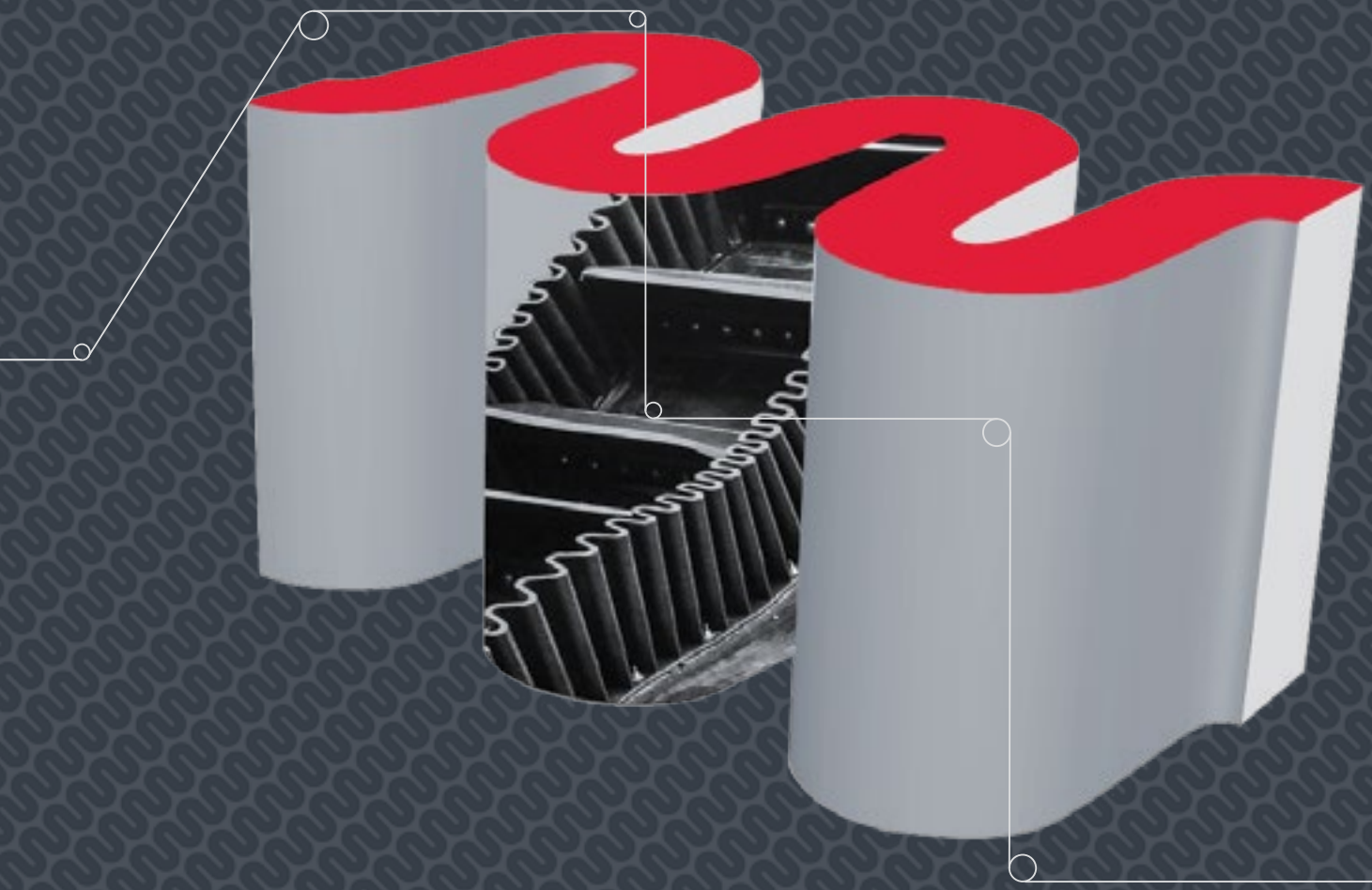
APACHE
Think *Forward.*



SIDEWALL BELTING

DUROWALL™ & PAC-WALL® Solutions

ISO 9001:2008

INNOVATIVE MATERIAL HANDLING SOLUTIONS

SIDEWALL BELTING FROM APACHE HAS A PROVEN TRACK RECORD SPANNING MORE THAN 30 YEARS IN LIGHTWEIGHT AND HEAVY-DUTY CONVEYING APPLICATIONS. Our belting provides exceptional performance and long life on all types of conveyors.

Apache has provided thousands of sidewall belts to the food, recycling, agricultural, metals, steel, cement, energy, and construction industries.

CONTINUOUS IMPROVEMENT
Apache is committed to being the market leader for both heavy-duty and lightweight sidewall belting. We are continually investing in equipment and personnel, devoting considerable resources to research and development.

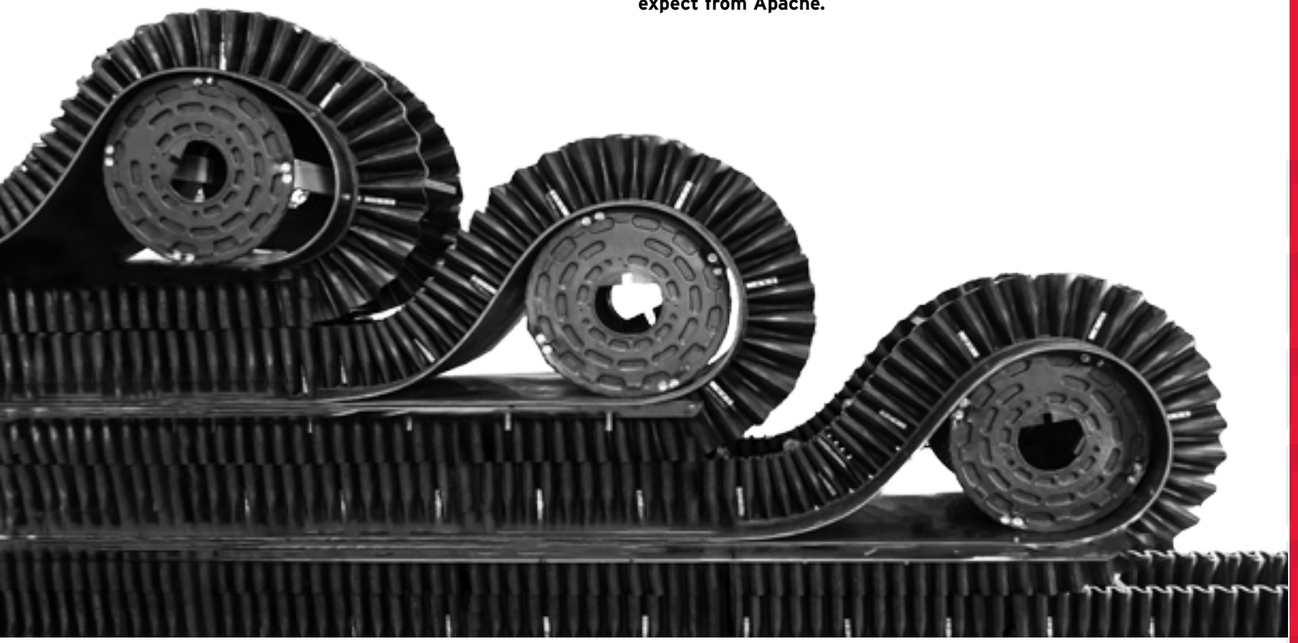
We conducts rigorous quality testing in our ISO certified product facilities. Our products are benchmarked against the competition, ensuring we always provide our customer with the highest quality products.

BENEFITS THAT MATTER
DUROWALL™ and PAC-WALL® belts can be configured to meet the unique needs of your application, no matter how large or small your conveying needs. In addition, these belts have lower power requirements, which reduce energy costs, require less lifetime maintenance, and allow the belts to handle a wide range of materials.

COMPANYWIDE SUPPORT
Sidewall belting products are supported by experienced and skilled teams – including manufacturing, engineering, field services, product specialists, and our nationwide salesforce. We have the expertise you need!

Dedicated to providing first rate service and dependable products, Apache is one of the largest conveyor belting fabricators in North America. The result? Customers always get the right belting for the right application. Built to last and designed to work.

- **That's the value and dependability you've come to expect from Apache.**



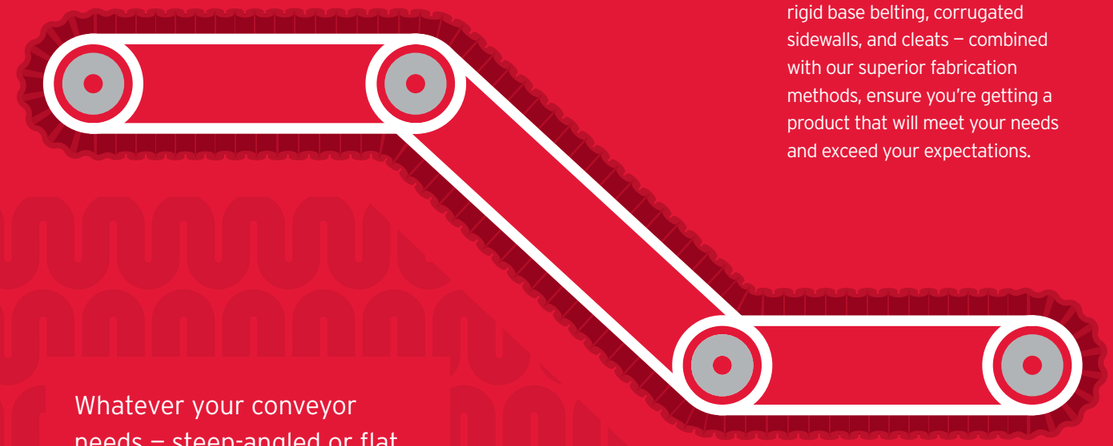
DESIGNING CONVEYOR BELTING IS A

COLLABORATION

1
ENGINEERING STRENGTH
Whether your DUROWALL™ or PAC-WALL® application is heavy-duty or lightweight, new or existing, horizontal or vertical, we will find the right combination of sidewall, cleats, and belting needed for your specific application.

2
DESIGNING PERFORMANCE
Our sizing program can engineer a belt for any conveying system. Helping us understand the conveyor's operating conditions – including pulley size, belting speed, incline angle, temperature, and material being conveyed – allows us to design solutions that work.

3
FABRICATING EXCELLENCE
Conventionally bonded DUROWALL™ and hot-vulcanized PAC-WALL® corrugated sidewalls are performance proven. Our quality components – cross-rigid base belting, corrugated sidewalls, and cleats – combined with our superior fabrication methods, ensure you're getting a product that will meet your needs and exceed your expectations.



Whatever your conveyor needs – steep-angled or flat, lightweight or heavy-duty – Apache can work with you to design a belting solution that works and lasts.

HEAVY-DUTY

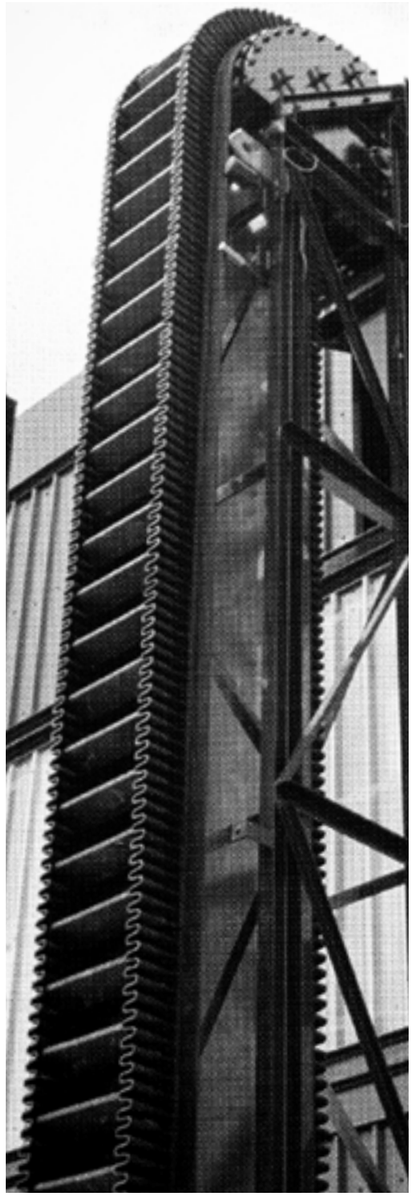
HEAVY-DUTY CORRUGATED SIDEWALLS

Apache offers two types of corrugated sidewall belting – DUROWALL™ and PAC-WALL®, and our exclusive sizing program can engineer a sidewall belt for any system.

DUROWALL™ – CONVENTIONAL

As Apache's flagship brand, our conventional DUROWALL™ sidewall belts have a successful track record. With a proven performance spanning four decades, this product offering comprises thousands of successful installations.

- State-of-the-art hydraulic presses apply consistent and uniform pressure, ensuring high adhesion levels between corrugated sidewall bases and conveyor belt covers
- Quality materials, precise work instructions, and attention to detail are standards at Apache
- Our experienced technicians fabricate every belt to ISO standards
- Automated, precision buffing machines are able to grind sidewalls and belt covers to the exact depths, maximizing needed component bond strengths



PAC-WALL® – HOT VULCANIZED

Apache's hot vulcanized sidewall product offering, PAC-WALL®, can improve belting performance in applications where a higher level of sidewall adhesion is required.

Specific applications that may be better suited to PAC-WALL® include:

- High temperature environments – eliminates the need for hardware attachments to the base belt
- Side loading conveyors where the material initially impacts the sidewall first and requires additional bond strengths
- Belts operating on conveyors with material build up in the horizontal return sections, where higher adhesion levels ensure sidewalls remain bonded to belt covers
- Hard to access conveyors where elevated adhesion values serve as an economical insurance policy when regular maintenance is not practiced

POPULAR APPLICATIONS INCLUDE:

- Mining
- Power
- Waste water treatment
- Recycling
- Cement
- Tunneling
- Dairies
- Steel manufacturing
- Food processing

HEAVY-DUTY CROSS-RIGID BASE BELTING

- Cross-rigid base belting helps deliver material in an efficient, cost-effective manner for applications that may challenge standard belts. That means a more efficient system without worry of belt failure or downtime.
- Our cross-rigid belting is specifically designed to provide lateral stiffness and eliminate belt bowing and cupping at directional change points on the conveyor. It also helps reduce belt sag on the return run.
- Although the belt is rigid in the transverse direction, it remains flexible in the longitudinal direction. This unique design allows the belt to operate on standard pulleys and not interfere with the conveyor structure.

HEAVY-DUTY CROSS-RIGID BELTING

STYLE	TOTAL PLIES	TENSION PLIES	PIW RATING	CROSS-RIGID PLIES	COVERS	PIW WEIGHT	OVERALL GAUGE (OAG)	MINIMUM PULLEY	COLOR	COMPOUND
AXB 150	3	2	150	1	1/16" x Bare MOR	0.140	0.25	4"	Black	Rubber
AXB 220	4	2	220	2	1/8" x 1/16" *	0.295	0.465	14"	Black	Rubber
AXB 225	3	1	225	2	1/8" x Bare MOR	0.160	0.25	8"	Black	Rubber
AXB 330	5	3	330	2	1/8" x 1/16" *	0.325	0.51	16"	Black	Rubber
AXB 440	6	4	440	2	3/16" x 1/16" *	0.360	0.605	24"	Black	Rubber
AXB 550	7	5	550	2	3/16" x 1/16" *	0.400	0.7	30"	Black	Rubber

* Available rubber compounds: Black Standard, Black-Oil-Resistant, Black Static-Conductive, Black (MSHA), and Black Heat-Resistant (400ºF)

Conventional Belting
Carrying Side

Cross-Rigid Belting
Carrying Side

Conventional Belting
Return

Cross-Rigid Belting
Return

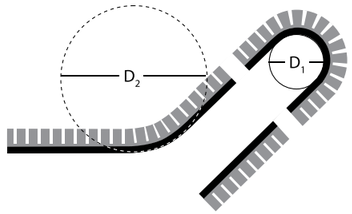
MOR = Moderate Oil Resistance

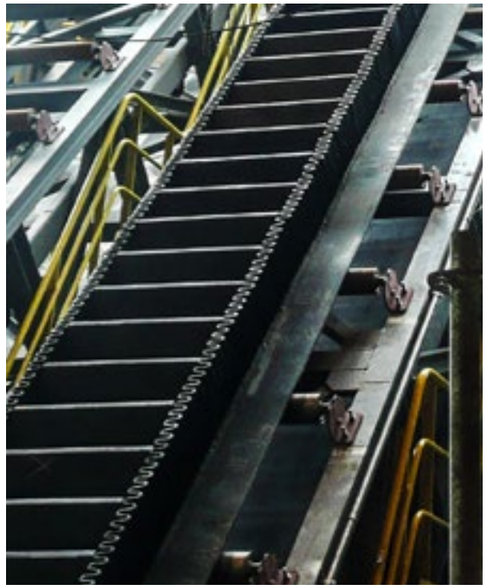
MSHA = Mine, Safety and Health Administration

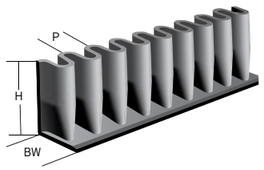
HEAVY-DUTY CORRUGATED SIDEWALL SIZING

Apache's DUROWALL™ and PAC-WALL® corrugated sidewalls (available in heights from 1" to 12") are manufactured in a variety of compounds to best suit your application needs.

All of our corrugated sidewalls have high tensile strength properties for added flexibility and toughness in order to withstand cutting, tearing, and abrasion. We also offer fabric reinforced sidewalls for products greater than 6" tall to provide additional strength and tear resistance.



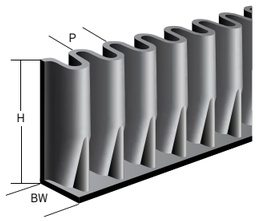




APACHE CORRUGATED SIDEWALLS
Add 25% to minimum pulley diameter for other than black standard

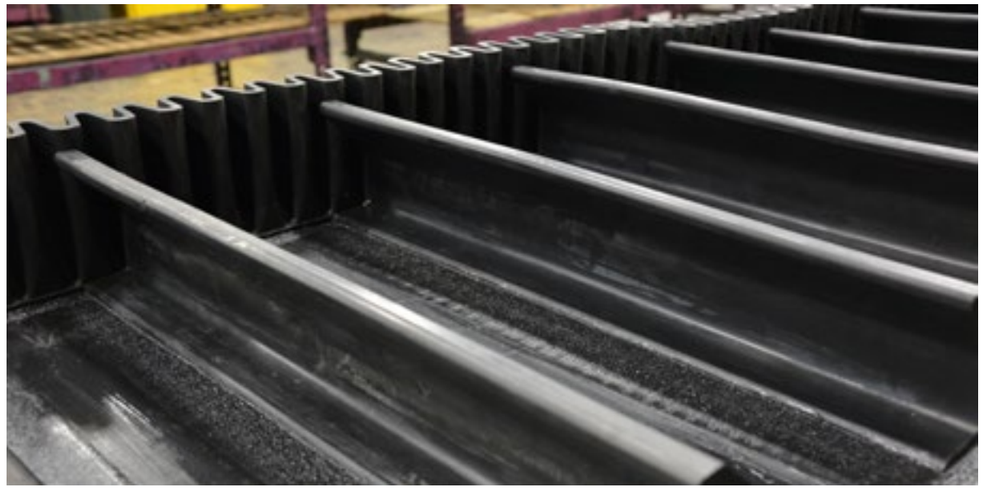
HEIGHT (H)	BASE WIDTH (BW)	PITCH (P)	WEIGHT (Per Foot/Lbs.)	CLEAT HEIGHT (Recommended)	D1 (Min. Pulley Dia.)	D2 (Min. Deflection Dia.)
1"	1-1/2"	1"	.30	-	2"	8"
1-1/2"	1-1/2"	1"	45	1"	3"	8"
2"	1-1/2"	1"	.60	1-1/2"	3"	8"
2"	2"	1-5/8"	.80	1-1/2"	6"	10"
2-1/2"	2"	1-5/8"	.95	2"	6"	12"
3"	2"	1-5/8"	1.10	2-1/2"	8"	16"
4"	2"	1-5/8"	1.40	3-1/2"	10"	18"
5"	2"	1-5/8"	1.75	4-1/2"	12"	20"
6"	2"	1-5/8"	2.20	5-1/2"	14"	24"

Any height available between 2" high and 6" high



APACHE FABRIC REINFORCED CORRUGATED SIDEWALLS
Add 25% to minimum pulley diameter for other than black standard

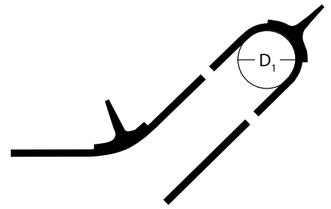
HEIGHT (H)	BASE WIDTH (BW)	PITCH (P)	WEIGHT (Per Foot/Lbs.)	CLEAT HEIGHT (Recommended)	D1 (Min. Pulley Dia.)	D2 (Min. Deflection Dia.)
6"	3"	2-13/32"	3.0	5-1/2"	14"	24"
8"	3"	2-13/32"	4.3	7"	16"	32"
10"	3"	2-13/32"	5.5	9"	20"	40"
12"	3"	2-13/32"	6.8	11"	24"	48"



HEAVY-DUTY SIDEWALL CLEAT OPTIONS

We designed our DUROWALL™ and PAC-WALL® belting with a variety of cleating styles and compounds to allow for maximum operational efficiency based on the required capacity and angle of inclination.

Many of the larger cleats we provide are fabric reinforced to withstand punishment at loading points (two-piece cleat compounds include rubber, polyurethane, high-temp polyurethane, and UHMW). Taller cleats are normally bolted to the sidewalls to reinforce "pocket" strength.



T-CLEAT Add 25% to minimum pulley diameters for special compounds

Cleat Height	1"	1.5"	2"	2.5"	3"	3.5"	4"	5"	6"
Min. Pulley Dia. (D1)	4"	5"	6"	8"	10"	14"	14"	18"	18"

C-CLEAT (SCOOP CLEAT) Add 25% to minimum pulley diameters for special compounds

Cleat Height	2"	2.5"	3"	3.5"	4"	4.5"			
Min. Pulley Dia. (D1)	6"	8"	8"	10"	14"	14"			

S-CLEAT Add 25% to minimum pulley diameters for special compounds

Cleat Height	3"	3.5"	4"	4.5"	5"	5.5"	7"	9"	
Min. Pulley Dia. (D1)	8"	11"	12"	12"	16"	16"	16"	20"	

BOLTED CLEAT (S OR T) STYLE PADDLE Add 25% to minimum pulley diameters for special compounds

Cleat Height	4.5"	5"	5.5"	6"	7"	9"			
Min. Pulley Dia. (D1)	14"	14"	14"	14"	14"	14"			

UHMW = Ultra High Molecular Weight

LIGHTWEIGHT

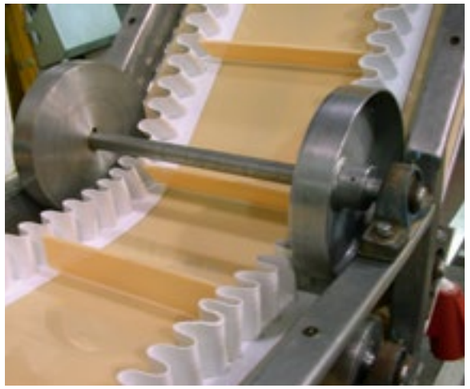
LIGHTWEIGHT DUROWALL SIDEWALLS

Apache offers a wide variety of material and fabrication solutions to tackle your most challenging conveying applications, and our lightweight DUROWALL™ corrugated sidewall belting is your problem solver for light-duty, steep-angle conveying.

- Our lightweight sidewall is offered in polyurethane, thermoplastic, and conventional rubber compounds for belting, cleats, and sidewalls
- These belts are suitable for applications requiring FDA/USDA/3A certifications, oil resistance, and anti-static properties

POPULAR APPLICATIONS INCLUDE:

- Bakeries
- Cereals
- Confection
- Wood products
- Recycling
- Glass
- Dairies
- Warehousing
- Injection molding
- Metal parts
- Plastics
- Light manufacturing



LIGHTWEIGHT CROSS-RIGID BELTING

Belting components are attached to base belts by hot air, high frequency (HF) welding, conventionally, or hot bonded for rubber components. The base belts are engineered to provide the features needed for maximum performance – transverse stiffness prevents bowing at conveyor transition/change-of-direction points, while also remaining flexible in the longitudinal direction to negotiate small pulleys:

- DUROWALL™ lightweight belts are popular for operating in confined areas, particularly when products need to be quickly elevated

LIGHTWEIGHT CROSS-RIGID BELTING

STYLE	TOTAL PLIES	TENSION PLIES	PIW RATING	CROSS-RIGID PLIES	COVERS	PIW WEIGHT	OVERALL GAUGE (OAG)	MINIMUM PULLEY	COLOR	COMPOUND
AXB 150 (Anti-static)	3	3	150	3	1/32 x Bare	0.100	0.156	3"	White	RMV*
AXB 150 (Anti-static)	3	3	150	3	1/32 x Bare	0.100	0.156	3"	Black	RMV*
AXB 160	3	2	160	1	1/16 x Bare MOR	0.140	0.25	4"	Black	Rubber
AXB 200 (Anti-static)	4	4	200	4	1/32 x Bare	0.140	0.22	6"	White	RMV*
AXB 200	4	4	200	4	1/32 x Bare	0.140	0.22	6"	Black	RMV*

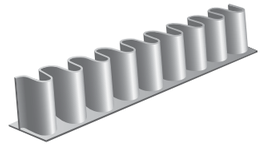
* RMV cross-rigid belting has monofilament polyester plies, which act as a tension member, and provide transverse stiffness

MOR = Moderate Oil Resistance

RMV = Rubber Modified Vinyl

LIGHTWEIGHT CORRUGATED SIDEWALLS SIZING

Polyurethane corrugated sidewalls are popular in food-grade applications, and provide consistent dependability. Black rubber sidewalls are used when more durability is needed, or in applications that require a more robust construction.

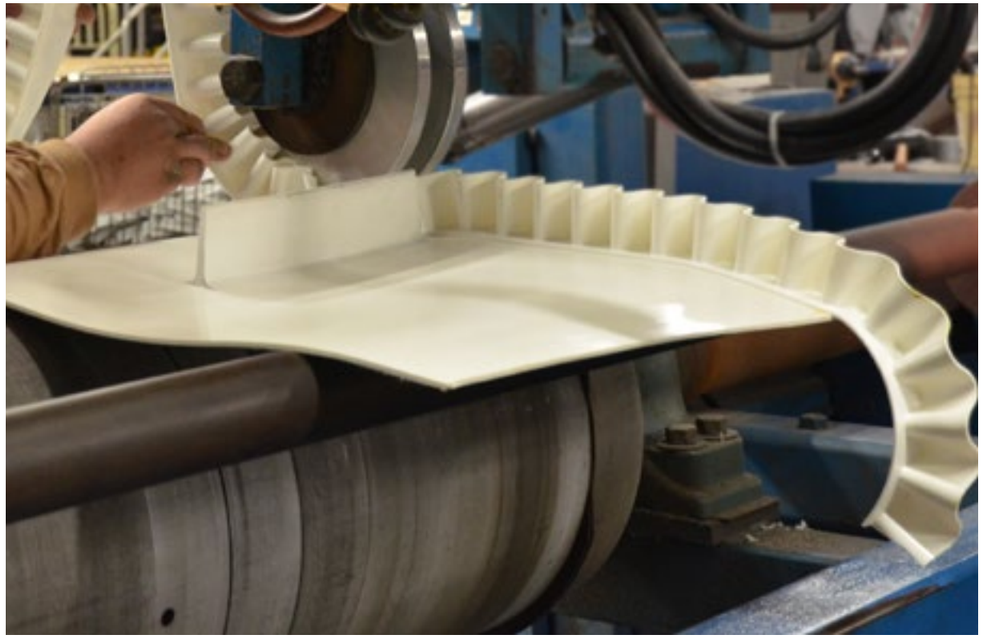


POLYURETHANE SIDEWALL

HEIGHT		MINIMUM PULLEY DIAMETER	
1-3/16"	30 mm	2-3/8"	60 mm
1-1/2"	40 mm	3-1/8"	80 mm
2"	50 mm	3-1/2"	90 mm
2-3/8"	60 mm	4-3/8"	110 mm
3-1/8"	80 mm	5-1/2"	140 mm
3-15/16"	100 mm	6-19/64"	160 mm

LIGHTWEIGHT RUBBER SIDEWALL

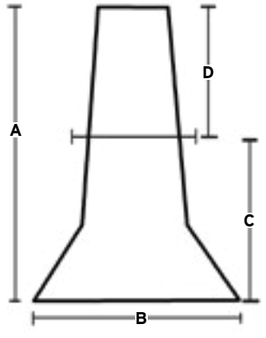
HEIGHT		BASE WIDTH		MINIMUM PULLEY DIAMETER	
1"	25 mm	1-1/2"	40 mm	2"	50 mm
1-1/2"	40 mm	1-1/2"	40 mm	3"	75 mm
2"	50 mm	1-1/2"	40 mm	3"	75 mm



LIGHTWEIGHT DUROWALL CLEAT OPTIONS

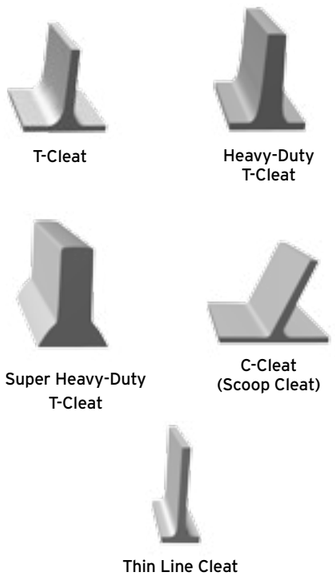
Cleats are used to convey materials up an incline and prevent product rollback, as well as to create separation between the products or materials that are being conveyed. Other names for cleats include flights, lugs, and profiles. We offer a wide variety of cleat styles and patterns to fit every application need.

- T-Cleat for most incline needs
- Scoop cleats for steeper angles
- Thin line cleats for smaller pulley diameters and lower tonnages
- Available in many sizes, styles, and colors



GENERAL CLEAT SPECS

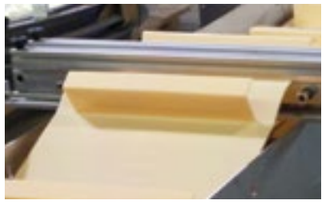
TYPE	A	B	C	D
Standard	1"	1-3/8"	3/16"	3/8"
	1-1.2"	1-3/8"	3/16"	3/8"
	2"	1-1/2"	3/16"	3/8"
	2-1/2"	1-1/2"	3/16"	3/8"
	3"	1-5/8"	3/16"	3/8"
	4"	1-3/4"	1/4"	9/16"
	3" Scoop	1-3/4	3/16"	5/16"
HD	1-1/2"	1-1/2"	1/8"	7/16"
Super HD	1-1/2"	1-1/2"	3/8"	9/16"
	2"	1-1/2"	3/8"	9/16"
	3"	1-1/2"	3/8"	9/16"
	4"	1-3/4"	1/4"	9/16"
Thin Line	30 mm	8 mm		3 mm
	40 mm	10 mm		3.5 mm
	50 mm	10 mm		3.5 mm
	60 mm	10 mm		3.5 mm



LIGHTWEIGHT HF WELDED CLEATS

High frequency (HF) welded profiles combine advanced technological features to optimize productivity, and provide quality custom products to meet your customers' unique application needs. The HF welding process creates a strong, consistent bond between two polymers. This strong bond helps ensure food safety while offering protection from bacteria contamination. It's also ideal for small parts, metals, and plastics.

- Stronger bond than traditional welding methods
- Custom profiles available for specialty applications
- Narrow-base widths to wrap smaller pulleys
- Precision placement of cleats
- Longer service life
- Easy cleaning
- Thin line and footless cleats available
- A variety of sizes and thicknesses available



NOTE:

High frequency (HF) welding can be done on any thermoplastic belt.

HEAVY-DUTY & LIGHTWEIGHT

HEAVY-DUTY & LIGHTWEIGHT CLEAT MINIMUM PULLEYS

When a belt involves multiple components (ie. Base belt, V-guide, sidewall, flange, lacing, etc.) it is important to consider the minimum pulley dimensions of all components when determining an appropriate minimum pulley dimension for the entire conveyor system.

PVC = Poly Vinyl Chloride

MINIMUM PULLEYS			
TYPE	RUBBER	PVC	URETHANE
O Lug	3"	3"	3"
A Lug	3"	3"	3-1/2"
B Lug	3-1/2"	3-1/2"	4-1/2"
C Lug	4"	4"	
1/4" Square (1/4" x 1/4")	3"		
3/8" Square (3/8" x 3/8")	3"		
1/2" Square (1/2" x 1/2")	4"	2-1/2"	
3/4" Square (3/4" x 3/4")	8"	2-1/2"	
1" Square (1" x 1")	10"		
1/2" Standard T-Cleat	3"	3"	
3/4" Standard T-Cleat		2-1/2"	
1" Standard T-Cleat	4"	3"	
1-1/2" Standard T-Cleat	5"	3"	6"
2" Standard T-Cleat	6"	3"	8"
2-1/2" Standard T-Cleat	8"	4"	
3" Standard T-Cleat	10"	4"	
4" Standard T-Cleat	12"	5"	
3/4" Heavy-Duty T-Cleat		3"	
1" Heavy-Duty T-Cleat	5"		
1-1/2" Heavy-Duty T-Cleat	8"	3"	
2" Heavy-Duty T-Cleat	8"		
3" Heavy-Duty T-Cleat	10"		
4" Heavy-Duty T-Cleat	18"		
5" Heavy-Duty T-Cleat	18"		
6" Heavy-Duty T-Cleat	18"		
1-1/2" Super Heavy-Duty T-Cleat		5"	
2" Super Heavy-Duty T-Cleat		6"	
3" Super Heavy-Duty T-Cleat		8"	
4" Super Heavy-Duty T-Cleat		10"	
1" C-Cleat (Scoop Cleat)	4"		
1-1/2" C-Cleat (Scoop Cleat)	5"		
2" C-Cleat (Scoop Cleat)	6"	3"	
2-1/2" C-Cleat (Scoop Cleat)	8"		
3" C-Cleat (Scoop Cleat)	8"	4"	
30 mm (1-1/4") Thin Line Cleat			2" / 50 mm
40 mm (1-1/2") Thin Line Cleat			2" / 50 mm
50 mm (2") Thin Line Cleat			2" / 50 mm
60 mm Thin Line Cleat			2" / 50 mm

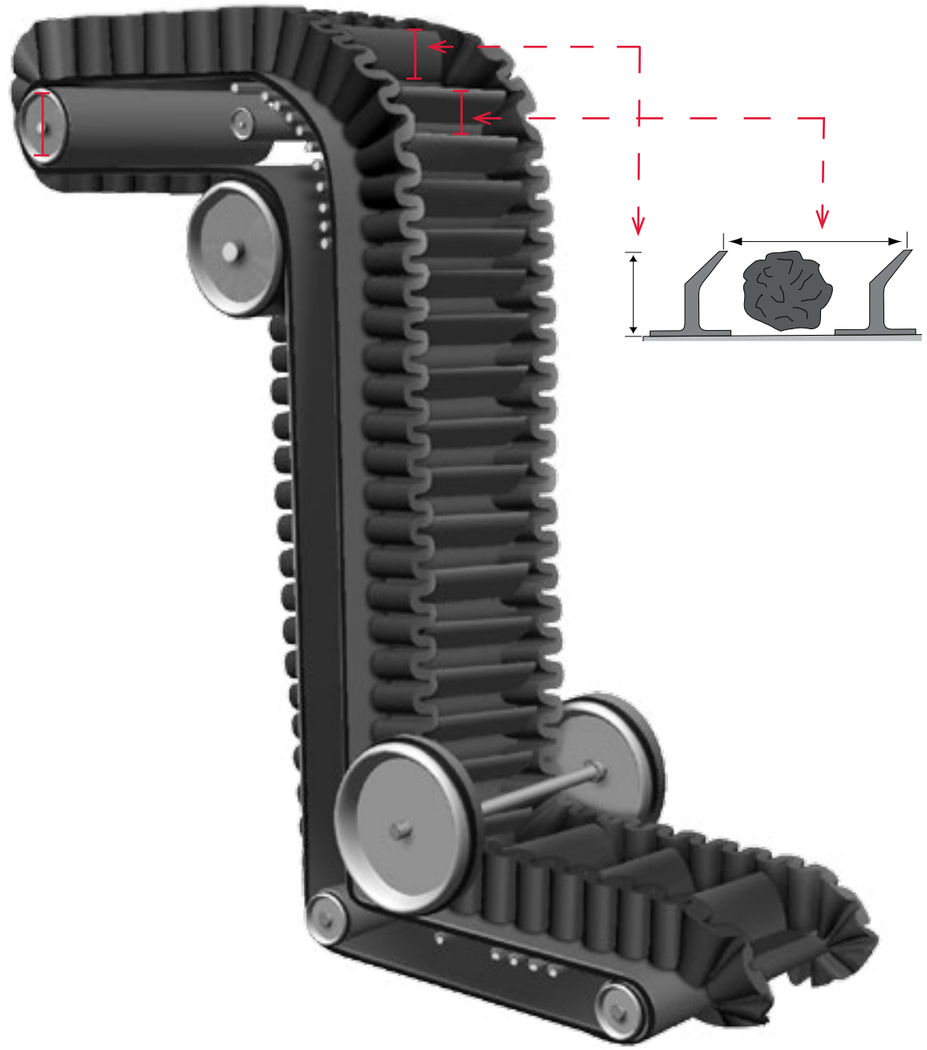
The above chart is intended to be used as a guideline. Contact your Apache product expert with questions for specifics to your application.

IMPORTANCE OF CORRECT PULLEY DIAMETERS

When selecting a fabricated belt, the "largest" minimum pulley diameter for each component must be chosen as the smallest pulley diameter to use.

Undersized pulleys can create a number of issues, including:

- Shortened belt life
- Ply separation
- Creation of stress cracks in covers
- Causes cleats to lift from belt covers



LIGHTWEIGHT DUROWALL™ DESIGN WORKSHEET

Here's what we need from you.

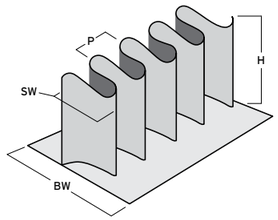
NAME:	
COMPANY:	
PHONE #:	
EMAIL:	
DATE:	

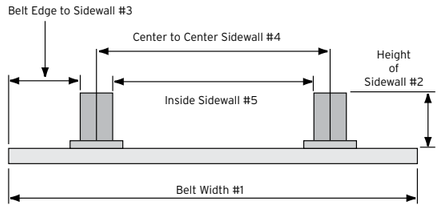
To ensure your belt is manufactured with a proper sidewall dimensions, please refer to the below diagrams and complete the following:

- **BELT STYLE**
  - Part number:
  - Description:
- **BELT LENGTH AND WIDTH:**
  - Length:
  - Width (see illustration, #1):
- **MINIMUM PULLEY DIAMETER:**
- **SIZE OF SIDEWALL (#2):**
- **PLEASE NOTE PLACEMENT OF SIDEWALL:**
  - Flush with edge of belt:
  - Indent from belt edge to corrugation (#3):
- **INSIDE SPACE BETWEEN SIDEWALL:**
  - Center to center of sidewall (#4):
  - Inside corrugation to inside corrugation (#5):
- **NOTE PLACEMENT OF CLEATS (IF APPLICABLE):**
  - Cleat height:
  - Cleat spacing:
  - Cleat width:
  - Style: T-Cleat, scoop, lug:
  - Flush to foot of wall / flush to corrugation / indent from sidewall cleat?
  - Additional sidewall to be left loose for field joining?

DUROWALL™ DIMENSIONS

	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM
HEIGHT "H"	1-1/4	30	1-1/2	40	2	50	2-3/8	60	3-1/8	80	3-15/16	100
BASE WIDTH "BW"	1-3/16	30	1-3/16	30	2-3/8	60	2-3/8	60	2-3/8	60	2-11/64	55
SIDEWALL WIDTH "SW"	3/4	19	3/4	19	1-1/2	40	1-1/2	40	1-1/2	40	1-49/64	45
PITCH "P"	7/8	22	7/8	22	1-9/16	40	1-9/16	40	1-9/16	40	2	50





Note: All lightweight, corrugated sidewall is measured using standard metric dimensions.

HEAVY-DUTY DUROWALL™ DESIGN WORKSHEET

Here's what we need from you.

NAME:	
COMPANY:	
PHONE #:	
EMAIL:	
DATE:	

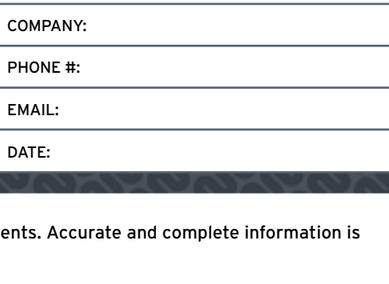
Copies of this data sheet can be used to help determine your belting requirements. Accurate and complete information is necessary to recommended the proper solution for your application.

- **CONTACT INFORMATION**
  - City: | State: | Zip:
  - Contact: | Phone: | Fax:
  - Reference Info.:
  - Material:
  - Density: | Size: | Min: | Max:
  - Surcharge: | Temperature: | Min: | Max:
  - Capacity: | Belt speed (check____if maximum):
  - Width preference: | Pulley diameter (check ____if maximum):
  - Oil resistance required? ☐ Yes ☐ No
- **EXISTING BELT SPECIFICATION FOR REPLACEMENT PART/PRICING**

CROSS SECTION OF BELT

CROSS SECTION OF BELT

SIDE VIEW OF CONVEYOR



Belt length:	Belt type:	Horizontal of incline (A):
Belt width:	Pulley dia.:	Lift (B):
Sidewall height (H):	Defl. dia.:	Infeed/or horiz. conv. (C):
Sidewall recess (R):	Cleat type:	Discharge (D):
Sidewall width (SW):	Cleat spacing:	Incline length (E):
Effective width (EW):	Cleat fastened to wall?:	Incline angle (F):
Cleat height (C):	Fasteners:	Horizontal length (G):

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Think *Forward.*

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