

padgett

MANUFACTURING, INC.

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Manufacturer of ceramic conveyor components

**Interchangeable with most conveyor company specifications
Servicing belt widths from 12" to 90"**



Ceramic troughing rolls

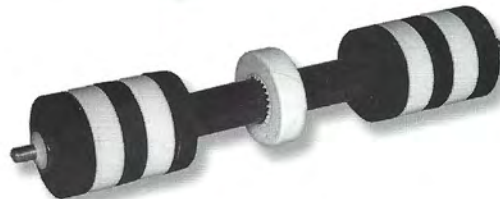
Ceramic trainers-troughing and returns



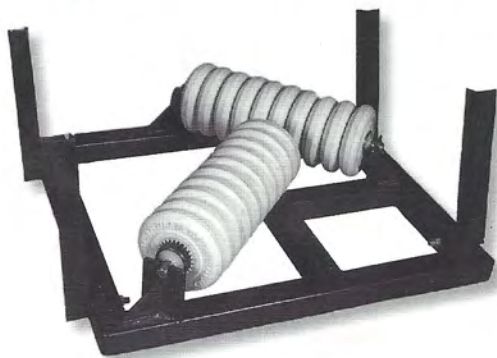
Ceramic guide rolls



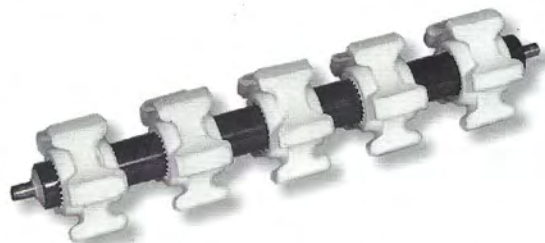
**Ceramic crowned
and standard return rolls**



Hybrid rolls (ceramic and rubber or urethane)



Ceramic belt wipers



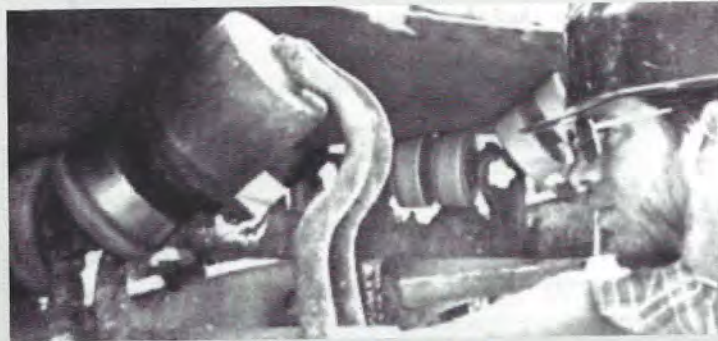
Ceramic cleaning return rolls

Consult specification pages for more details and options.

E-Mail: padgman@juno.com



Product Reliability



FAILED ... Abrasion!



FAILED ... Corrosion!



SureRamic Disc Idlers Roll On!

Answering the needs of the Times

Padgett Manufacturing is a spin-off of the Eastern coal industry where, in 1972, soaring operating costs called for a more efficient conveyor idler. Industrial ceramic, just becoming cost effective, was the *natural* material for disc fabrication. It resists abrasion and corrosion better than tool steel alloys.

Roller design was prompted by a lesson learned in the field about service-dependent idlers: "Because servicing idlers is such a nuisance, it is often done haphazardly contributing to untimely idler failures." So, Padgett built a roller exhibiting long life, independent of operator servicing habits. Matching the **Carefree Roller** with **SureRamic Discs** gave rise to a truly efficient idler, answering the needs of the times, both then and now.

In 1974, the first **SureRamic Disc Idlers** were installed in coal-fired power plant conveyors in the Ohio River Valley. They were still in service seven years later! Since 1974, this idler has excelled in many more coal operations, as well as the really tough processing of coke, phosphate, potash, cement, aggregates and silica.

Succeeds Where Others Fail

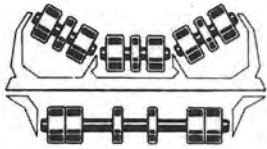
The **SureRamic Disc Idler** has demonstrated an extraordinary service life in all its applications. For example, we analyzed one particular silica operation. They converted from serviceable, steel idlers to new **SureRamic Disc Idlers** . .



Pictures tell the story. Silica and water destroyed thin steel and poorly sealed bearings in less than a year! **SureRamic Disc Idlers** had been going four years when these pictures were taken. Obviously, we can't guarantee a 4-to-1 service life over conventional idlers in every case, but our customers are convinced!

Doesn't your operation deserve the best?





CERAMIC DISC CONVEYOR IDLERS

Patent No. 3,847,260

Selection of abrasion resistant ceramic disc idlers may be dictated by the harshness of the application, one in which steel idlers just will not work. Regardless, ceramic disc idlers improve production efficiency in almost any situation. Ceramic disc troughing idlers have outlasted as many as five replacements of steel roll troughing idlers on conveyors where surface wear and corrosion were severe. Lower priced ceramic disc return rolls outlast rubber and urethane disc returns while providing the same self cleaning feature that eliminates belt training problems attributed to material and ice build-up.

Type 52, 62 & 72 rollers consist of solid ceramic discs secured on a steel tube assembly, bored to accommodate the permanently lubricated bearings with single or double-encasement contaminant seals. Solid steel shafts are terminated in fittings matched to user specified frames and brackets.

Type 53, 63 & 73 rollers are identical except the steel tube assembly is encapsulated in tough plastic for its protection in extremely corrosive applications involving salts, acids, bleaching agents and some food processing.

Padgett ceramic discs are actually hard synthetic rock, metamorphised from a kiln-fired compound of industrial ceramic clay and alumina. Occurring in nature as corundum or emery, alumina's abrasion hardness exceeds all common minerals and gives the non corroding, granite like discs an abrasion resistance equivalent to quartz, or about six times that of a steel roll. Their rigidity prohibits the use as impact idlers; however, they are tough enough to withstand the constant pounding of mechanical belt splices and just about anything else. Used as carrying or return units, ceramic disc idlers are very easy on belts. Even if forcibly stopped, the solid discs wear very slowly and smoothly, offering little drag to belt movement. Ceramic disc will not tear, chafe or burn belts, nor snag and loosen mechanical splices.

Padgett ceramic idlers are categorized by CEMA rating in the following specifications:

CEMA D Heavy Duty (HD) Series			CEMA E Extra Heavy Duty (XH) Series		
Type / Series Identification:			Type / Series Identification:		
52HD - 5" Rolls	For general purpose use ; available in all belt widths.		62XH - 6" Rolls	For general purpose use ; available in all belt widths.	
62HD - 6" Rolls			72XH - 6-1/2" Rolls	For high speed belts	
53HD - 5" Rolls	For severely corrosive use ;		63XH - 6" Rolls	For severely corrosive use ;	
63HD - 6" Rolls	encapsulated tubes in all belt widths.			encapsulated tubes in all belt widths.	
73XH - 6-1/2" Rolls				For high speed belts	
Load Ratings	Troughing Set	Return *	Load Ratings	Troughing Set	Return *
CEMA D Std	1200 lbs	600 lbs	CEMA E Std	1800 lbs	1000 lbs
As Built	1200 lbs	600 lbs	As Built	2500 lbs	1380 lbs
Roller Tube: 2-1/4" O.D., Steel, 7/32" wall thickness Shaft: 13/16" Solid Steel Bearing: #6204 Conrad ball type, two per roller, except four per roller in 42" & longer return rolls, 1.850" O.D., 8 steel balls (5/16" dia.) Lubed and sealed (Fig.1) Encasement Seal: Single or Optional Double (Fig.3) Disc Arrangement: Troughing rolls . . . A 3" wide disc on end with 1-1/2" discs between on 3" centers (approx.). Return rolls - Two 3" wide discs on each end with 1-1/2" discs between on 6" centers (approx.) Custom arrangement by request.			Roller Tube: 3-1/8" O.D., Steel, 3/16" wall thickness Shaft: 1-1/4" Solid Steel Bearing: #6306 Conrad ball type, two per roller, 2.835" O.D., 8 steel balls(15/32" dia.) Lubed and sealed (Fig.1) Encasement Seal: Single or Optional Double (Fig.3) Disc Arrangement: Troughing rolls . . . A 3" wide disc on end with 1-1/2" discs spaced on 3" centers (approx.). Return rolls - Three 3" wide discs on each end with 1-1/2" discs spaced on 6" centers (approx.) 60" and larger belt widths. Custom arrangement by request.		

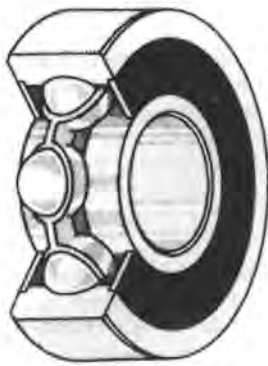
SureRamic DISC CONVERSIONS



SureRamic Discs are interchangeable with rubber or urethane discs on most brands of idlers. Get the most out of salvageable rollers when those discs wear out. Recycle with trouble-free SureRamic replacement discs for longer service life. Fast, dependable conversions to your standards or ours.



Figure 1. Precision Conrad Ball Bearing



More **Reliable** Than Tapered Roller Bearing Because Of These Inherent Characteristics:

- Inseparable construction
- Symmetrical loading
- Integral expansion clearance
- Permanent lubrication
- Contaminant exclusion

Figure 2. Single Encasement Seal

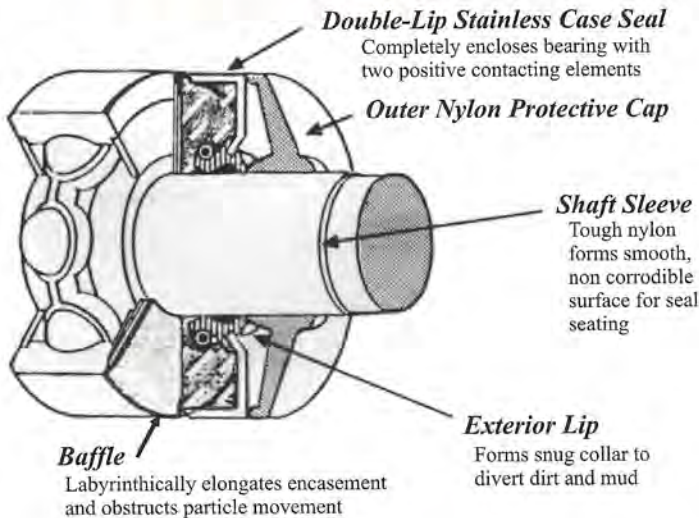
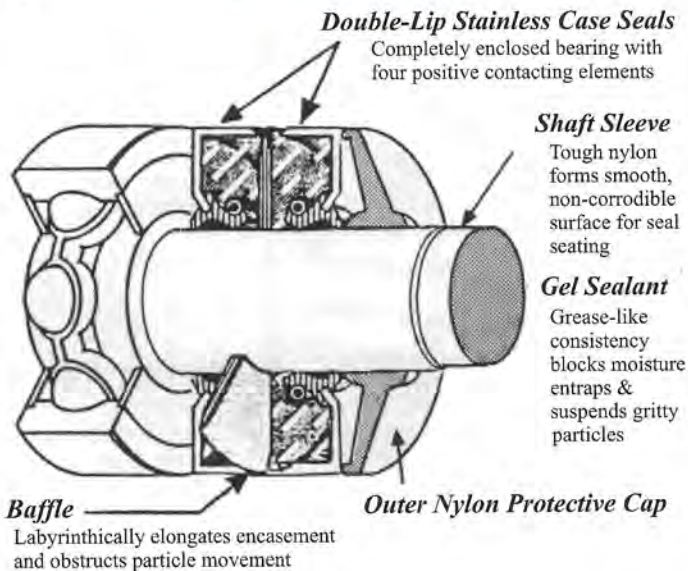


Figure 3. Double Encasement Seal



Load Rating vs Idler Life - The load ratings provided in the tables on the opposite page are maximum idler loads based on a CEMA defined standard bearing life of 30,000 hrs @ 500 RPM (785 FPM for 6" roller) These design loads typically exceed those actually encountered in the field by 100 percent; however, they are somewhat impractically predicated on bearing data obtained in ideal conditions.

Sealed-For-Life Reliability Starts With The Bearing

Rugged, single-piece construction and permanent lubrication make the conrad type ball bearing the most reliable of all antifriction devices. Deep contoured raceways distribute weight over a large area of the massive balls and symmetrically load the bearing to support omnidirectional forces. Precision, integral expansion clearance maximizes bearing performance throughout a thermal range from subzero to boiling hot.

Full-sized, steel-reinforced rubber seals lock in lubricant and exclude foreign matter. A durable molybdenum disulfide lithium grease is specially formulated to assure continuous lubrication in all temperatures (-20 F° to + 290 F°). A 100% capacity fill of this waterproof compound displaces all air from the bearing, preventing condensation and oxidation of the bearing steel.

The AFBMA 6204 bearing meets CEMA D weight standards and is used in both Heavy Duty (HD) and Medium Duty (MD) Series Idlers. Extra Heavy Duty (XH) Series Idlers for CEMA E application are designed around the larger AFBMA 6306 bearing.

Standard Single Encasement Seal MD Series Idlers

A completely enclosed bore isolates each bearing from external foreign matter and distinguishes Padgett MD Series Steel Idlers from other low-priced units, which typically only partially obstruct the bore opening with an open labyrinth or dust shield. A case seal is secured in the bore periphery by press-fit and its double rubber lip forms two independent occlusions around a glass-smooth nylon shaft sleeve. The exterior lip flexes outward around the sleeve creating a snug collar which diverts dirt and mud from the shaft onto the spinning seal casing where it is dispersed by centrifugal force. The interior lip, compressed around the sleeve by a retainer spring, provides backup protection and obstructs powder-fine particles in solution.

The nylon shaft sleeve performs double duty. The smooth, resilient characteristics of this tough polymer increase seal effectiveness by providing a flawless cushion for positive seal seating. The non-stick, corrosion-free characteristics prolong seal life by precluding abrading action on the seal lips from material build-up and corrosion-pitting on the shaft adjacent to the contact points.

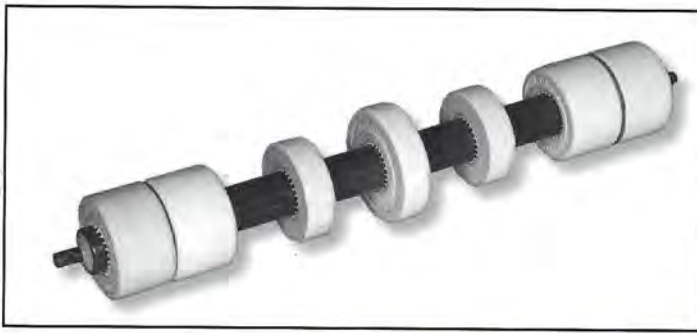
Padgett Medium Duty (MD) Series Steel Idlers feature single encasement seals and nylon outer end caps.

Optional Double Encasement Seal HD & XH Series Idlers

For over a decade of field operations, the double-encasement seal has demonstrated superior bearing contaminant protection in extremely dusty, wet, muddy and corrosive applications encountered in mining and processing trona, potash, limestone, copper, plaster sand, silica sand, lignite and bituminous steam coals, coking coal, solar salt, alumina, and phosphate. This virtually impenetrable assembly excels in heavy wash down applications and areas where material packs up against the end of the roller.

Two double-lip stainless case seals close off the bore forming a shaft-occluded encasement which is labyrinthically obstructed by a polyethylene baffle and charged with a permanent grease-like gel sealant. The waterproof sealant blocks out corrosive liquids and provides a colloidal medium which entraps and holds gritty particles in suspension indefinitely. The entire encasement seats on a smooth nylon shaft sleeve to increase sealing effectiveness of the contacting elements and prolong their useful life. An outer protective end cap is standard on every roll and serves as a barrier to belt webbing and solid materials.

Since all manufacturers categorize idlers in this manner, the user should assess the durability of any design by analyzing other component features for limitations (bearing protection seals, carrying surface material and thickness, maintenance requirements) within the context of actual operating conditions (environment, characteristics of conveyed material, preventive maintenance discipline).



SureRamic *DISC IDLERS*

SPECIFICATIONS:

Our standards are shown below and we can also meet most custom requirements. Your inquiry is invited. Since idlers are our primary business, our idler service will be faster, more dependable than you've ever enjoyed! Padgett can also supply frames, drop brackets, pillow block bearings, guide rolls, etc. as a further accomodation associated with idler service.

<i>SureRamic DISC</i>	TYPE: <i>Carefree Idlers</i> SERIES	
<ul style="list-style-type: none"> 5", 6" and 6-1/2" diameters 3" and 1-1/2" widths Glazed or unglazed Abrasion resistance of tool steel alloys (6.5-7.0 Mohs scale of abrasion hardness) Kiln fired alumina cermic compound - solid material Press-fitted on roller with resilient shock insert (Patent Number 3,847,260) 	Live Shaft <ul style="list-style-type: none"> Conrad ball bearings, prelubricated and sealed Additional Sure Seal bearing isolation (see diagram, p. 4) Furnished with drop-in fittings for existing conveyor brackets Encapsulated for extremely corrosive environments (optional) Dead Shaft <ul style="list-style-type: none"> Furnished with or without pillow block bearings Encapsulated (optional) 	Heavy Duty (C & D Series) <ul style="list-style-type: none"> 2-1/4" OD steel: 7/32" wall 2 bearings . . . Up to 42" rollers 4 bearings . . . 42" rollers and up 13/16" diameter solid steel shaft 2 additional stainless seals (optional) Extra Heavy Duty Returns (E Series) <ul style="list-style-type: none"> 3-1/8" OD steel; 3/16" walls 4 heavy duty bearings 1-1/4" diameter solid steel shaft 4 stainless seals per roll



Belt Width	Approx. Length	No. 3" Outer Discs	No. 1-1/2" Inner Discs	Approx. 5"d Weight 6"d	
18"	21"	2	3	22#	28#
24"	27"	4	1	30#	37#
30"	33"	4	2	37#	44#
36"	39"	4	3	42#	50#
42"	45"	4	3	46#	56#
48"	51"	4	4	53#	63#
54"	57"	4	5	59#	70#
60"	63"	4	6	68#	80#
EXTRA HEAVY DUTY SERIES					
54"	57"	4	5	----	85#
60"	63"	6	5	----	100#
66"	69"	6	5	----	104#
72"	75"	6	6	----	112#



Belt Width	Per Idler			Per Set	
	Approx. Length	No. 3" Outer Discs	No. 1-1/2" Inner Discs	Approx. 5"d Weight 6"d	
18"	8"	2	0	32#	41#
24"	10"	2	0	38#	48#
30"	12"	2	1	45#	54#
36"	14"	3	0	50#	61#
42"	16"	2	2	56#	69#
48"	18"	2	3	64#	77#
54"	20"	2	3	70#	84#
60"	22"	2	4	81#	91#
EXTRA HEAVY DUTY SERIES					
60"	----	2	4	----	120#
66"	----	2	4	----	125#
72"	----	2	5	----	135#

CONTACT YOUR PADGETT DISTRIBUTOR FOR CURRENT PRICING, ORDERING SPECIFICATIONS, OPTIONS AND DELIVERY SCHEDULE.

**PADGETT MANUFACTURING INC.,
INTRODUCES THE
"SCALLOPED RETURN IDLER"**

THE IDLER THAT GREATLY REDUCES CARRY BACK PROBLEMS

*The important aspects of the
Ceramic Scallop return idler are:*

- Low investment Cost
- Longevity of ceramic
- None maintenance rollers
- 4 Stainless seals each roll
- Won't catch or tear belting
- No maintenance required
- Even wear through rotation
- Taper and ball bearing combination
- Reinforced drop brackets with retainer
- Unaffected by mechanical belt splicing



***Replaceable ceramic disc from PADGETT MFG., INC., or field replaceable.**

PMI recommends the ceramic scallop return be installed with a pre-load of 1/2" to 1" directly behind, the discharge pulley or closest to the discharge pulley for maximum efficiency.

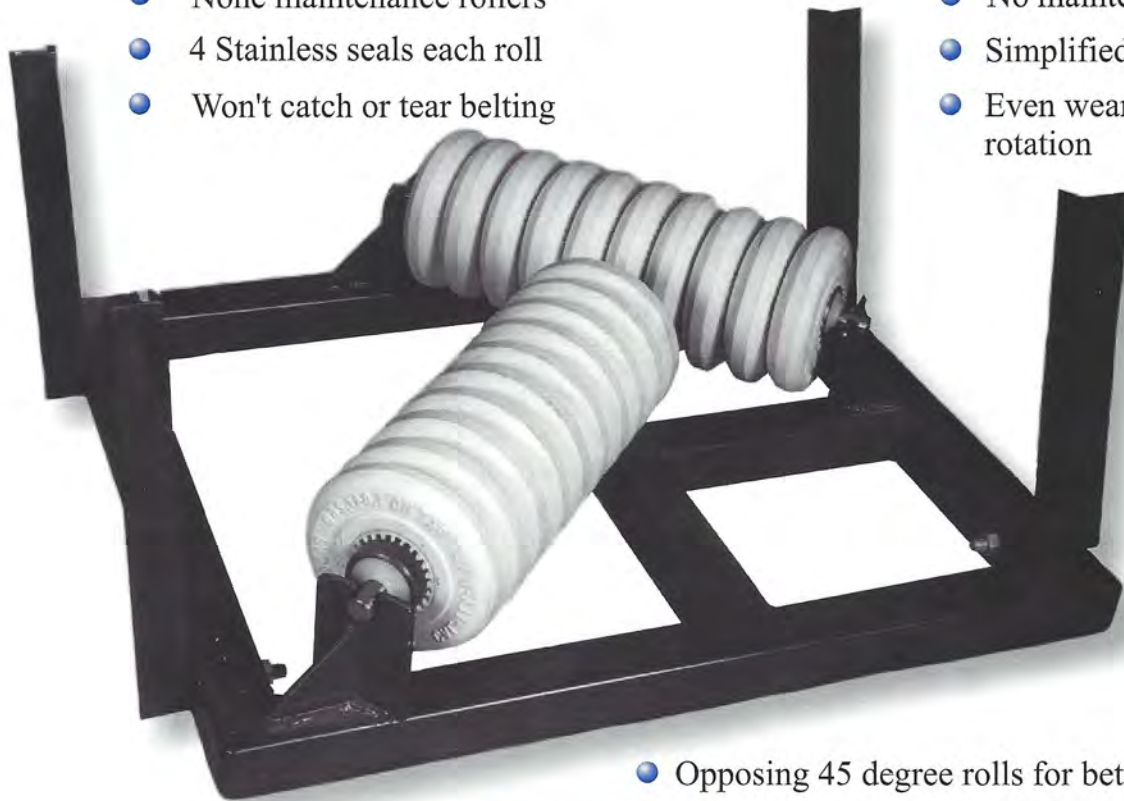
BUY A PADGETT SCALLOP RETURN IDLER AND DISCOVER THE RESULTS!

PADGETT MANUFACTURING INC., INTRODUCES THE "CERAMIC BELT WIPER"

THE ANSWER TO "THE BELT CLEANING PROBLEM"

*The important aspects of the
Ceramic Belt Wiper are:*

- Low investment cost
- Longevity of ceramic
- None maintenance rollers
- 4 Stainless seals each roll
- Won't catch or tear belting
- Taper and ball bearing combination
- Unaffected by mechanical belt splicing
- No maintenance required
- Simplified frame
- Even wear through rotation



- Opposing 45 degree rolls for better belt tracking
- Replaceable ceramic disc from manufacture or in the field

What is required from the customer is the outside or inside dimension of the support channel beams, belt distance below the support beams, and belt width size for fabrication.

When installed it is our recommendation that the ceramic belt wiper be installed with a pre-load of 1/4" to 1/2" directly behind the discharge pulley or closest to the discharge pulley.



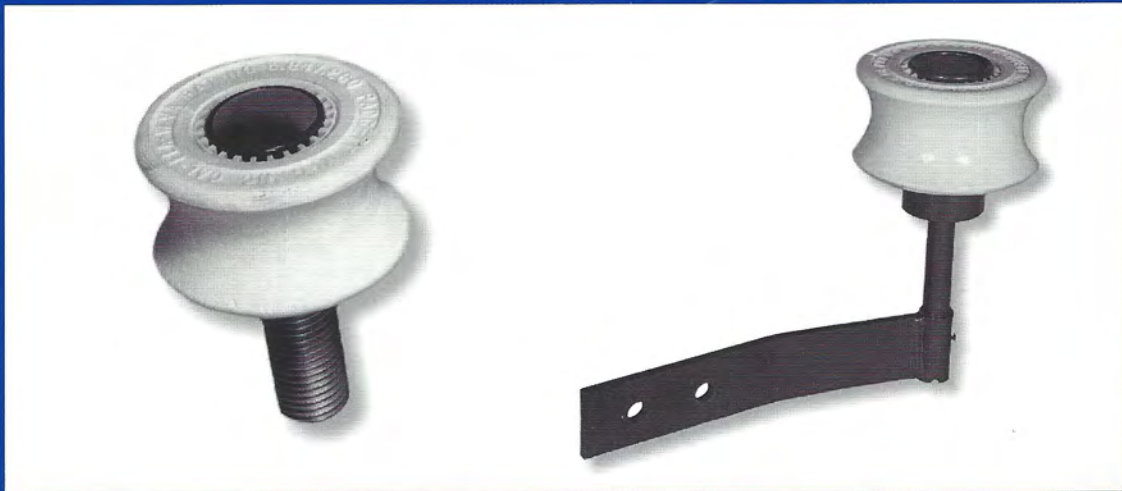
EFFICIENT AND DEPENDABLE

PURCHASE A PMI BELT WIPER AND DISCOVER THE DIFFERENCE IT WILL MAKE!

PADGETT'S CERAMIC GUIDE ROLLS

Offer the following:

- Standard 2-1/4" tubing & 13/16" shaft
- Threaded or non-threaded shafting
- Smooth concave design
- Field Installation of ceramic disc
- Retrofits on 2" thru 2-3/8" tubes
- Height adjustable
- 5" or 6" diameter ceramic
- Stainless seals and sealed bearings
- Shaft or bracket mounting type
- Superior service life



PADGETT MANUFACTURING'S DROP BRACKETS

Are available in the following configurations :

- 1-1/4" and 4-1/4" standard drop
- 5/8" thru 1-1/4" drop in slot
- 4", 6" & 8" bolt centers for mounting
- Painted or optional galvanized plating
- 1-1/4" thru 6" upright types
- More belt side clearance (J type)
- Open and closed mounting holes
- Standard & heavy duty available
- Retention clips available
- Custom engineered brackets



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