



■ 带式输送机 BELT CONVEYOR

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公司简介 · COMPANY PROFILE



上海湾越传动机械有限公司是一家专注于带式输送设备研发、生产、销售与服务的综合型企业，总部位于上海浦东，拥有现代化万平生产基地。

Transtack Machinery Co., Ltd. is a comprehensive enterprise specializing in the R&D, production, sales, and service of belt conveyor equipment. Headquartered in Shanghai's Pudong District, the company features a modern production base spanning over ten thousand square meters.



公司具备完善质量管理体系，配备先进生产设备与专业技术团队，严格把控产品品质，确保高标准交付。

Transtack operates a comprehensive quality management system, equipped with advanced production facilities and a specialized technical team. This ensures rigorous quality control and enables delivery that meets the highest standards.



产品广泛应用于矿山、煤炭、冶金、港口、电工、化工、建材、食品等行业，适用于各类散装物料的水平或倾斜输送场景，业务遍及全球 180 多个国家和地区，质量深受顾客好评。

Our products are widely used in industries such as mining, coal, metallurgy, ports, electrical engineering, chemical, building materials, and food processing. They are suitable for the horizontal or inclined conveying of various bulk materials. With a global footprint serving clients in over 180 countries and regions, our product quality is well-received and has earned wide acclaim from customers.





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通用带式输送机

GENERAL-PURPOSE BELT CONVEYOR

描述 DESCRIPTION



通用带式输送机是一种应用最为广泛的连续式散料输送设备,主要由驱动装置(电机、减速机)、输送带、托辊组(承载与回程)、滚筒(驱动、改向、张紧)、机架及电控系统等核心部件组成。

General-purpose belt conveyor are the most widely used continuous bulk material handling equipment. They primarily consist of core components such as the (motor, reducer), conveyor belt, idler sets (carrying and return), pulleys (drive, bend, take-up), frame, and electrical control system.

核心优势

CORE ADVANTAGES

高效可靠：

可实现大运量、长距离的连续输送, 显著提升物料转运效率, 运行稳定可靠。

High Efficiency and Reliability:

Capable of continuous, high-capacity, long-distance material transport, it significantly enhances handling efficiency and ensures stable, reliable operation.

经济耐用：

模块化设计, 配置灵活, 投资与维护成本相对较低。选用优质部件与耐磨输送带, 确保设备长久耐用。

Cost-Effective & Durable:

Featuring a modular design with flexible configuration, it offers relatively low investment and maintenance costs. The use of high-quality components and wear-resistant conveyor belts ensures long-term durability.

适应性强：

可根据工艺要求设计成水平、倾斜或转弯输送, 适应多种场地布局。能够处理颗粒、粉末、块状等多种形态的散料。

High Adaptability:

It can be designed for horizontal, inclined, or curved conveying based on process requirements, adapting to various site layouts. Capable of handling bulk materials in multiple forms such as granules, powders, and lumps.

易于集成：

作为标准输送单元, 可轻松与给料机、破碎机、筛分机等其他设备联锁, 组成自动化生产线。

Easy Integration:

As a standardized conveying unit, it can be easily interlocked with other equipment like feeders, crushers, and screens to form automated production lines.



选型参数表

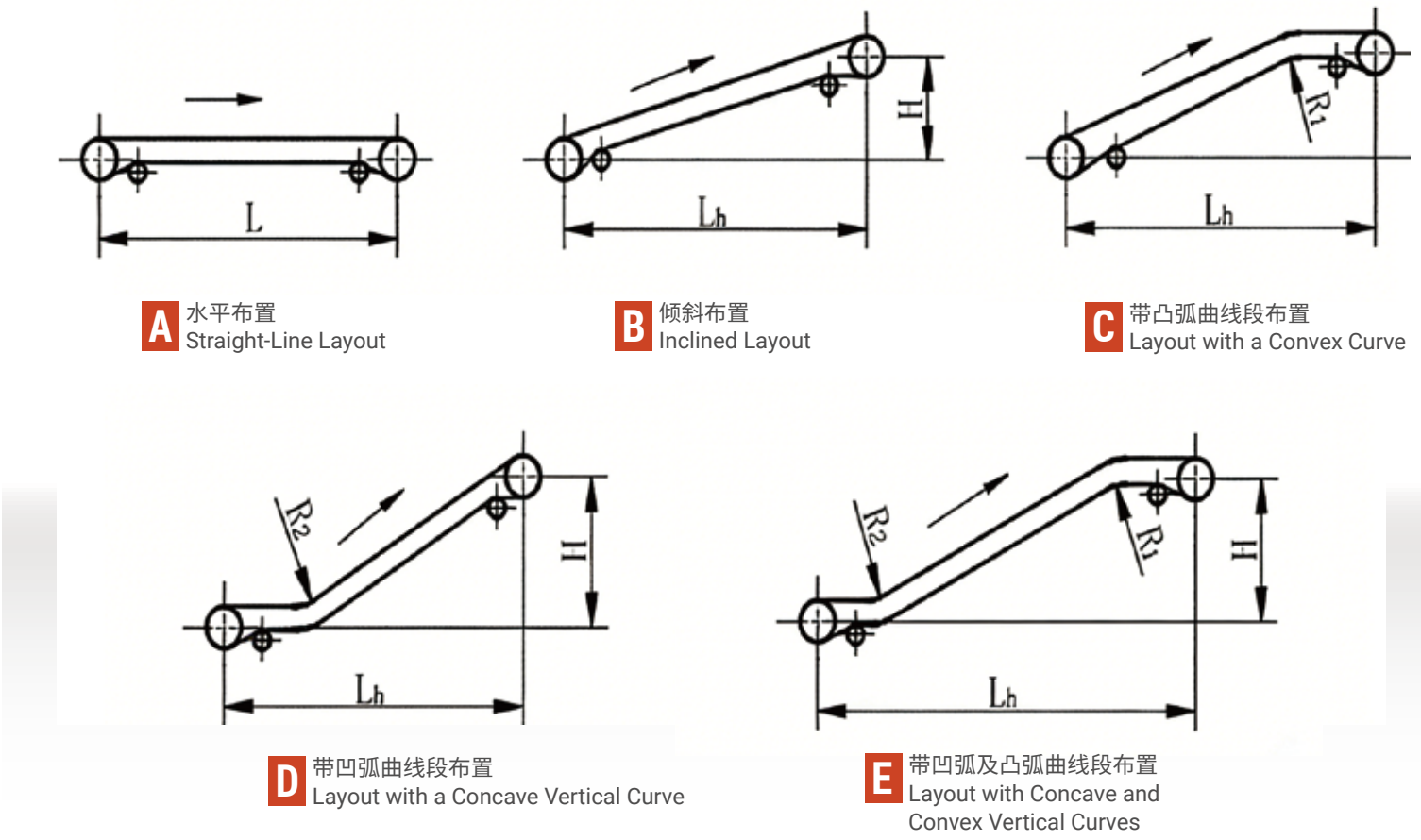
SELECTION PARAMETERS TABLE

(以实际需求为准) (Subject to Actual Requirements)

Belt Width (mm)	Conveying Capacity (t/h)	Incline Angle (°)	Material Lump Size (mm)	kW/m	Remarks
带宽	输送量(吨)	角度	料粒径	千瓦/米	说明
400	40-80	14-19	≤50		
500	107-157	14-19	≤60		
650	160-323	14-19	≤70	0.65	
800	350-498	14-19	≤150	0.85	
1000	600-827	14-19	≤200	1.1	
1200	850-1280	14-19	≤400	1.4	
1400	1350-1950	14-19	≤400	1.9	
1400	1900-2650	0-7	≤60	2.7	平输皮带Flat conveyor belt
1600	1920-2350	14-20	≤400	2.9	
1600	2850-3800	0-7	≤60	3.2	平输皮带Flat conveyor belt

基本布置形式

BASIC LAYOUT TYPES





描述DESCRIPTION

TD75型带式输送机是一种通用型连续输送设备,用于冶金、煤炭、水电等领域,输送堆积比重为500-2500kg/m³的各种散状物料或成件物品,适用工作环境温度在-15~+40℃之间。

The TD75 belt conveyor is a general-purpose continuous conveying equipment. It is used in fields such as metallurgy, coal, and hydropower for transporting various bulk materials or packaged goods with a bulk density ranging from 500 to 2500 kg/m³. It is suitable for ambient operating temperatures between -15°C and +40°C.

主要特点KEY FEATURES

标准化程度高:

设计选型快捷,互换性好。

High Degree of Standardization:

Facilitates quick design and selection with good interchangeability.

结构成熟可靠:

经过长期实践检验,结构简单,维护方便。

Mature and Reliable Structure

Proven through long-term practical application, featuring a simple structure and easy maintenance.

适用范围广:

带宽、带速、倾角、功率形成了完整的系列,能满足大多数常规工况需求。

Wide Range of Applications:

Belt width, belt speed, incline angle, and power are available in a complete series, enabling the conveyor to meet the requirements of most common working conditions.

成本较低:

由于标准化和长期大批量生产,成本相对经济。

Low Cost:

Benefiting from standardization and long-term mass production, the conveyor offers a relatively economical cost.

选型参数表SELECTION PARAMETERS TABLE

输送带宽度与输送能力参数表
(标准槽形托辊在水平输送时的理论输送能力)
Conveyor Belt Width and Conveying Capacity Parameters Table
(Theoretical Conveying Capacity of Standard Trough Rollers in Horizontal Conveying)

Belt Width (mm)	Belt Speed (m/s)	Conveying Capacity (t/h)
带宽	带速	输送能力
500	0.8, 1.0, 1.25, 1.6	78, 97, 123, 156
650	0.8, 1.0, 1.25, 1.6, 2.0	131, 164, 206, 264, 330
800	0.8, 1.0, 1.25, 1.6, 2.0, 2.5	278, 348, 435, 556, 696, 870
1000	1.0, 1.25, 1.6, 2.0, 2.5, 3.15	544, 681, 872, 1090, 1363, 1718
1200	1.0, 1.25, 1.6, 2.0, 2.5, 3.15	824, 1031, 1320, 1650, 2064, 2600
1400	1.0, 1.25, 1.6, 2.0, 2.5, 3.15	1120, 1400, 1792, 2240, 2800, 3528



DTII(A)型带式输送机

DTII(A) BELT CONVEYOR

描述 DESCRIPTION

DTII(A)型带式输送机满足工业发展对长距离、大运量、高带速的需求, 广泛适用于矿山、化工等重载或复杂工况, 部件标准化、系列化程度更高, 互换性好, 便于设计选型和维护。密封性能高, 适应潮湿、多尘等恶劣环境, 适用环境温度-20~+40℃。

The DTII(A) belt conveyor meets the industrial demand for long-distance, high-capacity, and high-speed conveying. It is widely suitable for heavy-duty or complex applications in sectors such as mining and chemical industries. With a higher degree of component standardization and serialization, it offers excellent interchangeability, facilitating design selection and maintenance. Its superior sealing performance enables reliable operation in harsh environments with moisture and dust, and it is suitable for ambient temperatures ranging from -20°C to +40°C.

主要特点 KEY FEATURES

高参数：

支持更高的带速(可达5.0m/s以上)、更大的带宽(可达2400mm)、更高的输送量(可达数千吨/小时)和更长的单机长度(可达数公里)。

High Performance:

Supports higher belt speeds (up to 5.0 m/s or above), larger belt widths (up to 2400 mm), greater conveying capacities (up to thousands of tons per hour), and longer single-machine lengths (up to several kilometers).

高强度：

全面支持并围绕高强度输送带(如尼龙NN、聚酯EP帆布芯, 特别是钢丝绳芯ST)进行设计, 突破帆布芯带的张力限制。

High Strength:

Specifically designed around high-strength conveyor belts (such as nylon NN, polyester EP fabric core, and especially steel cord ST belts), overcoming the tension limitations of conventional fabric-core belts.

高可靠性：

关键部件(如滚筒、托辊、减速器)采用强化设计, 承载能力和寿命大幅提升。

High Reliability:

Critical components (such as pulleys, idlers, and reducers) are reinforced in design, significantly increasing load-bearing capacity and service life.

先进传动：

普遍采用硬齿面齿轮减速器, 传动效率更高(可达94%以上), 体积更小, 承载能力更强。

Advanced Drive System:

Widely adopts hard-geared reducers, offering higher transmission efficiency (up to 94% or more), more compact dimensions, and stronger load-carrying capability.

选型参数表 SELECTION PARAMETERS TABLE

输送带宽度与输送能力参数表(标准槽形托辊在水平输送时的理论输送能力)

Conveyor Belt Width and Conveying Capacity Parameters Table (Theoretical Conveying Capacity of Standard Trough Rollers in Horizontal Conveying)

Belt Width (mm)		Belt Speed (m/s)		Conveying Capacity (t/h)									
带宽		带速		输送能力									
500		0.8, 1.0, 1.25, 1.6, 2.0, 2.5, 3.15, 4.0		69, 86, 108, 138, 172, 215, 271, 344									
650		0.8, 1.0, 1.25, 1.6, 2.0, 2.5, 3.15, 4.0		127, 159, 198, 254, 318, 397, 500, 635									
800		0.8, 1.0, 1.25, 1.6, 2.0, 2.5, 3.15, 4.0		198, 247, 309, 396, 495, 619, 780, 990									
1000		1.0, 1.25, 1.6, 2.0, 2.5, 3.15, 4.0, 5.0		400, 500, 640, 800, 1000, 1250, 1600, 2000									
1200		1.0, 1.25, 1.6, 2.0, 2.5, 3.15, 4.0, 5.0		576, 720, 921, 1152, 1440, 1814, 2304, 2880									
1400		1.0, 1.25, 1.6, 2.0, 2.5, 3.15, 4.0, 5.0		784, 980, 1254, 1568, 1960, 2469, 3136, 3920									
1600		1.25, 1.6, 2.0, 2.5, 3.15, 4.0, 5.0, 5.6		1280, 1638, 2048, 2560, 3225, 4096, 5120, 5734									
1800		1.6, 2.0, 2.5, 3.15, 4.0, 5.0, 5.6		2362, 2952, 3690, 4649, 5904, 7380, 8266									
2000		1.6, 2.0, 2.5, 3.15, 4.0, 5.0, 5.6		2916, 3645, 4556, 5740, 7290, 9112, 10205									
2200		2.0, 2.5, 3.15, 4.0, 5.0, 5.6		4950, 6188, 7796, 9900, 12375, 13860									
2400		2.0, 2.5, 3.15, 4.0, 5.0, 5.6		5880, 7350, 9261, 11760, 14700, 16464									



描述

DESCRIPTION

链条带式输送机是利用两条以上的封闭循环链条，通过直接夹持或固接的方式，来牵引和承载输送带及物料。输送带主要起承载物料的作用，牵引力由高强度链条承担。链条和特殊皮带比传统织物芯带更耐油耐温，适合输送油污、高温的工件(如铸造件、热处理件)。

Chain belt conveyor utilize two or more enclosed circulating chains to drive and support the conveyor belt and its load through direct clamping or fixation. The conveyor belt primarily functions as the load-bearing surface for the material, while the traction force is borne by the high-strength chains. Both the chains and the specially designed belt offer superior resistance to oil and temperature compared to traditional fabric-core belts, making them suitable for conveying oily or high-temperature workpieces.(such as castings or heat-treated components.)

主要特点

KEY FEATURES

牵引力大： 动力通过链条的机械啮合传递，避免滚筒驱动的“打滑”问题，能提供极大的牵引力。	High Traction: Power is transmitted through the mechanical meshing of the chains, avoiding the "slippage" issue common in drum-driven systems, thereby providing extremely high traction.
精确稳定的运行： 链条与链轮的啮合保证了同步性，不会发生跑偏，运行速度稳定。	Precise and Stable Operation: The meshing between chains and sprockets ensures synchronization, preventing belt misalignment and maintaining consistent operating speed.
复杂的空间布置能力： 可以轻松实现水平、倾斜、转弯、螺旋、立体交叉等多种复杂的三维空间线路。	Complex Spatial Layout Capability: Easily accommodates various complex three-dimensional routes, including horizontal, inclined, curved, spiral, and multi-level crossing configurations.

选型参数表

SELECTION PARAMETERS TABLE

核心设计参数范围 (典型值) Core Design Parameter Range (Typical Values)		
Parameter Category 参数类别	Parameter Range/Options 参数范围/选项	Remarks 说明
Conveying Capacity 输送能力	1-500m³/h(常见) (Typical)	适用于工艺性输送而非大宗散料。 Suitable for process conveying rather than bulk material handling.
Belt Width 输送带宽度	200-2000mm	宽度越大，对链条和结构的强度要求越高。 Wider widths demand higher strength from chains and structure.
Operating Speed 运行速度	0.1-1.5m/s (常用Commonly 0.3-1.0m/s)	高速会增加磨损、噪音和动态不稳定性。 Higher speeds increase wear, noise, and dynamic instability.
Single Conveyor Length 单机长度	≤150米m(经济范围) (Economical Range)	受链条强度和累计阻力限制，不适合超长距离输送。 Limited by chain strength and cumulative resistance, not suited for very long distances.
Lifting Height 提升高度	≤80米m	高度由链条强度和张紧系统决定。 Determined by chain strength and the take-up system.
Traction Chain Type 牵引链条类型	工程塑料链条、钢制滚子链、不锈钢链 Engineering Plastic Chains, Steel Roller Chains, Stainless Steel Chains	塑料链：轻、耐腐蚀、低噪音，适合轻载、食品医药。 钢链：高强、耐磨、耐高温，适合重载、工业环境。 Plastic Chains: Lightweight, corrosion-resistant, low-noise. Ideal for light-duty, food and Pharmaceutical. Steel Chains: High strength, wear/heat resistant. Suitable for heavy-duty, industrial environments.
Belt Type 输送带类型	平皮带、挡边皮带、特氟龙带、钢板/塑料链板 Flat Belt, Sidewall Belt, Teflon-coated Belt, Steel/Plastic Apron	平皮带通用，挡边皮带用于倾角>30°，特氟龙带耐高温/粘性物料，链板用于重载冲击。 Flat belts are general-purpose. Sidewall belts are for inclines >30°. Teflon belts handle high temperatures/sticky materials. Aprons are for heavy impact/loads.
Drive Power 驱动功率	1.5-150kW	取决于总阻力(提升力、摩擦阻力)。 Depends on total resistance (lifting force, friction).

长距离带式输送机

LONG-DISTANCE BELT CONVEYOR

描述 DESCRIPTION

长距离带式输送机是单机长度超过常规水平(通常指1公里以上,可达数十甚至数百公里)、用于解决跨区域、大宗散料连续输送问题的系统性工程装备。以连续、高效、节能、环保的方式,替代传统的公路或铁路中转,实现物料的大规模、长距离运输。

Long-distance belt conveyor is engineered systems with a single-unit length exceeding conventional limits (typically over 1 km, and capable of reaching tens or even hundreds of kilometers). They are designed to address the continuous, bulk material handling needs across extensive regions. By offering a continuous, highly efficient, energy-saving, and environmentally friendly solution, they replace traditional intermediate transport methods such as road or rail, enabling the large-scale, long-distance transportation of materials.



主要技术特征

MAIN TECHNICAL FEATURES

超高强度输送带： 采用钢丝绳芯输送带，带强（ST）可达ST10000甚至更高，以满足巨大的沿线张力和启动冲击力。	Ultra-High-Strength Conveyor Belt: Steel cord belts with strength ratings (ST) up to ST10000 or higher are used to withstand extreme line tension and starting shock loads.
驱动技术： 大功率多点驱动，采用头部、中部、尾部多点分布式驱动。配备高性能软启动/控制装置（如变频调速VFD、CST可控传输、液体粘性软启动），并对多驱动单元的功率进行精确平衡。	Drive Technology: High-power, multi-point distributed drive system, incorporating head, intermediate, and tail drive units. Equipped with high-performance soft-start/control devices (e.g., variable frequency drives (VFD), CST controlled start transmission, hydraulic viscous soft starters), along with precise power balancing among multiple drive units.
动态分析与控制： 进行详细动态仿真分析，用于确定合理的加/减速度、预测各点张力变化。采用自动控制的重锤车式或液压绞车拉紧，根据负载和工况变化实时调整张力。	Dynamic Analysis and Control: Detailed dynamic simulation analysis is conducted to determine appropriate acceleration/deceleration rates and predict tension fluctuations along the belt. Automatic tensioning systems-such as gravity take-up carriages or hydraulic winch take-ups-are employed to adjust tension in real time based on load and operating conditions.
线路设计与中间结构： 水平转弯技术，适应复杂地形，减少土方量，使输送机可以在水平面内弯曲运行。大跨度结构时，设计大型桁架桥或索道桥。	Route Design and Intermediate Structures: Horizontal curve technology enables the conveyor to bend in the horizontal plane, adapting to complex terrain and reducing earthwork requirements. For large-span sections, structures such as truss bridges or cable-supported bridges are designed.
高度集成监控与保护系统： 跑偏、拉绳保护，超声波钢丝绳芯在线检测、接头状态监测、纵向撕裂检测等。对全线所有重要滚筒和驱动单元的轴承进行在线温度与振动监测。对物流流监测，自动除铁。基于PLC和SCADA系统，实现无人值守、远程监控和智能预警。	Highly Integrated Monitoring and Protection System: Includes belt misalignment and emergency pull-cord protection, online ultrasonic steel cord detection, splice condition monitoring, and longitudinal rip detection. Online temperature and vibration monitoring is implemented for bearings of all critical pulleys and drive units. Material flow monitoring and automatic tramp iron removal are also incorporated. Based on PLC and SCADA systems, the conveyor enables unattended operation, remote monitoring, and intelligent early warning.



核心优势

CORE ADVANTAGES

极高的运营经济性： 能耗成本远低于卡车运输（通常只有其1/3至1/5），且不受天气、交通等因素影响，可24小时连续运行。 Exceptional Operational Economy: Energy consumption costs are significantly lower than truck transport (typically only 1/3 to 1/5 of trucking costs). Operation is unaffected by weather or traffic, enabling 24/7 continuous operation.	地形适应性强 通过水平转弯和灵活布置，可翻山越岭、跨越障碍，减少对环境的破坏和征地面积。 Strong Terrain Adaptability: Through horizontal curves and flexible routing, the conveyor can traverse mountains and cross obstacles, minimizing environmental disruption and land acquisition.
卓越的环保性能： 全封闭运行，基本无粉尘污染和物料遗撒，噪音低，碳排放少。 Outstanding Environmental Performance: Fully enclosed operation minimizes dust pollution and material spillage, reduces noise, and lowers carbon emissions.	超大运力： 单条线路年输送量可达数百万吨至数千万吨。 Massive Transport Capacity: A single line can achieve an annual throughput ranging from several million to tens of millions of tons.

选型参数表

SELECTION PARAMETERS TABLE

典型项目核心参数范围 Typical Project Core Parameter Range

Parameter Category 参数类别	Parameter Range/Options 参数范围/选项	Remarks 说明
Single Conveyor Length 单机长度	1km-30+km	超过10km即属于超长距离 Lengths exceeding 10 km are classified as ultra-long distance.
Conveying Capacity 输送能力	500-10000+t/h	通常要求年输送量达到数百万吨级以上 Typically required to handle annual throughput in the range of millions of tons.
Belt Speed 带速	3.15-6.5m/s (常见 commonly 4.0-5.6m/s)	高带速是实现大运量和降低带宽/张力需求的关键 High belt speed is key to achieving large capacity and reducing required belt width/tension.
Belt Width 带宽	800-2200mm (常见 commonly 1200-1800mm)	由运量、带速和物料粒度决定 Determined by capacity, belt speed, and material lump size.
Belt Type 输送带类型	钢丝绳芯输送带 Steel Cord Belt	带强范围通常在ST1600-ST10000或更高 Belt strength typically ranges from ST1600 to ST10000 or higher.
Total Drive Power 总驱动功率	数百-数万千瓦 Several hundred to tens of thousands of kW	采用多点分布式驱动 Utilizes a multi-point distributed drive system.
Maximum Route Incline 线路最大倾角	±18°	受物料安息角和防滑限制 Utilizes a multi-point distributed drive system.
Horizontal Curve Radius 水平转弯半径	≥800-1200m	实现绕开障碍、适应地形 Enables routing around obstacles and adaptation to terrain.
Total Lift / Drop 提升/下降高度	±300m以上 ±300 m or more	翻越复杂地形节省土方和隧道工程 Reduces earthwork and tunneling when crossing complex terrain.

管状带式输送机

TUBULAR BELT CONVEYOR



描述 DESCRIPTION



管状带式输送机是一种特种带式输送机。输送带在装载物料后,通过一系列特殊布置的多边形托辊组,被强制卷成圆管状,将物料完全包裹在管内进行密闭输送。

The tubular belt conveyor is a specialized type of belt conveyor. After loading, the conveyor belt is formed into a circular tube by a series of specially arranged polygonal idler sets, fully enclosing the material for sealed transportation.

工作原理WORKING PRINCIPLE

01	装料段：输送带以平皮带形式运行，在此处接收物料（类似普通皮带机）。	Loading Section: The conveyor belt operates in a flat configuration, where material is loaded onto it (similar to a conventional belt conveyor).
02	过渡段（成管段）：输送带逐渐经过由平形变为倾斜的过渡托辊组，开始弯曲并包裹物料。	Transition Section (Tubing Section): The belt gradually passes through transition idler sets that shift from flat to inclined positioning, causing the belt to curve and begin enclosing the material.
03	密闭输送段：进入正式管状段，输送带被六边形（或四边形、八边形）布置的托辊组完全卷成圆形管状，将物料密闭其中。	Enclosed Conveying Section: Within the formal tubular zone, the belt is fully formed into a circular tube by polygonal (typically hexagonal, quadrilateral, or octagonal) idler sets, completely enclosing the material for sealed transport.
04	过渡段（展平段）：在机头卸料前，托辊组逐渐将圆管展开，恢复为平带状态。	Transition Section (Transition Zone): Prior to discharge at the head, the idler sets progressively open the tubular shape, returning the belt to a flat configuration.
05	卸料段：以平带形式通过滚筒卸料。	Discharge Section: Material is discharged as the flat belt passes over the head pulley.



核心优势CORE ADVANTAGES

全封闭输送, 环保卓越： 无粉尘飞扬，无物料洒落，减少物料损失。 Fully Enclosed Conveying, Superior Environmental Performance: No dust emission, no material spillage, minimizing product loss.	空间布置灵活, 适应性强： 可三维空间弯曲，小半径转弯，大倾角输送。 Flexible Spatial Layout, High Adaptability: Capable of three-dimensional curves, small-radius turns, and steep-incline conveying.	输送线隐蔽, 美观集成： 线路可沿现有工厂布局走向布置，与环境 和建筑更好融合。 Discreet Routing, Seamless Integration: The conveyor line can follow existing plant layouts, blending harmoniously with the environment and structures.
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典型应用场景TYPICAL APPLICATION SCENARIOS

- 环保敏感区域：穿越城市、居民区、农田、自然保护区等。
Environmentally Sensitive Areas: Traversing cities, residential areas, farmland, nature reserves, etc.
- 输送特殊物料：易产生粉尘的物料(水泥、粉煤灰、矿粉、煤炭、化肥等), 有害物料(化工原料、废渣等), 怕污染的物料(食品、粮食等), 易受天气影响的物料。
Conveying Special Materials: Dust-generating materials (cement, fly ash, mineral powder, coal, fertilizer, etc.), hazardous materials (chemical raw materials, waste slag, etc.), materials that require contamination-free handling (food, grain, etc.), and weather-sensitive materials.

典型规格表TYPICAL SPECIFICATION TABLE

Nominal Pipe Diameter(mm)	Recommended Flat Belt Width(mm)	Approximate Conveying Capacity Range(t/h)	Max. Allowable Lump Size(mm)	Min. Horizontal Curve Radius(m)
公称管径	推荐平态带宽	近似输送能力范围	适用最大粒度	最小水平转弯半径
150	650-750	30-80	50	≥ 45
200	850-950	80-150	70	≥ 60
250	1050-1150	130-250	85	≥ 75
300	1250-1350	200-400	100	≥ 90
350	1450-1550	300-600	120	≥ 105
400	1650-1750	450-850	140	≥ 120
500	2050-2150	750-1400	180	≥ 150

注：近似输送能力范围：输送能力基于物料密度1.0 t/m³，带速2.5-3.15 m/s，填充率75%估算。

最小水平转弯半径：此为许用极限值，实际设计推荐采用更大的半径以确保运行稳定。

Note: Approximate conveying capacity range: Capacity is estimated based on a material density of 1.0 t/m³, belt speed of 2.5–3.15 m/s, and a fill rate of 75%.

Minimum horizontal curve radius: This is the permissible limit value. In actual design, a larger radius is recommended to ensure operational stability.

大倾角带式输送机

HIGH-INCLINATION BELT CONVEYOR



描述 DESCRIPTION

大倾角带式输送机是一种特殊的连续输送设备，利用特制的输送带（带横隔板、花纹或挡边等）与物料之间的摩擦力，以及挡边、横隔板对物料的阻挡作用，共同实现物料大倾角或垂直提升（通常为30°-90°）的输送机械。解决在空间有限、地形复杂的工况下，实现物料高效、短距离、大落差提升或下降的难题。

The High-inclination belt conveyor is a specialized continuous conveying equipment. By utilizing the friction between specially designed belts (equipped with cleats, profiles, sidewalls, etc.) and the material, combined with the blocking effect of sidewalls and cleats, it achieves steep-angle or vertical material conveyance (typically from 30° to 90°). It addresses the challenge of efficiently lifting or lowering materials over short distances with large vertical drops in space-constrained or topographically complex operating conditions.

典型应用场景 TYPICAL APPLICATION SCENARIOS

- 矿石开采与堆存: 从坑底向地面或从地面向高处的陡峭提升。

Mining and Stockpiling: Steep-angle lifting from pit bottom to ground level or from ground level to elevated storage.
- 电厂、水泥厂、化工、冶金行业: 将各类原料、炉渣等从堆场输送至处理设备入口或厂区高位储仓。

Power Plants, Cement Plants, Chemical & Metallurgical Industries: Transporting raw materials, slag, etc., from stockyards to processing equipment inlets or high-level silos within the plant.
- 粮食与食品工业: 在大需要大角度提升谷物、糖等散料时 (需使用食品级输送带)。

Grain & Food Processing: Used where steep-angle lifting of bulk materials such as grains and sugar is required (food-grade belts must be employed).
- 港口装卸船: 与装船机/卸船机配套, 进行大倾角输送。

Port Ship Loading/Unloading: Paired with ship loaders for high-incline material transfer.



规格与性能参数表 SPECIFICATIONS TABLE



Parameter Category 参数类别	Parameter Item 参数项	Typical Specification / Range 典型规格/范围	Remarks 说明
Core Specifications 核心规格	Belt Width 带宽	500mm, 650mm, 800mm, 1000mm, 1200mm, 1400mm, 1600mm, 1800mm, 2000mm	基带 (不含挡边) 的宽度 Width of the base belt (excluding sidewalls)
	Sidewall Height 挡边高度	80mm, 120mm, 160mm, 200mm, 240mm, 300mm, 400mm, 500mm, 600mm	挡边越高, 物料装载截面越大, 输送能力越强。 A greater sidewall height increases the material cross-sectional area, resulting in higher conveying capacity.
	Cleat Type 横隔板形式	T型, TC型, C型, TS型等 T-Type, TC-Type, C-Type, TS-Type, etc.	T型最常用 The T-type is the most commonly used.
	Cleat Height 横隔板高度	通常 ≤ 挡边高度 (H) Typically ≤ Sidewall Height (H)	决定每个“料斗”的盛料深度 Determines the filling depth of each individual “bucket.”
Performance Parameters 性能参数	Cleat Spacing 横隔板间距	200mm, 280mm, 360mm, 400mm, 500mm, 630mm等(etc.)	间距越小, 料斗越多, 物料填充率越高, 但运行阻力和能耗越大。 Smaller spacing provides more buckets and higher fill rate, but increases running resistance and energy consumption.
	Maximum Conveying Incline 最大输送倾角	30°-90° (常用Common: 30°, 45°, 60°, 75°, 90°)	倾角越大, 对隔板强度、填充率、卸料要求越高。 Steeper inclines place higher demands on cleat strength, fill rate, and discharge requirements.
	Conveying Capacity 输送能力	50-2000m³/h	受带宽、带速、物料填充率、倾角综合影响 Influenced by belt width, speed, material fill rate, and incline angle.
	Belt Speed 带速	0.8-2.5m/s (常用Common: 1.0–1.6 m/s)	粘性、磨损性大的物料宜低速 Lower speeds are recommended for sticky or highly abrasive materials.
	Lifting Height 提升高度	< 100m (单机) (single unit)	提升高度直接决定设备长度和功率 The lifting height directly determines the overall machine length and drive power.
	Horizontal Length 水平长度	根据工艺布置确定 Determined by process layout	设备总长度由水平段、倾斜/垂直段、过渡弧段共同组成 Total length comprises horizontal, inclined/vertical, and transition curve sections.
Drive & Configuration 驱动与配置	Drive Power 驱动功率	7.5-500kW	取决于总提升高度、输送量、带速、机长、摩擦阻力等 Depends on total lift height, capacity, belt speed, conveyor length, friction resistance, etc.
Material Characteristics Requirements 物料特性要求	Belt Strength 输送带强度	尼龙芯 (NN)、聚酯芯 (EP)、钢丝绳芯 (ST) 等, 强度从500-3150N/mm可选 Nylon core (NN), Polyester core (EP), Steel cord (ST), etc. Strength ranging from 500–3150 N/mm	提升高度高、距离长、负载大时需高强度带 High-strength belts are required for greater lift heights, longer distances, and heavier loads.
	Main Components 主要部件	驱动装置 (电机、减速机)、改向滚筒、压带轮组、平行/缓冲托辊、拉紧装置、机架、头尾罩、清扫器等 Drive unit (motor, reducer), bend pulleys, hold-down pulley assemblies, flat/impact idlers, take-up unit, frame, head/tail covers, belt cleaners, etc.	间距越小, 料斗越多, 物料填充率越高, 但运行阻力和能耗越大。 Smaller spacing provides more buckets and higher fill rate, but increases running resistance and energy consumption.
	Material Lump Size 物料粒度	≤隔板高度的1/2 ≤ 1/2 of cleat height	大块物料易卡在隔板与挡边转角处 Oversized lumps are prone to jamming at the corner between cleats and sidewalls.
	Material Temperature 物料温度	通常<60°C Typically < 60°C	高温物料需采用耐热带 High-temperature materials require heat-resistant belts.
	Material Properties 物料特性	适用于松散、干燥至微湿、非强粘性的散料 Suitable for free flowing, dry to slightly moist, non highly cohesive bulk materials.	粘性过强的物料粘附在隔板和挡边上, 会使填充率剧降。 Highly cohesive materials that stick to cleats and sidewalls can drastically reduce the fill rate.

波状挡边带式输送机

CORRUGATED SIDEWALL BELT CONVEYOR



描述DESCRIPTION



波状挡边带式输送机，俗称挡边机或裙边隔板机，是一种通过在输送带基带上硫化固定的波状挡边和横隔板，形成一个一个“匣形容器”，从而实现大倾角乃至垂直（90°）输送散状物料的设备。

The corrugated sidewall belt conveyor, colloquially known as the sidewall conveyor or the sidewall cleated conveyor, is a type of equipment that uses corrugated sidewalls and transverse cleats vulcanized onto a base belt to form a series of "box-like compartments," thereby enabling steep-angle and even vertical (90°) conveying of bulk materials.

工作原理WORKING PRINCIPLE

物料从尾部装载到由两侧挡边和横隔板形成的“格斗”中，随着输送带运行，这些格斗承载着物料上行。在达到顶点后，输送带绕过滚筒，物料在重力或离心力作用下被卸出。其核心是利用物理围挡来防止物料在陡坡上下滑或洒落。

Material is loaded into the "compartments" formed by the sidewalls and cleats at the tail section. As the belt moves, these compartments carry the material upward. Upon reaching the head, the belt wraps around the pulley, and the material is discharged by gravity or centrifugal force. This process relies on physical containment to prevent the material from sliding back or spilling on steep inclines.

核心优势CORE ADVANTAGES



超大倾角输送能力：
可实现从0°到90°垂直的连续输送，极大节省占地面积。
Exceptional Steep-Angle Conveying Capability:
Enables continuous conveying from 0°to vertical (90°), significantly reducing floor space requirements.

输送能力范围广：
通过在带宽、挡边高度、隔板间距上进行调整，可实现从小型到巨型（超过6000吨/小时）的输送量。
Broad Capacity Range:
By adjusting belt width, sidewall height, and cleat spacing, it can handle capacities ranging from small-scale to ultra-high (exceeding 6,000 t/h).

经济性好：
在同等提升高度和输送量的应用中，其投资和运行成本通常低于多台设备组成的系统。
High Cost-Effectiveness:
For applications requiring equivalent lift height and throughput, its capital and operating costs are often more economical than those of multi-conveyor systems.

典型规格表TYPICAL SPECIFICATION TABLE



(以C型隔板、倾角>60°为例) (for example with C-type cleats and incline angle > 60°)

Base Belt Width(mm)	Sidewall Height (mm)	Cleat Height (mm)	Approximate Bucket Volume(L/m)	Reference Capacity Range(t/h)
基带宽度	挡边高度	隔板高度	近似料斗容积	参考输送能力范围
800	160	120	25-30	50-120
1000	200	160	50-60	120-250
1200	240	180	80-100	200-400
1400	300	240	140-170	350-700
1600	300	240	160-190	400-800

注：基于物料密度1.0 t/m³，带速1.6-2.0 m/s，填充率75%估算。
Note: Estimated based on a material density of 1.0 t/m³, belt speed of 1.6-2.0 m/s, and a fill rate of 75%.

横隔板类型与倾角对照表Cleat Type and Incline Angle Reference Table

Cleat Type 隔板类型	Schematic 示意图	Applicable Incline Angle Range 适用倾角范围	Features & Applications 特点与用途
T-Type T型	近似“—”字 Resembles a dash ("—")	≤40°	防止物料下滑，用于小倾角增强。 Prevents material slipback; used for reinforcing conveyance at low inclines.
TC-Type TC型	T型带副板 T-type with an auxiliary plate	40°-60°	副板形成次级料斗，防止物料洒落。 The auxiliary plate forms a secondary pocket, preventing material spillage.
C-Type (Bucket Type) C型 (斗型)	近似“U”形 Resembles a "U" shape	60°-90°	最常用，形成完整料斗，用于大倾角及垂直提升。 The most common type, forming a complete bucket for steep angle and vertical lifting.
VS-Type VS型	带导向翼 With guide wings	空间转弯机型 For spatial curve	翼板与导向辊配合，实现三维空间转弯。 The guide wings cooperate with guide rollers to enable three dimensional curve negotiation.

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裙边带式输送机

SKIRT EDGE BELT CONVEYOR

描述 DESCRIPTION

裙边带式输送机指在普通平型输送带两侧, 固定有连续、笔直或微弯的橡胶挡边(即“裙边”), 以防止物料在输送过程中向两侧洒落的输送设备。

Skirt Edge Belt Conveyor refers to a conveying equipment that features continuous, straight or slightly curved rubber flanges (i.e., "skirts") fixed on both sides of a standard flat belt to prevent material from spilling laterally during transport.

工作原理 WORKING PRINCIPLE

裙边带式输送机依靠驱动滚筒与输送带之间的摩擦力, 带动输送带及其上物料连续运动。两侧加装的固定式橡胶挡边, 将物料限制在输送带宽度范围内, 有效解决了因输送带跑偏、抖动或物料堆积角过小而导致的侧向洒落问题。

The Skirt Edge Belt Conveyor operates by utilizing the friction between the drive pulley and the conveyor belt to propel the belt and the material on it in continuous motion. The fixed rubber skirts mounted on both sides confine the material within the width of the belt, effectively preventing lateral spillage caused by belt misalignment, vibration, or a low material angle of repose.

核心优势 CORE ADVANTAGES

有效防洒落: 从根本上解决粉状、颗粒状及小块状物料在输送过程中的侧向泄漏问题。 Effective Spillage Prevention: Fundamentally solves the problem of lateral leakage during the conveying of powdered, granular, and small lump materials.	结构相对简单: 在通用带式输送机基础上对输送带和托辊组进行改进。 Relatively Simple Structure: Based on modifications to the belt and idler sets of a general-purpose belt conveyor.
成本较低: 相比大倾角波状挡边输送机, 其输送带和整机成本要低得多。 Lower Cost: Compared to steep-incline corrugated sidewall conveyors, both the belt and the overall machine cost are significantly lower.	可密封: 可在裙边之上加盖密封罩, 实现全密闭输送。 Sealable: Can be equipped with a sealed cover above the skirts to achieve fully enclosed conveying.

典型规格表 TYPICAL SPECIFICATION TABLE

(以倾角30°、填充率70%为例) (for example with an incline angle of 30° and a fill rate of 70%)

Specification (B×H) 规格 (带宽B×裙边高H)	Belt Speed (v) 带速	Conveying Capacity Range(Q) 输送能力范围	Drive Power Range (30m Horizontal) 驱动功率范围 (长度30m水平)	Typical Application (Bulk Density 0.8 t/m³) 典型应用场景 (堆积密度0.8t/m³)
B500xH80	1.0-1.6m/s	25-65m³/h (20-50t/h)	2.2-4kW	轻质塑料颗粒、种子、小规模配料输送 Light plastic pellets, seeds, small-scale batching
B650xH100	1.25-2.0m/s	55-130m³/h (45-105t/h)	3-5.5kW	粮食、饲料、化工粉末、小型生产线转运 Grain, feed, chemical powder, small production line transfer
B800xH120	1.6-2.5m/s	100-240m³/h (80-190t/h)	5.5-11kW	主生产线、中颗粒输送 Main production line, medium-sized granular material handling
B1000xH150	1.6-2.5m/s	150-360m³/h (120-290t/h)	7.5-18.5kW	进出仓、煤炭、标准散货码头转载 In/out of silos, coal, standard bulk terminal transshipment
B1200xH180	1.6-2.8m/s	220-550m³/h (175-440t/h)	15-37kW	大型电厂、矿山、港口、建材原料输送 Large power plants, mines, ports, raw material handling for building materials
B1400xH200	1.8-3.15m/s	300-750m³/h (240-600t/h)	22-75kW或更高 22-75 kW or higher	大型枢纽港、钢铁厂、特大产能加工厂 Major hub ports, steel plants, ultra-high-capacity processing plants

定制带式输送机 CUSTOMIZED BELT CONVEYOR



为何需要定制？ WHY CUSTOMIZATION IS NEEDED?

■ 极度特殊的物料特性：

如超高温、超低温、强腐蚀性、强粘性、易爆、超轻、超重、极度磨损性的物料。

■ Extremely Special Material Characteristics:

Such as ultra-high/low temperature, highly corrosive, highly adhesive, explosive, ultra-light, ultra-dense, or extremely abrasive materials.

■ 极其复杂的空间布置：

场地存在大量障碍物，需要输送机呈S形、C形、L形、螺旋形或多角度三维空间转弯，不仅仅是直线或简单倾斜。

■ Highly Complex Spatial Layout:

Sites with numerous obstacles requiring S-shape, C-shape, L-shape, spiral, or multi-angle three-dimensional curves-beyond simple straight or inclined paths.

■ 严苛的工艺与环境要求：

全程绝对密封（防毒、防放射）、无菌洁净（GMP标准）、防爆（ATEX标准）、深海或太空环境、食品级直接接触等。

■ Stringent Process & Environmental Requirements:

Full-enclosure (for toxicity/radiation containment), Sterile and Cleanroom (GMP standards), explosion-proof (ATEX certification), deep-sea or space environments, direct food-grade contact, etc.

■ 极端性能参数：

超大输送量 (>5000t/h)、超长距离 (>5km)、超大倾角或垂直提升、超高带速、需要中间卸料或多点加料。

■ Extreme Performance Parameters:

Ultra-high capacity (>5,000 t/h), ultra-long distance (>5 km), steep/vertical lifting, very high belt speeds, or requirements for intermediate discharge/multiple feeding points.

■ 高度集成与自动化功能：

需要将称重、检测（金属、温度）、筛分、冷却、干燥、喷码、机器人拣选等工艺直接集成到输送线上，实现一体化控制。

■ Highly Integrated & Automated Functions:

Need to integrate weighing, detection (metal, temperature), screening, cooling, drying, marking, robotic sorting, and other processes directly into the conveyor line for unified control.

主要定制化维度

KEY CUSTOMIZATION DIMENSIONS

输送带定制	Belt Customization	01
材质:耐高温(硅胶、特氟龙)、耐油(丁腈橡胶)、耐酸碱、食品级白色(PU、PE)、不锈钢带、钢网带、链板带等。	Material: Heat-resistant (silicone, Teflon), oil-resistant (Nitrile rubber), acid/alkali-resistant, food-grade white (PU, PE), stainless steel belt, steel mesh belt, slat-top chain belt, etc.	
结构:特殊花纹(高摩擦、防滑)、挡边/隔板(高度、间距、形状特殊设计)、加强层(凯夫拉纤维、钢丝绳)、导电/抗静电层。	Structure: Special profiles (high-friction, anti-slip), sidewalls/cleats (customized height, spacing, and shape), reinforcement layers (Kevlar fiber, steel cord), conductive/anti-static layers.	
特性:阻燃、抗撕裂、耐切割。	Properties: Flame-retardant, rip-resistant, cut-resistant.	

结构设计定制	Custom Structural Design	02
路线定制:水平转弯(使用转弯模块或特殊导向)、垂直螺旋、空间曲线。	Route Customization: Horizontal curves (using curve modules or special guidance), vertical spirals, spatial curves.	
机架定制:异形结构以适应现有厂房立柱、管道;特殊材质(不锈钢、铝合金、防腐涂层);可移动式、可升降式、可伸缩式。	Frame Customization: Custom-shaped structures to accommodate existing columns and pipes;special materials (stainless steel, aluminum alloy, anti-corrosion coating)mobile, liftable, or telescopic designs.	
模块定制:特殊的加料段(防冲击、防洒落)、卸料段(犁式卸料器、可移动卸料车)、密封罩(全气密、带观察窗、带清洗系统)。	Module Customization: Specialized loading sections (impact-resistant, spill-proof), discharge sections (plough trippers, movable tripper cars), enclosures (fully airtight, with viewports, with cleaning systems).	

驱动与张紧定制	Drive & Tensioning Customization	03
多驱/分布式驱动:用于超长距离输送,解决单点驱动张力过大问题。	Multi-Point / Distributed Drive: Used for ultra-long-distance conveying to avoid excessive tension at a single drive point.	
特殊驱动位置:中间驱动、尾部驱动。	Special Drive Locations: Intermediate drive, tail-end drive.	
智能张紧:液压自动张紧、绞车张紧,保持恒定张力。	Intelligent Tensioning: Hydraulic automatic take-up, winch take-up, to maintain constant tension.	
特殊制动:快速制动、断电自锁、下行发电制动。	Special Braking Systems: Rapid braking, power-off self-locking, regenerative braking for decline sections.	

核心部件定制	Core Component Customization	04
特种托辊:陶瓷包胶、螺旋自清洁、防粘、防磁、耐高温、锥形调心。	Special Idlers: Ceramic-lagged, spiral self-cleaning, anti-stick, anti-magnetic, heat-resistant, conical training.	
特种滚筒:陶瓷包胶、花纹包胶、磁力滚筒、驱动滚筒直径非标。	Special Pulleys: Ceramic-lagged, patterned-lagged, magnetic pulleys, non-standard drive pulley diameters.	
特种清扫器:聚氨酯刮刀、螺旋滚筒清扫、高分子刷式。	Special Cleaners: Polyurethane blades, spiral drum cleaners, polymer brush-type cleaners.	

附属系统集成	Ancillary System Integration	05
工艺集成:集成在线称重秤、金属探测器、除铁器、除尘点、喷淋冷却系统。	Process Integration: Integrated in-line weighers, metal detectors, tramp iron magnets, dust collection points, spray cooling systems.	
控制与监测:集成PLC/DCS控制系统、全线状态监测(张力、跑偏、温度、烟雾、撕裂)、预测性维护系统、数字孪生接口。	Control & Monitoring: Integrated PLC/DCS control systems, plant-wide condition monitoring (tension, misalignment, temperature, smoke, rip), predictive maintenance systems, digital twin interfaces.	

环境与安全定制	Environmental & Safety Customization	06
防护等级:IP65/IP66等高防护、防雨防雪屋顶。	Protection Rating: High protection rating (IP65/IP66), weather-proof roof.	
安全设施:符合当地安全法规的急停拉绳、护栏、安全锁、警示系统。	Safety Features: Emergency stop cords, safety guards, lockout devices, warning systems compliant with local safety regulations.	
环保设施:全密闭设计、粉尘收集接口、降噪处理。	Environmental Features: Fully enclosed design, dust collection interface, noise reduction treatment.	



核心优势

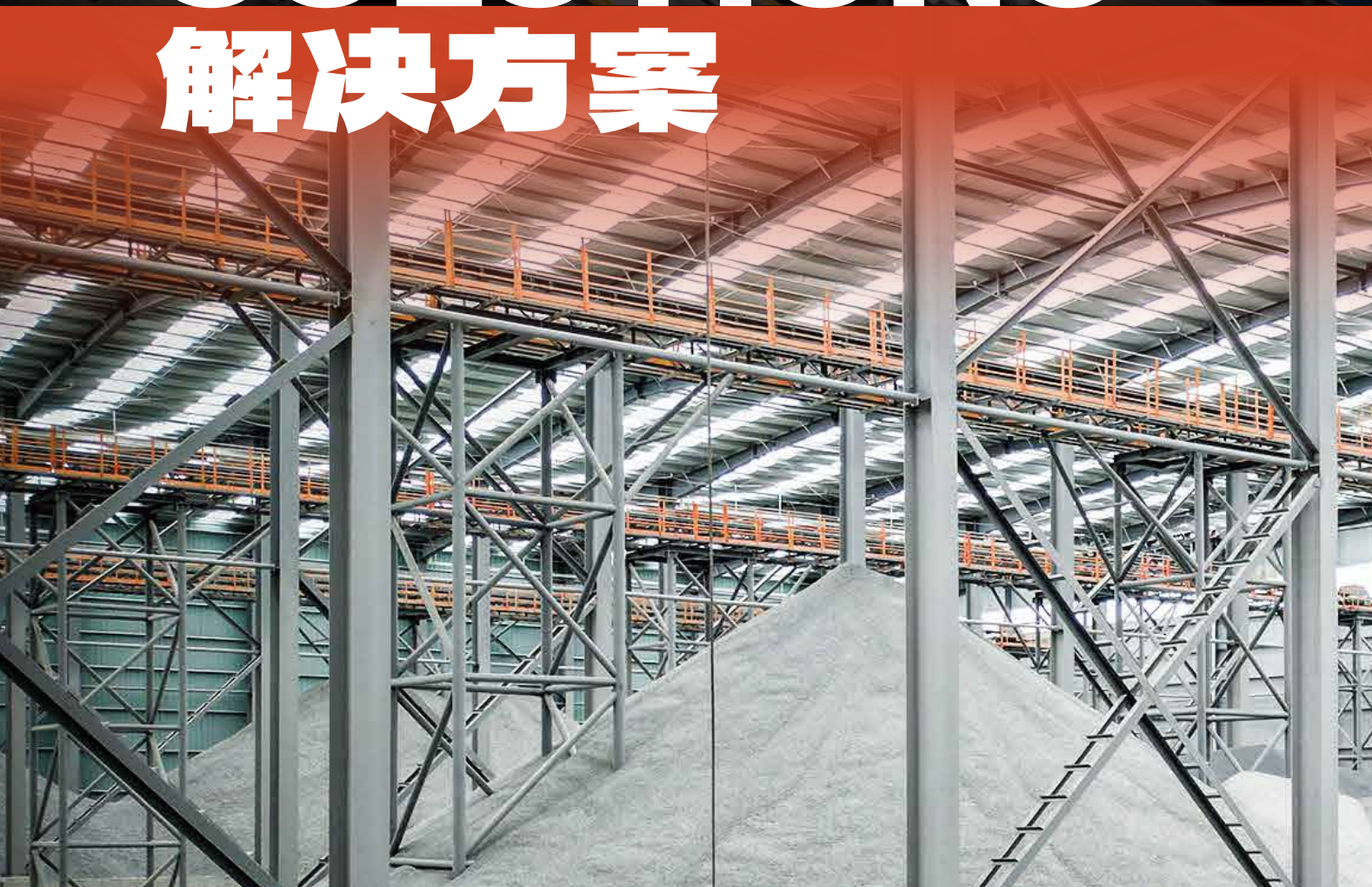
CORE ADVANTAGES

完美匹配需求: 解决特殊难题,优化工艺流程。 Perfect Requirement Matching: Solves unique challenges and optimizes process flow.	提升整体效率: 一体化设计减少转运点,降低故障率和物料损失。 Enhanced Overall Efficiency: Integrated design reduces transfer points, lowering failure rates and material loss.
节约空间与成本: 通过紧凑、高效的设计,可能节约土建和总运营成本。 Space and Cost Savings: Compact, efficient layouts can reduce civil engineering and overall operating costs.	实现高自动化与智能化: 为智能工厂奠定硬件基础。 Achieve a High Level of Automation and Intelligence: Lays the hardware foundation for smart factories.



SOLUTIONS

解决方案





SOLUTIONS

解决方案

