



Zhuoli Machinery Co.,Ltd.

Transport Equipment Manufacturer

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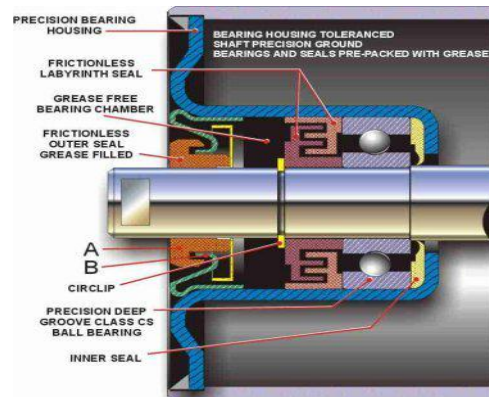
Conveyor roller use manual



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I Structure, principle and main performance parameters

1. Structure:



(1) GB/T13792-1992

Roller body uses GB/T13792-1992 Standard, conveyor special electric welded steel pipe. Precision includes general precision and higher precision. Its external diameter, wall thickness, tortuosity and ovality can meet design requirement with high quality and low cost, which facilitates enterprise management and operation.

(2) MT/T655-1997

Roller bearing uses SKF brand, with low resistance, good adjusting function, long working life and energy-saving and cost-reducing.



(3) Bearing pedestal uses 08AL pressed housing with high precision, low cost and good coaxiality, which provides security for high quality.



(4) Use bearing and seal to perform axial location. Roller axial location is accurate with good seal stress and can extend roller life.

(5) Roller seal system uses multilayer labyrinth type, with wear-resistance precise contact polyurethane seal, which is fireproofing, dustproof and water proof.

Labyrinth seal system with Lithium-based grease inside, should be waterproof, heat-resisting and durable.



2. Principle:

Conveyor roller drives roller body through conveyor belt friction, converting sliding friction into rolling friction and reducing running resistance.

3. Technical parameters

(1) Sheet one: radial run-out

Unit:mm

Diameter of roller	Length of roller			
	<460	460~950	950~1600	>1600
φ89~φ108	0.5	0.7	1.3	1.5
φ133~φ159	0.7	1.00	1.50	1.80

With 250N pressure and 2m/s excircle linear velocity, roller resistance is less than value in sheet two.

(2) Sheet two: rotation resistance

Roller diameter		Length of roller	Rotation resistance N
φ89	Non-contact seal	≤460	2.5
		>460	3.0
Φ108	Non-contact seal	≤800	3.0
		>800	3.5
Φ133	Non-contact seal	≤800	3.0
		>800	3.5
Φ159	Non-contact seal	≤800	3.0
		>800	3.5

(3) Falling strength

After roller level and vertical falling testing, the following requirement should be met: 6

(a) There is no damage and extrusion with all the parts and weld;

(b) 1.2mm;

After falling, roller axial displacement is less than 1.2mm;

(c) Roller body and bearing pedestal do not loosen;

(d) After falling testing, roller rotation resistance value is less than 1.5 times value in the sheet two.

(4) Axial load

Apply axial load in sheet three to roller carrier shaft, and roller carrier shaft (including bearing pedestal, sealing device) and roller body cannot be disconnected.

Sheet three: axial load

Roller diameter mm	Axial load kN
φ89~φ108	10
φ133~φ159	15



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(5) Sealing property

(a) coal dust sealing property

With roller rotate speed of 1450r/min and 200 hours operation, coal dust entering bearing grease cannot be more than 0.8%, and roller still can operate normally.

(b) Retting sealing property(non-contact seal)

With roller rotate speed of 1450r/min and 24 hours operation, the water inflow cannot be more than 150g;

(c) water sealing property(non-contact seal)

With roller rotate speed of 1450r/min and 120 hours operation, the water inflow cannot be more than 250g;

(6) Roller service life cannot be less than 30000 hours. In the field service, roller spoilage meet GB/T10595.

II Installation and debugging

1. Parts (including purchased part) can be used after passing examination.
2. All the parts should be cleaned and installed in the clean environment.
3. There cannot be sinkhole and solder skips with gas shielded welding in pressed housing and roller body. Iron bearing housing and body should be close without any looseness.
4. When installing KA series bearing, opening of nylon cage should be kept outside (shaft end), and there are appropriate axial clearance after bearing into roller.
5. Before installing sealing elements, clean bearing, seal chamber, end cover and sealing elements, and avoid entering sealing parts during adding lubricating grease.
6. During installing sealing elements, don't mutually contact inner and external sealing elements.
7. Lip cannot be damaged or turnup when contacting sealing elements.

III Use, operation and maintenance

1. There is no jam to guarantee flexible rotation during installation.
2. Clean slurry in roller when using roller.
3. If there is abnormal sound or non rotation with roller, replace and repair roller to avoid damage of adhesive tape caused by direct friction of roller and adhesive tape.



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Main malfunction and exclusion

IV Malfunction analysis

Malfunction	Reason analysis	Overcome Method
Roller rotates inflexibly	1..There is slurry or foreign matter in roller bearing. 2.Bearing normal clearance cannot be guaranteed during installation	1.Clean foreign matter in the bearing. 2.Beat both ends of roller bearing with bronze bar.
Roller cannot rotate	1.There is too much slurry in the roller bearing. 2.Bearing is damaged during installation.	1.Clean foreign matters in bearing. 2.Change roller bearing.

Roller rotates inflexibly

- (1)There is slurry or foreign matter in roller bearing.
- (2)Bearing normal clearance cannot be guaranteed during installation.
- (3)Clean foreign matter in the bearing.
- (4)Beat both ends of roller bearing with bronze bar.

Roller cannot rotate

- (1)There is too much slurry in the roller bearing.
- (2)Bearing is damaged during installation.

- (1)Clean foreign matters in bearing.
- (2)Change roller bearing.

V Transportation and storage

1. Roller should be packed during transportation and packing should be reliable.
2. Roller should be kept indoors and there is no corrosive gas and other liquid to avoid roller damage.
3. Carrying idler can withstand bumping in carry and installation.

VI Commitment and after-sales service

Provide technical support for customers and revisit customers aperiodically with one year warranty service policy.



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