



ZERES

400 - 2,300 kN

We extend electrical options

ZHAFIR ZERES SERIES

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

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



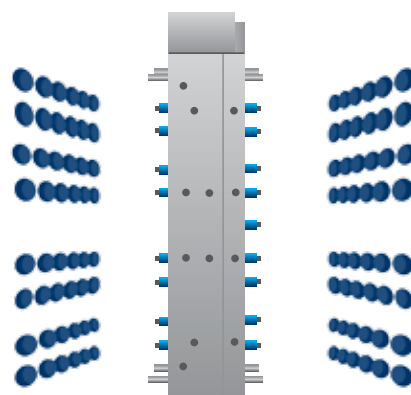


WE EXTEND ADVANTAGE

-> **Manufacturing Power**
Zhaifir in Germany (picture on top) has a total area of 4,500 m² to provide the European customers with their requirements regarding manufacturing, quality control and service support. In Chun Xiao, Ningbo, China (Picture below), a new plant with a total surface area of 300,000 m² is ready for the production of electrical machines up to 5,500 kN. The Chun Xiao plant is designed to deliver up to 10,000 machines per year.

-> **More than a network**
The integration of highly qualified specialists into the development team opens options for planning the 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 our customers benefit from Haitian's production experience of many years.

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



We extend electrical options

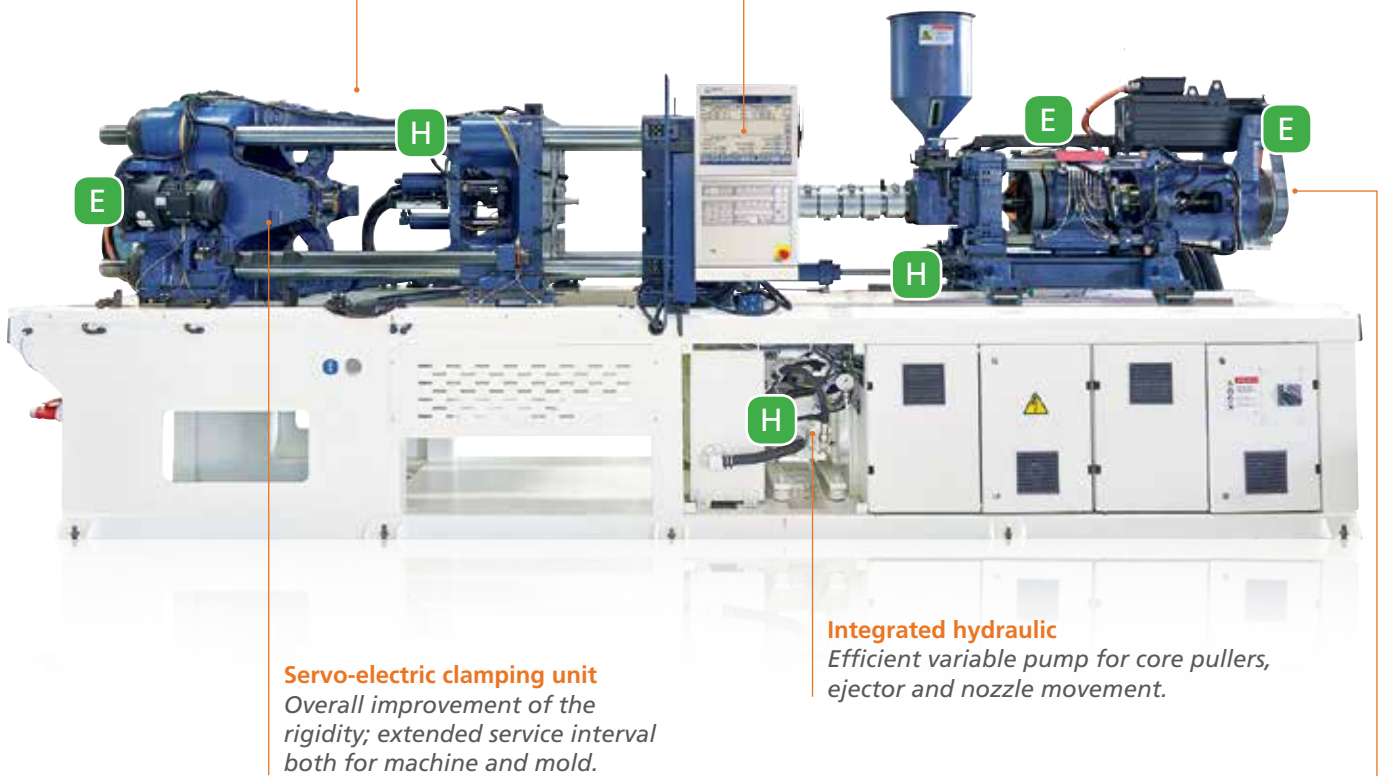
THE NEW ZERES SERIES AT A GLANCE

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; extended service interval both for machine and mold.

Integrated hydraulic

Efficient variable pump for core pullers, ejector and nozzle movement.

Servo-electric injection unit

Enhanced dynamic for improved response time and reliability.

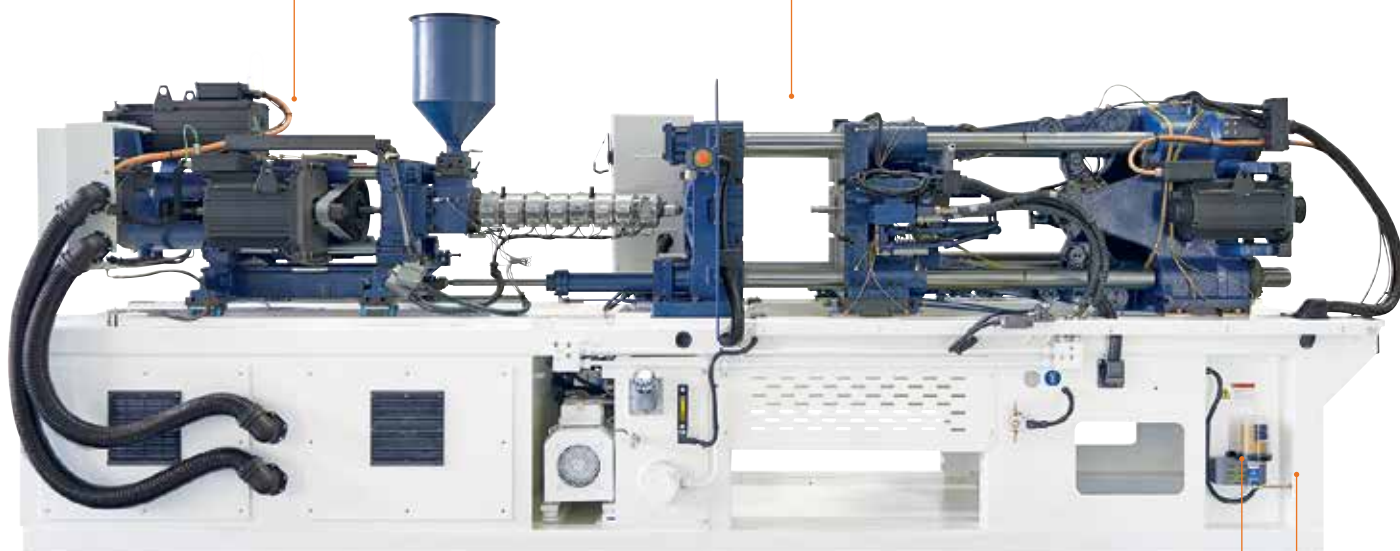


More flexibility

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 grease consumption and lower maintenance costs.

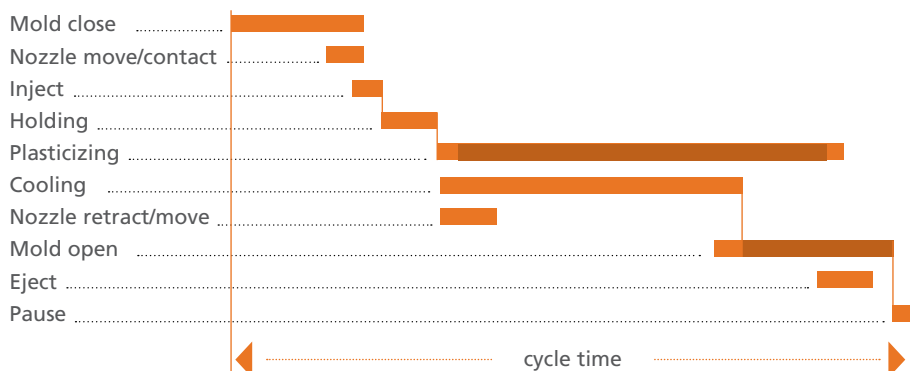


More space

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 UNIT



1

CLAMPING UNIT (kN)	INJECTION UNIT							
	80	120	210	300	430	640	830	1100
400								
600								
900								
1200								
1500								
1900								
2300								

Image 1
The new Zhafir Zeres Series - from 400 to 2,300 kN. With up to 4 injection units per clamping unit available.





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



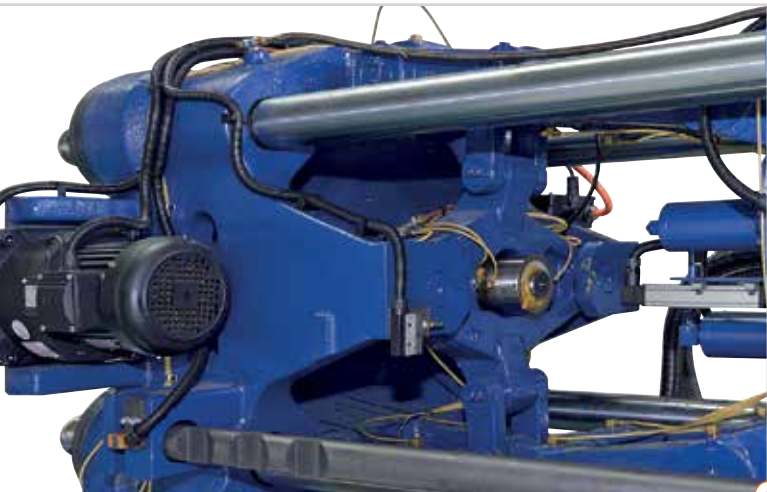
Image ②
 Matching of the servo motor and servo drive enables further improvement of the acceleration rate realizing energy saving.

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

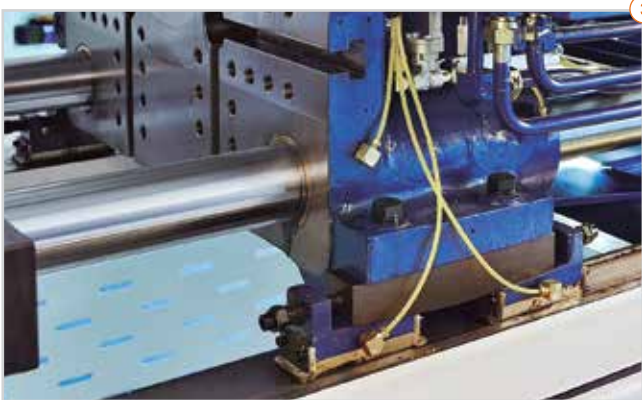
THE CLAMPING UNIT



1



2



3

Image 1

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

Image 2

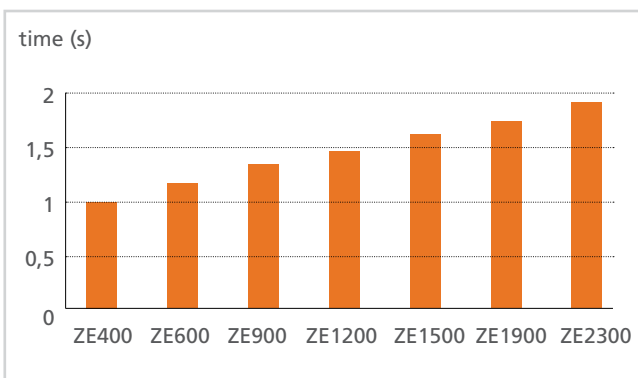
The encoder on mold height adjustment decreases the setup times during mold changes.

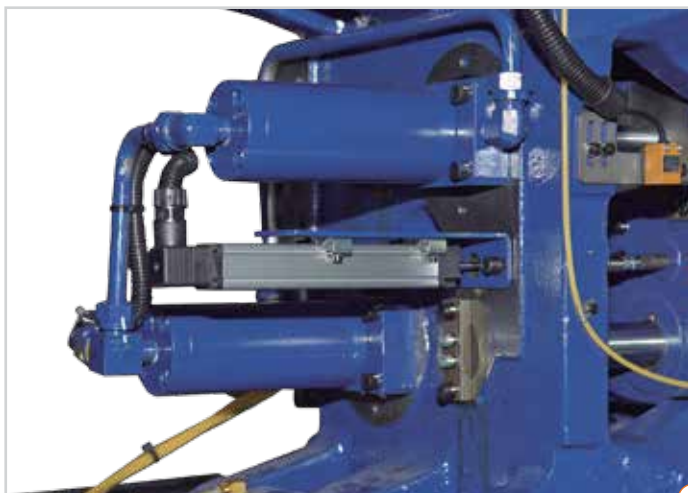
Image 3

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.

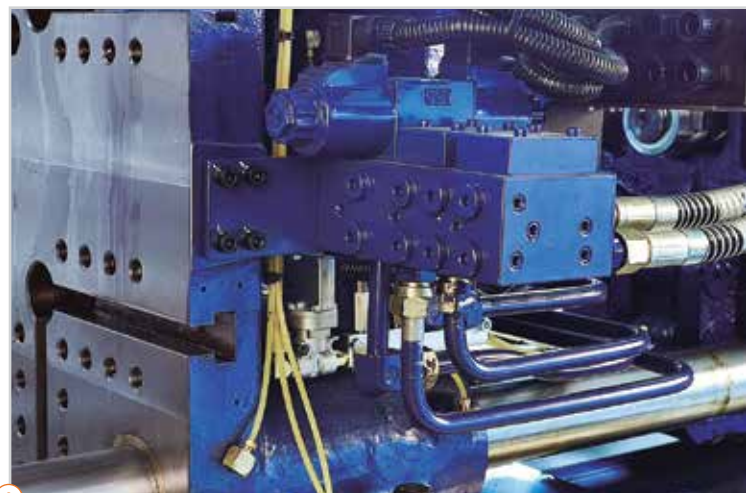
8

Optimized dry cycle time





5



6



4

Image 4
The centralized lubrication system for less grease consumption.

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

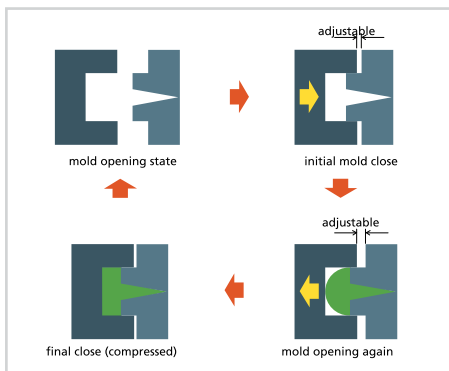
Image 6
Two integrated hydraulic core puller interfaces are installed on the moving platen and provide more flow and an increased pressure compared to external power pack solutions. Pressure and flow are adjustable on the control unit.



Usability & flexibility

SOFTWARE AND CONTROL

Compression Molding



Free Programmable I/O



Quality Monitoring



Monitoring Name	Basic Value	Sampling Value	State	Upper Offset	Lower Offset	Basic Value
M1 Change Time	0.00	0.00	---	0.00	0.00	0.00
M2 Cycle Time	0.00	0.00	---	0.00	0.00	0.00
M3 V/P Position	0.00	0.00	---	0.00	0.00	0.00
M4 V/P Pressure	0.0	0.0	---	0.0	0.0	0.0
M5 V/P Time	0.00	0.00	---	0.00	0.00	0.00
M6 Mix Crank Position	0.00	0.00	---	0.00	0.00	0.00
M7 Crank Complete Position	0.00	0.00	---	0.00	0.00	0.00
M8 Injection Peak Pressure	0.0	0.0	---	0.0	0.0	0.0
M9 Final Air Jet Temperature	0.0	0.0	---	0.0	0.0	0.0

Below the table, there are sections for 'Quality Flap' and 'Pass/Fail' settings, including options for 'Consecutive Rejected Pieces After' and 'Autocycle Shifting'.

Process Control

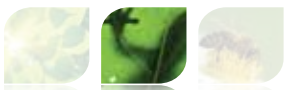
Cycle	Time (s)	W/P Position (mm)	W/P Pressure (bar)	W/P Time (s)	Min. Crank
01	0.00	0.00	0.0	0.00	0.00
02	0.00	0.00	0.0	0.00	0.00
03	0.00	0.00	0.0	0.00	0.00
04	0.00	0.00	0.0	0.00	0.00
05	0.00	0.00	0.0	0.00	0.00
06	0.00	0.00	0.0	0.00	0.00
07	0.00	0.00	0.0	0.00	0.00
08	0.00	0.00	0.0	0.00	0.00
09	0.00	0.00	0.0	0.00	0.00
10	0.00	0.00	0.0	0.00	0.00
11	0.00	0.00	0.0	0.00	0.00
12	0.00	0.00	0.0	0.00	0.00
13	0.00	0.00	0.0	0.00	0.00
14	0.00	0.00	0.0	0.00	0.00
15	0.00	0.00	0.0	0.00	0.00
16	0.00	0.00	0.0	0.00	0.00
17	0.00	0.00	0.0	0.00	0.00
18	0.00	0.00	0.0	0.00	0.00
19	0.00	0.00	0.0	0.00	0.00
20	0.00	0.00	0.0	0.00	0.00
21	0.00	0.00	0.0	0.00	0.00
22	0.00	0.00	0.0	0.00	0.00
23	0.00	0.00	0.0	0.00	0.00
24	0.00	0.00	0.0	0.00	0.00
25	0.00	0.00	0.0	0.00	0.00
26	0.00	0.00	0.0	0.00	0.00
27	0.00	0.00	0.0	0.00	0.00
28	0.00	0.00	0.0	0.00	0.00
29	0.00	0.00	0.0	0.00	0.00
30	0.00	0.00	0.0	0.00	0.00
31	0.00	0.00	0.0	0.00	0.00
32	0.00	0.00	0.0	0.00	0.00
33	0.00	0.00	0.0	0.00	0.00
34	0.00	0.00	0.0	0.00	0.00
35	0.00	0.00	0.0	0.00	0.00
36	0.00	0.00	0.0	0.00	0.00
37	0.00	0.00	0.0	0.00	0.00
38	0.00	0.00	0.0	0.00	0.00
39	0.00	0.00	0.0	0.00	0.00
40	0.00	0.00	0.0	0.00	0.00
41	0.00	0.00	0.0	0.00	0.00
42	0.00	0.00	0.0	0.00	0.00
43	0.00	0.00	0.0	0.00	0.00
44	0.00	0.00	0.0	0.00	0.00
45	0.00	0.00	0.0	0.00	0.00
46	0.00	0.00	0.0	0.00	0.00
47	0.00	0.00	0.0	0.00	0.00
48	0.00	0.00	0.0	0.00	0.00
49	0.00	0.00	0.0	0.00	0.00
50	0.00	0.00	0.0	0.00	0.00

The screenshot shows the 'Quality Display' interface with a table of process data. The table includes columns for Cycle, Time (s), W/P Position (mm), W/P Pressure (bar), W/P Time (s), and Min. Crank. The data shows consistent values across 50 cycles. The interface also includes a 'Reset' button and a 'Cycle Mold' indicator.

LATEST CONTROL TECHNOLOGY

- 15-inch color touch LCD screen
- Three general-purpose USB interfaces
- Mold 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





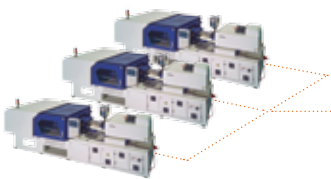
Core Sequences



Double-stroke Ejector



Production Overview



ZHAFIR PLASTICS MACHINERY GMBH

Jubatus-Allee 8-10
92263 Ebermannsdorf
Germany
Tel. +49-9438-9412-0
Fax. +49-9438-9412-150
E-Mail: contact@zhafir.com
www.zhafir.com

NINGBO ZHAFIR PLASTICS MACHINERY CO., LTD

No. 37, Laosan Road
Beilun, Ningbo, P.R. China 315800
Tel. +86-574-86182986
Fax. +86-574-86182977
E-Mail: contact@mail.zhafir.cn
www.zhafir.cn

Zhafir Partner:

