D90

D90 Grinding Wheel Balancer

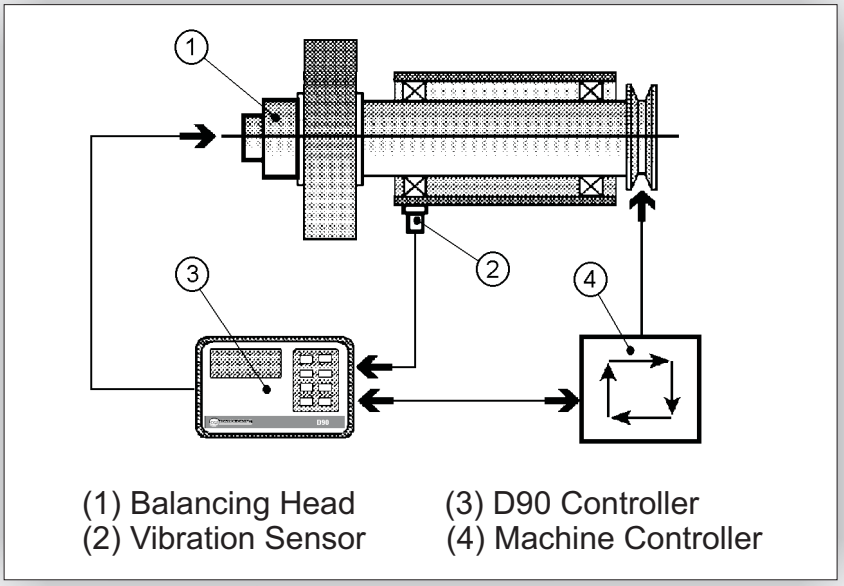
Automatic balancer cuts vibration to optimize finish and extend machine life

The D90 measures the vibration caused by an unbalanced grinding wheel and shifts weights attached to the wheel spindle until the vibration is neutralized. The system can be applied to grinding operations over a wide range of wheel sizes, wheel speeds, machine types, and wheel compositions.

The balancing head mounts easily to almost any wheel spindle with an adapter flange and nut. The precision piezo-electric vibration transducer attaches to the wheelhead housing, in line with one of the spindle bearings, with a simple stud or magnet. Machine downtime for installation is minimal.

During a balancing cycle, the D90 electronic unit receives a signal from the sensor proportional to the amount of vibration created by the wheel imbalance. The D90 then performs a realignment of the two weights in the balancing head until the amount of vibration falls below a pre-set limit.

- ☑ **Eliminates manual pre-balancing**
- ☑ **Fits most center-type, shoe-type, centerless, and surface grinders**
- ☑ **Flange mount installs easily to spindle**
- ☑ **Operation is simple and automatic**
- ☑ **High performance piezoelectric sensor**
- ☑ **Improves surface quality**
- ☑ **Increases machine life and productivity**



D90 Grinding Wheel Balancing System

TAKE CONTROL & SAVE MONEY

Control Gaging Incorporated
847 Avis Dr. Ann Arbor, Michigan 48108 Phone: +1 734.668.6750 Fax: +1 734.994.1335
www.controlgaging.com Email: sales@controlgaging.com

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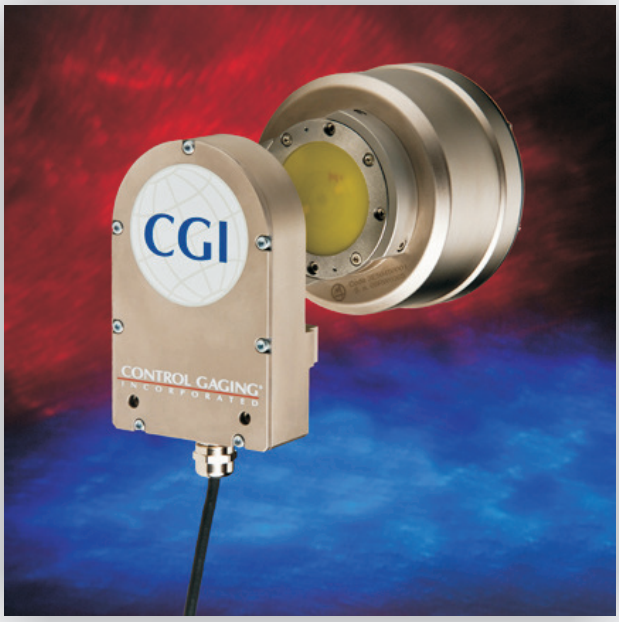
Balancing Head Models

Flange Type (FT) balancing heads

Available balancing heads range in capacity from 100 to 8,000 gcm, covering balancing requirements for most wheel sizes. A simple flange adapter connects the head to the grinder's wheel spindle.

- **Heads with retractable contacts (type FTR):**
  The contacts that transmit power to the head are normally open and are only closed during the balancing cycle, giving them a practically unlimited life. These heads are very competitively priced.

- **Heads with contactless transmission (type FTC):**
  The power and logic signals are transmitted through an air gap, allowing the FTC Balance Heads to operate at higher wheel speeds. These heads also have an exclusive zeroing cycle to neutralize the position of the weights. This is useful during machine startup or after a grinding wheel change.



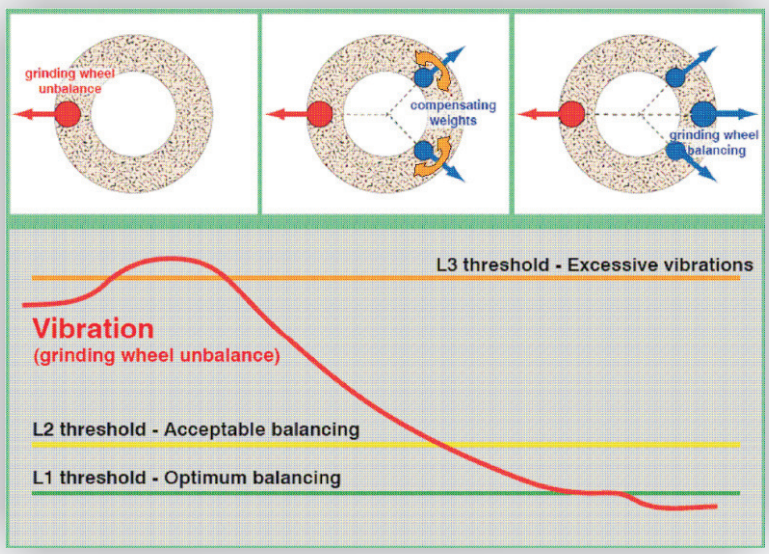
Balancing head with contactless transmission

D90 Specifications Summary

	Balancing capacity	Wheel speed
FTR	400-7500 gcm	1000-4000 rpm
FTC	100-8000 gcm	1000-8000 rpm

Programmable parameters: unit of measure, auto/man, limits (L1, L2, L3), Language (Eng, It, Ger, Sp)

I/O Interface: 24VDC source or sink



Typical Balancing Cycle

Balancing Method

Because of the wheel flange matching tolerance and variations in density and distribution of the abrasive and substrate, the center of gravity of a new grinding wheel is rarely at the exact center. When running at working speed, the wheel will vibrate as a result of the imbalance.

The two weights inside the balancing head can be moved through 360° in two separate paths. They are guided by the sensor to a position where the vector sum of their centrifugal force counteracts the original imbalance.

As shown in the graphic at left, the balancing cycle moves the weights until the vibration drops below the programmed threshold L1.

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www.controlgaging.com Email: sales@controlgaging.com