The VSR-8000 System Supplies State-of-the-Art Performance with Computerized Treatment and Automatic Treatment Data Archiving.

The VSR-8000 System uses resonant vibration to take full advantage of both resonance peak growth and/or shifting type responses that occur during effective vibratory stress relieving – the only method which can assure dimensionally stable, and therefore, predictable Workpieces. Since both types of resonance pattern changes can be generated, monitored, and documented, the VSR-8000 is also the ideal method to determine if a Workpiece is a good candidate for Vibratory Treatment; when, in the production cycle, to perform stress relieving; and whether more than one treatment (e.g., both before and after rough machining), is required.

The VSR Process operates on the principle that rigidity is reduced when a metal structure holding residual stresses undergoes effective stress relieving. The same change in rigidity is often observed during the cold-straightening operation of long components, such as rolls or shafts. Depending on the form of resonance (bend or torsional), and how the residual stresses affect the Workpiece’s resonance behavior, resonance peaks will either grow and/or shift during stress relieving. In most Workpieces, peak growth is normally the stronger of the two responses typically growing 4 – 20 times larger (See Treatment Chart on back). By monitoring the top(s) of the resonance peak(s), changes in both peak height and peak center frequency can be tracked and documented. As stress relieving progresses, the changes in the resonance pattern start to become increasingly subtle, eventually resulting in a stable pattern. Stability of the resonance pattern indicates stability in the Workpiece’s dimensional behavior.

The VSR-8000 System consists of the MX-8000 Console, the BL-8 Vibrator, a heavy-duty Accelerometer, a heavy-duty Equipment Cart, and Clamps and Connecting Cables for both power and signal data.
The MX-8000 Console features an industrial-grade, touch-screen Computer, built to provide years of simple to use, reliable performance. USB ports on the Console’s front panel allow easy connection of a printer, another PC, interface to an in-house or department network, or to a similar device or service. The System’s software enables fully computerized Treatment, the results of which are automatically archived. The Computer’s Treatment Archive can be reviewed remotely, which, along with software updates, is included in the System’s Technical Support Package.

The BL-8 Vibrator is driven by a 3 HP (2.2 kW), 3 phase, brushless DC motor. Because there are no brushes or commutator, which are often the cause of frequent maintenance or failure in electric motors (especially those subjected to vibration), the motor is the most reliable in the industry. The Vibrator’s housing contains a pair of massive roller bearings, and is made of a robust, long lasting aluminum-magnesium alloy providing light weight, rugged performance. The housing design includes dual sets of perpendicular mounting feet, which enable the user to always utilize the most effective vibrator orientation on every Workpiece, even on those with only one vibrator mounting surface. The Vibrator’s Unbalance setting can be easily adjusted over its 20 : 1 range. This feature, coupled with the Vibrator's extraordinary speed range (max speed: 8000 RPM), makes the BL-8 capable of stress relieving the industry’s widest range of Workpiece sizes and configurations.

If your Company regularly works with precision components, and can't compromise on quality or productivity, the VSR-8000 System will provide performance, cost containment, and reduction in energy-use strategy that today’s economic realities demand.