義展機械股份有限公司
YEAR-CHANCE MACHINERY CO., LTD.

Taiwan Plant (Headquarters) 台灣總公司
71042台南市永康區民東路7號
Address : No.7, Min Dong Rd., Yong Kang Dist., Tainan City, 71042 Taiwan
TEL : +886-6-2432155 **FAX :**+886-6-2437905
E-mail : year.chance@msa.hinet.net

Taipei Branch 台北分公司
248新北市五股區中興路二段37巷22號
TEL : +886-2-29868116 / +886-2-29868117
FAX : +886-2-29868580
E-mail : gary@tai-cheng.com.tw

Taichung Branch 台中分公司
412台中市大里區仁化路701巷6號
TEL : +886-4-24931557 / +886-4-24931559
FAX : +886-4-24931876

Mainland Dongguan Office 大陸東莞服務處
廣東省東莞市長安鎮烏沙建安路 332號A8
TEL : +86-769-85073586 **FAX :** +86-769-85073587

Europe Branch 歐洲分公司
Puperreigerlaan 234,8064DC Zwartsluis,Netherlands
TEL : +31-0-651162512
E-mail : johan@year-chance.com

Poland Branch 波蘭分公司
Jagatowo ul. Zurawia 60,83-010 Straszyn, Poland
TEL : +48-602283204
E-mail : wojciech@year-chance.com

Indonesia Branch 印尼分公司
PT.RIA SARANA PERDANA ENGINEERING
JL. Bandengan Utara 83 L/M, Jakarta 14440, Indonesia.
TEL : +62-21-6692279 / +62-21-6612966
FAX : +62-21-6694921 / +62-21-6694928
E-mail : sales@ria-engineering.com

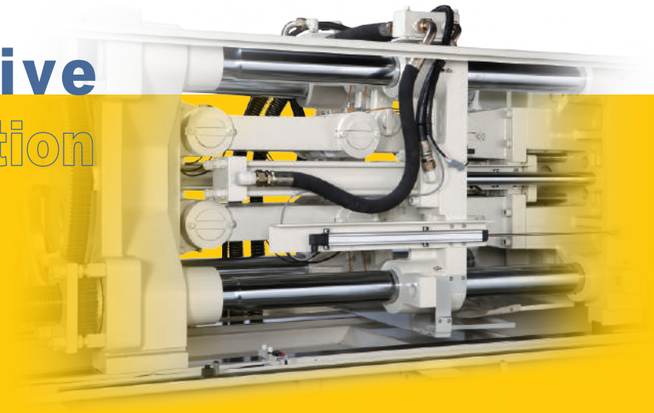
Customer Service Hotline/客服專線
+ 8 8 6 - 6 - 2 4 3 2 1 5 5
www.year-chance.com

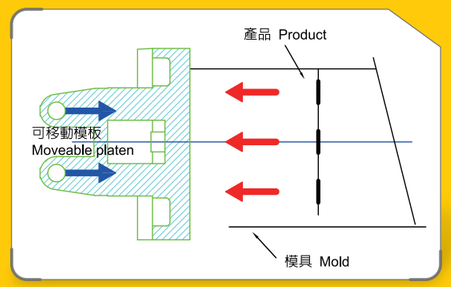
追求極致 塑造優勢
Pursuing ultimate. Molding advantage

YEAR-CHANCE
C系列射出成型機
C-SERIES INJECTION MOLDING MACHINE
C100.C130.C160.C220.C280.C350.C450.C600.C800.C1000.C1300.C1800.C2200

義展機械股份有限公司
YEAR-CHANCE MACHINERY CO., LTD.

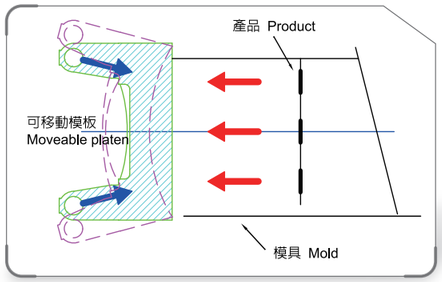
Elite perspective
Innovative deduction





外曲肘式 Outward toggle

鎖模機構
C系列外捲式五點曲肘鎖模機構，曲手施力點在接近活動模板的中心位置，可使模板的變形量降到最低。

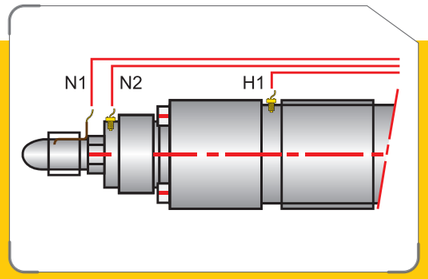


內曲肘式 Inward toggle

Clamping Mechanism
C series is designed with 5-point linkage outward toggle clamping mechanism, and linked with moveable platen at the central area to minimize its deformation while molding.

◆ 成型中最重要射嘴部有二段溫控，可非常精準地控制，易解決射嘴部拉成絲狀、射嘴溢料、冷卻遲緩，對降低成形不良品很有效果。

◆ 2 zones' temperature control at nozzle portion are precisely handled to easily manage the problems of filiform result, resin spill, and slow cooling, then the defect product will be decreased.



溫度控制部分
料管溫度控制採用PID+FUZZY控制模式，並採用SSR無接點繼電器，另可選配SCR恆溫型繼電器做電熱控制，能使料管溫度精確控制在1°C之內。

Temperature Control
Barrel temperature is controlled by PID+FUZZY mode with non-contact SSR relay. In addition, SCR constant temperature relay is optional for heating control to have temperature tolerance within 1°C.

同步加溫功能
傳統射出機在料管的加熱過程中，射嘴由於質量較小溫度很快就到達設定值，而其它段溫度由於料管的質量較大，因此溫度到達的時間可能會多出射嘴時間2-3倍，尤其料管最後段因為冷卻水循環的因素更加慢，因為射嘴的狀態長時間處於高溫狀，極容易發生過火、銀線、甚至也會發生碳化物的狀況。同步加溫功能可防止射嘴內樹脂的炭化和劣化。

Synchronized Heating Function
For traditional barrel design, it is easily heating up to the setting data at nozzle portion as its smaller quantity, but, 2~3 times longer at other zones as bigger quantity, even worse at the ending zone due to cooling circuit surrounded. So, pyrolysis and silver mark are easily occurred as high temperature at nozzle portion for long time, even carbonized as well. Synchronized heating function could prevent resin inside nozzle from carbonization and badness.

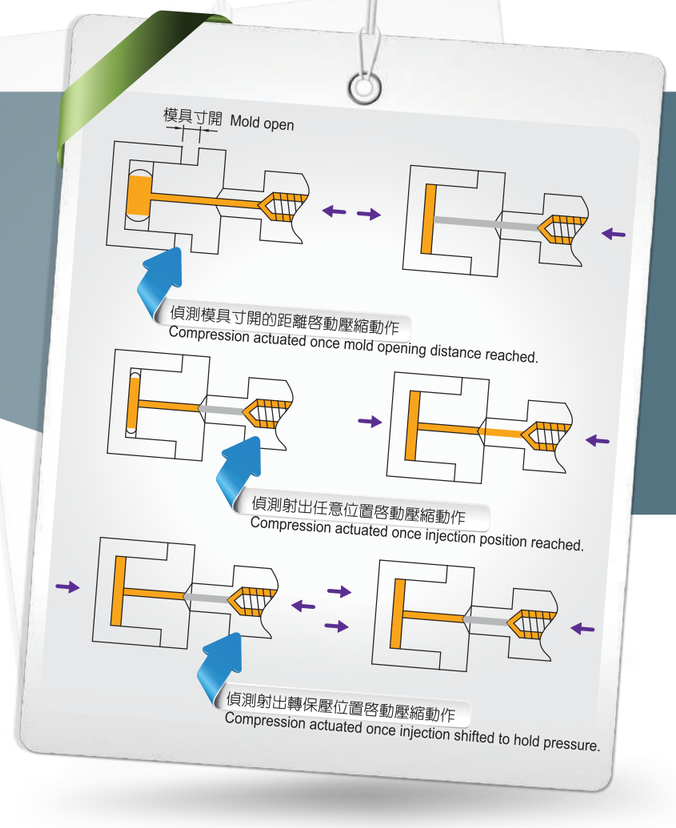
選配【Optional】

◆ 射出壓縮

射出壓縮成型的先決條件是模具配置楔型設計，溶膠被低壓注入模穴，模具會被溶膠撐開2~3mm也就是所謂的壓縮行程，模具的直升面溶膠不能從模板間隙流出。在射出填充過程中啓動鎖模的動作，因此保壓不是射出單元提供，而是由鎖模單元提供，這個壓力被平靜的完全散發，使得產品密度均勻化、無應力化。

◆ Injection Compression

Mold with a wedge design is necessary for injection compression molding, and forced open around 2~3 mm, called compression stroke, while low pressure injection without any resin effusion between mold parting area. Mold clamping is actuated during injection, so hold pressure is provided by clamping unit instead of injection unit. The stress will be smoothly released accordingly, and the molded product will have a uniform density and remain stressless.



◆ 射出壓縮成型的效果 Features of Injection Compression

- ○ 減少成型變型 minimize deformation of molded product
- ○ 改善托模特性 improve the ejection character
- ○ 改善貼層特性 improve labeling character
- ○ 縮短成型週期 shorten cycle time
- ○ 降低鎖模壓力 reduce clamping force
- ○ 提高排氣效果 promote air venting

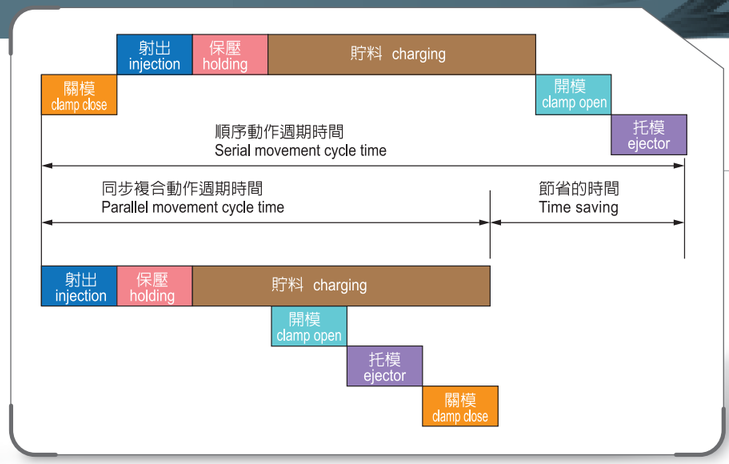
選配【Optional】

◆ 開中貯料同步複合動作

製作產品需要較長的貯料時間，而且模具的冷卻效率要好，不需很長的冷卻時間的情況下，利用同步複合動作，在做貯料動作的同時，進行開模、托模及關模的動作，可有效節省成型週期時間，降低生產成本。

◆ Parallel Movements (simultaneous actions)

The charging time is always much longer for heavier product. If mold cooling time is less, then simultaneous actions will effectively save molding cycle time and reduce the production cost as mold open, ejection and mold close can be actuated during charging.

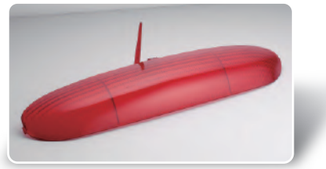


◆ 同步複合動作

有效減少週期時間大幅增加產能

◆ Parallel Movements

Reducing cycle time and increasing productivity



Power high efficient

◆ IPMP 馬達泵

義展射出機與DAIKIN共同開發，提高SUT伺服馬達系統壓力、流量反應速度，市售的SUT伺服馬達系統壓力流量的反應時間約150msec，經導入特殊的油路設計及程式的動作、壓力、流量的反應時間縮短到80msec，對一些微射出精細的產品能夠提高製成率。

◆ The IPMP Motor Pump

Joint collaboration with DAIKIN to upgrade the reflection time of system pressure and flowrate for SUT servo motor. It becomes 80msec with particular hydraulic circuit and programmable movement, and much better than 150msec of market selling one. The finished percentage could be higher for fine product via micro injection.

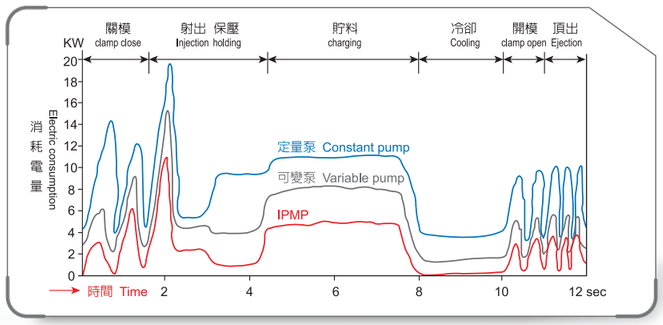
◆ 省能源 / 生產時消耗成本降低

採用大金(DAIKIN)IPMP馬達泵系統，比一般可變泵+定速馬達節省40%以上電量，比一般定量泵+定速馬達節省70%以上電量。

◆ Energy Saving / Less Power Consumption for Production

To use DAIKIN IPMP pump and motor system can save the electric consumption more than 40% in comparison with system of variable pump plus constant motor, and even 70% above in comparison with system of constant pump plus constant motor.

消耗電量比較曲線
Electric Consumption Curve



在實際測試生產同一物件之每小時消耗電量子力學（不含電熱）定量泵系統約10.44KW，可變泵系統約5.83KW，而IPMP系統只要2.91KW。

The hourly electric consumption (heating excluded) is about 10.44KW for constant pump system and about 5.83KW for variable pump system, but 2.91KW only for IPMP system.

Standard essories

標準配備 standard equipment

射出方面
1. 射出電子計位尺
2. 射出保壓有時間位置壓力等三種偵測方式
3. 大小料頭各自獨立的溫控段
4. 貯料三段比例背壓控制
5. 軌道式料斗座
6. 定時乾燥機
7. 備用噴嘴
8. 貯料轉速檢測顯示功能

Injection System
1. Injection potential meter
2. Injection to hold pressure shifted by 3 methods of time, position, and pressure
3. Individual temperature control zone for large and small barrel head
4. 3 steps proportional backpressure control
5. Railed hopper bracket
6. Hopper dryer with timer
7. Spare nozzle
8. Screw RPM measurement and display

關模方面
1. 集中打油器及管路
2. 油壓、電氣、機械三道關模安全裝置
3. 超低壓力關模保護模具系統
4. 自動調模
5. 水路分佈器
6. 開關模及托模電子計位尺
7. 多段速度、壓力的托模動作
8. 托模有單次、托停、多次、震托多種選擇
9. 中子、絞牙用油路、電氣裝置一組
10. 間歇噴離型劑控制
11. 風托裝置

Clamping System
1. Central lubrication and piping arrangement
2. 3 safety devices via hydraulic, electric and mechanical
3. Extremely low pressure mold protection system
4. Auto mold height adjustment
5. Water distributor
6. Clamping and ejection potential meter
7. Multi steps ejection pressure and speed control
8. Ejection function by single, forward holding, multi-stroke, vibration
9. One set of core pulling/unscrewing with hydraulic and electric device
10. Intermittent silicon spread control
11. Air ejector device

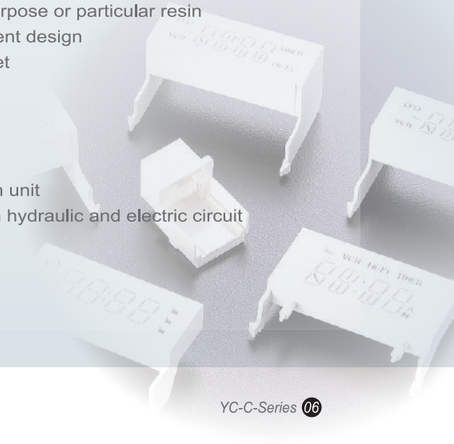
動力及其他
1. 葉片式高效率泵浦
2. EFBG壓力流量比例閥
3. 機械避震腳
4. 總壓力及射出背壓油壓錶
5. 模具吊桿組（含C160以下）
6. 夾模鐵及螺絲組
7. 簡易工具及工具箱
8. 單相電插座

Power System and Others
1. Vane type high efficiency pump
2. EFBG pressure & flowrate proportional valve
3. Mechanical anti-vibration pad
4. System pressure and injection backpressure gauge
5. Mold loading crutch (C160 Under)
6. Mold clamp and screws set
7. General tool and tool box
8. Single phase power socket

特殊配備 special equipment

組件及系統
1. 伺服節能馬達
2. 可變容量柱塞式省電泵浦
3. 射出閉回路伺服系統
4. 高速射出蓄壓器(ACC)及閉回路伺服系統
5. 特殊塑料、材質的射出配套方案
6. 射出壓縮動作系統
7. 射座電子計位尺
8. 塑料落下計量控制裝置
9. 高壓氣體填充產品中空射出設計
10. 大理石紋混色射出料管及動作配套
11. 雙合金耐磨耗料管
12. 高混煉及特殊材料用螺桿設計
13. 省電複合動作回路設計
14. 油壓封閉式料管頭組
15. 特殊型乾燥機
16. 吸料機
17. 乾燥機集塵器
18. 乾燥機磁鐵機
19. 電木、尿素射出裝置
20. 雙中子油路、電路
21. 絞牙油壓馬達組
22. 石英隔熱模板
23. 電腦連線系統
24. 量身訂做專案
25. 其他解決方案

Module and System
1. Energy saving servo motor
2. Plunger type of variable volume pump for power saving
3. Injection close-loop server system
4. High speed injection with accumulator and close-loop server system
5. Injection turnkey for special resin or material
6. Injection compression functioning system
7. Injection unit potential meter
8. Raw material auto-drop counting device
9. High pressure air serving for injection blowing article
10. Color mixing barrel and related function arrangement for product with marble lines
11. Bimetal wear-resisting barrel
12. Screw design for high-mixing purpose or particular resin
13. Energy saving complex movement design
14. Hydraulic shot-off barrel head set
15. Particular hopper dryer
16. Autoloader
17. Hopper dryer dust collector
18. Hopper dryer magnet device
19. Bakelite and carbamide injection unit
20. Double core pulling devices with hydraulic and electric circuit
21. Unscrewing hydraulic motor set
22. Quartz heat insulation plate
23. Computer connection system
24. Customization project
25. Other troubleshooting



C-Series 射出機性能表 Injection Molding Machine

YEAR-CHANCE

	型式 Model (standard)		C100			C130			C160			C220			C280			C350			C450			C600			C800			C1000			C1300			C1800			C2200		
射出系統 Injection system	螺旋桿直徑 Screw diameter	mm	28	32	36	36	40	44	40	46	52	48	55	60	50	58	65	55	62	70	60	68	75	70	80	90	70	85	100	80	95	110	90	105	120	120	130	140	140	150	160
	射出容積 Shot volume	cm^3	86	113	142	183	226	274	251	332	425	416	546	650	510	687	862	689	875	1115	933	1198	1457	1539	2010	2543	1731	2552	3533	2412	3401	4559	3306	4500	5878	7912	9286	10770	15386	17662	20106
	射出重量(PS) Shot weight	g	80	104	132	169	209	253	232	307	392	384	504	601	471	634	797	636	809	1031	862	1107	1346	1422	1857	2350	1599	2358	3264	2228	3142	4213	3055	4158	5431	7311	8580	9951	14216	16320	18568
		oz	2.8	3.7	4.6	6	7.4	8.9	8.2	10.8	13.8	13.6	17.8	21.2	16.6	22.4	28.1	22.4	28.5	36.4	30.4	39.0	47.5	50.1	65.5	82.9	56	83	115	79	111	149	108	147	192	257	302	351	501	575	655
	可塑化能力 Plasticizing capacity	kg/hr	20	32	40	55	77	95	64	105	150	128	140	167	118	127	159	127	146	175	151	200	254	206	359	527	203	402	699	282	395	508	293	384	474	461	553	655	490	574	666
	螺桿轉數 Screw rotation	R.P.M	213			269			222			228			208			195			206			202			200			159			140			120			90		
	射出壓力 Injection pressure	kgf/cm^2	2438	1867	1475	2380	1928	1593	2416	1827	1430	2361	1797	1511	2484	1846	1470	2245	1767	1386	2360	1837	1510	2214	1695	1339	2498	1694	1224	2657	1884	1405	2527	1857	1421	2172	1850	1595	2034	1772	1557
	射出效率 Injection rate	cm^3/s	78	101	128	128	158	191	156	206	263	233	306	365	237	320	401	309	392	500	370	476	578	465	608	769	500	737	1021	658	928	1244	909	1238	1616	1207	1416	1643	1556	1786	2032
	射出速度 Injection speed	mm/s	126			126			124			129			121			130			131			121			130			131			143			106			100		
	型式 Model (High-Speed)		C100H			C130H			C160H			C220H			C280H			C350H			C450H			C600H			C800H			C1000H			C1300H			C1800H			C2200H		
	可塑化能力 Plasticizing capacity	kg/hr	26	42	52	58	90	110	85	140	200	161	176	210	151	162	203	161	185	222	174	230	293	249	433	637	253	502	873	355	497	600	399	522	646	461	553	655	490	574	666
	螺桿轉數 Screw rotation	R.P.M	279			313			296			288			265			247			238			244			250			200			190			120			90		
	射出效率 Injection rate	cm^3/s	102	133	168	159	196	237	206	272	348	293	385	458	302	407	511	392	498	635	435	559	680	565	739	935	700	1032	1429	864	1219	1634	1043	1419	1854	1457	1709	1983	1984	2278	2591
	射出速度 Injection speed	mm/s	165			156			164			162			154			165			154			147			182			172			164			127			127		
	型式 Model (Energy-saving)		C100S			C130S			C160S			C220S			C280S			C350S			C450S			C600S			C800S			C1000S			C1300S			C1800S			C2200S		
	可塑化能力 Plasticizing capacity	kg/hr	25	40	50	52	73	110	62	101	145	126	137	164	101	109	136	93	107	122	100	133	169	145	254	365	147	291	399	191	268	344	218	284	352	377	452	535	490	574	666
	螺桿轉數 Screw rotation	R.P.M	266			260			216			225			180			144			138			146			145			108			104			98			90		
	射出效率 Injection rate	cm^3/s	92	121	153	154	191	231	152	201	257	240	315	375	227	306	385	252	320	408	312	400	487	422	551	698	453	663	925	565	796	1068	672	915	1195	1043	1224	1420	1392	1598	1818
	射出速度 Injection speed	mm/s	150			152			121			132			116			106			110			109			117			112			105			92			90		
開關模系統 Clamping system	鎖模力 Clamping force	Tonf	100			130			160			220			280			350			450			600			800			1000			1300			1800			2200		
	開模行程 Opening stroke	mm	410			460			510			560			610			710			820			920			1100			1300			1500			1700			2000		
	模厚 Mold height	mm	100~400			100~500			150~550			150~600			180~650			180~700			200~800			250~900			300~1150			350~1250			400~1350			500~1450			550~1550		
	模板 Platen dimension	mm	520 x 520			605 x 605			680 x 680			750 x 750			875 x 825			1015 x 965			1140 x 1090			1290 x 1240			1460 x 1410			1650 x 1550			1880 x 1780			2230 x 2030			2540 x 2340		
	支柱內距 Distance between tie bar	mm	360 x 360			410 x 410			460 x 460			510 x 510			610 x 560			710 x 660			810 x 760			910 x 860			1010 x 960			1160 x 1060			1360 x 1260			1560 x 1360			1860 x 1660		
	托模力 Ejection force	Tonf	4			4.8			5.6			6.5			7.5			7.5			13.3			13.3			17.6			17.6			17.6			30			30		
	托模行程 Ejection stroke	mm	100			120			140			160			180			200			230			260			290			320			350			380			410		
動力系統及其他 Power system and others	電機馬達 Pump driving motor	HP KW	15 11.2	H20 14.9	S14.7 11	25 18.6	H30 22.4	S20.1 15	30 22.4	H40 29.8	S20.1 15	40 29.8	H50 37.3	S29.5 22	40 29.8	H50 37.3	S29.5 22	50 37.3	H60 44.7	S29.5 22	60 44.7	H75 55.9	S40.2 30	75 55.9	H90 67.1	S49.6 37	90 67.1	H120 89.4	S59 44	120 89.4	H150 111.8	S79.1 59	150 111.8	H180 134.1	S88.5 66	180 134.1	H210 156.5	S118 88	210 156.5	H270 201.2	S147.5 110
	電熱段數 Heating zone	set	N2+2			N2+3			N2+3			N2+3			N2+4			N2+4			N2+4			N2+5			N2+5			N2+6			N2+6			N2+7			N2+8		
	電熱容量 Heating capacity	KW	5.7			7.5			8.1			11.8			14.8			16.9			18.5			24.0			27.0			35.1			38.2			53.8			102		
	系統壓力 Max. system pressure	kg/cm^2	170			170			170			170			170			170			170			170			170			170			170			170			170		
	油箱容量(S) Oil tank capacity	L	136			210			246			348			431			547			560			655			710			800			1120			1460			2215		
	機械尺寸 Machine dimension	M(LxWxH)	4.15 x 1.09 x 1.65			4.55 x 1.17 x 1.75			4.95 x 1.25 x 1.87			5.5 x 1.32 x 1.97			5.9 x 1.44 x 2.04			6.7 x 1.55 x 2.22			7.2 x 2.1 x 2.3			8.2 x 2.2 x 2.4			9.4 x 2.4 x 2.7			10.5 x 2.93 x 3.0			11.5 x 3.1 x 3.2			13.6 x 3.3 x 3.4			16 x 3.7 x 3.7		
	機械重量 Machine weight	Ton	3.9			5.2			6.2			7.8			9.6			13.5			19.6			27.5			39			54			73			112			168		

1. 射出重量以射出容積為準，以PS塑料比重1.05，假設效率0.88的乘積。
   Shot weight is based on shot volume multiplied by specific gravity 1.05 of PS with 88% efficiency.

2. OZ為重量單位，1OZ等於28.349g。
   OZ is weight units, and 1 OZ is equal to 28.349 grams.

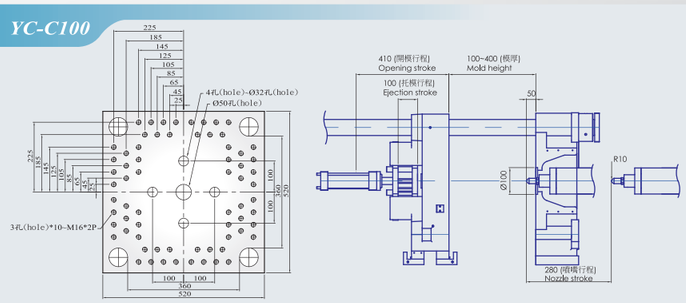
3. 機械顏色有象牙白及靛藍兩色可供選擇。
   Ivory and indigo are available for machine color.

4. 規格外料管亦可訂做，將跟據需求配合機械性能提出建議。
   Special barrel is also available along with a proposal based on request and machine function.

5. 基於研發需求，本公司保有修改上述規格之權利若未減低性能，得不另行通知。
   Design and specification are subject to change without prior notice.

模板規格及動作尺寸 platen specification and movement

YC-C100



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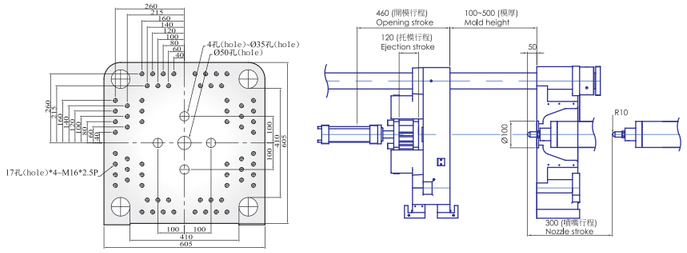

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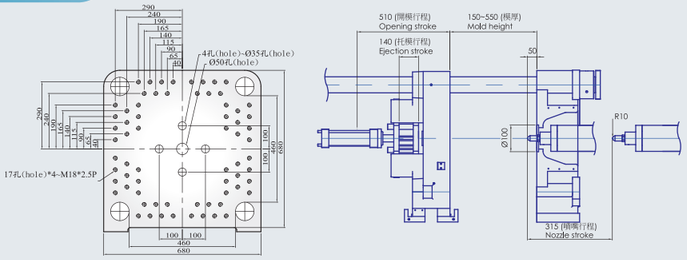

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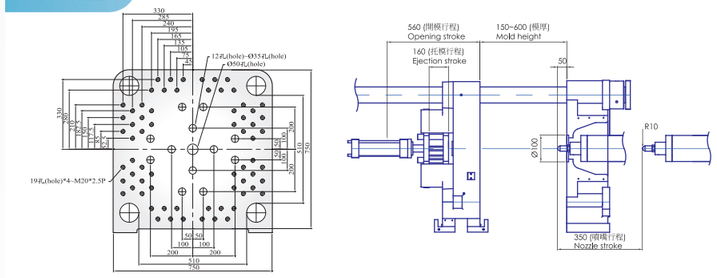

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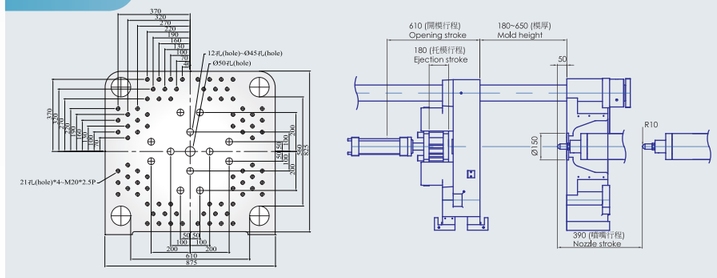

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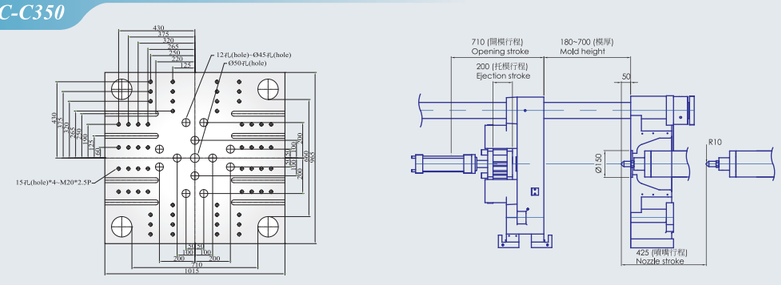

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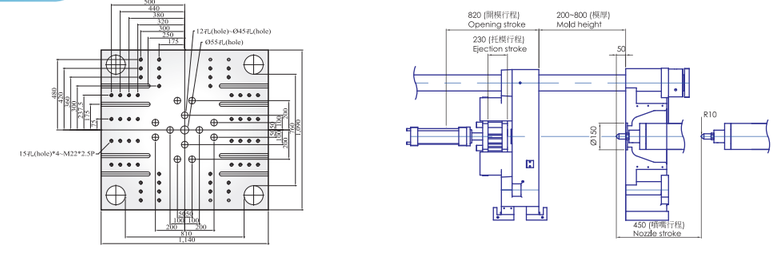

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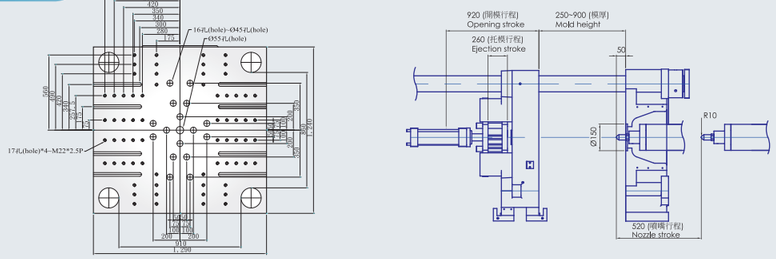

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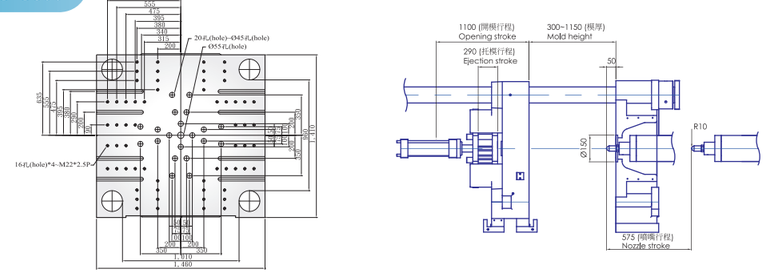

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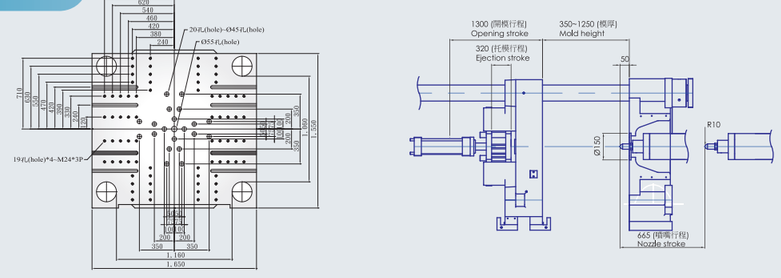

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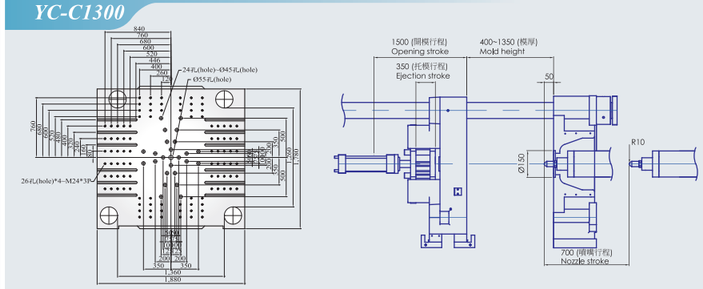

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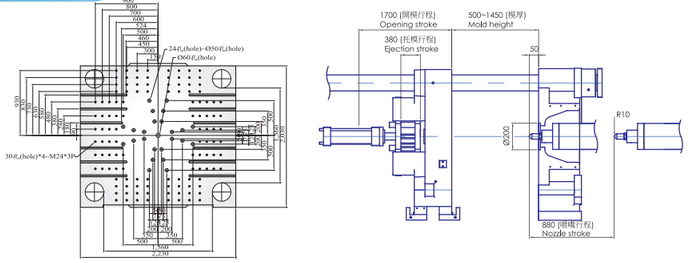

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