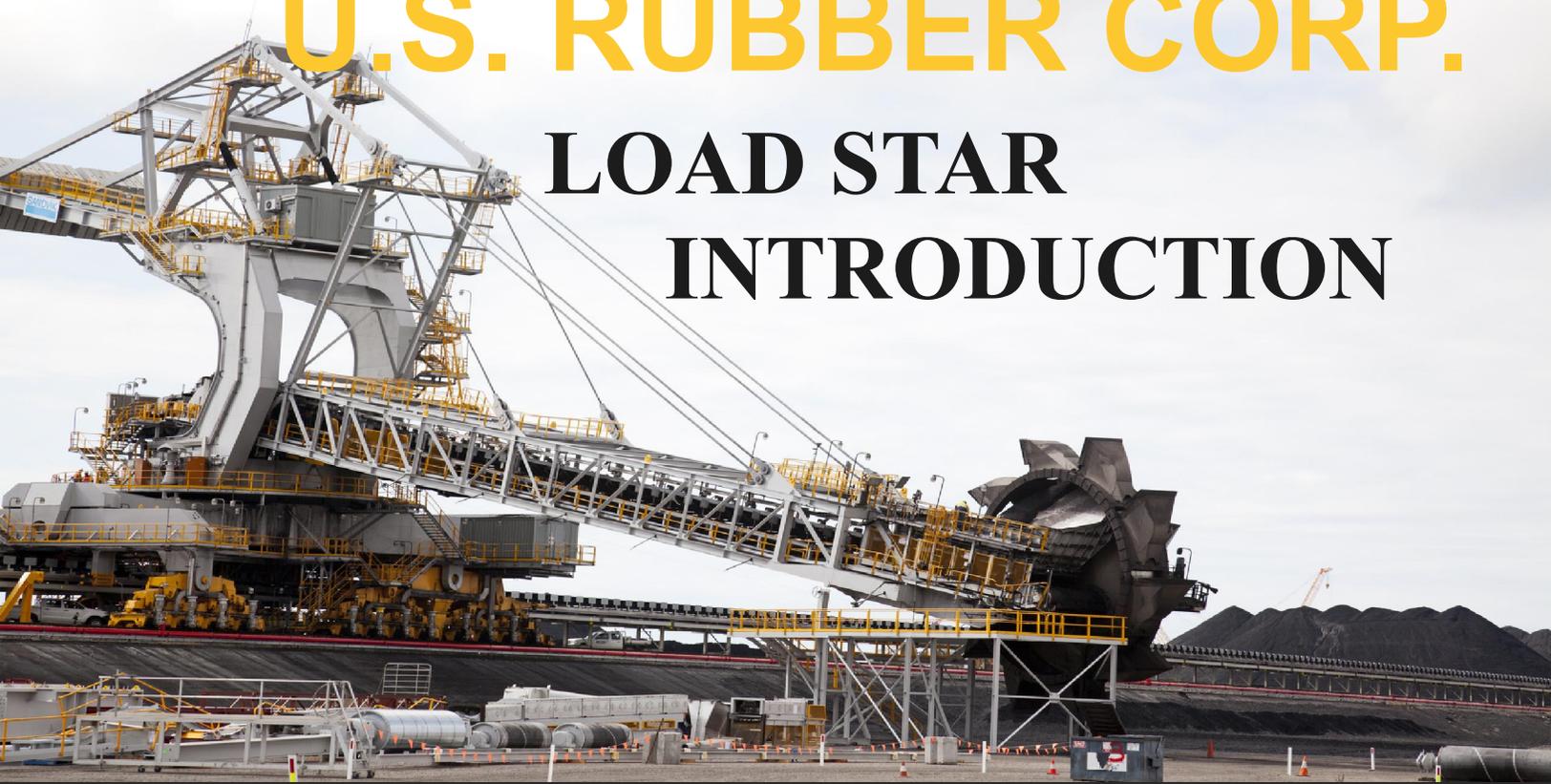


U.S. RUBBER CORP.

LOAD STAR INTRODUCTION



LOAD STAR INTRODUCTION CROSS SECTION OF A CUT EDGE L.S.

Load Star is the "work horse" belt specification from U.S. Rubber. Utilizing 110, 125, 150, 200, 250, 300 and 400 pound per ply PIW, 10:1 Service Factor fabrics, U.S. Rubber is capable of producing Heavy-Duty fabric-applied belt specifications from 2 ply 220 pound PIW working tension up to 4 ply 1600 pound PIW working tension.

Poly/Nylon -Polyester warp (tensile) yarns and nylon weft or crosswise yarns are reutilized as the standard yarns in all stock belt carcass constructions at U.S. Rubber.

Polyester was selected for the warp or tensile member of the carcass due to high-modulus, low elongation features that reduce belt stretch and provide a more stable base. This stability allows for minimum take up lengths and eliminates the necessity of "breaking in" a belt prior to installing a vulcanized splice. It also eliminates the reinstallation of splices to eliminate start-up elongation and the resultant down time. Polyester also does not absorb as much moisture as other carcass materials, providing higher wet adhesions and a higher percentage of dry-tensile strength where the belt must operate in extremely wet or submerged conditions.

The lower modulus of Nylon allows more elongation; making it the ideal material for the weft or crosswise yarns in a belt carcass. The higher stretch allows the belt to trough under a lighter load than high-modulus polyester, resulting in better tracking characteristics. The elongation also provides shock absorption that yields higher fastener retention and higher longitudinal tear resistance.

Nylon/Nylon -Nylon warp and nylon weft carcass materials for conveyors with short center tracking problems or extreme house keeping problems are available in 110# PIW fabric upon special request. Poly/Poly - Polyester warp and polyester weft carcass materials for a very stable belt for use in fabrication are available in 110# PIW fabric upon request.

U.S. RUBBER CORP.

LOAD STAR XT CONSTRUCTION

Load Star "XT" I & II

Load Star "XT" I & II is designed and manufactured to provide, high rear resistance and impact capability in a flexible reduced weight carcass system; a system that combines strength, low elongation and load support, while providing good troughability that results in improved tracking capabilities.

The "XT" Straight Warp carcass develops **SUPERIOR** impact and tear resistance due to a unique three component multi-warp construction utilizing high-strength straight yarns locked together with a special binder system.

Straight Warp's impact resistance can be as high as three times greater than standard plied belting. Tear resistance is improved up to five times in some constructions. These improvements result in a belt that has a greater life expectancy in highly abusive belt applications.

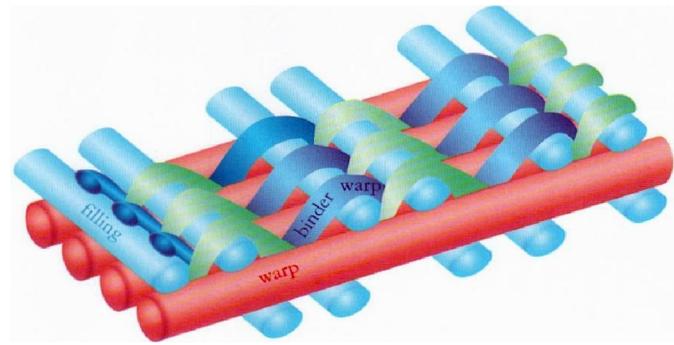
BALANCED COVERS

It is recommended that Single Unit Straight warp belt be manufactured with the pulley cover gauge at least one half of the carry cover gauge. This provides balance between the pulley covers, carcass and carry covers.

Example:

1/8 x 1/16, 3/16 x 3/32,
1/4 x 1/8, etc.

Consult factory for covers less than 1/16" or for bare back constructions.



Top Cover: _____
Any Thickness from
1/32' to 1-112
0.8mm to 38.I

Carcass: _____
Single Unit

Top Cover: _____
Any Thickness from
1/32' to 1-112
0.8mm to 38.I

Top Cover: _____
Any Thickness from
1/32' to 1-112
0.8mm to 38.I

Carcass: _____
Double Unit

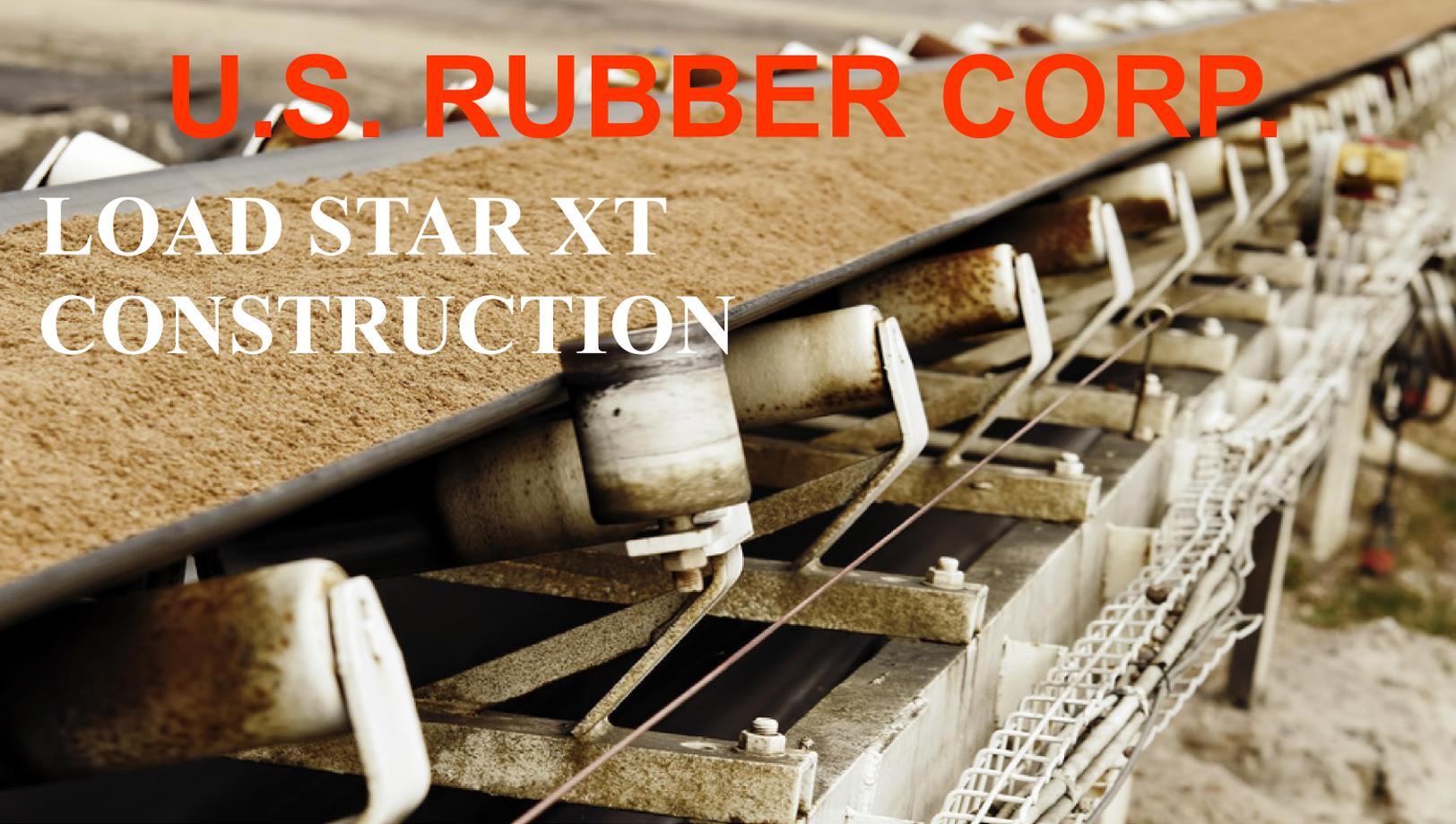
Skim: _____

Bottom Cover: _____
Any Thickness from
1/32' to 1-112
0.8mm to 38.I

- * **Full 10:1 service factor Poly/Nylon carcass.**
- * **Low elongation—Less than 2% at 100% working tension.**
- * **Premium "wet" application strength.**
- * **Premium fasteners holding capabilities.**
- * **Premium impact and tear resistance.**
- * **Excellent troughability.**

U.S. RUBBER CORP.

LOAD STAR XT CONSTRUCTION



A = TOP COVER:

Any thickness from 1/32" to 1-1/2" (0.8mm-38.1mm)

B = CARCUS:

1 to 10 plies

C = SKIMS:

Heavy and high-adhesion skim

D = BOTTOM COVER:

Any thickness from 1/32" to 1"

Bare back also available (0.8mm-25.4mm)

A. SIZES

1. WIDTH: Range from 24"(610mm)-72"(1830mm)
2. ROLL DIAMETER: Maximum 10'-10", or 130"
3. WEIGHT: Maximum 35,000 LBS (17.5 TONS) pounds per slab

B. THICKNESS:

1. TOP COVER: Range from 1/32" (0.8mm) to 1-1/2" (38mm)
2. PLYS: Monoply to 10 plys
3. BOTTOM COVER: 1/32" to 1" (0.8mm-25.4mm)
4. OVERALL THICKNESS: Maximum 1-3/4"(44.5mm)

C. COMPOUNDS

1. STOCK ITEMS: Grade I, Grade II
2. SPECIAL ORDER: MOR, MSHA, MOR MSHA, SCORF, EPDM, HOS

LOAD STAR CROSS SECTION OF A CUT EDGE L.S.



LOAD STAR XT BELT SELECTION

The primary considerations in selecting a belt are as follows:

The working tension required of the belt on the system.

If the required working tension is not known it can be determined by a series of computations based on the physical properties of the existing conveyor or by the production requirements of the system based on the material carried.

If some basic information on the conveyor is known, the following formula may be used to quickly calculate unit tension as an estimated PIW (pounds per inch of width)

Short Method of Calculating Belt Tension

$$TU = \frac{HP (1+K)33000}{S} \text{ Divided by the belt width} \\ = \text{PIW working tension}$$

TU - Tension unit

K - Drive factor

S - Belt Speed (feet per minute)

HP - Nameplate horsepower on drive motor

Understanding Selection

Selection of the best conveyor belt for your system is based on the specific requirements of the particular conveyor system, the materials being conveyed and the conditions under which the belt must operate. In addition to these considerations, the belt must be cost effective must be practical.

K-Drive Factor

Wrap on Drive Take-Up Type	Bare Pulley	Lagged
180 degree Screw	1.20	.80
180 degree Gravity	.84	.50
210 Degree Screw	1.00	.70
210 Degree Gravity	.67	.38

Example: The existing 42" conveyor has a single lagged drive with no snub pulley. The belt wraps 180 degrees of the drive pulley. The conveyor has a gravity take up. The nameplate horsepower on the motor is 50 (by using the nameplate HP, a safety factor is built into the calculation). The belt runs at 500 feet per minute (FPM).

$$TU = \frac{50(1.50)33000}{500 \text{ FPM}} \text{ Divided by } 42'' = 118 \text{ PIW working tension}$$