

REPLACEMENT & AFTERMARKET

UNEQUAL TROUGHING IDLERS



Collaborate / Create / Convey

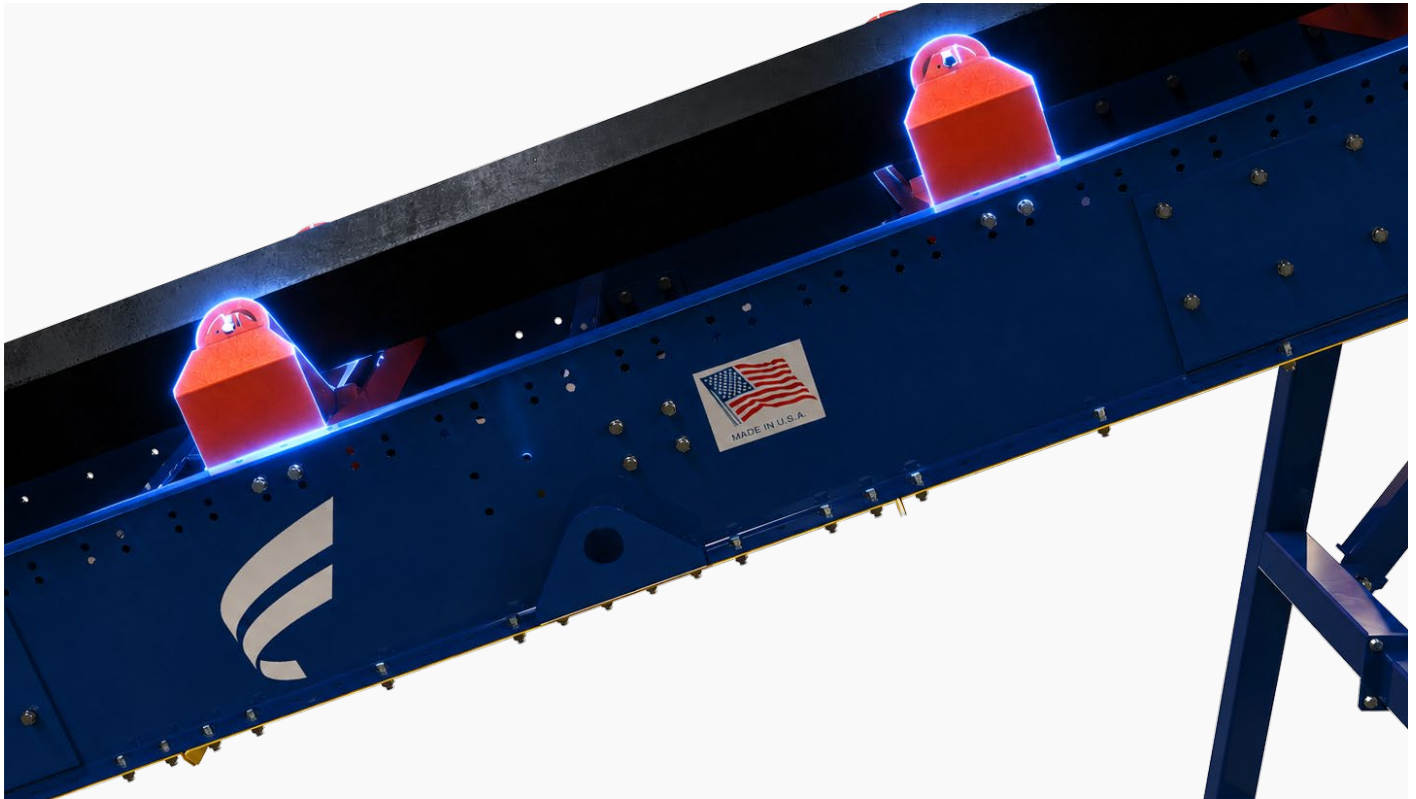
TABLE OF CONTENTS

Unequal Troughing Idlers	02	Product specifications	05
Applications	03	The Engineering Advantage	06
Key Features	04	Contact Information	07

© 2026 Fluent Conveyor. All rights reserved.

All content, including text, graphics, and product specifications, is the property of Fluent Conveyor and may not be reproduced, distributed, or transmitted in any form without prior written permission.

UNEQUAL TROUGHING IDLERS

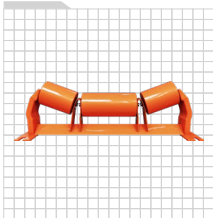


Unequal Troughing Idlers

Unequal troughing carrying idlers operate in picking, sorting, and feeding zones where bulk material requires flat distribution across the belt span. Standard equal troughing units create deep angular profiles that restrict manual belt access. Asymmetric roll geometry physically flattens the belt profile while maintaining necessary structural load support.

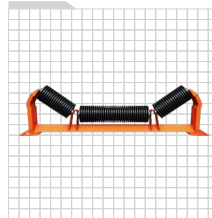
Fabricated for the carrying side of the circuit, these assemblies feature one extended center roll and two shortened wing rolls. The components rotate on C1018 cold-rolled steel shafts and mount via standard inline or clearance-restricted channel inset frames. Every unit functions as a direct replacement built to strict CEMA load specifications.

Steel Roll Construction



Fabricated for general-duty material handling across CEMA B-F classifications, supplied in standard ERW tubing or impact-rated variants.

Rubber Disc Construction



Engineered with solid rubber discs to absorb concentrated mechanical impacts at loading transition zones and resist chemical deterioration in harsh operating environments.

APPLICATIONS



Recycling Sort Stations

Carrying idlers are built for heavy impact and abrasive conditions, ensuring reliable belt support and reduced downtime in harsh waste and mining operations.



Aggregate Screening Preparation

Feeder conveyors positioned ahead of crushers and vibrating screens require material to be distributed evenly across the full belt width. The elongated center roll spreads bulk aggregates horizontally to optimize the physical feed rate into downstream mechanical processing equipment.



Manual Sortation & Picking

Manual sortation stations necessitate unobstructed belt access for line workers to accurately identify and extract specific materials. The 20-degree trough angle configuration creates a flattened structural profile that maximizes physical accessibility while maintaining necessary edge containment.



Package Distribution

Distribution facilities demand high-volume diversion setups operating in zones with strict vertical clearance limitations. Channel inset frame designs recess the mounting points to reduce the overall vertical footprint and clear tight structural constraints.



Wash Plants

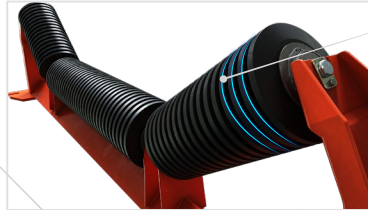
High-moisture dredging environments expose rotating mechanical components to severe liquid ingress and abrasive particulate. Wet idler seal configurations isolate internal roller bearings from contaminated water streams.

KEY FEATURES

01

Asymmetric Roll Geometry:

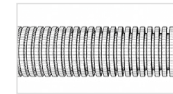
Utilizes a single extended center roll and two shortened wing rolls to flatten material cross-sections for manual extraction.



02

Rubber Disc Roll Assembly:

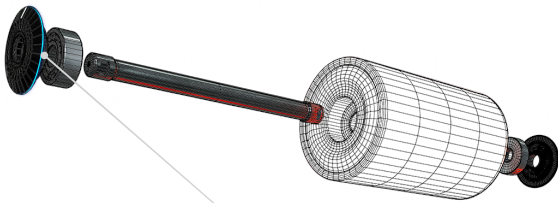
Configured with rubber discs to absorb falling material impacts and withstand chemical deterioration in harsh processing zones.



03

C1018 Cold-Rolled Steel Shaft:

Machined from cold-rolled steel stock to resist physical deflection under loaded material conditions.



04

Dry Idler Seal:

Integrated as a reinforced barrier around the bearing housing to block particulate ingress during crushing operations.

05

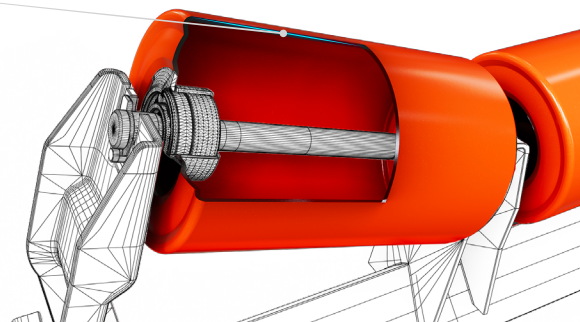
ERW Steel Tube Construction:

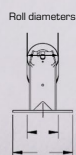
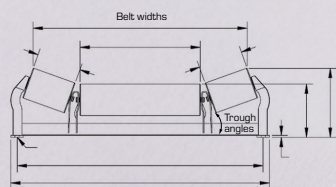
Fabricated from continuous steel tubing to support primary vertical loads along the carrying side of the conveyor circuit.

06

Reinforced Frame Construction:

Welded to maintain precise roller alignment and withstand operational stresses across extended frame widths.





UNEQUAL TROUGHING IDLERS SPECIFICATIONS

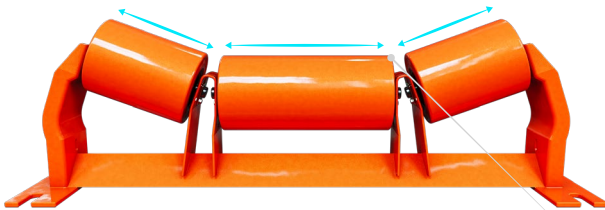
Parameter	Standard Specification	Extended / Custom
CEMA classes	B, C, D, E, F	-
Belt widths	18 – 96 inches	-
Trough angles	20°, 35°, 45°	-
Roll diameters	4 – 7 inches	-
Shaft material	C1018 cold-rolled steel	-
Roll construction	ERW steel tube	Rubber disc, solid rubber
Bearings	Standard ball	Spherical, tapered
Frame types	Standard inline	Wide-base options
Mounting	Top mount	Channel inset, web mount
Finish	Painted	Galvanized, stainless

Configuration Reference

Seal Type	Primary Application	Protection Level
Dry Seal	Crushing, screening, dusty aggregate	Reinforced barrier
Wet Seal	Wash plants, dredging, high-moisture	Enhanced protection
Eco Seal	Washed sand and fines	Combined extreme condition protection
Titanium Seal	Severe-duty operations	Maximum durability

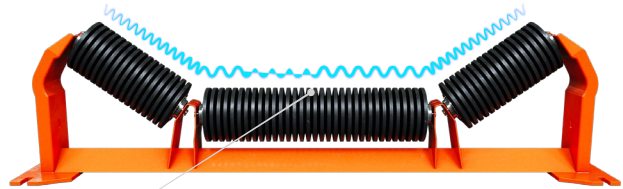
THE ENGINEERING ADVANTAGE

This section outlines the core engineering methodology behind unequal troughing idlers, covering specific geometric and structural design principles to ensure mechanical fit and continuous operation.



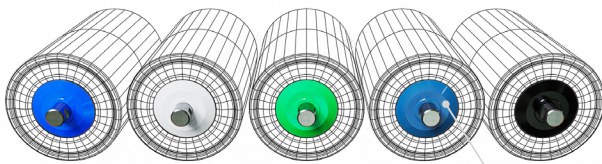
Low-Profile Trough Geometry:

Calculated with flattened trough angles to eliminate deep structural pockets and maximize horizontal surface dimensions.



Asymmetric Load Distribution:

Engineered to transfer the majority of vertical material load forces directly onto the extended center roll bearing assemblies.



Environmental Seal Isolation:

Configured with specialized wet, dry, eco, or titanium seal variants matched precisely to the particulate or moisture risk of the application.



Clearance-Restricted Channel Inset Mounting:

Designed to mount directly into the conveyor frame webbing to compress the vertical profile in tight structural installations.

CONTACT INFORMATION

OUR ENGINEERS WILL SPEC THE EXACT PART FOR YOUR SYSTEM

For product specifications, engineering support, or order inquiries, please contact our team using the information provided below. Our specialists are available to ensure accurate recommendations and efficient service for your application requirements.

Reach Us Directly

Email

Send us your questions or requests, and we'll respond promptly.

sales@fluentconveyors.com

Phone

Call us for immediate assistance and technical support.

[+1\(866\) 764-2980](tel:+18667642980)

Business Hours

Monday - Friday

8:00 AM – 5:00 PM MST

Departments

Sales & Quoting

Product pricing, availability, and order placement.

sales@fluentconveyors.com

Customer Service

Product pricing, availability, and order placement.

[+1 \(303\) 390-1228](tel:+13033901228)

Engineering

Technical specs, application review, custom configurations.

engineering@fluentconveyors.com