

ISP-Z SERIES

## IMPACT SPECIMEN NOTCH PROJECTOR OPERATION MANUAL



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MN-ISP-Z SERIES-E

V0

## OVERVIEW

The light emitted by this projector is directed onto the object under test through a condenser lens, and then projected onto the projection screen with an enlarged outline of the object through an objective lens.

According to actual needs, this instrument is a single projection illumination. The light source is projected onto the workbench through a series of optical elements, and then the clear contour of the test sample notch is projected onto the projection screen through a series of optical elements. The object is magnified and reflected twice to form a positive image, and the shape seen on the projection screen is consistent with the direction in which the actual sample is placed.

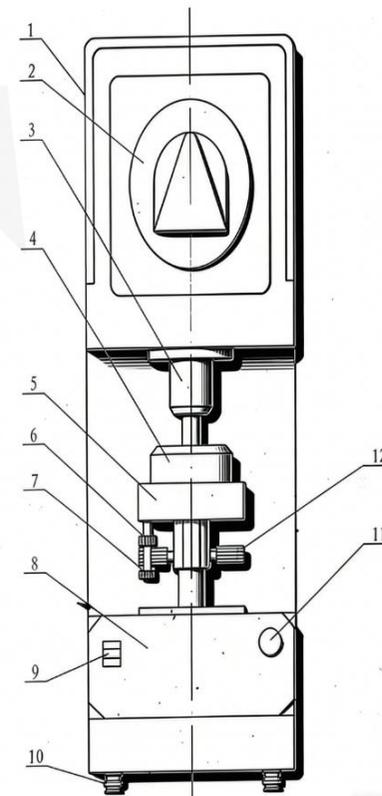
## 1.Main features

- Suitable for inspecting the notching quality of impact specimens of Charpy V-notch (depth of 2mm) and U-notch (depth of 2mm).
- Standard sample drawings with tolerances, angle values and depth lines on the screen for intuitive and efficient comparison.

## 2.Specification

Code	ISP-Z1	ISP-Z2
Corresponding standard	GB/T 229	GB/T 229, ASTM E23, ISO 148, ISO 83, EN 10045
Magnification	50X	
Magnification of lens	2.5X	
Magnification of projector lens	20X	
Diameter of projector screen	Ø200mm	
Size of square stage	110×125mm	
Size of round stage	Ø90mm	
Diameter of glass on stage	Ø70mm	
Stroke of stage (X axis)	±10mm	
Stroke of stage (Y axis)	±10mm	
Stroke of stage (Z axis)	±12mm	
Range of stage rotation	0°~360°	
Illumination (tungsten halogen lamp)	12V 100W	
Power supply	AC 220V, 50Hz 150W	
Dimension (W×D×H)	510×220×600mm	
Weight	20kg	

## 3.Product schematic



1. Shell
2. Project Screen
3. objectives
- 4.Round Table
5. Square Table
6. Vertical Adjustment Hand Wheel
- 7.Lateral Hand Wheel Adjustment
- 8.Base
9. Power Switch
- 10.Corner Screws
11. Power Led
12. Elevating Hand Wheel

## 4. Instruction of installation

- After unfolding the packing box, first check if the instrument is defective due to collisions in transport process to ensure it is in perfect condition.
- The instrument should be placed on the horizontal site without vibration and leveled by foundation bolt.
- The instrument should be located and used in a comparatively dim room.
- The ambient should be clear of dust and moisture to keep the optic components from being mildewed.
- After installation, connect the instrument with a power supply of 220V, and switch it on to check if the screen is illuminated. If it works, switched it off.

## 5. Operating instruction

- Connect the power and turn on the power switch.
- Place the test sample on the workbench, rotate the workbench lifting handwheel (12 in Figure 1), focus to clear the image, then adjust the circular workbench and the vertical and horizontal adjustment handwheels, so that the projected image of the V-shaped (or U-shaped) notch of the sample, which has been magnified 50 times, is compared with the standard size diagram of the impact sample notch provided by this instrument, which has also been magnified 50 times, to determine the geometric dimension processing quality of the V-shaped notch of the impact sample.
- When the brightness of the light bulb decreases or is damaged after prolonged use, it needs to be replaced with a new bulb: first, cut off the power, remove the back cover, loosen the two screws on the halogen tungsten lamp holder (white porcelain), and pull out the bulb upwards to replace it; After replacement, the lighting system needs to be readjusted according to the following method:
  - (1) Remove the rear cover and turn on the power switch;
  - (2) Place a piece of white paper on the workbench;
  - (3) Loosen the front roller screw of the lamp holder and adjust the

large roller handwheel after adjusting the light source to adjust the center height of the filament. Pulling the large roller handwheel can adjust the filament to be located at the horizontal center of the optical axis; When adjusting, pay attention to the round and centered bright spots on the white paper, then move the white paper away and observe whether the projection screen illumination is uniform. Repeat this process until it is even.

(4) Tighten the rolling screw, fix the lamp holder, and adjust the lighting system.

The adjustment of the lighting system is to place the filament at the center of the optical axis to achieve uniform brightness on the projection screen. The newly manufactured instrument lighting system has been correctly calibrated and generally does not require adjustment. Only when the instrument is subjected to severe vibration or the bulb is replaced, causing the filament to deviate from the center of the optical axis, adjustment is needed.

## 6. Precaution

- The instrument has already been inspected rigorously before leaving factory, if no accidents occur during transportation, it will run regularly. Please do not adjust the instrument before operation.
- The ambient in which the instrument is installed ought to be kept clean and clear of hazardous gases, dust and oil fog. The temperature should be kept between 20- 35 °C, and the relative humidity in the air should not exceed 80%, otherwise, undesired effects to the optic components and the metallic filming would be caused, which can damage the quality of the image.
- For the clarity of the image, the instrument should be kept away from sunshine and in place where no reflected rays can be projected onto the screen.
- The lens should be kept clean, the surface of which can not be touched by naked hand. If there is any oil contamination, wipe the floating dust by feather pen softly, and then, with a mixture of anhydrous ethyl alcohol and ether on the absorbent cotton tipped with glass detergent, and finally dry the surface with absorbent cotton.

- The naked parts of the instrument should be cleaned with petroleum regularly and lubricated with proper quantity of grease.
- The instrument must be grounded for reason of safety.
- If you have any more question concerning quality, please contact us in time.