# ADCOLE 1100-S

## HIGH PERFORMANCE SHAFT GAGE

The Adcole Model 1100-S gage is engineered to provide advanced manufacturers with an accurate, reliable and value-driven gage for production floor or metrology laboratory use. Engineered with the same exacting standards built into every one of Adcole's "TRUSTED ACCURACY" gage models, the 1100-S helps organizations improve part quality, reduce scrap, and increase manufacturing efficiency.


## Features

- Fully automated, push-of-a-button solution measures shafts up to 900mm in length and up to 225 kg (500 lbs)
- Operates with a high-precision linear glass scale encoder for optimal follower position tracking
- Collects 3,600 data points per revolution (every 1/10 of a degree), particularly useful in complex harmonics and chatter analysis
- Small gage footprint saves valuable production floor space
- Exceptionally durable mechanical ball bearing spindle which provides high weight loading capacity while matching air bearing runout performance
- Accommodates a wide range of part lengths with an adjustable tailstock
- Optional enclosed measuring chamber with interlocked, easy-swing door ensuring a safe and clean gage measurement environment
- Includes diagnostic routines for improved ease-of-use
- Optional bar code scanner for part identification capabilities
- Available with either tambour-top or sealed industrial control cabinet

## Benefits

- Glass scale linear encoder offers submicron radial accuracy (±0.5 µm)
- Offers fast cycle times and rapid part evaluation
- Includes expanded tactile and optional optical measurement options in a rugged and adaptable design
- Reduces labor and material costs with superior gage accuracy and reliability
- Air-bearing levels of runout performance offer superior part weight capacity of up to 225 kg (500 lbs)
- Optional Program Builder and 3D Color Map software data analysis provides reporting, including part summary, part programming, inspection packages, dimensions, calculated values for elements
- Eliminates operator error with one button testing, concise pass/fail inspection reports, and more
- Provides numerical and graphical representation
- Enables manufacturers to measure multiple part types and complex geometries using a flexible gage platform

THE MODEL 1100-S IS IDEAL FOR MEASURING CHALLENGING FEATURES ON:

- Camshafts
- Crankshafts
- EV Rotor Shaft
- Eccentric Shafts
- Transmission Output Shafts
- Other Cylindrical Parts

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# Model 1100-S Gage Specifications

| | 1100-S (1M) | 1100-S (1.5M) |
|---|---|---|
| **Accuracy Specifications** | | |
| Radial Accuracy[i] | ±0.5 µm | |
| Radial Resolution[i] | 0.1 µm | |
| Axial Accuracy | ±2.0 µm | |
| Angular Resolution | < 0.036 arc second (0.00001°) | |
| Spindle Total Runout | < 0.15 µm | |
| **General Specifications** | | |
| Axis of Rotation | Vertical | |
| Follower Stroke | 198mm (7.8”) | |
| Follower Width Limit | 171mm (6.75”) | |
| Swing Diameter | 316mm (12.4”) | |
| Part Weight Max. | 225 kg (500 lb) | |
| Part Length Max.[ii] | 900mm (36”) | 1,473mm (58”) |
| Rotational Speed | 1 to 15 rpm (max. 20 rpm) | |
| Traverse Speed | 2286 mm (90”) per minute (vertically) | |
| **Base Gage Dimensions** | | |
| Gage Height | 2,426mm (95.5”) | 2,908mm (114.5”) |
| Gage Width | 1,087mm (42.8”) | |
| Gage Depth | 1,264mm (49.8”) | |
| Gage Weight | 2,495 kg (5,500 lb) | 3,330 kg (7,340 lb) |

# Parameters Supported

- Angularity
- Center Deviation (hourglass/barrel)
- Coaxiality
- Concentricity
- Cylindricity
- Diameter (LSC, 2-Point Max/Min)
- Eccentricity
- Flatness
- FFT Chatter
- Index Angle
- Length
- Lobing
- Lobe Lift
- Lobe Angle
- Lobe Velocity
- Parallelism
- Perpendicularity
- Profile
- Radius
- Roundness (LSC,MIC,MCC,MZC)
- Runout
- Straightness
- Stroke
- Taper
- Throw
- True Position

# Gage Support

Adcole machine support is provided by a factory trained field service team that is backed by more than 60 years of industry experience and ISO 9000 certification. Machine and application support, machine retrofit and upgrade services, plus part inspection and gage recertification services are offered to our global customer base. Adcole‘s support regions include Japan, Korea, China, Brazil, Mexico, India, Europe and North America. Regular and after hours email and phone support is available 8am-11pm EST.

i Temperature 20±1 C°, Relative Humidity 40%-60%, Pressure 86KPa-106KPa.

ii Max. part length is approximate. Actual length is dependent on center tooling style, part center hole configuration, amount of TS travel needed to clear customer part, etc.

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