



Frost Inc.

2020 Bristol NW Grand Rapids MI, 49504 USA

phone +1.800.783.6633 | email: sales.frost@frostinc.com | fax +1.616.453.2161

Style of Wheel

Features

Full Ball Complement(FBC)

Energy Consideration

Moderate Horsepower Required

Frost standard FBC type trolley wheels are designed without a ball separator. Because of the ball-to-ball sliding contact and the demand for more chain pull, horsepower requirements are increased.

Raceway Design

Split Inner Raceway

Hardened and Fully Contoured Frost standard FBC wheels have an extremely deep-groove, fully contoured inner raceway and can operate continuously under heavy (two-directional) radial and thrust loads. The construction advantages are: 1) High raceway shoulders for maximum thrust load capacity; 2) Split inner raceway allows for deeper ball path and more balls for maximum load-carrying capability; 3) The raceway rings have a double lock feature. This provides a positive, dual direction lock assuring that the split inner rings will not spread apart.

Internal Fit-Up

Greater Clearance

Frost standard FBC wheels have greater internal raceway clearance for misalignment tolerance and to prevent bearing freezeup due to dirt contamination and/or heat expansion. For higher temperatures and contamination,

Heat Capability

500°F (260°C)

Frost standard FBC wheels were designed for temperatures up to 500°F (260°C). For temperature applications above 500°F, Frost should be informed so that extra internal clearances can be provided.

Contamination Tolerance

Heavy Contamination

Frost standard FBC wheels can withstand heavy contamination levels (dry or liquid) and operate best

More Information

Retainer Type

Low Horsepower Required

Frost retainer type trolley wheel construction is of the Conrad type (single row bearing with balls spaced apart by a coined, two-piece steel ball separator). This wheel design (with balls separated) causes low friction and requires the least amount of conveyor drive horsepower.

Non-Split Raceway

Hardened and Fully Contoured Frost retainer type wheels have a one-piece inner raceway, fully contoured on both sides of the ball for light, continuous thrust and radial load carrying capability.

Normal Clearance

Frost retainer type wheels have normal internal radial fit-up and a ball separator to ensure smooth rolling operation, yet ample clearance for misalignment tolerance.

325°F (162°C)

Frost retainer type wheels can be safely used up to 325°F (162°C). This limitation is due to less internal clearance for heat expansion of bearing components.

Moderate Contamination



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Features

Full Ball Complement(FBC)

with triple labyrinth seals. Added contamination tolerance can be obtained by using contact lip seals.

Retainer Type

Frost retainer type wheels can withstand moderate contamination levels. Added contamination tolerance can be obtained by using contact lip seals.

Load Capacity

High Load Capacity

Frost standard FBC wheels have greater load capacity than retainer type wheels due to the increased number of balls. Specifically designed for maximum load situations, standard FBC wheels can handle peak and continuous radial and thrust loads acting from any direction. They are the best choice for shock and impact loading. Note: In system design, I-Beam is the limiting load factor.

Moderate Load Capacity

Frost retainer type wheels have the highest load capacity of any available retainer type wheels. Although this capacity is exceeded by full ball complement wheels, Frost retainer type wheels have ample load capacity for most conveyor systems. Note: In system design, I-Beam is the limiting load factor.

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Shielding	Description	Temperature limits
Open	Open Wheel has no shielding giving the ability to spray in oil and see the balls within.	500F (260C) Continuous
Tripple Labyrinth	Standard of the conveyor industry "specification," the Triple Labyrinth Seal Trolley provides protection from contaminants and effectively retains lubrication and prohibits contaminants from entering the bearing unit, insuring long life and low maintenance. This is made from three all steel shields.	500F (260C) Continuous
Splashproof Standard	This Frost innovation has, for most applications, obsoleted other wheels and bearings incorporating seal designs. Acts as a double "Triple Labyrinth Seal" with a series of shields protecting against severe dirt and liquid contaminated conditions. The Splashproof Seal design creates a series of troughs thru which the contaminants must pass in ten directions to reach the bearing cavity.	500F (260C) Continuous
Splashproof Wiper for Normal Temperatures	This is the same as the standard splashproof but with the addition of a wiper seal. The wiper seal provides even more effective bearing cavity protection. With it, bearing can be relubricated or purged with no danger of seal damage.	300F (149C) Intermittent 275F (135C) Continuous
Splashproof Wiper for High Temperatures	This is the same as the standard splashproof but with the addition of a high temp wiper seal. The wiper seal provides even more effective bearing cavity protection. With it, bearing can be relubricated or purged with no danger of seal damage.	500F (260C) Intermittent 400F (205C) Continuous
Contact seal for Normal Temperatures	Benefits of Frost Trolley Wheel with Full Contact Lip Seal. Additional protection from outside contaminants can be provided by fitting Frost Trolleys with a Full Contact Lip Seal. Two seal materials are available, one for ambient temperatures and one for high temperatures. This Contact Lip Seal is mounted behind and protected by a steel shield, which throws off heavy contaminants and seals the lubricants in. This Lip Seal is always under positive pressure against the mating surface, even as wear occurs.	300F (149C) Intermittent 275F (135C) Continuous
Contact seal for High Temperatures	Benefits of Frost Trolley Wheel with Full Contact Lip Seal. Additional protection from outside contaminants can be provided by fitting Frost Trolleys with a Full Contact Lip Seal. Two seal materials are available, one for ambient temperatures and one for high temperatures. This Contact Lip Seal is mounted behind and protected by a steel shield, which throws off	500F (260C) Intermittent 400F (205C) Continuous



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Type of Wheels

More Information

Specifications

Standard Steel Wheel

Sani-Trolley

Wheel design

Available for standard 3", 4" and 6" I-Beam. Both retainer type and full ball complement style wheels (see next page more for more information).

Available for standard 3" I-Beam.

Design - Double row, free rolling full-ball complement bearing design with stainless steel inner raceways and balls and stainless steel outer raceway inserts for increased load capacity and bearing life. Plastic wheels eliminate rail flaking, wear problems and noise.

Contamination

Frost meat processing trolley wheels are available in plated steel. Stainless Steel trolleys are available for high corrosion environments. High levels of dry or liquid contamination can be tolerated by using Frost Splashproof® seals.

Plastic wheel and ball bearing wheel construction is designed to resist corrosion in normal environments of food processing, resist attack from cleaning solutions, and have easy access for lubrication and cleaning.

Lubrication

Wheels are factory sealed with U.S.D.A. approved lubricant to your specification.

Wheels are designed to operate with minimum of required lubrication. Daily spray cleaning with high pressure water and application of U.S.D.A. approved light oil will greatly increase bearing life.

Load factor

(see next page more for more information).

Allowable trolley loads and chain pulls for multi-plane conveyors utilizing Frost plastic-tired Sani-Trolley is 150 lbs. per trolley pair.

Heat Capacity

Recommended for heat applications up to 325F. (Full-ball trolley is recommended for applications up to 500F.)

May be used from 40oF to 200oF in continuous operation.



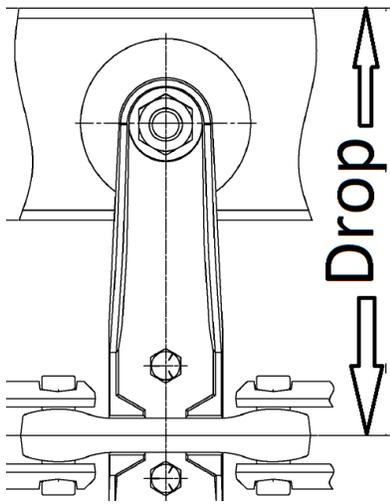
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Type of Bracket

More Information

Topic	Options	Discussion
Plating	<ul style="list-style-type: none"> -Plain. (No plating) -Silver zinc plate. (Gives corrosion resistance) -Yellow zinc plate. (Gives an extra layer of corrosion resistance) 	<ul style="list-style-type: none"> -Plain is the standard for the steel wheel on swagged bracket option -Silver zinc is the standard for the poly/sani/stainless wheel on bolted bracket option.
Drop	<ul style="list-style-type: none"> -This is the measurement from the top of the track to the centerline of the chain. 	 <p>The diagram illustrates a cross-section of a bracket assembly. A horizontal track is at the top. A vertical chain link is attached to the bottom of the track. A vertical double-headed arrow labeled 'Drop' indicates the distance from the top surface of the track to the horizontal centerline of the chain link.</p>
Attach	<ul style="list-style-type: none"> -Swagged -bolted 	<ul style="list-style-type: none"> Swagged style is the standard for our steel wheels. The bracket has a portion that fits inside the center of the wheel. We then form the bracket material around the wheel capturing it securely -Bolted style has a hole in the bracket through which the wheel is attached with a bolt.
Bolted style	<ul style="list-style-type: none"> -forged -stamped 	<ul style="list-style-type: none"> -forged brackets are very strong and durable. They are great for use on systems with large loads. -Stamped brackets are lighter, retain plating very well, and are easily cleaned and washed down.