Midas Gauging Systems

Metrology & Beyond

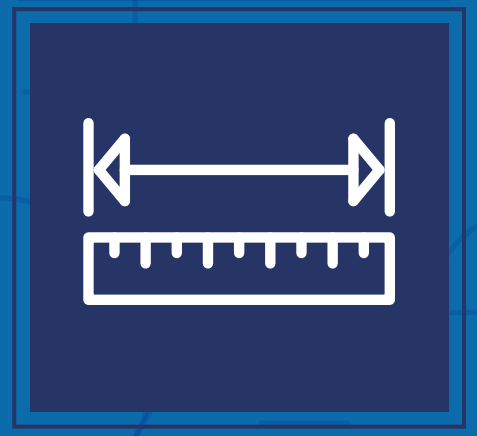
Midas Gauging Systems

Accuracy

Simplicity

Cycle Time

Accuracy



- Metal Selection as per application
- Master, Locators metal processing as per standards
- Electronic component quality and stability
- LVDT (Linear Variable Differential Transformer) stability, linearity least count 0.0001mm
- Stable and consistent results through quality software wire frame

Simplicity

- Conceptualisation and system design parameters
- User friendly operations
- Avoiding use of unwanted electronics and mechanical components & assemblies
- Multifunctional component selection over mono functional components
- Optimised space management
- Gauging system component designed for easy manufacturing process with high accuracy level

Cycle Time

- Selection of gauging system in accordance with manufacturing cycle time
- Ergonomics designed considering the manual or robotics operational system
- Predefined gauging parameter sequence

Metrology Solutions

Gauging Systems We Manufacture

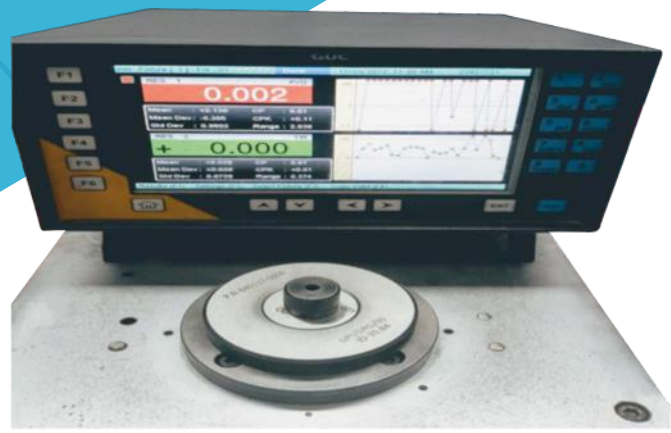
Conventional Gauging Systems

Air Gauging

- Non contact type measurement for internal and external diameters, taper, parallelism, squareness, flatness and matching components in fast and efficient method
- Air gauges used a simple back pressure technology
- Analogue air gauges

Electronic Gauging

- It is the experience that the speed of gauging and accuracy of measurement can be increased only by adopting the electronic techniques
- We can get the digital results which is easy to understand immediately



Multi-gauging Systems

Multi gauging systems are used to
measure a number of dimensions simultaneously.

Electronic Contact Type Multi Gauging

- In this system we can check multi parameter at a time by using electronic units and accessories (i.e. electronic columns DRO’s LVDT probes) with mechanical gauging fixtures
- Where LVDT probe directly in contact with part at the time of measurement

Electronic non-contact Type Multi Gauging

- This is the combination of air gauging system and electronic gauging system where we can do the measurement through air gauge which is directly not in contact with part at the time of measurement
- We can check the readings on digital display with checking status i.e. ok, not ok, rework with colure coding

Electronic Contact & non-contact Type Multi Gauging

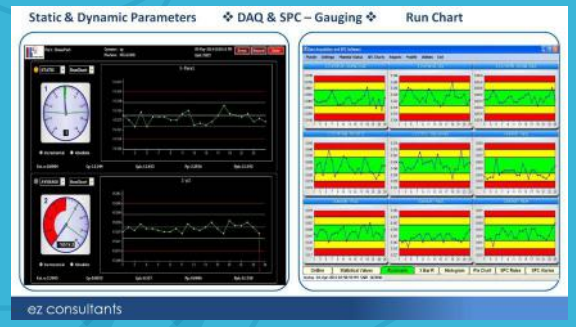
- This is the combination of electronic contact and noncontact multi gauging system
- Such type of systems are designed to check some parameters with direct contact and some parameters through noncontact with part at the time of measurement

Software based Multi Gauging System

- All measurements of Quality Parameters such as Diameters, taper, Lengths/ Heights, bend and twist and All GD&T Parameters are determined by the in built software after crunching the numbers received from the LVDT probes. Each program is designed according to the needs of the client and the SPC analysis desired

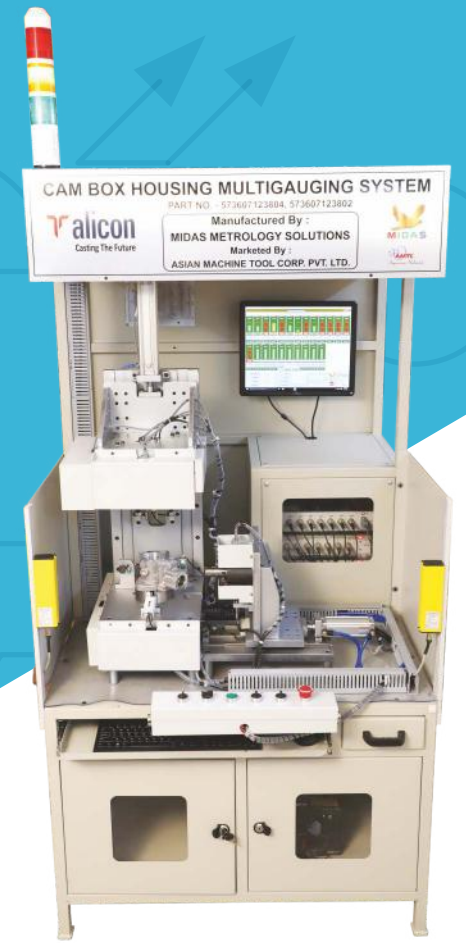
Software based Multi Gauging System

- Thousands of readings and reports generated by the software are saved and used whenever needed by the manufacturer, which in turn increases the productivity and gives a quality-conscious client a complete database that can be used as a blueprint for future design and manufacturing alterations



Software based Semi-Automatic Multi Gauging System

- This is PLC and software based gauging system for all types parameters measurement
- Part/ component loading and unloading by manually
- Part rotation and checking all parameters as per standard through PLC signals , software's interfacing and measurement through sensors (LVDT)
- All data capturing and saving automatically



Software based Automatic Multi Gauging System

- No manual interference on measurement all activities are done through PLC software and gantry / Robot or pick and place automatically at the time of measurement
- All data saving in system, alarm generation as per requirements
- Good and constant results, great repeatability, high accuracy in measurement

Midas Gauging Systems

Beyond

- IOT Based gauging system
  which will show real time Quality Trend
- Integration of marking with gauging - which will help
  to track individual component, batch wise, Quality Trends and
  for reverse traceability
- Quality Process Traceability - will compare machining parameters
  with measured parameters

MIDAS

AMTC

Some of the Gauging Systems We Manufactured

Project Name : Software Based multi-gauging system

for Compressor Housing (1.5 Litre)

Customer Name : Alicon cast alloy limited, Chinchawad.

Parameters ; 15 Nos.

Parameter Names : inside / outside diameters, heights, distance’s, flatness, Runout, Parallelism,

Features of gauging system

- All parameters covered in Software based Manual operating multi-gauging solution
- User friendly Multi-Gauge operating system
- Easy for Maintenance and fine setting
- On Measurement screen visual vertical Bar for each parameters along with color code indication (Green, Yellow, Red)
- On measurement screen Job counter (TOTAL, OK, NOT OK) and job status (OK/ NOT OK)
- Various modes of measurement like CUR, MIN, MAX, TIR, AVG, MIN Selected, MAX Selected, AVG Selected, and TIR Selected
- Multi parameters checking Data storing facility in system
- Digital Data Acquisition from Probe box
- Data available in Excel format (Date, Time, operator, Machine, Part, Shift wise)

- Statistical Analysis/Variable Charts (Run chart, cp -cpk, Histogram, x, x bar r, x bar s, histogram, pie chart)
- Multiple Parts registration in software
- Utilities (shift setting, change login, company name, backup/restore database)
- Administrative level authority and user level authority

Key Highlights

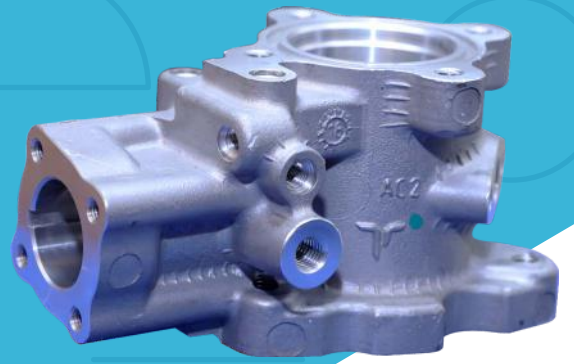
- we will check All parameters on Single multi-gauging system
- We can Store All data in system
- Faster measurement than other ordinary method

Project Name : PLC &Software Based

Semi-automatic multi-gauging system.

for Cam Box 2 Models. A) 573607123804, B) 573607123802

Customer Name : Alicon cast alloy limited, Shikrapur.



Parameters ; 26 & 23 Nos.

Parameter Names : inside / outside diameters, heights, distance’s, flatness, circularity, cylindricity, perpendicularity, Concentricity, Parallelism,

Features of gauging system :

- All parameters covered in Single Auto-Gauging fixture with automatic part rotation
- User friendly Multi-Gauge operating system
- Easy for Maintenance and fine setting
- On Measurement screen visual vertical Bar for each parameters along with color code indication (Green, Yellow, Red)
- On measurement screen Job counter (TOTAL, OK, NOT OK) and job status (OK/ NOT OK)
- SPC (Statistical Process Control) facility for monitor a process for confirming product with minimum waste

- Various modes of measurement like CUR, MIN, MAX, TIR, AVG, MIN Selected, MAX Selected, AVG Selected, and TIR Selected
- Multi parameters checking Data storing facility in system
- Digital Data Acquisition from Probe box
- Data available in Excel format (Date, Time, operator, Machine, Part, Shift wise)
- Statistical Analysis/Variable Charts (Run chart, cp -cpk, Histogram, x, x bar r, x bar s, histogram, pie chart)
- Multiple Parts registration in software
- Utilities (shift setting, change login, company name, backup/restore database)
- Administrative level authority and user level authority
- We can integrate system with Marking Machine, Leak testing Machine

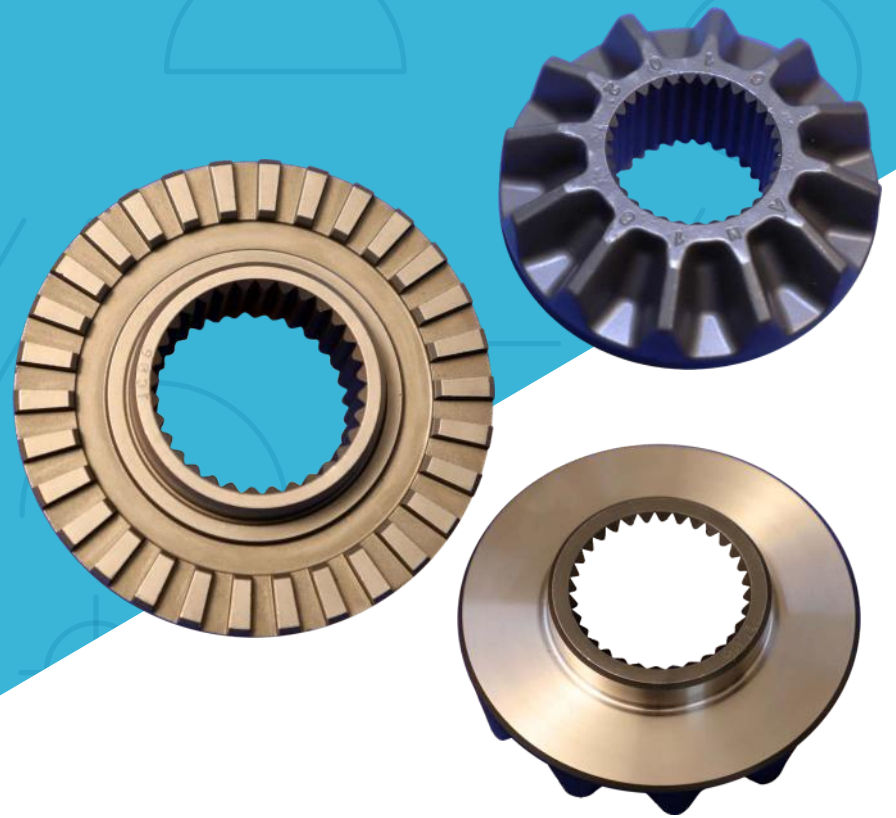
Key highlights :

- Auto gauging solutions Provider
- Interfacing with CNC, VMC, HMC with auto correction factor
- Auto gauging with traceability solutions
- Challenges for gauging / measurement of all Aluminum Parts

Project Name : Gear Auto-gauging system.

(PLC, HMI,SOFTWARE Based interfacing with GANTRY/ROBOT, CNC, VMC,HMC) for STD Side Gears, PINIONS

Customer Name : IP RINGS LTD, MM NAGAR, Chennai.



Parameters ; 8

Parameter Names : inside / outside step diameters, height,Ovality, Runout, SphericalRunouts

Features of gauging system :

- Auto gauging with process monitoring and controlling solutions
- Interfacing with CNC, VMC, HMC with auto correction factor
- Auto gauging with traceability solutions
- Online SPC Run chart
- Manufacturing machine wise Data storing facility in system

Core Businesses

Identification Solutions

- Direct part Marking (DPM) solutions using Laser Marking, Dot Peen Marking
- Representing Marks Pryor

Traceability Solutions

- Marked data stored in a database
- Duplicate check
- Collect/retrieve production data

Metrology Solutions

- Air Gauges
- Air Electronic Gauges
- Multi Gauging Systems
- IOT base Gauging Systems

Thank You!