



# Complex Over-Molding Solutions

A unique **branding** opportunity.

*A strong collaboration and an up-front engineering partnership enabled a unique branding opportunity for both Heuresis and PTA Plastics.*

**H**euresis presented PTA with their Pb200i XRF Lead Paint Analyzer; a quantum leap forward in XRF sensing technology. As far as their design philosophy goes, Heuresis strives to maximize integration yet minimize dependencies through the design cycle of the product. The result is a far smaller, lighter, and more efficient design, which creates a less expensive, yet superior product. PTA utilized a 12% glass filled

over-molding areas that were not attached or connected to fill within the same shot simultaneously.

Both PTA and Heuresis worked together to design three internal sub-runners that connected the five discreet over-molding areas to be placed

underneath the non-cosmetic area of the part. This was an important development in a molding and filling perspective due to the numerous internal components and the limited amount of space available. Once the gating was coordinated and strategically placed; one on the substrate and two on the sub-runner, PTA was able to uniformly fill all five of the protrusive over-molds.

The success of this project and complex over-molding is widely due to the collaboration and team work between PTA Plastics



We chose PTA because they have a very similar philosophy. It's clear that the development team at PTA work closely with one another, as well as closely with us.

Paul Bradshaw, VP, Director of Engineering, Heuresis

and Heuresis together. By these intentions, the design iterations were reduced to the hour timescale (as opposed to weeks using traditional siloed disciplines) in order to create the smallest, lightest, ergonomic, and rugged handheld XRF device in the market today.

PC + Polyester alloy resin which enabled the substrate of the Pb200i to be durable and scratch resistant. In addition, the protrusive over-mold protects the outer cosmetic surface on the rigid substrate. One of the biggest challenges faced was the five discreet

