



Trough Idler Roller

Xin Aneng's Trough idler Rollers guarantee 30,000hrs in normal working conditions. We control Trough idler Rollers quality through raw material procurement system, factory management system, production equipment system, testing equipment system, etc. We mainly provide complete belt conveyor solution and have very strong design and production capabilities.

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Product Description

Trough idler rollers play a crucial role in the performance of conveyor belt systems, providing support, guidance, and efficiency. Understanding the benefits and types of trough idler rollers can help industries optimize their conveyor systems for improved productivity and reduced maintenance costs.



Trough idler rollers are essential components in conveyor belt systems, providing support and guidance to the belt as it moves materials. Understanding the role and benefits of trough idler rollers can help optimize conveyor belt performance in various industries.

Benefits of Trough Idler Rollers

- Improved Belt Support:** Trough idler rollers provide better support to the conveyor belt, reducing the risk of sagging and potential damage.
- Reduced Material Spillage:** The trough shape of the rollers helps contain the material on the belt, minimizing spillage and maintaining a cleaner work environment.
- Enhanced Belt Tracking:** Trough idler rollers assist in maintaining proper belt alignment, reducing wear and tear on the belt and other conveyor components.
- Increased Conveyor Efficiency:** By reducing friction and ensuring proper belt alignment, trough idler rollers contribute to the overall efficiency of the conveyor system, reducing downtime and maintenance costs.

Belt Speed (m/s)	Length /mm	
	< 550	≥550
	Radial runout tolerance of diameter	
≥3.15	0.5	0.7
< 3.15	0.6	0.9
Shaft Dia/mm		AapplyAxialForce/N
≤20		10000
≥25		15000

Roller Diameter/mm		≤108	≥133
RotationalResistance/N	Dust-proof roller	2.5	3.0
	Dust-proof roller	3.6	4.35

Types of Trough Idler Rollers

There are several types of trough idler rollers available, including:

- Impact Idler Rollers:** Designed to absorb impact and protect the conveyor belt from damage.
- Return Idler Rollers:** Positioned beneath the conveyor belt to support the return run of the belt.
- Training Idler Rollers:** Used to adjust the alignment of the belt, ensuring it stays on track.



BW (mm)	IdlerRoller	TroughIdler Roller											
	BeltSpeed(m/s)	0.8	1	1.25	1.6	2	2.5	3.15	4	4.5	5	5.6	6.5
500	maximum conveying capacity	69	87	108	139	174	217						
650		127	159	198	254	318	397						
800		198	248	310	397	496	620	781					
1000		324	405	507	649	811	1014	1278	1622				
1200			593	742	951	1188	1486	1872	2377	2674	2971		
1400			825	1032	1321	1652	2065	2603	3304	3718	4130		
1600						2168	2733	3440	4373	4920	5466	6122	
1800						2795	3494	4403	5591	6291	6989	7829	9083
2000						3470	4338	5466	6941	7808	8676	9717	11277
2200								6843	8690	9776	10863	12166	14120
2400								8289	10526	11842	13158	14737	17014
2600													



FAQ:

1.What are Trough Idler Rollers?

Trough idler rollers are cylindrical rollers typically installed along the length of a conveyor belt. They are designed to support the belt and the material being transported, ensuring smooth and efficient movement. These rollers are placed in a trough shape to guide the belt and prevent spillage of materials.

2.What is the function of Trough Idler Roller?

Troughing idlers are designed such that the loaded belt itself forms a trough, which both reduces the risk of material spillage and increases the ultimate load-bearing ability of the conveyor for improved safety and productivity.

3.What is the angle of a Trough Idler Roller?

Conveyor idlers can be positioned at angles of 20°, 35°, and 45°, depending on the required trough depth. A deeper trough allows the conveyor to carry a higher volume of material, but requires extra height and transition distance to flatten around pulleys.

