

HLYQF^{series} 汽车冲压件成型液压机

Automotive stamping forming hydraulic press



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适用范围 Scope Of Application



本机为大型冲压件成型液压机。主要适用于汽车冲压件，家用电器、厨房用品等金属薄板件的深拉伸，浅拉伸，冲压，翻边、整形等工艺，特别适用于汽车冲压件的拉伸及冲压成型等工艺。

It is mainly applicable to the deep drawing, shallow drawing, stamping, flanging, shaping and other processes of the metal sheet of automobile stamping parts, household appliances, kitchen supplies, etc., especially for the drawing and stamping forming of automobile stamping parts.



本系列机器结构 Machine structure

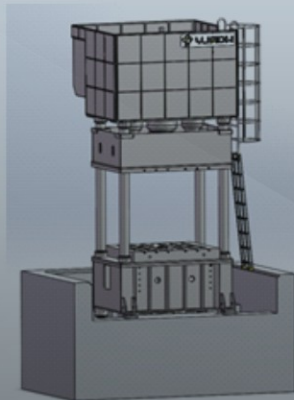


HLYQ 为三梁四柱锁紧封闭式结构

HLYQ is a three-beam and multi-column locking enclosed structure

结构紧凑，性价比高。油箱位于机顶后方。滑块采用四柱导向，上下运动。机架采用钢板焊接，整个机架刚性强固。配合自动化生产，迎合现代化的生产需求。

with compact structure and high cost performance. The oil tank is located behind the top of fuselage. Each slider is guided by four columns and moves up and down. The frame is welded by steel plate, the whole frame is rigid and strong. Cooperate with manipulators to realize fully automated production and meet modern production requirements.

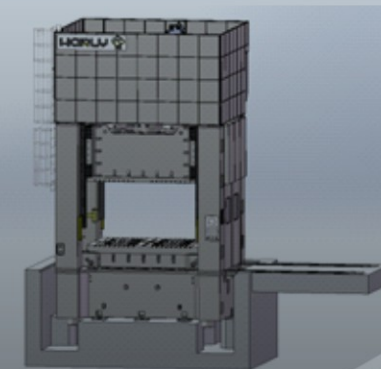


HLYNQ为整体封闭框架式结构

HLYNQ is an integral closed frame structure

机架采用榫卯连接箱体结构，焊接后，经热处理消除床身内应力，机身整体高刚性。滑块采用四角八面导轨导向，导向精度可调并调节方便，导轨材料采用高力黄铜，动、静导轨板之间形成摩擦副，设备高精密。

The frame adopts mortise and tenon joint box structure, after welding, heat treatment to eliminate the internal stress of the bed, and the overall high rigidity of the fuselage. The slide block is guided by four-corner eight-sided guide rail, the guiding accuracy is adjustable and easy to adjust, the guide rail material is made of high-force brass, friction pairs are formed between the moving and static guide rails, and the equipment is high precision.



本系列机器的优势

Advantages of machines



高平衡 低能耗

High Balance, Low Energy Consumption

采用多缸制取代常规单缸结构，受力情况从点向面扩散，对偏负载拉伸起到高平衡效果。根据液压拉伸特性，液压计算出浮动拉伸压力比值，通过差动原理把液压垫的力增压利用，达到节能的效果（通过科学技术成果鉴定，具有国际先进水平）专利号:ZL201120484951.2。

The multi-cylinder system is used to replace the conventional single-cylinder structure, and the force is diffused from point to plane, which has a high balance effect on the partial load tension. According to the hydraulic tensile characteristics, the computer calculates the ratio of floating tensile pressure, and uses the force of the hydraulic pad through the differential principle to achieve the effect of energy saving (through the identification of scientific and technological achievements, with the international advanced level) Patent No:ZL201120484951.2

生产配合度高

High production coordination degree.

机器具有非常高人性化特点：无压下行，同步顶出，机器状态三色灯，多操纵台，自定义程序等。所以非常适合大产品的冲压成型。液压垫也可以由多个缸组成，受力均匀，对异型产品拉伸效果非常显著。

The machine has very humanized characteristics: no pressure descend, synchronous ejection, three-color lights of machine state, multi-control console, custom program etc. So it is very suitable for stamping forming of large products. The hydraulic cushion can also be composed of multiple cylinders, the force is uniform, and the tensile effect of special-shaped products is very significant.

出色的速度、位置和压力控制性能

Excellent speed, position and pressure control performance

采用电液伺服控制，实现闭环控制回路。特定条件下，拉伸速度在3-40mm/s内任意设置。不同的产品及材料，调整不同的拉伸速度，增加拉伸的柔性效果。自主研发的定压，定位精度运算系统（专利号: 2019SR020725），使设备定压及定位达到非常高的精度。

Electro-hydraulic servo control is adopted to realize the closed loop control. Under certain conditions, the stretching speed can adjust in 3-40mm/s. For different products and materials, different stretching speed can be adjusted to increase the flexibility of stretching. We are independently developed the constant pressure and positioning precision operation system (Patent No. 2019SR020725), So that the equipment constant pressure and positioning achieve very high accuracy.

本系列机器的优势

Advantages of machines

液压垫五段比例调压

Five - stage proportional pressure adjustment of hydraulic cushion

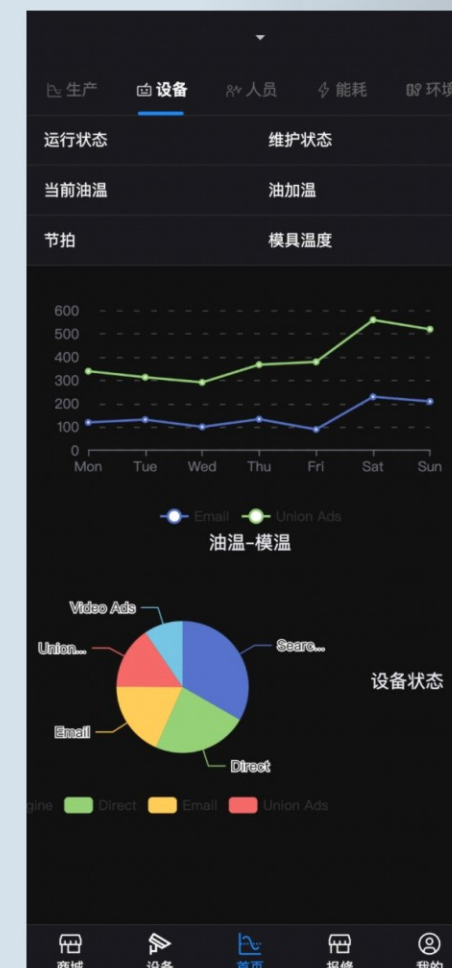


液压机液压垫在使用浮动拉伸工艺时，可以根据设定拉伸深度变化，分五段无极变化压边力，使其有效的控制材料在拉伸过程中的流动性，让你感觉到高难度的拉伸产品变的没有难度，产品质量大大提高。

When use the floating drawing process, the hydraulic press cushion can set by the drawing depth change, divided into five stages changes of blank holder force, so that the effective control the flow in the stretching process of the material, and you feel that the high difficulty of stretching products become no difficulty, product quality greatly improved.

具备了先进的智能服务

Advanced intelligent service

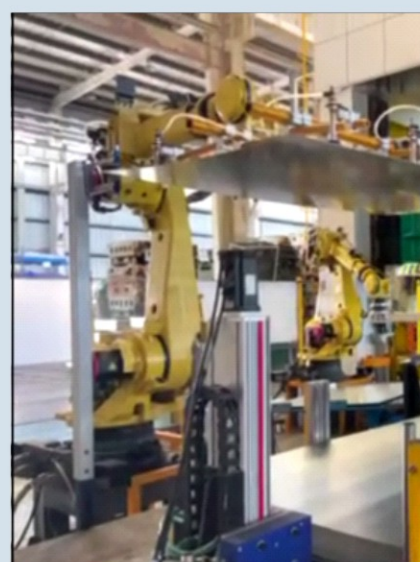


让客户无忧是我们一直奋斗的目标，设备的故障我们必须第一时间知道。手机扫描屏幕上的"智能服务"二维码，我们的设备服务平台就告诉你设备出现了什么问题，接下来的事，请放心交给我们。

Let customer reassure is our goal, we must know the failure of the machine in the first time. Scan the "intelligent service" QR code on the screen, our machine service platform will show what is the problem, then the next thing, please rest assured to us.

自动化及智能化离我们很近

Automation and Intelligent is near to us



自动化上选配机械手及上料装置，搭配自定义步进程序，实现设备全自动生产。智能上设备选配扫描枪，模具识别装置，搭配生产信息化管理系统，实现智能化信息化生产。同时设备配备了图构点检，智能维护等功能，保证生产的可靠性。

Automatic selection of robot and feeding device, with freely defined stepping logic system software, to achieve automatic production of equipment. Intelligent equipment is equipped with scanning gun, mold identification device and production information management system to realize intelligent information production. At the same time, the equipment is equipped with mapping point inspection, intelligent maintenance and other functions to ensure the reliability of production.

工作台孔位分布

DISTRIBUTION DIAGRAM I OF WORKTABLE HOLES

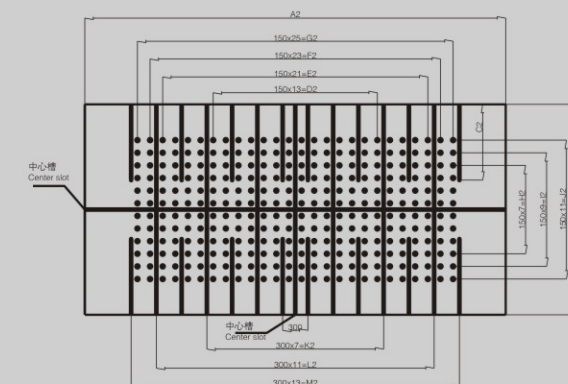
项 目 (ITEM)			A线 (A Production line)				B线 (B Production line)				C线 (C Production line)			
单 位 UNIT			HLYQF-400	HLYQF-500	HLYQF-630	HLYQF-800	HLYQF-630	HLYQF-800	HLYQF-1000	HLYQF-1250	HLYQF-1000	HLYQF-1250	HLYQF-1600	HLYQF-2000
公称压力	KN		4000	5000	6300	8000	6300	8000	10000	12500	10000	12500	16000	20000
液压最大 工作压力 Top Pressure	Mpa		25	25	25	25	25	25	25	25	25	25	25	25
工作台面有效尺寸 (左右×前后) Worktable size (L-R×F-B)			2800x1800	2800x1800	2800x1800	2800x1800	4000x2200	4000x2200	4000x2200	4000x2200	4500x2500	4500x2500	4500x2500	5000x2500
滑块距工作 台最大间距 Max daylight	mm		1600	1600	1600	1600	1900	1900	1900	1900	2100	2100	2100	2200
滑块最大行程 Max stroke	mm		1100	1100	1100	1100	1400	1400	1400	1400	1500	1500	1500	1600
滑 块 速 度	快下 Slider fast descend	mm/s	100-500	100-500	100-500	100-500	100-500	100-500	100-500	100-500	100-500	100-500	100-500	100-500
	工进 Press speed	mm/s	10-50	10-50	10-50	10-50	10-50	10-50	10-50	10-50	10-50	10-50	10-50	10-50
	回程 Slider ascend	mm/s	100-500	100-500	100-500	100-500	100-500	100-500	100-500	100-500	100-500	100-500	100-500	100-500
液压垫压边力 Cushion force(*)		KN	1200	1500	2000	2500	2000	2500	3000	3000	3000	3500	3500	3500
液压垫行程 Cushion stroke(*)		mm	300	300	300	300	350	350	350	350	400	400	400	400
液压垫 速度 Cushion speed (*)	顶出 Ejected	mm/s	80	80	80	80	80	80	80	80	80	80	80	80
	退回 Return	mm/s	150	150	150	150	150	150	150	150	150	150	150	150
顶杆直径 Ejected Pin Diameter (*)		mm	φ 45	φ 45	φ 45	φ 45	φ 50	φ 50	φ 50	φ 50	φ 55	φ 55	φ 55	φ 55

项目 (ITEM)		A2	B2	C2	D2	E2	F2	G2	H2	I2	J2	K2	L2	M2	T型槽 (T slot)	中心槽 (Center slot)
A线 A Production line	HLYQF-400	2800	1800	650	1950	<div></div>	<div></div>	<div></div>	1050	<div></div>	<div></div>	2100	<div></div>	<div></div>	T-1	Z-1
	HLYQF-500	2800	1800	650	1950	<div></div>	<div></div>	<div></div>	1050	<div></div>	<div></div>	2100	<div></div>	<div></div>	T-1	Z-1
	HLYQF-630	2800	1800	650	1950	<div></div>	<div></div>	<div></div>	1050	<div></div>	<div></div>	2100	<div></div>	<div></div>	T-1	Z-1
	HLYQF-800	2800	1800	650	1950	<div></div>	<div></div>	<div></div>	1050	<div></div>	<div></div>	2100	<div></div>	<div></div>	T-1	Z-1
B线 B Production line	HLYQF-630	4000	2200	850	1950	3150	<div></div>	<div></div>	1050	1350	<div></div>	2100	3300	<div></div>	T-1	Z-1
	HLYQF-800	4000	2200	850	1950	3150	<div></div>	<div></div>	1050	1350	<div></div>	2100	3300	<div></div>	T-1	Z-1
	HLYQF-1000	4000	2200	850	1950	3150	<div></div>	<div></div>	1050	1350	<div></div>	2100	3300	<div></div>	T-1	Z-1
	HLYQF-1250	4000	2200	850	1950	3150	<div></div>	<div></div>	1050	1350	<div></div>	2100	3300	<div></div>	T-1	Z-1
C线 C Production line	HLYQF-1000	4500	2500	850	1950	3150	3450	<div></div>	1050	1350	1650	2100	3300	<div></div>	T-1	Z-1
	HLYQF-1250	4500	2500	850	1950	3150	3450	<div></div>	1050	1350	1650	2100	3300	<div></div>	T-2	Z-2
	HLYQF-1600	4500	2500	850	1950	3150	3450	<div></div>	1050	1350	1650	2100	3300	<div></div>	T-2	Z-2
	HLYQF-2000	5000	2500	900	1950	3150	3450	3750	1050	1350	1650	2100	3300	3900	T-2	Z-2

Figure 1 is a schematic diagram of the layout of the test structure. It shows a central grid of circular holes. The dimensions are as follows:

- Central hole diameter: 100 mm
- Distance between centers of adjacent holes: 100 mm
- Distance from center of grid to center of hole: 100 mm
- Distance from center of grid to edge of hole: 100 mm
- Distance from center of grid to edge of grid: 100 mm
- Distance from center of grid to edge of test structure: 100 mm

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配置表

Configuration list

项目 Item		配置 Configuration	基本款 Basic	选配 Selection
配 件(Parts)				
		电动润滑给油装置 Electric cycle LUB device	○	
		电源插座 Power outlet (AC220V.10A)	○	
		空气源及喷风 Air Sources &Breeze	○	
		机床照明装置 Lighting Devices	○	
		三色运转指示灯 Three-color operating indicator light	○	
		机械手（前后） Robot (F-B)		○
		快速夹模装置 Fast speed clamp mold device		○
动力系统 Dynamical system		伺服油泵组 Servo pump group		○
		普电油泵组 Normal pump group	○	
冷却器 Cooler		水 冷 Water cooler	○	
		强 制 Forced cooler		○
安全防护 Safety Device		前后安全门 F-B safety door		○
		左右安全门 L-R safety door		○
		安全锁缸(棘齿条)Safety clock cylinder(Spines rack)	○	
		光电保护装置(前后)Grating protection device (F-B)	○	
移模工作台 Mold moving worktable		正移(前后) F-B moving	○	
		侧移(左右) L-R moving		○
移动操作台 Movable Operation Device		移动操作台(前后各1个) Movable operation device (F-B Each One)	○	
		手持调模器 Hand-held modulator		○
爬 梯 Ladder		侧爬梯 Side Ladder	○	
		旋转爬梯 Rotate ladder		○
功 能(Function)				
		液压模垫 Mold Cushion		○
		物联接口 Web interface		○
		扫描枪接口 Scanning interface		○
		模具识别功能 Mold recognition function		○
		液压油加热装置 Hydraulic oil heating device		○
		模温装置 Mold TEMP device		○
		冲载缓冲装置 Press buffer device		○
系统软件 (System software)				
		液压垫分段比例控制系统 Cushion subsection proportional control system	○	
		设备点检系统 Machine inspection system		○
		设备诊断系统 Machine diagnostic system		○
		智能服务平台系统 Intelligent service system		○
		生产信息化管理系统（MES） Production information management system		○
		模具存储量系统（基本50副） Mold storage system (Basic fifty sets)		○
附件 (Attachment)				
		使用说明书 Use Manual	○	
		维修工具及工具箱 Maintenance tools & tool kit	○	
		地脚垫板 Anchor plate	○	
		合格证 Certification	○	
		检验单 Inspection sheet	○	