

**Bead Test  
Instrument  
Model 227**



testing equipment for quality management



**Technical Description**

Practical  
testing procedure

For testing the quality  
of stamping paints  
and plastic coatings

# Bead Test Instrument, Model 227

## Purpose and Application

The **Bead Test Instrument, Model 227**, enables the quantitative assessment of the technological properties of stamping paints and plastic coatings on cylindrical standard cups. The instrument was designed to produce stresses comparable to those which occur in practice and is particularly suited for use in the development of high-quality stamping paints.

Stamped-out metal containers, such as shoe cream tins, feature a bead rolled into the vertical wall of the container which serves to position the lid. It is a well-known fact that the stamping paint at the crest of this bead is most susceptible to cracking and peeling. This is due to the fact that the stamping paint in this area is subjected to a higher degree of deformation.

## Test Principle

Standard cups (Erichsen stamping paint test pieces) are drawn from coated strip using our **Cupping and Deep-drawing Cup Test Machines, Models 212 and 242**. During the deep drawing process the stamping paint is subjected to stresses which are similar to those encountered under practical conditions.

The standard cup has an inner diameter of 33 mm and is drawn from a blank measuring 64 mm in diameter applying blank holding pressure. During the drawing process the stamping paint on the sheet is subjected to stressing and deformation which increases in severity towards the upper rim of the cup. The qualification of the stamping paint is easily detectable with the naked eye or with a magnifying glass, if necessary after conducting boiling tests.

The **Bead Test Instrument, Model 227**, is used to form a bead in the standard cup under defined deforming conditions. This bead is formed to a depth where the deformation limit, i.e. the deformation capability of the stamping paint, is reached. During the test a conducting fluid moistens the coated surface of the cup and penetrates even the finest cracks in the coating. Once the conducting fluid meets the metal surface of the cup an appropriate reading indicates the degree of cracking. (The conducting fluid is not included in the scope of supply.)

Since measurements with the bead drawing tools are acquired under standardised conditions, this testing method is reproducible and also provides readings which are suitable for direct comparison with each other. This is therefore a convenient means, e.g. for manufacturers and users to communicate the quality of a stamping paint in numerical terms.

## Technical Data

Dimensions:	Width	approx. 300 mm
	Height	approx. 200 mm
	Depth	approx. 400 mm
Net weight:		approx. 40 kg
Power supply:		230 V ~ / 0,5 kW
Fuses:		2 A
Motor rating:		250 VA / 2780 min <sup>-1</sup>

Order Information	
Order No.	Product Name
00330131	<b>Bead Test Instrument, Model 227</b> , <u>without</u> beading tool

Accessories	
Order No.	Product Name
	Beading tool, complete
02520132	for sheet thicknesses from 0.2 - 0.5 mm
02520232	for sheet thicknesses from 0.5 - 1.0 mm
	Beading tools to customers' specifications on request

Subject to technical modifications.  
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