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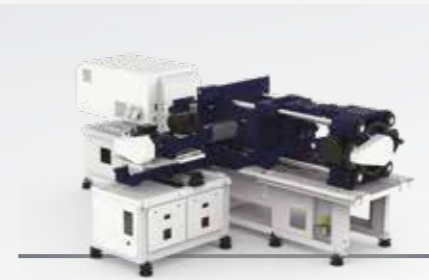


ELECTRIC & PRECISE
MULTI

ZHAFIR MULTI PROVIDING IDEAL & ECONOMIC SOLUTIONS

Electric multi-solutions from Zhafir offers all the advantages of electric machine technology: precise, quiet, energy-saving, maintenance-friendly and extremely flexible integration into upstream and downstream automated production processes.

Although any multi-component product can be achieved with any of the following injection unit layouts, the most suitable solution for your actual operating conditions should be selected to reduce time and economic costs. Our experts are always available for product analysis.



L

HORIZONTAL LAYOUT

CHARACTERISTICS

- » Wide range of injection applications, especially for large volume products
- » Easy to operate and maintain additional injection unit
- » Adjustable nozzle position on add-on injection unit

LIMITATIONS

- » Large footprint requirement



V

VERTICAL LAYOUT

CHARACTERISTICS

- » Small footprint requirement
- » Adjustable nozzle position on add-on injection unit
- » Easy plug & play
- » Flexible for 1K applications

LIMITATIONS

- » For small shot weights only
- » Height requirement



P

PARALLEL LAYOUT

CHARACTERISTICS

- » Specialized for multi-component applications
- » Small footprint requirement
- » Easy to operate and maintain both injection units
- » Flexible for automation integration
- » Easy access to the mold area

LIMITATIONS

- » Cannot be used as 1K machine



R

PIGGYBACK LAYOUT

CHARACTERISTICS

- » Small footprint requirement
- » Flexible for automation integration
- » Easy access to the mold area
- » Flexible for 1K or 2K applications

LIMITATIONS

- » Customized solutions



A

ASPECTANT (opposing) LAYOUT

CHARACTERISTICS

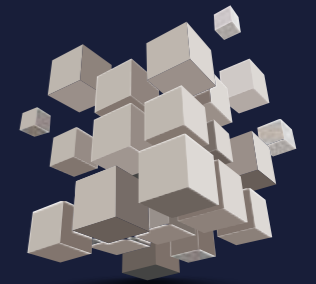
- » Significant increase in mold area utilization
- » Significant reduction in clamping force requirement

LIMITATIONS

- » Customized solutions

PLUG & PLAY

Electric injection units from Zhafir were designed as independent modular components with their own power and drive sources. They can be adapted to different Zhafir machine models for increased flexibility across several machines on your production floor.



L-TYPE

MULTI-COMPONENT SOLUTION WITH HORIZONTAL INJECTION UNIT

FEATURES

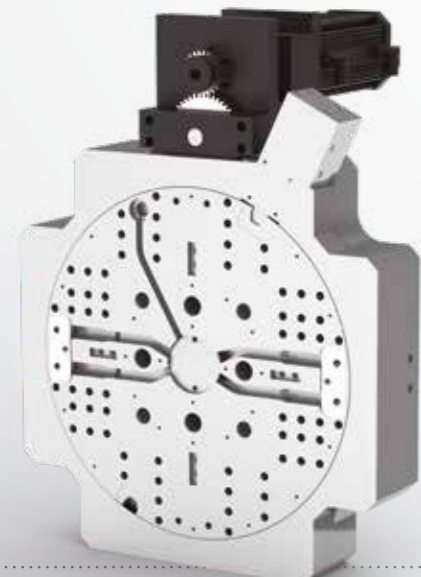
- Flexible and available on all Zhafir standard Series
- Compact and steady mechanical structure
- Electric technology on secondary injection unit: all electrical dosing, plasticizing and injection
- The nozzle position of second injection unit is horizontally adjustable
- Second injection unit designed for easy and quick access
- The injection unit control is integrated into the main machine unit
- Optional: electric rotary table or platen index on the movable platen
- Optional: protective housing



VENUS ZERES JENIUS

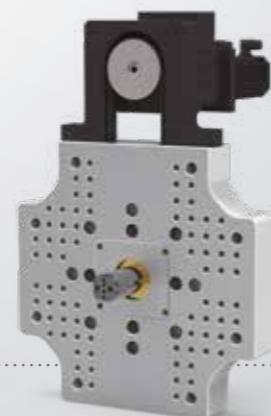
MATCHING OPTION: ELECTRIC ROTARY TABLES BY ZHAFIR

Specially developed electric rotary table is mounted on the moving platen. It is equipped with a dynamic and highly precise servo-electric drive. The reinforced bearing and positioning device of the rotary table ensures optimum force distribution, precise positioning and effective control of the tilting tolerance. The bracket and a freely adjustable support system provide rotation without friction and high load stability.



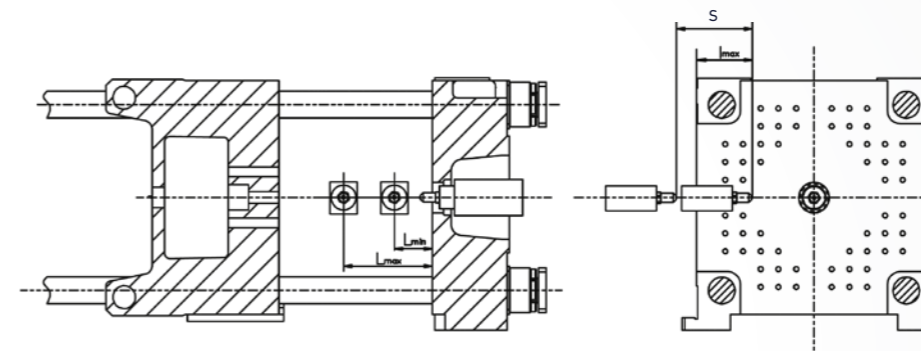
ELECTRIC INDEXING PLATEN
Specially developed electric indexing platen is mounted on the moving platen. It is equipped with a servo-electric drive and timing belt system which provide accurate rotational positioning, good repeatability and high reliability.

VENUS ZERES



L-COMBINATIONS

Clamping Force (kN)	2nd IU	L80(h)	L120(h)	L160(h)	L210(h)	L300(h)	L430(h)	L640(h)	L830(h)	L1100(h)	L1400(h)
1200	•	•	•	•	•						
1500	•	•	•	•	•	•					
1900	•	•	•	•	•	•	•				
2300	•	•	•	•	•	•	•	•			
3000	•	•	•	•	•	•	•	•	•		
3600	•	•	•	•	•	•	•	•	•	•	•
4500	•	•	•	•	•	•	•	•	•	•	•
5500	•	•	•	•	•	•	•	•	•	•	•
6500	•	•	•	•	•	•	•	•	•	•	•

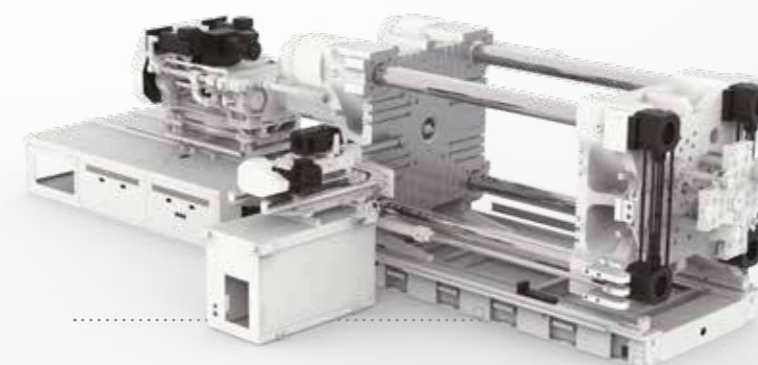


l_{max} : Max. nozzle dipping depth of auxiliary IU
 S : Nozzle stroke of auxiliary IU
 L_{min} : Min. distance to fix platen
 L_{max} : Max. distance to fix platen

INJECTION MOVEMENT PARAMETERS

2nd IU	$l_{max} A^1$	$l_{max} B^1$	$l_{max} C^1$	S	L_{min}	L_{max}
L80(h)	150	240	240	540	90	240
L120(h)	230	330	330	540	95	245
L160(h)	330	330	330	540	95	245
L210(h)	250	330	330	540	95	245
L300(h)	330	330	330	590	110	260
L430(h)	330	330	330	590	120	270
L640(h)	380	380	380	590	120	270
L830(h)	380	380	380	650	140	290
L1100(h)	430	430	430	650	150	300
L1400(h)	430	430	430	650	160	310

Note: The combinations are only available for VE and ZE Series.
¹⁾ different screw sizes



JEM-L

The electric hybrid "Jenius" performs multi-component tasks for large tool geometries. From 3600-3600-33000kN upwards, the space-saving two-platen solution, which has been tested hundreds of times, proves to be extremely precise, efficient and economical. For combinations and parameters, please contact us.

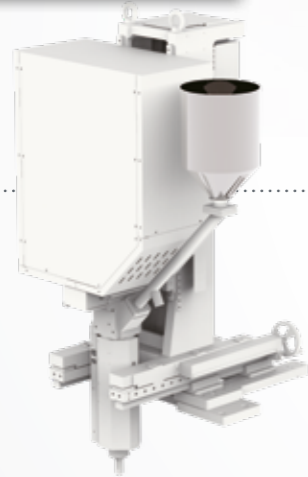
JENIUS

V-TYPE

VERTICAL MULTI-COMPONENT ELECTRIC INJECTION MOLDING MACHINE

FEATURES

- The additional injection unit can be mounted vertically on the fixed clamping platen, it can be moved horizontally for easy mold changes
- Flexible and available for all Zhafir standard series
- Electrical technology on the additional injection unit: fully electric metering, plasticizing and injection
- Optional: external HMI for the additional injection unit
- Optional: electric turntable or indexing platen



VERTICAL INJECTION PLUG IN VERSION

The electric, vertical Zhafir injection unit has its own power supply and independent automatic lubrication. Available in different sizes, the V-units expand your capabilities and transforms single shot Zhafir machines into multi-component solutions – quickly and efficiently.

VENUS ZERES JENIUS

EXTERNAL USER INTERFACE

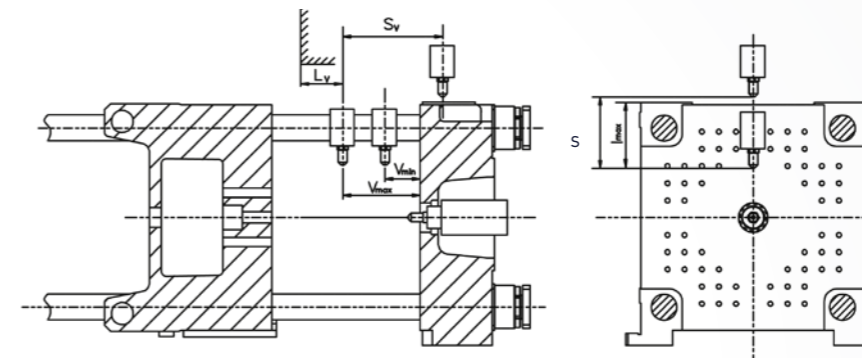
The adaptable unit is controlled by an external user interface. The latest control technology enables fast and easy operation of complex processes. This allows for simple and transparent implementation into a single shot Zhafir machine, while also optimizing the processing.

VENUS ZERES JENIUS



V-COMBINATIONS

Clamping Force (kN)	2nd IU	V80(h)	V120(h)	V160(h)	V210(h)	V300(h)
1200		•	•	•	•	
1500		•	•	•	•	
1900		•	•	•	•	•
2300		•	•	•	•	•
3000		•	•	•	•	•
3600		•	•	•	•	•
4500		•	•	•	•	•
5500		•	•	•	•	•
6500		•	•	•	•	•

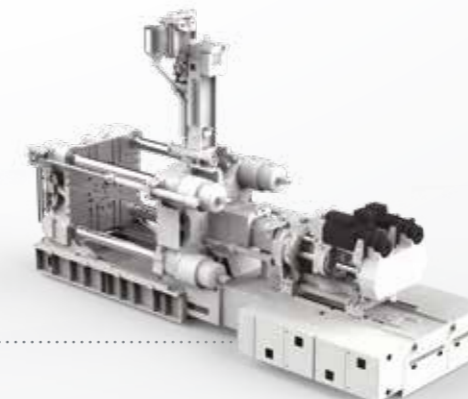


- L_{max} : Max. nozzle dipping depth of auxiliary IU
- S: Nozzle stroke of auxiliary IU
- V_{min} : Min. distance to fix platen
- V_{max} : Max. distance to fix platen
- S_v : Total adjustable range
- L_v : Edge distance of auxiliary IU

INJECTION MOVEMENT PARAMETERS

2nd IU	Screw	L_{max}	S	V_{min}	V_{max}	S_v	L_v	Unit: mm
V80(h)	A	140	350	90	200	450	225	
	B	230	350	90	200	450	225	
	C	230	350	90	200	450	225	
V120(h)	A	200	420	95	200	450	245	
	B	300	420	95	200	450	245	
	C	300	420	95	200	450	245	
V160(h)	A	300	420	95	200	450	255	
	B	300	420	95	200	450	255	
	C	300	420	95	200	450	255	
V210(h)	A	220	420	95	200	450	255	
	B	300	420	95	200	450	255	
	C	300	420	95	200	450	255	
V300(h)	A	430	500	110	200	480	280	
	B	430	500	110	200	480	280	
	C	430	500	110	200	480	280	

Note: The combinations are only available for ZHAFIR VE & ZE series.



JEM-V

For large and long multi-component parts, the Zhafir hybrid Jenius series combines significant advantages of fully electric operation – dynamic injection speed – with the benefits of the servo-hydraulic two-platen clamping unit – compact design and free space for large molds. For combinations and parameters, please contact us.

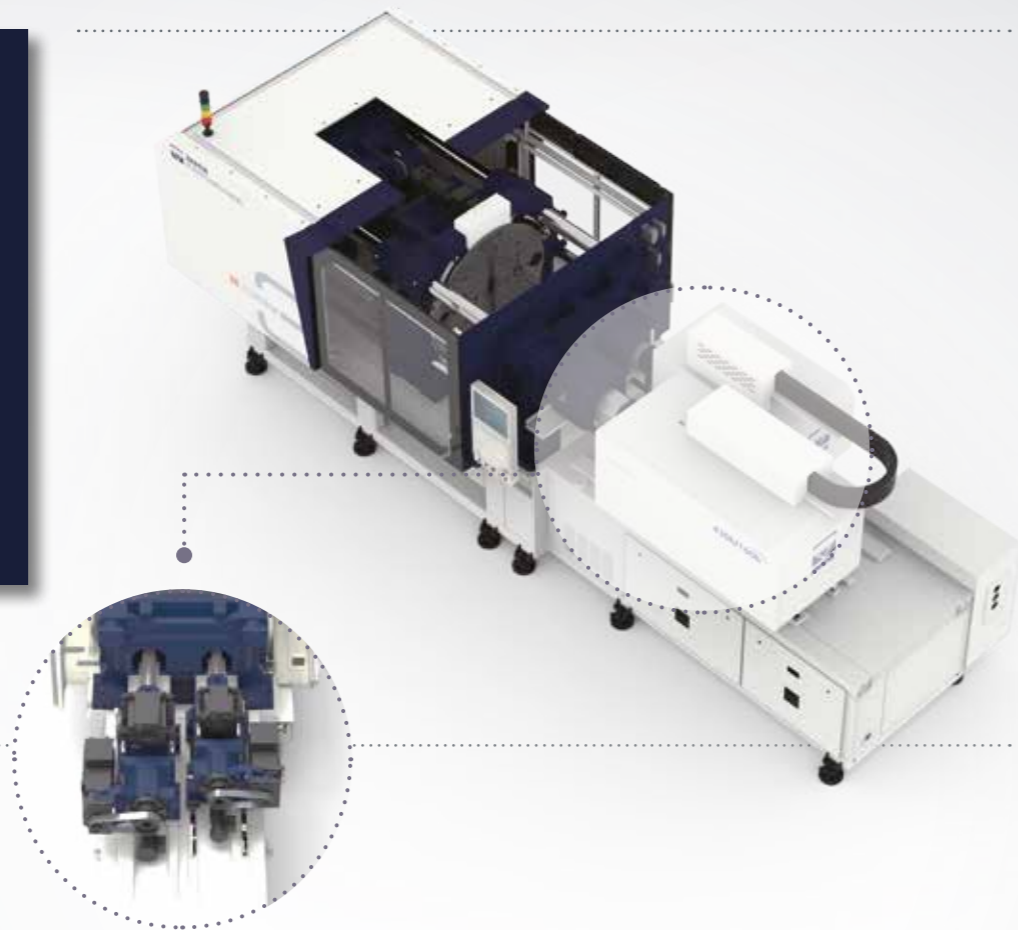
JENIUS

P-TYPE

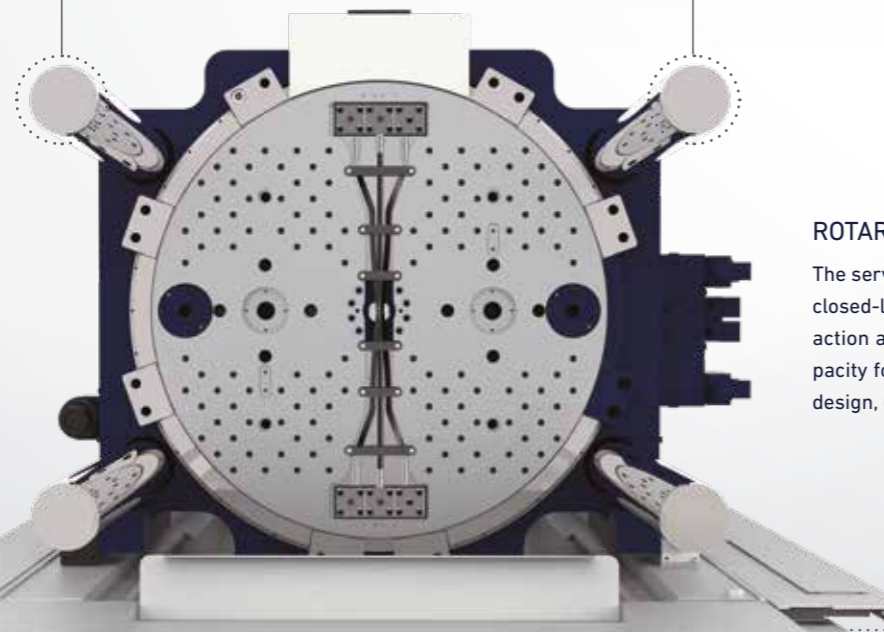
PARALLEL MULTI-COMPONENT ELECTRIC INJECTION MOLDING MACHINE

FEATURES

- Two injection units are placed horizontally parallel next to each other
- Parameters based on the ZE injection unit
- The servo-electric rotary table offers high precision and dynamics
- Dual ejector system is servo-hydraulic and controlled independently
- The powerful dual-CPU guarantees fast response times



« WIDE PLATEN STRUCTURE »»



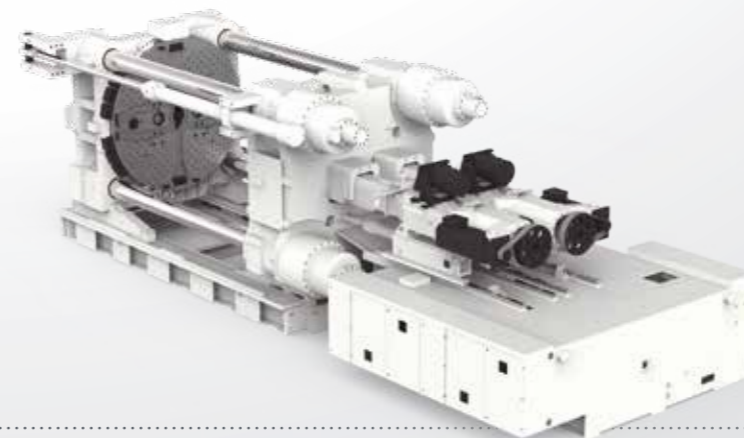
ROTARY TABLE FEATURES

The servo motor rotary table is standard and adopts the closed-loop motion control technology to ensure the fast action and high precision positioning. High loading capacity for mold, optimized cooling and hydraulic circuit design, user friendly HMI, mold interface adaptability.

VENUS ZERES

P-COMBINATIONS

Models	Clamping Force (kN)	2nd IU		1st IU											Nozzle distance (mm)			
		80(h)	120(h)	80(h)	120(h)	160(h)	210(h)	300(h)	430(h)	640(h)	830(h)	1100(h)	1400(h)	1700(h)				
ZE1500WM	1500	80(h)	•	•	•	•											400	
		120(h)	•	•	•	•												
		160(h)	•	•	•	•												
		210(h)	•	•	•	•												
ZE2300WM	2300	120(h)	•	•	•	•	•										500	
		160(h)	•	•	•	•	•											
		210(h)	•	•	•	•	•	•										
		300(h)	•	•	•	•	•	•	•									
ZE2800WM	2800	430(h)	•	•	•	•	•	•									500	
		640(h)	•	•	•	•	•	•	•									
		830(h)	•	•	•	•	•	•	•	•								
		1100(h)	•	•	•	•	•	•	•	•	•							
ZE3600WM	3600	210(h)	•	•	•	•	•	•	•								550	
		300(h)	•	•	•	•	•	•	•	•								
		430(h)	•	•	•	•	•	•	•	•	•							
		640(h)	•	•	•	•	•	•	•	•	•	•						
ZE5500WM	5500	830(h)	•	•	•	•	•	•	•	•							650	
		1100(h)	•	•	•	•	•	•	•	•	•							
		1400(h)	•	•	•	•	•	•	•	•	•	•						
		1700(h)	•	•	•	•	•	•	•	•	•	•	•					



JEM-P

The electric hybrid "Jenius" performs multi-component tasks for large tool geometries. From 7.500-18.500kN upwards, the space-saving two-platen solution, which has been tested hundreds of times, proves to be extremely precise, efficient and economical. For combinations and parameters, please contact us.

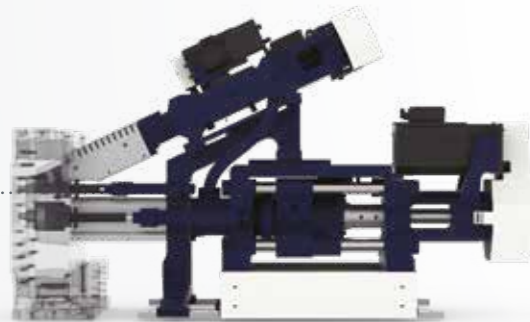
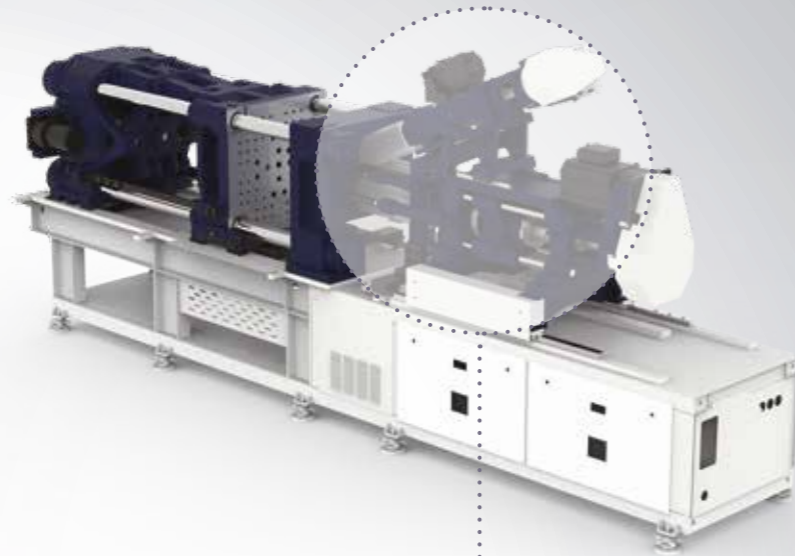
JENIUS

R-TYPE

PIGGYBACK MULTI-COMPONENT ELECTRIC INJECTION MOLDING MACHINE

FEATURES

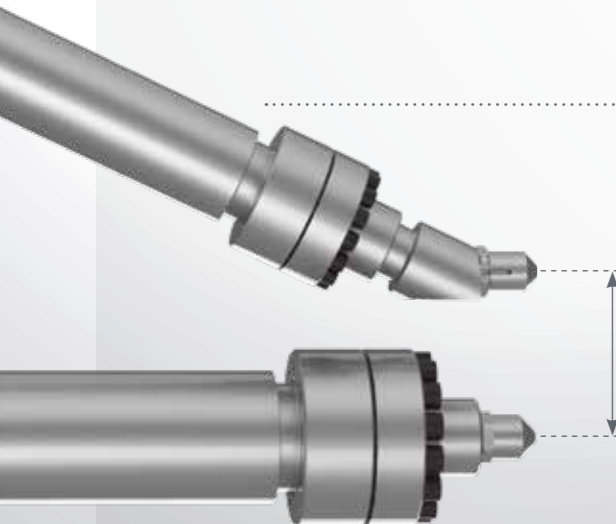
- Secondary injection unit placed above the main unit
- Extremely compact and space-saving, flexible and available on all Zhafir standard Series
- Electric technology on secondary injection unit: all electrical dosing, plasticizing and injection
- Optional: electric rotary table or platen index



INJECTION UNIT

The mechanical support for the second injection unit is mounted partly independent and partly connected with the main unit.

VENUS ZERES JENIUS

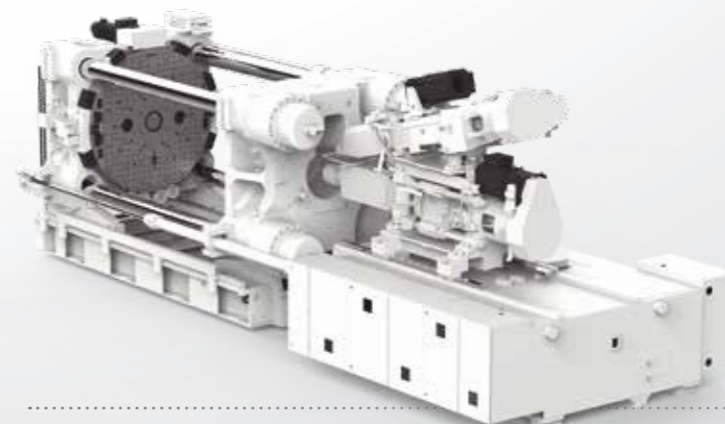


Nozzle center pitch can be appropriately adjusted on a standard basis, please contact us if you have customized needs.

R-COMBINATIONS

Clamping Force (kN)	2nd IU		R50(h)	R80(h)	R120(h)	R160(h)	R210(h)	R300(h)	R430(h)	R640(h)	R830(h)	R1100(h)	Nozzle distance (mm)
	1st IU												
1500	210(h)		•	•	•	•							150
	300(h)		•	•	•	•	•						
	430(h)				•	•	•	•					
	640(h)				•	•	•	•	•				
1900	300(h)		•	•	•	•	•						150
	430(h)				•	•	•	•					
	640(h)				•	•	•	•	•				
	830(h)						•	•	•				
2300	430(h)				•	•	•	•					150
	640(h)				•	•	•	•	•				
	830(h)						•	•	•				
	1100(h)						•	•	•	•			
3000	830(h)						•	•	•				200
	1100(h)						•	•	•	•			
	1400(h)							•	•	•	•		
3600	1700(h)							•	•	•			200
	1100(h)						•	•	•	•			
	1400(h)							•	•	•	•		
4500	1700(h)							•	•	•	•	•	300
	1400(h)							•	•	•	•	•	
5500	1400(h)							•	•	•	•	•	300
	1700(h)							•	•	•	•	•	

Note: The combinations are only available for ZHAFIR VE & ZE series.



JEM-R

For large and long multi-component parts, the Zhafir hybrid Jenius series combines significant advantages of fully electric operation - dynamic injection speed - with the benefits of the servo-hydraulic two-platen clamping unit - compact design and free space for large molds. For combinations and parameters, please contact us.

JENIUS

A-TYPE

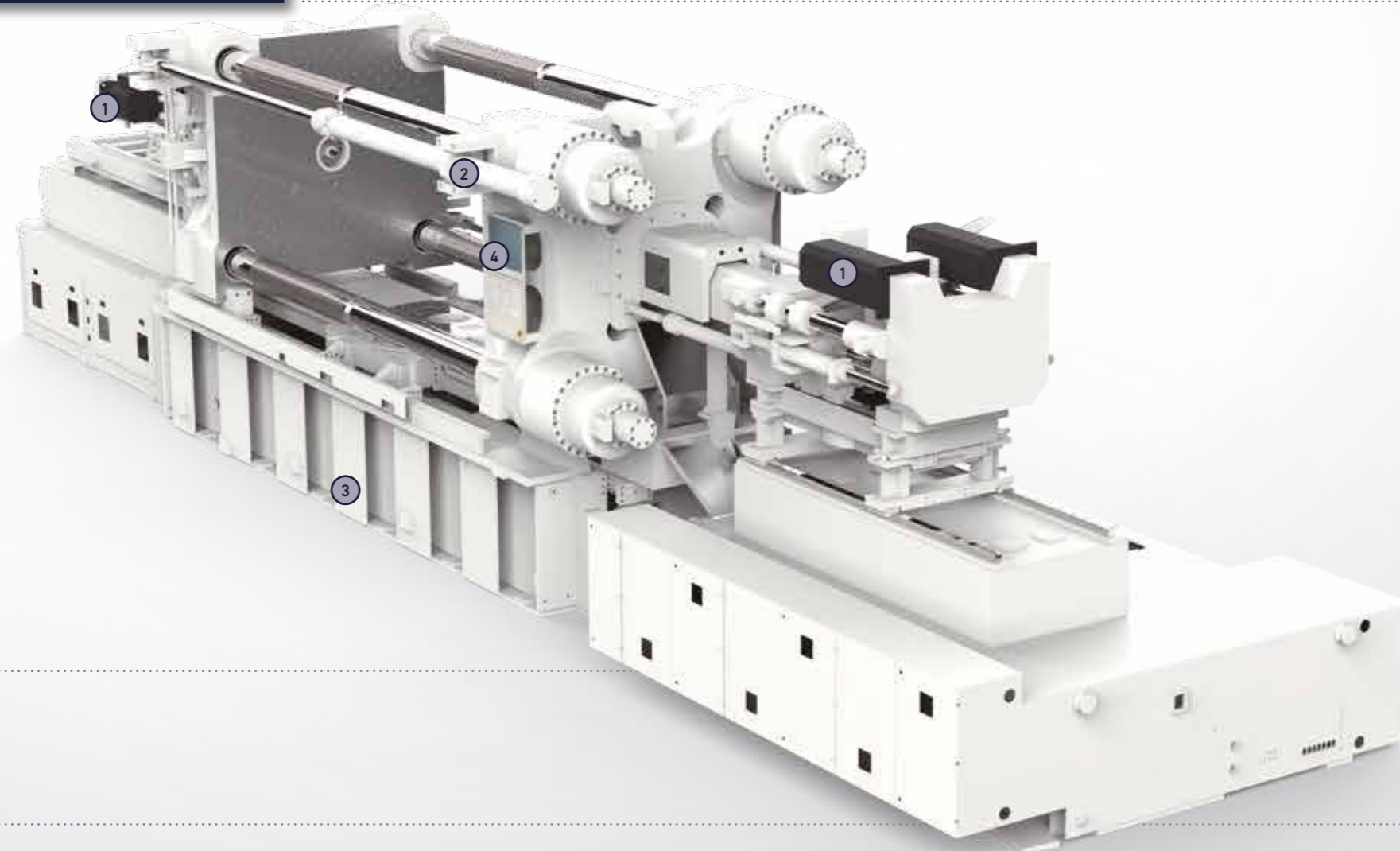
ELECTRICAL MULTI-COMPONENT SOLUTION WITH OPPOSITE HORIZONTAL INJECTION UNITS

FEATURES

- Two sets of electric injection units are arranged in opposite directions
- Significant increase in mold area utilization
- Significant reduction in clamping force requirements
- The force of the clamping unit is more uniform
- Multi system synchronous control to reduce cycle time
- Solutions for injection molding on complex molds
- Standard spring mold function, wide application range
- Meet the needs of large-scale two-color products

Note: Only available for Zhafir Jenius Series

- ① Electric technology: highly efficient and precise injection units
- ② The clamping unit is based on the latest Haitian two-platen technology platform
- ③ Highly rigid machine base for heavy molds
- ④ Human-machine interface is intuitive and easy to operate



CONTROLLER SYSTEM

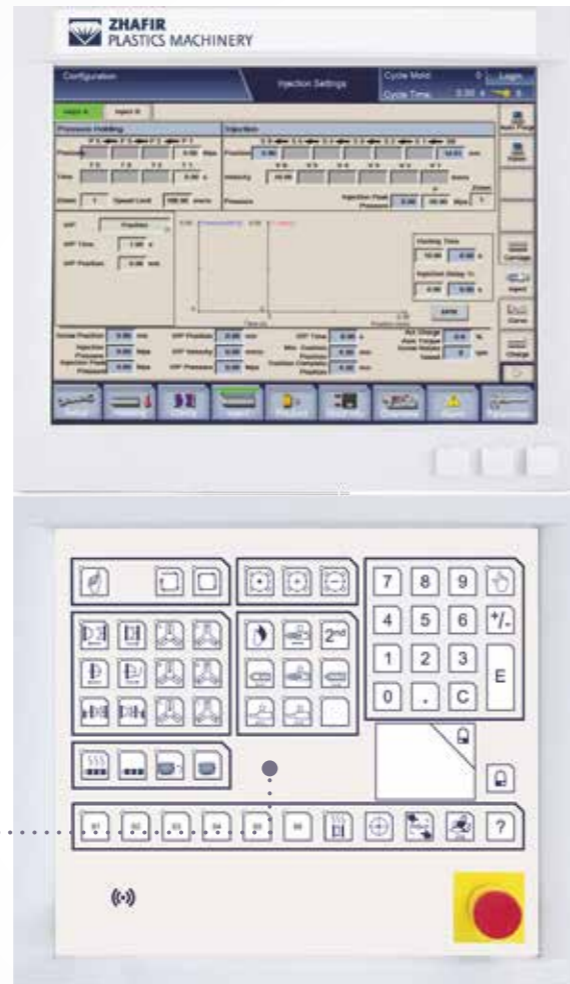
SMART TECHNOLOGY

NEW CONTROL GENERATION

- 5-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 production management

EASY OPERATION

Intuitive handling of complex multi-component processes through a user-friendly arrangement of the necessary key buttons for the injection process of the additional unit(s)



Machine Overview



Injection Settings A and B



Turntable interface



Turntable Settings



Turntable Parameters

EXTERNAL CONTROLLER FOR V-UNIT

The additional V-unit is completely independent in power supply and control. The latest control technology with a user-friendly HMI provides easy operation of complex processes.



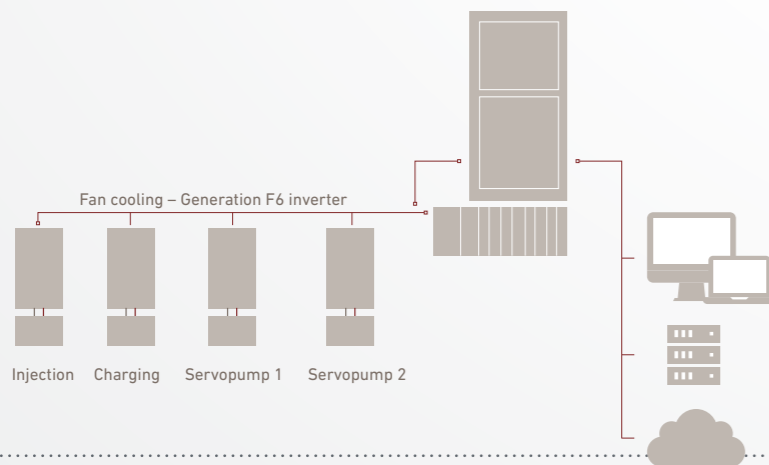
Charge Settings



Machine Overview, Configuration



Production Data, Configuration



OPEN INTEGRATION

Based on the OPC-UA standards for platform, system architecture, communication and data transfer, Connectivity Plus supports interaction in the area of Industry 4.0, for example with all common interfaces for interaction with peripherals, automation and for integration into MES systems.