PrimaFLOW

Designed in Slovakia by Zybra s.r.o.

User Manual

User Manual PrimaFLOW - Model M
Fiber Optic Blowing Machine

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Introduction

This user manual contains important information for the safe and efficient operation of the PrimaFLOW Model M fiber optic blowing machine.
Please read this document carefully before use to ensure optimal and safe performance of the device, which will also help extend its service life. Improper use or ignoring instructions may result in serious damage to the device or pose a health hazard.

WARNING: Risk of injury if operated improperly!

1. Device Description

PrimaFLOW is a compact battery-powered device designed for blowing fiber optic cables with a diameter of 1 – 4.5 mm into microducts with diameters of 7 and 12 mm. It supports both direct and continuous blowing. The device is securely mounted inside a case, which ensures easy handling and protection against external elements (dust, water).

2. Device Usage

PrimaFLOW is designed for the safe insertion of fiber optic cables into ducts using mechanical rollers and compressed air, which reduces friction and assists the fiber’s movement.
Using the device for any purpose other than specified is prohibited and may result in voiding the warranty and damaging the equipment.

3. Technical Specifications

- Compatible Microduct diameters: Ø 7 and 12mm
- Torque: 150 N
- Blowing Speed: 150 m/min
- Power Supply: 18 V battery
- Maximum Pressure: 15 Bar
- Weight: 4.8 kg
- Display: Monochrome, readable even in direct sunlight; displays blowing distance, air pressure, motor load, and fiber jam detection.

4. Features

- Motor load sensing
- Overload protection
- Distance measurement
- Air pressure monitoring
- Overspeed protection
- Fiber feeding
- Fiber kink protection

5. Detailed Device Description

The device is equipped with a pair of rubber-coated wheels, one of which is motor-driven. The system includes safety features such as fiber jam protection and automatic shutdown in case of motor overload. PrimaFLOW is compatible with batteries from all major cordless tool brands.



The device is operated using a set of control buttons, a speed dial, and a mechanism for adjusting fiber pressure:

- **POWER**: Turns the device on/off
- **Right Arrow**: Starts the motor in the fiber feed direction
- **Left Arrow**: Reverses the motor direction
- **STOP**: Stops the motor
- **SPEED**: Adjusts motor speed; pressing disables automatic stop function
- **RESET**: Resets the distance counter

6. Detailed Operating Procedure

6.1 Adjusting the Pressure Wheel

1. **Selecting the Correct Pressure**
   Choose the appropriate pressure based on the type and thickness of the fiber to be blown. Proper adjustment of the fiber pressure mechanism is crucial for smooth feeding and kink prevention.

2. **Inserting the Fiber**
   Insert approximately 50 cm of fiber between the wheels. This short insertion serves to test the pressure setting.

3. **Pressure Test**
   Gently pull the fiber while gradually increasing the pressure until both wheels rotate smoothly. Make sure there's no excessive friction, which could damage the fiber surface.

6.2 Adjusting the Device Head

1. **Centering the Head and Feeder**
   Flip open the top of the head, loosen the four hex screws inside the bottom part of the head, and unscrew the feeder screw. Remove the upper part of the feeder and loosen both screws.

2. **Proper Alignment**
   Align the head so that the fiber enters exactly through the center of the head opening. Proper alignment minimizes friction and reduces the risk of fiber damage during insertion.

3. **Alignment Check**
   Tighten the hex screws and verify the fiber is properly centered.

6.4 Air Connection and Blowing

1. **Connecting the air supply**
   Connect the air supply and check that you are using an air separator to remove moisture.

2. **Starting the blowing process**
   Turn on the device by pressing the POWER button. Start with low air pressure and gradually increase it as needed.
   Gradually increase the motor speed while monitoring the air pressure and motor load on the display.

6.5 Monitoring and Control

1. **Monitoring the display**
   During operation, monitor the values on the device display. Watch the motor load, air pressure, and other parameters.

6.6 Using the Device Head

1. **Opening and closing the head**
   The device head contains two eccentric quick-release levers, which allow for quick and easy opening and closing of the head that houses the seals.

6.7 Fiber Blowing

1. **Gradual start of fiber blowing**
   After proper setup and inspection of the device, press the RESET button to reset the length counter. Hold the right-arrow button and simultaneously increase the motor speed using the speed controller.

6.8 Post-Blowing Maintenance

1. **Cleaning the device head**
   After finishing work, it is essential to thoroughly clean the device head from dust and debris that may accumulate during blowing. A soft brush is recommended to remove dust from the seals.

2. **Seal inspection**
   Check the condition of the seals after each use, especially when working in dusty or humid environments. If worn, seals must be replaced.

7. Carrying Case

The device is supplied in a protective carrying case.





8. Prohibited Uses

• Do not use the device for blowing fibers with a diameter other than specified.
• Do not use the device without proper maintenance and pre-use inspection.
• Do not use the device near flammable materials or in environments with explosive gases.
• Do not operate the device with incorrect air pressure that exceeds the manufacturer's recommended limits.

9. Safety Instructions

1. Personal protective equipment (PPE)

Always wear safety glasses and protective gloves when working with the device.

2. Eye protection

Blowing optical fibers carries a risk of eye injury due to high air pressure. Always wear safety glasses.

3. Respiratory protection

Use a respirator or mask in dusty environments.

4. Hearing protection

Depending on the noise level of the air compressor, hearing protection may be necessary.

5. Battery safety

Use and charge batteries properly. Never open or expose batteries to fire.

6. **Device handling**
   Before each use, inspect the device for any damage. If any damage is found, do not use the device until it is repaired.

7. **Prevention of body part entrapment**
   The device has moving parts that can catch loose clothing, gloves, hair, or jewelry, potentially causing serious injury. Always wear tight-fitting work clothes and secure any loose items. Long hair must be tied back. Ensure no body parts are near rotating components during operation. Never place hands near moving parts, especially drive wheels and the device head, while the device is running. Always turn off the device and ensure all moving parts have stopped before performing maintenance or removing obstructions.

8. **Obstacles or objects**
   Ensure there are no obstacles or items near the device that could interfere with operation or catch on clothing. Regularly check the workspace and remove loose tools or materials.

9. **High pressure**
   Using excessive air pressure or overloading the device may cause sudden interruption or abrupt stoppage of the blowing process. Monitor the motor load and air pressure. In case of abnormal behavior, immediately shut down the device.

10. **Protection against fiber injuries**
    Handling optical fibers poses a risk of injury from their sharp, brittle ends. Always use safety glasses and gloves. Avoid contact between optical fibers and bare skin to prevent small but painful injuries.

10. Operating Instructions

1. **Control elements**
   Familiarize yourself with all control elements and their functions before starting work. Make sure you understand how to use them properly.

2. **Operating conditions**
   Operate the device only under recommended conditions: temperature 0 – 50 °C. Humidity and cleanliness are critical for trouble-free operation. Do not use the device in the rain.

3. **Pre-use inspection**
   Check all components of the device before each use, including seals, rollers, and pressure mechanisms.

4. **Access restriction**
   Only trained personnel with appropriate knowledge and experience may operate the device. Untrained individuals must not handle the device.

11. Fire Safety

1. **Fire protection**
   Do not store or use the device near flammable materials. Follow fire safety regulations when working with an air compressor.

2. **Battery charging**
   Follow the battery manufacturer’s instructions for charging.

12. Operator Responsibilities

1. **Following instructions**
   The operator must follow this user manual and comply with all safety regulations.

2. **Repairs and maintenance**
   All repairs and servicing must be performed by an authorized service center.

3. **Responsibility for the device**
   The operator is responsible for the condition of the device during use. If a problem occurs during operation, immediately stop the device and notify the responsible person.

13. Disposal of the Device

1. Environmental considerations

At the end of the device's service life, dispose of it in accordance with applicable laws and regulations regarding recycling and environmental protection.

2. Battery disposal

Batteries must be disposed of in accordance with current regulations. Do not throw them in household waste! Return them to a designated collection point for hazardous waste disposal.

14. Warranty

The PrimaFLOW device is covered by a 12-month warranty from the date of sale. The warranty covers manufacturing defects and material faults.
The warranty does not cover damage caused by improper use, failure to follow the operating procedures described in this manual, or normal wear of components.
In the event of a warranty claim, a copy of the proof of purchase must be provided.

15. Packaging

The device is packed in a protective case along with the following accessories:

- PrimaFLOW Model M blowing machine
- Set of sealing rings
- User manual

Check that the package contains all listed items. If anything is missing, contact your supplier.

16. Service and Spare Parts

If repair or part replacement is needed, contact the authorized service center of Zybra s.r.o.
Spare parts can be ordered through our customer service line.

17. Contact

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