

# Multinject with parallel injection unit The new GXH

*Engineering Passion*

***Krauss Maffei***

# Adding components to add value

## Applications



Electricals/electronics



Packaging



Packaging



Automotive

Add more color, improve surface feel, install parts or attach seals: Multicomponent injection molding opens up an abundance of design and construction possibilities for the user. Combining this in one process and one machine means that production can be increased, quality can be improved and there can be increased freedom when it comes to design.

### Highlights of the Multinject technology:

- High level of functional and design freedom
- Integrated workflows
- Fewer sources of faults
- Reduced logistics costs

### Perfect for Multinject technology

The series can be offered with any common multicomponent technology. KraussMaffei can provide a machine solution for almost any multicomponent technology. Examples of this include integrated turntables, index plate drives, and sandwich platens and heads.

### Endless possible combinations of:

- Colors
- Different material types and their properties
- Functions (hard-soft, surface feel, seals, etc.)

## The best solutions for every application The GX Series is now even more flexible

Thanks to its modular design, the GX Series is ideal for combining with other injection units as part of multicomponent technology. In addition to the L, V and Z versions, KraussMaffei now also offers the H position, in which two injection units are positioned side by side, horizontally.

### Powerful thanks to:

- An extremely short dry cycle time
- Simultaneous injection and parallel plasticizing of both injection units to each other – without a pressure accumulator
- Extremely low energy consumption
- Addition of up to two bolt-on injection units in the L or V position (integration of four injection units in a control system)

### User-friendly thanks to:

- Outstanding accessibility
- Fast mold set-up
- Intelligent, user-friendly control system
- Large mold-fixing platens
- Integrated chute

### Value proven thanks to:

- Robust clamping and injection unit
- Unique GuideX and GearX system
- Low maintenance costs

# Transparent technology

## Take a tour of the GXH

### Maximum application flexibility

Option for single-component retrofitting

### Flexible parts removal

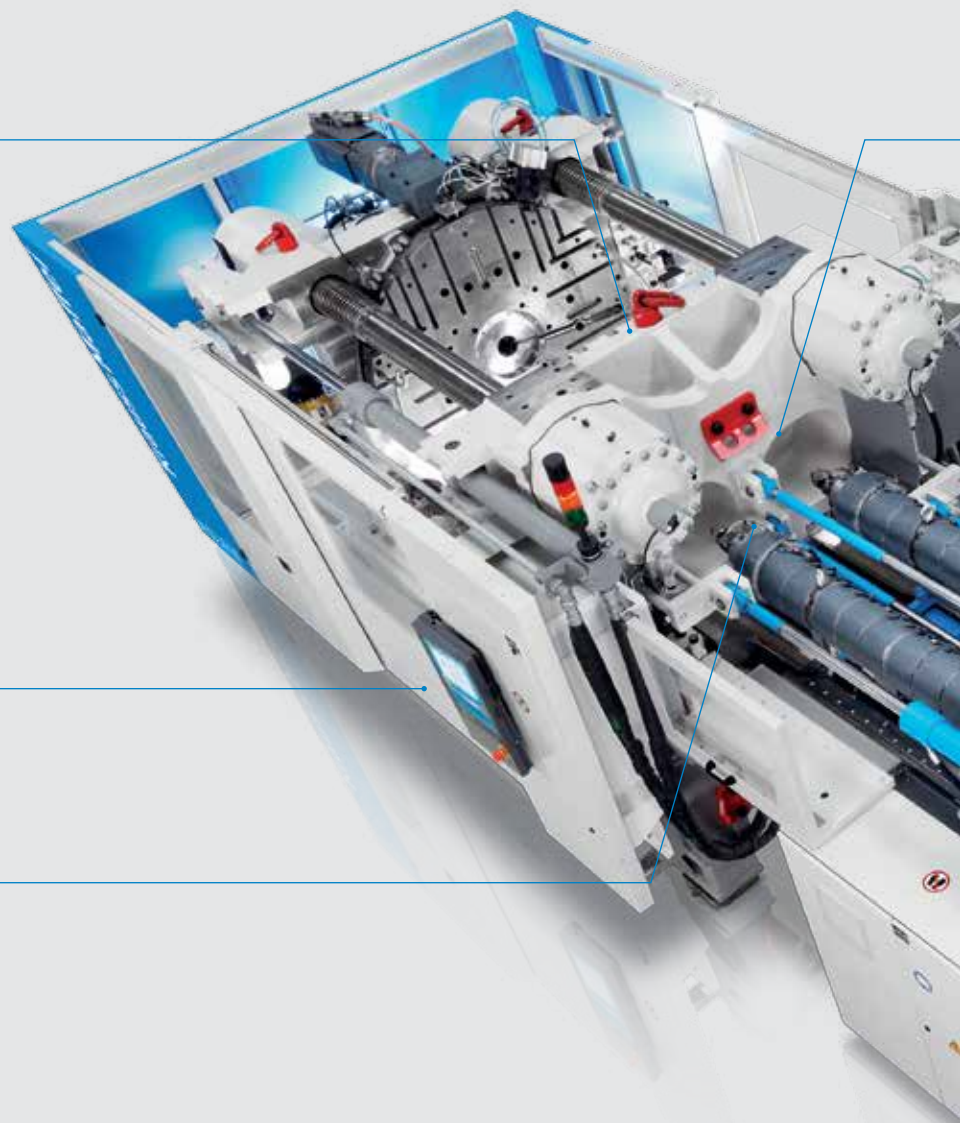
Chute for discharging the parts in all directions

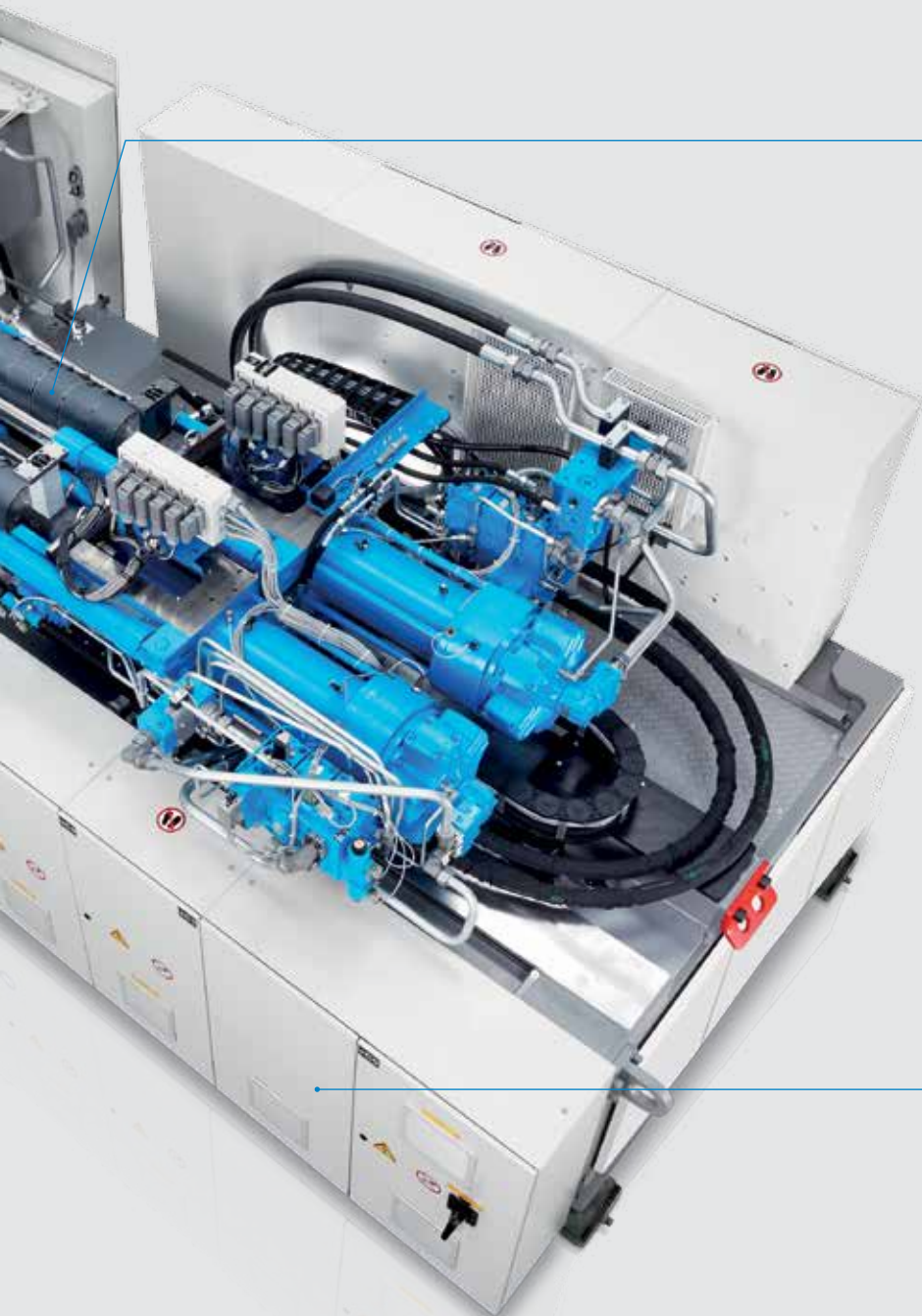
### High level of production flexibility

The clearance between the nozzles can be selected freely

### Optimum use of the surfaces

Same installation area and machine height as on a single-component machine



**Direct introduction**

The melt is guided directly into the mold half

**Easily accessible**

The primary and secondary injection units are extremely easy to access

**Easy to transport**

The second injection unit does not have to be removed during transport

## No detours – No losses Direct path into the cavity

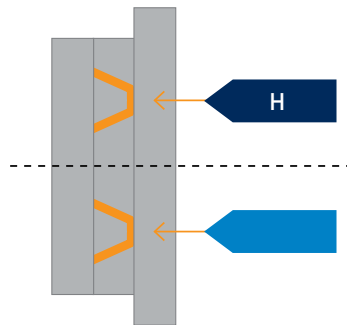
### Direct introduction

Detours are rarely advantageous. Because the end result is especially important for optical components, detours in mold manufacturing should definitely be avoided. Thanks to the horizontal arrangement of the injection units, the melt is guided directly into the cavity and thus avoids "dead corners". You will see that, with the GXH, KraussMaffei can offer you the best solution for sophisticated parts.

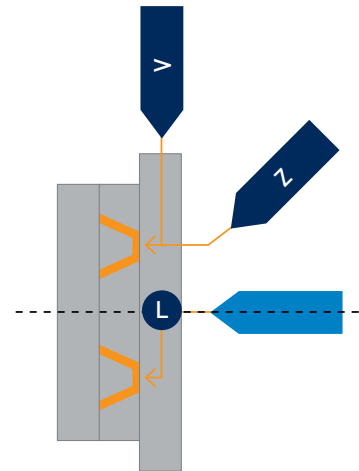
When the injection units are positioned horizontally, the melt is guided centrally into the relevant mold half. For other positions such as the Z, L or V position, the melt in the mold must be diverted into both mold halves.

### Your advantages:

- Simple mold design with low mold height
- Low flow-path lengths, leading to reduced pressure losses
- Excellent results, for example, for optical components
- Increased flexibility when selecting the secondary injection unit



Horizontal arrangement (H), top view



Piggyback arrangement (Z), vertical arrangement (V), lateral horizontal arrangement (L), side view

## Effective use of the surfaces Consistent installation area for the basic machine

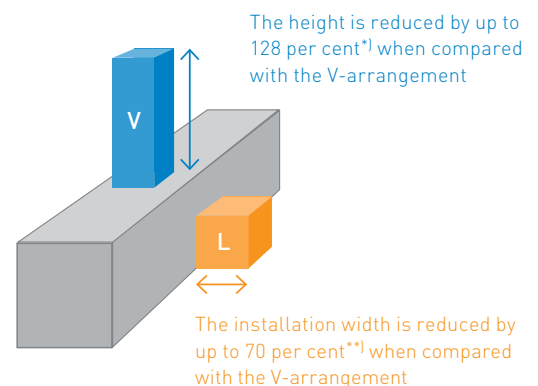
### Optimum use of the surfaces

Depending on the arrangement of the injection units, there is a risk that some valuable space may be lost. Thanks to the horizontal arrangement of the primary and secondary injection units, they do not protrude in terms of height or width.

The same installation area and machine height are required for the GXH as for a single-component machine. This means you can benefit from all of the advantages of a two-component solution while making optimum use of the surfaces.

### Your advantages:

- Smaller installation area
- Cost and time-savings



\*¹ When compared to: SP180-SP750

\*\*¹ When compared to: SP180-SP1400

## No barriers – for man or machine The horizontal position improves access

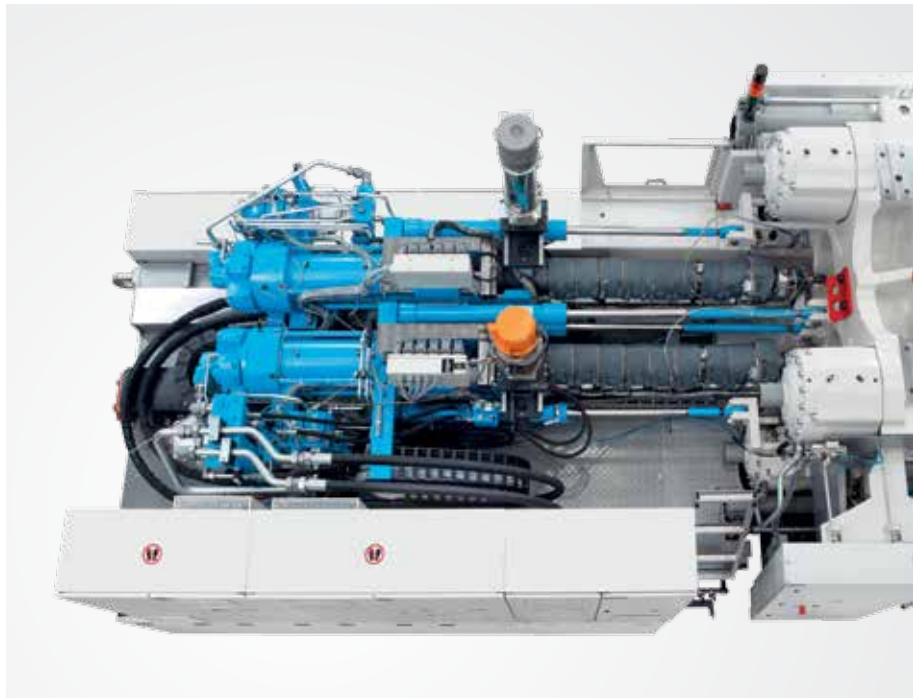
### Easily accessible

Since the injection units are located next to each other, both the primary and the secondary injection units are easily accessible. Furthermore, the melt cake and the nozzles can also be accessed without any problems. Both injection units are easy to maintain without any additional effort. Another major advantage of the GXH is the ease with which a linear robot can be installed.

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### Your advantages:

- Simple maintenance and straightforward change of the plasticizing unit
  - Easy access to the mold
  - No restrictions on automation
  - The nozzle contact forces are independent of each other
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Thanks to an integrated step to a platform, easy access to the injection units is guaranteed.

## Always ready for transport No need to remove the injection unit



### Easy to transport

Regardless of how big it is, the second injection unit does not need to be removed for transport. This means that conversions and machine extensions can be carried out quicker and with a more sustainable use of resources.

The arrangement of the injection units means that the machine can be transported without having to remove the units.

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### Your advantages:

- Time-savings and a reduction in costs
  - Prevention of damage
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## Nozzle clearances precisely according to your specifications

### Simple retrofitting of the clearance

#### Customer-specific clearances

As with the applications, there is also an infinite range of molds. KraussMaffei is aware of this diversity and offers intelligent solutions so that they can always offer you optimum flexibility. The aspect of a cost-benefit ratio is the highest priority here.

During the project phase, the required nozzle clearance is determined within a defined area. The clearance can be changed at a later point. This helps you to remain flexible for your future tasks.

#### Your advantages:

- The nozzle centers are easily adjustable
- Any nozzle clearance can be selected
- As an option, the nozzle clearance can be changed



A freely selectable nozzle clearance and simple retrofitting: Thanks to the large-scale plate holes, the location of the injection units may vary by up to 170 mm (using GXH 550 as an example: 480-650 mm).

## Double benefit

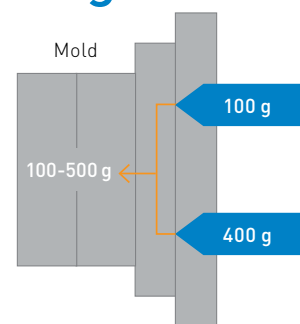
### Solution for single-component retrofitting

#### Maximum application flexibility

With an optional adapter plate, the GXH multicomponent machine can be retrofitted for single-component applications. Furthermore, you can even combine the shot weights or use each of the injection units individually. This increases the shot weight range and application flexibility.

#### Your advantages:

- Flexible machine use
- The shot weight can be increased or reduced for single-component operation



Rough drawing of an adapter plate: The shot weights can be combined with each other. This further increases the application flexibility.



## Adding components to add value The new GXH

Multicomponent injection molding opens up an abundance of design and construction possibilities for the user. Combining this in one process and one machine means that production can be increased, quality can be improved and there can be increased freedom when it comes to design. This enables you to combine specific materials just as easily as you can integrate functions.

In the medium-sized machine segment, the GX Series offers the multicomponent injection molder numerous possibilities for clamping forces of 400 to 900 tons. In the horizontal version (GXH), on which two injection units are positioned beside each other, it is ideal for packaging-related applications, for example.