



Laboratory equipment co.,limited

## Böhme Abrasion Tester STM-B

# PRODUCT MANUAL



### **C-TECH LABORATORY EQUIPMENT CO., LTD**

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## I. Overview

Thanks for choosing our products. In order to get better operation on the test and safety of users, this product manual should be read in detail. After total comprehension and master of the properties of the tester, operation is to be allowed. When reading finished, safe preserve is necessary for later use.

**NOTE:** Since continuous renewal of products, material object should be served as the norm when discrepancies occur between this manual and the material object.

### Application

This tester is mainly used for carrying out abrasive resistance test on natural stone and other constructive materials (such as artificial stone, glass ceramics, construction brick etc.) This tester is designed and manufactured according to the demand of method B-Böhme in EN 14157:2017 <Natural stone test methods - Determination of the abrasion resistance>

### Operating environment

Ambient temperature	10°C ~ 35°C
Ambient humidity	20% ~ 60%RH
Vibration-free around, corrosion-free medium, without disturb of high-intensity magnetic field.	
Power supply voltage fluctuation not exceeding 10% of nominal voltage	
Horizontal installation on a solid foundation, the horizontal levelness not greater than 0.2/1000	

### unpacking and inspecting

Pay attention to these items below when receiving cargo

- Whether the cargo received fits the product that you order  
To confirm refer to the logo on external packing
- Whether damages appear in products and outer packs.



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Please check appearances to confirm no any damages.

- Accessories supplied whether omit or repeat.

To check and confirm one by one according the purchase list.

- Whether bare bolts loosen or fall off

Please visual check

- Whether other abnormalities occur

**NOTE:** In order to solve problems properly, please contact with our company in time, if any abnormal condition appears.

## II. Technical specifications

Grinding wheel diameter	Ø750mm
Grinding wheel stiffness	190HB~220HB
Grinding wheel rotate speed	(30±1)r/min
Test track diameter	Ø220mm
Abrasive load on specimen	294N±3N
Revolution counter range	0~9999
Specimen size	(71±1.5)mm×(71±1.5)mm
Power supply	Three-phase four-wire 380V 50Hz
Power	0.55kW
Dimensions	830mm(L)×1070mm(W)×800mm(H)
Weight	Approximately 160kg

## III. Operation

- ①. Please connect the equipment power according to the sign power line.
- ②. Turn on the power button on the panel, the counter light starts.



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- ③. Before carrying the test, please weigh the specimen according to the test requirements.
- ④. Remove the load weight, lift the lever, put the specimen into the specimen's holder.
- ⑤. Lay down the lever, press load pressure head on the surface of the specimen, adjust pressure head according to the samples height to make the lever balance, hang on load weight.
- ⑥. According to the test requirements, corresponding label grinding materials well-distributed inside test track on the grinding wheel.
- ⑦. Set the revolutions on the counter, default setting is 22. If need to change to other revolutions, please press the button "↔" to make the corresponding digit flashes, then through pressing the button "↑↓" to increase and decrease numbers, without other operations, wait 10 seconds to save automatically.
- ⑧. Then press the button "□" to clear the numbers to zero, press the button "start", the test starts.
- ⑨. After reaching the set revolutions, the grinding wheel will stop automatically. If need to quit the test during the test process, please press the button "stop; if need to stop the equipment in emergency, please press the button "emergency stop" or the button "stop".
- ⑩. When test finished, remove the load weight, lift the lever, take out the specimen.
- ⑪. If not need anymore, please clear the grinding wheel and turn off the power, lid the machine clothing.

#### IV. Common faults and troubleshooting

No.	Fault phenomenon	Generate reasons	Solution
1	Main engine cannot start up	Power connection error	Connect power as required
		Frequency converter error	Check the frequency converter
2	Motor cannot start up	Emergency stop button close	Unscrew Emergency stop button
		Counter alarm	Press the counter resetting key
3	Inaccurate counter	Proximity switch install location moved	Adjust proximity switch position and fasten
		Electromagnetic interference	Far away interference source



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## V. Maintenance and Repair

Since the tester is mechatronics product, it may go wrong as the operating environment get changed, such as temperature and humidity and the aging of the electrical components and parts etc. In order to get long-term normal operation, the apparatus should be daily checked and regular maintenance during the storage and using procedure.

### Daily check

Examine the items below when apparatus in normal running.

- Whether abnormal sound or vibration occur on motor reducing gear.
- Whether grinding wheel rotate speed even or not.
- Whether the counter works normally.

### Regular Maintenance

Rub anti-rust oil regularly on exposed metal accessories according to working condition, for fear that accessories oxide etch and get rusty. During maintenance, be sure to turn off the host and cut off the power supply of the host.



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