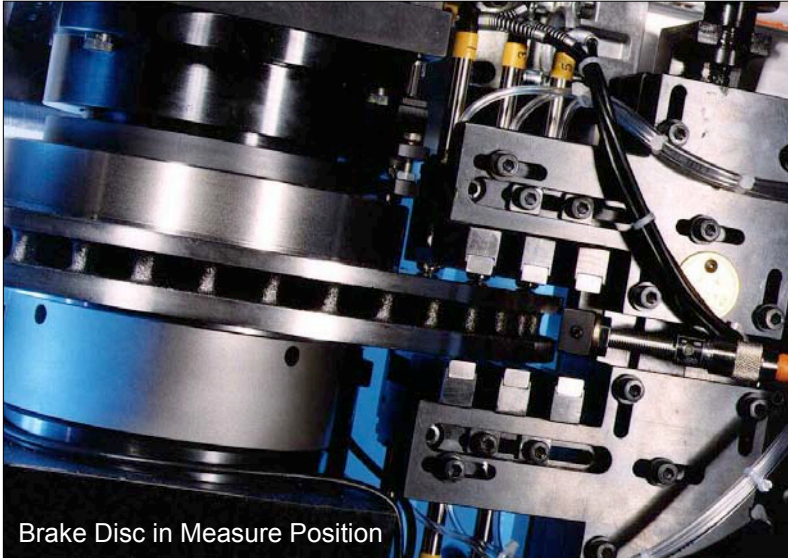


Brake Disc Measurement

Suspension Data Sheet



Brake Disc in Measure Position

Modern manufacturing techniques produce more efficient brakes that dissipate noise, reduce heat and limit vibration, the net result – “enhanced customer safety, reliability and comfort”.

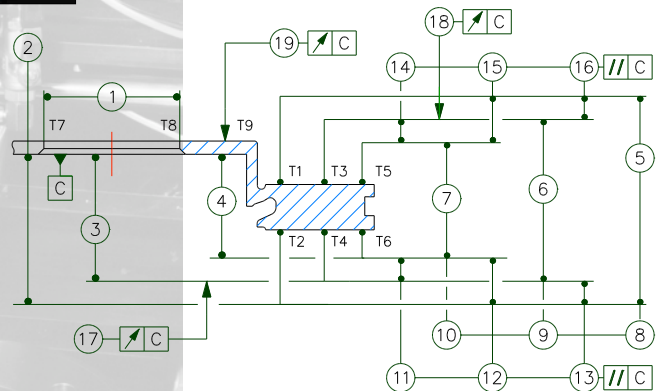
The tolerance levels applied to discs have become increasingly tighter as customer demands impose new standards in production.

A previously required tolerance of 20µm on thickness variation can now be as low as 6µm and 40µm can now be 10µm on location face to disc face runout.

Through specialised involvement with brake manufacturers, Intra has remained ahead of demands in terms of precision measurement, machine build, data analysis and control.

Features

- A cost-effective build approach using standard modular construction.
- Universally applicable, reliable proven designs.
- Precision spindle and part location with dynamic error compensation.
- Multi-dimensions and geometric features gauged simultaneously.
- Filterisation of measured data.
- Interchange over a range of parts, systems checked with vented and non-vented discs.
- 10 - 15 minute part changeover.
- Computerised measuring and Control Systems - CRITERION™.
- Fourier analysis.



Benefits

- Flexibility in machine configuration.
- Cycle times to meet production needs.
- Designed for use in harsh shop floor environment
- Highly accurate and responsive tracking resulting in excellent repeatability.
- Full numerical data evaluation and in-depth SPC.
- Optimise measurement for various machining processes through Filterisation
- Fourier analysis for monitoring process.
- Selective assembly through low/high point marking.

BRAKE DISC MEASUREMENT

Manual, Semi and Fully Automatic Systems

Fourier Analysis

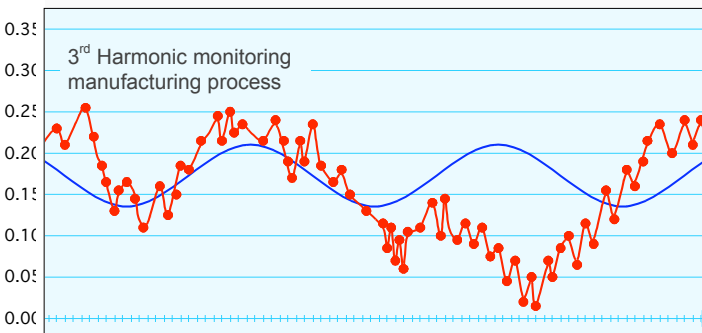
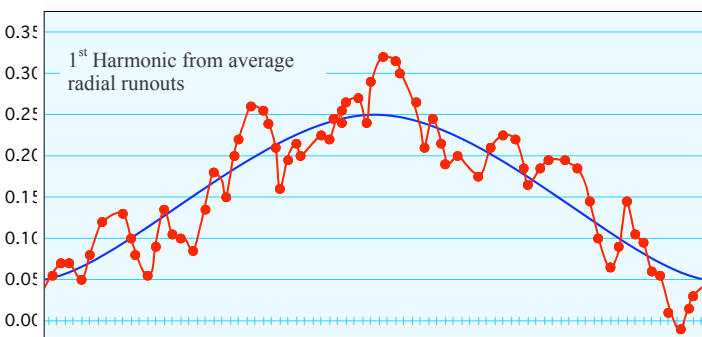
With brake disc measurement it determines sine waves of differing amplitude that are generated during radial runout.

Using CRITERION analysis software, harmonics based on the average of the radial runouts can be produced from the amplitude data.

Harmonics provide essential evaluation information such as "position of high and low points" based on the 1st harmonic and "monitoring of manufacturing processes" based on the 1st through nth harmonic.

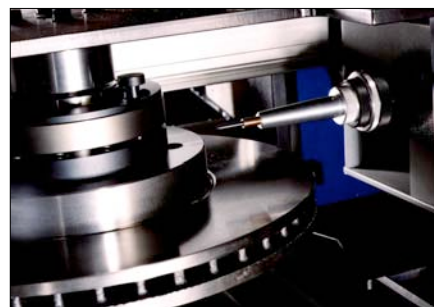
Complete manual, semi and automatic control:

	Manual	Semi Automatic	Fully Automatic
Location	Bench Top or freestanding	Freestanding	In line via conveyer.
User Requirements	Operator loaded and cycled	Operator loaded and automatically cycled	No operator required. Parts can be raised into measure position by elevator
Measuring Elements	Single pair of opposing transducers indexed to three positions	Manually loaded with thickness probes engaged by hand or on motorised table. Solid and vented gaugehead option.	Measured on rotary table between upper and lower units. Up to 240pph. OK and Reject segregation.
Support	series 100 to 500	series 500 or 700	series 900



Options

- Spindle Part Location Compensation
- High Pressure Part Clamping (replicate application mounting).
- Electronically Generated Datum
- Date Time Marking (Videojet / Dot Matrix).
- Fourier Analysis (Harmonic Amplitude).
- Marking high/low point point of runout of the 1st harmonic.



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