



heavy and needing to be flexed too strongly to get the necessary reaction).

It is here that the fitter's expertise comes in, with Simon even ruling out the Precision Superlite which – on weight grounds alone (103 grammes) – appeared to be a contender. "This particular shaft's stronger tip- and mid-section would make the shaft feel too stiff and play too strong, thereby defeating the object of moving to a lighter shaft," he explained.

We whittled it down to three shafts of varying weight and performance characteristics, together with a graph of each of their flex profiles:

Shaft	Weight (grammes)	Frequency (cpm)	Kickpoint [Flex index]	Torque index
Rifle Precision Lite (L)	109.8	272.5 [2.5]	63	2.0
Nippon NS Pro 950 (R)	93.3	282.7 [3.5]	58	2.1
Dynamic Gold Superlight R300	103.2	278.3 [3.1]	67	1.9

While one of my goals of a lower launch angle would suggest choosing the highest kickpoint, Simon explained that I would personally derive more benefit by focusing on the weight and flex profile. In particular, the graphs confirmed the profile of the Nippon NS Pro 950 as consistently softer than the others, requiring less 'load' to get a reaction out of it and therefore more likely to react appropriately with my swing. And while its trajectory was somewhat

higher than the others this would in any case be compensated for by my intention to switch clubhead. Given the rise of this light-weight steel classic (see sidebar) in recent years, I was happy to agree.

DI CHOOSING THE CLUBHEADS


I had already been planning to switch iron heads for aesthetic reasons, and this decision was reinforced by the performance factors that the fitting had identified.

Having favoured a succession of chunky early Ping Eye designs and, later, reassuringly thick-top-lined Callaways for most of my golfing life, my aesthetic preferences had changed in recent years. I wanted to move to a forged, shallow-cavity design taking me some way towards my pure blade aspirations but without relinquishing the forgiveness afforded by some subtle perimeter weighting.

Moreover, now that my swing had become shorter and simpler due to my back injury and ageing frame, I was paradoxically becoming more consistent in my game and less reliant on the extreme perimeter weighting so necessary in the past.

Similarly, with the FlightScope analysis confirming my naturally 'high launch, high spin' profile, there was less need for an ultra-low centre of gravity 'game improvement' construction to get the ball airborne. "You're not struggling for flight," as Simon put it.

Feeding in these personal requirements into the HotStix programme, reassuringly threw up a number of my favourite irons, including the Mizuno MP60, the Miura CB-201, Cleveland CG2,

A photograph of two men in a golf fitting room. The man on the left wears a red baseball cap, glasses, a dark long-sleeved shirt with a pink collar, and khaki pants. The man on the right wears a dark zip-up jacket with a logo on the chest and dark pants. They are standing in front of a large projection screen displaying a golf club data table. In the foreground, a desk holds a computer mouse and a laptop. A golf club is leaning against the desk.

"Even shafts of a similar flex will perform differently according to their weight, kickpoint and torque. This in turn will affect the attitude of the clubhead at impact and the launch and spin conditions that determine distance"

forged head material, graphite versus steel shaft preferences, levels of forgiveness and price constraints.

"The system knows how you hit the ball: how hard you hit it, how high you launch it, and how you spin it. It then goes out and finds the clubs in the system that are most appropriate for your goals.

"For example, if you specified forgiveness, it will go out and find those that tested with the highest Moment of Inertia (each iron head is tested rigorously across two axis for its resistance to twisting). Similarly, if you have a low launch angle and want a higher ball flight, it will rank iron heads according to the way they tested for trajectory (with centre of gravity tests conducted across three axis contributing to a specific Trajectory Index).

AND BALLS, TOO

The icing on the custom fitting cake is Hot Stix golf ball-fitting programme which makes specific recommendations for a given driver/shaft combination.

Again, you hit a dozen shots or so, with the control club to register your launch conditions, and then input the details of your selected club (head model, loft, shaft, etc), not forgetting to specify the type of ball you hit for the test.

Using another bank of objectively compiled data, Hot Stix then calculates the most appropriate models that would

(Note: Flex – Golfers with more variable direction and trajectories would at this point of course be considering altering shaft frequency itself. The textbooks suggest that low, weak shots pushed or sliced (to the right) suggest a shaft flex too firm; while high 'quick' pulls or hooks (to the left) are often a symptom of too weak a flex. However, Simon guarded against any generalisations, while also noting that fitting flex according to swingspeed alone can be risky as it does not necessarily capture the stress, or 'load', put on a shaft. For example, a golfer with a quickly accelerating hand action may bend the shaft more – and therefore require a stiffer shaft – than a player achieving the same speed with a smoother swing.)

2. INTRODUCTION TO HOT STIX TECHNOLOGIES

I was then introduced to the Hot Stix system, an awesome online databank of independently tested shafts, irons, drivers and golf balls (with fairway woods and hybrids in the pipeline). While a more detailed background is given in the accompanying sidebar, the basic principle of Hot Stix is for licensed fitters to help their clients home in on specific products from a huge selection of leading brands whose performance characteristics have all been meticulously tested and ranked back at their Arizona laboratory.

A) THE CONCEPT OF THE 'CONTROL' CLUB

First, it is important to understand that ranking products for their performance characteristics (for example shafts in terms of flex, kickpoint, weight, torque, etc) does not imply that one model is necessarily better than another in absolute terms.

Even if you had the password to hack into the Hot Stix website, the exclusive lists of product performance would be meaningless without reference to your own individual launch conditions. Hence the annual futility of those tests you might have read about in other magazines that claim to reveal "the longest driver on the market" based on the results of a mechanical robot whose launch conditions (and the style of swing that delivered them) will inevitably not be replicated by the vast majority of golfers.

Most importantly, the Hot Stix sorting procedure only becomes relevant when put in the context of your swing – not with your own existing set of clubs – but with a specially calibrated 'control' club whose known specifications of shaft, head and grip only then allow the relative comparisons with other tested products.

Accordingly, I hit some more balls with one of the special Hot Stix 'control' 6-irons which Simon chose as being most appropriate for my purposes. With the data relayed to Hot Stix via FlightScope, the system was then able to narrow down its field of some 1,000 tested shafts to a list of some 30 most likely to improve on my own launch conditions.

B) SORTING THE HOT STIX SHORTLIST

Simon's task was then to narrow these down further based on his knowledge of my swing and requirements, taking into consideration each of the shafts' figures for weight, torque, and kickpoint (for which Hot Stix helpfully provides an objective numerical index rather than just an arbitrary 'high', 'mid' or 'low' label).

Given my overriding need for a lighter shafts, he quickly eliminated leading models that I might otherwise have aspired to, such as the True Temper Dynamic Gold R300 (at 126 grammes, too heavy



Hot Stix' Arizona headquarters takes in everything from detailed laboratory testing of shafts and clubheads to intricate swing analysis and putter fitting