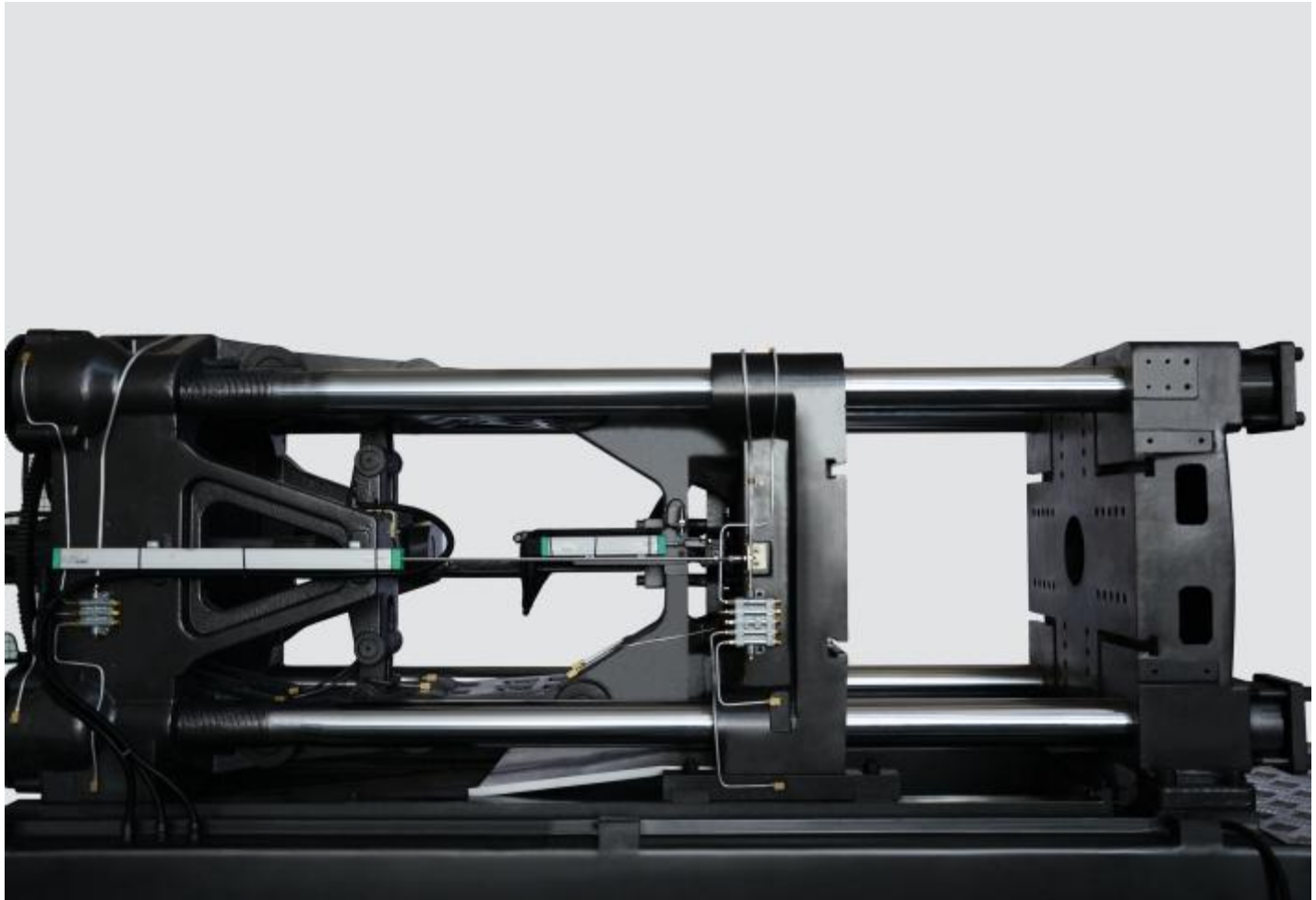


▶ FC Series High Precision Injection Moulding Machine



FC series is a high-end plastic injection moulding machine newly developed by Forstar after years of R&D and practical experiment. It is developed on the basis of the FST series with introduction of advanced European technique and appearance style. It keeps the advantages of efficiency, precision, energy-conservation and stability of the FST series while optimized thoroughly.



Symmetrical stress mould clamping

By evenly distributing the clamping force, the platens bear lower stress and are less likely to be distorted and have moulding problems. This technique not only protects the platens and the moulds, but also makes FC series competent in producing thin-wall plastic products.

High Rigidity Platens with T-slots

All FC series machines are equipped with high rigidity platens which have T-slots on them for mould mounting. T-slots is a good solution for platens to be compatible with moulds for different use required by customers and for extending the platen's service life by reducing the threaded hole wearing due to long-time use.

Extended slides and friction bells for the moving platen

All FC series machines are equipped with extended slides on the moving platens, which greatly improved the stability of platen movement during mould opening and clamping. Also, there are steel friction bells underneath the moving platen, which reduces the friction coefficient and thus improves the stability and precision of the platen movement, as well as protecting the mould.

Low pressure mould protection

This is a standard function of FC series for protecting the moulds.

Master Lubrication System

Tie bars and toggles are lubricated by an automatic master lubrication system which distributes thin oil automatically. The mould adjusting mechanism is lubricated by a manual master lubrication system. Both systems guarantee lubrication efficiency and thus improves reliability and stability of the machine.



INJECTION

UNIT



Unique double liner guide tracks

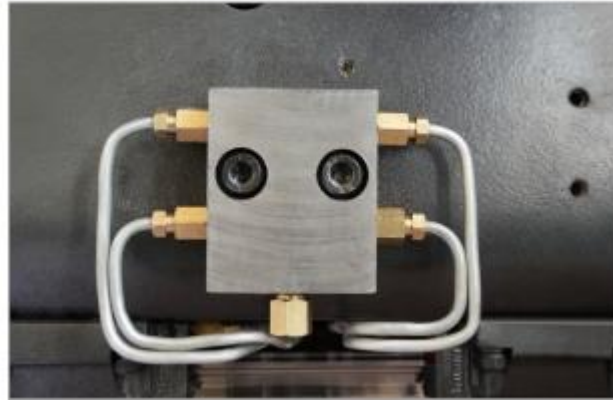
The injection unit of FC series is equipped with double liner guide tracks which improves injection accuracy and stability. Together with two high rigidity supporting bases, the double liner guide tracks guarantee high accuracy of the whole unit.

High-efficiency screw and barrel

Fast color-mixing screw is another standard feature of FC series. It works perfectly on plasticization and provides excellent color mixing, which satisfies customer's increasingly strict requirement on product features. The screw is consisted of the tip set, namely the screw head, screw ring and gasket. Also it has a high rigidity nozzle flange and nozzle. These parts effectively guarantee high position accuracy of the injection unit and high repeated accuracy of plastic products.

User-friendly safety devices

These devices include enclosed barrel shelter, a nozzle shelter, a mobile hopper and a manual pressure-releasing lubrication system. They not only guarantee safe operation but also enable better work efficiency and convenience.



HYDRAULIC UNIT

FC series is a combine of servo closed-loop system and variable pump technique used in Forstar for many years. Forstar made overall improvement and optimization on selecting motors, oil pumps and tubes. This greatly improves stability, reliability of the machine, ensuring its high-efficiency, energy conservation, durability and low-noise operation.

The variable pump series goes with a high performance load-sensitive variable pump, which alone saves 30% to 50% of energy consumption.

The servo series is equipped with advanced servo system, saving as much as 40% to 80% of energy consumption.

The injection manifold is relocated on the top of the injection cylinders. So is the clamping manifold on the clamping cylinder. This design enables faster responses and greatly benefits injection and clamping accuracy.

The oil tank is sealed with imported two-piece sealing elements such as Hallite which works better than traditional back-to-back sealing.

The layout of oil tubes and oil dripping tray are redesigned and optimized to make sure the cleanness of plastic products and the production field.



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名牌专用电机
Brand-name motor

进口品牌高压齿轮泵
Imported high-pressure gear pump

汇川伺服驱动器
INOVANCE servo drive



KEBA电脑

FC series is equipped with professional European KEBA computer to guarantee the production stability and efficiency.

The computer cabinet is designed according to ergonomics. It is rotatable and very user friendly.

FC series has a variety of important functions, including PID temperature control, mould data setting, non-volatile memory, oil-temperature monitoring.

Mould opening and clamping, injection, and pre-plasticizing are all monitored by high precision linear transducer (accuracy can be as high as 0.1mm). This guarantees fast response and stability of the control system.

Low pressure mould protection as a standard function for protecting the moulds.



机型 MODEL	单位 UNIT	FC60	FC60+	FC90	FC90+	FC120	FC120+
International. Specification		600/138		900/290		1200/410	
注射单元 INJECTION UNIT							
Screw Diameter	mm	25		31		35	
		28		35		41	
		31		41		45	
Theoretical Shot Volume	cm ³	61		122		180	
		77		156		247	
		94		213		297	
Actual Shot Weight	g(克)	58		113		165	
		71		143		227	
		87		198		273	
Injection Pressure	Mpa	225		236		227	
		180		185		166	
		147		135		138	
Screw L:D Ratio		23.5:1		22.6:1		23.7:1	
		21:1		20:1		20.2:1	
		19:1		17.1:1		18.4:1	
Screw Stroke	mm	125		162		187	
S Series Screw Speed	rpm	247	348	279	316	199	226
S Series Injection Rate	mm/s	119.4	168	113.9	129	95.3	108
V Series Screw Speed	rpm	263		213		187	
V Series Injection Rate	mm/s	126.7		87		90	
锁模单元 CLAMPING UNIT							
Clamping Force	KN	600		900		1200	
Opening Stroke	mm	270		330		360	
Platen Size	mmxmm	450x450		520x520		600x600	
Space Between Tie Bars	mmxmm	310x310		360x360		410x410	
Max. Daylight	mm	570		690		810	
Mold Thickness (Min. Max.)	mm	120-300		130-360		145-450	
Hydraulic Ejection Stroke	mm	70		100		120	
Hydraulic Ejection Force	KN	31		34		42	
Number of Ejector		1		5		5	
动力/电热 POWER UNIT							
Hydraulic System Pressure	Mpa	16		17.5		17.5	
Pump Motor	KW	9.5	11	11	14	11	14
Pump Motor	KW	7.5		9		11	
Heating Capacity	KW	4.5		6.5		8.8	
Number of Temp Control Zones		4		4		4	
其他参数							
Tank Volume	L	140		170		180	
Machine Dimension (LxWxH)	mxmxm	4.1x1.1x1.7		4.1x1.1x1.8		4.2x1.2x1.9	
Machine Weight (Dry)	Ton	2.0		2.7		3.0	

Video prezentare firma FORSTAR : <https://www.youtube.com/watch?v=9TqDi7VRi-A>