

# NOVUS MANUAL

## AIR CUSHION PACKAGING MACHINE

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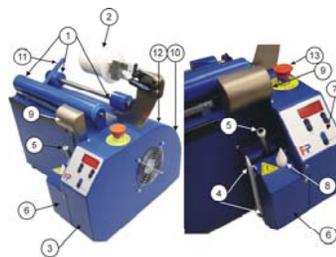
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### 1. INTRODUCTION

The Novus air packaging machine has been specially designed to fill strips of polyethylene with air, for use as packaging material. The machine is supplied ex factory preset and fully tested. Its installation and commissioning must be carried out by FP International or by technicians trained by FP International for this purpose, as must all repairs and maintenance to the electro technical, electronic and mechanical machine components. Prior to operating the machine, personnel must familiarize themselves with the contents of this manual. We emphasize that all of the necessary **safety measures** described below must be taken and complied with by the user in order to ensure the safety of people and property. During production, operating personnel are to prevent injury to any person, whether through unauthorized interference with the machine or by any other method.

### 2. TECHNICAL DATA

1. Guide rollers
2. MRS
3. Connector for peripheral equipment
4. Slot containing drive rollers
5. Air injector with teflon nozzle
6. Front cover
7. Operating panel
8. Cone for stretching the film
9. Film guide
10. Mains connection with ON/OFF-switch, fuse holder
11. Roll catcher
12. Air control
13. Emergency stop button



### Functioning

A roll of preconfigured, perforated polyethylene film is placed onto the guide rollers (1), over the central roll of the MRS (2). At this point, the film is a continuous, flat tube. The drive rollers (4) behind the front cover (6) transport the film through the machine, via the film guide (9). Through a channel running the length of the film, an air injector with a teflon ball nozzle (5) inflates the cells connected to the channel with air supplied by an internal compressor. Each cell inflated is then sealed, the whole process resulting in a strip of inflated cells, to be used as packaging material.

### Specifications

Product:	Polyethylene strip of inflated cells.
Production speed:	22 m / minute
Film:	Double Cushion (DC 480) Supertube (ST 480) Quilt Air Large (QL 480) Quilt Air Small (QS 600)
Operation: Manual:	RUN/STOP key
Automatic:	1. Infrared detector– automatic stop after run selected 2. Pedal operation
Air supply:	Internal compressor.
Dimensions/weight:	l x w = 400 x 475 mm / Approx. 26 kg.
Electrical supply:	230 V - 50 Hz, 6.3 A, earthed
Recommended fuse:	16 A

### 3. SAFETY MEASURES

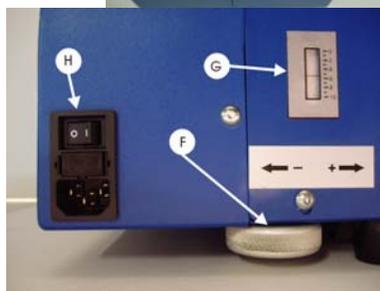
To ensure personal safety, the user as well as operating and maintenance personnel must take and comply with the following safety measures during machine operation.

- Never touch the electrical components of the machine, unless it is switched off.
  - Do not touch any machine part close to the seal head. These parts may remain hot for some time after the machine has been switched off.
  - Do not operate the machine with either the drive roller cover (6) removed or any person's hands near the drive rollers (4).
  - In an emergency, stop the machine by pressing in the "EMERGENCY STOP" button (13) or by switching the "MAINS SWITCH" to "OFF". Once the emergency has been cleared, the machine can be re-started as described under Operation/Starting up.
  - When finishing work, it is recommended that the machine is switched off. To do this, put the mains switch, located on the right hand side of the switch box, into the "OFF" position. The machine must also be switched off during installation and maintenance work.
  - All safety and personal protection measures must be implemented and complied with in accordance with IEC regulations (International European Commission).
  - The installation and commissioning of the machine will be carried out by FP International technicians or by an FP International authorized representatives. Any liability under IEC regulations will be nullified if the machine is expanded or modified in any way whatsoever without the prior written permission of FP International.
  - Work on the electrical installation requires the consent of FP International and may only be carried out by a suitably trained and qualified specialist. This also applies to maintenance to any electrical and/or mechanical part of the machine.
- FP International machines are supplied preset and fully tested. Any loss arising from production down time or failure of the machine caused by incorrect operation or poor or faulty maintenance, or the use of materials other than provided by FP International, shall fall outside of the terms of the warranty.

#### 4. OPERATION

The machine is operated by means of controls, located at the front and back side of the machine. The controls consist of:

- A. RUN/STOP key with LED
- B. FEED keys (↓ and ↑)
- C. TIMER keys (+ and -)
- D. Display
- E. Red EMERGENCY STOP button
- F. Air control
- G. Scale air control
- H. On/off-switch and mains connection



#### Starting up

1. Plug the mains lead into an earthed socket and switch the machine on by putting the mains switch (10) at the back of the machine in the "ON" position. If the machine does not start up, check the EMERGENCY STOP (E) and make sure it is disabled.
2. A yellow LED indicates that the machine is warming up. The display will alternately show the seal temperature set and the actual seal temperature. The machine will be fully warmed up within 5 minutes.
3. A flashing red LED indicates a fault. Contact FP International or its representative for advice and support.
4. A green LED indicates that the machine is operational.

#### Switching off

1. Remove the film from the machine using the FEED-↑ key (B).
2. Put the mains switch in the "OFF" position. The machine has now been switched off.

#### Placing the film

1. Put the blocking pin (1) in position "Load" and move the MRS to the upper position.
2. Put a roll of film onto the two guide rollers (1), ensuring that the wide seam rests against the MRS (2). The film will now hang down over the top of the roll towards the machine.
3. Put the blocking pin (1) in position "Run".
4. Unroll approximately 60 cm of film. Pull the lower right hand side of the film over the white cone (8) to stretch open the air channel.
5. Slide the opening of the air channel over the teflon ball nozzle of the air injector (5), and then pull the film straight down, through the slot containing the drive rollers (4).
6. Either roll up the film or unroll it slightly, leaving about 10 cm of slack towards the front. Check the edges of the film for creases and ensure that the film runs true. Check whether both sides of the film pass by the teflon ball nozzle.



#### Production

1. When the yellow LED (A) lights up, the machine has cooled down. Pressing in the RUN/STOP key (A) will cause the machine to warm up again.
2. Press down the FEED-↓ key (B) until the film reaches the underside of the machine.
3. Using the "+" and "-" keys of the TIMER (C) allows the duration, in seconds or meters, of a single production run to be entered\*. While setting the time, a red dot will appear in the lower right hand side of the display. Confirm the setting by pressing the RUN/STOP key. The red dot will disappear. When the machine is operating on timer control, the green LED will flash.
4. For continuous production, to be started and stopped manually by pressing in the RUN/STOP key, the time must be set to zero.
5. Production will start 3 seconds after the RUN/STOP key is pressed in.

#### Clearing a film jam

1. Tear off the film at the perforations above and below the drive rollers. Pull the film upwards and off the air injector using the FEED-↑ key (B).
2. Remove any remaining film from the machine by pressing the FEED-↓ and ↑ key (B).
3. Insert the film into the machine as described above.

\* for instruction, please see 5. Settings

#### 5. SETTINGS

**Setting the seal temperature** The seal temperature must be set to between 280 and 320°C. The seal temperature can be adjusted as follows:

1. Turn machine on.
2. Wait until the LED goes green.
3. Press both TIMER- buttons and hold for 10 secs.
4. The display shows a value ending with a dot. This is the set temperature.
5. Increase or decrease with + or -.
6. Press RUN/STOP to confirm.



**Setting the type of production cycle** By pressing the upper FEED-↑ (B) and TIMER + (C) key shortly, a choice can be made between a production cycle of a certain time (seconds) or length (meters). If length is chosen, an L will appear in the left side of the display\*\*.

**Setting the air supply** The amount of air to be injected in a cell can be regulated from 0 to 10 with the air control (12) at the back side of the machine. Turn the control clockwise (+) to increase and anti-clockwise (-) to decrease the air supply during production.

**Setting foot pedal** It is possible to use a foot pedal in combination with Novus. Put the plug of the foot pedal into the connector for peripheral equipment (3). It is now possible to give a 'RUN' or 'STOP' command using the foot pedal

**Setting external sensor** If combined with the stand, it is possible to use a sensor with the machine. Mount the sensor to the stand first. Then put the plug of the sensor into the connector for peripheral equipment (3). Then press both FEED keys (B) for 2-5 seconds, until a red dot appears in the middle of the display. Start the machine once manually by pressing the RUN/STOP key. The LED now turns green and the machine is ready for use.

**Interrupting the blower's post purge action** can be done by pressing FEED-↓ key (B).

\*\* the desired seconds or meters can be changed using the '+' and '-' keys of the TIMER (C)

## 6. TROUBLESHOOTING

Fault	Cause	Solution
Film is scorched or damaged	<ul style="list-style-type: none"> <li>- Seal temperature too high</li> <li>- Film tension too high</li> <li>- Loose thermocouple or wire</li> </ul>	<ul style="list-style-type: none"> <li>- Reduce the seal temperature</li> <li>- Check the guide rollers (1)</li> <li>- Contact your distributor or FP International</li> </ul>
Seal opens up when cushion is pressed in	<ul style="list-style-type: none"> <li>- Seal temperature too low</li> <li>- Machine problem</li> </ul>	<ul style="list-style-type: none"> <li>- Increase the seal temperature</li> <li>- Contact your distributor or FP International</li> </ul>
Seal crosses the cell	<ul style="list-style-type: none"> <li>- Film incorrectly placed</li> </ul>	<ul style="list-style-type: none"> <li>- Insert the film correctly into the machine</li> </ul>

### What to do in case of:

#### Fault code 9003 (film roll stopped)

- Check if the film roll is empty. If yes, replace the roll with a new one
- Check if the film is jammed. If yes, see 'film jams'.
- None of the above? Please contact your distributor.

#### Fault code 9004 (offset temperature too high)

- check if seal temperature is not above 320 °C
- Seal temperature is between 280 and 320 °C but code 9004 still in display? Please contact your distributor.

#### Film jams

Make sure that:

- the roll of film is installed properly onto the MRS (2);
- the film runs properly through the drive rollers (4);
- the seal temperature has been set correctly (280 to 320 °C);
- no remnants of film are stuck on the air injector or the drive rollers;
- the teflon ball on the air injector is in good condition;
- The film is not overly tight.

#### Unusual display

- contact your distributor

#### Seal faults

Make sure that:

- the roll of film is installed properly onto the MRS (2)
- the film runs properly through the drive rollers (4);
- the seal temperature is set correctly (280 to 320 °C);
- Check each item in the table above.

#### Poor inflation

Make sure that:

- the roll of film is placed properly onto the MRS (2)
- the film runs properly through the drive rollers (4);
- the teflon ball on the air injector is in good condition;
- the air supply control is turned fully clockwise (maximum air supply)

#### 7. MAINTENANCE

Daily:

Clean the machine with a clean and moist cloth.

Weekly:

Check the guide rollers (1) and the teflon ball nozzle of the air injector for signs of wear and tear.

Monthly:

Check the condition and operation of all mechanical parts

Annually:

General inspection of all machine parts for signs of wear and tear and anticipated life, to be carried out by a specialist such as an FP International technician.

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**\*\* NOTE \*\***

*The machine described in this instruction manual is intended only for the production of polyethylene strips divided into inflated cells, to be used as packaging material. To avoid any risk of endangering the health and safety of people and of damaging property, all the safety measures given in this manual must be implemented and put into practice. Should faulty functioning or operation control result in damage to property or health hazards, the operator will be responsible for taking appropriate action and/or putting into place appropriate safety measures.*

*FP International BV accepts no liability for any machine faults resulting from inexpert use or abuse of the machine or from incorrect data being entered by the operator. FP International also cannot be held liable for faults, damage or production downtime resulting directly or indirectly from any modification to the settings on the part of the user or operator.*

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