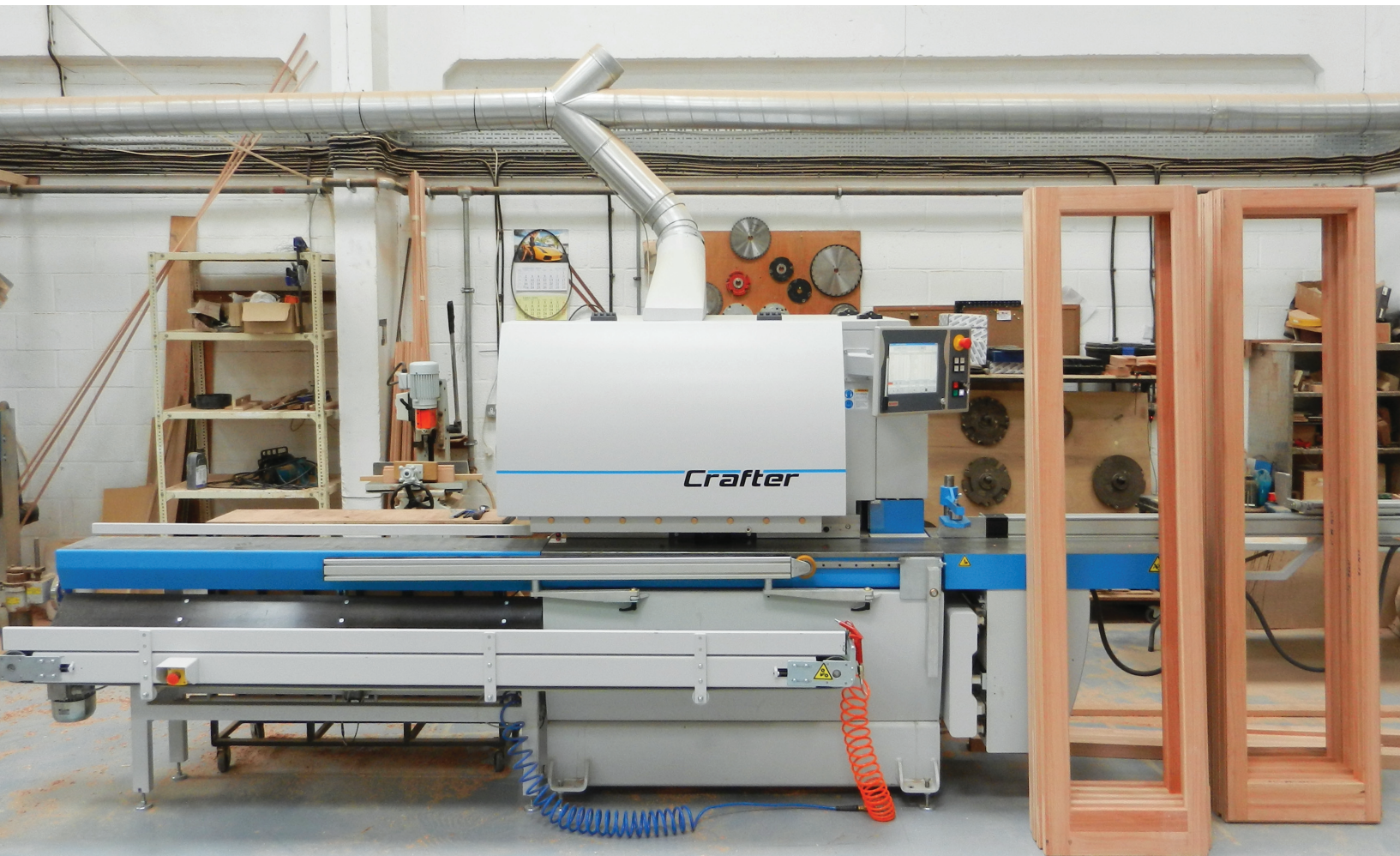


# Soukup provides uPVC window firm with efficient timber option

Until three months ago, Perfect Crystal Windows made uPVC windows and doors and a small number of bespoke timber variants. With its new Soukup Crafter, the company is already realising a ten-fold boost in timber joinery output adding a highly profitable revenue stream to the business. John Legg visited PCW shortly after the Crafter's installation.



The compact Crafter is well engineered

Arriving at Perfect Crystal Windows' (PCW) Park Royal, London premises, I was immediately struck by the impressive facade, the clean, sign-written vehicles and the professional showroom. Clearly the uPVC windows, doors and conservatory manufacturing market has been a happy hunting ground for the company which was set up in 2000. I asked director Krystian Pawlak about to tell me how his uPVC business had become one of the best examples of modern, bespoke timber window and door production firms in the UK.

After finding their feet in the formative years, PCW began to notice that more and more of its work was increasingly central London based, rather than from the

outlying areas. Also, that it was high, high performance timber windows the customers were looking for.

Demand from designers, architects and the general public for a more refined, aesthetically-pleasing option has grown steadily for some time – even throughout the recession. Typically, this type of joinery has long lead times and high prices due to the handmade nature of the product. Added to that, influential media individuals such as Sarah Beeney and Kevin McCloud have long-since championed the merit of well-made solid timber joinery over the often clumsy and inappropriate use of uPVC.

Perhaps surmisingly, there are relatively few firms able to offer traditional timber window and door products to the market



PCW director Krystian Pawlak says his Crafter is the result of long hunt for the perfect machine for his needs





The return belt conveyor makes it an easy one-man operation



The tenoning unit

within a reasonable timescale and at commercially-acceptable price points. PCW has been acutely aware of this changing mood and has wanted to find an effective solution for several years.

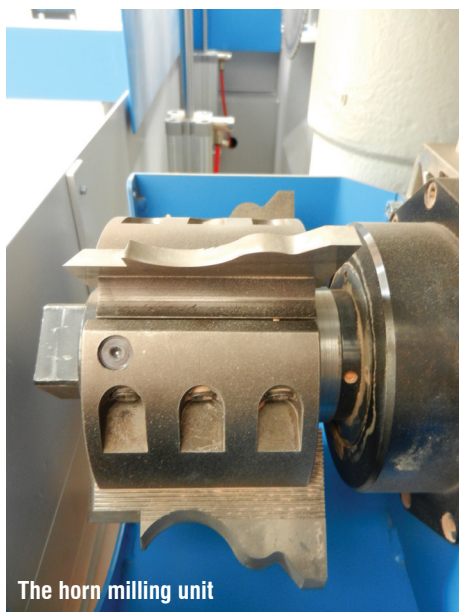
Initially, PCW opted to buy in the profiled timber and mitre and join the product using traditional methods and techniques. This was a labour-intensive scenario and could only cope with a modest output – but it worked fairly well for a few years.

But Krystian is not a man to sit on his laurels, he could see that this was an area of his business which he could develop, given the right approach. So he tried a small, multi-purpose CNC machining centre – but this quickly proved to be a bottleneck of its own making.

Krystian was then almost tempted to buy a £300k high-performance CNC machine: “These very sophisticated CNC machines were not the right solution for us: they are more suited to standard furniture production and using flat sheets of materials – not for windows and doors. We were looking for something more suited to our needs, where we could get create value,” explained Krystian.

Krystian had a lot of conversations with a lot of companies, but nothing quite added up for PCW. Until they met Ian Brown of IWM Ltd.

“When we found the Soukup Crafter, it was like a dream come true! It was exactly



The horn milling unit

what we were looking for. It is a strong, robust machine, it is compact and easy to use,” says Krystian.

The Crafter’s three basic functions are the sliding sash, sliding box and the casement operations.

The compact Crafter machining centre comprises CNC controlled tenoning and profiling shafts and the operator stays in front of the machine controlling the machining process. Tenons are made on two timbers at the same time and thanks to



An example of PCW’s beautifully-finished sash windows, replete with modern fittings and performance characteristics

the programming sequence, the machine automatically changes the working program on different ends of items (jambs with two different tenons). The operator inserts tenoned pieces into the profile section for moulding from one side. Using the returning conveyor enables an easy one-man operation.

The UK-series Crafter is specially designed for manufacturing of British window. The horizontal milling unit can easily provide the typical horns on sliding



sashes and the machine can be used for effective manufacturing of traditional boxes for sliding sashes including the cutting operation for lining beads, pulley stiles, head and sill.

The capacity is about 15-20 one-leaf casements, 30-40 single sashes or 8-12 complete sliding sash windows.

Although compact, the Crafter is nonetheless robust. The base of the Crafter is constructed from heavy, structured, ribbed steel to obtain a monolithic machine which is rigid and highly resistant to heavy loads and stress. All working units are moving on premium linear bearings driven by a precise ball screw.

The Crater is controlled by industrial PC Beckhoff with 12in touch screen in a Windows CE environment designed for industrial applications. The control unit is mounted between the tenoning and profiling units which gives an easy access and control of component movement to the machine operator.

Following an initial settling in phase, PCW's Crafter is already producing around 20 windows a day, a ten-fold increase on what is previously able to achieve using traditional methods. Krystian also maintains that the margins are significantly better with the new timber products compared to uPVC. Already some 12,000 sq ft of the factory floor is now focused on timber windows and doors and this could increase yet further.

Along with his production manager, Krystian has quickly realised that the Crafter is the perfect solution to PCW's needs, it is the heart of the company's new, efficient timber window and door production facility. PCW has already ordered additional Soukup equipment to ensure it gets the very



## Simplicity itself: the 12in Beckhoff PC controller

best out of the Crafter. PCW have always focused on the optimum performance, and so impressed is Krystian with the Soukup approach and is already considering the potential of buying a bigger machine from the range.

Krystian also points out how impressed he was with the Service and back-up from both Ian Brown in the UK and Soukup's David Tomica.

"With Ian's knowledge and experience, I knew we would get the right machine for us. Everything came on time, the installation was quick and it was all set-up and ready to go in no time. And when I had an issue with a new type of window design, I was able

to work with the Soukup factory to create a bespoke sash and casement window design which looks traditional but has the high-performance features of modern uPVC windows. This was not an easy task, but the Soukup team is very capable and very easy to work with. The bottom line is: the machine is just great. I love it!"

IWM Ltd will be exhibiting a range of Soukup machines at W14 in October, at the NEC in Birmingham, on stand 7D470.

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## Detailed finishing of sliding boxes



**PCW's professional office and factory is home to a Soukup-inspired renaissance for effective timber window and door production**