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TWII SERIES

OUTWARD TOGGLE TYPE PLASTIC INJECTION MOLDING MACHINE

DESIGNED BY POLARIS 2023.09 / 1000PCS +886-4-24517070



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CE
ISO9001



TWII

ALL SERIES



OUTWARD TOGGLE TYPE
PLASTIC INJECTION MOLDING MACHINE

TWII SERIES

Outward Toggle Type
Plastic Injection Molding Machine



100-5000 TONS

CLAMPING FORCE

Outward Toggle Clamping a Significant Increase in Structural Accuracy of Mold Platen

- Outward toggle type mold-clamping features minimum deformation of mold platen and accurate flatness.
- Injection unit uses low-friction linear slide design, the injection stability of a substantial increase in product.
- Rigid machine structure reduces deformation to a minimum while ensuring consistent product accuracy.
- Excellent for products requiring higher surface accuracy.
- Extra long mold opening stroke.
- Suitable for deeper products.





1 High Rigidity / Highly Precise INJECTION

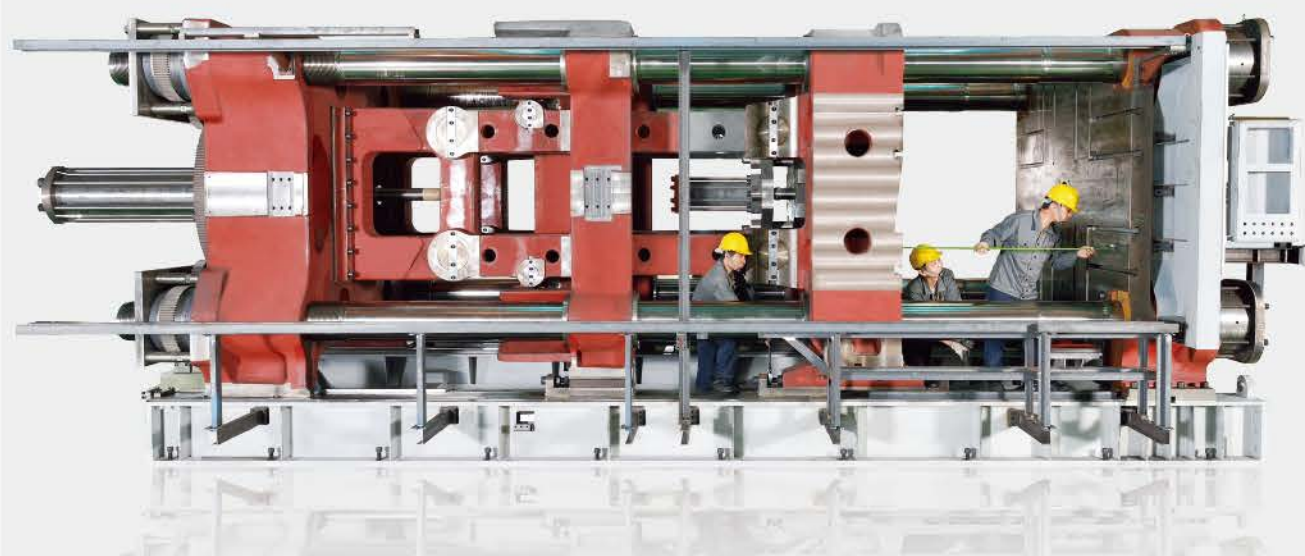
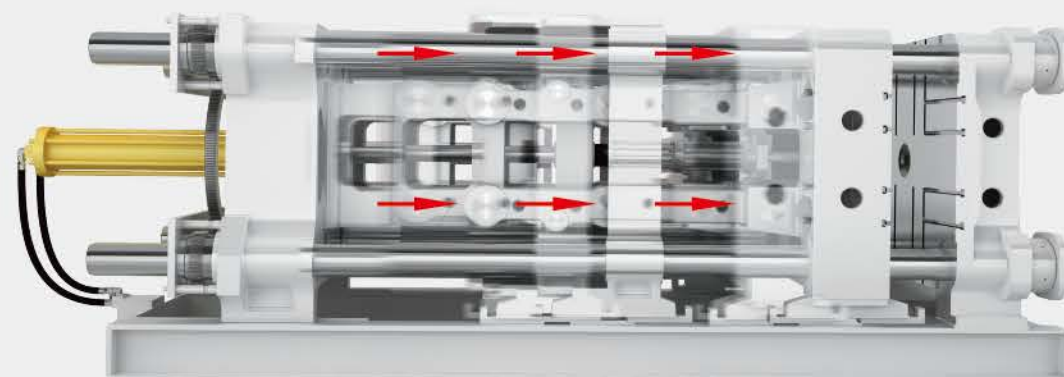
- Injection using high rigidity and highly precise linear support and guidance, achieving low friction, smooth movement, fast response and high precision molding.

2 Energy Saving / Customization PLASTICIZED

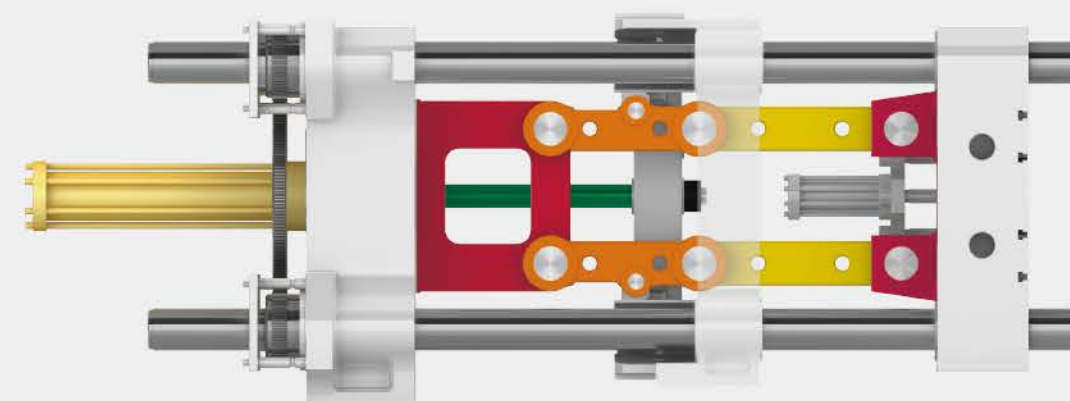
- Plasticized electric servo motor and high-performance gearbox drive, energy saving, independent loop control, customization is optional.

OPTIMIZED CLAMPING MOTION ANALYSIS

Outward Toggle Clamping Mechanism

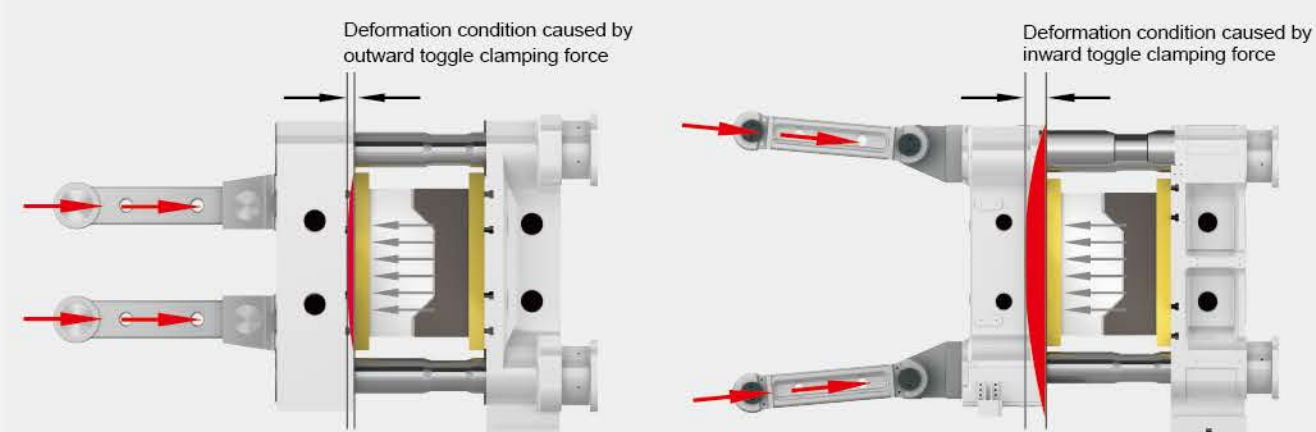


- 1** Clamping Unit Stronger **2** Powerful Clamping Unit Stronger, Minimum Deformation
- FAST**
- Outward toggle clamping mechanism exhibits superior flatness of mold platen and minimum deformation.
 - Extra long mold opening stroke and big installation space of mold.
 - Fast mold clamping / opening speed.
- POWERFUL**



- 5** Toggle Mechanism **POINT**
- With the specially designed five-point toggle mechanism, faster mold clamping speed can be achieved.

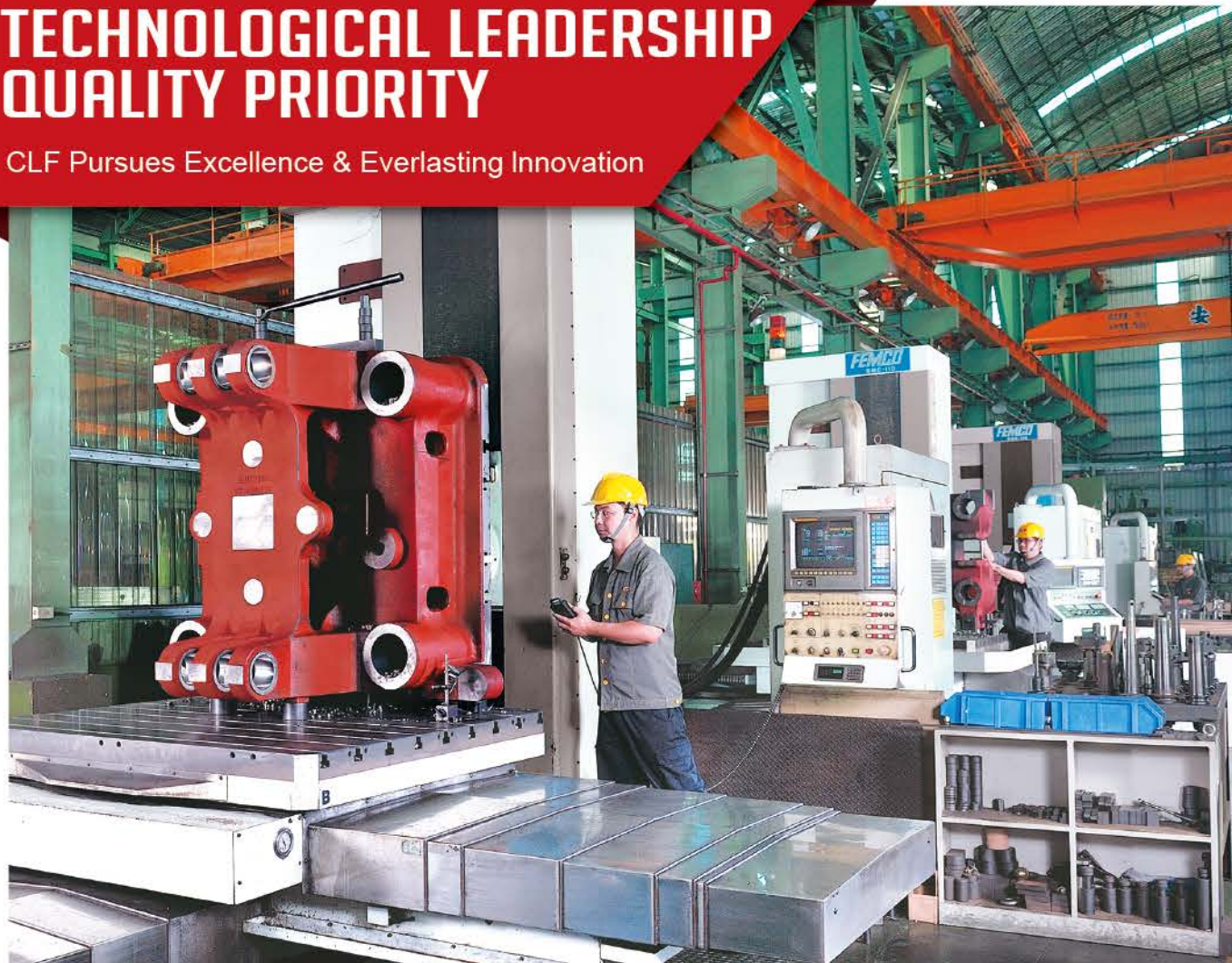
COMPARISON BETWEEN INWARD AND OUTWARD TOGGLE CLAMPING FORCE TRANSFER AND DEFORMATION



- MIN.** Deformation of Mold Platen
- The clamping force of an outward toggle type injection molding machine concentrates at the center of mold platen, and the force is uniformly distributed on the entire mold platen. This leads to a minimum deformation of the mold platen.

TECHNOLOGICAL LEADERSHIP QUALITY PRIORITY

CLF Pursues Excellence & Everlasting Innovation



CLF PLASTIC INJECTION MOLDING MACHINES, YOUR NO. 1 CHOICE FOR ANY INJECTION MOLDING APPLICATION

All critical parts of CLF machines such as mold platen are all machined in-house by Japanese-made and domestic high precision machine tools, such as Japan Toshiba floor type jig boring machines and Japan Kotobuki double column machining center. In addition, the hole accuracy of tie bar is also controlled in house to ensure the best running efficiency and product accuracy.



Machine model		100TWII			130TWII			160TWII			CLF - 200TWII			CLF - 250TWII			CLF - 300TWII			CLF - 360TWII			CLF - 420TWII			CLF - 500TWII			CLF - 600TWII		
International code		1000H - 400			1300H - 400			1600H - 800			2000H - 800			2500H - 1100			3000H - 1100			3600H - 1500			4200H - 1500			5000H - 2810			6000H - 2810		
INJECTION UNIT	Unit	130TDI - R2			130TDI - R2			160TDI - R2			160TDI - R2			250TDI - R2			250TDI - R2			350TDI - R2			350TDI - R2			500TDI			500TDI		
Screw diameter	mm	30	35	40	30	35	40	40	45	50	40	45	50	45	50	55	45	50	55	50	55	60	50	55	60	65	70	75	70	75	80
Theoretical injection volume	cm ³	141	192	251	141	192	251	314	398	491	314	398	491	429	530	641	429	530	641	589	713	848	589	713	848	1294	1501	1723	1501	1723	1960
Injection pressure	kg/cm ²	2805	2060	1577	2805	2060	1577	2550	2014	1632	2550	2014	1632	2564	2077	1716	2564	2077	1716	2499	2065	1735	2499	2065	1735	2172	1873	1632	1873	1623	1434
Injection rate	cm ³ /sec	62	84	110	62	84	110	110	139	172	110	139	172	176	217	263	176	217	263	180	218	260	180	218	260	325	377	432	377	432	492
Shot weight (ps)	gram	129	175	229	129	175	229	286	362	447	286	362	447	391	482	584	391	482	584	536	649	772	536	649	772	1178	1366	1568	1366	1568	1784
Screw rotation	rpm	207			207			251			251			263			263			163			163			182			182		
Nozzle radius	mm	12.7			12.7			12.7			12.7			12.7			12.7			12.7			12.7			12.7			12.7		
No. of heating zones	zone	5			5			5			5			5			5			6			6			7			7		8
Heating capacity	kw	5.4		7.6	5.4		7.6	8.8		12	8.8		12	11.7		15.1	11.7		15.1	15.1		15.1	15.1		15.1	23.7		23.7	23.7		30.6
CLAMPING UNIT																															
Distance between tie bars	mm	400 × 350			440 × 400			480 × 440			530 × 460			580 × 510			630 × 550			710 × 630			760 × 660			850 × 700			950 × 800		
Mold platen sizes	mm	585 × 535			640 × 600			710 × 670			760 × 690			850 × 780			920 × 840			1020 × 940			1090 × 990			1200 × 1050			1355 × 1205		
Mold thickness	mm	150 - 400			150 - 450			150 - 500			150 - 550			200 - 600			200 - 650			250 - 700			250 - 750			250 - 750			300 - 900		
Mold opening stroke	mm	360			450			500			550			600			650			700			750			850			1000		
Clamping force	ton	100			130			160			200			250			300			360			420			500			600		
Dia. of locating ring	mm	100			125			125			160			160			160			160			160			160			200		
Ejector stroke	mm	95			110			110			150			150			150			200			200			200			200		
Ejecting force	ton (kn)	4.8 (48)			4.8 (48)			4.8 (48)			4.8 (48)			6.5 (65)			6.5 (65)			7.5 (75)			7.5 (75)			7.5 (75)			11 (110)		
GENERAL DATA																															
Pump driving motor	kw	11			11			18.5			18.5			30			30			30			30			60			60		
Oil tank capacity	liter	250			250			312			312			418			418			418			418			750			750		
Machine size (L × W × H)	m	4 × 1.5 × 1.6			4.8 × 1.54 × 1.7			5.21 × 1.68 × 1.77			5.52 × 1.77 × 1.8			6.2 × 1.68 × 1.89			6.39 × 1.86 × 1.95			7.1 × 1.96 × 2.05			7.2 × 1.9 × 2.16			8.65 × 2.24 × 2			9.1 × 2.25 × 2.01		
Net weight	ton	4.3			5.3			6.5			8			10			12			14			16			20			25		

Machine model		CLF - 750TWII			CLF - 900TWII			CLF - 1100TWII			CLF - 1300TWII			CLF - 1500TWII			CLF - 1800TWII			CLF - 2200TWII			CLF - 2800TWII			CLF - 3500TWII			CLF - 4200TWII			CLF - 5000TWII	
International code		7500H - 4350			9000H - 4350			11000H - 8000			13000H - 8000			15000H - 10000			18000H - 12200			22000H - 16700			28000H - 23920			35000H - 38800			42000H - 53600			50000H - 77300	
INJECTION UNIT	Unit	750TDI			750TDI			1100TDI			1100TDI			1300TDI			1500TDI			1800TDI			2200TDI			2800TDI			3500TDI			4200TDI	
Screw diameter	mm	75	80	85	80	85	90	90	95	100	95	100	105	100	110	120	110	120	130	120	130	140	140	150	160	160	175	190	200	215	230		
Theoretical injection volume	cm ³	1988	2262	2554	2262	2554	2863	3340	3721	4123	3721	4123	4546	4712	5702	6786	6177	7351	8628	8200	9623	11161	12315	14137	16085	22117	26458	34023	37699	48104	55051		
Injection pressure	kg/cm ²	2189	1924	1704	1924	1704	1520	2421	2173	1961	2173	1961	1778	2134	1763	1482	1978	1662	1416	2040	1738	1498	1942	1692	1487	1756	1467	1577	1423	1606	1403		
Injection rate	cm ³ /sec	424	482	544	482	544	610	572	637	706	637	706	779	722	874	1040	864	1029	1207	995	1168	1354	1277	1466	1668	1588	1900	1927	2136	2505	2866		
Shot weight (ps)	gram	1809	2058	2324	2058	2324	2605	3039	3386	3752	3386	3752	4137	4288	5189	6175	5621	6690	7851	7462	8757	10156	11207	12865	14637	20126	24077	30961	34306	43775	50096		
Screw rotation	rpm	137			137			157			157			122			135			133			94			75			66			65	
Nozzle radius	mm	12.7			12.7			12.7			12.7			12.7			12.7			12.7			12.7			12.7			12.7			12.7	
No. of heating zones	zone	8			8		9	10			10			11			11		13	14			12		12		11			15		15	
Heating capacity	kw	29			29		36.5	39.1			39.1			51.8			51.8		62.8	66.8			74.7		84.2		102			115.5		166.8	
CLAMPING UNIT																																	
Distance between tie bars	mm	1010 × 860			1120 × 920			1220 × 1020			1320 × 1120			1460 × 1260			1650 × 1400			1800 × 1500			2000 × 1600			2200 × 1800			2400 × 2000			2600 × 2200	
Mold platen sizes	mm	1430 × 1280			1600 × 1400			1750 × 1550			1900 × 1700			2100 × 1900			2300 × 2000			2500 × 2200			2800 × 2400			3000 × 2600			3200 × 2800			3500 × 3100	
Mold thickness	mm	350 - 1000			400 - 1100			450 - 1200			500 - 1300			500 - 1400			600 - 1500			700 - 1700			700 - 1900			850 - 2000			1000 - 2150			1100 - 2300	
Maximum mold weight	kg																			23420.475			40568.8										
Mold opening stroke	mm	1050			1150			1250			1350			1500			1650			1800			1900			2300			2550			2800	
Clamping force	ton	750			900			1100			1300			1500			1800			2200			2800			3500			4200			5000	
Dia. of locating ring	mm	200			200			250			250			250			250			250			250			250			250			250	
Ejector stroke	mm	250			250			300			300			300			330			330			400			400			500			500	
Ejector force	ton (kn)	13.3 (133)			13.3 (133)			26 (260)			26 (260)			26 (260)			34 (340)			34 (340)			43 (430)			75 (750)			75 (750)			75 (750)	
GENERAL DATA																																	
Pump driving motor	kw	75			75			105			105			120			135			150			200			225			225			300	
Oil tank capacity	liter	1000			1000			1500			1500			1700			1900			2200			2700			3000			3300			4500	
Machine size [L × W × H]	m	10 × 2.32 × 2.3			10.6 × 2.47 × 2.3			11.7 × 2.6 × 2.6			12 × 3.0 × 2.8			13.8 × 3.1 × 2.8			14.5 × 3.4 × 2.9			17 × 4.1 × 3.2			18 × 4.2 × 3.3			21 × 4.9 × 4.1			22 × 4.7 × 4.3			24 × 5 × 4.6	
Net weight	ton	35			45			65			75			85			95			120			160			240			270			320	