

ENGINEERED PULLEYS & IDLERS

LARGE PROJECTS



PPI[®]
PRECISION PULLEY & IDLER



WE KEEP



GLOBAL PRESENCE

Operations around the world demand efficient and reliable systems. Customers are looking for components they can count on when they need them. That is exactly what PPI offers.

PPI components can be used in a wide range of applications from 1 to 10,000 horsepower. Customers around the globe trust PPI conveyor components.

Our promise is simple, provide quality products with a competitive price and unbeatable customer service. Customers count on the quality components we provide along with the team of field experts to help solve their most difficult application issues.

Whether the requirements of your operation are underground or above, PPI is your partner supplying components that will support your productivity goals from beginning to end.

IT MOVING



CAPABILITIES

PPI is a world renowned provider of conveyor components and solutions. It is this reputation that drives customers to use PPI pulleys and idlers when reliability is vital.

Manufacturing is at the core of what we do. Investment in state-of-the-art technology and qualified employees assure we remain a leader in providing the highest quality products with the shortest lead times in the industry.

IN HOUSE CAPABILITIES

- Shaft machining up to 28" (711mm) in diameter and 315" (8001mm) long
- Vulcanized lagging up to 72" (1829mm) diameter and 192" (4877mm) face width
- Roll Rims from plate up to 2" (51mm) thick and up to 120" (3048mm) in diameter
- Special surface protection available
- Cast urethane lagging for pulleys
- Total Indicator Run-out (TIR) and roll drag testing for idlers
- Testing and reporting for customer directed inspections

- Thermal stress relief of pulleys up to 72" (1829mm) diameter and 120" (3048mm) face width

ENGINEERING AND TECHNICAL SUPPORT

A dedicated engineering team utilizing PFEA and P-FLEX to optimize each design. Custom engineering services available

FIELD TECHNICAL SUPPORT

Field Service Technicians in the United States, Canada and South America. These resources are available for troubleshooting, surveying and site visits providing complete service from beginning to end.

PRODUCT DESIGN

Offering multiple design options including profiled end disc and turbine designs for maximum product predictability and strength

"This manufacturing approach allows us to be very focused, but it also gives greater flexibility to react quickly to the customer needs."

– Roger A. Brown. President of PPI



PULLEY PROJECTS

When it comes to large pulleys no other manufacturer is as well equipped to produce solutions to the world's most challenging applications as PPI. From extreme belt tensions and massive sizes to some of the coldest conveying environments on earth, PPI has the expertise and experience to keep operations up and running.



2013 - KAZAKHSTAN, ASIA

Pulley Size	72" x 69.88" (1829mm x 1775mm)
Shaft Size	18.8976" x 176.296" (480mm x 4478mm)
Bearings	SDAFS23180
Assembly Weight	34,937 lbs (15,847kg)



2011 - ALBERTA, CANADA

Pulley Size	60" x 106" (1524mm x 2692mm)
Shaft Size	21" x 242.91" (533mm x 6170mm)
Bearings	SGC231/500
Assembly Weight	42,986 lbs (19,498kg)



2007 - CHILE

Pulley Size	54" x 132" (1372mm x 3353mm)
Shaft Size	22.0472" x 243.307" (560mm x 6180mm)
Bearings	SDAF23092
Assembly Weight	52,259 lbs (23,704kg)



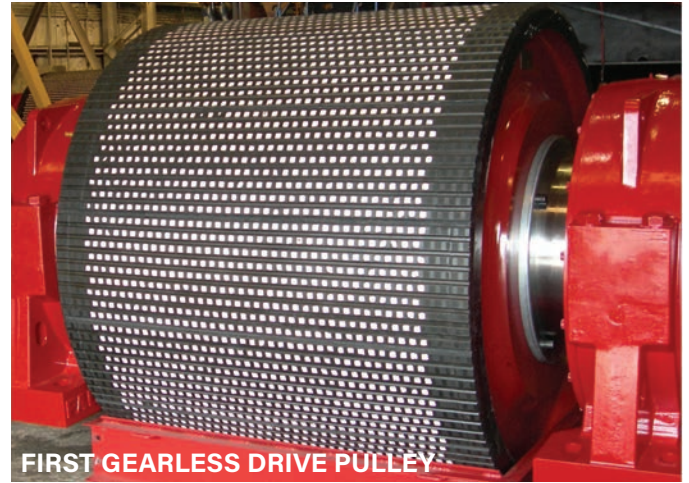
2005 - ALBERTA, CANADA

Pulley Size	54" x 80" (1372mm x 2032mm)
Shaft Size	17" x 166.59" (432mm x 4231mm)
Bearings	SDCD23184
Assembly Weight	30,000 lbs (13,608kg)



2010 - PERU

Pulley Size	71" x 79" (1803mm x 2007mm)
Shaft Size	20.4724" x 207.706" (520mm x 5276mm)
Bearings	SDAFS232/500
Assembly Weight	43,826 lbs (19,879kg)



FIRST GEARLESS DRIVE PULLEY

2010 - PERU

Pulley Size	74.02" x 65.75" (1880mm x 1670mm)
Shaft Size	30" x 197.835" (762mm x 5025mm)
Bearings	SSDD-230/750
Assembly Weight	72,843 lbs (33,041kg)



2003 - CHILE

Pulley Size	98.5" x 84" (2502mm x 2134mm)
Shaft Size	22.25" x 185.5" (565mm x 4712mm)
Bearings	SBDD241/530K/500
Assembly Weight	62,976 lbs (28,565kg)



2001 - ILLINOIS, UNITED STATES

Wheel Diameter	157.5" (4001mm)
Wheel Face Width	22.64" (96.07" overall) 575mm (2440mm overall)
Shaft Size	EZ200 - 20"
Assembly Weight	65,600 lbs (29,756kg)

PULLEY PROJECT HISTORY

In addition to the ability to produce highly engineered pulleys for the most demanding applications, PPI has the manufacturing capabilities to produce them in unmatched quantities. Below is a sampling of some of the projects PPI has successfully completed around the world.

YEAR	PROJECT NAME	LOCATION	QTY. OF PULLEYS	YEAR	PROJECT NAME	LOCATION	QTY. OF PULLEYS	YEAR	PROJECT NAME	LOCATION	QTY. OF PULLEYS
2019	Aktogay 2	Kazakhstan	61	2011	Camak Quarry	USA	118	2008	Springerville Unit 4	USA	57
2019	Cliffs Toledo	USA	86	2011	Caserones	Chile	96	2007	Andacollo	Chile	32
2019	Eagle Gold	Canada	63	2011	Cerro Verde	Peru	4	2007	Black Thunder	USA	11
2019	Oyu Tolgoi	Mongolia	11	2011	Gilgel Gibe	Ethiopia	124	2007	Comanche Unit 3	USA	74
2019	Spence	Chile	61	2011	International Marine	USA	23	2007	Gabriela "Gaby" Mistral	Chile	22
2018	Baffinland	Canada	39	2011	IOC Concentrator	Canada	15	2007	North Antelope Rochelle	USA	30
2018	Chuquicamata	Chile	39	2011	Lomas Bayas	Chile	33	2007	Safford	USA	153
2017	G3 Vancouver	Canada	90	2011	Long Harbour Nickel	Canada	62	2007	Veladero	Argentina	29
2016	Nordgold Gross	Russia	121	2011	Mildred Lake	Canada	32	2006	AEP - Mountaineer	USA	75
2015	Oxidos Encuentro	Chile	66	2011	Mina Ministro Hales	Chile	30	2006	Belle Ayre	USA	32
2015	Vulcan Materials Stockbridge	USA	241	2011	Pascua Lama	Chile/Argentina	99	2006	Cerro Verde	Peru	67
2014	Belneftgaz	Belarus	71	2011	Penasquito	Mexico	7	2006	CNRL - Horizon	Canada	27
2014	Cerro Verde	Peru	31	2011	PT Kaltim Prima Coal	Indonesia	123	2006	Gabriela "Gaby" Mistral	Chile	72
2014	Copper Mountain	Canada	22	2011	Tutupan	Indonesia	46	2006	Muskeg River Oil Sands	Canada	11
2014	Gahcho Kue	Canada	72	2010	Antamina	Peru	29	2006	Roxboro Plant	USA	94
2014	Morenci SWLP	USA	132	2010	Antapaccay	Peru	21	2005	BHP Spence	Chile	82
2014	Quebalix 4	Mexico	20	2010	El Teniente	Chile	18	2005	Cerro Verde	Peru	32
2014	Shougang	Peru	42	2010	Endako	Canada	29	2005	Chuquicamata	Chile	45
2014	Viterra Terminals	Canada	15	2010	Escondida	Chile	16	2005	Cowal Gold	Australia	30
2013	Aktogay	Kazakhstan	61	2010	Gualcamayo	Argentina	19	2005	Port of Immingham	United Kingdom	99
2013	Bozshakol	Kazakhstan	51	2010	New Afton	Canada	53	2005	San Cristobal	Bolivia	36
2013	Buenavista Concentrator 2	Mexico	94	2010	Pointe Noire Facility	Canada	47	2005	Suncor Steepbank	Canada	15
2013	Deepwater Bulk Terminal	USA	91	2010	Suncoke - Middletown	USA	96	2005	Syncrude SWQR	Canada	14
2013	Eleonore Mine	Canada	125	2010	Toromocho	Peru	39	2004	El Refugio	Chile	82
2013	Escondida OGP1	Chile	61	2009	Ambatovy	Madagascar	15				
2013	Hycroft Mine	USA	64	2009	Bayovar	Peru	32				
2013	International Marine Terminal Laydown Yard	USA	35	2009	Collahuasi Pebbles Project	Chile	34				
2013	Las Bambas	Peru	83	2009	Gabriela "Gaby" Mistral	Chile	25				
2013	Morenci 55k	USA	128	2009	John W. Turk Jr. Power Station	USA	53				
2013	Neptune Terminals	Canada	27	2009	Los Pelambres	Chile	55				
2013	Port of Sept-iles	Canada	78	2009	Ma'Aden Ras al Khair	Saudi Arabia	149				
2012	Agrium Vanscoy	Canada	58	2009	Tia Maria	Peru	144				
2012	Bloom Lake	Canada	62	2009	Trekkopje	South Africa	13				
2012	Burnside Terminals	USA	19	2008	Aitik Mine	Sweden	24				
2012	Cerrejon	Colombia	6	2008	Andina	Chile	65				
2012	Cerro Verde	Peru	189	2008	Bailey - Crabapple	USA	18				
2012	Conga	Peru	59	2008	Buenavista Quebalix 3	Mexico	44				
2012	Constancia	Peru	34	2008	CNRL - Horizon	Canada	18				
2012	Cormin Callao	Peru	62	2008	Cortez Hills	USA	40				
2012	Escondida OLAP	Chile	26	2008	El Abra	Chile	177				
2012	Highland Valley Copper	Canada	16	2008	Haverhill North Coke	USA	79				
2012	Imperial Oil Kearn	Canada	10	2008	Iatan Generating Station	USA	103				
2012	International Marine Terminal Northyard	USA	33	2008	Martin Marietta Augusta	USA	213				
2012	Ministro Hales	Chile	76	2008	Midway Coal	USA	110				
2012	Mount Milligan	Canada	35	2008	Oyu Tolgoi	Mongolia	61				
2012	Ridley Terminals	Canada	71	2008	Penasquito	Mexico	74				
2012	Tygart Valley Complex	USA	78	2008	Prairie State Generating Station	USA	86				

QUALITY PULLEY CHARACTERISTICS

BALANCING – Balancing specifications define the maximum amount of pulley imbalance acceptable for the application. The International Standards Organization (ISO) specification ISO 1940/1 is typically used as a guide for pulley balancing by pulley manufacturers. Typically, pulleys are static balanced to bring them into specification.

BEARING HOUSINGS – Evaluations are performed based on imposed loads, operating environment, operational speeds and customer preference. Split pillow block housings in various types, such as; SAF, SAFD, SDAF, SNG and SDCD are common. Housings are available in cast iron, ductile iron and cast steel.

END DISC – End disc design relates to the selection of end disc material composition, thickness, shape and hub configuration for the conveyor pulley. As with shaft selection, the key to end disc design is the ability to predict the stresses in the end disc assembly, and then limit them within acceptable parameters by the selection of disc thickness, disc material, shape and weld methods (if utilized).

LAGGING – Vulcanized in-house with our extruder system and auto-clave. Multiple rubber compounds available depending on application, thicknesses, hardness, and groove options available. Rubber lagging can be machined to meet customer TIR requirements. Ceramic lagging available in two forms; pads installed in hot-vulcanized and cold-bond method or Vulcanized Engineered Ceramic (VEC). In-house urethane lagging offered for demanding applications where high temperature, high abrasion, and oil and chemicals are a concern.

LINE BORING – Line boring is used for many high tension pulleys with locking assemblies to improve hub alignment and shaft run out. PPI line bores all pulleys with locking assemblies 9.44882" (240 mm) or larger.

LOCKING ASSEMBLY – While the XT® hubs and bushings provide reliability and a cost effective method of attaching pulleys to a shaft on conventional pulleys, keyless locking assemblies are often used on high tension pulleys. The selection of a shaft to pulley connection is extremely critical as it must transmit not only the torque but also the bending loading between shaft and pulley.

For high tension pulley systems, PPI recommends keyless locking assemblies. While generally used on shafts 12 inches (305mm) or greater in diameter, they are available from less than an inch (20mm) to over 23 inches (600mm), larger upon request.

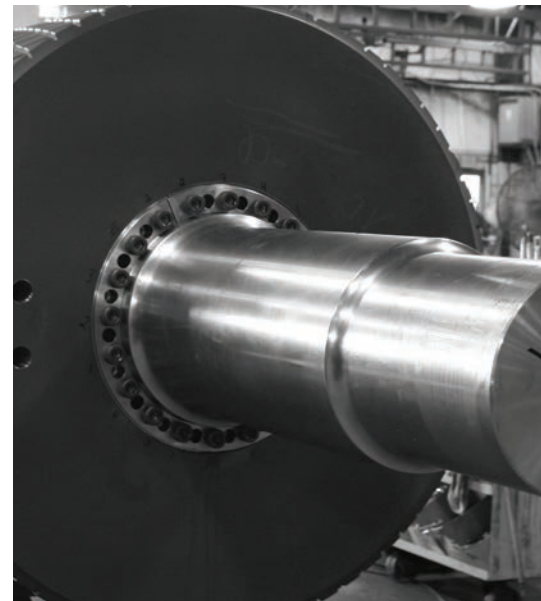
NON-DESTRUCTIVE TESTING – Nondestructive testing methods are often performed on pulley welds to insure quality. Methods such as Ultrasonic Testing, Magnetic Particle Testing, Charpy Testing and Dye Penetrant Testing are the common nondestructive test procedures used by pulley manufacturers.

RIM – Because the rim experiences full belt tension, every high tension pulley system rim is analyzed for stresses generated by the tension as well as the wrap of the belt, and the end couple that is caused by the bending moment being transferred to the rim by the end disc. Typically, high tension systems will use high modulus belts, requiring the rim be machined to ensure concentricity between the rim and the shaft.

SHAFT – Shaft deflection and shaft bending stress are fundamental elements of high tension pulley system design. Limits are based on CEMA recommendations and customer specifications. Standard shafting used in PPI pulley assemblies is 1045. Other shafting materials, such as 4140, are optional based on customer specifications and when the design requirements exceed shafting specifications.

THERMAL STRESS RELIEF – Testing has shown a significant increase in life for pulleys that are thermally stress relieved. This cost-effective option has proven to be so valuable for the longevity of the product. PPI offers this service at our manufacturing facilities.

WELDING – Each weld is carefully optimized in the design phase with PFEA. From joint preparation through pre-heat and welding, each is done to the appropriate American Welding Society (AWS) specification.



IDLER PROJECTS

PPI has been engineering and manufacturing conveyor components for over four decades. Over that time, PPI has emerged as the industry leader providing a full line of CEMA rated idlers. In addition to standard CEMA idlers, the experienced staff of engineers review unique application requirements and design idlers to meet specifications in the most productive manner. Customers look to PPI to provide idlers that meet their specific project requirements in the most demanding applications around the world. Whatever the application may be, PPI is the preferred choice for top of the line conveyor components.



2014 - ARIZONA, UNITED STATES

Conveyor Type	Radius Curve
CEMA Series	E
Bearing Size	6307
Belt Speed	1002
TPH	5,647



2013 - NORTH CAROLINA, UNITED STATES

Conveyor Type	Pipe Conveyor
CEMA Series	C
Bearing Size	P204
Belt Speed	272
TPH	500



2011 - CHILE

Conveyor Type	Overland
CEMA Series	E
Bearing Size	6307 & 6308
Belt Speed	1,083
TPH	3,039



2009 - COLOMBIA

Conveyor Type	Incline
CEMA Series	E
Bearing Size	6308
Belt Speed	827
TPH	2,000



2013 - PERU

Conveyor Type	Incline
CEMA Series	E
Bearing Size	6307 & 6308
Belt Speed	688
TPH	6,000



2012 - ARIZONA, UNITED STATES

Conveyor Type	Feeders
CEMA Series	E & F
Bearing Size	6308 & 6310
Belt Speed	49
TPH	3,750



2008 - MEXICO

Conveyor Type	Incline
CEMA Series	D
Bearing Size	6305
Belt Speed	1137
TPH	4,400



2005 - KENTUCKY, UNITED STATES

Conveyor Type	Incline
CEMA Series	C
Bearing Size	P204
Belt Speed	550
TPH	1,000

IDLER PROJECT HISTORY

Whatever material conveyed PPI can provide idlers to meet the most demanding applications. Recognized as the industry leader, PPI provides a broad idler product line as well as new and innovative product solutions.

PPI's experienced engineering staff will evaluate each application and provide cost effective solutions while maintaining optimal product performance. Refer to the project list below for a sampling of the wide range of PPI idlers serving operations around the world.

YEAR	PROJECT NAME	LOCATION	CEMA SERIES	BELT WIDTH	BEARING SIZE	BELT SPEED FPM (MPS)	QTY. OF CONVEYORS	DETAILS
2019	Eagle Gold	Canada	D & E	42" to 72" (1219mm to 1829mm)	6305 & 6308	12 (4)	Supplied idler structure	
2019	Cliffs	USA	C, D, & E	36" & 54" (914mm & 1372mm)	6204, 6305 & 6307	20 (6)		
2018	Baffinland	Canada	C, D, & E	36", 48", 54" & 84" (914mm, 1219mm, 1372mm & 2134mm)	P204, 6305 & 6308	7(2)		
2017	Nordgold Gross	Russia	C & D	48" (1219mm)	P204 & 6305	49 (15)	Low temperature bearings	
2017	G3 Vancouver	Canada	D	72" (1829mm)	6305	16 (5)	Offset center roll	
2016	Koch Enid	USA	C & D	36", 48" & 60" (914mm, 1219mm, 1524mm)	6204 & 6305	14 (4)	Nine conveyors & five pipe conveyors	
2016	Port Dikson	Russia	D & E	36", 42" & 54" (914mm, 1219mm & 1372mm)	6305 & 6307	11 (3)	Low temperature bearings	
2015	Stockbridge Quarry	Georgia	D & E	30" to 54" (762mm & 1372mm)	6305, 6307 & 6308	N/A	51	Standard catalog products
2015	Tutupan	Indonesia	G	83" & 95" (2100mm & 2400mm)	6312	925 & 1,083 (282 & 330)	2	Garland Idlers
2015	Morelos	Mexico	D, E, & F	48" & 84" (1219mm & 2134mm)	6305, 6307, 6308 & 6310	13 to 370 (4 to 113)	36	F7 unequal troughers with removable-end brackets, low profile transition toughers
2015	Ekati	Northwest Territories	E	54" & 72" (1372mm & 1829mm)	6308	N/A	2	PPI True Impact System for low temperatures
2015	Enid	Oklahoma	C & D	36", 48" & 60" (914mm, 1219mm & 1524mm)	6204 & 6305	59 to 709 (18 to 216)	14	Nine troughed conveyors and five pipe conveyors, all frames galvanized, FAG brand bearings
2015	Medina	Texas	C, D, & E	30" to 96" (762mm to 2438mm)	P204, 6305, 6307 & 6308	257 to 521 (78 to 159)	60	Idlers for 60 conveyors plus 106' of D6 TIS impact bed and 30' of E7 TIS impact bed
2014	Morenci SWLP	Arizona	E	54", 60" & 72" (1372mm, 1524mm & 1829mm)	6307 & 6308	580 to 1000 (177 to 305)	13	Banked trougher and v-return assemblies for overland, machined rubber groove return rolls
2014	Hammond Transfer	Indiana	C & D	42", 48", & 54" (1067mm, 1219mm & 1372mm)	P204 & 6305	N/A	8	Stainless steel shafts, galvanized frames, under slung style frames, plastic rolls
2014	Calhidra	Mexico	C & D	30", 36" & 48" (762mm, 914mm & 1219mm)	P204 & 6305	150 to 200 (46 to 61)	4	Special 5-roll 70° trougher assemblies
2014	Vernal Pit & Mill	Utah	D	42" (1067mm)	6305	900 (274)	1	2,700' long overland with curve, banked troughers and banked under slung style returns
2013	Convent Marine Terminal	Louisiana	E	72" & 84" (1829mm & 2134mm)	6307 & 6308	888 (271)	4	Retractable frames, wide base, PPI Rigid Rail Structure
2013	Imouraren Mine	Niger	E	79" (2000mm)	N/A	39 (12)	10	10 feeders with 242 live-shaft impact rollers with PPI type E bearings
2013	Hertford	North Carolina	C	48" (1220mm)	P204	272 (83)	2	Pipe conveyor rolls and brackets
2013	Constancia	Peru	D & E	42", 66", & 72" (1067mm, 1676mm & 1829mm)	6305, 6307 & 6308	216 to 688 (66 to 210)	7	Idlers for seven conveyors plus 60' of TIS impact bed, all galvanized frames.

YEAR	PROJECT NAME	LOCATION	CEMA SERIES	BELT WIDTH	BEARING SIZE	BELT SPEED FPM (MPM)	NUMBER OF CONVEYORS	DETAILS
2013	Eleonore	Quebec	D, E, & F	30" to 84" (762mm to 2134mm)	6305, 6307, 6308, & 6310	N/A	27	Bearings with low temperature grease, return rolls with molded urethane coating
2012	Metcalf 55k Expansion	Arizona	E & F	54", 60", 72", 96", & 120" (1372mm, 1524mm, 18229mm, 2438mm & 3048mm)	6307, 6308, & 6310	32 to 790 (10 to 241)	37	22 conveyors, 13 feeders ranging from 54" to 120" belt width
2012	El Teniente	Chile	E	48" & 60" (1219mm & 1524mm)	6307 & 6308	197 & 492 (60 & 150)	2	Wide base frames, low drag bearings, removable-end bracket style frames
2012	Ministro Hales	Chile	E	54" (1372mm)	6307 & 6308	N/A	1	One overland conveyor, banked troughers and v-return frames
2012	Pascua Lama	Chile/ Argentina	C, D, & E	18" to 60" (457mm to 1524mm)	P204, 6305, 6307, & 6308	43 to 629 (13 to 192)	36	21 conveyors and 15 feeders, removable-end bracket style troughers
2012	Calhidra	Mexico	C	30" (762mm)	P204	300 (91)	1	1 km long overland using PPI rigid rail idler structure and idler assemblies.
2011	Endako	British Columbia	E	54" & 72" (1372mm & 1829mm)	6307 & 6308	N/A	2	Bearings with low temperature grease. Trougher frames with removable-end brackets.
2011	Lomas Bayas	Chile	E	48" & 60" (1219mm & 1524mm)	6307 & 6308	1,083 (330)	4	Four overlands totaled 13,635'
2011	Carlsbad	New Mexico	C	25" (625mm)	P204	335 (102)	1	Pipe conveyor rolls, panels, and hardware.
2011	Antapaccay	Peru	C, E, & F	36", 72" & 96" (914mm, 1829mm & 2438mm)	P204, 6307, 6308, & 6310	79 to 640 (24 to 195)	11	Wide base frames. Removable-end bracket style frames.
2011	Callao Terminals	Peru	D	30", 36", 54" & 60" (762mm, 2438mm, 1372mm & 1524mm)	6305, 6307, & 6308	N/A	17	11 conveyors and 6 feeders.
2011	IOC Terminals	Quebec	F & G	72" (1829mm)	6310 & 6312	N/A	6	Bearings with low temperature grease. Offset center roll troughers.
2010	El Teniente	Chile	E	48" & 60" (1219mm & 1524mm)	6307 & 6308	106 to 472 (32 to 144)	3	Wide base frames. Removable-end bracket style frames.
2010	Rodemacher	Louisiana	D	20" (500 mm) Pipe	6305	827 (252)	1	Supplied 9,196 pipe conveyor rolls.
2010	Lazaro Cardenas	Mexico	D	30", 36", 42", 48" & 72" (762mm, 914mm, 1067mm, 1219mm & 1829mm)	6305	N/A	N/A	ISO rolls and frames. PPI supplied 1,710 rolls, 676 frames, and 1,200 return drop brackets.
2009	Los Pelambres	Chile	D & E	36", 48", 54" & 60" (2438mm, 1219mm, 1372mm & 1524mm)	6305, 6307, & 6308	393 to 492 (120 to 150)	13	Wide base frames. Removable-end bracket style frames.
2009	Collahuasi	Chile	D	36" & 42" (914mm & 1067mm)	6305	531 (162)	2	70 of our True Impact Systems (TIS)
2008	Penasquito	Mexico	D & E	60" & 84" (1524mm & 2134mm)	6305 & 6308	260 to 614 (79 to 187)	10	Retractable-style frames. Special self-aligners. Special drop brackets.

QUALITY IDLER CHARACTERISTICS

TUBE/SHELL – Bearing housing to tube weld is fully under the tube edge protecting it from wear. A variety of tube diameters and tube thicknesses are available.

SEAL – The service life of the idler is directly proportional to the quality of seal. PPI seals are designed and manufactured for a long and trouble free life. Large diameter stationary seal. Highly effective centrifugal seal. Effective radial and labyrinth seals.

BEARINGS – Sized for your application. Sealed for life ball bearings means no need to re-grease. Low rotational resistance. Sixteen arc minutes of angular deflection. High quality 52100 hardened and tempered bearing steel. Improved surface grinding to near motor quality sound levels increasing operating life. C4 radial clearance guaranteeing housing fit up clearance. Increased axial clearance to reduce roll drag. Contact seals with radial and axial lips increasing contamination protection. PPI uses third party testing to benchmark the bearings used in our idlers to recognized worldwide brands. Name brand bearings available if desired. Available bearing sizes: 6203, P204, 6204, 6305, 6306, 6307, 6308, 6310, and 6312.

LUBRICATION – Bearings factory supplied with 60% fill of 100 viscosity polyurea grease assuring excellent sealed for life lubrication. A range of special greases are also available for extreme conditions. Alternate grease fill available depending on application.

SHAFTS – Excessive shaft deflection is a common cause of bearing failure. PPI designs limit the extent of deflection to within the bearing limits. Shaft diameters are selected for the idler assembly for given loading conditions.

FRAMES – Cross members are designed for optimum strength to weight ratio while providing adequate support for the rolls under loaded conditions. PPI frames have wide heavy duty formed end brackets, heavy duty footpads for a solid base, wide center brackets for heavy loads and minimal roll gaps. Custom designs are available to meet individual requirements.

REDUCED NOISE – PPI has incorporated noise reduction into our design considerations. PPI's manufacturing processes keep total indicator run out (TIR) to a minimum. Doing this creates a roll that provides optimal roll to belt contact minimizing the potential for belt vibration.

REDUCED WEIGHT – Alternative designs and materials have allowed PPI to develop products lighter weight products. Rolls can either be manufactured from lightweight materials such as HDPE, Nylon, aluminum or can employ alternative designs such as hollow shafts.

MINIMIZED ROLL TIR – Minimizing roll TIR can prevent vibration and reduce noise generation. PPI rolls are checked regularly during manufacturing to assure they comply with PPI quality standards. PPI can offer rolls that meet tighter TIR requirements for more demanding specifications, including scale quality rolls. The standard TIR value published by CEMA for scale quality rolls is 0.015 inches.

BALANCE – Unbalanced rolls can cause excessive vibration throughout the conveyor system. These vibrations can cause damage to conveyor structure as well as the idler roll itself. By purchasing top of the line materials with stringent specifications and utilizing exclusive build processes PPI rolls maintain exceptional balance characteristics. PPI can also meet a range of dynamic balancing specifications to meet customer requirements.

LOW TEMPERATURE – For low temperatures (-20 F or -29 C and below) our rolls can be fitted with bearings with special grease.

ROLL DRAG – Roll drag has been a key focus in PPI's roll design and is tested routinely to ensure quality. PPI has developed an idler seal configuration that offers exceptional protection from contamination while maintaining acceptable roll drag performance. Testing has shown that PPI's standard rolls fall within the CEMA published allowable values for roll drag. In applications where roll drag becomes a major factor that affects power consumption and horse power requirements PPI offers several different types of seal and bearing configurations to meet customer's demanding specifications.

SURFACE TREATMENT – Most non-machined surfaces shall be painted unless otherwise protected by such means as rubber, plastic, plating, etc. Standard paint applied to rolls and frames is a high solids alkyd enamel giving an approximate dry film thickness of 1 mil. Other options are available such as a urethane primer with an alkyd enamel top layer giving an approximate dry film thickness of 1.7 mils, or a high performance two component urethane primer with a top layer of high performance, high solids, and two component urethane giving an approximate dry film thickness of 1.7 - 2.5 mils. PPI can meet many other paint requirements depending on customer needs. Exposed shafting is unprotected unless otherwise specified.

Hot Dip Galvanizing is another option for frames and brackets. Galvanizing forms a metallurgical bond between the zinc and the underlying steel, creating a barrier that is part of the metal itself. During galvanizing, the liquid zinc reacts with the surface of the steel article to form a series of zinc-iron alloy layers.

OTHER SPECIAL PRODUCT OFFERINGS

IDLERS

Engineered Idler Product Line
Retractable idler frames
Galvanized frames
Catenary idlers
Stainless steel frames
Lagged idler rolls
Pipe conveyor idler panels

Rubber grooved rolls
Rubber Disk Returns with Massed Ends
Retro Rolls®
Return roll cages
HDPE or Nylon Rolls
Pillow Block Bearings
Catenary and Rigid Rail Idler Structure

Impact Systems
Five Roll "Cradle Style"
Troughers
Under Slung Frames
Swing Down V-Return
V-Return Self-Aligners
Banked Idlers
DIN/ISO Rolls and Frames

PULLEYS

Deflection Wheels
EZ Mount Pulley & Shaft System
Static Shaft Pulley (SSP®)
Apron Feeder Shafts
Herringbone Wing

Other Services

Tier I and Tier II Pulley restoration services
Field Service Technicians

Accessories

Take-Up Frames with hydraulic assist available
Bearings – SAF, SAFS, SD, SDAF, SDAFS, SNG, and many other manufacturers' bearings
Lagging – Rubber, Ceramic, VEC, and Urethane
Low-Speed Couplings
Motor and Reducer Packaging





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