COETZ Technologies are based in Michigan, USA and Cape Town, South Africa and specialize in the manufacturing of dynamic balancing machines, banding machines, spin seasoning machines and undercutting machines especially for the motor, electrical and engineering industry.

Coetz Technologies was founded in 1986 by Mr. Dave Coetzee who is still the current President and CEO of Coetz Technologies and actively involved in the day to day operations of the company.

With a total factory floor space of 25 000 square feet and 28 permanent staff we strive to become the leader in the manufacturing of dynamic balancing and industrial machinery worldwide.

We believe in dedicated after sales service, top quality products and continues research and development.

We manufacture a wide variety of machinery for the automotive, industrial and engineering industries such as:

- Horizontal Balancing Machines (1kg up to 100 000kg)
- Turbine and Generator Balancing Machines
- Propeller Shaft Balancing Machines
- Crankshaft Balancing Machines
- Turbocharger Balancing Machines
- Manual and Automatic Mica Undercutting Machines
- Banding Machines
- Spin Seasoning Machines
- Retrofits and machine Upgrades
- Portable balancing and vibration Instruments
Hardware Features:

- The Compu100 measuring unit can be configured to operate as a 19" rackmount unit interfacing with a 10/15" industrial touchscreen computer (standard in new machines) or as a tabletop unit interfacing with a standard desktop PC and monitor / Latop (ideal for upgrades) or as a tabletop unit with a 10" industrial touchscreen computer (ideal for upgrades)
- State of the Art precision filtering techniques
- Both analogue and digital filtering to suppress electrical and mechanical noise extremely good
- Configurable for both Soft and Hard-bearing types of machines (Accepts Piezo electric pressure transducer pick-ups, Velocity pick-ups or Accelerometer pick-ups)
- 2 x Phase Generator inputs 10-30Vdc (For Belt and End drive machines)
- 1 x Encoder input for NPN or Push-Pull types of incremental encoders 10-30Vdc for remote angle display (Angle protractor)
- USB or RS232 interfacing with PC. (RS232 are more noise immune and used in larger machines)
- Relay output for machine stop start interfacing
- Special Dual Low noise power-supply filtering
- Precision Automatic Gain circuitry
- 70 – 12,000 rpm measuring range (70 – 60,000 rpm and 70 – 120,000 rpm optional)
- 110Vac / 220Vac, 50Hz / 60Hz configurable
MEASURING SYSTEMS

Features:

- Easy to use
- Robust
- 50 Rotor Storage
- Detailed A4/Letter print report using a dot-matrix printer
- Uses the same Advanced Measuring PCB as the Compu100 thus giving excellent results
- State of the Art precision filtering techniques
- 2, 3 or 4 Plane pick-up inputs depending on application
- Programmed for Hard / Soft Bearing Types of machines
- Both analogue and digital filtering to suppress electrical and mechanical noise extremely good
- Accepts Piezo electric pressure transducer pick-ups, Velocity pick-ups or Accelerometer pick-ups.
- Metric values display and parameters only
- 1 x Encoder input for NPN or Push-Pull types of incremental encoders 10-30Vdc for remote angle display
- Special Dual Low noise power-supply filtering
- Precision Automatic Gain circuitry
- 100 - 9999 rpm measuring range
- 110Vac / 220Vac, 50Hz / 60Hz configurable
- Large 7 segment displays and 4x20 character interfacing LCD display with keypad to enter numbers and letters

The Coetz Filtering and Processing circuit board is the core Component to all our measuring Systems both computerized and digital. It uses the latest high-end Technology to give the ultimate results. We only use the best components available to make it the most robust circuit board possible. It incorporates the latest low-noise, high precision analogue and digital filtering circuitry and techniques giving superior results. The Filtering PCB is mounted inside the Compu100 box connecting to different PC options via USB or RS232 communications.
We can upgrade or Retrofit any make of machine and make it like new again!
The Coetz SE200 propshaft / driveshaft balancing machine is designed for optimum performance and is able to balance all car, trucks and earthmoving propshafts at high speed (1000 - 4000 rpm depending on shaft weight). With its unique drive system, separate control and switchgear cabinet and precision measuring system it is very reliable, accurate and fast. With over 250 propshaft/driveshaft balancers sold the machine and its performance speaks for itself.

Features:
- Flat belt pulley drive system to eliminate any drive system unbalance errors. As many other manufacturers use a small propshaft / driveshaft between the drive motor and spindle problems like quick propshaft spline wear, false unbalance carryover to job readings etc occur. Coetz has solved all these problems by eliminating the small drive propshaft and using a flat belt drive system.

- Heavy duty pedestals being able to carry loads.

- Sealed accelerometer pick-up transducers are used inside the pedestals. There is no moving parts inside the transducer thus no wear. These sensors are very accurate and reliable. Many older machines use velocity moving coil type sensor which give problems by braking pins, springs etc.

- Separate control and switchgear panel ensures no machine vibrations carried over to the electrical and electronics systems of the machine.

- Soft Bearing Design (floating pedestal) makes it possible to spin shafts at high speeds. Another advantage of the soft bearing design is no special foundation is required. Propshafts require high speed or actual speed balancing because of several factors and the soft bearing balancer does exactly this.

The standard SE200 machine comes with 3 measuring pedestals. A 4th pedestal is optional. Two measuring systems are available: Windows7 Based Computerized (Compu100) or Microprocessor Based Digital(S200).
## SE200 Models and Specifications:

<table>
<thead>
<tr>
<th></th>
<th>Model SE200D (with digital S200 measuring unit)</th>
<th>Model SE200C (with computerized Compu100 measuring unit)</th>
<th>Model SE200HD – Heavy Duty for production (with computerized Compu100S measuring unit)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Max Weight of Shaft</strong></td>
<td>250 kg / 550 lbs</td>
<td>250 kg / 550 lbs</td>
<td>250 kg / 550 lbs</td>
</tr>
<tr>
<td><strong>No of planes</strong></td>
<td>3 (4&lt;sup&gt;th&lt;/sup&gt; pedestal optional)</td>
<td>3 (4&lt;sup&gt;th&lt;/sup&gt; pedestal optional)</td>
<td>3 (4&lt;sup&gt;th&lt;/sup&gt; pedestal optional)</td>
</tr>
<tr>
<td><strong>Measuring System</strong></td>
<td>S200 microprocessor based digital measuring unit</td>
<td>COMPU100 measuring unit with 15&quot; industrial touchscreen workstation running Windows 7 Operating System</td>
<td>COMPU100 measuring unit with 15&quot; industrial touchscreen workstation running Windows 7 Operating System</td>
</tr>
<tr>
<td><strong>Measuring Time (Start to stop)</strong></td>
<td>5-10 s depending on job size</td>
<td>5-10 s depending on job size</td>
<td>5-10 s depending on job size</td>
</tr>
<tr>
<td><strong>Auto Indexing</strong></td>
<td>No</td>
<td>Optional</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Report Save</strong></td>
<td>No</td>
<td>Yes - Unlimited</td>
<td>Yes - Unlimited</td>
</tr>
<tr>
<td><strong>Rotor Data Save</strong></td>
<td>Yes - 50</td>
<td>Yes - Unlimited</td>
<td>Yes - Unlimited</td>
</tr>
<tr>
<td><strong>Drive Power Variable Speed</strong></td>
<td>4kW AC motor with Yaskawa inverter drive. Electronic braking, Acceleration and deceleration functions. 0-4000 rpm</td>
<td>4kW AC motor with Yaskawa inverter drive. Electronic braking, Acceleration and deceleration functions. 0-4000 rpm</td>
<td>7.5kW AC motor with Yaskawa inverter drive. Electronic braking, Acceleration and deceleration functions. 0-4500 rpm</td>
</tr>
<tr>
<td><strong>Max Shaft Length Flange to Flange</strong></td>
<td>3440 mm / 135.4 in (1800mm extension beds optional)</td>
<td>3440 mm / 135.4 in (1800mm extension beds optional)</td>
<td>3440 mm / 135.4 in (1800mm extension beds optional)</td>
</tr>
<tr>
<td><strong>Machine Total Length</strong></td>
<td>4300 mm / 169.3 in</td>
<td>4300 mm / 169.3 in</td>
<td>4300 mm / 169.3 in</td>
</tr>
<tr>
<td><strong>Safety Brackets</strong></td>
<td>Yes (2)</td>
<td>Yes (2)</td>
<td>Yes (2)</td>
</tr>
<tr>
<td><strong>Safety Cover</strong></td>
<td>No (Optional)</td>
<td>No (Optional)</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Spot Welder on servo positioning sliding</strong></td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Coetz Vertical Balancers are designed for easy operation, high accuracy, fast response and great reliability. We manufacture single plane and two plane machines with several options such as on-board corrections, manual, semi-auto and fully auto operations with robotic pick and place, loading and unloading tables, laser marking / engraving etc. Our machines are used worldwide by many manufacturing, servicing and engineering companies.

Features:

- Hard Bearing design ensures accurate results and permanent calibration. Only enter basic measurement parameters and start balancing
- Auto-indexing can be added as an optional at a low cost.
- All Computerized systems comes standard with Metric / Imperial Units Selection
Vertical Balancing Machines: Special sized machines and automation options available on request.

<table>
<thead>
<tr>
<th>Model</th>
<th>V5HB</th>
<th>V30HB</th>
<th>V50HB</th>
<th>V100HB</th>
<th>V300HB</th>
<th>V1500HB</th>
<th>V4500HB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Weight of Job kg (lbs)</td>
<td>5 (11)</td>
<td>30 (66)</td>
<td>50 (110)</td>
<td>100 (220)</td>
<td>300 (660)</td>
<td>1500 (3300)</td>
<td>4500 (9900)</td>
</tr>
<tr>
<td>Max Diameter mm (in)</td>
<td>200 (7.8)</td>
<td>300 (11.8)</td>
<td>400 (15.7)</td>
<td>500 (19.6)</td>
<td>700 (27.5)</td>
<td>1100 (37.3)</td>
<td>1800 (37.3)</td>
</tr>
<tr>
<td>AC Motor Power kW (HP)</td>
<td>0.12 (0.16)</td>
<td>2.2 (3)</td>
<td>3 (4)</td>
<td>4 (5.4)</td>
<td>5.5 (7.3)</td>
<td>7.5 (10) with reduction gearbox</td>
<td>11 (15) with reduction gearbox</td>
</tr>
<tr>
<td>Urr %</td>
<td>&gt;90</td>
<td>&gt;90</td>
<td>&gt;90</td>
<td>&gt;90</td>
<td>&gt;90</td>
<td>&gt;90</td>
<td>&gt;90</td>
</tr>
</tbody>
</table>

- All of the above models are available in Single or Two plane models. Special sized machines also available.
- Safety Guarding Optional
- Correction attachments such as drill press or milling units optional
- The above machines are available in manual, manual with auto indexing, semi automatic (auto correction) and fully automatic configurations.
We manufacture a wide range of universal horizontal balancing machines from 100g up to 100,000kg weight capacity for the balancing of rotors, fans, armatures, blowers, impellers, centrifugal pumps, turbines, generator rotors etc. Being Hard bearing design calibration is only required annually. Only 5 basic measurements needs to be entered before balancing can be done.

All machines comes standard with rugged piezo electric transducers, Banner Engineering™ photocell, Angle protractor function with an encoder mounted on the back of the electrical motor and Yaskawa™ variable speed inverter drives.

Software features include ISO1940 balancing tolerance calculator, add/remove weight function, remount error compensation, static unbalance indication, metric/imperial units selection, detailed print and save reports and many other user friendly features.

Customers can choose between the HB200 microprocessor based 19” rackmount measuring system or the Compu100 10/15” Touchscreen Windows 7 based measuring system. Both systems use the same hardware processing electronics thus no performance difference between them but only interfacing features.
Belt Drive Machines: (Note: Larger diameters, motor power and bed lengths available on request)

<table>
<thead>
<tr>
<th>Model</th>
<th>HB5B</th>
<th>HB20B</th>
<th>HB50B</th>
<th>HB100B</th>
<th>HB300B</th>
<th>HB500B</th>
<th>HB750B</th>
<th>HB1000B</th>
<th>HB3000B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Weight of Job kg (lbs)</td>
<td>5 (11)</td>
<td>20 (44)</td>
<td>50 (110)</td>
<td>100 (220)</td>
<td>300 (660)</td>
<td>500 (1100)</td>
<td>750 (1650)</td>
<td>1000 (2200)</td>
<td>3000 (6600)</td>
</tr>
<tr>
<td>Max Diameter mm (in)</td>
<td>200 (7.8)</td>
<td>300 (11.8)</td>
<td>400 (15.7)</td>
<td>500 (19.6)</td>
<td>700 (27.5)</td>
<td>950 (37.3)</td>
<td>950 (37.3)</td>
<td>1400 (55)</td>
<td>1800 (59)</td>
</tr>
<tr>
<td>Bed Length mm (in)</td>
<td>300 (11.8)</td>
<td>400 (15.7)</td>
<td>750 (29.5)</td>
<td>900 (35.3)</td>
<td>1500 (59)</td>
<td>2600 (102)</td>
<td>2600 (102)</td>
<td>2600 (102)</td>
<td>3500 (138)</td>
</tr>
<tr>
<td>Journal Diameters mm (in)</td>
<td>5-30 (0.2-1.18)</td>
<td>8-40 (0.3-1.57)</td>
<td>8-70 (0.31-2.75)</td>
<td>8-70 (0.31-2.75)</td>
<td>10-120 (0.39-4.7)</td>
<td>15-150 (0.59-5.9)</td>
<td>15-150 (0.59-5.9)</td>
<td>15-180 (0.59-7)</td>
<td>20-220 (0.79-8.6)</td>
</tr>
<tr>
<td>Balancing Speeds depending on Job Size (rpm)</td>
<td>70-3000</td>
<td>70-3000</td>
<td>70-2500</td>
<td>70-2500</td>
<td>70-2500</td>
<td>70-2500</td>
<td>70-2500</td>
<td>70-2500</td>
<td>70-2500</td>
</tr>
<tr>
<td>Motor Power kW (HP)</td>
<td>0.12 (0.16)</td>
<td>0.25 (0.34)</td>
<td>0.75 (1)</td>
<td>1.1 (1.48)</td>
<td>1.5 (2)</td>
<td>3 (4)</td>
<td>4 (5.4)</td>
<td>4 (5.4)</td>
<td>5.5 (7.4)</td>
</tr>
<tr>
<td>Urr %</td>
<td>&gt;90</td>
<td>&gt;90</td>
<td>&gt;90</td>
<td>&gt;90</td>
<td>&gt;90</td>
<td>&gt;90</td>
<td>&gt;90</td>
<td>&gt;90</td>
<td>&gt;90</td>
</tr>
</tbody>
</table>

Belt and End Drive Machines: (Note: Larger diameters, motor power and bed lengths available on request)

<table>
<thead>
<tr>
<th>Model</th>
<th>HB1TBE</th>
<th>HB2TBE</th>
<th>HB3TBE</th>
<th>HB6TBE</th>
<th>HB10TBE</th>
<th>HB20TBE</th>
<th>HB50TBE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Weight of Job kg (lbs)</td>
<td>1000 (2200)</td>
<td>2000 (4400)</td>
<td>3000 (6600)</td>
<td>6000 (13,200)</td>
<td>10,000 (22,000)</td>
<td>20,000 (44,000)</td>
<td>50,000 (110,000)</td>
</tr>
<tr>
<td>Max Diameter mm (in)</td>
<td>1800 (70)</td>
<td>1800 (70)</td>
<td>2400 (94)</td>
<td>2600 (102)</td>
<td>2600 (102)</td>
<td>2800 (110)</td>
<td>3100 (122)</td>
</tr>
<tr>
<td>Balancing Speeds depending on Job Size (rpm)</td>
<td>70-3000</td>
<td>70-3000</td>
<td>70-3000</td>
<td>70-2500</td>
<td>70-2500</td>
<td>70-2500</td>
<td>70-2500</td>
</tr>
<tr>
<td>Motor Power Belt Drive kW (HP)</td>
<td>2.2 (3)</td>
<td>4 (5.4)</td>
<td>5.5 (7.4)</td>
<td>7.5 (10)</td>
<td>11 (15)</td>
<td>22 (30)</td>
<td>37 (50)</td>
</tr>
<tr>
<td>Motor Power End Drive kW (HP)</td>
<td>4 (5.4)</td>
<td>5.5 (7.4)</td>
<td>7.5 (10)</td>
<td>15 (20)</td>
<td>22 (30)</td>
<td>37 (50)</td>
<td>110 (150)</td>
</tr>
</tbody>
</table>
Coetz Technologies USA Inc. are based in Whitmore Lake, Michigan USA. We specialize in the manufacturing of dynamic balancing machines, mica undercutting machines, banding machines and traction motor spin seasoning machines especially for the motor, electrical and engineering industries.

Coetz Undercutting machines are reliable and operator friendly.

We manufacture mica undercutters from 50kg (110lbs) up to 10 000kg (22 000 lbs) weight capacity. All models are available in manual or automatic operated versions.

All Manual undercutters comes standard with a undercut depth digital readout and an excess material vacuum system.

Automatic undercutters uses 2 axis servo controlled motors to control the cutting stroke and cutting depth. The indexing is also controlled by a servo system. Mica slots are detected by a fibre optic precision sensor for reliable cuts. All parameters and machine controls are handled by a HMI touchscreen controller.
The Coetz B5000 banding machine is designed and manufactured to accurately band wire or tape around electrical armatures as well as pulling down armature coils by a Re-rolling operation.

The machine consist out of the following:

1. Machine bed
2. Headstock with AC drive motor and industrial gearbox
3. Tailstock with live centre
4. Tensioner and Re-Roll device
5. Electrical Switchgear and controls
6. Electrical supply connection from DB board to machine
7. Cable trunking etc

Specifications:

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Armature Weight</td>
<td>5000 kg</td>
</tr>
<tr>
<td>Maximum Diameter Swing Over Carriage</td>
<td>1280 mm</td>
</tr>
<tr>
<td>Maximum Diameter Swinger Over Bed</td>
<td>1600 mm</td>
</tr>
<tr>
<td>Maximum Length Between Centers</td>
<td>1900 mm</td>
</tr>
<tr>
<td>Faceplate Diameter</td>
<td>610 mm</td>
</tr>
<tr>
<td>Main Drive Motor</td>
<td>11 kW</td>
</tr>
<tr>
<td>Length – Standard Machine</td>
<td>3600 mm</td>
</tr>
<tr>
<td>Width – Standard Machine</td>
<td>1420 mm</td>
</tr>
<tr>
<td>Height – Standard Machine</td>
<td>1950 mm</td>
</tr>
<tr>
<td>Standard Machine Weight</td>
<td>2600 kg</td>
</tr>
</tbody>
</table>
The COETZ SS1800 Spin Seasoning Machine is designed for heating the commutator of a traction motor armature and spinning the armature at high speeds for a preset time and then torque the commutator. This procedure simulates the actual commutator temperature at running speeds ensuring the armature to run smoothly in the field.
Safety Features:

- Vibration Sensors on the pedestals interlocked to shut down the machine if the vibration levels exceed the preset limits.
- 3 Speed ramp-up feature ensures vibrations are not too high at lower speeds before ramping up to higher speeds.
- Bearing temperature sensors inside the pedestals to shut down the machine if the bearing temperatures exceed the preset limits.
- Heavy duty machine guard sliding on rails and interlocked with safety PLC system.
- Seasoned Cast Iron machine bed with precision T-slot nuts and linear guide ways ensures a solid foundation and precise movement of pedestals.
- Precision line bored pedestal true to each other ensuring excellent alignment.

Controls:

- 10.4” colour touchscreen HMI interface and PLC
- 22kW Variable Speed Inverter Drive
- 30 kW Thyristor Controller and closed loop temperature controller
- One screen with all parameters visible while running
- Preprogrammed database with all armatures listed
- One button to start automatic cycle
- On screen live commutator temperature graph with a detailed spin season printout.
- 4-20mA or RS-485 interfacing with external data recorders.
- Special high-end infrared commutator temperature sensor for precise and actual commutator readings and control.

Specifications:

- Maximum Armature Weight : 1800 kg / 3960 lbs
- Maximum Armature Diameter : 800 mm / 31.5 inches
- Maximum Armature Length between bearings : 1600 mm / 63 inches
- Maximum Commutator Diameter : 750 mm / 30 inches
- Minimum Commutator Diameter : 200 mm / 8 inches
- Maximum Rotating Speed : 4000 rpm
- Maximum Commutator Temperature : 200 °C / 392 °F
We offer both on-site and in-house training on dynamic balancing ranging from the basic theoretical training up to advanced balancing techniques.

We thoroughly understand dynamic balancing and machinery vibrations being in the field for many years and practically solving many problems with customers. As knowledge is power and improves product quality we want to share this knowledge with your company.

We can give your personnel training on your existing equipment regardless of the model or make of the machine.

Some of the topics we give training on and solve problems with customers:

- Static, Coupled and dynamic balancing principles
- Overhang balancing
- Balancing Tolerances
- Mounting Coupling errors (Remount errors)
- Keyway compensation
- Balancing vs Operating Speed
- Rigid and flex rotor balancing
- Overhang balancing
- Multistage Pump and rotor balancing
- Correction methods
- Vibration Analysis

Contact Us today so that we can find the best possible solution for your needs:

Coetz Technologies USA Inc.
11228 Lemen Road
Whitmore Lake, MI, USA

Tel: (001) 734 449 9340
Email: sales@coetzbalancing.com
Web: www.coetzbalancing.com