torus measurement systems

Quality Control Systems

Plastic Bottles and Preforms

Part of torus group

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Why choose Torus?

With 30 years' experience in the metrology, Torus Measurement Systems are used extensively within industry for dimensional and destructive testing under production conditions. Our team all have a shared passion for measurement as well as a customer-centric approach to everything we do.

We are a part of a group of 100+ employees with a continuously growing infrastructure to support the futures of both our customers and employees. This includes our ever-expanding, world-class R&D department, who are consistently working on both new and existing technologies to assist our customers in solving specific quality or production requirements.

We also have expansive service and technical support teams who work hard to provide our customers with remote support from strategically located offices, all over the world.

Our modular design approach provides flexibility by allowing our customers to configure individual measuring stations and automated handling systems to best suit their specific application.

Our gauges are all industry 4.0 ready, future proofing your business and offering the ability to directly transfer live data to customer-specific networks, allowing for instant analysis and process control.

Our business is registered to **ISO 9001:2015, ISO 10360** and accredited to **UKAS standards** for machine verification and first principle measurements. Our quality management procedures are maintained, externally audited and rigidly enforced to guarantee best practice.

Cert no. FM 570505

Plastic Bottle
Gauging

B300
Manual Thickness Inspection Gauge

Also available as:
Semi-Automatic Thickness Gauge

POWER
100-240 Volts / 50-60 Hz

COMPRESSED AIR
N/A

DIMENSIONS
(W) 391mm x (H) 362mm x (D) 543mm

The B300 Manual Thickness Inspection Gauge has been developed to provide a simple solution to single sided thickness measurement on plastic components.

Using state-of-the-art confocal technology for rapid, non-contact, reliable inspection, the system takes advantage of a live and continuous measurement mode enabling quick thickness checks without the requirement for batch setup. The system has been integrated into a small benchtop foot-print, allowing for ease of transportation around production facilities within a suitable transportation or flight case.

Reporting options such as standard CSV or Statistical Process Control (SPC).

Certification to UKAS Standards.

Measurement Features:

Thickness - Material thickness as point of measurement

Technical Specification:

Material Types	PET, PP, TRITAN, PEF
Colours	All colours that are translucent (others upon evaluation)
Component Neck Sizes	No limitation
Component Shapes	No limitation
Component Outer Neck Dia.	No limitation
Component Internal Neck Dia.	No limitation
Component Height Range	No limitation
Component Body Dia.	No limitation

Thickness Sensor Options:

Low-Range Sensor	0.04 mm - 0.70 mm
Mid-Range Sensor	0.12 mm - 2.50 mm (standard)
High-Range Sensor	0.35 mm - 8.00 mm

Benefits to your business

- Live and continuous measurement mode for quick checks
- No limitation of measured component size and shape
- Offering an alternative option to industry standard thickness inspection equipment, Magna Mike
- Single side measurement
- Thickness sensor can be configured for 0.04 mm - 8.00 mm measurement range
- Benchtop, lightweight design for transportation in flight case


FRAGILE!
GaugeXplorer
Measure
Bottle
Thickness
Thickness Measurement
0.557mm
Distance 1
-0.57
Distance 2
-0.00
Intensity 1
100.0
Intensity 2

B300
Semi-Automatic Thickness Inspection Gauge

POWER
100-240 Volts / 50-60 Hz

COMPRESSED AIR
5 bar / 72.5 PSI

DIMENSIONS
(W) 1130mm x (H) 1320mmm x (D) 600mm

The B300 Semi-Automatic Thickness Inspection Gauge has been developed to provide a traceable measurement solution for material thickness distribution, bottle height and base clearance measurements.

Using state-of-the-art confocal technology for rapid, non-contact, reliable inspection, the system takes advantage of a self-teach bottle profile function.

Interchangeable location tooling provides the capability to measure small vials to large containers within one platform, future production proofing the machine.

Measurement Features:

Feature		Accuracy
Wall Thickness	Up to 3000 measurements	+/- 0.020 mm
Base Thickness	Up to 3000 measurements	+/- 0.050 mm
Standing Thickness	Petaloid Bottle Stand Point	+/- 0.050 mm
Bottle Height	Individual / Average	+/- 0.100 mm
Bottle Clearance	Individual	+/- 0.100 mm

Technical Specification:

Material Types	PET, PP, TRITAN, PEF
Component Neck Types	All round necks
Component Shapes	Round, Oval, Square, Non-Symmetrical, Off centre neck
Component Internal Neck Diameter	Ø 8.00 - Ø 70.00 mm
Component Height Range	≤ 460 mm
Component Body Diameter	≤ 200 mm

Reporting options such as standard CSV or Statistical Process Control (SPC).
Certification to UKAS Standards.

Thickness Sensor Options:

Low-Range Sensor	0.04 mm - 0.70 mm
Mid-Range Sensor	0.12 mm - 2.50 mm (standard)
High-Range Sensor	0.35 mm - 8.00 mm

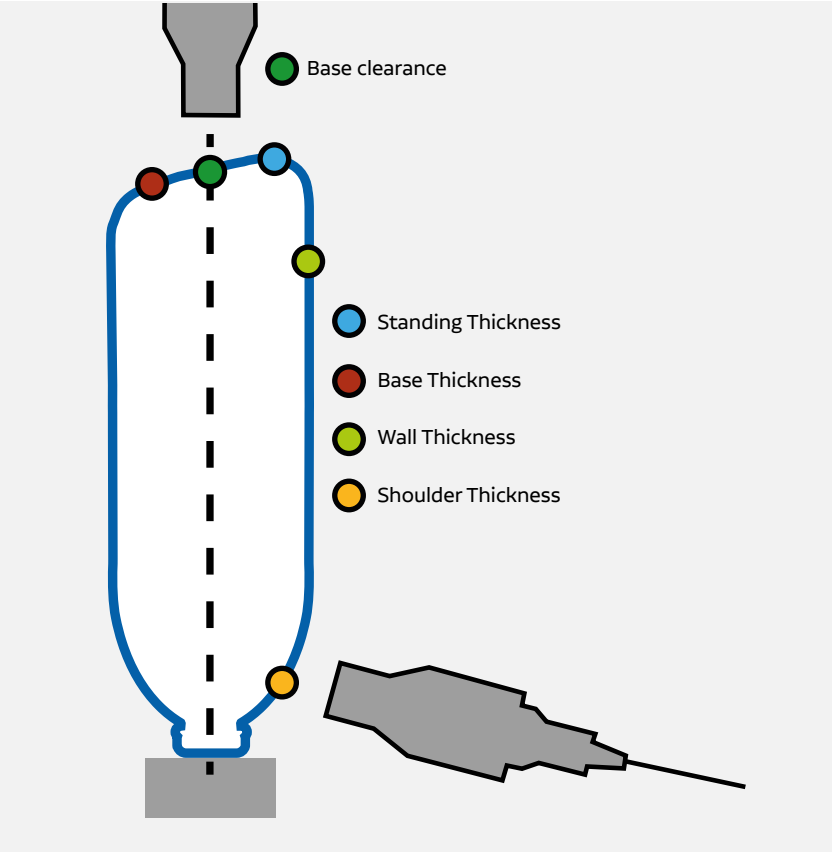
Benefits to your business

- Self-teach profile scan function
- Automatic body alignment routines
- Base and standing thickness as standard
- Ability to measure small vials to wide mouth, large containers
- Offering an alternative option to industry standard thickness inspection equipment, Magna Mike
- Single side measurement
- Thickness measurement sensor can be configured for 0.04 mm - 8.00 mm measurement range
- Up to 6000 measurement data points per bottle
- Radar and profile distribution display screens

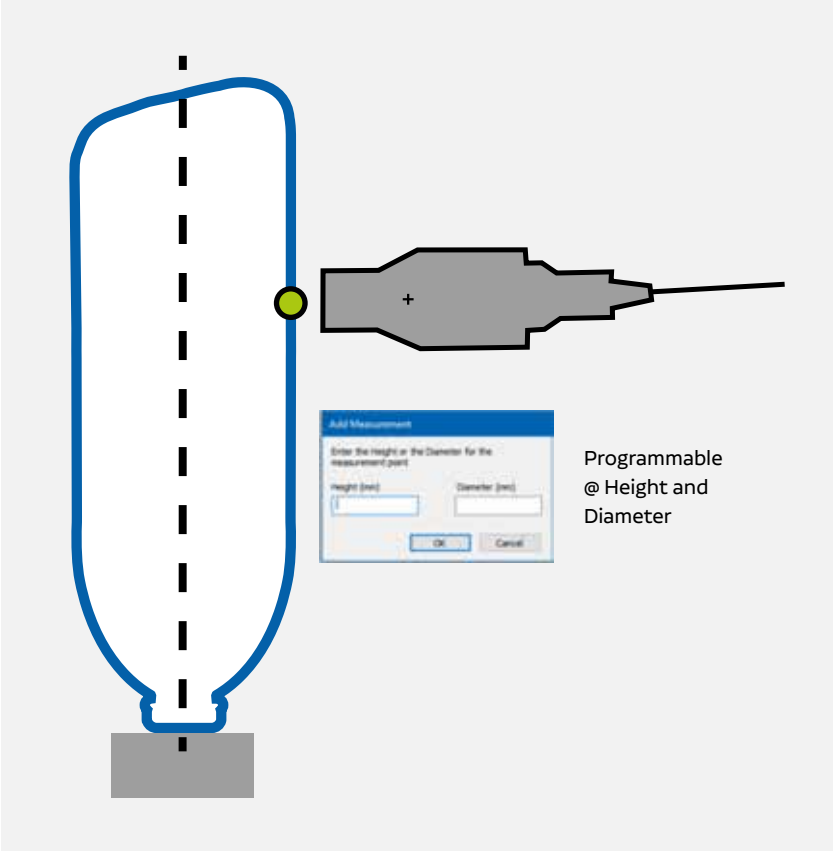
Click **here** to view the video

Advanced programming

Flexible Thickness Features



Programmable Features

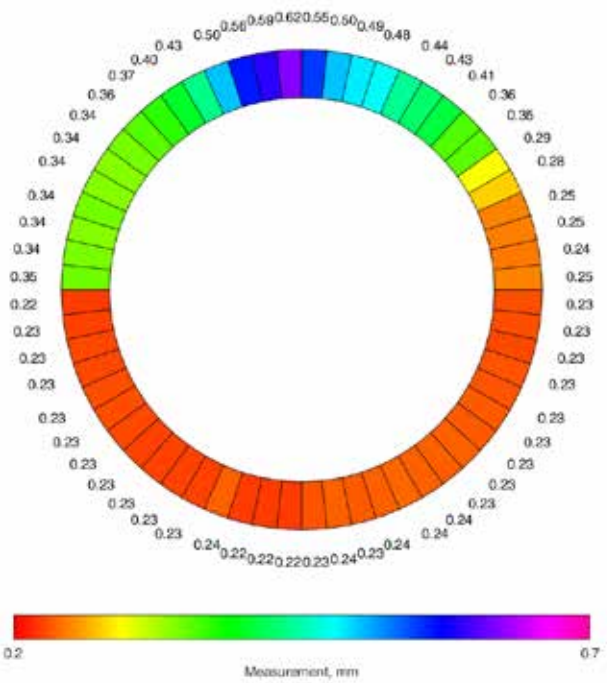


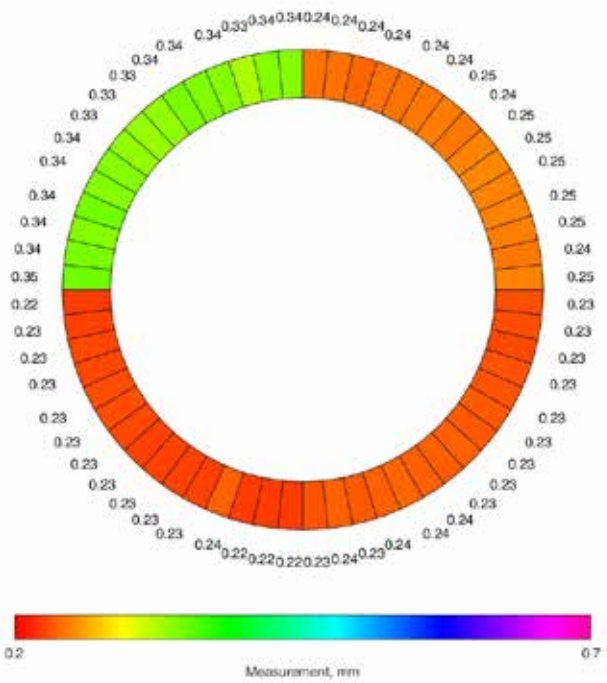
Thickness Features

Individual Thickness Results.
Average, Range, Max. and Min. Results per Ring.
Average, Range, Max. and Min. Results per Bottle.

Enhanced analytics

Radar Report Colour Maps





Distribution Data

by Thickness Ring

B302
Semi-Automatic Thread, Body and Thickness Inspection Gauge

Also available as:
Automatic Module with the Torus TQ Lab

Technical Specification:

Material Types	PET, PP, TRITAN, PEF
Component Neck Types	Thread, Continuous thread, Split thread, PCO, SP, ROPP, Snap, Clinch, Crown Cap (others on ap)
Compoment Outer Neck Dia.	≤ Ø 200 mm
Component Internal Neck Dia.	Ø 8.00 mm - 170.00 mm
Component Height Range	≤ 400 mm
Component Body Dia.	≤ 200 mm

POWER
100-240 Volts / 50-60 Hz

COMPRESSED AIR
6 bar / 87 PSI

DIMENSIONS
(W) 1450mm x (H) 1850mm x (D) 1100mm

The B302 Semi-Automatic Thread, Body and Thickness Inspection Gauge is unrivalled in non-contact dimensional inspection equipment for plastic containers.

Integrating the measurement functions from Torus' B300 Thickness Inspection Gauge and extending the capability of the B301 Optical Inspection Gauge in one system.

Interchangeable location tooling provides the capability to measure small vials to large containers within one platform, future production proofing the machine.

Automatic thread start and body alignment options used to offer unmatched measurement and system repeatability.

Reporting options such as standard CSV or Statistical Process Control (SPC).

Certification to UKAS Standards.

Measurement Features:

Feature		Accuracy
Neck Diameters	T, E, Z, B, B1, A, F, G Programmable neck diameter	+/- 0.030 mm
Neck Heights	S, K, X, H, M, D Programmable neck heights	+/- 0.030 mm
Body Diameters	Programmable body diameter	+/- 0.050 mm
Body Heights	Programmable body heights	+/- 0.050 mm
Perpendicularity	Angle / Distance	Indicative
Wall Thickness	Up to 3000 measurements	+/- 0.020 mm
Base Thickness	Up to 3000 measurements	+/- 0.050 mm
Standing Thickness	Petaloid bottle stand point	+/- 0.050 mm
Bottle Height	Individual / Average	+/- 0.100 mm
Base Clearance	Individual	+/- 0.100 mm

Thickness Sensor Options:

Low-Range Sensor	0.04 mm - 0.70 mm
Mid-Range Sensor	0.12 mm - 2.50 mm (standard)
High-Range Sensor	0.35 mm - 8.00 mm

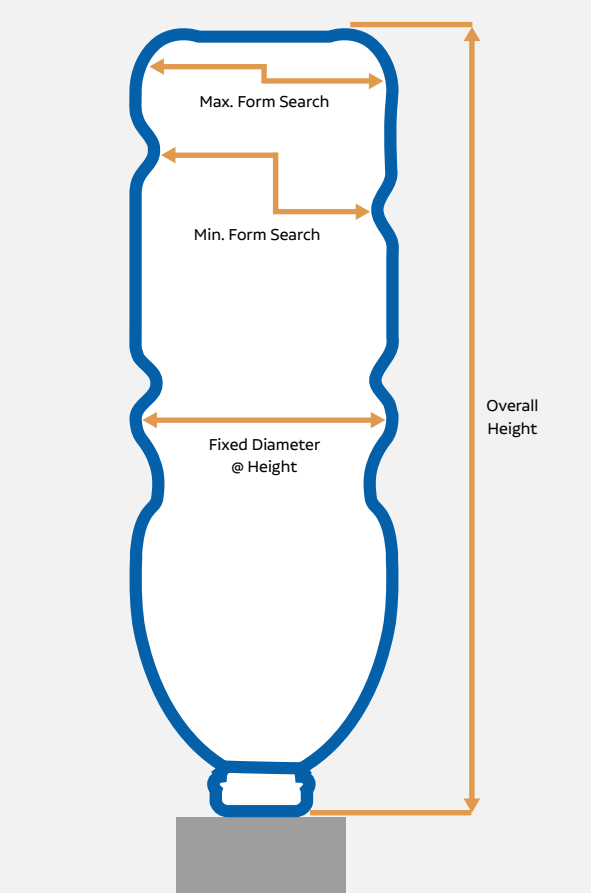
Benefits to your business

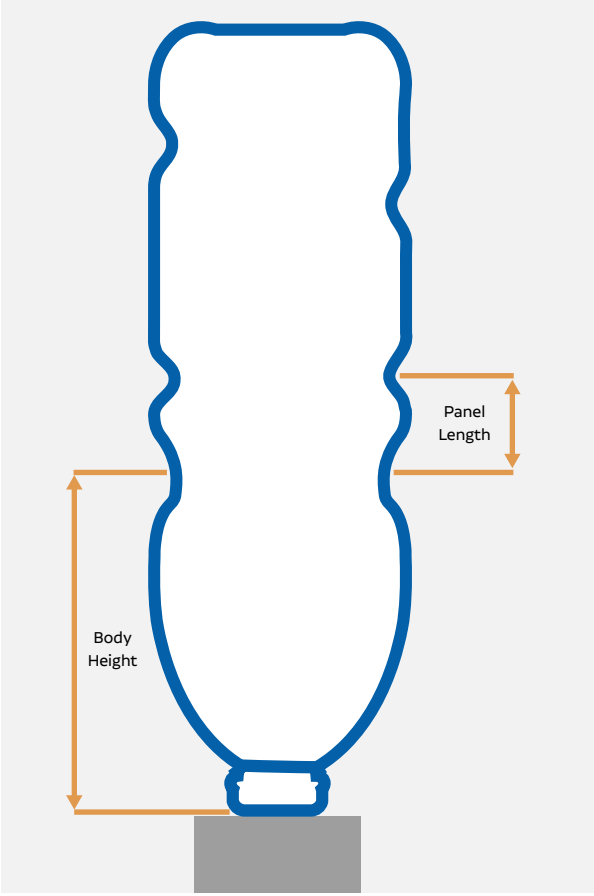
- Over 7000 measurement data points per bottle
- Quick-snap pre-programmed industry standard neck features
- Programmable neck features for full measurement flexibility
- Programmable body features, including dynamic rotational search functionality with max. and min. form and diameter features, perfect for minor, major and pinch diameters
- Single sided thickness measurement
- Thickness sensor can be configured
- Automatic thread start alignment
- Automatic body alignment
- Self-teach profile scan function
- Filled and sealed thermal stability capabilty

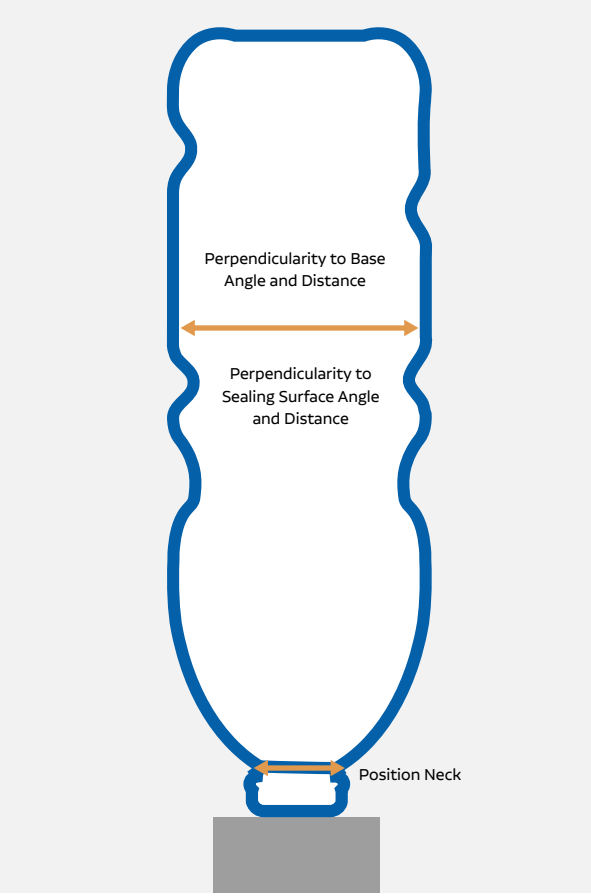
Click **here** to view the video

Advanced programming

Body Features







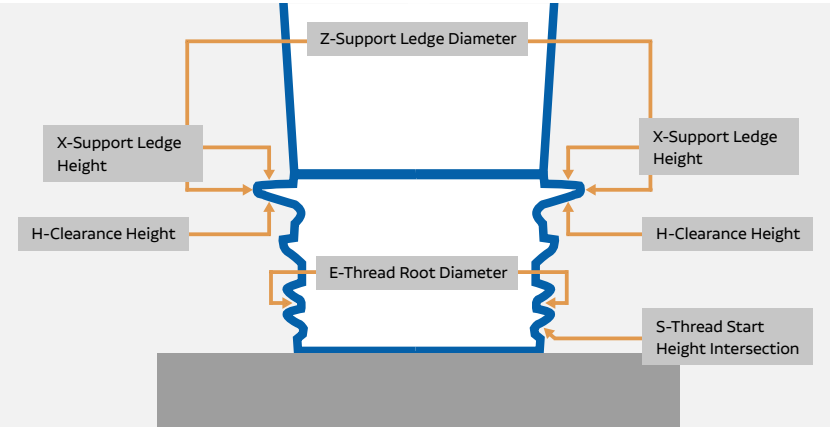
Body Features

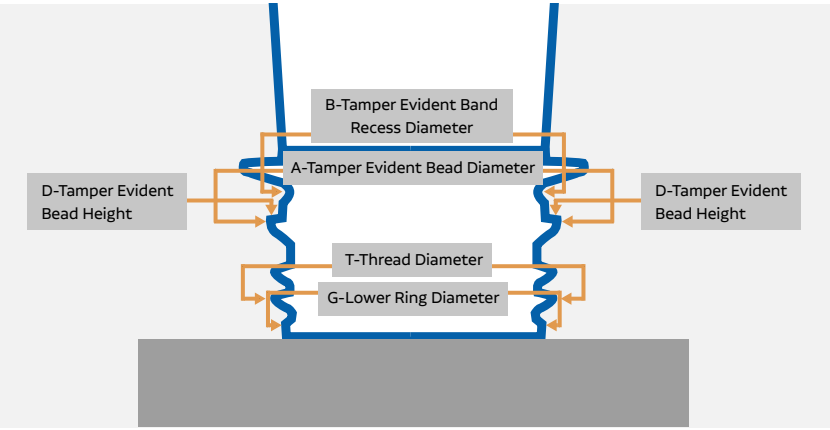
32 Rotational Height Measurements per Feature

16 Rotational Diameter Measurements per Feature

Advanced programming

Quick Snap Thread Features



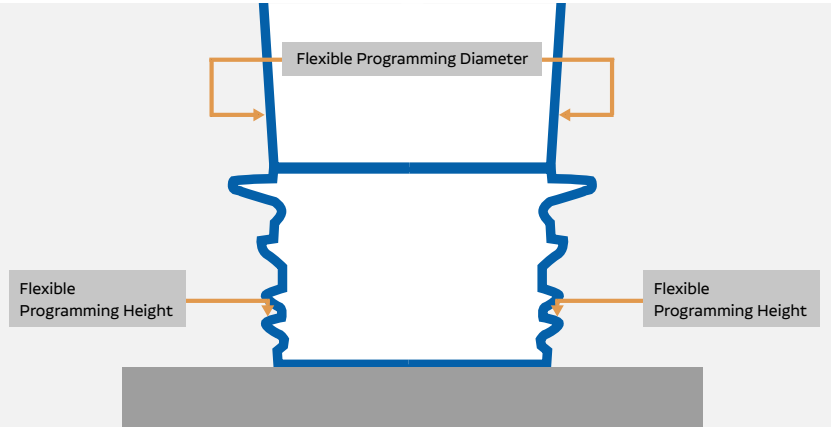


Thread Features

32 Rotational Height Measurements per Feature

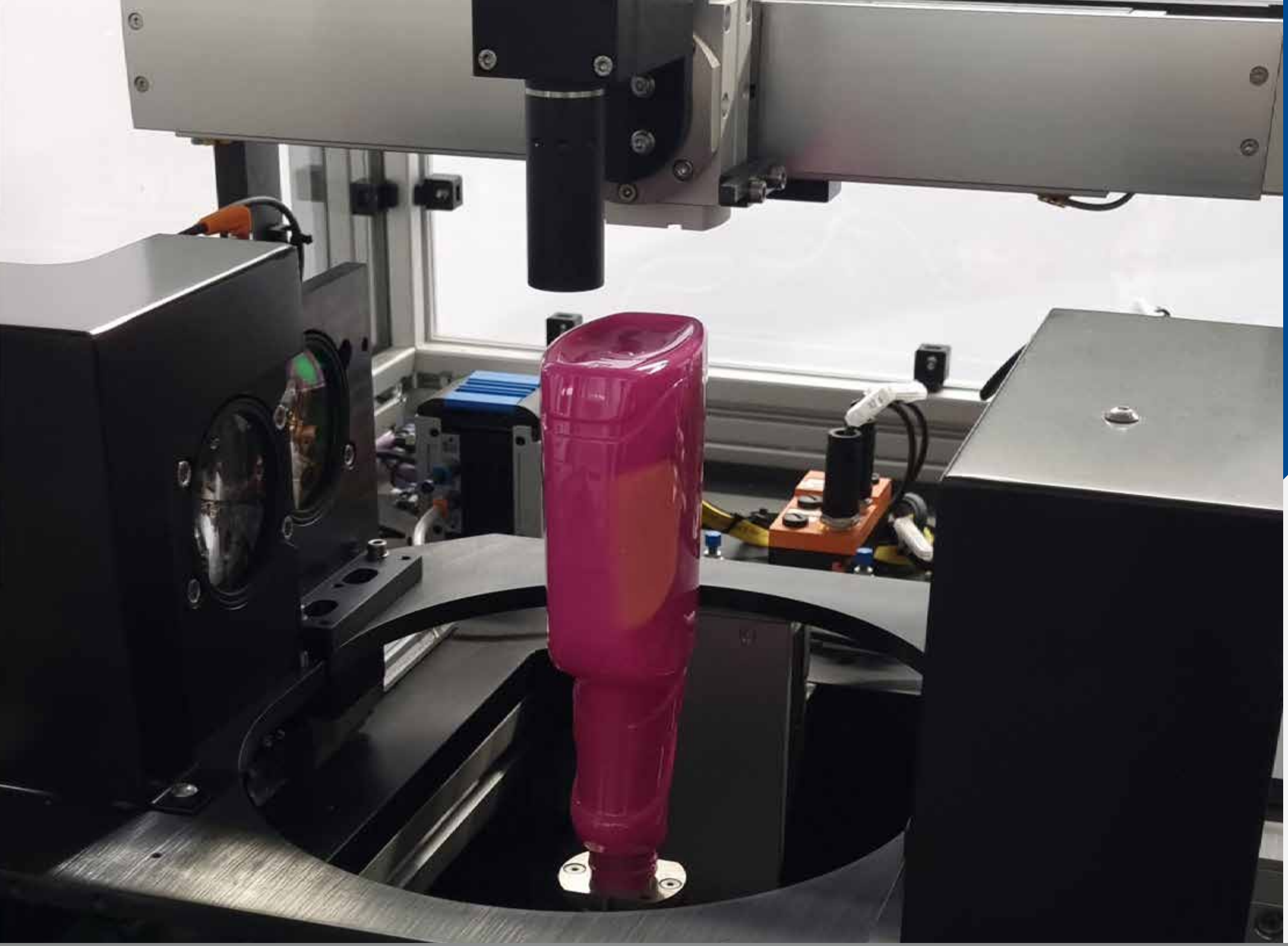
16 Rotational Diameter Measurements per Feature

Programmable Thread Features



Thread Features

Thread features can be reported as average range max. and min.



B303
Semi-Automatic Bottle Burst Gauge

Also available as:
Automatic Module with the Torus TQ Lab

POWER
100-240 Volts / 50-60 Hz

WATER
Mains 1-2 bar or supplied with recirculating tank as standard

COMPRESSED AIR
7 bar / 102 PSI

DIMENSIONS
(W) 1030mm x (H) 1060mm x (D) 875mm

The B303 Semi-Automatic Bottle Burst Gauge has been developed to verify production containers meet the minimum pressure requirements.

The system monitors expansion volumes, and yield points to provide important information regarding the stability of the bottle.

Quick-change tooling provides the capability to cover a wide range of industry neck finishes, future production proofing the machine as customer requirements and portfolios develop.

With an expansion volume of up to 2400ml, the system covers small vials to large waterkeg containers.

Measurement Features:

Feature		Accuracy
Burst Pressure	bar, PSI	+/- 0.2 bar
Expansion Volume	ml	+/- 20.00 ml
Expansion %	%	
Pressure Hold Out	Pass / Fail	
Yield Point Pressure	bar, PSI	
Yield Point Expansion Volume	%	
Test Time	Seconds	

Technical Specification:

Material Types	PET, PP, TRITAN
Component Volume Range	≤ 3000 ml
Component Neck Diameter	12.5 mm - 42 mm
Component Height Range	≤ 482 mm
Component Body Diameter	≤ Ø 180 mm
Component Burst Pressure	≤ 24 bar
Component Expansion Volume	≤ 2400 ml
Component Neck Height	≤ 25 ml

The system has the option of being mains water supplied or recirculating from a local water tank, reducing running costs and therefore cost of ownership.

Reporting options such as standard CSV or Statistical Process Control (SPC)

Traceable to UKAS Standards.

Pressure and Expansion Options:

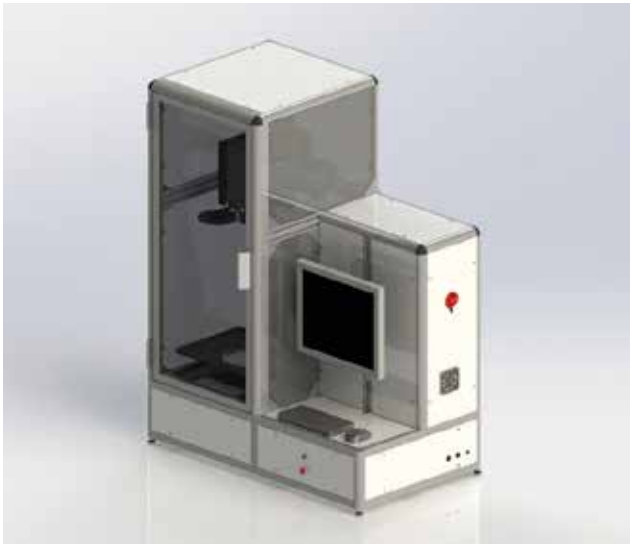
Low Range Pressure	24 bar / 2.4 L
Mid Rrange Pressure	35 bar / 1.8 L

Benefits to your business

- Interchangeable neck diameter tooling to cover a wider range of bottle neck finishes and diameters without sacrificing sealing capability
- Recirculating water tank reduces cost of ownership
- Live Pressure vs. Time vs. Volume graphical display
- Automated material yield pressure and volume
- 3 hold periods and pressure range
- Burst mode for quick cycle times

Click **here** to view the video

B304
Semi-Automatic Top Load, Volume and Weight Gauge



Also available as:
Automatic Module with the Torus TQ Lab

The B304 Semi-Automatic Top Load, Volume and Weight gauge has been developed to provide combination testing capabilities in volume capacity and vertical and horizontal strength.

POWER
100-240 Volts / 50-60 Hz

WATER
1-2 BAR / 60 - 120 ppm / 0.2 mS - 0.8 mS

COMPRESSED AIR
6 bar / 87 PSI

DIMENSIONS
(W) 1065mm x (H) 1440mm x (D) 810mm

The system has been designed to provide measurement capability for several industry standard tests within the same program, significantly reducing part setup and part cycle times. Torus' batch setup process enables the operator to quickly move between test types.

Measurement Features:

Feature		Accuracy
Dry Top Load	N, kgf, lbf	+/- 5.0 N
Wet Top Load	N, kgf, lbf	+/- 5.0 N
Side Load	N, kgf, lbf	+/- 5.0 N
Deflection Point	mm	+/- 1.0 mm
Brimfull (Overflow)	ml	+/- 1.0 ml
Fill Height	ml	+/- 1.0 ml
Vacuity (Headspace)	%	+/- 1.0 %
Empty Bottle Weight	g	+/- 1.0 g
Temperature	°C	+/- 1.0 °C

Technical Specification:

Material Types	PET, PP, TRITAN, HDPE, PEF
Fill Height from TOF	≤ 65 mm (+ on application)
Component Neck ID	≤ Ø 13 mm - 145 mm
Component Height Range	≤ 400 mm
Component Body Diameter	≤ 200 mm @ base
Component Max. Load	≤ 2500 N (250 kgf)
Compression Range	0 - 50 mm
Selectable Test Speed	0.5 - 510 mm/min

Volume Inspection Options:

Standard Range	≤ 3000 ml
Advanced Range	≤ 5000 ml

The latest update for the B304 introduces a side load, horizontal test function, for both filled and empty containers, providing critical compression information.

Reporting options such as standard CSV or Statistical Process Control (SPC)

Traceable to UKAS Standards.

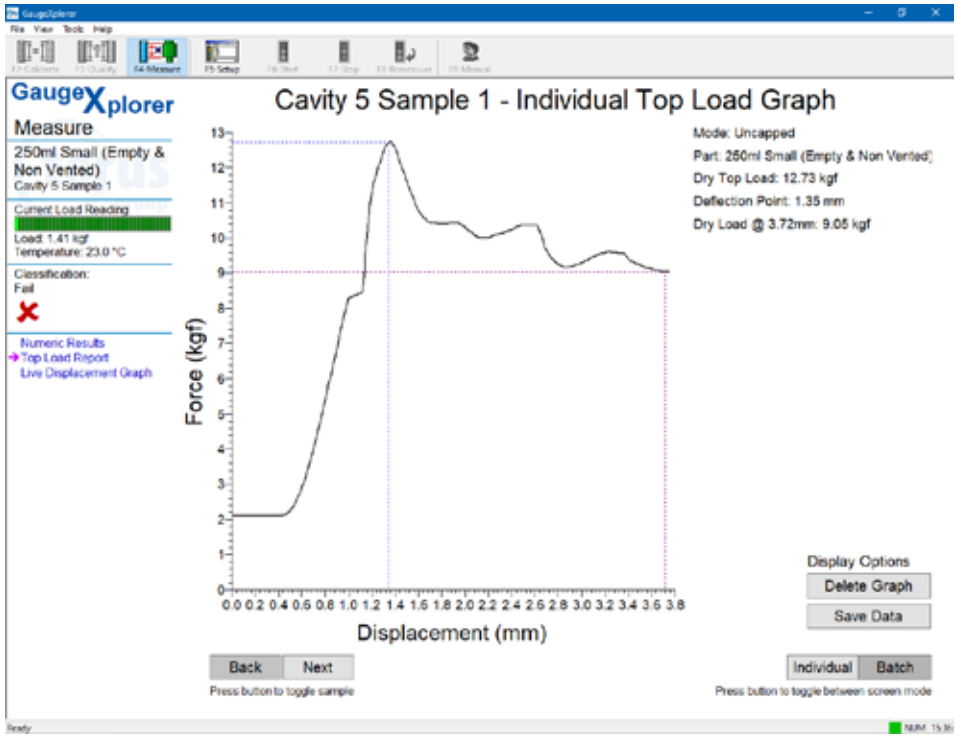
Benefits to your business

- Tests adhere to ASTM D2659 standard
- Top load tests can be completed, sealed, vented or capped
- Scan until dip functionality to stop test once elastic limit is passed to reduce cycle time
- Side load (horizontal load) testing functionality
- Top of finish detection for accurate and repeatable fill height and brimfull (overflow) fill positions
- Volume and wet compression testing completed in one part program cycle
- Water service packages to support hard and soft water conditions at customer facility

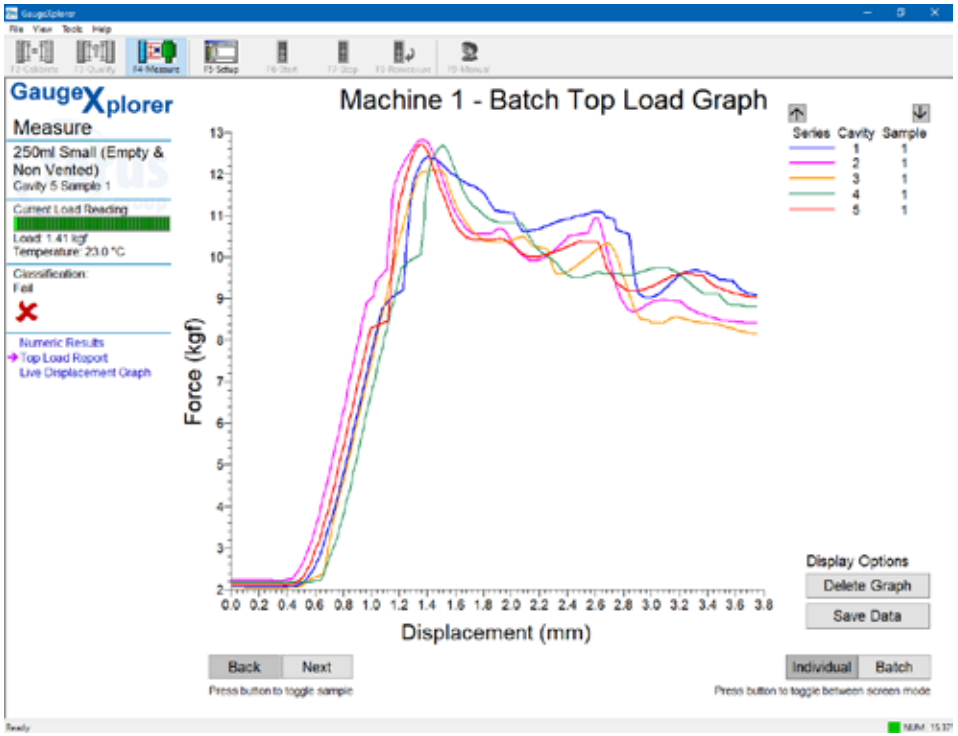
Click here to view the video

Enhanced analytics

Individual Top Load Report



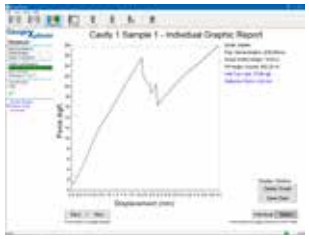
Batch Top Load Report



B307
Semi-Automatic Top Load Gauge

Dry Top Load

Wet Top Load



POWER
100-240 Volts / 50-60 Hz

DIMENSIONS
(W) 1065mm x (H) 1440mm x (D) 600mm

The B307 Top Load Gauge is a manually loaded gauge providing fast top load results to validate process setup and container specifiation.

Measurement Features:

Feature		Accuracy
Dry Top Load	N, kgf, lbf	+/- 5.0 N
Wet Top Load	N, kgf, lbf	+/- 5.0 N
Deflection Point	mm	+/- 1.0 mm

Technical Specification:

Component Types	Bottles, jars and containers
Neck Diameter	Optional adaptor plates to cover a wide range of containers
Max Outside Diameter	200 mm
Max Bottle Volume	3000 ml (Others upon evaluation)

Benefits to your business

- Simple software interface available in multiple languages
- Fully enclosed for use in production or laboratory environments
- Measurements are traceable and certified to UKAS standards
- Selectable force units: Kgf, N, lbs
- Adheres to ASTM D2659 Standard Test Method for Column Crush Properties of Blown Thermoplastic Containers
- Machine and Cavity number for traceability
- Factory calibrated
- Operated via the latest Windows operating system


FORCE TRANSDUCER
MODEL SMT2-2000N
CAPACITY 2000 N
S/N 108708
MADE IN USA

B309
Semi-Automatic Internal Diameter Gauge

The B309 Internal Diameter Gauge for plastic containers and preforms offers non-contact internal diameter measurements in a single operation with industry leading measurement range.

Reporting options such as standard CSV or Statistical Process Control (SPC)

Certification to UKAS Standards.

Measurement Features:

Feature	Accuracy
Internal Diameter	
System Accuracy	Internal Diameter: +/- 0.030 mm

Technical Specification:

Component Types	Bottles, jars, containers and preforms
Container Height Range	30 mm - 460 mm
Neck ID Range	8.5 mm - 145 mm
Max Body Diameter	200 mm
Materials	PET, HDPE, Tritan, PP (Others)

Benefits to your business

- Measurement range suits small vials, common necks and wide mouth containers
- Eliminates operator influence
- Ability to measure internal diameters at multiple heights (from TOF)
- Utilising state-of-the-art confocal white light technology
- Floor standing industrial enclosure for laboratory or shop floor environments
- Vertical Scanning Minimum Diameter Find function
- Intelligent camera system for finding neck centre

Click **here** to view the video

Also available as:
Automatic Module with the Torus TQ Lab

POWER
100-240 Volts / 50-60 Hz

DIMENSIONS
(W) 1450mm x (H) 1850mm x (D) 1100mm

Automatic TQ Lab

The Automatic TQ Lab is a fully configurable system capable of measuring Thread, Body, Thickness, Internal Diameter, Top Load, Volume, Weight and Burst Pressures.

Technical Specification:

Component Materials	PET, PP, TRITAN, PEF, HDPE
Component Neck Finish	Thread, Continuous thread, split thread, PCO, SP, ROPP, Snap, Clinch
Component Shapes	Round, Round with petals, Oval, Square, Non-Symmetrical, Off-centre neck
Component Height Range	80 - 400 mm
Component Gripper Pickup Height	75 – 395 mm
Component Outer Body Dia. Range	Ø 15 – Ø 160 mm
Component Internal Neck Dia. Range	Ø 15 – Ø 45 mm
Component Outer Neck Dia. Range	Ø 18 – Ø 54 mm
Component Weight Range	5 - 3000 g

POWER
100-240 Volts / 50-60 Hz

WATER
1-2 BAR / 60-120ppm / 0.2mS-0.8mS

COMPRESSED AIR
6 bar / 87 PSI

DIMENSIONS
(W) 2930mm x (H) 2280mm x (D) 2020mm

Key Benefits

- Worlds only Fully Automatic Bottle Inspection Laboratory
- Providing over 8,000 measurement data points across the full range of Dimensional and Destructive module options
- All required inspection features completed in one system, reducing testing time, equipment requirement and floor space
- GaugeXplorer operating system, enables fast part program generation completed on the gauge, Industry Standard and programmable features can be renamed to local measurement feature requirements at customers facility
- CSV data output and flexible formatting for input in to local data handling/control systems at customers facility
- Remote support package, which includes automatic gauge monitoring and reporting back to Torus for proactive response
- Measurements traceable and certified to UKAS standards, with internal Torus annual calibration recall system, for continued measurement assurance
- Configurable conveyor options, for batches of up to 50 components, with interchangeable pallet options specific to the customers bottle portfolio

Click **here** to view the video

Customise your Gauge

1 B302 - Thread, Body and Thickness Module (Optional)

» **Non-Contact Integrated Dimensional and Thickness Module**

» Automatic Thread Start Alignment Routine
» Automatic Body Alignment Routine
» Industry Standard Neck Diameters & Heights
» Programmable Neck Diameter & Heights
» Programable Body Diameters & Heights
» Programable Body Panel Length
» Min & Max Form & Diameter Body Diameters
» Shoulder Diameter & Heights
» Perpendicularity to Sealing & Base Surface
» Panel Deviation (Bulge)
» Overall Height & Base Clearance
» Concentricity & Linear Distance Capability
» Wall, Shoulder, Base & Standing Thickness
» Thickness Sensor Options 0.04 – 8.00mm

» Thermal Stability Capability

» Over 7000 Measurement Data Results Per Bottle

Also available as: Semi-Automatic B302 Gauge

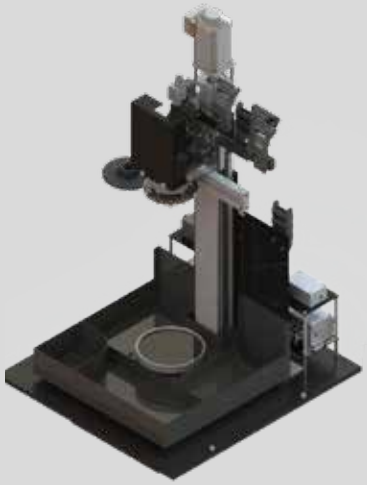
2 B304 - Load, Volume and Weight Module (Optional)

» **Integrated Load, Volume & Weight within one Module**

» Automatic top of finish (TOF) locator routine
» Top Load completed wet or dry
» Wet Top Load completed in cycle with volume
» Load at 'X' Deflection Distance Capability
» Deflection Point Measurement
» Brimful (Overflow) & Fill Height Volume
» Vacuity Measurement
» Empty Bottle Weight

» Water Temperature Compensation System
» Adjustable test speeds up to 510mm / min
» Adjustable deflection up to 10.0mm
» Scan until dip test functionality for reduced cycle time
» Continuous Water Pressure Monitoring System

» Hard & Soft Water Management Packages



Also available as: Semi-Automatic B304 Gauge

3 B309 - Internal Diameter Module (Optional)

» **Non-Contact Integrated Internal Diameter Module**

» Automatic Bottle Locator Routine

» Internal Diameter Depth Position Selectable
» Up to 10 Internal Diameter Depth Measurements
» Programmable number of rotation position measurements
» Vertical Internal Bore Scanning Capability

Also available as: Semi-Automatic B309 Gauge

4 B303 - Bottle Burst Module (Optional)

» **Integrated Bottle Burst Module**

» Burst Pressssure
» Expansive Volume & Percentage
» Yield Point Pressure & Volume
» Pressure Hold Out Functionality
» Test Time Functionality

» Programmable Ramp Pressures
» Programmable Ramp Speeds
» Programmable Pressure Hold Periods
» Burst Mode Option for fast cycle times
» Live graphical display screens for Pressure vs Time vs Volume

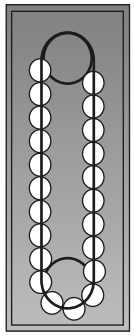
» Continuous Water Pressure Monitoring System
» Water Management & Filter Control System

Also available as: Semi-Automatic B303 Gauge

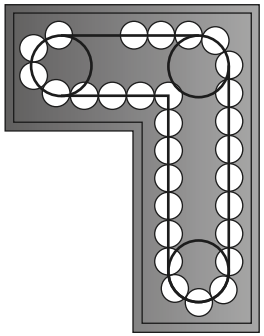
Customise your Gauge

Our modular gauge setups are unique and allow you to customise your gauge, giving you the flexibility to ensure you have a total quality solution.

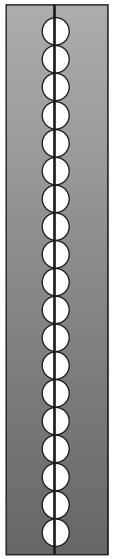
Add your **conveyor...**



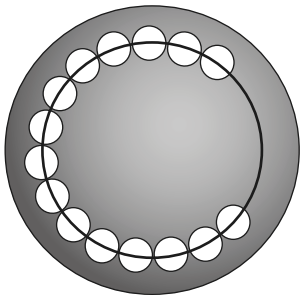
Standard Conveyor -
20 pallet conveyor



L-Conveyor -
30/40/50 pallet options



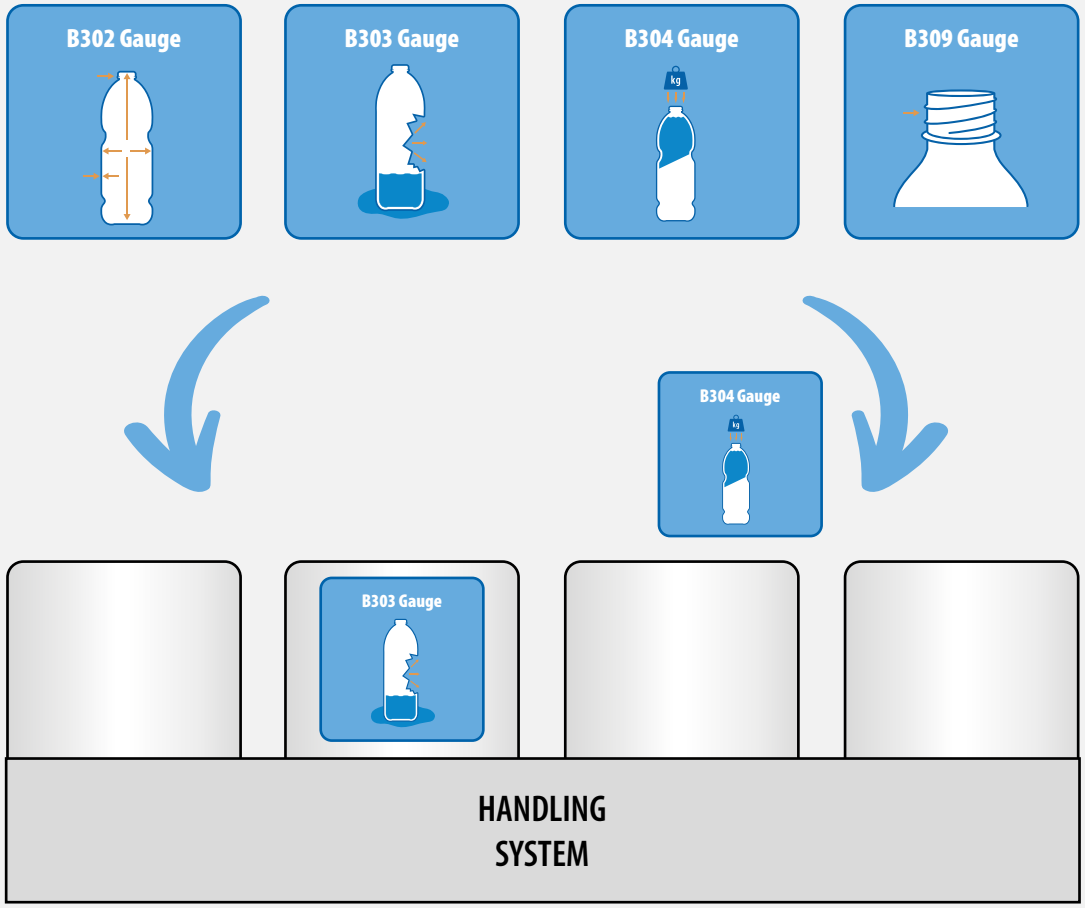
In-Line System -
Auto load conveyor



Index Conveyor

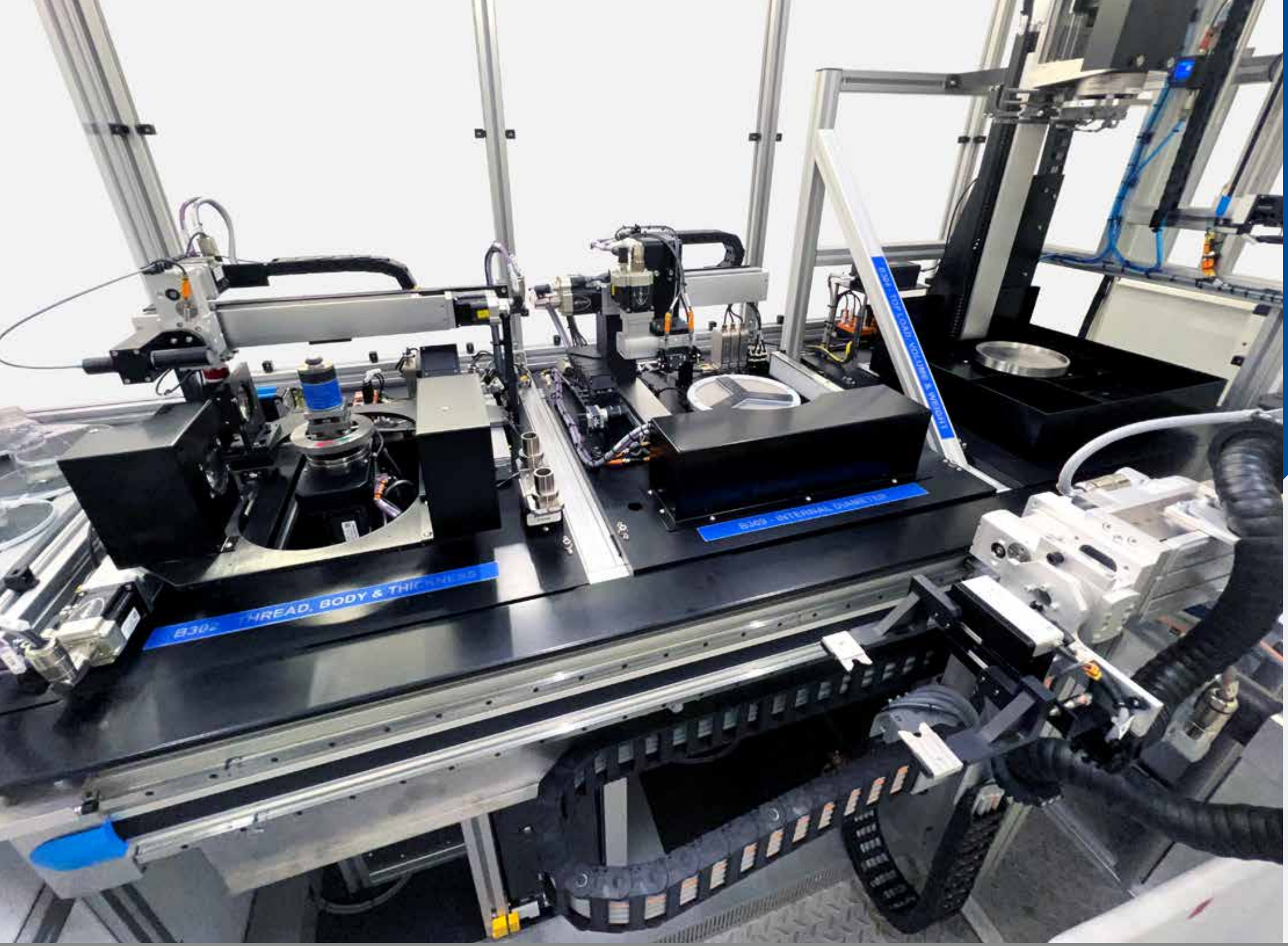
Choose from a range of conveyor options, and finally choose your modules (a minimum of a 2 station configuration through to a maximum of 4).

Choose your **modules...**



2-4 Station Configuration

Handling is **automatically configured**


B302 THREAD, BODY & THICKNESS
B303 - INTERNAL DIAMETER

Z704
RemoteXplorer Camera System

Remote Zoom and Focus

We even cover you in the dark!

Introducing Torus' Z704 Remote Xplorer, offering remote visual global support from our headoffice.

Standard Features:

- **Pan and Tilt Camera System** - Provides positional adjustment around the 340° field of view
- **Remote Zoom and Focus** - up to 15 pre-set programmable positions ensuring all metrology aspects of each module are covered
- **Video Recording and Image Capture Capability**
- **Multiple Camera Modules within larger gauging platforms can be added to provide visual coverage across the full gauging system**

Remote support has been available for many years via Torus' global helpdesk team, but only now can 'eyes on' support be offered via a new extension of Torus' traditional GaugeXplorer software, RemoteXplorer. With the permission of customers, the gauges can now be monitored visually using RemoteXplorer's newly developed pan and tilt camera system and software package.

Benefits to your business

- Remote visual access to assess potential problems and solutions
- Offers enhanced levels of support
- Reduces reaction and response times
- Reduces potential downtime situations
- Reduces onsite service costs
- Completely secure remote access

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Plastic Preform

Gauging

B301
Semi-Automatic Optical Inspection Gauge

POWER
100-240 Volts / 50-60 Hz

COMPRESSED AIR
5 bar / 72.5 PSI

DIMENSIONS
(W) 1130mm x (H) 1030mm x (D) 600mm

The B301 Semi-Automatic Optical Inspection Gauge has been developed to provide a fast, non-contact, traceable measurement solution for neck finish and body dimensions.

Using state-of-the-art optical telecentric lens technology, the system takes advantage of a self-teach profile function for part program generation.

Interchangeable location tooling provides the capability to perform dimensional inspection on a wide range of industry standard neck finish types.

Automatic thread start alignment used to offer unmatched measurement and system repeatability

Reporting options such as standard CSV or Statistical Process Control (SPC)

Certification UKAS Standards.

Measurement Features:

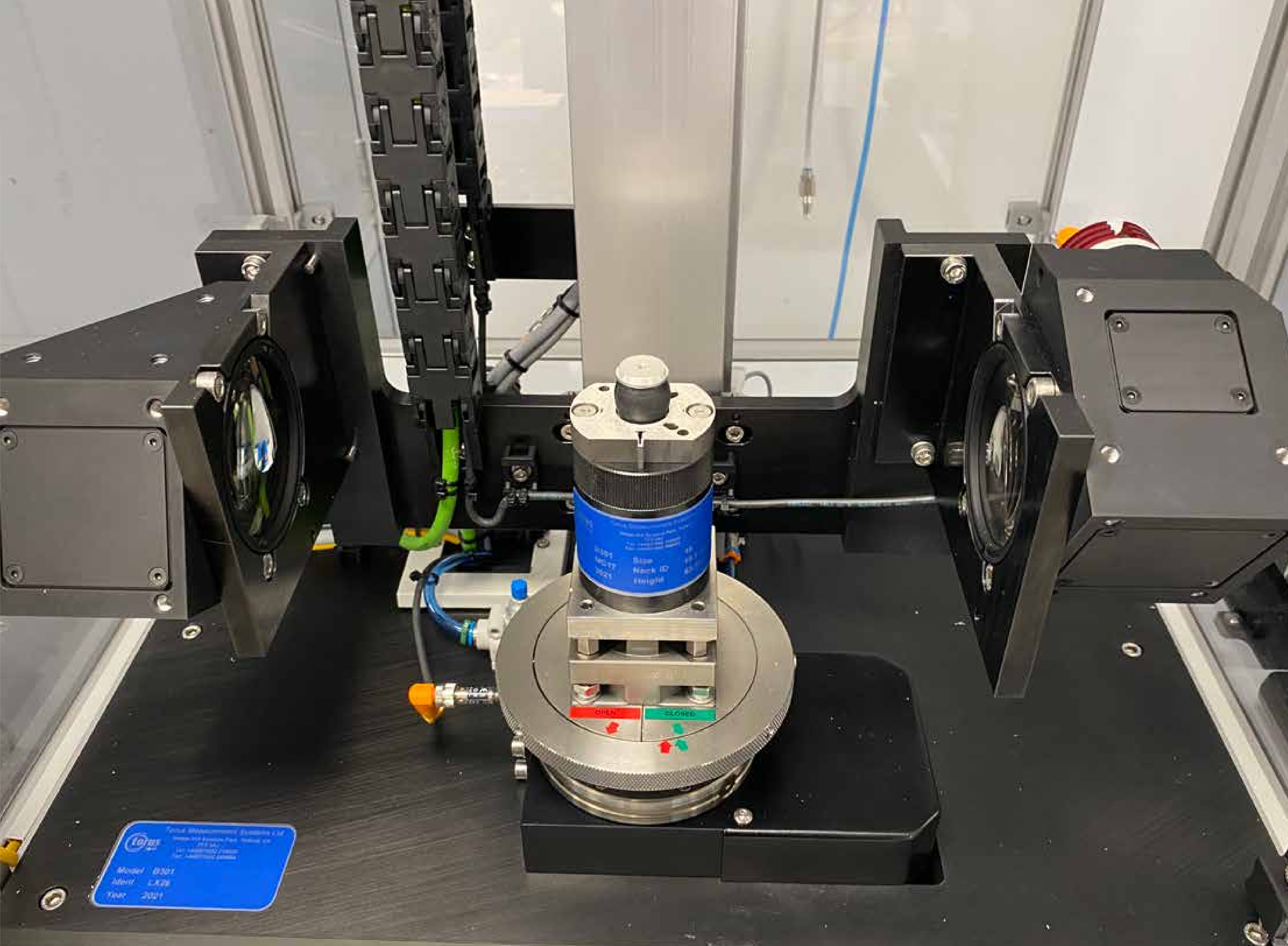
Feature		Accuracy
Neck Diameters	T, E, Z, B, B1, A, F, G Programmable neck dia.	+/- 0.030 mm
Neck Height	S, K, X, H, M, D Programmable neck heights	+/- 0.030 mm
Body Diameter	Programmable body dia.	+/- 0.030 mm
Overall Height	Individual	+/- 0.100 mm
Gate Height	Individual	+/- 0.100 mm
Perpendicularity	Angle / Distance	N/A

Technical Specification:

Material Types	PET, PP, TRITAN, PEF
Component Neck Types	Thread, Continuous Thread, Split Thread, PCO, SP, ROPP, Snap, Clinch, Crown Cap (others on ap)
Compound Outer Neck Dia.	≤ Ø 40 mm
Compound Internal Neck Dia.	Ø 8.00 mm - Ø 37.00 mm
Compound Height Range	≤ 165 mm
Compound Body Dia.	≤ 40 mm

Benefits to your business

- Quick-snap pre-programmed industry standard neck features
- Programmable neck features for full measurement flexibility
- Up to 16 rotational diameter positions
- Automatic thread start alignment
- Fast cycle time
- Mimic display screens


Size
Neck ID
Height
OPEN
CLOSED
Model B301
Ident LX26
Year 2021

B305
Automatic Preform Gauge

The B305 Automatic Preform Inspection Gauge is a fully configurable system capable of measuring and identifying all common industry features and defects

Technical Specification:

Material Types	PET, PP, TRITAN, PEF
Component Colours	Opaque and Clear
Component Neck Finish	Thread, Continuous thread, Split thread, PCI, SP, ROPP, Snap, Clinch
Component Height Range	60.00 - 200.00 mm
Component Outer Body Dia. Range	≤ 40 mm
Component Internal Neck Dia. Range	Ø 16 – Ø 34 mm
Component Weight Range	0-250 g
Component Neck Height	≤ 35 mm

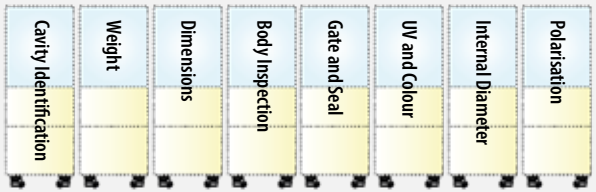
POWER
100-240 Volts /
50-60 Hz

COMPRESSED AIR
6 bar / 87 PSI

DIMENSIONS
(W) 2930mm x (H) 2280mm x (D) 2020mm

Our modular gauge setups are unique and allow you to customise your gauge, giving you the flexibility to ensure you have a total quality solution.

Add any of the below optional modules.



A full range of modular inspection station options, enables the customer to identify the inspection requirements and configure a system to suit the needs of the production facility.

Automatic thread start alignment provides unrivalled 'absolute' dimensional measurement system performance, for both Neck and Body features, traceable and certified to UKAS Standards.

Using state-of-the-art optical technology and illumination the system can provide a wide variety of defect analysis for features such as Gate and Seal, Body Defects and Plastic Flow.

The UV and Colour Inspection quickly provides checks on UV transmission rates and Colour data against customer preform specification.

The loading bowl feeder, enables the operator to load full shots of preforms, with traceable measurement results provided by the Cavity Identification Module.

Benefits to your business

- Live batch data and part overview screens during operation
- High speed throughput - Cycle Times < 15 seconds per part – designed to run 24 hours a day, 7 days a week
- Full shot (batch) loading via quick access bowl feeder with up to 150 preforms load capacity at a time
- Traceable measurement data without operator influence.
- Flexible pallet system providing capability for a wide range of Preform types
- CSV Data output and flexible formatting for input into local data handling / control systems at customers facility
- Remote Support package, which includes automatic gauge monitoring and reporting back to Torus for proactive response
- Automatic calibration/qualification on all gauging as standard
- Measurements traceable and certified to UKAS/NIST Standards, with internal Torus annual calibration recall system, for continued measurement assurance
- Link into Husky shotscope which gathers the current production and avoids operator errors

Click **here** to view the video

Customise your Gauge

Cavity Identification Module

Feature	Accuracy
Cavity ID	95% Read Rate

The Cavity Identification (ID) module completes an automatic cavity alignment to position the traceable cavity number correctly for recognition.

The recognised cavity number is then tagged to the feature results from the other inspection stations for process traceability.

Weight Module

Feature	Accuracy
Weight	0.05 g

The Weight module uses a high accuracy load cell, specifically selected for measuring weights 250g or lower, to provide superior levels of accuracy, with a typical resolution of 0.01g. Fitted with auto load calibration as standard.

Dimensional Module

Feature	Accuracy
Neck Dimensions	+/- 0.030 mm
Body Dimensions	+/- 0.050 mm
Overall Height	+/- 0.030 mm
Gate Height	+/- 0.030 mm
Sinkage	Indicative

The Dimensional module uses the latest state-of-the-art telecentric lens technology. Automatic thread start alignment used to offer unmatched measurement repeatability in 2 positions relative to start of thread. Fitted with auto load calibration as standard.

Body Inspection Module

Feature	Accuracy
Body Defect	Indicative

The Body Inspection module can capture typical preform defects such as Contamination, Scratching, Bubbles, Water Marks, Blemishes and Irregular Impressions.

This traceable information enables the operator to quickly identify production quality issues.

Gate and Seal Module

Feature	Accuracy
Gate Defect	Indicative
Seal Defect	Indicative

The Gate and Seal module can capture typical Gate defects, such as Tearing, Scratching, Burning, Castling and Gate Sinking, and typical Seal defects, such as Scratches, Notches, and Short Shots.

This traceable information enables the operator to quickly identify production quality issues.

UV and Colour Module

Feature	Accuracy
Colour	+/- 1.0 Ecmc

The UV Module measures UV Transmission at a pre-defined wavelength, and multiple programmable heights on the body of the preform.

The Colour Module makes reflective colour measurements on the outer wall of the preform. These are compared against the customers preform colour requirements to ensure the final product is exactly what is expected.

Internal Diameter Module

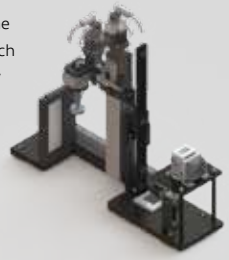
Feature	Accuracy
Internal Diameter	+/- 0.030 mm

The Internal Diameter module works in conjunction with the dimensional module as a continuation of critical dimension inspection. Using contact measurement probe technology, the features are measured at 0° and 90° positions as standard. Fitted with auto load calibration as standard.

Polarisation Module

The polarization inspection module uses vision technology, illumination and filtering to capture 8 images around a 360° complete rotation of the preform. The images are recorded for each preform, to be reviewed by the operator during and at the end of the batch run.

This traceable information enables the operator to quickly identify production quality issues.



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Street, Yuen Long, Hong Kong,

T: 00852 6979 1353
E: sales@torus-group.com

...we can be there

Our inspection systems all come with

24/7 remote sales and support

so your inspection and quality control can continue as seamlessly as possible.

10
ENGINEERS

UK / EUROPE / MIDDLE EAST ASIA / AFRICA / RUSSIA

7
ENGINEERS

UNITED STATES / BRAZIL / SOUTH AMERICA

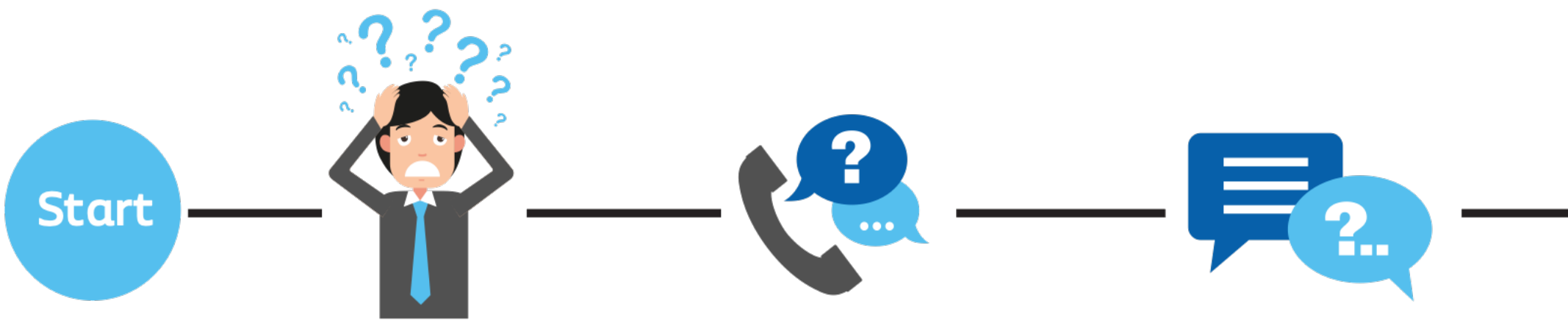
2
ENGINEERS

DEDICATED REMOTE SUPPORT ENGINEERS

Global Support Process

At Torus Measurement Systems we believe our job isn't finished until you can do your job better. We do that by supplying the highest quality products possible and backing them up with service and support dedicated to meeting your needs.

> Dedicated Technical Support
> Global Customer Service
> Maintenance Contracts
> Breakdown Cover and Spares
> Verification and Re-Calibration Services
> Engineers Located Worldwide



You have a problem!

When a problem is detected, don't pull your hair out and have sleepless nights...

Call our Global Customer Support Line

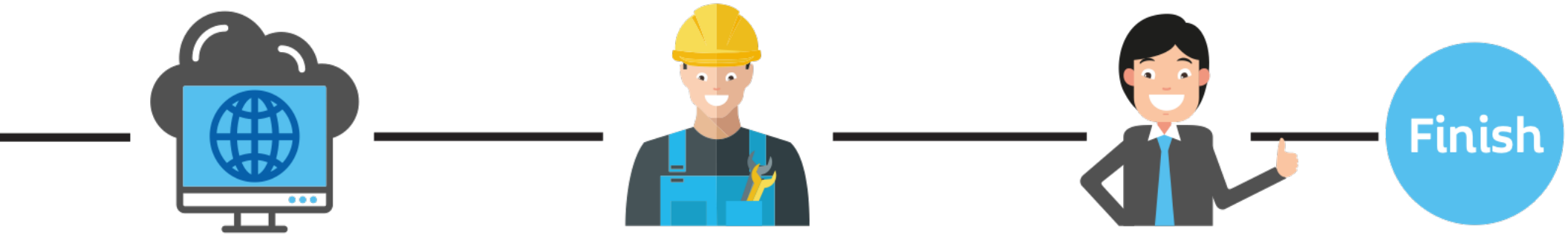
0044 (1952) 210 020

Over the Phone Support

Diagnosing the problem of your machine can be established by our team giving instructions over the phone.

Torus offers a comprehensive customer service facility from a dedicated technical support and administration team based at our Telford, UK office. We also have a number of global customer service partners based at strategic locations.

Our engineer and partner companies travel globally providing installation and training services worldwide.



Login Remotely

If the problem can not be resolved over the phone, we can access your machine remotely to do more in depth diagnostic checks.

Engineer will be Sent

Failing both means to resolve your issue, an engineer will be sent out to fix your machine.

Happy Customer

Customers can relax and feel assured they are in the right hands.

www.torus-group.com