GCS®
Global Conveyor Supplies

UKAS QUALITY MANAGEMENT
ISO9001:2015
Certified company

Belt Conveyor Components

Global Conveyor Supplies Company Limited
Guangdong, China

Contents

Profile

Global Conveyor Supplies Company Limited (**GCS**) occupies an area of 215,000 square feet and its registered trademark is **GCS**. **GCS** mainly produces belt conveyor equipments, various types of heavy and light duty conveyor rollers, frames and accessories, etc. As **GCS** grows, it has adopted and gathered professional knowledge with enriched experience of many fields to develop new technology to supply our customers with the most competitively high quality products.

Supported by a professional technical team, advanced equipments, customized production capabilities to accommodate the individual needs of customers from different areas and driven by the concept of “Customer First”, **GCS** products are sold globally and are widely used in Thermal Power Generation, Mine, Harbour, Metallurgy, Cement Plants, Food and other fields, etc.

Since the establishment of **GCS**, we always insist for scientific outlook on development, relying on technology innovations to reach sustainable developments. We aim to prolong the life span of **GCS** products and decrease energy consumption to save operational costs for the customer. The **GCS** team of dedicated staff will strive to make **GCS** a world famous brand to serve the high end markets.

GCS®
Global Convevor Supplies

Innovation and Solutions in engineering for cost efficient and reliable components

GCS Roller Features

To accommodate the demands of different working environment, **GCS** developed different body-sealed structures for customers to choose the most suitable type for their own particular applications.

Main features:

1. Solid design, most suitable for heavy loading.
2. The bearing housing and steel tube are assembled with precision concentric automatic welding machine
3. Cutting of the pipe and bearing is processed by CNC automatic equipment .
4. The shaft end is precision barrelled and firmly connected with the bearing.
5 Fabrication of the roller is tested by an auto device to ensure concentricity
5. Roller and supporting components.materials are conformed to DIN/AFNOR/FEM/ASTMCEMA standards.
7. The roller is lubricated and maintenance free.
8. Life span is up to 30,000 work hours or more, depending on correct usage.
9. Sealing structure: inner-seal, 3 slot labyrinth seal, V shape rubber ring and centrifugal self-cleaning body to ensure water and dust proof.

Raw material and specifications:

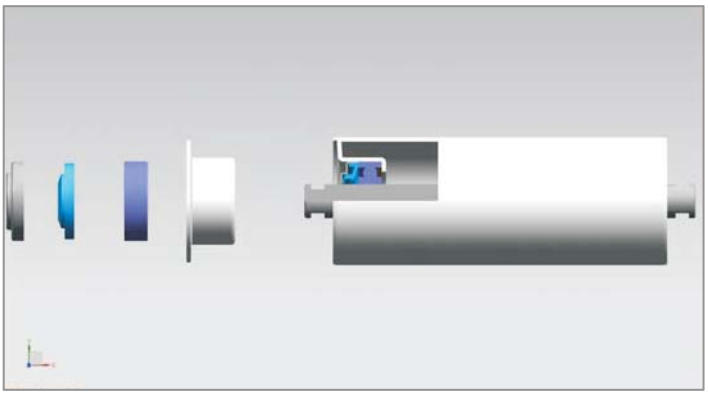
Shaft	Cold-draw steel ST ST37DINI7100, E24 AFNOR NFA 35501.
Rod	20.2 25.2 30.240.2 ISO h11. Polished to 20, 25, 30, 40 in the bearing and seal assembly area. The grinding accuracy is ISO h6.
Steel roll	Welded with DIN2394 standard. Material is ST37 and conforms to DIN17100 standard.
Bearing housing	Cold stamping fit ISO M7 accuracy, deep draw steel with raw material conforms to DIN1623-1624 standard.
Inner seal circle	Lip-lining sealed, component is made of NYLON6 (ISO Pa6).
Bearing	Trough type, deep groove ball bearing (Wind age level C3) DIN 6263 series
Labyrinth seal circle	3 troughs, component is made of NYLON6 (ISO Pa6)
Housing/cover	Deep draw steel conforms to DIN1623-1624 standard.
Outer seal circle	Sliding rubber ring with V shape. Made of nitrocellulose rubber with abrasion resistance, low friction and oxidation resistance.
Protecting cover	Used to protect the roller from vibration, made of copper alloy which is anti-corrosive.
Lubricating oil	The roller bearing is lubricated continuously by applying 2,3 grade long-lasting lithium grease.

Idlers Series

Carrier Idler	Trough (Forward) Idler		Transition Idler		Impact Idler		Training Idler			Flat Idler	
	35° 45°		10° 20° 30° Adjusted Angles		Trough	Flat	Friction Training Carrier Idler	Taper Training Carrier Idler	Friction Flat Training Carrier Idler	1 Roll	2 Roll
Return Idler	Flat Return Idler		Flat Rubber Disc Return Idler		V (Forward) Return Idler	V Rubber Disc Return Idler		Friction Training Return Idler	V Inverted Return Idler	Taper Training Return Idler		Spiral Idler
	1 Roll	2 Roll	1 Roll	2 Roll	10°	10°		2 Roll	3 Roll	10°		1 Roll

GCS Roller Series

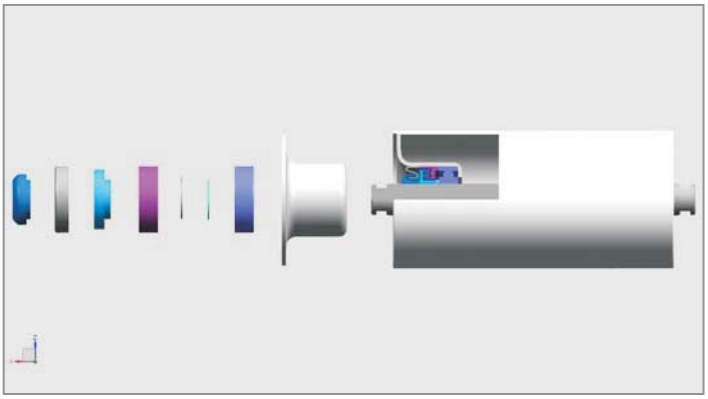
Model：NS　　6204 Series



Bearing	Pipe Dia
6204	60/76/89/108

A sealed cover is used in this model. Gap between sealed cover and bearing provides an effective dust protection to ensure a longer working life. This design applies to a normal working environment.

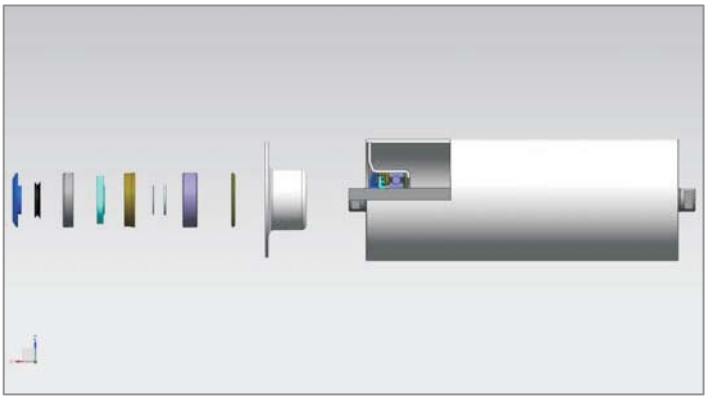
Model：LS　　6204-6205 Series



Bearing	Pipe Dia
6204/05	60/76/89/108/114/127/133

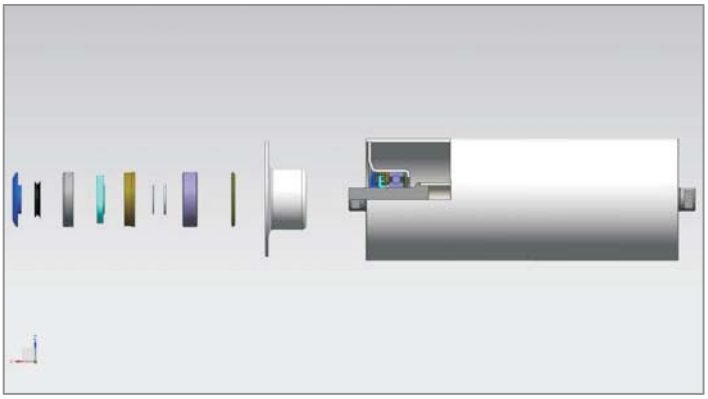
Labyrinth seal is used in this model, which can effectively prevent water and dust to the bearing inside. Gap between sealed ring and bearing is filled with grease to protect the roller even in thick dust environment.

Model：RS　　62-63 Series



Bearing	Pipe Dia
6204/05	60/76/89/108/114/127/133
6305/6/7/8/9/10/11/12	76/89/108/114/127/133/159/165/194/219

RS roller is premium product with triple anti-dust structure which can effectively prevent water and dust. This model applies to the conveyor belt systems that can carry large volume and high speed dusty bulks.

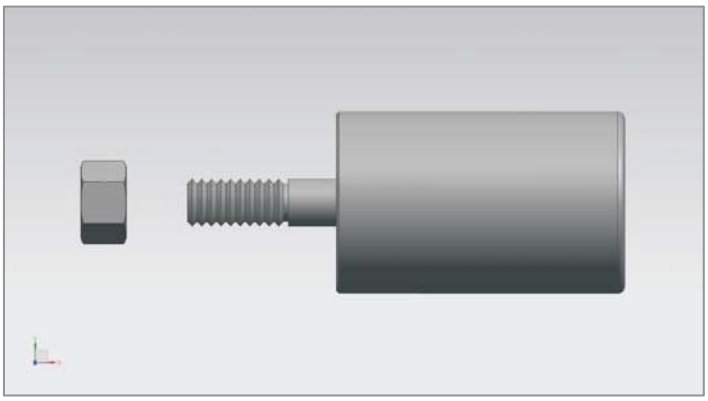


AL Roller

Bearing	Pipe Dia
6305	127/152
6307	127/152/178

Good surface performance, non-magnetic, non-toxic, sound absorbency, acid resistance, anti-nuclear radiation, small elastic coefficient, good mechanical properties, excellent casting and welding performance, good anti-impact.

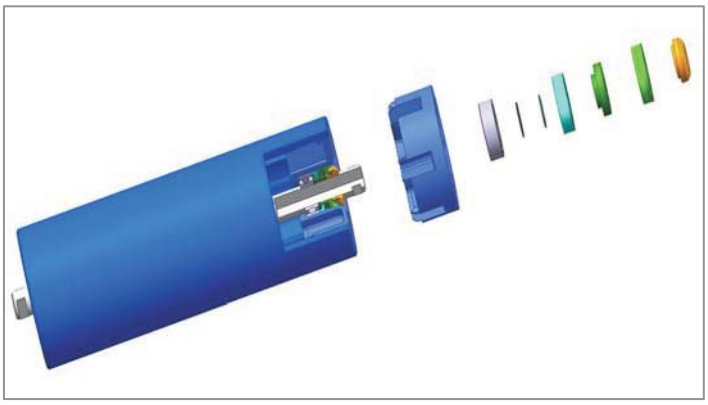
Side Guide Roller



Bearing	Pipe Dia
6204	60/76/89
6205	60/76/89

The side roller is arranged to both sides of the training frame, and it is used to prevent the belt from off tracking.
Common installation methods include: internal (external) screw type, bayonet type, etc.

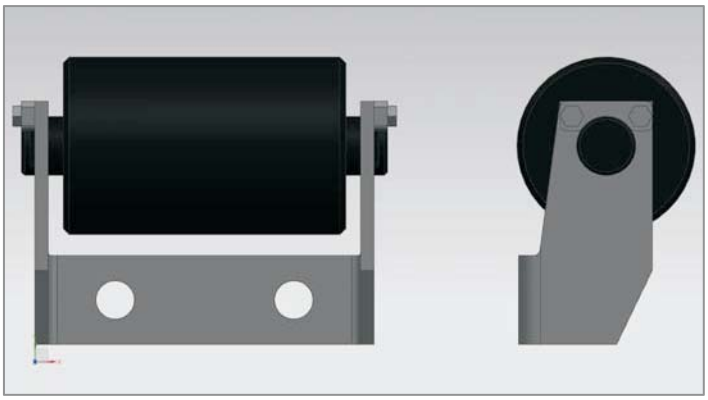
HDPE Roller



Bearing	Pipe Dia
6204	89/108
6205	108/114/127
6305/6306	152

Pipe and bearing house are made of ultra-high molecular weight polyethylene new engineering plastics with a molecular weight of over 3 million (American ASTM standard).
Wear resistance, impact resistance, long working life.

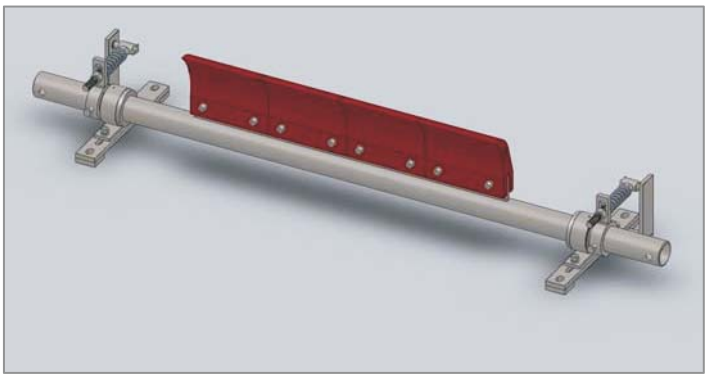
Pipe Roller Set



Bearing	Pipe Dia
6204/6205	89/108
6305/6306	152

Pipe roller set is used in tubular belt conveyors. Generally, 6 sets of idler sets place the belt in a round shape.
This type of conveyor is used for sealing conveying materials, and would not be affected by external environment such as wind and rain.

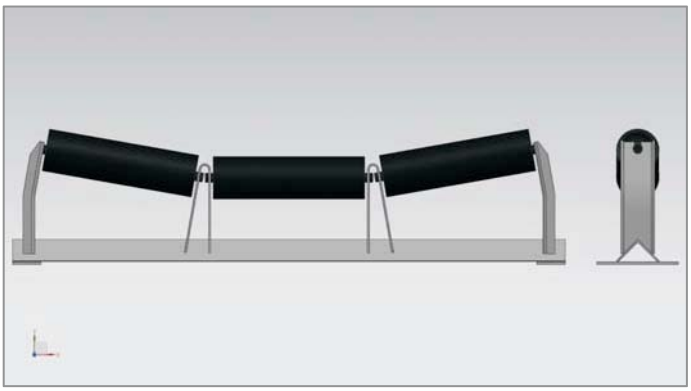
Belt Cleaner



Item		
P Model	H Model	Nonloaded Cleaner

Belt cleaner cleans the residual materials adhered to the belt surface. It consists of primary belt cleaner and secondary belt cleaner, and is normally used for conveying bulk materials.
(Picture shows the P model cleaner.)

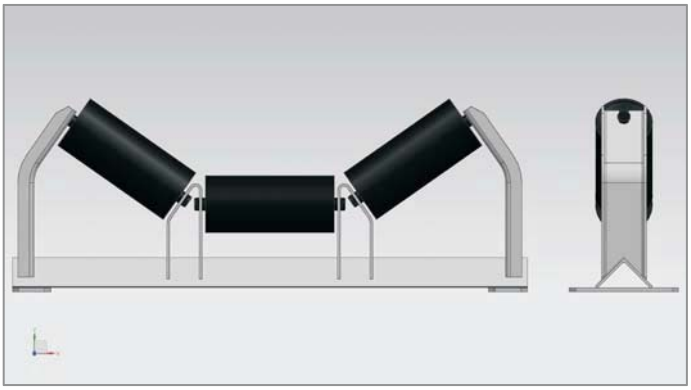
Transition Idler (GB)



Transition idler is arranged between the end roller and the trough idlers to reduce the stress on the edge of the conveyor belt and avoid the occurrence of material sprinkling. Trough angle is divided into 10° , 20° , 30° , and variable angle.

BW	B800-B2400
Pipe Dia	Φ89-Φ219

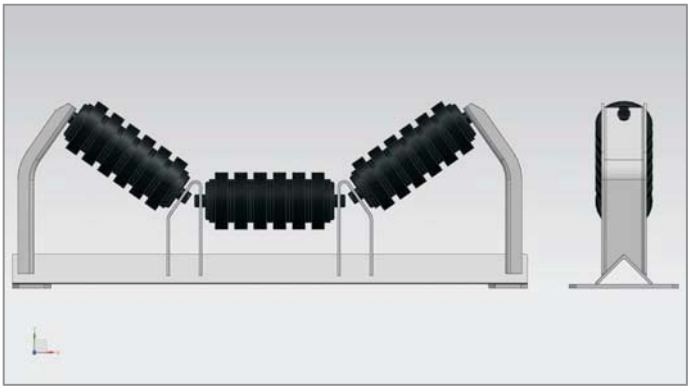
Trough Idler (GB)



Trough idler is used to support conveyor belts and material. Standard trough angle is generally divided into 30° ,35° , 45° . It includes the standard type and the forward type which can be arranged throughout the whole course to prevent the conveyor belt from off tracking.

BW	B400-B2400
Pipe Dia	Φ63.5-Φ219

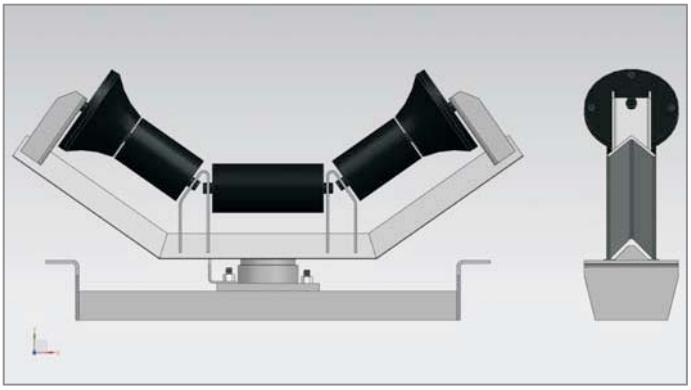
Impact Idler (GB)



Impact idler is installed under the feeding section. Roller surface is covered with rubber to absorb the impact kinetic energy on the conveyor belt when conveying materials fall down and extend the working life of the conveyor belt. Trough angles are 35° , 45° .

BW	B400-B2400
Pipe Dia	Φ89-Φ219

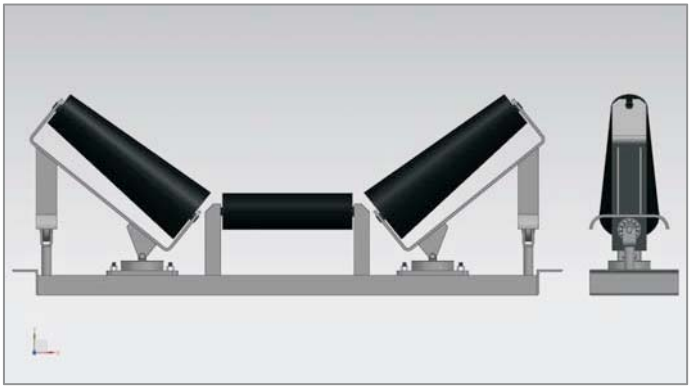
Friction Training Carrier Idler (GB)



Friction training carrier idler is used to automatically adjust the deviation of the conveyor belt. Generally, a set of friction training carrier idlers is arranged for each 10 sets of trough idlers in the loading section.

BW	B400-B1400
Pipe Dia	Φ63.5-Φ159

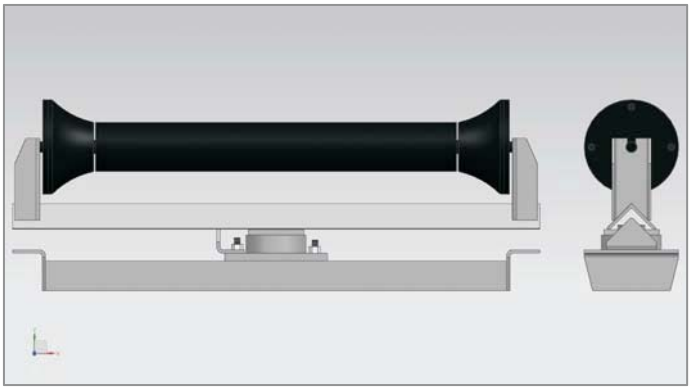
Taper Training Carrier Idler (GB)



Taper training carrier idler is used to automatically adjust the deviation of the conveyor belt, with wear resistance and long working life, light weight, small rotation inertia, proper structure, reliable sealing, and excellent anti-corrosion performance.

BW	B800-B2000
Pipe Dia	Φ89/133-Φ133/194

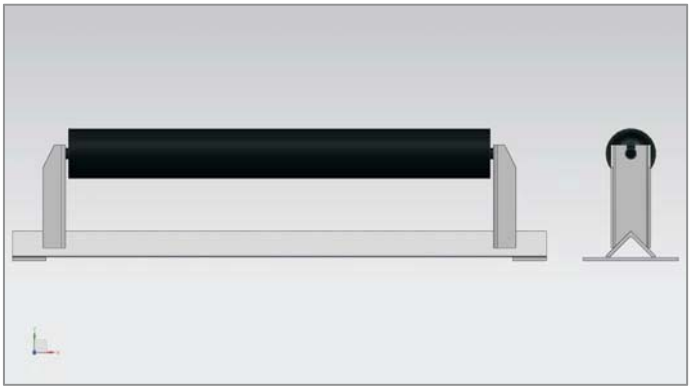
Friction Flat Training Carrier Idler (GB)



Friction flat training carrier idler is used to automatically adjust the deviation of the conveyor belt. Generally, a set of friction flat training idlers is arranged for each 10 sets of trough idlers in the loading section.

BW	B400-B1400
Pipe Dia	Φ63.5-Φ159

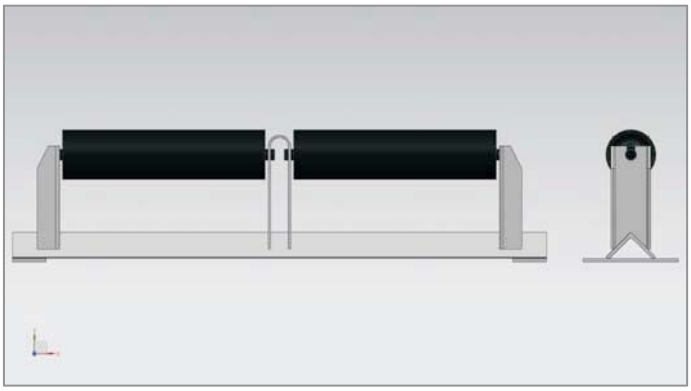
Flat Carrier Idler (1 Roll) (GB)



Flat carrier idler (1 roll) is composed of a single long roller, which is mainly used for carrying packaged articles.

BW	B400-B2400
Pipe Dia	Φ63.5-Φ219

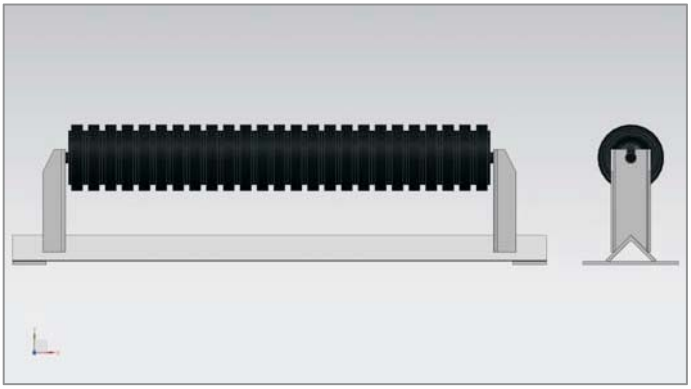
Flat Carrier Idler (2 Roll) (GB)



Flat carrier idler (2 roll) is composed of a single long idler, which is mainly used for carrying packaged articles.

BW	B800-B2400
Pipe Dia	Φ89-Φ219

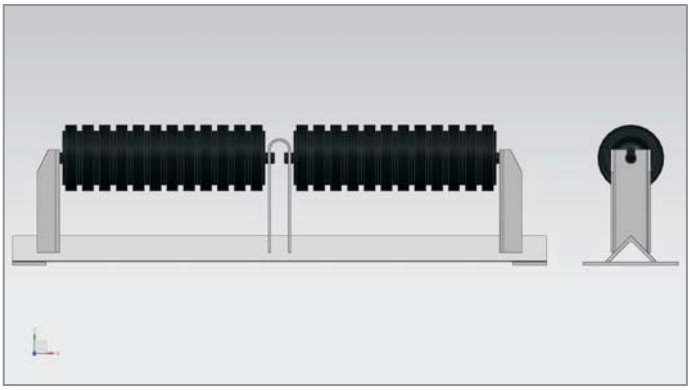
Flat Impact Idler (1 Roll) (GB)



Flat impact idler is composed of a single impact roller. Roller surface is covered with rubber to absorb the impact kinetic energy on the conveyor belt when conveying materials fall down and extend the working life of the conveyor belt.

BW	B400-B1400
Pipe Dia	Φ89-Φ159

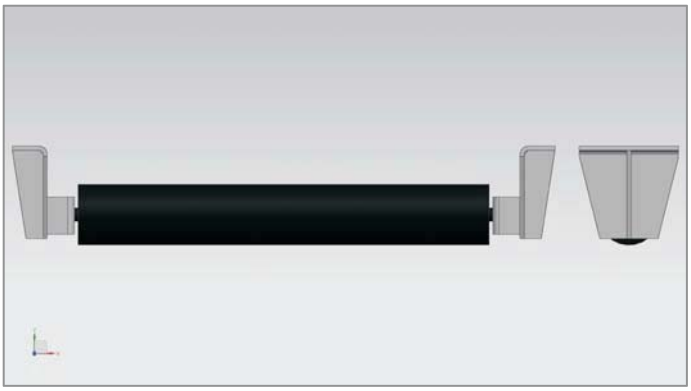
Flat Impact Idler (2 Roll) (GB)



Flat impact idler (2 roll) is composed of a 2 impact rollers. Roller surface is covered with rubber to absorb the impact kinetic energy on the conveyor belt when conveying materials fall down and extend the working life of the conveyor belt.

BW	B800-B2400
Pipe Dia	Φ89-Φ219

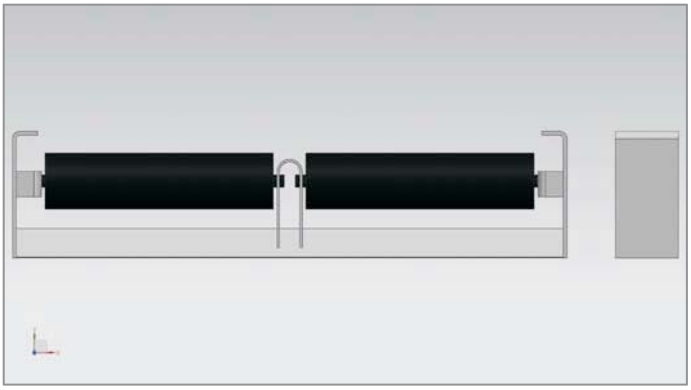
Flat Return Idler (1 Roll) (GB)



Flat return idler is composed of a single long idler, which has a fixed bracket at both ends. Roller length, bracket structure and the mounting distance allow the belt to have appropriate lateral movement but not be contact with any fixed part or frame of the conveyor.

BW	B400-B2400
Pipe Dia	Φ63.5-Φ219

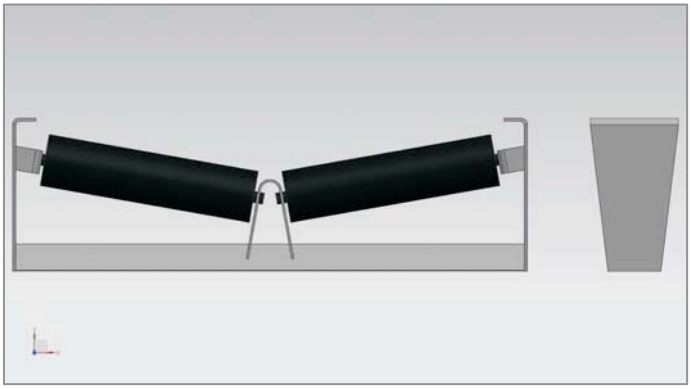
Flat Return Idler (2 Roll) (GB)



Flat return idler (2 roll) is composed of 2 short rollers, which is used to support the conveyor belt of the return section.

BW	B800-B2400
Pipe Dia	Φ89-Φ219

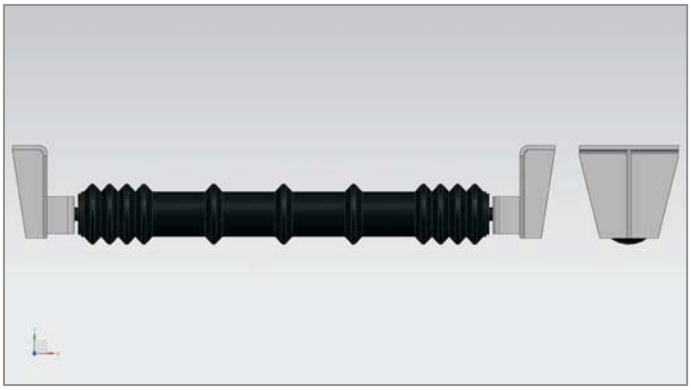
V Return Idler (GB)



V return idler is mainly used to support the returning conveyor belt and prevent it from deviation. There are V return and V forward idlers, etc. In general, 10 sets of return idlers are composed of 4 sets of V return idlers and 6 sets of flat return idlers.

BW	B800-B2400
Pipe Dia	Φ89-Φ219

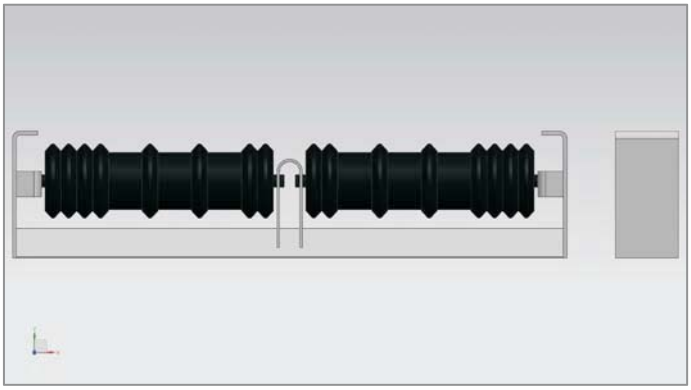
Flat Rubber Disc Return Idler (GB)



Flat rubber disc return idler is used to support the returning conveyor belt, clean the residual materials adhered to the belt surface, and keep belt running smoothly.

BW	B400-B2400
Pipe Dia	Φ89-Φ219

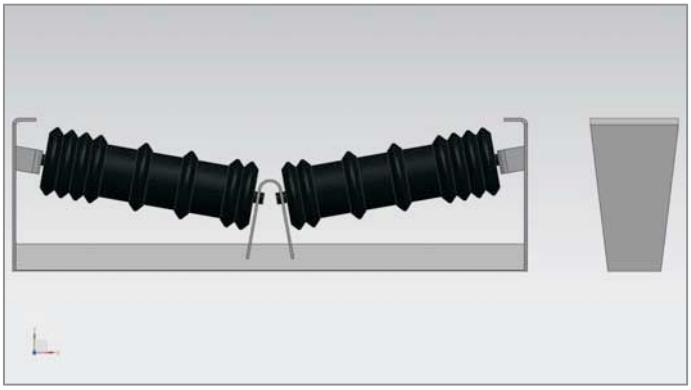
Flat Rubber Disc Return Idler (GB)



Flat rubber disc return idler is composed of 2 short rubber disc rollers, which is used to support the returning conveyor belt, clean the residual materials adhered to the belt surface, and keep belt running smoothly.

BW	B800-B2400
Pipe Dia	Φ89-Φ219

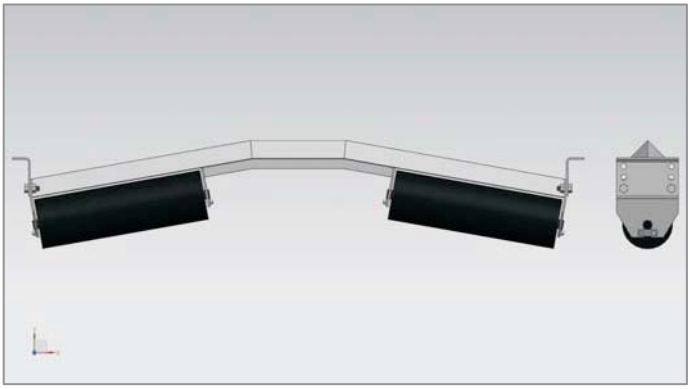
V Return Rubber Disc Idler (GB)



V return rubber disc idler is used to support the returning conveyor belt and prevent it from deviation, clean the residual materials adhered to the belt surface, and keep belt running smoothly.

BW	B800-B2400
Pipe Dia	Φ89-Φ219

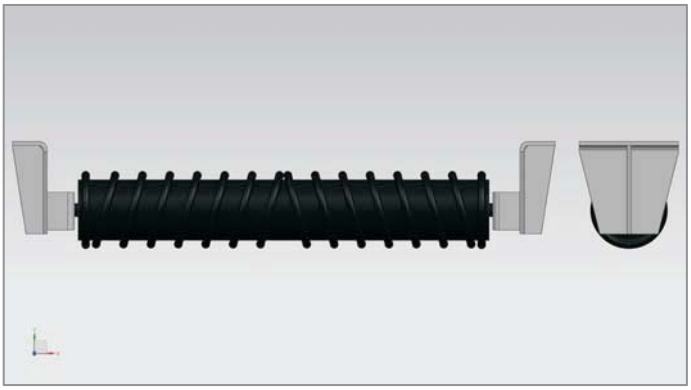
V Inverted Return Idler (GB)



V inverted return idler is used to support the returning conveyor belt and prevent it from deviation.

BW	B1000-B2400
Pipe Dia	Φ108-Φ219

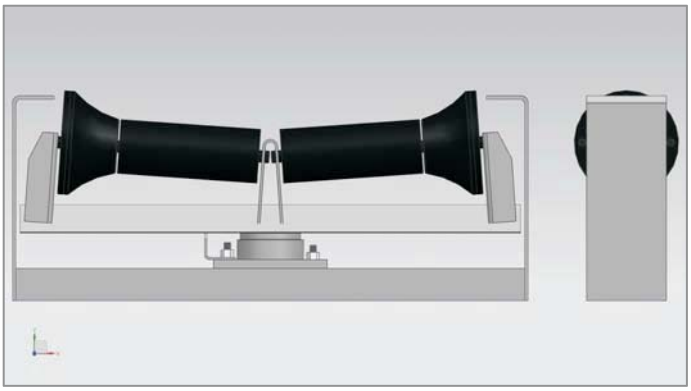
Spiral Return Idler (GB)



Spiral return idler is used to support the returning conveyor belt, clean the residual materials adhered to the belt surface, and keep belt running smoothly.

BW	B400-B2400
Pipe Dia	Φ63.5-Φ219

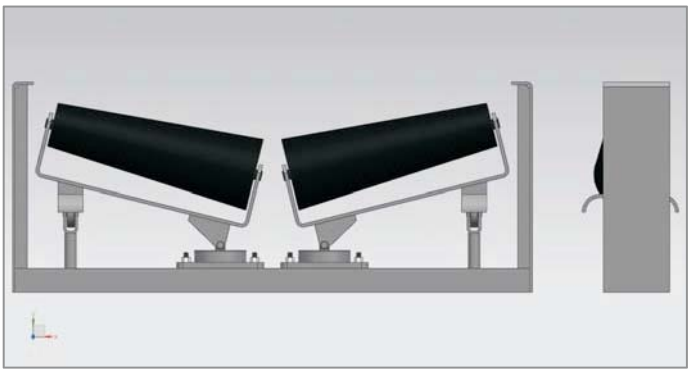
Friction Training Return Idler (GB)



Friction training return idler is used to automatically adjust the deviation of the conveyor belt. Generally, a set of friction training return idler is arranged for each 10 sets of trough idlers in the loading section.

BW	B400-B1400
Pipe Dia	Φ63.5-Φ159

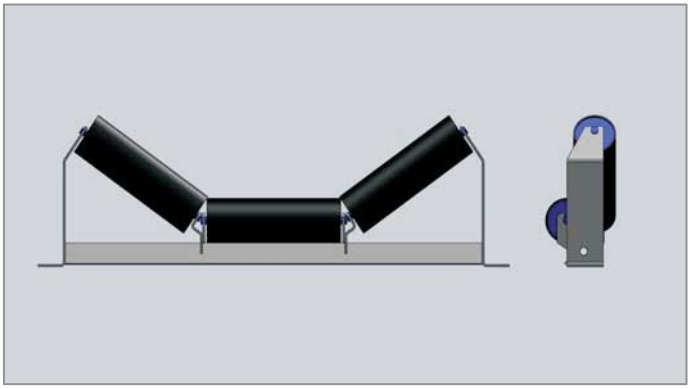
Taper Training Return Idler (GB)



Taper training return idler is used to automatically adjust the deviation of the conveyor belt, with wear resistance and long service life, light weight, small rotation inertia, reasonable structure, reliable sealing, and excellent anti-corrosion performance.

BW	B800-B2000
Pipe Dia	Φ108/159-Φ108/194

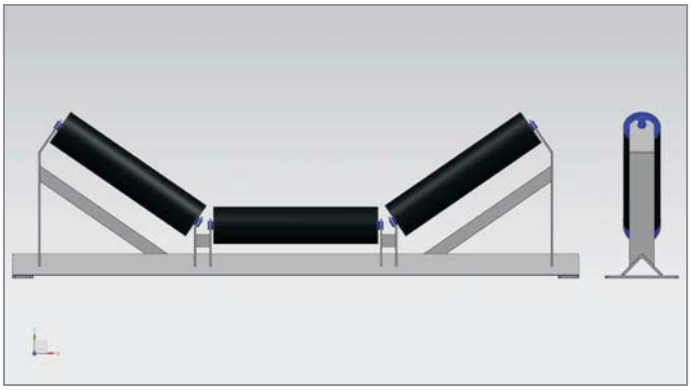
Offset Idler (AS)



Offset idler is used to support conveyor belts and material. Standard trough angle is generally divided into 20° ,30° ,35° , 45° . It can be arranged throughout the whole course to prevent the conveyor belt from off tracking.

BW	B350-B1800
Pipe Dia	Φ102-Φ114-Φ152

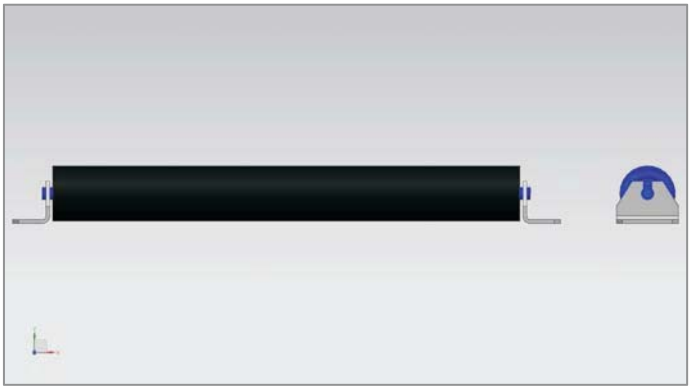
Trough Idler (AS)



Trough idler is used to support conveyor belts and material. Standard trough angle is generally divided into 20° ,30° ,35° , 45° .

BW	B750-B3000
Pipe Dia	Φ127-Φ152-Φ178

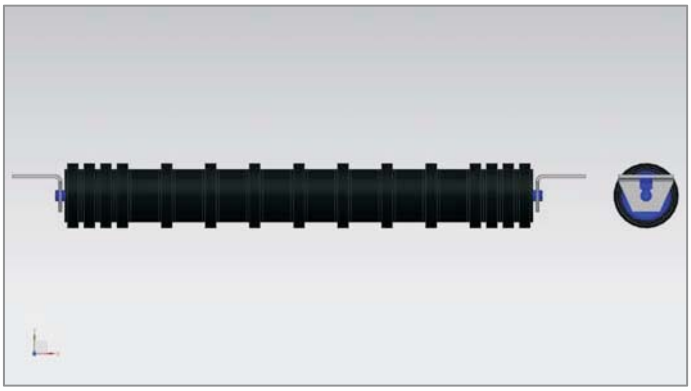
Flat Carrier Idler (AS)



Flat carrier Idler is composed of a single long roller, which is mainly used for carrying packaged articles.

BW	B350-B1800
Pipe Dia	Φ102-Φ114-Φ127-Φ152

Flat Return Idler (AS)



Flat return idler is composed of a single long roller, which is mainly used for carrying packaged articles. Roller can be normal long roller or rubber disc roller.

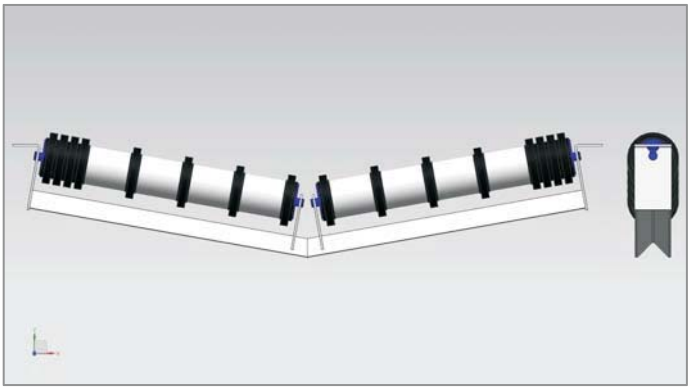
BW	B500-B1800
Pipe Dia	Φ127-Φ152-Φ178

V Return Idler (AS)

V return idler is mainly used to support the returning conveyor belt and prevent it from deviation.

BW	B800-B2400
Pipe Dia	Φ114-Φ127-Φ152-Φ178

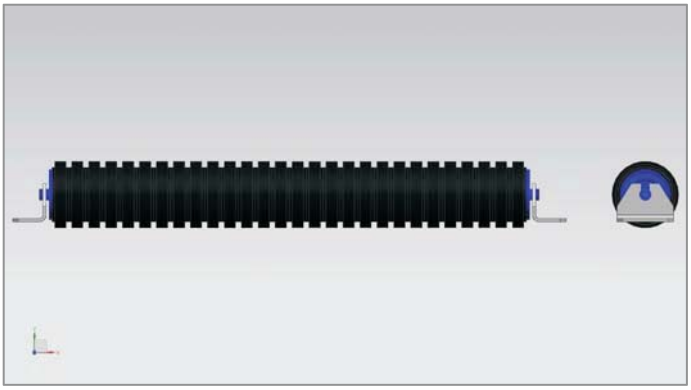
V Return Rubber Disc Idler (AS)



V return rubber disc idler is used to support the returning conveyor belt and prevent it from deviation, clean the residual materials adhered to the belt surface, and keep belt running smoothly.

BW	B900-B3000
Pipe Dia	Φ127-Φ152-Φ178

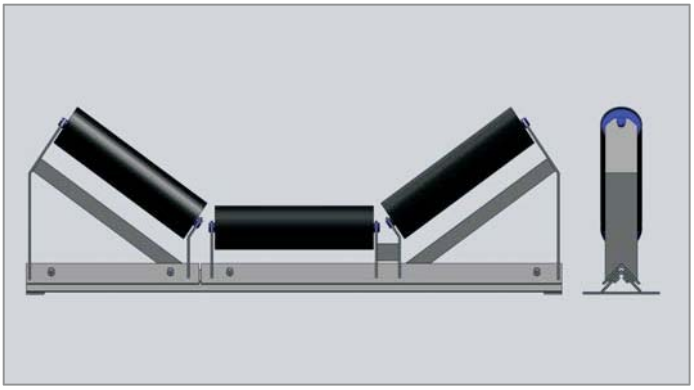
Flat Impact Idler (AS)



Flat impact idler is composed of a single long roller, which is mainly used for carrying packaged articles.

BW	B500-B1800
Pipe Dia	Φ133-Φ159-Φ178

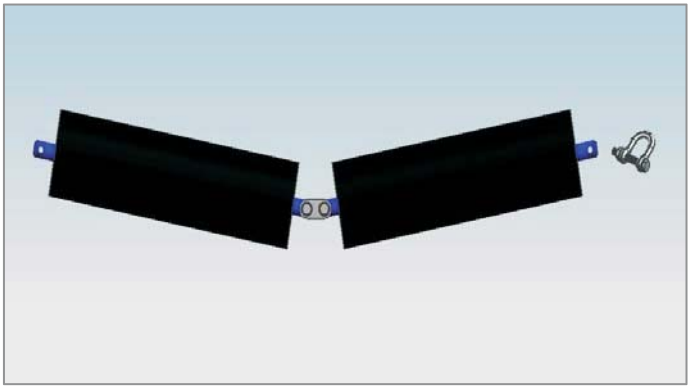
Retractable Idler (AS)



Retractable idler is used to support conveyor belts and material. Standard trough angle is generally divided into 20° ,30° ,35° , 45° . This model is desgned for that he roller can be replaced quickly without removing the frame.

BW	B750-B3000
Pipe Dia	Φ127-Φ152-Φ178

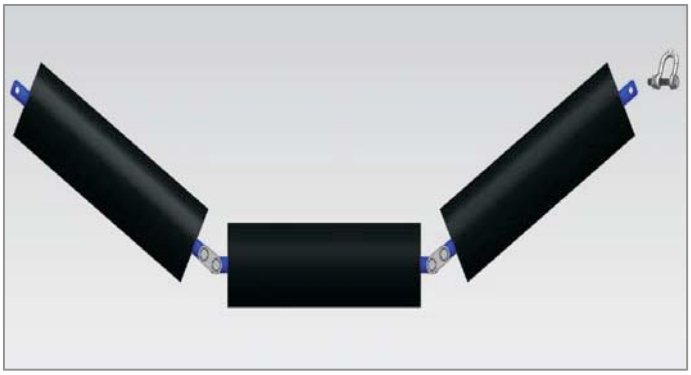
Suspended Idler (2 Roll) (AS)



Suspended idlers have good self-balance. When belt is off-tracking, the material redistribution in the operation causes the deformation of the idler plane and the load asymmetry of side idlers.The tilt angle of the inverted roller on the side of off-tracking belt is larger than that of the other side roller, which would result in the deflection of the intermediate idler to produce the regulating force.This adjustment will produce opposite thrust and correct the belt.

BW	B750-B1800
Pipe Dia	Φ127-Φ152-Φ178

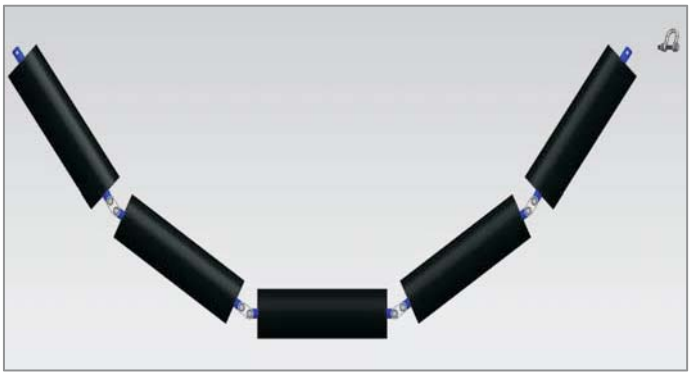
Suspended Idler (3 Roll) (AS)



Suspended idlers have good self-balance. When belt is off-tracking, the material redistribution in the operation causes the deformation of the idler plane and the load asymmetry of side idlers.The tilt angle of the inverted roller on the side of off-tracking belt is larger than that of the other side roller, which would result in the deflection of the intermediate idler to produce the regulating force.This adjustment will produce opposite thrust and correct the belt.

BW	B750-B1800
Pipe Dia	Φ127-Φ152-Φ178

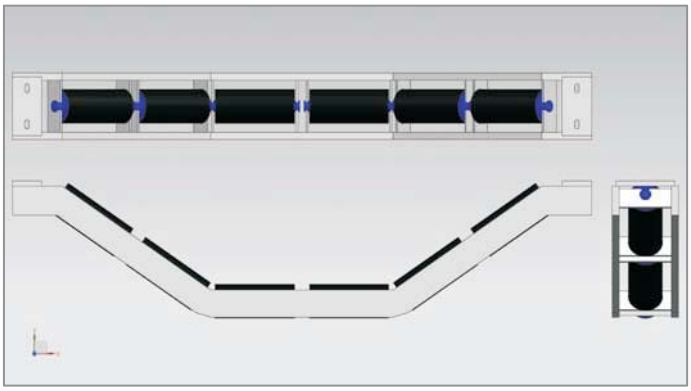
Suspended Idler (5 Roll) (AS)



Suspended idlers have good self-balance. When belt is off-tracking, the material redistribution in the operation causes the deformation of the idler plane and the load asymmetry of side idlers.The tilt angle of the inverted roller on the side of off-tracking belt is larger than that of the other side roller, which would result in the deflection of the intermediate idler to produce the regulating force.This adjustment will produce opposite thrust and correct the belt.

BW	B750-B1800
Pipe Dia	Φ127-Φ152-Φ178

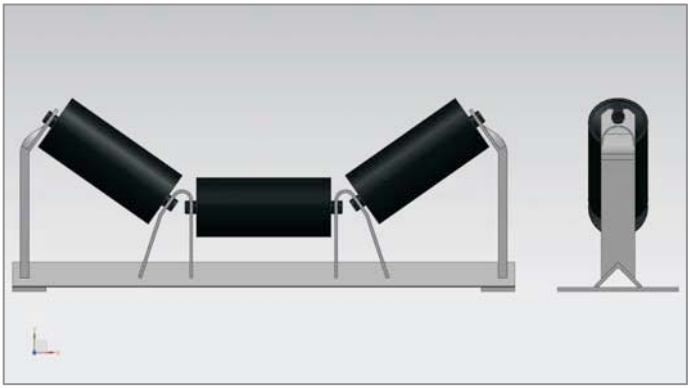
Suspended Idler (AS)



Suspended idler is usually installed in the position of the belt conveyor's feeding section. Design strength is higher to cope with the larger impact energy of falling material.

BW	B750-B1800
Pipe Dia	Φ127-Φ152-Φ178

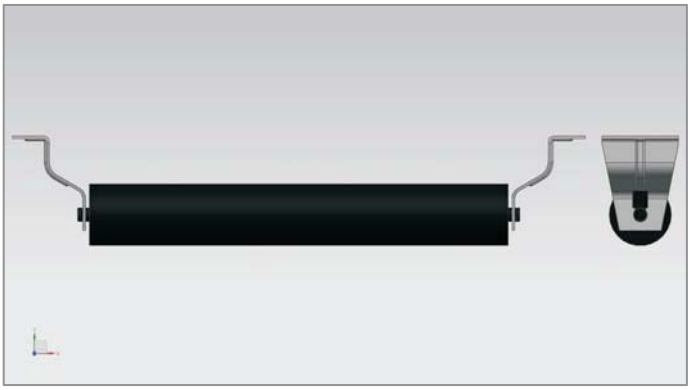
Trough Idler (MS)



Trough idler is used to support conveyor belts and material. Standard trough angle is 30° . Roller can be normal roller or impact roller.

BW	B400-B2000
Pipe Dia	Φ89-Φ165

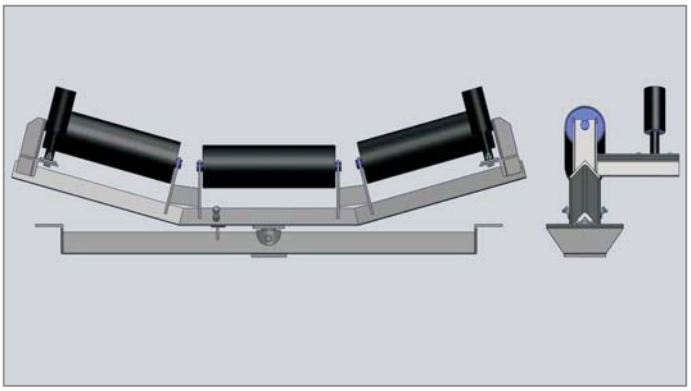
Flat Return Idler (MS)



Flat return idler is composed of a single long idler to support the returning belt.

BW	B400-B2000
Pipe Dia	Φ89-Φ165

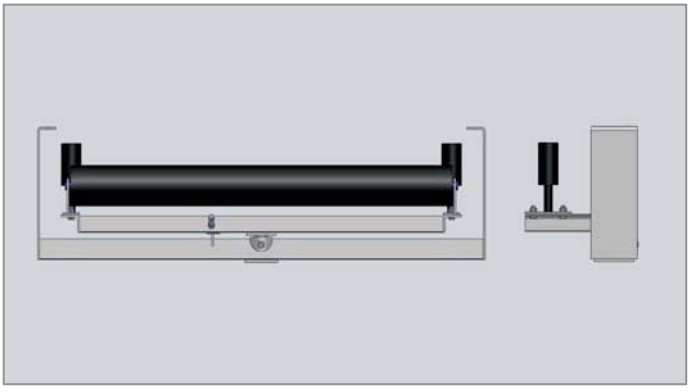
Guided Training Carrier Idler (MS)



Guided training carrier idler is used to automatically adjust the deviation of the conveyor belt. Generally, a set of guided training carrier idler is arranged for each 10 sets of trough idlers in the loading section.

BW	B400-B2000
Pipe Dia	Φ89-Φ165

Guided Training Return Idler (MS)



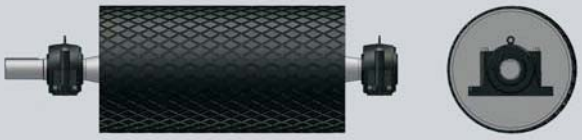
Guided training return idler is used to automatically adjust the deviation of the conveyor belt. Generally, a set of guided training carrier idler is arranged for each 10 sets of flat return idlers.

BW	B400-B2000
Pipe Dia	Φ89-Φ165

GCS Pulley Series

Pulley is the main component of dynamic transfer function for belt conveyor machine, which is widely used in mining, metallurgy, coal mine, chemical industry, grain storage, building materials, port, salt field, electric power and other industries. It is appropriate for the environment temperature of -20℃～+50℃. Generally, pulley is divided into drive and bend pulley.

Drive Pulley



Bend Pulley

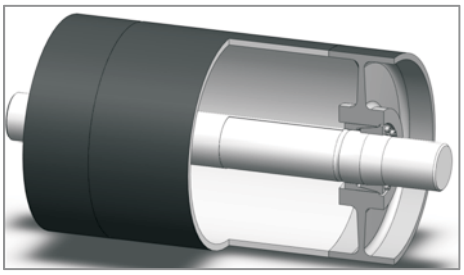
The drive pulley is the component that transmits power to the conveyor. Pulley surface has smooth, lagged and cast rubber, etc., and the rubber surface can be divided into rubber-covered with herringbone and diamond. The herringbone rubber-cover surface has a large friction coefficient, good slip resistance and drainage, but is directional. Diamond rubber-cover surface is used for conveyors that run in both directions. From the material , there are steel plate rolling, cast steel and iron. From the structure, there are assembly plate , spoke and integral plate types.

The bend pulley is mainly under the belt. If the belt conveying direction is left, the bend roller is on the right side of the belt conveyor. The main structure is the bearing and the steel cylinder. The drive pulley is the drive wheel of the belt conveyor. From the relationship between the bend and drive pulley, it is like two wheels of the bicycle,the rear wheel is the drive pulley, and the front wheel is the bend pulley. There is no difference in the structure between the bend and drive pulley. They are composed of the main shaft roller bearing and the bearing chamber.

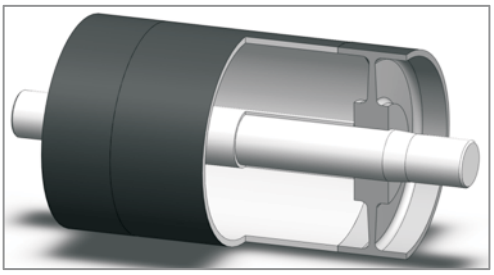
GCS pulley quality inspection mainly checks the shaft quenching and high temperature tempering , weld line ultrasonic flaw detection, rubber material and hardness, dynamic balance test, etc. to ensure product working life.

Shell Dia（ϕ）	**250/315/400/500/630/800/1000/1250/1400/1600/1800(customized)**
Length（mm）	**500-2800 (customized)**

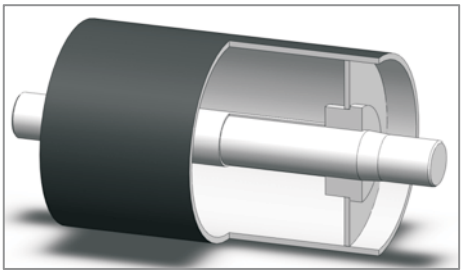
Pulley Structures：

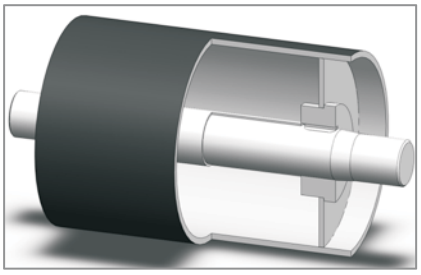


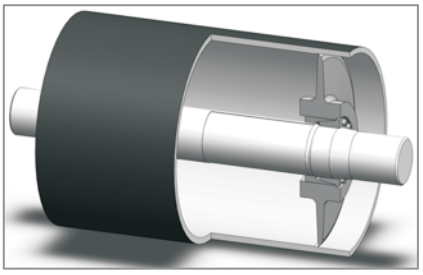
Interference fit joint between all-welded construction wheel hub and shaft



Interference fit joint between cast-weld construction wheel hub and shaft







Expansion joint between cast-weld construction wheel hub and shaft
Key joint between all-welded construction wheel hub and shaft
Expansion joint between all-welded construction wheel hub and shaft

GCS®

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