

**BELTWALL**  
*CORRUGATED SIDEWALL BELTING*



# Design Data Form

Email Completed Form To: [beltwall@beltservice.com](mailto:beltwall@beltservice.com)

Customer Name: \_\_\_\_\_  
 Street Address: \_\_\_\_\_  
 City / State / Zip: \_\_\_\_\_  
 Reference: \_\_\_\_\_

Contact Name: \_\_\_\_\_  
 Contact PH / Cell: \_\_\_\_\_  
 Contact Email: \_\_\_\_\_  
 New Project  Replacement Belt

**Material Data** (circle imperial / metric dimensions)

Material: \_\_\_\_\_  
 Max. Design Capacity: \_\_\_\_\_ STPH / MTPH  
 Bulk Density: \_\_\_\_\_ lb/ft<sup>3</sup> / t/m<sup>3</sup>  
 Angle of Repose: \_\_\_\_\_ °  
 Lump Size: Min. \_\_\_\_\_ Max. \_\_\_\_\_ (in / mm)

Ambient Temperature: Min. \_\_\_\_\_ Max. \_\_\_\_\_ (°F / °C)  
 Material Temperature: Min. \_\_\_\_\_ Max. \_\_\_\_\_ (°F / °C)  
 Oily Condition: YES  NO   
 Moisture: \_\_\_\_\_ %  
 Belt Width Preference: \_\_\_\_\_ (in / mm)  
 Belt Speed Preference: \_\_\_\_\_ (ft/min / m/s)

\* Provide sieve analysis if available. If sieve analysis not available, indicate % of min/max. Measure max lump size in any dimension.

**Conveyor Configuration** (New or Existing)

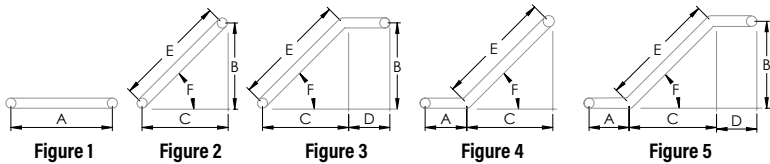
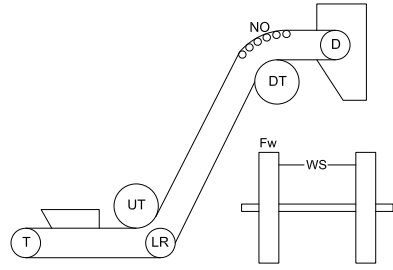


FIG. NO. \_\_\_\_\_ (Include unit of measure)  
 A \_\_\_\_\_ C \_\_\_\_\_ E \_\_\_\_\_  
 B \_\_\_\_\_ D \_\_\_\_\_ F \_\_\_\_\_

**Existing Conveyor and Belt Information** (if applicable)

Conveyor:

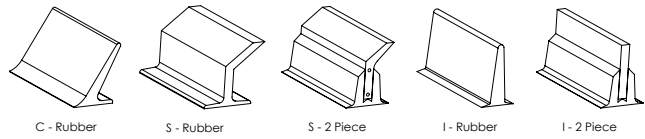
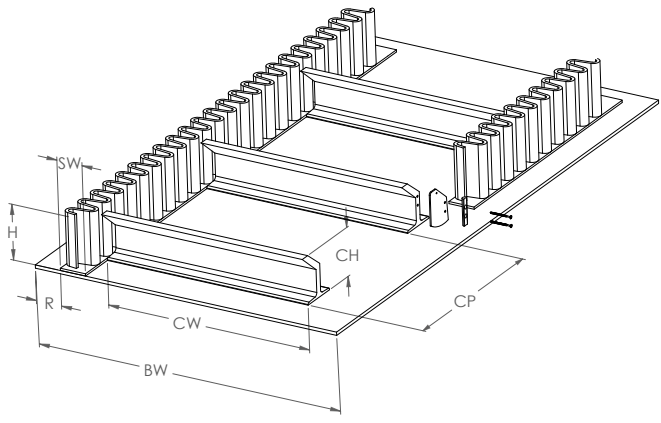
Drive (D): ∅ \_\_\_\_\_  
 Tail (T): ∅ \_\_\_\_\_  
 Lower Return Bend (LR): ∅ \_\_\_\_\_  
 Noseover (NO): ∅ \_\_\_\_\_ (Pulley or Roller Curve)  
 Downtime Deflection (DT): ∅ \_\_\_\_\_ x FW \_\_\_\_\_ x WS \_\_\_\_\_  
 Upturn Deflection (UT): ∅ \_\_\_\_\_ x FW \_\_\_\_\_ x WS \_\_\_\_\_



Belt:

include units of measure

Belt Endless Length: \_\_\_\_\_  
 Belt Width (BW): \_\_\_\_\_  
 Belt rating (PIW, N/mm): \_\_\_\_\_  
 Top Cover Gauge: \_\_\_\_\_  
 Bottom Cover Gauge: \_\_\_\_\_  
 Cover Compound: \_\_\_\_\_  
 No. of Tension Plies: \_\_\_\_\_  
 Type of Cross Rigid Plies: \_\_\_\_\_  
 Cut Edge or Molded Edge: \_\_\_\_\_  
 Splice Type: \_\_\_\_\_  
 End Preparation: \_\_\_\_\_  
 Sidewall Height (H): \_\_\_\_\_  
 Sidewall Base Width (SW): \_\_\_\_\_  
 Sidewall Recess (R): \_\_\_\_\_  
 Cleat Type (C, I, S, 2 Piece): \_\_\_\_\_  
 Cleat Height (CH): \_\_\_\_\_  
 Cleat Pitch (CP): \_\_\_\_\_  
 Cleat Width (CW): \_\_\_\_\_  
 Sidewall bolted to cleat (Y/N): \_\_\_\_\_  
 Spill Plate Installed (Y/N): \_\_\_\_\_  
 Spill Plate Material: \_\_\_\_\_



Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

# HIGH-INCLINE CONVEYING

Beltwall has over 40 years of design and fabrication experience producing the highest quality steep incline conveyor belts in the market. Large savings make steep incline conveyors an economical alternative to conventional trough conveyors.



Beltwall's engineering team reviews each application to ensure efficiency and the lowest cost per ton conveyed. Optimum service and support are provided for new projects including:

- ▶ Initial Layout and design review
- ▶ Belt specification and calculations
- ▶ Top of foundation budget cost studies

Site surveys are commonly performed on existing systems. Recommendations can be made for enhancing the belt specification as well methods to improve the system's performance.

## Features:

- ▶ Increased splice service factor through the use of two high strength, low stretch cross-rigid plies
- ▶ Reduced sidewall crack propagation through special fiber loaded compound
- ▶ Strongest cleat and sidewall bond through vulcanization
- ▶ Replaceable urethane cleat blades that maintain carrying capacity under heavy loads for the life of the belt

# COMPOUNDS

**SBR**

Black Standard High Abrasion Resistant (SBR) Rubber

**HR**

Black Heat Resistant (HR) Rubber

**OR**

Black Moderately Oil Resistant (MOR) and Super Oil Resistant (SOR) Rubber

**FDA**

White FDA Rubber

**FR**

Black Flame Retardant (FR) Rubber

**OTHER**

Other compounds meeting specific DIN standards available

# BASE BELTS

## BWX-MI

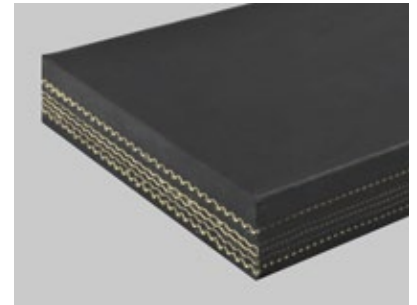
Fabric PP(EE) or PN(EP) tension plies with monofilament or fiberglass cross rigid plies.  
Typical belt ratings: 220PIW - 1000PIW (EP400-EP1750).

Stocked Specs:

BWX2222MI - 220PIW, 2+2 Ply - SBR, MOR, HR

BWX3332MI - 330PIW, 3+2 Ply - SBR, MOR, HR

BWX4442MI - 440PIW, 4+2 Ply - SBR

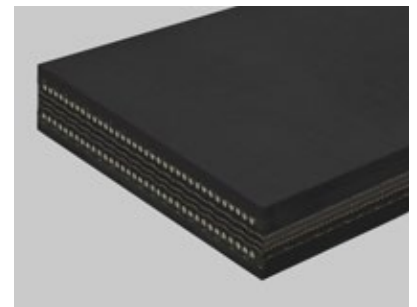


## BWX-SC

Fabric PP(EE) or PN(EP) tension plies with special steel breaker (SC) cross rigid plies.  
Typical belt ratings: 220PIW - 1000PIW (EP400-EP1750).

For applications involving wider belts yet still within the tension demand of an EE/EP belt. Also used in harsh applications for cut and puncture resistance.

**Special Order**



## BWX-ST+SC

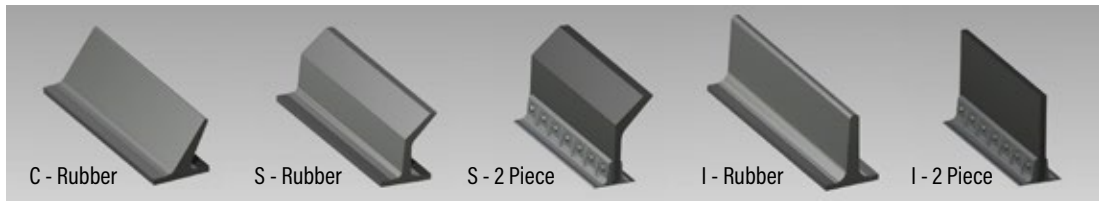
Steel Cords with special steel breaker (SC) cross rigid plies.  
Typical belt ratings: ST1600 to ST4000.

For high vertical lift applications requiring ST belt ratings.

**Special Order**



# CLEATS



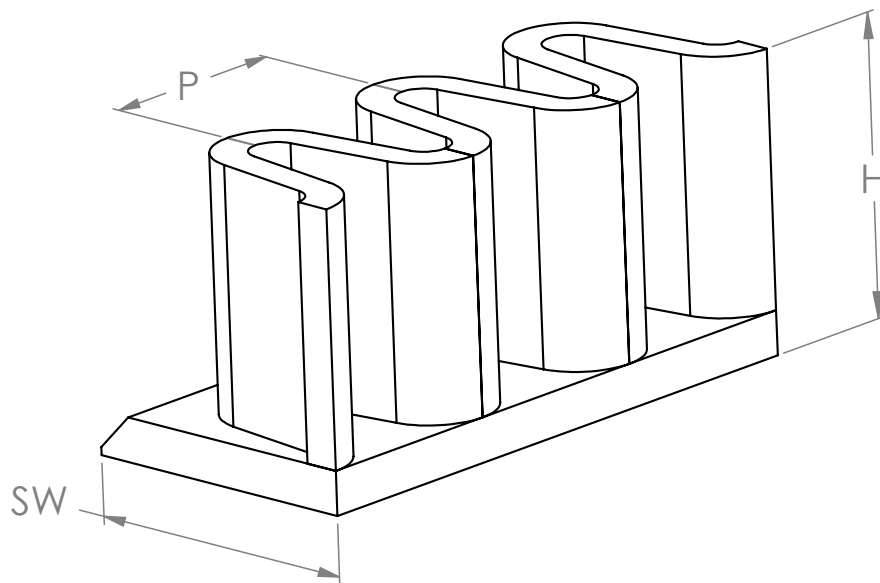
	Height		I-Cleat	C-Cleat	S-Cleat	Minimum Pulley	
	in.	mm.				in.	mm.
<b>Single Piece Rubber Cleat</b>	0.5	13	✓			3	75
	1	25	✓	✓		4	100
	1.5	38	✓	✓		6	150
	2	51	✓	✓		6	150
	2.5	64	✓	✓		8	200
	3	76	✓	✓		10	255
	3.5	89	✓	✓	✓	10	255
	4	102	✓	✓		10	255
	4.5	114	✓		✓	12	305
	5	127	✓			12	305
	5.5	140			✓	16	400
	6	152	✓			20	500
	7	178	✓		✓	20	500
	9	229	✓		✓	24	610
11	279			✓	36	915	
<b>Two Piece Rubber Base Urethane Blade</b>	5.5	140	✓		✓	16	400
	7	178	✓		✓	16	400
	7.5	191	✓		✓	16	400
	9	229	✓		✓	16	400
	9.5	241	✓		✓	16	400
	11	279	✓		✓	16	400
	11.25	286	✓		✓	36	915
	14.5	368	✓		✓	36	915
	15.25	387	✓		✓	36	915

*Note:* All Cleats are hot vulcanized, 6" I-Cleat available in standard and heavy duty

# SIDEWALL

							SBR / HR		OR / FR / FDA	
	Height (H)		Base Width (SW)		Pitch (P)		Min. Pulley		Min. Pulley	
	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.
<b>Non-Fabric Reinforced</b>	1	25	1.5	38	1	25	4	102	8	203
	1.5	38	1.5	38	1	25	4	102	8	203
	2	51	1.5	38	1	25	6	152	8	203
	2.5	64	1.5	38	1	25	8	203	12	305
	2.5	64	2.0	51	1.5	38	8	203	12	305
	3	76	2.0	51	1.5	38	10	254	12	305
	4	102	2.0	51	1.5	38	10	254	14	356
	5	127	2.0	51	1.5	38	12	305	16	406
	6	152	2.0	51	1.5	38	16	406	20	508
<b>Fabric Reinforced</b>	6	152	3.125	79	2.5	64	16	406	20	508
	8	203	3.125	79	2.5	64	20	508	24	610
	10	254	3.125	79	2.5	64	24	610	30	762
	12	305	3.125	79	2.5	64	36	914	48	1219
	12	305	4.125	105	3.5	89	36	914	48	1219
	16	406	4.125	105	3.5	89	42	1067	54	1372

**Notes:** White FDA available in 1.5" and 2.1875" base widths and 1" - 5" heights. | Fabric reinforcement available in 2.0" base width and metric heights 60mm, 80mm, 100mm, and 120mm. | Fabric reinforcement available in 3.0" base width and metric heights 160mm, 200mm, and 240mm.



## SIDEWALL BOLTED TO CLEATS

Sidewalls can be bolted to the ends of the cleats using an insert and two screws. This minimizes gaps between the sidewall and cleat thus reducing potential for product entrapment. For taller sidewall and cleat combinations, bolting prevents sidewall from leaning outward and cleats flexing backwards under heavy loads. Standard hardware: galvanized, stainless, and Grade 8. Standard inserts: aluminum and plastic.



## SPILL PLATES

Designed to contain small, granular, or free-flowing materials conveyed at steep incline angles. Spill plates are installed on each end of the cleat, effectively blocking the adjacent sidewall convolution and preventing flow past the cleat into the following cleat pocket.

Spill plates can also minimize product entrapment in the sidewall convolutions and subsequent carryback. The plates are available in mild steel, stainless steel, and polyethylene (*Tivar*®, *UHMW*)



## PACKAGING

### STANDARD



Best if belt will be installed within one year from shipment.

Recommended for indoor storage.

Standard diameter tubes and reels and Styrofoam used to support the belt laps on the skid.

Can be stacked/lapped double wide on the skid if necessary and if overall belt width permits.

Optional export grade wood panels installed on sides and top to protect the belt during shipment.

### OPTIONAL LONG TERM INDOOR / OUTDOOR



Best if belt will be stored for greater than one year from shipment.

Oversized tubes and reels and Styrofoam are used to support the belt laps on the skid and prevent sidewall deformation.

Belt stack is wrapped in heat shrink black UV protection film.

Belt stack should be single wide in order to avoid belt twist that is necessary if stacked double wide.

Certain belt configurations may dictate that double wide stack is more practical.

Export grade wood panels are installed on sides and top to protect the belt and custom fitted tarp is installed over the top of the skid. (*Outdoor Only*)

# REPLACEMENT BELTS

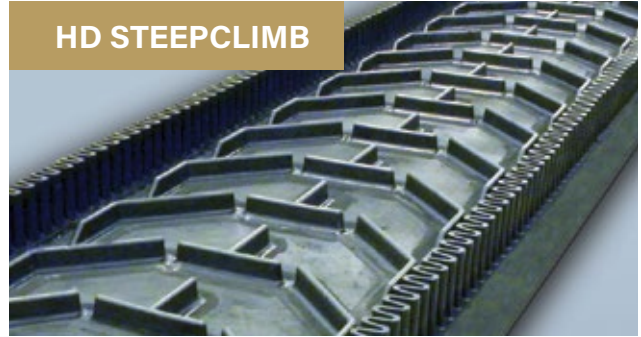
OEM and replacement sidewall belts for the frac sand industry are available in cross rigid and non-cross rigid multi-ply construction with vulcanized sidewalls and cleats. Below are several of the more common configurations.

## SIDEWALL ONLY



- Belt: 2-ply 220PIW Black Standard, 1/8" x 1/16"
- Widths: 24", 30", and 36"
- Sidewall: 2-1/2" or 3" tall and flush to belt edge
- Min. pulley diameter 10"

## HD STEEPCLIMB



- Belt: 4-ply 220PIW Black Standard cross rigid, 1/8" x 1/16"
- Widths: 24", 30", and 36"
- Sidewall: 3" or 4" tall and recessed from belt edge
- Min. pulley diameter 12"

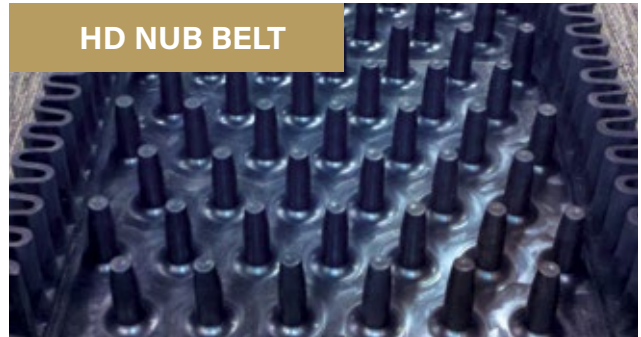
*(call for dimensions)*

## I-CLEAT



- Belt: 4-ply 220PIW Black Standard cross rigid, 1/8" x 1/16"
- Widths: 24", 30", and 36"
- Sidewall: 3" or 4" tall and recessed from belt edge
- Min. pulley diameter: 10"

## HD NUB BELT



- Belt: 2-ply 220PIW Black Standard, 3/16" x 1/16"
- Widths: 24", 30", and 36"
- Sidewall: 3" tall and hot bonded to belt edge
- Min. pulley diameter 10"



[beltservice.com](http://beltservice.com)

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