



NEXT GENERATION TOOLING...

## THE COMPANY

International Precision Moulds & Tools specialise in the design and manufacture of high quality injection moulds for clients worldwide. Whether single or multi-impression, conventional or twin-shot, overmoulded or strip fed, Precision Moulds has the expertise to produce tools of the highest calibre to agreed schedules.

The Company was formed in 1991 by two partners with a shared vision of high quality tool making, with experience gained in some of the most advanced tool rooms in Europe and around the world. Ongoing investment in the latest technology ensures that Precision Moulds is at the forefront of mould production.

This latest technology also ensures optimum consistency giving customers complete assurance that replacement inserts or repeat orders will be identical to the original. Precision Moulds is an ISO 9001:2000 Certified Company.



Having started in the connector market, Precision Moulds expanded rapidly and has established a reputation for expertise, quality and service in the medical & pharmaceutical industry as well as automotive, electrical, retail and leisure products. In 2001 the Company embarked on a major expansion plan that included the building of a mirrored plant in Sri Lanka, which opened in 2005 and continues to be run by one of the founding partners. More recently the Company opened its tool validation facility at the UK factory which has two Sumitomo Demag moulding machines in permanent residence for mould proving and pre-production sampling, with additional capacity for customer machines to be delivered for closed cell tool validation.

The Company now boasts over 38,000 sq.ft of purpose-built climate controlled manufacturing space and a workforce of 58.

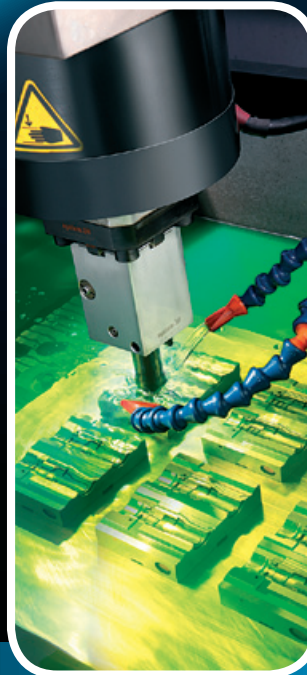


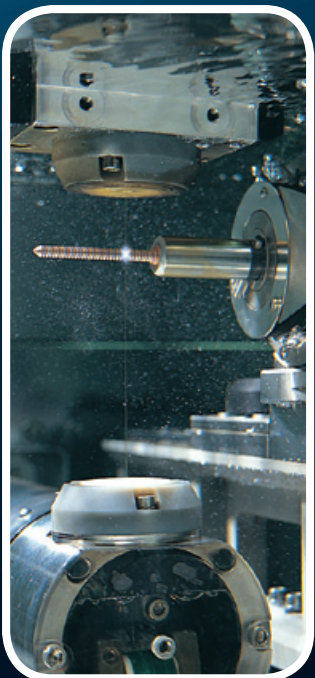
## THE FACILITIES

To maintain the highest standards Precision Moulds continues to invest in state-of-the-art equipment across both facilities. The combination of Charmille 1,000 series wire eroders with 2 micron accuracy and Mikron HSM multi-axis machining centres with 5 micron accuracy ensure Precision Moulds can deliver tools to the exacting standards demanded in today's marketplace. These are complemented by Sodick linear sparkers and full component inspection using high-end non-contact vision systems.

Good tooling is not simply a matter of technology, however, Precision Moulds also offers innovative design and tool development. All projects are archived with appropriate documentation & CAD models and tool drawings are fully detailed for ease of reference.

Precision Moulds' highly experienced engineers offer a comprehensive after sales service, including mould servicing, repairs and spare parts manufacture.



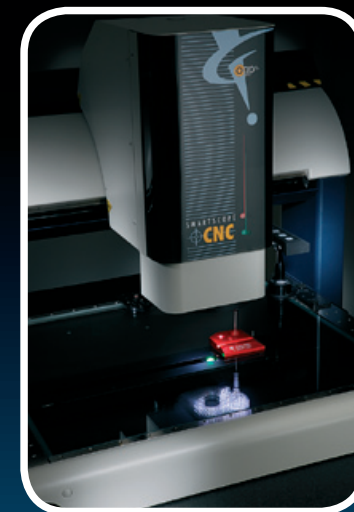


## TOOL VALIDATION

Precision Moulds offers full tool validation on new tooling up to Factory Acceptance Test (FAT) stage.

Services offered include:

- Initial dry cycle of tools
- First off samples
- Component inspection reports
- Closed cell tool validation



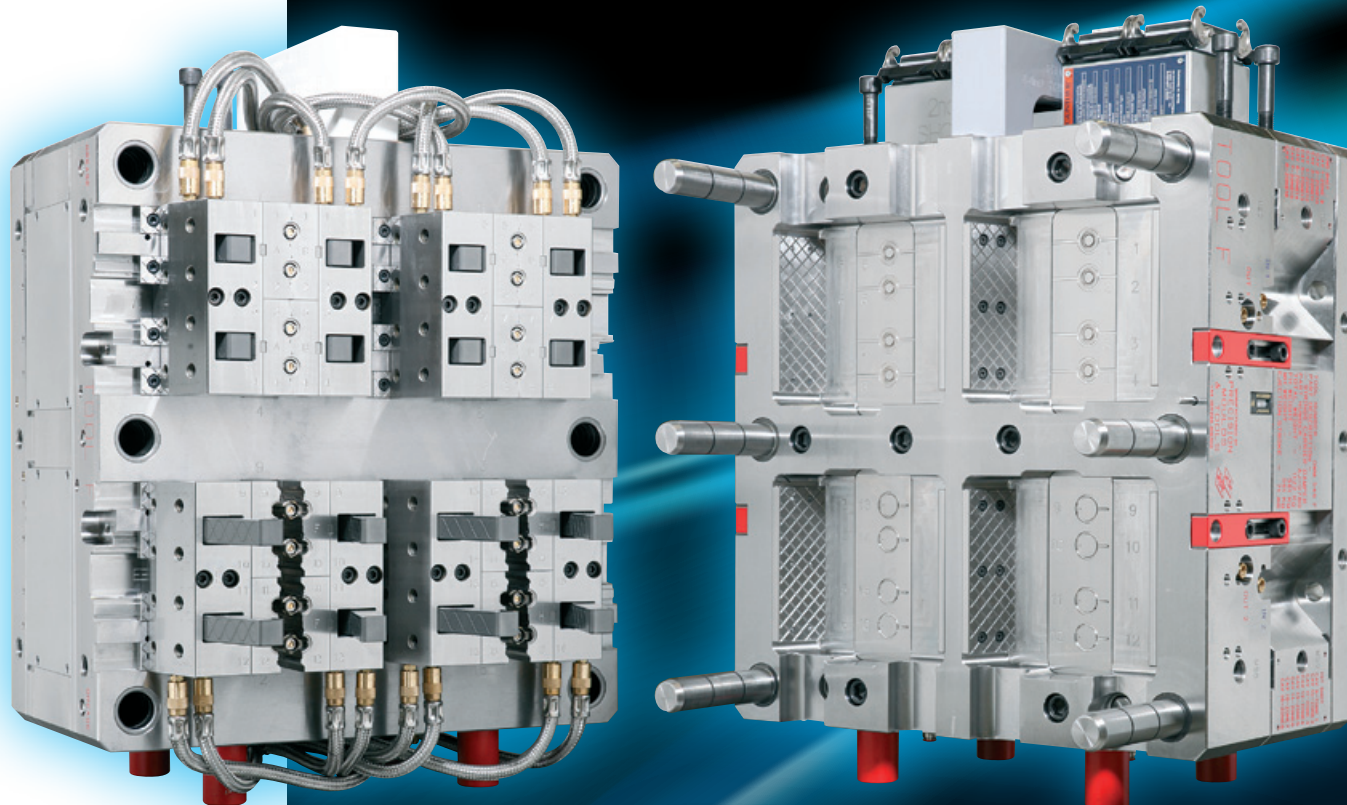
Component reports are produced with the aid of an OGP SmartScope CNC500 Vision System with six station touch probe and laser sensor, located within the climate controlled inspection area. For tool trials Precision Moulds has two Sumitomo Demag moulding machines in a dedicated mould shop adjacent to the tool manufacturing facilities.

## 8+8 IMPRESSION TWIN-SHOT HOT RUNNER TOOL

### TO PRODUCE SYRINGE CARRIER DAMPER

The ejection half of this tool has four identical sets of vertical splits and is bolted to the moulding machine's rotary table. The fixed half of the tool has two 8 drop Günther hot runner systems; one feeding the first shot (top of tool) and the other feeding the second shot (bottom of tool).

The ejection system opens the bottom two sets of splits via angle cams and finally sleeve ejects the components.



Dimensions	546 x 526 x 578mm
Weight	1120 Kilos
Material	1st shot Hostaform C1303 2nd shot TPE
Press	KM 110 / 130CXZ

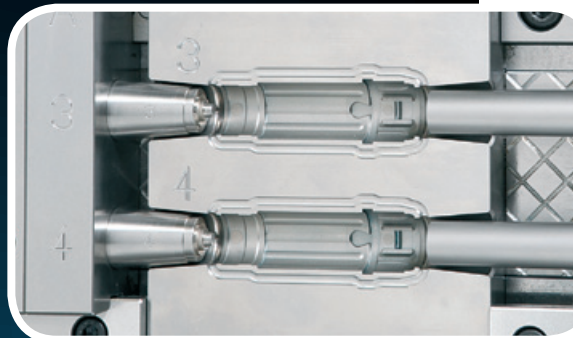
## 8 IMPRESSION HOT RUNNER TOOL

TO PRODUCE FIRING BODY

This tool incorporates an 8 drop Günther hot runner system, direct fed on to each part with a valve gate.

The hydraulic locking cylinders are utilised with a specific opening sequence to minimise distortion of the part. Mouldings are then ejected via pins.

Dimensions	596 x 503 x 480mm
Weight	900 Kilos
Material	PP Repsol Isplen PB176
Press	KM 100CX

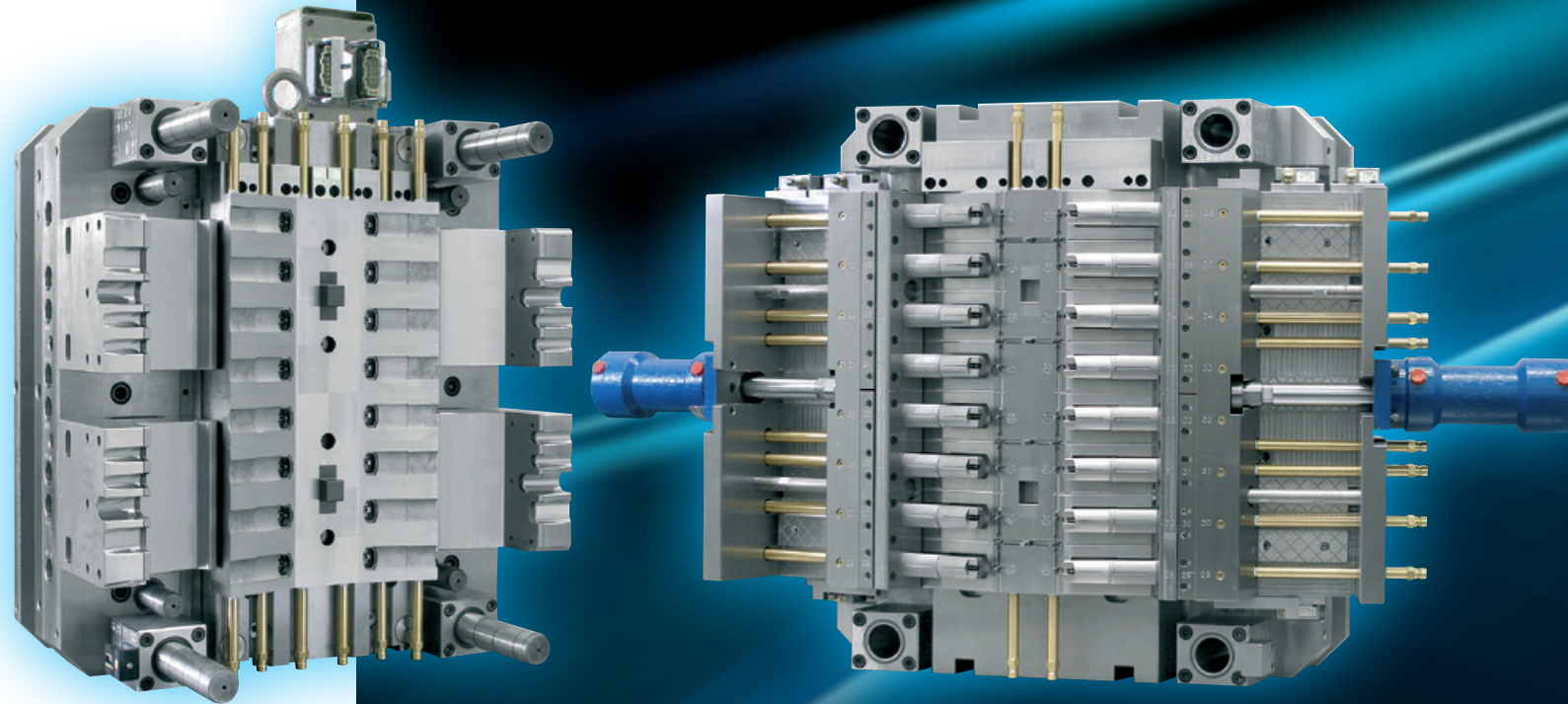


## 16 IMPRESSION TOOL

### TO PRODUCE HFA ACTUATOR

This tool incorporates a 4 drop Günther hot runner system, feeding into a sub runner and tunnel gated into the parts.

Sequentially operated hydraulic cylinders on side actions with staged moving half ejection.



Dimensions	700 x 640 x 604mm
Weight	1905 Kilos
Material	Polypropylene
Press	Evotec 250

## 48 IMPRESSION TOOL

TO PRODUCE INTERNAL BODY

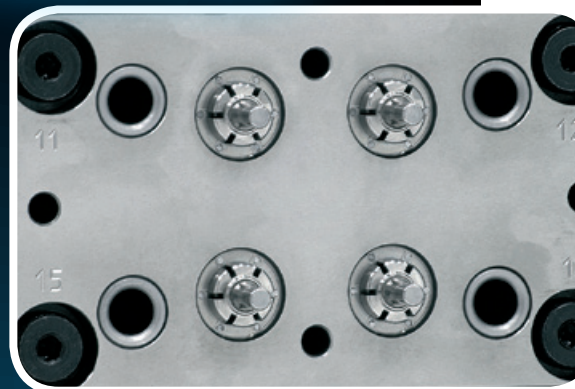
This tool is fitted with a 48 drop Männer valve gated hot half system feeding directly on to the parts.

The tool incorporates self alignment modular core and cavity inserts to allow for thermal expansion.

To maximise cooling within the tool, water channels have been machined into the cavity inserts and vacuum brazed together.



Dimensions	646 x 396 x 448mm
Weight	890 Kilos
Material	PBT
Press	Fanuc 100T

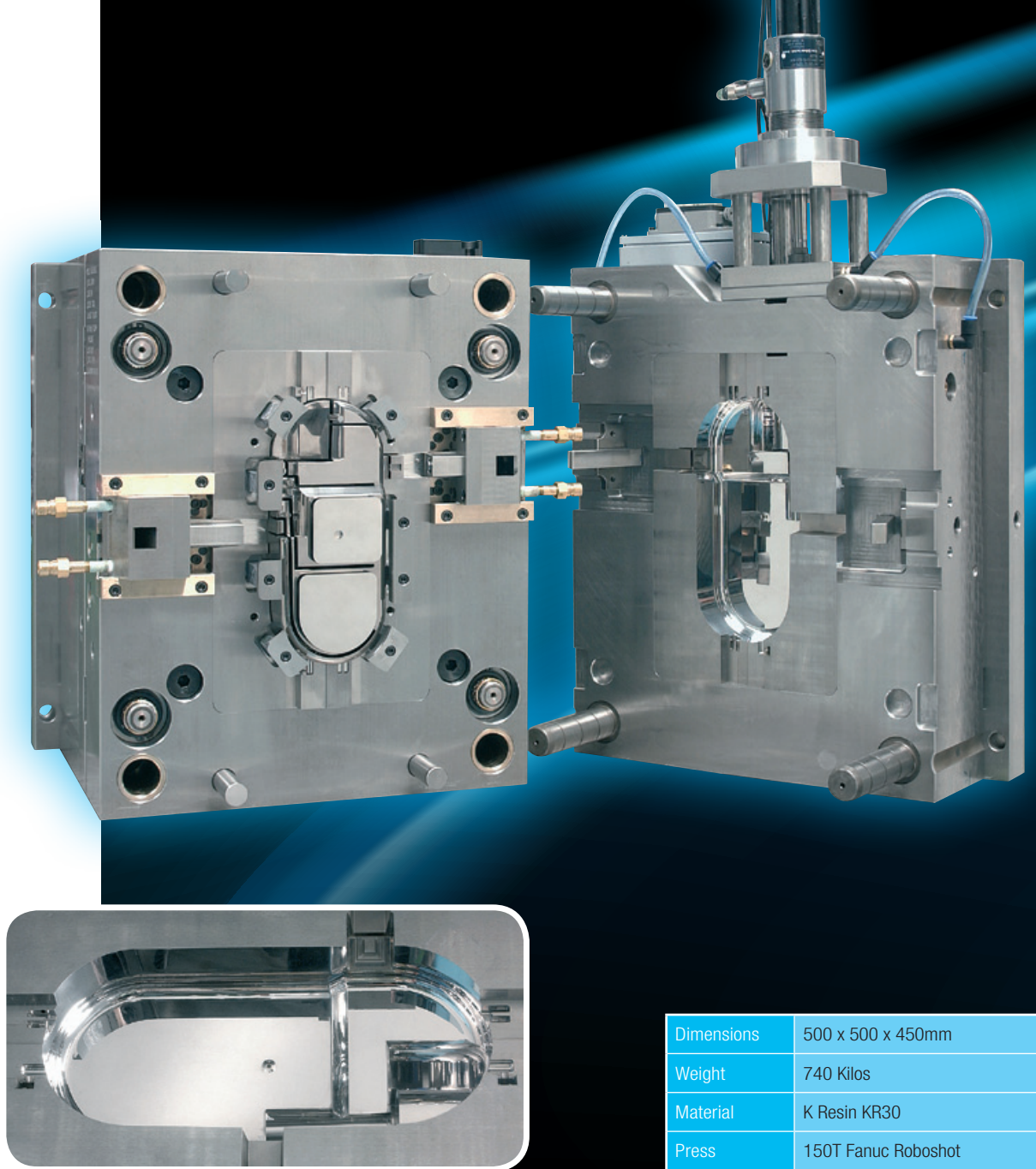
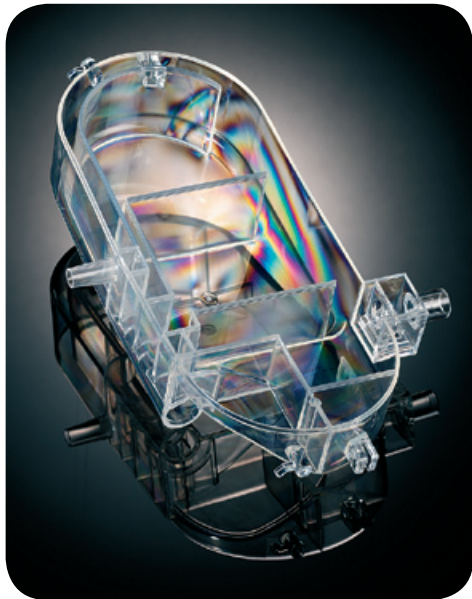


## 1 IMPRESSION TOOL

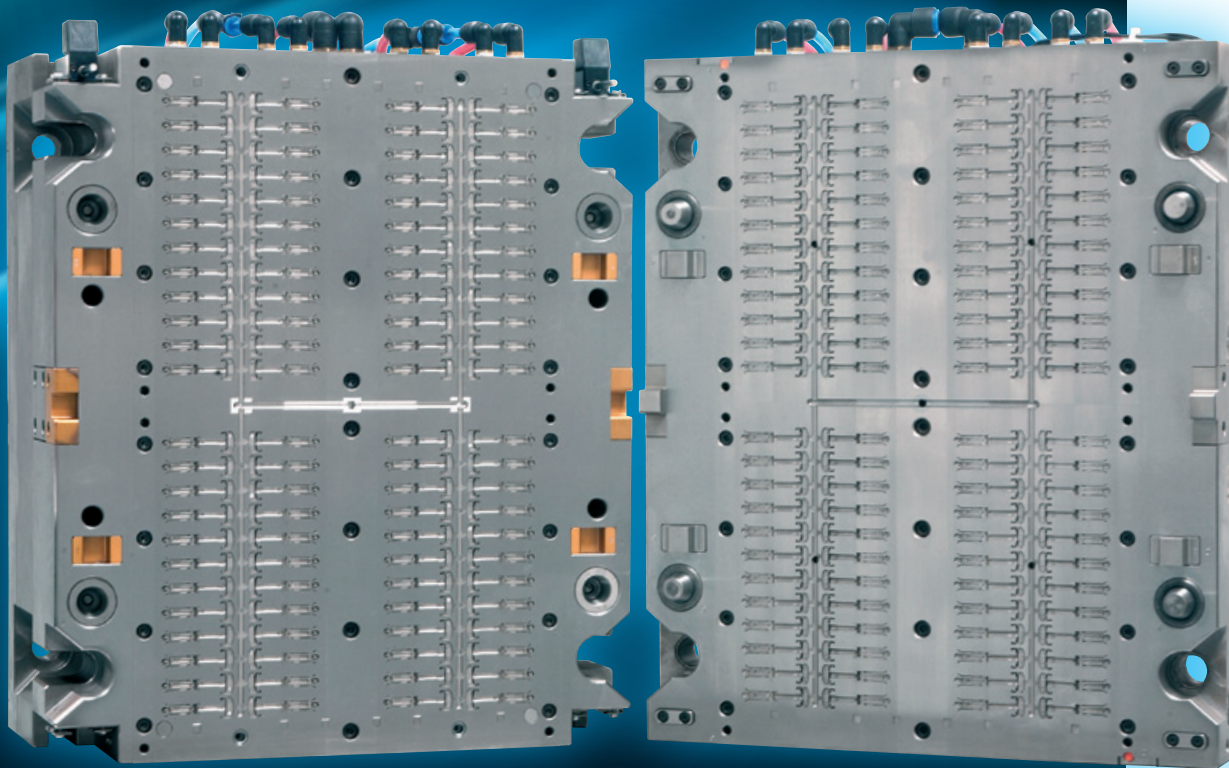
TO PRODUCE MEDICAL URI FILTER

This single cavity tool is direct fed via a Mold-Masters valve gated nozzle. The tool incorporates both external and internal M/H side core actions, together with a hydraulically operated F/H side core.

The core detail is built up from a series of inserts to ensure maximum cooling for the best possible cycle time.



Dimensions	500 x 500 x 450mm
Weight	740 Kilos
Material	K Resin KR30
Press	150T Fanuc Roboshot



## 96 IMPRESSION TOOL

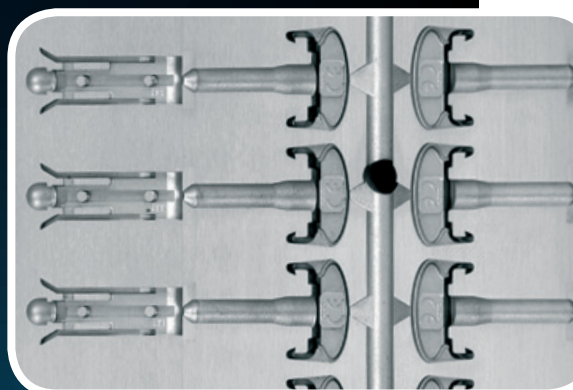
TO PRODUCE MEDICAL LANCET DEVICE

This 96 impression tool operates in a vertical moulding machine.

The needles are loaded horizontally via a transfer plate and the finished parts are removed by robot after ejection.



Dimensions	470 x 400 x 280mm
Weight	410 Kilos
Material	Polypropylene
Press	Engel E570-90VT

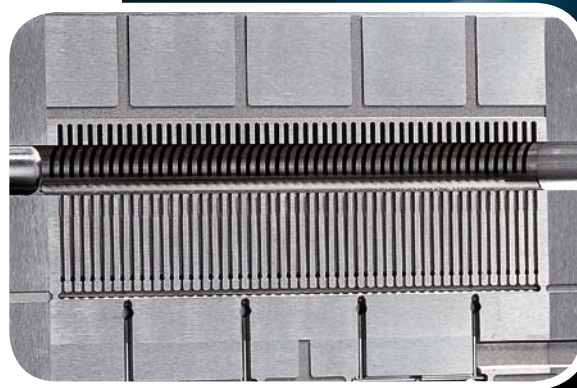
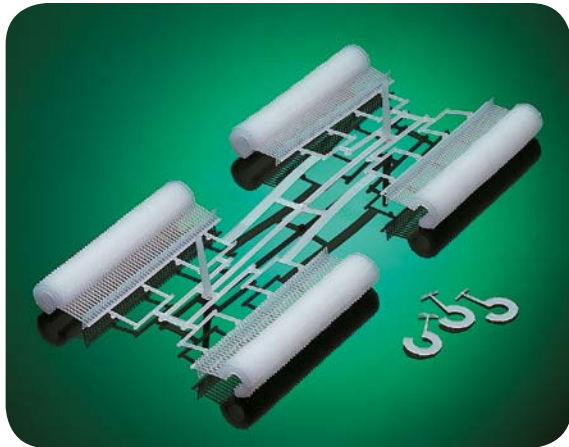
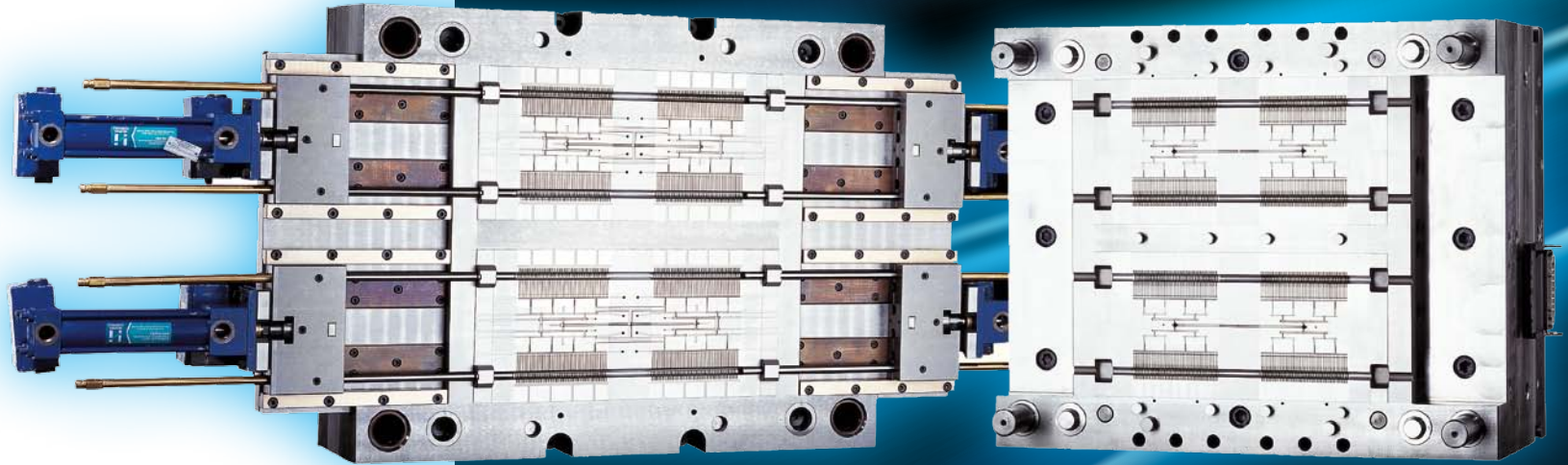


## 400 IMPRESSION 2 DROP HOT RUNNER TOOL

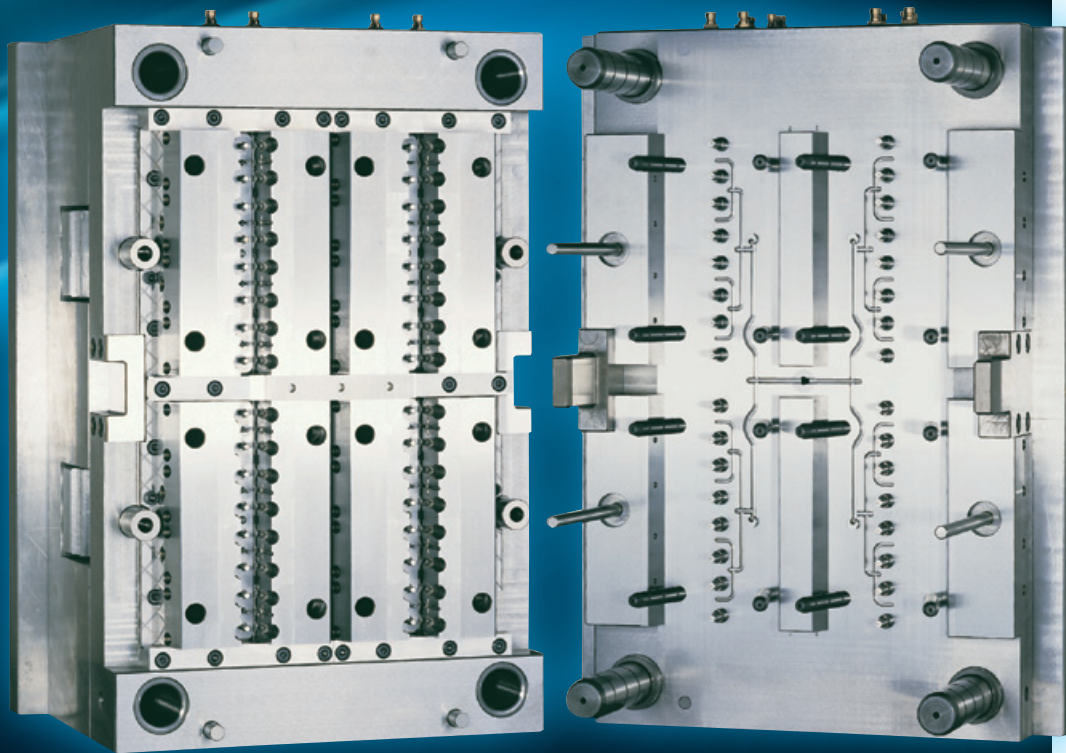
### TO PRODUCE HOOKTACH

This 400 impression tool has a 2 drop valve gate hot runner system, each nozzle feeding 200imps. via a balanced runner system.

The cores forming the hook are retracted by means of four pneumatic cylinders. Eight separate pin ejection units are operated in both fixed and moving halves of the tool.



Dimensions	600 x 500 x 460mm
Weight	1100 Kilos
Material	PP/Nylon6
Press	Various



## 32 IMPRESSION TOOL

TO PRODUCE ROLLERBALL & PEN INNER CAP

This 32 impression tool incorporates a conventional cold runner feed, side core action and two stage sleeve ejection.

Precision Moulds also manufactured a 32 impression tool to produce a ball pen plunger moulding for use in the same project.

Dimensions	546 x 346 x 381mm
Weight	565 Kilos
Material	LPDE
Press	Engel 125 HL



# 4 IMPRESSION INSERT MOULDED 4 DROP HOT RUNNER TOOL

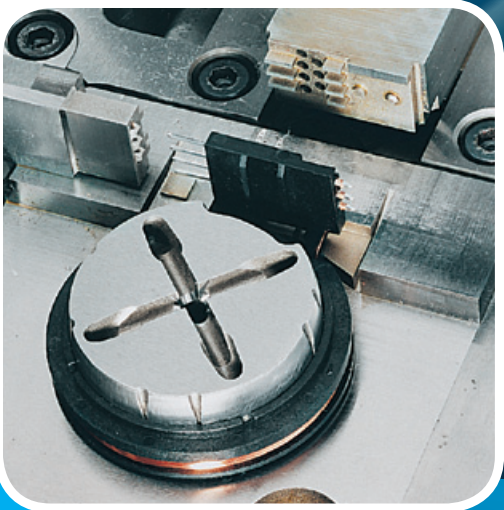
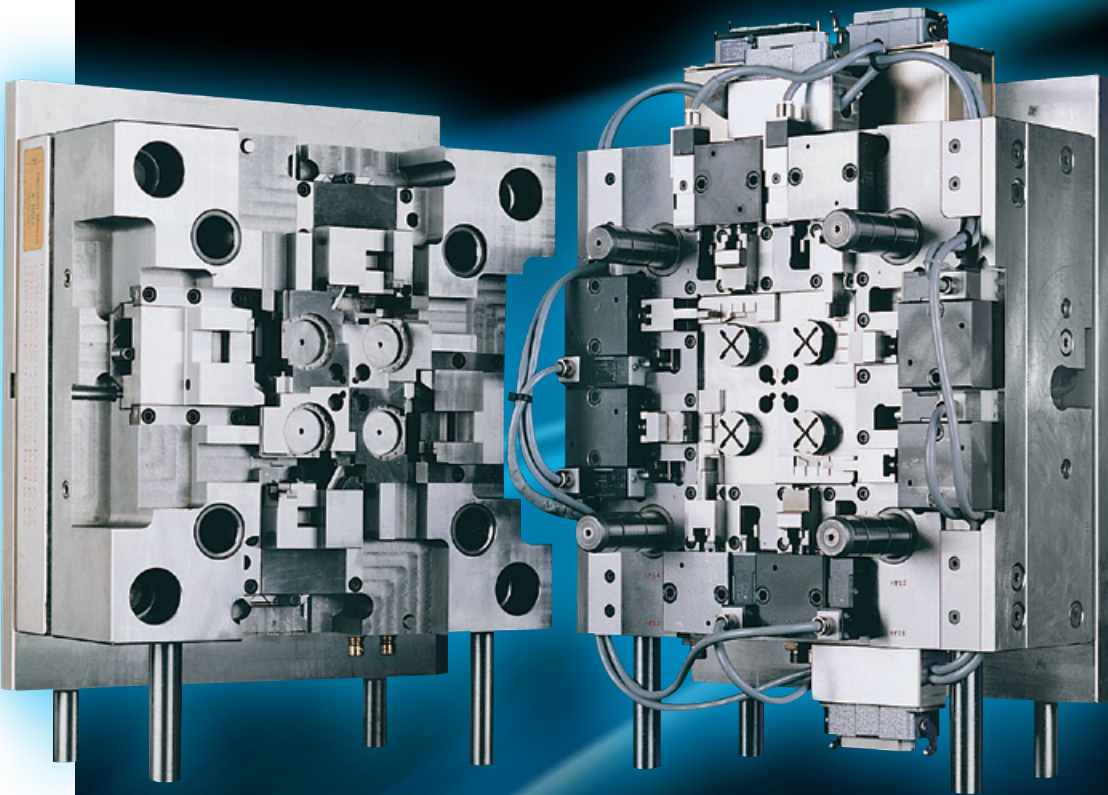
## TO PRODUCE A COIL CONNECTOR HOUSING

Robot loading the 'inner coil' to the fixed half core (shown in position in the inset photo) is the first stage of the tool cycle.

The four 'inner coils' are then secured by eight hydraulically operated fixed half side cores, two per impression (also shown in the inset photo). After the injection process the eight side cores open, freeing the moulding from the fixed half. At the same time the mould opens, actuating eight cam operated side cores by means of a floating moving half core plate. Finally, the mouldings are ejected by conventional ejector pins.



The 'coil connector housing' is illustrated above with the insert moulded 'inner coil' to its left. Precision Moulds also produced this tool.



Dimensions	396 x 396 x 390mm
Weight	470 Kilos
Material	25% GF PA66
Shrinkage	0.7%
Press	Demag Ergo Tech 100-200

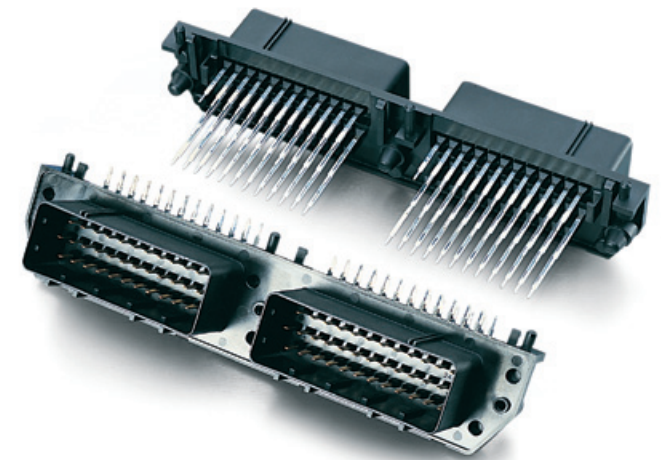
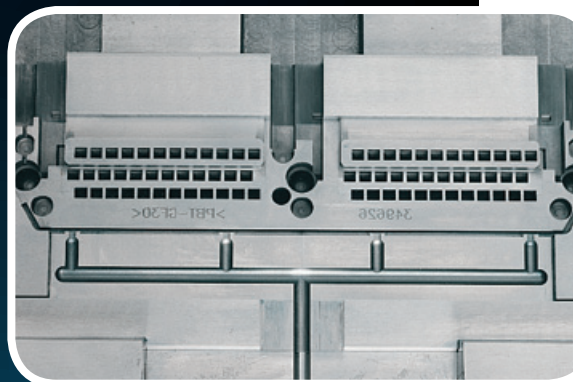
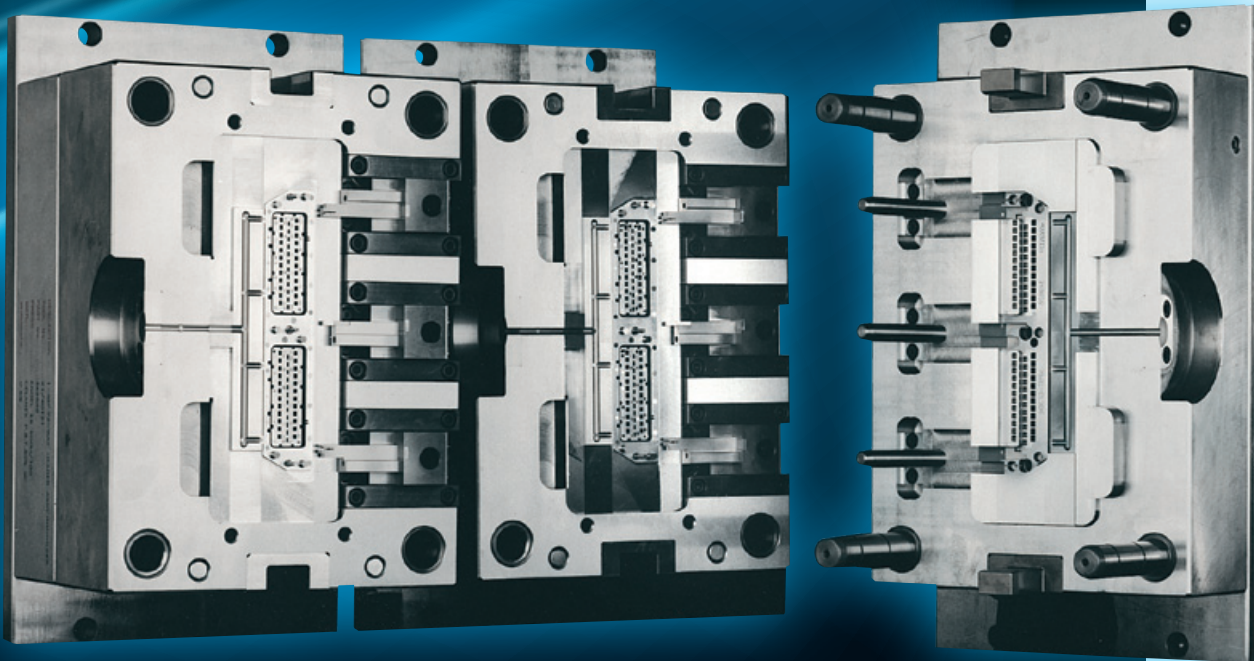
## 1 IMPRESSION TOOL INSERT MOULDED VIA ROTATING TABLE

TO PRODUCE A 72 WAY HEADER

This single impression tool operates in a vertical moulding machine.

Two identical ejection half assemblies are bolted to the machine's rotary table opposed at 180°. The contact inserts are assembled into one half whilst the moulding process continues on the other half.

When this process is completed the table indexes 180° to enable procedures to be repeated in a continuous operation.

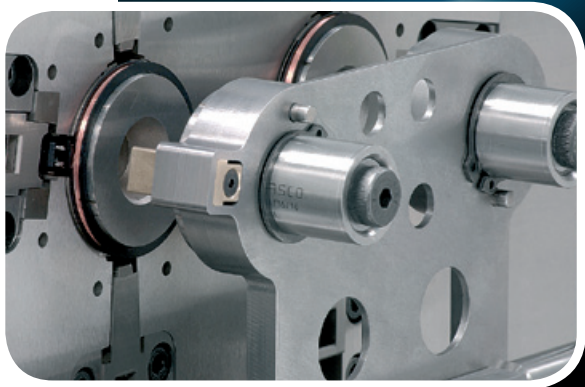
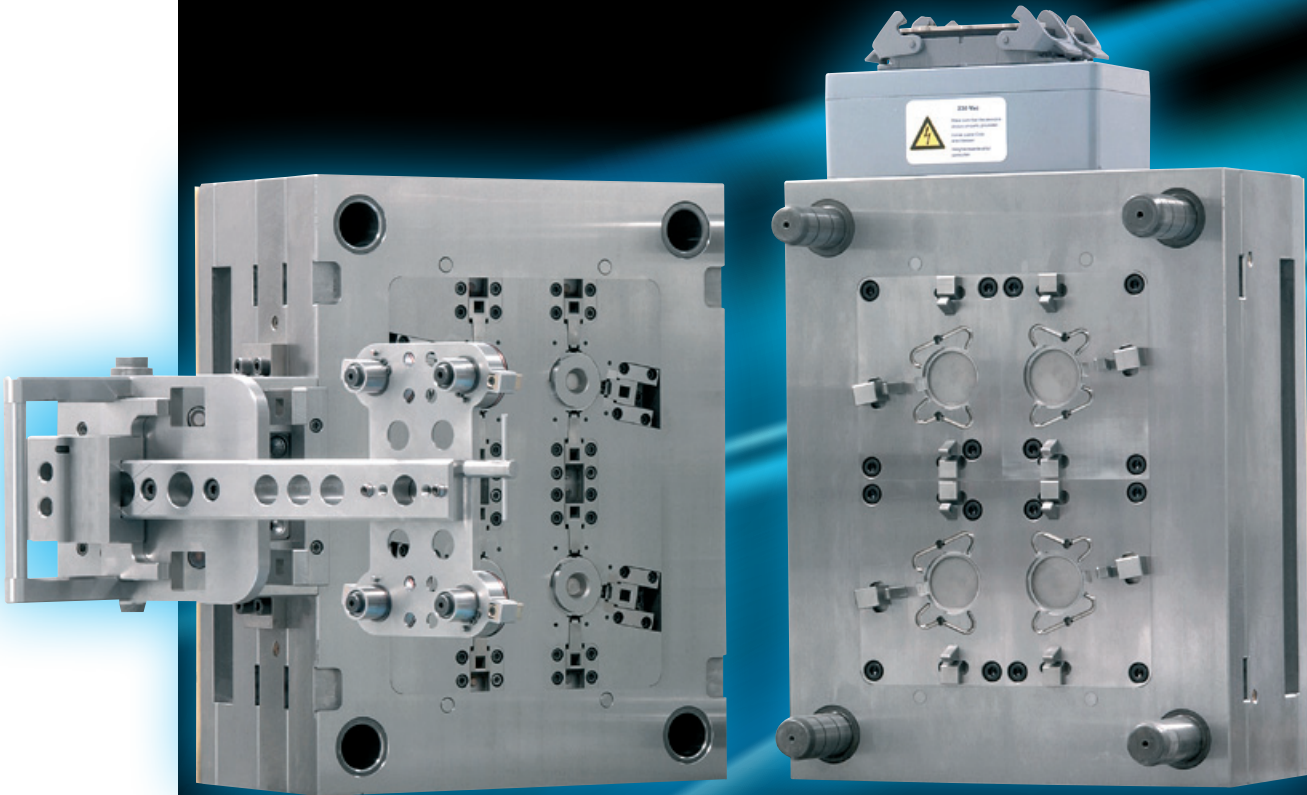


Dimensions	346 x 246 x 350mm
Weight	940 Kilos
Material	30% GF PBT
Shrinkage	0.5%
Press	Engel ES600H/100

# 4 IMPRESSION OVERMOULD TOOL WITH 4 DROP HOT RUNNER

TO PRODUCE A COIL CONNECTOR HOUSING

The project comprised two tools – a 4 impression pre-mould bobbin and a 4 impression overmould housing. Both incorporate 4 drop Synventive hot runner systems. Once the pre-mould bobbin is produced and wound it is loaded via a loading fixture into the overmould housing tool, which locates the parts in-situ prior to overmoulding and encapsulating the mould bobbin.

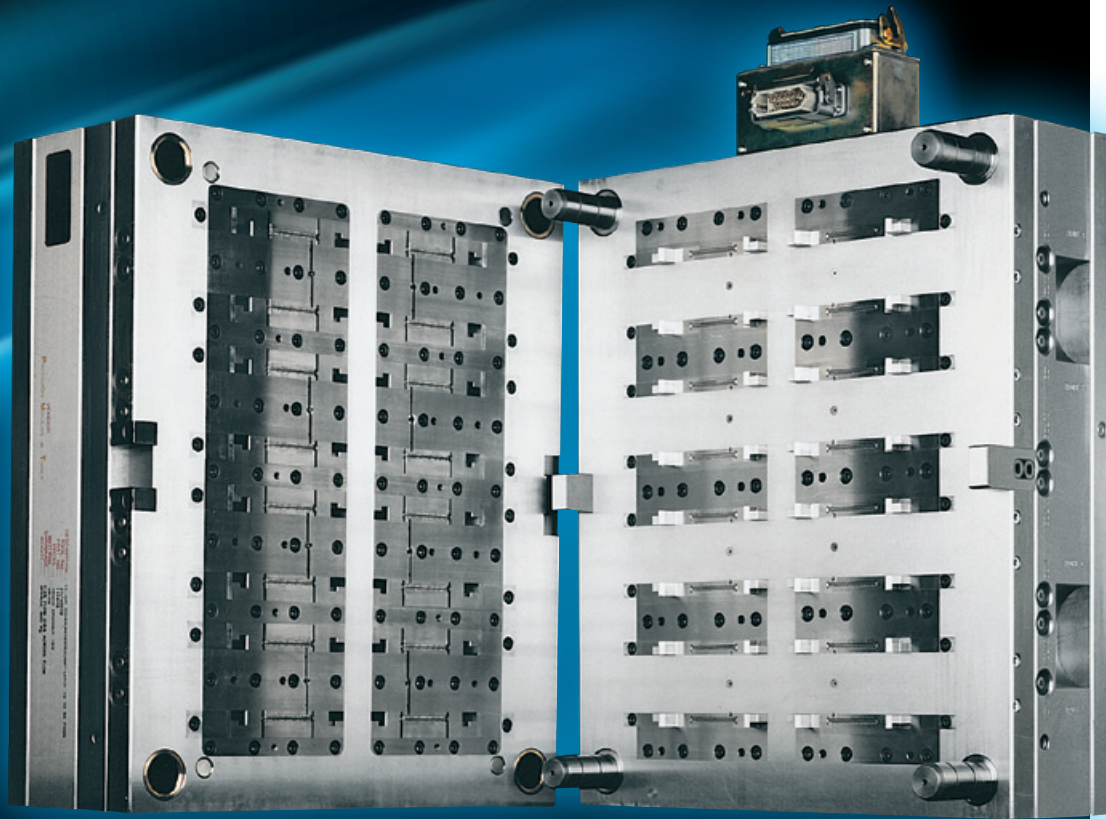


Dimensions	466 x 346 x 356mm
Weight	426 Kilos
Material	PA6
Press	150T

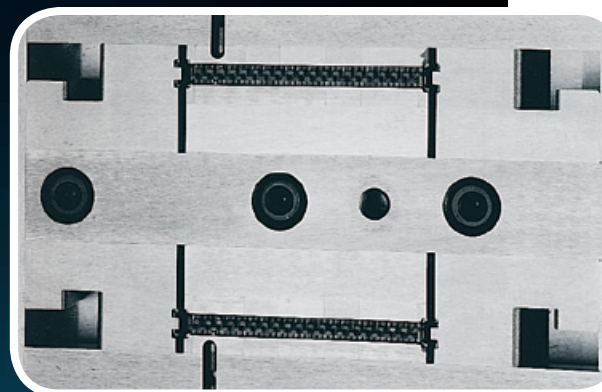
## 16 IMPRESSION 8 DROP HOT RUNNER TOOL

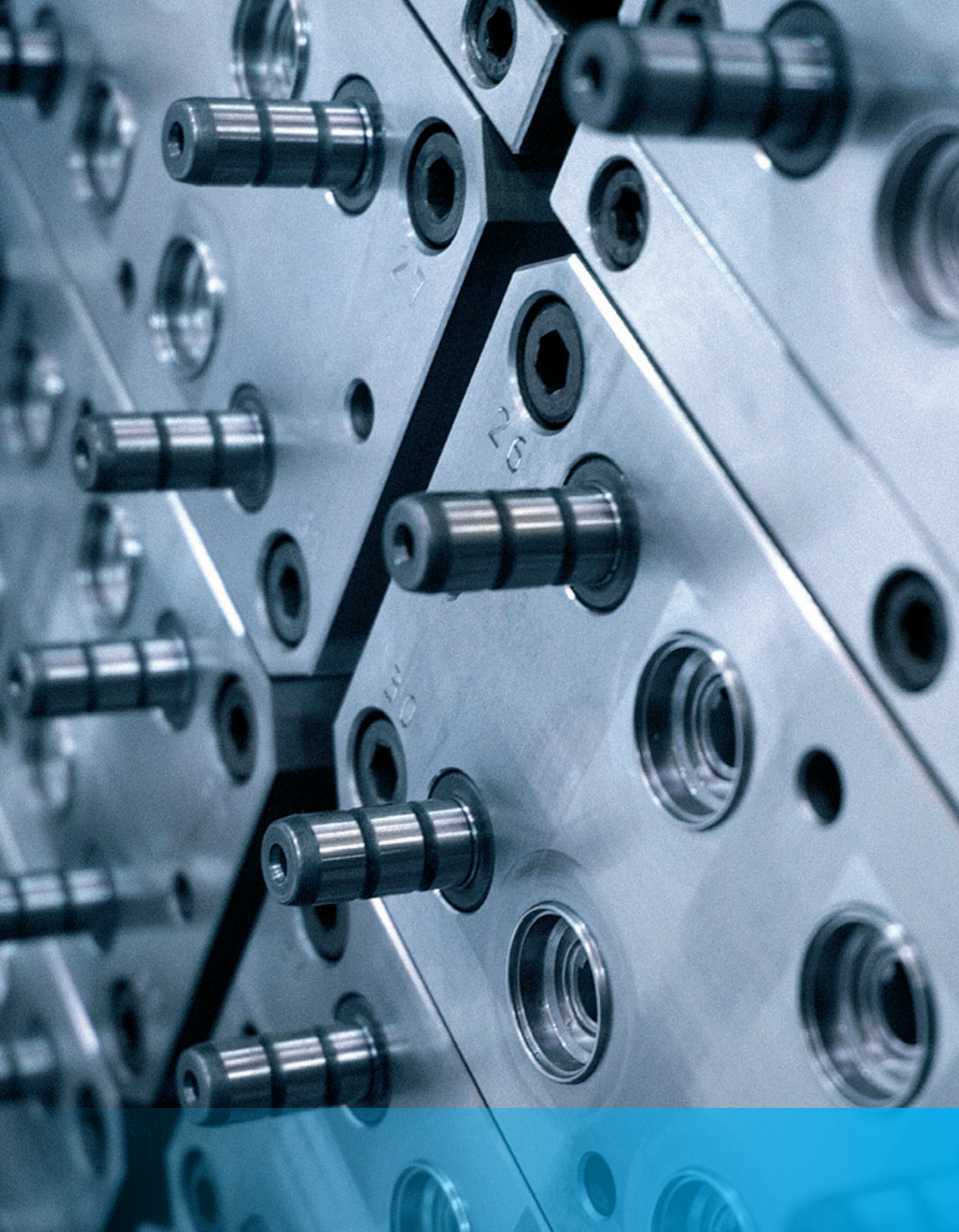
TO PRODUCE A 10 TO 64 WAY  
EXPANDING LATCH COVER MOULDING

The tool was supplied with sixteen complete sets of interchangeable inserts enabling swift changeovers from 10 to 64 ways. Precision Moulds also manufactured a 16 impression expanding modular tool of similar design to produce the mating 10 to 64 way latch housing moulding.



Dimensions	596 x 496 x 396mm
Weight	920 Kilos
Material	Valox 420
Shrinkage	0.2% Flow / 0.8% Across
Press	Demag Ergo Tech 150





## NEXT GENERATION TOOLING...

- TURNKEY SOLUTIONS
- DESIGN & MANUFACTURE
- SINGLE & MULTI-IMPRESSION
- TWIN-SHOT
- STRIP FED
- OVERMOULDING
- MOULD VALIDATION
- MEDICAL
- CONNECTOR
- AUTOMOTIVE
- RETAIL & LEISURE
- CLIMATE CONTROLLED EDM
- MULTI-AXIS MACHINING
- HIGH PRECISION WIRE ERODERS
- LASER ENGRAVING





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