



Solutions News

Helping all links in the injection moulding supply chain

SPRING 2007

Lessons from 2006

As one of the key suppliers to the UK moulding industry, DMS-Diemould, is well placed to gain an overview of the injection moulding market and the tool-makers that support it. The verdict on the last twelve months? "It could have been worse".

"2006 disproved two of the major articles of received business wisdom, firstly that, in toolmaking at least, bigger is not necessarily better - whereas previously the market favoured larger companies, now, with an unreliable flow of work, smaller companies are more able to cope by outsourcing where necessary. Secondly, in a climate where survival is paramount, the lack of a fixed long-term vision can be a positive strength, allowing companies to adapt rapidly and benefit from narrow windows of opportunity.

So, there seems to be light at the end of the manufacturing tunnel, even if the shape of that tunnel is rather different than we had imagined.

The UK remains competitive for small-scale, short production run and specialist moulding and an increase in the "personalization" of consumer goods could well increase that market substantially.

David Odlin, MD, DMS-Diemould

DMS-Diemould Rapidbases Aid Ultra-Fast Tooling Manufacture

Aluminium mould bases for prototypes and short runs from DMS-Diemould are helping Havant-based rapid tooling specialist Formaplex Machining Ltd turn round tooling in three days!

According to Formaplex, rapid tooling manufacture is all about spindle time. The time from receipt of IGES file to cutting is paramount. Formaplex use RTM (Real Time Machining) software with anti-collision detection in combination with its own bespoke process to merge jobs and enable global modelling of an infinite number of components. CAD/CAM software reads the incoming CAD model file and machining can commence within seconds if required, enabling tooling to be manufactured in a fraction of conventional lead-times.

To help this happen, Formaplex keeps Rapidbases (aluminium mould bases) from DMS-Diemould in stock at its brand new 1750 sq m headquarters for use on its 15 CNC high speed machining centres – some of which have beds up to 5m with five-axis capability, operating 24/7.

"We currently quote delivery from three days for small mould tools," declares sales director Andy Bone. "The Formaplex Process removes a substantial amount of the labour content deployed by conventional toolmaking companies – in 2005 we achieved a turnover in excess of £4 million with just 12 direct production personnel."

Formaplex manufactures a range of tooling from small, intricate part geometries to large parts and full suites of tooling for both prototype and low/medium volume production injection moulding

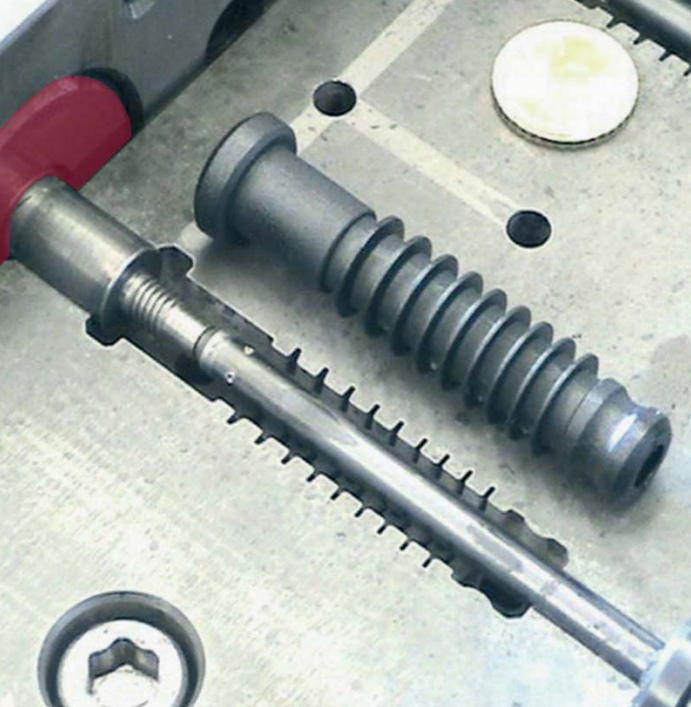
requirements. Mr Bone states that the instant availability of Rapidbases is key to getting jobs started quickly.

"Quickly getting into a position to start cutting is what we are all about as a manufacturer of rapid tooling solutions," he says. "Rapidbases cut a significant amount of machining time from our processes, helping us better serve our customers in the automotive, medical, domestic appliance and telecoms sectors. It helps keep the value chain very short and supports our 'can do' approach."

Formaplex is more a 'creative studio of manufacturing', rather than a toolmaker or precision engineering firm. In its five year history the company has invested heavily in latest design high technology machines, software, tooling and staff with high levels of ability. With these elements Formaplex is all set to become one of the most successful and dynamic machine shops in Europe.



"We currently quote delivery from three days for small mould tools." Andy Bone

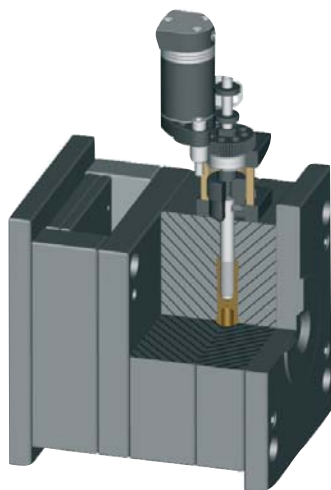


Unscrewing Device from DMS Helps Moulder Unwind

A medical care equipment component with a long internal thread recently necessitated the use of an innovative ‘unscrewing’ device (the first in the UK) from DMS-Diemould to help the moulder achieve the required result in a simple, compact, rapid, cost effective and successful manner – a feat that could not be achieved using other systems.

Long, coarse threads are no problem.

“The first thing we noticed was its ease-of-use – it’s simply a direct bolt-on replacement for an inverter motor.”



RA Labone & Co Ltd has built a formidable reputation based on the moulding and pressing work it produces for the automotive sector. Manufacturing automotive parts such as screen connectors for heated front and rear screens, mounting studs and clips for car windows, rear lamp backplates, lampholders and interior light fittings today represents 50-60 per cent of business at the Ilkeston-based company.

The company’s success in the automotive industry is mirrored in other sectors, such as home security, cash dispensing and medical care equipment (medicare). A current medicare project at RA Labone centres around a component with a long, fine pitched, internal thread, a feature that has caused the company some concern, as Engineering Director Richard Goldthorpe explains.

“To manufacture these moulded medicare parts we need to extract and ‘draw out’ the component before it is fully ejected,” he says. “Conventionally this kind of task will involve the use of a rack and pinion device. However, a rack and pinion demands either an exceptionally large press or plenty of headroom to fit it to the tool. In this case it simply wasn’t practical, on top of which it didn’t give us the desired level of control during the unscrewing process.”

Manufactured from acetal, the medicare part will suffer damage in the form of melting by friction if the unscrewing action occurs too quickly, meaning that precise control is required.

Undeterred the company then specified the tool be fitted with an AC motor featuring an inverter drive.

However, this also proved unsuccessful, largely due to interface problems between the drive, motor and machine. At the point of exasperation, the company had the fortune to read a short article about hydraulic unscrewing devices from DMS-Diemould, citing a long list of benefits.

“The EXAflow unscrewing device sounded ideal for our application,” says Mr Goldthorpe. “The first thing we noticed was its ease-of-use – it’s simply a direct bolt-on replacement for an inverter motor. Secondly it is so compact – it required no alterations to our guarding and we didn’t have to consider running a larger machine. Thirdly, there is no need to de-mount the tool from the machine, which would have been the case using a rack and pinion device. And lastly, the hydraulic control means there is no electronic interfacing required – the hoses and built-in proximity sensor connect directly to the machine.

The secret behind the precision of the EXAflow unscrewing device lies in the fixed stop of the core holder. The core holder must run against a fixed stop with its entire front surface area. This can even ensure a precise thread start position, for example, in the case of triangular caps for shampoo bottles, which need to be aligned with bottle geometry.

EXAflow unscrewing devices (supplied as either single or twin drive units) are exclusively distributed in the UK by DMS. The devices provide time and cost gains in mouldmaking while reducing production costs for the injection molder by giving reliable, trouble-free service.

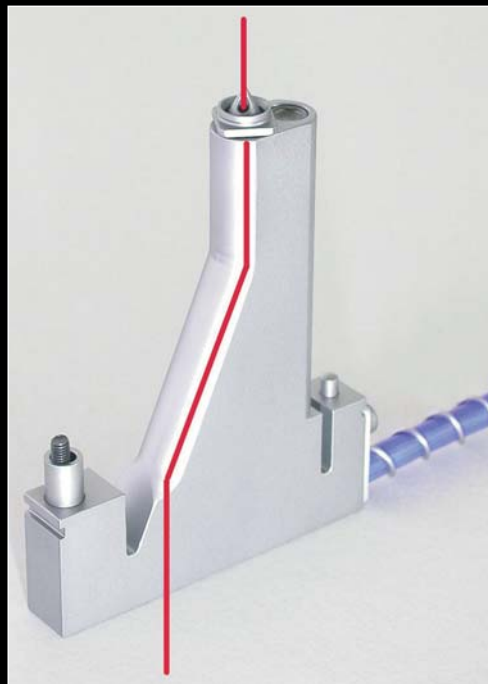
PDM Visitors Impressed by Special Hot Runner Nozzles for Tight Spots

Visitors to the DMS-Diemould stand at PDM'06 in Telford, showed particular interest in the offset version of the popular Flat-Line hot runner nozzle from Heitec. These innovative hot runner nozzles are specifically designed for use in difficult-to-access off-centre gate locations, and offer a maximum offset of 30mm and a minimum pitch of 13mm.

DMS MD, David Odlin, commented, "Once again, PDM attracted serious buyers looking for solutions to increasingly difficult moulding challenges - the offset Heitec nozzles proved to be just the type of thing they were looking for."

The new nozzles can be used in situation where previously an offset would require an additional separate manifold and nozzle, with all the associated expense in time and money that involves, with the off-set Flat-Line nozzle it is possible to achieve the desired position simply by using the special nozzle and an adaptor.

The nozzles are not only appropriate for off-centre and diagonal, and off-centre, diagonal and narrow locations, but also for use with nearly all commercial resins, including those with glass reinforcement. The units also offer side-supports to stabilize them against injection unit pressure.



With the option of modification to suit customers' specific requirements, the nozzles provide extensive design flexibility. They are available in single and multiple units and, when used in conjunction with a manifold, open up extensive new layout possibilities, particularly with regard to exactly balancing flow channel distances.

DMS-Diemould offers 2D and 3D CAD download from web

DMS-Diemould is pleased to announce that as from 1st December 2006 customers can download CAD files of DMS products from www.dms-diemould.co.uk simply by clicking on the "CAD download" button.

The system offers both 3-D and 2-D files in over 100 different formats and will soon incorporate a Bill of Materials (BOM) enabling customers to send it to us for a prompt quotation.

The first products to be made available are:

- DMS mould kits
- DMS RAPIDbases
- DMS pillars and bushes and other ancillaries
- CUMSA products and mechanisms

Over the next few months further products will be added to allow our customers to design their moulds with the minimum of fuss. Eventually there will be CAD files available for all DMS products so that everybody in the supply chain will be able to benefit from our cost saving ideas - whether they are designers, toolmakers or processors.

Haverhill Hot Runners

Haverhill Mould & Tooling prides itself on being a trouble-shooter when it comes to difficult plastic injection moulding work. "We get all the hard jobs," Workshop Manager and Director Neil Farenden explains. "When a customer has a complicated job or something that demands tight tolerances, he comes to us."

Accuracy is of the utmost importance to Haverhill's customers, and many of their applications require either the development of complex tools incorporating sliding cores or are manufactured in modular formats to enable a variety of components to be made from one basic toolkit.

For these tasks the DMS-Diemould Hot Runner System has proven to be extremely effective. Neil explains: "It was one of our customers who suggested we use the DMS-Diemould Hot Runner System and it has been absolutely fantastic. The design is very good and the system works well for us. Just as importantly the service is excellent."



New appointments at DMS Components

DMS is pleased to announce that **David Hasler** has joined the DMS team in North America.

David comes to DMS as a veteran in the plastics tooling industry, having been involved in mold base and component sales for over twenty-nine years. He will be responsible for sales of the expanding line of DMS products in Florida and Georgia.

Dates for your diary

PLASTEC WEST

Feb. 13-15, 2007

Anaheim Convention Center

Anaheim, CA.

Booth #3921

www.devicelink.com/expo/plastw06

www.camm.ca

MOLDMAKING EXPO 2007

April 18-19, 2007

Donald E. Stephens Center

5555 N. River Road

Rosemont, IL 60018

www.moldmakingexpo.com

PLAsT-EX 2007

May 1-3, 2007

Toronto International Center

Toronto, Ontario

Canada

www.plast-ex.org

News from North America...

New North America HQ



DMS (North America) has moved its North American headquarters into brand new facilities in Oldcastle, Ontario (locally known as "Moldcastle" because of the large number of tool-makers located there!).

"This facility has been designed and built to our specifications, so it is

ideally suited to what we're doing," says Frank Iatonna, President of DMS (North America). "The move greatly increases our accessibility to our customers and also boosts our efficiency in serving both the local and the North American markets."

The new 10,000 square foot building at 1875 Blackacre Drive, Oldcastle, Ontario, is located in the heart of the Windsor area's industrial community, just minutes from the Detroit/Windsor border crossing.

The modern facility optimizes inventory housing, shipping control, corporate offices, customer reception and also centralizes sales co-ordination.

Mike Hicks, Sales Manager, comments; "We now have space to expand our product range as well as the room we need for expansion and future growth."

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