

# 河北勤亿输送设备有限公司

## **Hebei QinYi**

### **Conveying Equipment Co., Ltd.**

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# COMPANY Brief Introduction



Hebei QinYi Conveying Equipment Co., Ltd. is founded in 2013, which is mainly engaged in designing and manufacturing bulk conveying systems and equipments.

QinYi has professional production workshops and modern production lines, covering an area of more than 60,000 square meters, with the registered capital of more than 12, 000, 000 dollars.





# COMPANY Brief Introduction



QinYi is specializing in Gravity Conveyor Roller, Idler and Drum Pulley.

In order to ensure the quality of the products, QinYi have passed the ISO9001:2000 quality management system certification. According to GB/T19001:2000 standard, QinYi has established a quality management system, which provides a reliable guarantee for the quality stability.



# COMPANY MAIN PRODUCTS

*NO.1*

1. Belt Conveyor  
System : Design  
& Production &  
Installation

*NO.3*

3. Conveyor Idler  
& Roller

*NO.5*

5. Belt Conveyor  
Impact Bed

*NO.2*

2. Conveyor  
Pulley

*NO.4*

4. Conveyor  
Cleaner

# Part 1 - Belt Conveyor System

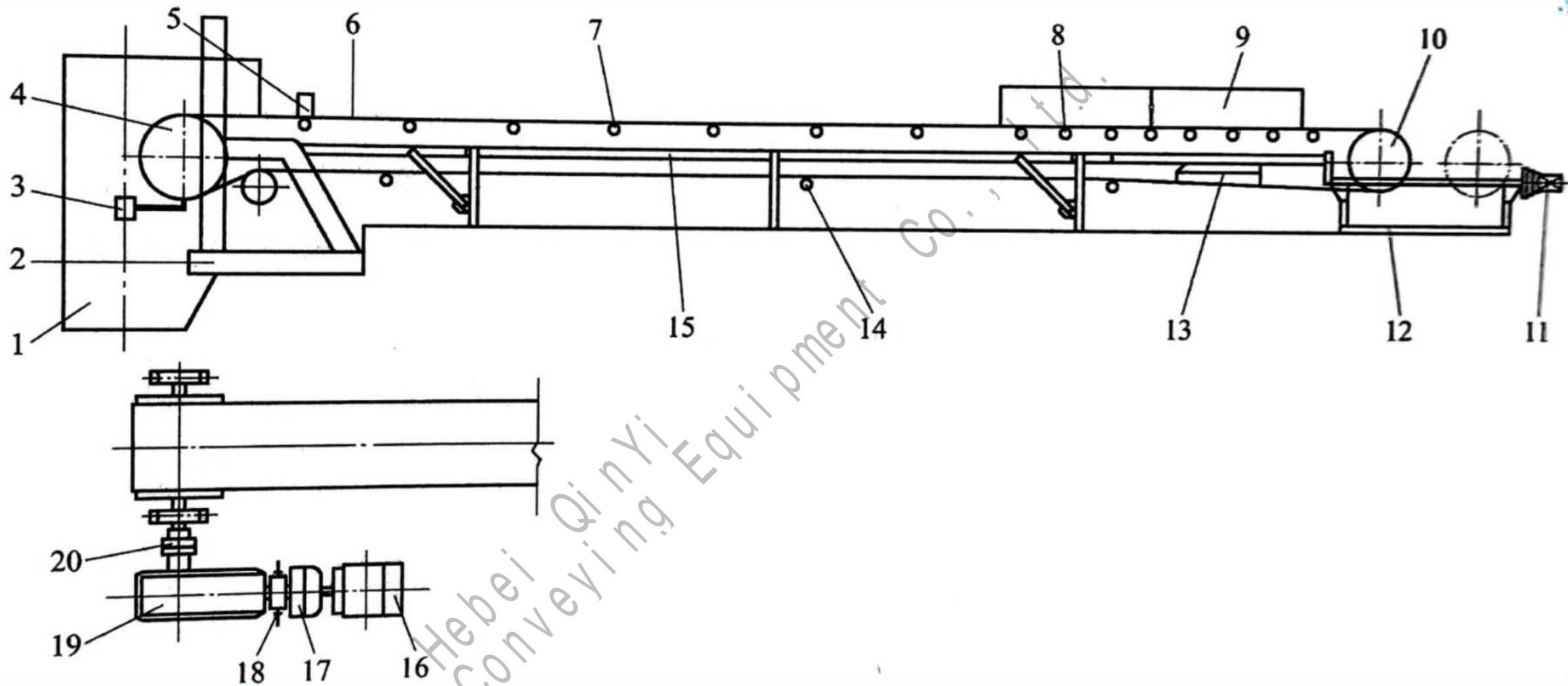
## CONVEYOR SYSTEM

One-up belt conveyor equipment manufacturer  
in China



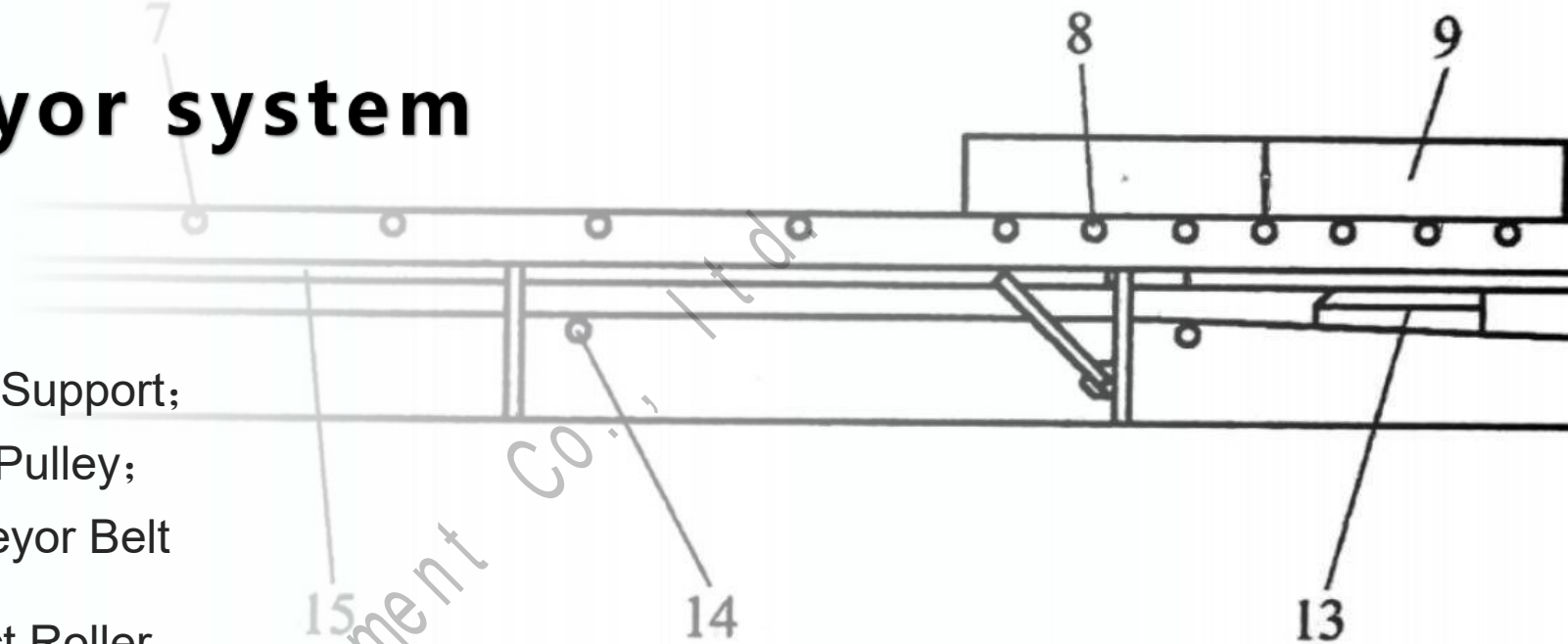
**Belt conveyor is a long distance bulk conveying equipment**





# Typical belt conveyor system structure DTII(A)

- |                             |                   |
|-----------------------------|-------------------|
| 1. Head Hopper              | 2. Head Support;  |
| 3. Primary Cleaner          | 4. Drive Pulley;  |
| 5. Safety Protection Device | 6. Conveyor Belt  |
| 7. Carrier Roller           | 8. Impact Roller  |
| 9. Loading Chute            | 10. Bend Pulley   |
| 11. Screw Tension Device    | 12. Tail Support  |
| 13. Empty Segment Cleaner   | 14. Return Roller |
| 15. Middle Support;         | 16. Motor         |
| 17. Hydraulic Coupler       | 18. Brake         |
| 19. Reduction Gear          | 20. Coupling      |




# QinYi - Belt Conveyor System



Belt conveyor is a category of continuous conveying machinery. It is a continuous conveying equipment that takes the conveyor belt as the traction component and support component, uses idler to support and relies on the friction force between the driving pulley and the conveyor belt to transfer the traction force.





# QinYi - Belt Conveyor System

It can handle all kinds of powders, granular and bulk materials in a continuous material flow from the loading point to the unloading point on a certain transportation line. It not only plays an important role in the internal transportation of industrial enterprises, but also plays an important role in its external transportation.

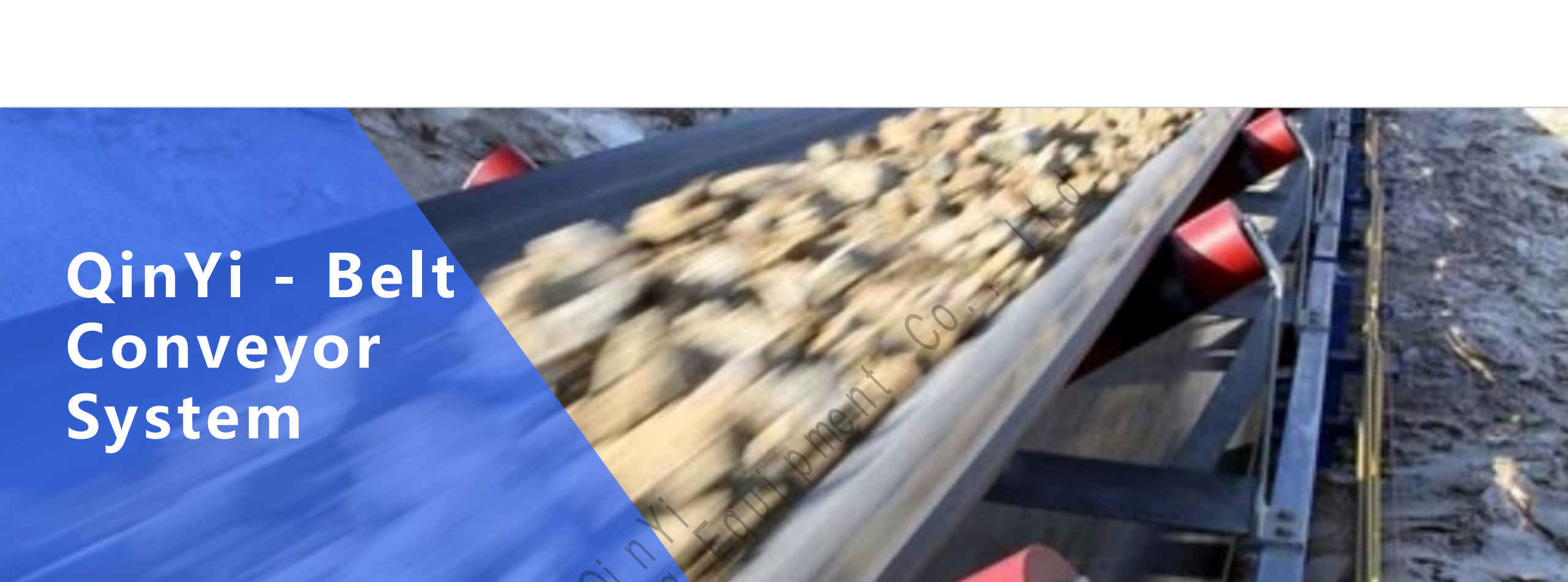


A large-scale industrial belt conveyor system is shown, featuring a blue steel frame and yellow safety railings. The conveyor belt stretches across a deep, rugged quarry, illustrating its use in long-distance material transport. The background shows the steep, rocky walls of the quarry and some distant construction equipment.

# QinYi - Belt Conveyor System

Due to low investment, low operating costs, long-distance material handing and other reasons, in some occasions can replace railway transportation and road transportation, has become an indispensable transportation equipment in the production of industrial enterprises.





# QinYi - Belt Conveyor System

Over the past 20 years, our company design and production of belt conveyor has made rapid progress in development, more prominent features are the application of belt conveyor conveying capacity, single machine length, motor power, starting and braking technology level has been greatly improved.





# QinYi - Belt Conveyor System

## Our advantages:

- simple structure - energy conservation and economy
- wide range of conveying materials - long conveying distance
- large delivery capacity - high production efficiency
- flexible wiring arrangement - highly adaptable
- large lift Angle - flexible receiving and discharging
- high safety and reliability - excellent environmental performance
- simple operation - easy program control

**Standard :** GB ISO EN DIN BS IOCT ANSI JIS AS VDI FEM &

**Custom - made :** BW200 - 400 BW500 BW650 BW800 BW1000 BW1200 BW1400

BW1600 BW1800 BW2000 BW2400 BW2600 BW2800 BW3000mm

# QinYi - Belt Conveyor System

## Long Distance Belt Conveyor Cases

BW (mm)	BS (m.s)	Length (m)	Belt Size	Raw Material	Lift Height (m)	Capacity (t/h)	Power (kw)	Application site	SOP Time
1400	4.00	1858	ST-2000	Coal	8	2000	3*500	Inner Mongolia huolinhe coal mine	1986
1200	4.00	4602	ST-2000	Coal		2220	3*400	Shan Xi - Daliu Tower	1991
1800	5.50	1482	ST-2500	Ouerburden Material	20	8600	4*630	Inner Mongolia zhungeer opencast coal mine	1996
1400	5.85	2556	ST-3150	Coal	12.7	5616	5*560	Inner Mongolia yuanbaoshan opencast coal mine	1996
1000	4.37	15832	ST-2000	Limestone		1260	4*600	Jiaxin-jiangyang	1997
1400	4.00	7602	ST-2000	Coal		1600	3*800	Shan Xi - jinchengsi he mine	2000
1800	5.60	8983	ST-3150	Coal		6000	4*1500	Tianjin Port - Nanjiang	2002
800	2.50	3980	ST-1600	Iron Ore	-221.5	432	250	Jiugang xigou mine	2003

# QinYi - Belt Conveyor System

## Long Distance Belt Conveyor Cases

BW (mm)	BS (m.s)	Length (m)	Belt Size	Raw Material	Lift Height (m)	Capacity (t/h)	Power (kw)	Application site	SOP Time
1200	4.00	3945	ST-2000	Sand Gravel	-20	3000	3*560	Longtan hydropower station	2003
1200	3.50	8139	ST-2000	Limestone	0	1600	5*560	Zhumadian yulong cement	2004
1000	3.15	5100	ST-2500	Limestone	0	650	3*500	Taishan cement	2005
1200	3.15	9608	ST-1600	Cement Clinker		1800	3*800	Wuhu hailuo cement	2005
1400	4.50	8500	ST-4000	Coal	-325	2700	4*710	Shanxi Golden Sea	2007
1200	4.00	8298	ST-3150	Sand Gravel	-104	3000	4*900	Xiangjiaba Aggregate line	2007
2200	4.70	780	ST-4000	Coal	Dip 12°		3*1600	Inner Mongolia buertai coal mine	2008
1200	3.0-4.2	5900	ST-2000	Sand Gravel	-200	2800/580 (Two-way)	6*400	Jinping-II Hydropower Station	2009



# QinYi - Belt Conveyor System

## Long Distance Belt Conveyor Cases

BW (mm)	BS (m.s)	Length (m)	Belt Size	Raw Material	Lift Height (m)	Capacity (t/h)	Power (kw)	Application site	SOP Time
1600	4.00	6000	PVG-2000S	Coal		4000	6*500	Jinxing Energy	2010
2000	4.50	3523.3	ST-4000	Coal		6000	3*1600	Shanxi datong mine	2010
1200	3.80	10574	/	Limestone		1000	5*560	Arong banner mensi cement	2012
1400	4.50	16589	ST-3150	Limestone		2500	8*750	Huarun Cement	2012
1200	4.50	2400	ST-4500	Iron Ore	363	1900	4*1000	Tiangan jiandong iron ore mine	2014

# Part 2 - Drive Pulley

According to load capacity, the drive pulley is divided into three types.

**Light - Duty:** Hole diameter of bearing is 80-100mm. Shaft and hub are connected by single key. Central plate is welded with the tube. It is of single extension shaft.

**Medium - Duty:** Hole diameter of bearing is 120-180mm. Shaft and hub are connected by extension sleeve (power block).

**Heavy-Duty:** Hole diameter of bearing is 200-220mm. Shaft and hub are connected by extension sleeve (power block).



# Drive Pulley



The drum body is casting-welding structure, which includes single extension shaft and double extension shaft( two types).

Pulley surface can adopt flat type, herringbone rubber lagging type and diamond rubber lagging type.

Herringbone rubber surface has big friction coefficient, good skid resistance and drainage, but it is restricted by its directivity. Diamond rubber surface is suitable for double - direction conveyor.





# Bend Pulley

**According to load capacity, the bend pulley is divided into three types.**

**Light - type:** hole diameter of bearing is 50-100mm

**Medium - type:** hole diameter of bearing is 120-180mm

**Heavy-Duty:** hole diameter of bearing is 200-260mm



# CONVEYOR PULLEY

## **Pulley Parts: Shell**

The chemical composition and mechanical properties of the metal materials used in the drum body should meet the corresponding national standards.

Before welding, the steel should be shot peened by pretreatment process.

## **Pulley Parts: Hub**

The casting quality of pulley hub shall be tested by magnetic powder or ultrasonic wave. For circumferential welds and longitudinal welds of small diameter rollers, the special technology of single side welding and double side forming should be adopted. The circular and longitudinal welds of the drum are all carbon dioxide shielded welds, and nondestructive inspection should be carried out to ensure the quality of the welds. Eliminate welding stress and ensure the normal operation of pulley.

## **Pulley Parts: Shaft**

The drum shaft shall be forgings and shall be nondestructive tested and shall be provided with a test report. The allowable torque and allowable net force should meet the design requirements.

Under the maximum load condition of the drum shaft, the deflection of the shaft between the bearing blocks is the connection way between drum and shaft.

According to the need, it uses key, heat expansion or extension sleeve (power block) connection.

# Belt conveyor beltwidth with drum length, drum diameter recommended combination

Pulley Diameter /mm - 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1400, 1600, 1800

Belt Width (mm)	Pulley Length (mm)	Pulley Diameter (mm)
300	400	200, 250, 315, 400
400	500	200, 250, 315, 400, 500
500	600	
650	750	200, 250, 315, 400, 500, 630
800	950	200, 250, 315, 400, 500, 630 1000, 1250, 1400
1000	1150	250, 315, 400, 500, 630 1000, 1250, 1400, 1600, 1800
1200	1400	
1400	1600	



# Belt conveyor beltwidth with drum length, drum diameter recommended combination

Pulley Diameter /mm - 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1400, 1600, 1800

Belt Width (mm)	Pulley Length (mm)	Pulley Diameter (mm)
1600	1800	315, 400, 500, 630 1000, 1250, 1400,1600,1800
1800	2000	
2000	2200	500, 630 1000, 1250, 1400,1600,1800
2200	2500	
2400	2800	
2600	3000	
2800	3200	630, 1000, 1250, 1400,1600,1800

## Part 3 – CONVEYOR IDLER

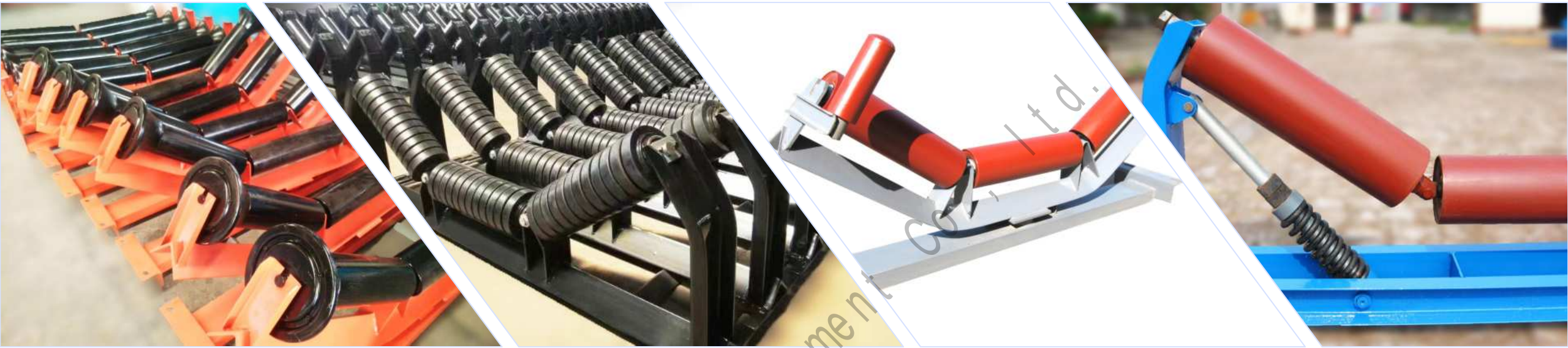


Idler is one of the main components of belt conveyor. Its role is to support the conveyor belt, reduce the running resistance, and make the sag of the conveyor belt not exceed a certain limit to ensure the smooth operation of the conveyor belt.

The total weight of idlers accounts for about 30%-40% of the total weight of the belt conveyor. Because of the large quantity, the quality of idlers directly affects the normal operation and operating costs of material handling.

From the point of view of belt conveyor system engineering design, it is mainly to select and arrange idlers.

# CONVEYOR IDLER



The requirements that idlers should meet are:

1. Requirements for supporting materials to be transported and for protecting and supporting conveyor belts.
  2. Requirements for buffering material impact and protecting conveyor belt at the unloading point.
  3. The idlers should meet the working conditions and environmental requirements, such as low temperature, dust, salt spray, corrosion and other conditions.
  4. The structure, size and tightness of idlers should reduce the energy consumption of the conveyor.
  5. The working life requirements of idlers should be satisfied.
  6. Other functional requirements.
-

# CONVEYOR ROLLER

Roller is an important part of COEYOR IDLER whether the belt conveyor can work properly is closely related to the quality of roller.

The indicators to measure the quality of idlers are as follows:

1. Roller radial run-out quantity (this index directly affects the stability of material transportation.)
2. Axial string momentum (directly affects the service life of rollers)
3. Flexibility ratio (directly affects the service life of rollers & belt)
4. Waterproofness (directly affects the service life of rollers)
5. Dustproofness (directly affects the service life of rollers)
6. Axial loading capacity (directly affects the service life of rollers)
7. Shock resistance (directly affects the service life of rollers)
8. Rotational resistance (directly affects the service life of belt)

We can do :

Conveyor Tube Dia.mm : 60 76 89 102 108 114 127 133 140 152 159 165 178 219

Roller Shaft Dia.mm : 20 25 30 35 40 45 50 55 60 & custom - made



# Conveyor Roller

Carrier Roller



Carrier Roller

# Conveyor Roller

Return Rubber Disc  
Roller



Return Spiral Rubber  
Roller

# Conveyor Roller

Rubber Lagging Roller



Impact Roller

# Conveyor Roller

Return Spiral Iron Roller



Guide Roller



# Conveyor Roller - HDPE

Hebei Qinyi HDPE Belt Idler is a revolutionary patent product of a new generation of idler developed by our company, which is composed of roller pipe, bearing, sealing assembly and shaft.

The product's patented core unique sealing technology completely isolates the contact between the bearing and the outside and prevents it from being polluted. Each roller is made of high- quality materials to ensure that the factory rollers are all high-quality products.

The roller tube of the idler is extruded from pure ultra-high molecular weight polyethylene material. The molecular weight is higher than 3.5 million and has excellent self-lubrication, wear resistance and anti-aging perfor.

The bearings are from well-known manufacturers at home and abroad, such as HRB, LYC, SKF, NSK, etc., to ensure the service life. Seals structure are injection-molded with high-strength materials, which can withstand various harsh working conditions.



# Conveyor Roller

UMHWPE ROLLER & HDPE  
ROLLER



# Conveyor Roller



HDPE rollers can extend the service life of equipment, save energy and effectively improve the working environment.

It has been widely used in the transportation system of coal, cement, steel, electric power, chemical industry, coking and other industries.

It is an ideal replacement product for steel idlers of belt transport machinery.





# Conveyor Cleaner - Part 4

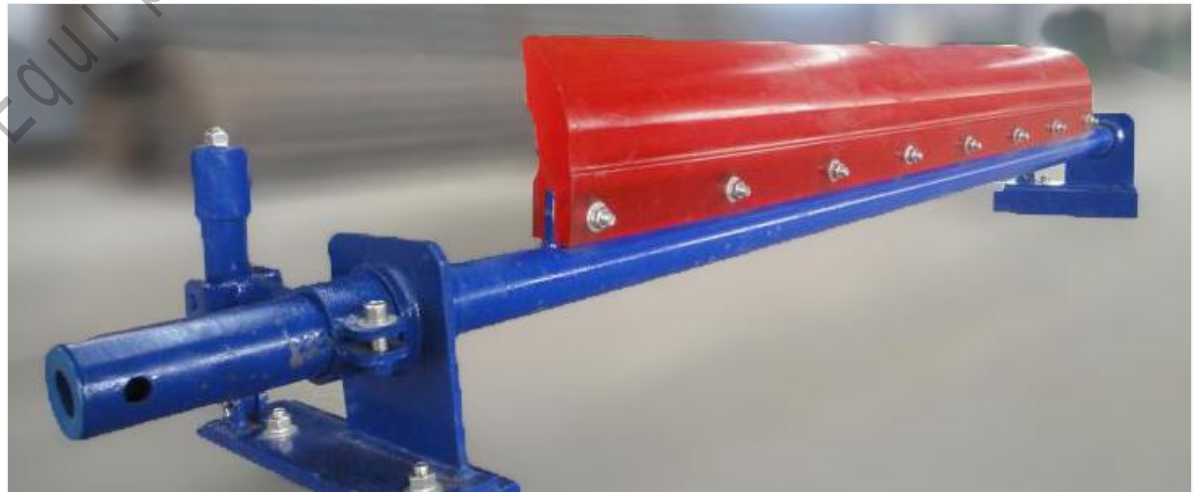
## PRODUCT FEATURES

### Maintenance-free




No need to adjust the locking device regularly, and save labor cost

### Cleaning effect

The larger scraper volume and the contact area with the conveyor belt make the conveyor belt cleaner



# SELECTION OF CONVEYOR BELT CLEANER

Product Picture						
Size	BC-1-A	BC-2-A	BC-1-180	BC-1-280	BC-1-400	BC-1-500
Scraper height	260	260	200	300	400	500
Suitable drum diameter	600~1500mm	600~1500mm	≤630mm	630~1200mm	1000~1600mm	≥1200mm
Suitable belt width	≤3000mm	≤3000mm	≤2400mm	≤3000mm	≤3000mm	≤3000mm
Suitable belt speed	≤7.5m/s	≤6m/s	≤2.85m/s	≤3.15m/s	≤4.6m/s	≤6m/s
Suitable degree	-35℃~210℃	-35℃~210℃	-35℃~210℃	-35℃~50℃	-35℃~50℃	-35℃~50℃
Anti-corrosion	Strong	Strong	Strong	Strong	Strong	Strong
Cleaning effect for uneven conveyor belt	Strong	Strong	Strong	Strong	Strong	Strong
Metal joints for conveyor belts	Not Applicable	Not Applicable	Applicable	Applicable	Applicable	Applicable



# Conveyor Impact Bed - Part 5

## Standard - CEMA 575-2000

We will be based on the customer's belt conveyor speed, capacity (tph), bulk material composition, blanking height to design suitable solution for customers.

According to the different working conditions, we will provide reasonable design, and the purpose is to make more production efficient.

Test Item		L	M	H
		Standard	Medium	Heavy
Impact Force	(lbf)	<8500	<12000	<17000
	(kN)	<35	<53	<76
Weight * Height (reference value)	lb.-ft	<200	<1000	<2000
	kg*m	<28	<138	<277



# LIGHT-DUTY IMPACT BED

- 1, Can adapt to the impact of small bulk materials;
- 2, Both sides can be adjusted 20° , 35° and 45° , reduce the overflow on both sides of the conveyor belt;
- 3, Better protection for the conveyor belt;
- 4, Suitable for conveying capacity < 1000T/H small bulk material conveying equipment.





# LIGHT-DUTY IMPACT BED

- 1, Can adapt to the impact of small bulk materials;
- 2, Both sides can be adjusted 20° , 35° and 45° , reduce the overflow on both sides of the conveyor belt;
- 3, Better protection for the conveyor belt;
- 4, The galvanized material is more acid-alkaline;
- 5, Suitable for conveying capacity < 1000T/H coal, iron ore, copper, chemical and other acid and alkali resistant conveying equipment.



# MEDIUM-DUTY IMPACT BED

- 1, Can adapt to the impact of medium bulk material;
- 2, Can be drawn to replace the buffer strip, can be switched between the buffer strip and the impact roller, simple and easy to operate;
- 3, With the impact roller set, can provide better buffer force and passability for the conveyor belt;
- 4, Suitable for conveying capacity < 1800T/H conveying equipment.



# MEDIUM-DUTY IMPACT BED

1, Can adapt to the impact of medium bulk material;

2, Can be drawn to replace the buffer strip, can be switched between the buffer strip and the impact roller, simple and easy to operate;

3, With the impact roller set, can provide better buffer force and passability for the conveyor belt;

4, The galvanized material is more acid-alkaline;

5, Suitable for conveying capacity < 1800T/H coal, iron ore, copper, chemical and other acid and alkali resistant conveying equipment.



# HEAVY-DUTY IMPACT BED

1, Can adapt to the impact of heavy bulk material;

2, The shock absorber can provide the best buffer support for the conveyor belt, reduce the conveyor belt tearing and damage;

3, Both sides can be customized 20° , 35° and 45° slope, and reduce the overflow on both sides of the conveyor belt;

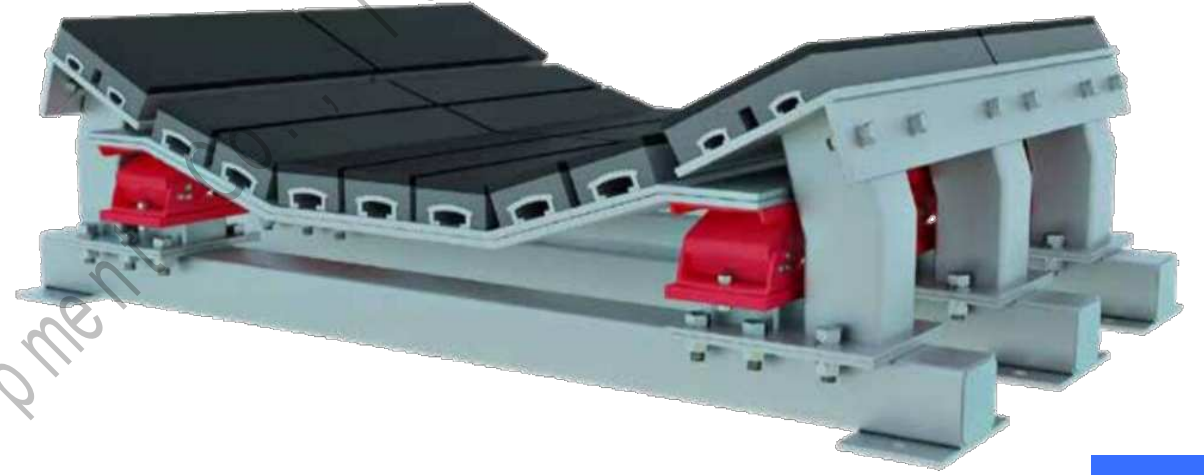
4, Suitable for conveying capacity > 1800T/H conveying equipment.





# HEAVY-DUTY IMPACT BED

- 1, Can adapt to the impact of heavy bulk material;
- 2, The shock absorber can provide the best buffer support for the conveyor belt, and reduce the conveyor belt tearing and damage;
- 3, Both sides can be customized 20° ,35° and 45° slope, and reduce the overflow on both sides of the conveyor belt;
- 4, The galvanized material is more acid-alkaline;
- 5, Suitable for conveyor capacity > 1800T/H coal, iron ore, copper, chemical and other acid and alkali resistant conveyor equipment.



# IMPACT BAR FOR COAL MINE

Size	Length.mm	Width.mm	Thickness.mm	Wear Thickness.mm	
IB-LD-0	600/700/750/800/900/1000/1220/ 1300/1400/1500/1520/1600/1800	100	50/75	12.5	
UHMEPE Parameter		Belt Width mm	Number of Impact bars		
Tensile strength	30Mpa		Left	Middle	Right
Elongation at break	300%		1	2	1
Hardness	96~98 Shore A		2	2	2
Density	0.93~0.94 g/cm³		2	3	2
Friction coefficient	0.07		3	3	3
			3	4	3
Rubber parameter			4	5	4
Tensile strength	19Mpa		5	5	5
Elongation at break	350%		5	6	5
Color	Red/green/blue/white/ black, etc	6	6	6	



# Contact Us

## 河北勤亿输送设备有限公司

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**Sea port** ( near from us ):  
(Product) Ship to Tianjin Port :  
2 hours by logistics

## **Airport** ( near from us ):

Beijing - Qinyi Factory 3 - 4 hours By car

Tianjin & Shijiazhuang & Jinan - 2 hours By car

## **High Speed Train** ( near from us ) :

Cangzhou Xi Railway Station.

Beijing - Cangzhou (50 mnts by train) -  
Qinyi Factory - (1 hour by car)

Welcome to visit us

