



# ZERES

400 - 13,800 kN

We extend electrical options

## ZHAFIR ZERES SERIES

Zhafir has developed a new electric injection molding machine series, the Zhafir Zeres Series, a tremendously flexible molding machine based on electric technology and equipped with integrated energy-efficient hydraulic unit, for example, for an efficient use of molds with hydraulic core pulls. This extends Zhafir's range of electrical solutions, opening up new and varied possibilities, and offering plastics processors an optimal solution for their specific requirements for operation such molds.

With the Zeres Series, we aim to make it easier for processors to switch from hydraulic to electric machines. The Zeres is the optimum machine for molds with hydraulic core pulls. Molded parts, requiring high precision and high repeatability rather than short cycle time, for example high precision and optical components, will be ideally manufactured on this machine series. The Zeres is structurally identical to the Venus II Series, and it offers all the advantages of the electric injection-molding technology: precision, energy efficiency, independent parallel movement throughout the whole cycle, and, not least, easy maintenance.



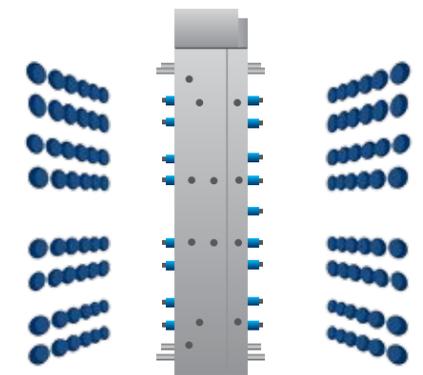
Zhafir Zeres Series / 3000 kN  
 400 kN —●— 13,800 kN



### WE EXTEND ADVANTAGE

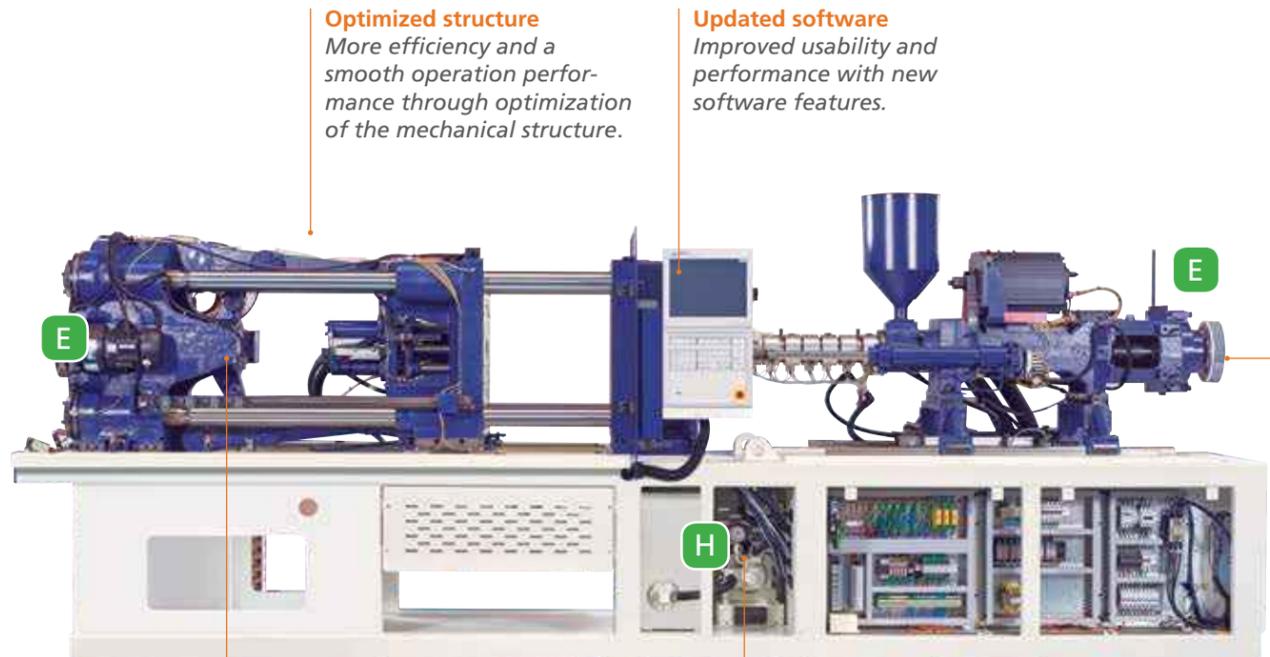
- .....> **Manufacturing Power**  
 Zhafir in Germany (picture on top) has a total area of 4,500 m<sup>2</sup> to provide the European customers with their requirements regarding manufacturing, quality control and service support. (Picture below) In Chun Xiao, Ningbo, China, a new plant with a total surface area of 300,000 m<sup>2</sup> is ready for the production of electrical machines of up to 5,500 kN. The Chun Xiao plant has a capacity designed to deliver up to 220,000 machines per year in the final phase.
- .....> **More than a network**  
 The integration of highly qualified specialists into the development team opens options for planning resources, depending on the stage of the project. The exchange between Germany and China creates synergies: The different demands of the market are taken into consideration and use is made of Haitian's production experience of many years.

The new Zhafir Zeres Series with integrated hydraulic fits for applications with core function and stack molds.



We extend electrical solutions

## THE NEW ZERES SERIES AT A GLANCE



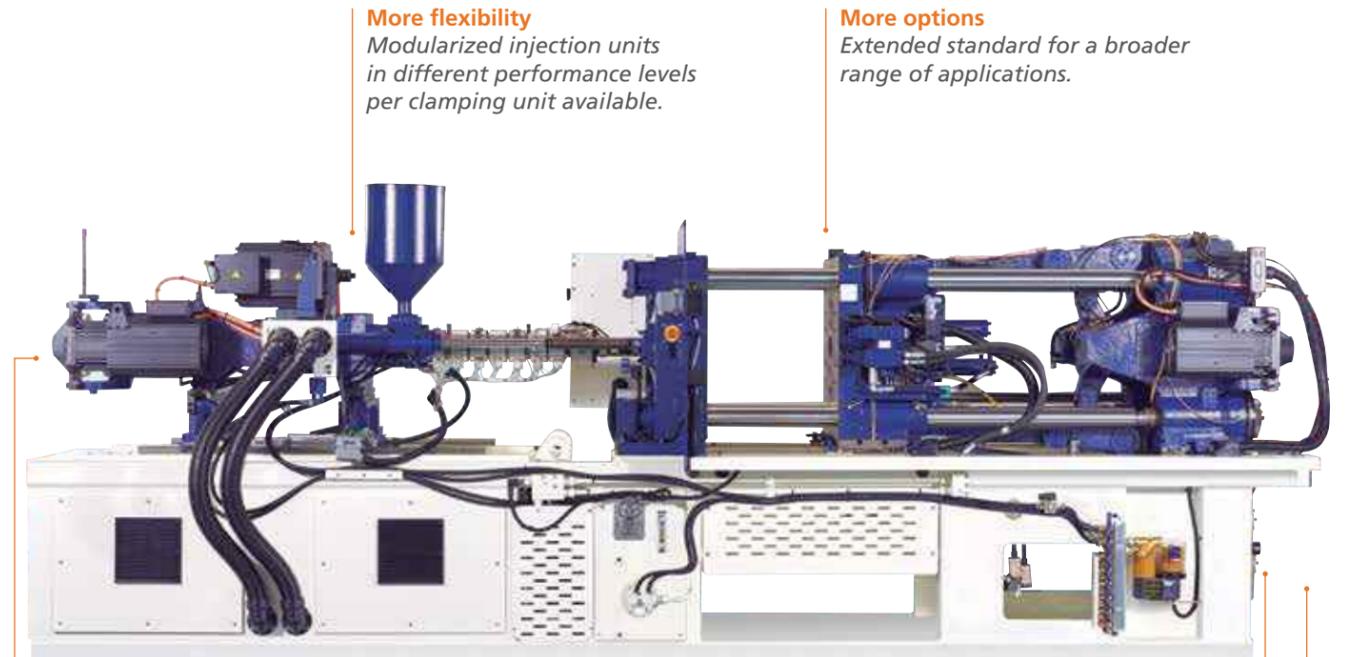
**Optimized structure**  
More efficiency and a smooth operation performance through optimization of the mechanical structure.

**Updated software**  
Improved usability and performance with new software features.

**Servo-electric clamping unit**  
Overall improvement of the rigidity; prolonged service life of both machine and mold.

**Integrated Hydraulic**  
Energy saving servo motor, ejector and nozzle movement

**Servo-electric injectin unit**  
Enhanced dynamic for improved response time and reliabiliy.



**More flexibility**  
Modularized injection units in different performance levels per clamping unit available.

**More options**  
Extended standard for a broader range of applications.

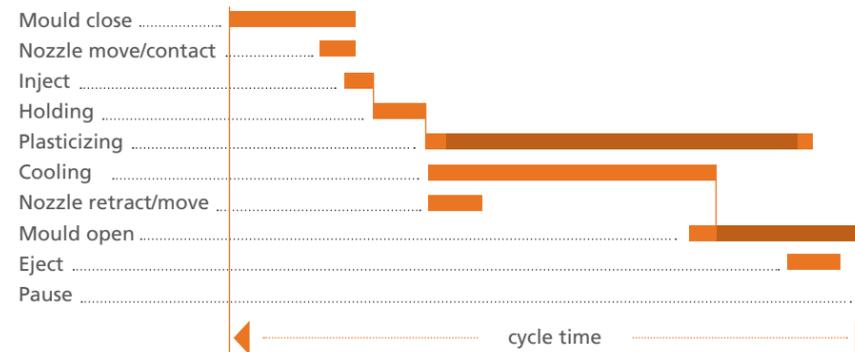
**Easy maintenance**  
Enhanced operation and maintenance convenience through the swiveling injection unit and the quick ejector coupling structure.

**Lubrication system**  
New lubrication system for reduced oil consumption and lower maintenance costs.



**More space**  
The open machine design and enhanced space below the machine can implement a conveyor.

**Fast and efficient**  
Parallel movements in all axis



High acceleration & speed

THE INJECTION SIDE

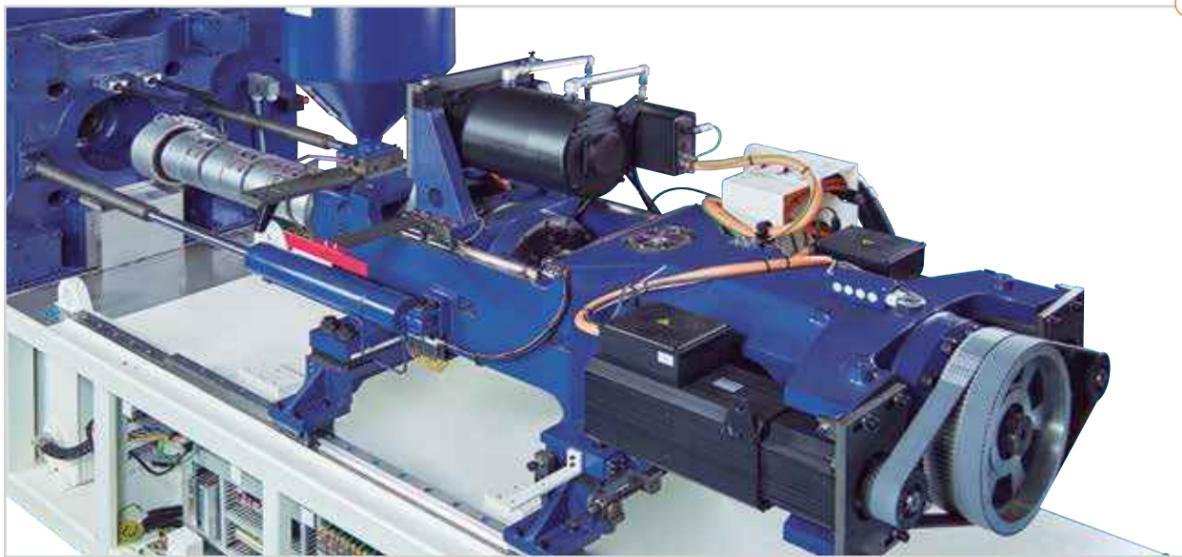


Image ①  
The new Zhafir Zeres Series - from 400 to 13,800 kN. With up to 4 injection units per clamping units available.

	CLAMPING UNIT (kN)				INJECTION UNIT													
	50	80	120	160	210	300	430	640	830	1100	1400	1700	2250	3350	5200	7000	9200	12800
400																		
600																		
900																		
1200																		
1500																		
1900																		
2300																		
3000																		
3600																		
4500																		
5500																		
6500																		
8000																		
9000																		
10800																		
13800																		



.....> **Easy maintenance**  
The swivelling injection unit allows quick change of screw and plastication components and shorter set up times. For easy replacement of the modules and a accessibility for cleaning and maintenance much more comfortable.

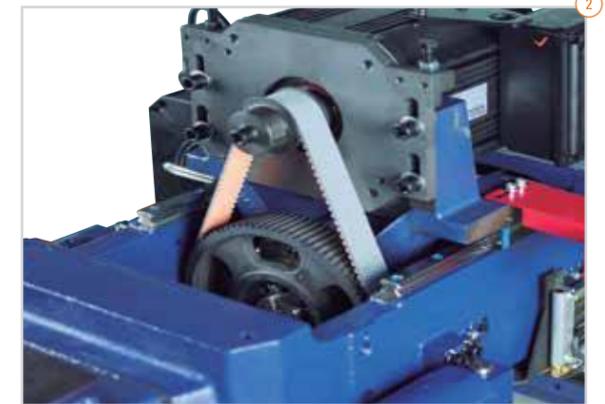


Image ②  
Matching of the servo motor and servo drive enables further improvement of the acceleration rate realizing energy saving.

Image ③  
The hydraulic carriage provides high pressure for mold contact with more speed. The nozzle touch pressure and moving speed can be adjusted on the control with a two-steps-setting.



Dynamic & efficiency

THE CLAMPING SIDE

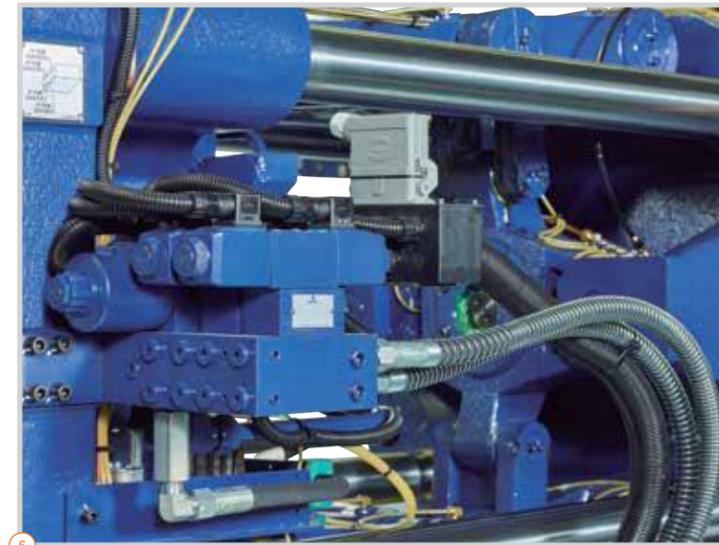
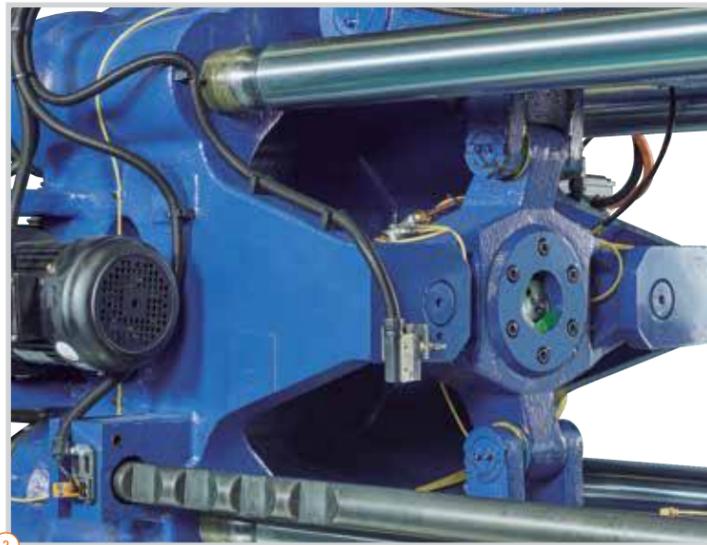
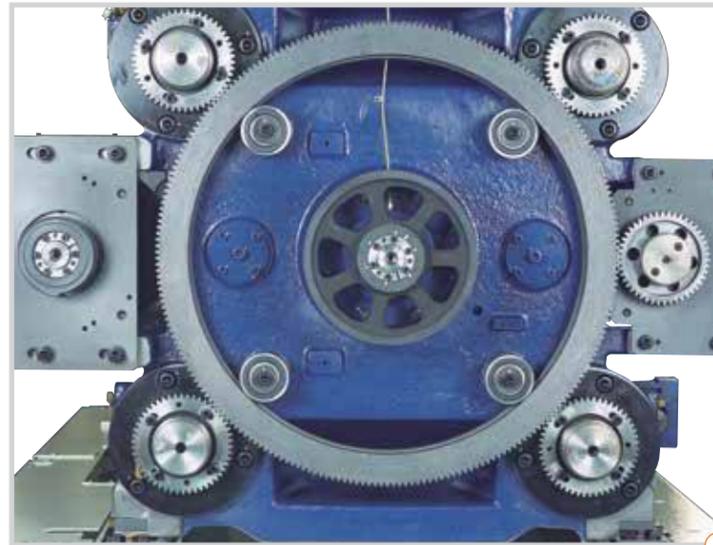


Image ①  
The redesigned 5-point-toggle-system increases the platen intensity, reduces platen inertia and joint stress. This delivers an optimized speed curve and reduced dry cycle times.

Image ②  
The encoder on mold height adjustment decreases the setup times during mold changes.

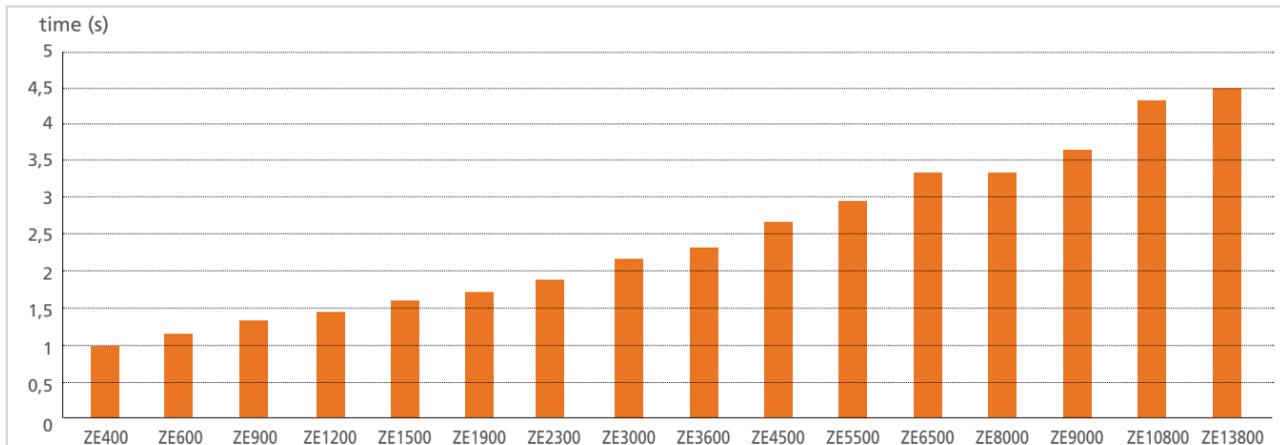
Image ③  
Sliders for the moving platen support the mold weight and reduce the coefficient of friction. The platen moves smoother and can be replaced and maintained very easy.

Image ④  
The centralized lubrication system for less grease consumption.

Image ⑤  
The twin ejector cylinder for the ejector balance can keep ejector back pressor during all cycles. The ejector rapid release coupling allows an ejector bolt connection within 30 s.

Image ⑥  
Two integrated hydraulic core puller interface are fixed on the moving platen and provide more flow and an increased pressure compared to external power pack solutions. Pressure and flow are adjustable on the control.

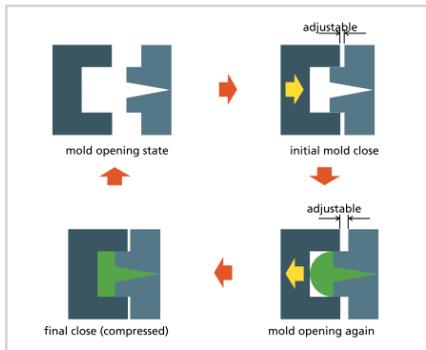
Optimized dry cycle time



Usability & flexibility

## SOFTWARE AND CONTROL

### Compression Molding



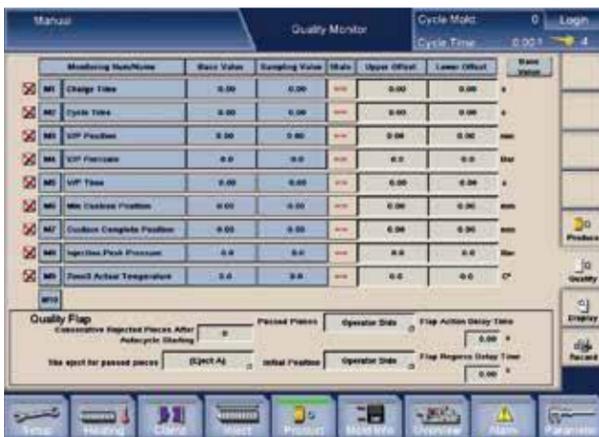
### Free Programmable I/O



### Core Sequences



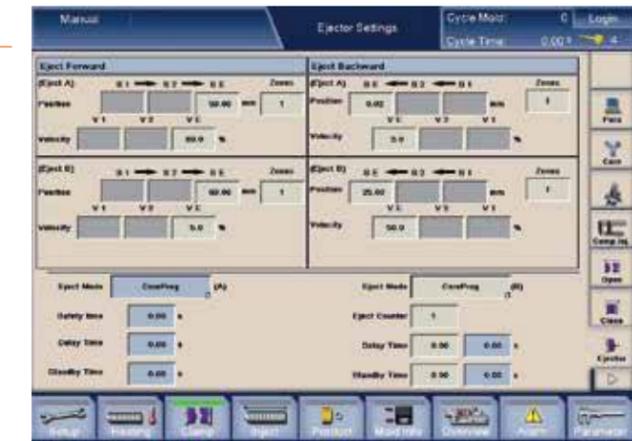
### Quality Monitoring



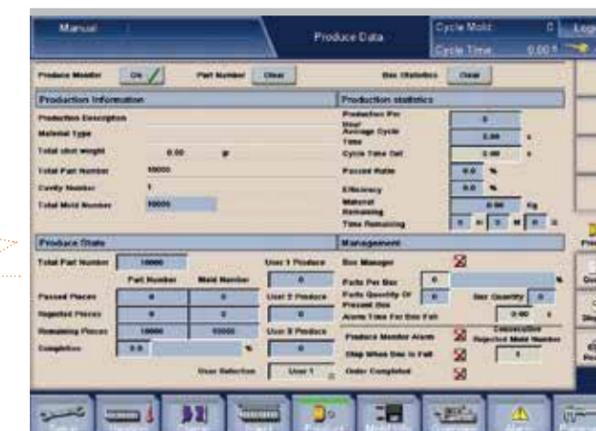
### Process Control



### Double-stroke Ejector



### Production Overview



### LATEST CONTROL TECHNOLOGY

- 15-inch color touch LCD screen
- Three general-purpose USB interfaces
- Mould profile data memory (up to 200 sets)
- New performance for production monitoring
- User-friendly user interface
- Comprehensive software functions
- LED operation indicator
- Clear and simple button to re-layout
- Shortcut configuration for clear identification
- Multi-language available
- RFID card with password control for an easier factory management

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**Zhafir Partner:**

