

Bulletin No. 42



FRICITION SURFACE RUBBER BELTING

Red Condor Friction Surface Belts

CONDOR is suitable for every service in any industrial establishment where belts are used.

The duck in **CONDOR BELT** possesses extraordinary strength, and eliminates all trouble from stretching. The friction used in **CONDOR** is the very best that it is possible to put into a belt.

No Degree of Heat Affects It

Particularly adapted for
use in

Planing Mills

Drives

Sideheads

Cylinders

Fans

Cut-off Saws



Saw Mills

Trimmers

Hogs

Top Saws

Slashers

Edgers

Corner Drives

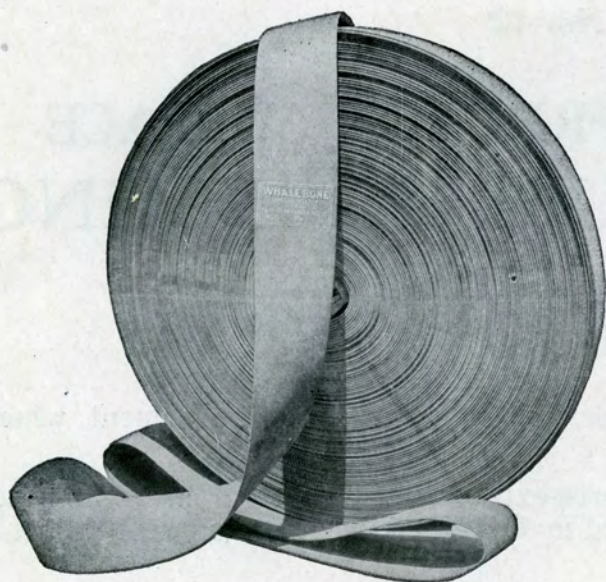
Oil Mills

Paper Mills

CONDOR has shown superiority and economy over belts of any other construction or design. The duck will not stretch, the rest is in the friction.

CONDOR wears longer under the most adverse conditions. It is without doubt the finest belt on the market today.

*Try Endless CONDOR Belts on your Band Mills, Trimmers,
Edgers, Hogs, Gangs, Etc. The results will surprise you.*



“Whalebone”

BLACK FRICTIONED SURFACE BELT

We Recommend 5-Ply

Especially adapted for extremely high speeds and very small pulleys; a light closely woven duck, high friction belt, for side-heads and cylinders.

“Kortlandt”

“KORTLANDT” is unsurpassed as a drive belt. Built for hard service on large or medium-sized pulleys. It has a record of twenty years behind it.



“The Big Three”

CONDOR WHALEBONE KORTLANDT

Are recognized in all parts of the world as par-excellence —
the very best under the most severe conditions.

In “The Big Three” you can get a belt to suit any condition, for they are guaranteed mechanically perfect.

*We can furnish any requirement from stock up to 20 inches
from Lufkin or Beaumont, Texas.*

A WORD ABOUT BELTING

REVISED BELT LIST

Adopted by the Mechanical Rubber Goods Manufacturers' Division of
The Rubber Association of America, Inc., May 21, 1918.

IN EFFECT JULY 1, 1918

Width in Ins.	2 Ply per ft.	3 Ply per ft.	4 Ply per ft.	5 Ply per ft.	6 Ply per ft.	7 Ply per ft.	8 Ply per ft.
1	\$.18	\$.20	\$.24				
1 1/4	.23	.26	.30				
1 1/2	.27	.31	.36	\$.45			
1 3/4	.32	.36	.42	.53			
2	.34	.39	.46	.58	\$.69		
2 1/2	.42	.48	.56	.70	.84		
3	.48	.55	.65	.81	.98		
3 1/2	.57	.65	.76	.95	1.14		
4	.61	.70	.82	1.03	1.23	\$1.44	
4 1/2		.78	.92	1.15	1.38	1.61	
5		.87	1.02	1.28	1.53	1.79	
6		1.04	1.22	1.53	1.83	2.14	\$2.44
7		1.22	1.43	1.79	2.15	2.50	2.86
8		1.31	1.54	1.93	2.31	2.70	3.08
9			1.73	2.16	2.60	3.03	3.46
10			1.92	2.40	2.88	3.36	3.84
11			2.11	2.64	3.17	3.69	4.22
12			2.30	2.88	3.45	4.03	4.60
13			2.50	3.13	3.75	4.38	5.00
14			2.69	3.36	4.04	4.71	5.38
15			2.88	3.60	4.32	5.04	5.76
16			3.08	3.86	4.62	5.40	6.16
18			3.46	4.32	5.20	6.06	6.92
20			3.84	4.80	5.76	6.72	7.68
22			4.22	5.28	6.34	7.38	8.44
24			4.60	5.76	6.90	8.06	9.20
26				6.26	7.50	8.76	10.00
28				6.72	8.08	9.42	10.76
30				7.20	8.64	10.08	11.52
32				7.72	9.24	10.80	12.32
34				8.18	9.82	11.46	13.08
36				8.64	10.40	12.12	13.84
38					10.96	12.78	14.60
40					11.52	13.44	15.36
42					12.10	14.10	16.12
44					12.68	14.76	16.88
46					13.24	15.44	17.64
48					13.80	16.12	18.40

Other Widths and Plies at Proportionate Prices

THE life and efficiency depends largely upon the manner in which it is handled. Carelessness and neglect will shorten the life of the best belt made.

Much depends on getting the **right ply**, next the right length, especially on endless belts. Pulley diameters have much to do with the success, for the inner plies compress and the outer plies stretch in passing over the pulleys. Therefore thick belts and small pulleys cause excessive strain and friction that will tear up a belt quicker than abnormal tension on suitable pulleys.

The following table will guide the purchaser, although there will be exceptions, so when in doubt put your belt questions up to us.

For belts of heavy Duck construction, like Condor or Kortlandt—

4-ply 12-inch dia. Pulleys
5-ply 18-inch dia. Pulleys
6-ply 24-inch dia. Pulleys
7-ply 30-inch dia. Pulleys
8-ply 40-inch dia. Pulleys
10-ply 48-inch dia. Pulleys

For belts of light Duck construction like whalebone—

WE RECOMMEND

5-PLY

This belt is especially made for small pulley drives on planing machines, etc.

Use pulleys at least one inch wider than belt.

Avoid guides to keep belts on. Better align the shafting—its cheaper than new belts.

Put no more strain on a belt than is necessary to do the work when using tighteners. They last longer.

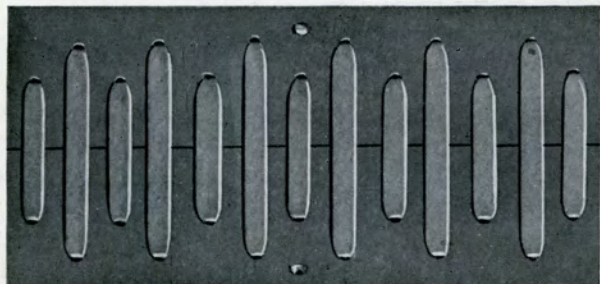
Most belts, especially if slack side is on top, will run without tighteners.

If slipping occurs, oftentimes caused by dusty belts and pulleys, apply boiled linseed oil with soft woolen cloth, for this will restore the adhesion and not injure the belt. Avoid all animal or mineral oils.

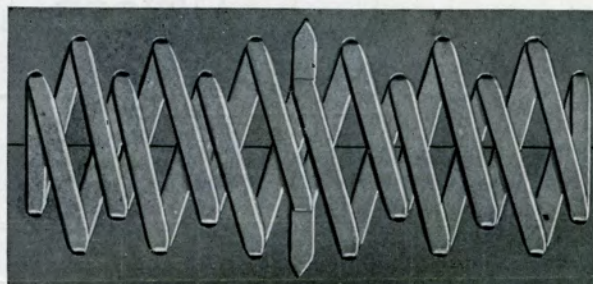
Eighty per cent of the belts that give out fail because of improper lacing, for the joint should have **equal tension**.

See that your Belts are Laced Correctly—they will last longer

SEE NEXT PAGE



PULLEY SIDE



BACK SIDE

Cut the ends perfectly true, punch two rows of holes, the first row $\frac{7}{8}$ -in. from the end and $\frac{3}{4}$ -in. from the side. Second row $1\frac{7}{8}$ -in. from end and $1\frac{1}{8}$ -in. from edge. Holes between should not be less than $\frac{3}{4}$ -in. apart. Draw belt up tight as possible, using rods and clamps if possible, and begin lacing in the center of the belt, lacing both sides with equal tension, taking care not to cross the lace on pulley side. Belts 3 in. and under use $\frac{1}{4}$ -in. lace, 4 to 12 in. $\frac{3}{8}$ -in. lace; 12 to 18 in. $\frac{1}{2}$ -in. lace. Space holes in 12-in. belt about $1\frac{1}{4}$ in.; 16-in. $1\frac{1}{2}$ in.; 20-in. 2 in., etc.

TO FIND THE LENGTH OF A BELT

When pulleys are the same or near the same diameter.

Multiply the sum of the diameters of both pulleys in feet by 1.57. Add to this twice the distance between the centers.

For pulleys of different diameters, use the above rule and add to this the square of the difference between the diameters, divided by four times the distance between centers.

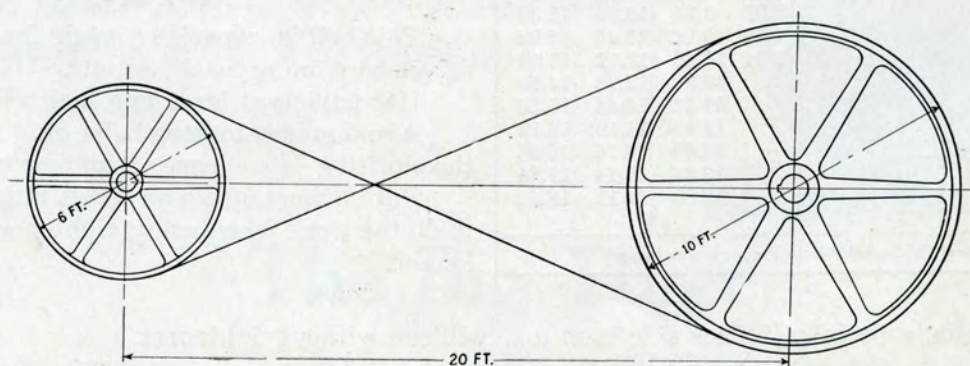
To find the length of a crossed belt.

A—Multiply the sum of the diameters by 1.57.

B—Divide the square of the difference the diameters of both pulleys by four times the distance between centers.

C—Square the sum of the radii of the pulleys and add to it the square of the distance between centers. Extract the square root and multiply by two.

The sum of A, B and C will give the approximate length of the belt, which will in nearly all cases be almost exact.



A	$10 + 6 = 16 \times 1.57 =$	25.12
B	$4 \times 4 = 16 \div 80 =$	.20
C	$64 + 400 = \sqrt{464} = 21.54 \times 2 =$	43.08
	Length of belt	68.40

 When ordering Endless Rubber Belts give exact steel tape measurements following course of belt about all pulleys. We suggest you use our blank form giving information which will enable the Factory to furnish the proper belt.