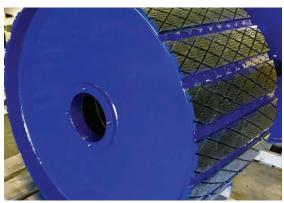
# **PULLEY CATALOG**

# Van Gorp®

# **Engineered Conveyor Components**









1410 Washington St. Pella, IA USA 50219 1 (641) 628-9212 www.vangorp.biz vangorp@vangorp.biz World Class Quality

# **ABOUT US**

### **OUR STORY**

Van Gorp Corporation was founded by Franklin "Hap" Van Gorp. Mr. Van Gorp started in 1933, initially performing repairs for coal mines, gravel plants, rock quarries and area farmers. By the 1950's, Van Gorp was manufacturing portable conveyor systems for use throughout the Midwest. Van Gorp was officially incorporated in 1957.

In 1976, Van Gorp was acquired by Emerson Electric Co., and in 1988 entered into a new organization phase called Emerson Power Transmission. In October, 2002, Emerson divested to Van Gorp Corporation.

Van Gorp is now owned and managed by company president, Joe Canfield. Today, Van Gorp's commitment to product improvement and development has enabled the company to become a leader in engineered conveyor components.

### **OUR MISSION**

We are committed to providing products and services that meet or exceed the needs of customers. The company does this to satisfy customers, employees, and shareholders.

### **OUR VALUES**

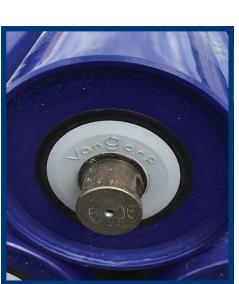
Van Gorp values provide the foundation upon which our work culture is built. Our positive work environment provides the energy and drive necessary for personnel to consistently provide products and services that meet or exceed the needs of customers.





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# IN THE FIELD













# **ORDERING GUIDE**

# Van Gorp Ordering Guide

### D 12 C 26 XT 25-L3H

(1) (2) (3) (4) (5) (6)

### (1) IDLER TYPE

D - H•D•R Drum **NST** - Non Standard True Turn **WQ** - Quarry Duty Wing **DD** - Double Drum **NSW** - Non Standard Wing **WX** - Extreme Wing **DS** - Spiral Drum **ST** - Single End Disk Tube **TBR** - Turbine Pulley **DX** - Extreme Drum

T - True Turn S - Solid Pulley **E** - Elevator (single disc) **W** - Turn Clean Wing **DG** - GSI Wing **ECD** - Engineered Class Drum **WR** - SBR Lagged Wing **WG** - GSI Wing

**ECT** - Engineered Class True Turn **WS** - Spiral Wing **ID** - Inter-systems Drum

**ECW** - Engineered Class Wing **WT** - T Bar Wing **W** - Inter-systems Wing **MD** - Mine Duty **WU** - Urethane Lagged Wing P-PD - Union Iron Drum

**NSD** - Non Standard Drum P-PW - Union Iron Wing **WH** - Heavy Duty Wing

### (2) DIAMETER

### (4) FACE LENGTH (6) HUB SIZE

### (3) CROWN TYPE

C - Crown Face

**S** - Straight Face SF - QD Hub

**EC** - Edge Crown **W** - Taperlock

NMS - Non Machined **SB** - Solid Bore

Straight Face

**HC** - High Crown

**CC** - Curve Crown

DC - Double Crown

### (5) CROWN TYPE

XT - XT Hub

**ER** - ER Bearing

**VER** - VER Bearing

**SLS** - SLS Bearing

**SER** - SER Bearing

# (7) OPTIONAL LAGGING

FOR STOCK PULLEYS L3H - 3/8 Herringbone

**L2P** - 1/4 Plain

**L4H** - 1/2 HBG



# Van Gorp®

# **Engineered Conveyor Components**

1410 Washington St Pella, IA 50219

Company Name:	
Contact:	Date:
Project Name:	
Phone:	
Email:	

### Belt Speed(FPM): \_ Idler Angle(deg): \_ Take-Up Type: \_ Lift(ft):\_\_ **Engineering Information** Material Type/Density: \_ Belt Type(Fab or Stl): \_ Drive Wrap(deg):\_ Horsepower(hp):\_ Conv Length(ft): Belt Width(in):\_

Conveyor Profile Sketch			

# **Engineering Data Required to Determine Pulley and Shaft Design**

Pulley Information				
Item	1	2	3	4
Conveyor I.D.				
Motor HP.				
Belt Speed in FPM or M/s.				
Quantity				
Pulley Location				
Pulley Type (Drum, Wing)				
Diameter				
Face Width				
Face Type (Crowned or Straight)				
Tension - 1				
Tension - 2				
Arc of Contact				
Lagging Thickness (1/4, 3/8, 1/2 or 1")				
Groove (R, H, C or D)*				
Hub Type				
Shaft Diameter inside the Pulley				
Shaft Diameter @ Hub				
Shaft Diameter @ Bearings				
Shaft Diameter at the Drive/Reducer				
Shaft Length				
Bearings				
Bearing Centers				
Keyways				
Shaft Material				
Machine Rim/Lagging				
Stress Relieve				
Line Bore				
Static Balance G40.				
Other:				

\*Groove Type

R - Plain

H - Herringbone

C - Chevron D - Diamond

# **BULK HANDLING PULLEYS**



**XT BUSHING** 



**XT-REME™ DRUM PULLEY** 



**TURBINE DISC** 



**TURBINE DISC** 



H·D·R®



**MINE DUTY** 



**DOUBLE DRUM** 



**VULCHANIZED AND "FIELD-LAGGING"** 





**TURN CLEAN** 



**XT-REME™ WING** 



**♦DB♦ WING LAGGING** 



**QUARRY DUTY WING** 



**EXTRA HEAVY DUTY WING** 



**SNAP-BACK®** 



**SPIRAL DRUM** 



**SPIRAL WING** 

# **UNIT HANDLING PULLEYS**



**ROUGH TOP LAGGING** 



**TRUE TURN®** 



**CONVEYOR ROLLERS** 



**FINISHED BORE DRUM** 



**ROLLERS WITH ER BEARINGS** 



**PACKAGE HANDLING PULLEY** 

### **RUBBER LAGGING**



### **ROUGH TOP LAGGING**



Rough Top Rubber Lagging is available in either **vulcanized** or **bolt on**.

**Vulcanized Rough Top** is 60±5 durometer Shore A, SBR Black Rubber. It is bonded directly to the pulley rim in the vulcanizing process.

**Bolt on Rough Top** Lagging material is applied to the pulley rim which is coated with a special bonding adhesive and fastened to the pulley rim with strong self tapping screws at the beginning and end of the lagging.

The top cover of both types of Rough top has thousands of fingers that grip the belt. This irregular surface increases the rubber's tractive capacity and helps keep the rubber clean.

### "FIELD-LAGGING"



Quality rubber is bonded to special traction pads fitting the pulley rim. The pads slide into retainers welded into the pulley rim. New pads can easily be replaced without removing the pulley from the conveyor

Slide-Lag® is a registered trademark of Holz Rubber Co., Inc.

# VULCANIZED RUBBER LAGGING



Vulcanized rubber lagging is 60±5 durometer Shore A, S.B.R. black rubber without a cloth fabric. It is bonded directly to the pulley rim in the vulcanizing process. The finished rubber surface has a cloth impression. When GROOVING is required, please specify whether herringbone or another type of grooving is desired. Normally, grooving should not be used in vulcanized rubber less than 3/8" thick.

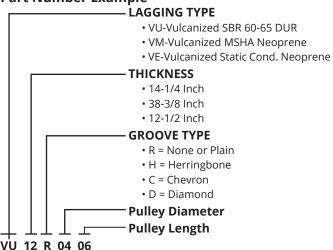
**NOTE:** Direction of grooving must be stated if we supply the lagging and install a shaft. Normally grooving should be run with the apex of pattern leading.

### **VULCANIZED LAGGING TOLERANCES**

Plain wrapped cloth impression lagging: ± 1/8" on rubber thickness--no concentricity tolerance guaranteed.

If you have an application for lagged pulleys that demands exact concentricity, such as some elevator pulleys, slide bed or reversing conveyor pulleys, then we suggest that you order machined lagged pulleys. True, this will cost more initially; however, in a tough application, this cost would be offset quickly by additional necessary labor when trying to tain the belt.

### **Part Number Example**



# **XT® HUBS AND BUSHINGS**



# The Premier Hub and Bushing for Conveyor Pulleys.

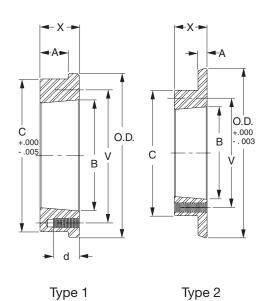
XT® Hubs & Bushings are specifically developed for conveyor pulley applications. The XT® design utilizes a 2"/ft. taper, providing superior holding power for conveyor pulleys, while permitting easier installation and removal than other bushing types.

XT® hubs and bushings are available in all of the major types and sizes of Van Gorp conveyor pulleys. For further information, consult your Van Gorp distributor.

Van Gorp conveyor pulleys offer you opportunities for increasing conveyor performance and reduce costs, because they utilize the XT® hub and bushing with all of these outstanding features:

- Designed specifically for conveyor pulley applications
- 2" per foot taper
- Malleable iron in many sizes
- Self-seating -- eliminates need for hammer and drift
- Less axial movement -- reduces end disc prestressing
- High compressive force minimizes pulley walking on shaft
- Bolts equally spaced for uniform draw-up
- More material in the barrel for added safety, especially in maximum bore sizes
- Full length engagement with hub
- Flange provides for maximum capscrew torquestoring capacity
- Easy removal
- Full size keys in maximum bores of size 50 and larger bushings

### **XT® HUBS**



**Table No. 1 -- SPECIFICATIONS** 

Part	For			DI	MENSIC	NS			TAP	PED HOLES	Wt.
No.	Bushing	O.D.	Α	В	С	V	Х	d	No.	Size	Lbs.
Type 1 - F	lubs										
XTH15	XTB15	3.190	7/16	2.000	2.875	2 7/16	5/8	5/8	4	1/4 - 20NC	.7
XTH20	XTB20	4.065	9/16	2.688	3.8125	3 3/16	13/16	13/16	4	5/16 - 18NC	1.5
XTH25	XTB25	4.690	13/16	3.188	4.375	3 3/4	1 1/8	1 1/8	4	3/8 - 16NC	2.6
XTH30	XTB30	5.940	7/8	3.875	5.750	4 9/16	1 1/4	1 1/16	4	7/16 - 14NC	4.1
XTH35	XTB35	6.565	1 1/16	4.688	6.345	5 7/16	1 1/2	1 1/4	4	1/2 - 13NC	6.6
XTH40	XTB40	7.563	1 1/4	5.313	7.250	6 1/8	1 3/4	1 3/8	4	9/16 - 12NC	10.7
XTH45	XTB45	8.315	1 1/2	5.938	8.000	6 7/8	2 1/8	1 9/16	4	5/8 - 11NC	15.4
XTH50	XTB50	9.940	1 3/4	7.250	9.563	8 5/16	2 1/2	1 3/4	4	3/4 - 10NC	24.9
XTH60	XTB60	11.690	1 15/16	8.625	11.250	9 7/8	2 3/4	1 5/8	4	7/8 - 9NC	36.4
XTH70	XTB70	13.628	2 3/16	10.000	13.188	11 9/16	3 1/8	1 15/16	4	1 - 8NC	57.7
XTH80	XTB80	14.940	2 3/8	11.125	14.625	12 7/8	3 3/8	2	4	1 1/8 - 7NC	75.6
XTH100	XTB100	17.940	3	13.688	17.500	15 9/16	4 1/8	1 3/4	6	1 1/8 - 7NC	122.0
XTH120	XTB120	20.940	3 1/2	16.188	20.500	18 3/16	4 13/16	1 1/2	8	1 1/8 - 7NC	189.0
Type 2 - H	lubs										
XTH15F4	XTB15	3.855	1/4	2.000	3.625	2 7/16	9/16	-	4	1/4 - 20NC	1.2
XTH15F5	XTB15	4.805	1/4	2.000	4.625	2 7/16	9/16	-	4	1/4 - 20NC	1.7
XTH15F6	XTB15	5.815	1/4	2.000	5.500	2 7/16	9/16	-	4	1/4 - 20NC	2.3
XTH15F8	XTB15	7.807	1/4	2.000	2.875	2 7/16	11/16	-	4	1/4 - 20NC	3.8
XTH20F5	XTB20	4.805	1/4	2.688	3.688	3 3/16	13/16	-	4	5/16 - 18NC	1.8
XTH20F6	XTB20	5.815	1/4	2.688	3.688	3 3/16	13/16	-	4	5/16 - 18NC	2.4
XTH20F8	XTB20	7.807	1/4	2.688	3.688	3 3/16	13/16	-	4	5/16 - 18NC	3.9
XTH20F10	XTB20	9.827	5/16	2.688	3.688	3 3/16	13/16	-	4	5/16 - 18NC	7.0
XTH20F12	XTB20	11.847	5/16	2.688	3.688	3 3/16	13/16	-	4	5/16 - 18NC	9.7
XTH25F6	XTB25	5.815	5/16	3.188	4.313	3 3/4	1 1/8	-	4	3/8 - 16NC	3.4
XTH25F8	XTB25	7.807	5/16	3.188	4.313	3 3/4	1 1/8	-	4	3/8 - 16NC	5.3
XTH25F10	XTB25	9.827	5/16	3.188	4.313	3 3/4	1 1/8	-	4	3/8 - 16NC	7.8
XTH25F12	XTB25	11.847	5/16	3.188	4.313	3 3/4	1 1/8	-	4	3/8 - 16NC	10.5



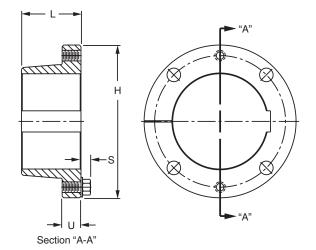


Table No. 2 -- RECOMMENDED WRENCH TORQUE

XT Size	Wrench Torque (in. lbs.)	Cap Screw Size
15	95	1/4"
20	200	5/16"
25	350	3/8"
30	550	7/16"
35	840	1/2"
40	1200	9/16"
45	1680	5/8"
50	3000	3/4"
60	4800	7/8"
70	7200	1"
80	9000	1 1/8"
100	9000	1 1/8"
120	9000	1 1/8"

**Maintenance.** For the first month of operation inspect bushings and capscrews for proper seating at least once a week and thereafter during periodic shut downs.

XT® is a registered trademark of Van Gorp Corporation.

**Table No. 3 -- XT® BUSHING SPECIFICATIONS** 

Bushing		Dimensions			С	ap Screws	Wt.
busning	L	U	Н	S	No.	Size	Lbs.
XTB15	1 1/8	3/8	2 7/8	5/32	4	1/4 x 1	.7
XTB20	1 13/32	15/32	3 3/4	7/32	4	5/16 x 1 1/4	1.5
XTB25	1 7/8	5/8	4 7/16	1/4	4	3/8 x 1 1/2	2.6
XTB30	2 1/16	11/16	5 5/16	9/32	4	7/16 x 1 1/2	4.2
XTB35	2 15/32	25/32	6 5/16	5/16	4	1/2 x 1 3/4	7.4
XTB40	2 13/16	7/8	7 1/8	3/8	4	9/16 x 2	10.5
XTB45	3 5/16	15/16	8	13/32	4	5/8 x 2 1/4	14.8
XTB50	3 3/4	1	10 1/8	15/32	4	3/4 x 2 1/2	27.8
XTB60	4 1/8	1 1/8	11 15/16	9/16	4	7/8 x 2 1/2	42.8
XTB70	4 11/16	1 5/16	13 15/16	5/8	4	1 x 3	66.3
XTB80	5 1/8	1 3/8	15 5/8	11/16	4	1 1/8 x 3 1/2	85.7
XTB100	6 3/16	1 9/16	17 15/16	11/16	6	1 1/8 x 3 1/2	146.0
XTB120	7 1/16	1 3/4	20 5/8	11/16	8	1 1/8 x 3 1/2	216.0

**Table No. 4 -- STOCK XT® BUSHINGS** 

Bushing	Stock		Key
Dusining	Bore	Keyseat	Supplied
XTB15	5/8*, 3/4*, 7/8*	3/16 x 3/32	none
	1*, 1 1/8*, 1 3/16*, 1 1/4*,	1/4 x 1/8	none
	1 7/16*, 1 1/2*	3/8 x 1/8	3/8 x 5/16 x 1 1/8
XTB20	3/4	3/16" x 3/32"	none
	1, 1 3/16, 1 1/4	1/4 x 1/8	none
	1 7/16, 1 1/2, 1 11/16	3/8 x 3/16	none
	1 15/16*, 2*	1/2 x 3/16	1/2 x 7/16 x 1 3/8
XTB25	1, 1 3/16, 1 1/4	1/4 x 1/8	none
	1 7/16, 1 1/2, 1 11/16	3/8 x 3/16	none
	1 15/16, 2, 2 3/16*	1/2 x 1/4	none
	2 7/16*	5/8 x 1/8	5/8 x 7/16 x 1 3/4
XTB30	1 7/16, 1 1/2	3/8 x 3/16	none
	1 15/16, 2 3/16	1/2 x 1/4	none
	2 7/16, 2 11/16*	5/8 x 5/16	none
	2 15/16*	3/4 x 3/16	3/4 x 9/16 x 2
XTB35	1 15/16, 2 3/16	1/2 x 1/4	none
	2 7/16*, 2 11/16*	5/8 x 5/16	none
	2 15/16*	3/4 x 3/8	none
	3 7/16*	7/8 x 5/16	7/8 x 3/4 x 2 1/2
XTB40	2 7/16	5/8 x 5/16	none
	2 15/16	3/4 x 3/8	none
	3 7/16*	7/8 x 7/16	none
	3 15/16*	1 x 3/8	1 x 7/8 x 2 3/4
XTB45	3 7/16	7/8 x 7/16	none
	3 15/16*	1 x 1/2	none
	4 7/16*	1 x 3/8	1 x 7/8 x 3 1/4
XTB50	3 15/16, 4 7/16	1 x 1/2	none
	4 15/16	1 1/4 x 5/8	none
XTB60	5 7/16, 5 1/2	1 1/4 x 5/8	none
	5 15/16, 6	1 1/2 x 3/4	none
XTB70	6 7/16, 6 1/2	1 1/2 x 3/4	none
	6 15/16, 7	1 3/4 x 3/4	none
XTB80	7 1/2	1 3/4 x 3/4	none
	7 15/16, 8	2 x 3/4	none
XTB100	8 1/2, 9	2 x 3/4	none
	9 7/16, 9 1/2, 10	2 1/2 x 7/8	none
XTB120	10 1/2, 11	2 1/2 x 7/8	none
	11 1/2, 12	3 x 1	none

<sup>\*</sup> These bushings are malleable or ductile iron; all others are cast iron.

# **TAPERED BORE TYPE HUBS & BUSHINGS**

### **TAPERED BORE BUSHINGS**



Table No. 5
RECOMMENDED WRENCH TORQUE

		-
Bushing No.	Screws	Wrench Torque* (In. Lbs)
1008 & 1108	1/4" Set Screws	55
1210, 1215 & 1310	3/8" Set Screws	175
1610 & 1615	3/8" Set Screws	175
2012	7/16" Set Screws	280
2517 & 2525	1/2" Set Screws	430
3020 & 3030	5/8" Set Screws	800
3535	1/2" Set Screws	1,000
4040	5/8" Set Screws	1,700
4545	3/4" Set Screws	2,450
5050	7/8" Set Screws	3,100
6050, 7060 & 8065	1 1/4" Set Screws	7,800
10085 & 120100	1 1/2" Set Screws	13,700

**Maintenance**. For the first month of operartion inspect bushings and cap screws for proper seating at least once a week and thereafter during periodic shut downs.

**Table No. 6 -- KEYWAY DIMENSIONS** 

BUSHING	STOCK BORE	BORE	BUSHING KEYWAY	SHAFT KEYWAY
W25 (2517)	1, 1 3/16,	15/16 to 1 1/4	1/4 x 1/8	1/4 x 1/8
(2317)	1 7/16, 1 1/2,	1 5/16 to 1 3/8	5/16 x 5/32	5/16 x 5/32
	1 11/16,	1 7/16 to 1 3/4	3/8 x 3/16	3/8 x 3/16
	1 15/16,	1 13/16 to 2 1/4	1/2 x 1/4	1/2 x 1/4
	2 3/16, 2 7/16	2 5/16 to 2 1/2	*5/8 x 3/16	5/8 x 5/16
K30 (3020)	1 7/16, 1 11/16,	1 5/16 to 1 3/8	5/16 x 5/32	5/16 x 5/32
(3020)	1 15/16,	1 7/16 to 1 3/4	3/8 x 3/16	3/8 x 3/16
	2 3/16, 2 7/16,	1 13/16 to 2 1/4	1/2 x 1/4	1/2 x 1/4
	2 11/16,	2 5/16 to 2 3/4	5/8 x 5/16	5/8 x 5/16
	2 15/16	2 13/16 to 3	*3/4 x 1/4	3/4 x 3/8
K35	1 15/16	1 7/8 to 2 1/4	1/2 x 1/4	1/2 x 1/4
(3535)	2 3/16	2 5/16 to 2 3/4	5/8 x 5/16	5/8 x 5/16
	2 7/16	2 7/8 to 3 1/4	3/4 × 3/8	3/4 x 3/8
	2 15/16	3 5/16 to 3 1/2	*7/8 x 1/4	7/8 x 7/16
K40	2 7/16	2 7/8 to 3 1/4	3/4 × 3/8	3/4 x 3/8
(4040)	2 15/16, 3 7/16,	3 3/8 to 3 5/8	7/8 x 7/16	7/8 x 7/16
	3 15/16	3 7/8 to 4	*1 x 1/4	1 x 1/2
K45	3 7/16	2 7/8 to 3 1/4	3/4 × 3/8	3/4 x 3/8
(4545)	3 15/16	3 3/8 to 3 3/4	7/8 x 7/16	7/8 x 7/16
	4 7/16	3 7/8 to 4 1/4	1 x 1/2	1 x 1/2
		4 3/8 to 4 1/2	*1 x 1/4	1 x 1/2
K50	3 15/16	3 3/8 to 3 5/8	7/8 x 7/16	7/8 x 7/16
(5050)	4 7/16	3 7/8 to 4 1/2	1 x 1/2	1 x 1/2
	4 15/16	4 7/8 to 5	*1 1/4 x 7/16	1 1/4 x5/8
K60		4 7/16	1 x 1/2	1 x 1/2
(6050)		4 15/16 to 5 7/16	1 1/4 x5/8	1 1/4 x5/8
		5 15/16 to 6	1 1/2 x 3/4	1 1/2 x 3/4
K70		4 15/16 to 5 7/16	1 1/4 x 5/8	1 1/4 x 5/8
(7060)		5 15/16 to 6 1/2	1 1/2 x 3/4	1 1/2 x 3/4
		6 15/16 to 7	1 3/4 × 3/4	1 3/4 x 3/4
K80		5 15/16 to 6 1/2	1 1/2 x 3/4	1 1/2 x 3/4
(8050)		6 15/16 to 7 1/2	1 3/4 x 3/4	1 3/4 x 3/4
		8	2 x 3/4	2 x 3/4
* Key to be fu	rnished for these size	_	2 / 0/7	2 / 0/7



# **Q-D® HUBS AND BUSHINGS**



Table No. 7
RECOMMENDED WRENCH TORQUE

ICECOMMINICIA	DED WINEIGE	ITORQUE	
QD HUB	WRENCH TORQUE (IN. LBS.)	WRENCH LENGTH (INCHES)	WRENCH PULL (LBS.)
SF	360	6	60
E	720	12	60
F	900	12	75
JS	1620	12	135
MS	2700	15	180
NS	3600	20	180
PS	5400	30	180
ws	7200	36	200
SS	9000	48	188

**Maintenance**. For the first month of operartion inspect bushings and cap screws for proper seating at least once a week and thereafter during periodic shut downs.

**Table No. 8 -- KEYWAY DIMENSIONS** 

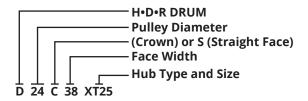
SF E	BORES - 1, 1 3/16 - 1 7/16, 1 1/2, 1 11/16 1 15/16, 2 3/16 - 2 7/16*	RANGE  1/2 to 9/16  5/8 to 7/8  15/16 to 1 1/4  1 5/16 to 1 3/8  1 7/16 to 1 3/4  1 13/16 to 2 1/4  2 5/16 to 2 3/8	1/8 x 1/16 3/16 x 3/32 1/4 x 1/8 5/16 x 5/32 3/8 x 3/16	1/8 x 1/16 3/16 x 3/32 1/4 x 1/8 5/16 x 5/32
	1 7/16, 1 1/2, 1 11/16 1 15/16, 2 3/16 -	5/8 to 7/8 15/16 to 1 1/4 1 5/16 to 1 3/8 1 7/16 to 1 3/4 1 13/16 to 2 1/4	3/16 x 3/32 1/4 x 1/8 5/16 x 5/32 3/8 x 3/16	3/16 x 3/32 1/4 x 1/8 5/16 x 5/32
E	1 7/16, 1 1/2, 1 11/16 1 15/16, 2 3/16 -	15/16 to 1 1/4 1 5/16 to 1 3/8 1 7/16 to 1 3/4 1 13/16 to 2 1/4	1/4 x 1/8 5/16 x 5/32 3/8 x 3/16	1/4 x 1/8 5/16 x 5/32
E	1 7/16, 1 1/2, 1 11/16 1 15/16, 2 3/16 -	15/16 to 1 1/4 1 5/16 to 1 3/8 1 7/16 to 1 3/4 1 13/16 to 2 1/4	1/4 x 1/8 5/16 x 5/32 3/8 x 3/16	1/4 x 1/8 5/16 x 5/32
E	1 7/16, 1 1/2, 1 11/16 1 15/16, 2 3/16 -	1 7/16 to 1 3/4 1 13/16 to 2 1/4	3/8 x 3/16	
E	1 15/16, 2 3/16 -	1 13/16 to 2 1/4		0.00
E	1 15/16, 2 3/16 -			3/8 x 3/16
E	-		1/2 x 1/4	1/2 x 1/4
E	2 7/16* -		5/8 x 5/16	5/8 x 5/16
Е	_	2 7/16 to 2 1/2	5/8 x 1/8	5/8 x 5/16
		7/8	3/16 x 3/32	3/16 x 3/32
	_	15/16 to 1 1/4	1/4 x 1/8	1/4 x 1/8
	_	1 5/16	5/16 x 5/32	5/16 x 5/32
	1 7/16, 1 11/16	1 7/16 to 1 3/4	3/8 x 3/16	3/8 x 3/16
	1 15/16, 2 3/16	1 13/16 to 2 1/4	1/2 x 1/4	1/2 x 1/4
	2 7/16, 2 11/16	2 5/16 to 2 3/4	5/8 x 5/16	5/8 x 5/16
	·	2 13/16 to		
	2 15/16	2 15/16	3/4 x 1/8	3/4 x 3/8
F	-	1 to 1 1/4	1/4 x 1/8	1/4 x 1/8
	-	1 5/16 to 1 3/8	5/16 x 5/32	5/16 x 5/32
	-	1 7/16 to 1 3/4	3/8 x 3/16	3/8 x 3/16
	1 15/16, 2 3/16	1 13/16 to 2 1/4	1/2 x 1/4	1/2 x 1/4
	2 7/16	2 5/16 to 2 3/4	5/8 x 5/16	5/8 x 5/16
	2 15/16	2 13/16 to 3 1/4	3/4 x 3/8	3/4 x 3/8
	-	3 5/16 to 3 1/8	7/8 x 7/16	7/8 x 7/16
	3 7/16*	3 7/16	7/8 x 3/16	7/8 x 7/16
JS	-	1 1/2 to 1 3/4	3/8 x 3/16	3/8 x 3/16
	-	1 13/16 to 2 1/4	1/2 x 1/4	1/2 x 1/4
	2 7/16	2 5/16 to 2 3/4	5/8 x 5/16	5/8 x 5/16
	2 15/16	2 13/16 to 3 1/4	3/4 x 3/8	3/4 x 3/8
	3 7/16	3 5/16 to 3 3/4	7/8 x 7/16	7/8 x 7/16
	-	3 13/16 to 3 7/8	1 x 1/2	1 x 1/2
	3 15/16*	3 15/16	1 x 1/8	1 x 1/2
MS	-	2 to 2 1/4	1/2 x 1/4	1/2 x 1/4
	-	2 5/16 to 2 3/4	5/8 x 5/16	5/8 x 5/16
	-	2 13/16 to 3 1/4	3/4 x 3/8	3/4 x 3/8
	3 7/16	3 5/16 to 3 3/4	7/8 x 7/16	7/8 x 7/16
	3 15/16, 4 7/16	3 13/16 to 4 1/2	1 x 1/2	1 x 1/2
NS	-	2 7/16 to 2 3/4	5/8 x 5/16	5/8 x 5/16
	-	2 13/16 to 3 1/4	3/4 x 3/8	3/4 x 3/8
	-	3 5/16 to 3 3/4	7/8 x 7/16	7/8 x 7/16
	-	3 13/16 to 4 1/2	1 x 1/2	1 x 1/2
	4 15/16	4 9/16 to 5	1 1/4 x 5/8	1 1/4 x 5/8
PS	•	2 15/16 to 3 1/4	3/4 x 3/8	3/4 x 3/8
	-	3 5/16 to 3 3/4	7/8 x 7/16	7/8 x 7/16
	-	3 13/16 to 4 1/2	1 x 1/2	1 x 1/2
	5 7/16	4 9/16 to 5 1/2	1 1/4 x 5/8	1 1/4 x 5/8
	5 15/16*, 6*	5 9/16 to 6	1 1/2 x 1/4	1 1/2 x 3/4
ws	-	4 7/16 to 4 1/2	1 x 1/2	1 x 1/2
	-	4 9/16 to 5 1/2	1 1/4 x 5/8	1 1/4 x 5/8
	5 15/16, 6, 6 1/2	5 9/16 to 6 1/2	1 1/2 x 3/4	1 1/2 x 3/4
	7	6 9/16 to 7	1 3/4 x 3/4	1 3/4 x 3/4
	7 1/2*	7 1/16 to 7 1/2	1 3/4 x 1/4	1 3/4 x 3/4
	8*	7 9/16 to 8	2 x 1/4	2 x 3/4
SS	-	6 to 6 1/2	1 1/2 x 3/4	1 1/2 x 3/4
	-	6 9/16 to 7 1/2	1 3/4 x 3/4	1 3/4 x 3/4
	8	7 9/16 to 8 1/4	2 x 3/4	2 x 3/4
	8 1/2*, 9*	8 5/16 to 9	2 x 3/4	2 x 3/4
	9 1/2*, 10*	9 1/6 to 10	2 1/2 x 1/4	2 1/2 x 7/8

<sup>\*</sup> Key to be furnished for these sizes only.

# H·D·R® CONVEYOR PULLEYS



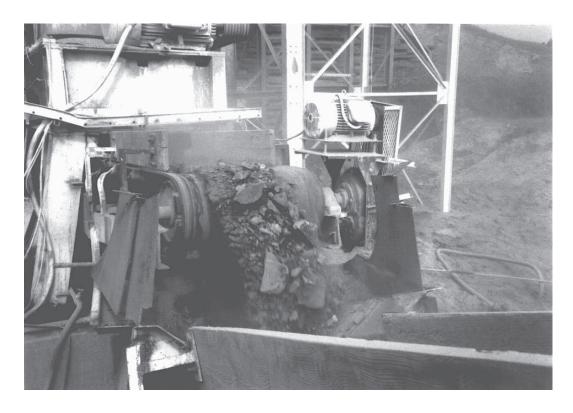
### **Part Number Example**



# **HEAVY DUTY REINFORCED**

The Van Gorp H•D•R® Rims of pulleys 14" in diameter and larger are formed in custom-designed crowning rolls by a cold "forming" process that increases the strength of the steel. They feature two-rim-half construction, an exclusive, perfected technique that permits the use of internal discs in crown and straight face pullevs...and thereby creates a stronger, more rounded finished pulley product. End discs are cut to micrometer calibration. Rims, discs and hugs are all steel and are fused together by a deep penetrating, submerged arc welding process with back-up bars used under the longitudinal rim welds. The result? A continuously welded drum construction, with its built-in barrier against dirt, water and steam; less maintenance; extended pulley service; and most important, a dramatic reduction in radial deformation and longitudinal deflection in the rim.

Radial deformation is a particularly serious problem when a pulley is used in a low arc of contact and high tension application. The addition of internal discs, plus heavier-than-standard construction, not only permits a VAN® GORP H•D•R® Pulley to work on any arc of construction, but also increases its moment of inertia, giving it additional strength and rigidity while decreasing the degree of longitudinal deflection. Pulleys 14" in diameter and larger, 26"-44" wide have one internal disc; pulleys 46"-64" wide have two internal discs; and pulleys 65" 46"-64" wide have two internal discs; and pulleys 65" and wider have three or more internal discs.





# **XT-REME™ DRUM PULLEY**

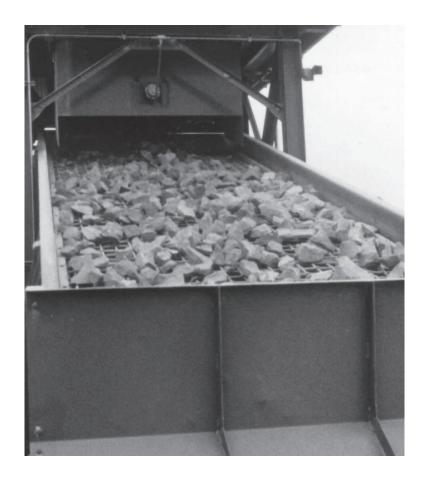


Conveyor systems today are moving faster and carrying higher tonnage than ever before. When these systems need drum pulleys which exceed normal ANSI/CEMA service factors, an XT-reme solution is required.

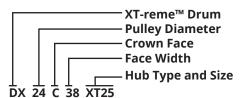
The Van Gorp XT-reme™ drum pulley is designed with heavier and discs than normal ANSI/CEMA designed pulleys. They have been designed for longer life with heavy end discs (rigid design) to minimize end disc stress due to shaft bending.

The XT-reme™ drum features the Van Gorp XT® hub which is the premier hub and bushing system available for conveyor pulleys. The XT® hub minimizes end disc pre-stress by using a unique 2 inch per foot self locking taper. Less pre-stress means that the XT-reme™ drum will run longer with less chance of down time than with other types of conveyor pulleys.

The XT-reme™ drum is available in diameters ranging from 10 to 50 and face widths to 76. Many types of lagging are available including SBR, Neoprene and Static Conductive Neoprene.



### **Part Number Example**



# MINE DUTY DRUM PULLEY

Mine Duty drum pulleys were originally designed for the underground coal industry for longwall mining. Longwall conveyors have belt tensions that change depending on the varying length of the conveyor. The conveyor gets longer as it is extended along the cut in the coal seam. The uncertainty in the loading conditions leads to a conveyor pulley design that is actually stronger than the shaft it is mounted on.

Because of their heavy duty construction and proven track record in the underground industry, mine duty pulleys are often used above ground to take advantage of their added service factor. Van Gorp standard mine duty pulleys are available in diameters ranging from 12" to 60" and face widths to 76". Many types of lagging are available including SBR, Neoprene and Static Conductive Neoprene.

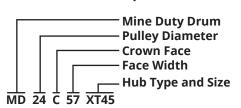
There are no ANSI/CEMA standards that govern the load ratings or material thickness of Mine Duty pulleys. The following chart compares the additional service factor that the Van Gorp Mine Duty has compared to the ANSI/CEMA ratings for a standard pulley.



Pulley Size	Shaft Diameter	Bearing Centers	ANSI/CEMA Load Rating	Mine Duty Service Factor
14 X 26	3 7/16"	32"	11,600	1.58
18 X 32	4 7/16"	40"	19,000	2.06
24 X 44	5 7/16"	54"	26,600	2.01
36 X 57	7"	69"	49,000	2.19

**NOTE:** The ANSI/CEMA ratings represents the maximum load for the shaft for a 8,000 psi bending stress. The service factor represents the ratio of the pulley load rating to the shaft load rating.

### **Part Number Example**





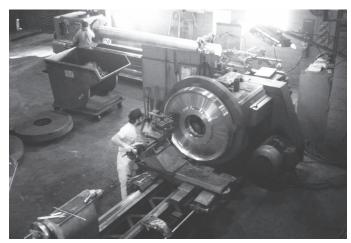


# **TURBINE DISC PULLEY**

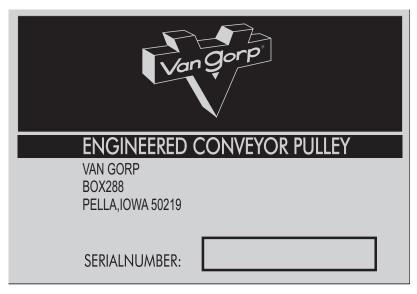
Van Gorp's Turbine Discs are "State-of-the-Art" conveyor pulleys used on high tonnage steel cable belt systems where belt tensions can often exceed 200,000 pounds. These systems require a special pulley designed to minimize the inherent stresses in a pulley which result from the rolling and welding processes during fabrication. The integral hub-end disc turbine replaces the critical hub to end disc welds of a regular drum pulley with a large transitional radius designed to minimize stress. The only weld on the end disc is where it is welded to the rim which is at the lowest stress point of the end disc.

Turbine Disc Drum Pulleys are available from Van Gorp with keyless locking assemblies up to 27 1/2" bore.







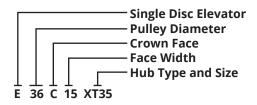


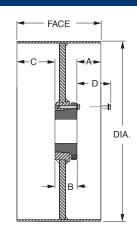
All Double Drum and Turbine Type End Disc Pulleys are provided with a Serialized Metal Tag.

# XT® ELEVATOR (SINGLE DISC) PULLEYS



### **Part Number Example**





With continuously welded disc-to-rim construction and compression type hubs, Van Gorp has turned the weak link in most elevator conveyor systems into the strong point. Now, you get a super strength, one piece, single disc steel elevator pulley, superior to any other on the market today. Here's why: with a Van Gorp Pulley, you get a stronger, heavy-duty component...with high compression hub and bushing. (The XT® hub and bushing was selected because XT® holding power is unequaled in pulley applications...and "pulley walking" on the shaft IS NOT a common problem with this hub design.) Intermittent welding of the disc to the rim is common in most elevator pulleys. However, at Van Gorp, we continuously weld the disc to the rim. Plus, the leading and trailing edges of the rim are formed before rolling. This forming process minimizes the rim seam's flat spot.

**Table No. 23 -- Bushing Location Dimensions** 

Dia.	Bushing		8" Face Dimer				9" Face Dimer				11" Fac Dimer	e Width				e Width				e Width				e Width	
		Α	В	С	D	Α	В	С	D	Α	В	С	D	Α	В	С	D	Α	В	С	D	Α	В	С	D
16"	XTB20	3 1/32	1 13/32	3 9/16	1 7/16	3 17/32	1 13/32	4 1/6	1 7/16	4 17/32	1 13/32	5 1/16	1 7/16	5 17/32	1 13/32	6 1/16	1 7/16	6 17/32	1 13/32	7 1/16	1 7/16	7 1/32	1 13/32	7 9/16	1 7/16
	XTB25	2 13/16		3 5/16	1 31/32	3 5/16	1 7/8	3 13/16	1 31/32	4 5/16	1 7/8	4 13/16	1 31/32	5 5/16	1 7/8	5 13/16	1 31/32	6 5/16	1 7/8	6 13/16	1 31/32	6 13/16	1 7/8	7 5/16	1 31/32
	XTB30	2 11/16	2 1/16	3 1/4	1 25/32	3 3/16	2 1/16	3 3/4	1 25/32	4 3/16	2 1/16	4 3/4	1 25/32	5 3/16	2 1/16	5 3/4	1 25/32	6 3/16	2 1/16	6 3/4	1 25/32	6 11/16	2 1/16	7 1/4	1 25/32
	XTB35	2 15/32	2 15/32	3 1/16	2 1/16	2 31/32	2 15/32	3 9/16	2 1/16	3 31/32	2 15/32	4 9/16	2 1/16	4 31/32	2 15/32	5 9/16	2 1/16	5 31/32	2 15/32	6 9/16	2 1/16	6 15/32	2 15/32	7 1/16	2 1/16
	XTB40	2 5/16	2 13/16	2 7/8	2 11/32	2 13/16	2 13/16	3 3/8	2 11/32	3 13/16	2 13/16	4 3/8	2 11/32	4 13/16	2 13/16	5 3/8	2 11/32	5 13/16	2 13/16	6 3/8	2 11/32	6 6/16	2 13/16	6 7/8	2 11/32
18	XTB20	3 1/32	1 13/32	3 9/16	1 7/16	3 17/32	1 13/32	4 1/6	1 7/16	4 17/32	1 13/32	5 1/16	1 7/16	5 17/32	1 13/32	6 1/16	1 7/16	6 17/32	1 13/32	7 1/16	1 7/16	7 1/32	1 13/32	7 9/16	1 7/16
	XTB25	2 13/16	1 7/8	3 5/16	1 31/32	3 5/16	1 7/8	3 13/16	1 31/32	4 5/16	1 7/8	4 13/16	1 31/32	5 5/16	1 7/8	5 13/16	1 31/32	6 5/16	1 7/8	6 13/16	1 31/32	6 13/16	1 7/8	7 5/16	1 31/32
	XTB30	2 11/16	2 1/16	3 1/4	1 25/32	3 3/16	2 1/16	3 3/4	1 25/32	4 3/16	2 1/16	4 3/4	1 25/32	5 3/16	2 1/16	5 3/4	1 25/32	6 3/16	2 1/16	6 3/4	1 25/32	6 11/16	2 1/16	7 1/4	1 25/32
	XTB35	2 15/32	2 15/32	3 1/16	2 1/16	2 31/32	2 15/32	3 9/16	2 1/16	3 31/32	2 15/32	4 9/16	2 1/16	4 31/32	2 15/32	5 9/16	2 1/16	5 31/32	2 15/32	6 9/16	2 1/16	6 15/32	2 15/32	7 1/16	2 1/16
	XTB40	2 15/16	2 15/16	2 7/8	2 11/32	2 13/16	2 13/16	3 3/8	2 11/32	3 13/16	2 13/16	4 3/8	2 11/32	4 13/16	2 13/16	5 3/8	2 11/32	5 13/16	2 13/16	6 3/8	2 11/32	6 6/16	2 13/16	6 7/8	2 11/32
20	XTB25	2 25/32	1 7/8	3 11/32	1 31/32	3 9/32	1 7/8	3 27/32	1 31/32	4 9/32	1 7/8	4 27/32	1 31/32	5 9/32	1 7/8	5 27/32	1 31/32	6 6/32	1 7/8	6 27/32	1 31/32	6 25/32	1 7/8	7 11/32	1 31/32
	XTB30	2 21/32	2 1/16	3 9/32	1 25/32	3 5/32	2 1/16	3 25/32	1 25/32	4 5/32	2 1/16	4 25/32	1 25/32	5 5/32	2 1/16	5 25/32	1 25/32	6 5/32	2 1/16	6 25/32	1 25/32	6 21/32	2 1/16	7 9/32	1 25/32
	XTB35	2 7/16	2 15/32	3 3/32	2 1/16	2 15/16	2 15/32	3 19/32	2 1/16	3 15/16	2 15/32	4 19/32	2 1/16	4 15/16	2 15/32	5 19/32	2 1/16	5 15/16	2 15/32	6 19/32	2 1/16	6 7/16	2 15/32	7 3/32	2 1/16
	XTB40	2 9/32	2 13/16	2 29/32	2 11/32	2 25/32	2 13/16	3 13/32	2 11/32	3 25/32	2 13/16	4 13/32	2 11/32	4 25/32	2 13/16	5 13/32	2 11/32	5 25/32	2 13/16	6 13/32	2 11/32	6 9/32	2 13/16	6 29/32	2 11/32
	XTB45	2 1/32	3 5/16	2 21/32	2 5/8	2 17/32	3 5/16	3 5/32	2 5/8	3 17/32	3 5/16	4 5/32	2 5/8	4 17/32	3 5/16	5 5/32	2 5/8	5 17/32	3 5/16	6 5/32	2 5/8	6 1/32	3 5/16	6 21/32	2 5/8
24	XTB30	2 21/32	2 1/16	3 9/32	1 25/32	2 5/32	2 1/16	3 25/32	1 25/32	4 5/32	2 1/16	4 25/32	1 25/32	5 5/32	2 1/16	5 25/32	1 25/32	6 5/32	2 1/16	6 25/32	1 25/32	6 21/32	2 1/16	7 9/32	1 25/32
	XTB35	2 7/16	2 15/32	3 3/32	2 1/16	2 15/16	2 15/32	3 19/32	2 1/16	3 15/16	2 15/32	4 19/32	2 1/16	4 15/16	2 15/32	5 19/32	2 1/16	5 15/16	2 15/32	6 19/32	2 1/16	6 7/16	2 15/32	7 3/32	2 1/16
	XTB40	2 9/32	2 13/16	2 29/32	2 11/32	2 25/32	2 13/16	3 13/32	2 11/32	3 25/32	2 13/16	4 13/32	2 11/32	4 25/32	2 13/16	5 13/32	2 11/32	5 25/32	2 13/16	6 13/32	2 11/32	6 9/32	2 13/16	6 29/32	2 11/32
	XTB45	2 1/32	3 5/16	2 21/32	2 5/8	2 17/32	3 5/16	3 5/32	2 5/8	3 17/32	3 5/16	4 5/32	2 5/8	4 17/32	3 5/16	5 5/32	2 5/8	5 17/32		6 5/32	2 5/8	6 1/32	3 5/16	6 21/32	2 5/8
	XTB50	1 13/16		2 7/16	2 31/32			2 15/16			3 3/4	3 15/16		4 5/16	3 3/4	4 15/16		5 5/16	3 3/4		2 31/32		3 3/4	6 7/16	
30	XTB35	2 13/32			2 1/16		2 15/32	3 5/8			2 15/32	4 5/8		4 29/32					2 15/32			6 13/32			2 1/16
	XTB40				2 11/32		2 13/16		2 11/32		2 13/16		2 11/32	4 3/4	2 13/16		2 11/32	5 3/4	2 13/16		2 11/32				2 11/32
	XTB45	2		2 11/16		2 1/2	3 5/16	3 3/16	2 5/8	3 1/2	3 5/16	4 3/16	2 5/8	4 1/2	3 5/16	5 3/16	2 5/8	5 1/2	3 5/16	6 3/16	2 5/8	6		6 11/16	
	XTB50	1 13/16		2 7/16	2 31/32	2 5/16		2 15/16				3 15/16		4 5/16	3 3/4	4 15/16		5 5/16	3 3/4		2 31/32		3 3/4		2 31/32
	XTB60	1 9/16	4 1/8	2 5/16	3 1/32	2 1/16		2 13/16		3 1/16		3 13/16		4 1/16	4 1/8	4 13/16		5 1/16	4 1/8	5 13/16		5 9/16	4 1/8	6 5/16	3 1/32
36	XTB35	2 13/32		3 1/8	2 1/16		2 15/32	3 5/8		3 29/32		4 5/8	2 1/16	4 29/32						6 5/8		6 13/32			2 1/16
	XTB40				2 11/32		2 13/16		2 11/32		2 13/16	4 7/16	2 11/32	4 3/4	2 13/16		2 11/32	5 3/4	2 13/16		2 11/32				2 11/32
	XTB45	2		2 11/16		2 1/2	3 5/16	3 3/16	2 5/8	3 1/2	3 5/16	4 3/16	2 5/8	4 1/2	3 5/16	5 3/16	2 5/8	5 1/2	3 5/16	6 3/16	2 5/8	6		6 11/16	
	XTB50 XTB60	1 13/16		2 7/16 2 5/16	2 31/32 3 1/32	2 5/16 2 1/16		2 15/16		3 5/16	3 3/4			4 5/16	3 3/4	4 15/16			3 3/4		2 31/32	5 13/16	3 3/4	6 7/16 6 5/16	2 31/32
		2 13/32	4 1/8					2 13/16	3 1/32			3 13/16		4 1/16	4 1/8	4 13/16		5 1/16	4 1/8	_	3 1/32		4 1/8		
42	XTB35			3 1/8	2 1/16		2 15/32	3 5/8				4 5/8	2 1/16	4 29/32		5 5/8			2 15/32	6 5/8		6 13/32			2 1/16
	XTB40 XTB45				2 11/32		2 13/16	3 7/16	2 11/32		2 13/16		2 11/32		2 13/16 3 5/16		2 11/32 2 5/8	5 3/4	2 13/16		2 11/32	6 1/4			2 11/32
		2		2 11/16		2 1/2	3 5/16		2 5/8	3 1/2	3 5/16	4 3/16 3 15/16	2 5/8	4 1/2		5 3/16			3 5/16	6 3/16	2 5/8	°		6 11/16	
	XTB50	1 13/16			2 31/32			2 15/16						4 5/16		4 15/16			3 3/4		2 31/32		3 3/4		
	XTB60	1 9/16	4 1/8	2 5/16	3 1/32	2 1/16	4 1/8	2 13/16	3 1/32	3 1/16	4 1/8	3 13/16	3 1/32	4 1/16	4 1/8	4 13/16	3 1/32	5 1/16	4 1/8	5 13/16	3 1/32	5 9/16	4 1/8	6 5/16	3 1/32

Contact factory if other hubs required

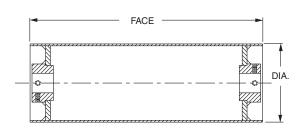


# UNIT HANDLING FINISHED BORE DRUM CONVEYOR PULLEYS



Van Gorp Finished Bore Conveyor Pulleys are designed to meet the demands for all types of package handling conveyor service including mail handling, bag handling and various warehousing requirements. They are constructed of Steel Tubing mechanically expanded to insure a true crown, with end discs continuously welded to rims to exclude foreign material.

Straight Face Pulleys are also available; Crown Face supplied unless otherwise specified.



### **Part Number Example**

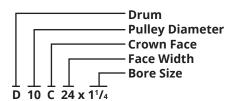
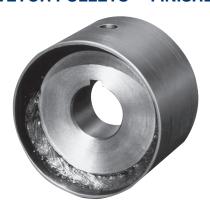


Table No. 27 -- Standard Sizes and Weights

Pulley		Face Width - Average Weight in Pounds										
Dia.	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"		
4"	4	5	6	6	7	7	8	8	9	10		
5	8	9	10	11	12	13	14	15	16	17		
6	9	11	12	13	14	16	17	18	19	21		
8	17	19	21	22	24	26	28	30	32	34		
10	24	27	29	32	34	36	39	41	43	45		

Pulley		Face Width - Average Weight in Pounds										
Dia.	26"	28"	30"	32"	34"	36"	38"	40"	42"	44"		
4"	10	11	12	12	13	13	14	14	15	15		
5	18	19	20	21	22	23	25	26	27	28		
6	22	23	24	26	27	28	29	31	32	33		
8	36	38	40	42	43	45	47	49	51	53		
10	48	51	53	55	58	60	63	65	67	70		

# STOCK MACHINED CROWNED CONVEYOR PULLEYS -- FINISHED BORE





	_				- 10 -				
Part	Type	Stock I	Bore Mar	ked "X"			WtLbs.		
No.	туре	3/8	3/4	1	Dia.	Face	L	С	VVILUS.
2CP2	1	Х	Х	-	2"	2"	1"	7/16"	1.5
2CP3	1	Х	Х	-	2	3	1	15/16	1.7
2CP4	1	Х	Х	Х	2	4	1	1 7/16	1.9
3CP2	1	Х	Х	-	3	2	1	7/16	2.4
3CP3	1	Х	Х	Х	3	3	1	15/16	2.7
3CP4	1	Х	Х	Х	3	4	1	1 7/16	3.0
3CP5	2	Х	Х	Х	3	5	1	1/2	4.3



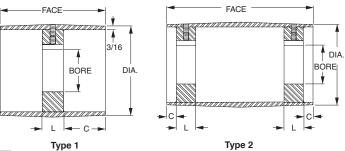


Table No. 29 Standard Keyseats

Bore Range	Keyseat
5/8" - 7/8"	3/16" x 3/32"
15/16 - 1	1/4 x 1/8

# UNIT HANDLING MACHINED CROWN TRUE TURN® PULLEYS



Built with heavy wall tubing and machined in a lathe, all Van Gorp True Turn® Conveyor Pulleys undergo a quality, precision method of construction that results in a heavy-duty pulley, machined for close tolerance and accurate pulley concentricity.

Each component has been built to an exact manufacturing requirement. A jig is used to properly position the hubs and end discs inside the tube. The components are firmly secured in this jigged position and all necessary bonding welds are completed. This jigging method, plus the use of high-quality steel throughout, ensures you of a continuously welded drum pulley construction, with maximum strength to weight ratio, true concentricity, and the virtual elimination of maintenance problems resulting from dirt, water and steam.

Available in 4" -5" -6" -8" diameter sizes.

### **BUSHING LOCATION DIMENSIONS**

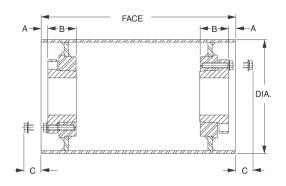
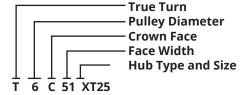


Table No. 30 XT® Bushings

ſ	Bushing		Dimensions						
ı	Busining	Α	В	С					
	XT15	3/4	1 1/8	7/16					
	XT20	5/8	1 13/32	3/4					
ĺ	XT25	1/2	1 7/8	1 1/2					

### **Part Number Example**



True Turn® Pulleys with Q-D® and Tapered Bore Bushings are available on application. Contact the Factory.

### **CUSTOM DESIGNED PULLEYS FOR PACKAGE HANDLING**



### Your design or ours?

We will design pulleys to meet your application needs, or we will manufacture to your prints and specifications.

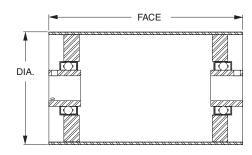






# UNIT HANDLING CONVEYOR ROLLERS WITH ER BEARINGS





Van Gorp conveyor rollers are designed to meet the demands for all types of package handling conveyor service including mail handling, bag handling and various warehousing requirements.

These conveyor rollers are constructed of steel tubing mechanically expanded to insure a true crown, with end disc continuously welded to rims to exclude foreign material. Straight face pulleys are also available. Crown face will be supplied unless specified otherwise.

**Table No. 31 -- Standard Sizes & Weights** 

Pulley Bore		Face Width - Average Weight in Pounds											
Dia	Range	10	12	14	16	18	20	22	24	26			
4	1/2-1 7/16	7	8	9	9	10	10	11	11	12			
5	1/2-1 7/16	13	14	15	16	17	18	19	20	21			
6	1/2-1 15/16	17	18	20	21	22	23	25	26	27			
8	1/2-1 15/16	29	31	33	35	37	39	41	42	44			

Pulley Bore		Face Width - Average Weight in Pounds											
Dia.	Range	28	30	32	34	36	38	40	42	44			
4	1/2-1 7/16	13	13	14	14	15	15	16	17	17			
5	1/2-1 7/16	22	23	24	25	26	27	28	29	30			
6	1/2-1 15/16	28	30	31	32	34	35	36	37	38			
8	1/2-1 15/16	46	48	50	52	54	56	58	59	61			

### **ROLLERS WITH ER BEARINGS**

Van Gorp also offers rollers built to your specifications or designed by our engineers to meet your application needs. Standard rollers are available in diameters of 21/8", 2 3/4", 3 1/2" and 41/2" with face widths 18" to 60".



Rollers are available with standard crown, trapazoidal crown, and straight faces.

# **DEAD SHAFT PULLEYS**

Van Gorp's Dead-Shaft Pulleys use a removable piloted flange bearing that easily fits over the shaft and bolts to the end-disc of the conveyor pulley. Dead-Shaft Pulleys can be made in a variety of drum and wing pulley sizes to fit the needs of the application.



Dead shaft pulleys are different from traditional pulleys. The shaft is held fixed (dead) and not allowed to rotate. The pulley is mounted on bearings and rotates around the fixed shaft.

There are several advantages to this design:

- The shaft does not rotate so there is no rotational shaft fatigue.
- Shaft and bearing diameters can be downsized from traditional designs.
- Reduced pulley stress because self-aligning bearings absorb the shaft bending moment so it is not transmitted to the pulley end discs.
- Pre-stressing of pulley end discs during the shaft mounting process caused by bushings is eliminated.
- Piloted flange bearings are well known commercial brands and readily available if they need to be replaced.

Contact the Van Gorp engineering department for additional information on how these unique pulleys can be used in you're application.

1-800-VAN-GORP or vangorp@vangorp.biz



# TURN-CLEAN™ WING PULLEYS



# TURN CLEAN™ WING PULLEYS REDUCES CLEANING PROBLEMS — PROTECTS CONVEYOR BELTS

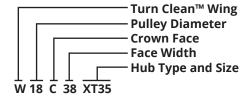
If you've ever cleaned off material build-up from a solid face pulley, you can appreciate the expense and the danger involved. That's why Van Gorp built the exclusive TURN CLEAN™ Pulley. Pulley rotation automatically starts the self-cleaning action, discharging foreign material to the side of the conveyor. Its strong double cone design features individual gussets welded

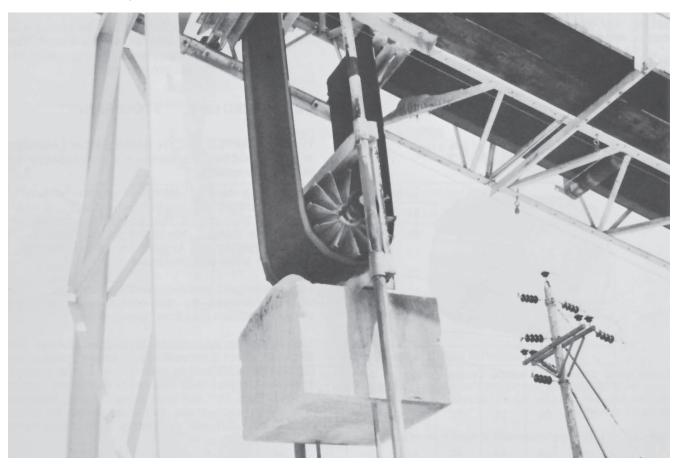
continuously to each wing and hub for longer life. This unique construction prevents belt misalignment and belt wear because it reduces the possibility of material between the belt and pulley.

Formed contact bars, which are welded to each wing, are the only pulley parts that come in contact with the belt, creating a self-cleaning action which reduces belt strain and wear.

Available in standard sizes from 8" to 36" in diameter and face widths from 12" to 76". Custom pulleys also made to your specifications.

### **Part Number Example**





# **XT-REME™ WING PULLEYS**

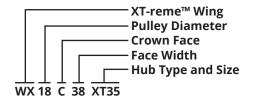
Wing pulleys, in general, are designed to be used in the dirtiest and most abrasive part of the conveyor system. Their self cleaning action is required to reduce material build up between the pulley and the belt which can cause belt misalignment and belt wear. When these conditions become so abusive that they actually reduce the life of a conventional wing pulley, an XT-reme™ solution to the problem

Van Gorp XT-reme™ wings have heavier contact bars, heavier wings and have reinforcing rings on all sizes. It also features the XT® system which is the premier hub and bushing system for conveyor pulleys.

The XT-reme™ wing is available in diameters ranging from 12 to 36 and face widths 12 to 76. It is also available with new Van Gorp ♦DB♦ replaceable wing lagging for even more wing pulley life.

# ing ild h

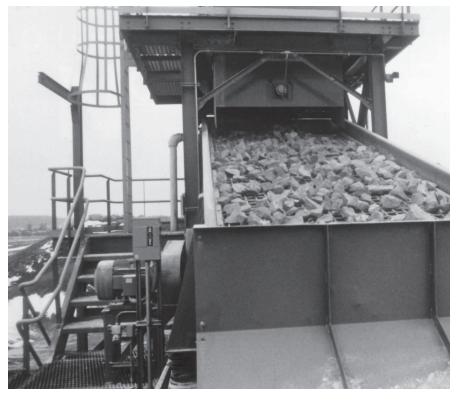
### **Part Number Example**



### **FEATURES AND BENEFITS**

is required.

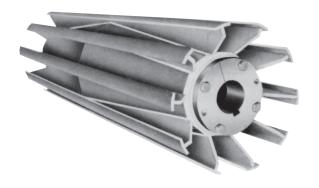
- Heavier contact bar for added wear in abrasive applications.
- Heavier wing for a greater load carrying service factor.
- Reinforcing rings to minimize the bending of the wing tips.
- XT® Hub and bushings with superior torque and thrust ratings.





# **EXTRA HEAVY DUTY WING AND QUARRY DUTY WING PULLEYS**

### **EXTRA HEAVY (MINE DUTY) WING PULLEYS**



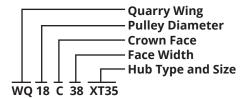
### AVAILABLE ON XT®, TAPERED BORE OR Q-D® HUBS.

**RUGGED FOR LONG LIFE** — Built for the stress and strain of big loads...or unusually long, large conveyor systems. All welded steel construction. Outer bars have a long radius surface for maximum traction and minimum belt wear. All pulleys are jig welded, and accurate concentricity is assured because the contact bar is hydraulically pressed against the exterior wing edge and then welded together. Individual gussets are welded continuously to each wing and the hub forming a strong double-cone design.

### **QUARRY DUTY WING**



### Part Number Example



Van Gorp Quarry Duty Wings are designed for long life in the most rugged applications. Most wing pulleys eventually need to be replaced because of excessive contact bar wear. Van Gorp's 3/4 inch thick by 2 inch wide Quarry Duty contact bars are much thicker than necessary to meet CEMA load ratings and can add many years of life to a pulley. Longer life results in reduced down time and increased productivity (profit). The contact bars are welded to heavy duty wings that are welded to thick steel end discs. The end discs are submerged arc welded to XT hubs to give you the strongest wing pulley design possible.

Quarry Duty Wings are available in diameters ranging from 16 through 60" and face widths 12" to 76".

# SPIRAL WING AND DRUM PULLEYS

### **SPIRAL WING**



AVAILABLE ON XT®, TAPERED BORE OR Q-D® HUBS.

The spiral wing pulley is formed by a pair of flat steel bars helically wound towards one another with intervals between the convolutions of each. Individual gussets are welded continuously to each wing and the hub forming a strong doublecone design. Rotation of the pulley automatically starts the self-cleaning action, discharging foreign material to the side of the conveyor.

No more belt misalignment because the multi-wing construction decreases the possibility of any material build up between the belt and pulley.

AVAILABLE IN CROWN OR STRAIGHT FACE.

SIZES: 10" THRU 60" Diameters and 12" THRU 76" Face.

NOTE: The finished diameter will be greater than the specified diameter by twice the spiral bar thickness. Example: A 12" diameter spiral wing will actually be 12 3/4" over the spiral.

The Van Gorp Spiral Drum Pulley is formed by a pair of vertical steel bars helically wound around a heavy-duty reinforced drum pulley (H•D•R®) and towards one another with intervals between the convolutions of each. This unique design reduces the possibility of material build up between the belt and the pulley in applications where self-cleaning wing type pulleys cannot be used.

Rotation of the pulley automatically starts the cleaning action, discharging foreign material to the side of the conveyor.

All pulleys are made with XT®, Tapered Bore or Q-D® Hubs, which permit the simplest, surest and most modern installation. Hubs are inset from the pulley end, and this inset permits the bushing to be easily removed in small confined spaces.

AVAILABLE IN CROWN OR STRAIGHT FACE. SIZES: 12" THRU 44" Diameters up to 76" face width.

### SPIRAL DRUM







### **♦DB♦ WING LAGGING**

DB♦ Wing Lagging has been designed to fit the standard Turn Clean™, XT-reme™ and Heavy Duty wing type pulleys. Tough 65 durometer - SBR (styrene butadiene) rubber hot vulcanized to a formed heavy gauge metal channel makes DB♦ ready to extend the life of a Turn Clean™ wing pulley in even the most abrasive applications. DB♦ will not only supply added life to your pulleys, it will reduce belt wear and can be simply and economically replaced in the field.

### **INSTALLATION AND REPLACEMENT PROCEDURES**

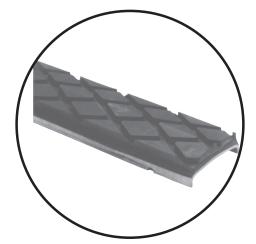
1. Remove the Worn Rubber Lagging

All tac welds between the replaceable lagging and the contact bar are broken using a hand chisel or hand grinder.

# 2. Clean Remaining Weld from Sides of Contact Bar

Using a hand grinder or chisel, clean all remaining weld from the sides of the existing contact bar. Remove any rust, dirt, or scale buildup from the sides and top of the contact bar.

3. Install new Replaceable ◆DB◆ Lagging Insert Install replacement ◆DB◆ lagging section to contact bar. Starting at end of contact bar tac weld per welding instructions at slotted areas.



**NOTE:** It is extremely important that the contact bar to lagging section fit-up as tight as possible to eliminate added stress to the tac welds. A good practice to follow is to tac weld the replaceable lagging to the contact bar first on the side towards the direction of rotation, thus ensuring a tight fit in the high stressed area.

### 4. Installation when Face Width is Greater than 32.00".

Face widths greater than 32.00" will require the addition of a partial

section of the replaceable lagging to be "butted" up against the 32.00" section. Partial Sections less than 6.00" should be discarded. Since the number and location of the notches in the replacement channel varies, a notch will need to be cut in the channel, 1.00" in from the end of the partial section.

### WELDING SPECIFICATIONS FOR REPLACEMENT

Welding Wire: .09375" (3/32) Diameter

Type - ASWS E6011 (Lincoln - Fleetwood 180)

Amps: 85 Amps

Welder: AC or DC Welder

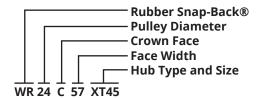




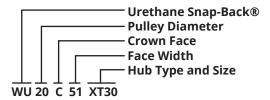
### **SNAP-BACK® WING PULLEYS**



### **Part Number Example**



### **Part Number Example**



### **SPECIAL WING PULLEYS**

**Engineered for special applications** 



This is a very unique wing pulley application. A conventional drum pulley was used in the original installation and it was a constant problem; build-up would cause belt misalignment. The drum pulley was replaced with a special engineered wing pulley and the build-up problem was solved.

# SOLVE TOUGH MAINTENANCE PROBLEMS ECONOMICALLY

Utilizing the same basic frame as the Turn Clean™ the patented Van Gorp SNAP-BACK® Pulley eliminates virtually every maintenance problem on conveyor systems handling wet, sticky or abrasive materials. Its exclusive design allows the pulley to automatically clean itself by reducing build-up, belt wear and eventually maintenance and downtime problems. Here's how it works:

High tensile strength rubber or Urethane lagging, encased in a steel jacket, displaces upon belt contact. When belt contact is broken, the rubber actually "snaps back" to its original height. Ideal in snub and bend applications where the pulley comes into contact with the belt's carrying side.

This unique feature assures minimum belt wear and maximum cleaning efficiency for years of maintenance-free service. Lagging can be easily and economically changed in the field by merely installing a new channeled rubber insert within the heavy-duty, 7-gauge steel jacket channel.



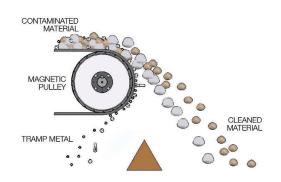
### **LIGHTWEIGHT SLAT**

Occasionally the need arises for small diameter slat type pulleys which are used in small unloading and loading conveyors. Van Gorp has designed a light weight slat pulley in 4" - 51/8" - 6" diameters. Since the diameter is so small, it is impossible to use gussets in this pulley, but the individual slat wing principle is applied. If an excessive amount of moist, sticky material such as clay or bulk fertilizer falls on the pulley and belt, it is possible to stop the conveyor and then clean the material out of the wing openings. This pulley is offered with solid bore hubs in the 4", 5 1/8" and 6" diameters and a XT15 hub in the 6" diameter. Solid bores have one key-way and two set screws in each hub.

# STANDARD AND SUPER POWER MAGNETIC PULLEYS

# STANDARD AND SUPER POWER MAGNETIC PULLEYS

Van Gorp Standard Magnetic pulleys are widely used in the recycling industry to separate steel from aluminum cans. As head pulleys on belt conveyors they also provide continuous protection against tramp iron contamination in the processing of materials such as chemicals, plastics, grains, food products, ceramic and coal. Van Gorp also has a line of Super Power Magnetic Pulleys that provide maximum protection against tramp iron contamination. These pulleys are widely used as head pulleys on belt conveyors in industries such as mining, paper, textiles, feed and foodstuff, drugs, chemicals and rubber. Our magnetic pulleys are equally effective in the separation of both large and fine metal particles from non-ferrous material. These easily installed pulleys provide permanent magnetic strength and require no special maintenance. Our pulleys are available in standard diameters of 4", 6", 8", 12", 16" and 18". Face and shaft sizes are available per customer request. All pulleys are constructed with stainless steel shells and are available with either radial or axial poles. Shafts are welded on 4", 6" and 8" models and are removable on all other sizes. Hot vulcanized or cold bonded rubber lagging and stainless steel shafts are optional.



### Hot Vulcanized or Cold Bond Rubber Lagging



# **MAGNETIC PULLEYS**

### MAGNETIC PULLEY APPLICATION INFORMATION

- Type of material from which the tramp is being Shape of tramp iron (hex, nut, rod, cube, extracted
- Flow rate in tons per hour
- % moisture content
- Maximum lump size
- Material density
- Is material abrasive?
- Size of tramp iron minimum and maximum

- plate, sphere)
- Belt width
- Belt speed in feet per minute
- Degree of conveyor incline
- Maximum material depth on belt
- Type of pulley requested (Standard Radial, Standard Axial, Super Power Radial, Super Power Axial)

### STAINLESS STEEL PULLEYS

Van Gorp can manufacture a stainless steel pulley specifically for your application. Large or small, wing or drum, lagged or un-lagged, just let us know your requirements.

We manufacture three classes of Stainless Steel pulleys:

- Food Grade for clean ability
- Corrosion resistant for pulleys in highly corrosive environments
- Non-magnetic for pulleys in strong magnetic fields of magnetic separators

These pulleys are designed and fabricated differently so it is important that we know which class is correct for your application.

# **CUSTOM PULLEYS - REQUIREMENTS**

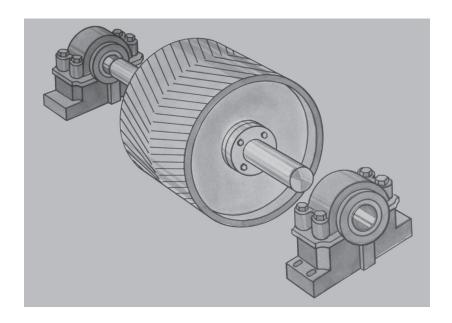
### **CONVEYOR PULLEY ASSEMBLIES**



Pulley, Lagging, Shaft and Bearing Assemblies are available on application. Whatever your pulley requirements, let Van Gorp Engineers assist you in determining the proper pulley, lagging, bearing type and related components you need for maximum efficiency of operation.

### **BEARINGS**

Have your bearings professionally installed by factory trained Van Gorp personnel. Whatever major bearing brand you prefer, we can supply them installed on the shaft ready to bolt down to the conveyor frame. We have adaptor mount spherical and type E bearings in stock. Save time and money by letting Van Gorp supply the whole pulley, shaft, and bearing assembly.







Van Gorp's standard shafting is AISI 1045, which represents the higher carbon range in the open hearth carbon group. Its mechanical property advantages over lower carbon steels prove especially valuable for transmission shafting. The higher carbon content in AISI 1045 results in one of the strongest steels in the carbon range, excluding alloy steels, and machines to a smoother finish than AISI 1018.

Shaft deflection should be clarified because many customers assume than an alloy steel will have less deflection than a low or medium carbon steel. This assumption is not correct, The principal of shaft deflection is quoted from the publication of Delaval Steam Turbine Company in Trenton, New Jersey entitled "Useful Data for Determining Stresses, Torques, Bending Moments and Deflections in Steel Shafts", as follows:

"Where an untreated carbon steel shaft is not strong enough, considerable improvement can be obtained by heat treatment and much more by the use of heat treated alloy steels, but if greater stiffness or rigidity is required, no improvement results from heat treatment or the use of better materials as deflection is entirely unrelated to strength."

"Unless the length or span is reduced, the only way that the deflection can be reduced is by INCREASING the size of the shaft as the modulus of elasticity of all steel is practically the same."

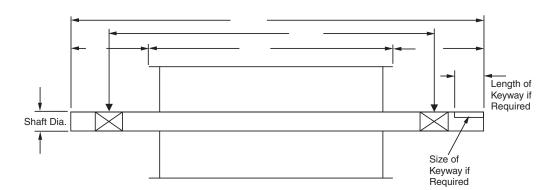
"In many cases when a shaft is made large enough to secure the required rigidity, the stress may be low enough that low strength steel may be entirely satisfactory unless greater hardness is required for other reasons."

# PLEASE REMEMBER, EXCESSIVE SHAFT DEFLECTION IS THE MAJOR CAUSE OF CONVEYOR PULLEY FAILURES. IT IS WISE TO BE GENEROUS IN SELECTING THE PROPER SHAFT DIAMETER FOR YOUR PARTICULAR SHAFT AND PULLEY APPLICATION.

When ordering shafting, specify the following:

- 1. Diameter and length
- 2. Number and size of keyways required
- 3. Length of shaft which extends beyond each end of the pulley
- 4. Diameter and length of journal, if required
- 5. Bearing Centers

If possible, furnish a simple sketch of the pulley and shaft, as this will help eliminate errors.







# Van Gorp®

**Engineered Conveyor Components** 





1(641) 628-9212 1(800) 826-4677 1(800) VAN GORP

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