



## PFI type LABORATORY MILL NPMI-02 model

For laboratory use in the process of refining chemical pastes under standard conditions and even for the defibration of semi-cooked fibers

## LABORATORY BEATER “PFI type” NPFI-02 model

### APPLICABLE STANDARDS:

ISO 5264/2 - DIN-EN 25264-2 - SCAN C 24 - TAPPI T248 - PAPTAC C.7

### GENERAL INFORMATION

For use in the laboratory to refine chemical pulps under standardized conditions and also for the defibration of semi-digested (uncooked) raw materials.

The refining elements consist of a mill with sharp vertical cutting bars and a container that houses the paper pulp sample to be refined, both elements made of stainless steel.

The mill with blades and the circular container has an independent electric motor drive and rotate in the same direction but the refining mill has a higher peripheral speed. Deployment and the base plate are carried out independently and rotate in the same direction, but implementation has peripheral speed.

Refining conditions, such as pulp consistency, refining pressure and the distance between the refining elements can vary within wide limits. The PFI type refining mill is equipped with a digital counter to record the mill turns during a pulp refining test.

- **Power consumption in W - watts (continuous measurement)**
- **Energy consumption in Kw / h, during the whipping process.**
- **Versatility due to fast operation and small pulp volume (30 g)**
- **You can refine between 5 - 40 g of pulp in a concentration of 5 to 50%**
- **(max 450 ml suspension)**
- **Excellent repeatability, to be used in quality control and research**
- **Safety elements for user and equipment protection (CE)**
- **Raising and lowering of the refining cylinder by electric automatic maneuver**

### TEST DESCRIPTION

The cylindrical container rotates at 720 +/- 20 r.p.m. and the refiner mill with 33 blades at 1440 +/- 30 r.p.m., both in the same direction. The refining mill exerts a pressure against the wall of the container of 3.33 N / mm. The pulp is refined due to the pressure between the container wall and the mill's blades. Refining times vary between 2 and 10 minutes (depending on the type of paper pulp)

### WORK PROCESS

A heavy and disintegrated amount of pulp is placed in the container. This operation is performed manually by placing the paste on the wall of the container. The refining mill is placed on top of the container and the test begins when the mill is introduced into the container.

Pressure is applied between the grinder and the wall of the container by raising the lever that releases the weight that will apply the pressure during the test. The pulp makes that there is no physical contact between the metal parts of the container and grinder. The team can now start the test, with the preselected number of revolutions.

After the selected revolutions have been rotated, the mill stops, and the refining process ends. The mill is placed in the initial position and the refined pulp is extracted to measure the degree of refining ° SR or CSF

## SPECIFICATIONS

- The refining mill and the cylindrical container are made of stainless steel.
- Easy to operate. After pressing "Start" the refining mill descends and refining begins.
- Pre-selection of the number of revolutions of the refining mill.
- Adjustable refining pressure, 1.0 to 5.5 N / mm cutting blade length.
- CVM-C10 Energy Counter with 4 digitals display for:
  - ✓ Current time record
  - ✓ Electrical characteristics of the supply voltage
  - ✓ Power absorbed in Watts (continuous measurement)
  - ✓ Energy consumed in Kilowatts / hour during the refining process
- Each PFI Refiner is inspected and calibrated in its characteristics and functions, with reference standard paste from the PAPRICAN Institute of Canada.
- If calibration with other standard pastes is desired, it must be indicated in the order and is
- it is necessary to send a sample of the desired reference paste.
- Modern (ergonomic) design for easy cleaning and functionality, with all measurement and actuation instruments integrated in a front and elevated control panel.
- Additional electrical maneuver that facilitates maintenance tasks (grinding of refining elements).



### "PFI" type BEATER TECHNICAL CHARACTERISTICS

<b>Designation</b>	"PFI type Beater						
<b>Model</b>	NPFI-2						
<b>Power supply</b>	220 VAC - 50 or 60 Hz - Three Phases + GND 380 VAC - 50 or 60 Hz - Three Phases + Neutral + GND						
<b>Power consumption</b>	2000 w						
<b>Refining pressure</b>	1.0 to 5.5 N / mm						
<b>Roll speed</b>	1440 +/- 30 r.p.m.,						
<b>Container speed</b>	720 +/- 20 r.p.m.						
<b>Standard beating pressure</b>	3,33 N/mm						
<b>Dimensions</b>	<table border="0"> <tr> <td><b>Wide</b></td> <td>660 mm</td> </tr> <tr> <td><b>Depth</b></td> <td>755 mm</td> </tr> <tr> <td><b>High</b></td> <td>1700 mm</td> </tr> </table>	<b>Wide</b>	660 mm	<b>Depth</b>	755 mm	<b>High</b>	1700 mm
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<b>High</b>	1700 mm						
<b>Net Weight</b>	380 Kg approx.						
<b>Dimensions of Transport Packaging</b>	1100 x 940 x 1950 mm (W x D X H)						
<b>Gross Weight</b>	550 Kg (Wooden packaging with phytosanitary treatment)						

#### STANDARD SUPPLY CONTENT:

- \* LABORATORY PFI Type BEATER NPFI-02 model
- \* PAPRICAN standard paper pulp (Canada)
- \* Additional weights