



郑州华萦化纤科技有限责任公司
ZHENGZHOU HUAYING CHEMICAL FIBER SCIENCE AND TECHNOLOGY CO.,LTD

化纤长丝纺丝设备

CHEMICAL FIBER FILAMENT SPINNING EQUIPMENT



郑州华萦化纤科技有限责任公司

地址：河南省郑州市南环路290号
邮编：450053
电话：0371-63589358 63586313 63585599
传真：0371-63589358
网址：www.zzfj.com

Add: No.290 Nanyang Road, Zhengzhou, Henan, China
P.C.: 450053
Tel: (0086371) 63585927 63586499
Fax: (0086371) 63586234
Web: www.zzfj.com

郑州华萦化纤科技有限责任公司 公司简介

荣誉资质 郑州华萦化纤科技有限责任公司

公司简介 Brief Introduction

郑州华萦化纤科技有限责任公司，是恒天重工股份有限公司控股的子公司。华萦公司具有长丝成套设备研发制造十多年的经验，目前有POY、FDY系列纺丝机、高速卷绕头、热辊等产品，可以为客户提供POY、FDY的成套设备，适用于涤纶、锦纶、丙纶等化纤产品。

创新优势

恒天重工股份有限公司是华萦公司的技术后盾。华萦公司拥有高级专业研究开发人员多人，同时与国内外多家知名大学及科研院所、知名专家开展广泛的合作，不断推出新的适应不同品种的长丝生产方案。公司一直致力于化纤长丝装备的发展，不断开发出适应市场需求的新产品，在市场上保持技术领先。

加工实力

华萦公司共享恒天重工股份有限公司的所有资源，其加工基地拥有多种多样的、具备世界一流水平的机加工及检测设备。加工设备精良、体系齐全，各类设备达2700余台。华萦公司本身也拥有多台进口的精密专用设备以及卷绕头装配生产线。

品质保障

华萦公司具有现代企业制度，以及先进、严格的管理机制和质量控制体系，公司以科技创新为动力，不断增强自己的核心竞争力。

华萦公司竭诚欢迎您惠顾洽谈。

As a subsidiary of CHTC, Huaying has more than ten year's experience in developing and manufacturing, and also has many experts including Germany, Japan, Taiwan expert for researching and developing. HTI has developed POY, FDY series spinning machine, high speed winder, hot roller and etc. Now it can supply whole set of POY, FDY equipment for PET, Nylon or PP and other chemical fiber product.

Innovation advantages
CHTC Hi-tech Heavy Industry Co., Ltd. is the technology support of Huaying Company, which has many senior professional research personnel and cooperates with famous universities and research institutes. Huaying Company continuously puts new kinds of filament production solution into the market.

Processing strength
As the machining base of Huaying Company, CHTC Hi-tech Heavy Industry Co., Ltd. possesses multiple kinds of advanced processing tools and testing devices over 2700 sets, as well as the different laboratory system. Huaying Company also has its own special precision mechanism and winder assembling production line.

Quality Guarantee
Huaying Company already has the modern enterprise system, as well as the advanced & strict management and quality system. It takes the science & technology innovation as the motive to improve its own core competition.

Sincerely welcome you to visit and negotiate us.

荣誉资质 Honors



协同 创新 卓越
——是我们永远不懈的追求

Cooperation, innovation and super excellence are our unremitting pursuit.

郑州华萦化纤科技有限责任公司

ZHENGZHOU HUAYING CHEMICAL FIBER SCIENCE AND TECHNOLOGY CO.,LTD

董事长：周一飞

总经理：刘玉强

President: Mr Zhou Yi-Fei

General Manager: Mr Liu-Yu Qiang

先进的装备 Advanced equipment

三坐标测量仪
Three coordinates measuring machine



陶瓷喷涂机器人
Spray-ceramic Robot



卧式加工中心
Horizontal Processing center



小装流水线
Assemble Line



高速平衡机
High speed balancing machine



高精度内圆磨床
High precision internal grinder

03

卷绕头 Winder

华菱公司始终坚持以设计制造高性价比的卷绕头为客户创造最高利润为宗旨。产品共分为ZWT系列凸轮滑槽式卷绕头和ZWB系列双转旋翼式卷绕头，可纺涤纶和锦纶的POY、FDY以及工业丝。

华菱公司提供高水准的多种组合、灵活运用，长丝纺丝卷绕系统，以致力于提高用户的盈利能力。

主要特点:

上位机系统: 采用友好的人机界面，具有参数下载、故障报警、产量统计等功能。

多段精密卷绕: 采用具有自主知识产权的分段式精密卷绕，丝饼成型良好，消除了带状丝，提高了丝饼的解舒性，丝饼过尾率高，接近或达到国外同类的水平。

压丝辊: 采用主动式压辊设计，压辊运转时与卡盘轴精确同步，减少了CR对尾丝及丝层的摩擦损伤，提高了丝的品质及退绕过尾率，尤其适合细旦/多孔丝的生产，减少了断头、毛丝等不良品的发生率。

切换: 采用伺服系统控制卷绕切换，大大提高了卷绕切换的平稳性和可靠性，同时伺服电机可以正反转，能有效的解决满卷切换过位等重大事故，在切换中冲击较小，尤其适用于长锭轴。

Huaying always adheres to the tenet of designing and manufacturing cost-effective winders to help the customers achieve maximum profits. Products can be divided into ZWT series traverse cam winders and ZWB series winder with Bi-rotary for spinning POY,FDY and industrial yarn.

Huaying winders are committed to providing high level of application flexibility.

Main features:

upper management computer: Friendly man-machine interface, with the function of data download, malfunction alarm, output statistics and etc.

Step precision winding: CHTC researched and developed the step precision winding, which reducing the yarn stacking and getting the better package shape. The tail yarn transfer rate reaches to 95% which is the advantages for the next processing.

Contact roller: Contact roller equipped with individual motor to ensure synchronization with the BH when running. It is flexible contact with BH to reduce the damages for the bottom yarn when string up and change over. This design increase the bottom yarn transfer rate and guarantee the best quality of the production. Reducing the yarn break and pile yarn. This design is much helpful for producing micro yarn or multi filament production.

Switching Mode: adopting servo control system, which owns high steadiness and reliability. The servo motor can be rotated forward and reversal, avoiding serious accidents such as wrong switch after full package.



04

ZWT 系列卷绕头

ZWT winder

ZWT系列卷绕头是华菱公司最具代表性的卷绕头之一。具有高可靠性、高生产效率等特点，采用凸轮滑槽式横动装置，能满足长锭轴、大卷装的需求。

ZWT series winder is the most representative product in Huaying company. Using the cam traverse system, there are high speed, high efficiency and high reliability property.



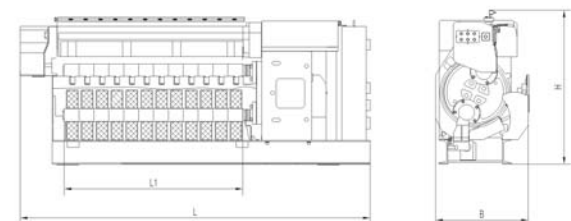
主要技术规格 Main Specification:

卷绕速度 Winding speed	锭轴长度 Shank length	纸管规格 Tube dimension	卷装直径 Package	卷装容积 (dm³) / 锭程 (mm) Volume/dm³ / Stroke length (mm)							
m/min	mm	mm	mm								

用户生产线 Production Line



05



ZWB卷绕头参数 Parameters

L	L1	B	H
mm	mm	mm	mm
2640	1200	778	1400
2820	1380	778	1400
2940	1500	778	1400
3225	1680	778	1400
3390	1800	778	1400

06

ZWB系列卷绕头

ZWB winder

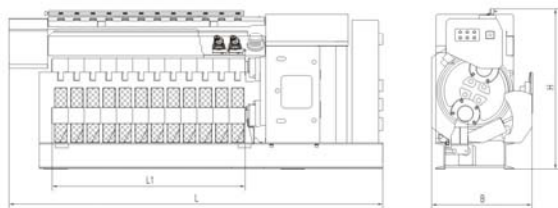
ZWB 系列卷绕头是华菱公司开发的双转鼓式卷绕头，具有可靠性高，生产效率高特点，采用双转鼓式横动装置，能满足长锭轴，高速、多丝饼的需要。

ZWB series winder is the high-tech product in Huaying company. Using the birotor system, there are high speed, high efficiency and high reliability property.



主要技术规格 Main Specification:

卷绕速度 Winding speed	锭轴长度 chuck length	纸管规格 Tube dimension	卷装直径 Package	卷装容积 (dm³) / 动程 (mm) Volume/dm³/Stroke length (mm)					
	Φ	Φ		10	12	14	16	18	20
m/min	mm	mm	mm						
2500-4000	1500	110*125	435	17.04/125	12.95/95	11.32/83	9.95/73	-	-
2500-5500	1500	125*140	380	12.25/125	9.3/95	8.13/83	7.15/73	-	-



ZWB卷绕头参数 Parameters

L	L1	B	H
mm	mm	mm	mm
2905	1500	780	1250

07

ZWPS系列卷绕头

ZWPS winder

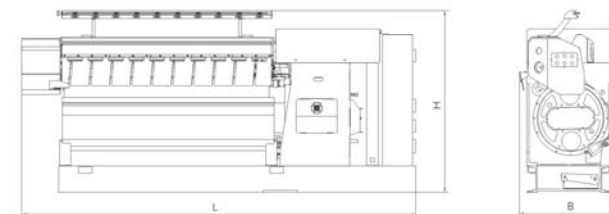
产品用于涤纶、锦纶、丙纶等化纤长丝生产，采用主动压丝辊精密卷绕控制系统，具有成型良好、退绕性好等特点。头切换采用顺向压辊非接触方式，有效保护底层丝。该机可以减小纺丝间距，采用对称结构设计可组装成双胞胎卷绕头使用。

Performance Introduction: it is used in PET & PA6/PA66 & PP filament production etc. With drive CR control system and Multi-precision winding mode, has the advantages of well forming and unwinding. Threading and change-over by CR non contact mode, which can protect bottom yarn effectively. This machine can reduce the spinning pitch, with symmetrical structure design method can be installed to twins winder.



主要技术规格 Main Specification:

卷绕速度 Winding speed	锭轴长度 chuck length	纸管规格 Tube dimension	卷装直径 Package	卷装容积 (dm³) / 动程 (mm) Volume/dm³/Stroke length (mm)					
	Φ	Φ		6	8	10	12	14	16
m/min	mm	mm	mm						
2500-4000	1500	110*125	435	-	22.16/102.5	17.04/125	13.77/101	11.32/83	9.95/73
2500-5500	1500	125*140	435	-	21.65/102.5	16.65/125	13.46/101	-	9.72/73



ZWPS卷绕头参数 Parameters

L	L1	B	H
mm	mm	mm	mm
2884	1500	693	1342

08

TK系列热辊、分丝辊

TK Series Hot Godet Roller(HGR) and Separate Roller(SR)

主要特点

华菱公司TK系列热辊、分丝辊是为民用丝而定制开发的，热辊部分包括导丝盘、加热器、测温传感器、旋转温度变送器、温度控制器等。利用电感应加热，采用热管技术，热辊工作区表面温度均匀。热辊由永磁同步电机驱动精确控制转速，在高速、高温工况下运转平稳可靠，能满足各种FDY民用丝纺丝工艺的要求。

适用范围

适用于涤纶、锦纶、丙纶以及复合丝等各种民用丝。同时还可根据纺丝品种灵活调整加热、拉伸和定型的工艺路线及参数，纺丝纤度范围40-800dtex。

Main features

TK series HGR and SR are developed for textile yarn. SR is driven by motor. HGR is comprised of godet, heater, transister, sensor and control temperature, etc. With electric induction technology, and it is driven by permanent magnet synchronization motor and suited for FDY.

Applications

The product is suited for PET, PA6/66 and PP and flexible operation setting different data for 40-800dtex FDY.

主要技术规格 Main Specification:

型号名称 Type	TK1101M 热辊 HGR2	TK1101N 热辊 HGR1	Tk1106 热辊 HGR2	TK1106A 热辊 HGR1	TK1102E 分丝辊 SR	Tk1106 分丝辊 SR		
电机型式 Motor Type	4极永磁同步电机 4-Pole Permanent Magnetic Synchronous Motor				2极异步电机 2-Pole Asynchronous Motor			
辊面尺寸 Dimension	Φ220x350mm	Φ220x400mm	Φ250x490mm	Φ250x490mm	Φ110x350mm	Φ125x500mm		
表面处理 surface treatment	表面喷陶瓷 Ceramic	表面镀铬 chromium	表面喷陶瓷 Ceramic	表面镀铬 chromium	表面喷陶瓷 Ceramic			
速度范围 Speed range	1000-6000 m/min	1000-4000 m/min	1000-5400 m/min	1000-4000 m/min	1000-6000 m/min	1000-5400 m/min		
有效加热长度 Work length	280mm	330mm	430mm					
表面温度 Surface Temperature	50-200℃	50-150℃	50-200℃	50-150℃				
工作区温差 Speed Range	±1.5℃				≤±1.5℃			
测温方式 Sensor Type	Pt100旋转测温 rotating							
加热功率 Heating Power	11KW	9KW	11KW					
轴承润滑方式 Bearing Lubrication	油雾润滑 Oil Mist							



民用丝热辊变频控制系统主要由变频驱动单元、控制单元、通讯转换单元等组成。可满足卷绕头二次生头需要，具有二次升速功能。可根据上位机设定的参数，自动更改运行速度。

It is consisted of inverter unit, temperature control unit and communication unit. Adopt two step string up function, flexible operation setting.

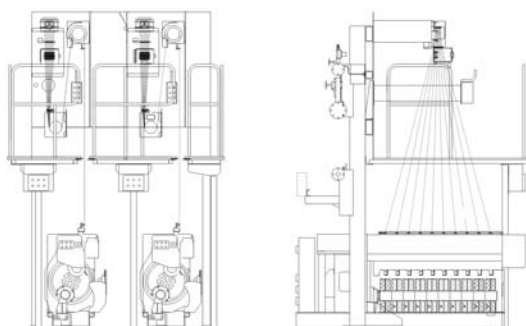
09

10

POY 纺丝应用方案

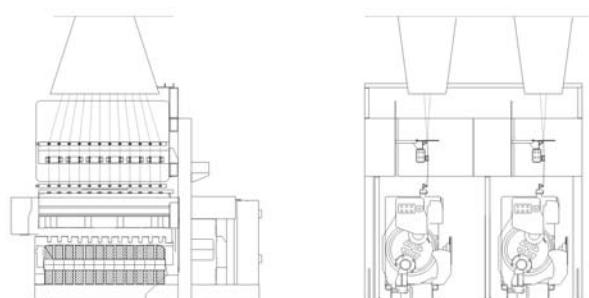
POY application

常规纺 With GR



导丝盘型号 Gudel Model	电机型号 Motor Type	最高速度 Max Speed	锭距尺寸 Dimension	表面处理 Surface Treatment	轴承润滑方式 Bearing lubrication
ZLK203-04	2极同步电机 2-pole Synchronous	4000m/min	Φ160 x 160	表面喷陶瓷 Ceramic	油脂润滑 Grease lubrication

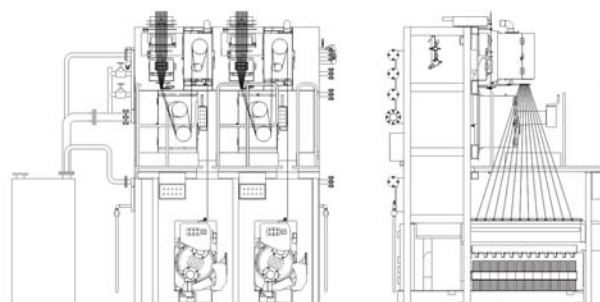
无导盘短程纺 Without GR



11

FDY 纺丝应用方案

FDY application



12

纺丝箱

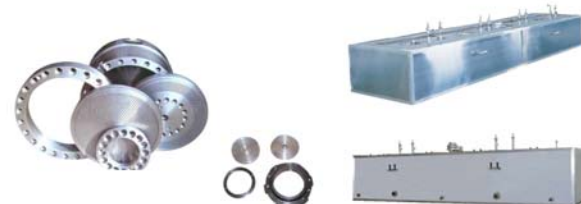
Spinning box

纺丝机主要技术特点:

1. 消除死角的熔体流经管线设计思路、熔体管道高精度抛光, 保证了到达每个纺丝位的熔体停留时间更加均匀一致;
2. 每位的联苯蒸汽保温及其循环系统的进出畅通、无死角设计理念, 保证了纺丝箱内温度均匀一致;
3. 新型保温材料与传统保温棉的复合保温结构设计, 节能20%~30%;
4. 新型下装式杯形自密封组件, 装卸方便, 安全可靠;
5. 结构新颖的双腔组件, 以及与之配套的环吹装置, 可以满足用户节省空间、满足用户多孔、细旦差别化纤维的需求。
6. 根据不同品种设计的侧吹、内环吹以及外环吹冷却方式, 可以满足不同用户的需求。
7. 电气采用先进的智能PID仪表, 压力、温度闭环控制元件采用固态继电器, 控制精度高, 保证了纺丝的温度、压力稳定;

Main technical feature of spinning

1. Eliminate dead corner of the melt flows through the piping design, manifold pipes with high precision polishing which ensure the melt to be more uniform when it reaches each spinning position.
2. The design concept is that each position biphenyl vapor insulation and the circulatory system turnover unblocked and no dead corner. It can ensure the temperature of spinning inside to be uniform.
3. Composite insulation structure design of new insulation materials and the traditional insulation cotton, it will save the energy 20%~30% for user;
4. The new Bottom mounted cylinder type self sealing components is easy to assemble and unassembled, which is safe and reliable;
5. New design of dual-chamber spinning pack, as well as suitable round quenching device which can save the position pitch and meet the special requirement for multi filament and micro fine denier yarn product.
6. Different yarn product to be equipped with different quenching cooling system, including cross quenching, simple round quenching and round quenching cooling type.
7. Use advanced PID intelligent instrument on electrical control. Pressure and temperature closed-loop control components is solid state relays, high control accuracy can ensure the stability of the spinning temperature and pressure.



POY、FDY纺丝箱系列主要规格参数 (单位: mm)

喷嘴直径 Dia. of spinneret	冷却方式 cooling system	下装式杯形组件最小位距 Bottom mounted cylinder type				
		6头/ends	8头/ends	10头/ends	12头/ends	16头/ends
Φ75	侧吹风	720	900	1100	1290	1650
Φ80	侧吹风	750	940	11150	1350	1730
Φ85	环吹风	780	1000	1200	1410	1810
	环吹风(W)	900	1150	1350	1650	
Φ90	环吹风(W)			960	1110	1480
	侧吹风	810	1040	1250	1470	1890
	环吹风	930	1190	1400	1710	
Φ90 双通道组件	环吹风(W)			1010	1170	1560
	侧吹风			700	810	1030
	环吹风			800	935	1200
Φ95	侧吹风	840	1080	1300	1530	1970
	环吹风	960	1230	1450	1770	
	环吹风(W)			1060	1230	1640
Φ100	侧吹风	870	1120	1350	1590	2050
	环吹风	990	1270	1500	1830	
	环吹风(W)			1110	1290	1720
Φ105	侧吹风	900	1150	1400	1660	2130
	环吹风	1020	1310	1550	1890	
	环吹风(W)			1160	1360	1800
Φ105 双通道组件	侧吹风			780	900	1150
	环吹风			880	1050	1350



13

14

碳纤维设备

Carbon fiber equipment

Zk6101型卷绕机主要用于碳纤维的低中速收卷。
ZK6101 winder is used to wind Carbon Fiber at low and middle speed



特点:

- 张力可以在线检测, 实现精确恒张力卷绕
- 成品卷装成形良好, 具有较好的退绕性
- 专业设计的防叠机构, 有效的解决了丝饼叠丝问题
- 针对扁扁平丝提供专用的展平机构, 解决了丝束的折边问题, 防止丝束在卷绕过程中加捻。

Main feature

- To be adopted for fine-tuning for line tension and to realize precise winding tension.
- To attain fine-forming package and the excellent unwinding performance.
- Unique antistack is the special forming software

15



规格:
机器锭数: 4行×5列20锭/组 (也可根据用户需要设计每组锭数及方向)
纤度: 1K-24K
卷绕速度: 1-15m/min
导纱动程: 254mm
筒管规格 (内径×长度): $\Phi 76 \times 280$ mm
最大卷绕直径: $\Phi 250$ mm
卷装重量: 1-4Kg
接触压力: 1-3Kg
卷绕张力: 50-1200g
驱动方式: 电机+减速机+同步传动带
电源电压: 3相电源220V 50/60Hz

Specification

Number of spindle: 4rows × 5 columns (it is also set the number of spindle and direction of every group according to the requirements of users.)
Titer: 1K × 24K
Winding speed: 1-15m/min
Guide stroke: 254mm
Tube dimension (inner diameter × length): $\Phi 76 \times 280$ mm
Max winding diameter: $\Phi 250$ mm
Package weight: 1-4kg
Contact pressure: 1-3kg
Winding tension: 50-1200g
Driving mode: motor + reducer + timing belt
Voltage: three-phase power 220V 50/60HZ



16

改造专家

Modification

华宏公司可进行凸轮滑梭式及双转旋翼式卷绕头6改12、8改12、8改16、12改18、10改20等工程改造。

承接各类导丝盘的加工制造: 可根据用户要求对导丝盘、热辊类零件表面进行表面喷涂和电镀处理。提供并修复安装各种卡盘轴、接触辊、曲线成形板: 提供国内外各种卷绕头的备品、备件。

Huayong Company provides the engineering transformation of traverse cam winder and birotor winder from 6 to 12, 8 to 12, 8 to 16, 12 to 18, 10 to 20 etc. and manufacture various guide roller; to treat the surface such as surface coated and plated against guide roller and heated roller according to the user's requirements. meanwhile provide the solution to repair all kinds of BH, contact roller and guide plate; to provide various spare part of winder.



● 进口卷绕头的民用丝和工业丝改造技术。
Import winder's transformation technology for textural fiber and technical yarn

客户服务

Customer Service



我们在江苏、上海、浙江及福建设立办事处和服务中心, 能及时为客户进行服务。
We set up offices and service centers in Jiangsu, Shanghai, Zhejiang and Fujian. Timely service to customers.

我们践行以客户的最需要为导向, 以客户最终满意为诉求。我们的客户在从最初的技术、商务交流直到最终的设备交付生产过程中, 将会得到优质周到的服务, 包括一流的设备、专业的技术指导与建议, 完善的售后服务。同时, 我们也乐于接受用户根据实际生产情况提出的要求和建设, 例如对设备的配置、涉及生产工艺的机械参数等。

We take customers' ultimate needs as our guidance and customers' ultimate satisfaction as our goal. Our customers will be offered quality and considerate service, including first-class equipment, professional and technical guidance and suggestions and impeccable after-sales service from the initial technology, business exchanges to the final equipment delivery. In the meantime, we are also happy to accept users' requirements and recommendations based on actual production situation, such as equipment configuration, things involving the mechanical parameters of the



18