

## CompoTech offers improved efficiencies to the Industrial Machinery sector

28 / 03 / 2006

Whilst talk of the use of composites in industrial applications such as automotive and construction is becoming more and more common, CompoTech has recognised the potential of composites in one relatively untapped area – that of mechanical engineering, and in particular industrial machinery.

The company has developed a unique process using ultra high modulus Pitch carbon fibre to manufacture structural tubes, which can be used in almost any type of high speed industrial machine, such as milling machines, robots and printers. This pitch-based fibre offers higher bending and torsion stiffness than the usual pan-based fibre, and can be cost-effective when used in volume. In fact, CompoTech is now using up to 1.5 tonnes of pitch carbon fibre per week, due to customer demand, and this figure is set to grow.

CompoTech's new process using this ultra stiff and stable fibre builds on ten years' experience developing and manufacturing composite structural tubes for a range of applications. Whilst other carbon composite parts can achieve a similar stiffness, it is only CompoTech's unique manufacturing process that can achieve this in a tubular shaped component.

The company's pitch carbon fibre solution offers:

- Versatility – tubes can be made in custom shapes and sizes
- Cost-effective repeatability – perfect for industrial applications
- Increased stiffness – at over 400 GPa it is twice as stiff as steel
- Reduced weight – 4 times lighter than steel

Whilst high speed machine components have traditionally been made of steel or aluminium, the improved material properties of pitch carbon fibre components can offer the customer increased productivity, longevity of the machine's life, reduced downtime and improved accuracy. For instance, when CompoTech's tubes are used for drive shafts and beams in CNC milling machines, the same level of accuracy can be achieved twice as fast, or twice the accuracy can be achieved at current speeds.

CompoTech's pitch carbon fibre tubes are successfully being used by companies in the printing and robotic automation sectors, such as Soma Engineering and Bilsing Automation respectively, who have seen considerable improvement in their machines' performance and are now rolling this out to become a standard feature on all of their machines.

### C o m p o T e c h P l u s S p o l s . r . o

**U. K. Branch Office**  
10 Princes Esplanade  
Gurnard, Isle of Wight  
PO31 8LE U.K.  
UK VAT No. GB 864 6678 70

T ++44 (0) 1983 290 323

F ++44 (0) 1983 290 218

M ++44 (0) 7775 736 725

[Sales@CompoTech.com](mailto:Sales@CompoTech.com)

**Czech Republic Office.** T ++420 376 521 130

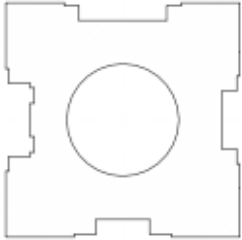
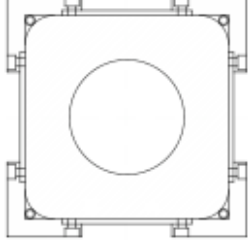
Druzstevni 159 F ++420 376 522 350

Susice 34201 M ++420 602 117 503

Czech Republic [CZoffice@CompoTech.com](mailto:CZoffice@CompoTech.com)

Czech Company Reg. No. 63507412

[www.CompoTech.com](http://www.CompoTech.com)

Traditional Steel		High Modulus Carbon Fibre with Steel Cladding
	Section Shape	
260 mm X 260 mm	Dimensions	260 mm X 260 mm
834 Kg	Weight (Kg)	303 Kg
210 GPa	E Modulus	360 GPa & 210 GPa
4.7 x 10 <sup>13</sup>	EI Stiffness	6.4 x 10 <sup>13</sup>
562 Hz	Natural Frequency	1354 Hz

