

VFIIE-150WES

Hybrid High-Performance Injection Moulding Machine



VFIII E-150WES

Simple, Productive, Economical

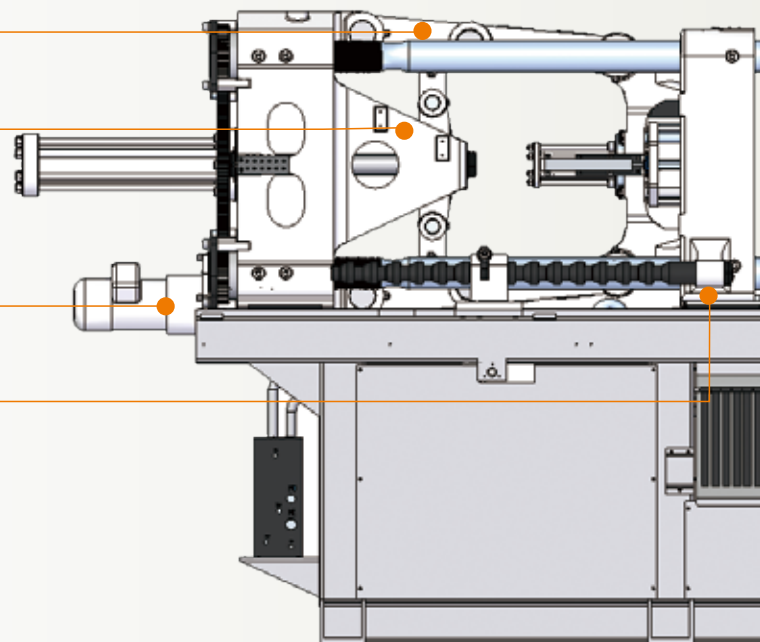


Five-points double toggle clamping system &
Self-lubricating bushings

Integrated guide armrest design

Electrical mold height adjustment

Sliding shoe support moving platen





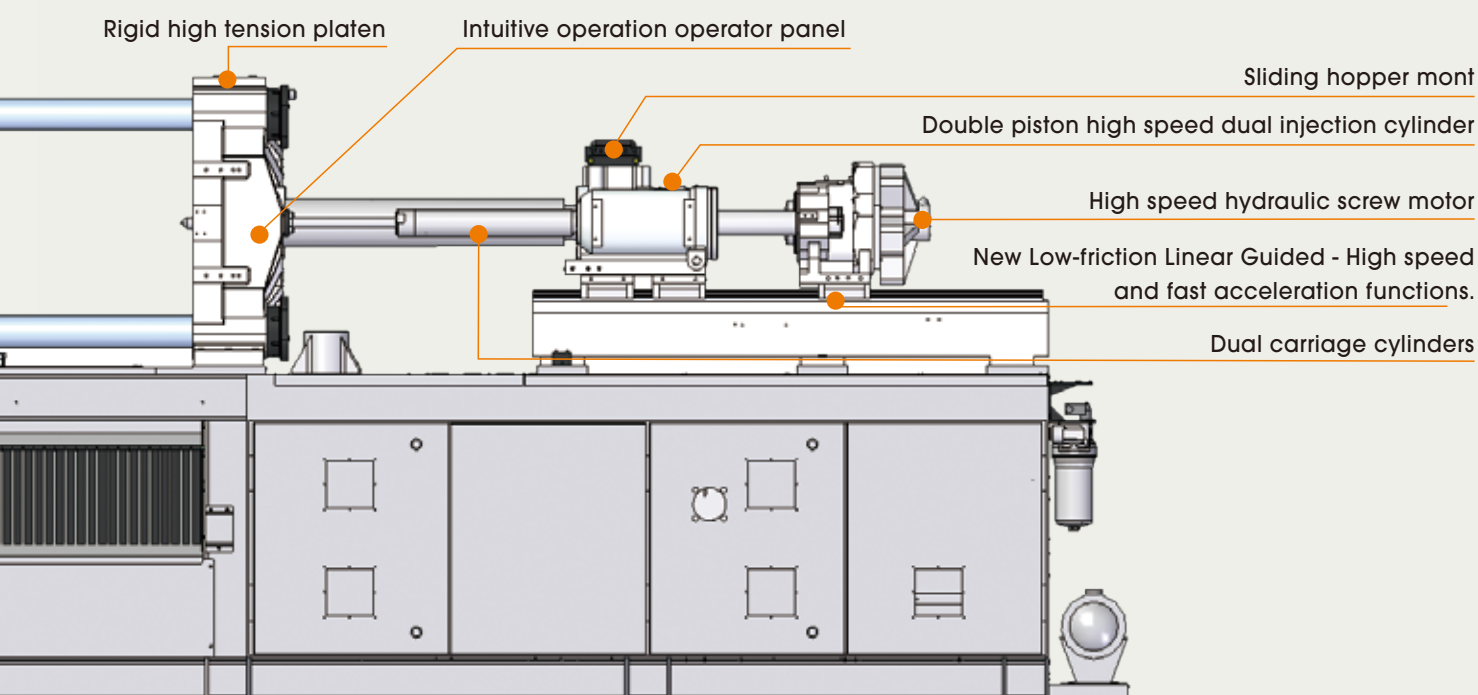
With a powerful AX8 controller and a high efficacy gear pump driven by P.M. Synchronous servomotor to satisfy your energy saving requirement and achieves the outstanding process consistency and repeatability.

VFIIE Series injection moulding machine has been developed by fusing of merits of hydraulic injection machines (low maintenance-free operation, long life, and low cost) and electric molding machines (energy-saving, high-velocity injection, quick response, high repeatability, and low operation noise)

The innovative new servo motor with high efficacy gear pump system, achieves energy-saving operation and quick response equivalent to those of all electric injection molding machines.

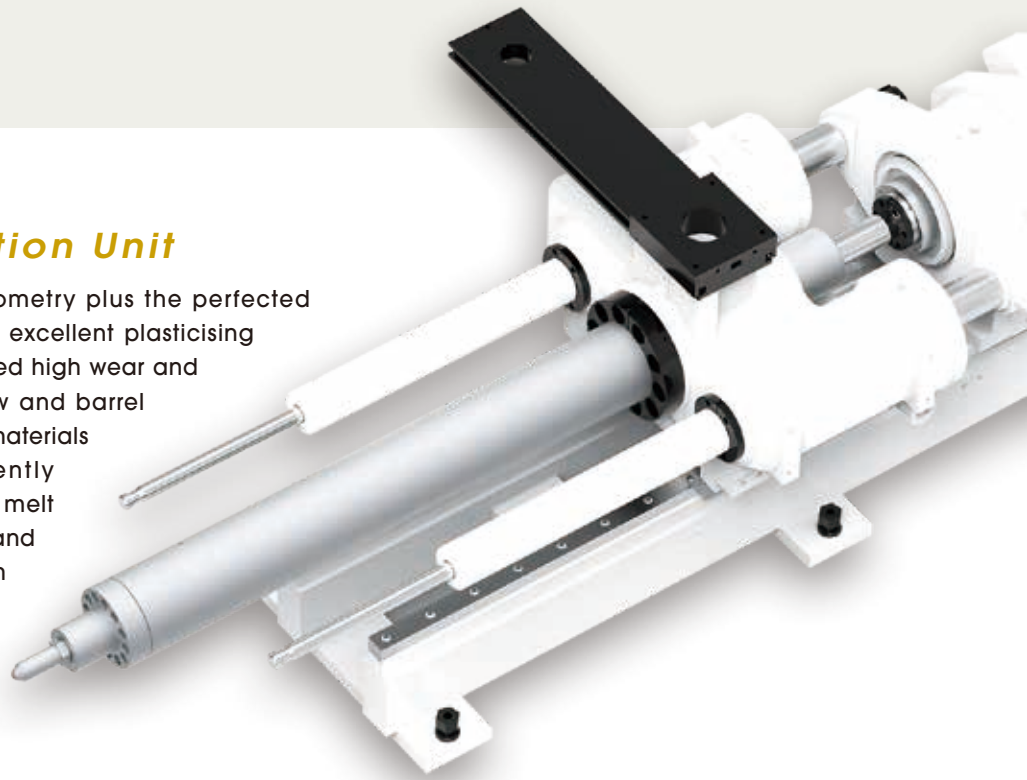


- Energy saving-almost equivalent to all- electric model machine.
- Quick response-Injection response time (Standard mode).
- Stability in low-velocity/low-pressure & wide range-Injection velocity: From ultra-low to high velocity range.
- Linearity-Excellent linearity in both injection velocity and injection pressure.
- Excellent injection holding pressure performance-Capability in sustaining high injection holding pressure longer (as compared with full-electric machine).
- Reduction in the amount of hydraulic oil and cooling water volume.
- Silent! (Low noise gear pump operation) Almost equivalent to all electric injection molding machine.



High Precision Injection Unit

The VFIIE Series optimum screw geometry plus the perfected drive and injection concepts provides excellent plasticising and injection capacity. Newly developed high wear and corrosion resistance ion-nitrided screw and barrel gives the customer a wide choice of materials for numerous applications. The gently prepared and properly homogenised melt is metered accurately, shot after shot, and is injected into the mould with high power and high speed.



The screw and barrel used on the machines has the following properties.

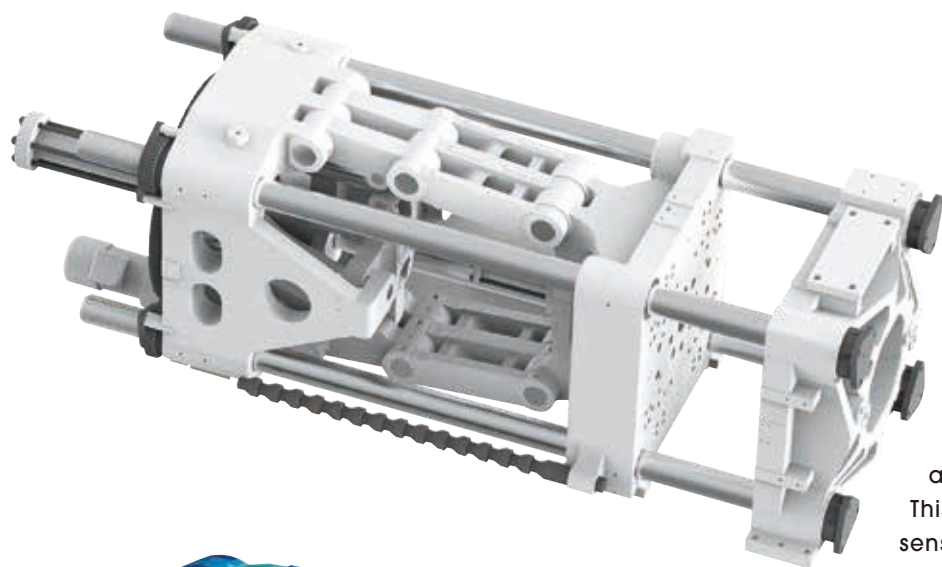
- Injection screw ACM2 German material
- Surface hardness: 900~1100 HV
- Processed by Nitride (500~520°C for 72hrs)
- Nitrided thickness: 0.4~0.5 mm



Bi-metallic coating screw and barrel (Option) - SKD 61 base material. Excellent wear-resistant, corrosion resistant screw & barrel for the processing of materials with fiber additives and also fire retardant materials. Victor general purpose screw and barrels can process any kind of material like PE, PP, PA, ABS, AS. We also supply an optional screw & barrel for engineering materials like PC, PBT, PET, with an L/D ratio from 18, 20, 22.

The multi-notch locking style screw tip. the locking style tip is useful for stabilizing part weight and increasing product precision comparing the convectional screw tip. the gap between the screw and check ring is reduced to the least, thereby the back flow resin can be reduced to minimum.

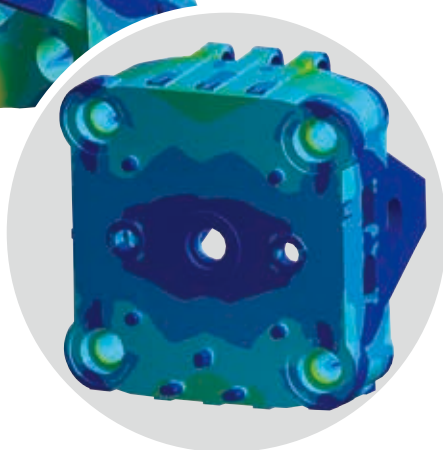
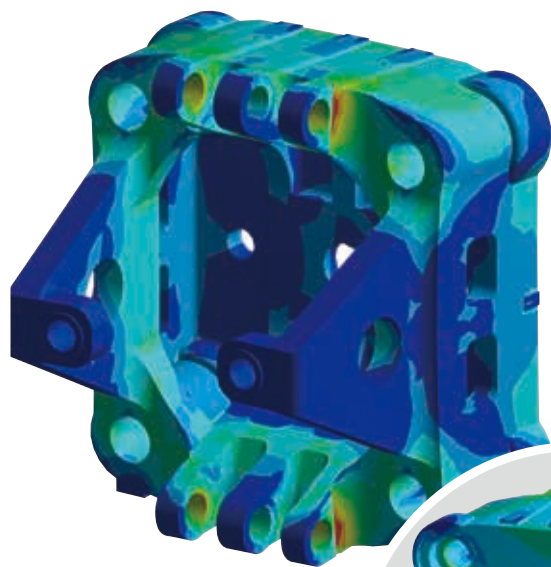




Heavy Duty, Rigid, Clamping Unit

Every component in the clamping unit that is subjected to a mechanical stress was designed and checked using the F.E.M (Finite element method) method of structure analysis. All VFIIE Series machines feature a unique, ultra-reliable, five-point toggle clamping mechanism, which is characterised, by an almost ideal kinematic velocity feature.

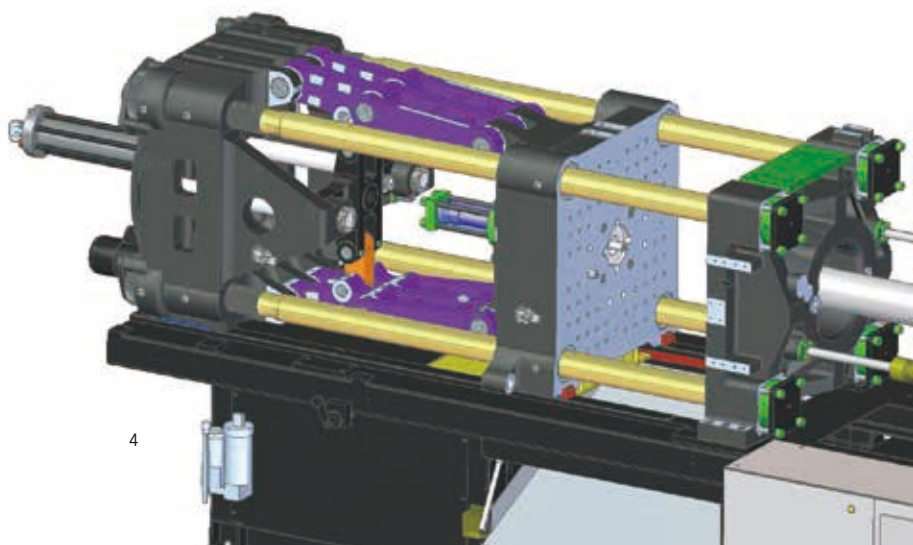
This system has fast speed, high force ratio, sensitive mould protection and good energy saving capabilities. The large square cast iron platens are extremely robust and the widely spaced tie bars allow for even the most complex of moulds.



The large, square cast iron platens virtually eliminate deflection. The bushings are manufactured from graphite impregnated phosphor bronze. Designed to run totally oil-free, there's no chance of contaminating molds, and maintenance is limited to long periodic greasing.



Mould height adjustment, which is the bull gear system, is operated by an electrical brake motor and when co-ordinated with a precision circuit breaker proceeds to prevent the possibility of overloading by force and cause machine damage.



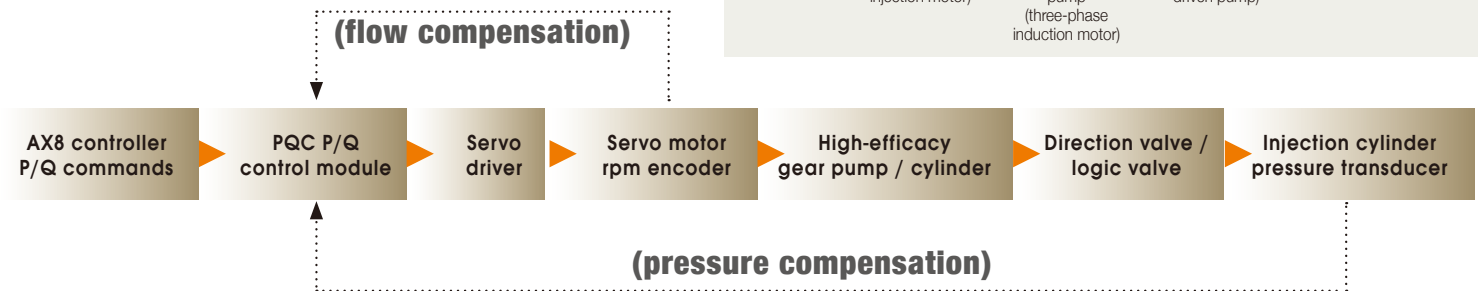
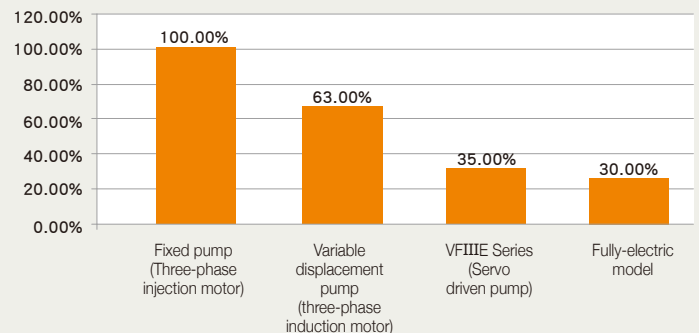
Energy Saving system

The VFIIIE Series adopts logic valves in its hydraulic system circuits. The logic valves give high response performance in injection and mould travelling stages and offers 5% energy reduction due to low-pressure loss, and can guarantee a long service life. Less energy loss means lower heat build-up in addition to a substantial reduction in the requirement of cooling water. This is further help automatic regulation of the hydraulic oil temperature.

VFIIIE Energy Saving system:

The pressure transducer measures the real injection cylinder and feedback to P/Q control module for the close-loop pressure compensation. The servo motor rpm encoder measures and feedback the pump flow to P/Q control module for the speed compensation to get precision relativity control.

Power consumption



New Generation AX8 Control

Intuitive 15 inch touch screen framed with keyboard

The swivel mounted 15" LCD high resolution touch screen, graphical user interface, can be optimally positioned for each operator, allowing an easy setting position and easy access to the mould area.

Lighted on/off manual movement buttons for each axis.

Simple Friendly Operation Interface

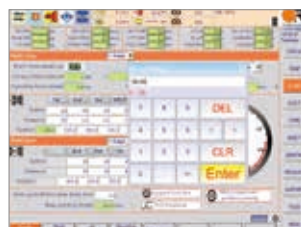
Application & Control Precision

- Convenient access to USB data, mold parameters and display screens.
- Control supports OPC UA communication protocol for Industrial Interoperability towards Industry 4.0 and Industrial Internet of Things (IIoT).
- Barrel heat zones are accurate to 0.1 °C to ensure stable material plasticizing.
- Screw position is controlled with in 0.1mm to precisely control shot size and cushion position.
- Control reaction time in 0.5ms.

Overall setting screen



Pop-up keyboards for data and text entry



SPC/SQC Production management - quality control



Specifications

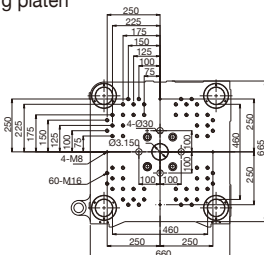


Model		VFIIIIE-150V			VFIIIIE-150W		
Injection unit							
Calculated injection capacity	cm³	116.6	147.6	182.2	192.8	235.5	282.5
Actual shot weight (PS)	g	109.3	138.3	170.8	180.7	220.8	264.8
Actual shot weight (PS)	oz	3.85	4.87	6.01	6.36	7.77	9.32
Calculated Plasticizing capacity (PS)	kg/hr	39.6	54.3	72.4	53.9	68.3	90.9
Injection pressure-Max.	kgf/cm²	2490	1968	1594	2179	1784	1487
Injection rate	cm³/sec	110	139	172	126	154	184
Injection speed	mm/sec	137			111		
Screw diameter	mm	32	36	40	38	42	46
Screw L/D ratio		22.5	20.0	18.0	21.0	19.0	17.3
Screw speed	rpm	285			244		
Screw stroke	mm	145			170		
Nozzle contact force	ton	5.0			5.0		
Total heating wattage	kw	11.46			13.5		
Clamping unit							
Clamping force	ton	150			150		
Clamp stroke-max.	mm	400			400		
Open daylight-max.	mm	850			850		
Mold thickness (min. - max.)	mm	150-450			150-450		
Platen dimension (H x V)	mm	690*665			690*665		
Tie-bar distance (H x V)	mm	460*460			460*460		
Ejector stroke	mm	100			100		
Ejector force	ton	4.0			4.0		
General							
Servomotor (ES system)	kw	15			15		
Oil tank capacity	l	195			195		
Hydraulic sys. Pressure (max.)	kgf/cm²	170			170		
Machine weight	ton	4.2			4.3		
Machine dimensions	mm	4449X1372X1683			4449X1372X1683		

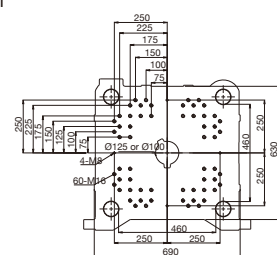
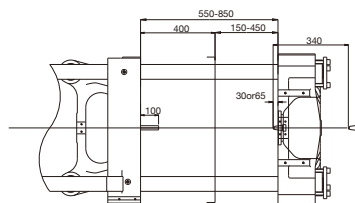
※ Notes: Due to continual improvements, specifications technical information and dimensions are subjected to change without prior notice.

JIS Platen Information

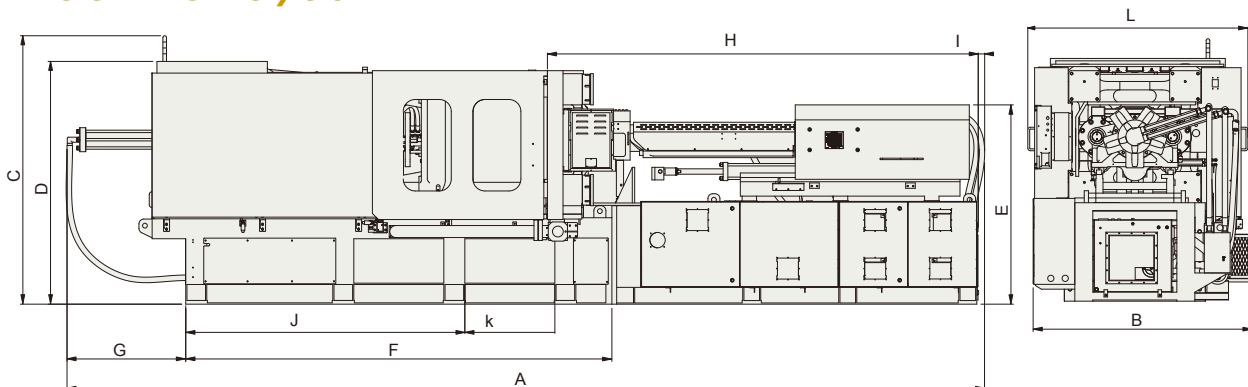
Moving platen



Fixed platen



Machine Layout



Unit: mm

MODEL	A	B	C	D	E	F	G	H	I	J	K	L	t
VFIIIIE-150WES	4449	1372	1983	1683	1490	-	675	2114	-	895	815	1292	4.1

Worldwide Subsidiaries



ONWARD RISE

To ensure the return on investment, Victor Taichung has invested considerably in setting up a distribution network in terms of global vision local touch for our sales and service supports worldwide. Besides the qualified exclusive agents around the world, Victor Taichung has 7 overseas subsidiaries to provide our customers efficient after-sales service and technical supports.



THE VICTOR-TAICHUNG COMPANIES

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VTL



VMC



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XMT



PIM