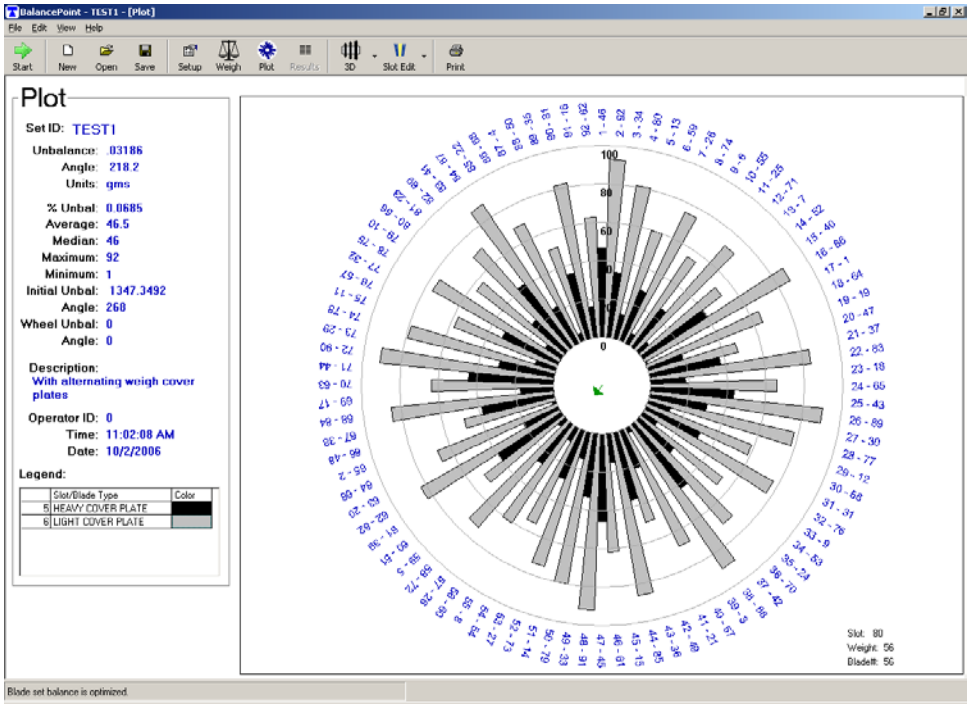
BalancePoint



In gas turbine and jet engine applications using non-integral compressor blades and turbine buckets, the weight tolerance of the individual blades or buckets can significantly affect the balance of the assembled rotor. Even if the weight differential is small, if by random assembly, more of the heavier blades are placed on one side of the rotor, the resulting unbalance condition may be more than can be corrected by additional balance weights or corrective machining processes. This means time-consuming and expensive disassembly of the rotor.

Since its introduction in January 2002, Turbine Metrology's BalancePoint software has become an industry standard for simple, fast, accurate, and affordable blade and bucket weighing and placement. Now used in Asia, North America, and Europe, BalancePoint is also finding applications in such diverse fields as paper pulping machines and ceiling fans.

AT A GLANCE

- **BalancePoint accommodates an unlimited number of blades or buckets.**
- **Advanced algorithms provide optimum placement of blades on rotor.**
- **Works with dead-weight or moment-weight inputs.**
- **Accommodates locking and cutter tooth blades, and blades with cover plates.**
- **Customer definable blades or slot types.**
- **Accommodates initial imbalance of bare rotor, if available.**
- **Tracks serial number of each blade.**
- **Comprehensive printed report ordered by blade number or slot number.**
- **Mass distribution plot gives visual representation of balance.**
- **Results saved in text file that may be exported to MS Excel.**
- **Optional direct reading from scales with RS-232 or USB interface.**
- **Customized for specific requirements.**

BalancePoint offers automatic, semi-automatic, or manual weighing as part of a balancing program that quickly determines the optimum rotor location for every blade or bucket in the set.

BalancePoint runs on Windows 95/98/ME/2000/XP operating systems with minimum hardware requirements. The step-by-step graphical format has been designed for easy use by operators with minimal computer training. Users can quickly write reusable Stage Templates that accommodate locking and cutter tooth blades, empty slots, cover plates, or any other special blade or slot type. Weighs can be automatically obtained from electronic deadweight scales or moment weight apparatus. The User can observe the blade distribution pattern from a Polar Plot and copy the Results output to an Excel spreadsheet. All results are saved for future reference.

Launch customer General Electric - Greenville Gas Turbine reports that **BalancePoint** requires 70% fewer step in the weighing/balancing operation than their former Bladis software, adding: "We have seen a 90% decrease in out-of-balance rejections" since the introduction of **BalancePoint**.

Aircraft engine builder AeroWin Tech (Taiwan) adds: "The resulting unbalance is amazing. I did not think it could be so low."

From an aircraft engine manufacturer in the UK: "Our old method balanced this [75 blade] set to .746 grams. **BalancePoint** did it to .0018 grams."

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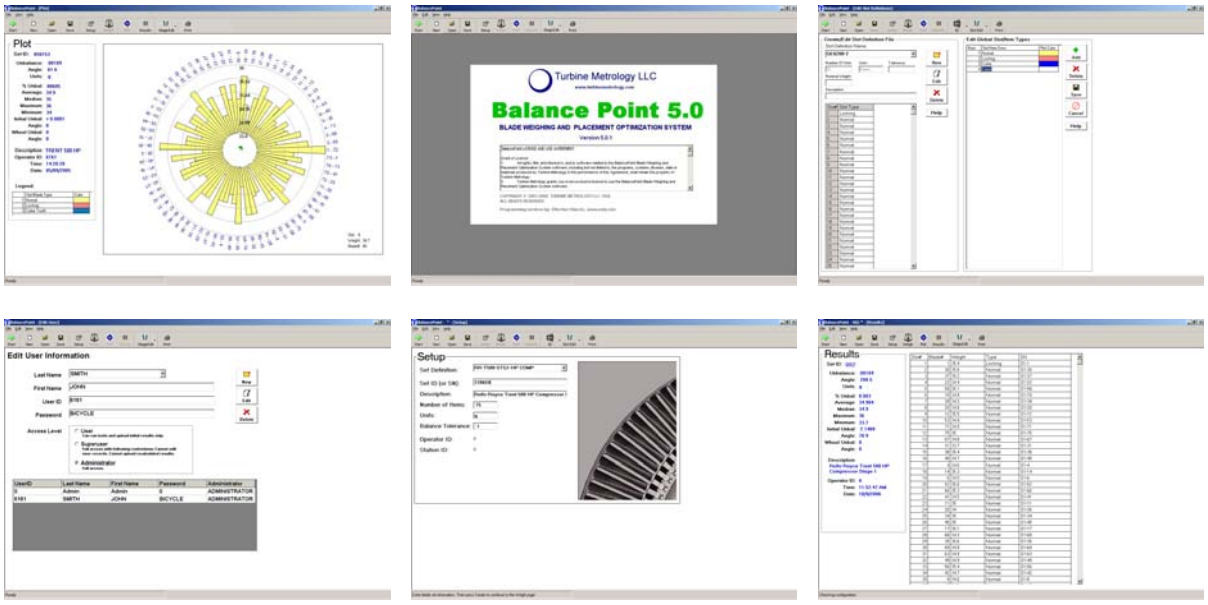

Sample screens, BalancePoint