Manual / Instruction

PORTAFORCE PF32SB
PORTABLE REBAR BENDER/STRAIGHTENER MACHINE



Please read these instructions carefully before using.

Not following the proper operating procedures may result in accidents.

If you have any doubts about the procedure, please contact Capital Machinery Sales.

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GENERAL SAFETY PRECAUTIONS

USAGE

Only use the PortaForce PF32SB Rebar Bender on concrete reinforcing bars.

RESTRICT USE TO DESIGNATED MATERIALS

Avoid using the machine to bend extremely rigid rebar, as it may cause breakage and damage to the tool. Refrain from attempting to bend rebars that are harder, thicker, or thinner than the specified requirements (refer to page 5).

USE EYE PROTECTION

Wear safety goggles, safety glasses with side shields or a face shield while using bender.

PROVIDE SAFETY BARRIERS

Install safety screens to shield co-workers from potential flying debris. Position the safety screen beneath the rebar when working at elevated heights.

GUARD AGAINST ELECTRIC SHOCK

To prevent electric shock, avoid handling the bender with wet hands or using it in rainy or damp areas. Be cautious of power lines, electric circuits, and other potential hazards, especially those that are hidden or below the surface. Stay safe!

POWER OFF

When not in use or before cleaning, adjusting, or servicing, make sure to disconnect the bender from the socket. Avoid connecting the power by pulling the cord. Always ensure that the switch lock is off before plugging in.

BEWARE OF ENVIRONMENT

Do not use the bender near flammable materials such as paint, thinner, petroleum products, or adhesives. Also, avoid using the bender in areas that may potentially have a source of ignition and ensure that the operator has a clear view of the cutter, rebar, and the surrounding area at all times.

WEAR PROPER APPAREL

Please refrain from wearing loose clothing, dangling objects, or jewelry. It is advisable to secure long hair. We recommend the use of a safety helmet and rubber-soled boots. If safety gloves are worn, exercise caution to prevent them from getting caught in moving parts.

KEEP VISITORS AWAY

Please maintain a safe distance from the work area. This helps protect you and prevents distractions for the operator.

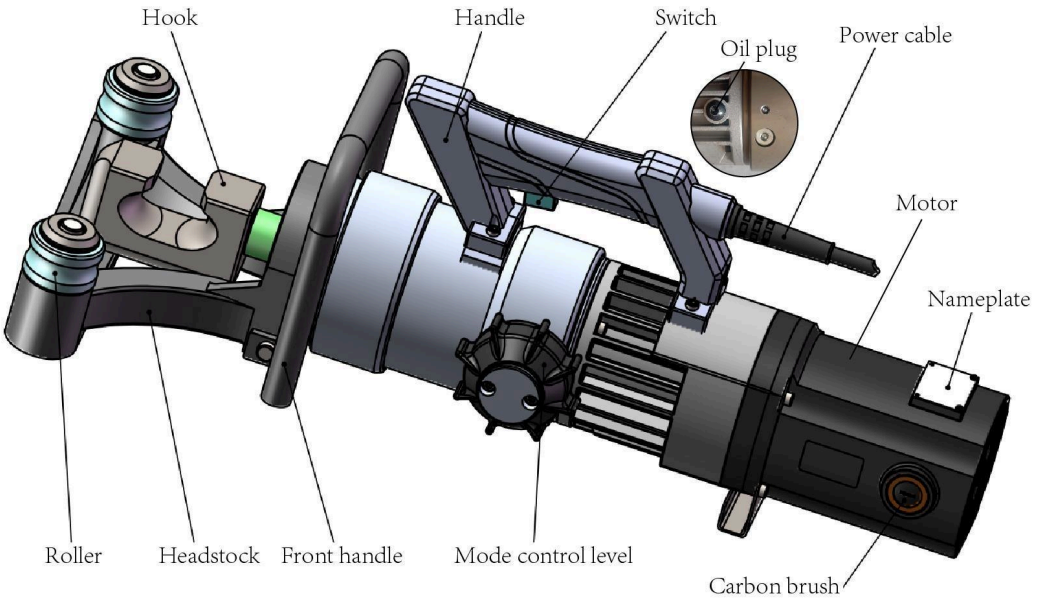
MAINTAIN BENDER WITH CARE

Before each use, inspect the bender. Ensure the handle is dry, clean, and free from oil or grease. Keep the housing and piston free of dirt and iron filings. Check for any loose or missing screws or bolts. Follow the maintenance instructions. Regularly inspect the switch, cord, plug, and any extension cable.

STORE CAREFULLY

When not in use, store bender and accessories in a dry place where unauthorized access is prevented.

PARTS AND SPECIFICATIONS



Main Parameters

Model	PF32SB
Voltage	240V 50HZ
Wattage	1800W
N.W	24 kgs
Bending Speed	10s
Max. Rebar	32mm
Min. Rebar	22mm
Dimensions	640 x 270 x 230 mm

OPERATING INSTRUCTIONS

CAUTION: This indicates a hazard that could cause minor personal injury and/or damage to the product.

NOTE: Indicates a hazard that can cause damage to the product.

PRE-USE CHECKS

1. Verify oil level.
2. Inspect bender blocks and ensure tightness of bender block bolts.
3. Confirm compatibility of power source with the bender.

NOTE: If voltage is too high, it may cause motor burnout. If voltage is too low, insufficient power will be generated. Never use DC power.

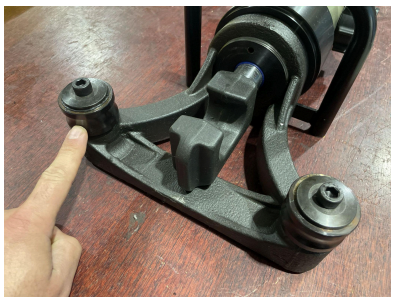
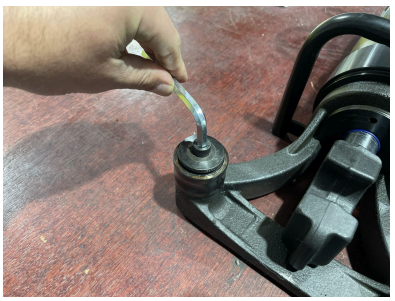
4. Ensure proper grounding of power supply.

CAUTION: Failure to ground the power supply may pose a risk of electric shock to the operator.

5. Ensure the cord is intact and the plug is securely connected. If using an extension cable, make sure it is undamaged and of appropriate thickness for the length. Refer to the table below.

Cable Length	**110/115V**	**230V**
	Cable size (AWG)	**Nominal diameter**
Up to 10m (33 ft)	16	1.0mm²
Up to 15m (50 ft)	14	1.25mm²
Up to 30m (100 ft)	10	1.5mm²

6. Before plugging in, ensure that the switch lock is in the OFF position.
7. Inspect and grease the roller bushes. Use an appropriately sized allen key to remove the bolts holding down each bush, thoroughly grease the inside of each bush, then replace and rotate each one to ensure it moves freely. Refer to the Parts and Specifications diagram on page 5 for bush locations.


WARM-UP

In cold weather, warm up the unit for 30 to 60 seconds to ensure proper viscosity of the hydraulic oil. Pull the trigger-switch to extend the piston and release it when it has reached its full stroke. Repeat this process 15 to 20 times.

POINTS OF ATTENTION

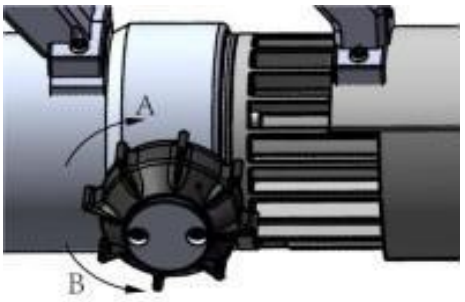
1. Avoid covering air vents.

CAUTION: If vents are covered, the motor may overheat and burn out.

2. If the hydraulic oil temperature exceeds 70°F (158°F), the power will decrease. Allow the unit to cool down before resuming operation. (Be especially cautious in summer when the aluminum pump case heats up faster.)
3. If you notice a decrease in power and the motor is unusually hot, check the carbon brushes.

OPERATION

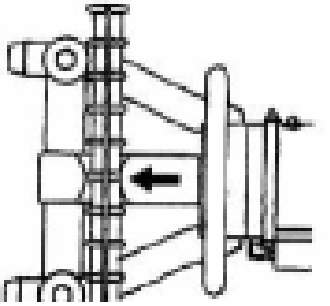
The PF32SB is designed primarily for straightening deformed rebar. Additionally, it can be used to bend straight rebar. To enable usage in confined spaces, the unit has two operating modes: PUSH and PULL. You can select the mode by moving the mode control lever to the respective position "B" for push (piston advances) and "A" for pull (piston retracts). To operate, simply press the switch to move the piston in either mode.



Important: The piston's movement is restricted by a safety valve. To avoid overheating, release the trigger switch once the piston has reached its travel limit.

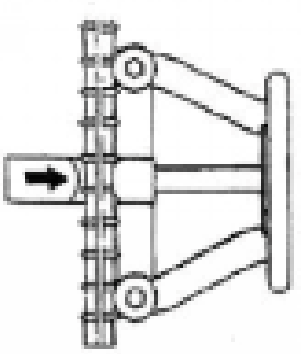
TO PUSH

Move the piston forward or backward to position the hook correctly. Switch the mode control lever to "B" and attach the rebar as shown on the left. Press and hold the trigger switch until the rebar reaches the desired angle.



TO PULL

Ensure the hook is set in the correct starting position and verify that the mode control lever is in the "A" position. Follow the illustrated instructions to fit the rebar. Pull the trigger switch until you reach the desired angle.



Note: It is important to ensure that the rebar is correctly positioned within the hook and against the rollers.

INTERIOR ANGLE

The interior straightening/bending angle will vary depending on the rebar diameter and operating mode, as the piston stroke has limitations. Please refer to the table below for more information.

MAINTENANCE

CLEARING

Clean the bender daily, preferably right after use.

CAUTION: Wear gloves to protect your hands from metal splinters. Avoid using an air-gun as it can cause metal filings and dust to enter your eyes and respiratory system.

1. Disconnect the unit.
2. Remove all dirt and metal filings by wiping or brushing. Pay extra attention to the lower half of the piston where dirt tends to accumulate more easily.

OIL-LEVEL CHECK

The bender is operated hydraulically, so it is important to regularly check the oil level, preferably on a daily basis. Failing to maintain the proper oil level can result in decreased pressure and bending power.

CAUTION: Hydraulic oil is highly flammable. Keep away from sparks, naked flames, and do not smoke.

CAUTION: Contact with hydraulic oil can cause irritation to the eyes and skin. If ingested, it may cause diarrhea and vomiting. If oil comes in contact with the eyes, rinse with clean water for at least 15 minutes and seek medical advice. If oil comes in contact with the skin, wash thoroughly with soap and water. If ingested, seek medical attention immediately. Do not induce vomiting intentionally.

1. Ensure that the oil is warm, but not hot. If the unit is cold, warm it up.
2. Adjust the stopper and make three or four cuts, carefully noting the exact point where the rebar breaks.
3. Pinch a short piece of rebar, stopping just before it breaks off. Then, unplug the unit from the power source.
4. With the partially severed rebar in place, turn the unit over so that the oil plug is on top (if the unit is hot, allow it to cool down).
5. Remove the oil plug and the seal washer (packing).

CAUTION: Do not remove the oil plug while the unit is hot to avoid oil spurting out.

6. Make sure the oil level is at the bottom of the plug hole (i.e., the pump case is full). If the oil level is too low, add 20-weight hydraulic oil with anti-foam and anti-abrasion properties (AW46 or AW32 grade oil).
7. After adding oil, remove air from the system. Gently tilt the cutter lengthwise and return it to a level position. Add oil again and tilt in the opposite direction. Repeat this process until all air bubbles are removed. Note: The bender won't work properly if there are air bubbles in the oil.
8. Replace the seal washer and plug. Connect the cutter to the power source and cut the rebar completely.

OIL-CHANGE

The hydraulic oil should be changed annually, or sooner if it looks dirty.

1. Disconnect the unit from the power source. Remove the oil plug and packing. Flip the bender over and drain the oil into a suitable container. Tilt the unit to the rear to let the oil trapped in the piston housing drain out. When the housing is empty, tilt the unit in the opposite direction to empty the residue in the pump case.
2. With the drain hole facing upward, slowly fill the unit with fresh oil. Replace the plug and lightly tighten it. Connect the unit to the power source and advance the piston two or three times. Disconnect the unit and remove the oil plug. Top up the oil level and replace the plug.
3. Finally, follow the procedure for checking the oil level (Steps 2-8).

Note: Dispose of hydraulic oil in accordance with local regulations. Do not pour it into the sea, river, lake, or drains.

BOLT TIGHTNESS

Check the tightness of all bolts once a week or after every 500 bends, particularly those securing the housing to the cylinder. Loose bolts can cause a loss of power.

BUSH INSPECTION AND GREASING

The PF32SB has two roller bushes located at the front of the machine on the hook arm assembly — one upper roller (Bush 1) and one lower roller (Bush 2), as shown in the Parts and Specifications diagram on page 5. Inspect and re-grease regularly to ensure smooth bending operation and prevent premature wear.

1. Use an appropriately sized allen key to remove the bolts holding down each bush.
2. Thoroughly grease the inside of each bush.
3. Replace the bushes and rotate each one to ensure they move freely.

CARBON BRUSHES

Inspect the two carbon brushes every two months (nominal brush life is 200 hours).

Please note: Worn brushes can cause power loss, motor overheating, and irreparable damage to the armature's commutator.

1. Disconnect the unit.
2. Unscrew both brush caps and remove the carbon brushes.
3. If the brushes are less than 6 cm long, replace them.