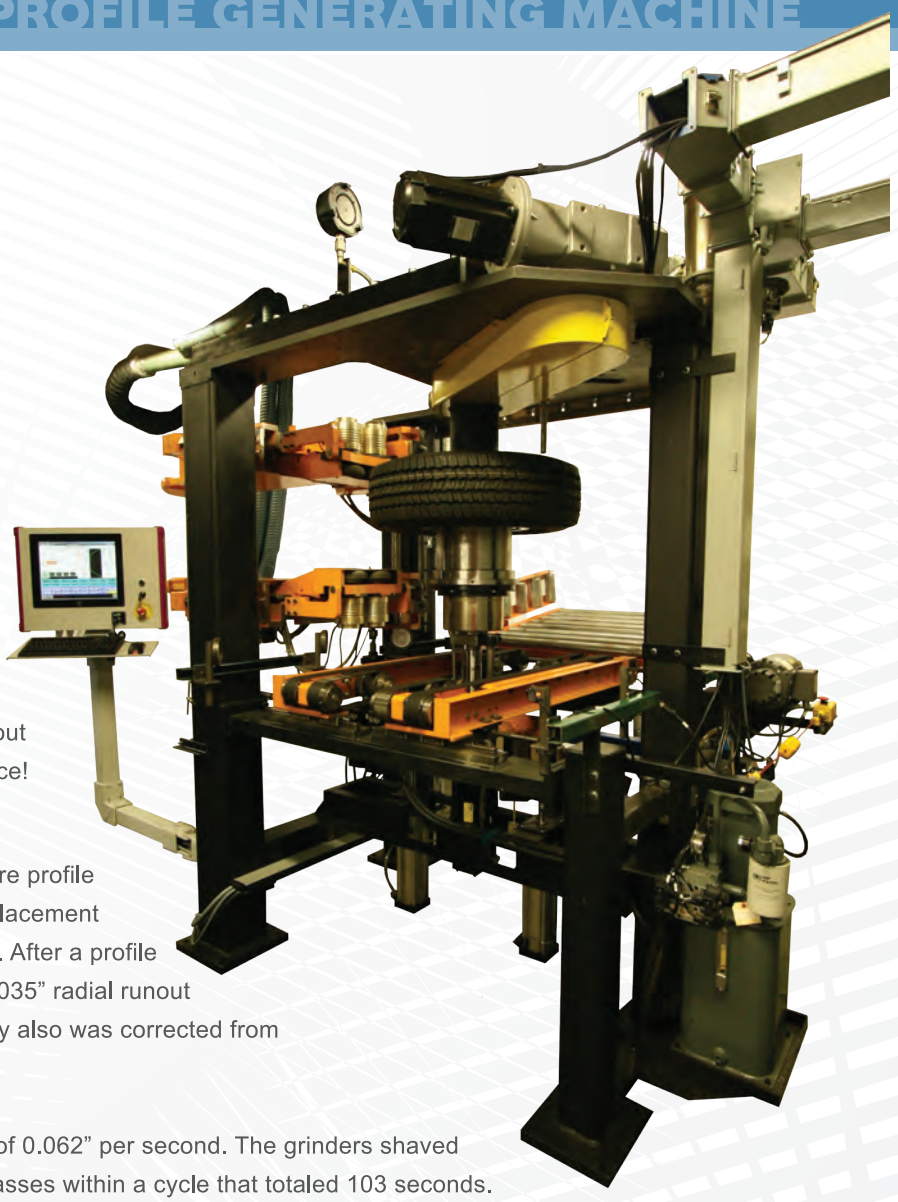
PGM (Profile Generating Machine) by asm Akron Special Machinery

the Poling Group

PROFILE GENERATING MACHINE

New From ASM

Profile Generating Machine



Increase Yield and Improve Customer Satisfaction

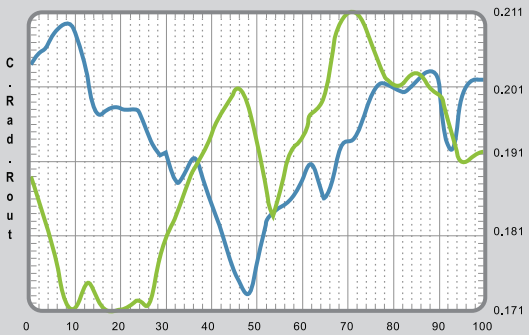
The PGM is a recipe-driven system that increases the ability of a tire manufacturer to supply consistently round tires, with identical diameter and profile, to the most demanding end-customers. Patented worldwide, PGM uses dual precision grinder units, a laser, and a Windows-based controller to reduce radial force, radial runout and conicity -- without compromising finished tire appearance!

The Proof is in the Results

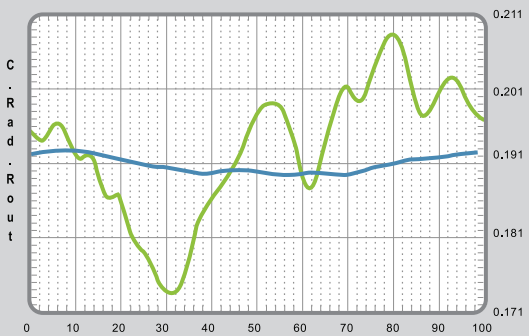
Consider the results of this recent trial, charted below. Before profile generating, the radial runout of a locally purchased, 15" replacement tire was 0.0367" and radial peak to peak force was 22.4 lbs. After a profile scan and grind of 0.028", the new test waveform shows 0.0035" radial runout and a drop to 17.6 lbs of radial peak to peak forces. Conicity also was corrected from -5.2 lbs. to +0.3 lbs.

In this trial, the grinders ran at 10,000 rpm with a feed rate of 0.062" per second. The grinders shaved a total of 0.028" off the outside diameter of the tire in two passes within a cycle that totaled 103 seconds.

Before PGM C. Rad. Rout Radial Load



After PGM C. Rad. Rout Radial Load



BEFORE Profile Generating

RPP		CON		CRRO	
lbs.	daN	lbs.	daN	inch	mm
22.4	9.96	-5.2	-2.3	0.37	0.94

AFTER Profile Generating

RPP		CON		CRRO	
lbs.	daN	lbs.	daN	inch	mm
17.6	8.72	0.3	0.13	.003	0.07

PROFILE GENERATING MACHINE

Ease-of-use in the Production Environment

The recipe screen makes it easy to define finished tire parameters, by tire type. PGM can calculate the target profile from recipe parameters, or retrieve it directly from either an uploaded CAD file or stored scan of the perfect master tire.

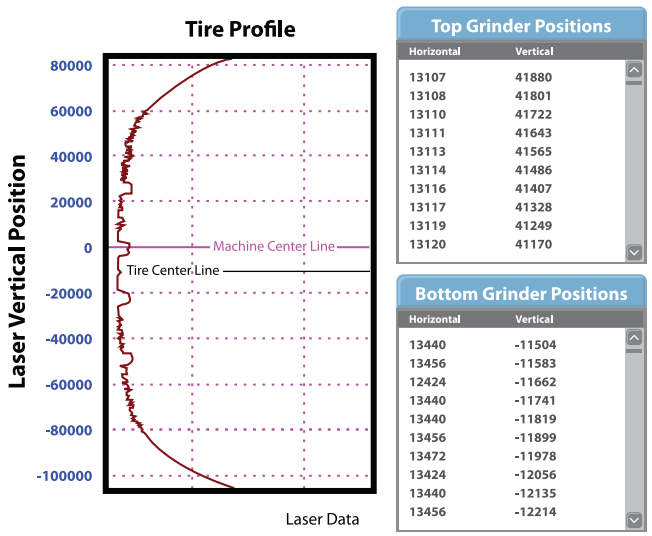
Other definable recipe parameters include:

- Tire and grind stone RPM
- Vertical/lateral feed rate
- Tire inflation pressure
- Tire rim spacing and tread width
- Number of grind passes
- Individual grind depth per pass

The initial tire scan indicates the center of the tread, which PGM compares to the centerline of the machine. This method provides a precise grind path for each tire type, regardless of tire width. The patented dual grinders move in tandem to generate the new profile, reducing grind time by half.

With PGM, you can now use your bar coding system to locate and correct objectionable tires produced by a mold with a repeating irregularity. PGM can also communicate with a plant information system to obtain a recipe, and then adjust grinding criteria for bar coded tires, without operator intervention.

After initial tire scan, PGM algorithms quickly calculate rubber removal for high point correction.



Use the Profile Generating Machine to produce

uniformly round tires with no heel and toe.

Standard Features:

- Windows Based Industrial PC Controller
- 17" Touch Screen
- Laser Tire Scanning
- Ethernet Communications
- CAD Profile Translator
- 8 Axis Control
- Patented Dual Stone Grinders
- TRRO, CRRO and BRRO Measurements
- Grind Full Tread Profiles up to 24”
- Predefined Grind Times
- Ethernet Networking for Remote Access
- Full Automation with optional Barcode Reader

Grind to the following:

- Defined Finished Tire Parameters
- CAD Profile
- Stored Scan of Master Tire

Learn More Today:

Contact a tire equipment professional at
Akron Special Machinery, a Poling Group Company

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