

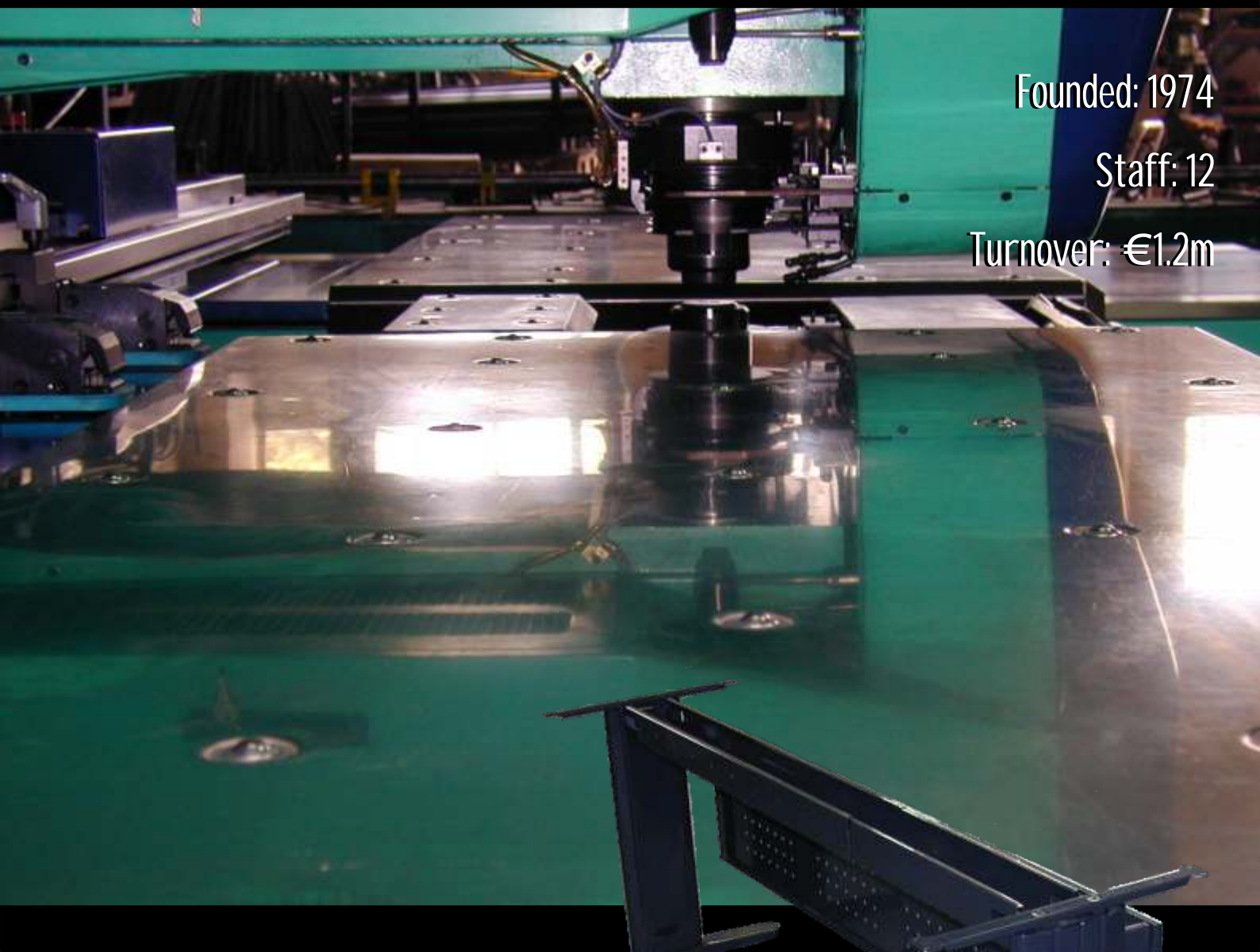
CASE STUDY: *Moutafis Furniture - Greece*



Founded: 1974

Staff: 12

Turnover: €1.2m



Rethinking a product strategy increases turnover by 25-30% in 6 months

CASE STUDY: Moutafis Furniture

With many markets currently depressed around the world every company needs to focus on its product range to see how they can either enhance their current portfolio or broaden it. Moutafis Furniture, based in Athens, Greece is one such company that took a long hard look at itself and the answer was a relatively simple one!

Founded in 1974 by two brothers, the company's primary business has always been the manufacture of chairs and their components. The components were sold through subcontractors, with Moutafis selling the finished chairs direct. Already Greece's number one furniture component supplier, their possible growth was limited by their product range.



Athanasios Moutafis

Said Athanasios Moutafis, General Manager, *"Chairs are only half the solution! We decided to manufacture a range of quality customisable desk components that could be supplied in flat pack form, would be easy to assemble and at a competitive price. We had no experience in this sector, so we contacted Perris SA (suppliers of Machine Tools and software) for advice."*

Perris recommended the Tecnology Italiana Tecnotransfer punch press, supplied with JETCAM Expert 1. The machine was installed in January 2002 and the machine operator, Christos Apostolidis went to Tecnology's headquarters in Sestri Levante, Italy for training. *"At university I had training in AutoCAD so I knew a little about design but had no experience with machines or sheet metal in general. In only one week I was able to design parts, generate code and make jobs run on the machine."*

The Tecnotransfer was specifically chosen due to its mechanical operation as opposed to hydraulic. This gives two benefits of being more consistently accurate and being able to punch much thicker materials. JETCAM Expert is supplied as standard with all Tecnology machines.

However, a company so new to sheet metal manufacturing processes could not expect to hit the ground running. A lack of experience in designing parts for manufacture may have led to poorly designed components, long design times and inefficient programs had it not been for Tecnology Italiana's tele-assistance service. This allowed Tecnology Italiana to connect to the customer's machine remotely, control JETCAM and talk to the customer simultaneously to give immediate service.



Christos Apostolidis: *"In one week with no previous experience of punching machines I was able to design, generate code and run jobs on the machine."*

Commented Moutafis, *"When we looked at designing a new product we talked to Tecnology to find out how to get the best out of the machine. With a combination of special tools and optimisation within the JETCAM Expert software not only was the part designed in the most flexible way but also with the optimum manufacturing process. For example, they helped us to design a special tool to produce a curve in one hit as opposed to nibbling. This reduced the time it took to make the part and also improved tool life. All of these solutions were provided over the phone."*



Moutafis already has a dominant position in its own marketplace but has its sights set further afield. Export business is becoming a larger part of their overall turnover and this is only likely to increase as their product range becomes more suitable to a wider audience. *“We are already shipping our flat-packed tables out to several European customers as we are now in a position to be much more competitive than many competitors outside of our own territory.”*

With every customer delivery is usually the number one priority, and Moutafis is now in a position to design, develop and deliver to its customers fast. Customers can either supply DXF files which can be nested and output in seconds, or parts can be quickly designed using JETCAM. *“A customer contacted us requesting a specialised table for use on an Internet Café on ships. With JETCAM's CAD module we were able to design the entire table component set within a couple of hours*

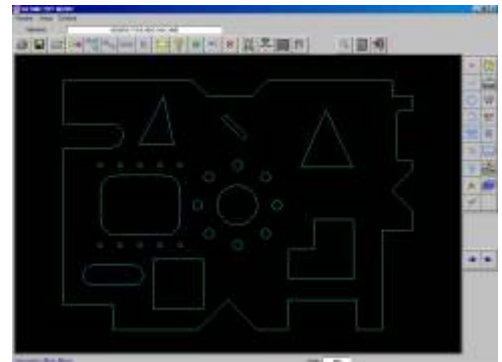
and in two days the job was completely finished previously this would have taken over a week. We prefer to use JETCAM over AutoCAD as it is simple and flexible if I make a mistake in designing it is very easy to rectify. For me also the collaboration between JETCAM and the Tecnotransfer is perfect. The software is fast and flexible and gets the most out of the machine. And I can expand the software as I need to in the future.”

A new machine is a large investment for any company, but is potentially a much greater risk when it is using a manufacturing technology that the company has no experience with. In the six months since the machine and software were installed Moutafis has already generated revenue to more than cover their ongoing overheads for this product line. Their engineer required minimal training, and further support is provided immediately by remote assistance. By re-inventing its product range Moutafis has increased its business by 25-30% since the beginning of the year.

Added Moutafis, “We did not have any experience with the fabrication sector before we bought this machine but now because of the ease of use and the support we are moving our company into new markets, in terms of both products and geography. Later this year we are launching a new range of furniture for schools and offices that should increase this figure further. Add to this our growing export market and together these factors have given us the confidence to look at other technologies. This may for example include tube bending for other possible future product and plant expansion plans.”



“We’ve increased our business by 25-30% in just six months...”



“With JETCAM's CAD we were able to design the entire product in a couple of hours...”

Mechanical vs Hydraulic



There are several advantages for companies that opt for a mechanically powered punch press over hydraulic. The primary benefit is power - a 37 tonne force generated by a 7 tonne machine, attributed to the dynamic kinetic forces generated by Tecnology Italiana's mechanically powered punches. Materials up to 8mm can be punched making the machine much more flexible.

Another major advantage of mechanical punching over hydraulic is that of accuracy. Penetration can be regulated to 0.01mm within accuracies of +/- 0.01mm - this accuracy is steadily maintained and is ideally suited to precision forming (for louvers etc). Hydraulic machines cannot achieve this as the properties of the machine oil change during normal operation, thus making the machine less accurate.

SPECIFICATION: *The delivered solution*

Features of Tecnotransfer 15SR 1050

Rated power capacity	300N
Max X axis traverse	- 40 / 1550mm
Max y axis traverse	- 40 / 1050mm
Max X axis with a repositioning	- 40 / 3100mm
C axis rotation	50rpm
Max shearing sequence in relation to the distance between centres of the holes (mm)	
• Step 3mm	600strokes/min
• Step 25mm	330 strokes/min
Max positioning speed	
• X axis	85metres/m
• Y axis	60metres/m
• Simultaneous axis	104metres/m
Positioning precision	+/-0.1mm
Max shearing diameter	100mm
Max punching/nibbling thickness	6.5mm
Compensation for reground tools	5mm
Adjustable stroke length	0 - 20mm
Max weight of metal sheet during working	150kg
Max rotating tools housing	15
Max tools housing (with Multitool)	75
Min time for tool change	3 seconds
Tool rotation accuracy	0.01 degrees
Machining workpiece with folded edges:	
With standard clamps, edge h	20mm
With special clamps, edge h	30mm
Pneumatic feeding	6 bar
Min compressed air capacity	200 l/min
Absorbed capacity	16Kw
Overall dimensions	3950 x 3800 x 2450mm
Weight	5400Kg



Features of JETCAM Expert 1

Stored Engineering Knowledge Technology Database
DXF Viewer
Automatic hazard avoidance (shaped tools, forms)
Interactive CAD
DXF interface for CAD drawing import/export
Automatic tool selection
Automatic micro-joints, lead-ins, lead-outs and loops
Interactive nesting (arrays, free-hand)
Automatic nesting of a single component at 0 and 90 degrees
User definable machine macro commands
Automatic tool path and tool rotation optimisation
Automatic repositioning
Automatic parting and unloading of components at any angle
Automatic turret/magazine loading
Multiple tool libraries
Automatic placement of special tools
Full simulation capabilities



Contact Details



Tecnology Italiana S.p.A.
 Tel: +39 0185 40371
 Fax: +39 0185 41256
 Email: info@tecnology.com
 Web: www.tecnology.com



Perris SA
 Tel: +30 10 854 7644
 Fax: +30 10 8547645
 Email: perris@otenet.gr

JACKSON
 Production Services Limited

UK & Ireland Dealer:
Jackson Production Services Ltd
 Tel: 0113 236 3366
 Fax: 0113 236 3339
 Email: mikejps@aol.com