

FS

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● 一步法PET拉吹機
FS-BT One stage injection blow molding machine



● 一步法射吹機
FS-IB One stage injection blow molding machine



鍍鑫塑膠機械股份有限公司
FULL SHINE PLASTIC MACHINERY CO., LTD.

FS-BT 一步法射吹機

PET/PC ONE STAGE INJECTION BLOW MOLDING MACHINE

Innovative Bottle Blowing Technology / 創新之吹瓶技術 Machine Description / 機台描述:

FS-BT-S is equipped with 2-station servo table and side-blow system. After preform injection, the servo table rotates 180 degrees, a servo screw then transfers a neck plate with PET/PC preforms to the side-blow station for blowing bottles. Using side-blow system is available and flexible for a bigger work place, and optional devices: gate trimmer (preform tail cutting device) and product conveyor can easily be mounted inside the machine to go on the automatic production. This model is good for small containers with short cycle time.

FS-BT-S採用2站式伺服旋轉台及側吹系統之設計;在射出瓶胚後, 伺服旋轉台轉向180度, 由伺服螺桿將瓶胚口模移至側吹區吹塑成型。使用側吹系統之設計, 節省並增加生產空間, 讓瓶胚剪尾裝置及成品輸送可以架在機台內部, 達到完全自動生產。此機種適用於短時間內生產小瓶子。

Jar/wide-mouth bottle available, FS-BT-J has the same benefits of FS-BT-S, but is for wide-mouth jar applications, and it's a stronger machine with higher injection capacity and stronger clamping force.

FS-BT-J也適用於生產寬口瓶;此機種和FS-BT-S有等同的生產優點, 但是適用於生產寬口瓶;此機種之結構較大、較高之射出量及較強之鎖模力。

Innovative approach by 2-station machine operation, FS-BT-S/FS-BT-J need less neck cavities, less mold cost, and has a more effective mold width to save the total cost. Mold cost is an important investment in running diversified and various products lines. The tooling/mold cost in our simple and innovative system is the lowest of all.

採用2站式之機台設計是鍍鑫之創新設計, FS-BT-S/FS-BT-J僅需較少的瓶口模穴、較低模具成本和更有彈性之模板空間, 節省成本。當生產多樣的產品時, 模具成本是重要的投資成本。鍍鑫射吹設計是簡化和創新之生產設計, 相對降低成本。

Advantage of Using One Stage Injection Blow Molding Machine 使用一步法射吹機之優點:

*Lowest machine investment. 較低之機械投資成本。

*All processes are completed in single machine - lower labor cost. 所有生產流程在單一機台上完成, 減少人工成本。

*One complete production cycle has fewer scratches, remains shining bottle surface, thus creates higher value of bottles and containers. 單一生產流程, 減少成品在運輸和轉換過程中的碰撞, 較無刮痕, 成品表面光亮, 提升產品的價值。

*No contamination of product occurs during production. 減少生產過程中之污染問題。

*No burrs/flash, free from material recycling concern. 沒溢料產生, 不需考量回收廢料之問題。

*Accurate neck dimensions. 精準之瓶口尺寸。

*To overcome the shortage of forming special PET bottles by traditional 2-stage PET production with uneasy PET stretch condition. 克服生產特殊PET瓶形時由傳統二段PET延伸拉吹不易之缺點。

FS-BT Series One Stage Injection Blow Molding Machine/ FS-BT系列一步法射吹機

*Simple: From injecting preforms to blow bottles, the whole process is done by one production cycle, which saves the cost of the investment in various machines to achieve the same production.

簡易: 由射出瓶胚至吹塑成品為單一生產循環設計, 節省投資多樣機械設之成本。

*Easy: Easy for operation; simple and durable mechanical structure for the long term use.

便利: 易於操作, 簡易化及耐用機構設計。

*Economical: Minimized mold parts for more economic tooling cost

經濟型: 模具設計盡量縮小化, 以減少成本支出。

*Flexible: Perfect for diversified and low volume bottles, such as cosmetics, shampoo and pharmaceutical bottles

彈性: 適用多變化, 容量小的化妝瓶, 洗髮瓶及藥用瓶。

*User Friendly: Fully computerized touch screen provides user-friendly operation interface.

人性化: 使用觸控式螢幕, 全自動人性化操作介面, 易懂好學。

*Energy saving: In-mold heat preconditioning feature; no extra heaters required.

採取模內控溫設計, 瓶胚溫度直接在射出模內調整, 無須使用額外加熱裝置, 可節省大量能源。

*Standardized: Standard and well-known pneumatic and hydraulic parts are widely available.

普遍性: 採用泛用及知名品牌之風壓及油壓零件, 易於當地市場購買。

*Thorough: Thorough service from providing know-how and service from tooling design to final product.

技術支援: 提供從設計到最終產品生產之技術支援及服務。

Bottle Condition for FS-BT-3S / FS-BT-3S之成品條件:

Round bottle with standard neck/ 標準瓶口圓瓶

Volume(ml)	Height(mm)	Neck(mm)	Pitch (mm)	B/DIA(mm)	Cavity(pcs)
容量(ml)	瓶子高度	瓶口直徑	中心距	瓶身外徑	穴數
<2000	300	<50	150	<120	2
<500	300	<38	75	<70	4
<200	300	<22	50	<45	6
<50	600	<15	37.5	<33	8

Bottle Condition for FS-BT-4S / FS-BT-4S之成品條件:

Round bottle with standard neck/ 標準瓶口圓瓶

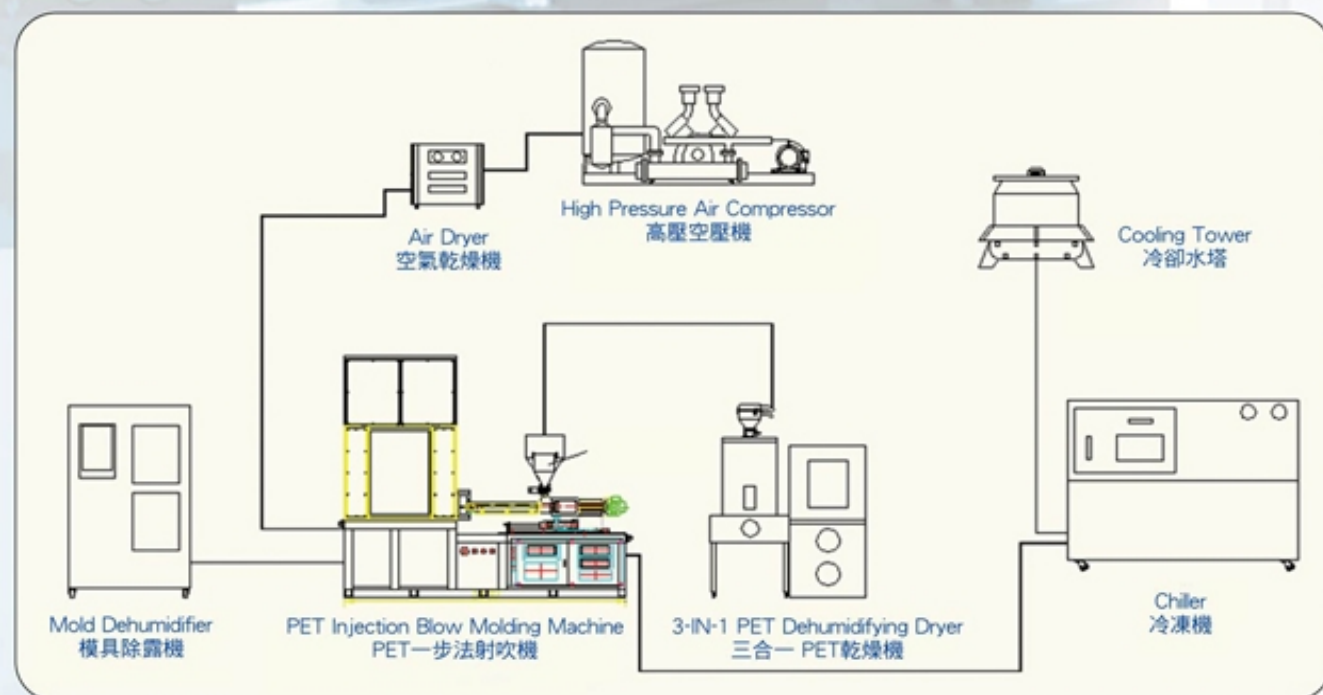
Volume(ml)	Height(mm)	Neck(mm)	Pitch (mm)	B/DIA(mm)	Cavity(pcs)
容量(ml)	瓶子高度	瓶口直徑	中心距	瓶身外徑	穴數
<1500	300	<45	105	<100	4
<400	300	<38	70	<65	6
<200	300	<22	52	<45	8

Bottle Condition for FS-BT-3J / FS-BT-3J之成品條件:

Round bottle with jar neck/ 廣口圓瓶

Volume(ml)	Height(mm)	Neck(mm)	Pitch (mm)	B/DIA(mm)	Cavity(pcs)
容量(ml)	瓶子高度	瓶口直徑	中心距	瓶身外徑	穴數
<1500	300	<83	125	<110	2
<1000	300	<63	98	<94	3
<600	300	<38	65	<60	4

流 程 圖



■ FS-BT Specification

Model	型式	UNIT/單位	FS-BT3S	FS-BT3J	FS-BT4S	FS-BT4J
Injection unit	射出部分					
Screw diameter	螺桿直徑	mm	28	42	45	50
Screw L/D ratio	螺桿比例	L/D	20/1	20/1	20/1	20/1
Screw speed range	螺桿轉速	RPM	0-100	0-100	0-100	0-100
Max. shot-weight	最大射出量	cm ³	86	194	223	373
Mold clamping (injection unit)	鎖模系統(射出部分)					
Injection mold opening stroke	射出開模行程	mm	300	300	300	300
Injection mold clamping force	射出鎖模力	ton	40	120	60	200
Max swing radius	最大迴轉半徑	mm	180	180	180	180
Mold clamping (blowing)	鎖模系統(成型部分)					
Blow mold opening stroke	吹氣開模行程	mm	120	120	140	200
Blow mold clamping force	吹氣鎖模力	ton	20	30	30	50
Stretch stroke	拉伸行程	mm	300	300	300	300
Power system	動力系統					
Pump motor	泵浦馬達	hp/kw	25/18.5	25/18.5	40/29.7	40/29.7
Heating capacity	電熱容量	kw	9.5	9.5	11.6	11.6
Table servo motor	旋轉台伺服馬達馬力	hp/kw	1.0/0.75	2.0/1.5	3.0/2.2	3.0/2.2
Total power consumption	總耗電量	kw	29.5	29.5	43.5	43.5
Air system	氣壓單元					
Air pressure	空氣壓力	bar	9	9	9	9
Processing air pressure(approx)	空氣消耗量	kg/cm ²	25	25	25	25
Hydraulic system	油壓單元					
Oil tank capacity	油箱容量	liter	250	250	450	450
System max. pressure	油壓壓力	kg/cm ²	140	140	140	140
Cooling water capacity	冷卻水容量	L/min	400	400	600	600

a) Specifications are subject to change without prior notice.

復鑫之研發部門保有修改機台規格之權利，以提供更好的機械性能。

b) Please feel free to contact us for special requirements.

如對機台有特殊要求，歡迎與我們聯絡。

c) Screw diameter could be different depends on product weight.

螺桿直徑會因生產成品之重量不同而變更設計。

d) Clamping force could be different depends on product neck diameter.

鎖模力會依據瓶口直徑的不同而調整。



Model FS-IB SERIES 60,80 一步法射吹機

ONE STAGE INJECTION BLOW MOLDING MACHINE

FS-IB SERIES 60,80 One stage Injection blow molding machines provide advanced technology.
一步法射吹機械具備下列先進科技設計

1. High speed and precise quality, suitable for processing PP, PE, PC, PS materials.
高速且精確的生產品質適合 PP, PE, PC, PS 等材質
2. Fully computerized design with self-diagnostics system, display erroneous message on touch screen, easy for trouble-shooting!
全機採電腦化自我診斷系統, 即時顯示故障於觸控螢幕面板易於排除
3. Quickly molds changing system, saving cost and productive cycle time
模具快速更換系統有效節約生產週期與成本
4. All function control- on -board design, easy for operator changing data and modifying setting directly on touch screen.
全機功能皆集中於控制面板上, 便利操作者直接由觸控螢幕中統一管理修正
5. The feature of injection blow molding machine, not only bottle surface shining, but also bottle body seamless, excellent for production smaller bottle.
射吹機械產品特色為表面光澤佳且無接縫及邊料問題, 適合細小瓶罐生產
6. Hydraulic is close loop system, controlled by proportion pressure and flow rate precisely.
液壓系統為封閉式迴路, 並由比壓, 比流精確控制
7. Mold seat is turret-typed design, adopt angular index device to ensure accurate orientation.
模座為塔式設計, 由角度分割器精確定位

■ Model FS-IB SERIES 60,80 Injection blow molding machine specification

Model	型 式	UNIT/ 單位	FS-IB SERIES	
			60	80
Injection	射出部份			
Screw diameter	螺桿直徑	mm	45	63
Screw L/D ratio	螺桿比例	L/D	20/1	20/1
Screw-speed range	螺桿轉速	RPM	0-180	0-180
Screw-stroke	螺桿行程	mm	127	250
Max.shot-weight	最大射出量	GRAM	264	740
Mold clamping (injection unit)	鎖模系統 (射出部份)			
Injection mold Opening stroke	射出開模行程	mm	127	150
Injection mold clamping force	射出鎖模力	ton	60	80
Trigger bar length	模柱內長度	mm	670	780
Max swing radius	最大迴轉半徑	mm	460	570
Mold clamping (Blowing)	鎖模系統 (成型部份)			
Blow mold opening stroke	吹氣開模行程	mm	127	150
Blow mold clamping force	吹氣鎖模力	ton	10	15
Power system	動力系統			
Pump motor	泵浦馬達	hp	30/20	30/30
Pump pressure	泵浦壓力	kg/cm ²	170	180
Heating capacity	電熱容量	kw	7	10
Heating zone	料管加熱點	point	4	6
Air consumption (Approx)	空氣消耗量	m ³ /hr	35	40
Air pressure	空氣壓力	bar	6-10	10-15
Oil tank capacity	油箱容量	L	300	1000
Total power consumption	總耗電量	kw	50	60
Machine dimension	機械尺寸	m	4x1.6x1.9	5.5x1.9x2.5
Machine weight	機械重量	ton	6	8.5

●本目錄中所有規格若有變動, 恕不另行通知。

Figures and data in this catalogue are subject to change without notice due to constant research and development



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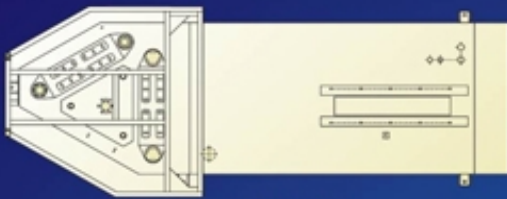
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機型：IB60

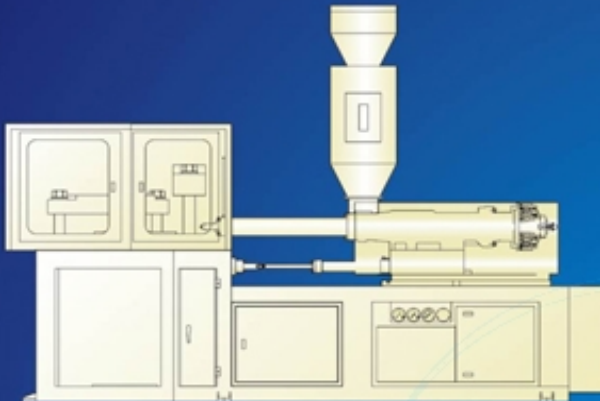
適用原料 Application : PE, PP, PS, PC, PETG, PMMA

Round bottles

Volume(ml)	Height(mm)	Neck(mm)	Weight(g)	B/DIA(mm)	Cavity(pcs)
容量(ml)	瓶子高度	瓶口直徑	瓶重	瓶身外徑	穴數
10	49	12.5	3	23	12
15	90	13.5	4.5	16	12
30	71	30	5	30	10
40	57	38	6	40	8
50	88	18	7	36	8
60	80	20	15	45	7
100	135	25	15	38	5
120	125	22	25	43	5
200	127	33	26	62	4



上視圖



正視圖

機型：IB80

適用原料 Application : PE, PP, PS, PC, PETG, PMMA

Round bottles

Volume(ml)	Height(mm)	Neck(mm)	Weight(g)	B/DIA(mm)	Cavity(pcs)
容量(ml)	瓶子高度	瓶口直徑	瓶重	瓶身外徑	穴數
50	90	18	7	36	10
100	100	25	11	38	10
120	120	22	22	43	8
250	120	23	25	62	6
350	170	25	30	75	4
500	170	25	31	90	4
600	180	30	37	90	4
850	180	30	47	110	2
1000	210	23	74	145	2

流程圖

