

PC+

SANY 三一筑工
CONSTRUCTION INDUSTRY
QUALITY CHANGES THE WORLD 品质改变世界



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SANY **PC+**



三一筑工依托三一集团在装备领域的优势
致力于用装备制造技术改造建筑业

TRelying on the advantages of SANY Group in the equipment field, SANY Construction Industry (SCI) is dedicated to rebuilding the construction industry with equipment manufacturing technology.

1

INTRODUCTION TO
SANY GROUP

三一集团介绍

2

INDUSTRIALIZED
CONSTRUCTION

建筑工业化

3

INTRODUCTION TO SANY
CONSTRUCTION PC+

三一筑工 PC 专家

4

INTRODUCTION TO SANY
CONSTRUCTION INDUSTRY

三一筑工 PC+

1

INTRODUCTION TO
SANY GROUP

三一集团介绍

SANY

三一集团

全球品类最全的建筑装备企业

SANY Group is the construction equipment manufacturer with the most comprehensive product line.

三一集团旗下拥有装备制造、建筑工业化、工业地产、新能源、银行、保险、大数据平台等多个产业

SANY Group covers business in many industries including equipment manufacturing, building industrialization, heavy industrial real estate, renewable energy, bank, insurance and big data, etc.



三一的核心优势

The Core Advantages of SANY

中国近 **50%** 商品混凝土由三一设备生产运输和泵送

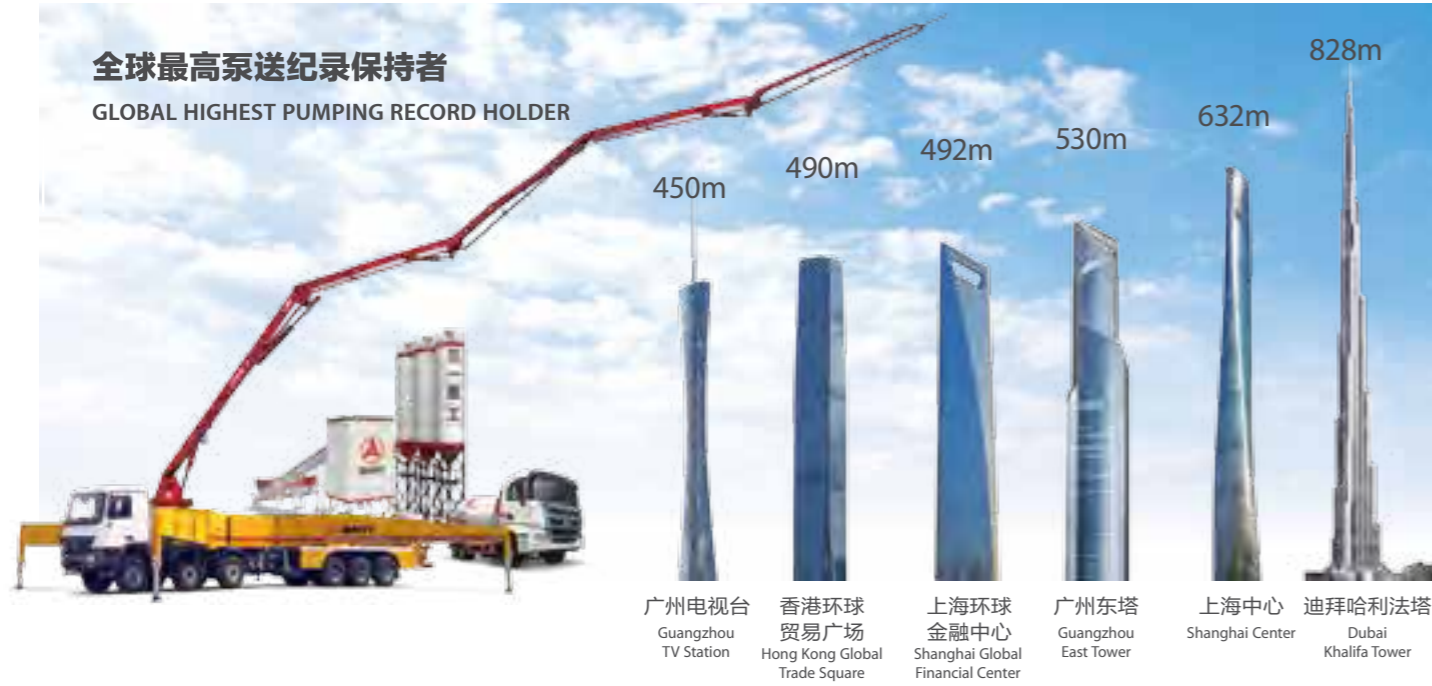
全球近 **40%** 商品混凝土由三一设备运输和泵送

中国超过 **50%** PC 成套装备 由三一提供

Approximate **50%** of the commercial concrete in China is produced, transported and pumped by SANY equipment.

Approximate **40%** of commercial concrete around the world is transported and pumped by SANY

More than **50%** of the full-set PC equipment in China is provided by SANY.



NO.1

混凝土机械 全球第一
Concrete Machinery ranks NO.1 in the world

挖掘机械 中国第一
Excavating machinery ranks NO.1 in China

大吨位起重机械 中国第一
Large-tonnage hoisting machinery ranks NO.1 in China

桩工机械 中国第一
Piling machinery ranks NO.1 in China

全球领先的制造体系
THE WORLD'S LEADING MANUFACTURING SYSTEM

采用全球领先的 SPS 制造体系，拥有全球最大的混凝土机械制造工厂、全球最大的挖掘机五星级工厂、亚洲首家数字化工厂。

Adopt the world-leading SPS manufacturing system and possess the world-largest concrete machinery manufacturing factory, the world-largest five-star excavator manufacturing factory and the first digital factory in Asia.



政策普照 三一金融

SANY Financial Business Motivated by National Policy

受国家政策普照，三一金融业务全面发展。通过运用移动互联网和大数据技术，采用集聚战略，专注于高端制造业，及其延伸的细分客户市场，为金融业带来了全新的视角。

Supported by national policy, SANY financial business develops fast in an all-round way. Through using mobile Internet and big data technology, SANY adopts integrated strategy, focus on high-end manufacturing industry and extends the segmentation of customer market, bringing a fully new perspective for the financial sector.



三一旗下湖南三湘银行，是中部首家民营银行
专注高端制造、互联网金融的创新型民营银行

Sanxiang Bank of Hunan, a subsidiary of SANY Group, is the first private bank established in central China and also an innovative private bank that focuses on high-end manufacturing and Internet finance.



久隆保险是首家服务于装备行业的保险公司
深耕智能制造，结合物联网创新的商业模式

Deeply plowing in intelligent manufacturing and combining with innovative business pattern of the Internet of Things, Jiu Long Insurance Co., Ltd., a subsidiary of SANY Group, is the first insurance company in China that is specialized in providing service for the equipment industry.

三一汽车金融有限公司

SANY Automobile Financial Co., Ltd

致力于支持三一旗下主要产品销售
提升服务水平，实现产业与金融有机结合

Committed to supporting SANY product sales
Enhance service level and realize the organic combination of industry and finance.

中国康富国际租赁有限公司

China kangfu international leasing co., ltd

开拓装备制造厂商外包、电力新能源
经营性租赁、跨境租赁、医疗
为中小企业打造个性化、运作与服务方案

Develop in equipment manufacturer outsourcing, new energy power, commercial leasing, cross-border leasing and medical care. Provide individualized operating and service plans for medium and small enterprises.

全球产业布局

Global Industrial Layout

国际产业布局: 美国、德国、印度、巴西建厂, 并购德国“普茨迈斯特”, 合资奥地利帕尔菲格, 产品销往 120 多个国家和地区

GLOBAL INDUSTRY LAYOUT: We invested and built industrial parks in US, Germany, India and Brazil. We acquired Putzmeister—the world's No. 1 brand in concrete machinery building and joint-ventured with Palfinger AG. We sell products to over 120 countries and regions.



国内产业布局: 上海、北京、沈阳、长沙、珠海、西北等六大产业基地

Industry LAYOUT in China: We invested and built industrial parks in US, Germany, India and Brazil. We acquired Putzmeister—the world's No. 1 brand in concrete machinery building and joint-ventured with Palfinger AG. We sell products to over 120 countries and regions.

2

INDUSTRIALIZED
CONSTRUCTION

建筑工业化

城市承载人类文明

City carries human civilization

城市是人类文明的重要组成部分，城市的出现是人类文明发展的开始。

City is an important part of human civilization and the appearance of city is the beginning of the development of human civilization.



建筑是城市的主体

Architecture is the main body of the city

建筑是城市的代表与承载，我们一直不断地建造更多更适合人居的建筑，力求使生活品质更美好。

Architecture is representative and carrier of the city. We have been constantly building more and more suitable residential buildings, committing to making a better quality of life.



我们可期待的明天 智慧城市 美丽乡村

以智慧的理念规划、建设、管理、发展城市，使城市更加具有活力和长足的发展

截止 2016，将试点建设智慧城市 286 个 未来 4 年培育 1000 个 特色小镇

The future we expect are smart city and beautiful country. Plan, construct, manage and develop the city with wise concept and make the city more vigorous and sustainable. Till 2016, the number of the pilot smart city construction projects reached 286, and 1000 characteristic small towns will be fostered in the next four years.



建筑工业化是大势所趋

Construction industrialization is the trend.

传统 建筑方式

TRADITIONAL
CONSTRUCTION

质量难以把控

Difficult to Control Quality

施工周期长

Time Consuming

成本控制粗放

Imprecise Cost Control

污染浪费

Pollution and Waste



建筑 工业化

INDUSTRIALIZED
CONSTRUCTION

品质稳定可控

Controllable and Reliable Quality

成本精确可控

Precise Cost Control

建造效率高

High Construction Efficiency

节能环保

Environmental-friendly

PC 建筑是主流

PC construction is the main stream.

建筑工业化的主要形式有 PC、钢结构和木结构，在中国当前国情下，从建筑的适用性、稳定性、抗压度、防火防腐、建造成本和主材资源的可获得性比较可以看出，**PC 建筑是建筑工业化的主流。**

The main form of the construction industrialization includes PC, steel structure and wood structure. Under the current national conditions of China, PC architecture is the mainstream of construction industrialization with its advantages in suitability, stability, compressive degree, fireproofing, anti-corrosion, construction cost, and material resources availability.

建筑工业化主要类型对比

建筑类型	适用性	稳定性	抗压度	防火防腐	建造成本	主材可获得性
PC 建筑	最多	高	高	高	略低	丰富
钢结构建筑	次之	较高	较高	较差	一般	丰富
木结构建筑	较少	一般	一般	差	最高	缺少
结论	<p>PC 适用广泛，高层、多层、低层等建筑兼用，品质稳定可靠，抗压度高，防火性和耐腐蚀程度高，建造成本略低，主要材料有丰富的可获得性</p> <p>PC is widely used in high-rise, multi-layer, low-rise building construction with stable quality, high compressive capability, fireproofing and high anti-corrosion degree. What is more, the construction cost is relatively low and main material is rich in availability.</p>					

人类应该以更环保的方式追求生态人居及绿色地球的和谐

We should pursue the harmony of ecological habitation and green earth with more environmental-friendly pattern.



节水 80%
Water Savings of 80%
 湿作业显著减少
 Significant Reduction of Water Use



节材 20%
Material saving 20%
 无水平构件模板 / 无外架 / 无浪费
 Without horizontal component template / outrigger / waste



节能 70%
Energy saving 70%
 集中工业化生产，综合能耗低
 Centralized industrial production with lower comprehensive energy consumption



节时 70%
Time saving 70%
 节约现场作业时间
 Save time for field operation



安全环保
Safety and environmental-friendly
 抗震更强，工地整洁，低事故率，无焊接，噪声小
 Realize stronger earthquake resistance to reduce loss from natural calamity. Keep the construction site clean to reduce the accident rate. No welding and little noise.

3

INTRODUCTION TO SANY
CONSTRUCTION PC+

三一筑工 PC 专家

SANY三一筑工

愿景 VISION

成为 PC 建筑世界级品牌

Build a world-class brand in PC construction.

使命 MISSION

用装备制造技术和互联网技术改造建筑业

Be a game changer in the construction industry with combination of equipment manufacturing technology and Internet technology

三一筑工依托三一集团在装备制造领域和全产业链资源的优势，已成为建筑工业化的 PC “家”。

通过“PC+”的合作模式，将设计、装备、工法、金融、开发、物联网融入到建筑工业化，提供全新的 PC 建筑解决方案。

为合作伙伴创造最大价值、为消费者提供最优产品、为中国贡献一个世界级品牌。

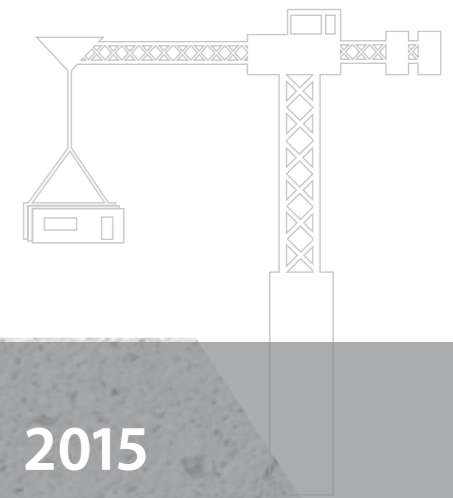
SANY Construction Industry supported by the strength of SANY Group in equipment manufacturing and the whole industry chain resources, has become a PC expert in the industrialization of construction industry.

Through the cooperation mode of "PC +", to provide brand new PC building solutions by integrating design, equipment, method, finance, industrial development, Internet of things with construction industrialization.

To create maximum value for partners, provide the best products for customers, build a world-class brand for China.

从工程装备行业的领导者到 建筑工业化的推动者

FROM THE LEADER OF CONSTRUCTION MACHINERY MANUFACTURER
TO THE PIONEER OF CONSTRUCTION INDUSTRIALIZATION.



HISTORY

1989

三一集团成立
SANY Group was founded in 1989.



2007

三一成立上海竹胜园，进军房地产开发，尝试装配式建筑施工

In 2007, SANY unveils Shanghai Zhushengyuan Real Estate marked the beginning of the company's development in construction industrialization.



2015

通过中国住建部“国家住宅产业化基地”的认证，合作成立新型建筑工业化技术研究中心

Certified as "National Housing Industrialization Base" by the Ministry of Housing and Urban-Rural Development of the PRC, the Research Center for New Construction Industry Technology were founded.

1994

三一重工成立，逐步成长为中国最大、世界第五的工程装备制造商

Founded in 1994, SANY Heavy Industry grows into China's largest and the world's fifth largest construction machinery manufacturer.



2014

三一收购快而居（快而居成立于2008年），成为国内最大的PC成套装备提供商，为国内市场提供近40%的PC装备

In 2014, SANY acquired Fast-Living Co. Ltd, (founded in 2008), becoming China's largest provider for PC equipment solutions, accounting for 40% in Chinese market.

三一集团有限公司

国家住宅产业化基地

中华人民共和国住房和城乡建设部
二〇一五年三月

三一 PC 建筑设计能力

SANY PC building design capacity

基于 BIM 的全流程信息化管理，进行建筑结构优化设计、科学拆分，进行新型建筑材料开发。

Optimized design of building structure and development of new building materials based on BIM information management of the whole process.



BIM 设计及运营管理

BIM design and operation management

基于 BIM 的三维设计，形成仿真数字化模型与企业的 ERP、CRM 以及 ECC 控制中心对接进行全流程信息化管理

Information management of the whole process by integrating the simulated digital model formed based on BIM 3-D design with SANY's ERP, CRM and ECC control centers.

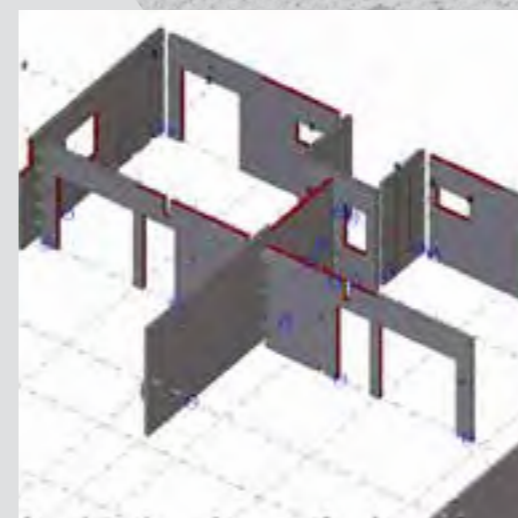


PC 建筑结构设计优化

Optimized design of PC building structure

基于 BIM 平台形成数字化建筑与 VR 结合进行建筑结构优化

Optimize the building structure by combining VR technology with the digital building formed based on BIM platform.



PC 建筑科学拆分

Scientific assembly/disassembly of PC building

通过数字仿真结合装配实验，使拆分做到迅速、合理、精细、准确

Combining digital simulation with assembly experiments to ensure the assembly/disassembly process is quick, reasonable, precise and accurate.



新型建筑材料开发

New building materials development

通过自主的 PC 实验工厂和材料实验室，进行新材料的研发实验

To conduct R&D of new building materials in independent PC pilot plants and material lab.

三一 PC 装备能力

We provide the full set of pc equipment

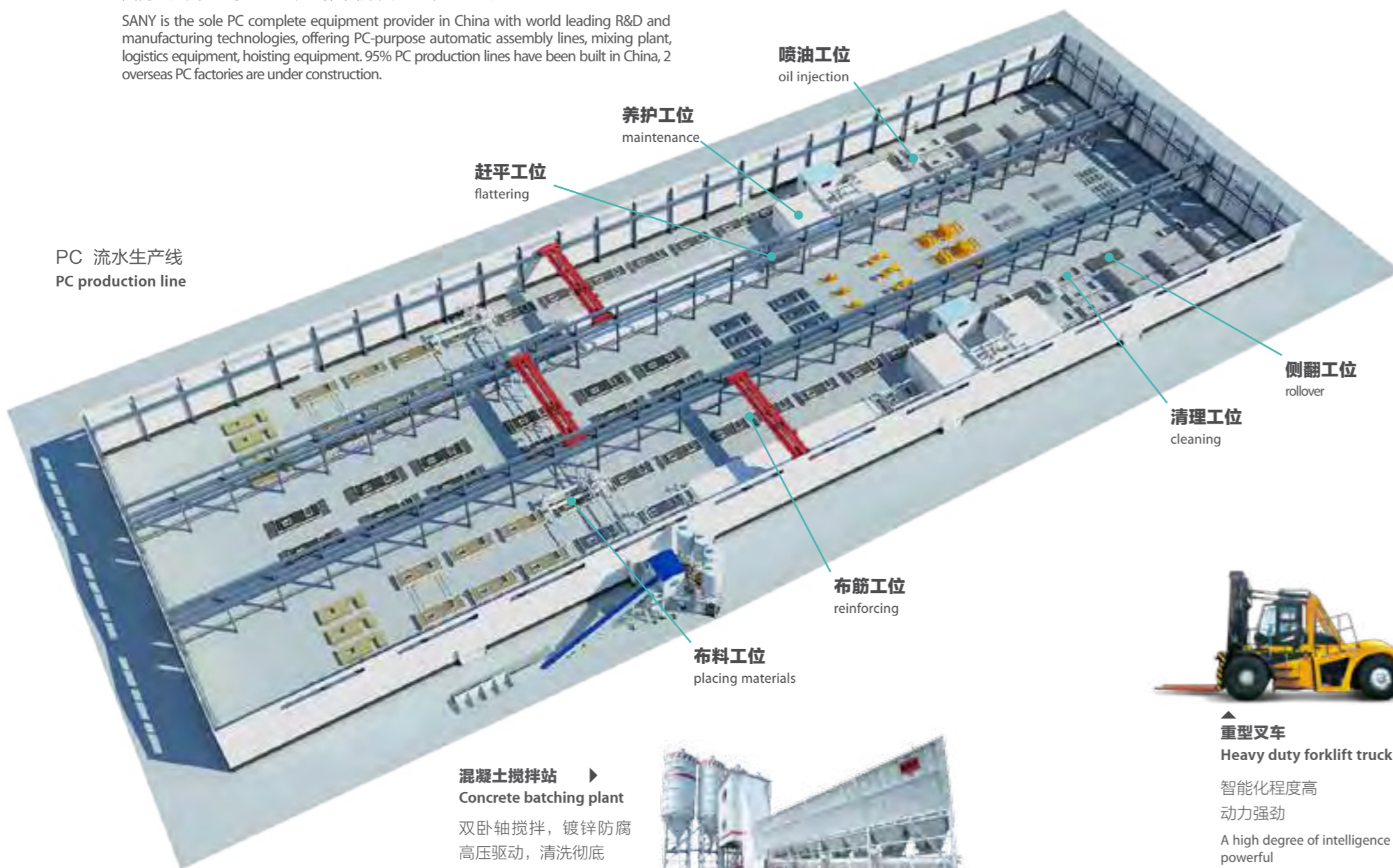
中国超过 50%PC 成套装备 由三一提供

50% PC complete equipment in China are provided by SANY

全球领先的 PC 装备研发生产，中国唯一可提供 PC 成套装备的企业。包括自动化 PC 流水生产线、PC 专用搅拌站、PC 成套物流设备、PC 成套吊装设备。国内已建成 95 条 PC 生产线，国外在建 2 个 PC 工厂。

SANY is the sole PC complete equipment provider in China with world leading R&D and manufacturing technologies, offering PC-purpose automatic assembly lines, mixing plant, logistics equipment, hoisting equipment. 95% PC production lines have been built in China, 2 overseas PC factories are under construction.

PC 流水生产线
PC production line



赶平工位
flattering

养护工位
maintenance

喷油工位
oil injection

侧翻工位
rollover

清理工位
cleaning

布筋工位
reinforcing

布料工位
placing materials

混凝土搅拌站
Concrete batching plant

双卧轴搅拌，镀锌防腐
高压驱动，清洗彻底

Double shaft stirring, galvanized anti-corrosion high-pressure drive, clean thoroughly



塔式起重机
Tower crane

防护性高
数据查询方便
一键控制起降、回转
就位准确

High protective
Data query is convenient
A key control landing, rotary
In place accurately



随车起重机系列
Boom trucks

强大起升力矩
过载保护

Powerful lifting torque
Overload protection



混凝土泵车系列
Concrete pumps

融世界尖端泵送技术
成就泵车制造经典

Melt the world cutting-edge
pumping technology
Pump truck manufacture classic



重型叉车
Heavy duty forklift truck

智能化程度高
动力强劲

A high degree of intelligence
powerful



预制件运输车
Pc transport vehicle

专为预制件运输设计
模块化设计，安装便捷

Designed for casting transport
Modular design, installation is
convenient



AGV 自行走小车
Agv self walking truck

智能设定行走
方便安全迅速

Smart set to walk
Convenient security quickly

PC 配套装备
PC supporting equipment

三一 PC 建筑工法能力

SANY PC construction method

通过 SPCI 信息化系统，将生产、运输、装配纳入云端服务及大数据平台，提供 PC 建筑全流程的信息化解决方案。

To provide solutions for the whole process of PC construction through SPCI information system, integrating the production, transportation, assembly with cloud service and big data platform.



SPCI 平台

SPCI platform

通过信息化平台实现全流程开发、数字化交付，提供大数据运营

Through information platform to realize the whole process of development, digital delivery, to provide big data operations



PC 生产制造

PC manufacturing

提供 PC 超级工厂成熟的运营体系确保品质与效率的完美交付

PC super factory mature operation system ensure the product quality and fast efficiency



PC 运输及装配

PC transportation and assembly

自主研发出专业构件运输车提供装配化施工技术和服

Independent research and development of PC transporter to provide assembly construction technologies and services



PC 专业培训

PC professional training

通过三一工学院进行专业人员培训并建立装配施工虚拟仿真训练系统

SANY Engineering School provides training to customers and build simulated training system of assembly construction.

多类型 PC 建材及各类部件

All types of PC materials and parts



叠合楼板 Floor slabs



外墙反打 Exterior Wall Facing



隔墙板 Partition



外挂墙板 out-hung panels



预制楼梯 prefabricated stairs



管廊 Alure



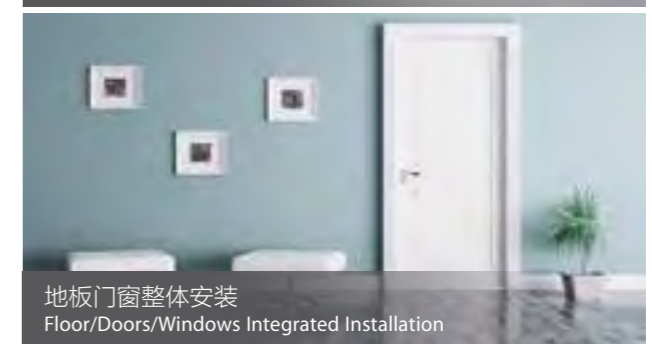
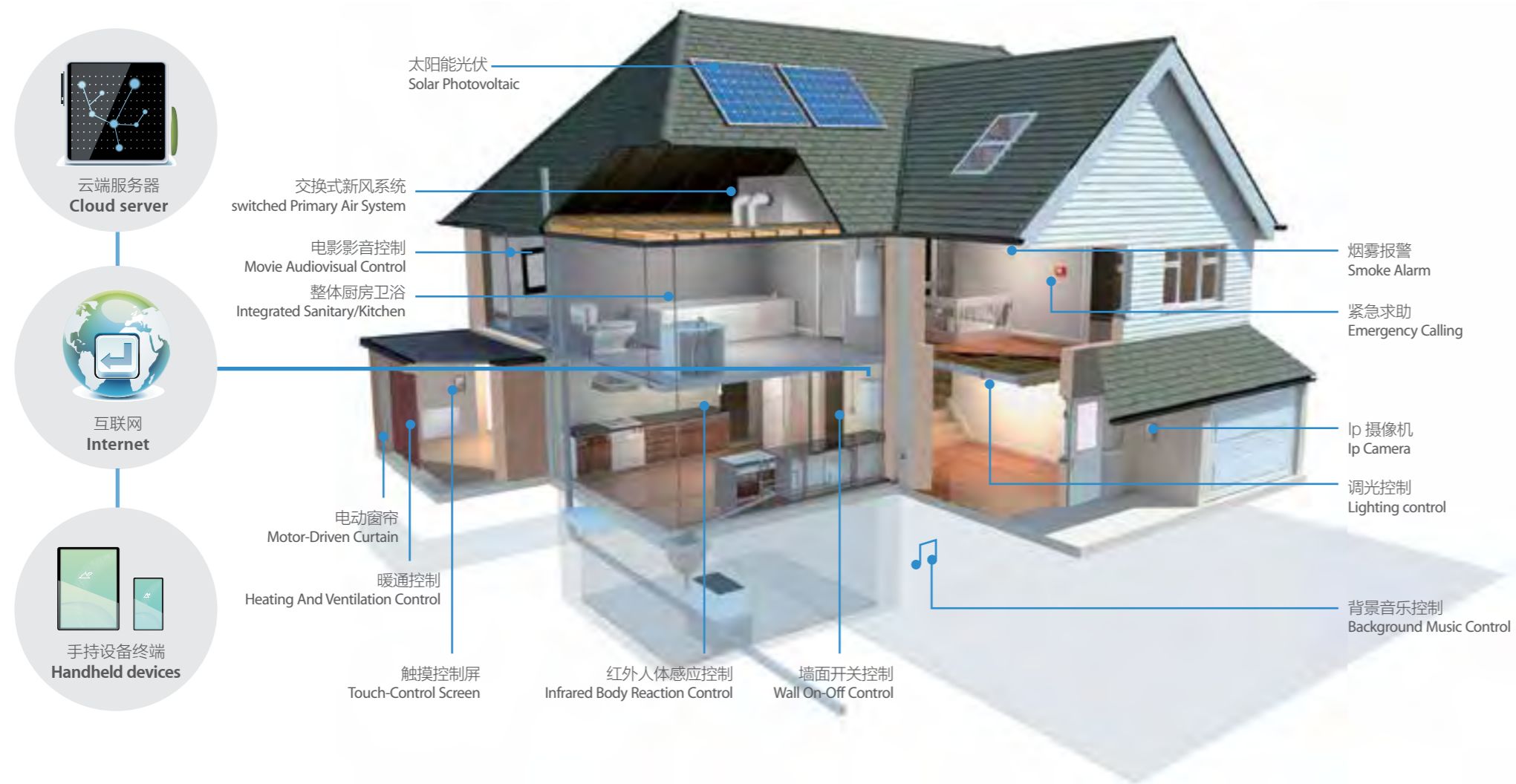
SANY

智能集成 工业一体化内装

We provide smart and integrated decoration solutions.

从设计、生产到施工，建筑智能集成贯穿其中。集成系统包括太阳能光伏、交换式新风系统、整体厨房卫浴、地板门窗整体安装、烟雾报警、火灾探测器、中央空调等，并可通过 Internet 与社区及社会紧密联接

Construction intelligent integration runs through from design, production to construction. Integration system includes solar photovoltaic, switched primary air system, integrated sanitary/kitchen, floor/doors/windows integrated installation, smoke alarm, fire detector, central air-conditioning, etc. It contacts with community and society closely through internet.



PC+ 工业物联网技术 Industrial Internet of Things

IROOTECH 树根互联 最具价值的工业物联网云平台
IROOTECH, the most valuable cloud platform of industrial internet of things



树根互联技术有限公司由三一物联网团队创业组建，是独立开放的第三方互联网高科技企业，打造了最具客户价值、最接地气的工业互联网平台；以客户价值为出口，提供集成应用解决方案。以“连通万物，物联创造价值，让制造更智慧”作为企业的使命。

IROOTECH Technology Co. Ltd. is built by SANY Internet of Things business team, is an independent open third party Internet high-tech enterprises, aiming to build the industrial Internet platform to create values and integrated solutions for the customers. the mission is to promote intelligent manufacturing through the internet of things.



致力于将卓越的 装备制造技术和工业物联网技术

运用到**建筑工业化**领域

SANY is committed to applying leading manufacturing technology and Industrial IOT Technology into the industrialization of construction.



4

INTRODUCTION TO SANY
CONSTRUCTION INDUSTRY

三一筑工 PC+

规划建设各类工业园区

Plan and build different industrial parks



三一宁乡产业园
SANY Ningxiang Industrial Park



三一昆山产业园
SANY Kunshan Industrial Park



三一智能工厂
SANY Changsha Industrial Park



三一长沙产业园
SANY Changsha Industrial Park

PC+ 合作模式

SCI PC+

PC 建筑专家 + 装备制造品牌 + 优秀的投资开发和建筑商 + 地方政府 + 建筑开发基金 + 金融
组建本地投资企业，承接本地工程和建筑开发，发展本地建筑工业化体系

PC expert+ leading construction machinery manufacturer+ excellent investor and contractor+ local government+ construction development fund+ finance
Find local investors, undertake development of local construction projects, develop local construction industry system

三项核心能力

Three core competences

设计装备工法

Engineering



寻找合作伙伴

Find partners

建筑商及开发商

Contractors and developers

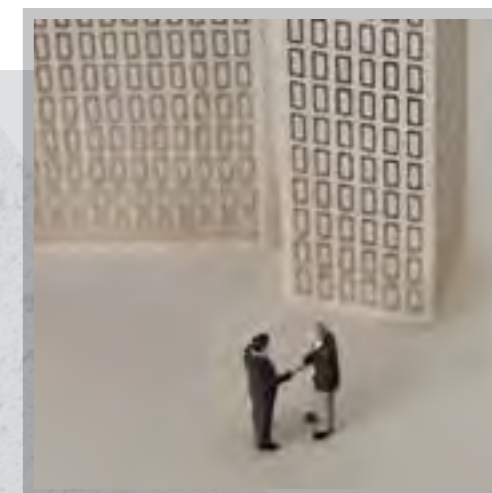


协助当地政府

Assist local governments

发展本地建筑工业化

Develop local construction industrialization



实现改造传统建筑

Transform traditional architecture

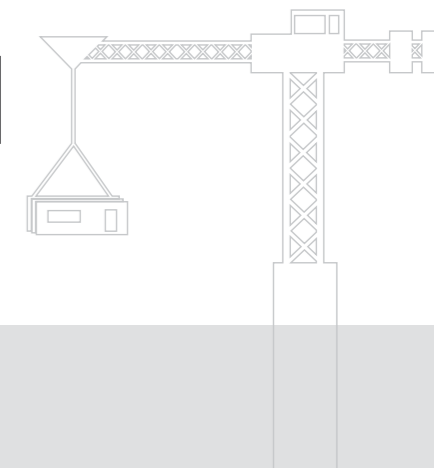
发展本地建筑工业化体系
建设美好智慧城市

Develop local construction industry system to build a better city

共同携手 迈向建筑工业新时代

Towards the new age of construction industry

GREEN DREAM



配合政府

Cooperate with the government

发展绿色建筑，带动产业升级
管廊铺设，保障房开发，新城镇建设

Develop green building to promote industry upgrading, Support construction of pipe gallery, social housing and new towns.



携手开发商

Cooperate with developers

实现开发效益最大化
提升建筑质量
加快资金周转

Maximize profits
Improve construction quality
speed up capital turnover



协助建筑商

Support To Constructor

降低成本，提升效益
提供装备，提供技术

Reduce cost, improve profitability.
Provide PC equipment and technology



服务消费者

Serve the customers

提供高品质、绿色建筑
带来物联网时代新服务

Provides high quality, green buildings
New service in the age of Internet of things

PC+

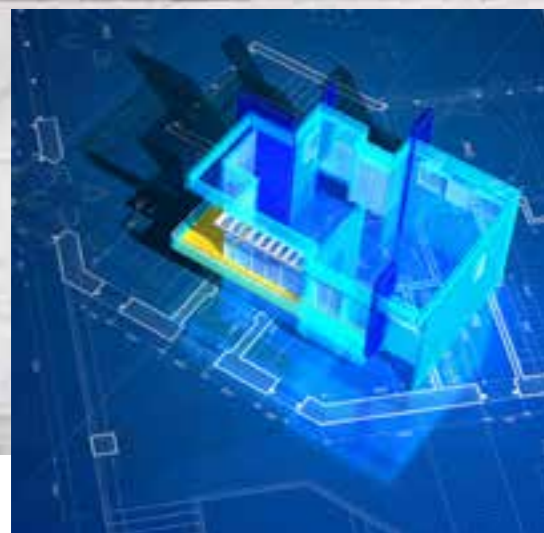
COOPERATION

设计 与国内外顶级设计院合作，打造精品工程，塑造示范项目
工厂 合资建厂，技术与资源结合，发挥各自优势

DESIGN
Work with top design institutes worldwide to create high-quality projects

FACTORY
Cooperate to build factories, combine the strengths of technology and resource

合作



WIN-WIN

平台 建立大数据中心，打造业内共赢平台
品牌 创造核心价值，树立建筑工业化世界品牌

PLATFORM
Establish large data center, build win-win platform in the industry

BRAND
Create core values, set up a world-renowned brand in the construction industry

共赢

装备 共享装备技术，提升品质与效率
工法 共享技术与管埋，打造业内一流装配能力
渠道 共享信息与资源，全面覆盖目标市场

EQUIPMENT
Share equipment technology, improve quality and efficiency

METHOD
Share technology and management, build the first-class assembly capability in the industry

CHANNEL
Share information and resource, fully cover the target markets

共享



SHARE