東莞市中谊精密仪器有限公司

Dongguan Zhongyi Precision Instrument Co., Ltd

Groove meter

USER MANUAL

Model Number: ZY-CWY-A

Power Supply: 220V/50Hz

Foreword

Thank you for choosing our products. We not only provide you with high-quality products, but also provide reliable after-sales services.

In order to ensure the personal safety of the user and the integrity of the instrument, please fully read this operation manual before using the instrument, and pay attention to the precautions on its use. This operation manual details the design principle, basis standard, structure, operation specification, correction, maintenance, possible fault condition and elimination method of this instrument, electrical diagram, etc. All "test regulations" and standards mentioned in this operation manual are only for reference. If you have any objection, please review relevant standards or data by yourself.

special announcement:

- This Operating Manual shall not be used as the basis for any requirements to the Company
- The Company reserves the right to interpret this Operating Manual

Ⅰ、summary

The fluted grain tester is applicable to pressing the standard corrugated waveform (i.e. corrugated core raw paper laboratory corrugating) during the determination of the flat compressive strength of corrugated core raw paper. After corrugating, it can measure the flat compressive strength (CMT) and vertical strength test (CCT) of corrugated core raw paper in cooperation with the computer compression tester. It meets the requirements of QB1061, GB/T2679.6, ISO7263, TAPPI T809 and other standards. It is an ideal testing equipment for paper mill, scientific research, quality inspection institutions and other departments.

Ⅱ、Specifications and main technical parameters

1.Operating speed: 4.5r/min

2.Temperature display resolution: 1° C

3.Temperature measurement accuracy: Level 0.5 ± 1 word

4.Operating temperature adjustable range: Room temperature~200 ° C

5.Operating pressure adjustable range: （0～200）N

6.Standard operating temperature: 177° C±8° C

7.Standard tension force: 100N

8.Overall dimensions (L × W × H): 380mm×580mm×500mm

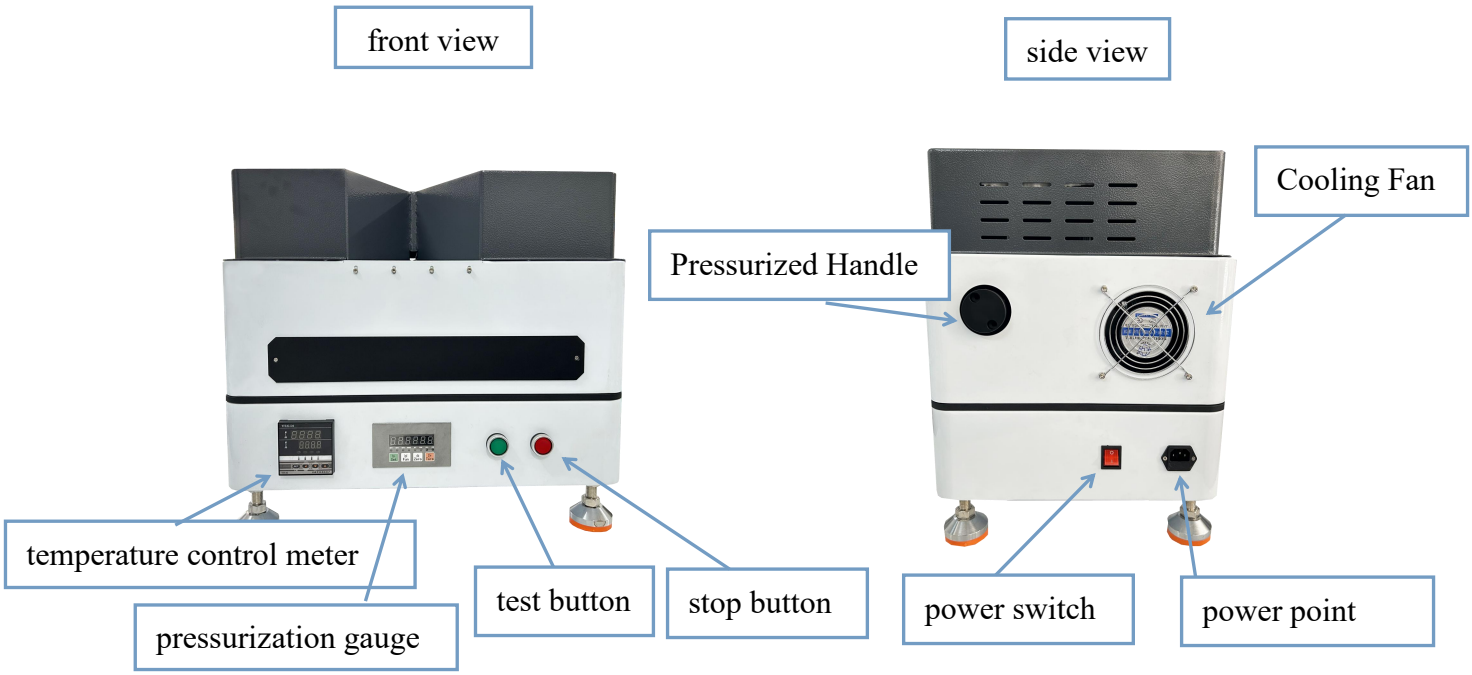
9.weight: 60Kg

10.power supply: AC220V, 50Hz

11.working conditions:Room temperature 10～30℃

12.Stable working table, flat table surface, no vibration.

1、Product Structure Diagram



2.Pictures of Corrugated Medium Plain Strength Test (CMT) Fixtures

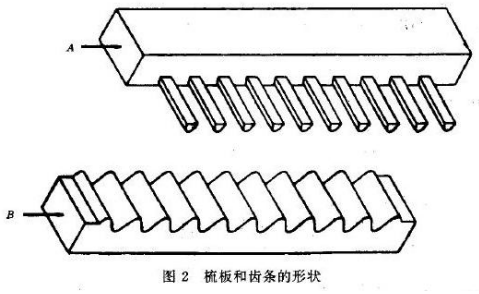
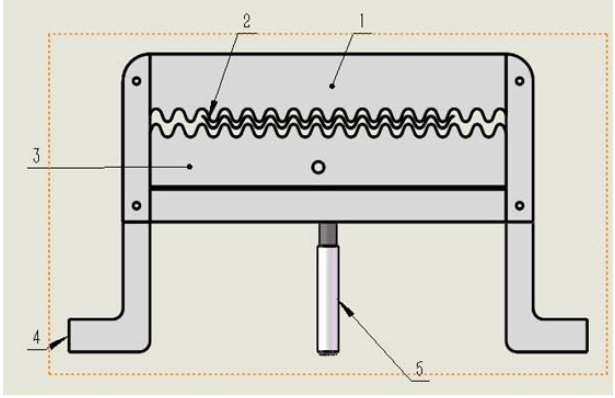


图 2 梳板和齿条的形状

A:comb B:rack

3.Corrugated Cardboard Vertical Strength Test (CCT) Vertical Strength Fixture Pictures



1：pedestals

2：test sample

3：Sliding block

4：handle

5：Adjustment knob

Ⅲ、Installation and adjustment

Instrument unpacking, after wiping clean, placed in the level of no vibration on the workbench, before connecting the power supply should be checked whether the ground is good, whether the power supply is reasonable, plug in the power supply, turn on the power switch to observe whether the display is bright, bright indicates that the instrument is normal, after checking, the instrument can be used.

Ⅳ、procedure

4.1.The specimens were processed to equilibrium under standard atmospheric conditions and then cut under the same atmospheric conditions. The specimen shall be 12.7 mm x 0.1 mm wide by 152 mm x 0.5 mm long, with the long side of the specimen in the longitudinal direction. The number of specimens should be such that 10 valid data can be measured.

4.2 Corrugated Medium Plain Strength Test (CMT)

4.2.1 The specimens were prepared as follows:

Turn on the fluting equipment, set the temperature of the instrument at 175 degrees according to the instructions of the temperature controller, and wait for the temperature of the instrument to stabilize (175±8)℃。Insert the specimen straight into the paper sample inlet to make the specimen flute. After fluting the specimen, put it on the rack (B), and then press the comb plate (A) on the specimen, put it along the top of the corrugated with a 120 mm long tape, and press it on the steel plate to keep it firmly, take out the comb plate (A) carefully, and remove the specimen, so as to produce the specimen with 10 corrugated.

4.2.2 Perform the compression test immediately or after warm and wet treatment according to the requirements of the product standard. If the specimen is compressed immediately after fluting, the time from fluting to the application of pressure shall be less than 15s e If

the specimen is treated with warm and humid treatment after fluting, it shall be treated for 30m in at 23℃, 50% relative humidity or for 60 min at 20℃, 65% relative humidity.

4.2.3 The specimens were tested as follows:

To perform the compression test, the specimen is placed in the middle of the lower platen of the compression gauge, with the untaped side up, and then compression is initiated, reading the maximum force to which the specimen is subjected when the specimen is completely crushed. The value of this force is the flat compressive strength of the specimen, expressed in N. If, during compression, the specimen is found to be deflected or the specimen is detached from the tape at any point, the result is discarded.

4.2.4 Calculation of results

Ten valid data were measured and the results were expressed as their arithmetic mean. Maximum and minimum values are reported. Calculations are accurate to 1N.

Test results can be expressed in the following form:CMTo= 350N; CMT30= 250N

Here CMT denotes the corrugated medium test and the footnote denotes the time between fluting and compression, expressed in minutes.

Ⅴ、Corrugated Vertical Strength Test (CCT)

This method is specifically designed for the determination of corrugated paper. As in the CMT (Corrugated Medium Test), the paper passes through a cold press corrugator and becomes the same core paper as in the wires. As in the CMT test procedure mentioned above, the formed core is also subjected to pressure, and the vertical compressive strength can be calculated at the moment of crushing.

5.1 Preparation of specimens (as for corrugated medium flat compression test (CMT))

The specimens were processed to equilibrium under standard atmospheric conditions and then cut under the same atmospheric conditions. The specimen shall be 12.7 mm x 0.1 mm wide by 152 mm x 0.5 mm long, with the long side of the specimen in the longitudinal direction. The number of specimens should be such that 10 valid data can be measured.

5.2 Corrugated Compression Strength Test (CCT)

5.2.1 Specimens are prepared as follows:

Turn on the fluting equipment, set the temperature of the instrument at 175 degrees according to the instructions of the temperature controller, and wait for the temperature of the instrument to stabilize (175 ± 8) degrees. Insert the specimen vertically into the "paper sample inlet" to make the specimen flute. Place the fluted specimen on the rack of the "base", and adjust the knob so that the teeth of the "sliding press" are close to the specimen, to make the specimen vertical.

5.2.2 Requirements according to product standards:

Immediately perform the compression test or warm and wet treatment followed by the compression test. If the specimen is compressed immediately after fluting, the time from fluting to the application of pressure shall be less than 15 s e If the specimen is subjected to temperature and humidity treatment after fluting, the specimen shall be processed for 30 m in at 23° C, 50% relative humidity or for 60 min at 20° C, 65% relative humidity.

5.2.3 Specimens are tested as follows:

To carry out the compression test, the specimen is placed in the middle of the lower platen of the compressor, the protruding side of the test specimen goes upwards, and then the compression is started, and the maximum force that the specimen is subjected to when the specimen is completely crushed is read. The value of this force is the vertical compressive

strength of the specimen, expressed in N. If the specimen is already deformed during clamping, the result is discarded.

5.2.4 Calculation of results

Ten valid data were measured and the results were expressed as their arithmetic mean. Maximum and minimum values are reported. Calculations are accurate to 1N.

Test results can be expressed in the following form: CCTo = 350N; CCT30 = 250N. Here CCT denotes the vertical compressive strength test of corrugated medium, while the footnote denotes the time between fluting and compression, expressed in minutes.

special attention:

Whether it is a CMT test or a CCT test, it should not be repeated because the shape or vertical state of the paper may have changed when it was subjected to compression, and the results will not be accurate when it is re-tested.

VI、Maintenance and upkeep

1. The relative humidity of the environment where the instrument is used is 65%.

2. Avoid other electrical interference.

3. If the instrument is not used for a long time, it should be regularly energized and run, and the electrical parts should not be affected by moisture.

VII、Note

If there are any omissions in this booklet that need to be added or corrected, or if there is a change in the design of the testing machine due to improvements or innovations, or if the testing machine is replaced with a better component and the method of use must be described separately, they are all listed in this section.

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This booklet has been compiled to assist your company in understanding the operation and matters to be noted, so please keep it in a safe place for reference when necessary.

As we are always innovating and improving our products, the examples, illustrations and specifications in this booklet are based on the models available at the time of publication.