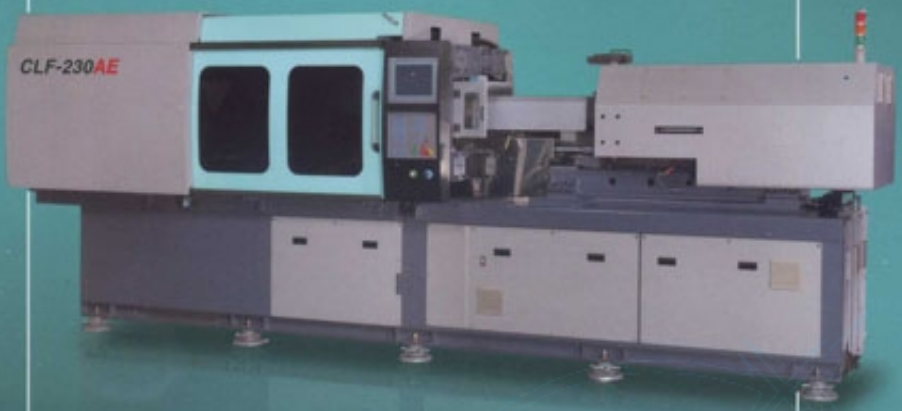
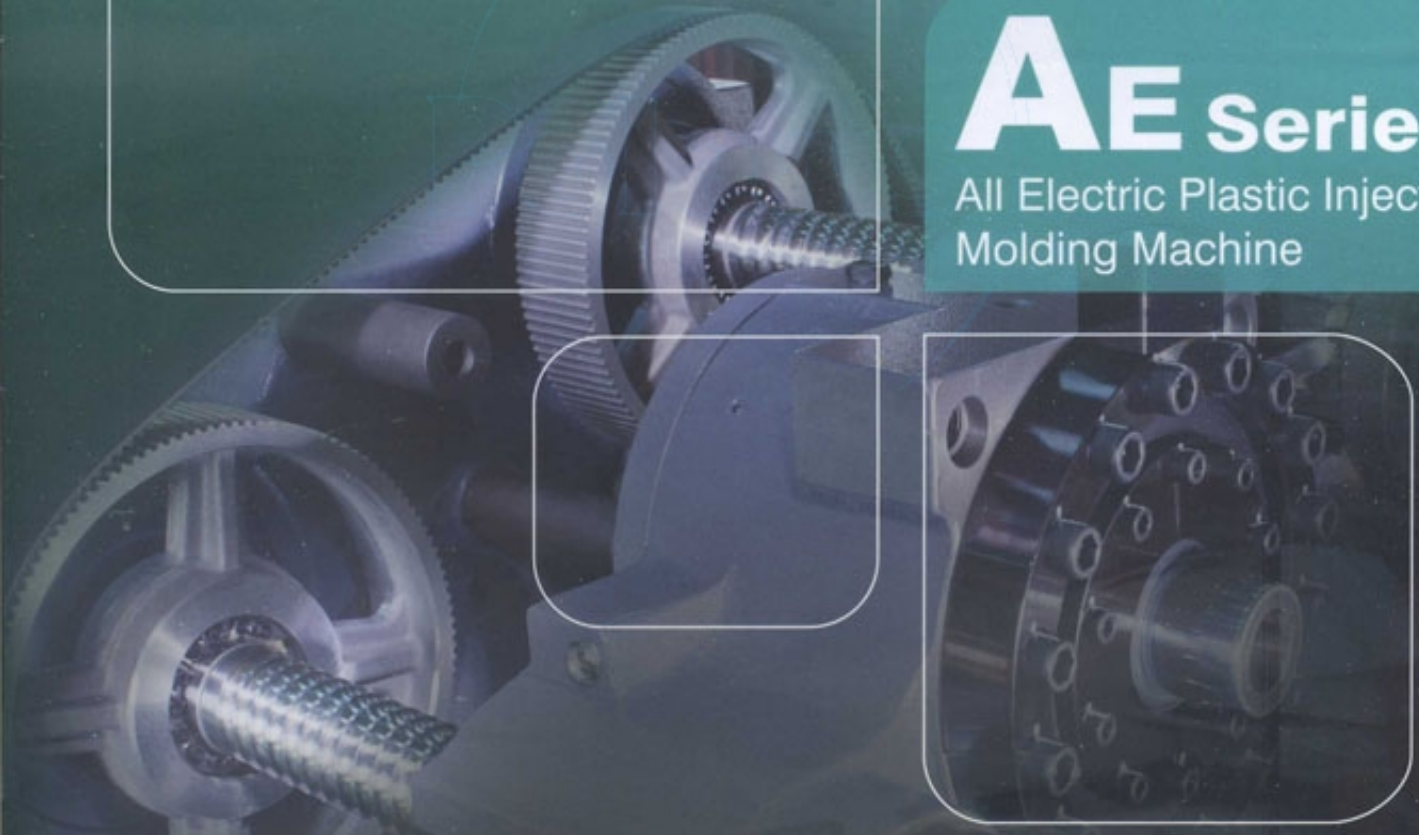


AE Series

All Electric Plastic Injection Molding Machine



CLF Being Advanced is Most Important at CLF.

Based on years of OEM/ODM cooperation experience with a renowned Japanese company, CLF has accumulated extensive expertise in this field of technology. With this outstanding background, CLF has successfully developed a new generation of molding machine. This new series features high speed, high precision and energy saving. The CLF-AE series employs German Siemens control system, offering unmatched performance to competitive control systems.

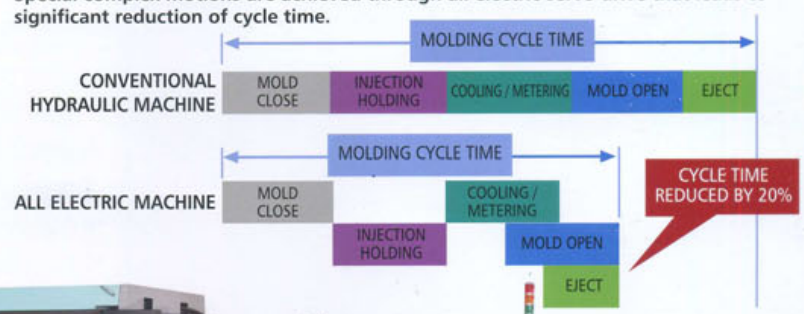
- Employs German Siemens control and servo motors for excellent performance and high accuracy.
- High performance injection unit that enhances the exceptional features of servo control. High speed, stability and accuracy are guaranteed.
- In-house software development capability combined with technical support from Siemens.
- Standardized hardware design simplifies the maintenance works and reduces the spare parts stock.
- Simultaneous control on multi-axes shortens molding cycle time dramatically.
- Overall super rigid structure minimizes running vibration.
- Exclusive energy-regeneration function not only provides electricity-saving and environmental protection, but also meets today's trend of energy-saving.
- Ergonomics operation interface.
- The access level to controller management can be ranked.
- Rigid platen design exhibits superior parallelism.
- Supports remote monitoring function.

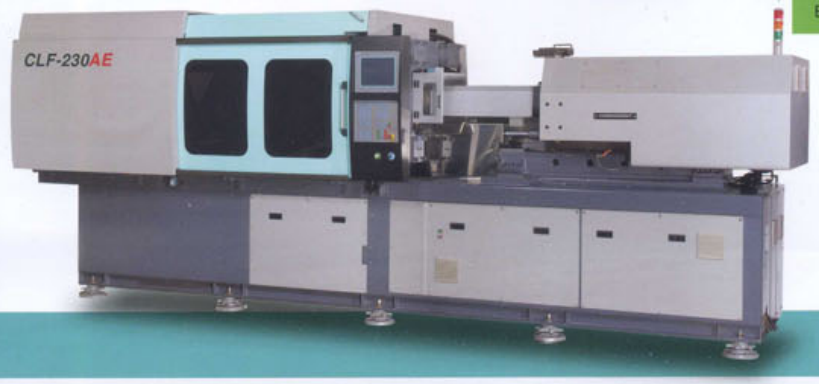
CLF-AE Series

All Electric Plastic Injection Molding Machine

With extra low speed and extra high speed injection controls to suit molding requirements for optical products and LPG. Also suitable for thin-wall production with shortened cycle time to greatly reduce production costs.

Special complex motions are achieved through all electric servo drive that leads to significant reduction of cycle time.





CLF AE Series Integrates Many Outstanding Features in One!

Application Samples

Thin-wall LGP/NB optical products

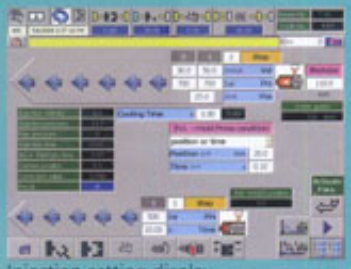
IML products

Precision products

High-Speed High-Pressure Injection! Energy-Saving & Environmental Protection! Complete German Siemens Control System!

CLF control system combines outstanding features from those of European and Japanese ones. Features simultaneous control on multiple axes that may shorten considerable molding cycle time.

Mold open/close setting display


Injection setting display

Temperature setting display

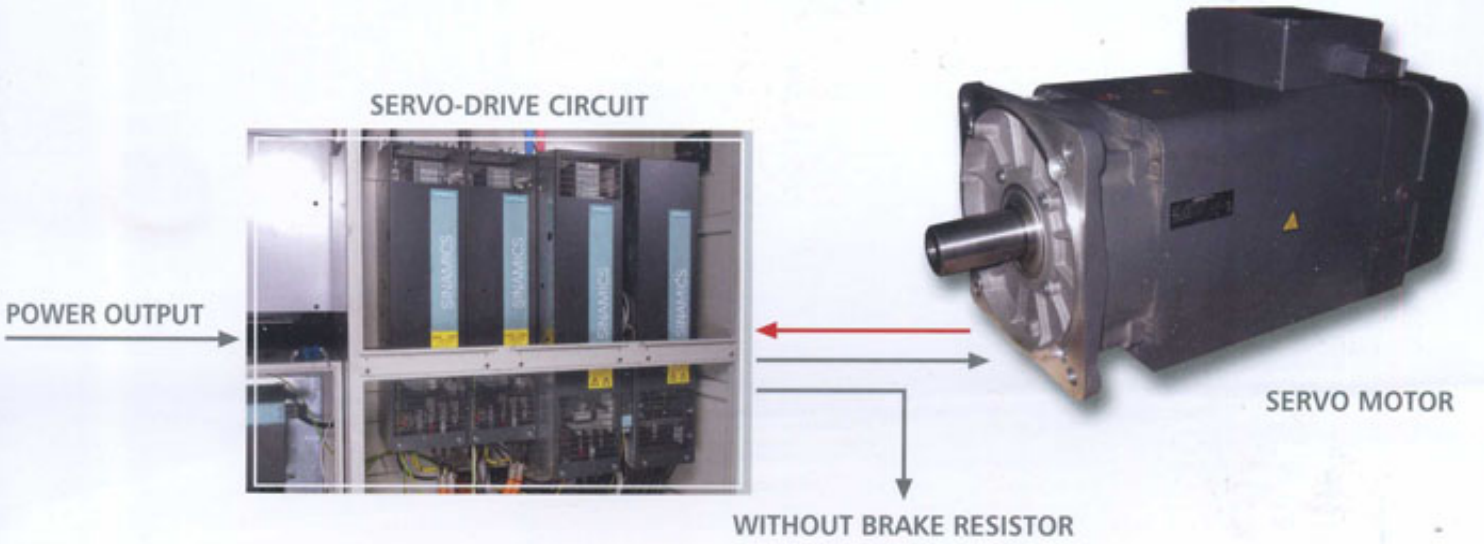
Electricity Regeneration Circuit

Electricity Saved by 15%

- The energy generated while the servo motor is decelerating will convert into electricity through the servo-driver circuit. This electricity can be used by the driver (without fitting with a brake resistor).
- Saves electricity by over 15% approximately for energy saving and environmental protection.

Siemens Servo Drive Controls

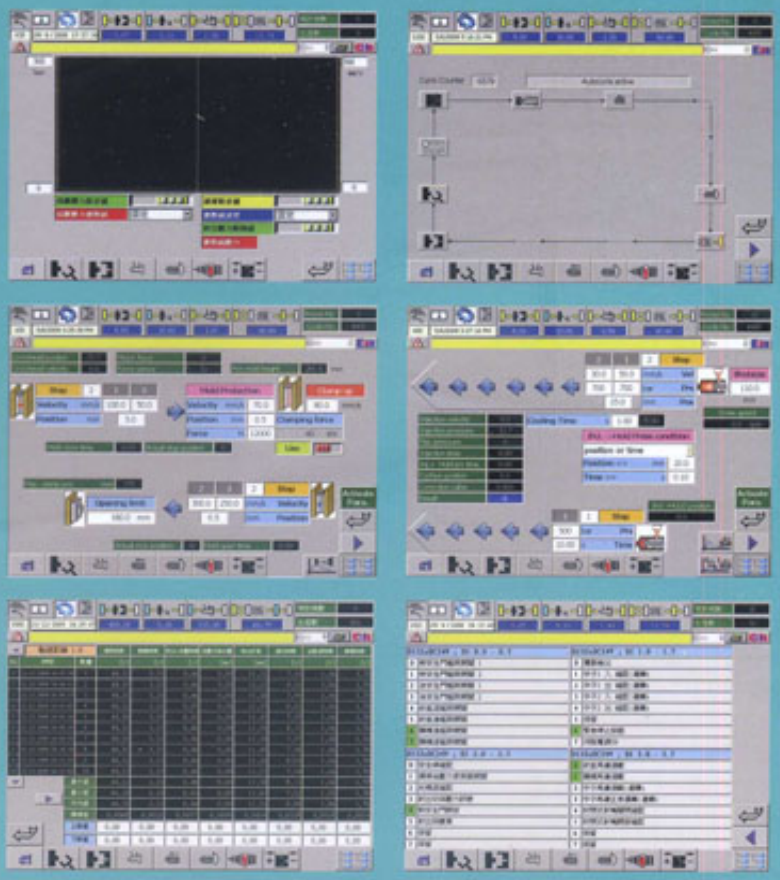
- FULLY CLOSED LOOP SERVO CONTROL: A drive system that features 31 bit control accuracy for speed, position and torque. it increases repeatability accuracy and stability.
- High precision low-pressure protection function.
- Applies German drive-based technology for multi-axes control.
- Employs German top performance servo motor with IP64 isolation level.
- Employs European industrial communication interface technology for interfacing between the controller and the driver, achieving high speed and safety features.
- Exclusive FEI (Fluid-Effect of Inertia) function control effectively reduces internal mold pressure when changing motion from injection to pressure holding.



Siemens Germany

Extra Large LCD Color Touch Screen Panel

- Siemens 12" Touch-Screen Monitor.
- Windows CE embedded operation system.
- Film type keyboard.
- Multi-language selection.
- Supports mold numbers access function through USB.
- 500 sets of monitoring records.
- Management leveling function.
- Supports remote monitoring.



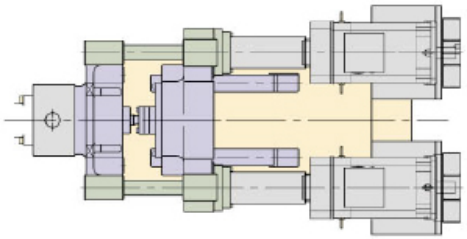
Ergonomics Operation Interface

A superior Ergonomics operation interfacing system that combines the features of European open type system and Japanese closed type system.

HIGH-SPEED HIGH-PRESSURE INJECTION UNIT

Injection Speed **0→600mm**

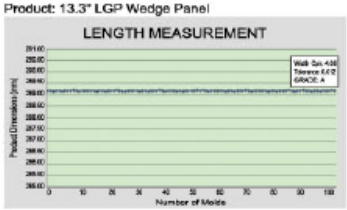
Acceleration within **60ms**

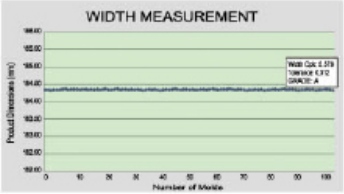


The injection unit is synchronously driven by two servo motors and transmitted through two ball screws to achieve extra high-end and high-pressure injection performance.

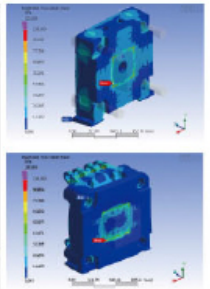
Consistency of Finished Product Sizes

Product: 13.3" LGP Wedge Panel





Inward toggle structure



Automatic Lubrication System

The automatic lubrication system provides outstanding lubrication to the extra heavy loaded ball screws. The use of the excellent lubrication system may greatly reduce wear on the ball screws and assure maximum smoothness of motions.

Rigid Platen Rigidity 60% UP

- Extra thick platen design increases machine rigidity by 60%, which minimizes the structural deformation.
- The platen structure design is analyzed by CAE computer software, assuring maximum toughness and rigidity.

AE SERIES Specifications of All Electric Series

Machine Model		CLF-120AE		CLF-180AE			CLF-230AE						CLF-285AE						CLF-350AE						CLF-450AE					
International Code		1200H-270E		1800H-460E			2300H-460E			2300H-785E			2850H-785E			2850H-1190E			3500H-785E			3500H-1190E			4500H-1190E			4500H-1585E		
INJECTION UNIT	UNIT																													
Screw Diameter	mm	30	35	35	40	45	35	40	45	40	45	50	40	45	50	50	55	60	40	45	50	50	55	60	50	55	60	55	60	65
Theoretical Inj. Volume	cm^3	99	135	173	226	286	173	226	286	264	334	412	264	334	412	491	594	707	264	334	412	491	594	707	491	594	707	665	792	929
Injection Pressure	kg/cm^2	2730	2006	2664	2040	1612	2664	2040	1612	2974	2350	1903	2974	2350	1903	2420	2000	1680	2974	2350	1903	2420	2000	1680	2420	2000	1680	2380	2000	1704
Inj. Holding Pressure	kg/cm^2	2321	1705	2265	1734	1370	2265	1734	1370	2528	1997	1618	2528	1997	1618	2057	1700	1428	2528	1997	1618	2057	1700	1428	2057	1700	1428	2023	1700	1449
Injection Speed	mm/sec	250	250	250	250	250	250	250	250	230	230	230	230	230	230	200	200	200	230	230	230	200	200	200	200	200	200	170	170	170
Injection Rate	cm^3/sec.	177	241	241	314	398	241	314	398	289	366	452	289	366	452	393	475	565	289	366	452	393	475	565	393	475	565	404	481	564
Shot Weight in GPPS	gram	89	122	156	204	258	156	204	258	238	301	372	238	301	372	443	536	638	238	301	372	443	536	638	443	536	638	600	714	839
Screw Rotating Speed	RPM	350		300			300				300		300			250			300			250			250			220		
CLAMPING UNIT																														
Distance between Columns (HxV)	mm	420 x 420		510 x 510			560 x 560						610 x 610						730 x 730						810 x 810					
Dimensions of Platens	mm	630 x 630		765 x 765			860 x 860						940 x 940						1120 x 1120						1260 x 1260					
Mold height Max./Min.	mm	450 / 150		500 / 200			550 / 200						650 / 250						700 / 300						800 / 300					
Mold Opening Stroke	mm	400		450			550						600						700						800					
Clamping Force	Ton	120		180			230						285						350						450					
Dia. of Locating Ring	mm	100		125			125						125						160						160					
Ejector Stroke	mm	100		120			150						150						150						180					
Ejector Force	Ton	3.3		4			5.2						6.2						7						10					
GENERAL DATA																														
Heating Zones	zone	6		6			6				6		6			6			6			6			6			6		
Heating Capacity	kw	5.8		9.2			9.2				11.8		11.8			16.3			11.8			16.3			16.3			18.2		
Machine Dimensions (LxWxH)	m	4.84 x 1.35 x 1.79		5.27 x 1.56 x 1.97			5.56 x 1.66 x 2.07				6.34 x 1.66 x 2.1		6.8 x 1.74 x 2.25			7.1 x 1.74 x 2.26			7.2 x 2.1 x 2.2			7.5 x 2.1 x 2.2			7.9 x 2.2 x 2.35			8.1 x 2.2 x 2.35		
Net Weight	Ton	4.5		7.5			9				11		13			15			17			20			24			26		

■ All specifications, dimensions and design characteristics shown in this catalogue are subject to change without notice.

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09.2012-E35