



友勝機械

Multiple-Slide Die Casting Machine 多軸滑塊式熱室壓鑄機

CE Certified

This innovative design of multiple-slide concept and parting-line injection offers you several cost-effective advantages compared with conventional

- ◆ Low tooling costs;
 - ◆ Faster cycle speeds;
 - ◆ Higher precision;
 - ◆ Reduction of secondary operations;
 - ◆ Lower energy costs;
 - ◆ Savings in raw material.
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- ◆ 模具標準化、節省製作時間及降低成本。
 - ◆ 分模面射料，無鑄口可節省材料、人工和能源。
 - ◆ 壓鑄生產快速、換模容易。
 - ◆ 自動化、資訊化功能擴張性強。
 - ◆ 操作簡易、安全、高效率。



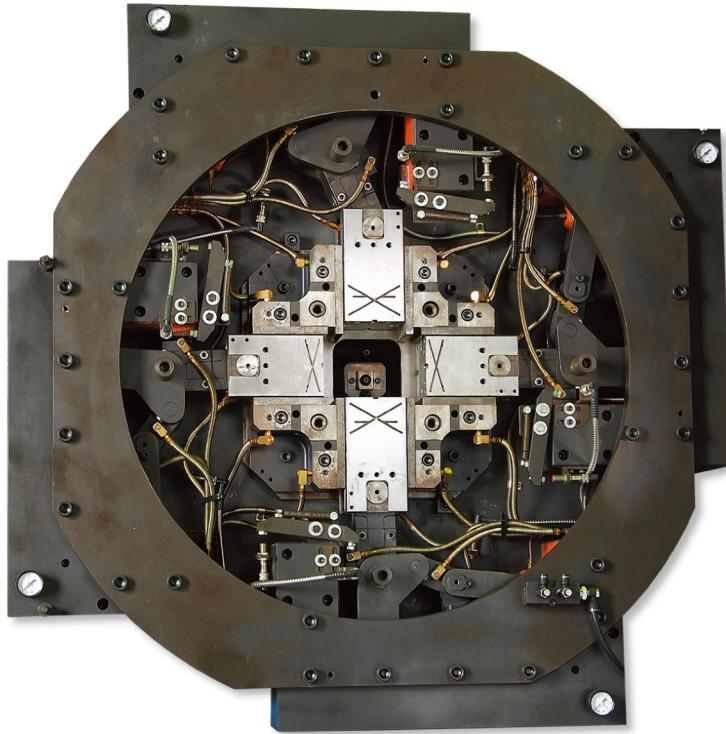
YEOW SHENG ENGINE



MS-44Z



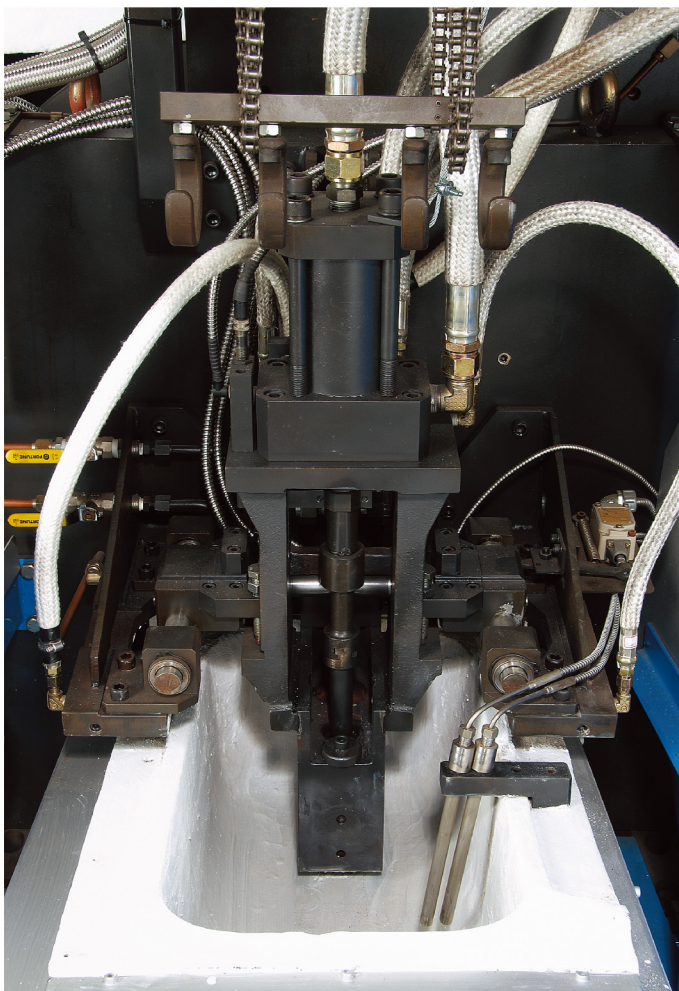
MS-24Z



Clamping System

The clamping system and toggles are designed for maximum durability and stability. The toggle mechanisms are designed with an automatic lubrication system, which lengthen service life and reducing maintenance costs. Slide guiding mechanisms with wear plates, cover, and shanks are included. Clearance between slides and wear plates are ground to 0.025mm, to maintain tight tolerances on castings.

- 突破性的多軸式模具設計、分模面選擇彈性大，可自任何方向拔模，超越傳統模具之限制，降低模具製作成本、減少產品二次加工程序，極適合製造精密複雜之小型鑄件。
- 獨特的分模面射出設計、不需豎澆道、材料成本節省30%以上，並降低能源消耗。
- 堅固的曲肘鎖模系統配合高精度十字模座和自動潤滑系統，確保精密合模與機器壽命。



Injection System

The entire injection system is designed for high performance and repeatability, resulting in maximum process capability. An innovative double piston injection system reduces porosity. Precision machined steel gooseneck designed for maximum life and consistent performance.

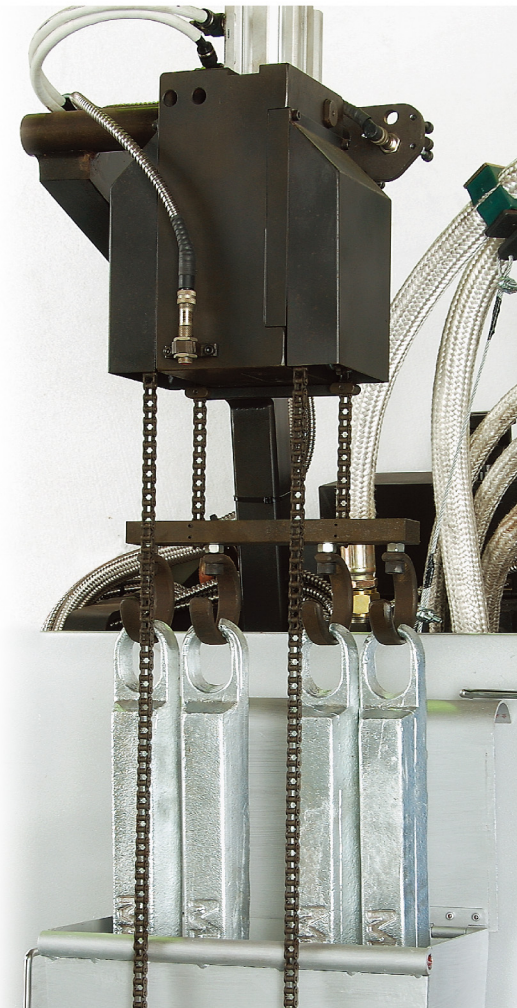


- 耐熱合金鋼製鵝頸、襯筒和柱塞桿，熱處理後精密研磨，使用壽命極長，襯筒磨損後可更換。
- 電熱自動溫控噴嘴，射料順暢穩定且連續無噴嘴阻塞或過熱之虞。
- 雙桿式射料設計，不但能保護射出安全，還可縮短充填時間、降低模穴的氣體含量，提升鑄件的品質和壓鑄的穩定性。

Automatic Ingot Feeding System

The electric melt pot equipped with a multiple feeding system incrementally loads up to 40 kgs of zinc, while maintaining accurate control over molten metal level and temperature.

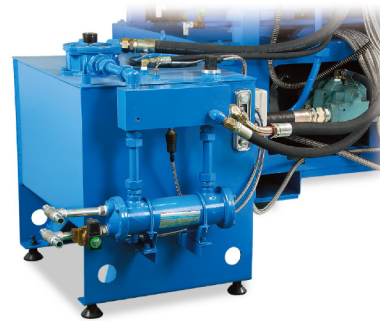
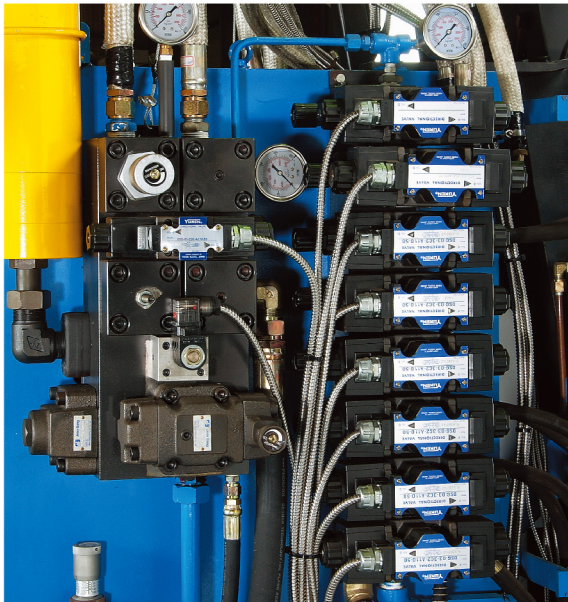
- 結合自動送料裝置，可預熱料錠使熔料溫度穩定，並且保持熔鍋料位一致，利於壓鑄及產品的穩定性。
- 熔鍋加熱採用電熱管插入直接接觸導熱，熱傳導效率極高節省能源，熔鍋壁受熱平均延長使用壽命。
- 覆蓋完善的防護罩，確保人員的安全。隔熱確實的電熱熔鍋，造就乾淨舒爽的工作環境。



Hydraulic System

A fully integrated hydraulic system incorporating high flow rate and rapid response valves ensures fast cycle speeds. Clamping is controlled by the function manifold, which also controls the movement of the slides and the gooseneck. There are six hydraulic functions available to incorporate core pulls and two pneumatic functions to facilitate automation. An independent injection manifold controls the speed of the injection piston, which results in consistent casting quality.

The stand-alone hydraulic power unit, for easier access to hydraulic pressure adjustments and maintenance on the pump and motor. This unit is equipped with sensors to monitor oil temperature and level, as well as the condition of filters. These sensors are linked to the control software, which will generate alarm messages, informing the operator of any abnormal conditions.

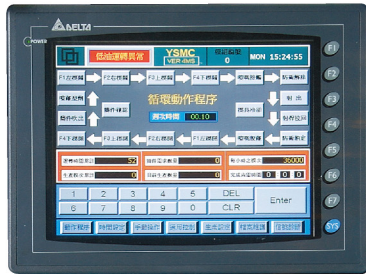


- 動力單元採壓力、容量可調式之柱塞泵，對於不同壓鑄特性需求的調適簡易化。
- 油箱使用難燃性液壓油，安全無虞。並且具備油溫自動控制和自動偵測油位以及濾網狀況，動力輸出穩定可隨時保持機器性能。
- 排列整潔的中央式油壓系統設計，易於系統壓力的核對、調整和維護。

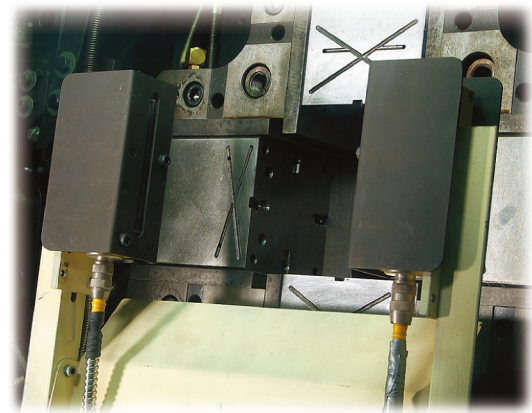
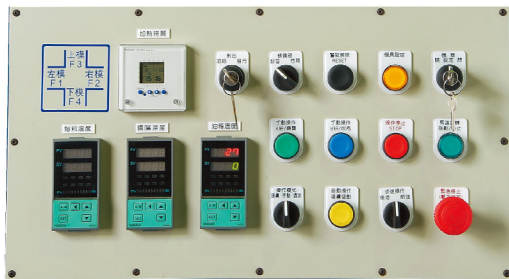
Control System

The control system of machines is based on a PC-compatible Beckhoff PLC combined with a touch screen operator interface. Proprietary software has been developed by YSM for control of sequencing and timing of both the injection process and up to eight functions or movements.

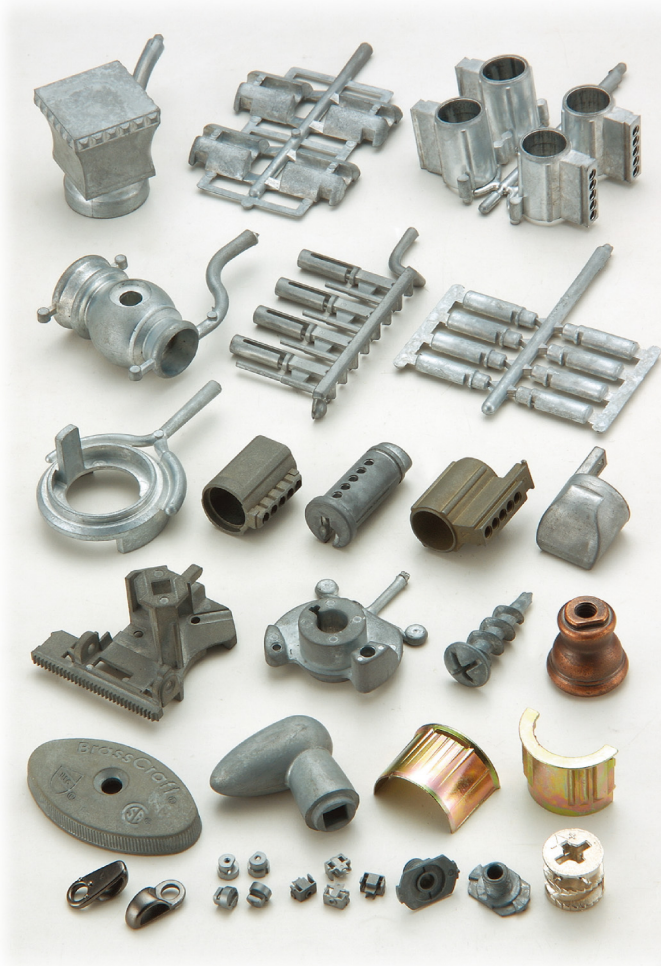
The simple, yet powerful graphical interface is easy enough to be used by just about anyone and reduces the "learning curve" associated with new equipment.



- 先進的多重安全設計之YSM壓鑄生產參數控制軟體，搭配人性化之電腦觸控系統以及操作盤的設計，提升產品品質和效率。非專業人員只需短期訓練，即可正常操作，並能確保人員和設備的安全。



- 高速應答的鑄件偵測裝置能滿足高達每分鐘40射次以上的快速生產條件。



Examples of parts produced

Applied to the production of small zinc components include: High precision, net shape parts, having complex geometry, can be cast.

- 適用範圍：舉凡電子、電腦、通訊、家用電器、鎖類、汽車、相機、武器、打火機、鈕扣、拉鍊、玩具、飾品等之各種鋅合金鑄件，均可使用本機生產，並且生產成本可低於傳統壓鑄機的30%以上。

SPECIFICATIONS 主要技術數據			MODEL	
			MS-44Z	MS-24Z
Slides 模具	Number of Die Motions	模具作動數	4軸	4軸
	Die Size (Standard)	模具尺寸 (標準)	101.6 x 101.6 mm	63.5 x 63.5 mm
	Stroke of Each Die Section	每軸模具行程	50.8 mm	38.1 mm
	Ejector Stroke (Max.)	最大頂出行程	25.40 mm	19 mm
	Total Die Opening (Max.)	最大模具開口尺寸	101.6 mm	76.2 mm
Injection 射料	Injection Plunger Diameter	射料柱塞直徑	38 mm	25.4 mm
	Injection Cylinder Diameter	射出油缸直徑	80 mm	50 mm
	Injection Plunger Stroke	柱塞行程	60 mm	60 mm
	Max. Dry Shot Speed (at 70 kg/cm ²)*	最大乾射速 (70 kg cm ² 時)	1.40 m/sec	1.43 m/sec
	Injection Capacity (Max. Theoretical)*	射出能力 (理論最大值)	435 g	195 g
	Shot Weight (Max. Recommended)*	射出重量 (建議最大值)	210 g	97 g
	Metal Pressure (Max. Recommended)*	金屬壓力(最大建議值)	310 kg/cm ²	271 kg/cm ²
Hydraulic 油壓	Nozzle Heater	射料嘴電熱器功率	3.2 kW	3.2 kW
	Hydraulic Line Pressure (Max.)*	油壓管路壓力 (最大建議值)	90 kg/cm ²	80 kg/cm ²
	Hydraulic Tank Capacity	油箱容量	30 gallons	30 gallons
	Clamping Force (Max.)*	鎖模力 (最大)	18 tons	7.2 tons
Melt Pot 熔爐	Dry Cycle Speed / Hour	空機速度	3,000/hr	3,600/hr
	Heaters	電熱器功率	25.2 kW	14.5 kW
	Capacity of Melt Pot	熔爐容量	180 kg	127 kg
Motor 馬達	Melt Rate / Hour	熔化能力	99 kg/hr	60 kg/hr
	Horse Power	驅動馬達	11.2 kW 15 HP	7.5 kW 10 HP
Machine 機器	Weight	機器重量	3350 kg	1700 kg
	Size (L x W x H)	機器尺寸 (L x W x H)	2.5 x 2.8 x 2.3 M	2.2 x 2.6 x 2.1 M
	Floor Space	佔地面積 (不含冷卻機)	3.0 x 3.0 M	2.5 x 3.0 M

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*Dependent upon machine configuration. YSM reserves the right to modify specification without notice.

*實際數值可能隨各種不同的設定條件和操作壓力而產生改變。友勝機械保有修改以上規格之權力。

