

Measure what you see.

# BYK-Gardner “Coverall” Bend and Impact Tester

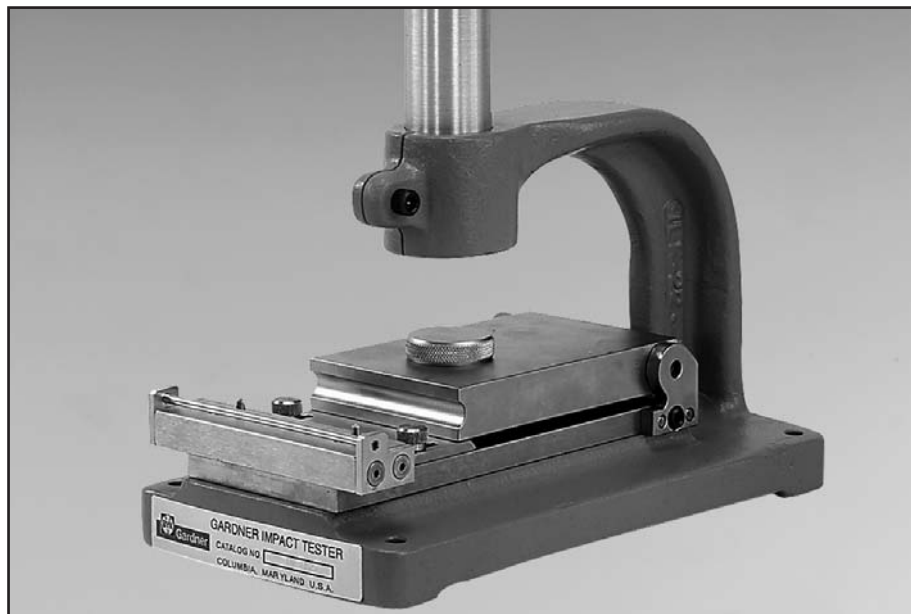


Operating Instructions

# BYK-Gardner „Coverall“ Bend and Impact Tester

## Operating Instructions

English



PF-1125

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## Safety Instructions

**Warning!** This manual cannot address all of the safety considerations associated with its use. It is the responsibility of the user to consult this manual and establish appropriate safety practices for use with this equipment and the individual material being tested.



**Warning!** The impact test requires dropping heavy weights from significant height. The weight hits the sample with tremendous force. No portion of the operator's body or clothing should be in the impact area during a test.

**Warning!** Impact testing may cause the test material to shatter. It is the responsibility of the user to determine the hazards associated with the material being tested.

**Warning!** Test samples may explode when impacted. Eye protection must be worn while operating this device.



**Warning!** Impact testing may cause very loud noises at the moment of impact. These can be as much or greater than 95 dBA. Ear protection must be worn by all personnel in the testing area.

**Warning!** The impact tester is designed and intended for the use described in this manual. Using the impact tester for other purposes for which it was not designed may reduce or eliminate the protection offered by the features of the tester. Serious injury may result.

**Description**

Two parts are built into the device to convert it to a bending machine. A  $\frac{1}{8}$  inch steel rod (mandrel) is mounted at the front of the base, and a butt hinge made of two steel blocks is attached to the base below the guide-tube. When the hinge is closed it creates a wedge-shape gap between the upper and lower parts ranging from  $\frac{1}{8}$  inch at the hinged end to zero thickness at the free end. To make a bent test, the coated panel (30-31 gage tin plate) is first bent double over the  $\frac{1}{8}$  inch rod. The bent panel is placed between the parts of the hinge. Then the impact tool, flat face down, is dropped from a height of one or two feet onto the upper part of the hinge. The cylindrical fold in the panel is squeezed into a conical shape.

The impact test is made with a cylindrical weight which terminates in a  $\frac{1}{2}$  inch diameter round nose. With a 4-pound weight and a 40-inch drop the BYK Gardner „Coverall“ Bend and Impact Tester delivers up to 160 inch-pounds of impact force.

Dimensions: 127 x 25 x 25 cm (50 x 10 x 10 in.)

Weights:        8.2 kg (18 lbs.) net  
                     10.9 kg (24 lbs.) shipping

## **General Information**

This versatile device can be used to make tests for both flexibility and impact resistance. By simply reversing the impacter, the instrument can be used in dual capacity to evaluate, for example, the flexibility of can-stock coating during double-seaming, and to test its impact resistance in handling.

### Operation:

(1) Mandrel Flexibility Tests: Make certain that the knurled cover is inserted in the hole located on the top plate of the wedge mandrel placed in the slanting position. The impactor is inserted in the guide-tube with the blunt end down. After insertion a threaded pin is screwed into the impactor. The guide-tube is then adjusted and clamped into place so that this lifting pin is set on the zero mark and cannot be sheared off.

Test panels should be cut to a size of 3" x 4" from metal plate up to 24 gage. A bare specimen should be tested first to determine the number of inch-pounds of impact required to flex this .selected metal to a knife edge. To accomplish this, the specimen is partially flexed over the 1/2" rod mandrel and inserted for complete flexing beneath the wedge mandrel. The impactor is lifted off the catch and dropped from a height sufficient to complete the flexing of the bare specimen (placed parallel to the long axis of the mandrel) to the required knife-edge crease at one corner.

