



Industry Newsletter

Special Edition

ARTEC'S NEW ABRO BALANCING MACHINE IN USE

ARTEC Gains Dynamic Balancing Capability

With the commissioning of Artec's new dynamic balancing machine, Artec has expanded its capability to provide dynamic balancing to customers. With a shortage of industrial dynamic balancing providers in CT and the North East, Artec plans to quickly achieve its goal of becoming the premier balancing provider for rotating machinery in New England.

Why Dynamic Balancing?

All rotating machinery is susceptible to unbalance, even when properly manufactured to a tight tolerance a skewed accumulation of allowable values may result. When system vibration occurs which can lead to quick wear of components and even system failure. System vibration can be caused by internal metallurgical anomalies. An unbalance caused by additional mass on one side of a rotor is called static or force unbalance. Even if a force is balanced by another equal force in the opposite plane (ie no static unbalance) there can still be what is known as a couple or dynamic unbalance. This occurs because, during rotation the forces can give rise to vibration. Even though a rotor may be symmetrical and statically force balanced, it can still be unbalanced.

Together, these force and coupled unbalances create what is called the combined unbalance. Through the use of Dynamic Balancing, this combined unbalance can be detected, measured, and corrected.



Precision removal of material to correct unbalance.

By using a dynamic balancing machine coupled with the right software, the total unbalance of a rigid rotor can be simplified to two unbalances in two planes perpendicular to the axis of rotation. This enables the correction of unbalance by adding or subtracting weight throughout the rotor. Careful removal of material is the most common way to balance an industrially used rotor. Removed material must be carefully measured to assure the structural integrity of the rotor is not compromised.

Exceeding Standards

Just like manufacturing requires dimensional tolerances, so too does balancing. The amount of allowable unbalance is generally prescribed by industry standards (e.g. API, AGMA, etc.). Artec is now capable of balancing rotor dynamics to all standard requirements of the industries it serves. This includes all balancing categories for API, AGMA, and ISO. This means that Artec is able to provide domestic balancing services and quality checks for both international and domestically manufactured products.

Providing Quicker Overhauls

By bringing the ability to dynamically balance couplings, gears, and other rotors in-house, Artec has increased the efficiency and effectiveness of overhaul services. As part of the comprehensive in house overhaul service that Artec has provided to the ski, turbo machinery, industrial extrusion, mill drive, and marine industries for years, customers can now be assured that all of their rotating machinery will be balanced to meet and exceed industry standards.

Want to learn more about Artec's balancing capability or have a balancing inquiry. Send us an e-mail at Sales@artec-machine.com