

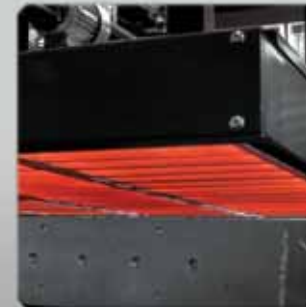
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Formech

forming to perfection

VACUUM FORMING MACHINES AND ANCILLARY EQUIPMENT



STRATEGIC PARTNERSHIPS

For over 30 years Formech has forged valuable partnerships with industry leading plastics companies across the world to offer a wide range of complementary services.

"It is with great pleasure and enthusiasm that I am writing to endorse Formech. Here at TechShop we provide thermoforming workshops and allow our members to form their projects on the Formech FM660 with great success. Formech has displayed and delivered with their expertise, response, professionalism and results and TechShop are proud to call them a partner and to be standardizing on their equipment at our future locations."

Jim Newton, Founder TechShop
San Francisco, CA | USA



EDUCATIONAL PARTNERS

Providing the machines of choice to the worldwide education sector, Formech offers comprehensive support and training for many of the most influential universities and colleges throughout the world, capturing the imagination of tomorrow's designers.

We could not be happier with our purchase and we appreciate all the helpful advice, demonstrations and connections to others that Nic gave us. We really feel we made the perfect choice for our students who are inventing things, building architectural models and coming up with new and clever ways to put the resources we give them to good use. I would highly recommend this company for anyone looking for reliable people who stand by their word and their products.

April Welch Director of Business and Educational
Planning, Idea Shop Illinois Institute of Technology



AFFILIATIONS

Formech is a long established affiliate and contributor to key organisations in the plastics industry.

"The BPF is proud of all its members, such as Formech - a British company, recognised worldwide for their high quality vacuum forming machines."

Philip Law
Public Industrial Affairs Director
British Plastics Federation | UK



FORMECH & THE ENVIRONMENT

All Formech machines are optimised for energy efficiency and minimal material wastage. Furthermore, Formech machines are designed to work with recyclable, biodegradable and fully compostable materials applied to a variety of applications across commercial, food service, retail, healthcare, packaging and many more sectors.



CONFORMITY

All our products and services comply with the most rigorous industry requirements to guarantee ease of use, safety, and excellent service.



Welcome to three decades of forming innovation



Formech's 30 years of experience in vacuum forming technology means we can offer our customers high performance machines to suit an extensive range of applications at an affordable price. All Formech machines are designed to a user-friendly brief, built to last with no-compromise components throughout and undergo rigorous quality control processes to ensure consistent performance for many years to come. Our extensive customer pedigree as highlighted throughout this catalogue underlines customer confidence in Formech to deliver the right solution across a wide variety of industry sectors, from food retail to automotive. We have forged valuable relationships with many of the world's leading brands enabling us to continually develop Formech machines to meet an increasing number of demanding applications. The origins of vacuum forming can be traced back as far as the 1940's and yet the process is as relevant today as it ever was. Formech's continual investment in R&D and adoption of the latest technologies throughout our 30 year timeline means we can offer the highest capability machines in-class today at accessible prices and built to last.

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Timeline

- Formech was founded by a group of toy designers to address the need for an economical, versatile and compact vacuum forming machine, capable of producing high quality mouldings from low cost tooling. Formech's first prototype was well received by model makers, architects, tool makers, R&D labs and design houses.

- Formech launches the 450 & 660 machines, providing larger forming areas and improved depth of draw to achieve high definition mouldings across a wider range of applications. The recently launched 508 and 686 represent the latest developments of these internationally successful machines.



- Formech rapidly expands international operations and machine sales with new branch offices in France and Italy and appoints resale partners throughout mainland Europe, Nordics, Asia, Australasia and the Middle East



1982

1984

1985

1986

1990-95

1998



- Hot on the heels of a fantastic market response to Formech machines at the NPE show 1985, Formech enters the US market and establishes Formech Inc.



- Plastics processing in Design & Technology introduced into the UK National Curriculum, leading to wide adoption of the purpose built Formech 300X throughout the UK education sector.



- Formech increases presence in the industrial sector with the launch of the touch-screen controlled Formech FDH Series for large scale, high definition applications featuring twin Quartz heaters for rapid and efficient performance and a comprehensive range of options and customisation possibilities.



- Formech enters the packaging sector with the launch of the TF Series, designed for small to medium scale production runs with thin gauge materials, enabling quick and easy set-up offering supplementary production to inline machines.
- Introduction of PLC with touch-screen HMI provides intuitive control, memory options, and customisable graphics, underlining Formech's commitment to delivering cutting edge technologies in machine design.

- Formech awarded ISO9001 conformity



- Formech forges strategic partnership with Stratysis / Dimension to offer alternative and affordable methods of rapid prototyping.



- Formech featured on the BBC's Tomorrow's World programme demonstrating a pioneering approach to vacuum forming with biodegradable materials.



Paul Vukovich, Formech's Managing Director with British athlete and Tomorrow's World presenter Roger Black

- Formech unveils the latest generation PLC driven, quartz heated manual and semi-automatic machines at the world's largest plastic technology show (K-show) in Germany.
- Subsequently, Formech DE is established to serve the increasing demand for Formech machines in Germany and the neighbouring territories providing comprehensive local support.



2000

2004

2006

2010

2012



- Formech launches the 300XQ, the latest evolution in the 300 Series featuring quartz heaters, firmly establishing itself as the most powerful and energy efficient machine in its class.
- By 2009, Formech exceeds global sales of 5,000 x 300XQ machines



- Quartz heaters implemented across the standard range of Formech machines with ceramic heaters available for specialist applications



- At our 30th anniversary Formech is stronger than ever and planning to expand into exciting new market sectors and regions through continual investment in R&D.

The appeal of rapid response quartz elements means that you get 100% heat only when you need it, unlike ceramics which require a constant heat even when the heater is not required during the cooling cycle. Savings can be substantial when quartz heaters are combined with the standby feature.

Peter Cracknell - Independent Polymer Specialist
 Member MIMMM
 Associate of the London School of Polymer Technology
 Grad PRI with 1st class Honours

Manual machines - Our customers' experiences

Trestle Theatre Company



"Using a Formech vac former to produce masks, particularly the education sets have proved to be ideal. There are no drying times, as with other materials such as latex or papier-mâché, and you can reproduce masks from moulds efficiently. It is also useful when experimenting with mask designs as you can pull a mask to see if it works, then go back and adapt the mould accordingly."

Claire Elcombe, Mask Maker
Trestle Theatre Company



Jim Henson's Creature Shop



"The Jim Henson Creature Shop in NY chose Formech because we had the best 'professional grade' vac-former for the price. On a recent trip to Queens we were able to visit the Henson facility and give some coaching to their staff - this included a review of their molds, material, and existing processes. Their staff were very grateful...including the count!"

Nic Neath
Head of Formech US Sales



Mandalay Bay Hotel - Las Vegas

"Happy New Year!! I'm sending you a picture of our new year's eve VIP party at Mandalay Bay. The showpiece on the plate is made of chocolate. I was able to do them all perfectly because I used my thermoform machine to make molds of all the pieces. I made the circle, square, dancing male, dancing female and the clock hands out of wood then I made the molds. It worked out great and of course I wanted to share the pictures with you."

Vincent Pilon
Executive Pastry Chef



Glossary

1 phase/ Single phase

Single phase electricity is supplied for domestic use for most households.

3 phase/ Three phase

Three phase electricity is supplied for industrial use and is usually cheaper than single phase.

Autolevel

Allows air to be pumped under the sheet during the heating cycle to maintain a consistent distance between the sheet and the heaters.

Becker Rotary vane pump - Oil free

This pump uses rotating vanes to generate the vacuum and is used on our free standing machines.

Blister

A clear vacuum forming to enclose product which is sealed on to a backing card.

Blow moulding window

A reducing window with a circular aperture for blowing plastic sheet into hemispheres.

Cable Chain

The hinged outer plastic casing that encloses the inner wires that lead to the heaters.

Clamping frame

Steel frame that clamps the plastic sheet during the vacuum forming process.

Cooling fan

Accelerate the cooling process once the plastic sheet has been formed.

Depth of draw

Equivalent to the maximum height of moulds/tools being used on a vacuum former.

Diaphragm pump

This pump uses a diaphragm to generate the vacuum and is used in our desk top machines.

Heating pyrometer

sends the heaters back based on the temperature of the sheet, rather than time.

Heating zone

The heaters are divided up into zones for greater control of different parts of the sheet.

Interlock

Feature ensuring that the mould cannot be raised when heater is in forward position.

Mouldings

These are the formed plastic parts, also known as vacuum formings.

Pre-stretch

Allows air to be pumped under the sheet to create a bubble to pre-stretch the material prior to forming.

Manual machines - Our customers' experiences

London College of Fashion

"I have always advocated the use and development of vacuum forming to students studying on the BA Technical Effects for Performance and would be lost without the input of the team at Formech... We use and experiment with a wide variety of thermo plastics and even create forms without making a rigid mould."

Caroline Gardiner, course leader of BA (Hons) Technical Effects for Performance
London College of Fashion



EPFL



"For our laboratory we require a forming machine that allows us a maximum of flexibility while ensuring performance and quality of output. Our jobs range from small parts to large-scale façade panels for construction, and may be single prototypes or a large complex production run. Flexibility of configuration, precision, and "getting it right the first time" are always a priority. After a comprehensive evaluation we chose the large Formech 1372 vacuum forming machine for its flexibility, performance, and excellent value. We are extremely satisfied with the machine, and the ongoing support from Formech is excellent."

Russell Loveridge
EPFL- Swiss Federal Institute of Technology,
Lausanne, Switzerland



Joint Active Systems



"At Joint Active Systems we create rehabilitation devices for "Range of Motion" therapy. To these devices, we attach custom cuffs that are created by our Formech vacuum formers. This custom cuff process involves shaping very thick pieces of plastic and foam in order to provide a proper, custom-feeling fit to our patients. The larger FM1 and '1372' machines are a great match for our process. We are now up to our fourth Formech machine and each of them work very hard to keep up with our daily production needs. Recently we had two of the Formech staff on site to install our new '1372'. They also refurbished our existing machines and helped advise us on how to increase the life of our machines. It's good to know that we can rely on a company like Formech with these formers being such an integral part of our daily operations."

Kevin Ruholl - Facility Manager
Joint Active Systems, Inc.
Illinois, USA



Pressure outlet

This is featured on the smaller desktop machines and allows you to supply air for external equipment such as dome blowing machines.

PLC with memory

Programmable logic controller with program storage in the memory.

Pyrometer

An electronic sensor that reads the temperature of the sheet and sends the heaters back when the sheet reaches the desired temperature.

Quartz/ceramic heaters

Quartz heaters have the benefit of the standby feature, resulting in reduced electricity consumption.

Reducing windows/frames

Reduce the forming area in order to use smaller sheets of plastic when forming a mould/tool which is much smaller than the original forming area of the machine.

Release lever or release air

Air is pumped under the vacuum forming after it has cooled to release the formed part from the tool.

Rotary vane pump

This pump uses rotating vanes to generate the vacuum and is used on our free standing machines.

Table

Part of the vacuum forming machine where the mould/tool is placed.

Table height adjustment

This allows you to reduce the amount of travel of the table when using shallow moulds/tools.

Toggle clamp

The mechanical clamp that applies pressure around the outer edge of the sheet using the clamping frame.

Touch screen

This is the main control panel that allows you to control all aspects of the machine.

Vacuum gauge

A visual indication of consistent vacuum being applied.

Vacuum pump flow rate

The amount of air that can be moved over a given time

Scissor action table

Pneumatically powered table using a scissor action.

Compac Mini

Designed for ultimate simplicity, the Compac Mini delivers an incredible performance from a compact desktop machine. With plug & play convenience and energy efficient Quartz heaters the Compac Mini is ready for action within a few minutes. Formech's interlocking feature prevents the table being raised whilst in the forward position making safe operation of the Compac mini accessible to virtually anyone with minimal training.

Typical applications



Small packaging
Recycled PVC

Display tray
HIPS



Product tray
HIPS



Masks
HIPS

Our Compac Mini customers include

- Coining of America - Preforms (USA)
- Clear Step - Medical R&D (UK)
- Cacao Prieto - Chocolatier (USA)
- Hallmark Cards - Prototyping (USA)
- US Dept of Agriculture - Prototyping (USA)
- Calibra Medical - R&D (USA)
- Universidad Anáhuac - Education (Mexico)
- Cocoa Atelier - Chocolatier (Ireland)
- EarthCam Inc - R&D (USA)
- Masthead Antenna Technology - R&D (UK)

Vacuum gauge



Vacuum & Release control



Digital timer



Message from the designer

This is the smallest machine in our range and was designed to cater for the education sector and hobbyists. It may be small in size but don't be fooled, this is a very capable machine.

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Trolley optional



Compac Mini



Features

- Interlock
- Linear heater guides
- Digital timer
- Vacuum and release
- Vacuum gauge
- Pressure outlet
- Diaphragm pump - 22" Hg - 2.76m³/HR

Options

- Reducing windows
- Trolley
- Spare parts kit
- Trimmer FT10/20

Technical Specifications

Material size	250 x 300mm / 10 x 12"
Forming area	230 x 280mm / 9 x 11"
Max. depth of draw	130mm / 5"
Max. material thickness	4mm / .15"
Zones	1
Heaters	Quartz
Overall width	490mm / 19"
Overall height	440mm / 17"
Overall depth	820mm / 32"
Weight	33kg / 77lbs

Electrical specifications

208-240V, 13A, 0.75kW, Single Phase

300XQ

The 300XQ is the world's leading vacuum forming machine for education and design houses and yet also adaptable to a wide range of applications. Featuring quartz heaters with power saving standby function, digital countdown for consistent cycle times and a 430mm x 280mm (17" x 11") forming area, Formech's 300XQ is the most powerful and efficient machine in its class. Furthermore, a host of options are available to meet your exact requirements.

Typical applications



Our 300XQ customers include

- Johnson & Johnson - Medical R&D (Canada)
- Trestle Theatre - Film & Theatre (UK)
- Indesit S.P.A - R&D (Italy)
- La Duree - Chocolatier (France)
- Lancaster University - Education (UK)
- La Perla - R&D (USA)
- Mandalay Bay Hotel - Chocolatier (USA)
- Lush - Soap moulding (UK & USA)
- Disney - Costume Parts (USA)

Digital timer



Vacuum gauge



Heater control



Message from the designer

Optimised for the education sector, the 300XQ is user friendly with all the expected safety features such as interlocks and auto-stops. The versatility of the 300XQ is underlined by growing interest from the confectionary market leading us to design a dedicated custom version of the 300XQ called the Chocolatier.



300XO Chocolatier version available



Trolley optional



300XO



Features

- Interlock
- Linear heater guides
- Digital timer
- Vacuum and release
- Vacuum gauge
- Pressure outlet
- Diaphragm pump : 25" Hg - 5.52m3/HR

Options

- Reducing windows
- Blow moulding window
- Trolley
- Reel feed
- Spare parts kit
- Trimmer FT10/20

Technical Specifications

Material size	450 x 300mm / 18 x 12"
Forming area	430 x 280mm / 17 x 11"
Max. depth of draw	160mm / 7"
Max. material thickness	6mm / .25"
Zones	4
Heaters	Quartz
Overall width	650mm / 25"
Overall height	530mm / 20"
Overall depth	970mm / 38"
Weight	75kg / 132lbs

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Electrical specifications

208-240V, 13A, 2.3kW, Single Phase

Featuring the very latest vacuum forming technologies, Formech's highly capable 508 series features a level of specification typically reserved for much larger, more expensive machines. Intuitive touch-screen, Programmable Logic Control (PLC) with multiple memory function provides incredible convenience and rapid adaptation. Our unique touch-screen graphics offer a truly bespoke user experience. A depth of draw up to 290mm makes the 508 series applicable to the most challenging applications.

Typical applications



Helmet
ABS



Electro silver plated sculpture
PETG

Pre-printed POS
PETG



Packaging insert
HIPS

Bottle tray
HIPS



Our 508 customers include

Central Saint Martins - Education (UK)
Decathlon - Sport equipment R&D (France)
A3P - Cosmetics R&D (France)
Police Service of Northern Ireland (UK)
Hershey Chocolate - Chocolatier (USA)
Jdeal Bra - R&D (Italy)
Under Armour - Footwear prototyping (USA)
Nike - Design/Prototyping (USA)
Reebok - Design/Prototyping (USA)
Aardman Animation - Animation/Video (UK)
Siemens - R&D (Italy)
Apple Computer - Prototyping/R&D (USA)

Vacuum gauge



PLC Touch screen



Material clamp



Message from the designer

The 508 is specifically designed for experimenting, light production runs and prototyping with more demanding shapes and materials. Equally suited to education and business purposes alike, the 508 offers a compelling range of capabilities at a highly competitive price.



Trolley optional

Technical Specifications

	508DT	508FS
Material size	508 x 457mm / 20 x 18"	508 x 457mm / 20 x 18"
Forming area	482 x 432mm / 19 x 17"	482 x 432mm / 19 x 17"
Max. depth of draw	185mm / 7.3"	290mm / 11.5"
Max. material thickness	6mm / .25"	6mm / .25"
Zones	4	4
Heaters	Quartz	Quartz
Overall width	597mm / 23.5"	597mm / 23.5"
Overall height	560mm / 22"	1200mm / 47.25"
Overall depth	1100mm / 43.3"	1100mm / 43.3"
Weight	100kg / 200lbs	125kg / 264lbs

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508

508DT 508FS

Features

- Heater travel - bearing wheels
- PLC touch screen control
- 12 program memories
- Vacuum gauge
- Interlock
- Pressure outlet
- Diaphragm pump : 25" Hg 5.52m3/HR

- Heater travel - bearing wheels
- PLC touch screen control
- 12 program memories
- Vacuum gauge
- Pre-stretch
- Autolevel
- BECKER Rotary vane pump 25" Hg - 10.0m3/HR

Options

- Reducing windows
- Trolley
- Reel feed
- Spare parts kit
- Trimmer FT10/20

- Reducing windows
- Cooling fan system
- Reel feed
- Spare parts kit
- Trimmer FT10/20

Air supply (508FS only)

Requires compressed air
 80 psi / 5 bar

Electrical specifications

508DT
 208-240V, 13A, 3.2kW, Single Phase

508FS
 208-240V, 20A, 3.5kW, Single Phase

For optimum sheet yield the 686 provides exceptional forming capacity enabling the user to produce mouldings of a size, thickness and quality unparalleled in its class. PLC controlled Quartz heaters with multiple zoning, combined with pre-stretch provide rapid response, accurate heat control and high definition forming with consistent results.

Typical applications

Medical mask
PETG



Air conditioning units
ABS

Motorcycle parts
Acrylic capped ABS



Decorative panels
Opal acrylic



Our 686 customers include

Brunel University - Education (UK)
Xerox - R&D (USA)
Skoda - Automotive (Czech Republic)
Wild Blue Tech - Design (USA)
Revision Military - R&D (USA)
Lockheed Martin - Aerospace (USA)
ILC Dover - Space Technology (USA)
Kohn Pederson Fox - Architectural (UK)
Camping Gaz - R&D (France)
Jim Marshall Speakers - Prototyping (USA)
Raytheon - Defense (UK)
Domus Academy - Education/Design (Italy)
Mecachrome - Automotive (France)
Neurospin - Neuroimaging research center (France)

Vacuum gauge



Colour PLC Touch screen



Material clamp



Message from the designer

Tailoring the 686 to specific projects is a breeze with a PLC memory capacity for storing settings. The 'Clinica' variant of the 686 is also available with an upgraded vacuum filter system, designed for compatibility with customers who often require the use of wet moulds constructed from clay and Plaster of Paris.



Features

- Heater travel - bearing wheels
- PLC touch screen control
- 20 program memories
- Vacuum gauge
- Pre-stretch
- Autolevel
- Pneumatic power table
- BECKER rotary vane pump : 26" Hg - 16m3/HR

Options

- Reducing windows
- Cooling fan system
- Reel feed
- Single phase or 3 phase (380 / 415V)
- Spare parts kit

Air supply

Requires compressed air
80 psi / 5 bar

Electrical specifications

208-240V, 40A, 8kW, Single Phase
OR
380-415V, 32A, 8kW, 3 Phase

Technical Specifications

Material size	686 x 660mm / 27 x 26"
Forming area	646 x 620mm / 25.5 x 24.5"
Max. depth of draw	325mm / 12.8"
Max. material thickness	6mm / .25"
Zones	6
Heaters	Quartz
Overall width	945mm / 37"
Overall height	1280mm / 50.4"
Overall depth	1900mm / 74.8"
Weight	260kg / 573lbs

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The 1372 offers a moulding capacity, depth of draw, speed of cycle and ease of operation, which is unrivalled at its price point. PLC operation with memory function adds convenience. For a more automated cycle the 1372 is also available as a semi-automatic version with pneumatic clamping and electric heater drive. Auto-level allows air to be pumped under the sheet during the heating cycle to maintain a tight definition with consistent results.

Typical applications



Radio controlled car body shell
PC - Lexan



Helmets
HIPS



POS display
HIPS/PETG



Luggage
Acrylic capped ABS

Our 1372 customers include

- BMW - Automotive R&D (Germany)
- Volkswagen - Automotive R&D (Germany)
- Honda - R&D (USA)
- Hindustan Aeronautics - R&D (India)
- EPFL - Education (Switzerland)
- Telsa Motors - Automotive (USA)
- Proctor & Gamble - Medical (USA)
- Science Museum - Props (UK)
- Helsinki Royal Opera House - Props (Finland)
- Nissan Cars - Automotive (Japan)
- Focal Point - Lighting design (USA)
- Joint Active System - Medical (USA)
- Airline Services Ltd - Aeronautical parts production (UK)

Quartz heating elements



Power table control



Touch screen control



Message from the designer

Specified with optional fans, the 1372 provides the opportunity to increase production through forming multiple smaller moulds on a single sheet thanks to its large forming area. This machine is a favourite with display companies where flexibility and machine accessibility is key to their success. Small or large runs are accommodated with ease.

1372



Features

- Heater travel - bearing wheels
- PLC touch screen control
- 20 program memories
- Pneumatic table
- Vacuum and pressure gauge
- Autolevel
- Pre-stretch
- Table height adjustment
- BECKER rotary vane pump
26" Hg - 25m3/HR

Options

- Reducing windows
- Twin cooling fan system
- Vacuum receiver tank
- Pneumatic trigger clamps
- Electric heater drive with Jaguar inverter for speed control
- Semi automation
- Spare parts kit

Air supply

80 psi / 5 bar

Electrical specifications

EU : 380-415V, 40A, 17kW, 3 Phase
USA : 208-220V, 63A, 17kW, 3 Phase



Twin cooling fan system optional

Technical Specifications

Material size	1372 x 660mm / 54 x 26"
Forming area	1330 x 620mm / 52.4 x 24.5"
Max. depth of draw	420mm / 16.9"
Max. material thickness	6mm / .25"
Zones	15
Heaters	Quartz
Overall width	1820mm / 72"
Overall height	1200mm / 47"
Overall depth	1820mm / 72"
Weight	600kg / 1300lbs

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Semi/fully automatic machines - Our customers' experiences

The customer & the challenge

Simpson-detour produce a range of exciting products for the motorcycle accessory market, typically huggers, belly pans and lighting fairing systems. All design, testing and manufacture is based in the UK with vacuum forming being an integral part in the production. Acrylic capped ABS, Polypropylene and polycarbonates are largely the materials of choice for this application and vacuum forming is perfect for small rapid design testing to larger volume production.



The Formech solution

Formech have supplied several machines to Simpson-detour similar to our latest 1250 and HD686. These machines have been designed to be user friendly, to facilitate quick tool changes and yet capable of producing the high quality components that Simpson-detour demand.

Simpson Detour UK

For us the lighter weight nature of Formech machines design and construction offer a far more versatile and flexible option to that of the somewhat over engineered and cumbersome nature of other manufacturers, meaning that adaptations, alteration and relocations are far simpler to apply.

Neil Simpson - Managing Director



Fiat 500 by Gucci

We cannot thank everyone at Formech enough for all the help and support during the production and shoot for the Fiat 500 by Gucci film. The Formech 1500 was instrumental to the success of the film and looked great in the finished edit. During the shoot, Formech staff were on hand to operate the machine and offer expert advice to our crew. Everyone is delighted with the outcome.

Roma Vaccaro, Producer - White Lodge
'Fiat 500 by Gucci' film



Glossary

1 phase or Single phase

Single phase electricity is supplied for domestic use for most households.

3 phase or Three phase

Three phase electricity is supplied for industrial use and is usually cheaper than single phase.

Autolevel

Allows air to be pumped under the sheet during the heating cycle to maintain a consistent distance between the sheet and the heaters.

Becker oil pump

Becker rotary vane oil pump

Bolster

The bolster is an aluminium plate (that sits under the tool) with internal channelling that allows either hot or cold liquids to circulate to maintain a consistent tool temperature.

Cable chain

The hinged outer plastic casing that encloses the inner wires that lead to the heaters.

Ceramic heaters

Ceramic heaters are ideal for packaging applications, where rapid cycles are required.

Clamping frame

Steel frame that clamps the plastic sheet during the vacuum forming process.

Cooling pyrometer

Controls the cooling fans based on the temperature of the cooled part, rather than time.

Depth of draw

Equivalent to the maximum height of moulds/tools being used on a vacuum former.

Flow regulators

Flow regulators are manually adjusted valves that allow you greater control of the vacuum flow, table speed and plug assist descent speed.

Heating pyrometer

sends the heaters back based on the temperature of the sheet, rather than time.

Heating zone

The heaters are divided up into zones for greater control of different parts of the sheet.

Jaguar Inverter with variable speed control

An inverter converts direct current (DC) into alternating current (AC).

Mouldings

These are the formed plastic parts, also known as vacuum formings.

PLC with memory

Programmable logic controller with program storage in the memory.

Semi/fully automatic machines - Our customers' experiences

Rochling Formaterm AB

"We needed a new twin heater vacuum forming machine for testing our extruded sheets in a way that would simulate what our customers do. We need to control and check the quality of the sheets. The Formech solution was the best choice for us, a machine that was small, compact and easy to use. Formech also provided a tool for testing, so the solution was complete."

Jimmy Karlsson, Maintenance Technician - Rochling Formaterm AB, Sweden



Rudd McNamara Ltd



"We approached Formech with a range of requirements and they were quick to identify a cost effective and versatile solution. It was important that we would be able to continue to meet the ever increasing demands from our clients. The training and after sales support we received from Formech helped us to start production as soon as the machines were in place and, as a result, we have subsequently purchased a further 7 machines."

John Wood . Managing Director
Rudd McNamara Ltd



Universität Des Saarlandes

We are very pleased with our FMDH660 vacuum forming machine. Within our research project we developed a plastic-metal-connection, which is produced in the thermoforming process. The connection has a very high stability and is leak proof against fluids. Further we use the machine for our lessons, to demonstrate the thermoforming process to our students.

Dipl.-Ing. Tobias Naumann



Unisza - Malaysia



UNISZA aspires to be a world class institution of higher learning. Our plastics polymer department were looking for a large format robust thermoforming machine requiring minimum maintenance that would serve the faculty for a minimum of 10 years. I graduated from CSM, London in 1986 and have been familiar with Formech throughout both my educational and working career in the UK before returning to Malaysia and always found them intuitive and user friendly machines to use. Formech provided a total solution with on-site local support provided by their representative Caddcam Tech and a full training program based on the machine, process and materials. This proved a success with our university technicians and students.



University Dean
Prof Suleiman BM Salleh MDesRCA

Pneumatic trigger clamps

Air cylinders are used to lock the clamping frame

Pre-stretch

Allows air to be pumped under the sheet to create a bubble to pre-stretch the material prior to forming.

Pressure gauge

A visual indication of consistent pressure being applied.

Quartz heaters

Quartz heaters have the benefit of the standby feature, resulting in reduced electricity consumption.

Reducing windows/frames

Reduce the forming area in order to use smaller sheets of plastic when forming a mould/tool which is much smaller than the original forming area of the machine.

Safety light curtain

The safety light curtain replaces a safety gate. As soon as the light curtain is broken all mechanical actions are halted or retract to safe positions.

Spray mist control

water mist is added to the cooling fans in order to cool down the moulded parts in a shorter space of time.

Table

Part of the vacuum forming machine where the mould/tool is placed.

Table height adjustment

This allows you to reduce the amount of travel of the table when using shallow moulds/tools.

Toggle clamp

The mechanical clamp that applies pressure around the outer edge of the sheet using the clamping frame.

Touch screen

This is the main control panel that allows you to control all aspects of the machine.

Vacuum gauge

A visual indication of consistent vacuum being applied.

Vacuum pump flow rate

The amount of air that can be moved over a given time

Vacuum receiver or tank

This is usually a feature of our larger machines and reduces the vacuum time required to pull the plastic around the mould/tool.

1250 & 1500

Designed for prototyping and light to medium production, the versatile 1250/1500 series provides a fully featured semi-automatic user experience, offering two forming sizes optimised to match industry standard extrusion formats. AC heater motor drive with Jaguar inverter provides variable speed drive for ultra-smooth and quiet travel

Typical applications



Golf car parts
Acrylic capped ABS



Bicycle case
HDPE

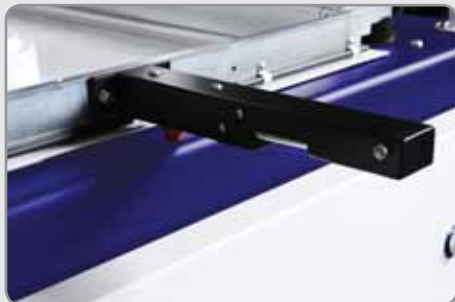


Instrument case
ABS

Our 1250/1500 customers include

Toyota Europe - R&D (France)
UK Centre of Carnival Arts - Props (UK)
Lycee Corvisart Paris - Education (France)
UCI Blind Association - Product (Italy)
JCB Aero - Aircraft interiors (France)
Bolshoi Ballet Moscow - Stage sets/Props (Russia)
Helsinki Theatre - Stage sets/Props (Finland)
Simpson Detour - Motorcycle parts (UK)
KKTM - Tech College (Malaysia)
ALLIO - Design (France)

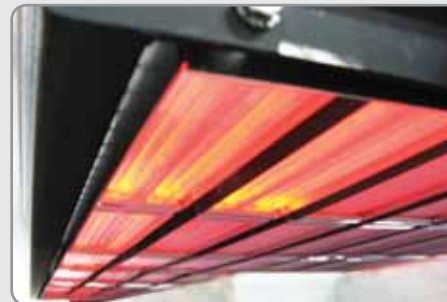
Pneumatic clamp



Touch screen with PLC



Quartz heaters



Message from the designer

Semi-automation eliminates the need for machine guards and affords the user a hands-on approach with full access during the forming cycle. The deep depth of draw makes the 1250/1500 truly versatile machines.



1250 & 1500



Features

- Electric heater drive
- Twin cooling fan system
- 2 air powered trigger clamps
- Pneumatic table
- PLC touch screen control
- 20 program memories
- Autolevel
- Pre-stretch
- Vacuum and pressure gauge
- Vacuum tank - 150L
- BECKER oil filled rotary vane pump 20m3/HR - <1mb ABS

Options

- Reducing windows
- Spare parts kit

Air supply

80 psi / 5 bar

Electrical specifications

1250

EU : 380-415V, 63A, 30kW, 3 Phase
USA : 208-220V, 80A, 30kW, 3 Phase

1500

EU : 380-415V, 63A, 29kW, 3 Phase
USA : 208-220V, 80A, 29kW, 3 Phase

Technical Specifications

	1250	1500
Material size	1220 x 1220mm / 48 x 48"	1500 x 1000mm (minimum) / 59 x 39"
Forming area	1180 x 1180mm / 46.5 x 46.5"	1460 x 960mm / 57.5 x 37.8"
Max. depth of draw	600mm / 23.5"	600mm / 23.5"
Max. material thickness	6mm / .25"	6mm / .25"
Zones	20	18
Heaters	Quartz	Quartz
Overall width	1740mm / 68.5"	2000mm / 79"
Overall height	2200mm / 86.5"	2200mm / 86.5"
Overall depth	3020mm / 119.0"	2600mm / 102"
Weight	1050kg / 2314lbs	950kg / 2094lbs

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FMDH660

Occupying minimum floor space, the FMDH provides a cost effective solution for extrusion manufacturers to quality control sheet material up to 10mm thick. Twin multi-zone ceramic or quartz heaters provide powerful performance and consistent results with the most demanding materials.

Typical applications

Chocolate mould
Copolymer PP



Marine pod
Acrylic capped ABS



Props
Acrylic capped ABS



Our FMDH660 customers include

- Ferrero Rocher - Chocolatier (Italy)
- Rochling Formaterm AB - Extrusion (Sweden)
- Rochling Formaterm AB - Extrusion (Finland)
- Rochling Engineering s.r.o - Extrusion (Czech Republic)
- Universität Des Saarlandes - Education (Germany)
- Foamalite - Insulation products (Ireland)
- Senoplast - Extrusion (Austria)

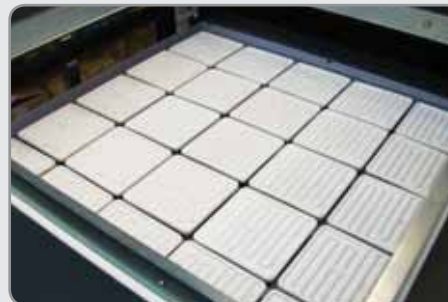
Touch screen with PLC



Jaguar inverters

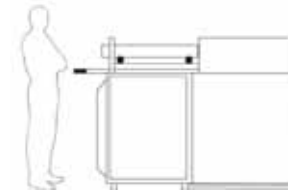
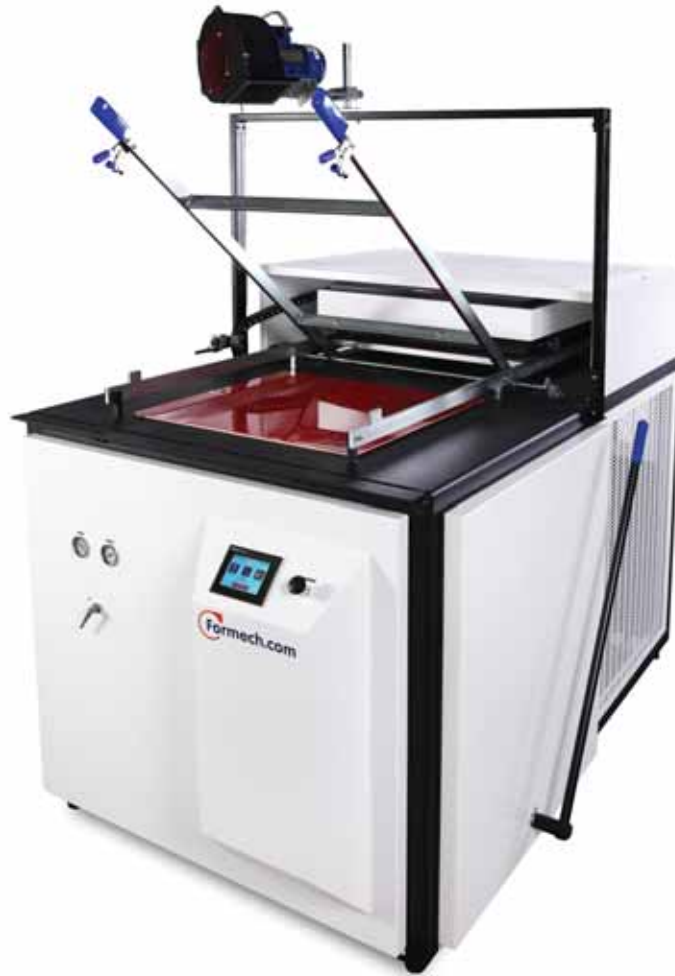


Ceramic heating tray



Message from the designer

The FMDH660 is an exceptionally capable machine, designed specifically to testing thicker materials and products, yet equally applicable to thinner gauge, highly technical materials for use in education, confectionary and industry alike.



FMDH660



Features

- Double heater (ceramic or quartz)
- PLC touch screen control
- 20 program memories
- Autolevel
- Pre-stretch
- Vacuum and pressure gauge
- Electric heater drive
- BECKER dry vane pump : 16m3/HR

Options

- Reducing windows
- Reel feed stand
- Cooling fan system
- Pneumatic trigger clamps
- Pyrometer
- Spare parts kit

Air supply

80 psi / 5 bar

Electrical specifications

EU : 380-415V, 32A, 11.8kW, 3 Phase
USA : 208-220V, 40A, 11.8kW, 3 Phase

Technical Specifications

Material size	660 x 660mm / 26 x 26"
Forming area	620 x 620mm / 24.5 x 24.5"
Max. depth of draw	250mm / 10"
Max. material thickness	10mm / .40"
Zones	8 (top) + 6 (bottom)
Heaters	Ceramic or quartz
Overall width	1200mm / 47.25"
Overall height	1500mm / 59"
Overall depth	2100mm / 82.6"
Weight	300kg / 662lbs

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IMD600

Film Insert Moulding (FIM) is a versatile and cost effective method of decorating and manufacturing durable plastic parts. It is an advanced form of In Mould Decoration (IMD) or In Mould Labelling (IML). The flat film is firstly reverse decorated (normally screen printed) then vacuum formed, cut and finally back injection moulded. It is used for cost effective manufacture of fascias, panels and casings for the automotive, telecommunications and electronic sectors. The Formech FIM/IMD range combine extremely accurate repeat sheet registration with incredibly precise heat control during the forming process of pre-printed, high specification materials. Formech produce IMD machines for both test and production using either ceramics or quartz, single or twin heaters and servo electric table for precise movement.

Typical applications



Polycarbonate

MacDermid Autotype

"It was very important that we could have a complete IMD solution in place at our demonstration facility in Oxon. We have been working closely with Formech for some time to develop a dedicated IMD machine that would meet the demanding registration tolerances and could be used in conjunction with our new range of formable hardcoated films.

The collaboration has been extremely successful and we have jointly participated at numerous exhibitions worldwide to promote our FIM/IMD solutions"

Richard Townsend – MacDermid Autotype



Registration inspection Machine setup IMD Lab



Message from the designer

With FIM you can easily integrate components such as lens and body into a single unit using hardcoated PC films. Formech have worked closely with MacDermid Autotype to produce a machine to meet all the stringent FIM/IMD requirements. An on-site demonstration facility at the MacDermid headquarters close to London provides a full insight into the process and the many applications.

IMD600

Features

- Megapoint full feedback heater temperature control
- Safety Light Curtain
- Vacuum and pressure gauge
- PC control
- Cooling fan system
- Autolevel
- Servo driven linear table movement guided by linear bearing
- Pyrometer
- Material registration punch
- 500W cooling fan system

Options

- Reducing windows
- Double heater
- Spare parts kit

Air supply

80 psi / 5 bar

Electrical specifications

EU : 380-415V, 30A, 14kW, 3 Phase
 USA : 208-220V, 30A, 14kW, 3 Phase



Servo table control

Technical Specifications

Material size	640 x 640mm / 25 x 25"
Forming area	610 x 610mm / 24 x 24"
Max. depth of draw	400mm / 15"
Max. material thickness	6mm / .25"
Zones	45
Heaters	Ceramic or quartz
Overall width	1250mm / 49.25"
Overall height	2200mm / 86.6"
Overall depth	1500mm / 59"
Weight	600kg / 1323lbs

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HD Series

The HD (heavy duty) series is a fully automated machine range designed to offer a robust and cost effective alternative to more expensive production machines. Plug assist, pyrometer, water cooling and multi-zone quartz heating affords a comprehensive level of control for more demanding mouldings and materials with an emphasis on production.

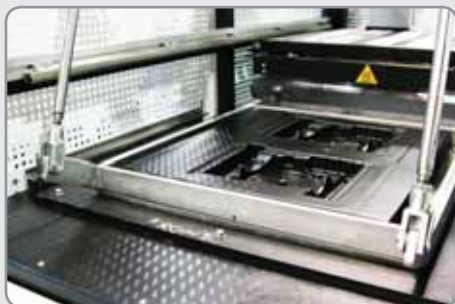
Typical applications



Our HD customers include

Makita - Insert Packaging (UK)
Nestle - Packaging R&D (Switzerland)
Giannuzzi SRL - Helicopter (Italy)
DPS Designs Ltd - Toolmaker (UK)
Renishaw - In-house transit and kit trays (UK)
Comco Plastics - POS displays (USA)
INSA - Education (France)
Berry Plastics Corp. - Design (USA)
Bahrain University - Education (Bahrain)
Interform - Trade former (UK)
Cornelius - IMD (UK)

Clamp frame



Pod



Quartz heaters



Message from the designer

Ease of use and robust manufacture is the essence of the HD series combined with all the usual essential features including plug assist, pyrometer, water cooling and full heating zone control. Despite its 'Heavy Duty' credentials, Formech's HD series acronym can be equally applied to 'High Definition'.

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HD686/750
Self-adjusting hinged clamping

HD1000/1500
Direct thrust vertical clamping

Technical Specifications

	HD686	HD750	HD1000	HD1500
Material size	686 x 660mm / 27 x 26"	750 x 540mm / 29.5 x 21.25"	1000 x 1000mm / 39.4 x 39.4"	1500 x 1000mm / 59 x 39.4"
Forming area	647 x 622mm / 25.5 x 24.5"	700 x 500mm / 27.6 x 19.7"	960 x 960mm / 37.8 x 37.8"	1460 x 960mm / 57.5 x 37.8"
Max. depth of draw	350mm / 14"	350mm / 14"	500mm / 19.7"	500mm / 19.7"
Max. material thickness	6mm / .25"	6mm / .25"	6mm / .25"	6mm / .25"
Zones	16	16	20	30
Heaters	Quartz	Quartz	Quartz	Quartz
Overall width	1100mm / 43.3"	1100mm / 43.3"	1600mm / 63"	2100mm / 82.7"
Overall height	2300mm / 90.5"	2300mm / 90.5"	2300mm / 90.5"	2300mm / 90.5"
Overall depth	2000mm / 78.5"	2000mm / 78.5"	2800mm / 110.2"	2800mm / 110.2"
Weight	750kg / 1650lbs	750kg / 1650lbs	1250kg / 2750lbs	2000kg / 4400lbs

HD Series



Features

- Safety Light Curtain
- Vacuum and pressure gauge
- Heater travel - industrial bearing tracks
- Siemens PLC + Touch screen
- 40 program memories
- Cooling fan system
- Pneumatic heater drive
- Pneumatic table
- Pneumatic clamping frame
- Autolevel
- Pre-stretch
- Direct thrust clamping
- BECKER Oil filled rotary vane pump
- HD686/HD750 : 41m3/HR
- HD1000/HD1500: 63m3/HR <1mb ABS

Options

- Reducing windows
- Plug assist
- Heating pyrometer
- Cooling pyrometer
- Spray mist cooling
- Cooling bolster
- Reel feed system
- Double heater
- Spare parts kit

Air supply

80 psi / 5 bar

Electrical specifications

HD686 & HD750
 EU : 380-415V, 11kW, 32A, 3 Phase
 USA : 208-220V, 11kW, 40A, 3 Phase

HD1000
 EU : 380-415V, 33kW, 40A, 3 Phase
 USA : 208-220V, 33kW, 63A, 3 Phase

HD1500
 EU : 380-415V, 47kW, 40A, 3 Phase
 USA : 208-220V, 47kW, 63A, 3 Phase

Custom build machines

At Formech we pride ourselves on providing the right solution for every customer and application. If we are unable to meet your exact requirements from our extensive range of standard machines we can offer a custom design and build service. With 30 years of problem solving experience in vacuum forming our design and manufacturing team can overcome the most challenging applications.

Our customer pedigree in this field speaks volumes. Many internationally recognised brands across a variety of industry sectors trust Formech to provide the perfect solution. Here are a just a few examples of Formech customers who have benefited from Formech's custom build service:



Internal automotive panel
Textured material



Corner bath
Acrylic capped ABS

Dourdin SA	France	Decorative trim applications for major automotive manufacturers
Inplas - Simoldes	Portugal	Leading manufacturer of automotive mouldings for VW group, GM, Renault, etc.
Honda - Fisem	Italy	Honda scooters
RAK Ceramics	UAE	One of the world's leading bath & sanitary manufacturers
Compo Plastics	New York	US Extruder and trader former
Apadil	Portugal	Major sign makers for automotive franchisee's and petroleum companies
3M UK	UK	Innovation & Technology
Destination Plasturgie	France	Education
SCA	Scotland	Air conditioning liners

Contact us for a free consultation and we will guide you through the steps from needs analysis, design and build through to installation and commissioning.
www.formech.com

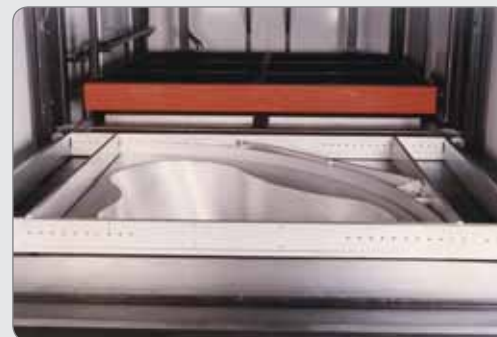
Fabrication



Hydraulic table



Bath mould



Dedicated bath machine



Custom build machines

Formech offers a wide range of customisation options at each key stage of the machine design including:

- Fully optimised forming areas and depth of draw
- Various automation types: manual or fully automatic with pneumatic, hydraulic or electric
- Positive or inverted pre-stretch
- Ceramic or quartz single and double heaters
- PLC options from leading providers
- Heat and cool pyrometers for accurate and consistent production cycles
- Water cooled table
- Spray mist cooling
- Reel feed, pincer or chain driven
- Trouble shooting with remote diagnostics
- Quick tool changes
- Fast reducing window adjustment



Plasfortech

We visited Formech and several other thermoforming machine suppliers at the K show in Germany. We were impressed with the approach Formech took and the way they listened carefully to our requirements. They were quick to identify a cost effective and versatile solution. It was important that we would be able to meet increasing demands from our clients so we wanted the machine to be as flexible as possible for future applications other than door panels. The complete process from our initial meeting to the machine build, install, training and after sales support has been impressive. The help and support from Formech has enabled us to start production immediately and I would like to thank Formech for the professional service extended to us.

Peter Mikola
 SC PLASORTECH SRL
 Romania



CAD design Welding Tool & Moulding Formed door panel



Packaging machines - Our customers' experiences

The customer & the challenge

Playmobil is one of the biggest names in toy manufacturing employing more than 2,300 staff worldwide. To date, 1.5 billion colourful plastic Playmobil materials have been produced, and the company attributes much of its success to its policy of producing on its own sites in Europe and not outsourcing manufacturing. Playmobil Malta's new 38,000 sq.m. manufacturing plant is testament to this.

With Playmobil's Malta facility running at full stretch, the company's ambitious plans to launch a further 80 new items required increased production capabilities. The team in Malta were keen to keep any new developments on site, and began searching for a machinery supplier who could meet Playmobil's exacting standards for quality and production — which included cost-effective production of small quantity runs — and which could manufacture, deliver and commission the plant in time to enable the production schedule to be met.

The Formech solution

An Internet search led Playmobil to Formech, and a visit from the Formech team to Playmobil Malta helped establish the company's precise requirements. Formech's solution was to propose an economical turn key solution to allow Playmobil to form, cut and seal their parts in house and ensure production levels could be met whilst maintaining flexibility and control of their designs and not relying on outside vendors.



Playmobil

"It was very important that we would be able to continue to provide the blister packs that were required across the Group. The training and after sales support we received from Formech helped us to start production as soon as the machine was in place. I would fully recommend Formech to my colleagues across the Group and if we had further requirements in the future we would definitely turn to Formech."

Johann Elsner, Playmobil Malta.



Formech have subsequently supplied several more machines to meet the further demands of Playmobil Malta and work closely with them on maintaining the machines and new project development.

Glossary

Autolevel

Allows air to be pumped under the sheet during the heating cycle to maintain a consistent distance between the sheet and the heaters.

Becker oil pump

Becker rotary vane oil pump

Blister

A clear vacuum forming to enclose product which is sealed on to a backing card.

Bolster

The bolster is an aluminium plate (that sits under the tool) with internal channelling that allows either hot or cold liquids to circulate to maintain a consistent tool temperature.

Ceramic heaters

We use ceramic heaters in our reel feed machines, because the standby feature associated with quartz heaters is of no benefit when used for this type of production that requires rapid machine cycles.

Clam pack

A hinged clear vacuum forming that encloses product when folded together.

Cooling jig

This is used to cool the plastic sheet after it has been heated on the line bender. The jig is adjusted to the required angle and the part is removed after it has become rigid.

Cooling pyrometer

Controls the cooling fans based on the temperature of the cooled part, rather than time).

Cutting board

The cutting board is used on the roller press to help cut the vacuum forming from the waste material.

Cutting Die or cutting form

This is a steel cutting rule that has been formed in to a particular profile to follow the outer edge of a vacuum forming. The vacuum forming is placed into the cutter and then placed into the roller press for trimming.

Flow regulators

Flow regulators are manually adjusted valves that allow you greater control of the vacuum flow, table speed and plug assist descent speed.

Heating pyrometer

sends the heaters back based on the temperature of the sheet, rather than time.

Packaging machines - Our customers' experiences

Destination Plasturgie

'DESTINATION PLASTURGIE is a total self-powered training workshop, running without external sources of electricity and water. It is a road workshop for training and demonstration of Plastics industry and the project is made up of a semi-trailer truck built specifically for accommodating young trainees and used to promote the plastics industry, heighten people's awareness of environmental safety and offer a logistic support for training processes. To qualify for this project all machine suppliers had to conform to a number of specific ECO requirements. Formech were selected as the thermoforming machine of choice and we are proud to include them as a partner.'

D. Paris
Director
Destination Plasturgie



CGL Pack

We had an old machine from 1963 for our prototype workshop. It was time to change so we first made some tests with Formech machines and after close evaluation we finally selected the Formech TF750 with Negative feature. The settings are quite easy and reproducible and tool change is fast. We especially like the automatic mode for small series of hundreds of parts. After one year, we are now in the process of buying another TF in the group.

BENOIT BLUM, Technical Manager
CGL PACK, France



Gratnells Ltd

"We, Gratnells Ltd would like to say that in the years that we have been dealing with Formech Ltd, we have had good service from both the staff and the machines that we purchased. Our latest M/C is so easy to operate and now that we have a maintenance contact with Formech worry and trouble free. We started out some years ago with one tool, with the expectation of producing 10,000 units per Annum, now we are producing nearly 20,000 per month on our two M/Cs and have 20 or so easily Interchangeable tools, some with plug assist and some quite deep and complex tools which our operators can change and use very quickly. In conclusion, we have seen a lot of changes to the way Formech has dealt with our needs and all have helped us to achieve the smooth running of this dept."

R.Wass
Head of Production
GRATNELLS LTD. UK



Flying knife

The knife is attached to the heater box and cuts the reel feed material into individual sheets after each cycle of the machine.

Mouldings

These are the formed plastic parts, also known as vacuum formings.

Negative feature

This feature allows you to form negative vacuum formings using reel feed material e.g. clam packs.

PLC with memory

Programmable logic controller with program storage in the memory.

Plug assist

This is usually a pneumatic or electrically driven ram that forces the plastic sheet into cavities to increase the thickness of the bottom of the cavities.

Pre-stretch

Allows air to be pumped under the sheet to create a bubble to pre-stretch the material prior to forming.

Pressure gauge

A visual indication of consistent pressure being applied.

Reducing windows/frames

Reduce the forming area in order to use smaller sheets of plastic when forming a mould/tool which is much smaller than the original forming area of the machine.

Reel feed

This is located on the side of the machine and holds reels of material, ready to be vacuum-formed.

Safety light curtain

The safety light curtain replaces a safety gate. As soon as the light curtain is broken all mechanical actions are halted or retract to safe positions.

Spray mist control

Water mist is added to the cooling fans in order to cool down the moulded parts in a shorter space of time.

Vacuum receiver or tank

This is usually a feature of our larger machines and reduces the vacuum time required to pull the plastic around the mould/tool.

TF Series

Specifically designed for the packaging industry and developed for those companies looking for a cost effective alternative to outsourcing small to medium run requirements and at a fraction of the cost of high speed inline machines, the Formech TF series provides the end user with a cost effective and versatile solution. Capable of processing reel materials up to 1.8mm and sheet material up to 5mm the TF series has a wide range of capabilities. A host of options are available to fine tune the TF series to your production needs.

Typical applications

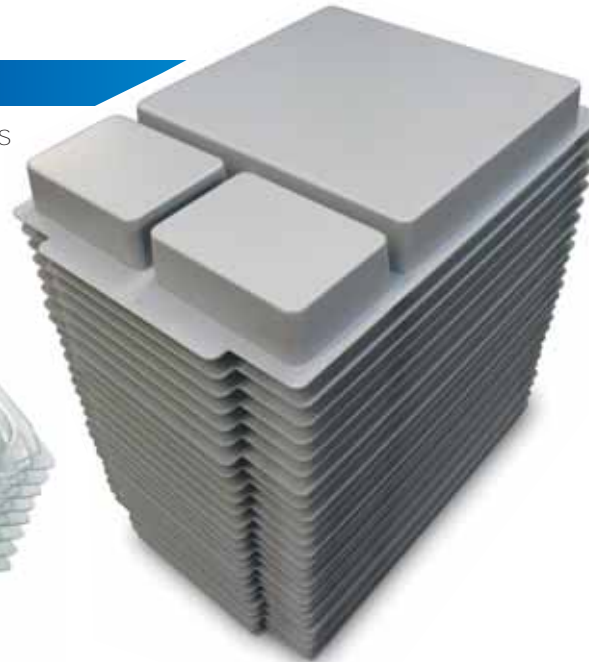


Blister
PETG



APET

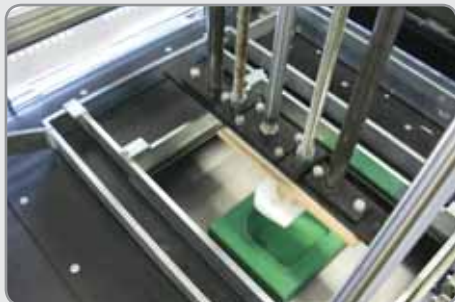
HIPS



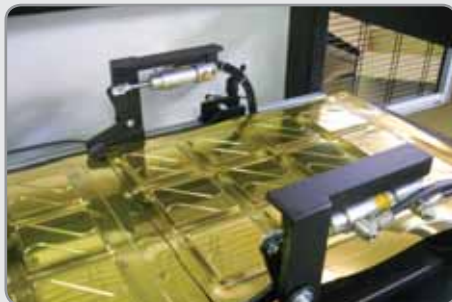
Our TF customers include

- Playmobil - Packaging (Malta)
- CGL Pack - Packaging (France)
- Destination Plasturgie - Education (France)
- Termoplastic SRL - Trade former (Italy)
- Nestle - Packaging R&D (Switzerland)
- Co-Packing - Packaging design (Germany)
- Glasseal - Contract Packaging (USA)
- Floreal - Chocolate Packaging (Italy)
- KKTM - Tech College (Malaysia)
- Imperial Packaging - (Malta)

Plug assist



Reel index pincer feed



POD + PLC



Message from the designer

Fast and intuitive to configure with PLC control and 40 assignable memory settings the TF series is also capable of achieving 4 cycles per minute making this an extremely flexible and capable machine for uninterrupted runs. Negative tooling capability adds even greater flexibility making the TF series the most versatile range of machines in class.

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TF Series



Features

- Siemens PLC + Touch screen control
- 40 program memories
- Pneumatic heater drive
- Pneumatic table
- Pneumatic clamp frame
- Pre-stretch
- Autolevel
- Reel feed
- Safety light curtain
- Plug assist
- BECKER Oil filled rotary vane pump 41m3/HR

Options

- Reducing windows
- Cooling bolster
- Additional depth of draw (250mm max in positive)
- Spray mist cooling
- Heating/Cooling pyrometers
- Negative feature (for clamp packs) (100mm depth of draw in negative)
- External flows regulator for vacuum, table and Plug control
- Double heater
- Spare parts kit

Air supply

80 psi / 5 bar

Electrical specifications

TF686 & TF750
 EU : 380-415V, 11kW, 32A, 3 Phase
 USA : 208-220V, 11kW, 40A, 3 Phase

Technical Specifications

	TF686	TF750	TF1000
Material size	686 x 660mm / 27 x 26"	750 x 540mm / 29.5 x 21.25"	1000 x 1000mm / 39.4 x 39.4"
Forming area	647 x 622mm / 25.5 x 25.5"	700 x 500mm / 27.5 x 19.68"	960 x 960mm / 37.8 x 37.8"
Max. depth of draw	150mm / 6"	150mm / 6"	150mm / 6"
Max. material thickness	6mm / .25" (sheet) or 2mm / .08" (reel)	6mm / .25" (sheet) or 2mm / .08" (reel)	6mm / .25" (sheet) or 2mm / .08" (reel)
Zones	16	16	20
Heaters	Ceramic	Ceramic	Ceramic
Overall width	3400mm / 134"	3400mm / 134"	4000mm / 157.5"
Overall height	2660mm / 104"	2660mm / 104"	2350mm / 92.5"
Overall depth	2000mm / 79"	2000mm / 79"	2800mm / 110.2"
Weight	750kg / 1653lbs	750kg / 1653lbs	2000kg / 4409lbs

Skinpack Series

For skin packing items onto special adhesive coated card, using high clarity Surlyn® film. Ideal for Point Of Sale display. Card can be manually cut to size by knife or guillotine and euro slot added by Rollerpress. Suitable for use with environmentally friendly "Peel Away"™ skin pack board.



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Arnold, MD 21012
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SP750

Electrical Specifications	EU : 380V, 50/60Hz 3 Phase USA : 208-220V, 3 Phase
Max absorbed power	5kW
Compressed air	4-6 bar
Working surface	500 x 750mm / 19.6 x 29.5"
Board size	495 x 695mm
Maximum production height	100mm
Machine width	1300mm / 51"
Machine depth	1500mm / 59"
Machine height	1500mm / 59"
Net machine weight	200kg / 440lbs

Blister Sealer Series

Products are laid inside the blisters and adhesive coated card is placed on top and positioned by spring loaded pins. The assembly is then moved to the heating station where the card is sealed to the blister - the other station can be unloaded and reloaded.



BS430

BS535

Electrical Specifications	220V, 50/60Hz single phase	220V, 50/60Hz single phase
Max absorbed power	2.5kW	3kW
Compressed air	4-6 bar	4-6 bar
Working surface	400 x 300mm / 15.7 x 12"	500 x 350mm / 19.6 x 14"
Sealing depth	75mm	75mm
Static Heater Platen with thermostat control / Aluminium Table powered by pneumatic cylinder		
Digital Timer for process control		
Machine width	670mm / 26.5"	800mm / 31.5"
Machine depth	800mm / 31.5"	1000mm / 39.5"
Machine height	1370mm / 54"	1500mm / 59"
Net machine weight	100kg / 220lbs	150kg / 330lbs

Manual Rollerpress

Unless you're doing continuous production, a manual roller press makes a lot of sense. Less space required and the ability to feed the job through the machine at the exact speed you want.



High quality shape and hole cutting with low cost tooling

	MRP500
Working width	500mm / 19.5"
Max adjustable height	125mm / 5"
Machine width	830mm / 32.5"
Machine depth (unfolded)	1350mm / 53"
Machine depth (folded)	700mm / 27.5"
Machine height (unfolded)	1200mm / 47"
Machine height (folded)	1320mm / 52"
Net machine weight	65kg / 143lbs

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Automatic Rollerpress

Full on vacuum forming requires a powered roller press in order to keep up with the output from the vacuum former. The RP series will perform all day long.



	RP680
Electrical Specifications	EU : 380V, 50/60Hz 3 Phase USA : 208-220V, 3 Phase
Max absorbed power	1kW
Working width	680mm / 28"
Max adjustable height	177mm / 7"
Machine width	1050mm / 41"
Machine depth	2815mm / 110"
Machine height	1400mm / 55"
Net machine weight	350kg / 770lbs

Can be custom made to your specifications

Strip Heaters



Catalogue holder
produced on the FLB1000
HIPS

Options



Adjustable fence
Allows you to position your
work piece consistently.

Message from the designer

Primarily designed for the education sector, the FLB500 is an entry level line bender, ideal for manipulating plastic sheet up to 6mm thick. Designed for ease of use, the FLB is ideal for students to begin their knowledge of thermoforming. The FLB1000 has double the heating width with precise heat control as well as a built-in timer.

The FLB Series of line benders have been designed for ease of use. The broad spread of heat from the incoloy element on the FLB500 and the quartz element on the FLB1000 means strong consistent bends are achieved rapidly.

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Our FLB customers include

Design Academy Eindhoven - Education (Belgium)
Sheffield Hallam University - Education (UK)
Performance Procurement - (UAE)
3M UK - R&D (UK)
IDEO - R&D (USA)
Itouch Systems - Prototyping (UK)
Superb Building Products - Product design (USA)
Chocolaterie Laruelle - Chocolatier (Belgium)

Technical Specifications

	FLB500	FLB1000
Heating width	500mm / 19.7"	1000mm / 39"
Heating element	Incoloy	Quartz
Timer	NO	YES
Alarm	NO	YES
Material clamp	YES	YES
Temperature regulator	YES	YES
Overall width	680mm / 28"	1280mm / 50"
Overall height	175mm / 7"	175mm / 17"
Overall depth	330mm / 13"	330mm / 13"
Weight	8kg / 17lbs	15kg / 33lbs
Electrical specifications	208-240V, 250W, 13A, Single Phase	208-240V, 750W, 13A, Single Phase



Cooling jig
Allows for precise angles to
be created and maintained to
achieve a perfect finish.

Formech - a partner to trust

Thousands of customers around the world including globally recognised brand leaders rely on Formech to provide the perfect vacuum forming solution for their needs. Formech's customer focused approach to design, manufacturing, quality control and support has earned us a position of trust across a variety of market sectors.



Formech is an ISO 9001 company, applying best practices across our entire operation. Additionally all Formech machines are CE compliant and adhere to the strictest

safety standards. Formech's insistence on over specification components in critical areas from the smallest desktop machines to the fully automatic series promotes long term durability without compromising affordability.

A cutting edge, not bleeding edge design philosophy means that Formech continually seeks to adopt the latest thermo-forming technologies, which provide real-world performance and efficiency enhancements. Prior to release of all new machines and features, Formech conducts extensive durability and application testing with multiple development partners.

Formech offers a range of services to help you select the perfect machine for your application and achieve the highest productivity from your investment including:

- Free of charge needs analysis
- Machine demonstrations
- CAD tooling support and consultancy
- Training programmes
- On-site commissioning
- Extended warranty options
- Comprehensive support including on-site assistance when required
- Parts, servicing and full reconditioning services for all Formech current and legacy machines

Over 30 years Formech has established an unparalleled global network of branch offices and qualified resale partners ready to provide expert advice, sales and support. We look forward to receiving your enquiry and sharing the benefit of our experience with you.

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Glossary

25" Hg

This relates to the efficiency of the vacuum produced using a mercury gauge.

1 phase or Single phase

Single phase electricity is supplied for domestic use for most households.

3 phase or Three phase

Three phase electricity is supplied for industrial use and is usually cheaper than single phase.



Becker oil pump

Becker rotary vane oil pump



Blister

A clear vacuum forming to enclose product which is sealed on to a backing card.

Blister sealing

To seal the vacuum formed blister (containing the product) on to the backing card.



Blow moulding window

A reducing window with a circular aperture for blowing plastic sheet into hemispheres.



Ceramic block

These are used to connect the electrical wires to the heating elements in the heater box.



Ceramic heaters

Ceramic heaters are ideal for packaging applications, where rapid cycles are required.



Clam pack

A hinged clear vacuum forming that encloses product when folded together.



Clamping frame

Steel frame that clamps the plastic sheet during the vacuum forming process. (Hinged or direct thrust)



Cooling bolster

A water cooled plate sits on top of the table and directly cools aluminium moulds/tools to a consistent temperature.



Cooling fan

Accelerate the cooling process once the plastic sheet has been formed.

Depth of draw

Equivalent to the maximum height of moulds/tools being used on a vacuum former.



Diaphragm pump

This pump uses a diaphragm to generate the vacuum and is used in our desk top machines.

Flying knife

The knife is attached to the heater box and cuts the reel feed material into individual sheets after each cycle of the machine.



Heater servo Motor

Consists of a DC motor, gear unit, sensors & control circuit.

Heating zone

The heaters are divided up into zones for greater control of different parts of the sheet.

Interlock

Feature ensuring that the mould cannot be raised when heater is in forward position.



Jaguar Inverter with variable speed control

An inverter converts direct current (DC) into alternating current (AC).

Mouldings

These are the formed plastic parts, also known as vacuum formings.

Negative feature

This feature allows you to form negative vacuum formings using reel feed material e.g. clam packs.

PLC with memory

Programmable logic controller with program storage in the memory.



Plug assist

This is usually a pneumatic or electrically driven ram that forces the plastic sheet into cavities to increase the thickness of the bottom of the cavities.



Pressure gauge

A visual indication of consistent pressure being applied.

Pressure outlet

This is featured on the smaller desktop machines and allows you to supply air for external equipment such as dome blowing machines.



Pyrometer

An electronic sensor that reads the temperature of the sheet and sends the heaters back when the sheet reaches the desired temperature.



Quartz heaters

Quartz heaters have the benefit of the standby feature, resulting in reduced electricity consumption.



Reducing windows/frames

Reduce the forming area in order to use smaller sheets of plastic when forming a mould/tool which is much smaller than the original forming area of the machine.



Reel feed

This is located on the side of the machine and holds reels of material.

Rotary vane pump

This pump uses rotating vanes to generate the vacuum and is used on our free standing machines.



Safety light curtain

The safety light curtain replaces a safety gate. As soon as the light curtain is broken all mechanical actions are halted or retract to safe positions.



Skin packing

To heat a clear film and then suck the film over a product down on to a perforated card.



Spray mist control

water mist is added to the cooling fans in order to cool down the moulded parts in a shorter space of time.



SSR relay

The Solid State Relays are electronic switches which control the current or voltage to the heating elements.

Table

Part of the vacuum forming machine where the mould/tool is placed.

Table height adjustment

This allows you to reduce the amount of travel of the table when using shallow moulds/tools.



Vacuum gauge

A visual indication of consistent vacuum being applied.

Vacuum pump flow rate

The amount of air that can be moved over a given time

Vacuum receiver or tank

This is usually a feature of our larger machines and reduces the vacuum time required to pull the plastic around the mould/tool.



Autolevel

Allows air to be pumped under the sheet during the heating cycle to maintain a consistent distance between the sheet and the heaters.



Education

Machines suitable for education



PLC with memory

Programmable logic controller with program storage in the memory.



Pre-stretch

Allows air to be pumped under the sheet to create a bubble to pre-stretch the material prior to forming.



Quartz/ceramic heaters

Quartz heaters have the benefit of the standby feature, resulting in reduced electricity consumption



Double heater.

Double heaters are usually required if you need to heat up the material very quickly or the material is over 4mm thick.



Manual

The manual option allows the operator to control almost every aspect of the machine during the cycle, without the use of electronic timers or PLC control.



Semi/fully automatic

Machine almost fully automatic apart from the operator needing to raise the pneumatic table (by pressing two buttons) before the heating of the sheet can continue. The rest of the machine cycle will be completed automatically. Some machines also have full automatic capacity - HD series requires manual placing of sheet / TF series includes reel feed as part of auto cycle.



		Compac Mini	300XQ	508DT	508FS	686	1372
SPECIFICATIONS	Forming area	280 x 230mm / 9 x 11"	430 x 280mm / 17 x 12"	482 x 432mm / 19 x 17"	482 x 432mm / 19 x 17"	646 x 620mm / 25.5 x 24.5"	1330 x 620mm / 52.4 x 24.5"
	Plastic size	300 x 250mm / 10 x 12"	450 x 300mm / 18 x 11"	508 x 457mm / 20 x 18"	508 x 457mm / 20 x 18"	686 x 660mm / 27 x 26"	1372 x 660mm / 54 x 26"
	Depth of draw	130mm / 5"	160mm / 7"	185mm / 7.3"	290mm / 11.5"	400mm / 15.7"	420mm / 16.9"
	Material thickness (max.)	4mm / .15"	6mm / .25"	6mm / .25"	6mm / .25"	6mm / .25"	6mm / .25"
	Vacuum pump	Diaphragm pump 22" Hg - 2.76m ³ /HR	Diaphragm pump 25" Hg - 5.52m ³ /HR	Diaphragm pump 25" Hg - 5.52m ³ /HR	Rotary vane pump 25" Hg - 10m ³ /HR	Rotary vane pump 26" Hg - 16m ³ /HR	Rotary vane pump 26" Hg - 25m ³ /HR
	Type of heater	Quartz	Quartz	Quartz	Quartz	Quartz	Quartz
	Heating zones	1	4	4	4	6	15
FEATURES	Digital timer	✓	✓	PLC	PLC	PLC	PLC
	Interlock	✓	✓	✓	-	-	-
	Vacuum gauge	✓	✓	✓	✓	✓	✓
	Pressure outlet	✓	✓	✓	✓	-	-
	Pre-stretch	-	-	-	✓	✓	✓
	Autolevel	-	-	-	✓	✓	✓
	PLC Control with touch screen	-	-	✓	✓	✓	✓



		1250	1500	FMDH660	HD686	HD750	HD1000	HD1500
SPECIFICATIONS	Forming area	1180 x 1180mm / 46.5 x 46.5"	1460 x 960mm / 57.5 x 37.8"	620 x 620mm / 24.5 x 24.5"	647 x 622mm / 25.5 x 24.5"	700 x 500mm / 27.6 x 19.7"	960 x 960mm / 37.8 x 37.8"	1460 x 960mm / 57.5 x 37.8"
	Plastic size	1220 x 1220mm / 48 x 48"	1500 x 1000mm / 59 x 39"	660 x 660mm / 26 x 26"	686 x 660mm / 27 x 26"	750 x 540mm / 29.5 x 21.25"	1000 x 1000mm / 39.4 x 39.4"	1500 x 1000mm / 59 x 39.4"
	Depth of draw	600mm / 23.5"	600mm / 23.5"	250mm / 10"	350mm / 14"	350mm / 14"	350mm / 14"	350mm / 14"
	Material thickness (max.)	6mm / .25"	6mm / .25"	10mm / .40"	6mm / .25"	6mm / .25"	6mm / .25"	6mm / .25"
	Vacuum pump	Oil filled rotary vane pump 20m ³ /HR - <1mb ABS + TANK	Oil filled rotary vane pump 20m ³ /HR - 1mb ABS + TANK	Dry vane pump 16m ³ /HR	Oil filled rotary vane pump 41m ³ /HR <1mb ABS + TANK	Oil filled rotary vane pump 41m ³ /HR <1mb ABS + TANK	Oil filled rotary vane pump 63m ³ /HR <1mb ABS + TANK	Oil filled rotary vane pump 63m ³ /HR <1mb ABS + TANK
	Type of heater	Quartz	Quartz	Quartz or Ceramic	Quartz	Quartz	Quartz	Quartz
	Heating zones	20	18	8 (top) + 6 (bottom)	16	16	20	30
FEATURES	PLC Control with touch screen	✓	✓	✓	✓	✓	✓	✓
	Program memories	20	20	20	40	40	40	40
	Pre-stretch	✓	✓	✓	✓	✓	✓	✓
	Autolevel	✓	✓	✓	✓	✓	✓	✓
	Cooling fan system	✓	✓	Optional	✓	✓	✓	✓
OPTIONS	Cooling bolster	Optional	Optional	Optional	Optional	Optional	Optional	Optional
	Pyrometer	Optional	Optional	Optional	Optional	Optional	Optional	Optional
	Manual reel feed	-	-	Optional	Optional	Optional	-	-

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