

# M-LINE

# GABLER

THERMOFORM TECHNOLOGY



## TILTING TECHNOLOGY IN PERFECTION

High productivity, innovative drive technology and highest stability:  
The unique tilting technology makes the high-end machines of the  
M-LINE ideally suitable for large scale production of cups of any kind.

Precise, efficient, and powerful

# M-LINE: State-of-the-Art Tilting Technology

With their unique tilting technology, decentral drive technology and a robust forming station made of cast steel, the machines of our M-LINE are perfectly suitable for the production of simple or complex parts in large scale. Combined forming and cutting in just one step and an innovative stacking system with patented product handling make these high-end machines especially flexible and powerful. But that's not all: the use of regenerative units in the drive technology also leads to significantly reduced energy consumption.

## Maximum flexibility

The machines of the M-LINE are characterized by high flexibility in the production of a large variety of products. This is ensured by the **modern stacking system with turning plate** as well as the simple integration of automation solutions.

## Highest Efficiency

Using **state of the art technology**, the high-end machines of the M-LINE are especially efficient and powerful. **Newest assisting plug technology, forming air supply and stacking systems** also enable ideal material efficiency and better film usage which can reduce the raw material consumption by up to 20%.

## Top Class Product Quality

The innovative **Trim-in-place (TIP) process** as well as optimized forming by using **the latest plug assist and forming air technology** enable a continuously high production performance with consistent quality.

## Robust and Stable

By the use of **cast steel**, the machines of the M-LINE show **highest stability**, which makes them particularly suitable for processing PET- and PP-film as well as biodegradable plastics.

Up to  
**180,000**  
cups/hour

**>95%**  
Product efficiency

## Decentral Drive Concept

A **decoupled drive technology** with separate **servo drive** for both the lifting and the swiveling movement are a unique selling point of the GABLER M-LINE. In combination with the crankshaft, the system ensures optimized movement, less wear of the tools and higher cycle rates.



## High Energy Efficiency

The integration of regenerative units in the drive technology results in a significant reduction of the energy consumption of the M-LINE machines. This makes them especially efficient and economical to operate compared to other systems on the market.

## Innovative Stacking System

The modern stacking system with its 180-degrees inverting plate covers all production needs and ensures highest production safety with a maximum of product flexibility. The patented article handling also provides gentle stacking even if the articles are still warm, hereby increasing product quality.





M is for multifunctional

# All this with the M-LINE

The M-LINE is characterized by high flexibility in the production of a large variety of products. Because of a fixed top yoke and a swiveling bottom table which performs all relevant movements, all machines of the M-LINE achieve perfectly parallel operation and first class product quality while they also score in terms of maximum tool life.

## Cup

Production of cups in all shapes and sizes is one of the showpieces of the M-LINE. Due to a very even material distribution, cups with very thin walls can be made without problems.

## Margarine tubs

No matter if round, oval or rectangular – the machines of our M-LINE serve to make margarine and cream cheese tubs in different depths and with different mechanical properties.

## Coffee capsules and plant pots

The thermoforming systems of our M-LINE in connection with the highly precise hole punch and stacking unit 4hole or Twin are the ideal solution for the efficient production of coffee capsules and plant pots of highest quality.

## M92

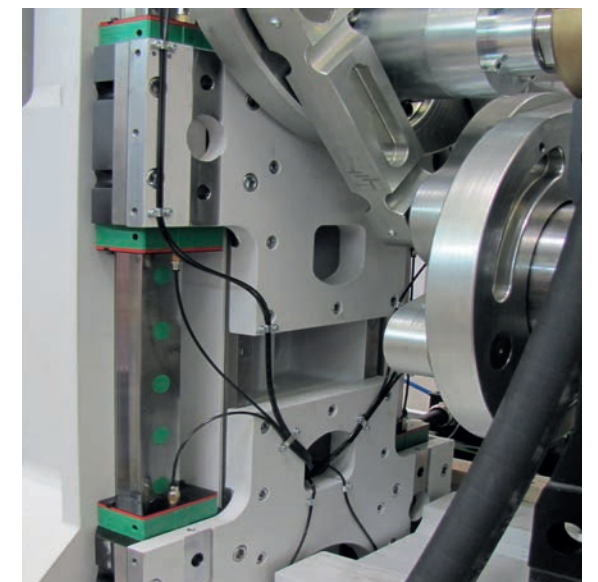
- » Entry-level model of the M-LINE
- » For small to medium volumes
- » Over 20 years of proven technology
- » Maximum flexibility in terms of tools and products

## M98

- » Most successful model in its class on the market
- » For large volumes
- » M98 MAXX for the integration of third-party tools
- » M98 Light for PET production

## M100

- » Lowest unit costs worldwide
- » Highest output performance with up to 180,000 cups per hour
- » Extreme cutting force of up to 1,000kN
- » Largest forming area on the market
- » High production power with low energy consumption



M is for more value

# M-LINE

- » Up to **180,000 cups/hour**
- » Extreme cutting force of **up to 1,000kN**
- » Over **200 mm** product depth
- » **Up to 20%** less raw material consumption
- » With **1,130 x 550 mm** the largest forming area on the market



### High economic efficiency

Less raw material consumption due to optimum film usage



### Low energy consumption

By using regenerative units in the drive technology



### Simple automation

Increased productivity and less personnel in fully automated systems



## CHECK MY GTF

Our well-tried and proven cloud-based remote support is available for all machines of the M-LINE. This option enables our experienced service technicians to access your machine easily and fast, offering many advantages:

- » Optimum visualization of the production process and the energy consumption
- » Process and drive optimization and increased machine efficiency (+1%)
- » More process safety and reduction of machine downtime
- » Better planning of maintenance and staff resources; lowering work cost



## TOOL HANDLING

For a rapid and comfortable tool change, the M-LINE machines are equipped with an integrated tool change system.

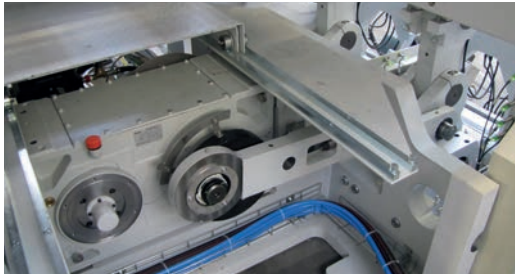
- » Simple and safe tool handling thanks to a gentry crane integrated as standard and quick-release connections for water and forming air
- » Easy-to-understand tool thanks to an integrated tool change help on the control panel
- » Tool change in just 90 minutes by just one person



M is for modern technologies

# Technologies for a Plus in Quality and Performance

Apart from the robust design and the widely proven GABLER quality, several sophisticated technological innovations in the machines of the M-LINE provide a maximum of power and product quality.



### Crankshaft

The innovative and proven crankshaft technology causes optimum transmission and very smooth and even movements.



### Gear rack plug assist

High cycle rates with first class quality: the proven gear rack system ensures fast acceleration and speed which effectively prevents stretchmarks on clear PET film. In addition, large draw depths can be achieved without problems.



### Eccentric shaft

The punching depth adjustment is achieved via an eccentric shaft in the knee lever axis. This ensures highest precision and product safety as well as very low maintenance effort.



### Direct cooling

A direct cooling system in the machines of the M-LINE ensures exact control of the cooling water temperature. This results in extended tool life and easy maintenance.



### Speedflow System

Four high power air valves and four large forming air tanks ensure faster filling and venting of the tool. This leads to high quality forming results and at the same time to an increased cycle speed for different products.



M is for manifest progress

## M-LINE

- » High productivity through the use of the latest high-end technology
- » Flexible production of a large variety of products
- » Decentralized drive concept for low tool wear
- » High energy efficiency due to regenerative units in the area of the drive technology
- » Forming station made in solid steel construction

### 4HOLE

The hole punching/stacking unit 4hole takes pallets with the formed products (e.g. plant pots or coffee capsules) directly downstream of the forming station and ensures high precision hole cutting in the hole punch. The resulting hole punching waste is vacuumed off through the bottom tool.

### TWIN

This compact system for the production of plant pots or coffee capsules scores with its tiny footprint and high precision. Two forming stations for forming and cutting the holes, directly in series without conveyor belt, ensure fast handover times and high product quality.

### M98 MAXX

The M98 MAXX is extremely solid thanks to its large forming table made of cast steel. It was specifically designed to be able to integrate a large bandwidth of third-party tools and thus scores with a plus in flexibility and profitability.

# Why GABLER?



## RELIABLE PARTNER

A financially sound company, one of the world-market leaders in high end thermoforming technology – with branches all over the world.



## EXPERT SERVICE

International network of experienced service technicians, rapid help on site, regular maintenance of your plants and fast, world-wide spare parts delivery.



## COMPREHENSIVE EXPERTISE

Almost 50 years of experience in thermoforming.



## STATE OF THE ART TECHNOLOGY

Innovations in the fields of pre-stretching technology, tool cooling, machine control, remote support, digitalization, and many more

