**Tapered roller bearing**

**HC series**

The advanced five-stage seal design contributes to long-life operation without re-lubrication

Five-stage seal design

1. An exterior shield provides an initial barrier to divert contaminants away from the bearing cavity.
2. A flinger employs the natural centrifugal forces of a rotating idler roll to redirect potential contaminants away from the bearing cavity.
3. A grease-filled, horizontal labyrinth seal retards lateral movement of contaminants.
4. A contact lip seal provides additional sealing protection and keeps lubricant in the bearing cavity.
5. A rear seal provides added protection for the grease reservoir.

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**20 deg. troughing idler  5” dia. 69AHCC501-BW**

**6” dia. 69AHCC601-BW**

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**35 deg. troughing idler  5” dia. 69AHCC530-BW**

**6” dia. 69AHCC630-BW**

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**Tapered roller bearing**

**HC series**

45 deg. troughing idler  5” dia. 69AHCC542-BW  6” dia. 69AHCC642-BW

Flat belt roll  5” dia. 69AHCC510-BW  6” dia. 69AHCC610-BW

Return roll  5” dia. 69AHCC510-BW  6” dia. 69AHCC610-BW

10 deg. V return idler  5” dia. 69AHCC528-BW  6” dia. 69AHCC628-BW
Tapered roller bearing  
HC series

20 deg. troughing training idler  5” dia. 69AHC503-BW  
6” dia. 69AHC603-BW

35 deg. troughing training idler  5” dia. 69AHC532-BW  
6” dia. 69AHC632-BW

45 deg. troughing training idler  5” dia. 69AHC544-BW  
6” dia. 69AHC644-BW

Return training idler  5” dia. 69AHC519-BW  
6” dia. 69AHC619-BW

Tapered roller bearing  
HD series

The advanced five-stage seal design contributes to long-life operation without re-lubrication.

1. An exterior shield provides an initial barrier to divert contaminants away from the bearing cavity.
2. A finger employs the natural centrifugal forces of a rotating idler roll to redirect potential contaminants away from the bearing cavity.
3. A grease-filled, horizontal labyrinth seal retards lateral movement of contaminants.
4. A contact lip seal provides additional sealing protection and keeps lubricant in the bearing cavity.
5. A rear seal provides added protection for the grease reservoir.

*Available on all return rolls and as all-42 inch bolt width and wider center troughing rolls.

Bolts, nuts, and washers for mounting are not included with idlers. All weights are in pounds and all lengths are in inches.
Dimensions subject to change or correction without notice. Use certified prints for construction purposes.
HC troughing idlers exceed CEMA D specifications through 38” BW. Four inch diameter rolls are also available.
Tapered roller bearing

HD series

45 deg. troughing idler
5" dia. 72AHDS42-BW

6" dia. 72AHDS62-BW

Return roll
5" dia. 72AHDS510-BW

6" dia. 72AHDS610-BW

10 deg. V return idler
5" dia. 72AHDS528-BW

6" dia. 72AHDS628-BW

Tapered roller bearing

HD series

20 deg. troughing training idler
5" dia. 72AHDS503-BW

6" dia. 72AHDS603-BW

35 deg. troughing training idler
5" dia. 72AHDS532-BW

6" dia. 72AHDS632-BW

45 deg. troughing training idler
5" dia. 72AHDS544-BW

6" dia. 72AHDS644-BW

Return training idler
5" dia. 72AHDS519-BW

6" dia. 72AHDS619-BW

Dimensions subject to change or correction without notice. Use certified prints for construction purposes.

Bolts, nuts, and washers for mounting are not included with idlers. All weights are in pounds and all lengths are in inches.

Bolts, nuts, and washers for mounting are not included with idlers. All weights are in pounds and all lengths are in inches.

Reference dimensions

A

B

C

D

E

F

G

H

I

J

K

L

M

N

O

P

Q

R

S

T

U

Reference dimensions

A

B

C

D

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H

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K

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U

Refer to CEMA D.
**H-Plus series – regreasable**

1. Combination lip and labyrinth seal A unique, precision die-cast adjusting nut, and triple horizontal labyrinth seal provide three baffles designed to keep contaminants out. The outer labyrinth is formed from malleable parts, which provides a precise close tolerance seal. The lip seal contacts the precision zinc die-cast surface to provide increased seal integrity. Additionally, the threaded bearing adjustment nut also provides an integral barrier against contamination.

2. Patented shaft design Our patented multi-piece shaft design includes a hollow tube center section and solid shaft ends that are machined to 3/4” diameter. The center tube sections are sized for high-capacity applications. By design, these shafts increase load capacity by decreasing shaft deflection and bearing misalignment.

3. Reduced deflection potential

   The reduced distance from support to bearing lessens shaft deflection and the potential for bearing misalignment.

4. Modified geometry tapered roller bearings

   Modified geometry, 19mm (3/4”) tapered roller bearings provide more bearing contact area than ball bearings. Spreading the load over a larger area relieves stress and enhances bearing life under heavy loads and impact.

5. Head concentricity Full section, pressed steel heads, manufactured by a proprietary technique, provide a centered product for a true roll. The computerized controlled banded electric weld unifies the shell and provides concentricity.

6. Relubrication system All bearings are positively greased from one fitting on either side. The compensating flats provide a metered grease path, which equally distributes lubricant to each bearing cavity. The grease enters behind the bearing, purging around and through the bearing, through the seal, flushing the bearing cavity of old grease and any contamination. The purpose of the positive purge of the bearing cavity is to prevent excessive back pressure, which may blow seals and lock rolls.

**CONVEYOR COMPONENTS**

**20° S/A troughing idler 127 mm (5”) dia. 78AH503-BW 152 mm (6”) dia. 78AH603-BW**

**35° S/A troughing idler 127 mm (5”) dia. 78AH532-BW 152 mm (6”) dia. 78AH632-BW**

**45° troughing idler 127 mm (5”) dia. 78AH542-BW 152 mm (6”) dia. 78AH642-BW**

**COMPONENTS**

**Wt**: Weight

**Dia.**: Diameter

Note: Our patented shaft is available on all return rolls and all 42-inch bolt motors and wider troughing rolls. Consult factory.

**Self-aligners for reversing service are also available. Consult factory.**

Add G to part number for sealed construction. Add J to part number for regreasable construction. Weights shown in pounds and lengths shown in inches.
H-Plus series

20° impact troughing idler

159 mm (6 1/2") dia. 78AH602-BW

<table>
<thead>
<tr>
<th>BW</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>Wt</th>
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</table>

Add S to part number for sealed construction.

Available in sealed construction only.

35° impact troughing idler

159 mm (6 1/2") dia. 78AH636-BW

<table>
<thead>
<tr>
<th>BW</th>
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<th>B</th>
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Add S to part number for sealed construction.

Available in sealed construction only.

45° impact troughing idler

159 mm (6 1/2") dia. 78AH649-BW

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<th>BW</th>
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</tbody>
</table>

Add S to part number for sealed construction.

Available in sealed construction only.

Transition idler

127 mm (5") dia. 78AH559-BW

152 mm (6") dia. 78AH689-BW

Add E to part number for regreasable construction.

Weights shown in pounds and lengths shown in inches.

H-Plus series

Return roll

127 mm (5") dia. 78AH589-E

Part numbers are for regreasable construction.

Consult factory for sealed return idler part numbers.

Drop brackets sold separately. Return idlers are shown above with 4½” drop brackets. When ordering return idlers, specify two brackets as 78AH3002 per roll. Other drop brackets are available, please consult factory. Part number and weight applies to roll only. Rolls and brackets shipped separately. Add 4 lbs per bracket.

Rubber disc return roll

152 mm (6") dia. 78AH612-BW

Drop brackets sold separately. Return idlers are shown above with 4½” drop brackets. When ordering return idlers, specify two brackets as 78AH3002 per roll. Other drop brackets are available, please consult factory. Part number and weight applies to roll only. Rolls and brackets shipped separately. Add 4 lbs per bracket.

Self-aligning return idler

127 mm (5") dia. 78AH519-BW

Self-aligning rubber disc return idler

152 mm (6") dia. 78AH621-BW

Add E to part number for regreasable construction. Add G to part number for regreasable construction.

Weights shown in pounds and lengths shown in inches.
Roll construction for 36 inch belt widths

- Concentric rolls
  Mechanical steel tubing cut and machined to rigid tolerances provides concentricity of roll-head assembly.
- External labyrinth seal
  The unique roll head and nut designs are combined to produce an extremely effective long path, close tolerance labyrinth seal.
- One point lubrication
  All bearings are positively greased and purged at each bearing from one fitting on either side.
- Positive hold down
  Drop-in rolls are factory assembled and positively secured with a sturdy 3/8” bolt.
- Extra heavy, die-formed bracket
  Designed with super wide base and direct foot mounting for increased rigidity and resistance to impact.
- Patented shaft
  Available on all return rolls and on 42-inch belt width and wider troughing rolls. (Details listed on page 14)

Roll construction for 42 inch and wider belt widths

- Connecting tube
  Elastomer tube provides positive grease passage.
- Rigid, one-piece, jig-welded frame
  Accurate roll positioning simplifies belt training and greatly reduces friction and roll wear.
- Modified geometry,
  1¼” tapered roller bearings
  SDX-2200 idlers are offered from 36” belt widths in 20 deg., 35 deg., and 45 deg. troughers with equal and extended center roll styles. Both sealed and regreaseable designs are available.
  The SDX-2200 idler is furnished with 152 mm (6”) or 178 mm (7”) diameter rolls equipped with modified geometry, 1¼” tapered roller bearings which provide generous load and thrust capacities. Our patented shaft design is available on all return rolls and on 42-inch belt width and wider troughing rolls.

SDX-2200
super-duty belt conveyor idlers
The secrets of SDX-2200 superiority

1. Grove-lock connection of machined head and tube
Heads are press fit into the roll and positively locked into position by means of our unique groove-lock design. This approach provides a truly concentric, scale-quality roll assembly.

2. Relubrication system
All bearings are positively greased from one fitting on either side. The compensating flaps provide a metered grease path which equally distributes lubricant to each bearing cavity. The grease enters behind the bearing, purges around the bearing, through the seal, flushing the bearing cavity of old grease and any contamination. The purpose of the positive purge of the bearing cavity is to prevent excessive back pressure which may blow seals or lock rolls.

3. Patented shaft design
Our patented multi-piece shaft design includes a hollow tube center section and solid shaft ends that are machined to 32 mm (1 1/4”) diameter. The center tube sections are sized for high-capacity applications. By design, these shafts increase load capacity by decreasing shaft deflection and bearing misalignment.

4. Combination lip and labyrinth seal
The combination of multiple labyrinths and a contact lip seal filled with grease has proven for decades to be the most effective seal for heavy-duty service. The outer labyrinth is formed from mating machined ductile parts which contributes to a precise, close tolerance seal. The lip seal contacts a burnished mirror finish surface to provide increased seal integrity.

5. Heavy section cast ductile head and nut
The SDX-2200 idler roll head and nut are heavy section, web-reinforced, ductile castings that are precision-machined for accurate roll and bearing fit. All machining is done in a single set-up to promote uniformity and dimensional alignment.

SDX-2200 series

20° troughing idler 152 mm (6”) dia. 73ASDX601-BW 178 mm (7”) dia. 73ASDX701-BW

35° troughing idler 152 mm (6”) dia. 73ASDX630-BW 178 mm (7”) dia. 73ASDX730-BW

45° troughing idler 152 mm (6”) dia. 73ASDX642-BW 178 mm (7”) dia. 73ASDX742-BW

20° S/A troughing idler 152 mm (6”) dia. 73ASDX603-BW 178 mm (7”) dia. 73ASDX703-BW

Self-aligning for reversing service is also available. Consult factory.
SDX-2000 series

20° extended center roll impact idler
184 mm (7".) dia. 73ASDX708-BW

Consult factory for load ratings.

20° extended double center roll impact idler
184 mm (7".) dia. 73AK9104-BWG

Part number is for regreasable idler.
Part number for sealed idler is 73AK775-BW/SE.

Self-aligning return idler
152 mm (6") dia. 73ASDX619-BW
178 mm (7") dia. 73ASDX719-BW

Return idler
178 mm (7") dia. 73ASDX610-BW
178 mm (7") dia. 73ASDX710-BW

Rubber disc self-aligning return idler
178 mm (7") dia. 73ASDX721-BW

V return
152 mm (6") dia. 73ASDX628-BW
178 mm (7") dia. 73ASDX728-BW

Add S to part number for sealed construction. Add G to part number for regreasable construction. Weights shown in pounds and lengths shown in inches.

Rubber disc return idler
178 mm (7") dia. 73ASDX712-BW

Massed end return idler
178 mm (7") dia. 73AK2027-BW
### CEMA F
### HXF-40 series

**40mm spherical roller bearing idlers**

The HXF-40 exceeds CEMA F idler load standards and is designed for today’s super high capacity operations. Applications include high tonnage mining and industrial operations, mining operations with overburden removal and underground longwall coal mining operations that want to more closely match tonnage rates to highly productive longwall mining machines.

HXF-40 series idlers are offered with our in-line design or with our OR-C frame design from 60” to 120” BW.

A flinger employs the natural centrifugal forces generated by a rotating idler roll to redirect potential contaminants away from the bearing cavity.

Patented retaining sleeve creates a smooth contact surface for the rotating lip seal.

Patented, engineered shaft reduces overall roll weight and shaft deflection.

The triple labyrinth seal retards lateral movement and provides a barrier to contaminants reaching the bearing.

Counter-bored shell with protected weld contributes to proper bearing alignment.

Lip seal designed to provide added protection for the bearing.

Bearing and seal cavities are filled with grease from the factory to promote long-life operation.

Spherical roller bearing designed to exceed CEMA requirements for L10 life.

The back seal allows for a larger grease reservoir.

Optional urethane available. For sticky material or adverse weather conditions, request the Wobbler return trainer with a 1/4” urethane cover that is designed to reduce material buildup on the surface of the idler.

### Description

The Wobbler idler is a return training idler made up of a tubular roll mounted on an anti-friction bearing in the center of the tube. The idler is pivoted on an inclined, fixed swivel pin. If the weight of the belt falls more on one side than the other, the heavy side rocks downward and forward, skewing the roller and guiding the belt to its central position.

### Benefits

No frame equals less material buildup – The Wobbler idler also solves another common problem. Most trainers have complex frames which accumulate so much material that the roll jams, causing possible de-training and damage to the belt. The Wobbler return training idler is held in place by two simple brackets with no framework to collect material. Lubrication can be accomplished from either side.

### Summary

Designed to solve common belt training problems – The Wobbler idler is a return training idler designed to train your conveyor belt. A steel roll, centered on a 60mm ball bearing, pivots when the conveyor belt moves off center and guides the belt back to allow for a more efficient operating conveyor. The Wobbler idler is available in belt widths from 18” to 60”.

**Table 1: XW-RAW-BWB**

<table>
<thead>
<tr>
<th>Belt Width</th>
<th>B</th>
<th>C</th>
<th>Wt</th>
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<tr>
<td>60</td>
<td>69</td>
<td>62</td>
<td>115</td>
</tr>
</tbody>
</table>

S08709A clamp box will be supplied if not specified. Available in 6” diameter rolls only.
Impact bed assembly

The impact bed assembly extends belt life and reduces downtime by supporting the conveyor belt and cushioning it against the shock of heavy loads and impact. Its modular design allows multiple units to be closely fitted to form the bed length needed. As shown in the picture below, the impact bed assembly is also offered with an impact center roll. Contact your sales representative for part numbers.

Slide seal assembly

The slide seal assembly is a simple and cost effective way to provide continuous support of your conveyor belt against the skirting material, resulting in a positive seal. By utilizing standard twinning idler frames with center rolls and UHMW/steel support bars with support mounting brackets, this unit is designed to provide a positive seal in your loading area with reduced belt drag. For impact loading, refer to impact bed assembly.

Replacement parts

UHMW replacement bars only

<table>
<thead>
<tr>
<th>BW</th>
<th>Part number</th>
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<th>Wt lbs</th>
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<td>UHMW 3/16” x 1 1/8”</td>
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<td>60K08608-18</td>
<td>UHMW 5/16” x 1 1/8”</td>
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*Consult factory for CEMA E applications.

Wing support insert

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UHMW replacement bars only

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Slide seal bar assembly

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