

热处理装取料机
Heat Treatment Manipulator

青岛海德马克智能装备有限公司
Qingdao HDMECH Intelligent Equipment Co.,LTD.

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HDMECH
QINGDAO HDMECH INTELLIGENT EQUIPMENT CO.,LTD

精细化的产品 国际化的海德马克

www.hdmech.com

公司简介 Company Profile

青岛海德马克智能装备有限公司（“海德马克”或“公司”）原青岛华东工程机械有限公司，成立于1994年10月28日，注册资金6166万元，位于青岛市高新技术产业开发区春阳路北侧、思源路西侧，公司厂区占地面积13.9万平方米（208亩），总资产3.57亿，现有员工170余人。

海德马克，是一家从事智能化生产线、机器人、物联网技术研发、设计、制造、销售、服务于一体的国家高新技术企业。主要产品包括：冰箱（冷柜）智能化生产线、洗衣机智能化生产线、油烟机智能化生产线、热水器智能化生产线、工业机器人、智能无人高精密锻造操作装备、径锻机、智能数控碾环机、智能数控热处理装备等。

海德马克，先后服务于海尔、海信、美的、澳柯玛、TCL、GE、格力、倍科、一重、二重、上重、太重、沈重、大连华瑞、无锡叶片、马钢、宝钛以及德国罗特艾德等知名企业。

Qingdao HDMECH Intelligent Equipment Co. Ltd. (“HDMECH”) Qingdao Huadong Engineering Machinery Co. Ltd., founded in October 28, 1994, registered capital of 61.66 million yuan, is located in Qingdao high tech Industrial Development Zone, between the north of Chunyang Road, and the west of Siyuan Road, the company covers an area of 139 thousands square meters (208 acres), with total assets of 357 million and enrolled employees more than 170.

HDMECH, is a national high-tech enterprise engaged in the R&D, designing, manufacturing, sales of home appliance intelligent production line, robot, internet of things technology. The main products include: refrigerator (freezer) intelligent production line, wash machine intelligent production line, kitchen ventilator intelligent machine production line, heater intelligent production line, intelligent unmanned-operation high precision forging equipment, industrial robots, intelligent CNC ring rolling machine, radial forging machine, intelligent CNC heat treatment equipment etc..

HDMECH has been supplied production line for Arcelik, Haier, Hisense, Midea, AUCMA, GREE, TCL, GE, and CFHI, CNEG, TAYOR, TYHI, NHI, DHHI, WTB, MIS, BaoTi and Germany Rothe Erde and other famous enterprises.

国家高新技术企业
山东省企业技术中心
青岛市液力装备工程技术研究中心
多个创新研发项目列入国家、省市重点技术创新项
60t数控重载锻造操作机技术被列入2010年度国家火炬计划
1000kg全液压重载机器人项目列入国家扩大内需重点资金支持项目
智能无人高精密锻造操作装备（800KN）被评为2015年度山东省首台套技术装备
260t锻造操作机项目获得青岛市重点技术攻关项目
数控精密锻造基层技术研发，被列入青岛市关键技术攻关计划
“18MN径向锻造压机、径向锻造操作机”被认定为2014青岛市企业技术创新重点项目
冷柜全自动钣金铆接线开发被列入青岛市企业技术创新重点项目计划
对开门冰箱门壳自动化生产线的开发被列入青岛市企业技术创新重点项目计划
洗衣机全自动内筒成型线的开发被列入青岛市企业技术创新重点项目计划

National high-tech enterprise
Shandong Enterprise Technology Center
Qingdao hydraulic equipment Engineering Technology Research Center
A number of innovative R & D projects included in the national, provincial key technological innovation projects
60t CNC heavy duty forging manipulator technology was included in the 2010 National Torch Program
1000kg all hydraulic heavy duty robot project included in the national expansion of domestic demand key funding projects
Intelligent unmanned operation high precision forging equipment (800KN) was named the 2015 annual Shandong province first sets of technical equipment
The project of 260t forging machine has been awarded the key technical project of Qingdao
CNC precision forging technology research and development, has been included in the key technology projects in Qingdao
"18MN radial forging press, radial forging manipulator" was identified as the 2014 Qingdao enterprise technology innovation key projects
Refrigerator automatic sheet metal rivet line development was included in the key projects of Qingdao city enterprise technology innovation plan
The development of the automatic door shell production line of the French door refrigerator was included in the key project of Qingdao enterprise technology innovation
The development of full automatic washing machine drum forming line of was included in the key project of enterprise technology innovation in Qingdao



技术专利

Technology Patents

合作与交流

Cooperation and Exchange

装料取料伺服仿真机械手发明专利
生产线传输对中机构及其方法发明专利
金属板料滚边装置及其方法发明专利
机械手及其夹持方法发明专利
钣金件复合加工模具及其方法发明专利
装出料机及其控制方法发明专利
机械手控制系统及控制方法发明专利
自动对中装置、对中方法及带有此装置的仿真手柄发
冰箱隐形门折弯模具及其折弯方法发明专利
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Patent of loading and reclaiming servo simulation manipulator
Patent of production line transmission centering mechanism and method
Patent of sheet metal rolling device and method
Patent of manipulator and its clamping method
Patent of sheet metal part composite machining die method
Patent of charging and discharging machine and its control method
Patent of Robot control system and its control method
Patent of automatic centering device, centering method, and simulation handle with this device
Patent of refrigerator invisible door bending die and its bending method

荣获100多项国家发明专利及实用新型专利 Won more than 100 national invention patents and utility model



公司一直与上海交通大学、燕山大学、中国海洋大学、济南铸锻所、中国重型机械研究院、马钢设计院等高校及科研院所保持着长期战略合作关系，通过与高校和科研院所的交流与合作提高技术创新能力。

HDMECH has maintained long term strategic relationship with Shanghai Jiao Tong University, Yanshan University, Ocean University of China, Ji'nan JFMMRI, Chinese Heavy Machinery Research Institute, Maanshan Institute and other universities and research institutes, and to improve the technological innovation capability through the exchange and cooperation with universities and research institutes

热处理装取料机

Heat Treatment Manipulator

Perfect Product / International Hdmech
精细化的产品 / 国际化的海德马克



概述 General

热处理装取料机为热处理生产线的专用装取料设备，为叉式结构，主要用于自由锻件、铸钢件、大型环件等出入炉与淬火，机器动作简单、准确、可靠。使用本机可完全实现零件热处理的机械化操作，有效地提高生产效率。

热处理装取料机为全液压传动有轨回转装取料设备，可根据机器动作分为2种：三个自由度、四个自由度

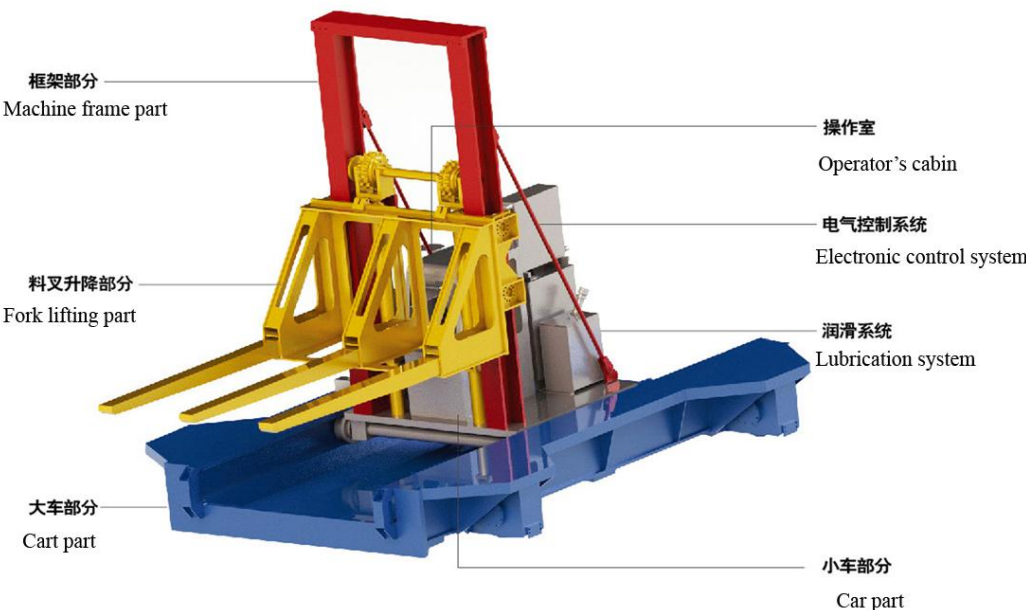
三个自由度	①大车行走、②小车行走、③叉架升降
四个自由度	①大车行走、②小车行走、③叉架升降、④台架回转

Heat Treatment Manipulator is a special reclaimer equipment used for heat treatment production line with the fork structure. It is Mainly used for free forging, casting parts, large ring , etc.out or into furnace and quenching. Machine movement is simple, accurate and reliable. The machine can fully realize the mechanical operation of parts heat treatment.

Heat Treatment Manipulator is a fully hydraulic drive and rotary reclaimer equipment with a railroad. According to the movement,it can be divided into two kinds: three degrees of freedom, four degrees of freedom

three degrees	1. cart walking 2. car walking 3. fork lifting
four degrees	1. cart walks 2.the car walks 3. the fork lifts, 4.he platform rotation

设备组成



规格系列: 3T-100T

操作模式: 手动操作模式、半自动操作模式、自动操作模式

Series:3T-100T
Operating mode: manual operation mode, semi-automatic operation mode, automatic operation mode.

YZYY-3/4-10

公称载荷 Rated load
动作自由度 Freedom of movement
YY传动形式为全液压式 Fully hydraulic drive
YZ热处理装取料机专用代号
Heat Treatment Manipulator

技术优点

1、自动化程度高，可实现手动控制模式、半自动控制模式、全自动模式、示教模式
A high degree of automation, manual operation mode, semi-automatic mode,automatic mode can be realized

3、速度快,效率高，工艺时间恒定
High speed, high efficiency, constant process time



4、刚性强 Strong rigidity

- 设计合理可靠，采用SolidWorks进行优化模拟
- 车体框架、回转底盘等采用整体加工，强度大，刚性好
- 采用客户有较好的体验配置，如YZR电机

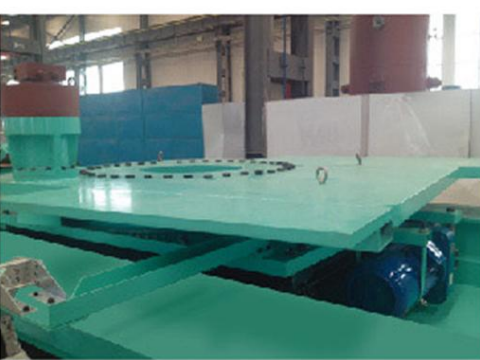
The design is reasonable and reliable, and SolidWorks is used to optimize the simulation. The framework of the body, chassis and so on make with the whole process, strength, good rigidity. Adopt have good experience of customers, such as YZR motor

2、不漏油 No oil leakage

- 进行模拟液压设计合理，采用AMESim对液压系统进行模拟和仿真
- 多项措施保障：
集成化模块
油箱特殊处理
独特的管道焊接工艺
采用精密无缝钢管
独特的管接头
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To simulate the hydraulic design is reasonable.The hydraulic system is simulated and emulated by AMESim.

A number of measures to guarantee:
Integration module
Special treatment tank
Unique pipe welding process
Using precision seamless steel tube
Unique pipe joint



5、安全 Safety

- 互锁功能
- 操作室和控制柜两处急停按钮，方便紧急制动。（可选）
- 手动干预优先功能
- 加装复位按钮，突然断电时可伸入炉内的钳口退出炉门。（可选）

Interlock mode
The operating room and the control cabinet are respectively provided with an emergency stop button. (optional)
Manual intervention priority
Equipped with reset button, when suddenly loses power,It can be further jaw inside the furnace dropped out of the furnace door (optional)

6、舒适 .Comfortable

- 车载空调
- 双层隔热玻璃
- 格拉默隔震座椅
- 液控/电控手柄

Automotive air conditioning
Double insulated glass
Isolation seat
Hydraulic control/electric control handle

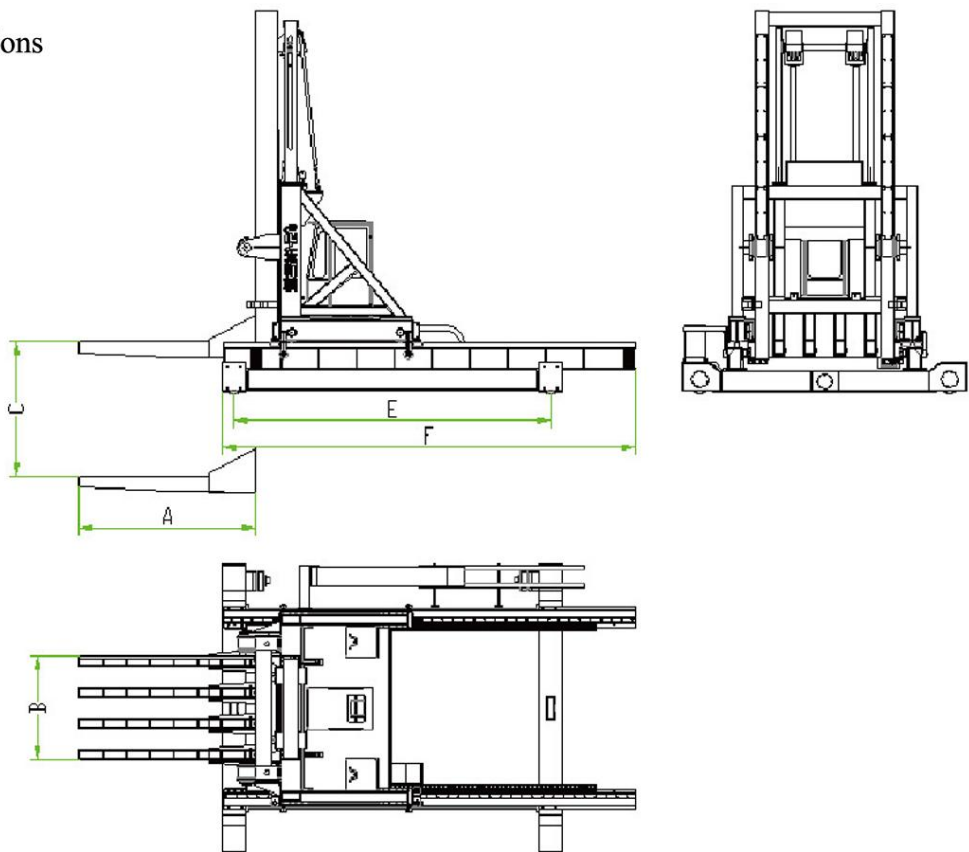
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外形图 Dimensions



参数表 Parameter list

公称载荷 (T)		3T	5T	8T	10T	13T	20T	25T	30T	40T	50T	60T	80T	100T
最大装料有效长度(mm) The maximum loading length	A	3000	3500	3500	3500	4000	4000	5000	5000	5000	5000	7000	7000	8000
最大装料有效宽度(mm) The maximum loading width	B	2000	2500	2500	3000	4000	5000	5000	6000	6000	6000	6000	6000	6000
料叉数量 Fork Number		3	4	5	5	5	6	6	6	7	7	8	8	10
料叉升降行程(mm) Fork lift travel distance	C	200/2800	200/2800	200/2800	200/2800	200/2800	200/2800	300/3500	300/3500	300/4500	300/4500	300/4500	300/4500	300/4500
料叉升降速度(mm/s) Fork lift travel speed		200/500	200/500	200/500	200/500	200/500	200/500	200/500	200/500	200/500	150/450	150/450	150/400	150/400
小车行走速度(mm) Car walking speed		600	600	600	600	400	400	400	400	400	400	300	300	300
大车轨距(mm) Cart track	E	4000	4500	5000	5500	6000	6000	7000	8000	10000	10000	11000	11000	12000
大车长度(mm) Length of the cart	F	4600	5100	5600	6500	7000	7000	8000	9000	11000	11000	12000	12000	13000
大车行走速度(mm/s) Cart walking speed		1000	1000	1000	1000	800	800	800	800	800	800	650	650	650
机器总功率(kw) Machine total power		38	40	55	60	60	78	110	150	200	220	270	330	380
驾驶室位置 Cabin position		左向、右向或中间Left, right, or Center												
供电方式 Power supply mode		滑导线 Sliding wire												
大车轨道 Cart track specification		38kg	43kg	QU80	QU80	QU120	QU120	QU120	QU120	QU120	QU120	QU120	QU120	QU120
工作压力(Mpa) Working pressure		20	20	20	20	20	20	20	20	20	20	20	20	20
液压油冷却方式 Hydraulic oil cooling mode		氟冷机/风冷机/油冷(油温不大于60 °C) Fluorine cooler / air cooler (oil temperature is not greater than 60 °C)												

部分业绩 Part of the performance



平阳重工10T热处理装料机
JiangXi JingHang 5T Heat Treatment Manipulator



罗特艾德25T热处理装料机
PingYang Heavy Industry 10T Heat Treatment Manipulator



徐州布兰肯13T热处理装料机
XuZhou Bradken 13T Heat Treatment Manipulator



江西景航5T热处理装料机
Rothe Erde 25T Heat Treatment Manipulator



北满特钢30T热处理装料机
BeiMan TeGang 30T Heat Treatment Manipulator



芜湖海螺8T热处理装料机
WuXi HongDa 40T Heat Treatment Manipulator