Naero™ Inboard Drop Bars
Initial Design & Test Methodology

Tired of embracing wind and directing it to our core, we began with a simple hypothesis: Inboard drops are faster than straight drops.

First we created various prototypes in aluminum alloy 6061 and 7075 for proof of concept and to find agreeable shapes, sizes and bends. We tested inward drops -6cm, -9cm and -12cm in bar sizes 42 and 44 c-c on the road.

We made numerous trials on different road courses between 200 and 250 fixed watts with hands at the hoods and again with hands at the narrowest part of the drops for comparison. These were made in regular kit on typical road race bikes with popular 23mm tires on flattish out-and-back courses to factor out wind bias to the best practical extent. Results were clear and consistent.

We validated our road results and quantified our savings at the wind tunnel. Since we were concerned with real world riding, and unlike those trying to justify marginal gains, the least possible coefficient of drag (CdA) wasn't important to us. We tested in regular kit, with a non-professional rider on a round-tube frame with bottles. Our tests were conducted at various wind angles (yaw) and speeds again with hands at hoods and repeated in the drops. Comparing these data we not only proved our road results, but we isolated gains from normal hood hand positions to inboard drops. Extrapolating the results to the 40k TT standard we released our findings in terms of seconds saved and watts saved at moderate yaw and headwind commonly experienced in real world riding. Our graphs represent the incremental savings we found from bringing hands in from 42 to 33cm (a greater than 21% reduction) tops to drops, far better than published data for straight drops alone.