

PROK

Quality Conveyor Equipment

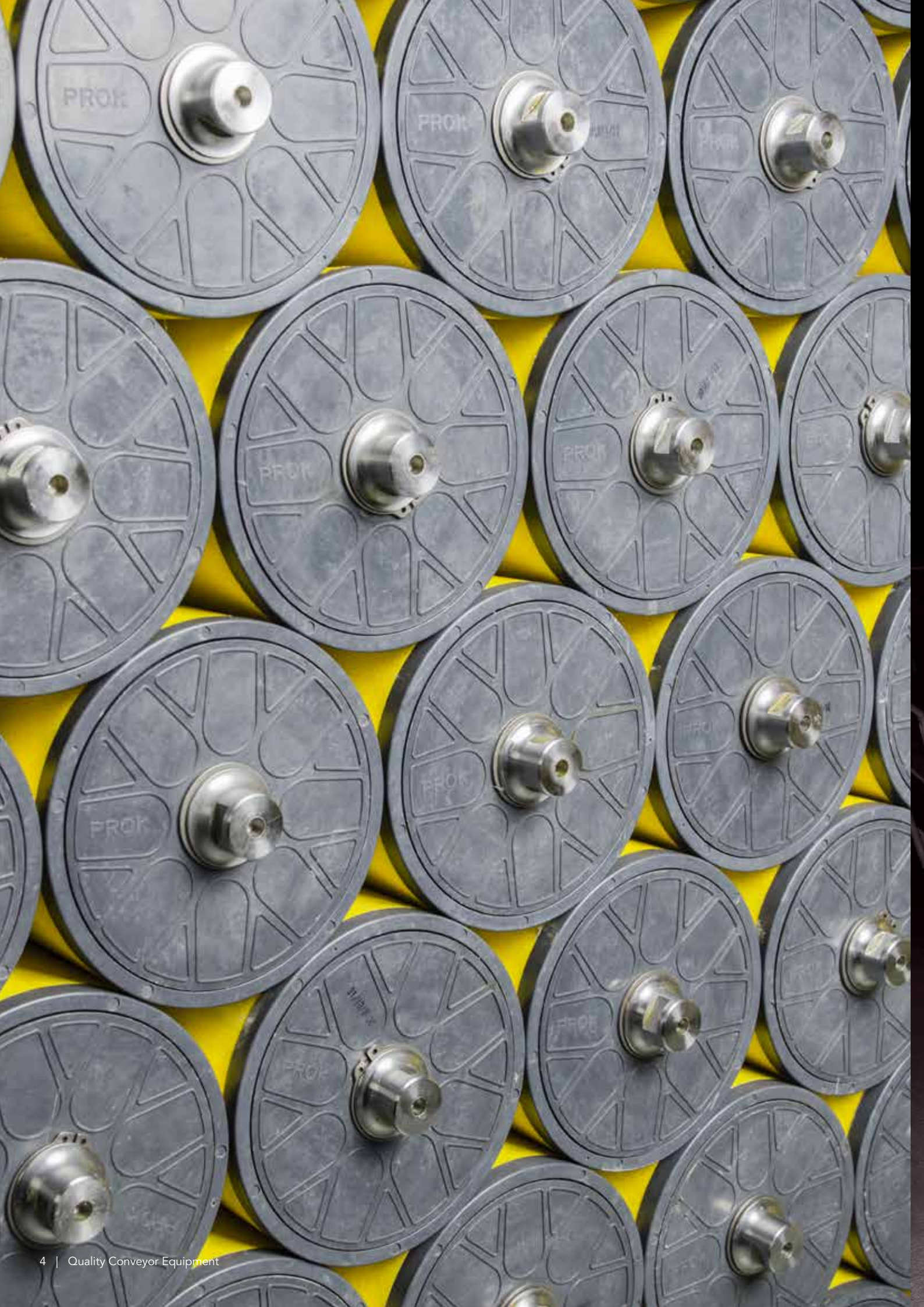
PROK IS A MEMBER OF:





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Safeguarding continuous material flow

SAFETY AND ENVIRONMENT

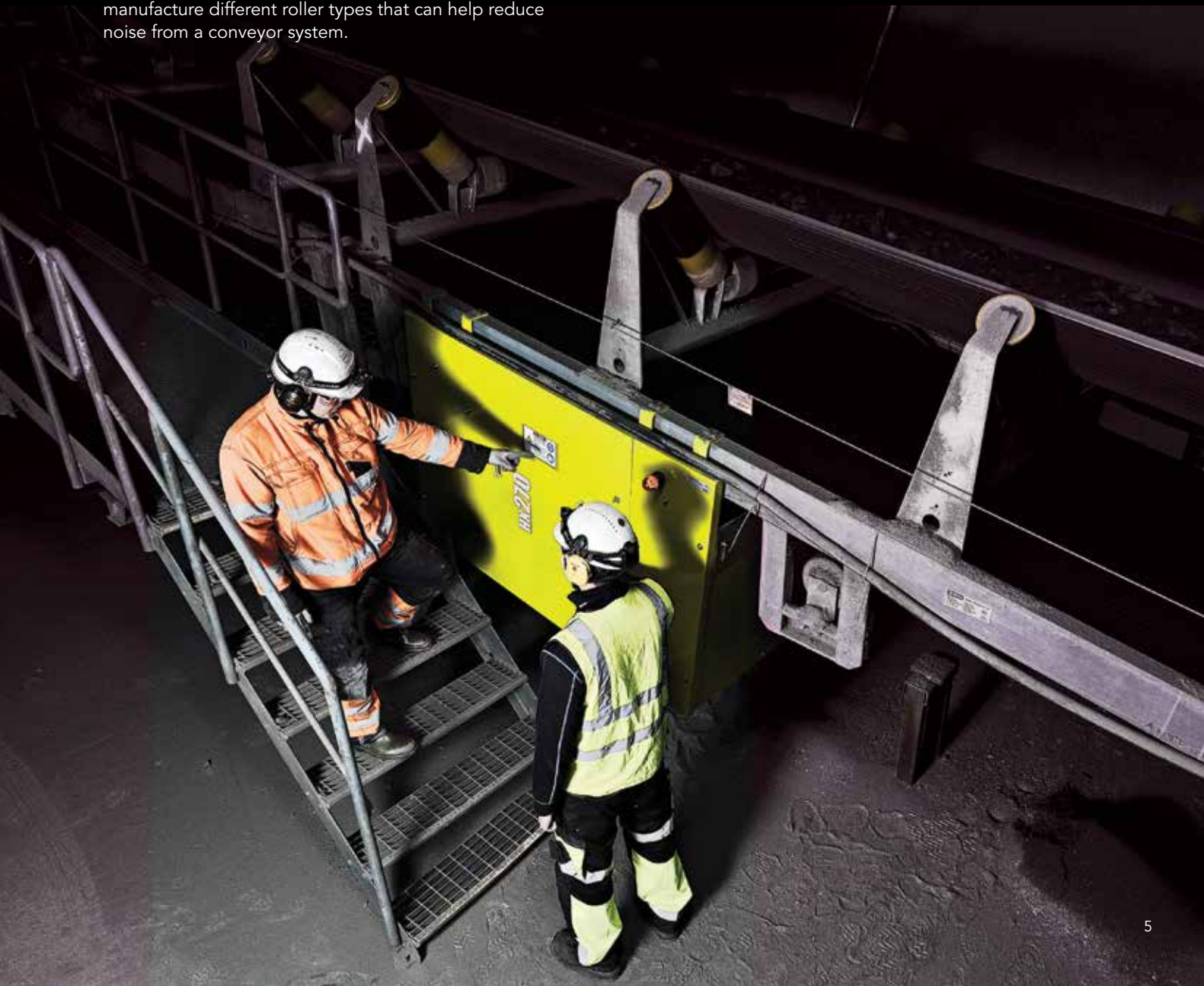
PROK has ISO14001 environmental accreditation and we are committed to helping you to improve your environmental profile.

Protection of personnel, equipment and environment are issues that are themselves important, but also affect operations and productivity. Carry-back and spillage of material from a conveyor system has a significant effect on the environment and is one of the most common problems experienced on many conveyor systems. We address these concerns with a variety of well-thought-out products and solutions.

High belt speeds bring additional challenges to conveyor rollers in bearing life, noise and power demands. We manufacture different roller types that can help reduce noise from a conveyor system.

PROK HR150 rollers are machined and balanced low noise rollers with smooth operation and long service life thanks to the excellent roundness and good dynamic balancing and reduced vibration. PROK HR160 molded end cap rollers with aluminum shell and composite end cap provide a light-weight corrosion-resistant low-noise roller.

Based on the innovative design principles, PROK HM140 and HM150 formed rollers operate more quietly and consume less energy than traditional high-speed rollers. Exceptional roundness minimizes vibration and noise, and optimized shell thickness contributes to lower weight, enabling easy and safe handling and installation of the roller.



Global strength, local service and support

Moving materials smoothly from one place to the next requires conveying systems that run reliably and at the lowest possible costs. We have a broad product scope of conveyor components, world class research and development, extensive engineering resources and a global manufacturing and distribution network.

We are globally present through a network of specialized engineering and service centres and manufacturing facilities. This ensures that our customer service and technical support is there for you whenever you need it, both for original components and as replacements in your existing systems.

DEDICATED TO CONVEYING

Our customers include mining and processing operations related to a wide range of metals and minerals, such as coal, iron, gold, copper, diamond and phosphate. Following the extracted materials downstream, our customer base also includes stockyards, power plants and port authorities.

The diverse range of companies we serve span from the world's largest mining companies and engineering houses to local entrepreneurs and a range of supporting companies.

We have gained comprehensive know-how in materials handling and conveying technologies, though our history of millions of conveyor kilometers operating in various industries.

Decades of engineering experience is designed into PROK conveyor products and development of advanced state-of-the-art design software. We have continued research work on the new technologies and materials to develop the current range of PROK conveyor components.



SCHÖPPENSTEDT, GERMANY

- Production unit, established 1976



HAPARANDA, SWEDEN

- Production unit, established 1975



VESPASIANO, BRAZIL

- Production unit, established 2009



PERTH, AUSTRALIA

- Production unit, established 1966

PILBARA, AUSTRALIA

MACKAY, AUSTRALIA

GOSFORD, AUSTRALIA

SANTIAGO, CHILE

JAKARTA, INDONESIA

VANCOUVER, CANADA

ORLANDO FLORIDA, USA

BRECKENRIDGE, USA

Keep your conveyor running with PROK components

The full range of PROK conveyor components – rollers, pulleys, idlers and garlands, and conveyor accessories, such as belt cleaners and safety and control devices – keep conveyor systems running efficiently and safely around the world.



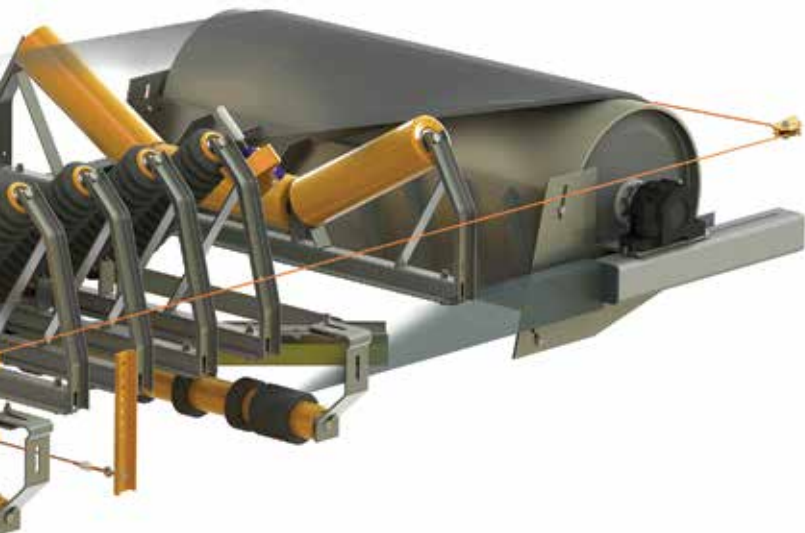
PROK HM100 FORMED ROLLERS

- End-formed rollers (PROK HM140)
- Flow- and end-formed rollers (PROK HM150)



PROK HP100 CONVEYOR PULLEYS

- Light-duty pulleys (PROK HP110)
- Medium-duty pulleys (PROK HP120)
- Heavy-duty pulleys (PROK HP130)
- Pulley lagging materials (PROK HP140)



PROK HR100 END CAP ROLLERS

- Unit handling rollers (PROK HR110)
- Standard end cap rollers (PROK HR120)
- Impact rollers (PROK HR130)
- Disc return rollers (PROK HR140)
- Machined and balanced rollers (PROK HR150)
- Aluminum and composite rollers (PROK HR160)



PROK HR300 IDLERS AND GARLANDS

- Idlers
- Garlands
- Belt trainers



PROK HB100-HB500 BELT CLEANERS

- Primary belt cleaners (PROK HB100)
- Secondary belt cleaners (PROK HB200)
- Tertiary belt cleaners (PROK HB300)
- Tail protection (PROK HB400)
- Cleaner accessories (PROK HB500)



PROK HR400 SPECIAL ROLLERS

- Tracking rollers
- Guiding rollers
- Holdback rollers



Conveyor rollers for materials handling and mining

PROK conveyor rollers are designed for smooth rotation, low noise, long service life and operating economy. Available in a wide range of types, sizes, designs and materials, they can be selected exactly to suit the speed, weight and width of the belt, the properties of the load and the full range of environmental conditions expected.

With premium bearings and very effective labyrinth seals, our rollers are built for tough working conditions and climatic extremes. PROK rollers are available with various surface finishes, produced as carry, impact, and return rollers suitable for garlands and fixed frames, greased for life and factory sealed. Our roller designs optimize seal efficiency, correct bearing fits and lubrication to maintain drag at acceptable levels – without compromising roller life or capacity.

We offer three primary series of rollers: PROK HR100 represent the traditional end cap rollers and PROK HM100, our innovative design of the formed rollers, developed especially for mining conveyors and similar high speed applications, as well as our series of special rollers, PROK HR400, for belt tracking and guiding.

All PROK rollers are designed on sound engineering principles with specific attention to achieve:

- Better balance for lower vibration levels
- Increased bearing life
- Less shell wear
- Reduced power consumption
- Quieter running

PROK HR100 END CAP ROLLERS

We manufacture rollers and frames to DIN and ISO standards, as well as in CEMA diameters ranging from 51 mm (2") to 219 mm (8.6") and bearing sizes from 6204 to 6312. PROK HR100 series end cap rollers are available for all bulk materials handling applications and unit-handling conveyors, as plain rollers, and with impact rings for loading areas, rubber discs for return rollers and rubber lagging for special applications. As an option these rollers are also available as machined and balanced low-noise rollers.

Advantages

- Widest offering range (diameters and bearings)
- Robust rollers for harsh environments manufactured in automated production facilities with fast deliveries of standard models from stock
- Equipped with precision bearings greased for life to prevent the ingress of contaminants to the bearing
- Effective multi-labyrinth seals to protect bearings
- Practically maintenance-free rollers

PROK HR110 UNIT HANDLING ROLLERS

PROK HR110 unit handling rollers are used in belt and roller conveyors for unit goods transfer. The rollers' deep-drawn end caps of steel are pressed inside the shell. Rollers with chain wheels are also available.

Advantages

- Premium bearings and labyrinth seals
- Greased for life for maintenance-free and low-friction operation
- Efficient multi-labyrinth sealing system protects the bearing from contaminants for longer service life
- Available from stock for short delivery times

PROK HR120 STANDARD END CAP ROLLERS

Our PROK HR120 standard end cap steel roller series features a wide range of roller diameters and bearing sizes available from stock.

Advantages

- Premium bearings and labyrinth seals are built for toughest conditions and climatic extremes
- Reliable deep grooved precision ball bearings are greased for life and factory sealed for maintenance-free rollers and low running resistance
- Effective multi-labyrinth seals prevent ingress of dirt into the bearing
- Smooth rotation, reduced vibration for long service life
- Standard roller series is available for fast deliveries from stock

PROK HR120 STANDARD END CAP ROLLERS OFFERING RANGE

Bearing		6204	6305	6306	6308	6310
Roller diameter						
mm	inch					
63.5	2.5"	■				
76	3"	■				
89	3.5"	■	■	■		
102	4"	■	■	■		
108	4.3"	■	■	■		
127	5"	■	■	■	■	
133	5.2"	■	■	■	■	
152	6"	■	■	■	■	■
159	6.3"	■	■	■	■	■
178	7"	■	■	■	■	■
194	8.6"	■	■	■	■	■

PROK HR130 IMPACT ROLLERS

In order to absorb and reduce impact loads on the rollers and the belts, impact rollers are equipped with buffering rubber rings, appropriate even for areas with high impacts. Polyurethane rings for highly abrasive applications, as well as with FRAS discs for underground coal mines, are also available.

Where impact loads are extremely high, the impact rollers are designed to achieve good running times and trouble-free operation.

Advantages

- Absorb impact loads to protect rollers and belt and the rollers last longer
- Equipped with ball bearings or roller bearings where necessary
- Rubber rings fixed in axial direction
- Rubber rings available separately for replacements
- Hot vulcanised impact rollers are also available



PROK HR140 DISC RETURN ROLLERS

On return rollers, support-spaced rubber discs can be used to prevent the conveyed material from caking on the roller. They can also prevent wear to the carrying side of the belt. Depending on your application, various disc profiles and materials are available, disc arrangement as per standard or as per your unique demand.

Advantages

- Prevent material buildup to reduce belt misalignment
- Suitable for belts with high levels of carry back
- Available in a wide range of diameters and bearings
- Discs with high abrasion resistance



PROK HR150 MACHINED AND BALANCED ROLLERS

PROK HR150 rollers are machined and balanced low-noise rollers with smooth operation and long service life, thanks to excellent roundness, good dynamic balancing and reduced vibration.

The roller surface profile has a direct effect on the noise generation for most conveyors. The most popular measurement that can be taken with respect to surface profile is the Total Indicator Reading (TIR). All PROK low-noise rollers are checked to ensure they achieve excellent TIR values.

Advantages

- Good dynamic balancing with excellent TIR values
- Reduced vibration and noise emissions
- Sealed for life bearings and high quality sealing system for long service life
- Smooth operation
- Premium high quality bearings



PROK HR160 ALUMINUM AND COMPOSITE ROLLERS

Aluminum rollers provide resistance to corrosion and reduced total roller weight in applications subjected to harsh environmental conditions. These rollers are ideally suited for applications requiring a corrosion-resistant roller that has low noise characteristics.

Molded end cap (MEC) rollers are fitted with a composite material end cap and an aluminium or composite tube to provide a light-weight and corrosion-resistant roller. FRAS end caps are available on request.

Advantages

- Low-noise roller with reduced vibration
- The end cap has exceptional mechanical and fatigue life characteristics
- UV- and ozone-resistant to withstand years of service in the harshest of environments
- Corrosion- and abrasive-resistant
- No welding between the shell and end cap
- Efficient PROK sealing provides years of trouble-free operation with a low roller drag
- Light-weight – easy to replace
- Uses less energy (power consumption)
- Premium bearings and labyrinth sealings are built for tough conditions and climatic extremes



PROKOMPOSITE

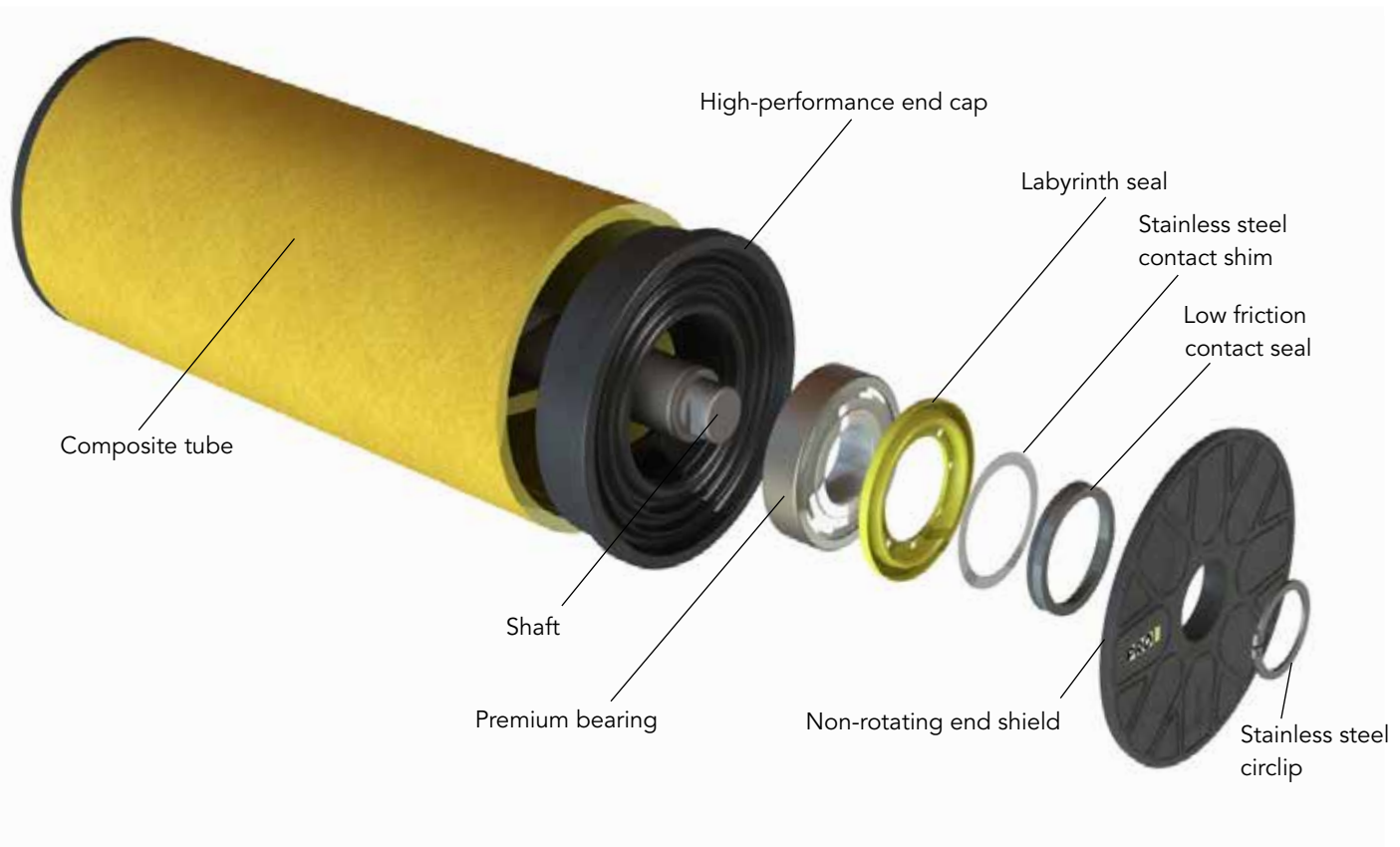
Roller

MAIN DATA

Tube diameters	152 mm to 178 mm
Bearing sizes	6306, 6308, 6309, 6310
Bearing life L10	60,000 hours
Seal performance testing	Based on DIN 22112
Shaft sizes	35 mm - 60 mm
Shaft material	SAE 1040 (stainless steel available on request)
Hollow shafts	Available for increased weight reduction up to 60%
CEMA rating	Up to CEMA E8

An alternative option for a roller with a steel tube is available on request.

WALKAROUND



are up to **55%**
lighter than traditional
steel rollers

SAFER

generate more than **50%**
less noise than traditional steel
rollers

QUIETER

cost up to **20%** less
than traditional steel rollers

MORE ECONOMICAL

PROKOMPOSITE

Roller

PROK have significant experience in designing conveying solutions that are safe, reliable and enable maximum productivity levels. PROK specialise in products for the future of mining.

PROKOMPOSITE, our latest generation all-composite roller, is a low-weight, low-noise innovation that answers your need for a superior conveyor component.

Our new composite rollers deliver significantly more value than competing steel rollers, from lower cost to corrosion resistance in wet and high-salt environments. They're safer, quieter and more economical.

PROKOMPOSITE rollers:

- Generate more than 50% less noise than traditional steel rollers
- Are up to 55% lighter than traditional steel rollers
- Cost up to 20% less to own due to easier maintenance and lower energy demands

Despite their light weight, our new PROKOMPOSITE rollers deliver durability in demanding medium to heavy duty conveying applications.

Suitable for high speeds and large tonnages, the rollers are available in diameters from 152 millimeters to 178 millimeters with bearing sizes from 6306 up to 6310.

KEY FEATURES AND BENEFITS

Significantly lower weight - enables safer, easier handling and helps reduce the risk of manual handling injuries.

Less noise - the natural dampening effect of the composite material means the rollers will minimise noise emissions.

Strong as steel - PROKOMPOSITE rollers are as strong as comparably-sized steel rollers and can carry the same running loads.

Advanced sealing - PROKOMPOSITE builds on more than 50 years of roller design experience providing a seal that delivers optimal bearing protection with low drag.

High performance end cap - manufactured from a specifically developed composite that is rigid, durable and creep resistant.

Non-rotating end shield - outer shield remains stationary with the roller shaft. If any debris becomes trapped between the frame and the end cap, it will not have any detrimental effect on the sealing system or the roller.





PROK HM100 formed rollers for advanced performance

Our new PROK HM100 series rollers deliver you an intelligent design and superior characteristics.

Designed for the highest loading capacities and belt speeds, formed rollers offer special features such as long life, low weight, energy efficiency, low vibrations and decreased noise levels.

Formed rollers are also available with hollow formed shafts instead of full steel shafts for added weight reductions. The tube ends are formed into bearing holders, improving reliability and saving costs – no separate bearing holders, inner tube and welding is needed. Flow- and end-formed rollers do not require machining and balancing, as TIR is extremely low and shell thickness remains constant, leading to improved operation and longer lifetime. Formed rollers are available as carry, impact and return rollers and garlands as well.

Bearing		6306	6308	6310	6312
Roller diameter	HM140 offering range				
mm	inch				
152	6				
159	6.3				
165	6.5				
178	7				
194	7.6				
203	8				
219	8.6				

Bearing		6303	6308	6310	6312
Roller diameter	HM150 offering range				
mm	inch				
159	6.3				
178	7				
194	7.6				
219	8.6				

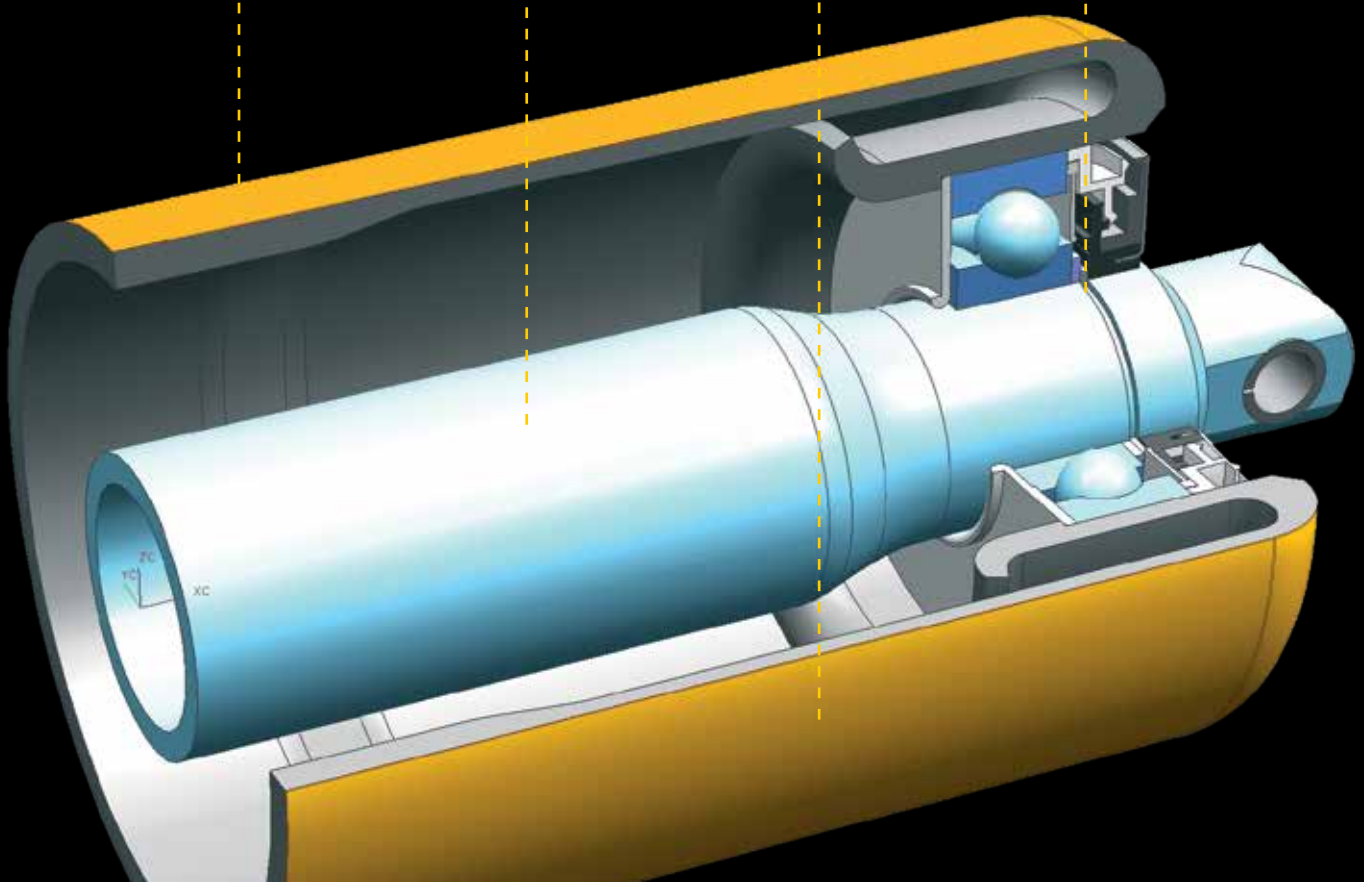
Intelligent design of HM150 and HM140 rollers contributes to superior characteristics

Increased wall thickness at the center of the roller shell allows for better loading capabilities

Hollow formed shaft provides less deflection, saves weight and reduces cost

Multi-labyrinth seals and precision bearings sealed for life are maintenance-free

Flow-formed roller shell provides exceptional TIR, integrated bearing seats, smoother running and low noise



PROK HM140 and HM150 high capacity and speed

PROK HM140 END FORMED ROLLERS

Our HM140 rollers are designed for the highest loading capacities and belt speeds. The bearing seats are formed as an integral part of the shell from a single tube, while the opposing bearings are tightly aligned.

Advantages

- Instead of welding, the bearing seats are formed as an integral part of the shell from a single tube; the opposing bearings are tightly aligned and more strongly supported
- The formed bearing holders improve reliability of the roller, leading to lower failure rate
- Simultaneous machining of the bearing holders improves alignment and extends life
- Shaft design increases load capacity
- Sealed bearing keeps the grease in place for extended bearing life
- Increased capacities with increased belt speeds and higher load capacities

PROK HM150 FLOW FORMED ROLLERS

In addition to the benefits you'll experience using our HM140 rollers, PROK HM150 series rollers are equipped with a flow-formed roller shell. The flow forming process delivers a shell of exceptional roundness and increased hardness, which is a key to success in mining conveyors and similar equipment. An increased wall thickness at the center of the shell allows for better loading capabilities with lower shell deformations.

Advantages

- Heavy-duty idler roller developed specifically for the heavy mining industry
- Forming avoids the need for dynamic balancing and machining, allowing high belt speeds
- Suitable for conveyor loads up to 52,000 mt/h and belt speeds up to 11 m/s (36 ft/s), achieved by a reduction of vibration which also reduces noise emissions.
- Exceptional roundness, straightness and hardness; inherent balance $G < 16$ according to DIN ISO1940, maximum concentric deviation maximum 0.3 mm
- Also available with shell wall thickness increased at the center of the roller to reduce shell stress and deformation
- The hollow formed shaft offers an extremely high bending resistance combined with the relatively low weight
- Hollow shaft and optimized shell thickness with lower weight enables easier and safer handling





PROK HR400 special rollers for belt guiding and tracking

We offer a wide range of special rollers in various designs and configurations, engineered to extend your belt life and transport material more efficiently. PROK belt tracking and guiding products help keep the belt correctly aligned during operation. PROK easy-to-fit trackers range from traditional types with side-guiding idlers to the rapid response belt tracking roller.

PROK HR410 BELT TRACKING ROLLERS

PROK HR410 belt tracking rollers are designed to provide long belt life and keep the belt correctly aligned during operation. This efficient return belt tracking solution is engineered for single and reversible belts, and helps align the belt without causing any additional wear to the belt or structure. The roller tilts and turns to correct the belt travel at the very first sign of deviation, and the belt will not travel sideways as it would with a traditional tracking device.

Advantages

- Fast automatic tracking response - the roller tilts and turns to correct belt travel at the first sign of deviation
- Models for single direction and reversible belts
- Easily adjustable steering strength to meet the requirements for light-, medium- and heavy-weight belts
- Easy to install on existing and new conveyors; no extra space or extensive modification to structure

PROK HR420 HOLDBACK ROLLERS

Where required, inclined conveyors can be equipped with rollers that have an anti-runback device to prevent reverse movement of the belts. Our HR420 holdback rollers are available upon special request and are tailor-made for your application.

Advantages

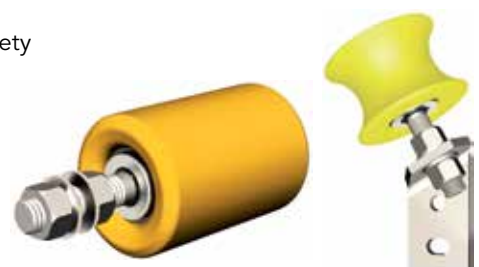
- Anti-runback device prevents reverse movement of the belt and improves safety
- Available for high capacity belts

PROK HR430 GUIDE ROLLERS

PROK HR430 side guide rollers are installed in belt tracking idlers, or in areas where the belt's side movement needs to be limited.

Advantages

- Easy-to-fit economical solutions
- Keep the belt correctly aligned during operation
- More efficient material transport
- Long belt life
- Improved safety





PROK HR300 idlers, garlands and belt trainers equipped with high-quality PROK rollers

IDLERS

A conveyor idler consists of a number of rollers and a frame. We manufacture conveyor idlers for the carrying and return run, impact and transition. Available in a wide range of sizes for belt widths from 400 to 3,500 mm (16" to 120") and in various designs for different placements, troughing angles and functional demands.

PROK idlers are equipped with high-quality PROK rollers supported by close tolerance, premium bearings and effective seals. Renowned for high performance and reliability, they are sealed for life and virtually maintenance-free. PROK idlers can be supplied either with galvanized or a painted surface frame. PROK idler frames permit great flexibility in conveyor design and idler replacement.

Advantages

- PROK idlers and frames are designed to maintain an optimum conveyor belt profile which in turn promotes low rolling resistance, excellent belt support, good belt guidance and long belt life
- Available as carry, impact and return idlers for belt widths from 400 mm to 3,500 mm; standard idler range from 400 mm to 3,000 mm
- Troughing angles upon requests; standard 30°, 35° and 45°; for return idlers 10°
- Rigid design for a long life
- Idlers come in 2-, 3-, 4- or 5-roller design; standard as 3- or 5-roller design
- Roller diameters from 63.5 mm to 219 mm and bearings from 6204 to 6312

GARLANDS

Instead of fixed idlers, garland rollers can be installed in the carrying and return run, as well as in impact areas.

The rollers are connected to each other with flexible links and fixed to the conveyor frame with suspension links, which allows free movement in the direction of belt travel. A garland set is easy to replace by lifting the idler set from the hook. The flexible arrangement also has a positive influence on the self-centering of the belt.

Advantages

- Available for belt widths from 400 mm to 3,500 mm standard garland range from 400 mm to 3,000 mm
- Troughing angles upon requests; standard 30°, 35° and 45°; for return garlands 10°
- Garlands come in 2-, 3-, 4- or 5-roller design; standard as 3-roller design for carry garlands and a 2-roller for return garlands
- Roller diameters from 63.5 mm to 219 mm and bearings from 6204 to 6312
- Rubber discs and impact rings in various dimensions are available for return and impact garlands

PROK HR370 BELT TRAINING IDLERS

Training idlers are designed to provide mechanical assistance with tracking of a conveyor belt.

Any trough or return idler can be supplied as a positive action training idler. Training idlers have a heavy-duty pivot arrangement in the center and are fitted with training arms and side guide rollers.

Advantages

- PROK belt trainers help keep the belt correctly aligned during operation for a long belt life and more efficient material transportation



OUR PRODUCT LINE INCLUDES:

- Suspended sets, fixed and garland type
- Fixed trough/vee – inline or offset
- Flat return
- Retractable impact sets
- Adjustable impact sets
- Training sets
- Varitrough
- Lightweight structure

Idlers are manufactured to our customers, design and tolerance requirements, in accordance with relevant Australian Standards.

PROK offer the “lipped flange” bearing housing, in-built low, Total Indicator Runout (T. I. R.) - providing increased bearing life and proven reductions in shell wear.

High Performance

- Low vibration
- Low noise
- Low drag

Allows PROK Conveyor Components to achieve superior bearing life.

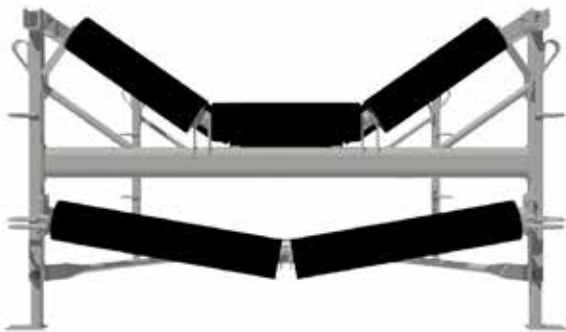
Design

- Lipped flange
- Internally welded
- Multi-labyrinth seal
- Breather hole

The external chamber on the tube protects the belt edge and the tube housings while the internal fillet weld is also protected from belt wear.

PROK Idler Standard Data

Unless otherwise agreed PROK idlers will be supplied to the standards listed the opposite page. These standards have been developed over 20 years of research and experience in conveyor design to suit customer requirements. The resulting product is technically and commercially sound, and is designed to eliminate the need for maintenance.



UNDERGROUND STRUCTURE - MAINGATE



UNDERGROUND STRUCTURE - TRUNK



MANUFACTURING TOLERANCES			
Nominal O.D. of roll steel shell	+/- 0.3 mm	Roll corner chamfer	3.0mm min
Rubber disc	+/- 0.8 mm	Corner weld penetration	80% min
Thickness of steel shell	+/- 0.5 mm	Total Indicator Reading (T.I.R)	
Roll face length	+/- 1.5 mm	Over steel shell:	Up to 750mm long: 0.50mm
Center roll height above base line	+/- 2.0 mm	T.I.R Above 750mm long	0.0007 x length
Transverse hole centers	+/- 2.0 mm	Out of balance	Standard rolls - 0.028 Nm
Longitudinal hole centers	+/- 2.0 mm		Weighing rolls - 0.014 Nm
Return bracket drop height	+/- 2.0 mm	Angular deflection at bearing full load	8 min
Trough angle	+/- 1°		

BASIC PROK ROLL CHARACTERISTICS				
Series	Roll Dia.	Bearing Designation	Bearing Dynamic Capacity	C.E.M.A Rating
05	114	6205	14.0kN	C4 1/2
10	102	6204	12.7kN	C4
11	114	6204	12.7kN	C4 1/2
12	127	6204	12.7kN	C5
15	127	6205	14.0kN	C5
20	152	6205	14.0kN	C6
25	127	6305	22.5kN	D5
30	152	6305	22.5kN	D6
35	152	6306	28.1kN	E6
40	178	6306	28.1kN	E7
45	152	6307	33.2kN	E6 plus
50	178	6307	33.2kN	E7 plus
54	152	6308	41.0kN	super 6
55	152	6309	52.7kN	super 6+
59	178	6308	41.0kN	super 7
60	178	6309	52.7kN	super 7+





PROK HP100 conveyor pulleys

Light, Medium and Heavy Duty Applications

We engineer conveyor pulleys in a wide range of diameters and lengths to meet any application requirement. Each pulley is available with many choices of lagging appropriate for drive- and non-drive pulleys. We can provide PROK conveyor pulley assemblies with bearings mounted for ease of installation. We also offer special pulley assemblies such as dead-shaft, wing and deflection wheels for high-angle conveying.

Pulleys must effectively and reliably transfer the drive motor load to the belt as well as provide support for changes in the belt direction. In-house design software, coupled with our dedicated research and development activities, ensure that we supply the optimum pulleys for your application.

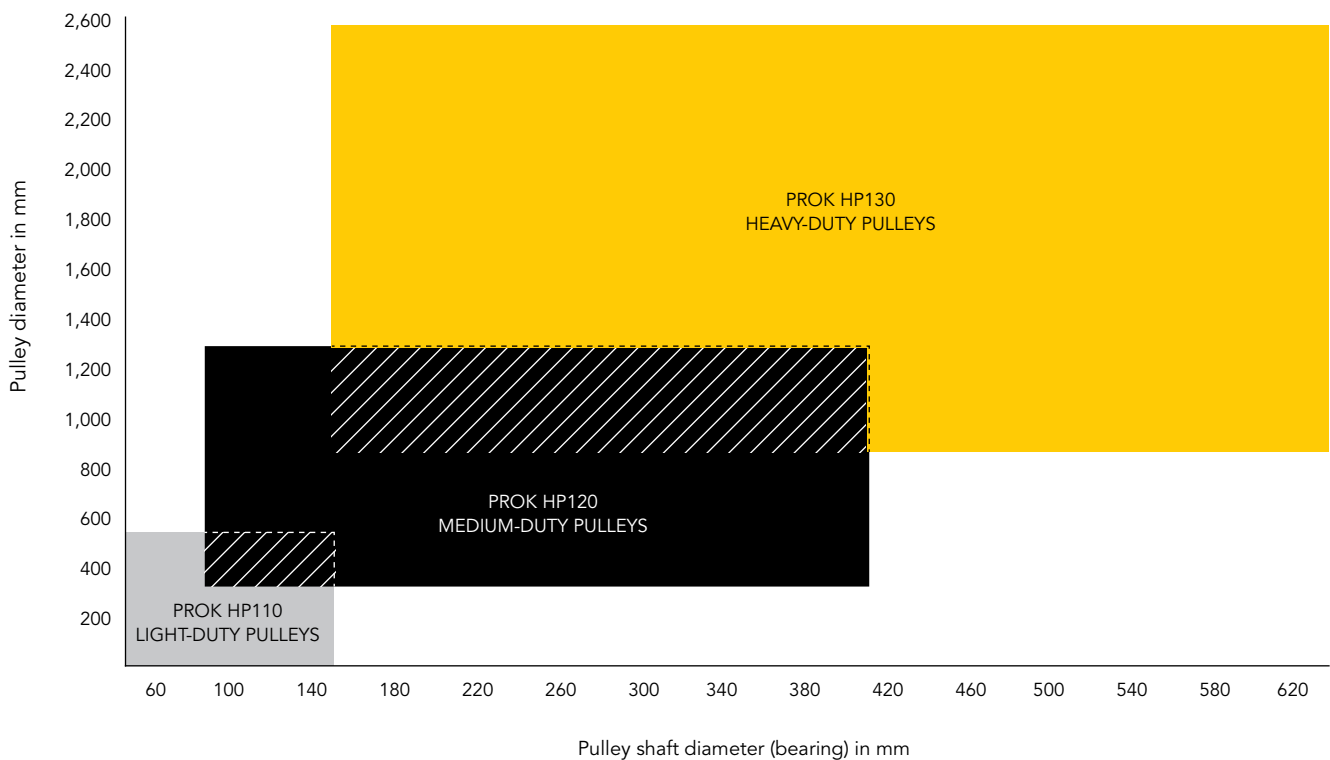
As a recognized leader in pulley design, we are able to supply the correct solution for your conveyor pulley requirements with help from our in-house design software. An advanced pulley design process incorporating Finite Element Analysis ensures that all PROK pulleys are designed to the best engineering practice. Further to world-leading calculation and design philosophy we select only first-class material and sub-component suppliers.

Advantages

- Wide range to meet even the toughest demands – standard range for light- and medium-duty as well as specially engineered and extra-heavy-duty pulleys for special applications
- Precision manufacture and accurate assembly for low maintenance for continued operation, low total cost of ownership
- Advanced pulley design process incorporating Finite Element Analysis ensures all PROK pulleys are designed to world's best practice for consistent performance – PROK pulleys effectively and reliably transfer the drive motor load to the belt and provide support for changes in the belt direction
- Optimized, standardized bearing centers
- Weight-optimized designs
- Efficient locking elements
- High loading capacities



PROK HP100 pulley offering range



PROK HP110 LIGHT-DUTY PULLEYS

When heavy loads or high speed are not absolutely required, our PROK HP110 series of high-quality, light-duty pulleys operate with maximum efficiency in conveyors for sand, gravel and similar applications.

They are engineered to provide an economic solution to a wide range of industry applications, where the belt widths are relatively narrow and the belt speeds are relatively low compared to, for example, high capacity mining conveyors.

With pulley diameters from 200 to 600 mm (8" to 24") and shaft diameters from 50 mm to 140 mm (2" to 5.5"), PROK HP110 pulleys are ideally suited to mobile and semi-mobile equipment, and to standard conveyors with belt widths up to 1,200 mm (48").

Advantages

- Compact, high-quality pulleys
- Predesigned construction offers an economical solution with short delivery times
- Weight-optimized designs
- Low maintenance for continued operation and low total cost of ownership
- Optional dead-shaft, wing and deflection wheels also available
- Standardized bearing centers; customized also available on request





PROK HP120 MEDIUM-DUTY STANDARD PULLEYS

Our PROK HP120 series of standardized pulleys are designed to meet the needs of medium-scale applications.

These pulleys have standardized bearing centers for bearings up to 360 mm (15"), and are designed for a load range typical for stockyard conveyors, mobile machines and similar applications. In addition to standard bearing centers, pulleys can be easily adapted to your specific bearing centers.

Pulley diameters range up to 1,250 mm (50") and shaft diameters from 100 mm to 400 mm (4" to 16") for belt widths from 800 mm (32") to 2,600 mm (104").

Medium-duty pulleys have efficient locking elements that consider bending and torque, welded as well as T-shaped end discs. The medium-duty pulleys are available as standard catalog items, eliminating the need for customized calculations.

Advantages

- PROK pulleys are designed to world's best practice
- Advanced pulley design process incorporating Finite Element Analysis
- Optimized standardized bearing centers enable selection of pulleys from catalog
- Other bearing centers on request
- Optional dead-shaft, wing and deflection wheels that offer high-angle are also available
- Efficient locking elements considering torque and bending
- Where required, T-shaped end discs offer highest performance and reliability
- Low maintenance for continued operation and low total cost of ownership
- Wide range of pulley laggings available



PROK HP130 HEAVY-DUTY PULLEYS

Large, high-capacity mining conveyors and heavy mobile mining systems and machines require pulleys that are engineered and manufactured to the most exact of standards.

We used our unique in-house software to design the PROK HP130 series of engineered-class pulleys, to ensure consideration of all operating conditions. Calculation of fatigue life ensures our pulleys are built to last. When combined with a comprehensive maintenance and reconditioning regimen, a PROK pulley will provide decades of trouble-free service. They are available in many configurations, from single-piece profiled turbine disc pulleys to cast T-shaped end discs for especially demanding applications. This pulley series is found in conveyors with the highest capacities and belt speeds as well as drive torques.

PROK HP130 pulleys are designed for belt widths from 1,000 mm (42") to 2,600 mm (102") in pulley diameters up to 2,500 mm (100") and shaft diameters up to 600 mm (24"). Heavy-duty pulleys are also available with standardized bearing centers for bearings up to 450 mm (18"). These pulleys in most cases feature T-shaped end discs and are equipped with efficient locking elements, considering bending moments and torques.

Advantages

- PROK pulleys are designed to world's best practice
- Advanced pulley design process incorporates finite element analysis
- Optimized, standardized bearing centers enable selection of pulleys from catalog
- Other bearing centers on request
- Non-driven pulleys option as dead-shaft pulleys
- Efficient locking elements considering highest torques and bending
- T-shaped end discs offer highest performance and reliability
- Low maintenance for continued operation and low total cost of ownership
- Wide range of pulley lagging available



Conveyor accessories PROK HB100-HB500 belt cleaners

Conveyor accessories help you ensure trouble-free, reliable and safe operation of your conveyor. By choosing the right conveyor accessories, operating efficiency and the life-time of main conveyor components and the conveyor belt can be remarkably increased. We manufacture a wide range of belt cleaners of compact and efficient design that are easy to maintain.

Designed to keep the conveyor belt, pulleys and rollers as clean as possible, PROK cleaners prolong conveyor service life, improve belt tracking, minimize spillage, and improve safety and productivity. In collaboration with the conveyor industry, we have also developed a range of monitoring, safety and control devices, such as emergency stop switches, belt rotation detectors, belt misalignment switches, blocked chute switches and an online belt condition monitoring device.

WHY BELT CLEANING?

Carry-back from inadequate belt cleaning has long been the single biggest enemy of conveyor systems and contributor to maintenance costs.

Carryback causes the following costly problems:

- Waste of material
- Costly cleaning work
- Creates safety hazards
- Poor belt tracking
- Premature failure of return rollers' shells
- Rusting of conveyor structures and steelwork
- Wears out return side pulley lagging and belt covers
- Unexpected maintenance stop

PROK HB100-HB500 BELT CLEANERS

A high-quality belt cleaner can help you raise the total performance of your conveying operation. It not only minimizes the waste material, but also keeps the environment cleaner and safer.

We deliver a range of primary, secondary and tertiary belt cleaners and tail protection from light- to heavy-duty applications. PROK cleaners are easy to install and maintain, and can be equipped with different blade materials. Our belt cleaners are also available for reversing conveyors and can be fitted with an optional spray pole for additional cleaning.



Belt Monitoring System

HX270 Enabling Proactive Maintenance

Condition monitoring and measuring have become increasingly important in industrial maintenance. The condition of equipment is monitored and measured either continuously or at certain intervals. In a growing number of companies, condition monitoring is considered an important media to manage productivity.

CONVEYOR BELT CONDITION MONITORING IS CRUCIAL

Critical and long conveyor belts deserve continuous monitoring. A belt damage can cause unplanned downtime and huge repair requirements and costs. Belt damage also creates a remarkable safety risk.

Roxon has developed an automatic online conveyor belt condition monitoring system HX270 which monitors the belt condition from both sides of the belt.

VALUE PROPOSITION

The purpose of condition monitoring is to be aware of potential damages as early as possible and in this way avoid further damaging to achieve:

- Improved productivity
- Planned maintenance
- Better utilization of stoppages
- Decreased unplanned stoppages
- Longer lifetime of machines.

HX270

ENABLING PROACTIVE MAINTENANCE



AUTOMATIC BELT DAMAGE INSPECTION ROUTINE ENABLES EFFECTIVE PROACTIVE MAINTENANCE

Peter Gustavsson points another important criterion when selecting HX270: "Automatic belt damage inspection routine makes belt service efficient, convenient and safe. We can drive the belt damages automatically to the predefined repair station in sequential order by using full belt speed. Inspection and repair setup is always in the optimal location, which is near by the tail end pulley in this case. There is enough space and it's easy to access for the belt repair. Belt damage inspection and repair decisions can be made in short stoppages. This enables true proactive belt maintenance."



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