

HUAHENG

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好管必须“管”好



HUAHENG
昆山华恒焊接股份有限公司
HUAHENG WELDING CO., LTD.

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管道智能制造 车间及其工作站

Flexible Pipe
Manufacturing Workshop
and Pipe Prefabrication
Workstations



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企业简介 Brief Introduction

昆山华恒焊接股份有限公司，是中国最早从事焊接自动化装备开发、制造的国家级高新技术企业，是一个在弧焊工艺技术、工业机器人、自动化、智能化装备领域提供一体化解决方案的中国领先者。

企业在昆山、徐州、长沙建有60000m²的生产基地，现有员工800多人，先进、齐全的生产设备、检测仪器300多台套，企业通过中国强制性产品（CCC）认证、质量管理体系（DIN ISO9001）认证、软件成熟度（CMMI-3）认证。企业主导产品-“全位置管焊设备”、“焊接自动化专用设备”、“中厚板钢结构件焊接机器人成套装备”的产销量均居国内之首。先后获得国际发明博览会金奖、江苏省科技进步奖、江苏省优秀新产品金奖、江苏省软件产品金慧奖和江苏省名牌产品等荣誉。

企业在昆山建有16000m²的研发基地，拥有江苏省焊接自动化装备高技术研究重点实验室、江苏省机器人自动化装备工程实验室，企业博士后科研工作站，具有国际先进水平的实验、仪器设备200多台套。先后承担并完成国家863计划、国家重大科技专项、国家火炬计划、国家重点新产品计划等一批国家级的研发项目，拥有71项授权专利（其中发明专利18项）和44项软件著作权，成为中国工业机器人、焊接自动化领域研发的主力军。

企业上海设有国际销售中心，在全国各地设有88家销售、代理和服务网点，为用户就地提供高效、快捷的服务。企业产品已广泛应用于工程机械、航空航天、船舶、海洋工程、轨道交通、能源、化工、核电、军工、医药、轻工、矿山机械等各个领域，并出口美国、欧洲、印度、巴西和东南亚等国家。

HUAHENG Welding CO., Ltd. is one of the first companies in China engaged in automatic welding equipment and welding system integration. HUAHENG is recognized as National Torch Program Enterprise of High and New Technology. Main products of high performance of numerical control orbital welding system, large Plasma, TIG and MIG automation welding system take a very important role in China market.



We have full range of production equipments and inspection equipments, we have CAD/CAM/CAE system, manufacturer and analysis system, CNC machining center, CNC linear cutting machine, CNC lathe, CNC cutting machine, automatic robotic system etc., and formed modern mass production on the scales of R&D, manufacture, service and training basis etc.

At present we obtained 66 patents (including 29 invention patents), 9 software copyrights, 9 high-tech products, and two products won First. We passed the “3C” product Certification and the certification of TUV ISO9001:2000 Management Service.

We have three major categories of products, i.e. All-position numerical control orbital welding equipment; Plasma, TIG and MIG welding system and robotic integration system.





华恒独特焊接工艺— TIG打底

Huaheng's Unique Welding Process – TIG Root Pass

概述

Brief Introduction

管道预制自动TIG打底工艺，是国内唯一在管道预制领域真正实现了单面焊双面成型工艺，达到国际先进水平，组对要求业界最低。

TIG root pass process for pipe prefabrication, the only one which realized one side welding both side forming, which is most advanced requiring less fit up requirements in the industry.



性能特点

Features

TIG打底焊的成功实现，需要满足以下必要条件：
Requirement of TIG welding for root pass:

- TIG的弧长控制技术
AVC function for TIG
- 防止管道在旋转过程中存在的轴向窜动和径向窜动而开发的专利技术产品管钳，是实现TIG打底焊的关键设备
Key mechanism open headstock – solve the radial and axial jumping during the rotation
- 成熟的焊接工艺是必要条件
Mature welding process experience
- 冷加工坡口和专用的坡口机加工的坡口
Cold cut process and professional cut and/or bevel machine for edge preparation
- 最大错边量 $\leq 2\text{mm}$
Misalignment $\leq 2\text{mm}$
- 间隙控制0-3mm，即无间隙组对和留间隙组对
Clearance: 0-3mm (with/without clearance fit-up)

华恒独特焊接工艺二 MAG打底 Huaheng's Unique Welding Process – MAG Root Pass

概述 Brief Introduction

华恒致力于MAG管道打底焊工艺并取得重大突破，解决了0-6mm范围内的间隙的管道对接自动焊接工艺，性能满足各项力学性能检测指标和X射线探伤二级合格，是管道预制的一次重大变革。适用于直管和管件的多种形式的自动对接焊接，特别适合长管以及两端是管件形式的焊接，是目前国际上唯一实现无间隙组对状态下的MIG单面焊双面成型工艺。

Huaheng dedicates to research on automatic MAG root pass welding procedure and get a significant breakthrough, which use automatic welding for fit-up gas within 0-6mm, and past mechanical test and X-ray test level II, which is the important achievement. It is suitable for straight pipe with various fittings connections, especially for long pipe with fitting on both ends.



性能特点 Features

MAG自动打底焊接优势:

Advantage of automatic MAG root pass:

- 焊接质量稳定可靠，焊接重现性100%
Stable welding quality, 100% reproducibility
- 极大限度淡化了工人的操作技能
Minimize worker's skill in welding
- 对管子的边界条件要求不高，管子的工作状况不再是实现自动化的瓶颈
Minimize fit-up preparation requirement
- 错变量和组对间隙要求不再是主要问题，最大间隙量可以控制在0-6mm以内
Unfitness of butt joint and fit-up gap is not a main problem within 0-6mm
- 错边量 ≤ 2mm Misalignment ≤ 2mm

华恒独特最核心创新焊接工艺三 高效热丝 Huaheng's Unique Welding Process – H-TIG (Hot Wire) TIG

概述 Brief Introduction

——高效率 – 高熔敷率 – 高质量 “三高” 管道热丝TIG焊接工艺
High efficiency, High deposition rate, high quality, 3H hot wire TIG pipe welding process

曾几何时，TIG焊接质量，MIG焊接速度仅仅是梦想

Achieve the dream of TIG welding quality with MIG welding speed

无与伦比的高效热丝焊接工艺，解决质量和效率

Unique high performance hot wire TIG process achieve quality and efficiency at the same time

高效热丝TIG焊，管道预制的颠覆性创新

H-TIG, the revolutionary innovation in pipe spool prefabrication application



性能特点 Features

- TIG焊接质量，MIG焊接速度——比传统TIG提升效率5倍以上，堪比MIG焊接速度
TIG welding quality, MIG welding speed--5 times efficiency than normal TIG welding, almost the speed of MIG welding;
- 更高的熔敷效率——从0.3-0.5kg/h (传统冷丝) 提升到2-4kg/h (H-TIG)
Higher deposition--promoted from 0.3-0.5kg/h(normal TIG) to 2-4kg/h (H-TIG)
- 更好的焊接质量——由于脉动送丝、脉冲热丝、叠加高频+尖脉冲等先进工艺方法的应用，达到了熔池搅拌、晶粒细化、熔深增加等效果，实现了质量和效率的提升
Better quality--Use advanced technology like pulse wire feeding, pulse wire heating, superposition HF + peak HF to stir the melting pool, refine the grain, enhance the penetration which promoted the welding quality and efficiency;
- 弧长跟踪——焊接过程无人干预
AVC--Reduce human intervention while welding
- 效率高，碳钢Φ108×10mm，8-10分钟
High efficiency, carbon steel Φ108x10mm, finish in 8-10 min
- 可焊接材料：碳钢、合金钢、不锈钢、镍基合金、铜镍合金、双相不锈钢等
Suitable material: carbon steel, steel alloy, stainless steel, Nickel alloy, copper nickel alloy, duplex steel etc.
- 坡口形式：U型坡口、V型坡口、双V型坡口兼可
Bevel type: U, V, compounding V
- 尤其适合双相不锈钢
Especially suitable for duplex steel

冷切削坡口加工工艺

Cold cutting process for pipe bevel

概述

Brief Introduction

管子在加工过程中，为适应碳钢、不锈钢、合金钢、铸铁等不同材质管子焊接时所需的坡口，现在一般采用车床车削加工或氧割及手轮磨砂磨削加工作业。但是，车床车削加工设备体积庞大、重量大，仅适合在固定场地加工，对大直径的钢管来说，物流及装夹等都很不方便。另外机床加工方式是采用管子旋转进刀机构固定的方式进行，对于长管的坡口加工，尤其不方便。管子坡口机的技术特点是管子夹持不动，刀盘围绕管子旋转进行坡口加工。氧割及手动砂轮磨削加工虽说能在现场加工，但其加工的表面质量差、效率低，后续打磨量非常大，操作环境恶劣，而且被加工工件在受热后金属晶格容易发生变化，相应材质内部质量发生变化，如此引起被加工工件耐温、耐压性能降低。

Traditionally, CNC lathe, gas cutting or manual grinding is used for bevel of different kind material. But the CNC equipment is very heavy and requires large space in fixed field, and it's not easy to convey or clamp the big pipes. And the lathe is rotating the pipe while cutting which is not possible for long pipes. Huaheng's beveling machine is clamp the pipe and fix it, rotate the tool plate to cut the bevel. The gas cutting bevel has a very poor surface condition and lower efficiency, which need a lot of grinding work. The working environment is also very bad. The work piece material might be destroyed by high temperature, or lower down the thermal and pressure resistant performance.

性能特点

Features

创新性冷加工工艺，专为自动化焊接而生：

Innovative cold cut beveling process, born for automatic welding:

● 切断&开坡口一体化切削工艺

Integrated cutting and beveling process

针对中小管径、薄壁 ($\leq 25.4\text{mm}$) 的管子实现优质高效的切断和坡口一体化加工，相当于10台套锯床 + 车床的总体效率， $\Phi 159 \times 20$ 的碳钢管切断 + 开坡口 (两个坡口) 总体时间约为2-3分钟，1个工人替代10个工人。场地的占用 + 工人工资 + 用电损耗一年回收投资成本。综合性能达到国际先进水平。

High quality and high efficiency integrated cutting and beveling process for small and middle diameter, thin wall ($\leq 25.4\text{mm}$) pipes. Which equal to the efficiency of 10 sets of band saw + lathe. Need only 2~3 min for cutting and beveling (two bevels) of $\Phi 159 \times 20$ carbon steel pipe, one worker can replace 10 workers.

The saving of space occupation, labor cost and electricity cost will recover the investment.

● 大管径端面坡口 + 内镗全CNC控制切削工艺

Big diameter edge beveling + counterbore process controlled by CNC program

针对目前国内中大管径、大壁厚存在的椭圆度大的状况，研发具备外坡口 + 内镗工艺的端面坡口，以及提升物流自动化水平，将预置前端工序的坡口质量提升，以及加工周期大幅度缩短，为后续的焊接工序提供优质高效的标准坡口，将管道预置提升到生产线做好准备。结合目前落后的管端坡口加工状况，研发出具有自主知识产权的管端坡口加工生产线，综合性能达到国际先进水平，为管道预置的下料工序提供“颠覆性”创新应用。

Outer bevel and counterbore process for big diameter and heavy wall pipe, improve the automation level, improve the bevel quality, reduce the prepare time which serve better for the coming welding process.



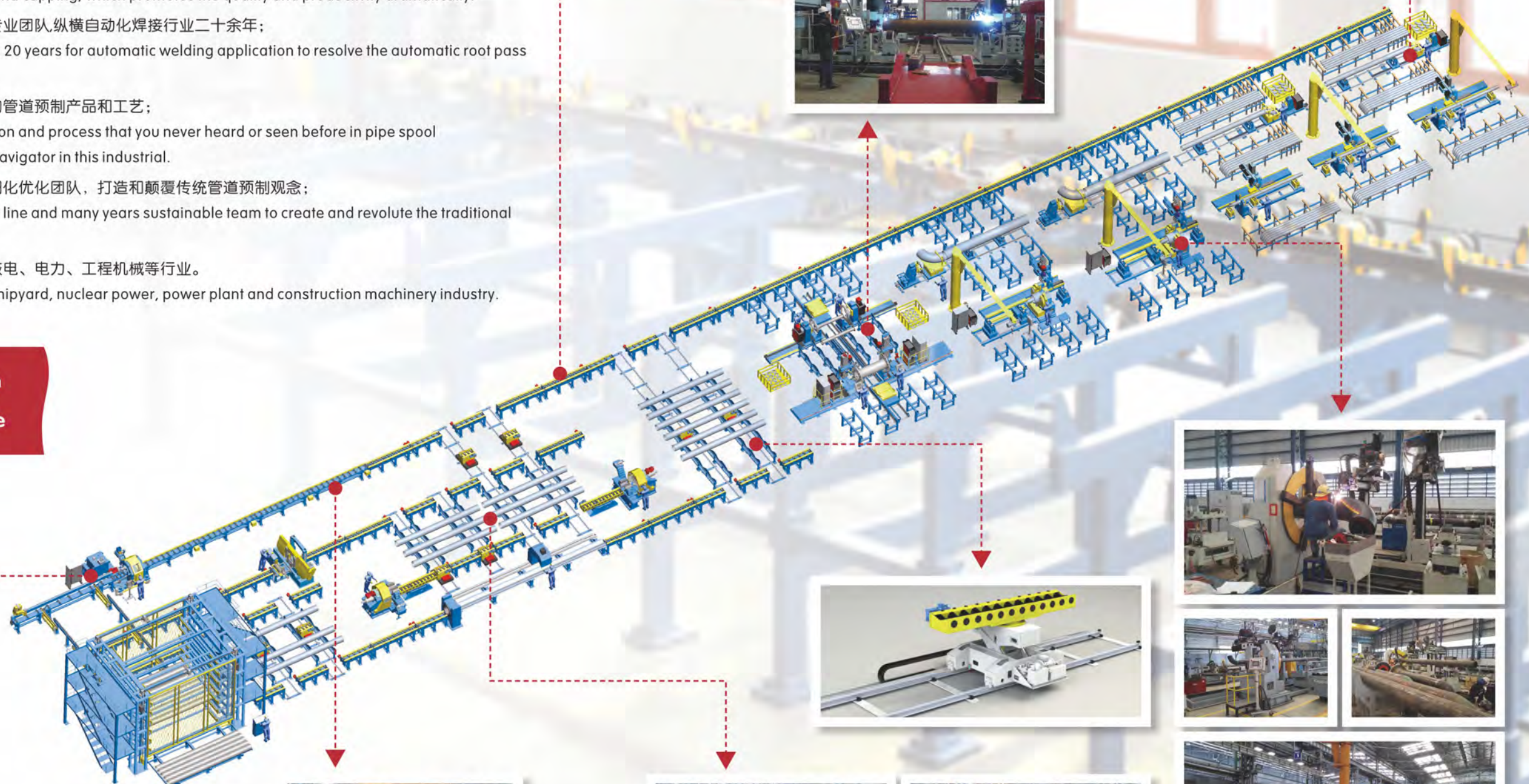
管道智能制造车间及其预制生产线 PIPELINE PREFABRICATION LINE

性能特点 Features

- 该生产线为管道预制行业前瞻性设计规划，可根据用户产能需求量身定制，各工作站之间通过高效的物流系统进行输送链接，减少行车占用排队，实现从管子上料、定长下料开坡口、组对、点焊、自动打底焊、填充盖面的一系列工序，大幅度提高管道预制的质量和效率；
This production line is customized with advanced design. Conveyer system between each station reduced the occupation of overhead crane. The line can achieve pipe automatic loading, length measure, cutting and beveling, fit-up for welding, tack welding, automatic root pass welding, filling and capping, which promotes the quality and productivity dramatically.
- 全球唯一解决自动化管道预制打底焊的资深专业团队纵横自动化焊接行业二十余年；
The professional team experienced more than 20 years for automatic welding application to resolve the automatic root pass in pipe spool prefabrication.
- 多项核心专利技术，让闻所未闻、见所未见的管道预制产品和工艺；
Many key patent technology lead the production and process that you never heard or seen before in pipe spool prefabrication industrial and make them the navigator in this industrial.
- 中国最稳定的生产线控制平台和多年持续精细化优化团队，打造和颠覆传统管道预制观念；
The most stable control platform in production line and many years sustainable team to create and revolute the traditional concept of pipe spool prefabrication.
- 广泛应用于海洋工程、石油、化工、造船、核电、电力、工程机械等行业。
Widely applied in offshore, petrol, chemical, shipyard, nuclear power, power plant and construction machinery industry.

管道智能预制车间 2-24" 2-24" Pipe Spool Prefabrication Line

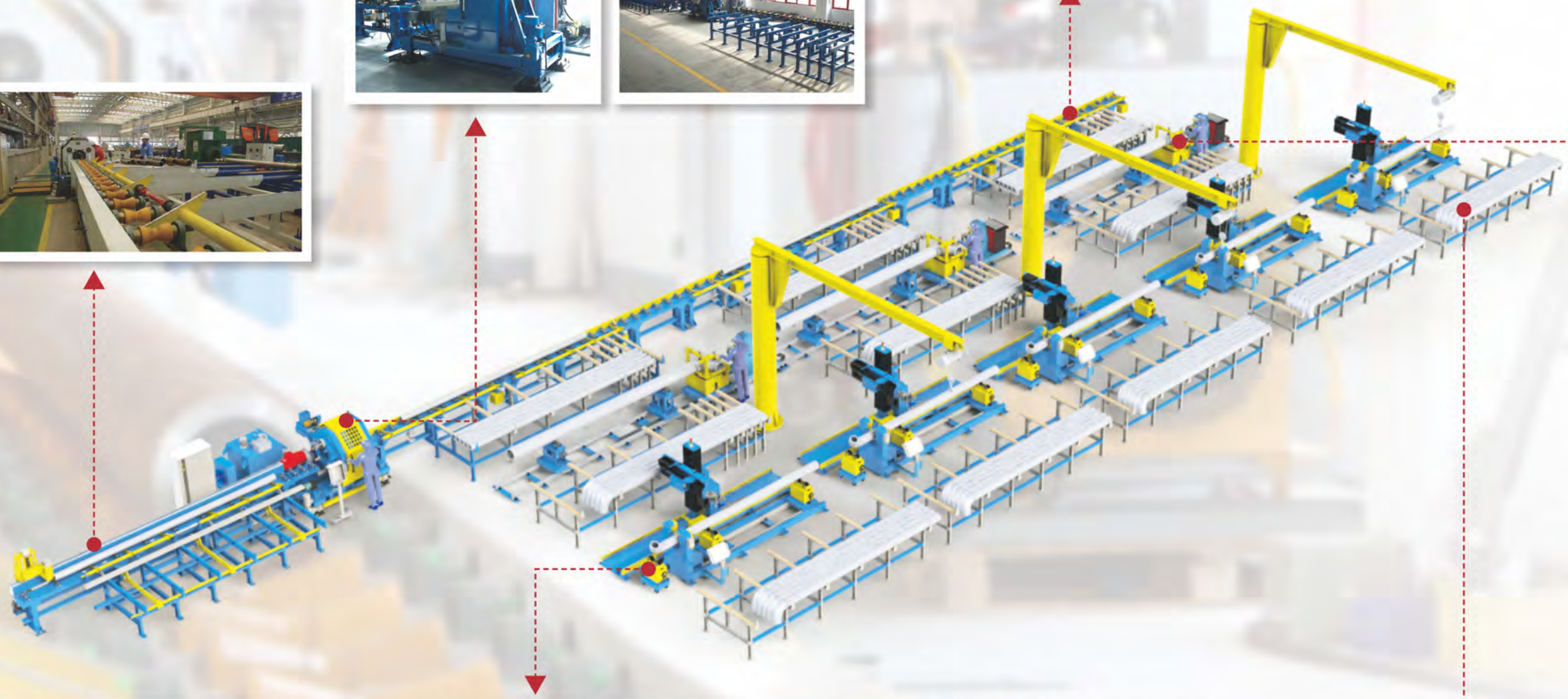
型号/Model: PCBWL-24



管道预制生产线— 2-14寸

2-14" Pipe Spool Prefabrication Line

型号/Model: PCBWL-14



切断坡口一体机管道下料生产线

Integrated Cutting And Beveling Machine Pipe Preparation Line

性能特点

Features

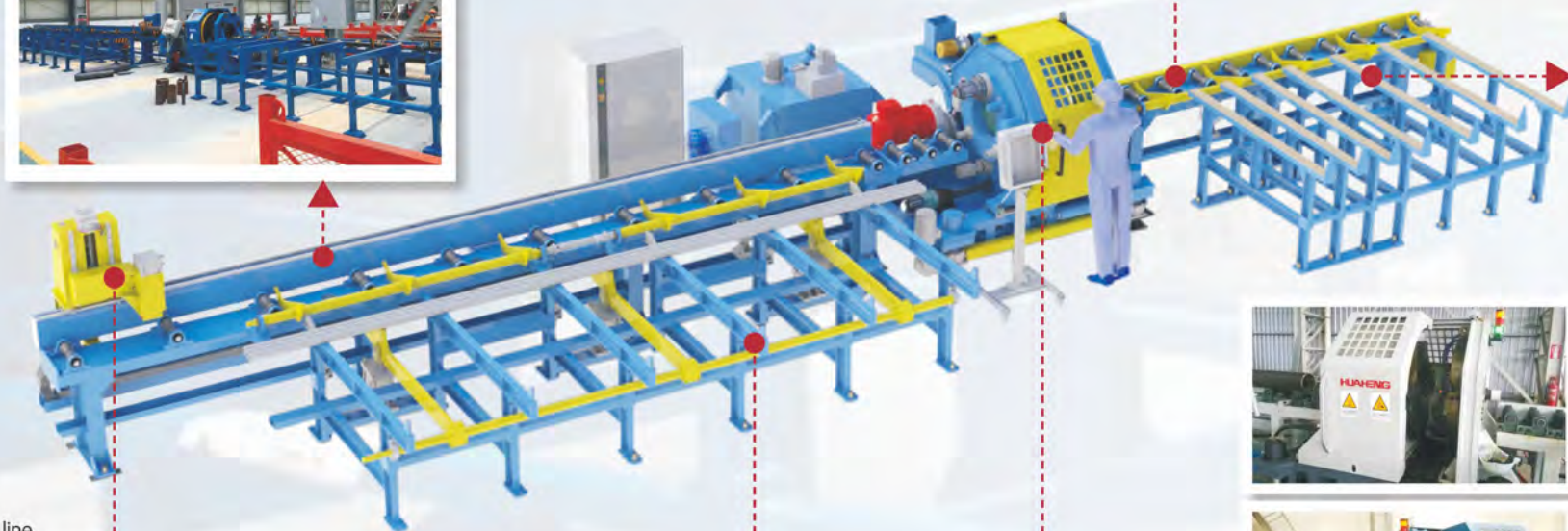
型号/Model: CBL-14, CBL-08

- 多项技术指标达到国际先进水平
Many advanced technique to achieve international standard
- 最厚可达25.4mm，行业第一厚
Reach max. 25.4mm thickness
- 坡口效率：≤2分钟/两道口 (DN200 SCH40)
Beveling Efficiency: ≤2 mins/two cuts(DN200 SCH40)
- 最先进的进刀方式：伺服径向进刀
Advance tool feed: servo radius feeding
- 图形化参数输入的编程方式，摆脱对工人的操作技能需求
Graphic parameter input programing, less requirement on operation skill
- 管子穿入设备内部，自动夹紧管子，管子固定，刀架旋转，一次完成管子切断和两个坡口加工
The pipe go through the machine body, clamped automatically; the tool plate start to rotate, finish two cut and bevels in one time
- 适合材质：碳钢、不锈钢、合金钢等
Suitable material: CS, SS, Alloy steel
- 坡口形式：V型
Bevel type: V bevel
- 适用管径：DN60-300 (Φ60-325mm)
Suitable pipe diameter: DN60-300(Φ60-325mm)
- 厚度：3-25mm
Pipe wall thickness: 3-25mm
- 进刀方式：径向伺服进刀
Tool feeding: Radial servo feeding
- 驱动方式：电机驱动
Driving: electric motor
- 夹紧方式：采用可调式液压卡盘夹紧；卡爪采取4爪
Pipe Clamping: Adjustable pressure hydraulic clamping; 4 chucks pneumatic (hydraulic) clamping
- 控制方式：数控+PLC控制+触摸屏
Controlling: digital + PLC + Touch screen
- 不锈钢切断时，可采取冷却液冷却方式，防止氧化
Prevent oxidize by coolant while cutting stainless steel
- 自动调心：配备自动升降装置，以实现自动调节坡口机中心标高（和输送线配套）
Machine center adjustment: suspension system to adjust the center height according to different pipe diameter(suitable to the conveyer line)
- 可选配物流系统和自动定长输送装置，组成坡口加工生产线
Optional conveyer system and pipe feeding/length measurement system can assembled as production line.

技术参数

Technical Parameters

型号/Model	CBL-08	CBL-14
坡口形式	U, V, 双V, 内锥, 有端面坡口机功能 (选购项)	
Bevel time	U,V, compounding V, counterbore, end beveling function	
刀具数量	最多四把 (行业最多)	
Tool quantity	Max. 4 pcs	
刀片	成品硬质合金刀片	
Tool bit	Hard alloy bit	
刀片寿命	长 (>=50口)	
Tool bit life time	Long(>=50 cuts)	
切削速度	2分钟/2个口 (DN200x12)	
Cutting speed	2 min/2 cut (Dn200x12mm)	
切削厚度	CS 25MM, SS 20mm	CS 25MM, SS 20mm
排屑功能	自动排屑	
Iron chips collection	Automatic	
管径坡口范围	2-8"(Φ60-219mm)	2-14"(Φ60-356mm)
Pipe diameter range		
定长精度	1mm	
出料自动最短长度	600mm (按需设计)	
Automatic unloading length	600mm(customized)	



中厚壁管道坡口精密冷加工自动生产线8-24" Precise Cold Cutting Beveling Production Line For 8-24" Middle And Thick Wall Pipes

型号/Model: CBL-24

技术参数 Technical Parameters

型号Model	CBL-24	CBL-32
坡口形式	U, V, 双V, 内镗, 以及外坡口 + 内镗一体化数控加工	
Bevel time	U, V, compounding V, counterbore	
刀具数量	最多2把 (内镗不需换刀)	
Tool quantity	Max. 2 pcs	
刀片	成品硬质合金刀片	
Tool bit	Hard alloy bit	
刀片寿命	长 (>=50口)	
Tool bit life time	Long(>=50 cuts)	
切削速度	3分钟/口 (DN200x12)	
Cutting speed	3min/cut (Dn200x12mm)	
排屑功能	自动排屑	
Iron chips collection	Automatic	
管径坡口范围	4-24" (Φ108-630mm)	8-32" (Φ219-850mm)
Pipe diameter range		

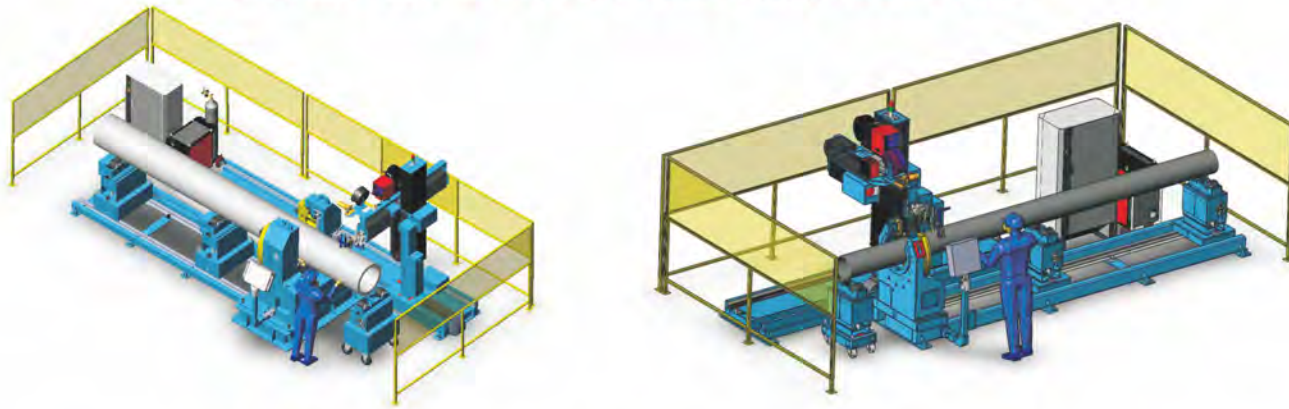


性能特点 Features

- 多项技术指标达到国际先进水平
Many advanced technique to achieve international standard
- 最厚可达100mm, 行业第一厚
Reach max. 100mm thickness
- 坡口效率: ≤5分钟 (DN200 SCH40)
Beveling efficiency: ≤5 min (DN200 SCH40)
- 最先进的全数控三轴专利技术进刀方式: 三轴联动, 轴向 + 径向两轴伺服进刀, 进刀按需调整
Advance tool feed: servo radius feeding, 3 axes synchronized
- 行业内第一家解决外坡口 + 内镗的一体程序化自动数控坡口加工
The first who solved outer bevel and counterbore by CNC
- 图形化参数输入的编程方式, 摆脱对工人的数控编程操作技能需求
Graphic parameter input programing, less requirement on operation skill
- 5轴RGV物流小车的设计 (行走、顶升、回装、滚动、下料) 和物流自动转运
5 Axes transporter achieve pipe automatic conveying
- 可实现U型、双V、V型以及内镗的最先进技术复合坡口一体化数控自动加工方式, 加工过程不换
Achieve U, compounding V and counterbore by CNC, no need to change the tool bit for these kinds of process
- 刚性切削
Rigid cutting

管钳式管道焊接工作站
Open Headstock Pipe Spool Welding Station

型号/Model: KB370T, KB630TMS, KB500TMS...



技术参数
Technical Parameters

控制方式	PLC+触摸屏+线控器集中控制
Control	PLC + touch screen + remote pendent centralized contro
设备型号参数	详见样本管钳介绍 P37
Equipment model parameters	See page 37 for detail parameters

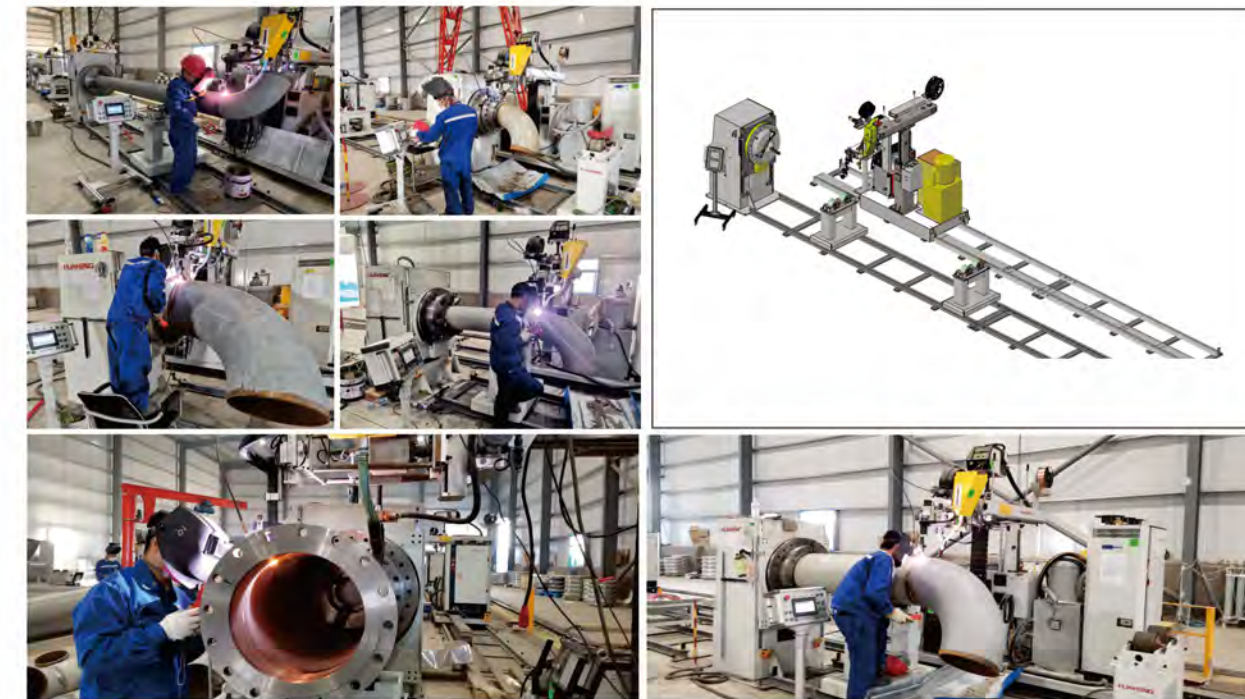
性能特点
Features

- 单套使用或和生产线配套使用
Single station or integrated in the production lines
- 可进行管-管、管-法兰、管-弯头、管-封头、管-三通等多种形式管件的焊接
Suit for welding of pipe-pipe, pipe-flange, pipe-elbow, pipe-dish end, pipe-tee
- 根据不同焊接工艺可对管道进行打底、填充、盖面焊
Able to do root pass, filling, capping according to different welding process
- 多焊接工艺组合，实现高效热丝TIG、冷丝TIG、MAG、SAW、窄间隙TIG/SAW等多功能焊接
Achieve hot wire TIG, cold wire TIG, MAG, SAW, narrow groove TIG/SAW welding
- 操作业界最简单，无经验操作工通过简单培训可快速上岗
Easy operation, simply training
- 焊接效率最快，操作技能最低
Highest welding efficiency, lowest requirement of operation skill
- 最便于上下料（开口式设计让长管吊装更加轻松便捷）
Most convenient for material loading/unloading (open head design for easy handling)

型号/Model: HDV630T, HDV630TM, HDV630TMS

技术参数
Technical Parameters

控制方式:	PLC+触摸屏+线控器集中控制
control:	PLC + touch screen + remote pendent centralized control
设备型号参数:	详见样本头架变位机介绍 P39
Technical specification	See page 39 for detail parameters



性能特点
Features

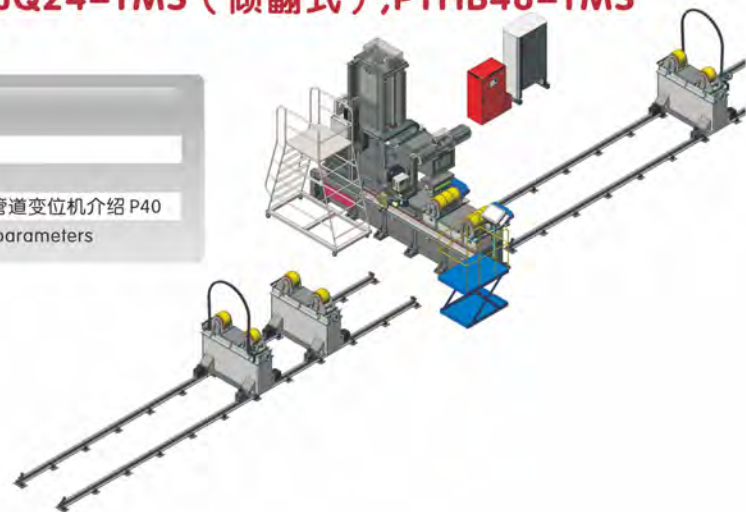
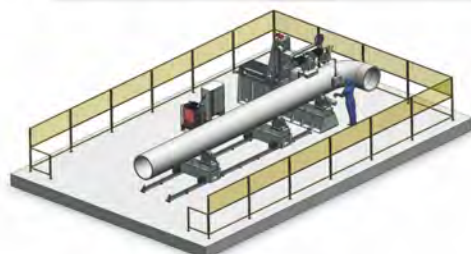
- 单套使用或和生产线配套使用
Use separately or integrated in production line
- 可进行管-管、管-法兰、管-弯头、管-封头、管-三通等多种形式管件的焊接
Used for welding pipe-pipe, pipe-flange, pipe-elbow, pipe-dish end, pipe-tee
- 根据不同焊接工艺可对管道进行打底、填充、盖面焊
Used for root pass, filling, and capping for pipe welding
- 多焊接工艺组合，实现高效热丝TIG、冷丝TIG、MAG、SAW、窄间隙TIG/SAW等多功能焊接
Multiple welding process, achieve hot wire TIG, cold wire TIG, MAG, SAW, narrow space TIG/SAW tec.
- 操作业界最简单，无经验操作工通过简单培训可快速上岗
Easy operation, the unskilled worker can operate with simple training
- 焊接效率最快，操作技能最低
Highest welding efficiency, lowest skill requirement
- 适合于单头焊接
Suit for one end welding
- 性价比相对较好
Better cost performance

压紧式变位机管道焊接工作站 Press Roller Welding Station

型号/Model: PYHB24-TMS, PYJQ24-TMS (倾翻式), PYHB48-TMS

技术参数 Technical Parameters

控制方式 Control	PLC+触摸屏 PLC + Touch Screen
设备型号参数 Equipment model parameters	详见倾翻/固定压紧式管道变位机介绍 P40 See page 40 for detail parameters

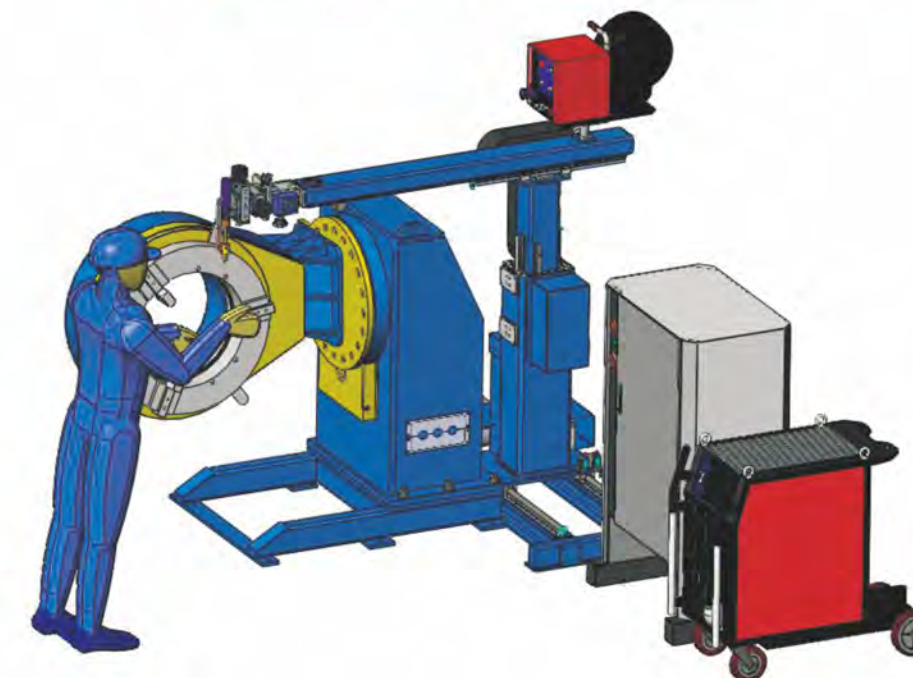


性能特点 Features

- 单套使用或和生产线配套使用
Use separately or integrated in production line
- 可进行管-管、管-法兰、管-弯头、管-封头、管-三通等多种形式管件的焊接
Used for welding pipe-pipe, pipe-flange, pipe-elbow, pipe-dish end, pipe-tee
- 焊接性能一般，常用于角焊缝或管件的填充、盖面焊
Used for fillet welding or pipe filling, capping
- 多焊接工艺组合，实现TIG、MAG、SAW、窄间隙TIG/SAW等多功能焊接。
Multiple welding process, achieve hot wire TIG, cold wire TIG, MAG, SAW, narrow space TIG/SAW tec.
- 操作业界最简单，无经验操作工通过简单培训可快速上岗
Easy operation, the unskilled worker can operate with simple training
- 焊接效率最快，操作技能最低
Highest welding efficiency, lowest skill requirement
- 最便于上下料
Most convenient for material loading/unloading
- 配置简单，价格最低
Simple configuration, lowest cost

中空变位机式管道焊接工作站 Hollow Positioner Pipe Welding Station

型号/Model: ZFB500T、ZFB500TM



技术参数 Technical Parameters

控制方式 Control	PLC+触摸屏+线控器 PLC + touch screen + remote pendent
设备型号参数 Equipment model parameters	详见样本中空倾翻式变位机介绍 P42 See detail parameters on page 42

性能特点 Features

- 单套使用或和生产线配套使用
Use separately or integrated in production line
- 可进行中小管径管-管、管-法兰、管-弯头、管-封头、管-三通等多种形式管件的焊接
Used for welding pipe-pipe, pipe-flange, pipe-elbow, pipe-dish end, pipe-tee
- 焊接性能一般，常用于管法兰角焊缝或管件的打底、填充、盖面焊
Used for fillet welding or pipe root pass, filling, capping
- 多焊接工艺组合，实现TIG、MAG、SAW、窄间隙TIG/SAW等多功能焊接。
Multiple welding process achieve TIG, MAG, SAW, narrow space TIG/SAW welding.
- 操作业界最简单，无经验操作工通过简单培训可快速上岗
Easy operation, the unskilled worker can operate with simple training
- 焊接效率最快，操作技能最低
Highest welding efficiency, lowest skill requirement
- 最便于上下料
Most convenient for material loading/unloading

管件焊接工作站 Pipe Fittings welding station

管件焊接工作站 A Pipe Welding Station Type A 型号/Model: HB500T-A, HB500M-A

技术参数 Technical Parameters

适用管径:	具体根据设计确定
Suitable pipe diameter:	Customized
适用壁厚:	一般2mm以上(具体根据设计确定)
Suitable wall thickness:	2mm or above(customized)
适用材质:	碳钢、不锈钢、合金钢等
Suitable material:	Carbon steel, stainless steel, alloy steel
驱动方式:	交流变频
Driving:	AC variable frequency
系统配置:	变位机 + 气动操作架 + TIG或MAG焊组合
Configuration:	Positioner + pneumatic manipulator + TIG/MAG welding unit



性能特点 Features

- 单套使用或和生产线配套使用
Use separately or integrated in production line
- 可进行短管径, 包括中小管径管-管、管-法兰、管-弯头、管-封头、管-三通等多种形式管件的焊接
Used for welding small and medium diameter pipe-pipe, pipe-flange, pipe-elbow, pipe-dish end, pipe-tee
- 焊接性能一般, 常用于管法兰角焊缝或管件的打底、填充、盖面焊
Used for fillet welding or pipe root pass, filling, capping
- 适合于单枪焊接工艺
Suit for single torch welding process
- 操作业界最简单, 无经验操作工通过简单培训可快速上岗
Easy operation, the unskilled worker can operate with simple training
- 焊接效率最快, 操作技能最低
Highest welding efficiency, lowest skill requirement

管件焊接工作站 B Pipe Welding Station Type B 型号/Model: HB500T-A, HB500TM, HB500TMS

技术参数 Technical Parameters

适用管径:	具体根据设计确定
Suitable pipe diameter:	Customized
适用壁厚:	一般2mm以上(具体根据设计确定)
Suitable wall thickness:	2mm or above(customized)
适用材质:	碳钢、不锈钢、合金钢等
Suitable material:	Carbon steel, stainless steel, alloy steel
驱动方式:	交流变频
Drive:	AC variable frequency
系统配置:	变位机 + 气动操作架 + TIG或MAG焊组合
Configuration:	Positioner + pneumatic manipulator + TIG/MAG welding unit



性能特点 Features

- 单套使用或和生产线配套使用
Use separately or integrated in production line
- 可进行短管径, 包括中小管径管-管、管-法兰、管-弯头、管-封头、管-三通等多种形式管件的焊接
Used for short mall and medium pipe-pipe, pipe-flange, pipe-elbow, pipe-dish end, pipe-tee welding.
- 焊接性能一般, 常用于管法兰角焊缝或管件的打底、填充、盖面焊
Used for fillet welding or pipe root pass, filling, capping
- 适合于单枪焊接工艺
Suit for single torch welding process
- 操作业界最简单, 无经验操作工通过简单培训可快速上岗
Easy operation, the unskilled worker can operate with simple training
- 焊接效率最快, 操作技能最低
Highest welding efficiency, lowest skill requirement



集装箱式移动坡口加工管道工作站

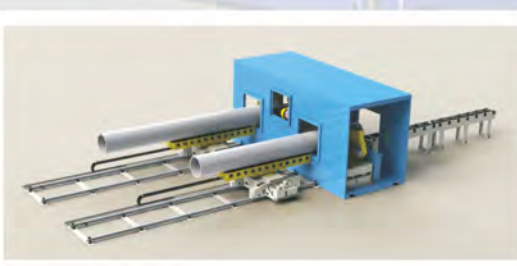
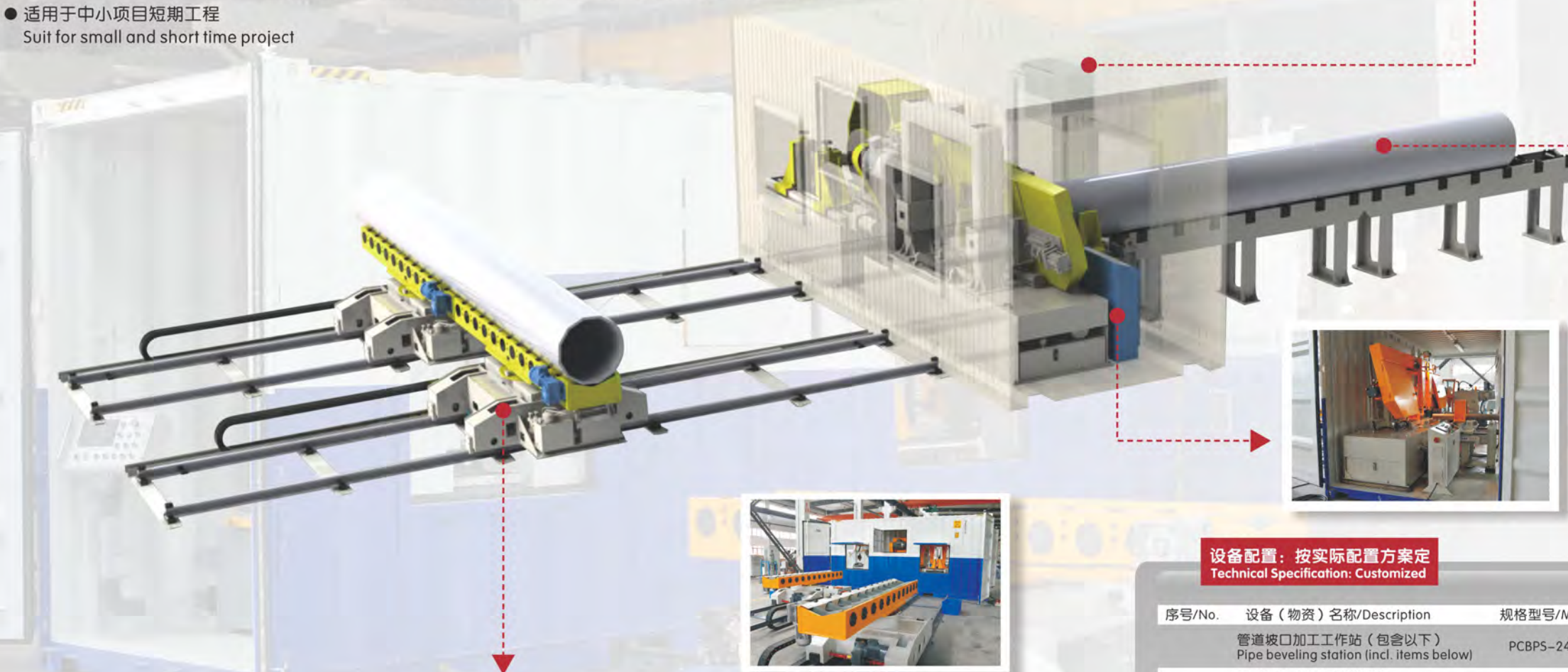
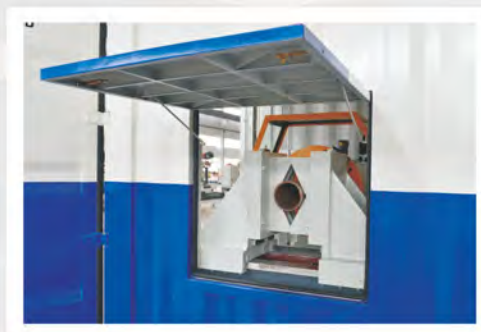
Container-design Pipe Cut/bevel Preparation Work Station

型号/Model: PCBPS-24

性能特点

Features

- 将设备安装固定到集装箱中组成管道预制移动工作站，适合于中小型短期工程
The equipment were installed in moveable container, suit for small and short time project
- 基本配置：切断坡口加工工作站+简单物流运输系统+集装箱
Configuration: Pipe cutting and beveling station + simply conveyer system + container
- 生产效率：较高（在工地现场可以进行小流水线的预制）
Productivity: high (can do small prefabrication line onsite)
- 现场设备安装性能：好（主要设备、吊具及动力配电在集装箱中安装固定好，物流现场摆放）
Onsite installation performance: good (main equipment are installed in container, conveyer line install onsite)
- 适用于中小项目短期工程
Suit for small and short time project



设备配置：按实际配置方案定

Technical Specification: Customized

序号/No.	设备（物资）名称/Description	规格型号/Model	单位/Unit	数量/Qty	备注/Remarks
	管道坡口加工工作站（包含以下） Pipe beveling station (incl. items below)	PCBPS-24	套 Set	1	管子切断、坡口用 For Pipe cutting and beveling
1	管道数控定长大切带锯床 Digital control length measurement system with band saw cutting machine	CMBS-24	台 Pc	1	数控定长、卧式双柱 Digital measure, horizontal double column
2	管道数控端面坡口机 CNC edge beveling machine	PCEBM-24	台 Pc	1	径向轴向数控进刀 CNC radius and axial tool feeding
3	特制改造集装箱 Customized container	6058x2438x2896mm	个 Pc	1	改造电气系统、照明及通风系统 Reform the electric, lighting and air ventilation system
4	带锯床进料物流运输系统 Convey system for band saw machine	PFS-24	套 Set	1	配带锯床上料用 For pipe loading to band saw machine
5	带锯床轨道小车输送系统 Transporter for band saw machine	PRGV-24A	套 Set	1	配带锯床下料用 For pipe unloading from band saw machine
6	坡口机轨道小车输送系统 Transporter for edge beveling machine	PRGV-24B	套 set	1	配坡口机用 For edge beveling machine

直管法兰四点焊接工作站 Straight Pipe-flange Four Heads Welding Station

型号/Model: PF4H-24M, PF2H-8M

技术参数 Technical Parameters

适用管径:	具体根据设计确定
Suitable pipe diameter:	Customized
适用壁厚:	一般6mm以上, 长度2-6m (具体根据设计确定)
Suitable wall thickness:	6mm or above(Customized)
适用材质:	碳钢、等
Suitable material:	Carbon steel, alloy steel
驱动方式:	交流变频
Drive:	AC variable frequency



性能特点 Features

- 单套使用或和生产线配套使用
Use separately or integrated in production line
- 可进行管-法兰的焊接
Used for pipe-flange welding.
- 适合于四枪焊接工艺
Suit for 4 torch welding process
- 操作业界最简单, 无经验操作工通过简单培训可快速上岗
Easy operation, the unskilled worker can operate with simple training
- 焊接效率最快, 操作技能最低
Highest welding efficiency, lowest skill requirement

集装箱式移动管道焊接工作站 Container-design Pipe Spool Welding Work Station

型号/Model: PCWS-24

性能特点 Features

- 将焊接设备安装固定到集装箱中组成管道预制移动工作站, 适合于中小型短期工程
The welding equipment were installed in moveable container, suit for small and short time project
- 基本配置: 管道焊接工作站+简单物流输送系统+集装箱
Configuration: Pipe welding station + pipe conveyer line + Pipe supporter + special container
- 生产效率: 较高 (在工地现场可以进行小流水线的预制)
Productivity: high (can do small prefabrication line onsite)
- 现场设备安装性能: 好 (主要设备、吊具及动力配电在集装箱中安装固定好, 物流现场摆放)
Onsite installation performance: good (main equipment are installed in container, conveyer line install onsite)
- 适用于中小项目短期工程
Suit for small and short time project

设备配置: 按实际配置方案定 Technical Specification: Customized

序号/No.	设备(物资)名称/Description	规格型号/Model	单位/Unit	数量/Qty	备注/Remarks
	管道焊接工作站 (包含以下) Pipe spool welding station (incl. items below)	PCWS-24	套 set	1	管子-管件对接焊接 Pipe to fittings butt joint connection welding
1-1	压紧式变位机式管道焊接工作站 Press rollers pipe spool welding station	PQYJ24-TMS	台 set	1	适合于2-24" 管径 Suit for 2-24" diameter pipe
1-2	管钳式管道焊接工作站 Open head stock welding station	KB370TM	套 set	1	适合于2-14" 管径 Suit for 2-14" diameter pipe
2	特制改造集装箱 Customized container	6058x2438x2896mm	个 pc	1	改造电气系统、照明及通风系统 Reform the electric, lighting and air ventilation system



管道数控相贯线切割机 CNC Profile Cutting System

型号/Model: CPCS-X(2-6)-P/F



技术参数 Technical Parameters

序号/No.	项目/Description	单位/Unit	参数/Parameters
1	控制轴数/Control axis		2-6轴/2-6 Axes
2	切割外径/Cutting diameter	mm	50-1500
3	切割长度/Cutting length	mm	2000-18000
4	切割厚度/Cutting thickness	mm	5-60
5	最大载重/Payload	KG	8000
6	割炬组数/Cutting torch	set	1组等离子火焰互换/ 1 set of plasma/oxyfuel torch switching
7	切割速度/Cutting speed	Mm/min	80-2500
8	空行速度/Idling speed	Mm/min	0-10000
9	切割方式/Cutting method		等离子、火焰/Plasma, oxyfuel
10	切割坡口/Beveling type		V/Y ± 45° (等离子/plasma) ± 60° (火焰/Oxyfuel)
11	坡口规范/Bevel specification		美国AWS/定角/变角/ AWS/ fixed-angle/variable-angle

性能特点 Features

- 切割方式：火焰切割或等离子切割
Cutting method: oxyfuel or plasma
- 对钢管和有色金属管子的结合处相贯线孔、相贯线端部、弯头（虾米节）进行自动计算和切割的设备
Automatic program and cutting of hole, pipe end and elbow profile cutting
- 适合于端面坡口的下料加工
Suit for edge beveling preparation process
- 广泛运用于建筑、化工、造船、工程机械、冶金、电力、海工等行业的管道结构件的切割机
Widely used for pipe fitting cutting in construction, chemical, shipyard, construction machinery, metallurgy, power plant, offshore industry
- 数控相贯线切割机能十分方便的切割加工此类工件，无需操作计算、编程，只需输入管道相贯系统的管子的相贯线、相贯线孔及焊接坡口
Easy to cut these kind, no need for calculating or programming, just input the intersection line, hole and bevel requirement

管道物流 PIPE CONVEYER SYSTEM

定长输送系统 Length Measurement Conveyor System

型号/Model: LMC-08, LMC-14, LMC-24



技术参数 Technical Parameters

型号/Model	LMC-08	LMC-14	LMC-24
原材料管径范围 pipe diameter	2" - 8"	2" - 14"	8" - 24"
原材料管子重量 Raw pipe weight	3000KG	3000KG	7000KG
原材料管子长度 Raw pipe length	3000-12000mm	3000-12000mm	3000-12000mm
定位控制方式 Measuring control	交流伺服电机 AC servo motor	交流伺服电机 AC servo motor	交流伺服电机 AC servo motor
管子定长精度 Length measure accuracy	± 1mm	± 1mm	± 1mm
定长系统小车行走速度 Pipe feeder speed	≤15000mm/min	≤15000mm/min	≤15000mm/min

性能特点 Features

- 切断坡口一体机或高速带锯床等根据需求配此系统，进行自动定长切割，可减轻劳动强度并减少工人
Can integrate cutting and beveling machine or high speed band saw cutting machine as per request to achieve automatic length measurement and cutting, decrease labor intensity and reduce labor quantity
- 精度高，采用电动夹紧工件，伺服驱动传输
High accuracy, motorized clamping, servo driving
- 系统稳定，采用PLC控制
System is stable and controlled by PLC
- 操作方便，触摸屏傻瓜式设置操作
Easy to operate on touch screen

锯床/坡口机出料物流系统 Pipe Unloading Conveyor For Band Saw Or Beveling

型号/Model: PUC-14, PUC-24

概述 Brief Introduction

为了管子在管子下料、开坡口生产过程中减少吊装及搬运，方便操作，配此系统，此系统可减轻劳动强度，提高生产效率。

This system is used to reduce the handling and transition time while cutting & beveling, decrease the labor intensity and promote the efficiency.



技术参数 Technical Parameters

型号/Model	PUC-14	PUC-24
适合管径范围 Pipe diameter	2" ~ 14"	8" ~ 24"
承载管子重量 Payload	3000KG	7000KG
输送方式 Driving	电动或手动 Motorized or manual	电动或手动 Motorized or manual
输送速度 Conveying speed	≤15000mm/min(motorized)	≤15000mm/min(motorized)
输送方式 Conveying type	辊道输送 Roller line	辊道输送 Roller line
最短输送管 Min. convey length	1000mm 或按要求定制 1000mm or customized	1000mm 或按要求定制 1000mm or customized

备注：具体可咨询相关人员
Notice: Contact us for more information



性能特点 Features

- 配套锯床或坡口机出料端使用，可实现管子自动下料，减轻劳动强度并减少工人
Configured at the end of the band saw machine to achieve automatic pipe unloading and decrease labor intensity.
- 减少行车占用时间
Reduce occupying time of the crane
- 和生产线集成配套使用
Used together with the production line
- 输送稳定，采用PLC集中控制
Stable conveying, PLC centralized control
- 操作方便，触摸屏傻瓜式设置操作
Easy operation on touch screen

纵/横向物流输送小车 Transporter

型号/Model: PRGV-24A, PRGV-24B

概述 Brief Introduction

为了管子在管子下料、开坡口生产过程中减少吊装及搬运，方便操作，配此系统，此系统可减轻劳动强度，提高生产效率。不同功能的小车具备升降、回转、行走、输送等功能。

This system is used to reduce the handling and transition time while cutting & beveling, decrease the labor intensity and promote the efficiency. Different transporter with function of lifting, rotation, traveling and conveying etc.

技术参数 Technical Parameters

型号/Model	PRGV-24A	PRGV-24B	PRGV-24C
适合管径范围 Suitable pipe diameter	2" ~ 24" (Φ57mm-Φ630mm)	2" ~ 24" (Φ57mm-Φ630mm)	2" ~ 24" (Φ57mm-Φ630mm)
承载管子重量Payload	5000KG	5000KG	5000KG
输送方式 Convey type	小车电动行走+托架辊道输送 Motorized travel + roller line conveying	小车电动行走+托架辊道输送 Motorized travel + roller line conveying	小车电动行走+托架辊道手动输送 Motorized travel + roller line manual conveying
传送长度/Transfer length	500 - 6000mm	500 - 6000mm	500 - 6000mm
小车升降方式/Lifting	---	液压/电动Hydraulic/motorized	液压/电动Hydraulic/motorized
升降行程/Movements itinerary	---	400mm	---
小车旋转最大速度 Max. rotation speed	0.73r/min	0.73r/min	---
小车上输送轮最大转速 Max. rotation speed of rollers	13.5/min	13.5/min	---
V型滚轮材质 V roller material	碳钢+聚氨酯 Carbon steel + PU	碳钢+聚氨酯 Carbon steel + PU	碳钢+聚氨酯 Carbon steel + PU
小车行走速度/ travel speed	14000mm/min	14000mm/min	14000mm/min
小车旋转角度/rotation angle	-5° -185°	-5° -185°	---
轨道形式 Rail type	22 # 7.5m轻轨+板条 22 # 7.5m rail + rack	22 # 7.5m轻轨+板条 22 # 7.5m rail + rack	22 # 7.5m轻轨+板条 22 # 7.5m rail + rack
控制方式/ Control	Wireless pendent	Wireless pendent	Wireless pendent
承载重量/Payload	5T	5T	5T
长×宽×高 (mm) LxWxH (mm)	3000 × 2300 × 940	3000 × 2300 × 940	600 × 2300 × 850



性能特点 Features

- 主要和管道预制生产线配套使用，在生产线导轨上行走输送工件，以提升其物流效率
Used together with the pipe spool pre-fabrication line to convey the pipes and promote the conveying efficiency
- 行走灵活、效率高
Flexible and efficient
- 可实现升降、回转、行走、输送等功能，智能化程度高
Can lift the work piece, high intelligent

三轴全数控端面坡口机
3-axis CNC Edge Beveling Machine

型号1/Model 1: PCEBM-24
型号2/Model 2: EBM-24

技术参数
Technical Parameters

技术指标 Item	适用管径 Suitable Dia.	数控进刀 Tool Feeding	坡口实现方式 Beveling Process	刀具轨迹 Tool Path	编程界面 Program Interface	调速方式 Speed Adjust	是否刚性切削 Rigid Cutting	提高对夹紧重复性机构 Alignment Mechanism
PCEBM-24 DN60-600		全数控 Fully digital control	1把刀实现不同坡口 1 bit for different bevel	编程连续走刀, 一键切削 Programmed continue feeding	图形化+参数化 Graphic+parameterization	变频+齿轮调速 Inverter+ gear box	是/Yes	齿轮齿条对中, 高重复性 Gear + linear gear, high repeatability
EBM-24 DN100-600		半数控 Semi digital control	多把刀实现不同坡口 Multiple bits for different bevel	手动多次进刀 Manual multiple feeding	图形化+参数化, 品种少 Graphic+parameterization	齿轮箱调速 Gear box	否/No	正反牙丝杆对中, 低重复性 Screw bar, low repeatability
EBM-16 DN30-400		按钮控制 Press button control	多把刀实现不同坡口 Multiple bits for different bevel	手动多次进刀 Manual multiple feeding	无编程 No program	齿轮箱调速 Gear box	否/No	正反牙丝杆对中, 低重复性 Screw bar, low repeatability



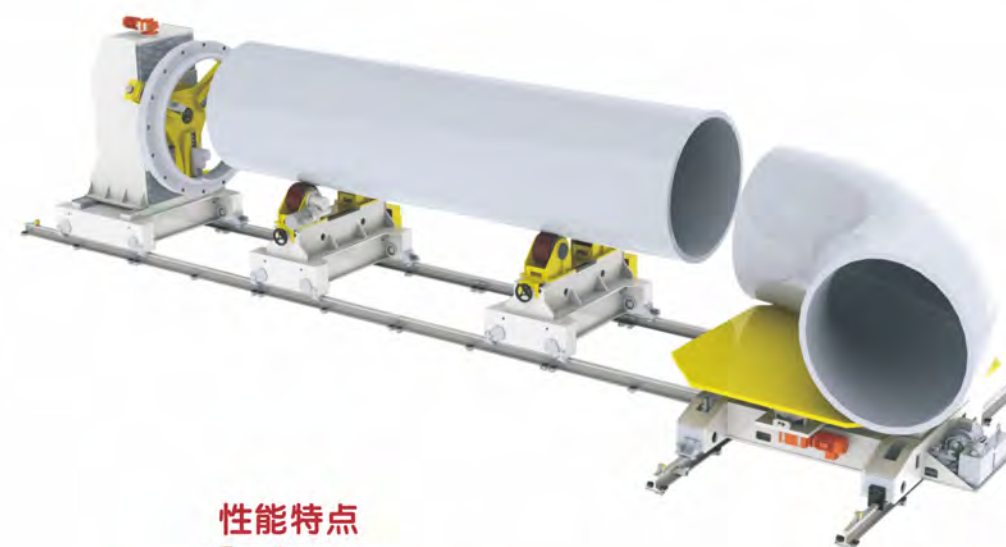
性能特点
Features

- 适用壁厚: Suitable wall thickness: 5-90mm
- 适用材质: 碳钢、合金钢、不锈钢、低温钢、双相不锈钢
Suitable material: carbon steel, steel alloy, stainless steel, low temperature steel, duplex steel
- 坡口型式: U、X、V、双V型; bevel type: U, X, V, compounding V
- 外坡口+内镗一体化数控加工 (PCEBM-24)
Integrated bevel and inner bore(PCEBM-24)
- 坡口角度: 0-45° 可调; Bevel angle: 0~45° adjustable
- 进刀方式: 径向自动差动进刀或轴向数控电动进刀
Tool feed in: radial differential feed or axial motorized feed
- 退刀方式: 径向自动电动退刀或轴向数控电动退刀
Tool feed out: radial differential feed or axial motorized feed
- 驱动方式: 采用电机+减速机驱动
Driving: electrical motor and reducer
- 主轴转速/Rotation speed: 0-133r/min stepless adjust/无级变频调速 (EBM-24); 0-156r/min (PCEBM-24)
- 轴向位移/Axial stroke: 150mm (主轴/main spindle), 300 mm (机头/headstock)
- 横向位移/Horizontal stroke: ±100mm
- 控制系统/Control system: PLC控制, 7寸彩色触摸屏, 人机对话模式; PLC, 7" touch screen, HMI

多功能管道快速组对机

Pipe Multifunctional fit-up machine

型号/Model:
PFU14, PFU24, PFU60



性能特点

Features

- 实现了直管与法兰、弯头、三通快速组对和手工点焊
Achieve fast fit-up of straight pipe to flange, elbow and Tee
- 提高了直管与各类管件组对的效率和质量
Improve the efficiency and quality of the fit-up
- 降低了组对工人的劳动强度，降低了组对工人的技能要求
Reduce the working intensity and skill requirement
- 可根据用户需求实现单头组对和双头组对
1-end or 2-end fit-up configuration for customer's requirement

技术参数

Technical Parameters

规格 Item	适用管径 Suitable dia.	托架数量 Supporter	法兰工装 For Flange	管件工装 For Fittings	承载 Payload
PFU-14	2-14"	2	上下手动/Manual lift/down 前后手动/Manual FWD/BWD 左右行走手动/Manual left/right 夹紧手动/Manual clamp	升降手动/Manual lift/down 左右行走手动/Manual left/right 回装手动/Manual rotate	3T
PFU-24	8-24"	2	上下电动/Motorized lift/down 前后手动/Manual FWD/BWD 左右行走电动/Motorized left/right 夹紧手动/Manual clamp	升降电动/Manual lift/down 左右行走电动/Motorized left/right 回装手动/Manual rotate 前后微调手动/Manual FWD/BWD fine adjust	5T
PFU-60	26-60"	2	上下电动/motorized lift/down 前后电动/motorized FWD/BWD 左右行走电动/motorized left/right 夹紧电动/motorized clamp	升降电动/manual lift/down 左右行走电动/motorized left/right 回装电动/motorized rotate 前后微调电动/motorized FWD/BWD fine adjust	8T

管道系列焊接工装 – 管钳

Welding Station Structural Component: Open Headstock

概述

Brief Introduction

管道系列工装主要用于管-管、管-法兰、管-弯头、管-三通等多种形式的管子焊接，采用具有专利技术的开口式管钳，实现管子、管件的自动定心、电动（手动）夹紧，并且稳定旋转，配备弧压监控等控制手段，实现管道预制的打底、填充、盖面的自动化焊接。

Pipe welding station is used for welding pipe to pipe, pipe to flange, pipe to elbow, pipe to tee etc. It could realize the pipe automatic centering, motorized (manual) clamping, and It could be used for automatic root pass, fill/cap pass with arc voltage control (AVC) monitoring.. It could use for fill/cap pass controller (AVC) monitor and so on.



技术参数

Technical Parameters

型号 Model	KB230	KB370	KB500	KB630	KB760
最大旋转速度 Max. rotation speed(rpm)	3.7	4.3	3.5	2	2.26
最大驱动扭矩 Max. torque(N/m)	2500	2900	7000	20000	20000
管径范围 Diameter(mm)	Φ34-Φ230	Φ60-Φ370	Φ168-Φ500	Φ219-Φ630	Φ219-Φ760
承载能力 Payload(KG)	550	1300	3000	5000	5000
电动功率 Power(KW)	1.3	1.3	3.0	4.4	4.4
中心高 Center height(mm)	600	780	950	1190	1280
外形尺寸(长x宽x高) Dimension(LxWxH)(mm)	550x440x830	774x500x1135	1000x630x1420	1750x1200x1945	2100x1090x2140
夹紧方式 Clamping	电动/Motorized	电动/Motorized	电动/Motorized	电动/Motorized	手动/Manual

性能特点

Features

- 专利技术产品
Patent technology
- 有效解决管子轴向窜动问题
Avoid axial jumping during the rotation
- 有效解决管子径向窜动问题
Avoid radial jumping during the rotation
- 开口式设计让长管吊装更加轻松便捷
Easy load and unload by open design
- 电动三爪夹紧，自动定心，降低了工人的劳动强度
Motorized three-jaw
- 交流伺服电机夹紧 + 驱动，调速范围大，动态反应快，精度高
AC servo motor driven, wide speed adjustment range, quick response, high accuracy
- 齿轮/链轮传动，传动效率高，承载能力大，能适应恶劣工况
Gear/Chain transmission for high efficiency

头架变位机 Headstock-Tailstock

型号/Model: HDV1000, HDV2500, HDV5000

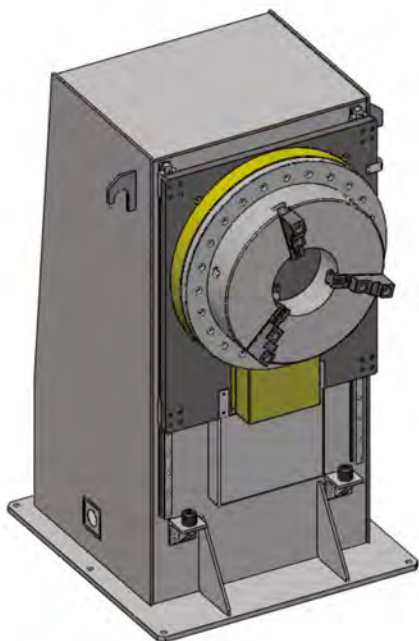
概述 Brief Introduction

头架变位机工装主要用于管-管、管-法兰、管-弯头、管-三通、管-锥形管等多种形
式管子焊接时的夹持和旋转，其可和托架、操作机等配合进行管件的焊接。

The headstock positioner mainly used for clamping and rotation of pipe-pipe, pipe-
flange, pipe-elbow, pipe-tee, pipe to reducer etc, which can work together with
supporter and column&boom to do welding job.

性能特点 Features

机器人外围标准模块，旋转平稳可靠、精度高
Standard extend modular for robotic system, stable rotation, high accuracy

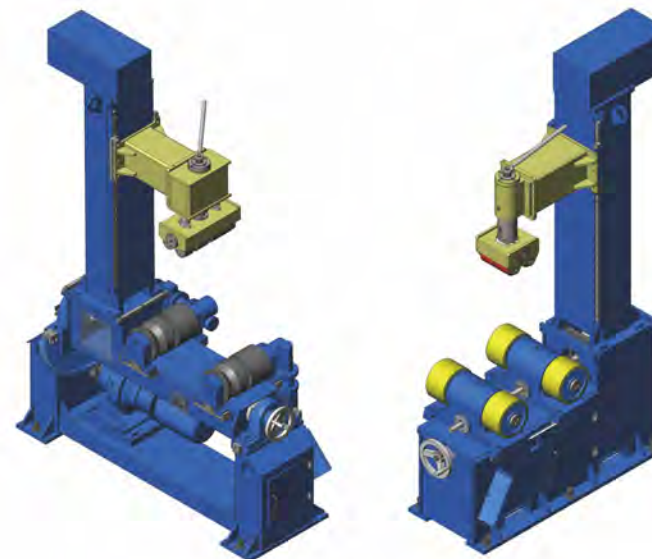


技术参数 Technical Parameters

型号/Model	HDV1000	HDV2500	HDV5000
承载能力/Payload	1000kg	2500kg	5000kg
驱动方式/Driving	交流伺服/交流变频/AC servo/AC inverter		
管件范围/Diameter	按需求定/Customized		
旋转范围/Rotation angle	n X ± 360°		
旋转速度/Rotation speed	根据实际定/According to different pipe		

倾翻/固定压紧式管道变位机 Tilting/fixed Press Roller Pipe Positioner

型号/Model: PQYJ24, PYHB24



技术参数 Technical Parameters

型号/Model	PQYJ24(倾翻式tilting)	PYHB24(固定式fixed)
适用范围/Suitable dia.	2"-24"(Φ60-610mm)	2"-24"(Φ60-610mm)
托辊线速度/Roller liner speed	76mm/min-760mm/min	76mm/min-760mm/min
压辊升降速度/Roller lifting speed	1100mm/min	1100mm/min
最大承载/Max. payload	5000kg	5000kg
倾翻角度/Tilting angle	± 60°	0°
转摆速度/Turn swing speed	0.42r/Min	0

注：其他管件范围请咨询相关人员。
Note: contact us if you need equipment for other diameter pipe.

性能特点 Features

压紧式管道变位机是一种管与管、直管与法兰、直管与弯头等形式管件的焊接工装。其主要有两个托
辊和一个压辊组成，两个托辊带动力驱动，压辊为从动辊，压辊的高度采用丝杆螺母副电动升降粗
调，并在压辊处配置一个手摇丝杆螺母副进行夹紧。其可以和托架、操作机等配合，形成整套焊接系
统。可根据需要选择倾翻PQYJ24和不倾翻PYHB24两种规格。

This positioner is a mechanism for welding of pipe-pipe, pipe-flange, pipe-elbow. It main consists of
two support rollers(driven) and one press roller(idle). The height of the press roller is adjusted by
motorized screw bar and nut and tighten by manual nut pairs. It can be integrated with pipe supporter
or column&boom to form a welding system.

倾翻式管道变位机 Tilting Pipe Positioner

性能特点 Features

倾翻式管道变位机主要用于管-管、直管-法兰、直管-弯头等形式管件的简单焊接/切割。其结构紧凑，操作简单。广泛应用于海工、船厂、石油化工、压力容器、冶金、电力、金属结构等行业。

This positioner is mainly used for simple welding/cutting of pipe-pipe, pipe-flange, pipe-elbow. It's compact and ease operated. Widely used in industrial like offshore, shipyard, chemical refinery, pressure vessel, metallurgy, power plant and metal structure etc.



技术参数 Technical Parameters

型号/Model	FB500	FB1000	FB3000	FB5000	FB10000
承载能力/Payload(kg)	500	1000	3000	5000	10000
翻转速度(rpm)/Tilting speed	0.6	1	0.2	0.2	0.2
回转调速方式/Speed adjustment	交流变频调速/伺服调速/AC inverter/servo				
翻转角度(°)/Tilting angle	电动/Motorized 0-135		电动/Motorized 0-130		
工作台直径(mm)/Rotation plate dia.	Φ800	Φ900	Φ1300	Φ1600	Φ1800
最大偏心距(mm)/Max. eccentricity	150	150	200	200	200
最大重心距(mm)/Max. distance of gravity	200	200	300	300	400
回转电机功率(kw)/Rotation motor power	0.37	0.75	1.5	2.2	3
翻转电机功率(kw)/Tilting motor power	0.37	0.75	1.5	2.2	4

注：以上参数为配交流变频电机参数，伺服电机需咨询相关人员。
Note: The parameters above is for AC inverter motor, contact us if you need servo motor driving.

中空倾翻式变位机 Hollow Tilting Positioner

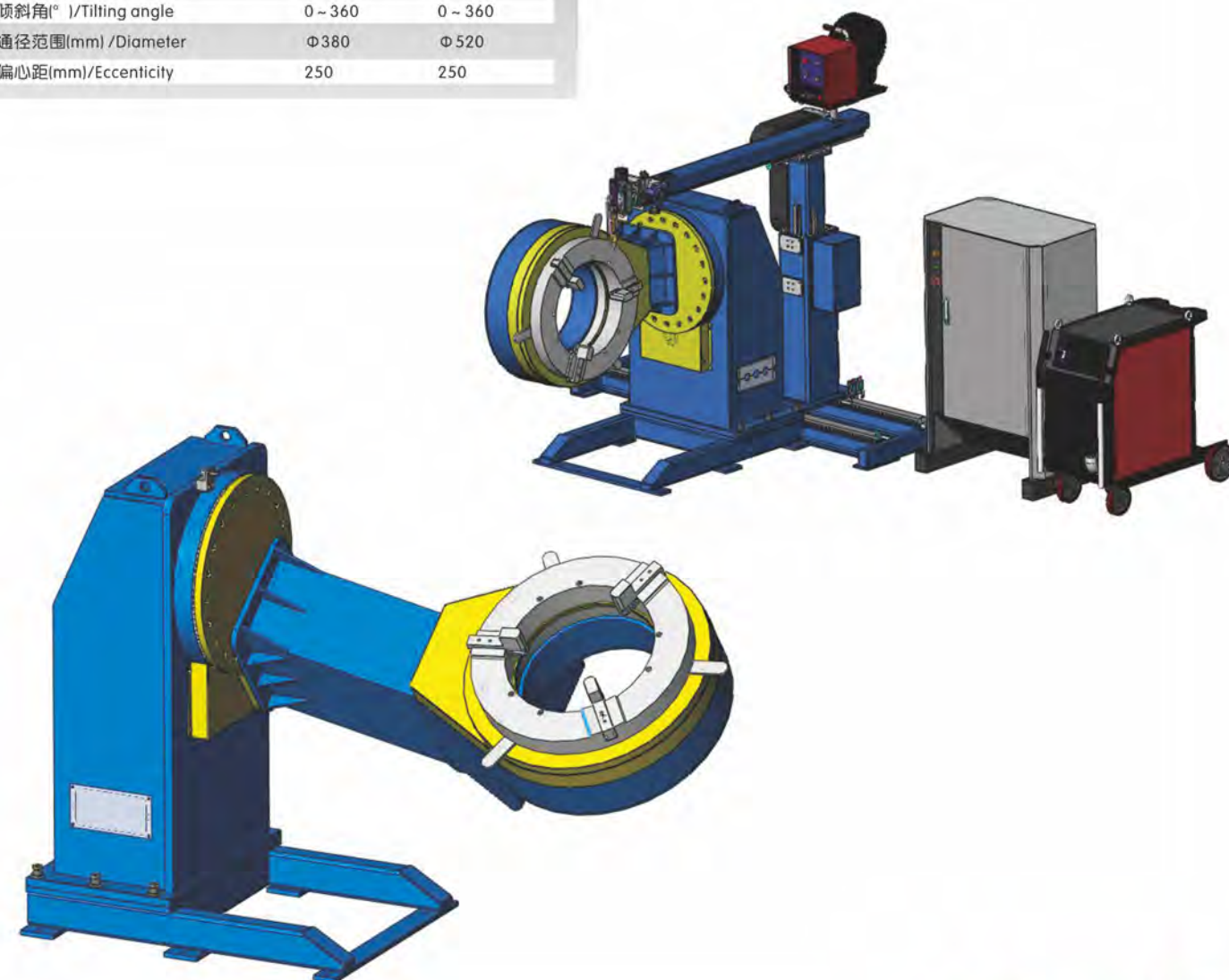
性能特点 Features

中空式管道变位机是根据管道焊接特点特殊设计，通过两轴回转动作将工件置于任何方便施焊位置的工艺装备，主要解决形状复杂工件（管道-法兰、管-封头、管-三通等管道预制部件）的装配、焊接等，可明显提高工作效率，特别是用于管道打底、填充盖面上。

This positioner is designed for complicated shape of pipe welding (pipe-flange, pipe-dish ends, pipe-tee), which can get a best welding position by the rotation of 2 axes. It can raise the working efficiency obviously in pipe root pass, filling and capping.

技术参数 Technical Parameters

规格型号/Model	ZFB500	ZFB1000
工作载荷(KG)/Payload	500	1000
回转速度(rpm)/Rotation speed	0.2~2	0.2~2
翻转速度(rpm)/Tilting speed	0.39	0.39
倾斜角(°)/Tilting angle	0~360	0~360
通径范围(mm)/Diameter	Φ380	Φ520
偏心距(mm)/Eccentricity	250	250



焊接操作架 Welding Manipulator

● 管道自动焊接操作架 (A型) Automatic pipe welding manipulator(type A)

性能特点 Features

- 操作方便、小巧灵活、方便搬运
Easy operation, compact and flexible, easy to handle
- 手动移动, 移动锁紧固定
Manual move with fix lock
- 三轴气动分控锁紧控制
3 Axes control by pneumatic separately

技术参数 Technical Parameters

型号/Model	TPF03
锁紧动力/Locking power	气动/Pneumatic
水平移动距离/Horizontal stroke	1500mm
上下移动距离/Vertical stroke	1000mm
前后移动距离/FWD-BWD stroke	450mm
可焊管距离底面最小距离 Min. distance from work piece to ground	600mm



型号/Model: TPF03

● 管道自动焊接操作架 (B型) Automatic pipe welding manipulator(type B)

性能特点 Features

- 三轴电动移动, 操作方便
3-axis motorized motion, operation convenience
- 升降采用伸缩臂形式, 简洁
Suspension arm structure

技术参数 Technical Parameters

型号/Model	PCZ-01
立柱上下移动有效行程 Column up/down stroke	550mm
立柱上下移动移动速度 Column up/down speed	2300mm/min
横梁前后移动距离 Beam FWD/BWD stroke	800mm
横梁前后移动速度 Beam FWD/BWD speed	2300mm/min
底座水平移动有效行程 Base horizontal stroke	按实际需求定 Customized as per request
机头载重/Pay load	50KG



型号/Model: GDCZ-B

● 管道自动操作架 (C型) Automatic pipe welding manipulator(type C)

技术参数 Technical Parameters

型号/Model	PCZ-C1	PCZ-C2
上下有效行程 Lift/down stroke	1100mm	1500mm
前后有效行程 Fwd/bwd stroke	800mm	1200mm
底座行程 Base stroke	根据实际需求 Customerised	根据实际需求定 Customerised
底座移动速度 Base move speed	2000mm/min	2000mm/min
机头载重 Beam end pay load	80KG	80KG



性能特点 Features

- 三轴电动移动, 操作方便
3-axis motorized driving
- 直线导轨导向, 运行平稳
Linear guide ensure stable moving
- 定位准确、经久耐用
Accurate and durable
- 带焊枪角度倾翻、回装
Torch angle adjustment and rotation function

管子托架 Pipe Supporter



技术参数 Technical Parameters

型号/Model	PTJ-A1	PTJ-A2	PTJ-B1	PTJ-B2	PTJ-C
适用管径 Diameter	2-14"	2-14"	6-30"	2-24"	6-30"
承载 Payload	1T	1T	3T	3T	3T
托架升降方式 Lifting	手动 Manual	手动 Manual	手动 Manual	手动 Manual	电动 Motorized
托架升降行程 Lift stroke	280mm	280mm	300mm	300mm	300mm
适用材质 Material	碳钢、不锈钢、合金钢等 Carbon Steel, Stainless Steel, Alloy Steel				
移动方式 Moving	地面四轮手动 Ground wheel, manual	导轨上手动 Guide rail, manual	地面四轮手动 Ground wheel, manual	导轨上手动 Guide rail, manual	导轨上手动 Guide rail, manual

性能特点 Features

- 带钢尺刻度中心高调节精准方便
Steel ruler accurate indicate the height adjustment
- 在地面或导轨上可灵活移动
Flexible moving on the ground or guide rail
- 承载稳定、安全、可靠，升降机+双柱导向
Stable support, safe, reliable, double column guide
- 非铁质轮，防止碳污染和不圆管的硬摩擦
Non-iron rollers, prevent carbon pollution and friction of elliptical pipes

高速带锯床 High Speed Band Saw

型号1: HBS-24

Model 1: HBS-24

型号2: 数控定长切割带锯床CMBS-24

Model 2: Digital control length measurement band saw CMBS-24



技术参数 Technical Parameters

输入电压/Power input	380V 50Hz	切割方式/Cutting method	锯条切断、水冷却/Blade sawing, water cooling
额定功率/Rating power	11.5kw	最大承重/Max. payload	5000kg
液压电机功率/Hydraulic motor power	1.5kw	锯带涨紧/Blade extension	液压涨紧/放松/Hydraulic
主电机功率/Main motor power	7.5kw	锯带速度/Sawing speed	17-85m/min
冷却电机/Cooling motor	0.125kw	设备重量/Weight	约3900kg
控制方式/Controlling	PLC+ touch screen	锯条尺寸/Blade dimension	6980mm x 41mm x 1.3 mm

性能特点 Features

- 适用材质: 碳钢、合金钢、低温钢、不锈钢、双相不锈钢
Suitable material: carbon steel, steel alloy, low temperature steel, stainless steel, duplex steel
- 结构型式: 卧式龙门双立柱、双油缸
Structure: horizontal type with 2 columns gantry, double oil cylinder
- 夹紧系统: 自动液压双边对中夹紧，二对夹钳前后分布锯床
Clamping: Automatic self-aligned hydraulic clamping
- 具有自动夹紧、自动进给、断带自动停机等功能
Automatic clamping, automatic feeding, emergency stop while blade broken
- 锯切速度、进给速度，在给定的范围内无级可调
Stepless adjustable speed of cutting and blade feeding
- 切削刀具采用薄片双金属带锯条，切口窄，耗材少，所需动力小，是一种具有显著节材又节能的高效切割设备
Metal thin wall saw blade, which achieve narrow cut notch, less material wasting, less power consuming.
- 适用管径: DN50-600 (Φ57-630mm)
Suitable pipe diameter: DN50-600 (Φ57-630mm)
- 适用壁厚: 5-90mm
Suitable wall thickness: 5-90mm
- 可选用光栅尺数控定长 (CMBS-24)
Optional grating length measuring function(CMBS-24)

钨极磨削机

Tungsten Electrode Grinding Machine



性能特点 Features

- 设计新颖，结构简单，操作方便
Innovate design, simply construct, convenient to operate
- 具有长度切断功能和锥体磨削功能
With cutting and grinding function
- 钨极长短和磨削角度均有刻度值指示
Electrode length and angle indicated by scale

技术参数 Technical Parameters

型号/Model	WHM05
可加工钨丝直径/Suitable tungsten diameter	Φ1.0mm-Φ5.0mm
可调节斜度范围/Suitable angle range	0° -90°
可磨削长度范围/Grinding length	25-150mm
可切断长度范围/Cutting length	20-60mm
长×宽×高 L×W×H	165×395×330mm
转速 (r/min) /Rotation speed	2800
额定电压/Rated voltage	220v
重量/Weight	11kg



高频发生器 High Frequency Device



性能特点 Features

- 提高TIG起弧成功率
Promote the TIG arc ignition success rate

三维送丝支架 3d Wire Feeding Bracket

性能特点 Features

- 安装简单，调整方便
Easy installation, convenient to adjust

技术参数 Technical Parameters

型号/Model	HWT5C
送丝角度调整方向 Feeding angle adjustment	角度大小可在X/Y/Z三个方向调整 Can be adjusted at X/Y/Z 3 direction
适合焊枪 Suitable welding torch	直柄TIG枪或等离子焊枪 Straight handle TIG or PAW torch



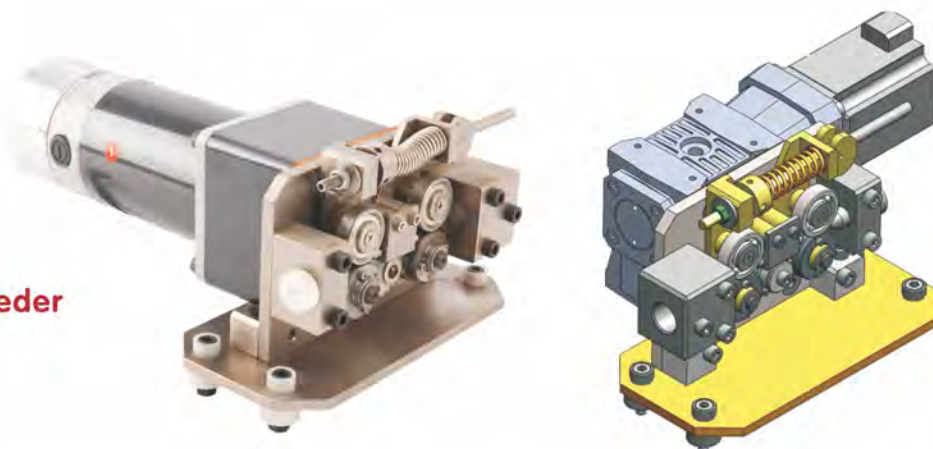
送丝机 Wire Feeder

- TIG自动送丝机
Automatic TIG wire feeder

技术参数

Technical Parameters

型号Model	HWT4	
送丝直径 Wire diameter	Φ0.8、Φ1.0、Φ1.2 (标配)、Φ1.6	Φ0.8、Φ1.0、Φ1.2 (标配)、Φ1.6
驱动方式 Driving	直流电机+四轮驱动 DC motor + 4 wheels drive	伺服电机+四轮驱动 Servo motor + 4 wheels drive
送丝速度 Wire feeding speed	200-2000mm/min	300-7800mm/min



自动TIG焊枪 Automatic Tig Torch

性能特点 Features

- 水冷枪体结构设计，焊枪暂载率高，500A，60%；
Water cooling structure design, high duty cycle 500A, 60%
- 可根据系统配套要求，选择枪体的长度为270/380/500mm三种规格；
Torch length is optional to choose 270mm/380mm/500mm
- 可采用网筛式气体分流结构，焊接保护效果好，焊枪喷嘴有：12、6、19mm口径选择；
Gas flow divider to ensure better protection; optional nozzle: Φ 6mm/ Φ 12mm/ Φ 19mm
- 钨极安装和调整方便；
Easy to install and adjust tungsten electrode
- 可选钨极直径2.4/3.2/4.0/4.8mm，长度150/175mm；
Optional electrode diameter: Φ 2.4mm/ Φ 3.2mm/ Φ 4.0mm/ Φ 4.8mm; length: 150/175mm
- 焊枪电缆长度为1500mm，适合于各类系统的配套或单独购置；
Torch cable is 1500mm, suitable for various systems
- 焊枪暂载率高，在混合气体或纯氩气状态下，MG501为500A 60%，MG501S为500A 100%；
High duty cycle, in mixed gas or argon state, MG501 torch duty cycle is 500A 60%, MG501S duty cycle is 500A 100%
- 枪体和保护喷嘴均得到良好冷却，焊枪使用寿命长，易损件消耗少；
Torch and protection nozzle are saved by cooling system to make torch with a long using time, and decrease the consumption of parts.
- 可适应焊丝规格为0.8/1.0/1.2/1.6，焊丝材料为碳钢，不锈钢，铝合金等。
Suitable to wire diameters: Φ 0.8mm/ Φ 1.0mm/ Φ 1.2mm/ Φ 1.6mm; suitable to material as carbon steel, stainless steel, and aluminum alloy



自动双水冷MIG焊枪 Duel Water Cooling MIG Torch

性能特点 Features

- 暂载率：500A，60%；
Duty cycle: 500A 60%
- 欧式接口；
Continental interfaces
- 双水冷，喷嘴带水冷。
Dual water cooling with cooling in nozzle



电动十字滑架 Motorized Slider

性能特点 Features

- TIG/PAW焊接过程中的弧长和摆动执行机构；
AVC and OSC execute structure to TIG/PAW
- 滑架的有效调节行程为60mm；
Step motor to ensure stable motion, adjustable stroke: 60mm
- 滑架选用铝合金外壳和精密直线导轨和丝杆组合，重量轻，运动稳定可靠，精度高；
Carriage use aluminum alloy shell and precision linear guide and screw combination, light weight, stable and reliable, high precision;
- 滑架的有效运行速度范围：高度（弧长）为：0-700mm/min，宽度（左右）为：150-1500mm/min（标准），300-3000mm/min（快速）；
Effective speed: AVC, 0-700mm; OSC, 150-1500mm/min, 300-3000mm/min
- 适合于MIG/MAG焊接工艺时的焊枪摆动和焊枪高度调节。
Suitable for torch oscillation and torch height adjustment during welding process



自动焊接控制器 Welding Control Center

性能特点 Features

- 控制模式采用PLC或工业PC机；
Optional to choose PLC control model
- 系统控制柜具有安装和维护方便，通风散热防尘效果好，移动灵活等特点；
Easy to install and maintenance, good thermal diffusivity and dustproof design
- 系统可扩展能力强，可根据实际需要进行功能增加和升级，不需要更换主机部件；
Extendable and easy to upgrade without changing mainframe device
- 可对焊枪运动速度、工件运动速度、焊接电流/电压、弧压、摆动速度的参数存储进行过程控制；
Control function: torch motion speed, work piece motion speed, welding current/voltage, arc voltage, and oscillation speed etc.
- 根据操作要求，操作部分可选择移动式控制盒或悬挂式控制盒的形式，相关的操作功能均安装在操作盒上，方便操作者的使用。
Optional to use moveable remote control or hanging control box to easy control and achieve all functions.

