



**FMC** Technologies

## **Link-Belt**<sup>®</sup> Ball Bearing Idlers (Metric)

Advanced Technology for Performance Excellence

FMC's Link-Belt® belt conveyor idlers and components set the standard of excellence for bulk material handling throughout the world.

Link-Belt® ball bearing idlers feature advanced bearing technology for less rolling resistance than competing designs. Efficient bearing placement minimizes shaft deflection and extends bearing life. Moreover, the bearings are sealed for life, resulting in maintenance-free service. The new bearing technology also helps to ensure quality control in the manufacturing process and to extend roll life.

Link-Belt® ball bearing idlers are radically different from competitive belt conveyor idlers because they incorporate an interference-fit pressed head design to



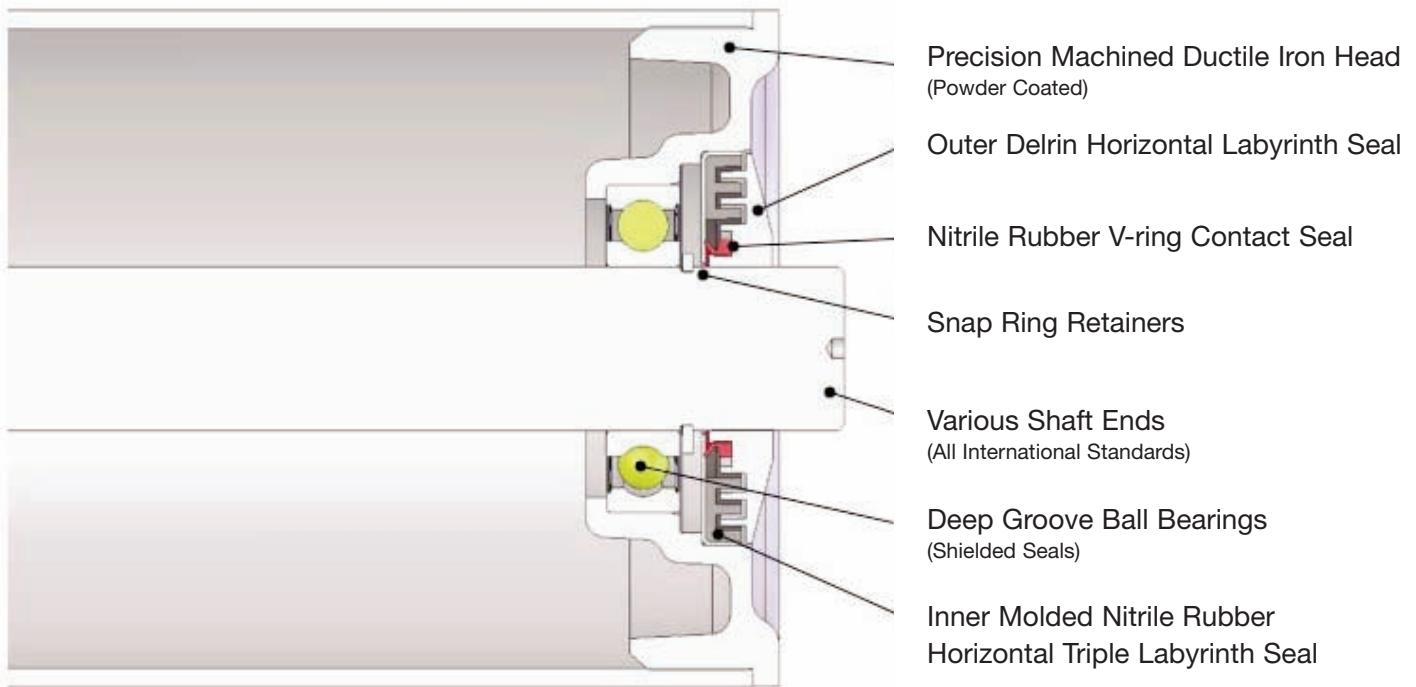
maintain roll integrity. This ductile iron cast head eliminates welding and any of its associated problems (such as distortion, misalignment or poor weld quality) and delivers very low circular runout values compared to welded roll designs.

FMC's Material Handling Solutions Operation combines quality products, prompt shipment and after-sales service to provide outstanding solutions for a wide range of bulk conveying applications.



# Link-Belt® Ball Bearing Idlers (Metric)

## Roll Features



Shell Thickness = 3.00 mm, 3.75 mm, 4.50 mm or 6.00 mm

## Design Features

- Interference-fit pressed head to minimize circular runout of the roll
- Pressed heads eliminate welding problems, such as distortion and misalignment
- Shaft end can be machined to a variety of international standards
- Design accommodates various bearing sizes and bearing seal arrangements
- Electrostatically applied Corvel grey polymeric powder coating
- Design utilizes heavy duty snap rings
- Head designed to accommodate various sealing arrangements



# Available Roll and Shaft Diameters

Series (Shaft Diameters)	Roll Diameter (mm)													
	89.0	101.6	108.0	114.3	127.0	133.0	139.7	152.4	159.0	165.1	178.0	193.7	203.0	219.1
20 mm	Available													
25 mm		Available												
30 mm			Available											
35 mm				Available										
40 mm					Available									
50 mm						Available								
60 mm							Available							

3.00 mm / 3.75 mm / 4.50 mm / 6.00 mm wall thickness available for each roll diameter

# Available Bearing Size and Types

**20 mm Series:** 6204-ZZ 20 mm Ball Bearings, Dynamic Load Rating = 12.9 KN  
6304-ZZ 20 mm Ball Bearings, Dynamic Load Rating = 15.9 KN

**25 mm Series:** 6205-ZZ 25 mm Ball Bearings, Dynamic Load Rating = 14.0 KN  
6305-ZZ 25 mm Ball Bearings, Dynamic Load Rating = 22.2 KN

**30 mm Series:** 6206-ZZ 30 mm Ball Bearings, Dynamic Load Rating = 19.4 KN  
6306-ZZ 30 mm Ball Bearings, Dynamic Load Rating = 27.0 KN

**35 mm Series:** 6207-ZZ 35 mm Ball Bearings, Dynamic Load Rating = 25.5 KN  
6307-ZZ 35 mm Ball Bearings, Dynamic Load Rating = 33.2 KN

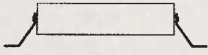
**40 mm Series:** 6208-ZZ 40 mm Ball Bearings, Dynamic Load Rating = 29.5 KN  
6308-ZZ 40 mm Ball Bearings, Dynamic Load Rating = 40.8 KN

**50 mm Series:** 6310-ZZ 50 mm Ball Bearings, Dynamic Load Rating = 61.8 KN

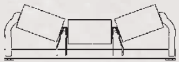
**60 mm Series:** 6312-ZZ 60 mm Ball Bearings, Dynamic Load Rating = 81.8 KN

# Link-Belt® Ball Bearing Idlers (Metric)

## Carrying Idler Types



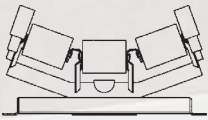
**Flat belt idlers** are used for handling bulk materials such as prepared foundry sand and undelinted cotton seed where it is desirable to plow off material at one or more intermediate points along the conveyor. Also used for pulpwood logs, packages, picking and sorting conveyors. Live shaft type is available for heavy duty service.



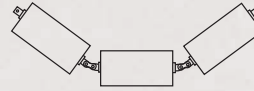
**Troughed belt idlers** for general carrying service are available with roll inclinations of 20°, 35°, and 45°.



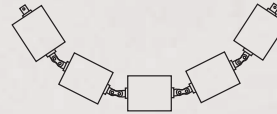
**Troughed belt rubber cushion idlers** protect the belt by absorbing impacts at loading and transfer points. Design features include removable end brackets on 35° and 45° idlers.



**Troughed belt training idlers** automatically train belts and protect belt edges from damage caused by misalignment. Positive action type available for belts operating in one direction, and actuating shoe type available for two-directional operation (reversing).

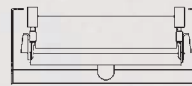


**Catenary 3-roll assembly troughing idlers** for general carrying service are available with trough angles of 35° and 45°.



**Catenary 5-roll assembly impact type idlers** effectively absorb high impact at loading points. Available with a trough angle of 55°.

## Return Idler Types



**Return belt training idlers** train the belt and protect its edges from damage caused by misalignment. Positive action type for belts operating in one direction. Actuating shoe type for reversing belts.



**Catenary 2-roll assembly v-return type idlers** assist in belt training. Urethane covered rolls are available in trough angles of 10° and 15°.

## Roll Construction

### Heads

- ASTM A536 ductile iron casting
- Machined to close tolerances for bearings, seals and shell press-up

### Bearings

- C4 Clearance
- js6 fit between bearing inner race and shaft
- N7 fit between bearing outer race and housing
- L10 life of 60,000 hours minimum
- Bearing seals are type “ZZ”

### Grease

- Standard Chevron SRI-2 bearing grease (-30°C to 177°C) or Optional Mobilgrease 28 synthetic based grease with an operating temp. range of -54°C to 177°C

### Shaft

- Solid ASTM A-108 C1018CD material
- Maximum shaft deflection at bearings of 0.0029 radians
- Utilizes snap rings

### Seals

- Low friction V-Ring Nitrile rubber inner primary seal
- Horizontal Triple Labyrinth Seal

### Shell

- 0.6mm maximum circular runout for steel rolls
- Hot rolled electric welded mechanical tubing
- ASTM A513 C1010-1020
- 3.00mm, 3.75mm, 4.50mm, 6.00mm wall thicknesses

### Paint

- Polymeric powder coating, Corvel gray
- Phosphate wash pretreatment
- Electrostatically applied powder, oven cured
- Polyester TGIC, 4 mills minimum D.F.T.

### Dynamic Balancing

- Meets ISO-1940 Balance Quality Grade of G 40 for standard steel rolls
- Meets ISO-1940 Balance Quality Grade of G 16 for scale quality steel rolls

### Rolling Resistance

- 3.1N Average Running Frictional Force at 650 RPM, +20°C, 159mm OD and 250N Load per DIN 22112
- 5.9N Average Running Frictional Force at 650 RPM, -20°C, 159mm OD and 250N Load per DIN 22112



### Product Offering

- Belt Conveyor Idlers
- Idler Rolls
- Scavenger™ Belt Conveyor Cleaners
- Screw Conveyors
- Bucket Elevators
- Link-Belt® Component Parts
- Heavy-Duty Vibrating Feeders
- Light-Duty Vibrating Feeders
- Screening Feeders
- Vibrating Screens
- Vibra-Drive Units
- Volumetric Feeder Machines
- Grizzly Bar Screens
- Vibrating Conveyors
- Bin Vibrators
- Packing Tables
- Paper Joggers
- Syntron® Component Parts

### Technisys Product Offering

- Automation and Process Control
- SCADA and Process Software
- Variable Frequency Drives
- DC Drives
- Motors
- Harmonic Filters
- Line Reactors
- Power Factor Correction
- Enclosures (Metal, Fiberglass, Plastic)
- Sensors
- Transformers
- Circuit Protective Devices
- Industrial Controls
- UL Panel Shop

#### FMC Technologies, Inc.

PO Box 1370  
Tupelo, MS 38802  
Tel: 662-869-5711  
Fax: 662-869-7493  
Toll Free: 800-356-4898  
Email: [mhsol.info@fmcti.com](mailto:mhsol.info@fmcti.com)

#### FMC Technologies, Inc.

2# Road No. 1  
Changshu Export Processing Zone  
Changshu, Jiangsu, China 215513  
Tel: 86-0512-52299002  
Fax: 86-0512-52297228  
Email: [mhsolchina.info@fmcti.com](mailto:mhsolchina.info@fmcti.com)

#### FMC Technologies Chile Ltda.

Callao 2970, Office 704  
Las Condes, Santiago, Chile  
Tel: 56 2 234 4418  
56 2 246 4361  
Fax: 56 2 232 0825  
Email: [fmc@entelchile.com](mailto:fmc@entelchile.com)

#### FMC Technologies, Inc.

479 West 900 North  
North Salt Lake, UT 84054  
Tel: 801-296-9500  
Fax: 801-296-9601  
Email: [mhsol.info@fmcti.com](mailto:mhsol.info@fmcti.com)

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