



VSR Balancing Machine

A VSR balancing machine is an essential piece of equipment for anyone involved in the remanufacture or rebuild of customer turbos.

Why balance the core assembly of a turbo?

The operating speed of a passenger vehicle turbo can reach speeds as high as 200,000rpm so if the rebuilt core from the turbo is not balanced it runs the risk of rotating off its central axis impacting the turbine or compressor housings.



The outcome could result in total devastation to all moving parts and housings. This would then allow the lubricating oil being supplied to the central core of the turbo to escape into the exhaust system and intercooler rather than leaving the turbo as it should via the oil return pipe to the engine sump.

That is why all the turbos prepared by Essex Turbo are balanced on an appropriate machine.



However if the turbo is a VNT™ turbo with a set of variable vanes, balancing the turbo is not enough. Once assembled the turbo setup is not complete until the unit is placed on an Air Flow Rig to set the variable vanes correctly. (See [‘VNT™ Technology’ information Sheet](#))