

K E E L S





Leading the Field in Advanced Keel Manufacture



Yacht racing doesn't get any more high-tech than the prestigious America's Cup. And since 1991 New Zealand foundry A&G Price Ltd has been chosen by discerning racing syndicates as a preferred supplier of high-performance fins and bulbs for some of the fastest yachts in the world.

A&G Price has supplied advanced keel solutions to many America's Cup campaigns, including the winners of at least three previous Cups, as well as Whitbread (now Volvo) round-the-world races and Grand Prix programmes.

Thanks to its unrivalled technical expertise and unswerving commitment to quality, the company has also made its mark elsewhere. Working closely with leading yacht designers and marine industry specialists, it has developed a reputation for excellence in the design and manufacture of custom-built keels, bulbs and stabilisers for everything from superyachts to frigates.

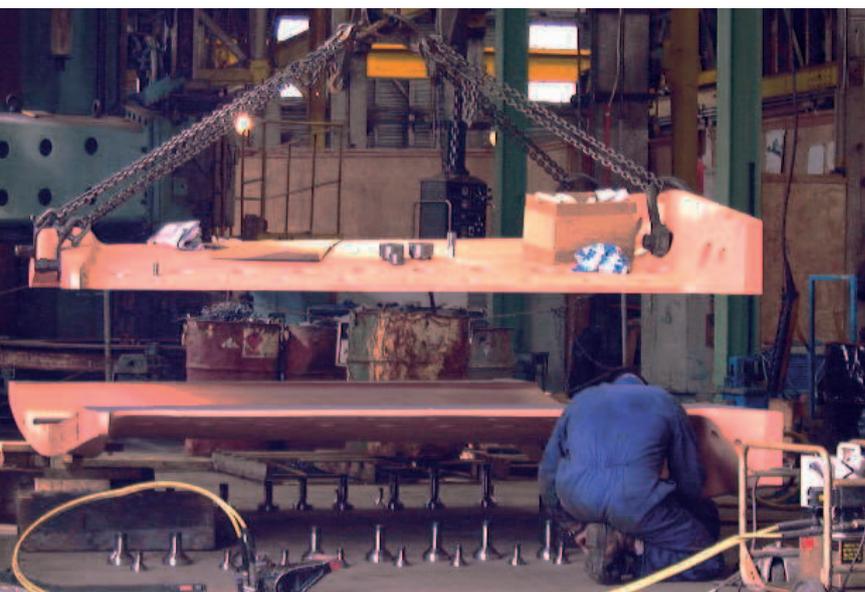
A&G Price's designers, engineers, metallurgists, foundry technicians and fabricators harness the latest technology to work with a range of metals including high tensile stainless steel, alloy steel and SG iron castings. Thanks to a Zayer 10m CNC milling machine and a new Johnford DMC 6000 five-face machining centre it is now able to machine large keels to a high level of precision.

One of the company's more technically challenging jobs was to manufacture the fin for the award-winning superyacht Silvertip — a 33.8m Dubois-designed sloop built by New Zealand Yachting Developments.

The design called for a hollow central core running through Silvertip's 18,540kg bulb and 11,460kg fin to house a carbon daggerboard. Difficulties in accessing the narrow central

Right: **Another high-performance A&G Price keel is launched**

Below: **An engineer assembles A&G Price's innovative two-piece daggerboard keel**

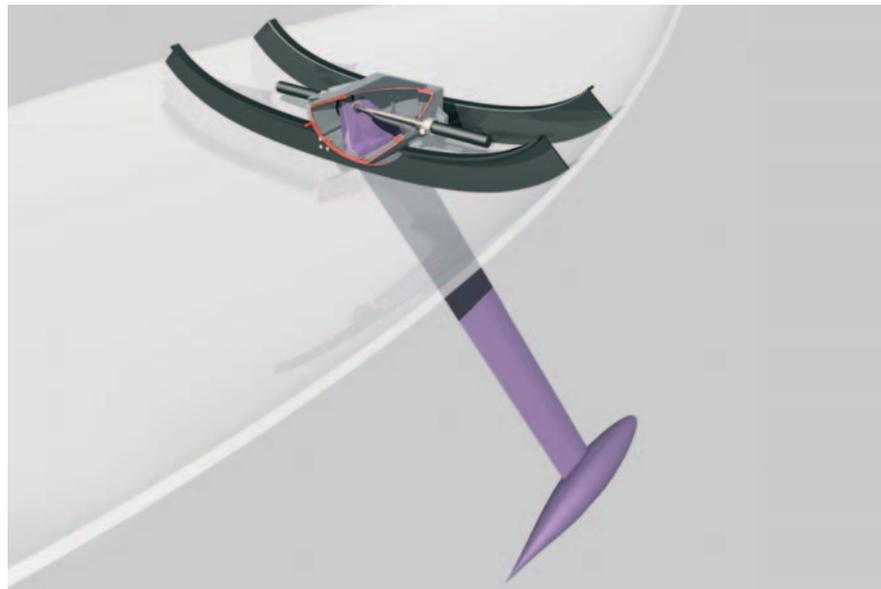


cavity were overcome by A&G Price's engineers, who devised the innovative solution of splitting the keel vertically. The split design eliminated the need for an additional corebox, allowed access for dressing the daggerboard slot and reduced the overall cast mass.

Recently, A&G Price consolidated its position as a market leader in the fabrication of high-tech keels with the formation of a new division, Precision Keels @ A&G Price.

The division has been created to further develop the company's traditional keel market and to expand into new areas utilising its Precision Canting System and Precision Lifting and Canting System.

As a combined foundry and engineering works, A&G Price is able to supply a complete 'bolts-to-bulb' package to any given



specifications. The new systems incorporate bolt, weld or glass-in solutions tailored to a vessel's construction.

Precision Keels @ A&G Price is able to engineer a canting or lifting system, including support structure, rams, pivots, hydraulics and controls based on a client's keel and bulb design.

For ease of handling, the company has developed a shipping method that utilises existing flat rack technology. This enables individual components to be positioned on the rack in such a way that they can be removed with either overhead gantry, crane or travel lift. To simplify installation each system is preassembled at the factory before shipping.

A&G Price brings to the market almost 140 years of casting and machining experience and an unsurpassed reputation for innovation, quality and customer focus. From split casting to lifting and canting keels, the company's commitment to engineering excellence is winning new customers around the world.

Above: **Conceptual drawing of an A&G Price canting keel**

Left: **A newly cast keel being machined**

Bottom Left: **A cast lead bulb en-route to the machine shop**

Capabilities Offered

Full casting, heat-treatment, machining, NDT, assembly and painting facility under one roof

6.5 tonne gross steel/stainless steel casting

12 tonne gross iron casting

Full metallurgical support able to offer customised material compositions

Lead casting to 50 tonne, including calcium lead

Full welding facilities for composite keels

SM2 qualified NDT personnel

Telarc ISO 9001:2000 registered

Other specialised industries

- Forestry/Pulp and Paper
- Marine • Mining and Quarrying
- Defence • Energy • Rail • Steel
- Fertiliser and Lime • Cement



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