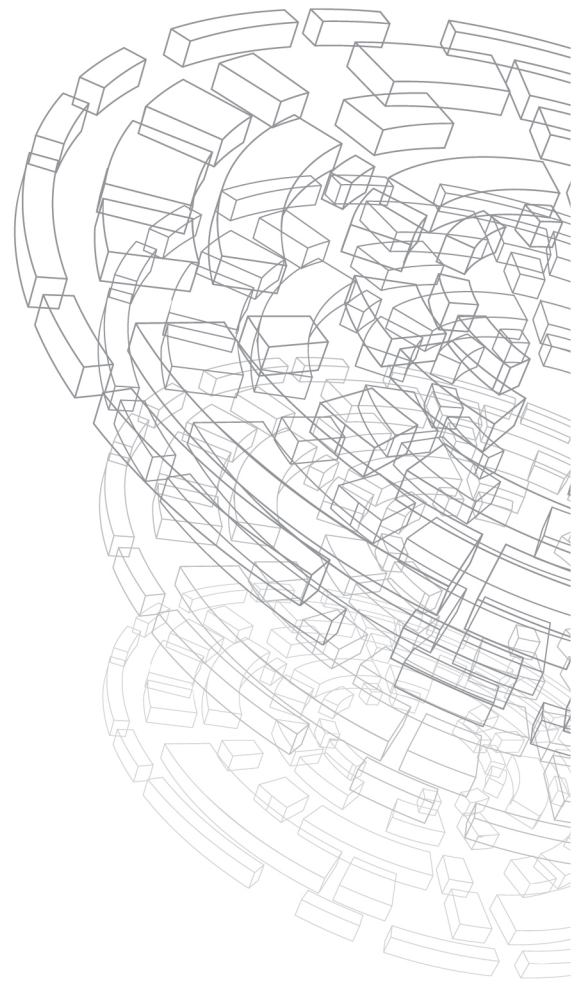




为教育
事业
做出
技术
贡献

**MAKE
TECHNICAL CONTRIBUTION
TO EDUCATION**
为教育事业做出技术贡献



**NO. 1 EXPORT BRAND
IN THE EDUCATION EQUIPMENT
INDUSTRY**

教育装备行业出口第一品牌

DOLANG

中德栋梁



栋梁柱 Mainstay

■ 标准 严谨 Standards Rigorous

■ 热情 奋斗 Enthusiasm Work Hard

■ 荣誉 愿景 Honor Vision

DO: “做”

LANG: “长久”

DOLANG: 含有基业长青的深刻寓意

中德®: 德国标准 中德合作

栋梁: 具有中流砥柱的内涵

DO: "Take Action"

LANG: "Long"

DOLANG: Contains a profound meaning of the everlasting foundation

Sino-German®: German Standard Sino-German Cooperation

DoLang: With the meaning of the mainstay

企业使命: 为教育事业做出技术贡献

企业愿景: 做长久 有规模的 国际化企业

企业战略: “工业+教育” 双轮驱动的国际发展之路

核心价值观: 以客户为中心 成就客户 艰苦奋斗

Corporate mission: Make technical contributions to education

Corporate Vision: To be a long-term international company with scale

Enterprise strategy: "Industry + Education" two-wheel drive international development road

Core values: Customer-centric, Customer success, Hard working

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WHO
IS
DOLANG
栋梁是谁



COMPANY PROFILE

公司简介

中德栋梁教育科技集团自 1998 年和德国专家合作成立以来，坚持“工业 + 教育”双轮驱动的国际化发展理念。用工业哺育我们的教育，用教育提升我们的工业技术。

聘有哈尔滨工业大学、山东大学、山东省科学院、德国锡根大学等高校院所专家教授，建有院士专家工作站、济南市企业技术中心、济南市工程技术研究中心、德国杜塞尔海外研发中心等研发平台，与哈尔滨工业大学机器人研究所、济南市市中区人民政府三方合作成立有哈博特机器人研发中心；同时与清华大学、山东省计算机中心等高校及科研机构建立了密切合作关系，先后承担科研项目近 30 项；先后荣获“国家高新技术企业”“山东省高新技术企业”“山东省中小企业创新转型优胜企业”“山东省“一企一技术”创新企业”“济南市创新型企业”“全国重合同守信用企业”“全国工业机器人技术应用技能大赛‘突出贡献奖’”等百余项荣誉称号。

Since Sino-German Dolang Education Technology Group was established in cooperation with German experts in 1998, it has adhered to the "industrial + education" dual-wheel drive international development concept. To nurture our education through industry and to enhance our industrial technology through education.

Hired experts and professors from Harbin Institute of Technology, Shandong University, Shandong Academy of Sciences, Germany Siegen University, etc., built academician expert workstations, Jinan City Enterprise Technology Center, Jinan City Engineering Technology Research Center, Germany Dussel Overseas R&D Center, and other research and development platforms. The Harbin Institute of Robotics Research Institute and the Central People's Government of Jinan City have established a Habot Robotics R & D Center; at the same time, they have established close cooperative relations with Tsinghua University, Shandong Computer Center and other universities and scientific research institutions. Undertook nearly 30 scientific research projects successively; successively won the "National Advanced Enterprise", "Shandong Provincial Emerging Enterprise", "Shandong Province SME Innovation and Transformation Outstanding Enterprise", Shandong Province "One Enterprise One Technology" Innovation Enterprise "Jinan Innovative Enterprise" There are more than 100 honorary titles such as "National Contract-honoring and Trustworthy Enterprise" "National Industrial Robot Technology Application Skills Competition "Outstanding Contribution Award".



DEVELOPMENT HISTORY 发展历程

从发展轨迹上, 栋梁教育集团走过了一条海内外迂回发展之路。2001年之前, 由于国内购买力有限, 栋梁教育集团主动走出国门开辟海外市场, 在竞争激烈的国际市场争得一席之地, 铸就了“中国教育装备行业出口第一品牌”的美誉。进入21世纪, 国内职业院校对职教设备的需求由数量层面转变为国际化经验和质量标准层面。由此, 应国内众多职业院校邀请, 栋梁教育集团运用自身所积累的国际化职教服务经验, 投入到我国职业教育技术创新事业中。

Before 2001, Dolang Education Group took the initiative to go abroad to open up overseas markets, gain a place in highly competitive international market, won a reputation "NO.1 exports brand of China's education industry". Into the 21st century, the domestic vocational schools on the demand for vocational education equipment from the quantitative level into international experience and quality standards. As a result, with the invitation of many professional institutions in China, Dolang Education Group has invested in the experience of international vocational education service, which has been put into China's vocational education technology innovation.



1998

面向海外市场, 专注于出口
Facing overseas market, focusing on export



2020

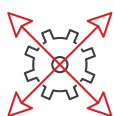
2019

协办第三届全国工业机器人技术应用技能大赛, 为大赛提供设备、技术支持
Co-organized the 3rd National Industrial Robotics Application Skills Competition and provided equipment and technical support for the competition



2018

为全国智能制造技术应用技能大赛提供设备、技术保障
Provide equipment, technology support for the national smart manufacturing technology application skills competition



2009

转入国内市场, 为各类技能大赛提供竞赛设备和技术服务

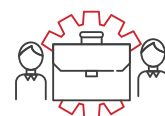
Transfer to the domestic market and provide competition equipment and technical services for various skill competitions



2013

开展校企合作, 探索现代/新型学徒制运作模式

Carry out school enterprise cooperation and explore modern / New Apprenticeship operation mode



2014

以中外合作办学为契机, 开启国际化新征程

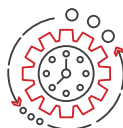
Take the opportunity of Sino foreign cooperation in running schools and start a new journey of internationalization



2017

作为世界技能大赛中国组委会官方合作伙伴, 为中国代表团参加第44届世界技能大赛提供技术支持和服务保障

As the official partner of China Organizing Committee of the world skills competition, provide technical support and service guarantee for Chinese delegation to participate in the 44th World Skills Competition



2016

冠名全国工业机器人技术应用技能大赛, 提供设备、技术、理念支持

Named national industrial robot application technology skill competition, providing equipment, technology and idea support

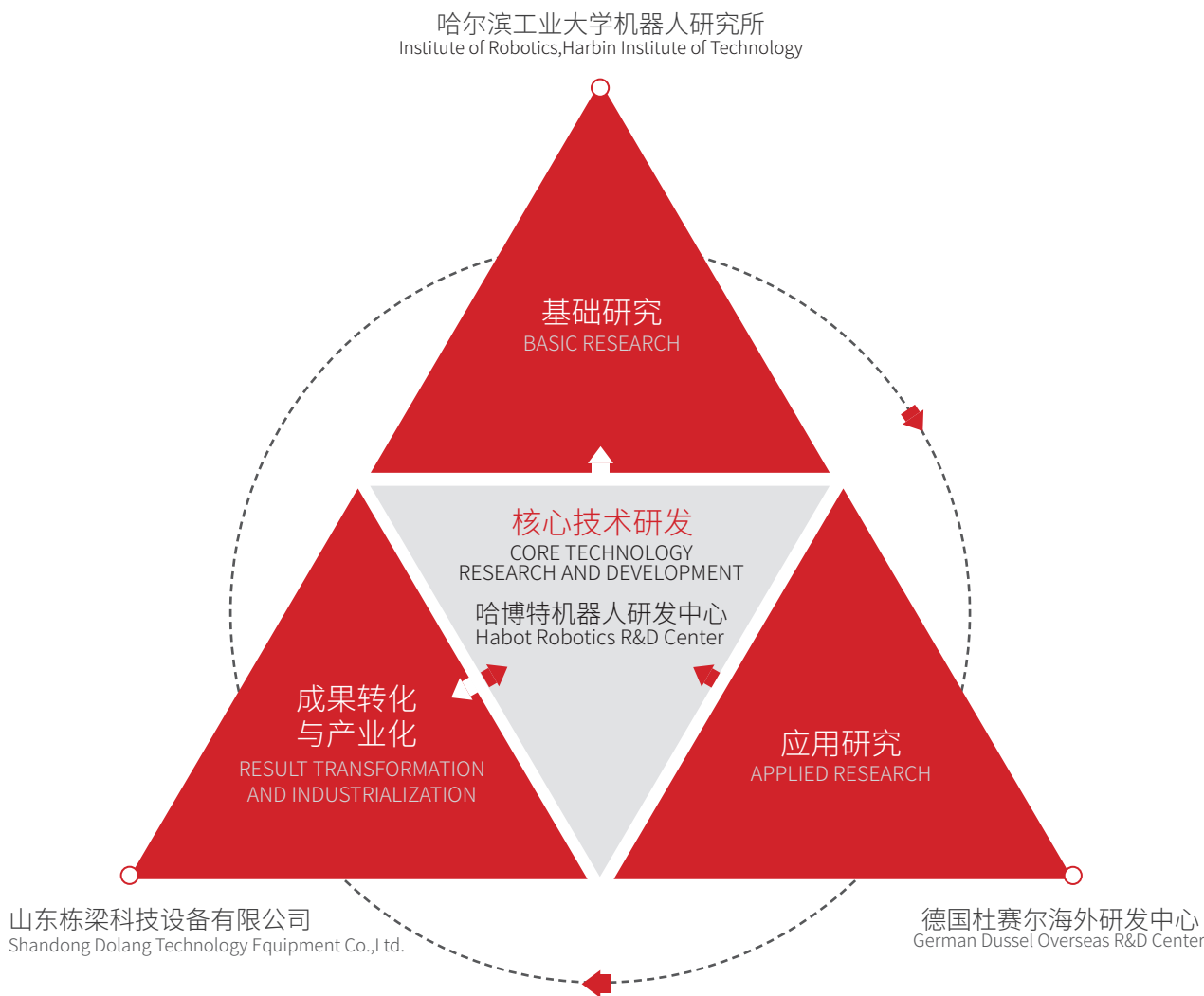


2015

承办校企合作对接对话会, 创新国际校企合作模式

To hold a dialogue meeting on school enterprise cooperation and innovate the mode of international school enterprise cooperation

TRIANGULAR R&D SYSTEM 三角研发体系



Hobot Robotics R&D Center 哈博特机器人研发中心

哈博特机器人研发中心是哈尔滨工业大学机器人研究所、济南市市中区人民政府、山东栋梁科技设备有限公司三方共建的机器人技术研发和科技成果转化服务机构，致力于建成国内一流、国际先进的公共平台。

中心致力于手术、助老助残、医疗康复等智能服务机器人，AGV、视觉、串并联等工业机器人，以及特种应用机器人的技术研发、系统集成、成果转化与产业化。

Hobot robot R&D center is the robot research institute of Harbin Institute of Technology, the people's government of shizhong district, jinan city, and shandong dongliang science and technology equipment co., LTD.

The center is committed to intelligent service robots such as surgery, helping the elderly and disabled, medical rehabilitation, and industrial robots such as AGV, vision, serial and parallel, as well as special application robot technology research and development, system integration, achievement transfer and industrialization.



Institute of Robotics Harbin Institute of Technology 哈尔滨工业大学机器人研究所

研究所具有一支高素质的科研、教学队伍，经多年发展，形成了一支由院士、长江学者、国家杰出青年基金获得者、资深教授为学术带头人的学术梯队，打造了“产学研”三位一体的科研体系。

The institute has a high-quality scientific research and teaching team. After years of development, it has formed an academic echelon with academicians, cheungkong scholars, winners of national outstanding youth fund and senior professors as academic leaders, and built a triune scientific research system of "production, study and research".

German Dussel Overseas R&D Center 德国杜塞尔机器人海外研发中心

中心致力于工业机器人、医疗机器人、康复机器人等方向的技术研发和成果转化。中心以德国为桥头堡，着眼于全球机器人技术及应用前沿信息的搜集、研发及成果引进，致力提升我国产业发展水平。

The center is committed to the research and development of industrial robots, medical robots and rehabilitation robots, and the transfer and transformation of achievements. With Germany as its bridgehead, the center focuses on the collection, research and development of global cutting-edge information on robotics technology and application, and the introduction of results to improve China's industrial development level.

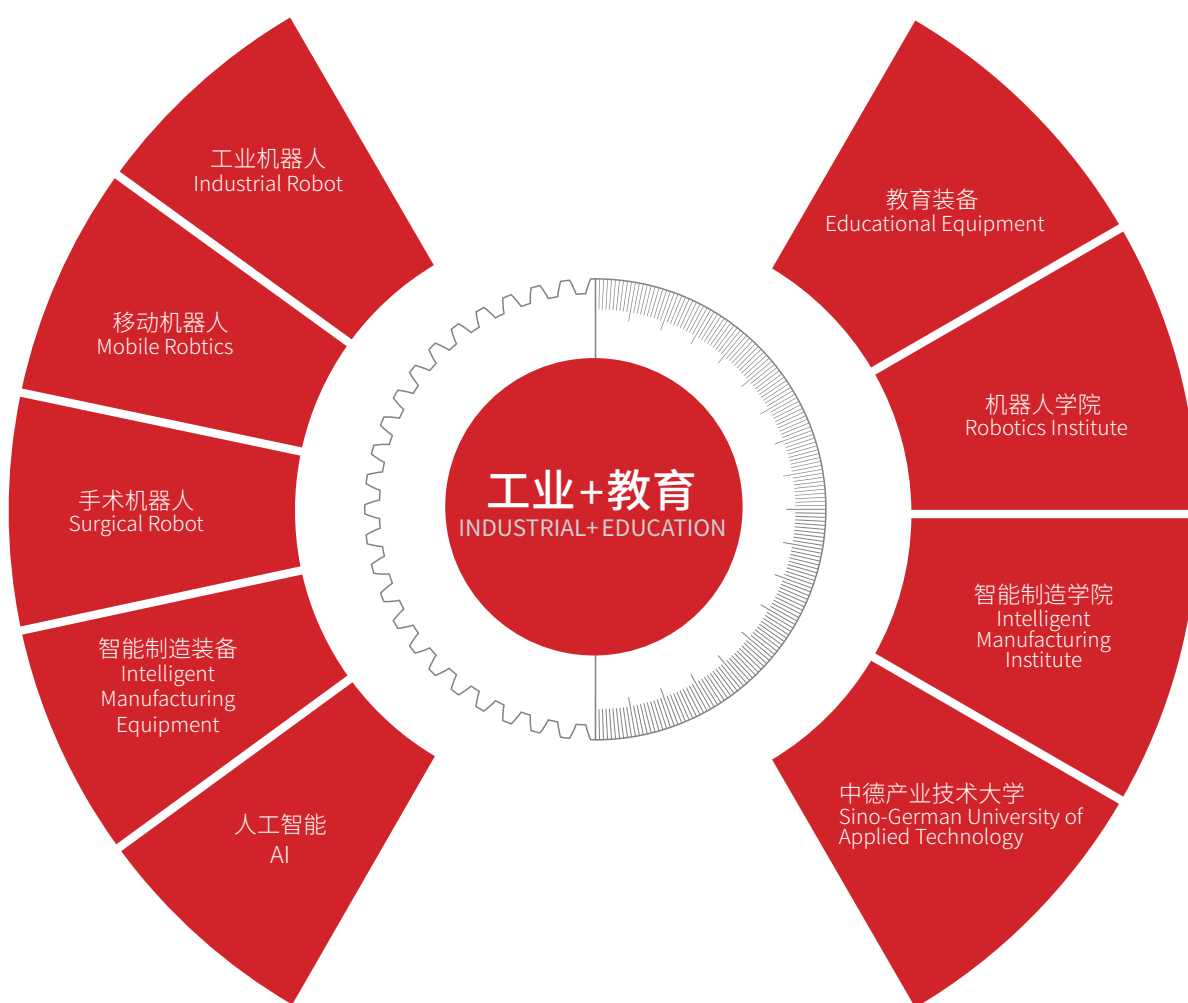


WHAT
IS
DO'ANG
DOING

栋梁在做什么



DEVELOPMENT CONCEPT 发展理念



双轮驱动的国际化发展之路

THE INTERNATIONALIZED DEVELOPMENT ROAD WITH TWO WHEELS DRIVE

5-DIMENSION SOLUTION 五维一体解决方案

顺应职教理念发展潮流，栋梁教育集团建立了以职业技能人才培养与评价为核心，以提升师资队伍建设为主线的“五维一体”职教整体解决方案，开创了新型校企合作关系。该方案包含基于工业现场的数字化资源库、基于还原工业现场的实训设备、基于实训指导师的师资培训与测评、基于项目管理的教学方法、基于工学一体化的立体教程五大部分。

Adapt to the development trend of vocational education concept, Dolang education group established "five-dimensional in one" vocational education overall solution base on vocational skills training and evaluation as the core, to enhance the construction of teachers as the main line, creating a new school-enterprise cooperation. The program includes 5 parts, such as digital resource library based industrial field, the teacher training and evaluation based on the training instructor, training equipment based on the restore industrial field, the teaching method based on the project management, three-dimensional tutorials based on the integration of engineering and industry.



还原工业现场的教育设备 Restoration of Teaching Equipment at Industrial Sites



DLIM-201纯净水自动化生产线实训系统
Pure Water Automatic Production Line Training System



灌装生产过程控制系统
Filling process control system



物流码垛系统
Logistics palletizing system



立体化仓储系统
Stereoscopic storage system

基于岗位流程体系的立体化教程 Stereoscopic Course on Post Procedure Systematic

工作页 4.2.3-01 自动化生产线的机械安装

项目 4: 自动化生产线的安装与调试	任务 2: 自动化生产线的安装与调试
主题: 自动化生产线的机械安装 1	页码: G216-21-01

情景描述: 你已经认识了前序课程生产线上特殊场景, 现在要逐步完成该生产线的自动控制, 让我们先完成装配吧, 首先完成装配。

1.本任务中, 你要完成哪些组件的安装, 先来认识它们?

2.查看信息页, 设计设备布局, 再画出布局图。

3.明确各个设备在系统中起什么作用?

工作页 4.2.4 指尖陀螺装配工艺教程

项目 4: 指尖陀螺装配编程与调试	任务 2: 指尖陀螺装配编程与调试
主题: 指尖陀螺装配编程与调试	页码: G219-2-1

情景描述: 指尖陀螺工作页已经搭建完成, 现在要实现整条工作站的自动控制与运行, 在编程之前, 需要先明确整个动作流程及工艺要求。

信息页 4.2.4 指尖陀螺装配工艺教程

项目 4: 指尖陀螺装配编程与调试	任务 2: 指尖陀螺装配编程与调试
主题: 指尖陀螺装配编程与调试	页码: X014-2-1

指尖陀螺装配工艺教程:

1.基于机器人自动上下料的指尖陀螺压盖生产工作站组合形式 1:

方案简述: 1#操作平台为任务平台, 工作人员通过触摸屏选择所需模型的颜色和成品放置位置, 然后启动设备, 视觉模块从陀螺原料盘中识别出所需要的陀螺颜色, 并执行尺寸和外观质量的检测, 四轴工业机器人抓取符合要求的陀螺主体和配件, 放置到冲压装配平台相应位置, 完成压盖机上料操作, 然后由伺服电机把陀螺原料送给六轴机器人进行装配; 装配完成后, 伺服电机反向运动把成品送到气垫的正下方, 进行冲压件配件和主体安装平衡, 之后再伺服电机动作, 把成品六轴机器人的合适位置, 六轴机器人按照触摸屏的参数设置完成压盖装机下料操作, 将成品装成成品。

评价页 4 指尖陀螺装配编程与调试

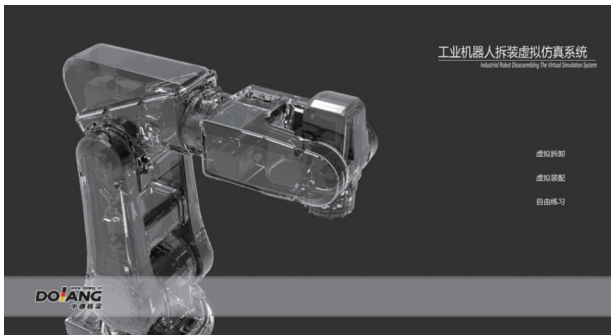
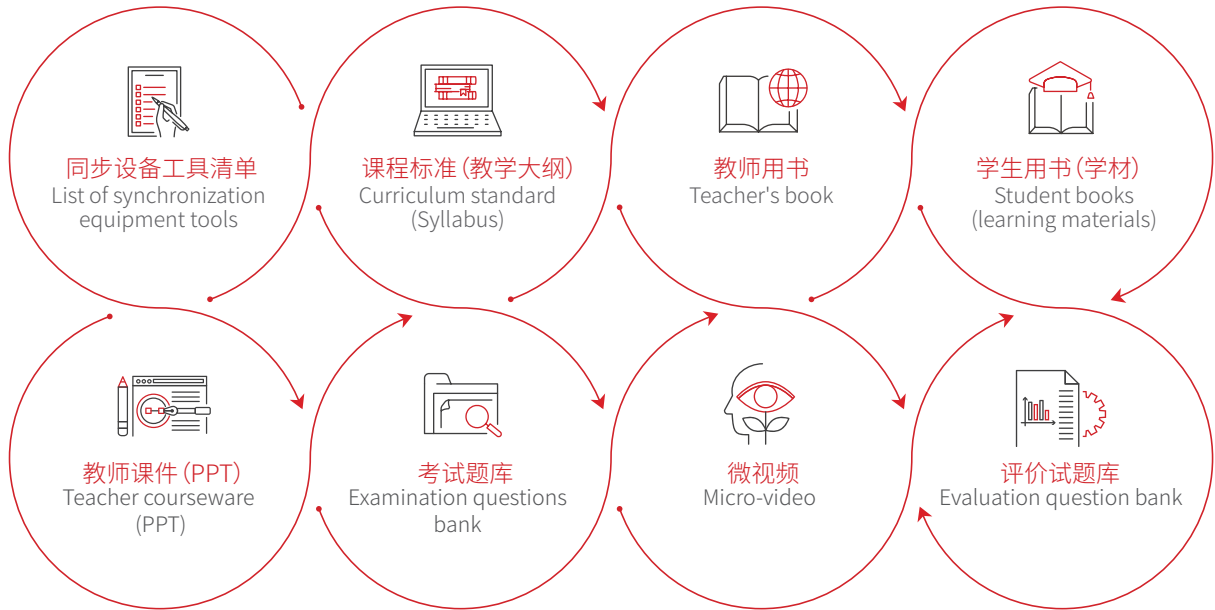
项目 2: 指尖陀螺装配编程与调试	任务 2: 指尖陀螺装配编程与调试
主题: 指尖陀螺装配编程与调试评价	页码: P014

任务评价:

评价:

序号	评价点	评价标准	本次任务得分
1	布局设计合理	□是 □否	
2	工艺参数设置正确	□是 □否	
3	视觉检测正常	□是 □否	
4	平衡检测正常	□是 □否	
5	装配精度合格	□是 □否	
6	操作安全规范	□是 □否	

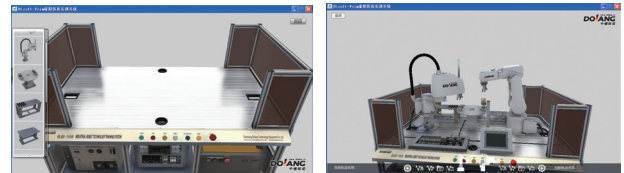
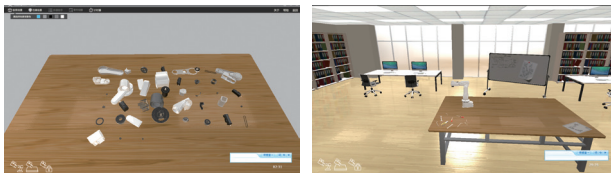
基于兴趣教学的数字化教学资源库 Digital Teaching Resource Database on Interest Teaching



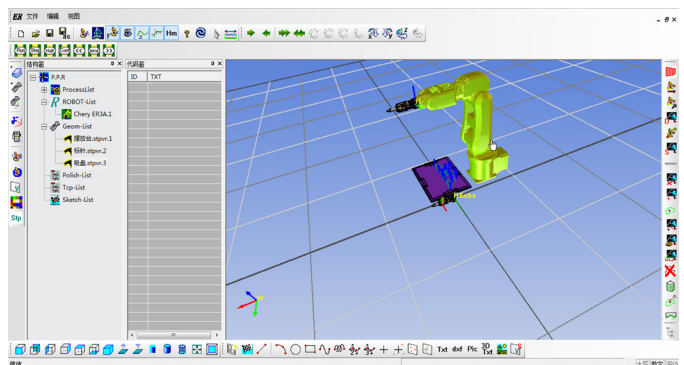
工业机器人拆装软件 (Industrial Robot Assembly & Disassembly software)



设备配套仿真软件 (Simulation software for equipment)



液气动仿真软件 (Hydraulic Pneumatic simulation software)



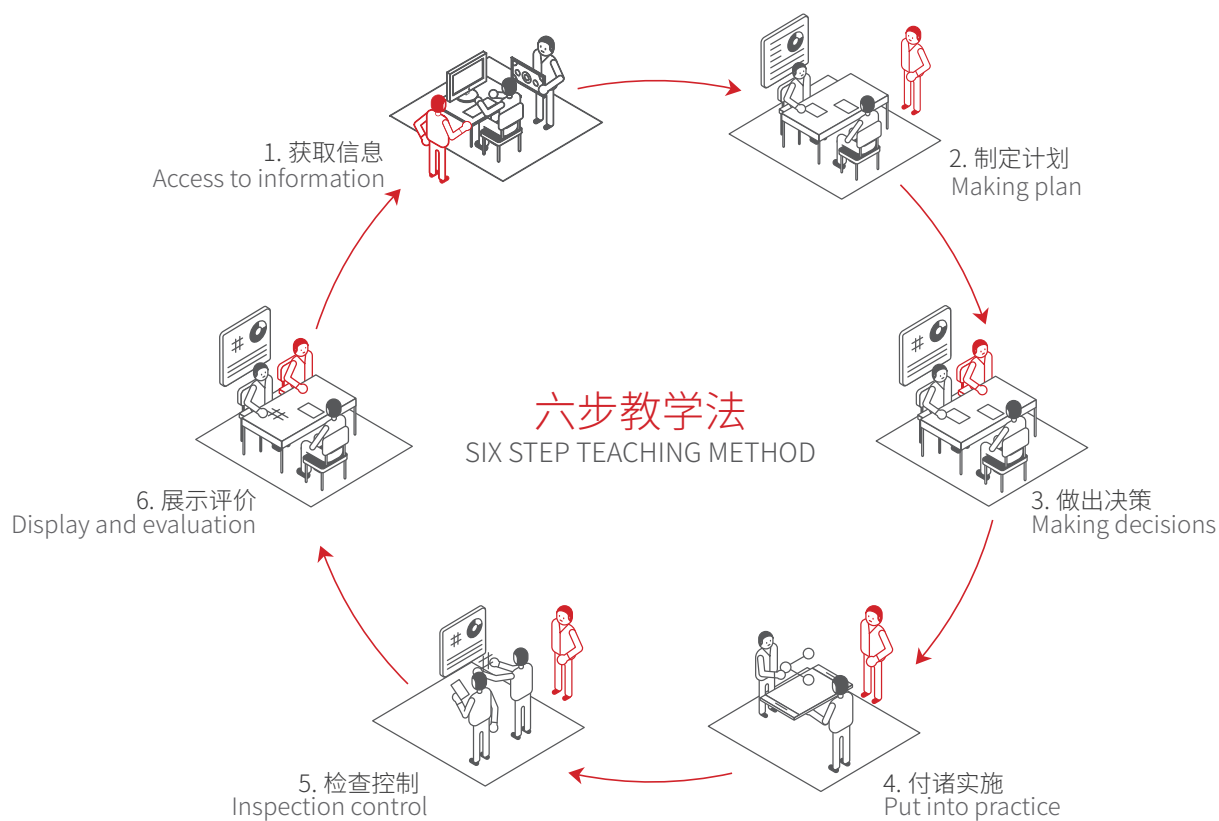
工业机器人仿真软件 (Industrial robot simulation software)

以学生为中心的教学方法

Student-centered Teaching Method

行动导向教学是以“行动导向驱动”为主要形式，在教学过程中充分发挥学生的主体作用和教师的主导作用，注重对学生分析问题，解决问题能力的培养，从完成某一方面的“任务”着手，通过引导学生完成“任务”，从而实现教学目标。

Action oriented teaching is mainly in the form of "action oriented driving". In the process of teaching, it gives full play to the main role of students and the leading role of teachers, pays attention to the cultivation of students' ability to analyze problems and solve problems, starts from the completion of a certain aspect of "tasks", and achieves the teaching goal by guiding students to complete "tasks".



基于教师能力提升的培训认证体系

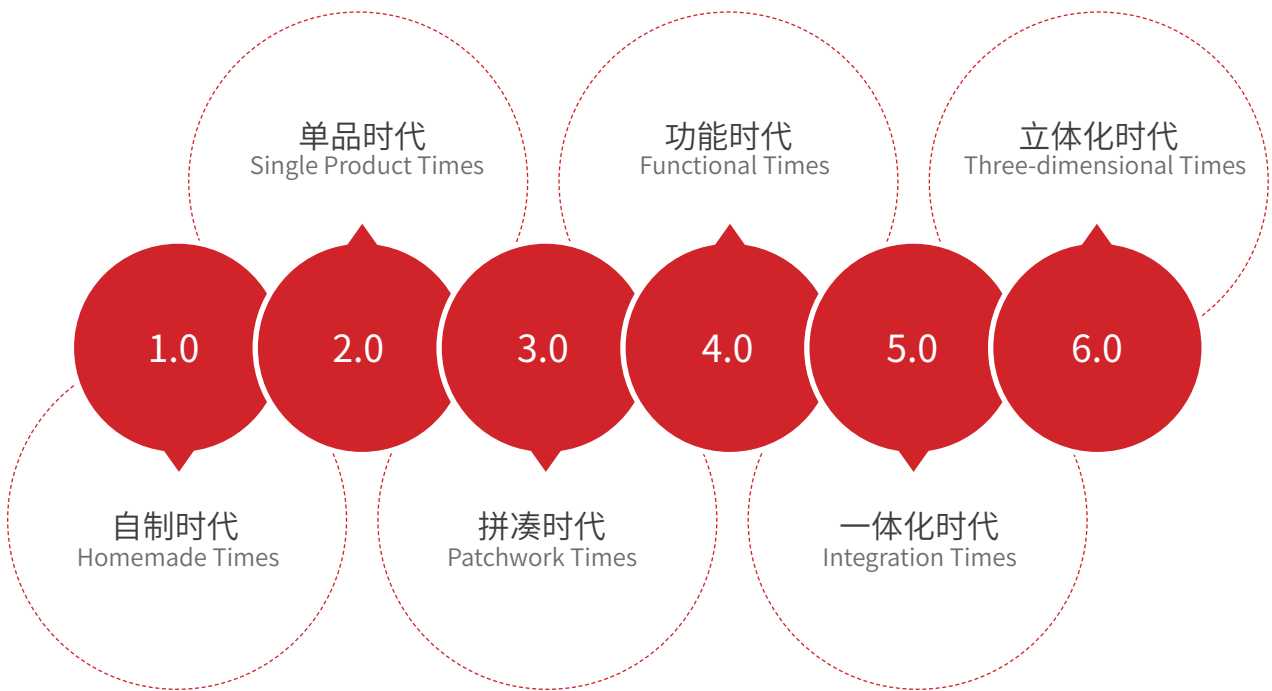
Training and Certification System Based on Promote Teacher's Ability



INTEGRATED SOLUTION FOR PROFESSIONAL CONSTRUCTION OF INDUSTRIAL ROBOT

PROFESSIONAL SOLUTIONS FOR INTELLIGENT MANUFACTURING

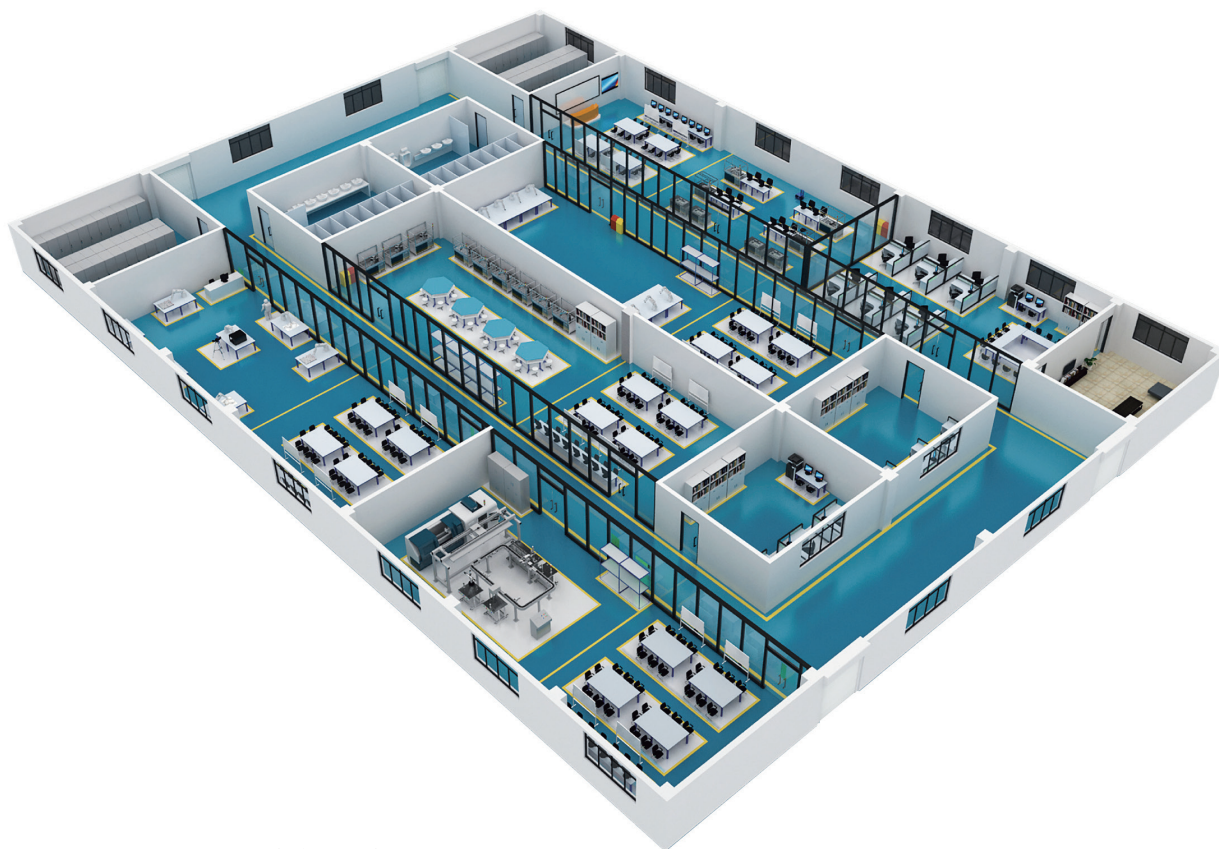
工业机器人专业建设整体解决方案
智能制造方向专业解决方案



专业名称 Subject Name	专业代码 Subject Code
<input type="checkbox"/> 工业机器人技术 Industrial Robotics Technology	580218
<input type="checkbox"/> 工业机器人应用与维护 Industrial Robot Application and Maintenance	0208
<input type="checkbox"/> 机电一体化技术 (智能制造方向) Mechatronic technology (intelligent manufacturing direction)	580201

工业机器人技术/工业机器人应用与维护

Industrial Robot Technology/ Industrial Robot Application and Maintenance



工业机器人技术立体化教学空间示意图

Industrial robot technology three-dimensional teaching space diagram

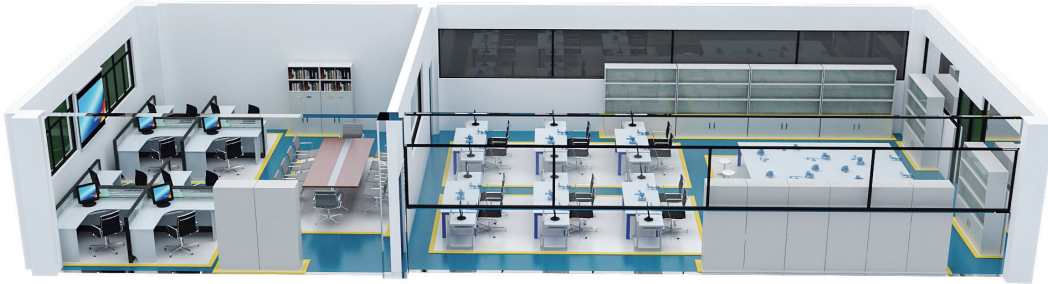
校园文化是学校教育的重要组成部分,是学校精神、学校活动、学校秩序和学校环境的集中体现,具有重要的育人功能,而融合优秀企业文化的校园文化,在促使学生养成良好的职业道德和职业行为习惯、帮助学生顺利实现从学校到企业的跨越方面更会起到举足轻重的重要作用。

栋梁立体化职业教育专业建设解决方案以企业优秀文化为基础,结合教学实际需求,进行学校教室环境建设,使之成为职业氛围浓厚、专业特色鲜明的学习场所。通过展现企业工作现场有关生产、经营、管理、服务的纪律、规范、流程,加强学生的职业素养训练,增强学生立志成才的信心。培养学生树立牢固的职业意识,提高学生适应未来工作环境的综合素质和职业能力。

Campus culture is an important part of school education. It is the concentrated embodiment of school spirit, school activities, school order and school environment. It has an important educational function. Campus culture, which integrates excellent corporate culture, can promote students to develop good professional ethics and behavior habits, and help students realize the leap from school to enterprise smoothly Important role.

Based on the excellent culture of the enterprise and combined with the actual needs of teaching, the solution of three-dimensional vocational education specialty construction is to construct the school classroom environment, so as to make it a learning place with strong professional atmosphere and distinctive professional characteristics. By showing the disciplines, norms and processes related to production, operation, management and service in the workplace of the enterprise, the vocational quality training of the students will be strengthened, and the confidence of the students in aspiring to become talents will be enhanced. Train students to establish a strong sense of occupation and improve their comprehensive quality and professional ability to adapt to the future working environment.

工业机器人技术创新实训室 Industrial Robot Technology Innovation Training Room



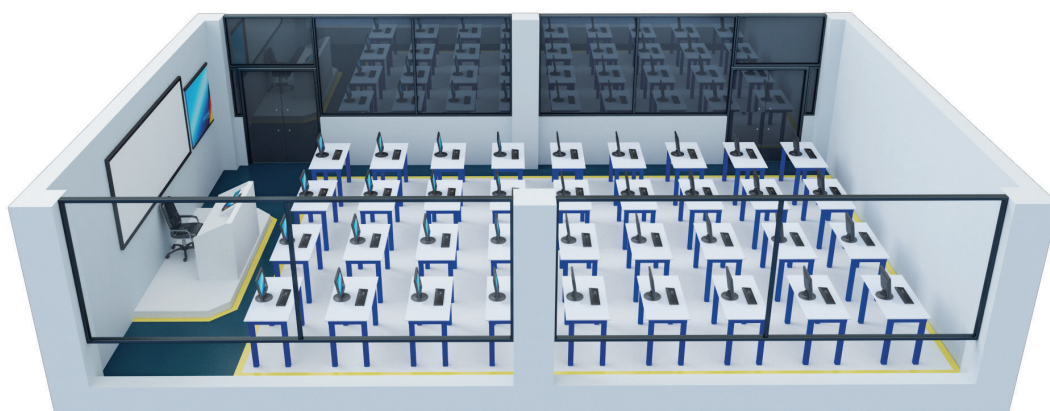
序号 NO.	区域 Area	配置内容 Configuration		单位 Unit	数量 Qty
1	多媒体教学系统 Multimedia teaching system	投影仪、多媒体讲台、幕布、电脑主机等 Projector, multimedia platform, screen, host computer		套 set	1
2	工作区 Working area	DLRB-MR519移动机器人 DLRB-MR519 Mobile robotics		套 set	6
3	讨论区 Discussion area	六角讨论桌、会议白板等 Table conference, whiteboard		套 set	6
4	资讯区 Information area	电脑桌、台式电脑、交换机、文件柜等 Computer desk, desktop computer, switchboard, file cabinet		套 set	6
5	仓储区 Storage area	工具柜、货架、物料小车等 Tool cabinet, shelf, material trolley		套 set	1
6	情景建设 Scene construction	清洁区 Clear area	扫把、灰斗、拖把、分类垃圾桶等 Broom, bucket, mop, classified, garbage, barrels, etc.	套 set	1
7		消防区 Fire district	消防器材 Fire equipment	套 set	1
8		医务区 Medical area	医药箱 Medicine cabinet	套 set	1
9		空间硬装 Space finishing	自流平、吊顶等 Self-leveling, hand ceiling	套 set	1
10		空间软装 Space decoration	文化展板、区域划分、标识等 Cultural exhibition, regional division, identification	套 set	1

机器人创新实训室的目的是为各类职业技术学院的学生和教师提供一个综合地专业的机器人教育和研究平台,引导学生进行单片机和微控制器、数字电路和模拟电路、嵌入式计算机技术、检测与传感技术等课程的学习和实践,并通过采用系统方法对实验教学内容、方法和手段进行创新,使学生既能了解基本原理,又能根据理论联系实际,科学主导工程。提高学生的创新能力和动手能力,提升整个专业的教学水平,为学校参加各类机器人职业技能大赛等提供硬件和软件支持,使学生能够广泛适用于机电一体化、电气工程、自动化工程等方向的就业需求,同时满足高校专业教学实验和科学研究的要求。

"Robot Innovation Training Room" is designed to provide a comprehensive professional robot education and research platform for students and teachers in variety of vocational and technical college, guide students to learn and practice SCM and microcontroller, digital circuit and analog circuit, embedded computer technology, detection and sensor technology etc, enable students to not only learn basic principle but also combine theory with practice through using systematic methods to innovate the teaching contents and methods. Improving students' innovative and hands-on ability, enhance the teaching level.

工业机器人技术仿真实训室

Industrial Robot Technical Simulation Training Room



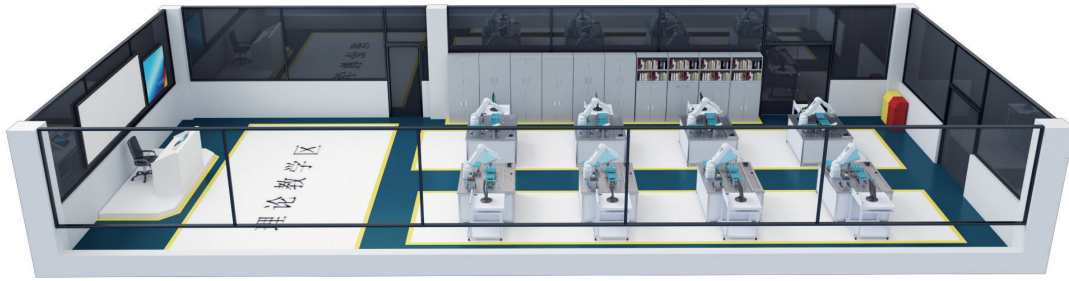
序号 NO.	区域 Area	配置内容 Configuration	单位 Unit	数量 Qty	
1	多媒体教学系统 Multimedia teaching system	投影仪、多媒体讲台、幕布等 Projector, multimedia platform, screen etc.	套 set	1	
2	工作区 Working area	学习桌 Learning desk	台 pcs	1	
3		电脑主机、显示器 Computer host, display	套 set	1	
4		DLsoft-robotarm工业机器人虚拟拆装训练仿真系统 DLsoft-robotarm industrial robot virtual disassembly and assembly training simulation system	节点 pcs	36	
5		DL-VIF可视化智能制造工厂仿真系统 DL-VIF Visual intelligent manufacturing plant simulation system	节点 pcs	36	
6		清洁区 Clear area	扫把、灰斗、拖把、分类垃圾桶等 Broom, bucket, mop,classified garbage, barrels, etc.	套 set	1
7	情景建设 Scene construction	消防区 Fire district	消防器材 Fire Equipment	套 set	1
8		医务区 Medical area	医药箱 Medicine cabinet	套 set	1
9		空间硬装 Space finishing	自流平、吊顶等 Self-leveling, hand ceiling	套 set	1
10		空间软装 Space decoration	文化展板、区域划分、标识等 Cultural exhibition, regional division, identification	套 set	1

虚拟现实技术可丰富教学内容,将实验、实训等技能训练搬到课堂中进行,在有效地节约有限的教育成本的同时,还可突破传统实训室的限制,使每一位学生都可以根据自己的方式和速度自由地选择适合的内容进行学习与训练。

Virtual reality technology can enrich the teaching contents,carry out experiment,skill training on class. Can effectively reduce the education cost,meanwhile also can break the limit of traditional training room,make students freely selecting suitable contents for training.

工业机器人技术应用基础实训室

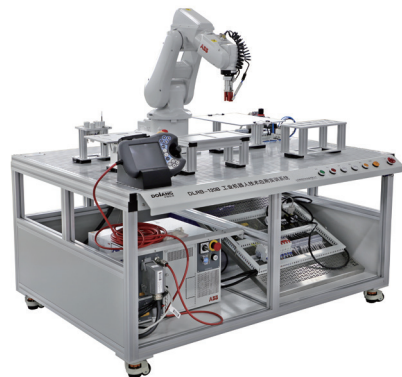
Basic Training Room of Industrial Robot Technology Application



序号 NO.	区域 Area	配置内容 Configuration		单位 Unit	数量 Qty
1	多媒体教学系统 Multimedia teaching system	投影机、多媒体讲台、幕布、电脑主机等 Projector, multimedia platform, screen, host computer		套 set	1
2	工作区 Working area	DLRB-120B工业机器人基础技术实训系统 DLRB-120B Industrial robot basic training system		套 set	6
3	讨论区 Discussion area	六角讨论桌、会议白板等 Table conference ,whiteboard		套 set	6
4	资讯区 Information area	电脑桌、台式电脑、交换机、文件柜等 Computer desk, desktop computer, switchboard, file cabinet		套 set	1
5	仓储区 Storage area	工具柜、货架、物料小车等 Tool cabinet, shelf, material trolley		套 set	1
6	情景建设 Scene construction	清洁区 Clear area	扫把、灰斗、拖把、分类垃圾桶等 Broom, bucket, mop, classified, garbage, barrels, etc.	套 set	1
7		消防区 Fire district	消防器材 Fire equipment	套 set	1
8		医务区 Medical area	医药箱 Medicine cabinet	套 set	1
9		空间硬装 Space finishing	自流平、吊顶等 Self-leveling, hand ceiling	套 set	1
10		空间软装 Space decoration	文化展板、区域划分、标识等 Cultural exhibition, regional division, identification	套 set	1

本实训室以训练工业机器人的编程操作为主要目的, 配备各种典型的工装夹具和作业单元供学生进行学习与操作。主要支撑工业机器人编程与操作、工业机器人现场编程等核心课程。

The main purpose of this training room is to train the programming operation of industrial robots. It is equipped with various typical fixture and operation units for students to learn and operate. It mainly supports core courses such as industrial robot programming and operation, industrial robot field programming, etc.



工业机器人技术应用典型实训室

Basic Training Room of Industrial Robot Technology Application



序号 NO.	区域 Area	配置内容 Configuration		单位 Unit	数量 Qty
1	多媒体教学系统 Multimedia teaching system	投影仪、多媒体讲台、幕布、电脑主机等 Projector, multimedia platform, screen, host computer		套 set	1
2	工作区 Working area	DLRB-934工业机器人典型应用实训系统 DLRB-934 Industrial robot basic training system		套 set	6
3	讨论区 Discussion area	六角讨论桌、会议白板等 Table conference, whiteboard		套 set	6
4	资讯区 Information area	电脑桌、台式电脑、交换机、文件柜等 Computer desk, desktop computer, switchboard, file cabinet		套 set	1
5	仓储区 Storage area	工具柜、货架、物料小车等 Tool cabinet, shelf, material trolley		套 set	1
6	情景建设 Scene construction	清洁区 Clear area	扫把、灰斗、拖把、分类垃圾桶等 Broom, bucket, mop, classified, garbage, barrels, etc.	套 set	1
7		消防区 Fire district	消防器材 Fire equipment	套 set	1
8		医务区 Medical area	医药箱 Medicine cabinet	套 set	1
9		空间硬装 Space finishing	自流平、吊顶等 Self-leveling, hand ceiling	套 set	1
10		空间软装 Space decoration	文化展板、区域划分、标识等 Cultural exhibition, regional division, identification	套 set	1

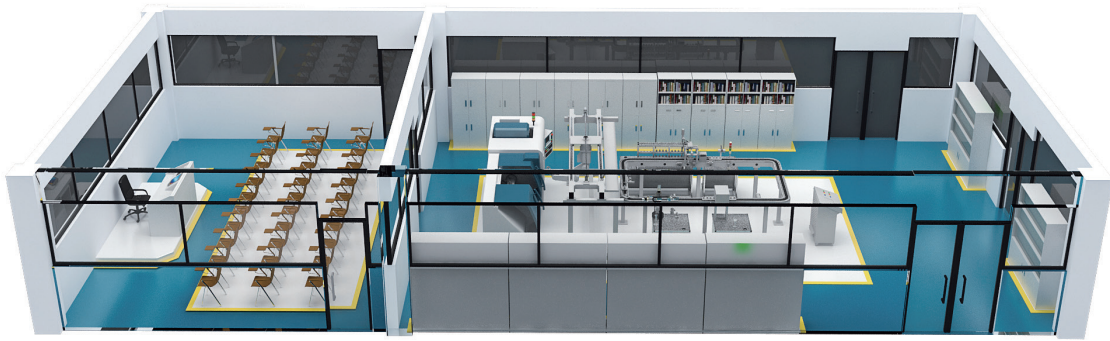
本实训室以实际现场工业机器人典型应用,如搬运、码垛、装配、焊接等为原形,配置典型的工业机器人学习工作站,用以学习工业机器人的系统集成、作业工艺及通信接口技术等。主要支撑工业机器人工作站系统集成、工业机器人系统维护等核心课程。

The training room take actual industrial field industrial robot typical application, such as convey, palletizing, assembling, welding prototype, equipped with typical industrial robot workstation, used to learn industrial robot systematic integration operation technology and communication interface technology etc. Mainly serve core course like industrial robot workstation integration, industrial robot system maintenance etc.



工业机器人技术应用典型实训室

Basic Training Room of Industrial Robot Technology Application



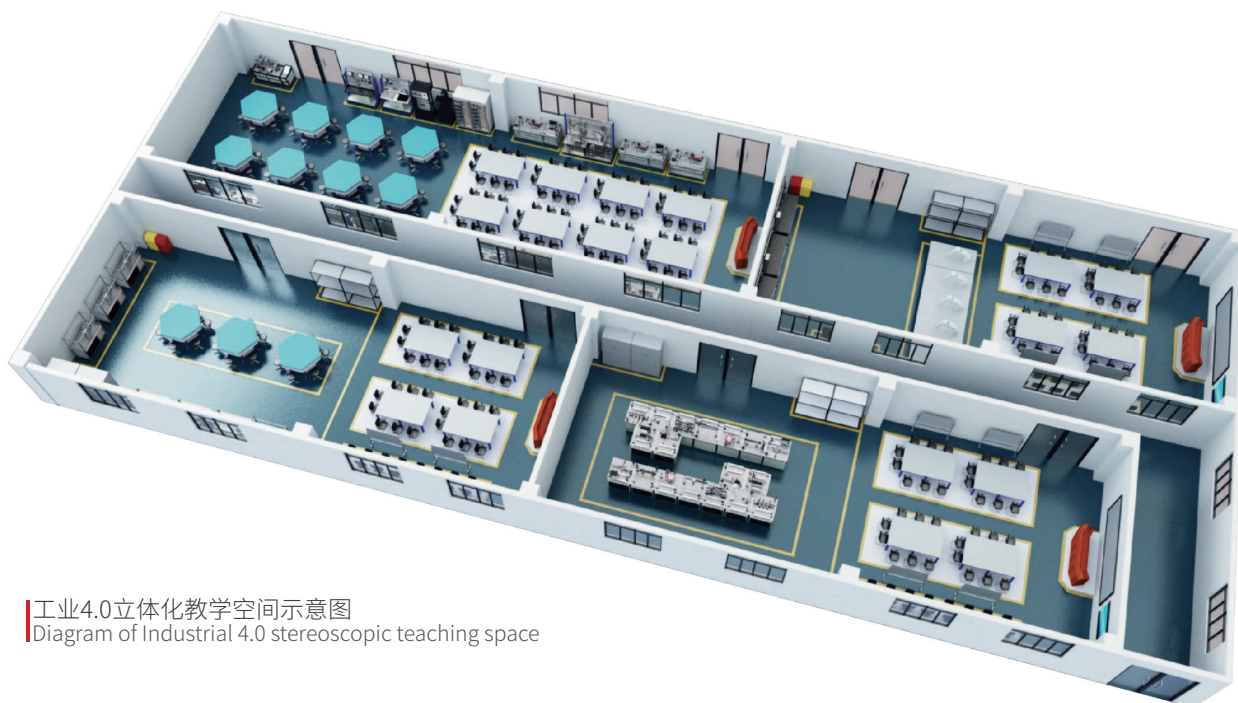
序号 NO.	区域 Area	配置内容 Configuration		单位 Unit	数量 Qty
1	多媒体教学系统 Multimedia teaching system	投影仪、多媒体讲台、幕布、电脑主机等 Projector, multimedia platform, screen, host computer		套 set	1
2	工作区 Working area	DLRB-801柔性制造生产实训系统 DLRB-801 Flexible Modular Production Training System		套 set	1
3	讨论区 Discussion area	六角讨论桌、会议白板等 Table Conference Whiteboard		套 set	6
4	资讯区 Information area	电脑桌、台式电脑、交换机、文件柜等 Computer desk, desktop computer, switchboard, file cabinet		套 set	1
5	仓储区 Storage area	工具柜、货架、物料小车等 Tool cabinet, shelf, material trolley		套 set	1
6	情景建设 Scene construction	清洁区 Clear area	扫把、灰斗、拖把、分类垃圾桶等 Broom, bucket, mop, classified, garbage, barrels, etc.	套 set	1
7		消防区 Fire district	消防器材 Fire equipment	套 set	1
8		医务区 Medical area	医药箱 Medicine cabinet	套 set	1
9		空间硬装 Space finishing	自流平、吊顶等 Self-leveling, Hand ceiling	套 set	1
10		空间软装 Space decoration	文化展板、区域划分、标识等 Cultural exhibition, regional division, identification	套 set	1

学生在理论知识学习过程中学习到的都是单个的知识点,而企业所需的是具备能够解决实际问题、具备一定专业技能的人才。在本实训室,学生将通过具体的工作任务,系统地、将专业技术整合运用在一起,将学到的专业知识点通过“做积分”的整合,进行知识与能力的转换,形成能解决实际问题的职业能力,从而达到企业所需。

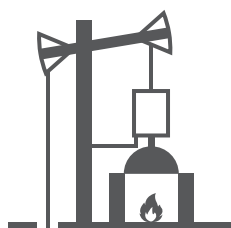
The students get in the process of theory study is single knowledge, however enterprise need talents who capable of solving practical problem and have professional skills. Through specific task in the training room, students can systematically and comprehensively use their professional knowledge, coordinate professional knowledge, convert knowledge into ability and achieve the vocational ability to solve practical problems and meet the needs of enterprise.

机电一体化技术(工业4.0方向)

Mechatronic Technology(Industrial 4.0)



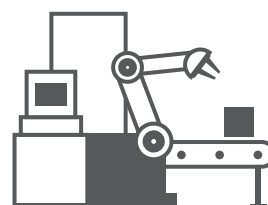
工业4.0立体化教学空间示意图
Diagram of Industrial 4.0 stereoscopic teaching space



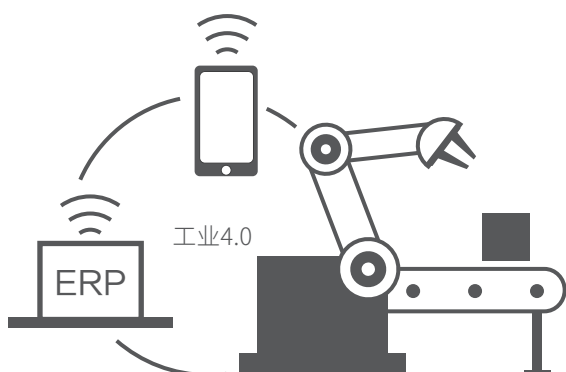
工业1.0



工业2.0



工业3.0



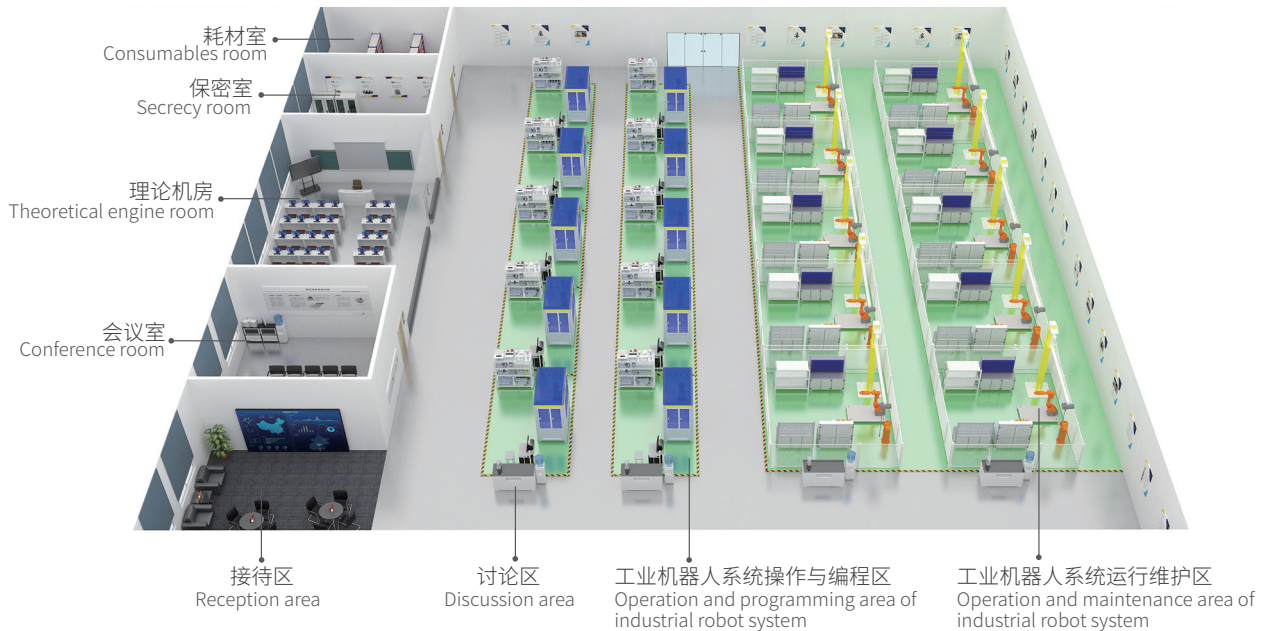
工业4.0

经济发展及转型升级,推动以“智能制造”为主导的工业4.0的发展,形成互联网与制造的融合,我们的职业教育必将顺应市场的变革,与市场对接,与企业岗位对接,迎接工业4.0职教大发展。

The economic development and transformation, to promote the development of industrial 4.0, form the integration of internet and manufacturing, our vocational education must adapt to market change,docking with market and enterprise post and meet the development of industrial 4.0 .

1+X INDUSTRIAL ROBOT OPERATION AND MAINTENANCE

1+X 工业机器人操作与运维



1+X培训考核基地划分为：工业机器人系统运行维护培训考核区、工业机器人系统操作与编程培训考核区、耗材室、保密室、理论机房、会议室、接待区。

■ 工业机器人系统运行维护区主要配置为10套“DLIR-106工业机器人拆装及运维工作站”。

■ 工业机器人系统操作与编程区主要配置为10套“DLIR-116工业机器人操作与编程应用系统”或10套“DLDS-3512 工业机器人技术应用实训系统”。

■ 同时在操作平台上方设置考核记录分析系统，可通过视频方式记录设备使用情况以及考核全过程，可远程监控考生行为，又可作为安全文明操作评分和争议复核依据，使考核更具客观性和公平性。

■ 培训区主要由理论学习室（含30套电脑及工控一体机）、会议室组成。用于技能考核相关培训及咨询接待。

1+X training and assessment base is divided into: operation and maintenance training and assessment area of industrial robot system, operation and programming training and assessment area of industrial robot system, consumables room, confidentiality room, theory room, conference room and reception area.

■ The operation and maintenance area of industrial robot system is mainly equipped with 10 sets of "DLIR-106 industrial robot disassembly and operation and maintenance workstation".

■ The industrial robot system operation and programming area is mainly configured with 10 sets of "DLIR-116 industrial robot operation and programming application system" or 10 sets of "DLDS-3512 industrial robot technology application training system".

■ At the same time, an assessment record analysis system is set up above the operation platform, which can record the use of the equipment and the whole assessment process through video, monitor the examinee's behavior remotely, and serve as the basis for safe and civilized operation scoring and Dispute Review, making the assessment more objective and fair.

■ The training area is mainly composed of theory learning room (including 30 sets of computers and industrial control integrated machine) and conference room. It is used for skill assessment related training and consultation reception.



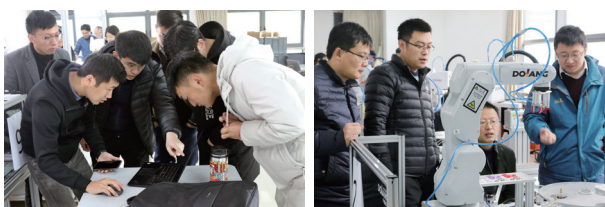
DLIR-106工业机器人拆装及运维工作站
Industrial Robot Disassembly and Operation and Maintenance Workstation



DLIR-116工业机器人操作与编程应用系统
Industrial Robot Operation and Programming Application System



DLDS-3512 工业机器人技术应用实训系统
Industrial Robot Application Training System



▲ 1+X工业机器人操作与运维职业技能等级证书师资培训
1+X Industrial Robot Operation and Maintenance Vocational Skills Level Certificate Teacher Training

INTEGRATION OF INDUSTRY AND EDUCATION COLLABORATIVE EDUCATION

产教融合 协同育人

适应产教融合趋势，创新校企合作模式，栋梁和职业院校在职业领域开展更深层次合作，推动和带动职业院校转型发展，促进职业院校改革和建立以职业训练院为主体的高技能人才培养体系，为我国职业教育的转型发展作出新的贡献！

In order to adapt to the trend of industry and education integration, innovative mode of cooperation between schools and enterprises, Dolang deepened cooperation with vocational institutes in the field of vocational education, promoted the transformation and development of Vocational Schools, accelerated the reform of Vocational Colleges and the process of establishing, based on vocational training institutes, a high-skilled personnel training system to make new contribution for the transformation development of China's Vocational Education.



校企通 School-enterprise

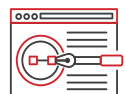
我们向合作院校提供部分设备投入、课程体系、教学资源、师资培训、标准化实训基地的整体设计、教学方法、认证体系、就业平台等系统化解决方案。在院校投入有资金缺口时，我们帮助院校争取金融银行的定向扶持政策。

We provide equipment, curriculum system, teaching resources, teacher training, overall design of standardized training base, teaching method, authentication system, employment platform etc systematic solution for cooperative institutions. we help them to strive for aid policy of financial bank when university and college short of investment budget.

双元+ Dual System⁺

我们向合作院校提供课程体系、教学资源、师资培训、教学方法、认证体系、就业平台等系统化解决方案，由院校配备标准化实训基地，校企共同参与人才培养过程。

We provide curriculum system, teaching resources, teacher training, teaching methods, certificate system, employment platform etc systematic solution for cooperative institutions, institutions equip standardized training base, school-enterprise working together in talents training.



栋梁提供一站式完整解决方案，由始至终地支持教师和学生的教学过程。系统地从现在教学理论和方法出发，融入自主学习的理念，针对整个教学过程提供实时评估和反馈。无论学生处于什么知识能力水平，栋梁的解决方案保证让他们达到顶峰！

One stop solution: we provide complete one-stop solution and support teaching process from beginning to the end. The system is based on the modern teaching theory and method, integrates the idea of autonomous learning, real-time provide assessment and feedback on whole teaching process. Our solution can help students with different knowledge to reach top level.



▲ 2015 国际校企合作对接对话会
2015 International Dialogue Conference on School-Enterprise Cooperation and Docking



▲ 与江苏盐城技师学院校企合作建立世赛校内研究所
Establishment of the WorldSkills Institution in cooperation with Yancheng Technician College, Jiangsu Province



▲ 与山东铝业职业学院校企合作办学签约
Signing Ceremony of School-Enterprise Cooperation Strategy with Shandong Aluminum Vocational College



▲ 中德栋梁·邢台技师“工业机器人教育”战略合作签约仪式
The Signing Ceremony of Strategic Cooperation of "Industrial Robot Education" between Dolang and Xingtai Technician College



▲ 与辽宁工程职业学院共建世赛国家集训基地
Establishment of the National Training Base for the WorldSkills Competition with Liaoning Vocational College of Engineering



▲ 与哈尔滨工业大学建立产学研合作基地
Establishment of an industry-university-research cooperation base with Harbin Institute of Technology



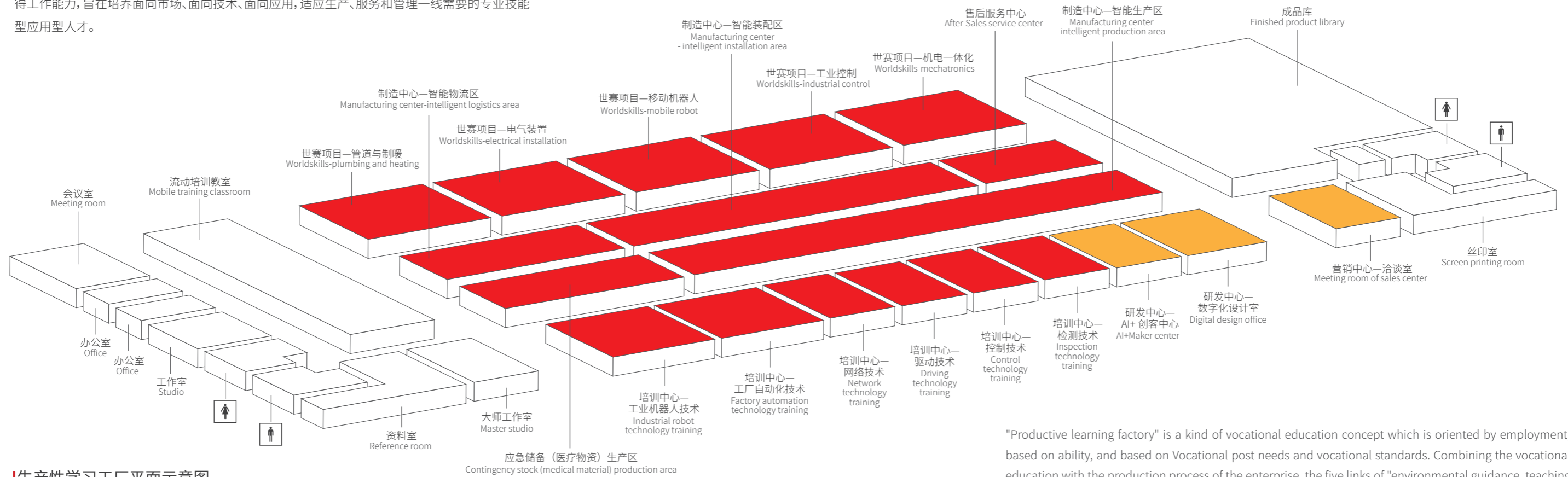
▲ 中德栋梁联手天职师大设立“校企合作师资培训基地”
Dolang and Tianjin University of Technology and Education establish "School-Enterprise Cooperation Teacher Training Base"



▲ 枣庄科技职业学院·中德栋梁教育科技集团校企合作办学战略签约仪式
Signing Ceremony of School-Enterprise Cooperation Strategy with Zaozhuang Vocational College of Science and Technology

PRODUCTIVE LEARNING FACTORY 生产性学习工厂

“生产性学习工厂”是一种以就业为导向，以能力为本位，以职业岗位需要和职业标准为依据的职教理念。将职业教育与企业生产过程紧密结合，实施“环境引领、教材开发、教学场所设置、综合实训、任务评价”五个环节，实现“企业环境与教学环境融为一体，教学实际与生产实际融为一体，理论与实践融为一体，知识与能力融为一体”的理实一体化教学。通过构建与企业发展相适应的“生产性学习工厂”教学模式及以“项目教学法”为代表的行为导向教学法，给予学生更多的实践空间，让学生参与企业项目强化技能，在“做中学、学中做”，实现学做合一、校企合一、教研合一，进而获得工作能力，旨在培养面向市场、面向技术、面向应用，适应生产、服务和管理一线需要的专业技能应用型人才。



生产性学习工厂平面示意图
Production Learning Factory Floor Plan

"Productive learning factory" is a kind of vocational education concept which is oriented by employment, based on ability, and based on Vocational post needs and vocational standards. Combining the vocational education with the production process of the enterprise, the five links of "environmental guidance, teaching material development, teaching place setting, comprehensive training and task evaluation" are implemented to realize the integration of the enterprise environment and the teaching environment, the teaching practice and the production practice, the theory and the practice, and the knowledge and the ability. Through the construction of the teaching mode of "productive learning factory" and the behavior oriented teaching method represented by "project teaching method", we can give students more practice space, let students participate in enterprise projects, strengthen their skills, and achieve the unity of learning and doing, school enterprise integration, teaching and research integration, so as to obtain working ability, aiming to cultivate the working ability oriented to Market oriented, technology-oriented, application-oriented, professional and skilled application-oriented talents to meet the needs of production, service and management.



Intelligent Storage System
DLRB-IWS591 智能仓储系统

智能仓储系统由立体货架、堆垛机、倍速链输送机、滚筒输送机、滚筒转弯输送机、顶升移栽机、WCS 管理软件、电控系统等组成，可完成自动入库、自动出库、库位状态查询等功能，可通过人工上下料或 AGV 上下料等方式进行物料的存储和取放，实现仓储的自动化、智能化和数字化。

The intelligent storage system consists of three-dimensional shelf, stacker, double speed chain conveyor, roller conveyor, roller turning conveyor, jacking transfer machine, WCS management software, electronic control system, etc., which can complete automatic storage and automatic delivery, the location status query and other functions, the material can be stored and retrieved by manual loading or unloading or AGV loading and unloading, to achieve automation, intelligence and digitization of storage.



Industrial Robot Welding Workstation
DLRB-WK1420 工业机器人焊接工作站

工业机器人焊接工作站由六轴工业机器人（搬运）、焊接专用六轴工业机器人、焊接电源、焊枪、送丝机、清枪站、焊接变位机、三维柔性焊接平台、烟尘净化器、焊接专用夹具、安全围栏、电控系统等组成，配合机器人焊接专用软件包，可显著提高焊接质量及质量稳定性，提高劳动生产率，降低生产成本，改善工人劳动条件，可在有害环境下长期连续工作。

Industrial robot welding workstation consists of six-axis industrial robot (handling), welding special six-axis industrial robot, welding power supply, welding torch, wire feeder, clear gun station, welding positioner, three-dimensional flexible welding platform, soot purifier, welding special fixture. The safety fence, electronic control system and other components, combined with the robot welding special software package, can significantly improve the welding quality and quality stability, improve labor productivity, reduce production costs, improve workers' working conditions, and can work continuously in a harmful environment for a long time.



Industrial Robot Grinding & Polishing Workstation **DLRB-PER16 工业机器人打磨抛光工作站**

工业机器人打磨抛光工作站包括 6 轴工业机器人、浮动打磨装置、力控砂带磨削抛光机、专用打磨平台、自动脉冲反吹除尘清灰除尘器、专用夹具、电控系统等，与人工打磨相比，具有生产效率高，打磨抛光质量好的优势，同时可代替人在粉尘、噪音的环境中连续稳定工作，可大大降低工人劳动强度、提高产品质量稳定性。

Industrial robot grinding and polishing workstations include 6-axis industrial robots, floating grinding devices, force-controlled abrasive belt grinding and polishing machines, special grinding platforms, automatic pulse blowback dust removal and dust removal devices, special fixtures, electronic control systems, etc. Compared with the advantages of high production efficiency and good polishing quality, it can replace people's continuous and stable work in dust and noise environment, which can greatly reduce the labor intensity of workers and improve the quality stability of products.



Internet Collaborative Manufacturing Technology Application System **DLIM-102MA 互联网协同制造技术应用系统**

互联网协同制造技术应用系统包括仓储供料单元、四轴机器人分拣单元、六轴工业机器人装配单元、AGV 输送单元、MES 系统单元、电控系统等，本系统采用六轴工业机器人、四轴 SCARA 水平多关节机器人、桁架机械手、AGV、激光标记机等作为关键设备，可实现微信下单、柔性化生产、机器视觉识别、RFID 读写、AGV 输送、自动分拣、激光打标、自动包装等功能，涵盖了工业 4.0 互联网协同制造的关键技术。

Internet collaborative manufacturing technology application system including storage feed unit, four axis robot sorting unit, six axis industrial robot assembly unit, AGV transportation unit, MES system unit, electric control system, etc., this system uses the six axis industrial robots, 4-axis SCARA horizontal multi-joint robot, truss manipulator, AGV, laser marking machine, etc as the key equipment, which can realize WeChat order identification, RFID, speaking, reading and writing, flexible production, machine vision, automatic AGV transportation, sorting, laser marking, automatic packaging, and other functions, covers 4.0 Internet industry and the key technologies of collaborative manufacturing.



Intelligent Manufacturing Gift Frame Production System **DLIM-3119 智能制造礼品相框生产系统**

智能制造礼品相框生产系统由自动立体仓库、数控加工单元、打标单元、UV打印单元、组装检测单元、包装单元、环形传输系统、AGV输送系统、MES软件及电气控制系统组成，融合了工业机器人技术、数控加工技术、智能仓储技术、AGV物流运输、MES制造执行系统、激光标记技术、RFID应用、视觉检测、工业互联网技术等智能制造关键技术，实现了设备自动化、生产精益化、管理信息化的高度统一。

Intelligent manufacturing gift frame production system by the automatic stereoscopic warehouse, numerical control processing unit, marking unit, UV printing unit, detection unit assembly, packaging unit, circular transmission system, AGV transportation system, MES software and electrical control system, is a blend of industrial robot technology, nc machining technology, intelligent storage technology, AGV logistics conveyor, MES manufacturing execution system, laser marking technology, RFID application, visual inspection, industrial intelligent manufacturing key technologies such as the Internet technology, has realized the automation equipment, production of the lean, highly unified management informationization.



High-speed Automatic Flat Mask Production Line **NBL-9600 高速全自动平面口罩生产线**

NBL-9600 高速全自动平面口罩生产线是将一次性口罩中的外层、中层（白色过滤溶喷无纺布）、内层（白色无纺布）、鼻夹条、耳线组装成一次性平面口罩（口罩规格：175mm*95mm）的全制程自动化设备。该生产线由挂料架（含鼻梁托盘）、打片机、分流机、焊耳站、收料装置（输送带）组成。

NBL-9600 high-speed automatic flat mask production line is a full-process automatic equipment that assembles the outer layer, middle layer (white filtered and sprayed non-woven fabric), inner layer (white non-woven fabric), nose clip and ear wire of disposable masks into disposable flat masks (mask specification: 175mm*95mm). The production line consists of a hanging frame (including nose tray), a chip punching machine, a shunt machine, a welding ear station and a receiving device (conveyor belt).

SERVICE THE COMPETITION 服务国赛

2009年

- 山东省职业院校技能大赛
- 山东省职业院校(高职组)技能大赛
- Shandong Vocational College Skills Competition
- Shandong Vocational College (Higher Vocational Group) Skills Competition

2010年

- 山东省职业院校技能大赛中职组“栋梁杯”电工电子技能竞赛
- 第三届全国技工院校技能大赛山东省选拔赛
- Shandong Vocational College Skills Competition (Secondary Vocational Group) “Dolang Cup” Electrical and Electronic Skills Competition
- The Third National Technical College Skills Competition - Shandong Provincial Selection Competition

2017年

- 山东省职业院校技能大赛及市级选拔赛
- 全国技工院校技能大赛山东省选拔赛
- 28个省份及12家国有骨干重点企业第二届“埃夫特·栋梁杯”全国工业机器人技术应用技能大赛选拔赛
- 技能中国行2017系列活动
- 2017年中国技能大赛-中国国际技能大赛
- 2017年中国技能大赛-第二届“埃夫特·栋梁杯”全国机器人技术应用技能大赛
- 2017年中国技能大赛-首届全国智能制造应用技术技能大赛
- Shandong Vocational College Skills Competition - City-level Selection Competition
- National Technical College Skills Competition - Shandong Provincial Selection Competition
- 28 Provinces and 12 key state-owned enterprises, the second “Efort-Dolang Cup” National Industrial Robot Technology Application Skills Selection Competition
- Skills China 2017 Activities
- China Skills Competition in 2017-China International Skills Competition
- China Skills Competition in 2017 -The Second “Efort -Dolang Cup” National Robot Technology Application Skills Competition
- China Skills Competition in 2017 -The First National Intelligent Manufacturing Application Technology Skills Competition

2018年

- 第二届全国智能制造应用技术技能大赛
- 2018年中国技能大赛第45届世界技能大赛全国选拔赛
- The Second National Intelligent Manufacturing Application Technology Skills Competition
- China Skills Contest in 2018 - The 45th World Skills Contest National Selection Competition

2012年

- 第四届全国技工院校技能大赛山东省选拔赛
- The Fourth National Technical College Skills Competition - Shandong Provincial Selection Competition

2014年

- 中国技能大赛山东省选拔赛
- 山东省职业院校技能大赛(中职组) 液压与气动系统装调与维护
- China Skills Competition Shandong Provincial Selection Competition
- Shandong Vocational College Skills Competition (Secondary Vocational Group) - Hydraulic and Pneumatic System Installation and Maintenance

2016年

- 世赛河南省、山东省选拔赛
- 2016中国技能大赛-“埃夫特·栋梁杯”全国工业机器人技术应用技能大赛
- 25个省份首届“埃夫特·栋梁杯”全国工业机器人技术应用技能大赛选拔赛
- World Competition - Henan Province, Shandong Province Selection Competition
- 2016 China Skills Competition - “Efort-Dolang Cup” National Industrial Robot Technology Application Skills Competition
- The Selection of the first “Efort- Dolang Cup” National Industrial Robot Technology Application Skill Competition - Selection Competition in 25 provinces

2015年

- 山东省春季技能高考
- 山东省职业院校技能大赛(中职组) 液压与气动系统装调与维护
- 山东省职业院校技能大赛中职组机械装配技术
- Shandong Province Spring Skills College Entrance Examination
- Shandong Vocational College Skills Competition (Secondary Vocational Group) - Hydraulic and Pneumatic System Installation and Maintenance
- Shandong Provincial Vocational College Skills Competition (Secondary Vocational Group) - Mechanical Assembly Technology

2019年

- 第三届全国工业机器人技术应用技能大赛
- 第三届全国智能制造应用技术技能大赛
- 2019“一带一路”国际技能大赛
- The Third National Industrial Robot Technology Application Skills Competition
- The Third National Intelligent Manufacturing Application Technology Skills Competition
- “Belt and Road” International Skills Competition in 2019

全国工业机器人技术应用技能大赛

为国家级一类大赛，由工业和信息化部、人力资源和社会保障部、教育部、中华全国总工会、共青团中央共同主办。自2016年设立该项赛事以来，中德栋梁一直致力于为大赛提供比赛设备及技术服务，并积极服务于各省区选拔赛，连续三届获“突出贡献奖”。

The National Industrial Robotics Application Skills Competition is a national competition co-organized by the Ministry of Industry and Information Technology, Ministry of Human Resources and Social Security, Ministry of Education, All-China Federation of Trade Unions and the Central Committee of the Communist Youth League. Since the establishment of the tournament in 2016, Sino-German Building Blocks has been committed to providing competition equipment and technical services for the tournament, and has actively served the provincial and regional selection competitions, winning the "Outstanding Contribution Award" for three consecutive years.



▲ 2016年中国技能大赛—首届“埃夫特·栋梁杯”全国工业机器人技术应用技能大赛
2016 China skills competition - The first "Efort and Dolang Cup" national industrial robot technology application skills competition



▲ 2017年中国技能大赛—第二届“埃夫特·栋梁杯”全国工业机器人技术应用技能大赛
2017 China skills competition - The second "Efort and Dolang Cup" national industrial robot technology application skills competition



▲ 2019年中国技能大赛—第三届全国工业机器人技术应用技能大赛
2019 China skills competition - The third national industrial robot technology application skills competition

全国智能制造应用技术技能大赛

为国家级一类大赛，由人力资源和社会保障部、中华全国总工会、中国机械工业联合会共同主办。自2017年设立该项赛事以来，中德栋梁致力于为大赛提供比赛设备平台及技术服务，并积极服务于各省区选拔赛，连续三届获“突出贡献奖”，并被评为“优秀合作企业奖”。

The National Smart Manufacturing Applied Technology Skills Competition is a national competition jointly organized by the Ministry of Human Resources and Social Security, All-China Federation of Trade Unions and China Machinery Industry Federation. Since the establishment of the tournament in 2017, Sino-German Building Blocks has been committed to providing competition equipment platform and technical services for the tournament, and has actively served the provincial and regional selection competitions, winning the "Outstanding Contribution Award" for three consecutive years and being awarded the "Excellent Cooperation Enterprise Award".



▲ 2017年中国技能大赛-首届全国智能制造应用技术技能大赛
2017 China Skills Competition - The first national intelligent manufacturing application technology skills competition



▲ 2018年，第二届全国智能制造应用技术技能大赛
2018, The second national intelligent manufacturing application technology skills competition



▲ 2019年，第三届全国智能制造应用技术技能大赛
2019, The third national intelligent manufacturing application technology skills competition



DOLANG & WORLDSKILLS COMPETITION 栋梁与世赛

栋梁自 2007 年以来一直关注着世界技能大赛的动态及相关活动。紧密跟踪“世界技能组织”（WorldSkills International）的发展方向、组织实施特点、技术研发方向、命题方式、评分规则；深入研究栋梁产品和教学理念与世界大赛接轨事宜；收集国际国内技能竞赛动态信息，把世界技能大赛技术标准作为栋梁产品研发标准，为栋梁的发展提供了技术理念。在对国际技能竞赛了解、准备方面栋梁走在了国内同行业的前面。

Since 2007, Dolang has been paying attention to the development and related activities of the WorldSkills Competition. Closely follow WorldSkills International development direction, organization implementation characteristics, technology research and development direction, proposition and evaluation method; deeply study the linking of Dolang products and teaching concepts with the WorldSkills Competition; collect dynamic information of international and domestic skills competitions, Dolang take WorldSkills International Standard as the benchmark. In terms of understanding and preparing for the international skills competition, Dolang is ahead of the domestic industry.



左起：马德志、宋晨曦、张友权、王晓冬、郭军、王伟明、王兰柱、董京华、李成飞、贾伟一、黄晓峰、郑伟琪、杨伟群、刘友和、张帅、孙怀荣、张志达、周云芳、蒋作栋

2010 年 5 月，栋梁作为教育装备领域唯一一家企业应邀参加中国第一届国际技能大赛技术准备工作研讨会
May 2010, As the only enterprise in the field of educational equipment, Dolang was invited to attend the seminar on technical preparations for the first International Skills Competition in China.



栋梁赞助支持第 44 届世界技能大赛全国选拔赛；为电气装置赛项提供全部设备和独家技术支持，并进行职业技能互动项目展示。
Dolang sponsored the 44th World Skills Competition National Selection Competition; provides all equipment and exclusive technical support for the electrical installation competition, and carries out the interactive project demonstration of vocational skills.





▶ 栋梁受国家人社部和上海人社局邀请参与2017中国国际技能大赛，为电气装置和移动机器人赛项提供全部设备和独家技术支持，并进行职业技能互动项目展示。

Dolang participated in the 2017 China International Skills Competition at the invitation of the Ministry of human resources and social security and the Shanghai human resources and social security Bureau. It provided all equipment and exclusive technical support for the electric devices and mobile robots, and displayed the interactive project of professional skills.



▶ 栋梁赞助支持第45届世界技能大赛全国选拔赛；在上海赛区和广东赛区为电气装置、管道与制暖 and 移动机器人提供全部设备和独家技术支持，并进行职业技能互动项目展示。

Dolang sponsored the 45th World Skills Competition National Selection Competition, and provided all equipment and exclusive technical support for electric devices, plumbing and heating and mobile robotics in Shanghai and Guangdong Competition Areas, as well as demonstration of interactive professional skills projects.



WHERE
IS
DOLANG
GOING

栋梁到哪里去



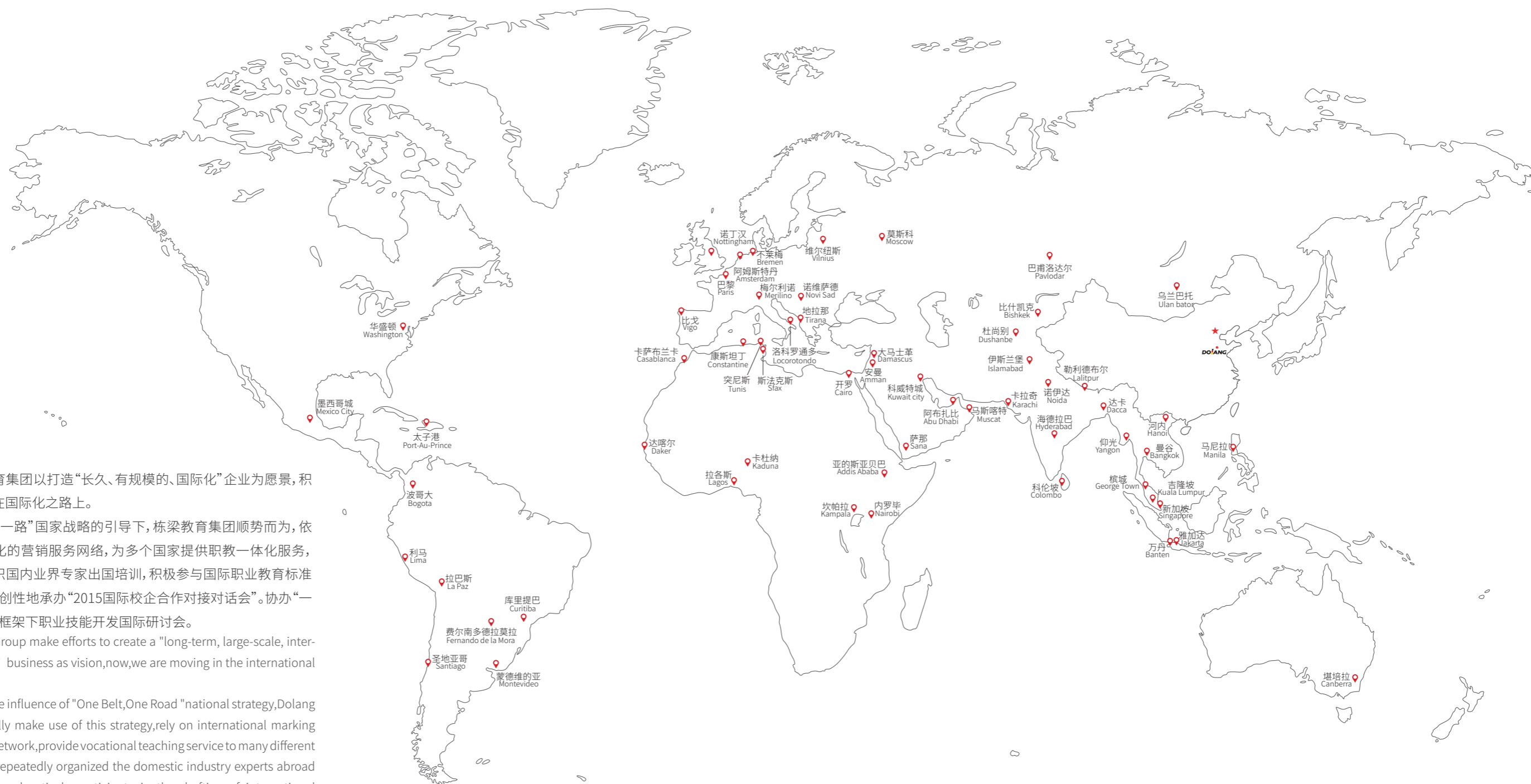
SERVE THE "BELT & ROAD" 服务“一带一路”

栋梁教育集团以打造“长久、有规模的、国际化”企业为愿景，积极行进在国际化之路上。

在“一带一路”国家战略的引导下，栋梁教育集团顺势而为，依托全球化的营销服务网络，为多个国家提供职教一体化服务，多次组织国内业界专家出国培训，积极参与国际职业教育标准起草，开创性地承办“2015国际校企合作对接对话会”。协办“一带一路”框架下职业技能开发国际研讨会。

Dolang Group make efforts to create a "long-term, large-scale, international" business as vision, now, we are moving in the international road.

Under the influence of "One Belt, One Road" national strategy, Dolang group fully make use of this strategy, rely on international marketing service network, provide vocational teaching service to many different country, repeatedly organized the domestic industry experts abroad training, and actively participate in the drafting of international vocational education standards, groundbreaking contractor 2015 international school-enterprise cooperation docking dialogue. Co-organized an international seminar on vocational skills development under the framework of "One Belt, One Road".



栋梁的世界 世界的栋梁
The world of Dolang, Dolang belongs to world



联合国教科文组织会议
United Nations Educational, Scientific and Cultural Organization



肯尼亚教育部职业教育司司长
Mr. Mursal Bashir Hassan 莅临栋梁
Mr. Mursal Bashir Hassan Director,
Vocational Education Division, Ministry of Education, Kenya visit factory



法国教育部长验厂
French Minister of Education visit factory



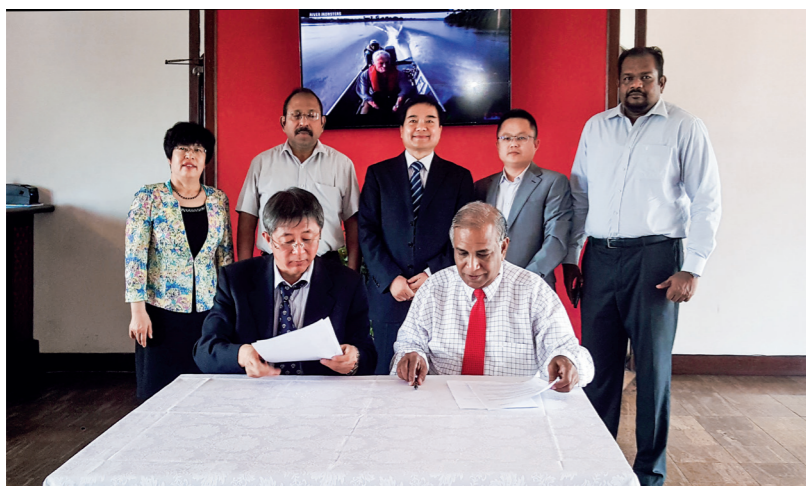
栋梁赴缅甸开展培训
Dolang went to Myanmar for training



援助乌拉圭设备
Aid project for Uruguay



柬埔寨劳动部职业教育司司长参观栋梁
Director of TVET from Ministry of Labour and Vocational Training, Cambodia Visited Dolang



走进埃及、印度、斯里兰卡
Entering Egypt, India, Sri Lanka



▲ 与泰国教育部达成合作
Cooperation with the Ministry of Education of Thailand



▲ 与印度尼西亚教育部达成合作
Cooperation with the Ministry of Education of Indonesia



◀ 2019年5月栋梁赞助支持由国家人力资源社会保障部、国家发展改革委、国际发展合作署、重庆市人民政府等四部门主办的“一带一路”国际技能大赛。

In May 2019, Dolang assisted The "Belt and Road" International Skills Competition sponsored by four departments, including the Ministry of Human Resources and Social Security, the National Development and Reform Commission, the International Development Cooperation Agency, and the Chongqing Municipal Government.



◀ 2019年12月栋梁协办“一带一路”框架下职业技能开发国际研讨会

December 2019 Dolang co-organizes an international seminar on vocational skills development under the framework of the Belt and Road Initiative.

DOLANG PRODUCTS 栋梁产品



鲁南机床

CLK6140S

东 梁科技设备有限公司

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41

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- 44 供电技术实训考核系列
Power Supply Training Assessment Series
- 45 电子实训系列
Electronic Training Series
- 46 电机实训系列
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Pneumatic Training Series
- 56 液压实训系列
Hydraulic Training Series
- 57 可编程序逻辑控制器实训系列
PLC Training Series
- 57 创新型工业自动化控制技术实训系列
Innovative Industrial Automation Control Technology Training Series
- 58 过程控制实训系列 (PCS 系列)
Process Control Training Series
- 59 制冷与空调系列
Refrigeration and Air Conditioning Series

机电一体化、机器人实训系列
MECHATRONICS, ROBOTICS TRAINING SERIES

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- 61 机电一体化实训系列 (FA 系列)
Mechatronics Training Series
- 64 模块化柔性生产线实训系列 (MPS 系列)
Modular Flexible Manufacturing Training Series
- 64 柔性制造实训系列 (FMS 系列)
Flexible Manufacturing Training Series
- 65 应急储备 (物资) 生产系列
Emergency Stock (Material) Production series
- 66 移动机器人系列
Mobile Robotics Series
- 67 工业机器人系列
Industrial Robot Series
- 73 人工智能系列
Artificial Intelligence Series
- 74 智能制造技术与应用系列
Intelligent Manufacturing Technology and Application System



电工电子实训系列

ELECTRICAL AND ELECTRONIC
TRAINING SERIES

维修电工技能实训考核系列

Electrical Maintenance Skills Training Series



DLWD-SA2668B 安全用电实训设备
Electrical Protection Techniques Demonstration Set



DLWD-ETBE12D730 维修电工技能实训系统
Maintenance Electrician Skills Training System



DLWD-ETBE24D730M 维修电工技能实训系统
Electrical Maintenance Skills Training System



DLWD-ETBE840M-PX 中控教师机
Central Control Teacher



DLWD-ZNDG 智能型电工综合技能实训考核设备
Intelligent Electrician Comprehensive Skill Training and Assessment Equipment



DLWD-ZD1200/6 中低压模拟实训系统
Low and Medium Voltage simulation Training System



DLWD-XD35 现代电工技术技能实训考核系统
Modern Electrician Technical Skills Training and Evaluation System





DLDS-1214F 电气装置实训系统
Electrical Installation Training System
本系列还提供 | This series also offers

- DLDS-1214A 电气装置实训系统
- DLDS-1214B 电气装置实训系统
- DLDS-1214C 电气装置实训系统
- DLDS-1214D 电气装置实训系统



DLWD-CSMK 故障考核模块
Fault Assessment Module



DLWD-KNX 住宅与楼宇智能控制实训系统
Residential and Building Intelligent Control Training System



DLVR-EI 电气装置数字化VR实训教学仿真系统
Digital VR Teaching Simulation System for Electrical Equipment



DLDS-1214DEMO 电气装置标准工艺平台
Electrical Device Standard Process Platform



DLWD-ETBEKZKG 控制与开关实训系统
Controlling and Switching Training System



DLWD-ETBEZMXT 电气安装实训系统
Electrical Installation Training System



DLWD-ETBE12D-II 高级维修电工实训系统
Electrical Assembly Training System



DLWD-ETBE12D-I 中级维修电工技能实训考核系统
Intermediate Maintenance Electrician Skills Test System

本系列还提供 | This series also offers

- DLWD-ETBE12D-III 维修电工技师技能实训考核系统

供电技术实训考核系列 Power Supply Training Assessment Series



DLGD-5A-II 低压供配电实训考核系统
Low Voltage Power Supply and Distribution Training and Assessment System

电子实训系列 Electronic Training Series



DLZ-165E 电子线路实验实训装置
Electronic Circuit Experimental Training Unit



DLDP-WXD12 无线电调试工技能实训考核鉴定装置
Radio Debugger Skills Practical Training Assessment Appraisal Device



DLZ-ETTE24D 电子技能及PCB制作工艺实训系统
Electronic Skills and PCB Manufacturing Process Training System



DLZ-DLDZ03 电力电子技术与自动控制实训系统
Power Electronic Technology and Automatic Control Training System



DLDP-YD510 单片机实训考核系统
Microcontroller Practice Test System

本系列还提供 | This series also offers

- DLDP-YD511 单片机实训考核系统



DLWD-DGJS13 电工、电子、电拖技术实验系统
Experimental System for Electrical Engineering, Electronics, Electrical Towing Technology

本系列还提供 | This series also offers

- DLWD-DGJS11 型电工技术实验系统
- DLWD-DGJS12 型电工电子技术实验系统

电机实训系列

Motor Training Series



DLDS-JZL031 交直流传动实训台
AC/DC Transmission Training Station



DLJD-DJCD01 机电传动控制综合试验台
Electromechanical Transmission Control Comprehensive Test Bench



DLWD-DJ05 电机实训台
Electric Machine Training System



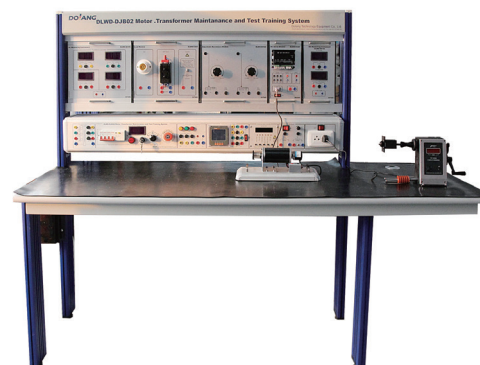
DLWD-DJ22-III 电机与变压器综合实训系统
Electric Motor and Transformer Comprehensive Practical Training System



DLWD-DJ22-M 感应电机实训系统
Induction Machine Training System



DLWD-DJSX-T 同步电机实训系统
Synchronous Motor Training System



DLWD-DJB02 电机与变压器维修检测实训系统
Motor and Transformer Maintenance and Inspection Training System



新能源实训系列

NEW ENERGY PRACTICAL
TRAINING SERIES



DLXNY-FN01 风力发电实训系统
Wind Power Training System



ST03 箱式太阳能设备
Portable Solar Power System



DLXNY-FN02 风光互补发电实训系统
Wind-solar Complementary Training System

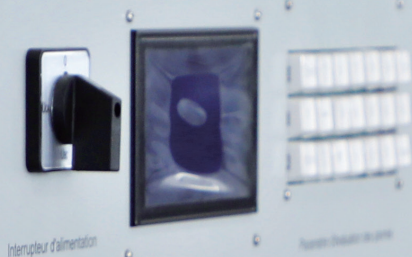


DLXNY-GF05 光伏发电实训系统
Photovoltaic Power Training System



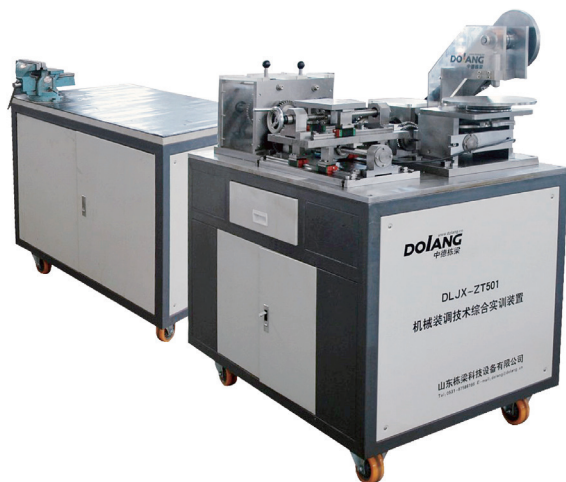
DLXNY-WPHGS 风光互补发电实训系统
Wind-solar Complementary Training System

DLWD-DDJBH01 Coffret d'Expérimentation
Pour Electricité Industrielle



机械设计 数控机床实训系列

MECHANICAL DESIGN
CNC MACHINE TRAINING SERIES



DLJX-ZT501 机械装调技术综合实训系统
Integrated Training System for Machine Setting Technology



DLJX-JXXT 机械系统综合实训系统
Mechanical System Integrated Training System



DLJCS-G2 机床电气技能实训系统
Machine Tool Electrical Skill Training System



DLDS-SKX23 数控维修实训考核系统
Numerical Control Maintenance and Training Assessment System

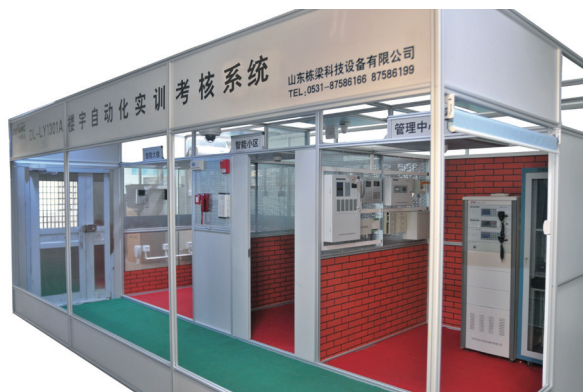


DLSKN-Xmate230G 智能数控铣床实训考核系统
Intelligent Numerical Control Milling Machine Practical Training and Assessment System



楼宇自动化实训系列

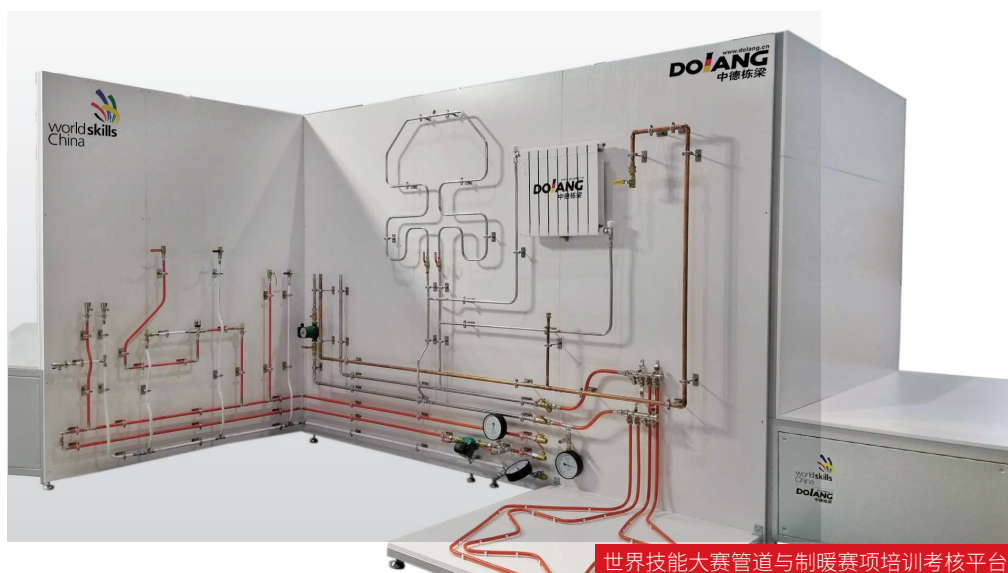
BUILDING AUTOMATION PRACTICAL
TRAINING SERIES



DLly-LY1301A 楼宇自动化实训考核系统
Building Automation Technology Training Assessment System



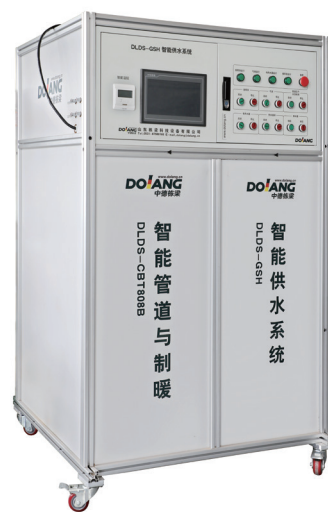
DLly-501A 楼宇自动化工程技能实训考核系统
Building Automation Engineering Skills Training Assessment System



DLDS-PH5738A 管道与制暖实训系统
Plumbing and Heating Training System



DLDS-CBT808A 管道与制暖实训系统
Plumbing and Heating Training System



DLDS-CBT808B 智能管道与制暖实训系统
Intelligent Plumbing and Heating Training System



1+X 智慧后勤运营职业技能等级证书培训考核平台

DLIT-370X 物联网人工智能应用系统
Artificial Intelligence Application System of Internet of Things



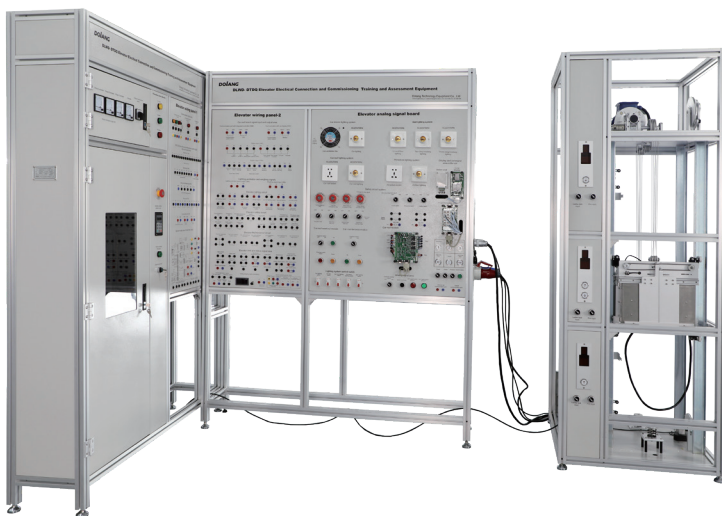
DLly-DT61 六层电梯实训系统
Six Floors Elevator Training System



DLly-QDT361 群控多层电梯实训系统
Group Control Multifloor Elevator Training System



DLly-QDT262 群控多层电梯实训系统
Group Control Multifloor Elevator Training System



DLWD-DTDQ 电梯电气连接安装调试与评估实训系统
Elevator Electrical Connection and Commissioning Training and Assessment Equipment



DLLYS-QDT242 透明电梯实训系统
Transparent Elevator Training System



DLLY-DTCLG10 电梯主要部件展示台
Elevator Main Components Display Stand



DLLY-DTY01 电梯曳引机展示台
Elevator Tractor Display Stand



DLLY-DTTJM11 电梯门机构安装与调整实训系统
Elevator Door Mechanism Installation and Adjustment Training System



DLJT-DTDG02 电梯导轨安装与调试实训设备
Elevator Guide Rail Installation and Commissioning Training Equipment



DLJT-DTKMJ08 电梯开门机安装与拆装调试实训设备
Elevator Door Opener Installation, Disassembly and Commissioning Training Equipment

栋梁产品 | DOLANG PRODUCTS

电气自动化实训系列

ELECTRICAL AUTOMATION PRACTICAL
TRAINING SERIES

传感器实训系列

Sensor Training Series



DLCG-DS130 传感器实训系统
Sensor Training System

本系列还提供 | This series also offers

- DLCG-DS110型接近传感器实训系统
- DLCG-DS120型距离、位移传感器实训系统

气动实训系列

Pneumatic Training Series



DLQD-DP202 高级电气实训系统
Advanced Electric Power Training System

本系列还提供 | This series also offers

- DLQD-DP101 基础气动实训系统
- DLQD-DP201 基础电气实训系统
- DLQD-DP301 高级比例电气实训系统
- DLQD-DP401 双面电气实训系统
- DLQD-X1 箱式气动实训系统

液压实训系列

Hydraulic Training Series



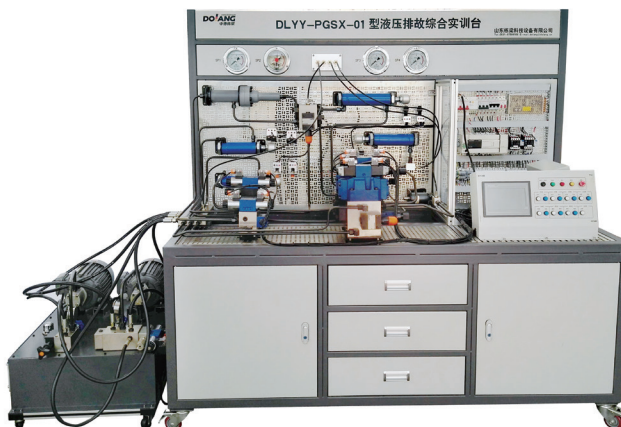
DLYY-DH202 高级电液实训系统
Advanced Electrohydraulic Training System

本系列还提供 | This series also offers

- DLYY-DH101 基础液压实训系统
- DLYY-DH201 基础电液实训系统
- DLYY-DH301 比例液压实训系统
- DLYY-DH202A 双面液压PLC综合实训系统
- DLYY-DH230 透明液压实训系统
- DLYY-DH401 电液伺服比例控制实训系统



DLYQ-PH401 双面液压气动实训系统
Double-sided Hydraulic and Pneumatic Training System



DLYY-PGSX-01 型液压排故综合实训台
Hydraulic System Failure Analysis and Training System



DLYY-ZHSX02 液压与气动传动综合实训系统
Hydraulic and Pneumatic Transmission Integrated Training System



DLYY-DH311 伺服比例液压实训系统
Hydraulic Proportional and Servo System

可编程序逻辑控制器实训系列 PLC Training Series



DLPLC-SIMGD 可编程序逻辑控制器实训系统(西门子)
Programmable Logic Controller Training System (Siemens)

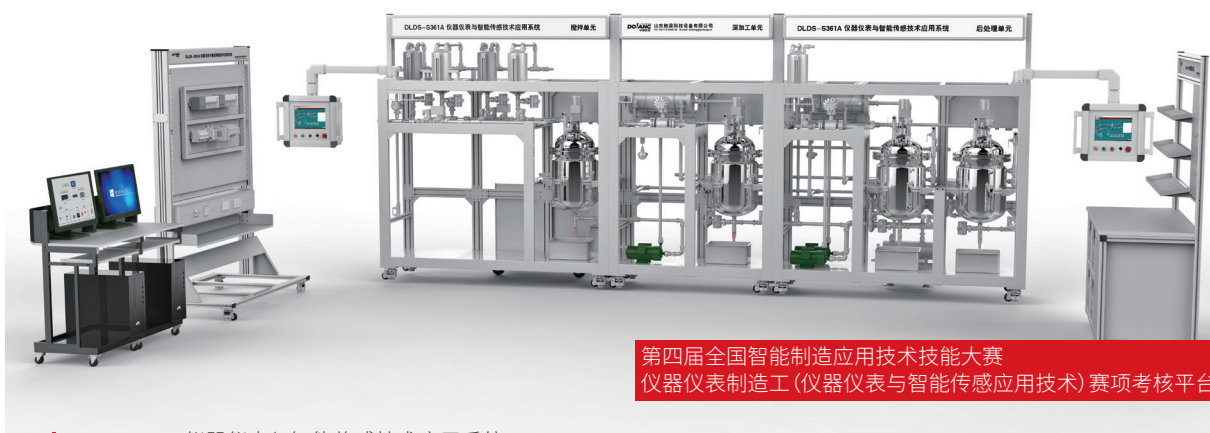
创新型工业自动化控制技术实训系列 Innovative Industrial Automation Control Technology Training Series



DLGK-SIMND 工业自动化网络集成实训系统
Industrial Automation Network Integration Training System

过程控制实训系列 (PCS 系列)

Process Control Training Series



第四届全国智能制造应用技术技能大赛
仪器仪表制造工(仪器仪表与智能传感应用技术)赛项考核平台

DLDS-S361A 仪器仪表与智能传感技术应用系统
Instrument and Intelligent Sensing Technology Application System



DLGK-53A 过程控制实训系统
Process Control Training System



DLLY-HYGS462 恒压供水实训系统
Constant Pressure Water Supply Training system



DLGK-JD3 高级过程控制实训系统
Advanced Process Control Training System



DLGK-373 过程控制实训系统
Process Control Training System

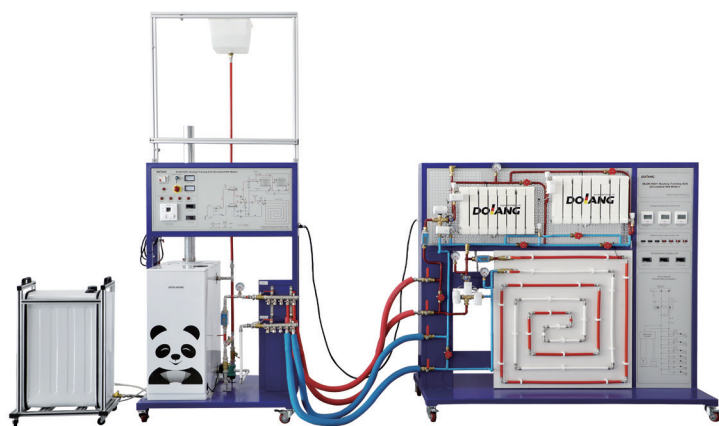


DLGK-53B 过程控制实训系统
Process Control Training System



DLPCS-YL101 压力控制实训系统
Pressure Control Training System

制冷与空调系列 Refrigeration and Air Conditioning Series



DLGN-HS01 供暖实训台装置
Heating Training Unit



DLZL-AC01 分体式空调培训装置
Educational Two Pieces Reverse Cycle Air Conditioner Trainer



DLZL-AP01 整体式空调培训装置
Educational Air Conditioning Trainer



DLZL-WA01 水冷式冷凝器制冷培训装置
DLZL-WA01 Lab AC Circuit Trainer

本系列还提供 | This series also offers

- DLZL-WA02 水冷式冷凝器制冷培训装置
- DLZL-WA03 水冷式冷凝器制冷培训装置

机电一体化 机器人实训系列

MECHATRONICS
ROBOT TRAINING SERIES



机电一体化实训系列 (FA 系列)

Mechatronics Training Series



DLFA-5DPR-A 五自由度气动机械手实训系统
Five Axes Manipulator Training System



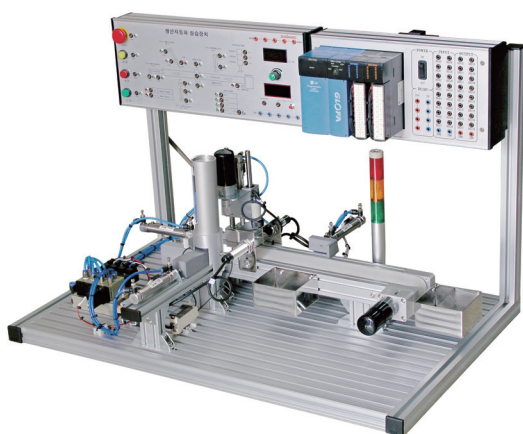
DLFA-5DPR-B 五自由度气动机械手实训系统
Five Axes Manipulator Training System



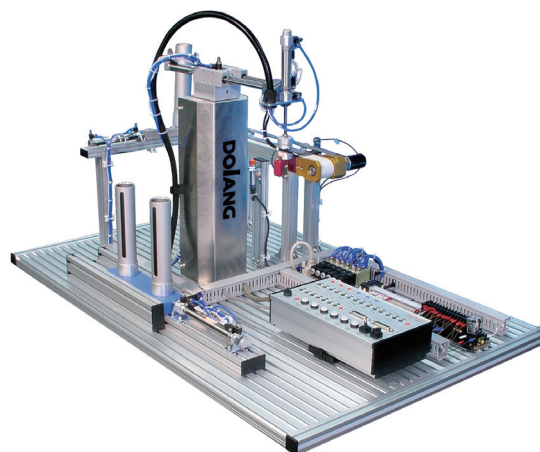
DLFA-DT33 三层电梯实训系统
Three Layers of Elevator Training System



DLFA-LCK2 立体停车库实训系统
Three-dimensional Parking Garage Training System



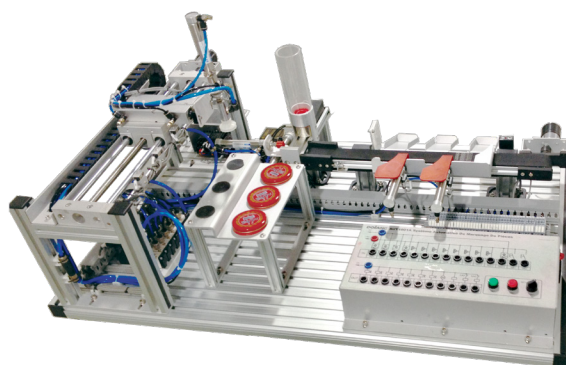
DLFA-MAS-S 工厂自动化制造库实训系统 (标准型)
Factory Automation Manufacturing Library Training System (Standard)



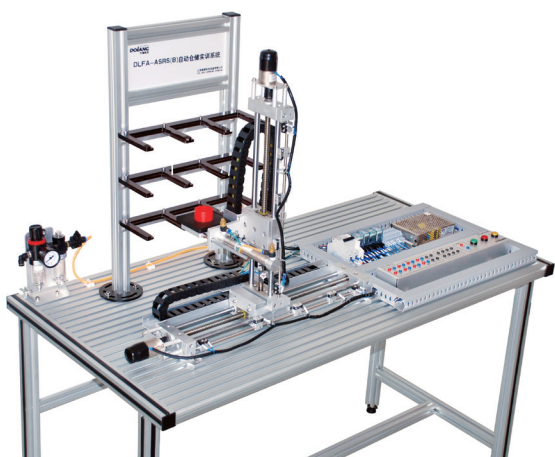
DLFA-PTP 气动机器人实训系统
Pneumatic Robotics Training System



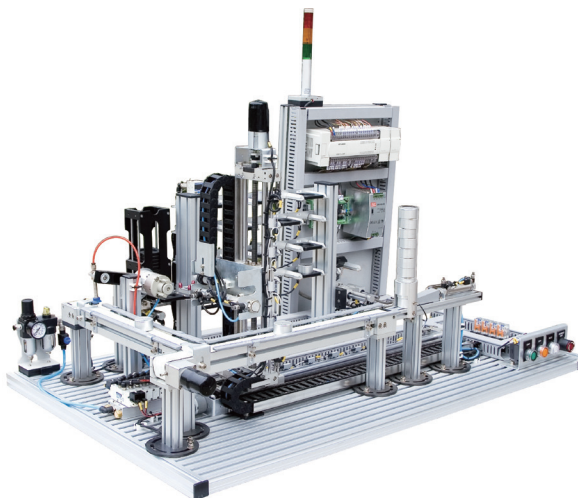
DLFA-JXS3 机械手实训系统
Manipulator Training System



DLFA-BJ03 型零部件自动标记机实训系统
Auto Marking Machine Training System



DLFA-ASRSB02 自动仓储实训系统(基础)
Automatic Storage Training System (Basic)



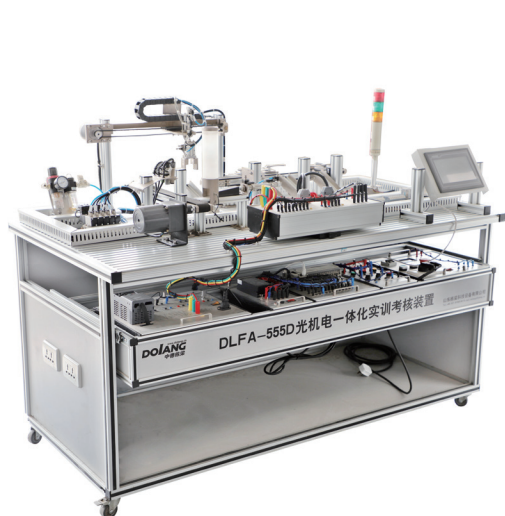
DLFA-ASRSA01 自动仓储实训系统(高级)
Automated Storage Training System (Advanced)



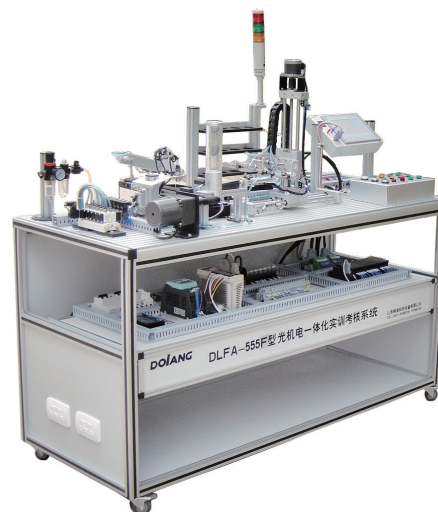
DLFA-SFW 钢铁进给与卷成机实训系统
Steel Feeding and Rolling Machine Training System



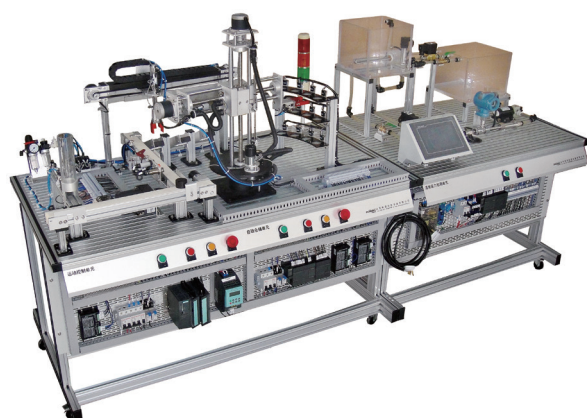
DLFA-PCT 位置控制实训系统
Position Control Training System



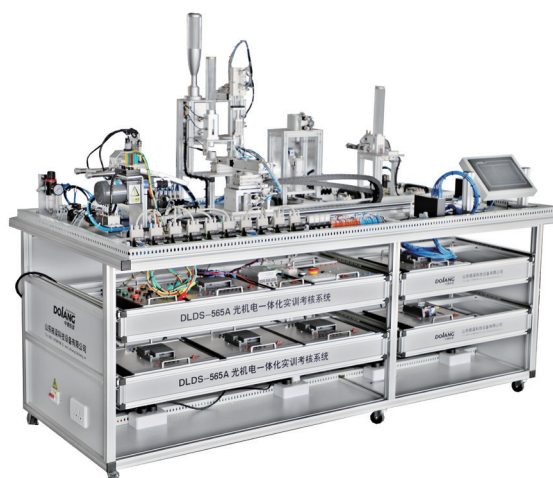
DLFA-555D 光机电一体化实训考核系统
Optical Mechatronics Training System



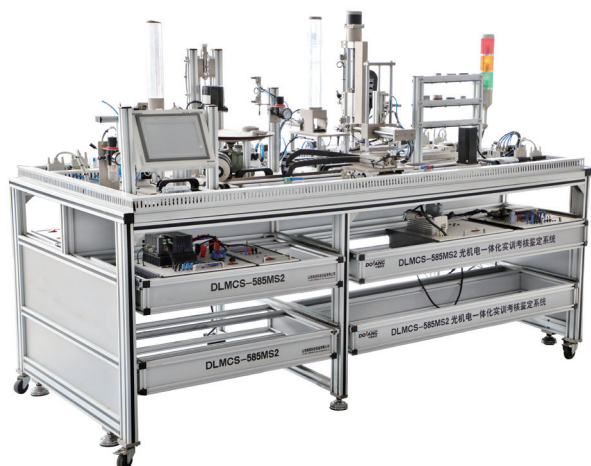
DLMCS-555F 光机电一体化实训考核系统
Optical Mechatronics Training System



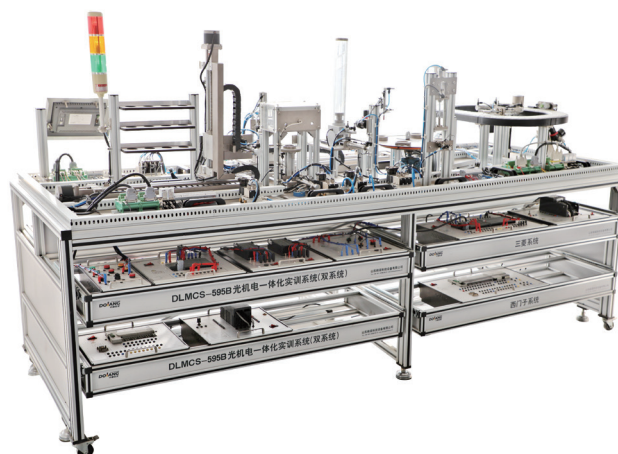
DLFA-321 可编程控制系统设计师培训考核系统
PLC Designer Training System



DLMCS-565A 光机电一体化实训考核系统
Optical Mechatronics Training System



DLMCS-585MS2 光机电一体化实训考核鉴定系统
Optical Mechatronics Training System



DLMCS-675 光机电一体化实训系统(双系统)
Optical Mechatronics Training System (Dual System)

模块化柔性生产线实训系列 (MPS 系列)

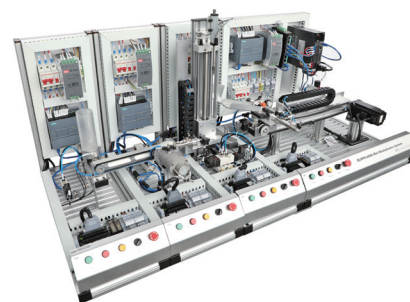
Modular Flexible Manufacturing Training Series



DLMPS-205 模块化柔性生产线实训系统
Modular Flexible Production Line Training System



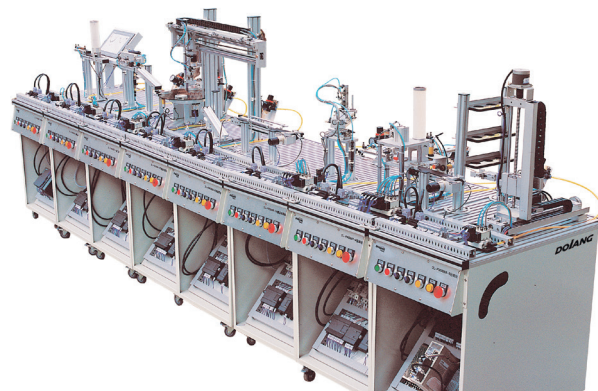
DLMPS-300A 模块化柔性生产线
Modular Flexible Production Line



DLMPS-400A 微型机电一体化系统
Mini Mechatronics System



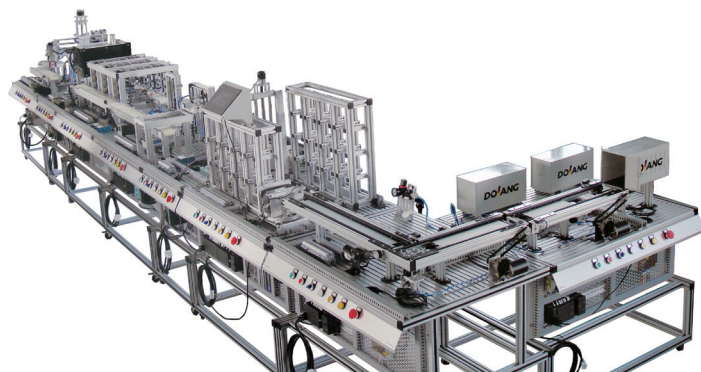
DLMPS-600B 模块化柔性生产线实训系统
Modular Flexible Production Line Training System



DLMPS-800A 模块化柔性生产线实训系统
Modular Flexible Production Line Training System

柔性制造实训系列 (FMS 系列)

Flexible Manufacturing Training Series

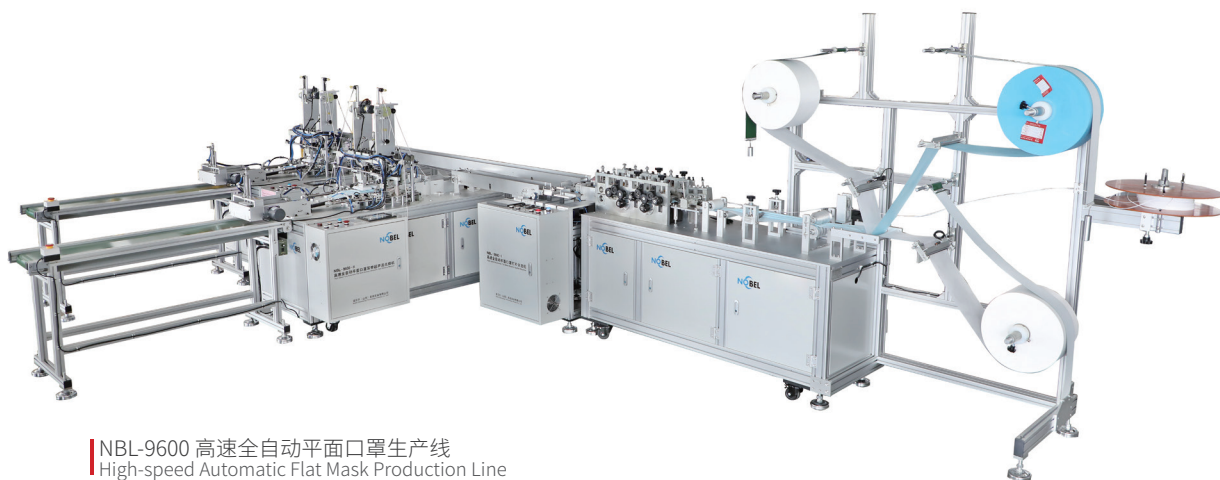


DLWL-800A 模块化现代物流生产加工系统
Modular Modern Logistics Manufacture Process System



DLFMS-1700B 现代工业生产装配实训系统
Modern Industrial Production Assembly Training System

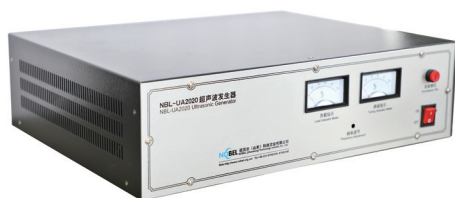
应急储备（医疗物资）生产系列 Emergency Stock (Medical Material) Production series



NBL-9600 高速全自动平面口罩生产线
High-speed Automatic Flat Mask Production Line



NBL-N2700 高速全自动N95口罩生产线
High-speed Fully Automatic N95 Mask Production Line



NBL-UA2020 超声波发生器
Ultrasonic Generator



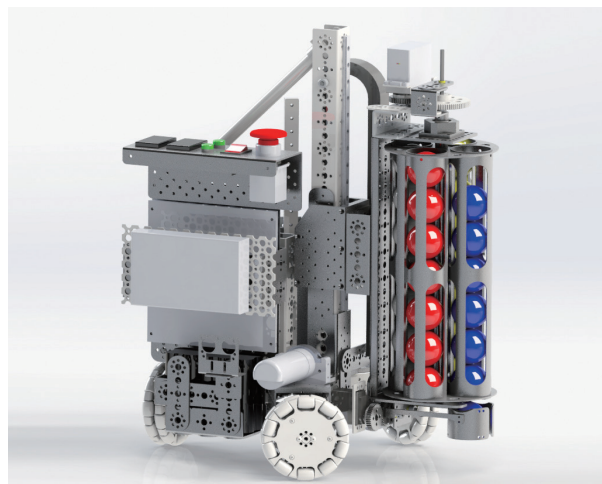
NBL-2003 口罩拉力测试机
Face Mask Tensile Tester

移动机器人系列

Mobile Robotics Series



DLRB-MR519 移动机器人
Mobile Robotics



DLRB-MR519-45 移动机器人
Mobile Robotics



DLRB-342910 桌面AGV
Desktop AGV



DLRB-BF01 背负式AGV
Back-loaded AGV



DLDZ-DGSS01 单轨输送线
Monorail Conveyor Line

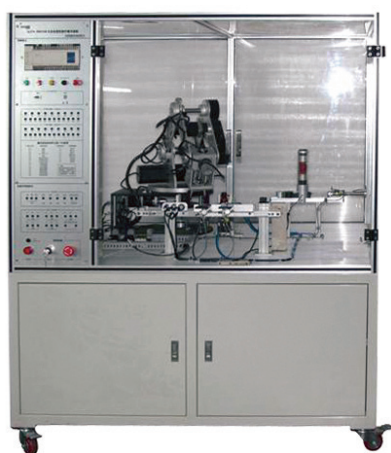
工业机器人系列 Industrial Robot Series



DLRB-YZ 工业机器人演奏系统
Industrial Robot Performance System



DLRB-LM 工业机器人人脸画像工作站
Industrial Robot Face-portrait Workstation



DLFA-R501D 电动机械手实训系统
Electric Manipulator Training System



DLFA-JXS 四关节机器人实训系统
Four-joint Robot Training System

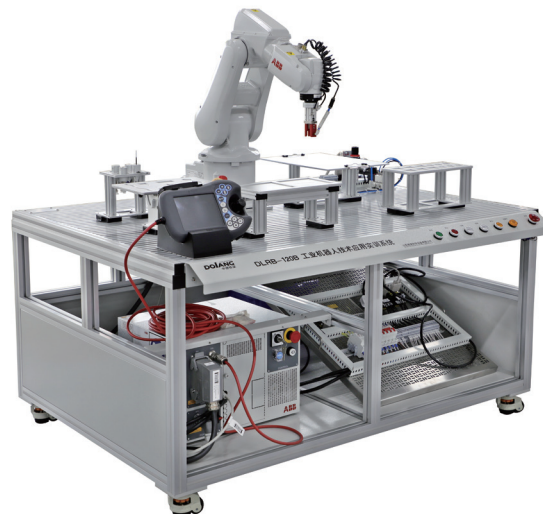


DLFA-R601DM 模块化串联机器人实训系统
Modular Tandem Robot Training System





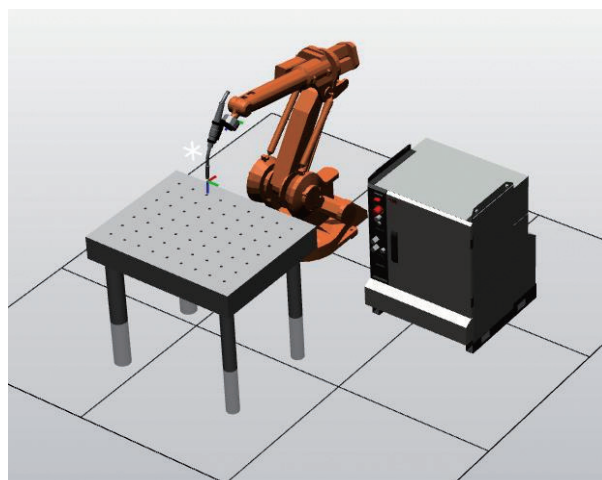
DLRB-120 工业机器人基础技能实训系统
Industrial Robot Basic Skills Training Equipment



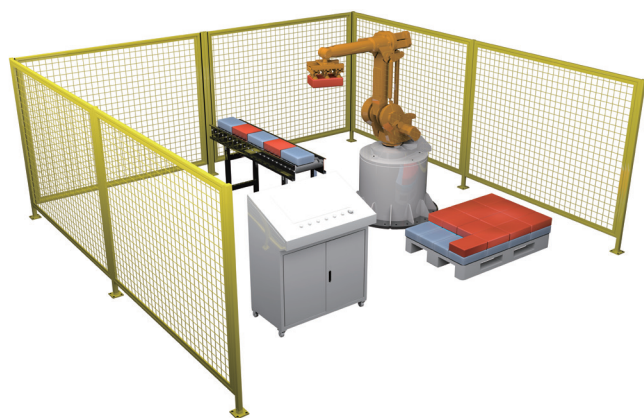
DLRB-120B 工业机器人基础技能实训系统
Industrial Robot Basic Skills Training System



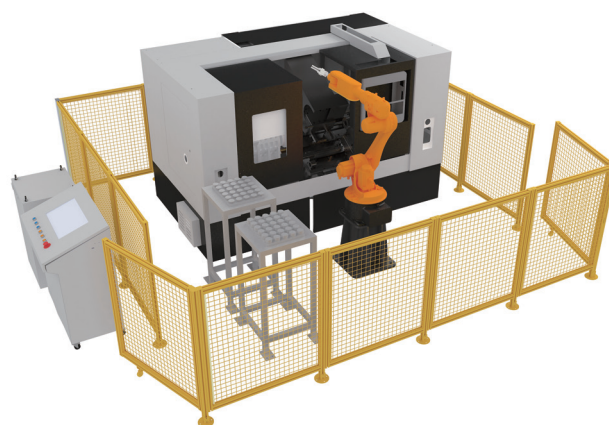
DLRB-932型工业机器人典型工作站实训系统
Industrial Robot Typical Workstation Training System



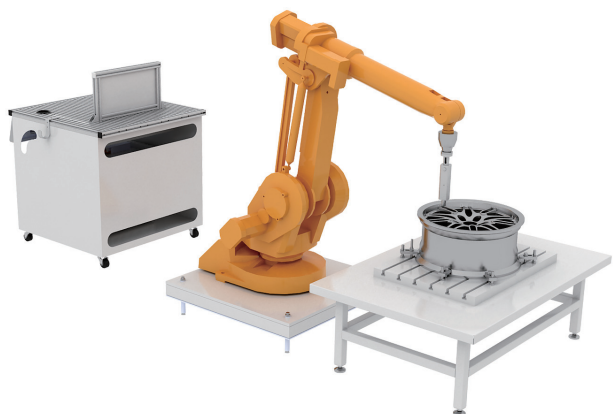
DLRB-1410 焊接机器人实训系统
Welding Robot Training System



DLRB-460 码垛机器人实训系统
Palletizing Robot Training System



DLRB-1410C 机器人机床上下料实训系统
Robot Machine Loading and Unloading Training System



DLRB-2600 机器人打磨抛光实训系统
Robot Polishing Training System



DLRB-1410A 工业机器人数控加工教学工作站
Industrial Robot CNC Machining Teaching Station



DLRB-1410B 工业机器人去毛刺实训工作站
Industrial Robot Deburring Training Workstation



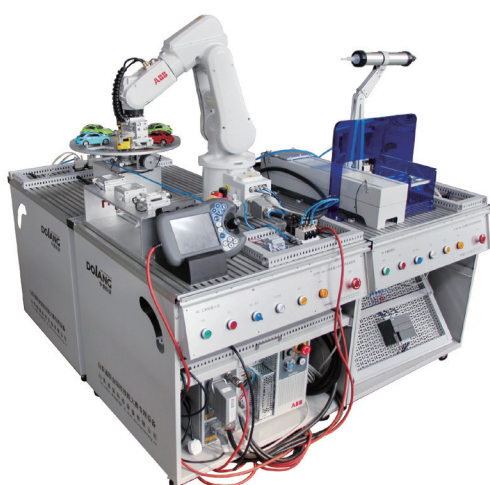
DLRB-KR20 工业机器人数控加工实训工作站
Industrial Robot CNC Machining Training Workstation



DLRB-WK1420 工业机器人焊接工作站
Industrial Robot Welding Workstation



DLRB-PER16 工业机器人打磨抛光工作站
Industrial Robot Grinding & Polishing Workstation



DLRB-934 工业机器人典型工作站实训系统
Industrial Robot Typical Workstation Training System



DLRB-341M 模块化工业机器人开放式实训系统
Modular Industrial Robot Open Training System



DLDS-1508 工业机器人技术应用实训系统
Industrial Robot Application Training System



DLDS-3512 工业机器人技术应用实训系统
Industrial Robot Application Training System



全国工业和信息化技能大赛
工业机器人系统运维员(工业机器人技术应用)赛项考核平台

DLDS-3516 工业机器人技术应用系统
Industrial Robot Technology Application System



世界技能大赛工业4.0赛项培训考核平台

DLDS-1182 工业机器人系统集成
Industrial Robot System Integration



1+X 工业机器人操作与运维职业技能等级证书培训考核平台
全国新职业技能大赛工业机器人系统运维员赛项考核平台

DLIR-116 工业机器人操作与编程应用系统
Industrial Robot Operation and Programming Application System

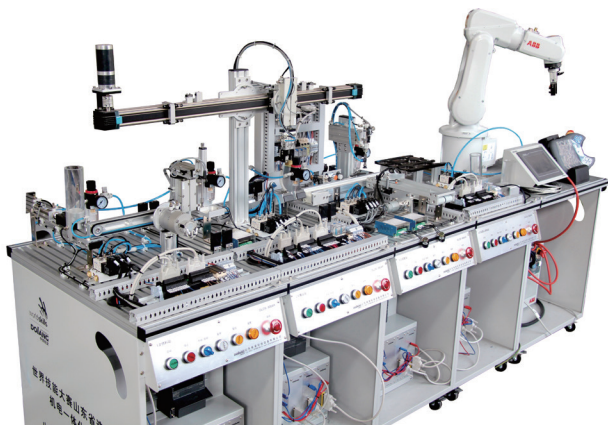


DLCIM-01 机器人集成制造和处理系统
Robot Integrated Manufacturing and Processing System

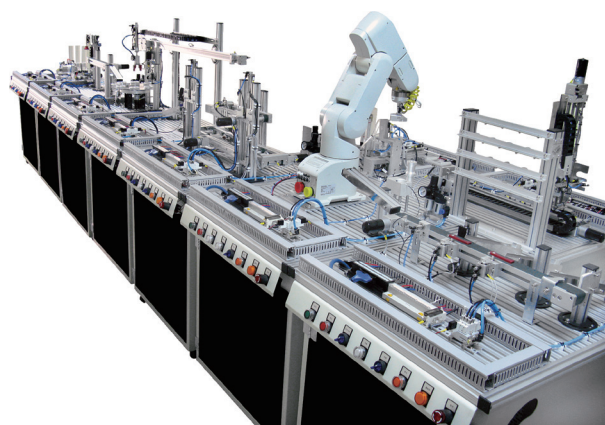


1+X 工业机器人操作与运维职业技能等级证书培训考核平台
全国新职业技能大赛工业机器人系统运维员赛项考核平台

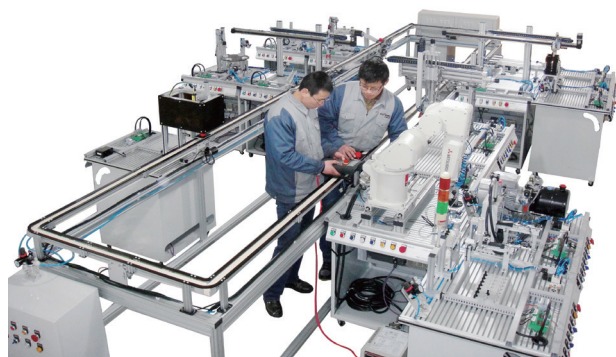
DLIR-106 工业机器人拆装及运维工作站
Industrial Robot Disassembly and Operation and Maintenance Workstation



DLDS-500AR型模块化柔性生产线实训系统
Modular Flexible Production Line Training System



DLRB-900A 模块化柔性生产线实训系统
Modular Flexible Production Line Training System



DLRB-1601 柔性制造系统
Flexible Manufacturing System



DLRB-501 柔性制造系统
Flexible Manufacturing System



DLRB-801 柔性制造系统
Flexible Manufacturing System



DLRPS-501D 工业机器人糖果包装搬运系统
Industrial Robot Candy Packaging and Handling System

人工智能系列 Artificial Intelligence Series



DLAI-1221A 人工智能综合训练考核系统
Artificial Intelligence Comprehensive Training and Assessment System



DLAI-1221B 人工智能综合训练考核系统
Artificial Intelligence Comprehensive Training and Assessment System



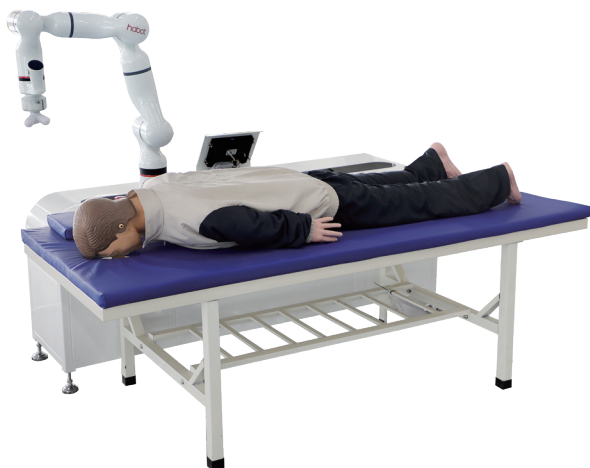
DLIR-CRMA1 协作机器人机箱装配
Collaborative Robot Chassis Assembly



DLIR-CRBC 协作机器人写毛笔字
Cooperative Robot of Writing Brush Words



DLIR-CRGT 协作机器人功夫茶
Cooperative Robot of Kung Fu Tea



DLIR-CRTM 协作机器人按摩
Cooperative Robot Massage



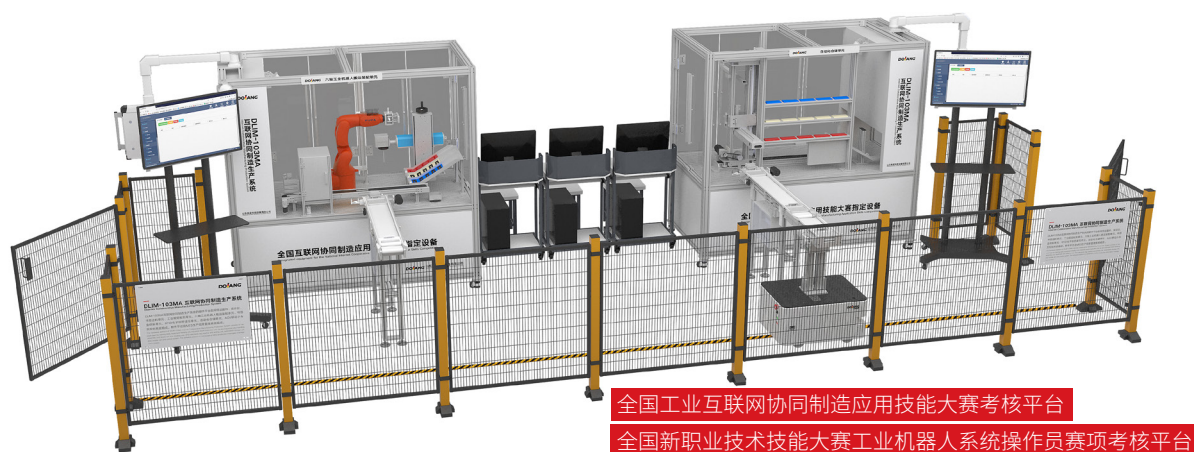
DLIR-CRMB 协作机器人无人零售
Cooperative Robot Unmanned Retail

智能制造技术与应用系列

Intelligent Manufacturing Technology and Application System



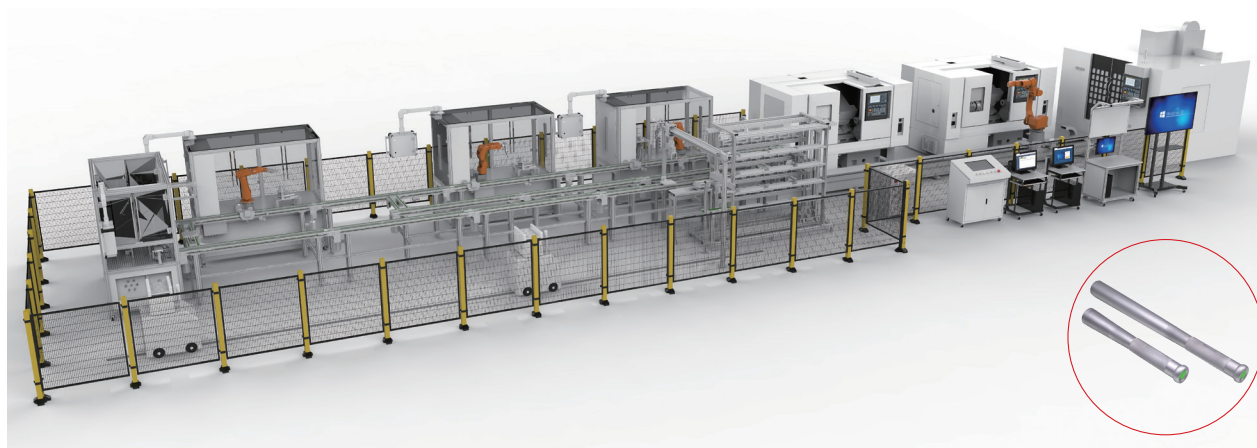
DLIM-102MA 互联网协同制造技术与应用生产实训系统
Internet Collaborative Manufacturing Technology Application System



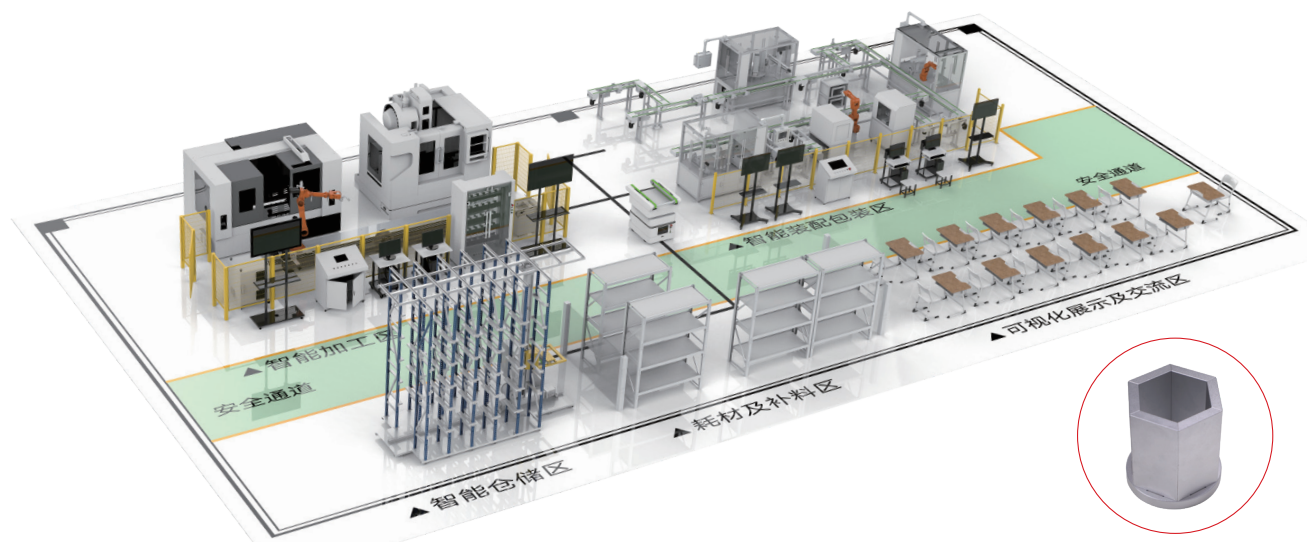
DLIM-103MA 互联网协同制造生产系统
Internet Collaborative Manufacturing Production System



DLIM-512MS 智能制造生产系统
Intelligent Manufacturing Production System



DLCIM-FL824 智能制造 (手电筒) 自动化生产线
Intelligent Manufacturing (Flashlight) Automation Line



DLIM-3411 个性化定制笔筒智能制造生产线
Personalized Pen Holder Intelligent Manufacturing Line



DLIM-3119 智能制造礼品相框生产系统
Intelligent Manufacturing Gift Frame Production System



DLIM-201 纯净水自动化生产线实训系统
Pure Water Automatic Production Line Training System



DLRB-IW591 智能仓储系统
Intelligent Storage System



全国智能制造应用技术技能大赛
物联网安装调试员（智能制造数字技术应用）赛项培训考核平台

DLDS-331 智能制造数字技术应用系统
Intelligent Manufacturing Digital Technology Application System



1+X 智能制造系统集成应用职业技能等级证书培训考核平台
全国新职业技能大赛智能制造工程技术人员赛项考核平台

DLIM-441 智能制造系统集成应用平台
Intelligent Manufacturing System Integrated Application Platform



DLIM-412 工业4.0技术应用系统
Industrial 4.0 Technology Application System



DLIM-DT432 数字孪生技术应用系统
Digital Twin Technology Application System

以科技为动力 以质量求生存 以信誉求发展
Driven by Technology Survive by Quality Develop by Reputation

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