

A photograph of a large industrial facility, likely a factory or warehouse, featuring a complex network of blue and silver conveyor belts. The belts are arranged in multiple levels and directions, creating a sense of depth and movement. The background shows structural steel beams and various pieces of machinery. The image is overlaid with large, semi-transparent geometric shapes in red and blue, which also appear in the logo and text.

Conveyor Solutions

ABOUT AniFlex



AniFlex Conveyor Solutions, a division of AniGears Engineering Solutions, is engaged in the design, development, and manufacturing of high-performance Conveyor Belts, Pulleys, and Idlers.

Established with the vision to deliver dependable and efficient material handling systems, AniFlex has strategically placed its manufacturing facilities in Central India (Indore) and Eastern India (Kolkata), enabling nationwide reach, faster deliveries, and prompt technical support.

AniFlex Conveyor Solutions are designed to deliver seamless material handling performance through a complete range of products engineered for reliability, precision, and endurance. Serving diverse sectors — including steel, cement, power, mining, and bulk material handling industries — our products ensure smooth conveying, reduced downtime, and minimal maintenance under demanding operating conditions.

Each component is manufactured using advanced technology, high-grade raw materials, and strict quality control measures, ensuring consistent performance, superior strength, and long service life. Our dedicated R&D and testing teams continually innovate to meet international standards of safety, durability, and efficiency.

With a strong focus on engineering excellence and customer satisfaction, AniFlex continues to be a trusted partner for industries seeking robust and sustainable conveyor solutions across India.

Construction

AniFlex belts consist of multiple functional layers, each contributing to the overall strength and performance:

- ✓ Top Cover: High-grade rubber for abrasion and impact resistance.
- ✓ Carcass: Fabric layers providing strength and flexibility.
- ✓ Skim Coat: Ensures high adhesion between plies and covers.
- ✓ Bottom Cover: Protects the carcass from wear and idler friction.
- ✓ Edge Type: Available in cut-edge and moulded-edge versions for different applications.

Manufacturing Excellence

AniFlex operates modern manufacturing units in Indore (Madhya Pradesh) and Kolkata (West Bengal), enabling efficient production and timely delivery across India.

Our Indore facility specializes in high-quality Conveyor Belts, equipped with advanced compounding, calendaring, and curing systems. The Kolkata unit focuses on Pulleys and Idlers, featuring precision fabrication, dynamic balancing, and protective coating lines.

Both facilities follow strict quality control standards, ensuring every product meets demanding industrial requirements for strength, reliability, and long service life.



02

Why AniFlex

With over two decades of industrial experience, AniFlex has evolved into a trusted name in complete conveying solutions — manufacturing high-quality Conveyor Belts, Pulleys, and Idlers for material handling applications across steel, cement, power, mining, and process industries.

AniFlex products are known for performance, dependability, and engineering precision, serving as the backbone of India's bulk material handling systems.

01 Product Features

The features for which we have received appreciation from our clients include:

- ✓ Experienced and Qualified Technical Professionals
- ✓ Modern Manufacturing & Fabrication Facilities for Belts, Pulleys & Idlers
- ✓ Advanced Testing and Quality Control Infrastructure
- ✓ Custom Design Options for Specific Material Handling Needs
- ✓ Robust Engineering Standards and Consistent Product Quality
- ✓ Timely Delivery and Prompt After-Sales Support
- ✓ Client-Centric Approach and Transparent Dealings
- ✓ Competitive and Cost-Effective Solutions

02 Serving Industries

AniFlex Belts, Pulleys, and Idlers are widely used in:

- ✓ Steel Plants, Rolling Mills, and Sponge Iron Units
- ✓ Cement Plants, Clinker and Limestone Conveyors
- ✓ Thermal Power Plants and Ash Handling Systems
- ✓ Mining, Stone Crushing, and Aggregate Units
- ✓ Ports and Bulk Material Terminals
- ✓ Fertilizer, Chemical & Process Industries
- ✓ Food & Packaging Industries (for hygienic conveying)
- ✓ Project Engineering, OEMs, and EPC Contractors

03 Quality Standards

AniFlex supplies all products conforming to Indian and International Standards:

- ✓ IS 1891 (Parts I-V) – Conveyor Belt Specifications
- ✓ IS 8598 / ISO 1537 – Idler and Pulley Dimensions & Tolerances
- ✓ ISO 340 – Flame and Fire Resistance Standards
- ✓ ISO 283 / ISO 9856 – Tensile & Elongation Testing
- ✓ DIN 22102 – Textile Conveyor Belts
- ✓ IS 8005 – Rubber Testing and Hardness Verification
- ✓ 100% Batch-Wise Inspection with Traceable Records
- ✓ Certified QA System with Dimensional and Balance Checks

04 Conveyor Belting & Systems

Nylon/Nylon (NN) Carcass Belts

- ✓ Lower longitudinal elongation
- ✓ High tensile strength and superior flexibility
- ✓ Resistant to moisture, mildew, and edge wear
- ✓ Excellent impact absorption and troughability
- ✓ Suitable for short and medium-length conveyors

Polyester/Nylon (EP) Carcass Belts

- ✓ Excellent dimensional stability
- ✓ High load-bearing capacity and minimum stretch
- ✓ Best suited for long-distance, high-tension conveyors

Conveyor Pulleys

- ✓ Fabricated from heavy-duty rolled steel shells with machined end discs
- ✓ Static and dynamic balance ensures vibration-free operation
- ✓ Lagging options: plain rubber, diamond groove, or ceramic
- ✓ Available in drive, tail, bend, snub, and take-up configurations

Conveyor Idlers

- ✓ Seamless steel tubes with precision bearings (SKF/FAG equivalent)
- ✓ Triple-labyrinth sealing prevents dust and moisture ingress
- ✓ Available as carrying, return, impact, and training idlers
- ✓ Powder-coated or galvanized for corrosion resistance

Cover Grades

AniFlex offers belts in several grades, each tailored to specific operating environments:

- ✓ M24: High abrasion resistance and tensile strength
- ✓ N17: General-purpose compound for standard conveying
- ✓ HR / SHR / UHR: Heat-resistant compounds for high-temperature materials
- ✓ OR: Oil-resistant compound for exposure to mineral and vegetable oils
- ✓ FR: Fire-resistant, self-extinguishing compound
- ✓ FG: Food-grade, non-toxic, odourless compound
- ✓ CR: Cold-resistant belts for sub-zero operations
- ✓ AR: Anti-static and flame-retardant for coal handling

03

Conveyor Belts

General Duty Belt

General Duty Conveyor Belt made from technologically superior rubber compounds with better ageing characteristics, available in a variety of grades; carcass available in both Nylon or Polyester Fabric (EP).



Heat Resistant Belt

The rubber cover protects the fabric of the belt against hot materials such as alumina, ash, granite, iron and copper, grit etc, available in various grades: HR (Heat Resistant) | SHR (Super Heat Resistant) | UHR (Ultra Heat Resistant) | HOR (Heat & Oil Resistant).



Fire Retardant Belt

Fire - Retardant Belts is a Self-Extinguishing design prevent fires from spreading over the entire belt.



Oil Resistant Belt

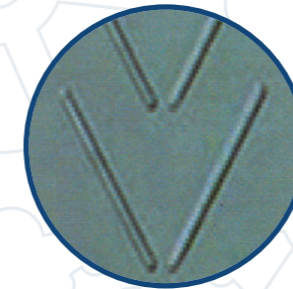
The synthetic fabric is impervious to oil, turps, moisture and rot. The top and bottom covers are made of oil and terpene-resistant black rubber, so that they retain their shape, hardness and surface characteristics, also available OHR (Oil and Heat resistant) belt.



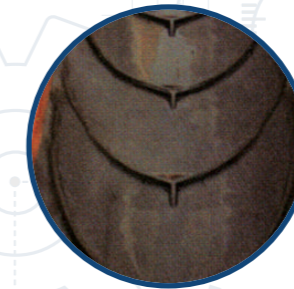
Special & Standard Belts

Chevron / Cleated Belt

AES offers a wide range of Profiled Chevron Cleated Belts which make increased angles of 30 Degree to 40 Degree inclination possible. The advantage of high angle of inclination is that less space is needed to reach the desired conveying inclination/ angle.



V-CLEATS



V-YI-CLEATS



C-CLEATS



Y2-CLEATS



Elevator Belt

These Belts are suitable for vertical transportation of materials. AES offers special elevators belts with minimum elongation characteristics, available in various grades M-24, HR, SHR, HOR, Oil Resistant & White.

Chemical Resistant Belt

These belts stand up to aggressive acids and high concentrations of various chemicals such as sulphur, potassium nitrate or hydrochloric acid.

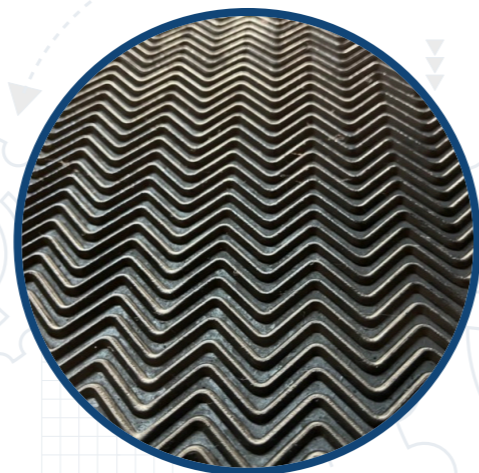


Rough Top Belt

Rough Top belts designed for transport of sacks, boxes and parcels. The top cover is made of wear resistant rubber with a non-slip surface.

Wavy Top Belt

Belts with wavy impression on top. Suitable for loaders and weigh feeders & bag carrying.



Minimum Pulley Diameters for Conveyors Belt

Carcass thickness (mm)						Recommended Minimum Diameter in mm for Percentage of RMBT Used								
Cotton		100 Percent Polyamide		Polyester Polyamide		Over 60 Up to 100 percent			Over 30 Up to 60 percent			Upto 30 percent		
From	To	From	To	From	To	Type of Pulley			Type of Pulley			Type of Pulley		
						A	B	C	A	B	C	A	B	C
-	1.2	-	1.1	-	0.9	100	-	-	-	-	-	-	-	-
1.3	1.5	1.2	1.3	1.0	1.1	125	100	-	100	-	-	-	-	-
1.6	2.0	1.4	1.7	1.2	1.4	160	125	100	125	100	-	100	100	-
2.1	2.5	1.8	2.2	1.5	1.8	200	160	125	160	125	100	125	125	100
2.6	3.1	2.3	2.7	1.9	2.3	250	200	160	200	160	125	150	160	125
3.2	3.9	2.8	3.5	2.4	2.9	315	250	200	250	200	160	200	200	160
4.0	5.0	3.6	4.4	3.0	3.7	400	315	250	315	250	200	250	250	200
5.1	6.2	4.5	5.5	3.8	4.6	500	400	315	400	315	250	315	315	250
6.3	7.8	5.6	7.0	4.7	5.8	630	500	400	500	400	315	400	400	315
7.9	10.0	7.1	8.8	5.9	7.4	800	630	500	630	500	400	500	500	400
10.1	12.5	8.9	11.1	7.5	9.2	1000	800	630	800	630	500	630	630	500
12.6	15.6	11.2	13.8	9.3	11.5	1250	1000	800	1000	800	630	1000	1000	630
15.7	17.5	13.9	15.5	11.6	12.9	1400	1250	1000	1250	1000	800	1000	1000	800
17.6	20.0	15.6	17.7	13.0	14.8	1600	1250	1000	1250	1000	800	1000	1000	800
		17.8	20.0	14.9	16.6	1800	1400	1250	1400	1250	1000	1250	1250	1000
				16.7	18.5	2000	1600	1250	1600	1250	1000	1250	1250	1000

RMBT Denotes "Recommended Maximum Belt Tension"

A - Driving Pulleys and Pulleys exposed to High Belt Tension.

B - Snub Pulleys in the return run under Lower Belt Tension.

C - Bend Pulleys for a change of directions of Belt of Less Than 30 Degree.

Selection Chart for Grade of Cover Rubber

Belt Cover are made of **Super Abrasive Resistance (SAR)**

COVER GRADE CHARACTERISTICS AND APPLICATION	PHYSICAL PROPERTIES							
	STANDARD	BEFORE AGEING		Temperature of Ageing °C	Duration of Ageing hrs.	AFTER AGEING		MAXIMUM ABRASION LOSS MM ³
Tensile Strength MPa		Elongation %	Change in Tensile Strength %			Change in Elongation %		
GENERAL PURPOSE BELTING								
GRADE M-24								
This Grade is recommended for conveying heavy, sharp, highly abrasive materials like metallic ores, granite, lime stone, coal, Blast furnace slag & clinker etc.	IS 1891 PART-I BS 490 PART-I ISO 4195/1 DIN 22102	24.0	450	70	72	+10 -20	+10 -25	150
GRADE N-17								
Recommended for conveying less severe and moderately abrasive material like sized coal, ash, chalk, bauxite etc.	IS 1891 PART-I BS 490 PART-I ISO 4195/1 DIN 22102	17.0	400	70	72	+10 -20	+10 -25	200
GRADE N-17 SYNTHETIC								
Composed of Synthetic Rubber mainly, this grade is suitable for arduous application as M-24 and has similar wear resistance properties.	IS 1891 PART-I	17.0	400	70	72	+10 -20	+10 -25	150
HEAT RESISTANT BELTING								
GRADE HR (T-1)								
This grade is recommended for conveying hot material and suitable for fines upto 100°C and coarse material upto 125°C.	IS 1891 PART-II	12.5	350	100	72	-25	-40	200
GRADE HR (T-2)								
This grade is recommended for conveying hot material and suitable for fines upto 125°C and lumps upto 150°C.	IS 1891 PART-II	12.5	350	125	72	-35	-50	250
SUPER HEAT ULTIMA								
Specially blended with a compound of EPDM and Chlorobutyl, this grade is recommended for applications where material temperatures beyond 150°C are involved.	"AES" STANDARD	12.5	350	125	72	-35	-50	250
FIRE RESISTANT BELTING								
GRADE FR								
Having fire resistance and antistatic properties, this grade is recommended for use where a fire hazard exists eg. Thermal Plants, Underground Mines.	CSA-M422-M87 IS 1891 PART-V DIN 22103 JISK. 6324-1977	17.0	350	70	72	+10 -20	+10 -25	NOT SPECIFIED
OIL RESISTANT BELTING								
GRADE OR								
Composed of Synthetic Rubber Compounds this grade is resistant to mineral, vegetable, animal oils and fats.	IS 1891 PART-III	12.0	250	70	72	±35	±35	NOT SPECIFIED
HYGIENIC BELTING								
GRADE HYGIENIC								
This cover grade is specially designed with nontoxic Rubber Compounds for use in the food processing, pharmaceutical Industry.	IS 1891 PART-IV	10.0	350	70	72	+10 -25	+10 -45	NOT SPECIFIED
CHEMICAL RESISTANT BELTING								
GRADE CMR								
This specially designed grade of Conveyor Belting incorporates a Top Cover of Nitrile Rubber and Bottom Cover of PVC to withstand the chemical and abrasive action of material like Polash, Urea, etc. It also overcomes the problem of "Reverse Toughing" faced in conveying such material on Belting with normal Cover Grades.	IS 1891 PART-I	24.0	450	70	72	+10 -20	+10 -25	150

Selection Chart for Grade of Cover Rubber

BELT DESIGNATION		FULL BELT TENSILE STRENGTH KN/m	MAXIMUM RECOMMENDED WORKING TENSION		Nominal Carcass Thickness (mm)	Nominal Carcass Weight Kg/cm/mtr	Maximum Belt Width (mm) for adequate load support Bulk Density (T/m ³)			Minimum Belt width (mm) For adequate Troughing		
TYPE	RATING		Vulcanised Splice (kN/m)	Mechanical Fasteners			Upto 1.0	Upto 1.5	Upto 2.5	20 Deg. Idlers	30 Deg. Idlers	45 Deg. Idlers
GENERAL DUTY	200/2	200	20	20	2.4	0.022	650	500	-	300	400	500
	250/2	250	25	25	2.5	0.023	650	600	-	300	400	500
	315/2	315	31	31	2.7	0.024	900	650	500	300	400	500
	315/3	315	31	31	3.2	0.025	1000	800	650	400	500	500
	400/2	400	40	40	2.8	0.025	1000	800	650	400	500	500
	400/3	400	40	40	3.4	0.027	1200	900	650	500	500	500
	500/3	500	50	*	3.4	0.030	1200	900	650	500	500	500
	630/3	630	63	*	3.5	0.031	1200	1000	800	500	500	500
HEAVY DUTY	200/2	200	20	20	2.8	0.026	800	650	500	400	400	500
	250/2	250	25	25	3.0	0.028	800	650	500	400	400	500
	315/2	315	31	31	3.1	0.029	1000	800	650	400	500	500
	315/3	315	31	31	3.6	0.030	1200	1000	800	500	500	500
	400/2	400	40	40	3.2	0.030	1200	1000	800	500	500	500
	400/3	400	40	40	3.6	0.032	1200	1000	800	500	500	650
	400/4	400	44	40	4.5	0.044	1200	1000	800	500	500	650
	500/3	500	50	*	3.7	0.034	1400	1000	800	500	500	650
	500/4	500	55	*	4.5	0.040	1400	1200	900	500	650	650
	630/3	630	63	*	3.9	0.036	1600	1400	1200	650	800	800
	630/4	630	70	*	5.0	0.049	1800	1600	1400	650	800	900
	800/4	800	90	*	5.4	0.051	1800	1600	1600	650	900	900
	1000/4	1000	110	*	5.8	0.054	2000	1800	1600	800	900	1000
	1000/5	1000	110	*	6.6	0.066	2000	1800	1600	800	900	1000
1250/4	1250	140	*	6.5	0.062	2000	2000	1600	800	900	1000	
1250/5	1250	140	*	7.1	0.080	2000	2000	1600	900	900	1000	
EXTRA HEAVY DUTY	400/4	400	44	*	4.8	0.058	1200	1000	800	500	500	500
	500/4	500	55	*	4.8	0.060	1600	1200	900	500	500	500
	630/4	630	70	*	5.6	0.063	1800	1400	1200	500	650	800
	800/4	800	90	*	6.0	0.065	1800	1600	1400	650	800	900
	800/5	800	90	*	6.5	0.068	1800	1600	1400	650	650	800
	1000/4	1000	110	*	6.2	0.068	1800	1800	1400	800	800	900
	1000/5	1000	110	*	7.0	0.075	2000	1800	1600	800	900	1000
	1250/4	1250	140	*	6.8	0.076	2000	1800	1600	800	800	900
	1250/5	1250	140	*	7.5	0.089	2000	1800	1800	800	900	1000
	1400/4	1400	145	*	7.2	0.077	2000	1800	1800	800	900	1000
	1400/5	1400	155	*	8.2	0.089	2000	1800	1800	800	900	1200
	1600/4	1600	180	*	7.4	0.081	2000	2000	1800	800	900	1200
1600/5	1600	180	*	8.8	0.100	2000	2000	1800	800	1000	1200	
1800/6	1800	190	*	10.6	0.110	2000	2000	2000	900	1000	1200	

- Note:**
1. In the above belt strength designations, the first set of figures denote the belt strength in kn/m and the second set of figures denotes the number of fabric plies.
 2. Denotes that mechanical fasteners are not recommended.
 3. The above figures represent the standard construction of conveyor belts. Special construction can be designed and manufactured against specified requirements.
 4. The above figures are approximate values and should be taken into account for the purpose of design and estimation only and not for the purpose of inspection. " AES " reserves the right to change the specification/parameters, without notice, in light of technical development.

Advantages

Precision-engineered components ensuring smooth and stable operation

High load-bearing capacity with minimal rolling resistance

Long bearing life with sealed and lubricated-for-life design

Dynamic balance for high-speed conveyors

Easy maintenance and interchangeability

Available in both standard and customized designs

AniFlex – Engineered for Motion. Trusted for Durability.



Conveyor Pulleys

According to their position in a conveyor system, pulleys must withstand forces generated by belt tension and the conveyed load. AniFlex pulleys are engineered for optimum performance, reliability, and service life in these demanding conditions.

Proper selection of pulleys is critical for efficient operation and long-term reliability. The following parameters are considered during design and selection:

- ✓ Belt width
- ✓ Drum diameter (as per belt type and characteristics)
- ✓ Locking arrangement of shaft to pulley (keyed or friction lock assembly)
- ✓ Position of pulley (drive, return, snub, bend, or take-up)
- ✓ Belt tension ($T_1 + T_2$)
- ✓ Type of lagging as required

AniFlex pulleys are manufactured with precision for structural strength, concentric accuracy, and long service life. Each pulley shell is made from a single rolled steel plate with a single seam weld ensuring uniformity and perfect balance. The end discs are deep-penetration welded to the shell, providing exceptional rigidity.

All pulleys are statically balanced, and dynamic balancing is available on request for high-speed conveyors.

Lagging Options

To ensure optimal grip and longer belt life, AniFlex offers a full range of lagging types and finishes:

Thickness: 6 mm to 25 mm

Patterns: Diamond, Herringbone, Plain, or Custom

Grades: Standard, FR, or Custom Grades available

Lagging Type	Features
Cold-Bonded Rubber Lagging	Easy to apply, suitable for light to medium-duty conveyors.
Hot-Vulcanised Rubber Lagging	Provides excellent adhesion and smooth surface finish.
Cold / Hot Vulcanised Rubber Lagging	Ideal for wet and humid operating conditions.
Rubber-Backed Ceramic Lagging	Combines rubber cushioning with high ceramic grip.
Direct-Bond Ceramic Lagging	Maximum traction and abrasion resistance for heavy-duty use.

Pulley Applications

Type	Function
Drive Pulley	Transmits power to the belt through friction.
Tail Pulley	Guides the belt at the discharge or return end.
Snub Pulley	Increases the wrap angle on the drive pulley.
Bend Pulley	Redirects the belt path to suit system design.
Take-Up Pulley	Maintains belt tension during operation.



Conveyor Idlers

AniFlex Idlers are designed to support the belt and load with minimal rolling resistance and high operational reliability.

Precision manufacturing ensures smooth rotation, reduced noise, and prolonged bearing life.

Each idler is assembled using seamless tubes, machined steel shafts, and deep-groove ball bearings (SKF / FAG / Equivalent) with a triple-labyrinth sealing system that prevents ingress of dust and moisture.

Idlers are available in painted, powder-coated, or galvanized finishes depending on site conditions.

Types Of Idlers

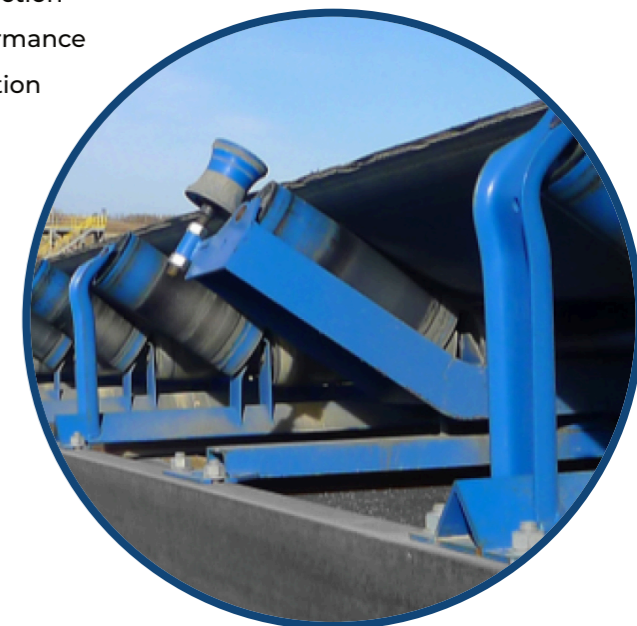
Category	Type	Function
Carrying Idlers	Three-Roll Trough	Standard type forming a trough angle of 20°, 30°, or 35°; ideal for bulk materials.
	Impact Trough	Fitted with rubber rings to absorb impact at loading zones.
	Transition	Used between flat and troughing idlers to gradually shape the belt.
	Twin-Roll Trough	Compact design for light-duty conveyors.
	Picking Idler	Used where manual sorting or inspection occurs.
Return Idlers	Flat Return	Supports the belt on its return path
	Twin-Vee Return	Self-aligning, prevents belt mis-tracking.
	Rubber Disc Return	Minimizes material build-up on return side
	Rubber Screw / Steel Screw	Self-cleaning designs for sticky materials
	Tapered Idler	Aids in centering and belt alignment.
Training Idlers	Trainer Trough / Return	Automatically aligns the belt to correct mis-tracking.

Technical & Material Highlights

- ✓ **Roller Tubes:** Seamless mild steel for accurate concentricity
- ✓ **Shafts:** Bright steel, machined for precise bearing fit
- ✓ **Bearings:** Deep groove, heavy-duty (sealed for life)
- ✓ **Sealing System:** Triple-labyrinth design for dust and water protection
- ✓ **Balance:** Dynamically balanced for smooth, vibration-free performance
- ✓ **Surface Finish:** Powder-coated / galvanized for corrosion protection

Standard Range:

- ✓ **Belt Widths:** 400 mm to 2000 mm
- ✓ **Roller Diameters:** 76 mm to 194 mm
- ✓ **Shaft Diameters:** 20 mm to 50 mm
- ✓ **Trough Angles:** 20°, 30°, 35°



Designed for Industry Challenges. Trusted for Performance.

We sincerely appreciate your confidence in **AniGears™** Engineering Solutions. Your trust drives our commitment to deliver precision, innovation, and quality — powering industries, empowering progress.

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