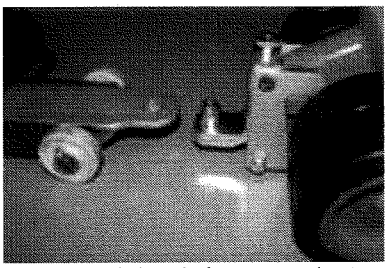
Steerable skate plus adaptor and PowerCat



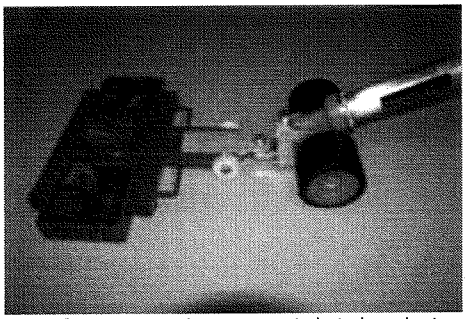
Dismantled axle with adaptor



Installed adaptor



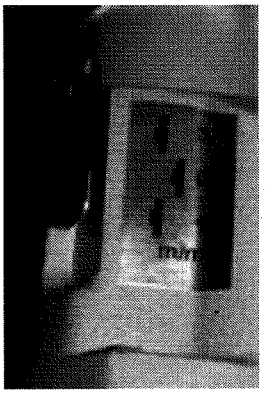
Adaptor and skate before connecting to PowerCat



PowerCat connected to transport skate by adaptor

4. Operation of PowerCat

Depending on the weight to be moved you can preselect 2 operating speeds according to the scheme on the left side of the drive motor. Just push the black button inwards and shift to desired position.

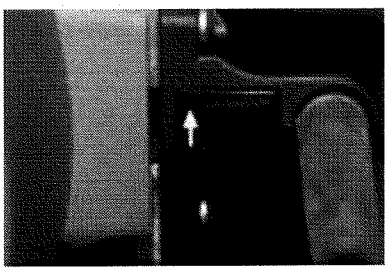


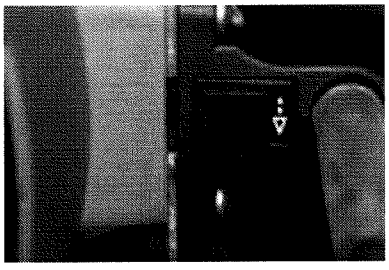
1. Gear from 0 up to max. 3,5 m/ Minute
2. Gear from 0 up to max. 10 m/ Minute

The speed is controlled electronically and increases by further pushing the trigger on the front side of the handle.

As a basic rule we recommend: The higher the weight the lower the speed !

Per switch on the **right side handle** you can choose the direction for movement - **Forward or Reverse –** see pictures below!





The trigger on the front side of the handle switches ON PowerCat.

Warning: Always make sure that there are no persons in the direct working environment while working with Powercat!

Depending on the weight you want to move and depending on the ground conditions you have to apply a downward force on the handles to generate traction on the drive wheels by simultaneously pushing the trigger for the drive motor. If the downward force is not enough and the load is not moving you can telescope the maintube by 50 cm/ 20 in. to increase leverage. Loosen the black screw on the maintube and pull out the telescope to the marked position and fasten black screw again.

Warning: Before starting to operate make sure this black screw is securely inserted and fastened. Otherwise severe damage and injury can result by the turning of the drive motor due to the high torque.

PowerCat MTC 25 is intended to move up to max. 25 tons.

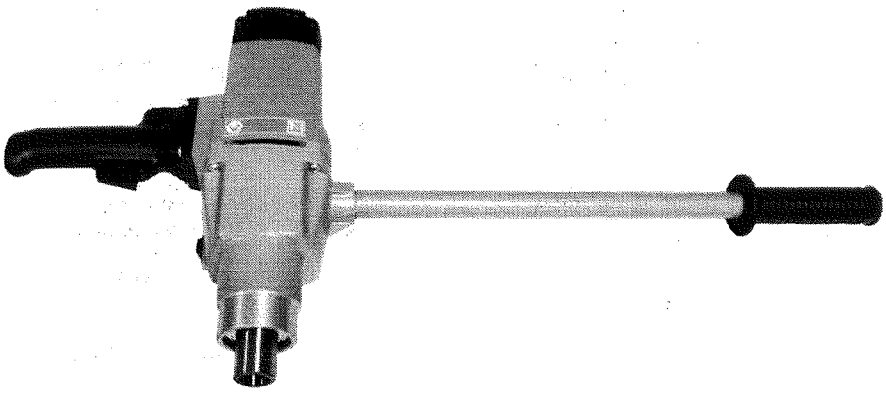
Always stick to caution, work safety !

5. Technical Data of the drive motor

EIBENSTOCK
Elektrowerkzeuge

D

GB Operating Instructions



AMM 32 electronic

Operating Instructions

Important Safety Instructions

Important instructions and warning notices are allegorized on the machine by means of symbols:

Before you start working, read the operating instructions of the machine.

Work concentrated and carefully. Keep your workplace clean and avoid dangerous situations.

In order to protect the user, take precautions.

During work you should wear ear protectors, goggles, protective gloves and sturdy work clothes!

wear ear protectors

wear goggles

wear protective gloves

Specifications

Hand-Held Drilling Machine EHB 32 / 2.2 R R/L

Rated voltage:	230 V ~	110 V ~
Power input:	1800 W	1800 W
Rated current:	8.7 A	17.8 A
Order number EHB 32 / 2.2 R R/L	0152H	0152K

Frequency:	40 - 60 Hz
Max. basket diameter:	32 mm
Spindle connection:	MT 3
Protection Class:	II
Degree of Protection:	IP 20
Net Weight:	about 6.4 kg
Interference Suppression:	EN 55014 and EN 61000

Speed	Rated speed
●	0 - 140 rpm
●●	0 - 470 rpm

Subject to technical alterations!

Available special accessories:

Item	Order No.
Taper mandrel B18/MT 3	33122
Drill drift size 3	33220
Scroll chuck B18 max. clamping diameter 16 mm	33342
Reducing Sleeve MT 3 – MT 2	33621
Magnetic drill rig B32	09506
mount MT 3 – Ø 19 mm weldon	33125

Supply

Hand-held drilling machine, operating instructions, drill drift size 3 and additional handle in a cardboard box

Application for Indented Purpose

The hand-held drilling machine **EHB 32 / 2.2 R R/L** is designed for professional use. Together with the appropriate drills it is used for drillings in steel, wood, plastics etc.
The tool diameter of twist drills should not exceed 32 mm.

Safety Instructions

Safe work with the machine is only possible if you read this operating instruction completely and follow the instructions contained strictly.
Additionally, the general safety instructions of the leaflet supplied with the tool must be observed. Prior to the first use, the user should absolve a practical training.

If the connection cable gets damaged or cut during the use, do not touch it, but instantly pull the plug out of the socket.
Never use the tool with a damaged connection cable.

Prior to drilling in walls and ceilings, check them for hidden cables, gas and water pipes and other media.
Check the working area, e.g. using a metal detector.

The tool must neither be wet nor used in humid environment.

- Do not use the tool in an environment with danger of explosion.
- Do not use the tool standing on a ladder.
- Do not drill into asbestos-containing materials.
- Do not carry the tool at its cable, and always check the tool, cable and plug before use. Have damages only repaired by specialists. Only insert the plug into the socket when the tool switch is off.
- Modifications of the tool are prohibited.
- When the machine runs outside, always use a protection switch

(30 mA max.) against fault current.

- Plug and switch the machine off if it is not under supervision, e. g. in case of putting up and stripping down the machine, in case of setting up and striking, voltage drop or when fixing or mounting an accessory.
- Switch the machine off if it stops for whatever reason. This way, you avoid that it starts suddenly and not under supervision.
- Do not use the machine if one part of the housing is damaged or in case of damages on the switch, cable or plug.
- While working always lead the line cord and extension cord to the back away from the machine.
- Electric tools have to be inspected visually by a specialist in regular intervals.
- Do not touch rotating parts.
- The tool may be used only in two-hand operation or with the drill rig.
- Keep the handles dry, clean and free of oil and grease.
- Persons under 16 years of age are not allowed to use the machine.
- During use, the user must wear goggles, ear protectors and protective gloves.



- **During use, hold the machine with both hands and maintain a safe standing position. Always consider the reaction moment of the tool.**
- **Always work with concentration. Always work in a carefully considered way and do not use the tool if you are lacking consideration.**

For further safety instructions, please refer to the enclosure.

Electrical Connection

Before starting the machine, please check the correspondence between voltage and frequency against the data mentioned on the identification plate. Voltage differences of + 6 % and – 10 % are allowed.

The Hand-Held Drilling Machine is made in protection class II. Only use extension cables with a sufficient cross section. A cross section which is too small could cause a considerable drop in performance and an overheating of machine and cable.

Additional Handle

When using the machine handheld than only with its additional handle.

For mounting, screw it in the thread on the gearbox housing and fix it tightly.

Tool Protection

Wrong handling can cause damages on the tool and injuries of the user. Therefore, the following instructions should be observed:

Do not allow blocking of the tool.

Only use original accessories made by EIBENSTOCK.

Switching on and off

Short-Time Operation

Switching-on: press the on/off switch
Switching-off: release the on/off switch

Permanent Operation

Switching-on: press the on/off switch and, keeping it pressed, engage the lock-on button
Switching-off: press the on/off switch and release it again

Attention!
Only press the lock-on button when using a stand. In case of every stop of the machine, the lock-on button has to be released immediately by pressing the on/off switch. Consequently, you can avoid an unintentional restart of the machine (physical hazard).

The machine is equipped with two selecting wheels, which allow an adjustment of load speed and torque.
These are in the intermediate block between handle and motor housing.
The speed adjustment (SPEED) is on the same side like the arrestor button.
Torque adjustment (POWER) is on the opposite.
Additional the machine has a change-over switch for reverse action.
It is on the top side between the selecting wheels.
Use the change-over switch only when the spindle is stopped.

Mode of Action of Speed Adjustment

Position "I" means minimum, position "IIIII" maximum speed.
Please pay attention that a permanent use with reduced speed can cause an overload because the motor then gets less cooling air and therefore the machine will be overheated much faster.
So always use preferably the mechanical speed selection for changing the speed.

Mode of Action of Torque Adjustment

As well as with the speed adjustment position "I" means minimum and "IIIII" maximum. Position "I" is 1.4 times and position "IIIII" is equal to the 2.8 times of the rated torque.

Changing Gears

The machine is equipped with a mechanical two-speed gearbox.
Select the required speed by pressing-in, shifting and engaging. The position of the lower speed is in direction of the working spindle. Change the speed only when the machine is not running, and support the speed-changing by slightly rotating the work spindle.

Overload Protection

In order to protect the operator, the motor and the drill bit are equipped with a mechanical, electronic and thermal overload protection.

Mechanical: If the drill bit is suddenly blocked in the hole, a clutch will slip disengaging the bit from the motor.

Electronic: In case of overload due to too large feed force, the electronic will cut OFF the machine. After discharge and switching ON you can continue drilling again.

Thermal: By means of a thermal element, in case of continuous overload, the motor is protected against destruction. In fact, the machine switches OFF automatically and only can be switched ON again after a certain cooling period (about 2 minutes). This cooling period depends on the warming of the motor winding and ambient temperature.

Instructions

Only use faultless and sharp drilling tools and avoid that the machine stops due to overload.

Mounting the tool

Disconnect the plug from the mains before every tool change!

Twist drills:

- Drills with MT 3 connection can be directly fit in the drill spindle.
- For twist drills with MT 2 connection use a reducing sleeve MT 3 – MT 2.
- For twist drills with parallel shank use a drill chuck B18 with appropriate taper mandrel MT 3 - B18.

Core drills:

- For working with core drills you need a mount MT 3 – Ø 19 Weldon.
- Fit the ejector pin of suitable length in the core drill.
- Place the core drill in the Weldon mount so that the two Allen screws hit the two surfaces of the shaft.
- Tighten the Allen screws equally.

Attention!

Never press the tool into the tool connection with might and main!
Morse tapper and – cone have to be free of grease and dirt.

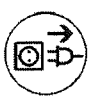
Removing the tool

Put the drill drift in the opening of the gearbox collar.
If you cannot insert the drill drift through the work spindle, turn the work spindle slightly.
Remove the tool from the work spindle by a slight impact on the drill drift.

Safety Clutch

The safety clutch should absorb shock and excessive stress. It is an aid and not an absolute protection. Therefore you have to handle and drill carefully.
To keep it in good condition, the clutch should slip for a very short time (max. 2 seconds) in each case only. After excessive wearing the clutch has to be renewed by an authorized service shop.

Care and Maintenance



Before starting with the maintenance- und repair works you have to disconnect the plug from the mains.

Repairs have to be carried out only by qualified and due to education and experience suited personnel. After every repair the machine has to be inspected by an electric specialist. Due to its design, the machine needs a minimum of care and maintenance. The following works have to be carried out regularly:

- The electric tool as well as the ventilation slots always has to be clean.
- During work, please pay attention that no foreign elements get into the interior of the machine.

- In case of failure, a repair has to be carried out by an authorized service workshop.

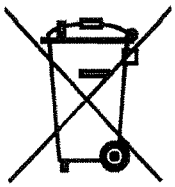
Environmental Protection

Raw material recycling instead of waste disposal

In order to avoid damages on transportation, the power tool has to be delivered in sturdy packing. The packing as well as the tool and its accessories are made of recyclable materials and can be disposed accordingly.
The tool's plastic components are marked according to their material, which makes it possible to remove environmental friendly and differentiated because of available collection facilities.

Only for EU countries

Do not dispose of electric tools together with household waste material!



In observance of European Directive 2002/96/EC on waste electrical and electronic equipment and its implementation in accordance with national law, electric tools that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility.

Noise Emission / Vibration

The indication of noise emission is measured according to DIN 45 635, part 21. The level of acoustic pressure on the work place could exceed 85 dB (A); in this case protection measures must be taken.

Wear ear protectors!

The typical hand-arm vibration is below 2.5 m/s².
Measured values determined according to EN 50 144.

The declared vibration emission level represents the main applications of the tool. However if the tool is used for different applications, with different accessories or poorly maintained, the vibration emission may differ. This may significantly increase the exposure level over the total working period.

An estimation of the level of exposure to vibration should also take into account the times when the tool is switched off or when it is running but not actually doing the job. This may significantly reduce the exposure level over the total working period.

Identify additional safety measures to protect the operator from the effects of vibration such as: maintain the tool and the accessories, keep the hands warm, organisation of work patterns.

Dust protection

Dust from material such as paint containing lead, some wood species, minerals and metal may be harmful. Contact with or inhalation of the dust may cause allergic reactions and/or respiratory diseases to the operator or bystanders.
Certain kinds of dust are classified as carcinogenic such as oak and beech dust especially in conjunction with additives for wood conditioning (chromate, wood preservative). Material containing asbestos must only be treated by specialists.

- Where the use of a dust extraction device is possible it shall be used.
- To achieve a high level of dust collection, use industrial vacuum cleaner DSS 1225/1250 for wood and/or minerals together with this tool.
- The work place must be well ventilated.
- The use of a dust mask of filter class P2 is recommended.

Warranty

According to our general terms of delivery for business dealings, suppliers have to provide to companies a warranty period of 12 months for redhibitory defects (to be documented by invoice or delivery note).

Damages due to natural wear, overstressing or improper handling are excluded from this warranty.

Damages due to material defects or production faults shall be eliminated free of charge by either repair or replacement.
Complaints will be accepted only if the tool is returned in non-dismantled condition to the manufacturer or an authorized Eibenstock service centre.

CE *Declaration of Conformity*

On sole responsibility we declare that this product is in conformity with the following standards and standard documents:

EN 50 144, EN 55 014, EN 61 000, IEC 60 745
according to the regulations 2006/95/EC, 89/336/EEC, 98/37/EC

Elektrowerkzeuge GmbH Eibenstock
Lothar Lässig
19.07.2009

We are always open to criticism or suggestions for improvement, please mail to:
support@powercat.biz