

BGD 660

Automatic Drying Tester

INSTRUCTION MANUAL



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1. 0 General introduction

BGD 660 Automatic Drying Tester produced by our company is in accordance with QB 562 (Test Method for Ink Drying Time), it provides a method to test ink drying time. The definition for this standard ink drying time: Putting the quantitative sample, ink drying time is the time that parchment paper covering on test sample doesn't have staining colour under certain pressure, unit: hour. Test shall be carried out under doing comparison test between standard and test sample.

BGD 660 Automatic Drying Tester adopts single slice microprocessor, LCD displays relative test parameters. Comparison test uses standard sample、 test sample and parchment paper covering on test sample & fixed by adhesive band on the roller, the roller revolves slowly according to settled speed , pressure tyre forces on the parchment paper and moves slowly on the roller at constant proportion. Ink drying time can be calculated by number of stain strip.

BGD 660 Automatic Drying Tester is used for chemical material process, safety and health protective step must be set up in accordance with all local codes and ordinances. Before using this machine, safety problem associated with chemical material must be established by user, not belonging to explanation of this Instruction Manual.

2.0 Specification

- 2.1 Electrical power source: 220V 50Hz
- 2.2 Mass of pressure tyre: 100g
- 2.3 Speed of pressure tyre: 2mm/r
- 2.4 Time of whole course: 5-20 h
- 2.5 Circle number of whole course: 120r
- 2.6 Per circle time accuracy: $\pm 0.025s$
- 2.7 Overall dimensions: 500mm×200mm×220mm
- 2.8 Weight: 17kg

key instructions

Key	Instructions	Notes
“↑”、“↓”key	Cycle transfer between 5-20h when increase、 subtract 1h for timing whole course	Effective under clear condition
“ Clear timing ” key	Clear compensating timing、 running cycle & test timing.	Effective when roller stops revolving
“Start、 Stop timing”key	start & stop compensating timing ,	No effective if no clear after reaching settled value or pressure tyre touching limit switch
“Run” key	Start roller revolving, simultaneously & automatically stop compensating timing	
“Stop” key	Stop roller revolving, simultaneously & automatically start compensating timing	

3.0 Operations

3.1. Testing Environment: 25°C±1°C, relative humidity: 60%~70%.

3.2. Turn on the power switch which is on the back of tester, buzzer buzzing.

3.3 Liquid crystal screen shows sequentially on the main interface as following.

<i>Time of whole course</i>	<i>20h</i>
<i>Compensating timing</i>	<i>00:00:00</i>
<i>Running cycle</i>	<i>0000.0</i>
<i>Test timing</i>	<i>00:00:00</i>

3.4. According to estimated ink drying time, adjust “time of whole course” (tacitly approve 20h)

Contrast table for Time of whole course & Time per cycle for roller (interval between two stain strips on the parchment paper) as following:

Time of whole course (h)	05	06	07	08	09	10	11	12
Time per cycle for roller(min)	2.5	3	3.5	4	4.5	5	5.5	6
Time of whole course (h)	13	14	15	16	17	18	19	20
Time per cycle for roller(min)	6.5	7	7.5	8	8.5	9	9.5	10

3.5 Weigh test sample & standard white & dry oil on the analytical balance according to following proportion. they shall be homogeneous; Weigh standard sample & standard white & dry oil using same method, they shall be homogeneous. The proportion for ink & dry oil:

Resin ink: test sample (standard sample) ink: standard white & dry oil= 95:5

Oil ink: test sample (standard sample) ink: standard white & dry oil= 90:10

3.6 After blended homogeneously, Standard sample is parallel to test sample, coat 30cm length. Press “Start、 Stop timing” key and start test timing & compensating timing; parchment paper covering on test sample, wrap them together & fixed by adhesive band on the roller.

3.7 Move pressure tyre to the right of screw stem, force on parchment paper; Press run “key” and start roller revolving (automatically stop compensating timing), pressure tyre start to scratch.

3.8 During running, Press “Stop” key to stop roller revolving (automatically restart compensating timing) so as to observe scratch condition; then repress “run” key to rerun roller (automatically stop compensating timing).

3.9 When test timing reaches time of whole course、 or pressure tyre touches limit switch on the left, automatic Drying Tester automatically stop running, buzz three times and stay display on the display screen. Press “Stop” key after no scratch on the pressure tyre, then immediately press “Start、 Stop timing” key to stop roller revolving, and stay “compensating timing” display.

3.10 Take off parchment paper and check spacer number between two stain strips, multiply spacer number by time per cycle then add compensating timing , that is ink drying time. Calculate difference between test sample and standard sample, check if it is suitable.

3.11 “Clear timing” key must be pressed to clean display, then next test can be done.

4. 0 Note

4.1 When installing the tester, locate the instrument on a sturdy bench apart from environment of strong draught, strong magnetic field, strong electrical field, strong electromagnetic pulse disturbance.

4.2 After finishing test,, "time of whole course" should be readjusted, or "Clear timing" key must be pressed to clean last time displaying data before new test, otherwise relative keys will be no effective

4.3 For quick-drying ink, choose shorter "time of whole course", time per cycle for roller will be shorter, resolution of drying time will be increased.

4.4 After testing, wipe and clean the instrument; each running part should be lubricated after using a period of time.

4.5 Turn off the power switch which is on the back of tester, it should be waiting 10 seconds to restart the instrument, otherwise it will cause display in disorder. If happening display in disorder occasionally, Please turn off the power & restart the instrument after waiting 10 seconds.

5.0 OTHERS

For further information contact Biuged, your local supplier, or visit our website at www.biuged.com