

VF III Series

Hybrid High-Performance Injection Moulding Machine



VFIII Series

60-580 Tons VFIII Series Simple,
Productive, Economical

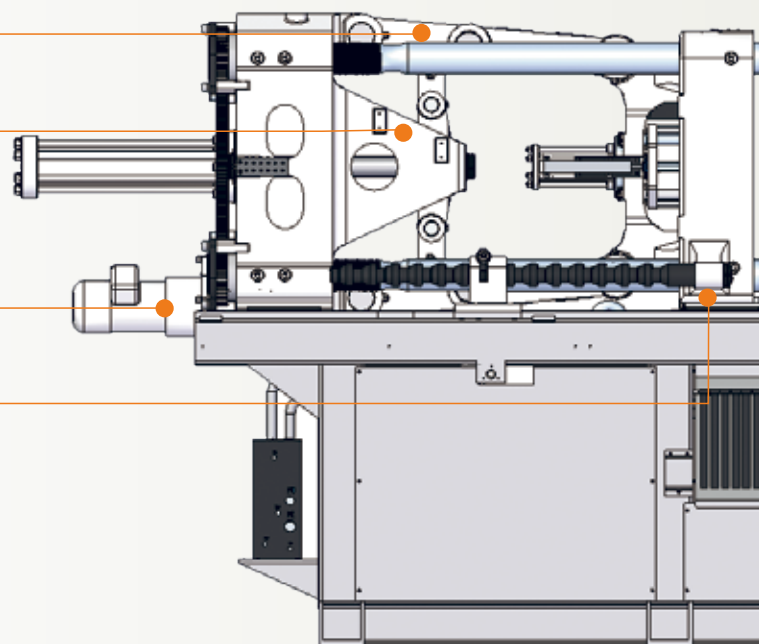


Five-points double toggle clamping system &
Self-lubricating bushings

Integrated guide armrest design

Electrical mold height adjustment

Sliding shoe support moving platen





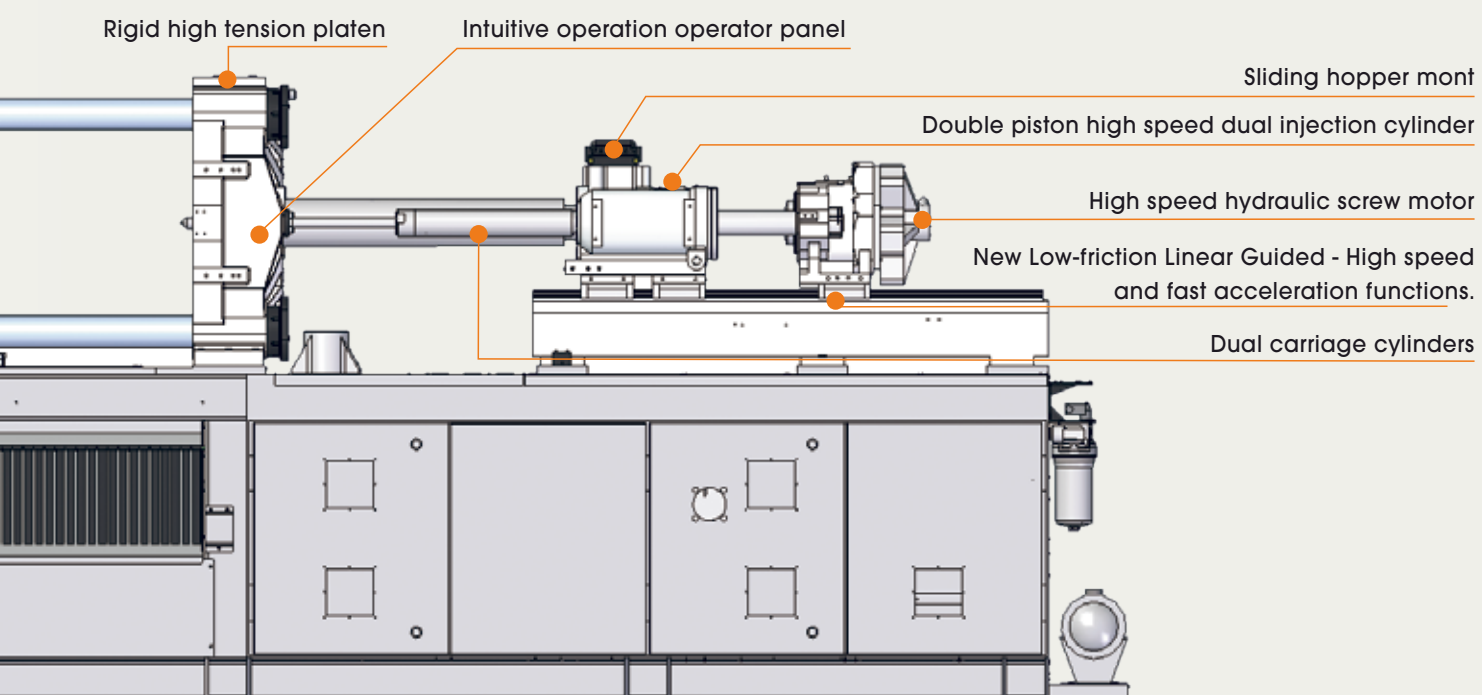
With a powerful V8800 controller and a high efficacy gear pump driven by P.M. Synchronous servomotor to satisfy your energy saving requirement and achieves the outstanding process consistency and repeatability.

VFIII 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.

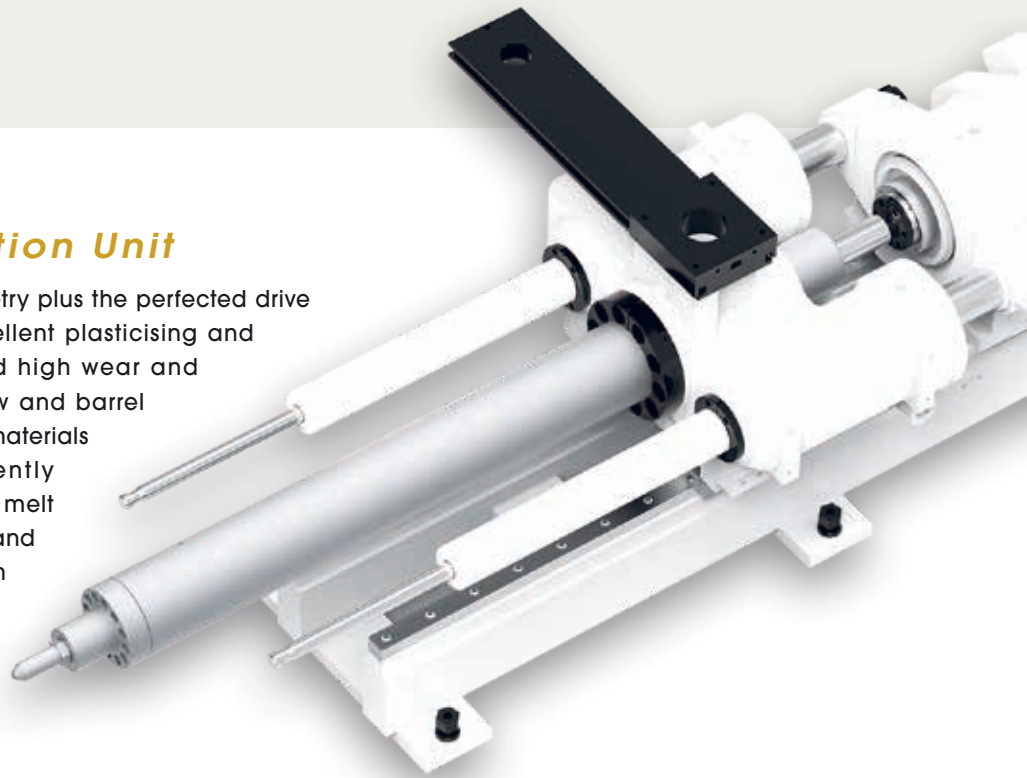


- Energy saving-almost equivalent to all- electric model machine.
- Quick response-Injection response time (Standard mode).
- Stability in low-velocity/low-pressure & wide range-Injection velocity: From ultra-low to high velocity range.
- Linearity-Excellent linearity in both injection velocity and injection 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 VFIII 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.

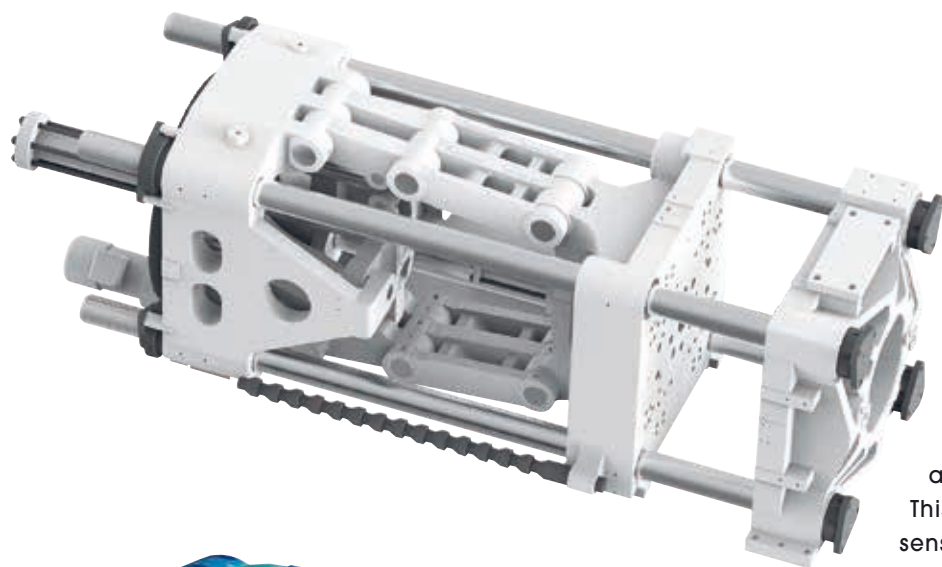
- Injection screw ACM2 German material
- Surface hardness: 900~1100 HV
- Processed by Nitride (500~520°C for 72hrs)
- Nitrided thickness: 0.4~0.5 mm



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.

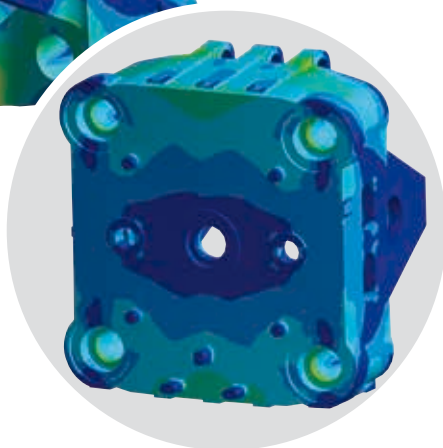
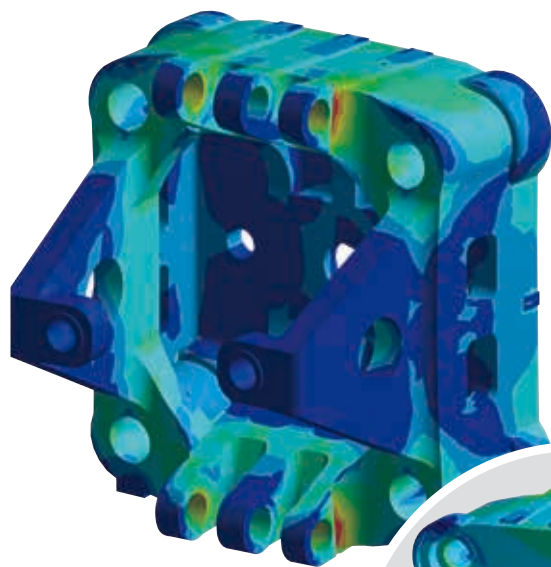




Heavy Duty, Rigid, Clamping Unit

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 VFIII Series machines feature a unique, ultra-reliable, five-point toggle clamping mechanism, which is characterised, by an almost ideal kinematic velocity feature.

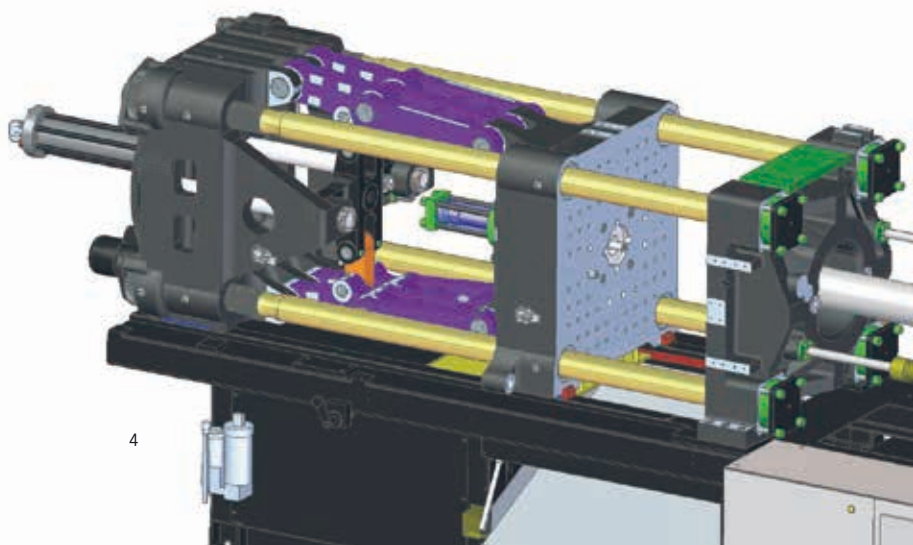
This system has fast speed, high force ratio, sensitive mould protection and good energy saving capabilities. The large square cast iron platens are extremely robust and the widely spaced tie bars allow for even the most complex of moulds.



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.



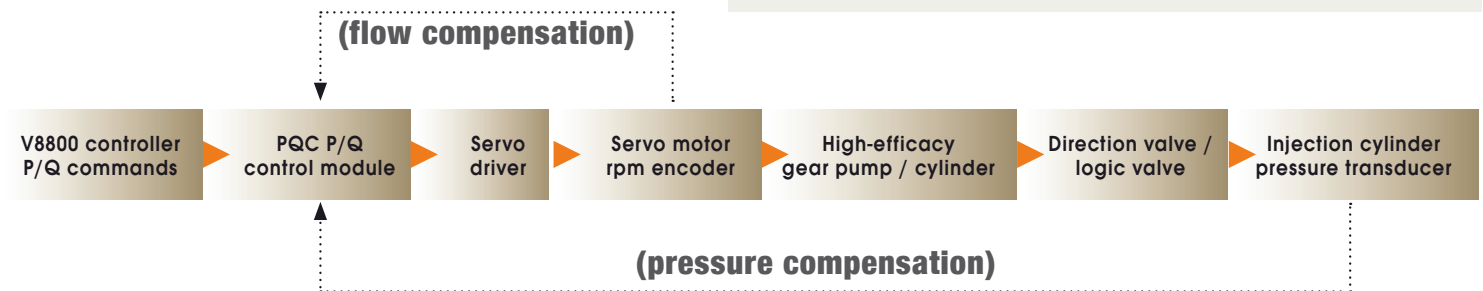
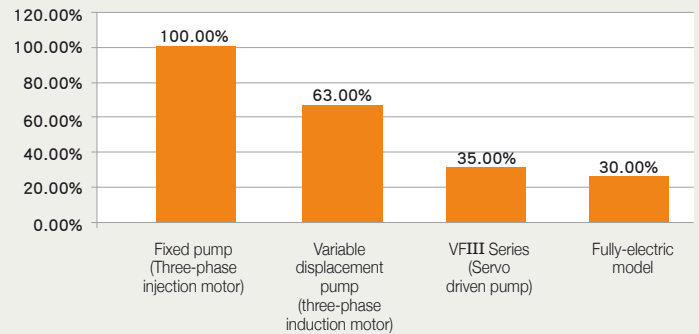
Energy Saving system

The VFIII Series (60T~580T models) 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.

VFIII 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 V8800 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

Mold settings can be transferred using a USB drive

The internal memory allows for up to 1000 set to be stored, the USB port enables molding condition files to be stored to an external USB memory stick.



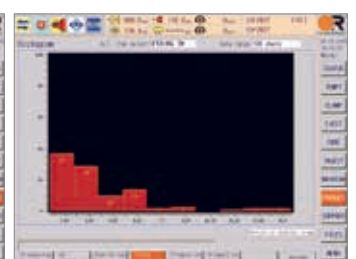
Overall setting screen



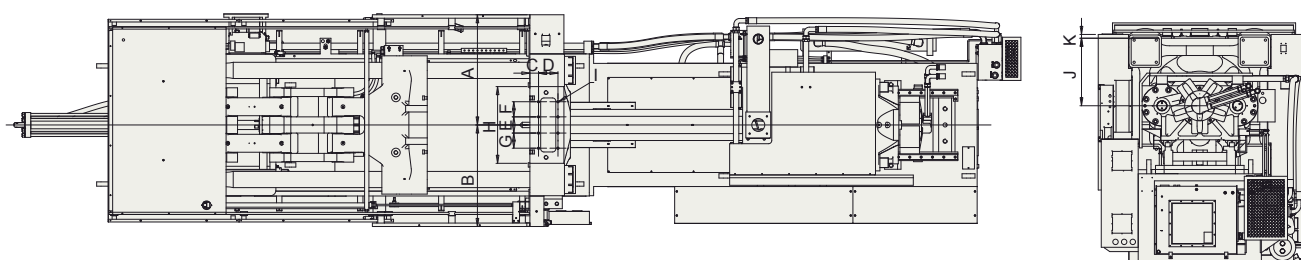
Pop-up keyboards for data and text entry



SPC/SQC Production management - quality control



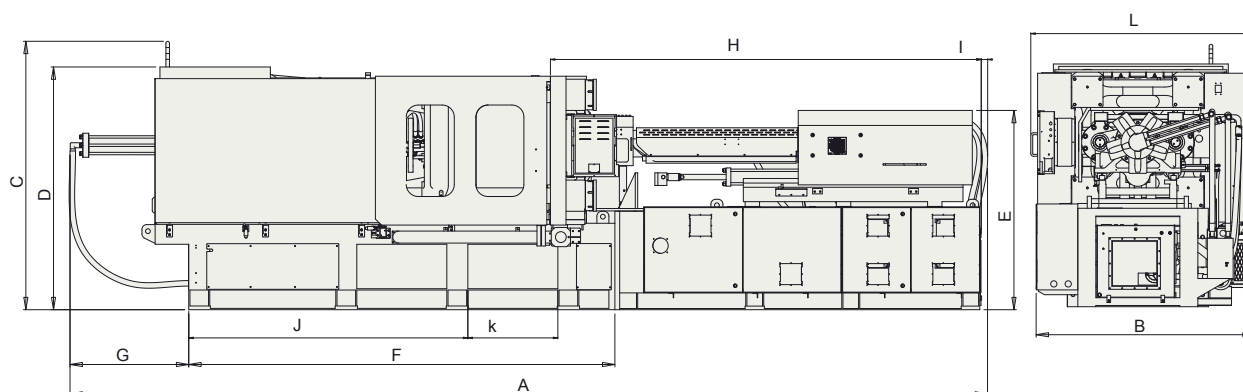
Robot Systems Integration



Unit: mm

MODEL	A	B	C	D	E	F	G	H	I	J	K
VFIII-60	515	466	55			100	100	240	M16	258	144
VFIII-90	525	493	45	50		100	100	240	M16	292	83
VFIII-120	558	516	45	50		100	100	270	M16	338	64
VFIII-150	605	575	45	50		100	100	270	M16	348	73
VFIII-180	680	620	65	80		150	150	350	M16	407	71
VFIII-220	721	666	65	80		150	150	350	M16	425	78
VFIII-260	722	722	65	80		150	150	450	M16	457	100
VFIII-320	818	893	80	120	360			540	M20	485	95
VFIII-400	885	835	70	170	360			580	M20	520	55
VFIII-480	980	1000	80	180	150	140	140	670	M20	585	30
VFIII-580	1020	1030	80	180	150	140	140	710	M20	625	35

Machine Layout



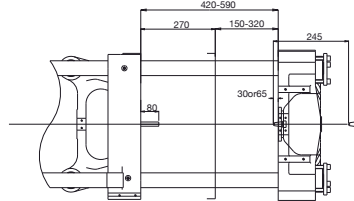
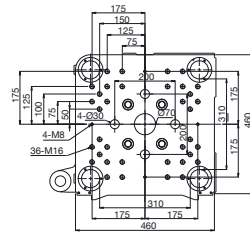
Unit: mm

MODEL	A	B	C	D	E	F	G	H	I	J	K	L	†
VFIII-60	3706	1093	1912	1612	1353		474	1928		778	572	1091	2.3
VFIII-90	4228	1185	1893	1593	1400		545	2154		800	785	1155	2.9
VFIII-120	4364	1316	1950	1650	1431		594	2120		895	815	1286	3.5
VFIII-150	4449	1372	1983	1683	1490		675	2114		895	815	1292	4.1
VFIII-180	5254	1450	2096	1796	1518		641	2360	173	1195	914	1410	5.5
VFIII-220	5581	1529	2160	1860	1578		685	2363	312	1340	916	1499	7.2
VFIII-260	6421	1585	2313	2013	1731		866	2904	151	1438	1143	1555	9.3
VFIII-320L	7620	1862	2350	2051	1634		483	3485	85	2033	827	1832	13.6
VFIII-400M	8120	1865	2360	2060	1650	3940	587	3577	320	2325	750	1920	16.7
VFIII-480N	8890	1940	2417	2117	1700	4220	688	3990	300	2800	650	2100	20.7
VFIII-580P	9880	2020	2517	2217	1752	4560	770	4150	380	3100	700	2170	26.4

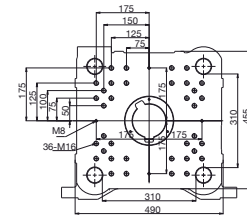
JIS Platen Information

VFIII - 60

Moving platen

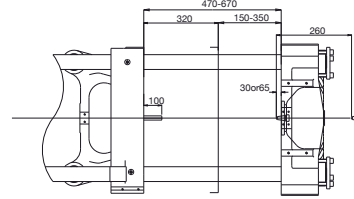
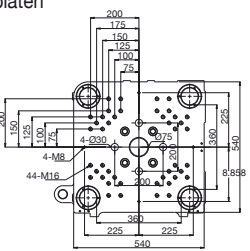


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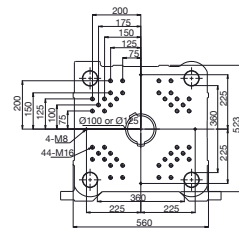


VFIII - 90

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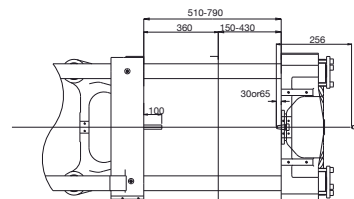
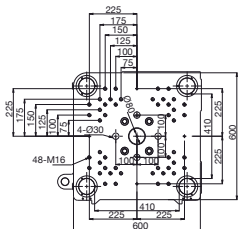


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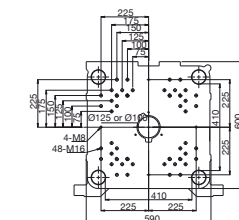


VFIII - 120

Moving platen

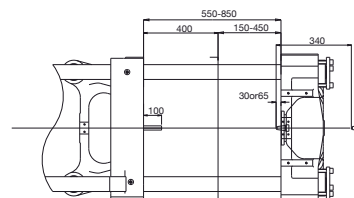
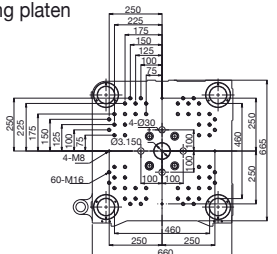


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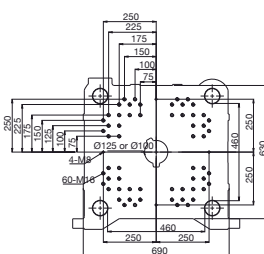


VFIII - 150

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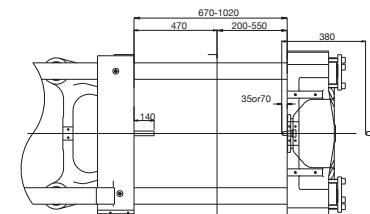
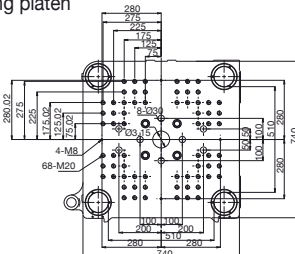


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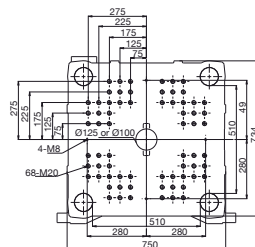


VFIII - 180

Moving platen

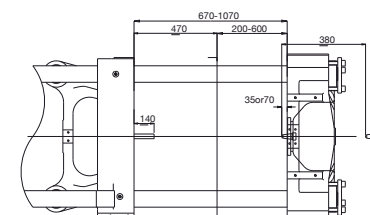
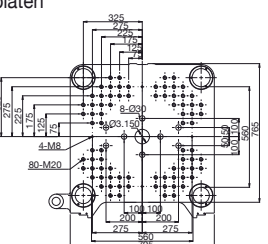


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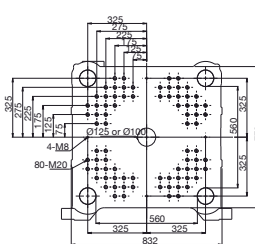


VFIII - 220

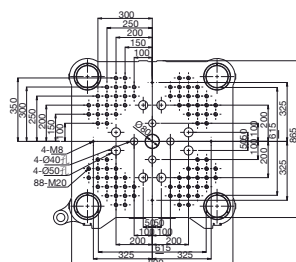
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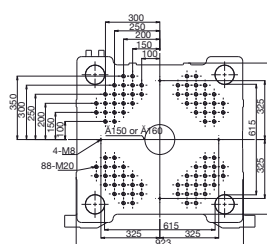
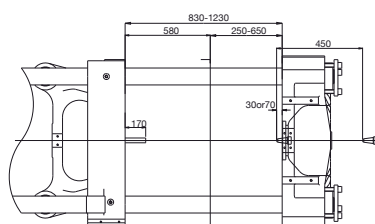
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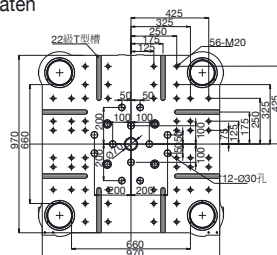
VFIII - 260
Moving platen



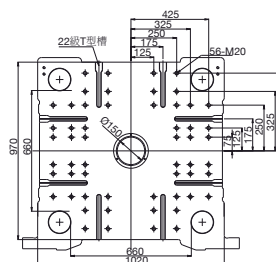
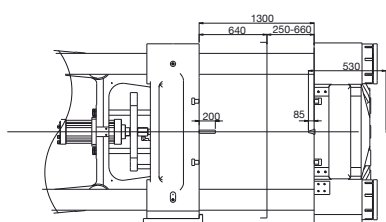
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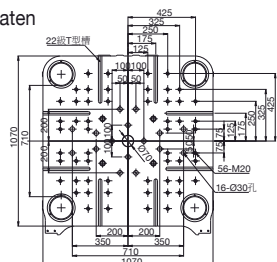
VFIII - 320
Moving platen



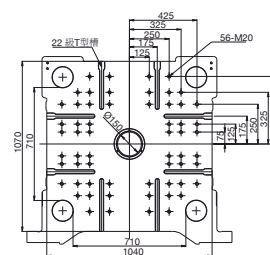
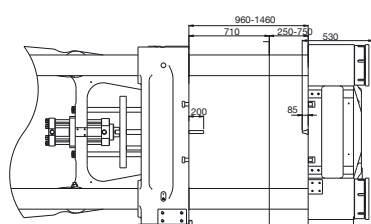
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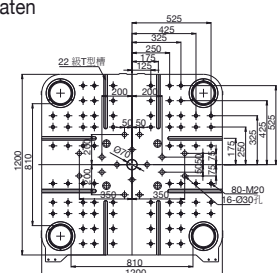
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Moving platen



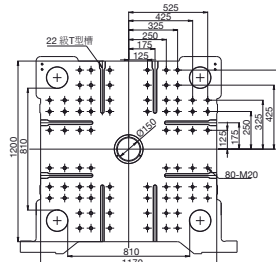
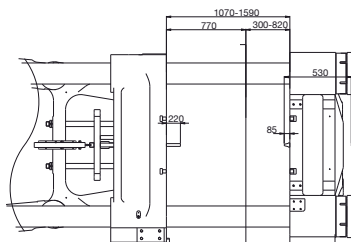
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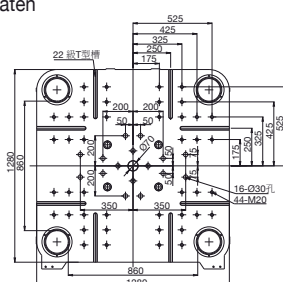
VFIII - 480
Moving platen



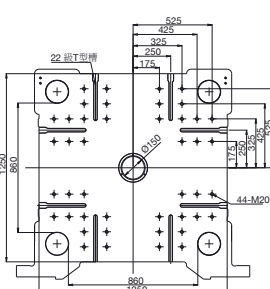
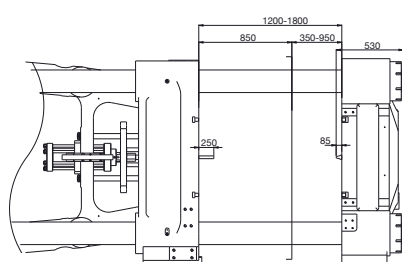
Fixed platen



VFIII - 580
Moving platen



Fixed platen



Specifications

Model		VFIII-60						VFIII-90							VFIII-120					
Injection unit		S		T			S		T			V		T			V			
Calculated injection capacity	cm³	38.0	49.1	61.6	80.4	101.8	38.0	49.1	61.6	80.4	101.8	116.6	147.6	182.2	61.6	80.4	101.8	116.6	147.6	
Actual shot weight (PS)	g	35.6	46.0	57.7	75.4	95.4	35.6	46.0	57.7	75.4	95.4	109.3	138.3	170.8	57.7	75.4	95.4	109.3	138.3	
Actual shot weight (PS)	oz	1.25	1.62	2.03	2.65	3.36	1.25	1.62	2.03	2.65	3.36	3.85	4.87	6.01	2.03	2.65	3.36	3.85	4.87	
Calculated Plasticizing capacity (PS)	kg/hr	23.7	34	33.6	49.1	67.4	23.7	34	33.6	49.1	67.4	46.7	64.1	85.4	33.6	49.1	67.4	46.7	64.1	
Injection pressure-Max.	kgf/cm²	3012	2333	2635	2017	1594	3012	2333	2635	2017	1594	2490	1968	1594	2635	2017	1594	2490	1968	
Injection rate	cm³/sec	52	67	84	109	138	64	83	104	136	172	110	140	172	104	136	172	110	140	
Injection speed	mm/sec	136		136			169		169			137		169			137			
Screw diameter	mm	22	25	28	32	36	22	25	28	32	36	32	36	40	28	32	36	32	36	
Screw L/D ratio		22.7	20.0	22.9	20.0	17.8	22.7	20.0	22.9	20.0	17.8	22.5	20.0	18.0	22.9	20.0	17.8	22.5	20.0	
Screw speed	rpm	400		300			400		300			285		300			285			
Screw stroke	mm	100		100			100		100			130		100			145			
Nozzle contact force	ton	5.0		5.0			5.0		5.0			5.0		5.0			5.0			
Total heating wattage	kw	6.68		10			6.68		10			11.46		10			11.46			

Clamping unit

Clamping force	ton	60		60			90		90			90		120			120		
Clamp stroke-max.	mm	270		270			320		320			320		360			360		
Open daylight-max.	mm	590		590			670		670			670		790			790		
Mold thickness (min. - max.)	mm	150 - 320		150 - 320			150 - 350		150 - 350			150 - 350		150 - 430			150 -		
Platen dimension (H x V)	mm	490 x 460		490 x 460			560 x 540		560 x 540			560 x 540		600 x 600			600 x		
Tie-bar distance (H x V)	mm	310 x 310		310 x 310			360 x 360		360 x 360			360 x 360		410 x 410			410 x		
Ejector stroke	mm	80		80			100		100			100		100			100		
Ejector force	ton	4.0		4.0			4.0		4.0			4.0		4.0			4.0		

General

Servomotor (ES system)	kw	10		10			14		14			14		14			14		
Oil tank capacity	l	150		150			150		150			150		150			150		
Hydraulic sys. Pressure (max.)	kgf/cm²	170		170			170		170			170		170			170		
Machine weight	ton	2.5		2.5			3.3		3.3			3.4		3.6			3.7		
Machine dimensions	mm	3706 x 1093 x 1612		3706 x 1093 x 1612			4234 x 1165 x 1593		4234 x 1165 x 1593			4234 x 1165 x 1593		4362 x 1201 x 1650			4362 x 1201		

Model		VFIII-320										VFIII-400							
Injection unit		X			Y			L			Y			L			M		
Calculated injection capacity	cm³	332	393	475	570	679	872	905	1162	1452	570	679	872	905	1162	1452	1235	1542	
Actual shot weight (PS)	g	312	368	445	534	636	817	848	1089	1361	534	636	817	848	1089	1361	1157	1446	
Actual shot weight (PS)	oz	11	13	15.7	18.8	22.4	28.8	29.9	38.4	47.9	18.8	22.4	28.8	29.9	38.4	47.9	40.8	50.9	
Calculated Plasticizing capacity (PS)	kg/hr	122	151	188	114	142	190	113	151	194	142	177	237	141	189	242	141	181	
Injection pressure-Max.	kgf/cm²	2250	1904	1574	2065	1735	1351	2127	1656	1326	2065	1735	1351	2127	1656	1326	2206	1766	
Injection rate	cm³/sec	244	289	349	266	317	407	258	332	415	333	396	509	323	415	518	311	389	
Injection speed	mm/sec	147			112			91			140			114			86		
Screw diameter	mm	46	50	55	55	60	68	60	68	76	55	60	68	60	68	76	68	76	
Screw L/D ratio		21.7	20	18.2	21.8	20	17.6	22.7	20	17.9	21.8	20	17.6	22.7	20	17.9	22.4	20	
Screw speed	rpm	327			198			157			257			197			147		
Screw stroke	mm	200			240			320			240			320			340		
Nozzle contact force	ton	5.0			7.9			10.6			7.9			10.6			10.6		
Total heating wattage	kw	21.5			30.6			23			30.6			26.8			35.4		

Clamping unit

Clamping force	ton	320			320			320			400			400			400		
Clamp stroke-max.	mm	640			640			640			710			710			710		
Open daylight-max.	mm	1300			1300			1300			1460			1460			1460		
Mold thickness (min. - max.)	mm	250 - 660			250 - 660			250 - 660			250 - 750			250 - 750			250 - 750		
Platen dimension (H x V)	mm	970 x 970			970 x 970			970 x 970			1070 x 1070			1070 x 1070			1070 x 1070		
Tie-bar distance (H x V)	mm	660 x 660			660 x 660			660 x 660			710 x 710			710 x 710			710 x 710		
Ejector stroke	mm	200			200			200			200			200			200		
Ejector force	ton	8.5			8.5			8.5			10.8			10.8			10.8		

General

Servomotor (ES system)	kw	25	25	25	18+18	18+18	18+18
Oil tank capacity	l	300	300	300	390	390	390
Hydraulic sys. Pressure (max.)	kgf/cm²	170	170	170	170	170	170
Machine weight	ton	12.6	13	13.6	15.9	16.5	16.7
Machine dimensions	mm	7050 x 1862 x 2051	7050 x 1862 x 2051	7620 x 1862 x 2051	7430 x 1865 x 2060	7430 x 1865 x 2060	8020 x 1865 x

Worldwide Subsidiaries

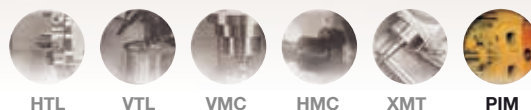


ONWARD RISE

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



TAIWAN

Victor Taichung Machinery Works Co., Ltd.

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TEL: 886-4-23592101 FAX: 886-4-23593389
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TEL: 886-4-23590919 FAX: 886-4-23592425
- Houli Foundry
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