



**UNIVERSE**

## **APPARATUS FOR SHEAR STABILITY OF LUBRICATING OILS CONTAINING POLYMERS**

### **AZA1329A**

The AZA1329A Apparatus for Shear Stability of Lubricating Oils Containing Polymers by AZA LAB is a precision-engineered testing system designed for determining the shear stability of polymer-containing lubricating oils under controlled mechanical stress conditions. Developed in accordance with DIN 51350-6, the apparatus evaluates the permanent viscosity loss of lubricants subjected to mechanical shear similar to real gearbox operating conditions.

The AZA1329A utilizes a tapered roller shearing system (KRL – Kugel Rollen Lager) integrated with a Shell Four-Ball Tester and constant temperature control system to accurately assess lubricant degradation and viscosity stability. This instrument is widely used in lubricant testing laboratories, petrochemical industries, transmission oil development centers, research institutions, and quality control facilities.





## **UNIVERSE SYSTEM CONSTRUCTION**

The AZA1329A consists of the following major components:

Embedded body assembly

Mandrel system

Tapered roller friction pair

Tapered roller bearing assembly

Constant temperature control system

Refrigeration-based temperature regulation unit

High-load mechanical testing system

Precision force application mechanism

The integrated imported compressor-based cooling system ensures highly stable temperature control throughout long-duration testing.

## **STANDARD COMPLIANCE**

The AZA1329A conforms to:

DIN 51350-6 – Testing of lubricants using Shell Four-Ball Tester for shear stability determination

CEC L-45-99 – KRL tapered roller bearing shear stability test

Additionally, the system supports Four-Ball Wear and Extreme Pressure Testing Standards including:

ASTM D2783 – Extreme Pressure Properties of Lubricating Fluids (Four-Ball Method)

ASTM D2266 – Wear Preventive Characteristics of Lubricating Grease (Four-Ball Method)

ASTM D4172 – Wear Preventive Characteristics of Lubricating Fluid (Four-Ball Method)



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**TECHNICAL SPECIFICATIONS**

<b>Parameter</b>	<b>Specification</b>
Model	AZA1329A
Make	AZA LAB
Standard Compliance	DIN 51350-6, CEC L-45-99
Motor Speed	1475 ± 25 RPM
Temperature Control Mode	Imported Compressor
Sample Temperature	60 ± 1°C
Sample Volume	40 ± 0.5 ml
Test Load	5000 ± 200 N
Test Period	174000 s (Approx. 19 h 40 min)
Power	5.5 kW
Power Supply	Standard Laboratory Supply
Dimensions (L × W × H)	640 × 380 × 895 mm
Weight	Approx. 150 kg