Martin

IDLERS

CEMA C, D, E

EQUAL / UNEQUAL IDLERS
IMPACT / RUBBER DISC
RETURN / V-RETURN / FLAT CARRY
SELF-ALIGNER / MADE-TO-ORDER

NIBA The Belting Association

CEMA Conveyor Equipment Manufacturers Association

Martin Idlers are stocked in a wide range of belt widths to meet customers' needs.

Martin manufactures heavy-duty Idlers and components that exceed CEMA standards. Martin uses sealed-for-life ball bearings that allows for trouble-free life even in the harshest applications. With idlers available when and where you need them, martin can provide the complete solution for your belt conveyor needs.

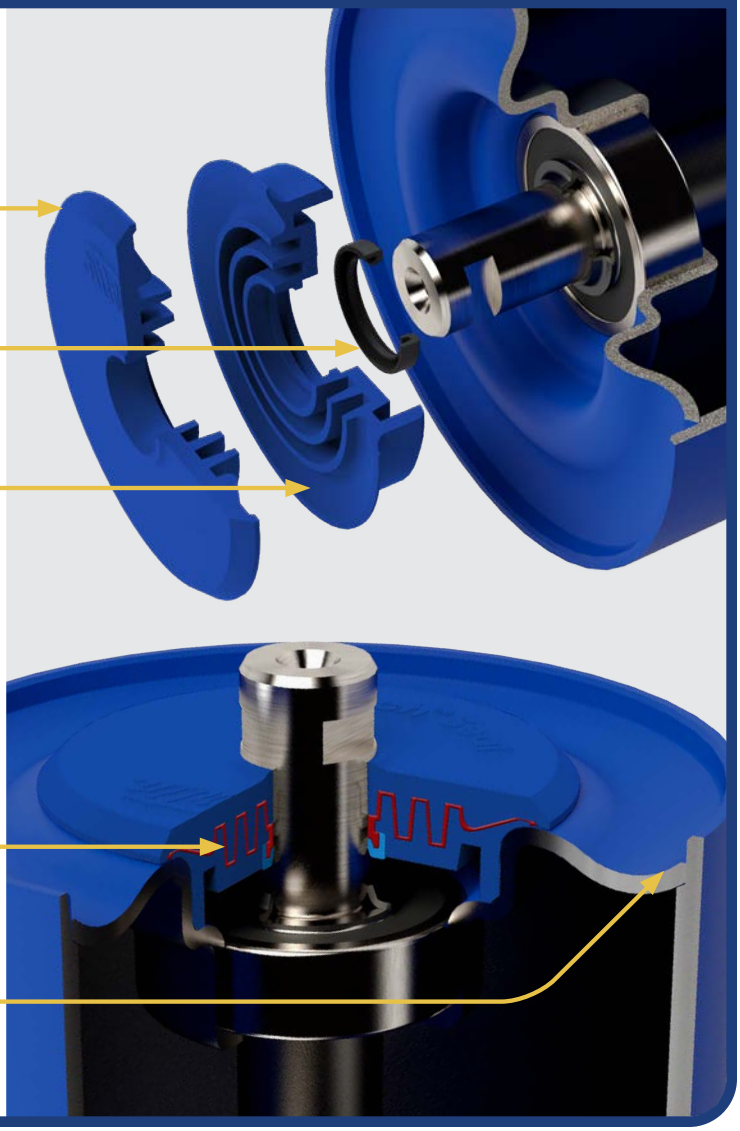
Belt conveyors are a proven way to move bulk materials in practically every industry. Belt conveyors routinely operate at 90% capacity and can be operated 24/7, 365 days per year. Belt conveyors have a lower operating cost and can provide a higher return on investment than competitive methods. Maintenance is minimized and less labor is required. Materials conveyed can range from very fine powder such as gypsum to large lump size material such as limestone from a quarry. The size of material conveyed is limited by the belt width used.

Martin can provide the full material handling package to meet your needs, including idlers, conveyor pulleys, screw conveyors, drag conveyors, bucket elevators and other material handling components.

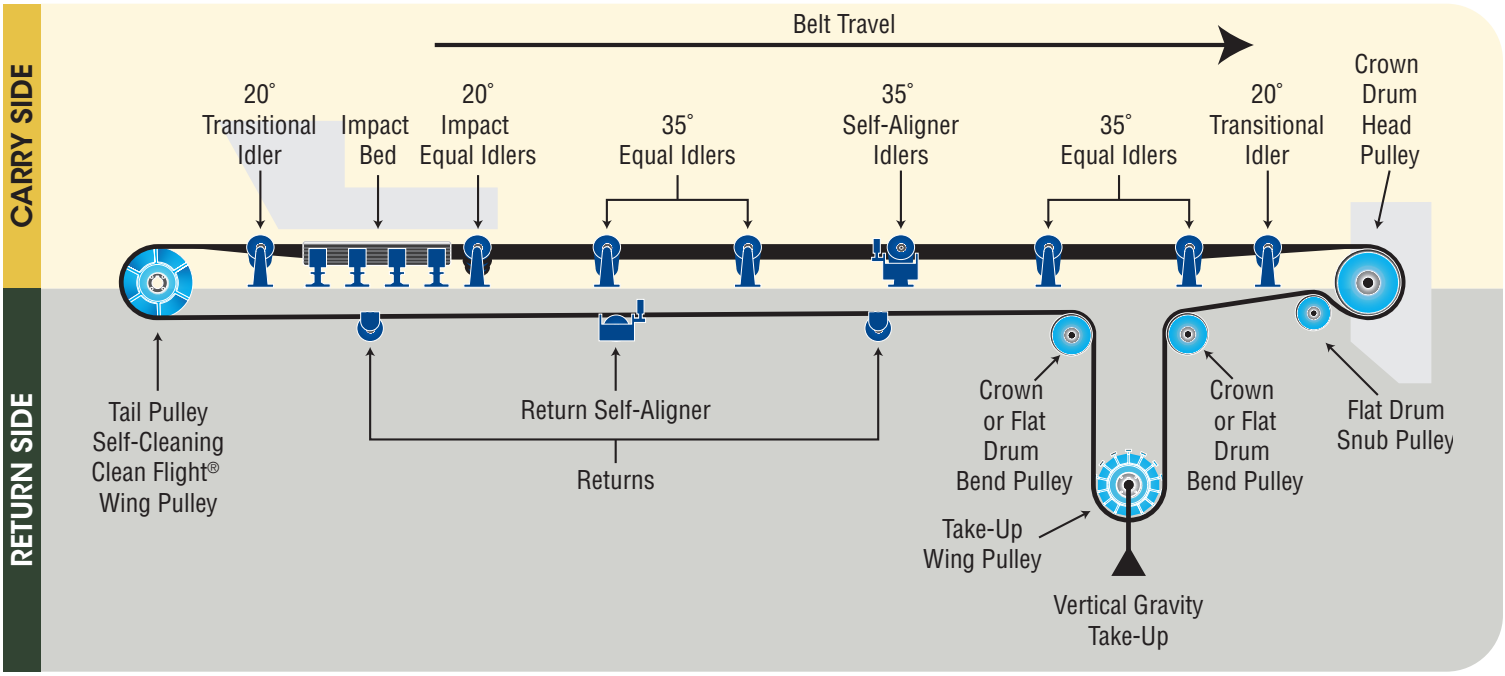
Martin Idler Roll Design

The triple labyrinth seal system offers the following bearing protection:

1. **Large External shield**
   Shields the labyrinth & bearing from outside contaminants
2. **Contact lip seal**
   Adds a level of protection against moisture & fine contaminants
3. **Flinger design**
   Removes contaminates away from the bearing housing by centrifugal force
4. **Grease filled triple labyrinth**
   Catch contaminants attempting to pass through the labyrinth
5. **Protected weld**
   Welded inside the tubing instead of an exposed corner weld



A conveyor belt system consists of at least 2 Pulleys, carrying and return Idler components, Take-Up components and a conveyor belt.



CARRY SIDE

Transition Idler – Typically found on either end of the conveyor. These idlers have a smaller wing roll angle and help transition the conveyor belt to or from flat to full trough angle.

Impact Beds – Can be used at a material transfer point in place of impact idlers to help with material impact or conveyor sealing. Impact beds are able to handle a much heavier impact force. The replaceable impact bars are made of rubber with a UHMW cap to reduce conveyor belt drag.

Impact Idlers – Rubber discs help to absorb and dissipate impact forces without transferring it through the shaft, bearings, idler frames and conveyor structure. Impact idler frames are reinforced for added strength.

Idlers – Support the conveyor belt and provide a trough to contain the material conveyed.

Self-Aligner Idlers – Also known as training idlers are a solution for a mistracking belt. If the belt contacts the guide rollers or the self-actuating shoe the top of the idler pivots to steer the belt back into the trough.

Flat Carry Rolls – Some conveyors might require the belt to run flat for various needs like picking, sorting, or inspecting.

RETURN SIDE

Returns – Can be steel or spaced rubber discs. Typically mounted in drop brackets on the underside of the conveyor structure. The primary purpose of a return roll is to support the empty belt on the on the return side of the conveyor.

Return Self-Aligners – Mounted on the return side of the belt. Supports an empty flat belt. The assembly pivots if the return side of the belt begins to mistrack guiding the belt back into the center of the return rolls.

V-Returns – 2 rolls typically in a 10 degree V assembly. The V profile aids with belt tracking. Should be used on higher tension systems and when steel cord belts are used in the application.

Inverted V-Returns – Mounted on the inside of the belt to aid with belt tracking on the return side into the tail pulley.

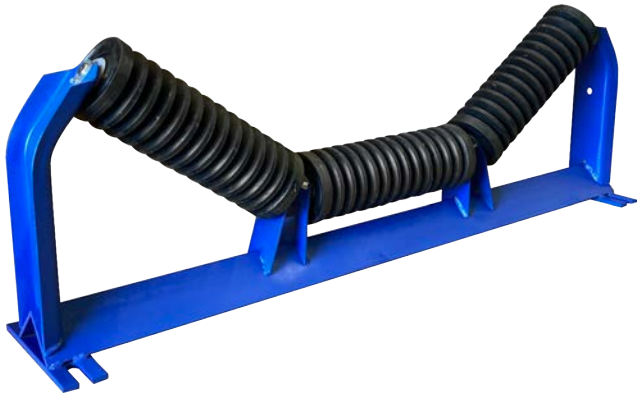
Live Shaft Rollers – Steel, spaced rubber disc or feeder impact solid rubber discs mounted on external pillow block or flange bearings. Typically used in applications with excessive impact and material load or in areas of a conveyor belt with elevated belt tensions.

Idler Types

Idlers

- **Troughing idlers typically contain 3 rolls** with wing roll inclinations of 20, 35 or 45 degrees**.**
- **Support the conveyor belt and provide a trough** to contain the material conveyed.
- **The trough configuration** prevents spillage and increases the carrying capacity of the conveyor belt.
- **Standard troughing idler spacing** is 3.5 To 4 feet apart.
- **Martin troughing idlers meet or exceed the load carrying capacities recommended by CEMA** (conveyor equipment manufacturer's association.)

Impact



- **Rubber discs absorb impact** to dissipate shock loads to bearings, idler frame, and conveyor structure.
- **60 Durometer rubbers discs** are pressed onto a steel tube.
- **Each roll is designed to absorb the impact and protect the belt** from sharp edged material .
- **Impact idler frames are reinforced** to increase strength.
- **Idler assemblies are typically spaced as close together as possible** to enable the load to be absorbed by a greater number of idler rolls.
- **Impact rollers are locked in tightly** to avoid roller shafts bouncing and wearing of the middle bracket.
- **Made-to-order removable end-plates** are offered for easy roller change.

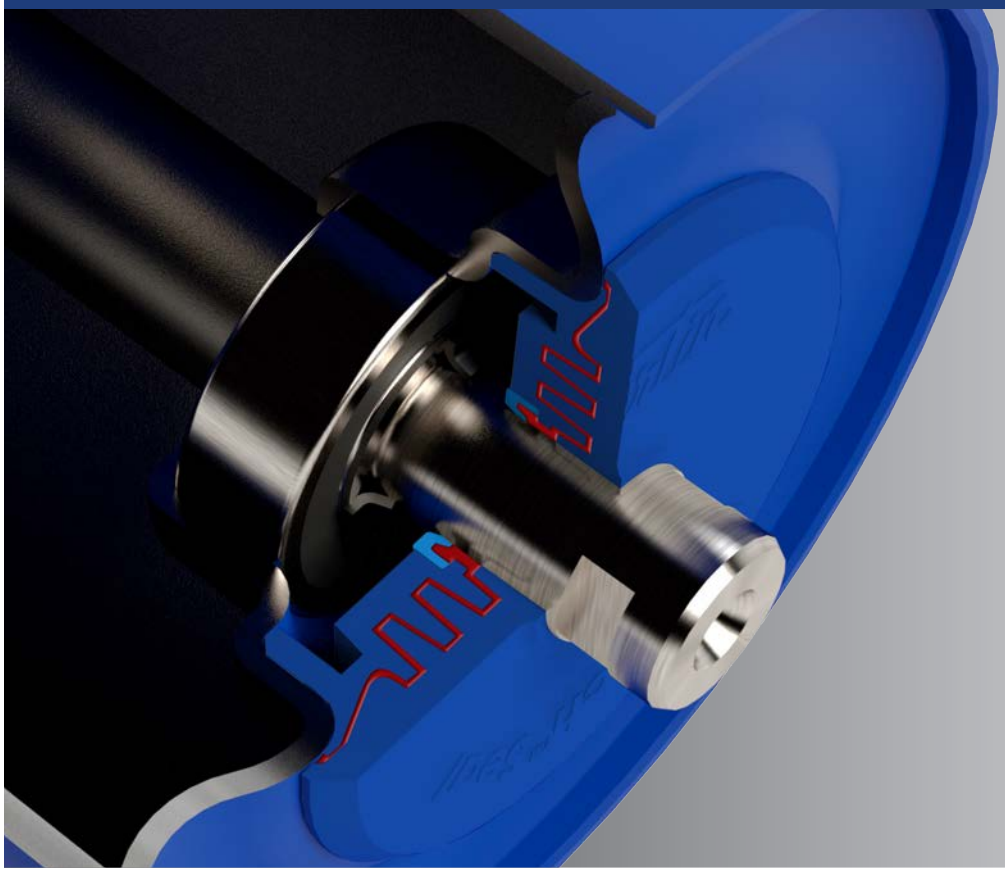
Self-Aligners

- **Training Idlers assist in training the belt and protect belt edges** from damage caused by misalignment.
- **Transient conditions occur that may cause belts to become misaligned** such as build up on Return, poor Idler alignment, crooked structure and improper loading of material onto the belt.
- **On long conveyors, they are typically spaced 100 ft apart**, but should not be spaced within 50 feet of the head or tail pulleys**.**
- **The Idler frame is designed** to allow the Idler to swivel on the cross-member when the belt touches either guide Roll**.**
- **Center Roll slightly higher** to assist in pivoting the assembly

Returns

- **Returns support the empty belt on the return side.**
- **Returns are typically spaced** every 8 to 10 feet.
- **Steel rolls are used in clean belt environments** or can be urethane-coated to protect the roll in abrasive/corrosive environments.
- **Rubber tread rolls are used when wet or sticky materials** cling to the belt and where corrosive or abrasive material will degrade the steel roll**.**
- **Spaced rubber disc rollers use massed rubber discs on both ends to support the edges of the belt.** There should be enough flat surface in case the belt mistracks and drops into the gap and cannot track back.
- **1½" And 4½" drop brackets standard.**
- **Belt-saver brackets are also available**

Martin Triple Labyrinth Seal Guard Design



Martin Triple Labyrinth Seal design offers the following bearing protection

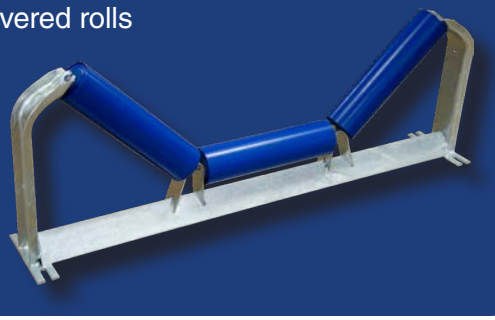
- External shield deters impurities from entering the bearing housing
- Flinger design removes contaminates away from the bearing housing by centrifugal force
- Grease is injected into the labyrinth chambers during manufacturing to add an additional layer of protection against bearing contamination
- The contact lip seal adds additional level of protection
- CEMA C, D & E Idlers have sealed for life ball bearings

Roll Specifications

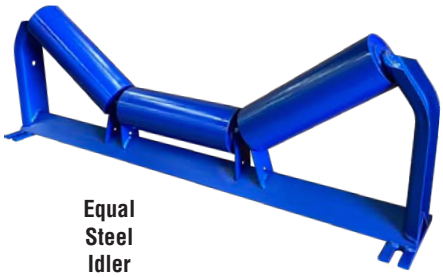
- **Idlers are maintenance-free.** Martin Idlers use sealed-for-life ball bearings that allows for trouble-free life in the harshest applications.
- **Low rolling resistance** that allows for the lowest total operating cost.
- **Engineered for low roller runout (TIR).**
- **Offered in a wide range of belt widths** from 18" to 96".

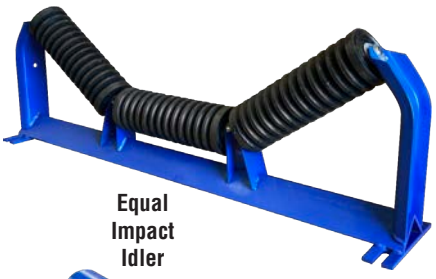
Other Idler Products

- Galvanized frames
- Garland/catenary
- Belt saver brackets
- Scale quality rolls
- Urethane covered rolls
- Live shaft rolls
- Impact beds
- Channel inset
- And more



Idler Part Number


Equal Steel Idler


Equal Impact Idler


Equal Steel Self-Aligner


Unequal Impact Idler


Steel Flat Carry


Steel Channel Inset Idler


Steel Return Self-Aligner


Steel Return


Rubber Disc Return

CEMA Class
C, D, E

C 5 - 10 V 4 G - 36 - 09

Wall Thickness Gauge
(Only Steel Rolls) **09, 07, 04**

Roll Diameter
4, 5, 6, 7

Assembly Angle *(Not for Return & Flat Carry)*

10°	V-Return
15°	Inverted V-Return
20°, 35°, 45°	Idler

Belt Width

C	18" to 60"
D	24" to 72"
E	36" to 96"

Special Construction

A	Grain Idler
B	Box Frame Idler
C	Catenary Idler
G	Galvanized Frame
L	Urethane-Lagged Rolls
Q	Scale Quality Idler
R	Removable Wing Bracket Idler
RET	Retractable Idler
TT	Adjustable/Transitional Idler
W	Wide Base Idler
WR	Wire Rope Idler
TO	Offset Center Roll Idler

Idler Type

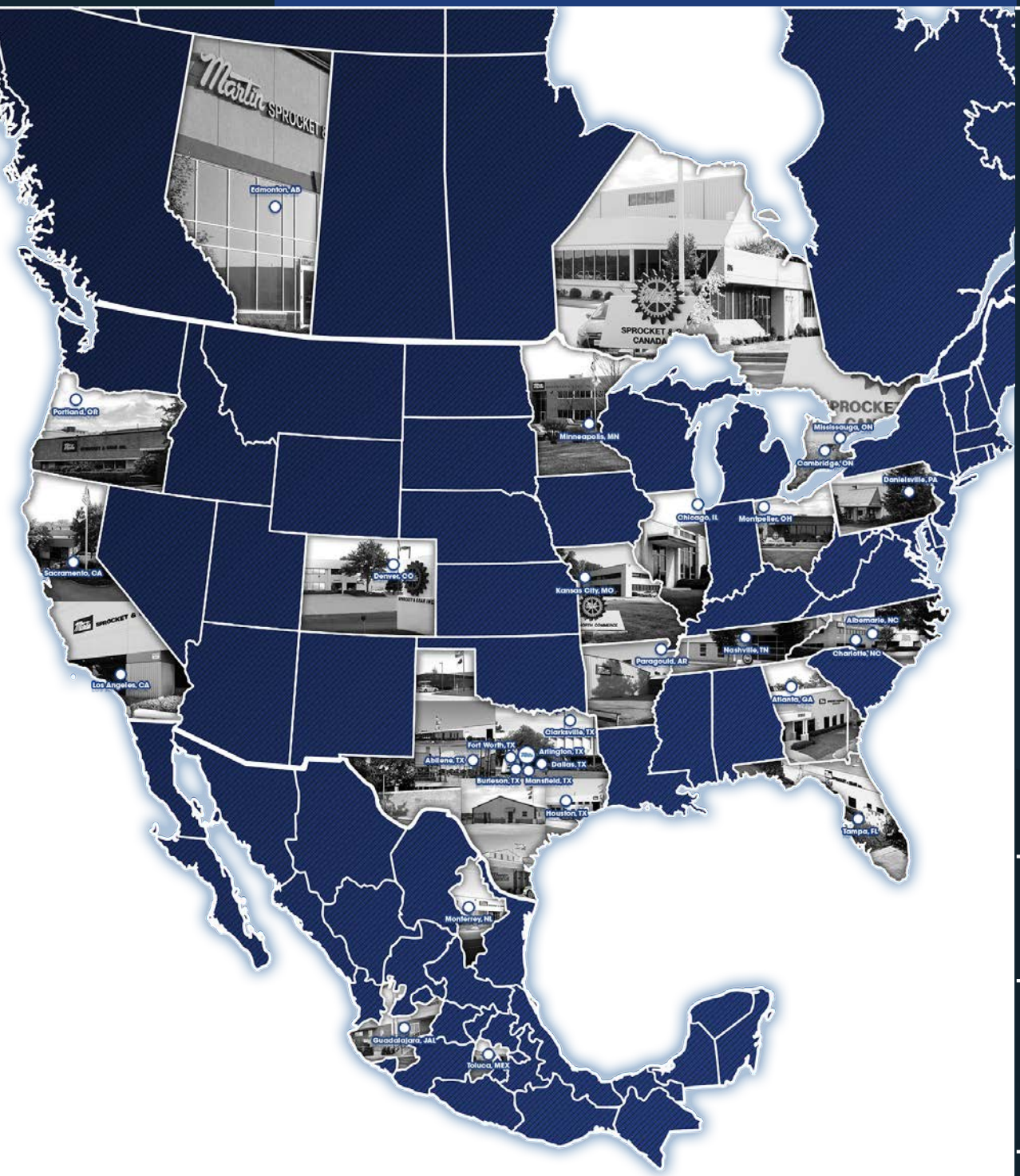
Carry Side		*Return Side*	
T	Equal Steel Idler	**R**	Steel Return**
TI	Equal Impact Idler	**RRD**	Rubber Disc Return**
TSA	Equal Steel Self-Aligner	**URD**	Urethane Disc Return**
TSS	Equal Steel Self-Aligner Shoe-Type	**RSA**	Steel Return Self-Aligner*
		RSS	Steel Return Self-Aligner Shoe-Type*
U	Unequal Steel Idler	**RRDSA**	Rubber Disc Return Self-Aligner*
UI	Unequal Impact Idler	**CR**	Steel Channel Inset Return**
CT	Steel Channel Inset Idler	**CRRD**	Rubber Disc Channel Inset Return**
CTI	Impact Channel Inset Idler	**V**	Steel V-Return*
F	Steel Flat Carry**	**VRD**	Rubber Disc V-Return*
FRD	Impact Flat Carry**	**IV**	Steel Inverted V-Return
FSA	Steel Flat Carry Self-Aligner	**IVRD**	Rubber Disc Inverted V-Return
LI	Impact Live Shaft Roll	**LR**	Steel Live Shaft Roll
		LRRD	Rubber Disc Live Shaft Roll

***Frame Rise/Drop for V, VRD, RSA, RRDSA**

1	1.5" Standard
4	4.5" Standard
4S	4.5" Belt Saver
7S	7" Belt Saver

****Bracket Rise/Drop for R, RRD, F, FRD**
Add the end of part number, examples:
C 5 - R - 36 - 09 - 4S
C 5 - FRD - 36 - 1

There's a Martin Near You



Locations

USA

Corporate Offices
Sales & Manufacturing

Arlington, TX
817-258-3000 (FAX 817-258-3333)

Regional Manufacturing Plants

Albemarle, NC
704-982-9555 (FAX 704-982-9599)

Atlanta, GA
404-292-8744 (FAX 404-292-7771)

Burleson, TX
817-295-7151 (FAX 817-447-3840)

Danielsville, PA
610-837-1841 (FAX 610-837-7337)

Ft. Worth, TX
817-258-3000 (FAX 817-258-3173)

Montpelier, OH
419-485-5515 (FAX 419-485-3565)

Sacramento, CA
916-441-7172 (FAX 916-441-4600)

Branch Manufacturing Plants

Charlotte, NC
704-394-9111 (FAX 704-394-9122)

Chicago, IL
847-298-8844 (FAX 847-298-2967)

Denver, CO
303-371-8466 (FAX 303-371-7116)

Houston, TX
713-849-4330 (FAX 713-849-4807)

Kansas City, MO
816-231-5575 (FAX 816-231-1959)

Los Angeles, CA
323-728-8117 (FAX 323-722-7526)

Minneapolis, MN
952-829-0623 (FAX 952-944-9385)

Nashville, TN
615-871-4730 (FAX 615-871-4125)

Portland, OR
503-223-7261 (FAX 503-221-0203)

Tampa, FL
813-623-1705 (FAX 813-626-8953)

Manufacturing Only

Abilene, TX • Clarksville, TX
Dallas, TX • Mansfield, TX
Paragould, AR

CANADA

Cambridge, Ontario
519-621-0546 (FAX 519-621-4413)

Edmonton, Alberta
780-450-0888 (FAX 780-465-0079)

Mississauga, Ontario
905-670-1991 (FAX 905-670-2110)

MEXICO

Guadalajara, JAL
+52 33-3283-1188
(FAX +52 33-3271-8450)

Monterrey, N.L.
+52 811 156 6830
(FAX +52 81-1156-6833)

Toluca, MEX
+52 722 276 0800
(FAX +52 722-276-0801)

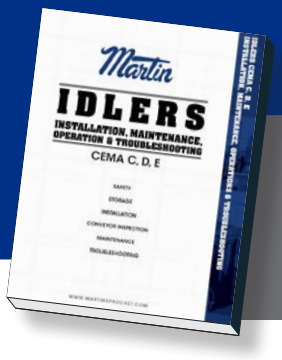
BRAZIL

São Paulo, SP
+55 19 3877 9400
(FAX +55 19-3877-9429)

martinsprocket.com

Martin sales and engineering will work with you to completely solve your belt conveying needs. Since there are infinite amounts of conveying possibilities and configurations our sales and engineering staff are prepared to assist you with a custom solution.

Call Martin, we will be happy to assist you!



Free Download
Idler Maintenance & Troubleshooting Guide

Scan to download