ELE 伯乐聖加 成路集团 CHENGLU GROUP

More than 100 tests and 20 patents, all-round improvement in speed, precision, stability. Benchmarking European IMM brand, DK already become the best choice for auto industry.



German Technology German Origin

DK Series Two-platen
Injection moulding machine















SHIII IINGXIN

GREE

GREE



Technical bottleneck of Chinese two platen machine



Mold open &close not smoothly

Limitation of computer software development, most of the manufactures have to slow down the speed of mold open and close to avoid the mold and machine shaking



Tie bar easily to break

It's the normal case that one tie bar goes along with the machine as a spare part in case of tie bar break ,which prohibit many highend

customers not willing to use China Made two platen machine even

though the manufactures try hard to improve



Lock nut unstead

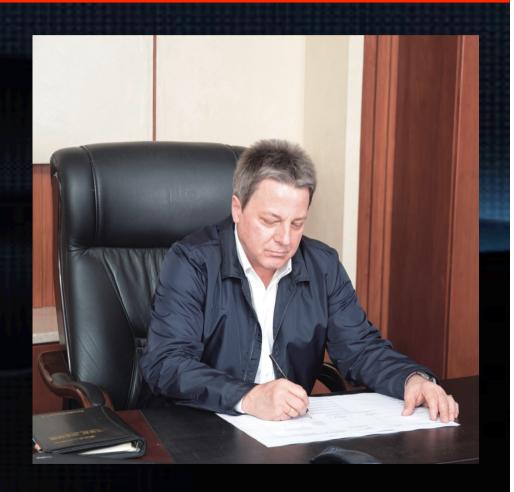
Production and operation is often stopped by lock nut failure

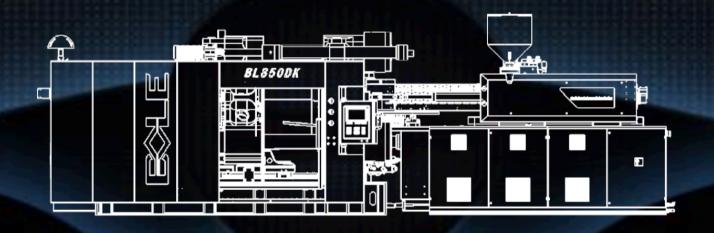


General manager

OTTO KARL

Chief engineer Industrial Electric, Information Technology double Master degree in German Demag as technical director, Engel Shanghai Branch as Project Director, Engel Changzhou Branch as Technical Director. In all-electric injection molding machine, large two-platen machine, servo control injection molding machine and other high-end equipment field has more than 40 authorized patents.

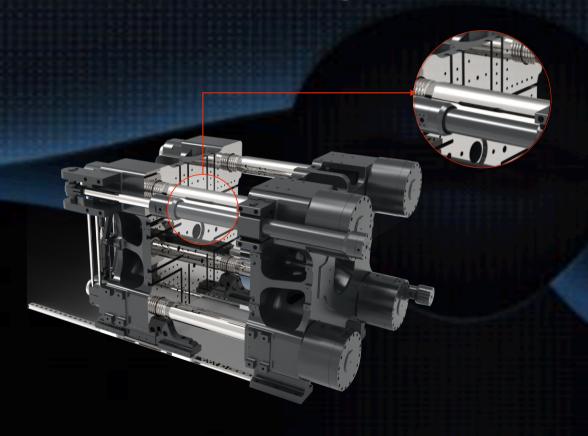






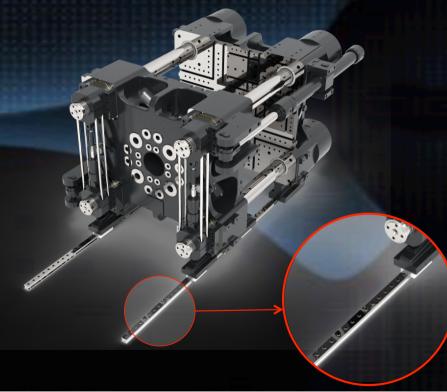
Application of leading Technology in Germany

1. Patended tie-bar design



The specially designed
patented Anti-Break tie bar can
reduce the stress at the risky
point of the tiebar to bring down
the tiebar breaking possibility

2. clamping movement adopts the Linear guideway



\$ 0.0 mm	222.12 mm (a)	1 bar dt _F 请关安全门	0 bar គ្រឿ		18-12-18 下午 Administrator	1:57	E B A
间隔:1 模数 📑 /workspace/protocol/ms_data/pdp/default.txt 🎉							
周期计数 [周期数]	开模终 [mm]	合模时间 [s]	开模时间 [s]	转保压位置 [mm]	注射最小位置 mm	合闸 [
38507 38508	1509.46 1509.72	4.82 4.81	2.80 2.80	50.00 50.00	49.29 49.29		
38509 38510	1509.76 1509.76	4.81 4.81	2.80 2.80	50.00 50.00	49.29 49.30		<u> </u>
38511 38512 38513	1509.67 1509.67 1509.70	4.81 4.81 4.81	2.80 2.80 2.80	50.00 50.00 50.00	49.31 49.32 49.32	=	<u>ت</u> ا
38514	1509.83	4.81	2.80	50.00	49.33	_	o iii
	1		П			F	
参考	0.00	0.00	0.00	0.00	0.00		设置
最小值	1509.42	4.81	2.80	50.00	49.24		
最大值	1509.83	4.83	2.80	50.00	49.33		
不同	0.41	0.02	0.00	0.00	0.09		
监控出错							
上限	*****	****	**** **	****	****		
下限	*****.**	****.**	****.**	****.**	*****		
计数出错 总错误 0	U	U	U	U	0		
停止	设置	▲ 视图	导出				打印
主页 模板	顶针 中子1/2	射胶	熔胶	射台	m热 生产	警报	+



3.German-designed plasticize system

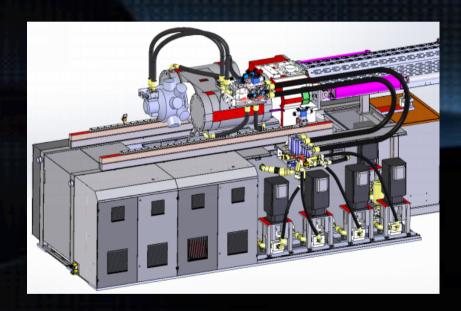


- Efficiency excess above 20% of domestic level
- Special plasticizing system can be customized for various complex process requirements and application requirements
- All types of a/b/c screw applied with L/D ratio of 23: 1 to ensure that each type of screw can achieve the best plasticizing effect and plasticizing efficiency.



4. Innovative motor placement

- The vertical arrangement of the motor reduces the space occupied
- reduces the influence of the bias load caused by the gravity of the motor rotor, which makes the motor running more stable.



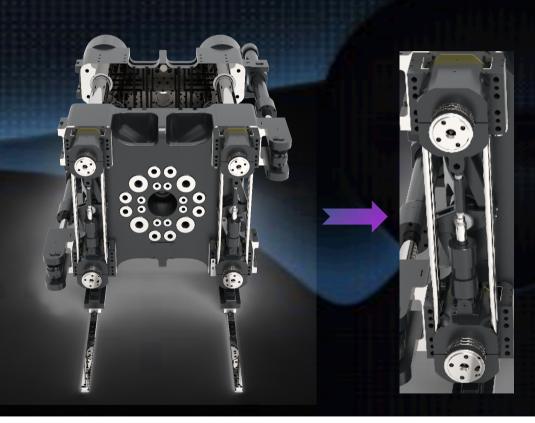


4. Innovative motor placement

Brand	Engel	КМ	BOLE	BORCH	YIZUMI	
	520T 7.4x2.7x2.3		520T 7x2.3x2.4	500T 7.2X2.5X2		
Model&	950T 10.6x3.5x2.7	1000T 10.7X3.4X2.6	950T 9x2.9x2.7	1000T 9.8X3.2X3.2	1000T 10.9X3.4X3.0	
Dimension (mxmxm)	2000T 14.4x4.3x3.5	2000T 14.75X4.1X3.4	2000T 13.2x3.7x3.2	1800T 12.3X3.1X3.6	2000T 14.6X4.4X3.8	
	2300T 15.4x4.7x3.5	2300T 16.03X4.39X3.4	2300T 14.8x4.1x3.6	2200T 15.1X4.3X3.8	2300T 16.1X4.4X3.9	



5.Fast, stable and impact-free locking system

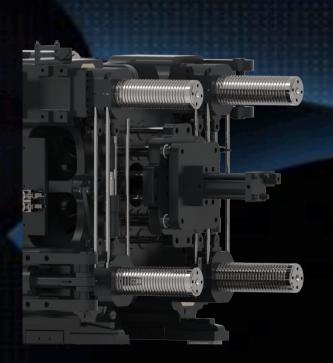


- Fast, smooth, quiet
- More effective lock nut to protect tie bar and the nut itself,prolong equipment lifetime



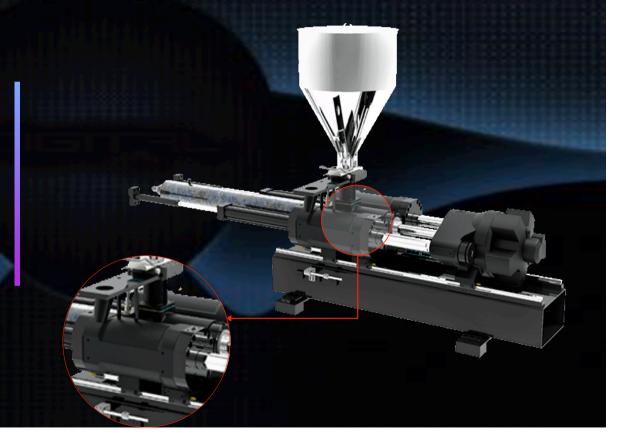
6. synchronized ejection (core) movement

Intend to improve efficiency,all the mechanical operation are synchronous.



7. Unique new cylinder structure design

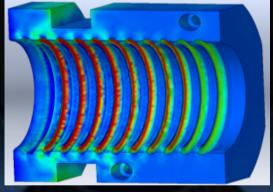
The new injection cylinder, with very low oil return resistance, is combined with the linear guide to reduce the friction of the injection unit and greatly improve the control precision of the injection unit.



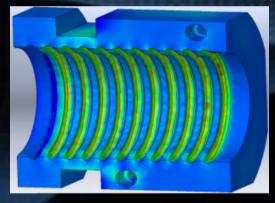
8. Progressive screw tooth distance design

Progressive screw tooth distance design ,which makes each screw teeth with even force load, ensure tie bars with much longer lifetime.





Equal distance teeth , force not even



Unequal distance teeth, force even





9. Independent filtering and cooling system



- Very compact and less space occupation.

 Stabilize the entire oil temperature without any other interruption, such as cycle time, or some other working elements.
- Prolong equipment lifetime





10. Stable temperature at the feeding throat area

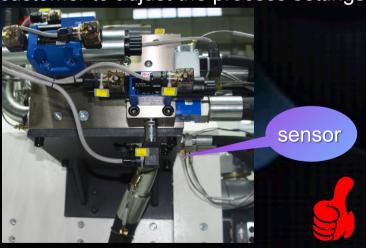
The feeding throat area temperature is brought into the closed loop for temperature control unit, thus the efficiency and precision of the whole machine injection unit are improved which avoids low injection accuracy due to inconsistency or material caking.

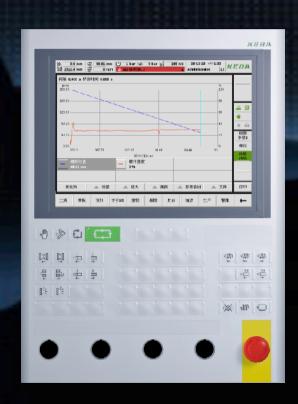




11. injection pressure sensor

The injection pressure is feeded back simultaneously, and the injection curve makes it easier for the customer to adjust the process settings of the product.





Work shop		Plastic injection		Measurement		2017. 11. 2			
,		, time							
Reason of detection		Machine capability test							
Machine pressure and series		BL950DK			Machine No.		DK0950-1004		
Part name		Rear enclosure panel			Material		PP		
Part weight (including tolerance)		705							
Measuring tools and methods		Electronic scale							
Environmental condition fluctuation range		-3 Temperature humidity noise							
Sampling method		Contin samp		√	Interval sampling				
Sampling qty		50 (pic)			(pic)				
1	704. 50	11	705. 30	21	705. 30	31	704. 80	41	705. 60
2	704. 80	12	705. 30	22	705. 30	32	704. 70	42	704. 80
3	705. 30	13	704. 40	23	704. 40	33	704. 60	43	705. 80
4	704. 80	14	704. 60	24	704. 60	34	704. 50	44	704. 10
5	704. 90	15	705. 30	25	705. 30	35	704. 20	45	705. 10
6	705. 00	16	705. 10	26	705. 10	36	704. 20	46	705. 00
7	704.60	17	705. 10	27	705. 10	37	704. 40	47	705. 20
8	704. 50	18	705. 00	28	705. 00	38	705. 00	48	705. 30
9	704. 40	19	705. 10	29	705. 10	39	704. 50	49	705. 40
10	704.60	20	704. 90	30	704. 90	40	704. 40	50	704. 90
	,		,			•		_	
Analysis		$X = \frac{1}{n} \sum_{i=1}^{n} X_{i}$			σ - √-Σ (xx). TTolerance range				

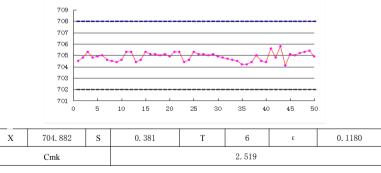
A case on Cmk value report





TuUpper limit size	TLLower limit size
SStandard deviation of the sample	XAverage
XiMeasured value	CmkMechanical capability index
双向公差时:Cmk=(T-2 ε)/6S	ε分布中心与公差中心的绝对偏移量

单向公差时:Cmk=(Tu-X)/3S或Cmk=(X-TL)/3S



Evaluation: From the analysis of the trend chart, it is known that the size has no obvious upward or downward trend, 则Cmk=2.519>1.667, so the machine meet the requirement.

Countermeasures: None



Design team





