



CONVEYOR DESIGN PROGRAM

USER MANUAL



INTRODUCTION

PPI's Conveyor Design Program is a web based application for conveyor horsepower calculation, selection of pulleys and idlers, and selection of take-up travel length for fixed take-up conveyors up to 1,000 feet long using our Stretch-Rite calculations. Its use is limited to non-regenerative conveyors that don't exceed 2,000 feet in length and fabric belts with ratings that don't exceed 1,000 PIW. We recommend using it on Google Chrome but it is capable of running on other browsers including Microsoft Edge, Microsoft Internet Explorer (version 11 and higher), Mozilla Firefox, Opera, and Apple Safari. This manual provides instructions on accessing the program as well as guidance on its use.

GETTING STARTED

1. Access the program from our website, www.ppi-global.com, in the Resources menu.
2. At the login prompt, click "Sign Up". There is also an option for users to sign up with their Google or LinkedIn account. If you are a registered user of our current design program, your existing login credentials will provide you access to the new design program without having to go through the registration process again.

The screenshot shows the login interface for the PPI Conveyor Design program. At the top, the PPI logo is centered above the text "Conveyor Design". Below this, there are two links: "Log In" and "Sign Up". The "Sign Up" link is highlighted with a blue underline. Underneath, there are two social login buttons: "LOG IN WITH GOOGLE" (with a white 'G' icon) and "LOG IN WITH LINKEDIN" (with a white 'in' icon). Below these is the word "or". There are two input fields: one for an email address (containing "yours@example.com") and one for a password (containing "your password"). Below the password field is a checkbox labeled "Don't remember your password?". At the bottom, there is a large green button with the text "LOG IN >" in white.



3. Complete the User Profile form, accept the Terms and Conditions, and click the “Update” button.

User Profile

Full Name*
Chris Hall

Email Address
chall@ppi-global.com

Phone Number
(800) 247-1228

Company Name *
Precision Pulley & Idler

Website
www.ppi-global.com

City
Pella

State/Province
IA - Iowa

I accept the [Terms and Condition](#)

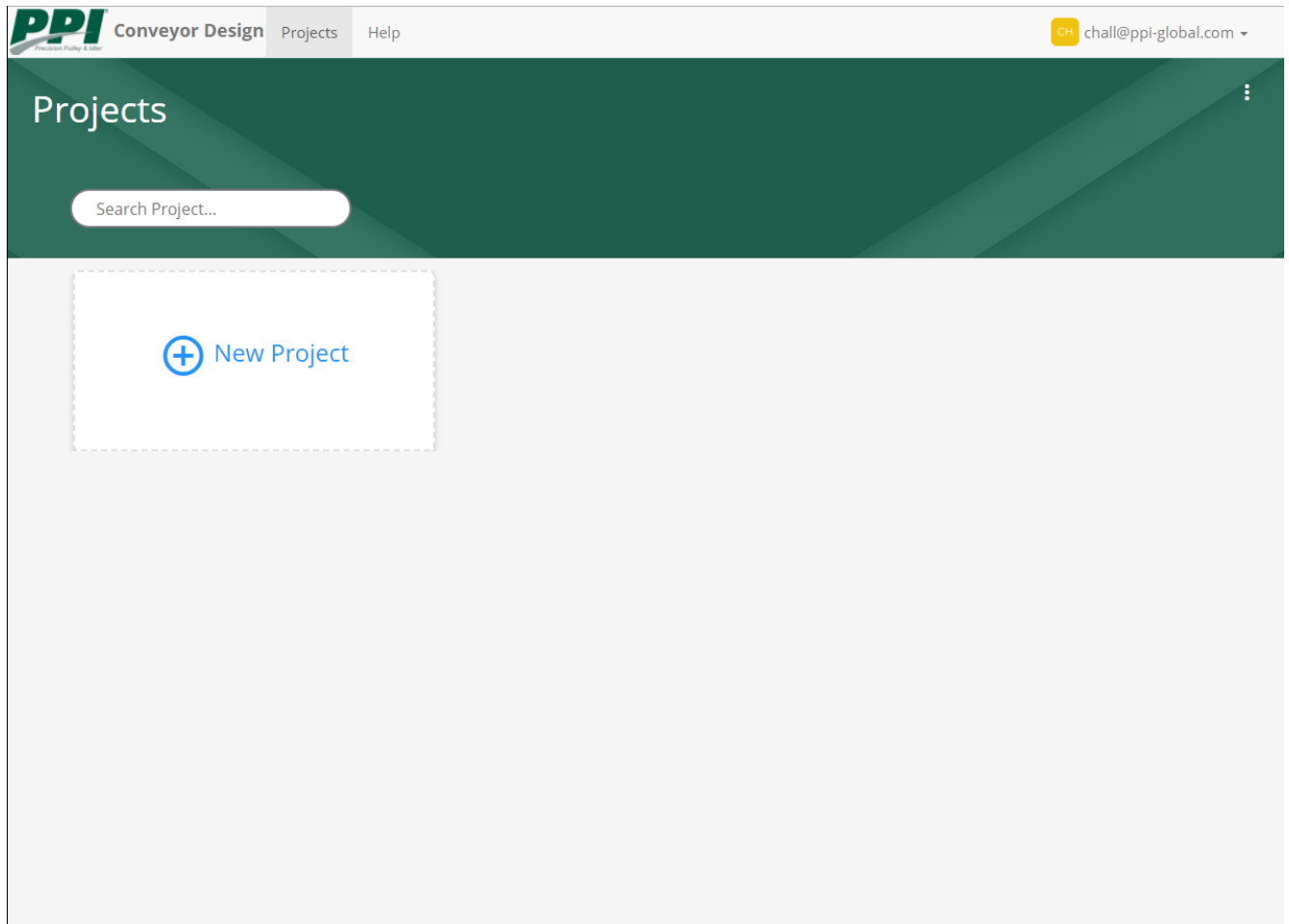
Update

4. Upon completion of the registration process, a verification email will be sent to you. Clicking on the verification button in the email will generate an email to our Marketing department to approve your account. This can take some time depending on their availability.
5. Once Marketing has approved your account, you will receive email notification that your account has been activated. There is a link in the email that will take you to the program.



PROJECTS

This is the first screen you will see upon logging into the program and accepting the Terms and Conditions. You may start a new project by clicking the “New Project” box. Returning users may review and make changes to existing projects by clicking on a project box. Clicking on the three dots in a project box will open a menu allowing you to archive or delete that project. Clicking on the three dots in the heading will provide you with different view options for your project list.





PROJECT INFO

This is the next screen you will see after selecting a project name and clicking the “Add” button. You can add comments to your design file here. Public comments will appear on the summary sheet after a design is complete. Private comments will be saved to the design file for future reference.

Click on the next numbered circle in the chain at the top of the screen to save the screen you are on and advance to the next screen. Click the “Cancel” button to undo any changes you made. Click the “Save” button to save your work without advancing to the next screen. Click on “Projects” near the top of the screen to save your design and exit to the Projects screen.

The screenshot shows the PPI Conveyor Design software interface. At the top, there is a navigation bar with the PPI logo, the text "Conveyor Design", and menu items "Projects" and "Help". On the right side of the navigation bar, there is a user profile icon with the email "chall@ppi-global.com". Below the navigation bar, the word "Sample" is displayed. A progress indicator at the top of the main content area consists of ten numbered circles (1-10) connected by a line. Circle 1 is highlighted with a green border. Below the progress indicator, the steps are labeled: "Project Info", "Conveyor Data", "Basic Input", "Idler Info", "Power & Tension", "Take-up Calculation", "Idlers", "Design Limits", "Pulleys", and "Summary". To the right of the progress indicator are "Cancel" and "Save" buttons. The "Project Info" section contains a "Project Name" field with the value "Sample" and a red asterisk indicating it is required. Below this is a "Printed Comments" field with the subtitle "(will appear on the summary sheet)". At the bottom is a "Private Comments" field with the subtitle "(for your reference only)".



CONVEYOR DATA

- **CONVEYOR PROFILE** – It is necessary to select a profile before advancing to the next screen. The program currently only supports head drive profiles. Intermediate drive and tail drive profiles will eventually be added. Select the correct profile for your take-up style and whether the drive is snubbed or not.
- **DRIVE LAGGING TYPE** – It is necessary to select the type of Drive pulley lagging before advancing to the next screen. The options are none, rubber, and ceramic.
- **TEMPERATURE RANGE** – Adjust if known, otherwise leave the default values.
- **PREFERRED BELT SPECIFICATION** – Leave this as No Preference if it is unknown or you would like the program to make a recommendation. Otherwise, select a belt from the drop-down list. The carcass weight, elastic modulus, and minimum pulley diameters are per Table 7.39 in CEMA's "Belt Conveyors for Bulk Materials, 7th Edition".
- **CARCASS WEIGHT** – Leave this as zero if you would like the program to use the value from Table 7.39 or adjust the value for the specific belt you are using. **It will be important to adjust this value if you will be using the Stretch-Rite calculations on the Take-up Calculation screen.**
- **PREFERRED COVER THICKNESS** – Adjust the top and bottom cover thicknesses if known. **It will be important to adjust these values if you will be using the Stretch-Rite calculations on the Take-up Calculation screen.**

The screenshot displays the PPI Conveyor Design software interface. At the top, the PPI logo is on the left, and navigation links for 'Conveyor Design', 'Projects', and 'Help' are in the center. On the right, there is a user profile icon and the email 'chall@ppi-global.com'. Below the navigation bar, a progress indicator shows 10 steps: 1. Project Info, 2. Conveyor Data (active), 3. Basic Input, 4. Idler Info, 5. Power & Tension, 6. Take-up Calculation, 7. Idlers, 8. Design Limits, 9. Pulleys, and 10. Summary. A 'Cancel' button and a 'Save' button are also visible.

The 'Conveyor Data' section includes the following fields:

- Conveyor Profile: 1- FIXED TAKE-UP, HEAD DRIVE
- Drive Lagging Type: RUBBER
- Temperature Range: Min 0 °F, Max 70 °F
- Number of Belt Cleaners: 2
- Number of Belt Plows: 0
- Chute Drop Height: 10 feet
- Skirtboard Length: 15 feet
- Slider Bed Length: 0 feet

The 'Belting' section includes the following fields:

- Preferred Belt Specification: 3 PLY 330 PIW
- Carcass Weight: 0 lb/ft2
- Preferred Top Cover Thickness: 3/16 "
- Preferred Bottom Cover Thickness: 1/16 "

Informational notes are present in the Belting section:

- Selection will be adjusted higher to provide an adequate tension rating if necessary.
- Leave as zero to use the value from Table 7.39 in CEMA's "Belt Conveyors for Bulk Materials, 7th Edition".



BASIC INPUT

- **MATERIAL** – Select a material from the drop-down list and make adjustments to the other material properties as necessary.
- **VOLUMETRIC CAPACITY** – This is a measure of how full the belt is for the loading conditions. A warning will display when this value exceeds 85%. The program will not let you advance if this value exceeds 100%.
- **EDGE DISTANCE** – This is the calculated distance from the edge of the material to the edge of the belt.
- **VERTICAL CENTERS AND INCLINE/DECLINE ANGLE** – Adjusting either one of these inputs will automatically calculate the other.
- **DRIVE LOCATION** – This input is currently disabled because it only applies to intermediate drive profiles.
- **TAKE-UP LOCATION** – This is the take-up location as a percentage of the horizontal centers of the conveyor. The 0% location is at the head and the 100% location is at the tail. This will normally be 100% for a fixed take-up head drive conveyor profile. The program defaults to the conveyor midpoint for gravity take-up profiles. Adjust this value with the slider or type in a number.

PPI Conveyor Design Projects Help CH chall@ppi-global.com

Sample

1 2 3 4 5 6 7 8 9 10 Cancel Save

Project Info Conveyor Data **Basic Input** Idler Info Power & Tension Take-up Calculation Idlers Design Limits Pulleys Summary

Material	Gravel, bank run
Material Density	100 lbs/cu ft
Angle Of Repose	38 deg.
Trough Angle	35 deg.
Lump Note	
Belt Width	36 in
Belt Speed	300 fpm
Belt Load	300 tph
Volumetric Capacity	35 %
Edge Distance	8.1 in

Maximum Lump Size	6 in
Angle Of Surcharge	19 deg.
Horizontal Centers	150 feet
Vertical Centers	26.4 feet
Incline/Decline Angle	10 deg.
Drive Location (0% = Head and 100% = Tail)	0 %
Take-up Location (0% = Head and 100% = Tail)	100 %



IDLER INFO

- **SAG LIMIT** – The default value of 2% is also the maximum allowed value. This normally shouldn't be changed but can be adjusted downward.
- **IDLER MISALIGNMENT** – This is the height difference between subsequent idlers which adds a belt tension component to the idler load calculations. The default value of 0.250" is typical but it can be adjusted between 0.063" and 0.500".
- **PREFERRED CEMA SERIES AND ROLL DIAMETER** – Change these inputs per your preference or leave them as No Preference if you would like the program to select these for you. The program will limit your roll diameter options based on your selection for Preferred CEMA Series.
- **RETURN IDLER TYPE AND RETURN DROP HEIGHT** – It is necessary to make a selection before advancing to the next screen. The program will limit your options based on your selection for Preferred Return CEMA Series.

The screenshot shows the PPI Conveyor Design software interface. The top navigation bar includes the PPI logo, "Conveyor Design", "Projects", "Help", and a user profile icon with the email "chall@ppi-global.com". Below the navigation bar is a "Sample" header. A progress indicator at the top of the main content area shows 10 steps: 1. Project Info, 2. Conveyor Data, 3. Basic Input, 4. Idler Info (current step), 5. Power & Tension, 6. Take-up Calculation, 7. Idlers, 8. Design Limits, 9. Pulleys, and 10. Summary. There are "Cancel" and "Save" buttons on the right side of the progress bar.

The main content area is divided into two columns. The left column contains a table of input fields:

Trougher Spacing	4 ft	↑	↓
Return Spacing	10 ft	↑	↓
Load Zone Spacing	1 ft	↑	↓
Load Zone Length	8 ft	↑	↓
Load Zone Idlers	RUBBER	↓	↑
Belt Sag Limit	2 %	↑	↓
Idler Misalignment	0.25 in	↑	↓

The right column contains two sections for CEMA series and roll diameter selection:

Estimated Trougher CEMA Series : B5

Preferred Trougher CEMA Series: C

Preferred Trougher Roll Diameter: 5"

Selection will be adjusted higher to meet CEMA load ratings if necessary

Estimated Return CEMA Series : B5

Preferred Return CEMA Series: C

Preferred Return Roll Diameter: 5"

Selection will be adjusted higher to meet CEMA load ratings if necessary

Return Idler Type: FLAT V-RETURN

Return Drop Height: 1 1/2" 4 1/2" 7"



POWER & TENSION

- **ACTUAL MOTOR HP OVERRIDE** – The program automatically selects a motor size based on the running horsepower. You may override this selection by inputting a value. A warning message will display if you select a motor size less than the running horsepower. Change this value back to zero to return to the original selection.
- **NUMBER OF MOTORS ON SHAFT** – Change to 2 if there will be a drive assembly on each end of the shaft.
- **NUMBER OF DRIVE PULLEYS** – This is currently disabled as it only applies to intermediate drive profiles.
- **TENSIONS** – Belt tensions are calculated for running and full motor horsepower. If belt sag is controlling the tensions (as shown below), there won't be any difference for T2, Ttu, and Tt.
 - **Take-up Tension (Ttu)** – This value can change depending on the Take-up Location selected on the Basic Input screen.
 - **Stationary Tension (Ts)** – This is the tension throughout a fixed take-up conveyor when it is at rest. It is the required initial tension to prevent T2 and Tt from dropping below their minimum required values once power is applied to the conveyor and the belt stretches. The Running and Full Motor Ts are used in the Stretch-Rite calculations on the next screen to help you establish an appropriate travel length for your fixed take-up.
- **WARNING MESSAGES** – There are several different messages that can display if there is an issue with the belt specification. Some will prevent you from advancing further through the program. Some will give you the option to keep a user specified belt or let the program automatically adjust the specification to minimum requirements. There is also a warning if a declined conveyor is regenerative.

The screenshot shows the PPI Conveyor Design software interface. The top navigation bar includes the PPI logo, 'Conveyor Design', 'Projects', 'Help', and a user profile 'chall@ppi-global.com'. Below the navigation bar is a 'Sample' header. The main content area features a progress indicator with 10 steps: 1. Project Info, 2. Conveyor Data, 3. Basic Input, 4. Idler Info, 5. Power & Tension (highlighted), 6. Take-up Calculation, 7. Idlers, 8. Design Limits, 9. Pulleys, and 10. Summary. A 'Cancel' button and a 'Save' button are also visible.

The 'Power & Tension' screen contains the following input fields:

Actual Motor HP Override	0 hp
# Of Motors On Shaft	1
# Of Drive Pulleys	1

The 'Tensions' table displays the following data:

	Running	Full Motor
HP	16.8	20.0
Effective Tension (Te)	1,751	2,200
Tight Side Tension (T1)	2,927	3,376
Slack Side Tension (T2)	1,176	1,176
Take-up Tension (Ttu)	1,015	1,015
Tail Tension (Tt)	1,015	1,015
Stationary Tension (Ts)	1,593	1,741



TAKE-UP CALCULATION

This screen provides guidance for selection of fixed take-up travel length and is bypassed for gravity take-up conveyor profiles. It is optional for conveyors up to 200 feet long and you may continue directly on to the Idlers screen if you like. For conveyors exceeding 200 feet in length, you will be prompted to interface with PPI's Stretch-Rite calculations and proprietary output chart, which enable the user to design fixed take-up conveyors up to 1,000 feet in length. **Training is required to use the Stretch-Rite feature for conveyors longer than 200 feet.**

The black line on the Stretch-Rite chart shows the return belt sag decrease as the take-ups are tightened and the blue line shows the corresponding tension increase. The vertical green bar shows the range of take-up travel to correctly tension the belt based on the initial conditions, belt modulus, and belt weight. Please refer to the Stretch-Rite O&M manual for additional information.

- **REQUIRED TAKE-UP TRAVEL** – This defaults to 2% of the horizontal centers of the conveyor. **It will likely be necessary to adjust this value on longer conveyors depending on the other inputs on this screen.**
- **INITIAL BELT TENSION AND RETURN BELT SAG** – These are the initial splicing conditions of the belt before any tightening of the take-up frames has occurred. Adjusting either one of these inputs will automatically calculate the other. **It is important to confirm that the initial conditions can be reasonably achieved during splicing.**
- **BELT WEIGHT** – This value can't be adjusted on this screen. If adjustments are necessary, you will need to return to the Conveyor Data screen, adjust the Carcass Weight input, and advance through the program.
- **BELT MODULUS** – This value can vary widely for a given Belt Specification and should be adjusted for the specific belt you are using.

Required Take-up Travel 36 in

Initial Belt Tension 300 lb

Initial Return Belt Sag 3.63 in

Belt Specification 3P330

Belt Weight 7.26 lb/ft

Belt Modulus 30000 piw

PATENT PENDING PPI Stretch-Rite Output

Sample
Horizontal Centers: 150 ft
Belt: 36 in, 3P330, 30,000 PIW, 7.26 lb/ft
Idler Spacing: 4 ft. Carrying and 10 ft. Return

TU Travel (in)	Return Belt Sag (in)	Belt Tension (lb)
0.0	3.63	300
2.6	0.68	1,593
5.1	0.63	1,741
36.0	0.63	1,741



IDLERS

This screen calculates the idler loads, minimum L₁₀ bearing life hours, and trougher sag. A warning message will display if you selected an idler series on the Idler Info screen that doesn't meet the required CEMA load rating. If this happens, you will need to return to the Idler Info screen and select a higher CEMA series. This screen also calculates idler quantities and displays part numbers and descriptions.

- **ADD INVERTED V-RETURN AND ADD PRO-TRAINER** – These buttons allow you to substitute premium return trainers for some or all of the standard return trainers on the conveyor. These buttons will only display when flat idlers are selected on the Idler Info screen. They are disabled when the conveyor Horizontal Centers are less than 150 feet.
- **CONVERT RETURN ROLL TYPE** – Clicking this button will toggle between steel and rubber disc return rolls. The part numbers and descriptions change accordingly.
- **“RESET” BUTTON** – Click this at any time to cancel your changes and return to the original selections.

Sample

1 Project Info 2 Conveyor Data 3 Basic Input 4 Idler Info 5 Power & Tension 6 Take-up Calculation 7 **Idlers** 8 Design Limits 9 Pulleys 10 Summary Cancel Save

Troughing Side	
Basic Load	162 lb
Calculated Idler Load (CIL)	193 lb
CEMA C Rated Load	837 lb
Minimum L10 Life	5,683,388 hr
Belt Sag	2 %

Return Side	
Basic Load	73 lb
Calculated Idler Load (CIL)	78 lb
CEMA C Rated Load	200 lb
Minimum L10 Life	30,041,352 hr

Selected Idlers		
Qty	Part #	Description
2	C5-20TE-36SB	20° Troughers, 4.0 ft. spacing
32	C5-35TE-36SB	35° Troughers, 4.0 ft. spacing
8	C5-35TEI-36SB	35° Impact Troughers, 1.0 ft. spacing
1	C5-35TESA-36SB	35° Trough Trainers
13	C5-R-36SB	Flat Return, 4.5 in. Drop, 10.0 ft. spacing
1	C5-RSA-36SB	Flat Return Trainer, 4.5 in. Drop

+ Add Inverted V-Return
+ Add Pro Trainer
↔ Convert Return Roll Type
Reset



DESIGN LIMITS

- **DESIGNED TO** – This input affects the pulley design tensions. The default value is to design to running horsepower but you can choose to design to full motor horsepower.
- **TAKE-UP SAFETY FACTOR** – This input also affects the pulley design tensions. The default value is 1.25 but can be adjusted between 1.0 and 1.5.
- **MAXIMUM PULLEY SHAFT SLOPE** – The default value is 0.0015 in/in but other commonly used limits can be selected.
- **SHAFT MATERIAL** – The default value is 1045 but can be changed to 4140. The Maximum Shear Stress value adjusts automatically based on the selected material.
- **BENDING AND TORSION FACTORS** – These are the K_b and K_t factors in the CEMA shaft diameter calculation. They default to typical values which are also the minimum allowable values. They can be adjusted upward if necessary.
- **BEARING TYPE** – The default is Spherical but may be changed to Ball.
- **TURNDOWN ALLOWED?** – Change to No if you don't want bearing turndowns.
- **TURNDOWN CLEARANCE** – The default value of ½" is PPI's standard and normally shouldn't be changed.

The screenshot shows the PPI Conveyor Design software interface. The top navigation bar includes the PPI logo, "Conveyor Design", "Projects", "Help", and a user profile icon with the email "chall@ppi-global.com". Below the navigation bar is a breadcrumb trail: "Sample".

The main content area features a progress indicator with 10 steps: 1. Project Info, 2. Conveyor Data, 3. Basic Input, 4. Idler Info, 5. Power & Tension, 6. Take-up Calculation, 7. Idlers, 8. Design Limits (highlighted), 9. Pulleys, and 10. Summary. There are "Cancel" and "Save" buttons at the end of the progress bar.

The "Design Limits" configuration screen is divided into two main sections: "Pulley" and "Bearing".

Pulley Section:

- Designed To:** Radio buttons for "Running HP" (selected) and "Full Motor HP".
- Take-up Safety Factor:** Input field with value "1.25" and up/down arrows.
- Shaft Section:**
 - Maximum Pulley Shaft Slope:** Input field with value "0.0015 in/in" and up/down arrows.
 - Shaft Material:** Dropdown menu with value "1045".
 - Maximum Shear Stress:** Input field with value "10667 psi".
 - Bending Factor:** Input field with value "1.5" and up/down arrows.
 - Torsion Factor:** Input field with value "1" and up/down arrows.

Bearing Section:

- Bearing Type:** Dropdown menu with value "Spherical".
- Taconite Seals?:** Radio buttons for "Yes" and "No" (selected).
- Minimum L10 Life:** Input field with value "50000 Hrs" and up/down arrows.
- Turndown Allowed?:** Radio buttons for "Yes" (selected) and "No".
- Turndown Clearance:** Input field with value "0.5" and up/down arrows.



PULLEYS

Pulley diameters and shaft and bearing sizes are calculated based on the inputs from the previous screens. You may adjust any of the values that aren't greyed out. Any values changed from the original selection will be highlighted. You may return to the original selections by clicking the "Reset" button.

- **BEARING CENTERS** – A warning message will display if you select bearing centers that are too narrow for the selected bearing.
- **FACE WIDTH** – The bearing centers will display a warning if you select a face width that is too wide for the bearing centers and selected bearing.
- **DIAMETER** – You won't be able to adjust the diameter below our minimum recommendation based on the pulley type and hub size. You may adjust it upwards.
- **STYLE** – Selecting one of the wing pulley types may increase the pulley diameter.
- **LAGGING** – Some selections may not be available depending on the Lagging Type selected on the Conveyor Data screen. For instance, if you selected Rubber, None and Ceramic aren't available options. If you need to make a change to the Drive pulley lagging, you will need to return to the Conveyor Data screen and advance through the program.
- **SHAFT LENGTH** – Drive shaft lengths are estimated based on the bearing centers and selected bearing.

PPI Conveyor Design Projects Help chall@ppi-global.com

1 2 3 4 5 6 7 8 9 10
Project Info Conveyor Data Basic Input Idler Info Power & Tension Take-up Calculation Idlers Design Limits **Pulleys** Summary

Cancel Save

Reset


Pulley	Drive	Tail
T1 (lb)	3,181	1,593
T2 (lb)	1,430	1,593
Wrap Angle (°)	180	180
Diameter (in) ⓘ	14	12
Face Width (in)	38	38
Style	CF - Drum	CF - Drum
Lagging	1/2 HBG	3/8 PL
Hub	PXT40	PXT35
Shaft Diameter (in)	3.9375	3.4375
Bearing Centers (in)	50	50
Shaft Length (in)	67.375	54.875
Bearing	E2B215	E2B207
Bearing Bore (in)	2.9375	2.4375



SUMMARY

This screen provides a summary sheet that can be printed or sent to PPI for quotation of pulleys, idlers, take-up frames, and drive assemblies. Clicking the “Request For Quote” button will bring up a dialog box that will ask you for your name and email address. It will also give you the opportunity to include any special instructions for your quotation.

Click the “Save” button to finish your design. You can return to any of the previous screens to review your work or make changes by simply clicking on the appropriate circle. If you make changes on a screen, you will need to advance sequentially through the rest of the screens to return to the Summary screen. Once you have finalized your design, you may return to the Projects screen by clicking “Projects” in the header or click the “Start New Project” button to start a new design.



Conveyor Design Projects Help
CH chall@ppi-global.com

Sample

12345678910

< Previous
Next >

Project Info
Conveyor Data
Basic Input
Idler Info
Power & Tension
Take-up Calculation
Idlers
Design Limits
Pulleys
Summary



USA | CANADA | CHILE

SAMPLE

FIXED TAKE-UP, HEAD DRIVE

Precision Pulley & Idler
Pella, IA
Ph: (641) 628-3115
Fax: (641) 628-3658
www.ppi-global.com
Date : 2017-11-28

Print
Request For Quote
+ Start New Project

Comment:

CONVEYOR DESIGN DATA					
Belt Width (in):	36	Material:	Gravel, bank run	Temperature Range (°F):	0 - 70
Belt Speed (fpm):	300	Material Density (lb/ft ³):	100	Number of Belt Cleaners:	2
Belt Load (tph):	300	Surcharge Angle (°):	19	Number of Belt Plows:	0
Horizontal Centers (ft):	150	Maximum Lump Size (in):	6	Skirtboard Length (ft):	15
Vertical Centers (ft):	26.4	Volumetric Capacity (%):	34.5	Slider Bed Length (ft):	0
Incline/Decline Angle (°):	10	Edge Distance (in):	8.1		

POWER AND TENSION			BELT		DESIGN LIMITS	
	Running	Full Motor	Specification:	3P330	PULLEY:	
HP	16.8	20.0	Covers (in):	3/16 x 1/16	Designed To:	Running HP
Effective Tension (Te)	1,751	2,200	Elastic Modulus (PIW):	30,000	Take-up Safety Factor:	1.25
Tight Side Tension (T1)	2,927	3,376	Weight (lb/ft):	7.26	SHAFT:	
Slack Side Tension (T2)	1,176	1,176	Sag (%):	2.0	Max. Shaft Slope (in/in):	0.0015
Take-up Tension (Ttu)	1,015	1,015			Max. Shear Stress (psi):	10,667
Tail Tension (Tt)	1,015	1,015	TAKE-UP		Bending Factor:	1.5
Stationary Tension (Ts)	1,593	1,741	Type:	Fixed	Torsion Factor:	1.0
			Location:	100 % of Horizontal Centers	BEARING:	