



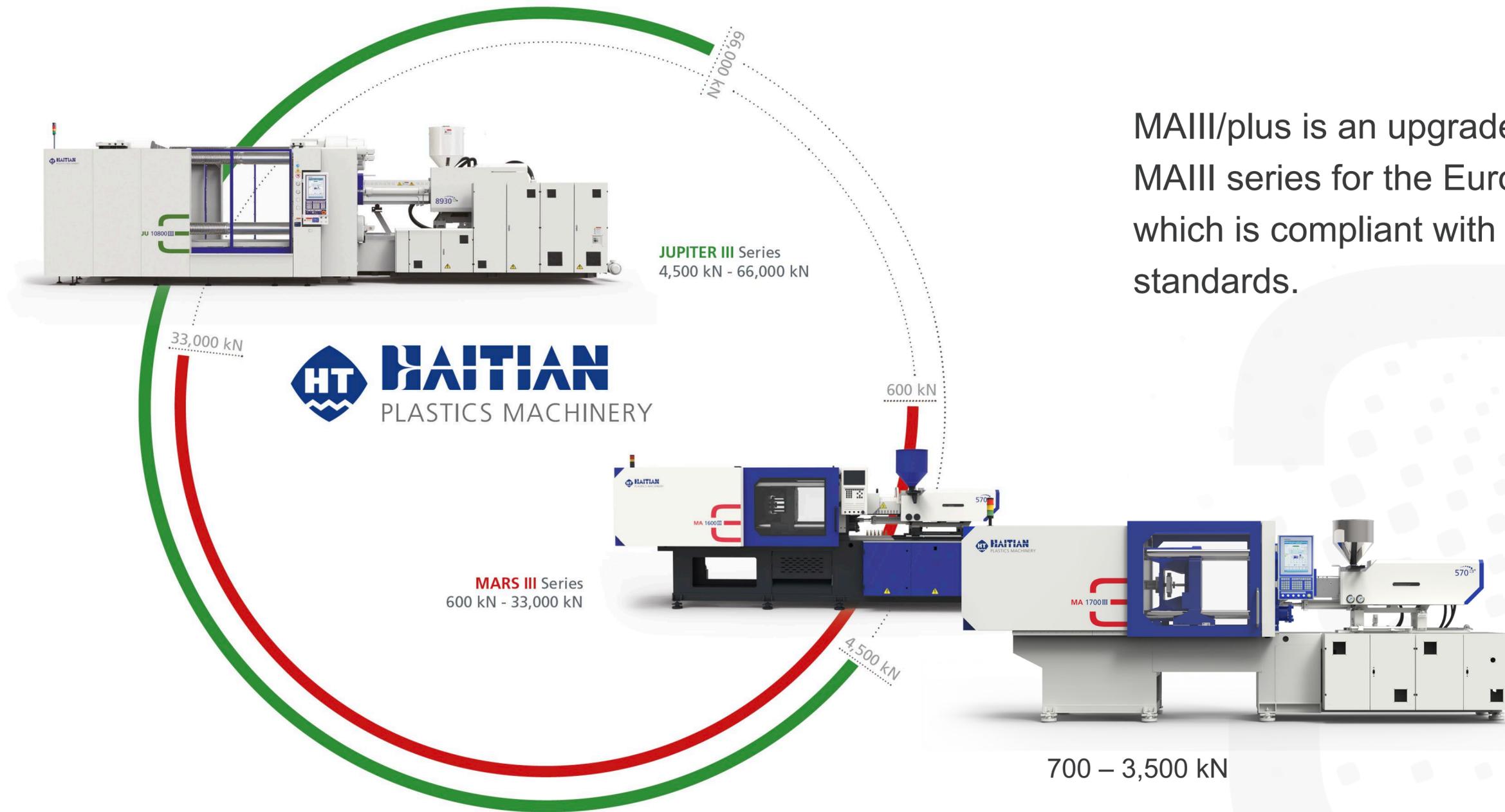
**HAITIAN**  
PLASTICS MACHINERY

# HAITIAN MARS III/PLUS SERIES



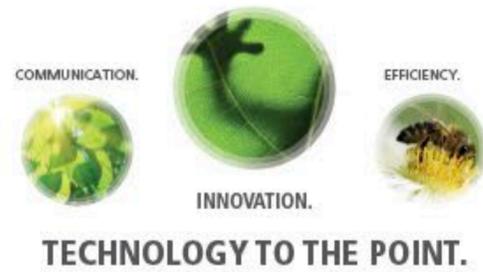
TECHNOLOGY TO THE POINT

# The Haitian Product Family



MAIII/plus is an upgraded version of the MAIII series for the European markets, which is compliant with CE and UL standards.

# Application Fields Examples



## CONSUMER GOODS

- Plastics parts used in daily life
- Highly efficient and cost effective



## CONSUMER ELECTRONICS

- Parts and components in the consumer electronics industry
- Highly efficient solutions for high cavity applications



## HOME APPLIANCE

- Plastics parts in home appliance
- Flexible, highly efficient and stable solution



## AUTOMOTIVE

- Plastics parts in the automotive industry
- High efficient solution for a wide range of applications and process requirements



# Mars Series Production Bases



- Production bases in Ningbo (picture), Guangzhou and Wuxi
- Over 500,000 sqm production area



# Development

Initial stage  
2006 - 2007

Marketization generation I  
2007 - 2012

  
Generation II  
2013 - 2018

  
Enhanced version generation II  
2015 - 2018

  
Generation III  
2019



Launch of HTF series  
j5 servo control technology



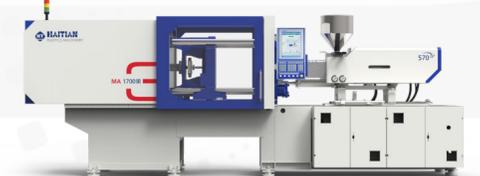
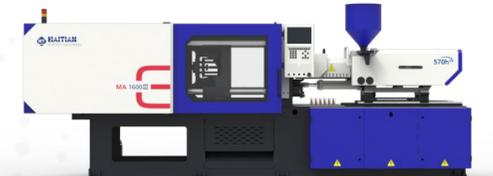
Introduction of servo  
energy saving technology



Servo technology upgrading



More precise





700 - 3,500 kN

Accumulative sales for Mars Series over  
**250,000** units

## Intelligent<sup>+</sup>



Smart algorithms for a new machine performance

## Dynamic<sup>+</sup>



More efficient and application oriented than ever before

## Interactive<sup>+</sup>



Open integration with all common interfaces for automation and MES

# Haitian Mars III Plus Series Overview

Dedicated EU Version with clamping force from **700 - 3,500 kN**

## New Clamping structure

- More space
- Higher precision clamping
- Better mold support

## Intelligent Control

- New UI Interface
- Precise and fast digital control



## Stable and reliable injection

- Wide range of injection process coverage
- Lower energy consumption but higher running accuracy

## Fast Response Power System

- Increased system pressure (20 Mpa)
- Reduced response time
- Energy efficient



## EXTERIOR DESIGN



# Exterior Design

- European-style appearance
- Open body, drive distribution box placed in non-operation



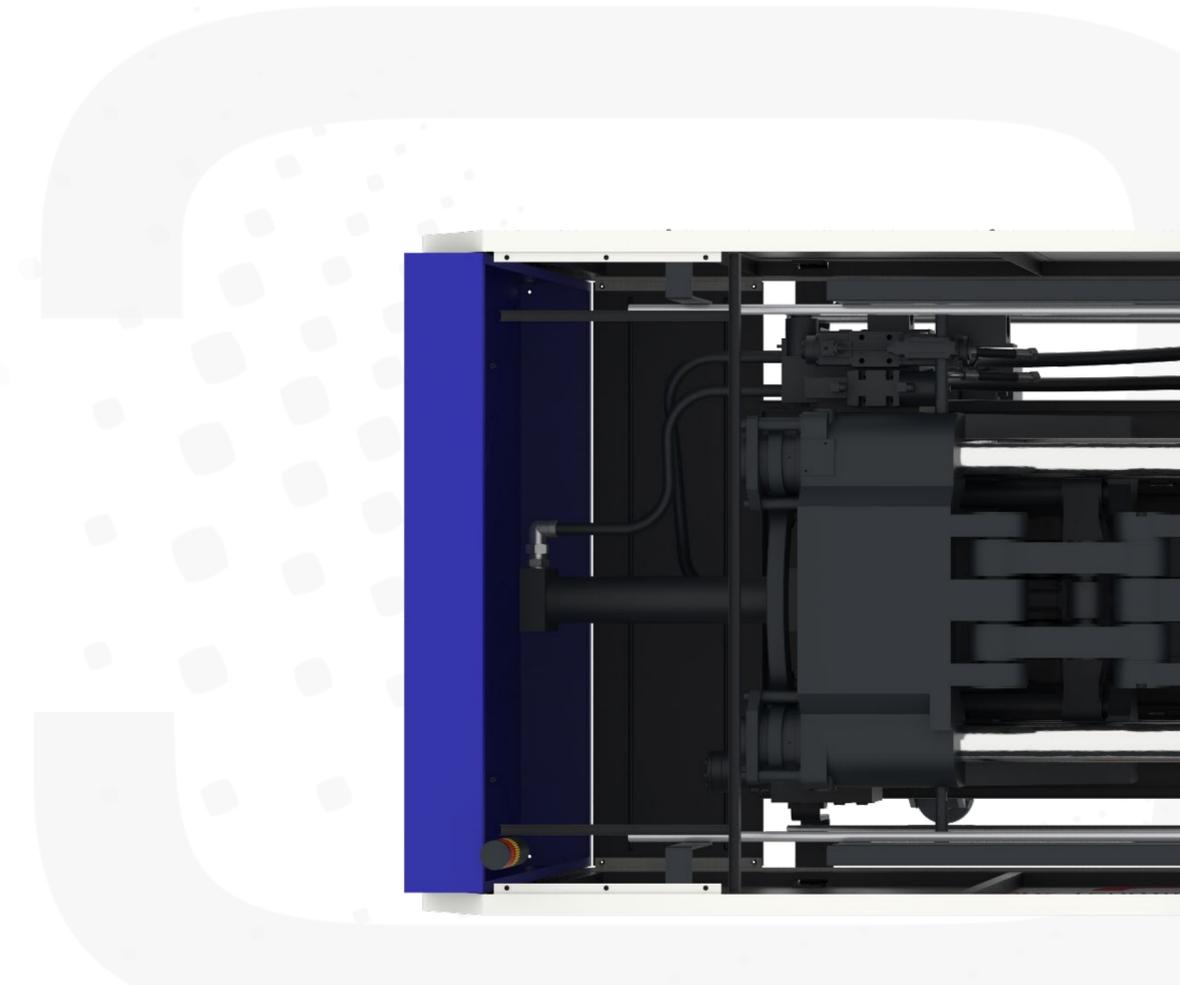
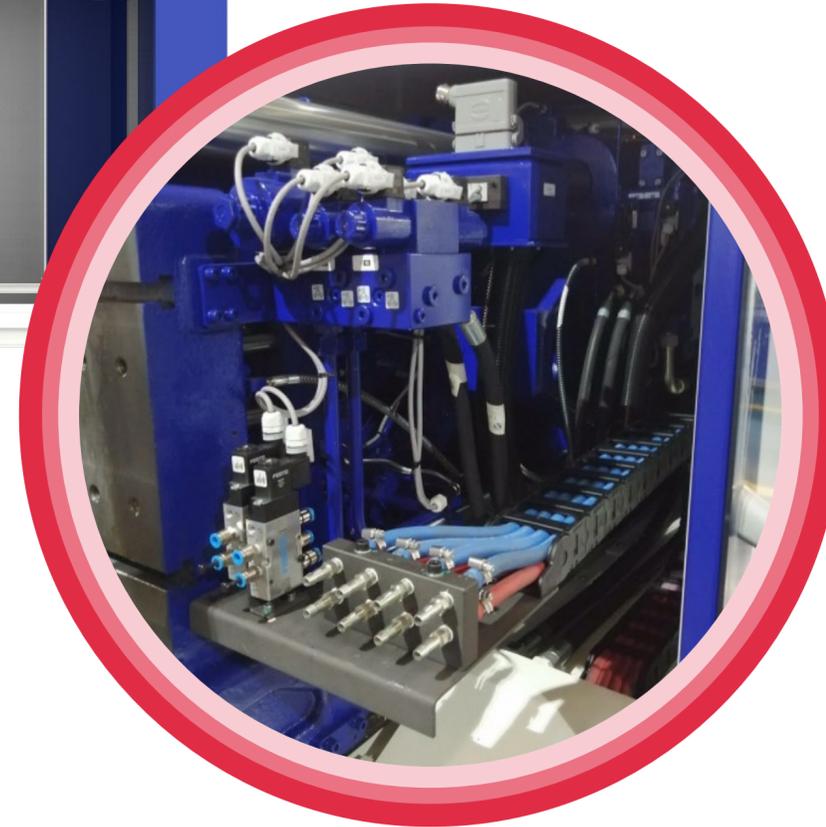
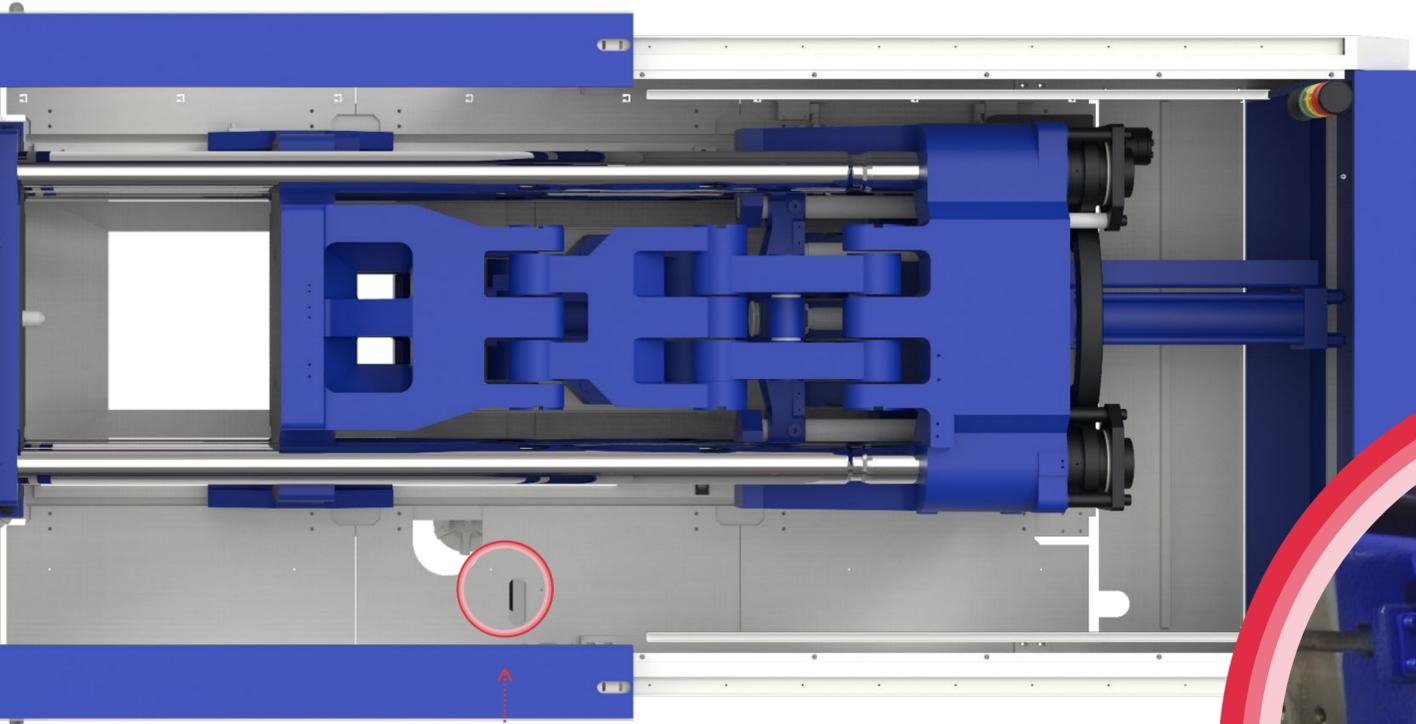
# Exterior Design

- Frameless door easy entry for mold changes and robots
- Free space under basement for auxiliaries and conveyor belts



# Exterior Design

- The safety door on the non-operation side is widened
- Two sets of core-pulling
- Glass tube flowmeters are reserved (optional)





# INJECTION UNIT



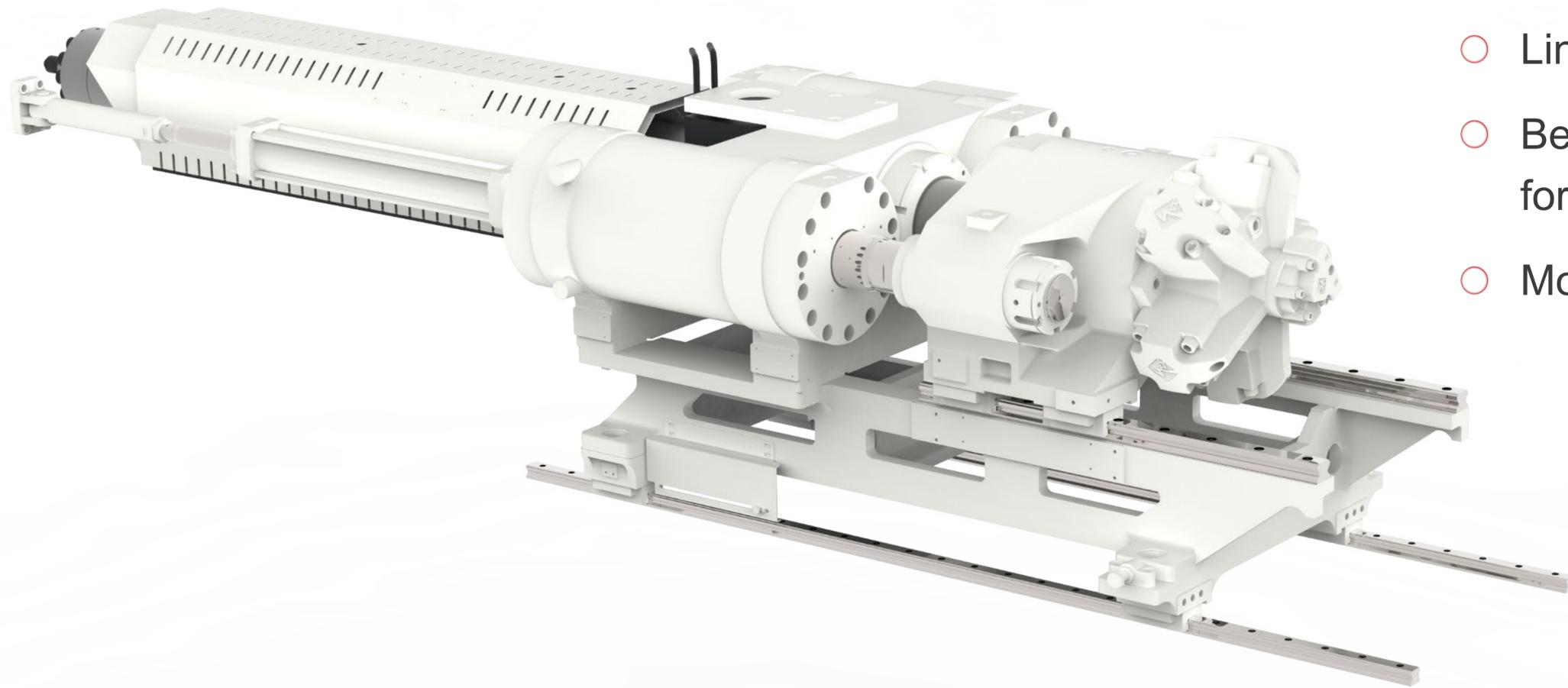
# Injection Unit Modularity

Clamping Unit	Injection Unit								
	130	280	400	570	750	1000	1350	1700	2250
70	Standard range	Combination range							
100	Combination range	Standard range	Combination range						
130		Combination range	Standard range	Combination range					
170			Combination range	Standard range	Combination range				
210				Combination range	Standard range	Combination range			
270					Combination range	Standard range	Standard range	Combination range	
350							Combination range	Standard range	Combination range

Standard range  
 Combination range

# Linear Guides

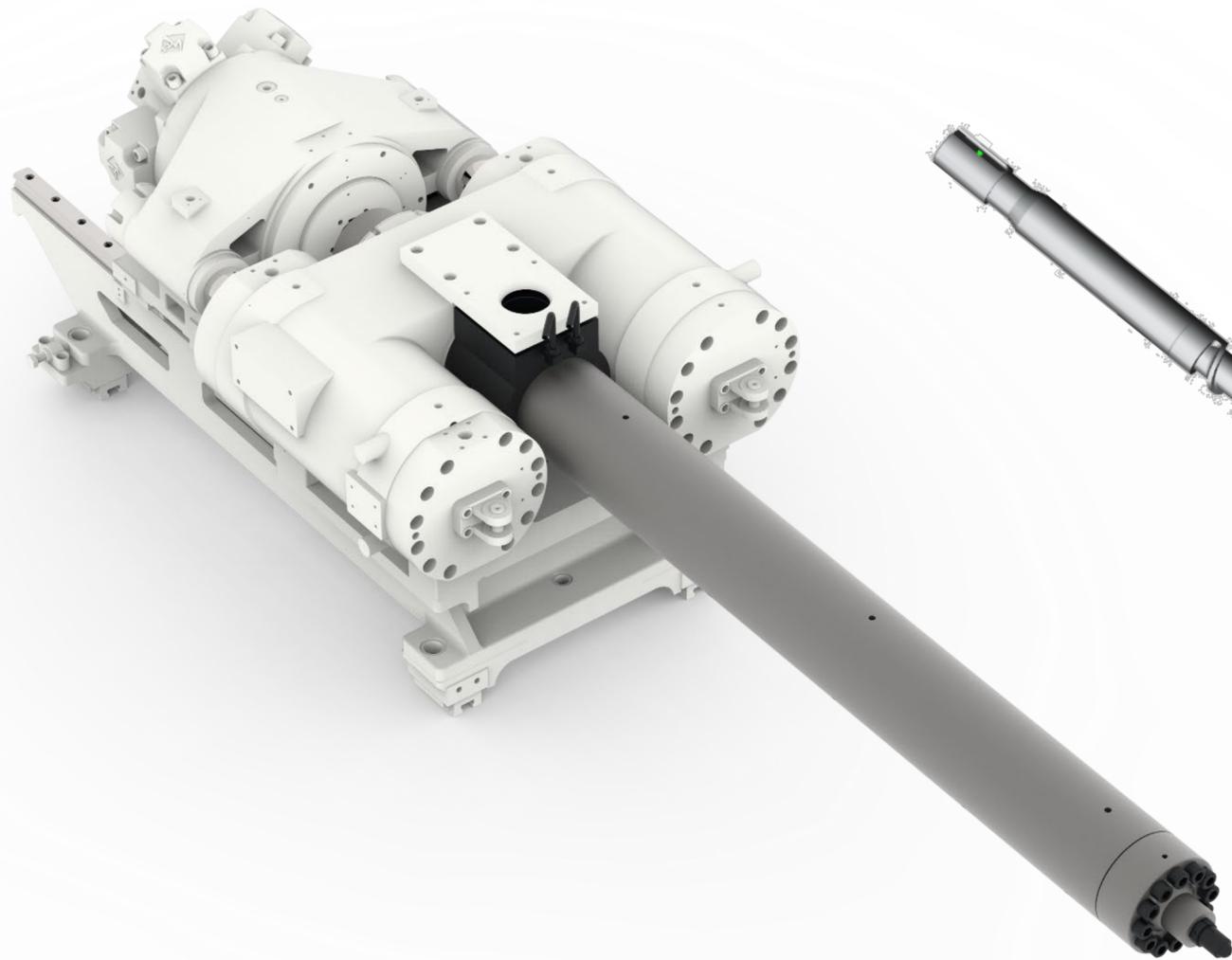
## Precise Injection Response



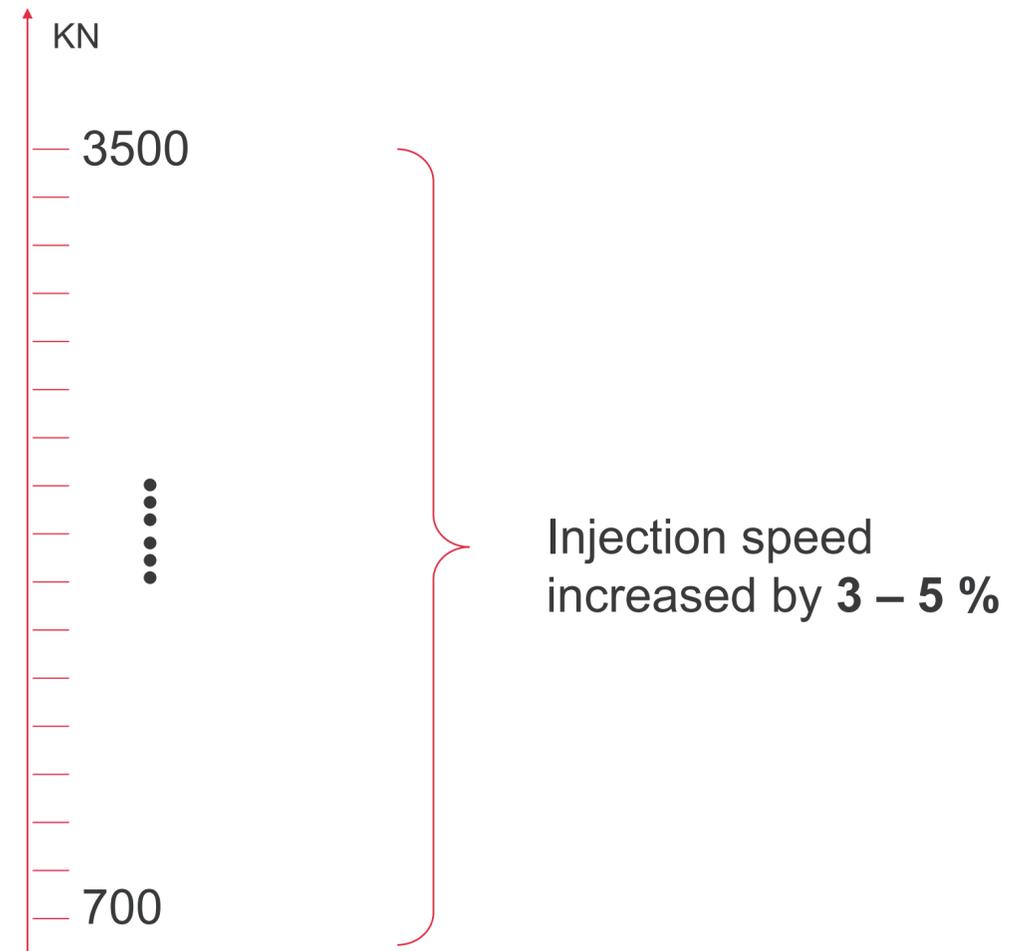
- Linear guides on both carriage and injection
- Better acceleration and deceleration response for injection
- More precise back pressure control

# Efficient Plasticizing Components

- Newly designed plasticizing components
- Further improvement of the plasticizing efficiency



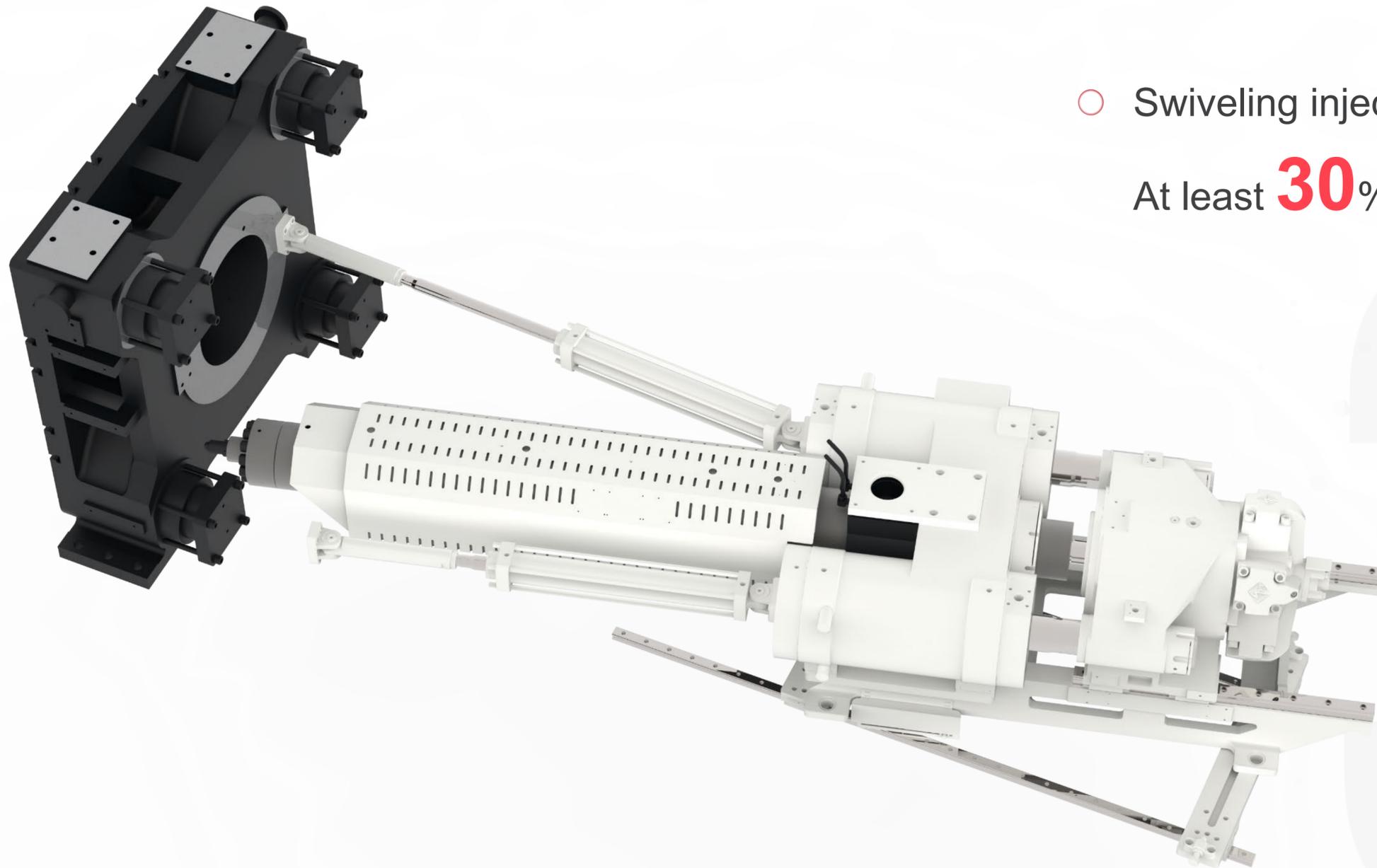
# Increased Injection Speed



## Strong injection capacity featuring high injection pressure & speed

- Shorter dry cycle times
- Better solution for thin-walled parts
- Prevention from deformation through cooling
- Improved process range and improve process forming capabilities.

# Easy Maintenance



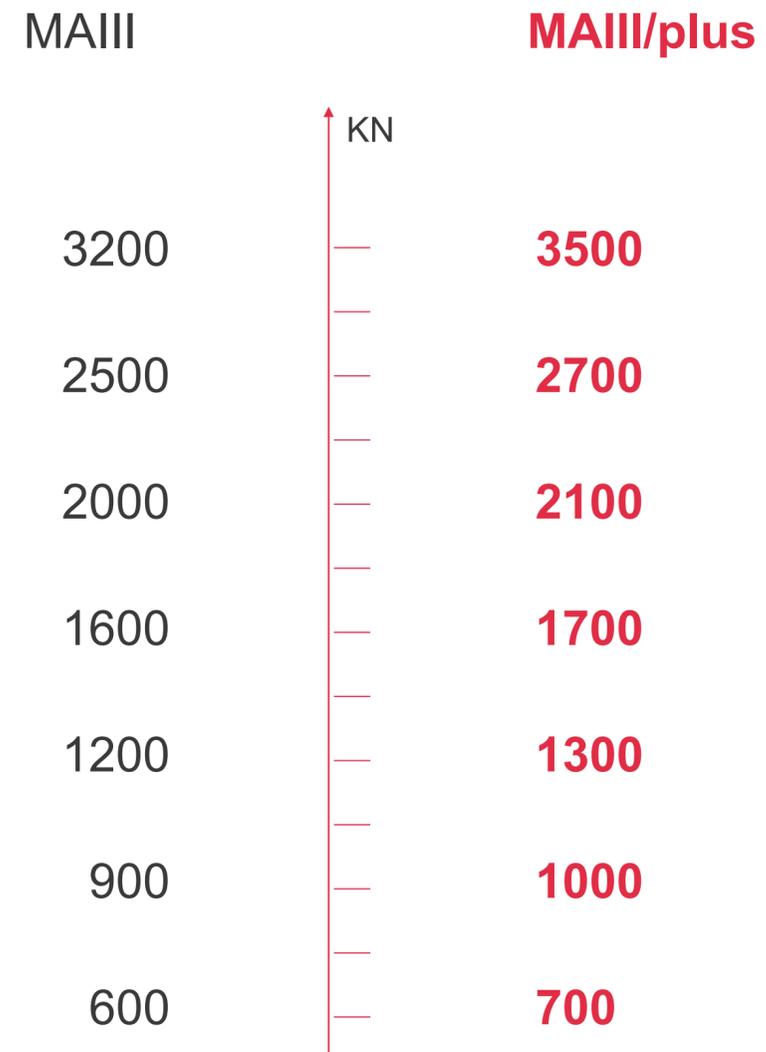
- Swiveling injection unit as standard

At least **30%** time saving for screw replacement

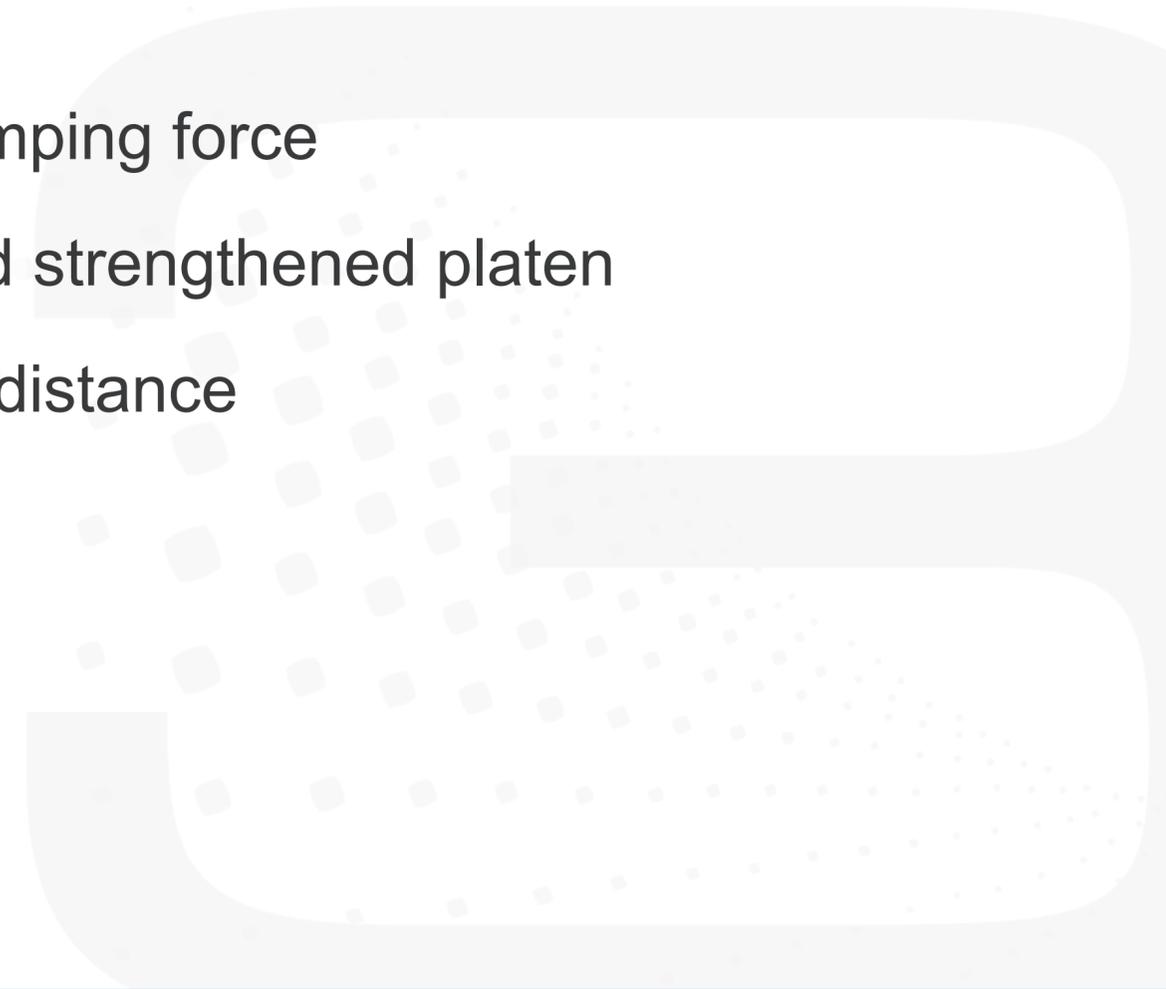
# CLAMPING UNIT



# Clamping Unit



- Upgraded clamping force
- Thickened and strengthened platen
- Bigger tie bar distance

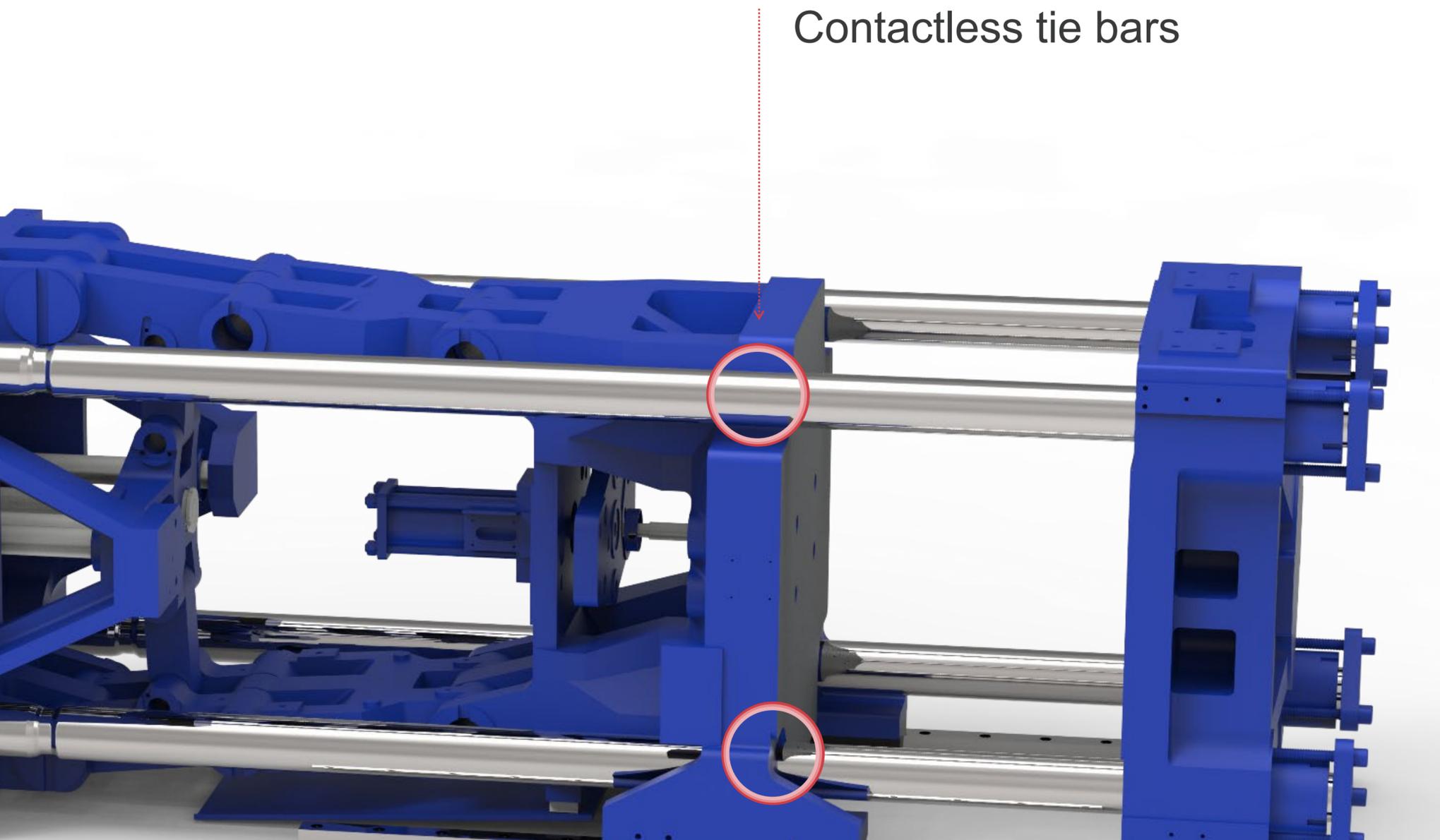


# Tie Bar Distance

MAIII/plus	Tie Bar Distance	MAIII	Tie Bar Distance
MA700III/130	360 x 360	MA600III/130	310 x 310
MA1000III/280	410 x 410	MA9000III/280	360 x 360
MA1300III/400	470 x 470	MA1200III/400	410 x 410
MA1700III/570	530 x 530	MA1600III/570	470 x 470
MA2100III/750	580 x 580	MA2000III/750	530 x 530
MA2700III/1000	680 x 680	MA2500III/1000	580 x 580
MA3500III/1700	730 x 730	MA3200III/1700	680 x 680

- Enlarged tie bar distance
- Fully square

# Contactless Tie Bars

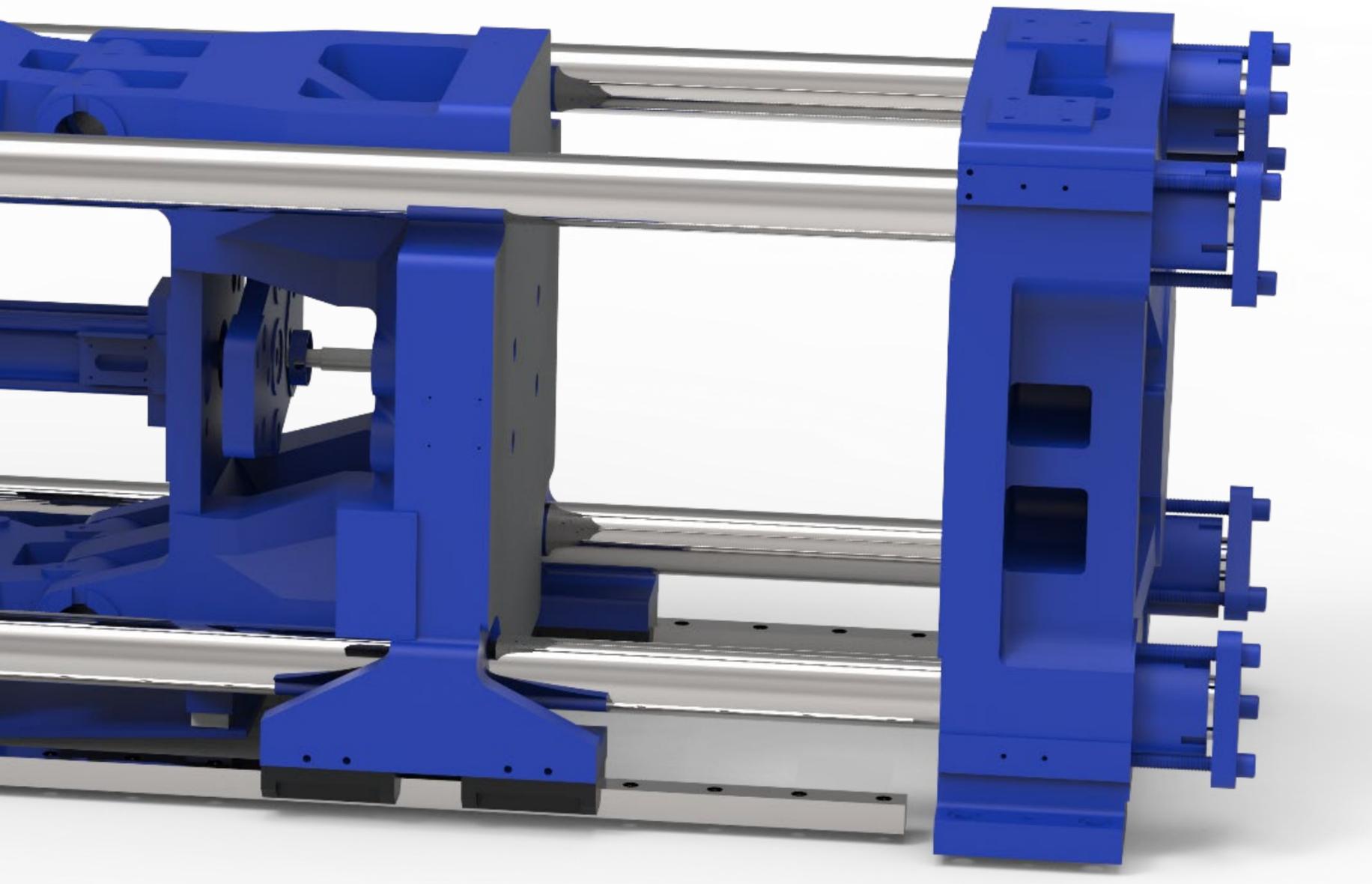


Contactless tie bars

- No lubrication on tie bar for cleaner parts

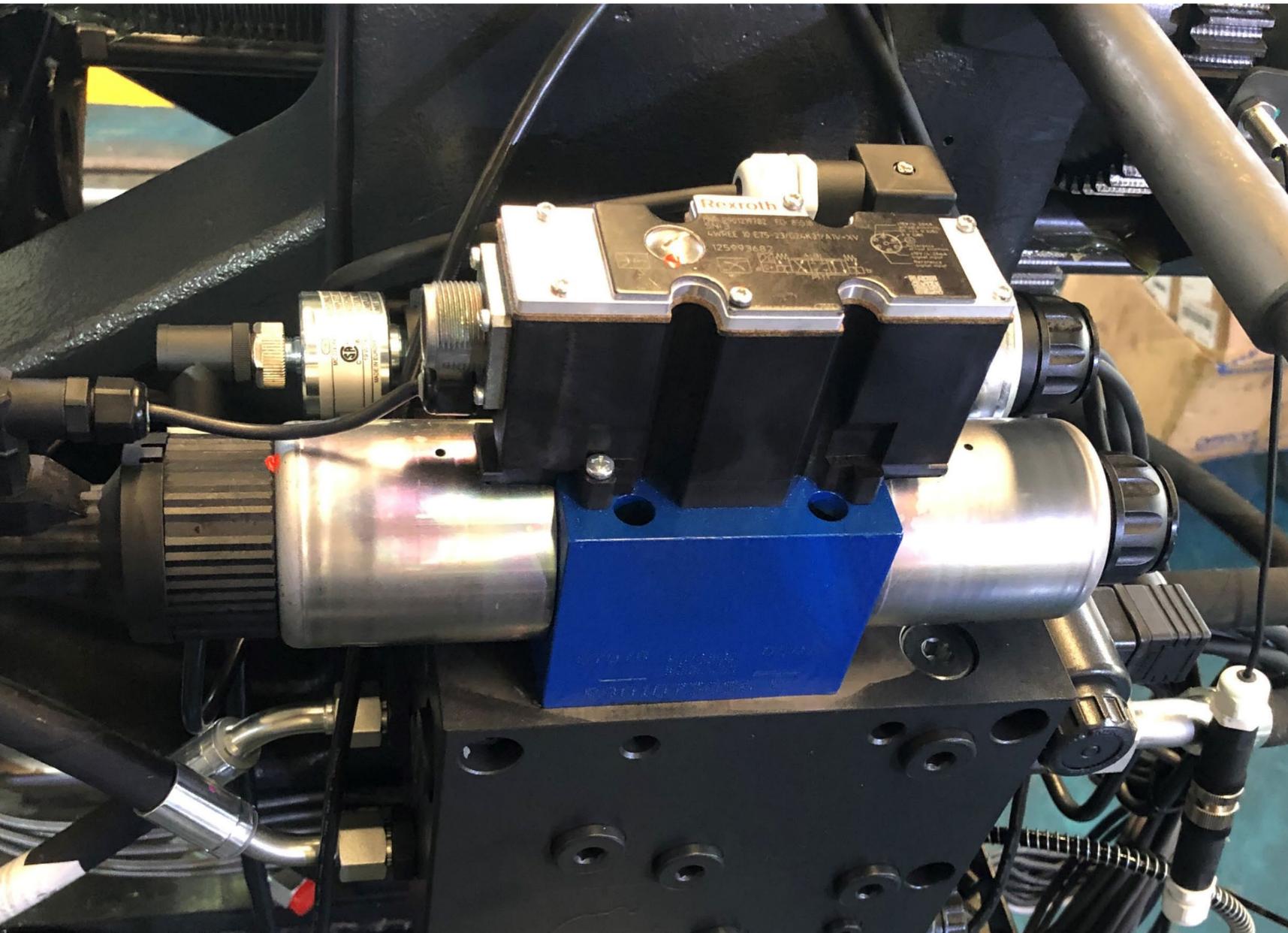


# Linear Guides



- Linear guides on the clamping unit
- Increased parallelism
- Better support for heavy molds
- Reduction of energy consumption

# Proportional Control Technology



- Proportional valve for the clamping unit offers faster mold opening and closing
- Higher precision
- Repeatability up to 0.5 mm



# NEW PERFORMANCE



# New Servo-drive System

- Self-development by Haitian
- New high-performance system
- Low noise and high efficiency
- Faster injection acceleration response
- Response time reduced from 200ms (IIs) to 100ms (III)



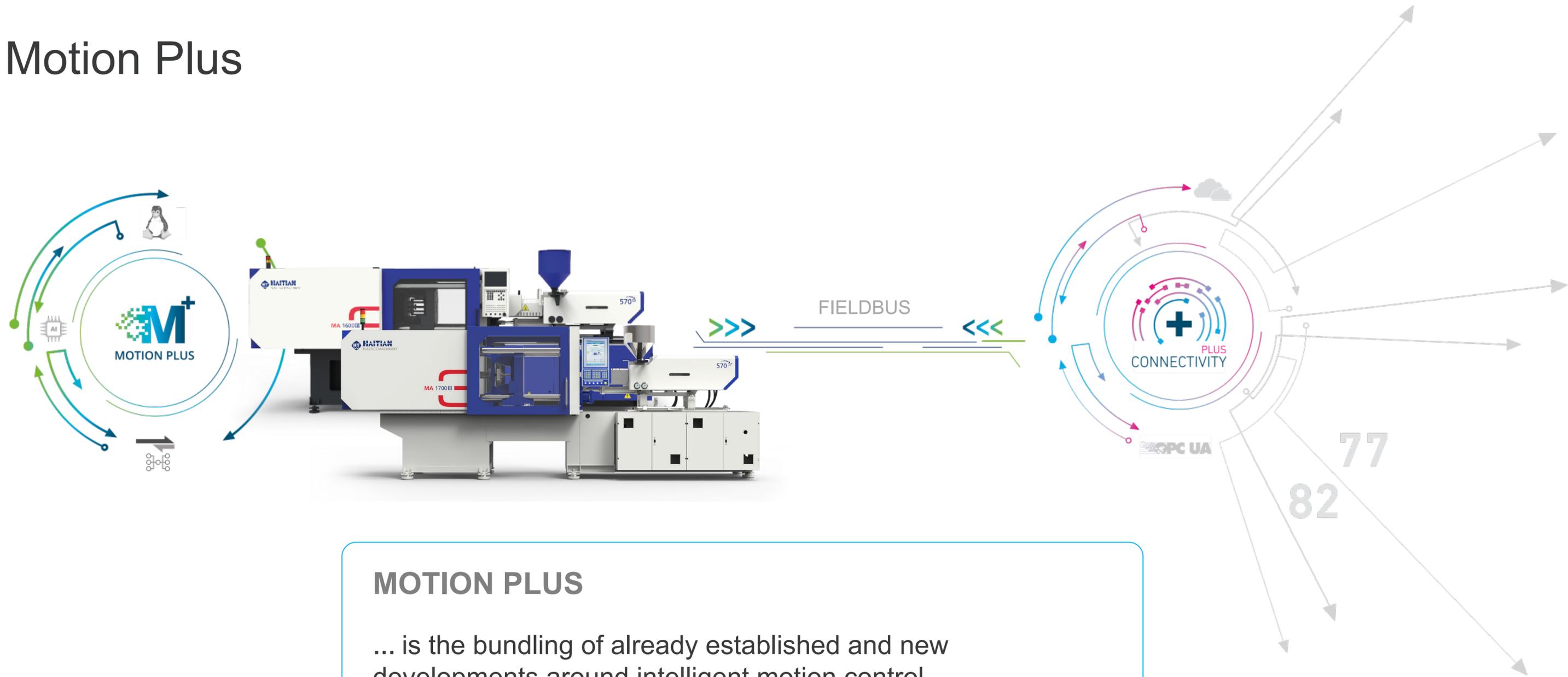
GREEN VANTAGE



SPEED VANTAGE



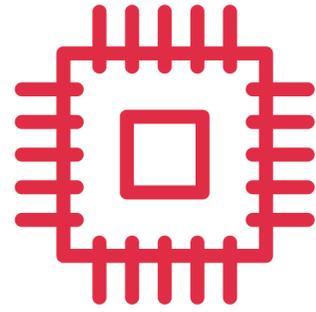
# Motion Plus



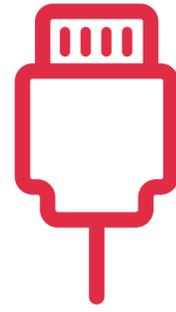
## MOTION PLUS

... is the bundling of already established and new developments around intelligent motion control

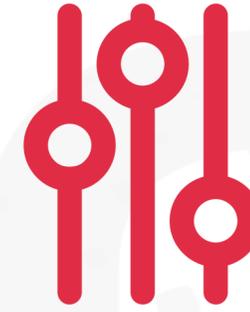
# Improved Control Technology



Intelligent core hardware



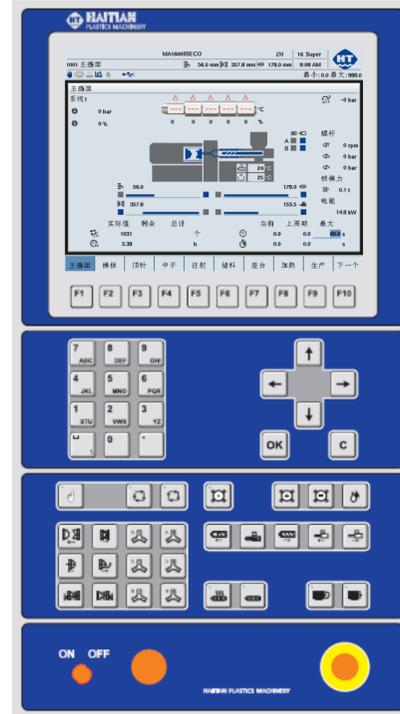
Compatible with the latest international information interface standards



Precise control

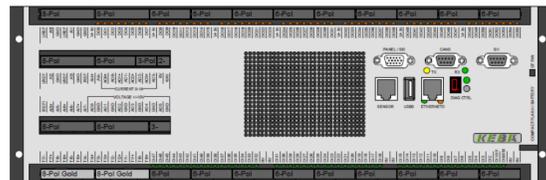


# User-friendly HMI



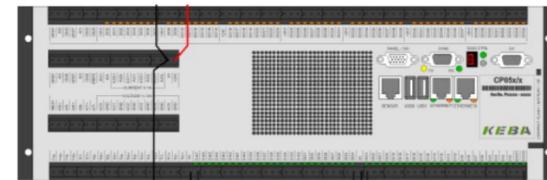
Standard KEBA i1180 controller

12-inch screen



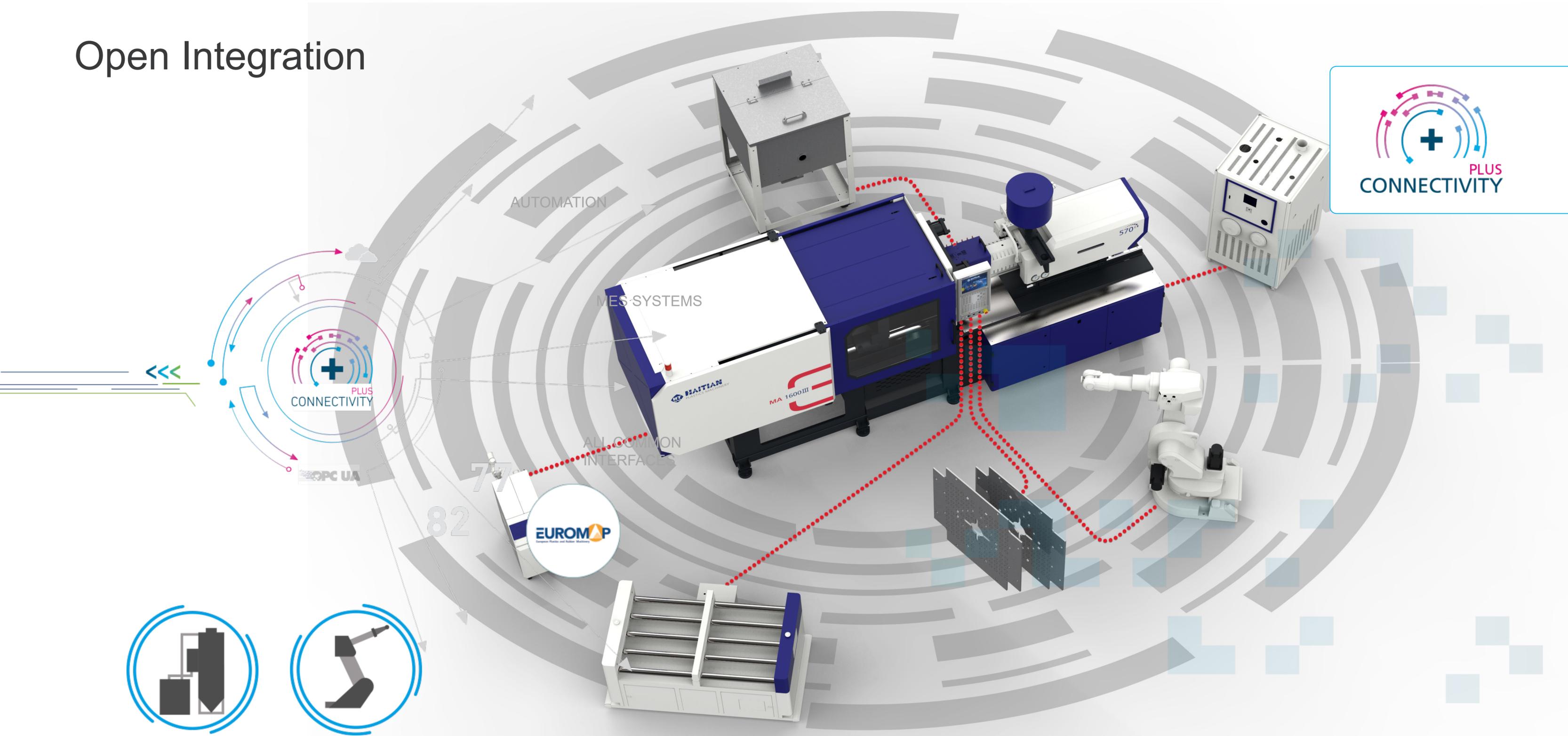
Optional KEBA i2885 controller

15-inch screen



- User-friendly panel with large screen and new UI interface
- Digital bus system EtherCAT,
- Flexible expansion through IO expansion module

# Open Integration



AUTOMATION

MES-SYSTEMS

ALL COMMON INTERFACES

PLUS CONNECTIVITY

OPC UA

EUROMAP

HAITIAN  
MA 1600III

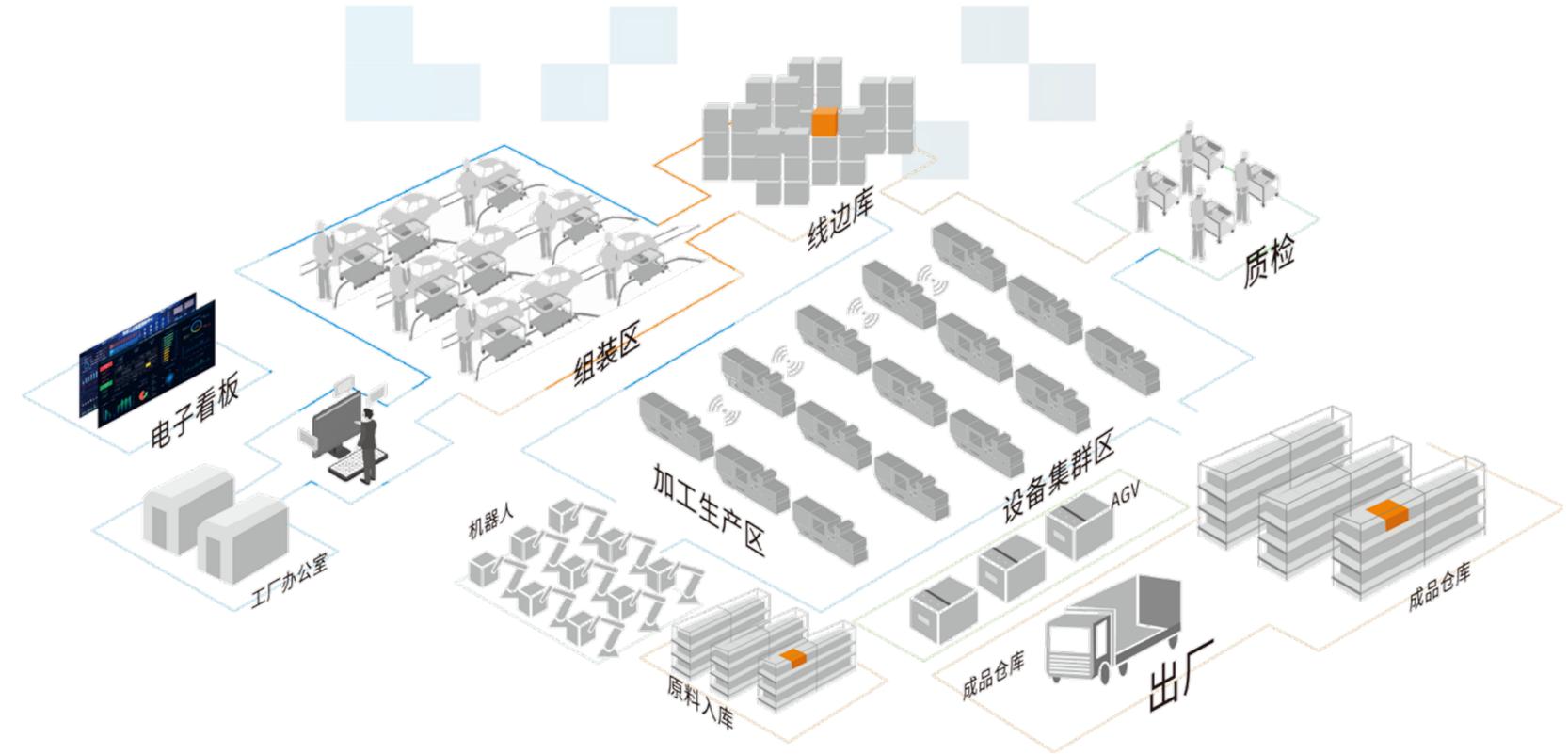
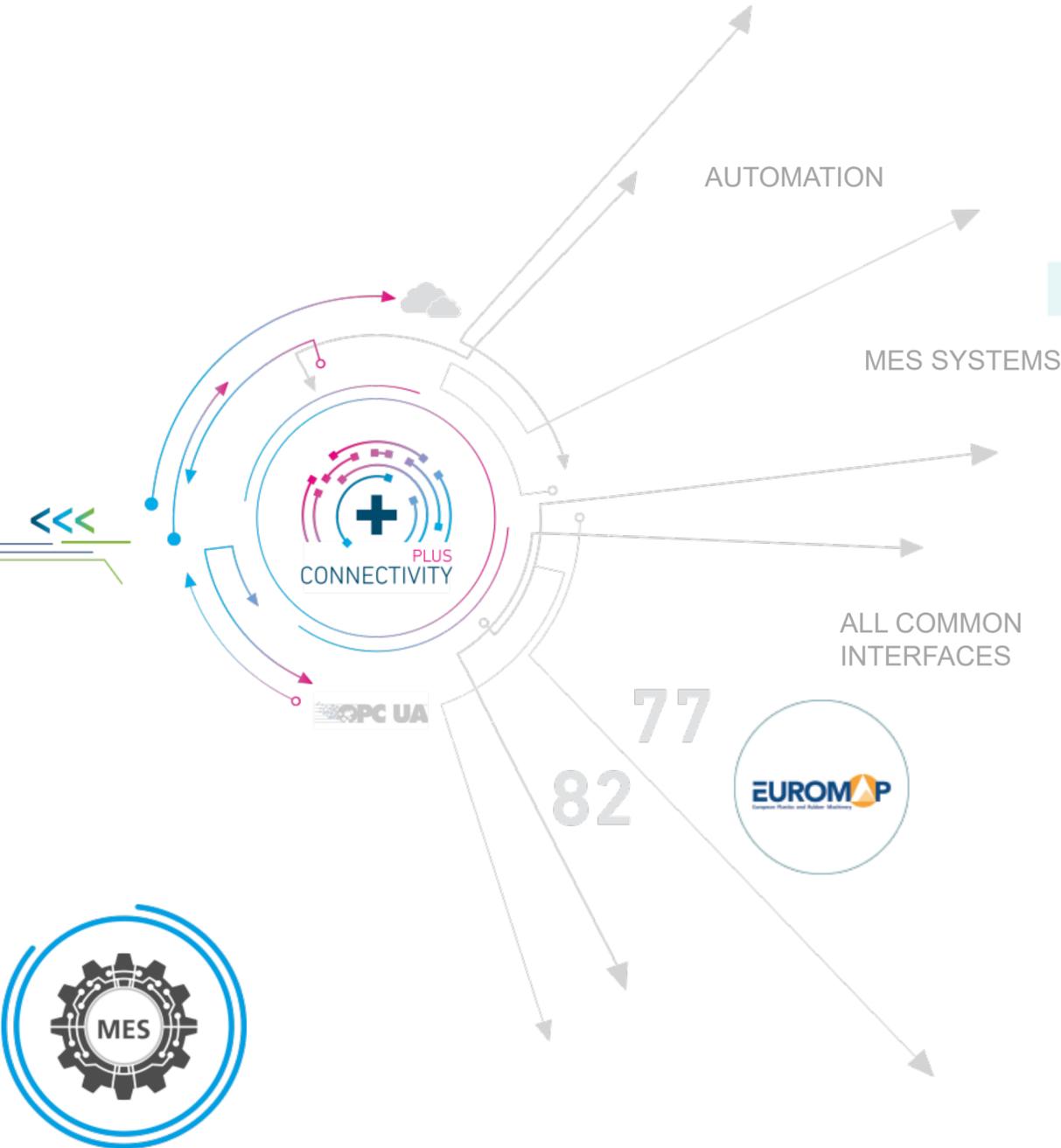
570

77

82



# Intelligent Connectivity



# Connectivity Plus Overview



## Data+ Exchange

Independent interoperability standard ensures the secure and reliable exchange data



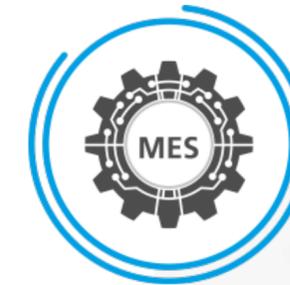
## Flexible+ integration

Easy device integration capabilities for efficient coordination of IMM and periphery



## Open+ integration

Full integration of automation cells – free choice for the customer



## Business+ to Machine

Incorporate into the customer's vertical management system



## Broad+ Data compatibility

Ability to transform heterogeneous data from edge computers



**HAITIAN**  
PLASTICS MACHINERY

THANK YOU!



TECHNOLOGY TO THE POINT