Manual / Instruction

PORTABLE REBAR BENDER



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1.SPECIFICATION PARAMETERS

Read this manual carefully before operating the machine. Failure to follow the prescribed operating procedures may result in accidents or equipment damage. If you are uncertain about any procedure, contact the authorized service provider for clarification.

Parameters

Models	PF22B	PF25B	PF32B
Voltage±5%	240vac	240vac	240vac
Wattage	1200W	1200W	1800W
Machine weight	14.6Kg	15.4Kg	22.16Kg
Bending speed	3-6 secs	4-7 secs	10 secs
Bending range (To 90°) Standard bushes	Φ10~Φ22mm (45mm Standard Bending Bushes)	Φ22 ~Φ25mm (50mm Standard Bending Bushes)	Φ25 ~Φ32mm (44mm Standard Bending Bushes)
Bending range (To 90°) Large bushes/Min.Rebar	(No Large Bending Bushes)	Φ16 ~Φ25mm (70mm Larger Bending Bushes)	(No Large Bending Bushes)
Bushes Option	When bending rebar OD≥Φ16, use standard bushes OD<Φ16, use large bushes		When bending rebar OD≥Φ28,use standard bushes OD<Φ28, use large bushes
Note: Don't use the machine to bend bars that exceed the maximum bending size.			

2. SAFETY INSTRUCTIONS

Before operating the portable bending machine, read this manual thoroughly to ensure safe and correct use. The operating methods and safety precautions described herein apply only to the equipment specified in this manual. The user assumes full responsibility for any safety incidents resulting from failure to follow the prescribed procedures.

1. Failure to observe instructions labeled **WARNING** may result in serious personal injury or accidents.
2. Failure to observe instructions labeled **CAUTION** may result in equipment damage or malfunction.

WARNING

Failure to observe the following warnings may result in serious injury, electric shock, fire, or explosion.

1. Operate this equipment only within the scope specified in this manual.
2. Follow all operating instructions strictly. Only trained and qualified personnel may use this machine.
3. Do not operate the machine in rain, damp areas, or locations where water or oil may enter the unit, as moisture reduces motor insulation and may cause electric shock.
4. Always connect the machine to a power supply equipped with a leakage circuit breaker and proper grounding.
5. Maintain adequate lighting in the work area. Poorly lit or cluttered areas increase the risk of accidents.
6. Sparks may be generated during operation and switching. Never use the machine near flammable or explosive substances (e.g., paints, solvents, gasoline, gas, adhesives). Do not operate in confined or poorly ventilated spaces such as tunnels or closed rooms.
7. Restrict access to the worksite to trained operators only. Keep bystanders away from the machine and power cables.
8. Wear appropriate clothing. Loose garments, open sleeves, scarves, towels, jewelry, or gloves may become entangled in moving parts, causing injury.
9. Operators must wear safety helmets and protective footwear.
10. Always wear safety goggles. In dusty environments, also use a dust mask and dust collection equipment.
11. Before starting the machine, ensure all bolts and fasteners are tightened.
12. Use only the rated voltage specified on the machine’s nameplate. Overvoltage may cause excessive motor speed, resulting in damage or injury. Undervoltage may cause motor failure.
13. Confirm that the power switch is OFF before plugging in the machine to avoid accidental startup.
14. Do not move the machine while it is connected to power. Accidental contact with the switch may start the machine unexpectedly.
15. Maintain a stable stance with firm footing while operating. Improper posture may result in loss of control and accidents.

16. If the machine operates abnormally or is damaged, stop use immediately and arrange for inspection and repair.
17. Do not exceed the rated capacity of the machine or use unsuitable accessories. Overloading may cause machine damage and safety hazards.
18. Perform regular inspections and maintenance. For repairs or replacement parts, contact the authorized supplier and use only approved components.

CAUTION

Failure to observe the following precautions may result in equipment damage or malfunction.

1. If the machine is dropped or subjected to impact, inspect immediately for cracks, deformation, or other damage. Do not operate until repaired.
2. Do not pull the power cord to disconnect it from the socket or use it for lifting the machine. Keep the cord away from sharp edges, hot surfaces, and chemicals. Replace damaged cords immediately.
3. Keep the cooling vents clear of dust or obstructions. Blocked ventilation can cause motor overheating and burnout.
4. Clean the machine after each use, especially the motor and switch areas, to maintain optimal performance.
5. Store the machine and its accessories in a safe environment:
    - Out of the reach of children or in a locked storage area.
    - In a location with stable temperature and humidity.
    - In a dry area free of moisture.
    - Away from flammable or explosive materials.

3.COMMON SAFETY PRECAUTIONS

3.1 Operation

1. The steel bar bending machine is designed exclusively for bending steel bars. Do not use it for other materials.
2. Be aware that splinters or fragments of steel may be ejected during bending.
3. Never attempt to bend steel bars exceeding the specified diameter, hardness, or strength. Doing so may damage the machine and increase the risk of accidents.

3.2 Safe Use

1. Always wear protective equipment, including safety goggles or side-shield glasses. Use protective covers when provided.
2. Install safety barriers to protect nearby personnel from ejected material. When working at elevated locations, place steel bars beneath a safety screen.

3. Maintain firm control of the machine with proper footing and balance. Do not overreach when working at height. Secure the machine with a safety rope if used on scaffolding. Keep the power cord clean, undamaged, and away from sharp edges or heat sources.
4. To prevent electric shock, do not operate the machine with wet hands or in rain or damp environments. Remain alert to hidden or exposed electrical wiring or circuits.
5. Do not operate the machine near flammable or explosive substances (e.g., paints, thinners, petroleum products, adhesives). Ensure the work area is well lit and free of obstacles. The operator must always maintain a clear view of the tool, reinforcement bars, and surrounding area.
6. Wear appropriate clothing. Avoid loose garments, jewelry, or accessories that could become entangled in moving parts. Secure long hair. Operators should wear a safety helmet and rubber-soled safety shoes. If gloves are worn, exercise caution to prevent them from catching in rotating parts.
7. Keep bystanders at a safe distance. Unauthorized personnel must not enter the work area, as distractions may cause accidents.
8. When not in use, store the machine and accessories in a dry, secure location, out of reach of unauthorized persons.

4.HYDRAULIC OIL FUNCTIONS

WARNING

Failure to observe the following may result in serious injury or environmental hazards.

1. **Hydraulic Oil Hazards**
    - Contact with eyes may cause inflammation. Always wear protective goggles.
    - Contact with skin may cause irritation. Wear protective gloves during operation.
2. **Emergency Treatment**
    - **Eye Contact:** Rinse immediately with clean water and seek medical attention.
    - **Skin Contact:** Wash thoroughly with soap and water.
    - **Ingestion:** Do not induce vomiting. Seek immediate medical attention.
3. **Waste Oil Disposal**
    - Do not discharge waste oil into seas, rivers, lakes, or drainage systems. Improper disposal causes environmental pollution and fire hazards.

CAUTION

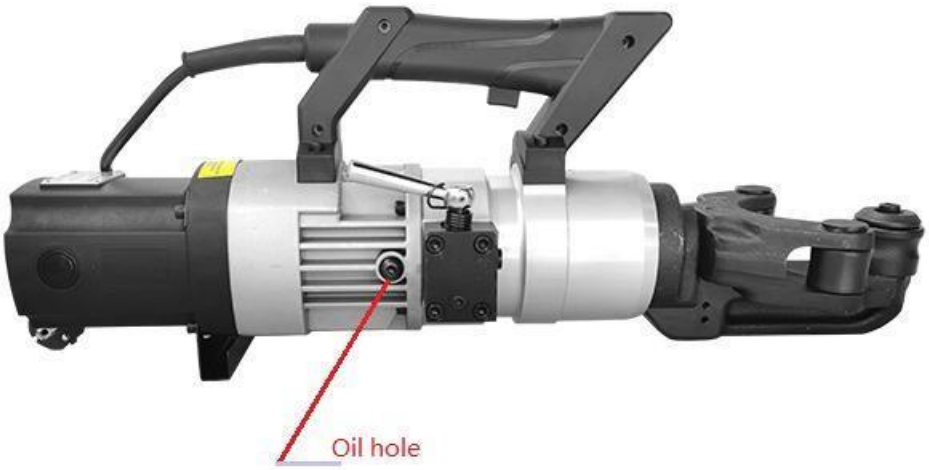
1. **Check Oil Level Before Operation**
    - Use only **#46 anti-wear hydraulic oil** (recommended for this equipment).
    - Insufficient oil volume will reduce system pressure and machine performance.

- If the machine body temperature reaches **70 °C or higher**, power output decreases. Allow the machine to cool before resuming operation.

2. **Warm-Up Operation**
   - In cold weather, hydraulic oil may thicken and hinder startup. Run the machine without load for **30–60 seconds** to preheat before bending.
3. **Switch Operation**
   - Do not leave the switch continuously ON.
   - Confirm the piston has reached the upper limit, then turn OFF the switch once before proceeding. Continuous activation may cause unintended piston movement.

5.REFUELING HOLE LOCATION AND REFUELING METHOD

5.1Refueling Hole Location ：



PFXXB type Rebar bender Refueling hole location

Note: Due to different models, the Exterior maybe have some difference

5.2 Refueling Method

1. Place the bender on a flat, stable surface with the oil filler port facing upward.
2. Remove the screw from the oil filler port.
3. Slowly add hydraulic oil through the filler port.
4. Add a small amount of oil, then temporarily block the filler port. Press the bender switch to move the shaft forward slowly.
5. After the shaft advances, add more hydraulic oil. Repeat this process until the shaft reaches its limit position.

6. Press the manual pressure relief valve to return the shaft. Continue adding oil and repeating the operation until the machine operates normally.
7. Once refueling is complete, securely tighten the filler screw.

6. CAUTION BEFORE USING

1. Confirm the power supply.

   Ensure the power supply voltage matches the specifications indicated on the machine nameplate.

2. Check the power socket.

   Insert the plug into the socket and check for a secure fit. If the connection is loose or unstable, discontinue use and have the socket repaired immediately. Operating with a faulty connection may result in overheating and potential hazards.

7. CORRECT OPERATING METHOD

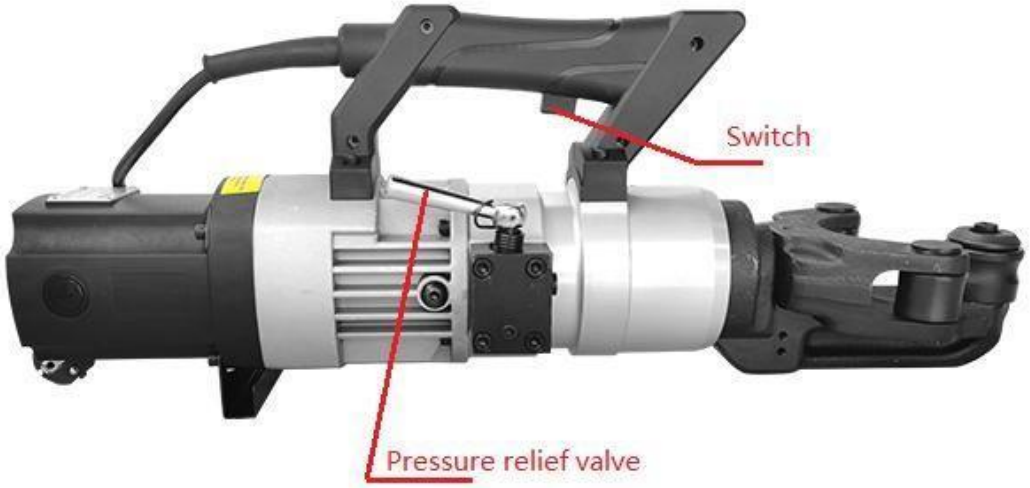
1. Confirm that the steel bar is correctly positioned. Place the bar at the bottom, between the head frame and the push block, as illustrated in the diagram.



2. After positioning the bar, activate the switch to begin the bending process.

3. The push shaft will advance and bend the steel bar. When the shaft reaches the required position, release the switch. Then, pull the manual pressure relief valve to allow the push shaft to return automatically.

Refer to the diagram for the locations of the switch and relief valve.



4. Do not press the switch until the push shaft has fully returned to its original position.

- If the shaft does not move when the switch is pressed, the pressure relief valve may not have fully closed.
- Pull the relief valve again to ensure it is completely returned before restarting operation.

5. If the push shaft does not return automatically:

- Press the pressure relief valve.
- If necessary, lightly tap the push shaft with a bar to assist its return.

Once the shaft has returned, the machine will operate normally.

8.INSPECTIONS AND MAINTENANCE

1. Hydraulic Oil Inspection

- Regularly check the hydraulic oil level and condition.
  - If the oil becomes turbid or contaminated with impurities after extended use, drain all oil and replace it with new oil.
  - If the oil level is sufficient but the machine lacks power, internal pump components (e.g., piston, plunger valve core) may be worn. Contact your supplier for service.

2. Cleaning the Push Shaft Area

- Perform regular cleaning around the push shaft.
  1. Disconnect the power supply.
  2. Wear protective leather gloves.
  3. Use compressed air to clean the area.

Caution: *Metal filings can be sharp and may cause injury. Always wear gloves and protective eyewear to prevent contact with skin, eyes, or inhalation.*

3. Long-Term Storage

- For extended storage, consult your supplier to determine whether internal components such as springs, oil bags, or other parts should be replaced before restarting operation.

4. Carbon Brush Maintenance

- Inspect carbon brushes at least twice per month. The average service life is approximately 200 hours.
    - **Note:** Worn carbon brushes may cause power loss, overheating, and permanent damage to the motor commutator.

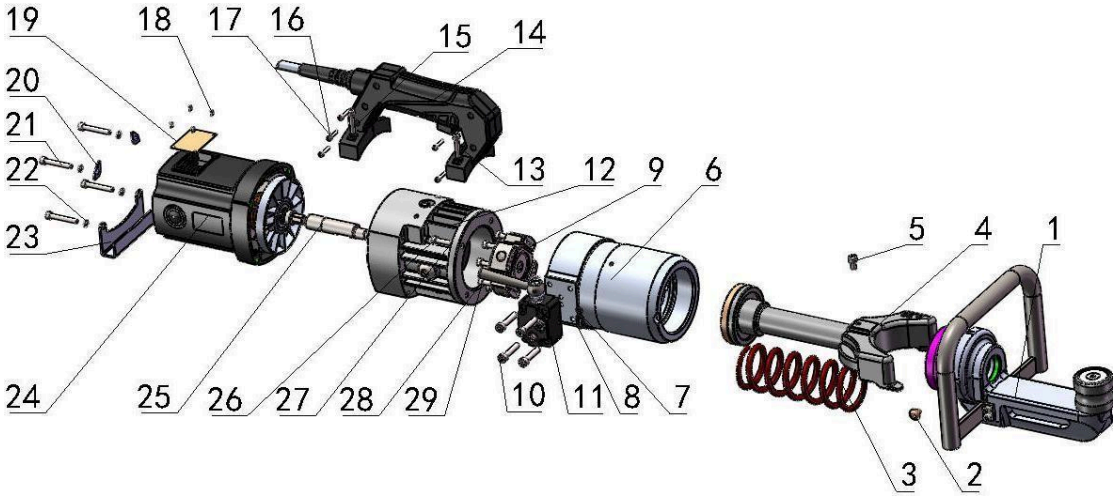
Carbon Brush Inspection Procedure

1. Disconnect the power supply.
2. Unscrew the brush cap and remove the carbon brush.
3. If the carbon brush length is less than 6 mm, replace it immediately.

9. MACHINE ASSEMBLE DRAWING AND ACCESSORIES

＊Taking PF22B as an example

9.1 Complete assembly

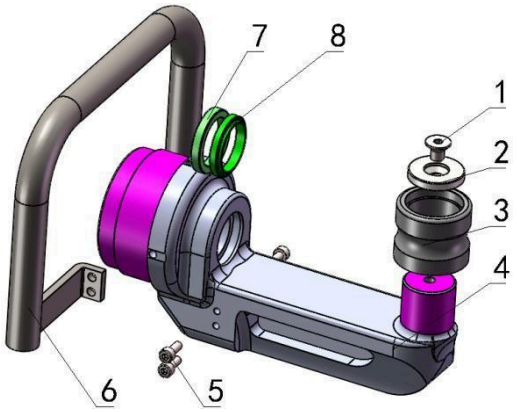


Number	Name	Specifications	Amount
1	Per seat assembly	PF22B	1
2	Inner hexagonal band inter screw	M6x6	1
3	Spring	D6xWD55x142x7T	1
4	Bending push shaft assembly	PF22B	1
5	Inner hexagon cylindrical head screw	M6x12	1
6	Oil cylinder assembly	/	1
7	Type O sealing ring	ND5x1.5	1
8	Type O sealing ring	ND12x1.5 FKM75	1
9	Four-cylinder assembly	/	1
10	Inner hexagon cylindrical head screw	M6x30	1
11	Manual pressure relief valve assembly	/	1
12	Aluminum shell assembly	/	1
13	Inner hexagon cylindrical head screw	M5x20	2
14	Handle assembly	/	1
15	Inner hexagon cylindrical head screw	M5x25	2

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16	Inner hexagon cylindrical head screw	M3x16	5
17	Shim	D3(ND3xWD7x0.5)	5
18	Cross-head tapping screw	ST2.5x5	4
19	Nameplate	PF22B	1
20	Alternative spacer	1.2KW	2
21	Inner hexagon cylindrical head screw	M5x35	4
22	Spring washer	D5	4
23	Rear seat support frame	/	1
24	Rear shell assembly	/	1
25	Eccentric shaft	1.2 Eccentricity	1
26	Inner hexagon cylindrical head screw	M5x20	4
27	Spring washer	D5	4
28	Inner hexagon cylindrical head screw	M5x28	8
29	Spring washer	D5	8

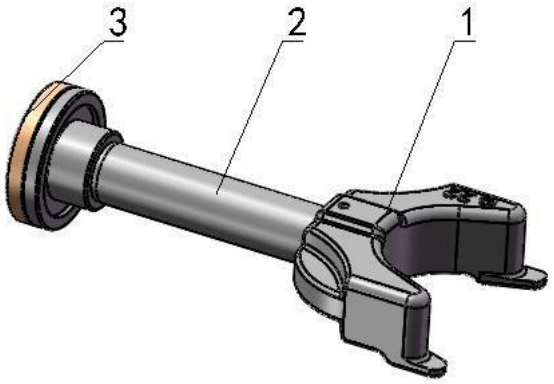
9.2 Bending head assembly



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Number	Name	Specifications	Amount
1	Inner hexagon head screw	M8x12	1
2	Bending machine pliers seat head holder	PF22B (Rolling wheel)	1
3	Inner hexagon cylindrical head screw	M5x12	4
4	Bend machine handle	/	1
5	scraper seal ; wiper scraper seal	ND30xWD38x5/6.5	1
6	Lip seal ring	ND30xWD40x6	1

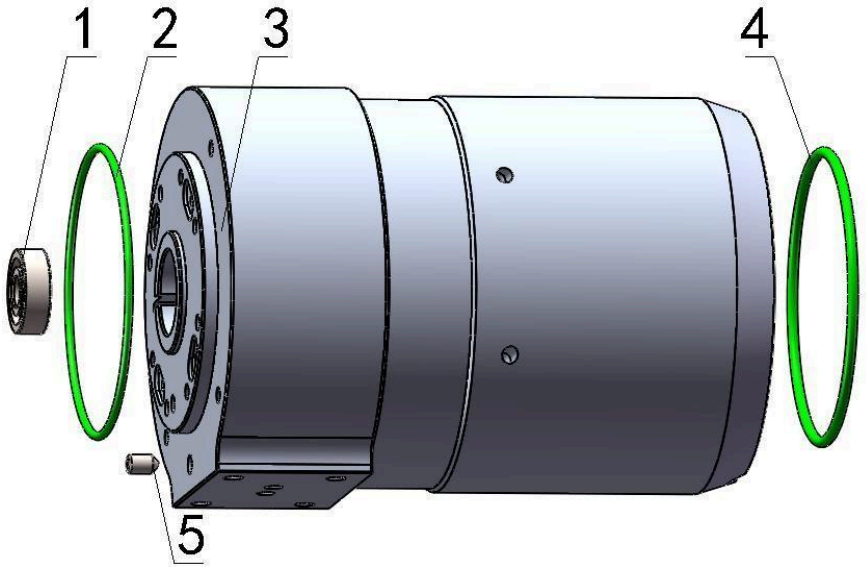
9.3 Bending push shaft assembly



Number	Name	Specifications	Amount
1	Large module jaw	PF22B	1
2	Bending machine piston push shaft	PF22B	1
3	Lip seal ring	ND55xWD70x9	1

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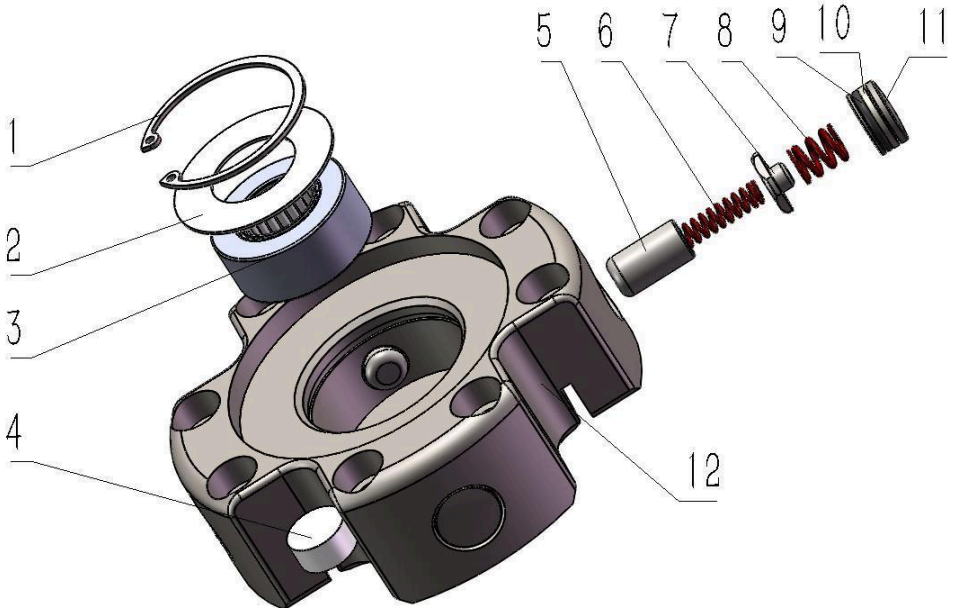
9.4 Oil cylinder assembly



Number	Name	Specifications	Amount
1	Deep groove ball bearing	608	1
2	Type O sealing ring	ND71x2.0	1
3	Bend machine cylinder	PF22B	1
4	Type O sealing ring	ND74x2.65 FKM75	1
5	Inner hexagonal flat end set screw	M6x8	1

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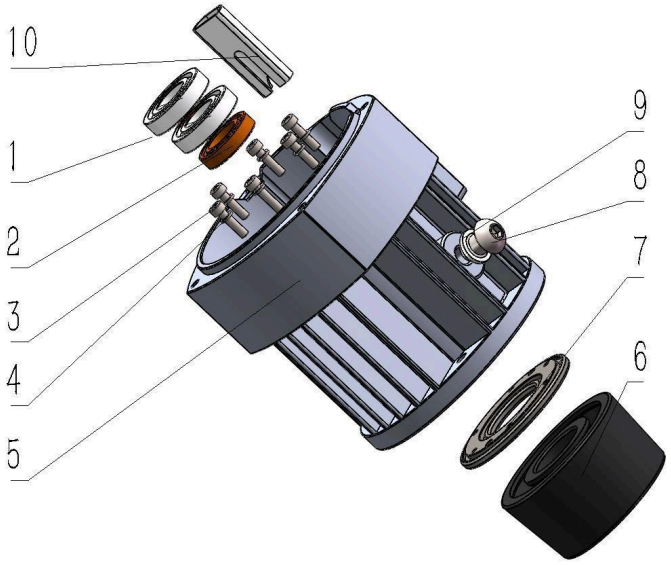
9.5 Four-cylinder assembly



Number	Name	Specifications	Amount
1	Hole with retaining ring	D28	1
2	Wear piece for four-fitting assembly	ND15xWD28.2x0.5	1
3	needle bearing	RSTO8(ND12xWD24x10)	1
4	Magnet pin column	D10x5	2
5	Four-plunger assembly plunger	D7	4
6	setting bolt spring	D0.6xWD4x18x13T	4
7	Four-plunger assembly plunger check valve plate	RC-25L	4
8	Setting bolt spring	D0.9xWD6.4x8x4T	4
9	Type O sealing ring	ND8x1.5	4
10	Teflon retaining ring	ND8.6xWD11x1.1	4
11	Four-plunger assembly plunger cap	RC-25	4
12	Four-pillar plug pump body	RC-25	1

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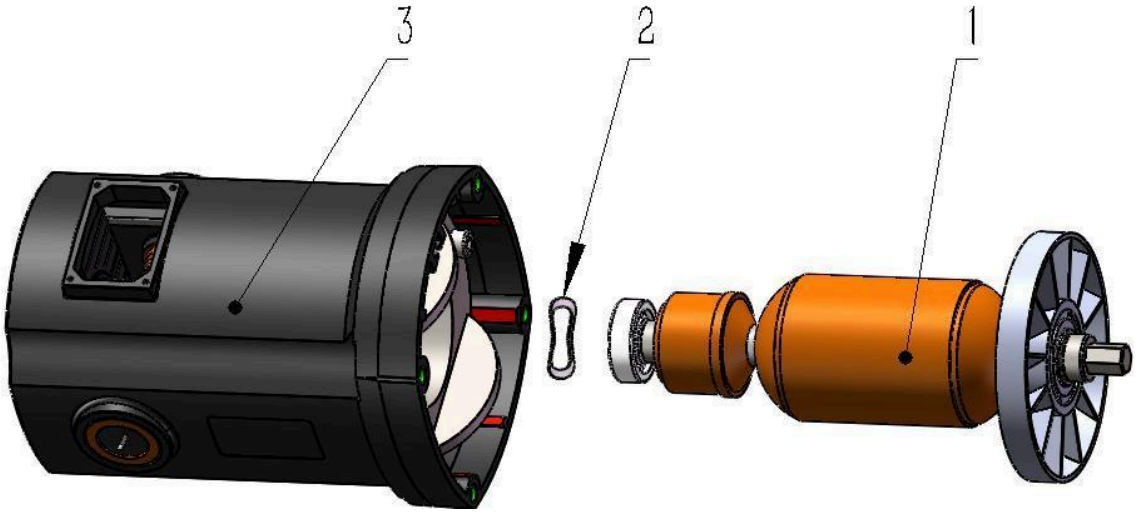
9.6 Common aluminum shell assembly



Number	Name	Specifications	Amount
1	Deep groove ball bearing	16003	2
2	Skeleton oil seal	ND17xWD30x7	1
3	Inner hexagon cylindrical head screw	M4x16	6
4	spring washer	D4	6
5	General aluminum shell	FTLK	1
6	brush ring oil bag	Common	1
7	Ring oil bag pressure plate	/	1
8	Inner hexagonal half-head screw	M10x16	1
9	Combination gasket	D10	1
10	Universal aluminum case power cord supports protective case	/	1

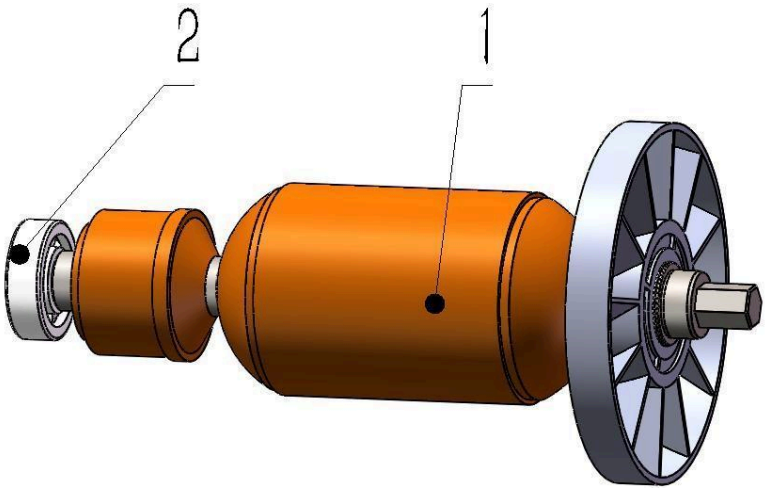
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9.7 Rear shell assembly



Number	Name	Specifications	Amount
1	The 1.2-kw rotor assembly	1.2KW	1
2	Corrugated gasket	D10(ND10.5xWD21x1.0)	1
3	1.2kw stator assembly	1.2KW	1

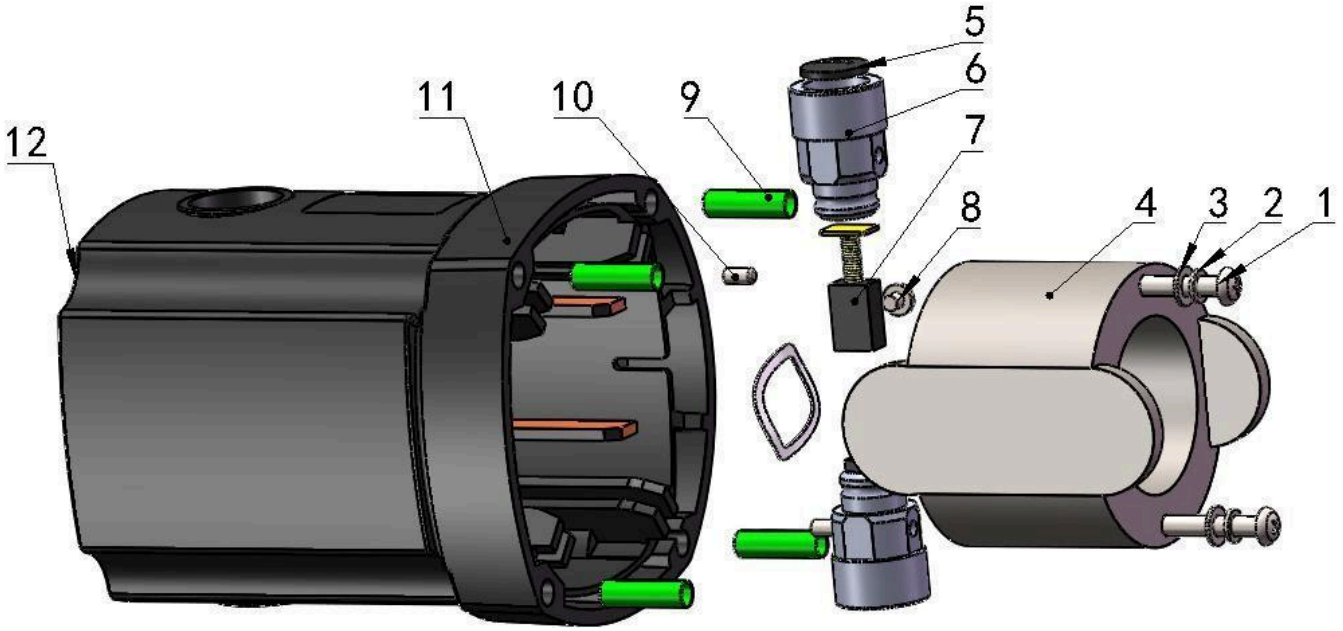
9.7.1 1.2kw rotor assembly



Number	Name	Specifications	Amount
1	1.2KW motor rotor	1.2KW	1
2	Deep groove ball bearing	608	1

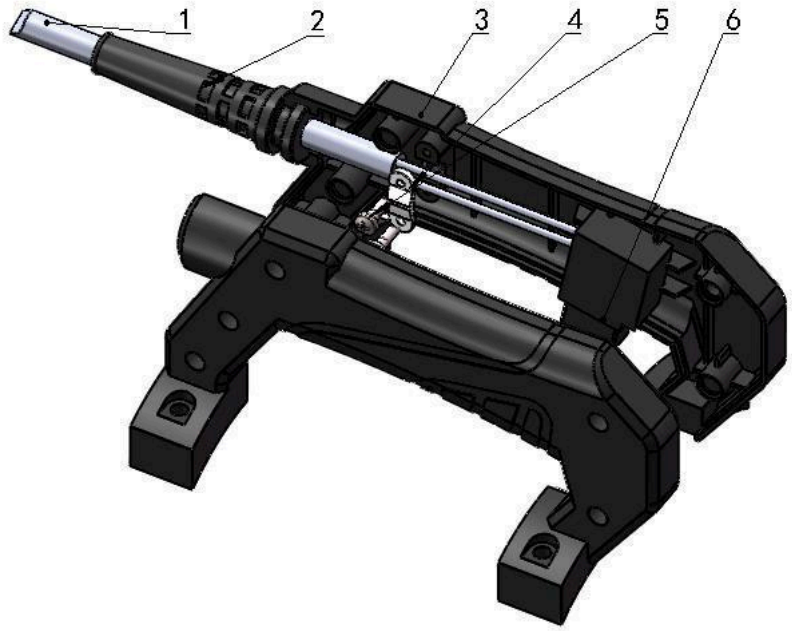
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9.7.2 **1.2kw** stator assembly



Number	Name	Specifications	Amount
1	Inner hexagon cylindrical head screw	M5x65(Half teeth)	2
2	spring washer	D5	2
3	Flat pad (copper)	ND5xWD9x2.0	2
4	1.2KW motor stator	1.2KW	1
5	Carbon brush frame cap	1.2KW	2
6	Carbon brush frame	1.2KW	2
7	Carbon brush	1.2KW	1
8	Cross slot head screw	M4x4	2
9	Elastic cylindrical pin (non-standard)	ND5.7xWD6.9x23.5	4
10	Inner hexagon cone end set screw	M4x8	2
11	General plastic back shell	1.2KW	1
12	Rubber plug	12MM	1

9.8 Handle assembly



Number	Name	Specifications	Amount
1	Universal rubber power supply cord	1.5mm²x3m	1
2	1.8KW power cord rubber sheath	ND10	1
3	Plastic handle	/	1
4	Hold the power cord	24x7.5x4A word line clip	1
5	Cross-head tapping screw	ST4.0x12	2
6	Universal button switch	/	1

10. COMMON FAULTS AND SOLUTION

Faults	Reason	Solutions
Push shaft speed is slow, push force is weak	1. Insufficient hydraulic oil or air in the system 2. Pressure relief valve is damaged	1. Position the oil hole upwards, run the switch continuously with no load, refill oil, and press the pressure relief valve until the push shaft operates normally. 2. Replace the pressure relief valve.
Push shaft cannot extend or return	1. Flat key in the head is stuck 2. Push shaft expansion	1. Replace the flat key. 2. Extend the push shaft, then smooth any high points with sandpaper so the shaft can move freely.
Excessive sparking at carbon brush	1. Worn carbon brushes 2. Worn rotor copper segments 3. Short circuit	1. Replace carbon brushes. 2. Replace rotor. 3. Inspect and repair electrical short circuits.
Abnormal noise during operation	1. Damaged needle bearings 2. Loose components	1. Replace needle bearings. 2. Inspect and tighten all connections (ensure power is disconnected first).

Note: For faults not listed, contact your supplier.

11. ACCESSORIES

1. Manual instruction 1 pc
2. Tool kit 1 set
3. Oil can 1 pc
4. Certificate 1 pc